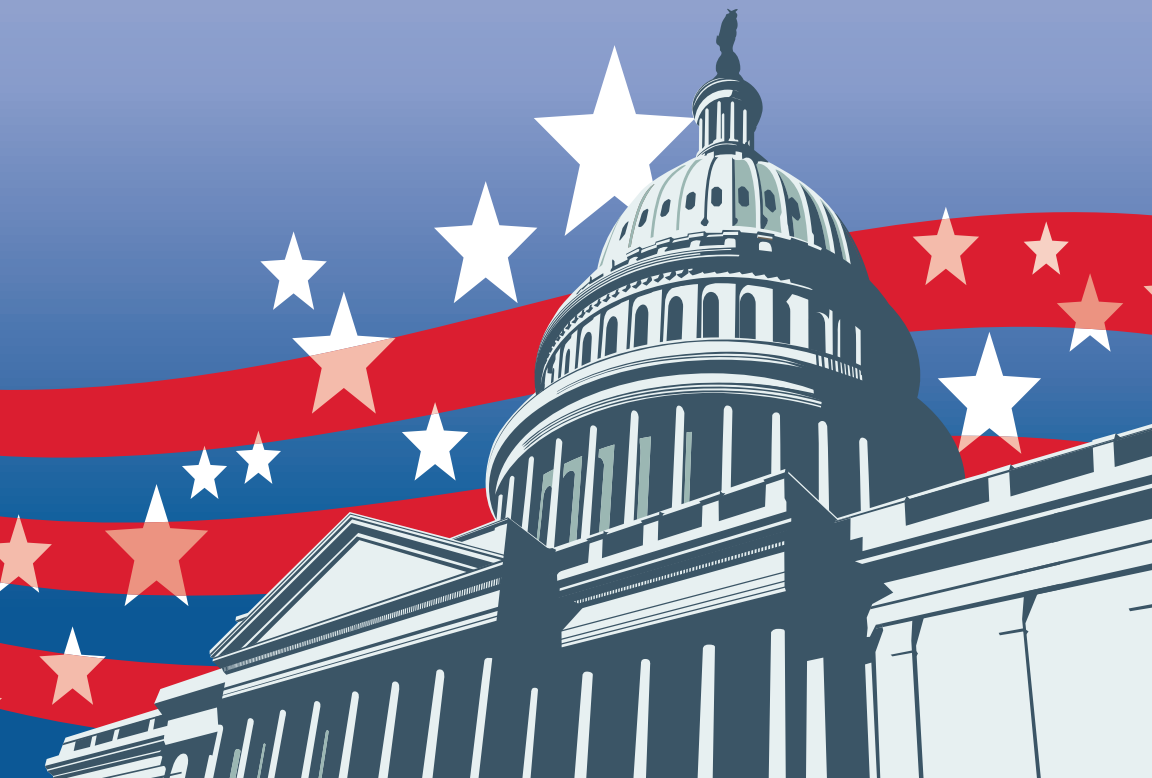
AAS 223rd Meeting

American Astronomical Society

Washington, DC | 5–9 January 2014

with the High Energy Astrophysics Division (HEAD)
and Historical Astronomy Division (HAD)



223RD MEETING OF THE AMERICAN ASTRONOMICAL SOCIETY
WITH HIGH ENERGY ASTROPHYSICS DIVISION (HEAD) AND HISTORICAL ASTRONOMY DIVISION (HAD)

5-9 JANUARY 2014 • WASHINGTON, DC

Session Numbering Key

100's Monday

200's Tuesday

300's Wednesday

400's Thursday

Sessions are numbered in the Program Book by day and time.

Changes after 6 December are included only in the online program materials.

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Apogee systems have contributed to discoveries in many different fields, from astronomy to life science. They are operated in a variety of extreme conditions, from the Arctic to orbiting around the Earth. We're proud of our accomplishments, but recognize that we must strive to continually improve our products and our processes. From bio array readers and radiance measurement systems to backyard astronomy and bright field microscopy imaging we've supplied the tools for serious research and discovery work for over a decade.

We are a corporate sponsor of the American Astronomical Society and support various local educational institutions.

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Since the dawn of the space age, Northrop Grumman has put good ideas into orbit and beyond. From systems engineering, spacecraft manufacturing, precision sensors, space instrument design, ground stations development and orbiting space platforms, Northrop Grumman's space capabilities have transformed lofty concepts into high-flying realities for a wide variety of missions.

USRA

Universities Space Research Association, an independent, nonprofit research corporation that combines efforts of in-house talent and university-based expertise to advance space science & technology. USRA was founded in 1969, near the beginning of the Space Age, driven by the vision of two individuals, James Webb (NASA Administrator 1961-1968) and Frederick Seitz (National Academy of Sciences President 1962-1969). Together, they worked to create USRA to satisfy not only the ongoing need for innovation in space, but also the need to involve society more broadly so the benefits of space activities would be realized.

Today, USRA works across a wide spectrum of disciplines stemming from the range of challenges originally posed by the space program. From biomedicine to astrophysics, from basic research to facility management and operations, USRA is helping enable the study of the Universe from ground, airborne, and orbiting observatories, the study of Earth from space-based platforms, and more.

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202	Springer
412	Submillimeter Array
110	Teledyne Imaging Sensors
308	The National Academies
520	The National Optical Astronomy Observatory - NOAO
243	Thirty Meter Telescope - TMT
217	University Science Books
118	Universities Space Research Association - USRA
124	W. H. Freeman
400	W. W. Norton & Company

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500 Shared Book Exhibit

Hadrosaur Press • University of Arizona Press • University of Chicago Press

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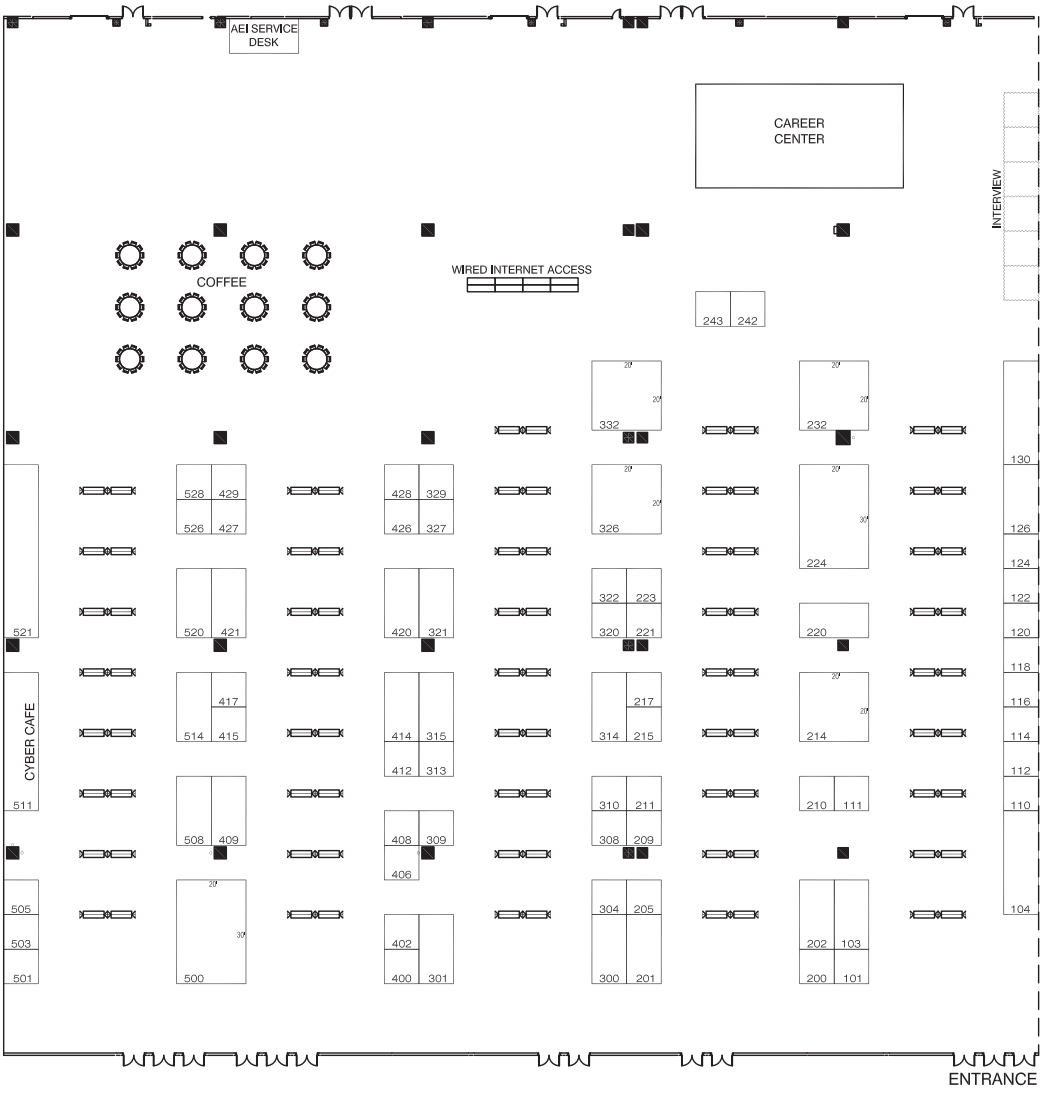
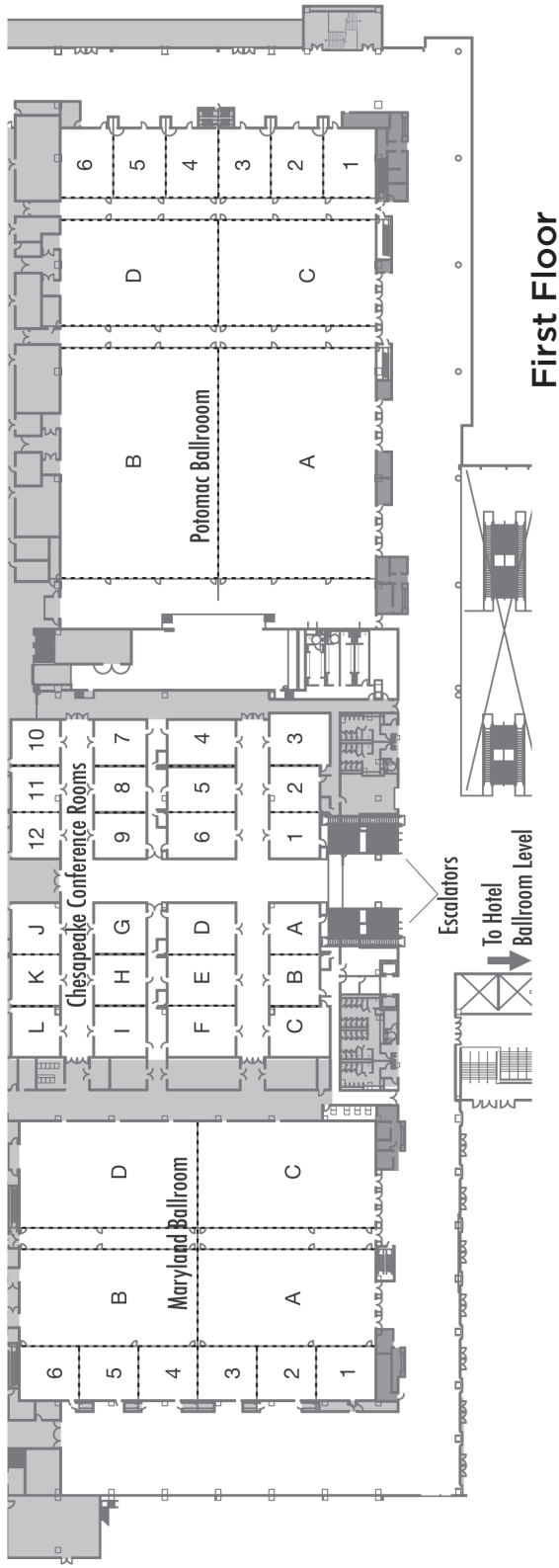
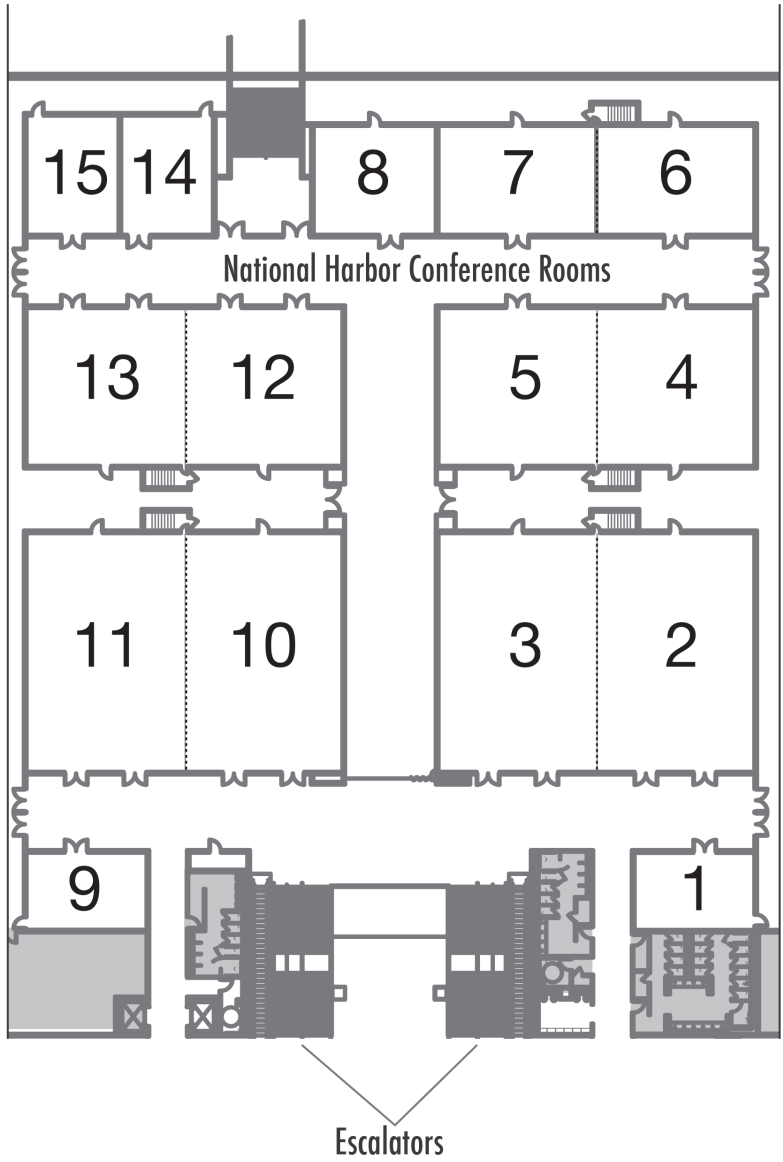


MEETING FLOOR PLANS



Second Floor



Wear your badge at all times during the meeting. Attendees who do not have their name badges on will be denied entrance to meeting rooms, the exhibit hall, etc.

Registration

Gaylord Convention Center Foyer

Sunday: 3:00 PM - 8:00 PM
Monday: 7:30 AM - 5:00 PM
Tuesday-Wednesday: 8:00 AM - 5:00 PM
Thursday: 8:00 AM - 2:00 PM

What's New at the Meeting

AAS Open Mic Night

Tuesday, 7 January 2014
8:00 PM - 9:00 PM; Maryland Ballroom C

For the first time, the AAS will be holding an open-mic night for our talented members to share their musical and other talents with their friends and colleagues. Held Tuesday evening, we invite all musicians, singers, storytellers, comedians, poets, spoken word enthusiasts or other performers (e.g. jugglers) to participate. We welcome all styles and genres of music from bluegrass to speed metal….seriously!

Come have some fun and strut your stuff. Cocktails, wine and beer will be available for purchase. Sign up online to ensure a spot and let us know what kind of equipment you need to perform. You can decide to participate on-site as well, but signing up early helps us ensure the proper equipment is available. Ukulele performers are especially encouraged to participate.

AAS Extras

The American Astronomical Society is pleased to unveil a new tool designed to enhance scientific communication and productivity at our meetings. Every presenter gets a personal AAS Extras webpage. You can use yours to upload a PDF of your poster or presentation slides and to create links to additional resources such as images, videos, journal articles, data sets, and websites. Your page comes with a unique QR code that you can download and print on your poster or display on one of your slides. Anyone who scans the code with their smartphone or tablet will be taken directly to your AAS Extras page, where they can download the materials and follow the links that you've posted there. More detailed information and instructions for accessing your personal AAS Extras page are available online at http://extras.aas.org.

Amateur Events (Monday, Tuesday or Wednesday)

We invite our amateur attendees to attend the plenary and amateur talks and to peruse our exhibit hall.

MONDAY

Gravitational Lensing Boot Camp

9:30 AM - 10:00 AM
Robert J. Nemiroff, *Professor of Physics, Michigan Technological University*

Origins of Habitable Planets

1:30 PM - 2:00 PM
Alycia J. Weinberger, *Scientific Staff Member, Carnegie Institution of Washington*

Public Talk - Tales from the Twitterverse, and Other Media Excursions

8:00 PM - 9:00 PM
Neil deGrasse Tyson, *Frederick P. Rose Director of the Hayden Planetarium*

TUESDAY

Observing Asteroids for Fun and (Astronomical) Profit

9:30 AM - 10:00 AM
Linda French, *Professor of Physics, Illinois Wesleyan University*

Hunting the Oldest Stars in the Neighborhood

1:30 PM - 2:00 PM
Thomas M. Brown, *Astronomer, Space Telescope Science Institute*

Star Party

Tuesday, (if cloudy Wednesday), 7:30 PM - 10:30 PM, Gaylord Pier

Attendance is FREE and open to the public.

Updates, including weather and logistic updates, will occur on Facebook.
Follow us! www.facebook.com/AmericanAstronomicalSociety
Organizer: **Jason Kendall**, *William Paterson University*

WEDNESDAY

Blazars and Gamma Rays

9:30 AM - 10:00 AM
Lynn R. Cominsky, *Professor and Chair, Physics and Astronomy, Sonoma State University*

The Nearest Stars

1:30 PM - 2:00 PM
Todd J. Henry, *Distinguished Professor of Astronomy, Georgia State University*

Exhibit Hall

Monday-Wednesday: 9:00 AM - 6:30 PM
Thursday: 9:00 AM - 2:00 PM

Please do not leave personal items unattended.
The AAS is not responsible for lost or stolen property.

Posters not removed by closing time each day will be recycled.

Exhibit Hall Events

Career Center

Monday-Wednesday: 9:00 AM - 6:30 PM
Thursday: 9:00 AM - 1:00 PM

Morning Coffee Break

Monday-Thursday: 9:30 AM - 10:00 AM

Poster Session

Monday-Wednesday: 5:30 PM - 6:30 PM with cash bar
Thursday: 1:00 PM - 2:00 PM

Speaker Ready Room

Chesapeake 2
Sunday: 3:00 PM - 5:00 PM
Monday-Wednesday: 7:30 AM - 4:00 PM
Thursday: 7:30 AM - 2:00 PM

Cyber Café - Sponsored by Northrop Grumman

Located in the Exhibit Hall

Monday-Wednesday: 9:00 AM - 6:30 PM
Thursday: 9:00 AM - 2:00 PM

Absolutely no food or drink is permitted in the Cyber Café.

Using Your Own Laptop or Mobile Device While at the Meeting

- The network is monitored throughout the meeting and the AAS staff reserves the right to disconnect any device that is causing network problems or harm to other devices.
- Please keep your software up-to-date and use a firewall and virus/spyware protection when necessary.
- No device should be running as a server for off-site clients.
- Absolutely no routers can be attached to the network without prior authorization from the AAS IT Staff.
- Wireless will be available throughout the entire meeting space although some areas may experience limited connectivity. Wireless access information is printed on the back of your badge. Please note that the wireless is not encrypted.
- Due to FCC regulations and physical laws, some of the available wireless spectrum can become overcrowded and temporarily unusable which limits connectivity and speeds. We work hard to avoid this without breaking the laws set by the government or physics.
- Wireless connections will be dropped after 40 minutes of inactivity.

Donor and Sponsor Lounge

Attendance by Invitation Only
Chesapeake G
Monday-Wednesday: 7:30 AM - 5:30 PM
Thursday: 7:30 AM - 2:00 PM

Rodger Doxsey Travel Prize

The Rodger Doxsey Travel Prize, established through the support of his father, John Doxsey, and other friends, family, and colleagues, provides graduate students within one year of receiving or receipt of their PhD a monetary prize to enable the oral presentation of their dissertation research at a winter AAS meeting.

Winners:

Edmond Cheung

Bart Dunlap

Courtney Epstein

Charles Hull

Jedidah Isler

John Jardel

Jamie Lomax

Ferah Munshi

Timothy Rodigas

Dan Sirbu

Runner-Ups:

Stacey Alberts

Katherine Follette

Michael Pagano

Chalence Safranek-Shrader

Saturday, 4 January 2014	
9:00am	Attendance by Invitation Only: Astronomy Ambassadors Workshop for Early-Career AAS Members, 9:00am-5:30pm, Chesapeake 7
	Exoplanet Exploration Program Analysis Group, 9:00am-5:00pm, National Harbor 6/7
	CAE's Tier I Teaching Excellence Workshop for Current and Future Astronomy and Space Science Instructors, 9:00am-5:30pm, Chesapeake 4
1:00pm	2014 NSF Postdoctoral Fellows Symposium, 1:00pm-6:00pm, Chesapeake 10/12
Sunday, 5 January 2014	
8:00am	AAS Council Meeting, 8:00am-5:00pm, Chesapeake 5/6
	CAE's Tier I Teaching Excellence Workshop for Current and Future Astronomy and Space Science Instructors, 8:00am-5:30pm, Potomac 2
	Exoplanet Exploration Program Analysis Group, 8:00am-5:00pm, Potomac Ballroom C
9:00am	Attendance by Invitation Only: Astronomy Ambassadors Workshop for Early-Career AAS Members, 9:00am-5:00pm, Chesapeake 7
	Introduction to Python and Working with Astronomical Data, 9:00am-5:00pm, Potomac 3
	2014 NSF Postdoctoral Fellows Symposium, 9:00am-6:00pm, Potomac Ballroom D
	Leadership and Teambuilding for Astronomers, 9:00am-4:00pm, Potomac 4
9:30am	NASA Physics of the Cosmos Program Analysis Group, 9:30am-6:00pm, Annapolis 3
	NASA's PhysPAG Gamma Ray SIG, 9:30am-3:00pm, Baltimore 3
	NASA's Cosmic Origins Program Analysis Group, 9:30am-6:00pm, Baltimore 1
10:00am	Volunteer Orientation, 10:00am-11:00am, Potomac 1
	NRAO Very Large Array Sky Survey Science Planning, 10:00am-4:00pm, Annapolis 1
12:00pm	LSST Stars, Milky Way and LV Splinter Meeting, 12:00pm-6:00pm, Baltimore 4
1:00pm	AAS/NGS Science Communication Workshop, 1:00pm-5:00pm, Potomac 6
	Dark Skies & Energy Kits for Classrooms & Outreach, 1:00pm-5:00pm, National Harbor 7
	Managing, Sharing, and Archiving Your Data, 1:00pm-4:00pm, Potomac 1
	Re-Numerate: Restoring Essential Numerical Skills, 1:00pm-5:00pm, Chesapeake 2
	The Future of Time in Astronomy, 1:00pm-5:00pm, National Harbor 6
1:30pm	**90 HAD I Special**: Origin of Structure and the Expanding Universe, 1:30pm-3:30pm, Baltimore 5
3:00pm	Speaker Ready Room, 3:00pm-5:00pm, Chesapeake 2/3
	Registration, 3:00pm-8:00pm, Gaylord Convention Center Foyer
4:00pm	**91 HAD II Special**: From Barnard's Star to the Kepler Mission: Searching for Low Mass Companions to Stars, 4:00pm-6:00pm, Baltimore 5
6:00pm	Undergraduate Orientation, 6:00pm-7:00pm, Maryland Ballroom A
7:00pm	AAS Opening Reception, 7:00pm-9:00pm, Potomac Ballroom A

Monday, 6 January 2013				
7:30am	Session Chair Breakfast, 7:30am-8:00am, Chesapeake H			
	Speaker Ready Room, 7:30am-4:00pm, Chesapeake 2/3			
	Registration, 7:30am-5:00pm, Gaylord Convention Center Foyer			
8:00am	**100 Plenary Session:** Welcome Address by AAS President David Helfand, 8:00am-8:30am, Potomac Ballroom A			
8:30am	**101 Plenary Session:** Kavli Foundation Lecture: The Hubble Deep Field and its Legacy, Robert Williams (STScI), 8:30am-9:20am, Potomac Ballroom A			
9:00am	Exhibit Hall, 9:00am-6:30pm			
	Cyber Café, 9:00am-6:30pm, Exhibit Hall			
	Career Center, 9:00am-6:00pm, Exhibit Hall			
	Posters, 9:00am-6:30pm, Exhibit Hall			
	145 New Science from the CLASH/CANDELS Multi-Cycle Treasury Programs Poster Session **146** Exoplanets and Kepler Poster Session **147** HAD III: Poster Session **148** Instrumentation: Ground or Airborne Poster Session **149** Instrumentation: Space Missions Poster Session **150** AGN, QSO, Blazars Poster Session III **151** Stellar Atmospheres, Winds Poster Session		**152** Stellar Evolution, Stellar Populations Poster Session **153** Pulsars & Neutron Stars Poster Session **154** Novae, Cataclysmic Variables, Evolved Stars **155** Binary Stellar Systems, X-ray Binaries **156** Variable Stars Poster Session **157** White Dwarfs **158** The Sun Poster Session **160** Developing Our Own Future: Undergraduate Research and Enrichment Through Peer-Led Programs Poster Session	
9:30am	Coffee Break, 9:30am-10:00am, Exhibit Hall			
	Amateur Talk: Gravitational Lensing Boot Camp, Robert J. Nemiroff (Michigan Technological University), 9:30am-10:00am, Maryland Ballroom A			
	Careers 101: Career Planning Workshop for Graduate Students and Postdocs, 9:30am-11:30am, Potomac 1			
10:00am	**Special and Oral Sessions 102-118, 10:00am-11:30am**			
	102 Cosmology & CMB I Potomac Ballroom D	**103** Exoplanets and Kepler Astrophysics Potomac Ballroom A	**104** Exoplanets: Exomoons and Migration National Harbor 12	**105** Extrasolar Planet Characterization & Theory I Maryland Ballroom A
	106 Galaxy Clusters: Star Formation, AGN, Interactions National Harbor 10	**107** HAD IV: History of Astronomy National Harbor 3	**108** HEAD I: News from the Galactic Center: A Multiwavelength Update on the Sgr A*/G2 Encounter National Harbor 5	**109** Instrumentation I: Space Missions Maryland 2
	110 Intergalactic Medium & QSO I National Harbor 2	**111** Interstellar Medium & Dust I National Harbor 4	**112** Nearby Dwarf & Irregular Galaxies Maryland Ballroom D	**113** Novae, Dwarf Novae and Evolved Stars Maryland 1
	114 Pulsars & Neutron Stars I National Harbor 13	**115** QSOs, AGN National Harbor 11	**116** Results from the Pan-STARRS1 Surveys Maryland Ballroom B	**117** Star Formation I Potomac Ballroom C
	118 The Sun Maryland Ballroom C			
10:15am	Press Conference, 10:15am-11:15am, Chesapeake D/E			
11:40am	**119 Plenary Session:** Linking Visualization and Understanding in Astronomy, Alyssa Goodman (Harvard-Smithsonian CfA), 11:40am-12:30pm, Potomac Ballroom A			
12:30pm	Career Hour 1: Having the Right Stuff: Outstanding Resumes/CVs for Outstanding Career Opportunities in Academia and Industry, 12:30pm-1:30pm, National Harbor 2			
12:45pm	**120 Town Hall:** HAD Business Meeting, 12:45pm-1:45pm, National Harbor 5			
	121 Town Hall: The International Astronomical Union: Roles and Goals, 12:45pm-1:45pm, Potomac Ballroom D			
	122 Town Hall: The NASA Kepler Mission Town Hall: 2014 and Beyond, 12:45pm-1:45pm, Potomac Ballroom C			
	123 Town Hall: WGLE Town Hall, 12:45pm-1:45pm, National Harbor 4			
	124 Town Hall: NSF Town Hall, 12:45pm-1:45pm, Maryland Ballroom C			
1:30pm	Amateur Talk: Origins of Habitable Planets, Alycia J. Weinberger (Carnegie Institution of Washington), 1:30pm-2:00pm, Maryland Ballroom A			

Monday, 6 January 2013 Continued				
2:00pm	**Special and Oral Sessions 125-141, 159, 2:00pm-3:30pm**			
	125 Variable Stars National Harbor 4	**126** AGN on Sub-kiloparsec Scales National Harbor 11	**127** Cosmology & CMB II Potomac Ballroom D	**128** Dynamics and Habitability of Exoplanets - What have we learned from Kepler? Potomac Ballroom A
	129 Evolution of Elliptical Galaxies and Black Holes Maryland Ballroom D	**130** Evolution of Star Formation and Dust in Galaxies National Harbor 2	**131** Extrasolar Planet Characterization & Theory II Maryland Ballroom A	**132** Extrasolar Planet Detection - Ultra-Short-Period, Circumbinary, and Exomoons From Kepler National Harbor 12
	133 Galaxy Evolution at z>2 Maryland Ballroom C	**134** HAD V: History of Astronomy National Harbor 3	**135** HEAD II: Consistent Cluster Cosmology: What are Planck, SZ Telescopes, and X-ray Observations Telling Us? National Harbor 5	**136** Instrumentation II: Ground Missions Maryland 2
	137 Intergalactic Medium & QSO II Potomac Ballroom C	**138** Interstellar Medium & Dust II Maryland 1	**139** New Science from the CLASH/CANDELS Multi-Cycle Treasury Programs Maryland Ballroom 2	**140** Pulsars & Neutron Stars II National Harbor 13
	141 The Dark Energy Camera and the Dark Energy Survey National Harbor 10	**159** Developing Our Own Future: Undergraduate Research and Enrichment Through Peer-Led Programs Maryland 3		
2:15pm	Press Conference, 2:15pm-3:15pm, Chesapeake D/E			
3:40pm	**142 Plenary Session:** Henry Norris Russell Lecture: New Developments in Galactic Archeology, Kenneth Freeman (Australian National University), 3:40pm-4:30pm, Potomac Ballroom A			
4:30pm	**143 Plenary Session:** HAD Doggett Prize Lecture: Applied Historical Astronomy, F. Richard Stephenson (University of Durham), 4:30pm-5:20pm, Potomac Ballroom A			
5:30pm	**Evening Poster Session, 5:30pm-6:30pm, Exhibit Hall A**			
	Career Hour 2: Work-Life Balance: It Can Be Done, You Can Have Fun in Both Worlds, 5:30pm-6:30pm, National Harbor 2			
6:30pm	**144 Town Hall:** AAS Publications Town Hall, 6:30pm-8:00pm, Potomac Ballroom C			
	SOFIA Mission Status and Science Update, 6:30pm-8:00pm; Maryland Ballroom A			
	Observatory Site Protection: Challenges & Solutions, 6:30pm-8:00pm, National Harbor 3			
	LGBTIQ Networking Dinner, 6:30pm-8:30pm, Meet at AAS Registration Desk			
8:00pm	Tales from the Twitterverse, and Other Media Excursions, Neil deGrasse Tyson (American Museum of Natural History), 8:00pm-9:00pm, Potomac Ballroom A			

Tuesday, 7 January 2013				
7:30am	Speaker Ready Room, 7:30am-4:00pm, Chesapeake 2/3			
8:00am	Registration, 8:00am-5:00pm, Gaylord Convention Center Foyer			
	Session Chair Breakfast, 8:00am-8:30am, Chesapeake H			
8:30am	**200 Plenary Session:** The Thick and Thin Disks in Spiral Galaxies, Rosemary Wyse (Johns Hopkins University), 8:30am-9:20am, Potomac Ballroom A			
9:00am	Exhibit Hall, 9:00am-6:30pm			
	Cyber Café, 9:00am-6:30pm, Exhibit Hall			
	Career Center, 9:00am-6:00pm, Exhibit Hall			
	Posters, 9:00am-6:30pm, Exhibit Hall			
	243 The Cosmic Origins Spectrograph view of the Circumgalactic Medium Poster Session **244** Star Formation Poster Session **245** Cosmology Poster Session **246** Evolution of Galaxies Poster Session **247** The Solar System Poster Session **248** Lenses & Waves Poster Session **249** NITARP: The NASA/IPAC Training in Archival Research Program **250** AGN, QSO, Blazars Poster Session I		**251** AGN, QSO, Blazars Poster Session II **252** Starburst Galaxies Poster Session **253** Astroinformatics and Astrostatistics Poster Session **254** Surveys and Large Programs Poster Session **255** Computation, Data Handling, & Image Analysis Poster Session **256** Catalogs Poster Session **257** Laboratory Astrophysics Poster Session **258** Observatory Site Protection Poster Session	
9:20am	**201 Plenary Session:** AAS Prize Presentations: Education Prize, Joseph Weber Award presented by AAS President David Helfand, 9:20am-9:40am, Potomac Ballroom A			
9:30am	Coffee Break, 9:30am-10:00am, Exhibit Hall			
	Amateur Talk: Observing Asteroids for Fun and (Astronomical) Profit, Linda French (Illinois Wesleyan Univ.), 9:30am-10:00am, Maryland Ballroom A			
10:00am	**Special and Oral Sessions 202-218, 10:00am-11:30am**			
	202 Instrumentation III: Ground or Airborne Missions Maryland 2	**203** Building the Astronomical Information Sciences: From NASA's AISR Program to the New AAS Working Group on Astroinformatics and Astrostatistics National Harbor 4	**204** Cosmology & CMB III Potomac Ballroom C	**205** Evolution of Galaxy Structure Potomac Ballroom A
	206 Extrasolar Planet Detection - Identification, Classification, and Validation of Kepler Candidates Maryland Ballroom A	**207** Extrasolar Planet: Atmospheres Maryland Ballroom B	**208** Galaxy Clusters: Cosmology and Evolution National Harbor 10	**209** HAD VI: History of Astronomy National Harbor 3
	210 Jets and Outflows from AGN National Harbor 11	**211** Lenses & Waves I Maryland 1	**212** Pulsars & Neutron Stars III National Harbor 13	**213** Spitzer Space Telescope: The Next Ten Years Potomac Ballroom C
	214 Star Formation II National Harbor 12	**215** Stars - M & L Dwarfs National Harbor 5	**216** Supernovae & Nebulae I National Harbor 2	**217** Surveys and Large Programs I Maryland Ballroom D
	218 The Solar System Potomac Ballroom D			
10:15am	Press Conference, 10:15am-11:15am, Chesapeake D/E			
11:30am	**Public Event:** Education and Public Outreach, Student Welcome: John Grunsfeld (NASA), 11:30am-12:00pm, Potomac Ballroom; followed by event in Exhibit Hall until 2:00pm			
11:40am	**219 Plenary Session:** Cannon Award: Giant Planets in Dusty Disks, Sarah Dodson-Robinson (University of Delaware), 11:40am-12:30pm, Potomac Ballroom A			
12:30pm	Career Hour 3: Network Yourself to a Great Career, 12:30pm-1:30pm, National Harbor 2			
	Proposing for NRAO Instruments, 12:30pm-3:30pm, Potomac 1			

Tuesday, 7 January 2013 Continued				
12:45pm	**220 Town Hall:** CSWA Demographics Survey 2013, 12:45pm-1:45pm, National Harbor 12			
	221 Town Hall: Thirty Meter Telescope (TMT) Town Hall, 12:45pm-1:45pm, Potomac Ballroom C			
	222 Town Hall: NASA Town Hall, 12:45pm-1:45pm, Potomac Ballroom A			
1:00pm	Engaging Scientists in NASA Astrophysics E/PO, 1:00pm-2:00pm, National Harbor 4			
1:30pm	Amateur Talk: Hunting the Oldest Stars in the Neighborhood, Thomas M. Brown (STScI), 1:30pm-2:00pm, Maryland Ballroom A			
2:00pm	**259** HAD VII: Oral History Project and HAD Workshop: Oral History Interviewing Techniques, 2:00pm-3:30pm, National Harbor 3			
	Special and Oral Sessions 223-238, 2:00pm-3:30pm			
	223 AGN Theory and Techniques National Harbor 11	**224** Astronomy Education Policy, EPO Programs, and Undergraduate Education Maryland 2	**225** Astrophysics Code Sharing II: The Sequel National Harbor 5	**226** Cosmology & CMB IV Maryland Ballroom C
	227 Evolution of Emission Line Galaxies Potomac Ballroom D	**228** Extrasolar Planet Detection - Kepler Mission and Microlensing Surveys Maryland Ballroom A	**229** Extrasolar Planet Detection - Occultations, Coronagraphy, and Astrometry National Harbor 13	**230** Extrasolar Planet: Spectroscopy, Metallicity, and Composition Maryland Ballroom D
	231 Galaxy Evolution in Groups/Clusters National Harbor 2	**232** Laboratory Astrophysics Maryland 1	**233** Lenses & Waves II National Harbor 12	**234** Reports from NASA's Astrophysics Program Analysis Groups Potomac Ballroom A
	235 Supernovae & Nebulae II National Harbor 10	**236** Surveys and Large Programs II Maryland Ballroom D	**237** The Cosmic Origins Spectrograph View of the Circumgalactic Medium National Harbor 4	**238** The Galactic Center Potomac Ballroom C
2:15pm	Press Conference, 2:15pm-3:15pm, Chesapeake D/E			
3:40pm	**239 Plenary Session:** Heineman Prize: The Formation of Galaxies and Supermassive Black Holes: Insights and Puzzles, Rachel Somerville (Rutgers University), 3:40pm-4:30pm, Potomac Ballroom A			
4:30pm	**240 Plenary Session:** HEAD Rossi Prize: The Amazing Pulsar Machine, Alice K. Harding (NASA's GSFC) and The Pulsing Gamma-ray Sky, Roger Romani (Stanford University), 4:30pm-5:20pm, Potomac Ballroom A			
5:30pm	**Evening Poster Session, 5:30pm-6:30pm, Exhibit Hall A**			
	Career Hour 4: Developing Your 30-Second Value Statement (aka Your Elevator Pitch), 5:30pm-6:30pm, National Harbor 2			
6:30pm	Exoplanet Exploration Program News, 6:30pm-8:00pm, National Harbor 3			
	241 Town Hall: HEAD Business Meeting, 6:30pm-7:30pm, National Harbor 2			
	242 Town Hall: National Radio Astronomy Observatory Town Hall, 6:30pm-8:30pm, Potomac Ballroom C			
	Gemini Observatory Open House, 6:30pm-8:30pm, National Harbor 10			
	SPS Evening of Undergraduate Science, 6:30pm-8:00pm, Chesapeake 7			
8:00pm	Telescopes for Cosmic Dawn and 21 cm Cosmology, 8:00pm-9:30pm, National Harbor 12			
	AAS Open Mic Night, 8:00pm-9:00pm, Maryland Ballroom C			

Wednesday, 8 January 2013				
7:30am	Speaker Ready Room, 7:30am-4:00pm, Chesapeake 2/3			
8:00am	Registration, 8:00am-5:00pm, Gaylord Convention Center Foyer			
	Session Chair Breakfast, 8:00am-8:30am, Chesapeake H			
8:30am	**300 Plenary Session:** Pierce Prize: Exploring the Stellar Graveyard of the Milky Way, Jason Kalirai (STScI), 8:30am-9:20am, Potomac Ballroom A			
9:00am	Exhibit Hall, 9:00am-6:30pm			
	Cyber Café, 9:00am-6:30pm, Exhibit Hall			
	Career Center, 9:00am-6:00pm, Exhibit Hall			
	Posters, 9:00am-6:30pm, Exhibit Hall			
	343 Time Domain Astronomy, the Large Synoptic Survey Telescope, and Transient Follow-up Poster Session **344** Preparing for Future NASA Missions Poster Session **345** Young Stellar Objects Poster Session **346** The Milky Way, The Galactic Center Poster Session **347** Extrasolar Planet Characterization Poster Session **348** Extrasolar Planet Detection **349** Astrobiology Poster Session		**350** Circumstellar Disks Poster Session **351** Dust Poster Session **352** Gamma Ray Bursts Poster Session **353** Planetary Nebulae, Supernova Remnants **354** Supernovae Poster Session **355** Dwarf & Irregular Galaxies Poster Session **358** Galaxy Clusters Poster Session	
9:30am	Coffee Break, 9:30am-10:00am, Exhibit Hall			
	Workshop for Journal Authors and Referees, Part I, 9:30am-11:30am, Chesapeake 7			
	Amateur Talk: Blazars and Gamma Rays, Lynn Cominsky (Sonoma State University), 9:30am-10:00am, Maryland Ballroom A			
10:00am	**Special and Oral Sessions 301-317, 10:00am-11:30pm**			
	301 AGN Across the Spectrum: I National Harbor 11	**302** Data Handling & Catalogs National Harbor 5	**303** Debris Disks Around Young Stars and Planet Formation I Potomac Ballroom C	**304** Demographic Studies and the AAS National Harbor 3
	305 Developing Career Opportunities in Science Policy and Industry at All Career Levels Maryland 1	**307** Evolution of Local Group Galaxies Maryland Ballroom C	**308** Exoplanets: Interiors, Evolution, and Planetarydisks Maryland Ballroom A	**309** Galaxies I - Motions, Velocities, Kinematics, Masses National Harbor 12
	310 Galaxy Evolution at z~2 Potomac Ballroom A	**311** Gamma Ray Bursts: Multi-wavelength and Afterglow Maryland Ballroom D	**312** Interstellar Medium & Dust III National Harbor 13	**313** Large Scale Structure & Cosmic Distance I National Harbor 4
	314 Scientific Opportunities with the James Webb Space Telescope Maryland Ballroom B	**315** Stars Maryland 2	**316** Supernovae & Nebulae III National Harbor 10	**317** Time Domain Astronomy, the Large Synoptic Survey Telescope, and Transient Follow-up Potomac Ballroom D
	NICER: Future X-ray Astrophysics from the ISS, 10:00am-11:30am, Maryland 1			
10:15am	Press Conference, 10:15am-11:15am, Chesapeake D/E			
11:40am	**318 Plenary Session:** Warner Prize: The Origin of Stellar Masses, Mark Krumholz (University of California, Santa Cruz), 11:40am-12:30pm, Potomac Ballroom A			
12:30pm	Career Hour 5: The Interview: What You Need to Do Before, During, and After to Get the Job, 12:30pm-1:30pm, National Harbor 2			
12:45pm	**319 Town Hall:** The Hubble and James Webb Space Telescope Town Hall Meeting , 12:45pm-1:45pm, Potomac Ballroom A			
	320 Town Hall: U.S. National Research Council's Committee on Astronomy and Astrophysics Town Hall, 12:45pm-1:45pm, National Harbor 3			
1:30pm	Workshop for Journal Authors and Referees, Part II, 1:30pm-3:30pm, Chesapeake 7			
	Amateur Talk: Bringing the Nearby Stars Closer to Home, Todd Henry (Georgia State University), 1:30pm -2:00pm, Maryland Ballroom A			

Wednesday, 8 January 2013 Continued				
2:00pm	**Special and Oral Sessions 321-337, 2:00pm - 3:30pm**			
	321 AGN Across the Spectrum: II National Harbor 11	**322** Astronomy Education Research Maryland 1	**323** Binary Systems Maryland 2	**324** Evolution of Galaxy Mergers National Harbor 2
	325 Exoplanet Models Potomac Ballroom D	**326** Extrasolar Planet Detection - Optical RV Surveys Maryland Ballroom A	**327** From Protostars to Lensed Galaxies: The Immense Riches from Herschel Maryland Ballroom C	**328** Galaxies II - Starbursts Potomac Ballroom C
	329 Galaxies III - Andromeda and Nearby Disks National Harbor 3	**330** Gamma Ray Bursts: Phenomenology and Model Maryland Ballroom D	**331** Interstellar Medium & Dust IV National Harbor 12	**332** Large Scale Structure & Cosmic Distance II National Harbor 4
	333 Public Policy: Perspectives from Congressional and White House Staff Potomac Ballroom A	**334** Stars - Brown Dwarfs and YSOs National Harbor 13	**335** Supernovae & Nebulae IV National Harbor 10	**336** The Milky Way Maryland Ballroom B
	337 The Proper Use of GRE Scores and Noncognitive Measures for Enhancing Diversity and Excellence in Astronomy Graduate Programs National Harbor 5			
2:15pm	Press Conference, 2:15pm-3:15pm, Chesapeake D/E			
3:40pm	**Plenary Session**: U.S. Science Policy Talk, 3:40pm-4:30pm, Potomac Ballroom A			
4:30pm	**338 Plenary Session:** Astronomy and Public Policy, Nicholas Suntzeff (Texas A&M University), 4:30pm-5:20pm, Potomac Ballroom A			
5:30pm	**Evening Poster Session, 5:30pm-6:30pm, Exhibit Hall**			
	The First Annual Buchalter Cosmology Prize, 5:30pm-6:30pm, National Harbor 11			
6:30pm	Career Discovery Networking Reception, 6:30pm-7:30pm, Maryland Ballroom D			
	339 Preparing for Future NASA Missions: The Strategic Astrophysics Technology Program, 6:30pm-8:00pm, National Harbor 2			
	340 The Millimetron Space Mission, 6:30pm-8:00pm, National Harbor 10			
	341 Wide Field InfraRed Space Telescope (WFIRST), 6:30pm-8:00pm, National Harbor 3			
	Korean Astronomer Symposium, 6:30pm-8:00pm, Maryland 1			
7:00pm	**342 Plenary Session:** ESO: Present and Future, P. de Zeeuw (ESO HQ), 7:00pm-8:00pm, Potomac Ballroom A			
8:00pm	RAS Gold Medal Lecture: Some Puzzles in High-Energy Astrophysics, Roger Blandford (Stanford University), 8:00pm-9:00pm, Potomac Ballroom A			

Thursday, 9 January 2013				
7:30am	Speaker Ready Room, 7:30am-2:00pm, Chesapeake 2/3			
8:00am	Registration, 8:00am-2:00pm, Gaylord Convention Center Foyer			
	Session Chair Breakfast, 8:00am-8:30am, Chesapeake H			
8:30am	**400 Plenary Session**: Engineering Considerations for Large Astrophysics Projects, David Hogg (New York University), 8:30am-9:20am, Potomac Ballroom A			
9:00am	Exhibit Hall, 9:00am-2:00pm			
	Cyber Café, 9:00am-2:00pm, Exhibit Hall			
	Career Center, 9:00am-1:00pm, Exhibit Hall			
	Posters, 9:00am-2:00pm, Exhibit Hall			
	438 The Nuclear Spectroscopic Telescope Array (NuSTAR) Poster Session **439** The Exciting Future of Cosmic Microwave Background Measurements Poster Session **440** APOGEE - A Fresh View Into the Stellar Populations of the Milky Way Poster Session **441** Stars, Cool Dwarfs, Brown Dwarfs **442** Star Associations, Star Clusters - Galactic & Extra-galactic Poster Session **443** Black Holes Poster Session **444** Education and Public Outreach Events and Programs **445** Upper-Level Undergraduate and Graduate Education, Research Opportunities, and Diversity **446** Observatories for Education and Public Outreach **447** Astronomy Programs and Resources for High School Students and Teachers **448** Astronomy Education Research		**449** Professional Development Workshops and Programs for Teachers **450** Education and Public Outreach Resources **451** Astronomy 101: Courses and Resources **452** Increasing the Accessibility of Astronomy Poster Session **453** Spiral Galaxies Poster Session **454** Molecular Clouds, HII Regions, Interstellar Medium Poster Session **455** Elliptical Galaxies Poster Session **456** Dark Matter & Dark Energy Poster Session **457** Large Scale Structure, Cosmic Distance Scale Poster Session **458** Intergalactic Medium, QSO Absorption Line Systems Poster Session **459** The NASA SMD Science Education and Public Outreach Forum	
9:30am	Coffee Break, 9:30am-10:00am, Exhibit Hall			
10:00am	**Special and Oral Sessions 401-417, 10:00am-11:30am**			
	401 A Melange of Circumstellar and Stellar Presentations Maryland Ballroom B	**402** AGN Across Cosmic Time National Harbor 11	**403** APOGEE - A Fresh View Into the Stellar Populations of the Milky Way National Harbor 3	**404** Astronomy Across Africa: A New Dawn Maryland 1
	405 Binary Systems - Dwarfs and Giants Maryland 2	**406** Black Holes I National Harbor 10	**407** Cosmology & CMB V National Harbor 13	**408** Dark Matter & Dark Energy I Maryland Ballroom C
	409 Debris Disks Around Young Stars and Planet Formation II National Harbor 12	**410** Evolution of Nearby Galaxies Maryland Ballroom D	**411** Extrasolar Planet Detection - Ground-Based Observations Maryland Ballroom A	**412** Galaxy Clusters in the X-rays National Harbor 5
	413 Public Policy National Harbor 2	**414** Science Highlights from NASA's Astrophysics Data Analysis Program Potomac Ballroom A	**415** Stellar Evolution I Potomac Ballroom C	**416** The Nuclear Spectroscopic Telescope Array (NuSTAR) Potomac Ballroom D
	417 Young Stellar Objects I National Harbor 4			
	Hack Day, 10:00am-7:00pm, Chesapeake 7			
10:15am	Press Conference, 10:15am-11:15am, Chesapeake D/E			
11:40am	**418 Plenary Session**: An Astronomical Time Machine: Light Echoes from Historic Supernovae and Stellar Eruptions, Armin Rest (STScI), 11:40am-12:30pm, Potomac Ballroom A			
12:30pm	Career Hour 6: Negotiation Strategy and Tactics, 12:30pm-1:30pm, National Harbor 2			

Thursday, 9 January 2013 Continued				
12:45pm	**419 Town Hall**: Giant Magellan Telescope Organization Town Hall, 12:45pm-1:45pm, National Harbor 3			
	420 Town Hall: Transforming NOAO, A Town Hall Discussion, 12:45pm-1:45pm, Maryland Ballroom C			
1:00pm	**Afternoon Poster Session, 1:00pm-2:00pm, Exhibit Hall**			
2:00pm	**Special and Oral Sessions 421-436, 2:00pm-3:30pm**			
	421 AGN at Radio to IR Wavelengths National Harbor 11	**422** Binary Systems - ULXs and Stellar Collisions Maryland 2	**423** Black Holes II National Harbor 10	**424** Circumstellar Disk Topics with some Evolved Star Talks to Boot Maryland Ballroom B
	425 Clouds in Brown Dwarfs and Giant Planets National Harbor 3	**426** Cosmology & CMB VI National Harbor 13	**427** Dark Matter & Dark Energy II Maryland Ballroom C	**428** Dwarf & Irregular Galaxies National Harbor 12
	429 Emerging Impacts on Structure Formation and AGN Science from NanoHz Gravitational Wave Studies Maryland 2	**430** Extrasolar Planet Detection - M Dwarfs and Young Stars Maryland Ballroom A	**431** Galaxy Clusters in High Energies and Radio National Harbor 5	**432** Galaxy Evolution at z~1 Potomac Ballroom A
	433 Star Clusters and Associations, Galactic and Extragalactic National Harbor 2	**434** Stellar Evolution II Potomac Ballroom C	**435** The Exciting Future of Cosmic Microwave Background Measurements Potomac Ballroom D	**436** Young Stellar Objects II National Harbor 4
2:15pm	Press Conference, 2:15pm-3:15pm, Chesapeake D/E			
3:40pm	**437 Plenary Session**: AIP Gemant Award Lecture**:** Star Trek: The Search for the First Alleged Crab Supernova Rock Art, E.C. Krupp (Griffith Observatory), 3:40pm-4:30pm, Potomac Ballroom A			
4:30pm	**460 Plenary Session:** Lancelot M. Berkeley Prize: Using the SDO Atmospheric Imaging Assembly to Study Solar Activity, James Lemen (Lockheed Martin Solar & Astrophysics Lab), 4:30pm-5:20pm, Potomac Ballroom A			
5:30pm	AAS Closing Reception, 5:30pm-7:00pm, Cherry Blossom Ballroom			

A GUIDE TO AAS MEETING ETIQUETTE

AAS meetings are the largest and most logistically complex astronomy meetings in the world. We ask all attendees to work together to enhance the value of the meetings by keeping in mind the following points.

Executive Summary

- Do wear your AAS identification badge at all times during the meeting.
- Do obey the "golden rule," i.e., treat others as you would have them treat you.
- Do not hog wireless bandwidth; use the AAS wireless service sparingly.
- Do be quiet during presentations; use computers and mobile devices discretely.
- Do silence all cell phones and other electronic devices with audible alerts.
- Do not blog, tweet, or otherwise post private conversations online.
- Do not panic if reporters attend your talk on results under journal embargo.
- Do pick up after yourself by depositing trash in the appropriate receptacles.

General Considerations

Meetings of the American Astronomical Society are not public events. All attendees must register at the applicable rate; registration types are structured to cover all situations. The only exceptions involve sessions or other activities specifically noted as being open to the public, such as public talks or star parties held in collaboration with local amateur astronomers.

Identification badges must be worn at all times during the meeting. These badges help meeting attendees, AAS staff, and security personnel identify registered participants. Attendees not wearing their name badges will be denied entrance to session rooms, the exhibit hall, and other meeting venues. If you lose your name badge, visit the AAS registration desk to obtain a new one. Note that the design of AAS meeting badges changes regularly to prevent the inappropriate reuse of old badges.

Attendance at AAS meetings is not a right but a privilege, and attendees are expected to behave professionally. The AAS is committed to providing an atmosphere that encourages the free expression and exchange of scientific ideas. The AAS is further dedicated to the philosophy of equality of opportunity and treatment for all members and other meeting attendees, regardless of gender, race, ethnic origin, religion, age, marital status, sexual orientation, disabilities, or any other reason not related to scientific merit. It is AAS policy that all participants in Society activities will enjoy an environment free from all forms of discrimination, harassment, and retaliation. Harassment, sexual or otherwise, is a form of misconduct that undermines the integrity of Society meetings. Violators will be subject to discipline. (Full AAS anti-harassment policy: http://aas.org/policies/anti-harassment-policy)

AAS-meeting staff are trained professionals, expert at organizing and conducting scientific meetings. They work with professional contractors who specialize in providing audio-visual and other services, and with professional hotel and convention-center staff as well. The AAS retains security services, sometimes through the meeting venue and sometimes privately, to ensure the safety and security of all meeting attendees

and exhibitors. Help us ensure a safe, secure, and professional environment by acting appropriately, reporting inappropriate behavior, and paying attention to those around you and your environment.

Attendees who are notably disrespectful or who act in an unprofessional manner toward meeting staff, contractors, other attendees, or hotel or convention-center staff will be required to leave the meeting and may have their registration rescinded without refund. In extreme cases, the AAS may call law-enforcement authorities and/or pursue legal action.

Note that all sessions except those marked "private" by the AAS are open to all registered attendees, including scientists, educators, students, journalists, and guests. All are due the same level of professional respect and courtesy. Only with your help can we ensure the most productive scientific conference.

Computers & Internet Service

The AAS provides wireless Internet service throughout each meeting, but we cannot guarantee full coverage in all locations. We provide priority access in the common areas. This means you may experience limited connectivity in the session rooms.

If you do make use of wireless Internet access during a presentation, or even if you are just taking notes on your computer, please keep your activities as quiet as possible so as to minimize distractions to other attendees and the speaker. If you must use a computer during a session, please consider sitting near the back of the room so as not to distract the speaker or session chair. These same guidelines apply to mobile phones, tablets, and other electronic devices.

One of the cost drivers for meeting registration is provision of adequate bandwidth, which — believe it or not — costs *tens of thousands* of dollars per meeting. Excessive downloading or uploading of files, software updates, streaming video, and other bandwidth-hungry activities (e.g., gaming, exploring virtual worlds) increases the costs for all attendees. The AAS reserves the right to ban excessive users from its meeting network and to use site blocking, port blocking, and traffic shaping to ensure adequate bandwidth for all.

Mobile Phones & Related Devices

Cell phones, tablets, pagers, and similar electronic devices should be silenced. Before each session begins and before you enter an active session, please silence your cell phone and any other devices that have audible alerts. Switching phones to vibrate rather than ring is not sufficient, as the vibrations can be heard or felt by those nearby.

Do not dial or take a phone call during a session. Please exit the session room before beginning or answering a call. All modern mobile phones have caller-ID and call-back features — please make use of them.

Blogging & Tweeting

If you blog, tweet, or otherwise post near-real-time material from the meeting online, you must follow the guidelines above concerning the use of computers, tablets, mobile phones, and AAS wireless bandwidth.

Please do not publicly report private conversations — only scheduled presentations and public comments are fair game for blogging, tweeting, etc.

Remember that many presentations at AAS meetings concern work that has not yet been peer-reviewed. So think twice before posting a blog entry or tweet that is critical of such work. It is helpful to receive constructive criticism during the Q&A after your talk or while standing next to your poster, but it is hurtful to be raked over the coals online before your session is even over and with no easy way to respond.

New York Times editor Bill Keller said it well. When it comes to meetings among colleagues, he explained, "We need a zone of trust, where people can say what is on their minds without fear of having an unscripted remark or a partially baked idea zapped into cyberspace. Think of it as common courtesy."

Sessions & Questions

If you are giving a presentation, please be sure you have read the speaker and AV instructions on the AAS website (http://aas.org/meetings/aas-speaker-ready-and-audio-visual-information). All oral presentations must be uploaded to the internal network in the Speaker Ready Room. Personal laptops and USB drives will not be permitted for presentations in session rooms. We ask that you upload your presentation at least 24 hours in advance. Be sure to show up at your session on time.

The session chair is in charge of the session. He or she is empowered to stop questioning and to rearrange or otherwise adjust time slots (or not) based on tardiness or non-attendance of a scheduled speaker. The chair cannot extend talk times beyond the common limits of 10 minutes for regular contributions and 20 minutes for dissertation contributions (including time allotted for Q&A).

When asking questions of speakers please be professional, courteous, and polite. This is especially important when questioning students presenting their dissertation research.

Be considerate of other people wishing to ask questions. If you have multiple or detailed questions, speak with the presenter after the session.

Journalists & Embargoes

If your presentation covers results that have been, or will be, submitted to *Nature or Science* or any other journal with a strict embargo policy, be sure you understand how that policy applies to scientific meetings. No journal wishes to hinder communication between scientists. For example, both *Science and Nature* state explicitly that conference presentations do not violate their embargo policies.

Both journals also state that if your presentation covers work that has been, or will be, submitted to them, you should limit your interaction with reporters to clarifying the specifics of your presentation. As *Science* puts it, "We ask that you do not expand beyond the content of your talk or give copies of the paper, data, overheads, or slides to reporters." That does not mean you should be rude if a reporter asks you for such materials or poses a question that you do not want to answer — just explain that your results are under embargo at Science or Nature, and the reporter will understand why you cannot be more forthcoming.

Photography & Video

Many events and presentations at AAS meetings are recorded for posterity by a Society photographer. Some sessions, and all press conferences, are videotaped and eventually posted on the AAS members website as a member benefit. Your attendance at an AAS meeting signifies your agreement to be photographed or videotaped in the course of normal meeting business. Invited and prize lecturers *will* be asked to sign a form for legal clarity.

If you take pictures during the meeting, please be considerate of others. Do not use a flash when taking pictures during sessions.

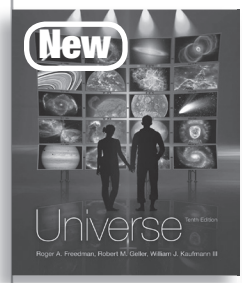
Eating, Drinking & Smoking

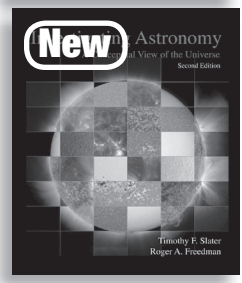
Because our meetings are so full of great content, it can be hard to find time to eat breakfast or lunch. If you must eat or drink while attending a session, please do so quietly and be sure to deposit your trash properly after the session ends. Additional cleaning services cost the AAS money and increase registration costs.

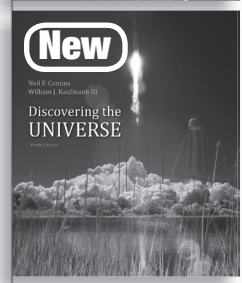
Some venues have strict policies against eating or drinking in particular areas. Meeting attendees are expected to follow these policies. Attendees may not bring their own alcoholic beverages or drink them at the meeting venue outside of areas or times when they are sold. Obviously this does not apply to bars, restaurants, or other facilities co-located with our meeting venues.

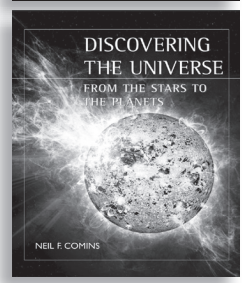
AAS meetings are strictly non-smoking, consistent with laws in the localities where we hold our conferences. When possible, smoking areas will be clearly identified.

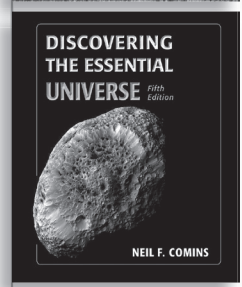
W. H. FREEMAN ASTRONOMY 2014

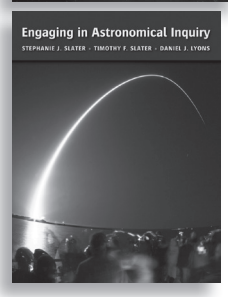












Two-Semester

New! **Universe, Tenth Edition**
Roger A. Freedman • Robert Geller
William J. Kaufmann III

Also available in split volumes:

Universe: The Solar System, Fifth Edition
Universe: Stars & Galaxies, Fifth Edition

One-Semester

New! **Investigating Astronomy**
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For the Lab

Engaging in Astronomical Inquiry
Stephanie J. Slater • Timothy F. Slater
Daniel J. Lyons

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VISIT W.H. FREEMAN AT BOOTH #124

WHY ARE AAS MEETINGS SO EXPENSIVE?

The real question is, why are they so *inexpensive*?! Week-long conferences in the commercial sector typically charge registration fees that exceed $1,000 — often by a lot.

The main reason that AAS-meeting registration rates aren't even lower than they are is that the AAS doesn't use profits from our journals to pay for Society activities. This means that all Society expenses, including the salaries of the Executive Office staff, are paid out of meeting revenues, membership dues, Job Register fees, and some overhead collected from other projects. Not siphoning profits from the journals benefits our discipline by keeping publication costs low, but it also places severe challenges on the financing of Society operations.

As with our journals, the AAS sets its meeting-registration fees according to the expenses we actually incur to hold a meeting. A winter meeting costs more than $1 million to successfully carry out.

The lion's share of meeting expenses are for food and beverage service as well as the infrastructure and logistical support necessary to carry out the meeting, with the food-related costs being the single biggest slice of the pie.

Why are food and beverages (known in the trade as "F&B") so expensive? Mainly because the cost includes not only the price of the food and drinks themselves, but also the costs for any associated condiments as well as for hotel and/or convention-center staff to set up, monitor, refresh, and take down the F&B service. For a typical venue, a gallon of coffee or hot water for tea costs $70. Coffee breaks as a package at most venues cost more than $25 per person per day. Read that last sentence carefully. What about shrimp on a stick for a reception? $10 each. Want a bagel? $8 a pop. Moreover, most venues add a service charge on top of all F&B costs ranging from 18% to 26%, and on top of that there's tax — we may be a 501(c)(3) nonprofit organization, but we're not exempt from all taxes, just those that the local jurisdiction decides to waive. Finally, all meeting venues are for-profit entities. They need to make a profit, and F&B is one place where they can charge high rates to achieve their bottom-line goals.

Some attendees have asked why we don't bring in outside food and beverages via catering services not associated with the convention center. This is rarely possible and rarely cheaper: most venues either prohibit external F&B vendors in the first place or charge so much extra to admit them that it wouldn't save us money anyway.

We know that not all attendees have their registration paid for by grants, so we're sensitive to the total cost to attend our meetings and work hard to keep the registration fee — as well as hotel rates and other costs — as low as possible. Transportation expenses are harder to control, but we try to minimize them by holding most meetings in cities that are easy to get to.

We'd love to see the meeting industry lower prices in response to the current economic climate, but so far we've not seen any indication that such a recalibration is in the cards. We will continue to ensure that the core purpose of our meetings — scientific discussion and interaction — can be fulfilled at the lowest possible cost to ensure the broadest possible participation of our members and the broader astronomical community. We welcome your input and comments, as always.

Kevin B. Marvel
Executive Officer
kevin.marvel@aas.org

A SPECIAL THANK YOU TO OUR AAS PAPER SORTERS

Gina Brissenden

Jeff Carlin

Karna Desai

Shantanu Desai

Rafael Eufrasio

Steve Federman

Scott Fleming

Kathryn Grasha

Nimish P. Hathi

Kevin Marvel

Joel Parriott

Wellesley Pereira

Peter Pessev

Joshua Ridley

Michael Rutkowski

Paula Szkody

Joe Tenn

Panayiotis Tzanavaris

Yan Wang

SATURDAY, 4 JANUARY 2014

Exoplanet Exploration Program Analysis Group (Day 1 of 2)

Saturday, 9:00 AM - 5:00 PM; National Harbor 6/7

A public meeting for soliciting and coordinating community input into the development and execution of NASA's Exoplanet Exploration Program (ExEP). It serves as a community-based, interdisciplinary forum for analysis in support of activity prioritization and for future exploration.

Organizer(s):
Ozhen Pananyan, *JPL*

CAE's Tier I Teaching Excellence Workshop for Current and Future Astronomy and Space Science Instructors (Day 1 of 2)

Saturday, 9:00 AM - 5:30 PM; Chesapeake 4

Are you a current or future instructor teaching Earth, Astronomy, or Space Science? Would you like your classroom to actively engage your students in discourse about the big ideas of your class; how evidence is used to understand the universe; and the role of science in society? We invite you to come to our CAE Teaching Excellence Workshop. Spend time with your colleagues becoming an effective implementor of active-learning instructional strategies. Learn how to transform your classroom into a vibrant learning environment that will: (1) increase students' conceptual understandings; (2) improve their abilities to think critically, interpret graphs, and reason about quantitative data; (3) motivate them to actively engage in their learning; and (4) improve their self-efficacy. Our Tier I Teaching Excellence Workshop will provide you with the experiences you need to create effective and productive active-learning classroom environments. We will model best practices in implementing many different classroom-tested instructional strategies. But most importantly, you and your workshop colleagues will gain first-hand experience implementing these strategies yourselves. During our many microteaching events, you'll have the opportunity to role-play the parts of student and instructor. You'll assess and critique each other's implementation in real-time, as part of a supportive learning community. You'll have the opportunity to face and conquer your fears of unfamiliar teaching in collaboration with kind and gentle friends and mentors before you try them by yourself in front of your students. Workshop topics will include: creating inclusive classroom environments; strategies to improve retention & diversity of STEM majors & grads; collaborative group learning; interactive lectures, demonstrations, and videos; effective use of writing; Think-Pair-Share (Peer Instruction, Clicker Questions); Lecture-Tutorials; Ranking Tasks; assessment strategies (including homework, grading, and exams). Presented by Rica French (MiraCosta College), Seth Hornstein (Univ. of Colorado-Boulder), and Paul Robinson (Westchester Community College). This workshop is sponsored by AUI/NRAO and will feature several new activities designed to effectively bring radio astronomy into your classroom.

Organizer(s):
Gina Brissenden, *Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona*

Astronomy Ambassadors Workshop for Early-Career AAS Members (Day 1 of 2)

Saturday, 9:00 AM - 5:30 PM; Chesapeake 7

The AAS Astronomy Ambassadors program is designed to support early-career AAS members with training in resources and techniques for effective outreach to K-12 students, families, and the public. Workshop participants will learn to communicate more effectively with public and school audiences; find outreach opportunities and establish ongoing partnerships with local schools, museums, parks, and/or community centers; reach audiences with personal stories, hands-on activities, and jargon-free language; identify strategies and techniques to improve their presentation skills; gain access to a menu of outreach resources that work in a variety of settings; and become part of an active community of astronomers who do outreach. Participation in the program includes a few hours of pre-workshop online activities to help us get to know your needs; the two-day workshop, for which lunches and up to 2 nights' lodging will be provided; and certification as an AAS Astronomy Ambassador, once you have logged three successful outreach events. The workshop includes presenters from the American Astronomical Society, the Astronomical Society of the Pacific, and the Pacific Science Center. The number of participants is limited, and the application requires consent from your department chair. We invite applications from graduate students, postdocs and new faculty in their first two years after receipt of their PhD, and advanced undergraduates doing research and committed to continuing in astronomy. Early-career astronomers who are interested in doing outreach, but who haven't done much yet, are encouraged to apply; we will have sessions appropriate for both those who have done some outreach already and those just starting their outreach adventures. We especially encourage applications from members of groups that are presently underrepresented in science. Please complete the online application form (http://aas.org/content/aas-astronomy-ambassadors-program-2014-application) by 18 October 2013.

Organizer(s):
Suzanne Gurton, *Harvard-Smithsonian, CfA*

2014 NSF Postdoctoral Fellows Symposium (Day 1 of 2)

Saturday, 1:00 PM - 6:00 PM; Chesapeake 10

This is the annual meeting of the NSF Astronomy & Astrophysics Postdoctoral Fellows (AAPF). The NSF AAPF program supports young scientists who carry out an integrated program of independent research and education/public outreach. During this two-day annual symposium, the Fellows gather to give talks on their current research and outreach projects. Several outside speakers are also invited to give keynote talks and participate in discussion panels on a range of topics such as exploring non-traditional outreach methods, addressing the next big problems in astronomy, and exploring alternative careers outside of academia. This meeting provides an opportunity for the current, past, and prospective Fellows to meet and discuss their work with members of the community, learn from each other's experiences, and to foster new collaborations. All members of the astronomical community are welcome and encouraged to attend.

Organizer(s):
Douglas Watson, *University of Chicago*

Exoplanet Exploration Program Analysis Group (Day 2 of 2)

Sunday, 8:00 AM - 5:00 PM; Potomac Ballroom C

A public meeting for soliciting and coordinating community input into the development and execution of NASA's Exoplanet Exploration Program (ExEP). It serves as acommunity-based, interdisciplinary forum for analysis in support of activity prioritization and for future exploration.

Organizer(s):
Ozhen Pananyan, *JPL*

CAE's Tier I Teaching Excellence Workshop for Current and Future Astronomy and Space Science Instructors (Day 2 of 2)

Sunday, 8:00 AM - 5:30 PM; Potomac 2

Are you a current or future instructor teaching Earth, Astronomy, or Space Science? Would you like your classroom to actively engage your students in discourse about the big ideas of your class; how evidence is used to understand the universe; and the role of science in society? We invite you to come to our CAE Teaching Excellence Workshop. Spend time with your colleagues becoming an effective implementor of active-learning instructional strategies. Learn how to transform your classroom into a vibrant learning environment that will: (1) increase students' conceptual understandings; (2) improve their abilities to think critically, interpret graphs, and reason about quantitative data; (3) motivate them to actively engage in their learning; and (4) improve their self-efficacy. Our Tier I Teaching Excellence Workshop will provide you with the experiences you need to create effective and productive active-learning classroom environments. We will model best practices in implementing many different classroom-tested instructional strategies. But most importantly, you and your workshop colleagues will gain first-hand experience implementing these strategies yourselves. During our many microteaching events, you'll have the opportunity to role-play the parts of student and instructor. You'll assess and critique each other's implementation in real-time, as part of a supportive learning community. You'll have the opportunity to face and conquer your fears of unfamiliar teaching in collaboration with kind and gentle friends and mentors before you try them by yourself in front of your students. Workshop topics will include: creating inclusive classroom environments; strategies to improve retention & diversity of STEM majors & grads; collaborative group learning; interactive lectures, demonstrations, and videos; effective use of writing; Think-Pair-Share (Peer Instruction, Clicker Questions); Lecture-Tutorials; Ranking Tasks; assessment strategies (including homework, grading, and exams). Presented by Rica French (MiraCosta College), Seth Hornstein (Univ. of Colorado-Boulder), and Paul Robinson (Westchester Community College). This workshop is sponsored by AUI/NRAO and will feature several new activities designed to effectively bring radio astronomy into your classroom.

Organizer(s):
Gina Brissenden, *Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona*

AAS Council Meeting

Sunday, 8:00 AM - 5:00 PM; Chesapeake 5/6

The AAS Council is the board of directors for the AAS, which is a 501(c)3 non-profit corporation incorporated in the District of Columbia. The Council meeting, which is open to AAS members except for any executive sessions (note: limited seating is available due to space constraints), allows for routine corporate business (such as approval of prize winners and setting each year's budget) as well as discussion of current conditions in the field of astronomy and closely related sciences, setting of long-term goals, and allocation of resources to achieve these goals.

Organizer(s):
David Helfand, *Quest University Canada*

NRAO Very Large Array Sky Survey Science Planning

Sunday, 9:00 AM - 3:00 PM; Annapolis 1

It has been 20 years since the initial observations were made for the NRAO Very Large Array Sky Survey (NVSS) and the Faint Images of the Radio Sky at Twenty-Centimeters (FIRST). These pioneering programs have defined the state-of-the-art in centimeter radio sky surveys and produced a steady stream of excellent science. Given the enhanced capabilities of the Karl G. Jansky Very Large Array (VLA), now is an appropriate time to discuss the scientific potential of new centimeter-wavelength sky surveys. High priority science goals of the 2010 decadal survey New Worlds, New Horizons in Astronomy and Astrophysics can be addressed by a new VLA sky survey, and many scientists have expressed their keen interest in employing the VLA to conduct new, wide-area synoptic surveys in support of multi-wavelength sky surveys using existing and future facilities, such as the Large Synoptic Survey Telescope. Thus, we are launching a NRAO VLA Sky Survey (VLASS) initiative that will explore the science and technical opportunities of a new centimeter-wavelength survey. A community-led Science Survey Group (SSG) will define the science program and key components of VLASS, and NRAO will support its technical definition and implementation. All VLASS data will be available immediately to the astronomical community. By 1 September 2013, we will have formally announced the formation of the SSG and issued a call for white papers that will provide critical input to the SSG and NRAO regarding survey science goals, techniques development, and design. In this workshop at the January 2014 American Astronomical Society meeting at National Harbor, MD, all interested community members are welcome to attend, learn about the VLA and its survey capabilities, participate in discussion of survey science priorities, and provide input on survey planning. This workshop will also be a forum for the presentation and discussion of the white papers.

Chair(s):
Stefi Baum, *Rochester Inst. of Technology*
Steven Myers, *NRAO*
Organizer(s):
Mark Adams, *NRAO*

Leadership and Teambuilding for Astronomers

Sunday, 9:00 AM - 4:00 PM; Potomac 4

In this interactive, day-long workshop, we will focus on numerous subjects that will enable you to successfully lead and manage teams and research groups in astronomy. The workshop will include opportunities for dynamic discussions, exercises and engagement activities. Case studies will also be utilized. Topics will include: - Leadership: The difference between leading and managing teams; the characteristics of an effective leader; and how to develop and hone leadership skills early in your career. - Project Management: The elements of project management and how to craft and produce strategic plans that incorporate vision, goals and executional tactics. - Management and Teambuilding: How to build and organize an efficient research group; choose new members of your group; motivate people (particularly across diverse cultures); and be a strong team member yourself. - Conflict Resolution: How to interact with team members in challenging situations; how to effectively disband a group or remove a team-member. - The Mentor/Protégé Relationship: Strategy and tactics for development, cultivation, and management of this partnership; how to create a synergetic experience with your mentor and your protégés. Intended Audience: Postdocs and early-career faculty. Will be limited to 30 participants. Facilitator: Alaina G. Levine has been advising emerging and established scientists and engineers about their careers for over a decade, and has consulted with tens of thousands of early- and mid-career scientific and engineering professionals.

Chair(s):
Alaina Levine, *Quantum Success Solution***s**
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

Introduction to Python

Sunday, 9:00 AM - 5:00 PM; Potomac 3

We will present an introduction to Python and object-oriented code organization concepts. Participants will get FITS data files from standard astronomical releases and write code to access the data. The participants will use these classes to display data. Through the process participants will be introduced to the numpy, matplotlib, and scipy Python packages. Emphasis will be placed on sharing and reusing code rather than recreated by each astronomer who uses the data. The instructors will be Demitri Muna (Ohio State University) and Adrian Price-Whelan (Columbia University), who have four years of experience running the successful week-long SciCoder workshop. Participant Requirements: Participants are required to bring their own laptops with specified software pre-installed. For the workshop, we will only support Mac OS X or Linux operating systems. Users who use Windows have the option of running Linux in a virtual machine or else creating a dual-boot system. Participants must have a minimum of 20GB free on their computer. Organized by August Muench and the AAS Employment Committee.

Chair(s):
Demitri Muna, *New York University*
Adrian Price-Whelan, *Columbia University*
Organizer(s):
August Muench, *Smithsonian Astrophysical Observatory*

Astronomy Ambassadors Workshop for Early-Career AAS Members (Day 2 of 2)

Sunday, 9:00 AM - 5:30 PM; Chesapeake 7

The AAS Astronomy Ambassadors program is designed to support early-career AAS members with training in resources and techniques for effective outreach to K-12 students, families, and the public. Workshop participants will learn to communicate more effectively with public and school audiences; find outreach opportunities and establish ongoing partnerships with local schools, museums, parks, and/or community centers; reach audiences with personal stories, hands-on activities, and jargon-free language; identify strategies and techniques to improve their presentation skills; gain access to a menu of outreach resources that work in a variety of settings; and become part of an active community of astronomers who do outreach. Participation in the program includes a few hours of pre-workshop online activities to help us get to know your needs; the two-day workshop, for which lunches and up to 2 nights' lodging will be provided; and certification as an AAS Astronomy Ambassador, once you have logged three successful outreach events. The workshop includes presenters from the American Astronomical Society, the Astronomical Society of the Pacific, and the Pacific Science Center. The number of participants is limited, and the application requires consent from your department chair. We invite applications from graduate students, postdocs and new faculty in their first two years after receipt of their PhD, and advanced undergraduates doing research and committed to continuing in astronomy. Early-career astronomers who are interested in doing outreach, but who haven't done much yet, are encouraged to apply; we will have sessions appropriate for both those who have done some outreach already and those just starting their outreach adventures. We especially encourage applications from members of groups that are presently underrepresented in science. Please complete the online application form (http://aas.org/content/aas-astronomy-ambassadors-program-2014-application) by 18 October 2013.

Organizer(s):
Suzanne Gurton, *Astronomical Society of the Pacific*

2014 NSF Postdoctoral Fellows Symposium (Day 2 of 2)

Sunday, 9:00 AM - 6:00 PM; Potomac Ballroom D

This is the annual meeting of the NSF Astronomy & Astrophysics Postdoctoral Fellows (AAPF). The NSF AAPF program supports young scientists who carry out an integrated program of independent research and education/public outreach. During this two-day annual symposium, the Fellows gather to give talks on their current research and outreach projects. Several outside speakers are also invited to give keynote talks and participate in discussion panels on a range of topics such as exploring non-traditional outreach methods, addressing the next big problems in astronomy, and exploring alternative careers outside of academia. This meeting provides an opportunity for the current, past, and prospective Fellows to meet and discuss their work with members of the community, learn from each other's experiences, and to foster new collaborations. All members of the astronomical community are welcome and encouraged to attend.

Organizer(s):
Douglas Watson, *University of Chicago*

NASA's Cosmic Origins Program Analysis Group

Sunday, 9:30 AM - 6:00 PM; Baltimore 1

The COPAG is responsible for soliciting and coordinating community input into the development and execution of NASA's Cosmic Origins Program. The COPAG serves as a community-based, interdisciplinary forum for analysis in support of Cosmic Origins objectives and of their implications for mission planning, technology prioritization and for future studies and exploration. It provides findings and analysis to NASA through the NASA Advisory Council (NAC) via the COPAG Chair, who is a member of the Astrophysics Subcommittee. We will present a description of the on-going COPAG activities, in particular focusing on efforts to formulate science drivers for near-term mission concepts, primarily for the UV/Visible but not precluding other wavelengths, and on technology development activities. All interested parties are encouraged to participate and provide their thoughts and suggestions.

Organizer(s):
Susan Neff, *NASA's GSFC*

NASA's PhysPAG Gamma Ray SIG

Sunday, 9:30 AM - 3:00 PM; Baltimore 3

NASA's PhysPAG Science Interest Group, GammaSIG will hold their community meeting January 5, 2014. All interested members of the community are encouraged to participate.

Organizer(s):
Ann Hornschemeier, *NASA GSFC*

NASA Physics of the Cosmos Program Analysis Group

Sunday, 9:30 AM - 6:00 PM; Annapolis 3

NASA's Physics of the Cosmos Program Analysis Group will hold their community meeting Sunday, January 5, 2014. The PhysPAG is a forum for soliciting and coordinating input from the science community to advance the science objectives of the Physics of the Cosmos program. The five Science Analysis Groups in the areas of X-rays, Gravitational Waves, Inflation Probe, Gamma Rays and Cosmic Rays will report on progress within their groups and there will also be discussion of dark energy science. All interested members of the community are encouraged to participate.

Organizer(s):
Ann Hornschemeier, *NASA GSFC*

LSST Stars, Milky Way and LV Splinter Meeting

Sunday, 12:00 PM - 6:00 PM; Baltimore 4

The Stars, Milky Way and Local Volume LSST collaboration will work from the completed Phase I roadmaps that we have assembled, and which highlight technical/scientific challenges that must be worked on in order to do LSST science. We plan here to synthesize and map out the next steps for our collaboration. We will begin the task of outlining a path from where we are today to where we need to be in 7 years to do LSST science (Phase II). Example action items include: informing the Project with respect to survey decisions such as cadence and algorithms; utilizing imminent or existing analog data to do precursor science; and developing Level 3 products.

Organizer(s):
Nitya Kallivayalil, *University of Virginia*

Managing, Sharing, and Archiving Your Data

Sunday, 1:00 PM - 4:00 PM; Potomac 1

Astronomers use, peruse and produce vast amounts of scientific data. Managing these data consumes a great deal research effort. Making these data publicly available is important because it supports the reproducibility of results. Archiving these data ensures their long term preservation and reuse. This workshop will introduce participants to some tools to tackle the problem of managing, sharing, and archiving their data. Specific topics covered will include funding agency data management requirements, data-literature connections such as how to best cite data in your paper, online tools for preserving and sharing data, and desktop tools for managing data. The instructor will be August Muench (Smithsonian Astrophysical Observatory). Participant Requirements: Participants at all stages of their career are welcome, and there are no prerequisites. Participants should bring their own laptops in order to participate in hands on tutorials with specific data archiving tools and websites. Organized by August Muench and the AAS Employment Committee

Organizer(s):
August Muench, *Smithsonian Astrophysical Observatory*

Dark Skies & Energy Kits for Classrooms & Outreach

Sunday, 1:00 PM - 5:00 PM; National Harbor 7

The National Optical Astronomy Observatory has been heavily involved in the development of Dark Skies and Energy Education activities. The activities help students identify wasteful/inefficient lighting and provide ways to reduce energy consumption and cost. Reducing excess light is critical to astronomy, but excess light also affects human health, as well as plant and animal ecosystems. In the past several years, we have taught these activities in workshops, online forums and Google+ Hangouts. They have been used in college, high school, and middle school classrooms. They have also been utilized in afterschool programs, museums, planetaria, and science and environmental centers. As part of this program, we have developed a Dark Skies and Energy Education kit (DS&EE). The DS&EE kit contains a demonstration on the importance of shielding lights; different lights, sockets and diffraction gratings to learn about the efficiency of lights; and a luxmeter, a Sky Quality Meter and a camera to quantify and calculate the energy, cost, and carbon footprint in a lighting audit. Materials for three other activities addressing how light pollution affects wildlife and helping prepare participants for the Globe at Night citizen-science campaign are also included in the kit. In this workshop, participants will learn about and evaluate the DS&EE kit materials and activities. The activities cover topics that illustrate responsible lighting, the effects light pollution has on energy consumption and wildlife, and how everyone can measure the darkness of their night skies. All of the activities will be set up and participants will have a chance to perform as many of the activities as time permits. We will collect feedback on the activities and materials from the workshop participants and incorporate the feedback into future versions of the DS&EE kit. At workshop's end, a DS&EE kit will be raffled. For more information, see http://www.globeatnight.org/dsr/.

Organizer(s):
Constance Walker, *NOAO*

AAS/NGS SCIENCE COMMUNICATION WORKSHOP

Sunday, 1:00 PM - 5:00 PM; Potomac 6

One of the great things about working in astronomy is that the press and public are keenly interested in what we do. That's the good news. The bad news is that few of us receive any training, in our education or on the job, in how to communicate effectively with the press and public. Yet funding agencies increasingly expect researchers to reach beyond the narrow confines of academia to share scientific findings and insights with the wider community. To help fill the gap between expectations and preparation, the AAS is partnering with the National Geographic Society to present a half-day workshop on science communication. Interactive and engaging, it will focus on specific practical techniques for communicating more effectively with nonscientists. Topics will include speaking to diverse audiences, visual storytelling, effective use of social media, how to write for a general readership, and tips for surviving your first TV appearance. The workshop is open to all AAS members but will be especially valuable to early-career astronomers.

Organizer(s):
Richard Fienberg, *American Astronomical Society*

Re-Numerate: Restoring Essential Numerical Skills

Sunday, 1:00 PM - 5:00 PM; National Harbor 12

All who step in front of an introductory science course today encounter the same problems with introducing quantitative science – students' gross lack of arithmetic skills, inability to think numerically and frequent pervasive fear of all things numerical. Although we can enhance appreciation of astronomy through qualitative methodologies, we do so at the expense of scientific authenticity and depth of understanding by excising the real and beautiful quantitative principles that underlie nature. We also reinforce the commonly-held belief that numerical skills are not useful in everyday life. This workshop will show participants how to confront misconceptions, increase student motivation and self-awareness and improve arithmetic thinking using astronomy-specific materials as well as "real life" examples. Participants will learn how to extend existing materials (e.g., Lecture Tutorials) for this purpose and will be introduced to new possibiliti es in labs, class activities, think-pair-share questions and homework assignments. This is a hands-on workshop, and participants will be engaged in creating new materials of their own, in addition to being introduced to our materials.

Organizer(s):
Katherine Follette, *University of Arizona*

The Future of Time in Astronomy

Sunday, 1:00 PM - 5:00 PM; National Harbor 6

Turning day into night: A proposal to redefine Coordinated Universal Time (UTC) to no longer be tied to the rotation of the Earth narrowly missed a vote at the 2012 World Radiocommunication Conference (WRC) of the International Telecommunication Union (ITU), an agency of the United Nations. A similar proposal is scheduled for the 2015 WRC. While the IAU has a UTC working group, the decision is out of the hands of astronomers – but with significant implications for observatories, space missions and time domain science. Redefining UTC would introduce a secular drift into civil time and make even familiar concepts like "day" incoherent; each missed leap second would be an error of 15 seconds of arc at the equator. Clocks worldwide – and on your computer, phone and wrist – would be affected. We will discuss the history and future of timekeeping, and will present strategies and best practices (whatever the ITU outcome) for time standards and network clocks, and for performing a Y2K-like software and system inventory at your institution. See http://futureofutc.org/AAS223/ for speakers and links. Time affects everyone and AAS registration is not required.

Organizer(s):
P. Kenneth Seidelmann, *Univ. of Virginia*

90 HAD I: Origin of Structure and the Expanding Universe

Sunday, 1:30 PM - 3:30 PM; Baltimore 5

When Hot Big Bang cosmology became widely accepted from the 1960s theorists realised that an explanation of how structure arises in the universe was a complex intellectual puzzle.

Speakers in this session will explore how aspects of the problem of structure formation developed in the last century. Speakers will explain how the problem of origin - the "why is there something rather than nothing?" question slowly dawned. Speakers will explain why expansion models of the universe were only slowly accepted. New scholarship sheds light on the exchanges between Einstein and Hubble. A new timeline will be presented of events in 1948 concerning the thermal radiation associated with a hot expansion. The session concludes with an assessment of Beatrice Tinsley's contribution to derailing the famous "search for two numbers" that would define the evolution of the universe.

Organizer(s):
Simon Mitton, *Total Astronomy*

90.01 **NOR YET THE LAST TO LAY THE OLD ASIDE: Structuring the Something**
Trimble, Virginia L.[1]
[1.] UC, Irvine, Irvine, CA.

90.02 **A One Galaxy Universe and the Shift to Modern Cosmology**
Smith, Robert W.[1]
[1.] Univ. of Alberta, Edmonton, AB, Canada.

90.03 **REDSHIFTS AND THE EXPANDING UNIVERSE - PARADIGM SHIFT OR SLOW DAWNING?**
O Raifeartaigh, Cormac[1]
[1.] Waterford Institute of Technology, Waterford, Ireland, Ireland.

90.04 **Dismantling Hubble's Legacy?**
Way, Michael J.[1, 2]
[1.] NASA/Goddard Institute for Space Studies, New York, NY. [2.] Department of Physics and Astronomy, Uppsala, Sweden.

90.05 **What happened in 1948?**
Peebles, P. J.[1]
[1.] Princeton University, Princeton, NJ.

90.06 **How Beatrice Tinsley Destroyed Sandage's Quest for a Standard Candle**
Mitton, Simon[1]
[1.] University of Cambridge, Cambridge, United Kingdom.

91 HAD II: From Barnard's Star to the Kepler Mission: Searching for Low Mass Companions to Stars

Sunday, 4:00 PM - 6:00 PM; Baltimore 5

One of the signal advances in astronomy in the last 25 years has been the discovery of extrasolar planets. Speakers in this session will examine the role of applying new technologies, hardware and software, scientific and cultural, to the search for planets in the universe. Speakers will identify what the limits of detection have been over the past century, and how these limits have been extended to the point where humanity seems now on the verge of actually finding habitable abodes of life circling other stars. Speakers who have been participants in the process will discuss their strategies and modes of operation, and what they feel are the key artifacts of the material heritage of the process that should be preserved to better record and appreciate this stage in the search for life in the universe. Speakers include Geoff Marcy, David Latham, Gordon Walker, Bill Borucki, Tim Brown, and Edward Dunham.

Organizer(s):
David De Vorkin, *Smithsonian Inst.*
Steven Dick, *NASM*

91.01 **Hydrogen Fluoride: an unexpected calalyst in the search for extra-solar planets**
Walker, Gordon A.[1]
[1.], Victoria, BC, Canada.

91.02 **The Unseen Companion of HD 114762**
Latham, David W.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA.

91.03 **Technology Enabling the First 100 Exoplanets**
Marcy, Geoffrey W.[1]
[1.]UC, Berkeley, Berkeley, CA.

91.04 **Barriers to the Development of the Kepler Mission**
Borucki, William J.[1]; Batalha, Natalie M.[1]; Dunham, Edward W.[3]; Jenkins, Jon M.[2]
[1.]NASA Ames Research Center, Moffett Field, CA. [2.]SETI Institute, Mountain View, CA.[3].Lowell Observatory, Flagstaff, AZ.
Contributing teams: Kepler Science Team

91.05 **The Discovery of Extrasolar Planets via Transits**
Dunham, Edward W.[1]; Borucki, William J.[2]; Jenkins, Jon M.[3]; Batalha, Natalie M.[2]; Caldwell, Douglas A.[3]; Mandushev, Georgi[1]

[1.]Lowell Obs., Flagstaff, AZ. [2.]NASA Ames, Moffett Field, CA. [3.]SETI Institute, Mountain View, CA.

91.06 **Adapting Low-Tech Gear to Exoplanet Discovery**
Brown, Timothy M.[1, 2]

[1.]Las Cumbres Global Telescope Network, Inc., Goleta, CA. [2.]CU/CASA, Boulder, CO.

Undergraduate Orientation

Sunday, 6:00 PM - 7:00 PM; Maryland Ballroom A

Undergraduate students, their advisors and those interested in attracting undergraduate students to their graduate program, or undergraduate research opportunity are invited to attend this event. Members of the AAS Council and of the Astronomy Education Board will be there to meet and chat with students. For the benefit of those students attending an AAS meeting for the first time, we will explain how to get the most out of an AAS meeting and outline how the meeting works. Sign up, free of charge to all undergrads, their advisors and those offering research opportunities (or jobs) to undergraduates, through the meeting registration form. Light snacks and refreshments will be provided.

Organizer(s):
Kevin Marvel, *American Astronomical Society*

AAS Opening Reception

Sunday, 7:00 PM - 9:00 PM; Potomac Ballroom A

Open to all attendees and registered guests, the Opening Reception kicks off the 223rd meeting of the American Astronomical Society at the Gaylord National.

MONDAY, 6 JANUARY 2014

100 Welcome Address

Monday, 8:00 AM - 8:30 AM; Potomac Ballroom A

101 Kavli Foundation Lecture: The Hubble Deep Field and its Legacy

Monday, 8:30 AM - 9:20 AM; Potomac Ballroom A

Chair(s):
David Helfand, *Quest University Canada*

Robert Williams - Kavli Lecturer
For providing strong scientific leadership as Director of the Cerro Tololo Inter-American Observatory, Director of the Space Telescope Science Institute, and President of the International Astronomical Union; an example of which is his instigation and leadership of the Hubble Deep Field project, which has provided us with an exquisite view of the early universe and a deeper understanding of very young galaxies.

101.01 The Hubble Deep Field and its Legacy
Williams, Robert E.[1]
[1]STScI, Baltimore, MD.

Careers 101: Career Planning Workshop for Graduate Students and Postdocs

Monday, 9:30 AM - 11:30 AM; Potomac 1

This workshop and panel discussion will center on the current and expanding crisis in the job and career market for astronomers. Specifically targeted towards graduate students and Postdocs, this workshop will identify how early-career scientists can work towards their ideal career path. Our focus will be on career planning for traditional astronomy positions. We will demonstrate how to orchestrate a personal career plan and to identify skills that will be marketable in more than one industry. We will discuss what early-career astronomers should do now to enhance their CVs and research reputations, and what they should look for in and how they can leverage a Postdoc appointment to that can set themselves up for success in the field. We will also discuss a variety of jobs and career paths in astronomy, and introduce the skills that are needed to pursue these. Q and A between panelists and workshop participants will be highly encouraged. Please see "Recovering from Postdoc Mistakes," Science Magazine, March 3, 2011, http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2011_03_18/science.opms.r1100101 for a reference on some of the topics we will discuss. Audience: Undergraduates, graduate students, postdocs. Facilitator: Alaina G. Levine, President, Quantum Success Solutions Alaina G. Levine is a science careers consultant, science writer, and professional speaker and comedian. Her new book on networking strategies for scientists and engineers will be published by Wiley in 2014.

Chair(s):
Alaina Levine, *Quantum Success Solutions*
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

Amateur Talk: Gravitational Lensing Boot Camp

Monday, 9:30 AM - 10:00 AM; Maryland Ballroom A

What is gravitational lensing, what has it told us about the universe, and what more can it tell us about the universe? Lenses such as black holes, stars, galaxies, clusters of galaxies, and the universe as a whole will be covered. Concepts such as Einstein rings, photon spheres, image pair creation events, and shear will be defined and briefly discussed. The intersection of current research frontiers and gravitational lensing will be reviewed including how microlensing is being used to search for extra-solar planets, how radio telescopes are being used to probe galaxy-center black holes, and how weak lensing is being used to probe galaxy evolution in the early universe. Short videos showing what it looks like to go near a black hole will be shown and described.

Chair(s):
Robert Nemiroff, *Michigan Technological Univ.*

102 Cosmology & CMB I

Monday, 10:00 AM - 11:30 AM; Potomac Ballroom D

Chair(s):
Alan Kogut, *NASA's GSFC*

102.01D Toward a precise determination of the neutral gas fraction at z~7 using the Lyman alpha fraction test
Schenker, Matthew A.[1]; Ellis, Richard S.[1]; Stark, Daniel[2]
[1.]Caltech, Pasadena, CA. [2.]University of Arizona, Tucson, AZ.

102.02 Finding the First Cosmic Explosions: Hypernovae and Pair-Instability Supernovae
Wiggins, Brandon[1, 2]; Whalen, Daniel J.[2]; Migenes, Victor[1]
[1.]Brigham Young University, Provo, UT. [2.]Los Alamos National Laboratory, Los Alamos, NM.
Contributing teams: Astrophysics Research Group at Los Alamos National Laboratory

102.03 In Pursuit of the Thermal State of the IGM at Redshift 20: Radio Foreground Characterization
Greenhill, Lincoln J.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA.
Contributing teams: LEDA collaboration

102.04D Simulating Metal-Poor and Metal-Free Star Formation in the Earliest Galaxies
Safranek-Shrader, Chalence[1]
[1.]University of Texas at Austin, Austin, TX.

102.05 21cm Reionization Results Suggesting X-Ray Heating
Parsons, Aaron[1]
[1.]University of California, Berkeley, Berkeley, CA.
Contributing teams: PAPER, HERA

102.06 Linear and Circular polarization of CMB and cosmic 21cm radiation
De, Soma[1]; Vachaspati, Tanmay[1]; Pogosian, Levon[2]; Tashiro, Hiroyuki[1]
[1.]Arizona State University, Tempe, AZ. [2.]Simon Fraser University, Burnaby, BC, Canada.

102.07 The effect of aberration on partial-sky measurements of the cosmic microwave background temperature power spectrum
Jeong, Donghui[1]; Chluba, Jens[1]; Dai, Liang[1]; Kamionkowski, Marc[1]; Wang, Xin[1]
[1.]Johns Hopkins University, Baltimore, MD.

103 Exoplanets and Kepler Astrophysics

Monday, 10:00 AM - 11:30 AM; Potomac Ballroom A

In addition, to revolutionizing our view of exoplanets, Kepler has also extended our understanding of the time domain astrophysics. The talks presented here will yield insight into the tremendous power of citizen science in the discovery of exoplanets (Meg Schwamb), will present a discussion of the stellar variability and its relationship to the stellar properties (Fabienne Bastien), and the variability of active galactic nuclei (Rick Edelsen).

Chair(s):
David Ciardi, *Caltech*
Organizer(s):
Frederic Rasio, *Northwestern Univ.*

103.01 Planet Hunters: Kepler by Eye
Schwamb, Megan E.[1]; Lintott, Chris[2, 3]; Fischer, Debra[4]; Smith, Arfon M.[3]; Boyajian, Tabetha S.[4]; Brewer, John M.[4]; Giguere, Matthew J.[4]; Lynn, Stuart[3]; Parrish, Michael[3]; Schawinski, Kevin[5]; Schmitt, Joseph[4]; Simpson, Robert[2]; Wang, Ji[4]
[1.]Institute of Astronomy & Astrophysics, Academia Sinica (ASIAA), Taipei, Taiwan. [2.]University of Oxford, Oxford, United Kingdom. [3.]Adler Planetarium, Chicago, IL. [4.]Yale University, New Haven, CT. [5.]ETH Zurich , Zurich, Switzerland.

103.02 Flicker, Jitter, Crackle: Lifting the Veil on Stellar Variability and Understanding its Impact on Planet Detection with Kepler
Bastien, Fabienne A.[1]; Stassun, Keivan[1, 4]; Basri, Gibor S.[2]; Pepper, Joshua[3, 1]
[1.]Vanderbilt University, Madison, TN. [2.]University of California, Berkeley, CA. [3.]Lehigh University, Bethlehem, PA. [4.]Fisk University, Nashville, TN.

103.03 Optical variability of the Kepler AGN
Edelson, Rick[1]
[1.]University of Maryland, College Park, MD.

104 Exoplanets: Exomoons and Migration

Monday, 10:00 AM - 11:30 AM; National Harbor 12

Chair(s):
Steve Bryson, *NASA Ames Research Center*

104.01 Open Cluster Planets and an Observational Constraint on Hot Jupiter Migration
Quinn, Samuel N.[1]; White, Russel J.[1]; Latham, David W.[2]; Buchhave, Lars A.[2]; Torres, Guillermo[2]; Stefanik, Robert P.[2]
[1.]Georgia State University, Atlanta, GA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

104.02 Planetesimal Migration and its Effects on Mean Motion Resonances
Chatterjee, Sourav[1]; Ford, Eric B.[2]
[1.]University of Florida, Gainesville, FL. [2.]Pennsylvania State University, University Park, PA.

104.03 How Do Mini-Neptunes Migrate?
Berta-Thompson, Zachory K.[1]
[1.]MIT, Cambridge, MA.

104.04 First Evaluation of the Rate of Planet Migration Into Stars, Plus Many Newly-Found Correlations Between Metallicity and Planet Orbit Parameters
Taylor, Stuart F.[1, 2]
[1.]Participation Worldscope, Hong Kong, Hong Kong. [2.]Global Telescope Science, Cottonwood, AZ.

104.05 Exomoon Conditions in Circumbinary Habitability Zones
Mason, Paul A.[1, 3]; Zuluaga, Jorge I.[2]; Clark, Joni[3]; Cuartas-Restrepo, Pablo2
[1.]Univ. Of Texas at El Paso, Las Cruces, NM. [2.]Universidad de Antioquia, Medellin, Colombia. [3.]New Mexico State University, Las Cruces, NM.

104.06 Taking Exomoons to the (Radius) Limit
Hinkel, Natalie R.[1]; Kane, Stephen R.[1]
[1.]San Francisco State University, San Francisco, CA.

105 Extrasolar Planet Characterization & Theory I

Monday, 10:00 AM - 11:30 AM; Maryland Ballroom A

Chair(s):
Nicolas Cowan, *Northwestern University*

105.01 Earth-Size Planets from Kepler
Marcy, Geoffrey W.[1]; Petigura, Erik[1]; Howard, Andrew[2]; Weiss, Lauren M.[1]; Isaacson, Howard T.[1]; Rogers, Leslie[3]
[1.]UC Berkeley, Berkeley, CA. [2.]University of Hawaii/IfA, Honolulu, HI. [3.]Caltech, Pasadena, CA.
Contributing teams: Kepler Team

105.02 Just the Photometry: Constraining exoplanet orbits by measuring stellar densities
Sliski, David[1]; Kipping, David M.[2]
[1.]Harvard University, Cambridge, MA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

105.03 NPOI Observations of the Exoplanet Host Kappa Coronae Borealis
Baines, Ellyn K.[1]; Armstrong, J. T.[1]; van Belle, Gerard[2]
[1.]Naval Research Laboratory, Washington, DC. [2.]Lowell Observatory, Flagstaff, AZ.

105.04 A Relation between Mass and Radius for 59 Exoplanets Smaller than 4 Earth Radii
Weiss, Lauren M.[1, 2]; Marcy, Geoffrey W.[1]
[1.]UC Berkeley, Berkeley, CA. [2.]NSF, Washington, DC.

105.05 The Fate of Hot Jupiters
Schlaufman, Kevin[1]
[1.]MIT Kavli Institute for Astrophysics and Space Research, Cambridge, MA.

105.06 Exoplanet Transit Spectroscopy of Hot Jupiters Using HST/WFC3
Mandell, Avi[1]; Haynes, Korey[2, 1]; Sinukoff, Evan[3]; Madhusudhan, Nikku[4]; Burrows, Adam S.[5]; Deming, Drake[6, 1]
[1.]NASA GSFC, Greenbelt, MD. [2.]George Mason University, Fairfax, VA. [3.]University of Hawaii, Honolulu, HI. [4.]Yale University, New Haven, CT. [5.]Princeton University, Princeton, NJ. [6.]University of Maryland, College Park, MD.

105.07 On the Coplanar Origin of Counter Orbiting Hot Jupiters
Li, Gongjie[1]; Naoz, Smadar[1]; Kocsis, Bence[1]; Loeb, Abraham[1]
[1.]Harvard Univ., Cambridge, MA.

105.08 The Spitzer/IRAC 4.5 micron full-orbit phase curve of the hot Jupiter HD 209458b
Zellem, Robert[1]; Lewis, Nikole[2]; Knutson, Heather[3]; Griffith, Caitlin A.[1]; Fortney, Jonathan J.[4]; Showman, Adam P.[1]; Cowan, Nicolas B.[5]; Agol, Eric[6]; Burrows, Adam S.[7]; Charbonneau, David[8]; Deming, Drake[9]; Laughlin, Gregory P.[4]; Langton, Jonathan S.[10]
[1.]Lunar and Planetary Laboratory - University of Arizona, Tucson, AZ. [2.]Massachusetts Institute of Technology, Cambridge, MA. [3.]California Institute of Technology, Pasadena, CA. [4.]University of California, Santa Cruz, Santa Cruz, CA. [5.]Northwestern University, Evanston, IL. [6.]University of Washington, Seattle, WA. [7.]Princeton University, Princeton, NJ. [8.]Harvard University, Cambridge, MA. [9.]University of Maryland, College Park, MD. [10.]Principia College, Elash, IL.

105.09 Experimental study of a low-order wavefront sensor for high-contrast corona graphic imagers
Lozi, Julien[1]; Belikov, Ruslan[2]; Schneider, Glenn[1]; Guyon, Olivier[1]; Thomas, Sandrine[2, 3]; Pluzhnik, Eugene[2, 3]
[1.]University of Arizona, Tucson, AZ. [2.]NASA Ames Research Center, Moffett Field, CA. [3.]UARC/NASA Ames, Moffett Field, CA.
Contributing teams: EXCEDE Project Technology Development Team

106 Galaxy Clusters: Star Formation, AGN, Interactions

Monday, 10:00 AM - 11:30 AM; National Harbor 10

Chair(s):
John Feldmeier, *Youngstown State Univ.*

106.01D Star Formation in Cluster Dwarf Galaxies
Rude, Cody[1]; Barkhouse, Wayne[1]
[1.]University of North Dakota, Grand Forks, ND.

106.02D Modeling AGN Feedback in Cool-Core Clusters
Li, Yuan[1]
[1.]Columbia University, New York, NY.
Contributing teams: Enzo

106.03 The Spectacular Interacting Galaxy System Arp 105
West, Michael[1]; Gregg, Michael[2, 3]
[1.]Maria Mitchell Observatory, Nantucket, MA. [2.]University of California, Davis, Davis, CA. [3.]Lawrence Livermore National Lab, Livermore, CA.

106.04 Star Formation in the Double Galaxy Cluster Abell 2465
Wegner, Gary A.[1]; Chu, Devin S.[2]
[1.]Dartmouth College, Hanover, NH. [2.]Dartmouth College, Hanover, NH.

106.05 Weighing 'El Gordo' with a Precision Scale: Hubble Space Telescope Weak-lensing Analysis of the Merging Galaxy Cluster ACT-CL J0102-4915 at z=0.87
Jee, Myungkook J.[1]; Hughes, John P.[2]; Menanteau, Felipe[3, 2]; Sifon, Cristobal[4]; Mandelbaum, Rachel[5]; Barrientos, Felipe[6]; Infante, Leopoldo[6]; Ng, Karen[1]
[1.]UC Davis, Davis, CA. [2.]Rutgers University, Piscataway, NJ. [3.]NCSA, Urbana, IL. [4.]Leiden University, Leiden, Netherlands. [5.]Carnegie Mellon University, Pittsburgh, PA. [6.]Pontificia Universidad, Santiago, Chile.

106.06 The Radio Relics and Halo of El Gordo: a Massive Cluster Merger at z = 0.870
Baker, Andrew J.[1]; Lindner, Robert[1, 2]; Battaglia, Nicholas[3]; Gupta, Neeraj[4]; Hughes, John P.[1]; Knowles, Kenda[5]; Marriage, Tobias[6]; Menanteau, Felipe[7]; Moodley, Kavilan[5]; Reese, Erik D.[8]; Srianand, Raghunathan[4]
[1.]Rutgers, the State University of NJ, Piscataway, NJ. [2.]University of Wisconsin, Madison, WI. [3.]Carnegie Mellon University, Pittsburgh, PA. [4.]Inter-University Centre for Astronomy and Astrophysics, Pune, India. [5.]University of KwaZulu-Natal, Durban, South Africa. [6.]Johns Hopkins University, Baltimore, MD. [7.]University of Illinois, Urbana, IL. [8.]University of Pennsylvania, Philadelphia, PA.

106.07 A Deep Chandra X-ray Observation of El Gordo
Hughes, John P.[1]; Baker, Andrew J.[1]; Barrientos, Felipe[2]; Jee, Myungkook J.[3]; Infante, Leopoldo[2]; Lindner, Robert[4]; Mandelbaum, Rachel[5]; Menanteau, Fe lipe[6]; Sifon, Cristobal[7]; Zitrin, Adi[8]
[1.]Rutgers Univ, Piscataway, NJ. [2.]Pontifica Univ Catolica de Chile, Santiago, Chile. [3.]UC Davis, Davis, CA. [4.]Univ of Wisconsin, Madison, WI. [5.]Carnegie Mellon Univ, Pittsburgh, PA. [6.]NCSA, Urbana-Champaign, IL. [7.]Lieden Univ, Lieden, Netherlands. [8.]Univ of Heidelberg, Heidelberg, Germany.

107 HAD IV: History of Astronomy

Monday, 10:00 AM - 11:30 AM; National Harbor 3

Chair(s):
Marc Rothenberg, *National Science Foundation*

107.01 We Are NOT Alone!
Griffin, Elizabeth[1]
[1.]Dominion Astrophysical Observatory, Victoria, BC, Canada.

107.02 The Astronomy Genealogy Project
Tenn, Joseph S.[1]
[1.]Sonoma State University, Rohnert Park, CA.

107.03 East, West, North, South: A look at a method available to prehistoric cultures to both determine cardinality and the date of the equinox
Hull, Anthony B.[3]; Ambruster, Carol[2]; Jewell, Elizabeth[1]
[1.]University of Phoenix, Philadelphia, PA. [2.]AAS Emeritus, Philadelphia, PA. [3.]University of New Mexico, Albuquerque, NM.

107.04 Graeco-Roman Astro-Architecture: The Temples of Pompeii
Tiede, Vance R.[1]
[1.]Astro-Archaeology Surveys, Guilford, CT.

107.05 The Talmudic Sage Samuel, the Pleiades and Comet 2P/Encke: An Ancient Jewish Astronomical Text Explained
Gersch, Alan[1]
[1.]Univ. of Maryland, College Park, MD.

107.06 Copernican Astronomy and Oceanic Exploration
McKittrick, Paul[1]
[1.]Georgia Institute of Technology, Atlanta, GA.

107.07 Messier, Copernicus, Flamsteed: The SAF Rare-Book Collection in Paris
Pasachoff, Jay M.[1]
[1.]Williams College, Williamstown, MA.

107.08 The Carbon Dioxide Concentration in Earth's atmosphere and Its Possible Influence on the Temperature at the Surface – as discussed in Sweden in 1894-96.
Willson, Lee Anne M.[1]
[1.]Iowa State Univ., Ames, IA.

108 HEAD I: News from the Galactic Center: A Multiwavelength Update on the Sgr A*/G2 Encounter

Monday, 10:00 AM - 11:30 AM; National Harbor 5

The predicted collision between a dense, cold gas cloud (dubbed "G2") and our Milky Way's own supermassive black hole, Sgr A*, has sparked real-time observational and theoretical efforts across the entire astronomical community. G2's orbit is eccentric and the cloud already shows signs of tidal disruption by the black hole. This encounter offers an unprecedented opportunity to test models of black hole accretion and its associated feedback. Yet, despite impressive multiwavelength monitoring campaigns and substantial theoretical work, debate continues as to the nature of G2 and it's impact on Sgr A*: Is G2 really a cloud, or is it an enshrouded star? Will Sgr A*'s high energy flare rate increase during this encounter and can such an increase help constrain the flare mechanism? Can we use G2 as a probe of Sgr A*'s hot accretion flow? What changes do we observe from G2 itself as it is shocked and heated? What do we learn if nothing happens (electromagnetically speaking)? Join the AAS High Energy Astrophysics Division (and friends!) for a lively discussion about these and other controversies unfolding in our Galactic Center.

Chair(s):
Daryl Haggard, *Northwestern University/CIERA*
Organizer(s):
Daryl Haggard, *Northwestern University/CIERA*

108.01 A Brief Overview of X-ray Monitoring of the Sgr A*/G2 Interaction in 2012-2013
Baganoff, Frederick K.[1]
[1.]MIT, Cambridge, MA.
Contributing teams: Sgr A* XVP Collaboration

108.02 G2 Monitoring at Submillimeter, Millimeter, and Radio Wavelengths
Bower, Geoffrey C.[1]
[1.]ASIAA/RCUH, Hilo, HI.

108.03 The Swift/XRT monitoring campaign of the Galactic center
Degenaar, Nathalie[1]; Reynolds, Mark[1]; Miller, Jon M.[1]; Wijnands, Rudy[3]; Kennea, Jamie A.[2]; Haggard, Daryl[4]; Gehrels, Neil[8]; Ponti, Gabriele[7]; Baganoff, Frederick K.[5]; Markoff, Sera[3]; Altamirano, Diego[6]; Burrows, David N.[2]
[1.]University of Michigan, Ann Arbor, MI. [2.]Penn State University, State College, PA. [3.]University of Amsterdam, Amsterdam, Netherlands. [4.]Northwestern University, Evanston, IL. [5.]MIT, Cambridge, MA. [6.]University of Southampton, Southampton, United Kingdom. [7.]MPE, Garching, Germany. [8.]NASA GSFC, Greenbelt, MD.

108.04 Expectations for Sgr A* in the case of an enhanced accretion rate from the G2 encounter
Markoff, Sera[1]
[1.]API, University of Amsterdam, Amsterdam, Netherlands.
Contributing teams: Chandra X-ray Visionary Project on Sgr A*

108.05 Multi-Wavelength Monitoring of the G2 Cloud Interacting with Sgr A*
Yusef-Zadeh, Farhad[1]
[1.]Northwestern Univ., Evanston, IL.

108.06 G2 Encounter: A Real-time Experiment on Accretion Flows
Ozel, Feryal[1]
[1.]University of Arizona, Tucson, AZ.

108.07 Keck observations of G2 and SgrA*
Meyer, Leo[1]; Ghez, Andrea M.[1]; Do, Tuan[2]; Boehle, Anna[1]; Witzel, Gunther[1]; Sitarski, Breann[1]; Yelda, Sylvana[1]; Lu, Jessica R.[3]; Morris, Mark[1]; Becklin, Eric E.[1]
[1.]UCLA, Los Angeles, CA. [2.]Dunlap Institute, Toronto, ON, Canada. [3.]IfA, Honolulu, HI.

108.08 VLT Observations of the Gas Cloud G2
Gillessen, Stefan[1]
[1.]Max Planck Institute For Extraterrestrial Physics, Munich, Germany.

109 Instrumentation I: Space Missions

Monday, 10:00 AM - 11:30 AM; Maryland 2

Chair(s):
Tobias Marriage, *Princeton University*

109.01 Next Generation Submillimeter Heterodyne Focal Plane Array Technology
Goldsmith, Paul[1]; Mehdi, Imran[1]; Kawamura, Jonathan H.[1]; Siles, Jose V.[1]; Lee, Choonsup[1]; Chattoopadhyay, Goutam[1]; Bumble, Bruce[1]; Stern, Jeffrey A.[1]
[1.]JPL, Pasadena, CA.

109.02 Technology Demonstration Milestone #1 for the EXoplanetary Circumstellar Environments and Disk Explorer (EXCEDE) I. Laboratory/Experimental Results.
Belikov, Ruslan[1]; Bendek, Eduardo[1]; Davis, Paul[1]; Duncan, Alan[3]; Greene, Thomas P.[1]; Guyon, Olivier[2]; Hix, Troy[3]; Irwin, Wes[3]; Kendrick, Rick[3]; Lozi, Julien[2]; Lynch, Dana[1]; Mihara, Roger[3]; Pluzhnik, Eugene[1]; Schneider, Glenn[2]; Smith, Eric[3]; Thomas, Sandrine[1]; Witteborn, Fred C.[1]
[1.]NASA Ames Research Center, Moffett Field, CA. [2.]University of Arizona, Tucson, AZ. [3.]Lockheed Martin SSC, Palo Alto, CA.

109.03 The Hybrid Lyot Coronagraph for the Imaging of Exoplanet Systems with the AFTA telescope
Trauger, John T.[1]; Gordon, Brian[1]; Moody, Dwight[1]
[1.]JPL, Pasadena, CA.

109.04 Emulating Weak Gravitational Lensing Measurements in the Lab
Shapiro, Charles[1]
[1.]JPL, California Institute of Technology, Pasadena, CA.

109.05 JPL Technology Development for the Dark Ages Radio Explorer (DARE) Proposal
Jones, Dayton L.[1]; Lazio, Joseph[1]; Sanchez Barbetty, Mauricio[1]; Sigel, Deborah[1]; O'Dwyer, Ian[1]
[1.]JPL, Caltech, Pasadena, CA.

109.06 Chandra X-ray Observatory Pointing and its Stability
Zhao, Ping[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA.

109.07 Starshade Alignment Sensing Demonstration Using Starlight
Jordan, Ian J.[5, 1]; Henze, Paul[2, 7]; Cash, Webster C.[4]; Regan, Michael W.[6, 1]; Kochte, Mark[3]; Soummer, Remi[1, 6]; Roelle, Curtis[7]; Fraquelli, Dorothy A.[5, 1]; Chen, Peter C.[9]; Lyon, Richard[8]
[1.]STScI, Baltimore, MD. [2.]Henze Observatory, Westminster, MD. [3.]JHU/APL, Laurel, MD. [4.]University of Colorado, Boulder, CO. [5.]Computer Sciences Corporation, Baltimore, MD. [6.]AURA, Baltimore, MD. [7.]Westminster Astronomical Society, Westminster, MD. [8.]Goddard Space Flight Center, Greenbelt, MD. [9.]Lightweight Telescopes, Inc., Greenbelt, MD.
Contributing teams: UMBRAS, WASI, New Worlds, JWST

109.08 Uncertainties in the Astronomical Ephemeris as Constraints on New Physics
Warecki, Zoey[1]; Overduin, James[1]
[1.]Towson University, Towson, MD.

110 Intergalactic Medium & QSO I

Monday, 10:00 AM - 11:30 AM; National Harbor 2

Chair(s):
Aparna Venkatesan, *Univ. of San Francisco*

110.01D OVI Absorbers Over Cosmic Time
Muzahid, Sowgat[1, 2]
[1.]The Pennsylvania State University , State College , PA. [2.]Inter University Center for Astronomy & Astrophysics , Pune , Maharashtra, India.

110.02 The CGM around dwarf galaxies

Bordoloi, Rongmon[1]; Tumlinson, Jason[1]; Werk, Jessica[2]; Thom, Christopher[1]; Prochaska, Jason X.[2]; Tripp, Todd M.[3]; Katz, Neal[3]; Dave, Romeel [4, 5]; Oppen heimer, Benjamin[6, 7]; Brady Ford, Amanda[4]; O'Meara, John M.[8]; Peeples, Molly S.[1, 9]; Sembach, Kenneth[1]; Weinberg, David H.[10]

[1.]Space Telescope Science Institute, Baltimore, MD. [2.]UCO/Lick Observatory, University of California, Santa Cruz, Santa Cruz, CA. [3.]Department of Astronomy, University of Massachusetts, Amherst, MA. [4.]Steward Observatory, University of Arizona, Tuscon, AZ. [5.]University of the Western Cape, South African Astronomical Observatories, and African Institute for Mathematical Sciences, Cape Town, South Africa. [6.]Leiden Observatory, Leiden, Netherlands. [7.]CASA, Department of Astrophysical and Planetary Sciences, University of Colorado, Boulder, Boulder, CO. [8.]Department of Chemistry and Physics, Saint Michael's College, Colchester, VT. [9.]Center for Galaxy Evolution, University of California Los Angeles, Los Angeles, CA. [10.]Department of Astronomy, The Ohio State University, Columbus, OH.

110.03 OVI as an Unique Tracer of Large-Scale Stellar Feedback at 2<z<4.

Lehner, Nicolas[1]; O'Meara, John[2]; Burns, Vincent[1]; Howk, J. C.[1]; Prochaska, Jason X.[3]; Fox, Andrew[4]; Armstrong, Ashley[2]; Wolfe, Arthur M.[5]

[1.]Univ. Of Notre Dame, Notre Dame, IN. [2.]St Michael College, Colchester, VT. [3.]UCO/Lick Observatory, SANTA CRUZ, CA. [4.]STScI, Baltimore, MD. [5.]UCSD, San Diego, CA.

110.04D Study of Chemical Evolution in Sub-damped Lyman-alpha QSO Absorbers

Som, Debopam[1]; Kulkarni, Varsha P.[1]; York, Donald G.[2]; Peroux, Celine[3]; Khare, Pushpa[4]; Lauroesch, James T.[5]

[1.]University of South Carolina, Columbia, SC. [2.]University of Chicago, Chicago, IL. [3.]Aix-Marseille Universite, Marseille, France. [4.]IUCAA, Pune, Maharashtra, India. [5.]University of Louisville, Louisville, KY.

110.05 A Detailed Spatial Study of HI and OVI Absorbing Gas Around Galaxies

Mathes, Nigel[1]; Churchill, Christopher W.[1]; Kacprzak, Glenn[2]; Nielsen, Nikole M.[1]; Charlton, Jane C.[3]; Muzahid, Sowgat[3]

[1.]New Mexico State University, Las Cruces, NM. [2.]Swinburne University of Technology, Hawthorn, VIC, Australia. [3.]The Pennsylvania State University, University Park, PA.

110.06 Tracing the flow of gas onto galaxies with the Green Bank Telescope

Pisano, Daniel J.[1, 2]; Rabidoux, Katherine[1]; de Blok, Willem J.G.[4]; Leroy, Adam K.[3]; Walter, Fabian[5]; Bigiel, Frank[6]; Brinks, Elias[8]; Keating, Katie M.[7]

[1.]West Virginia University, Morgantown, WV. [2.]National Radio Astronomy Observatory, Green Bank, WV. [3.]National Radio Astronomy Observatory, Charlottesville, VA. [4.]ASTRON, Dwingeloo, Netherlands. [5.]Max Planck Institut fur Astronomie, Heidelberg, Germany. [6.]University of Heidelberg, Heidelberg, Germany. [7.]Rincon Research Corporation, Tucson, AZ. [8.]University of Hertfordshire, Hertfordshire, United Kingdom.

111 Interstellar Medium & Dust I

Monday, 10:00 AM - 11:30 AM; National Harbor 4

Chair(s):
Peregrine McGehee, *Caltech*

111.01 Modeling Thermal Dust Emission and Implications
Liang, Zhuohan[1]
[1.]Loyola University Maryland, Baltimore, MD.

111.02 X-ray Studies of Interstellar and Intergalactic Dust
Corrales, Lia[1;] Paerels, Frits B.[1]
[1.]Columbia University, New York, NY.

111.03 Dust Lifetimes and Grain Destruction Rates by Supernova Remnants in the Magellanic Clouds
Temim, Tea[1, 2]; Dwek, Eli[1]; Meixner, Margaret[3]; Boyer, Martha L.[1, 2]; Tcher nyshyov, Kirill[4;] Gall, Christa[5]
[1.]NASA Goddard Space Flight Center (GSFC), Greenbelt, MD. [2.]Oak Ridge Associated Universities (ORAU), Oak Ridge, TN. [3.]Space Telescope Science Institute (STScI), Baltimore, MD. [4.]Johns Hopkins University, Baltimore, MD. [5.]Aarhus University, Aarhus, Denmark.

111.04 THE EVOLUTION OF DUST IN THE MAGELLANIC CLOUDS
Dwek, Eli[1]; Temim, Tea[1, 2]; Meixner, Margaret[3]; Boyer, Martha L.[1, 2]; Tcher nyshyov, Kirill[4]; Gall, Christa[1, 5]
[1.]Observational Cosmology Lab, Code 665,NASA GSFC, Greenbelt, MD. [2.]Oak Ridge Associated Universities (ORAU), Oak Ridge, TN. [3.]Space Telescope Science Institute (STScI), Baltimore, MD. [4.]Johns Hopkins University, Baltimore, MD. [5.]Aarhus University, Aurhus, Denmark.

111.05 Power-law Temperature Distribution SED Modeling To Reveal Properties of High-z Starburst Galaxies
Su, Ting[1]; Staguhn, Johannes[1, 2]; Dwek, Eli[2]; Kovacs, Attila[3, 4]
[1.]The Henry A. Rowland Department of Physics and Astronomy, Johns Hopkins University, Baltimore, MD. [2.]Observational Cosmology Lab, Code 665,NASA Goddard Space Flight Center, Greenbelt, MD. [3.]California Institute of Technology, Pasadena, CA. [4.]Institute for Astrophysics, University of Minnesota, Minneapolis, MN.

111.06 Relations between mid-IR dust emission and UV extinction
Massa, Derck[1]; Fitzpatrick, Edward L.[3]; Gordon, Karl D.[2]
[1.]Space Science Institute, Boulder, CO. [2.]STScI, Baltimore, MD. [3.]Villanova University, Villanova, PA.

112 Nearby Dwarf & Irregular Galaxies

Monday, 10:00 AM - 11:30 AM; Maryland Ballroom D

Chair(s):
Janice Lee, *Space Telescope Science Institute*

112.01 Andromeda's dwarf spheroidals and the universal mass profile
Collins, Michelle[1]; Rich, Robert M.[2]; Martin, Nicolas[3]; Ibata, Rodrigo[3]; Chapman, Scott C.[4]; McConnachie, Alan W.[5]
[1.]MPIA, Heidelberg, b.Munchen, Germany, Germany. [2.]UCLA, Los Angeles, CA. [3.]Strasbourg Observatory, Strasbourg, France. [4.]Dalhousie, Halifax, NS, Canada. [5.]HIA, Victoria, BC, Canada.
Contributing teams: PAndAS

112.02D Variations in a Universal Density Profile for the Milky Way's Dwarf Spheroidal Galaxies

Jardel, John[1]; Gebhardt, Karl[1]
[1.] The University of Texas, Austin, TX.

112.03 Massive No More: How baryon removal and tidal stripping alter the structure of dwarf spheroidal galaxies

Arraki, Kenza S.[1]; Klypin, Anatoly A.[1]; More, Surhud[2]; Trujillo-Gomez, Sebastian[1]
[1.] New Mexico State University, Las Cruces, NM. [2.] Kavli Institute for the Physics and Mathematics of the Universe (WPI), University of Tokyo, Kashiwa, Chiba, Japan.

112.04D Observational Constraints on Models of Rapidly Evolving Luminous Stars

Rosenfield, Philip[1, 2]; Dalcanton, Julianne[1]; Girardi, Leo[3]; Marigo, Paola[2]; Bressan, Alessandro[4]
[1.] University of Washington, Seattle, WA. [2.] Dipartimento di Fisica e Astronomia 'Galileo Galilei', Padova, PD, Italy. [3.] INAF-OAPd, Padova, PD, Italy. [4.] SISSA, Trieste, Italy.
Contributing teams: ANGST Team

112.05 Ultra-Deep HST Imaging of the SMC: The IMF at M < 1 Msun

Kalirai, Jason S.[1, 2]; Anderson, Jay[1]; Dotter, Aaron L.[1]; Richer, Harvey B.[3]; Fahlman, Gregory G.[4]; Hansen, Bradley M.[5]; Hurley, Jarrod R.[6]; Reid, Iain N.[1]; Rich, Robert M.[5]; Shara, Michael[7]
[1.] Space Telescope Science Institute, Baltimore, MD. [2.] Johns Hopkins University, Center for Astrophysical Sciences, Baltimore, MD. [3.] University of British COlumbia, Vancouver, BC, Canada. [4.] NRC/HIA, Victoria, BC, Canada. [5.] UCLA, Los Angeles, CA. [6.] Swinburne University of Technology, Melbourne, VIC, Australia. [7.] American Museum of Natural History, New York, NY.

112.06 The Effect of Metallicity on Molecular Gas and Star Formation in the Large Magellanic Cloud

Jameson, Katherine[1]; Bolatto, Alberto D.[1]; Leroy, Adam K.[2]; Wolfire, Mark G.[1]; Meixner, Margaret[3]; Roman-Duval, Julia[3]; Gordon, Karl D.[3]
[1.] University of Maryland, College Park, MD. [2.] NRAO, Charlottesville, VA. [3.] STScI, Baltimore, MD.
Contributing teams: HERITAGE Collaboration

112.07 Evidence for an Interaction in the Nearest Starbursing Dwarf Galaxy IC 10

Nidever, David L.[1, 2]; Ashley, Trisha L.[3]; Slater, Colin[1]; Ott, Juergen[4]; Johnson, Megan C.[5]; Bell, Eric F.[1]; Stanimirovic, Snezana[6]; Putman, Mary E.[7]; Majewski, Steven[2]; Simpson, Caroline E.[3]; Burton, W. Butler[8]; Juette, Eva[9]; Oosterloo, Tom[10]
[1.] University of Michigan, Ann Arbor, MI. [2.] University of Virginia, Charlottesville, VA. [3.] Florida International University, Miami, FL. [4.] National Radio Astronomy Observatory, Socorro, NM. [5.] National Radio Astronomy Observatory, Green Bank, WV. [6.] University of Wisconsin, Madison, WI. [7.] Columbia University, New York, NY. [8.] National Radio Astronomy Observatory, Charlottesville, VA. [9.] Ruhr-Universitaet Bochum, Bochum, North Rhine-Westphalia, Germany. [10.] Netherlands Institute for Radio Astronomy, Dwingeloo, Drenthe, Netherlands.

113 Novae, Dwarf Novae and Evolved Stars

Monday, 10:00 AM - 11:30 AM; Maryland 1

Chair(s):
Bradley Schaefer, *Louisiana State Univ.*

113.01 Fermi Discovers a New Population of Gamma-ray Novae
Cheung, Chi C.[1]; Shore, Steve N.[2, 3]; Jean, Pierre[4]
[1.]NRL, Washington, DC. [2.]University of Pisa, Pisa, Italy. [3.]INFN, Pisa, Italy. [4.]IRAP, Toulouse, France.
Contributing teams: on behalf of the Fermi-LAT collaboration

113.02 Radio Observations of Gamma-ray Novae
Linford, Justin D.[1]; Chomiuk, Laura[1]; Ribeiro, Valerio[2]
[1.]Michigan State University, East Lansing, MI. [2.]University of Cape Town, Cape Town, South Africa.
Contributing teams: E-Nova project

113.03 The Effect of Globular Cluster Specific Frequency on the Relative Nova Rates in Three Virgo Elliptical Galaxies
Curtin, Christopher[1]; Shafter, Allen W.[1]; Pritchet, Christopher[2]
[1.]San Diego State University, San Diego, CA. [2.]University of Victoria, Victoria, BC, Canada.

113.04 Dwarf Novae in the Galactic Bulge Survey - Observational Constraints on X-ray/Recurrence Time Relations and Space Density.
Britt, Christopher[1, 2]; Maccarone, Thomas J.[1]; Hynes, Robert [1,2]; Jonker, Peter[3], [4]; Torres, Manuel[3, 4]
[1.]Texas Tech University, Lubbock, TX. [2.]Lousiana State University, Baton Rouge, LA. [3.]SRON Netherlands Institute for Space Research, Utrecht, Utrecht, Netherlands. [4.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.
Contributing teams: Galactic Bulge Survey Collaboration

113.05 Spitzer-IRS Spectroscopic Studies of the Properties of Dust from Oxygen-Rich Asymptotic Giant Branch and Red Supergiant Stars
Sargent, Benjamin A.[1]; Speck, Angela[2]; Volk, Kevin[3]; Kemper, Ciska[4]; Reach, William T.[5]; Lagadec, Eric[6]; Bernard, Jean-Philippe[7, 8]; McDonald, Iain[9]; Meixner, Margaret[3]; Srinivasan, Sundar[4]
[1.]Rochester Institute of Technology, Rochester, NY. [2.]University of Missouri, Columbia, MO. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]Academia Sinica, Institute of Astronomy and Astrophysics, Taipei, Taiwan. [5.]Stratospheric Observatory for Infrared Astronomy, Universities Space Research Association, Moffett Field, CA. [6.]Cornell University, Ithaca, NY. [7.]CNRS, IRAP, Toulouse, France. [8.]Universite de Toulouse, Toulouse, France. [9.]University of Manchester, Jodrell Bank Centre for Astrophysics, Manchester, United Kingdom.

113.06 A Search for Thorne-Zytkow Objects
Levesque, Emily M.[1]; Massey, Philip[2]; Morrell, Nidia[3]; Zytkow, Anna[4]
[1.]University Of Colorado Boulder, Boulder, CO. [2.]Lowell Observatory, Flagstaff, AZ. [3.]Las Campanas Observatory, La Serena, Chile. [4.]University of Cambridge, Cambridge, United Kingdom.

114 Pulsars & Neutron Stars I

Monday, 10:00 AM - 11:30 AM; National Harbor 13

Chair(s):
Dacheng Lin, *University of Alabama*

114.01 Latest NANOGrav Pulsar Timing Results: Toward the Detection of Gravitational Waves
Demorest, Paul[1]
1.National Radio Astronomy Observatory, Charlottesville, VA.
Contributing teams: NANOGrav Collaboration

114.02 Monitoring the interstellar scattering delays of NANOGrav millisecond pulsars
Levin Preston, Lina[1]; Cordes, James M.[2]; Demorest, Paul[3]; Dolch, Timothy[2]; Jones, Glenn[4]; Lam, Michael T.[2]; Lazio, Joseph[5]; McLaughlin, Maura[1]; Palliyaguru, Nipuni[1]; Stinebring, Dan[6]
[1.]West Virginia University, Morgantown, WV. [2.]Cornell University, Ithaca, NY. [3.]National Radio Astronomy Observatory, Charlottesville, VA. [4.]Columbia University, New York, NY. [5.]Jet Propulsion Laboratory, Pasadena, CA. [6.]Oberlin College, Oberlin, OH.

114.03 Detecting correlated gravitational waves with pulsar timing
Van Haasteren, Rutger[1]
[1.]Jet Propulsion Laboratory, Pasadena, CA.

114.04 A Day in the Life of Millisecond Pulsar J1713+0747: Limits on Timing Precision Over 24 Hours and Implications for Gravitational Wave Detection
Dolch, Timothy[1]; Bailes, Matthew[13]; Bassa, Cees[9, 15]; Bhat, Ramesh[13]; Bhattacharyya, Bhaswati[14]; Champion, David[10]; Chatterjee, Shami[1]; Cognard, Ismael[11]; Cordes, James M.[1]; Crowter, Kathryn[8]; Demorest, Paul[5]; Finn, Lee S.[7]; Fonseca, Emmanuel[8]; Hessels, Jason[15]; Hobbs, George[12]; Janssen, Gemma[9, 15]; Jones, Glenn[6]; Jordan, Chris[9]; Karuppusamy, Ramesh[10]; Keith, Michael[12]; Kramer, Michael[10]; Kraus, Alex[10]; Lam, Michael T.[1]; Lazarus, Patrick[10]; Lazio, Joseph[18]; Lee, Kejia[10]; Levin, Lina[4]; Liu, Kuo[11]; Lorimer, Duncan[4]; Manchester, Richard N.[12]; McLaughlin, Maura[4]; Palliyaguru, Nipuni[4]; Perrodin, Delphine[16]; Petroff, Emily[13]; Rajwade, Kaustubh[4]; Rankin, Joanna M.[2]; Ransom, Scott M.[5]; Rosenblum, Jason[3]; Roy, Jayanta[14]; Shannon, Ryan[12]; Stappers, Benjamin[9]; Stinebring, Dan[3]; Stovall, Kevin[19]; Teixeira, Mateus[2]; van Leeuwen, Joeri[15]; van Straten, Willem[13]; Verbiest, Joris[17, 10]; Zhu, Weiwei[8]
[1.]Cornell University, Ithaca, NY. [2.]University of Vermont, Burlington, VT. [3.]Oberlin College, Oberlin, OH. [4.]West Virginia University, Morgantown, WV. [5.]National Radio Astronomy Observatory, Charlottesville, VA. [6.]Columbia University, New York, NY. [7.]Pennsylvania State University, Pennsylvania, PA. [8.]University of British Columbia, Vancouver, BC, Canada. [9.]Jodrell Bank Centre for Astrophysics, Manchester, United Kingdom. [10.]Max-Planck-Institut für Radioastronomie, Bonn, Germany. [11.]Station de Radioastronomie de Nançay, Paris Observatory, Nançay, France. [12.]CSIRO Astronomy and Space Science, Australia Telescope National Facility, Epping, NSW, Australia. [13.]Centre for Astrophysics and Supercomputing, Swinburne University of Technology, Hawthorn, VIC, Australia. [14.]National Centre for Radio Astrophysics, Tata Institute of Fundamental Research, Pune, India. [15.]ASTRON, the Netherlands Institute for Radio Astronomy, Dwingeloo, Netherlands. [16.]INAF/Osservatorio Astronomico di Cagliari , Cagliari, Sardinia, Italy. [17.]Fakultät für Physik, Universität Bielefeld, Bielefeld, Germany. [18.]Jet Propulsion Laboratory, Pasadena, CA. [19.]University of New Mexico, Albuquerque, NM.

114.05 Variable nebula of PSR B1259-63 resolved by Chandra
Kargaltsev, Oleg[1]; Pavlov, George G.[2]; Durant, Martin[3]; Volkov, Igor[1]; Hare, Jeremy[1]
[1.]George Washington University, Washington, DC. [2.]Pennsylvania State University, University Park, PA. [3.]University of Toronto, Toronto, ON, Canada.

114.06 High-energy gamma-rays from pulsar wind nebula 3C 58
Hewitt, John W.[1, 2]
[1.]CRESST/UMBC, Baltimore, MD. [2.]NASA/GSFC, Greenbelt, MD.
Contributing teams: Fermi-LAT Collaboration

114.07 TeV-detected young pulsar wind nebulae
Cillis, Analia[1]; Torres, Diego F.[2]; Martin, Jonatan[2]; de Oña, Emma[2]
[1.]Instituto de Astronomía y Física del Espacio, Buenos Aires, Argentina. [2].Institut de Ciencies de l'Espain (IEEC-CSIC), Barcelona, Spain.

114.08 Near Infrared Activity Close to the Crab Pulsar Correlated with Giant Gamma-ray Flares
Rudy, Alexander R.[1]; Max, Claire E.[1, 2]; Weisskopf, Martin C.[3]
[1.]UC Santa Cruz, Santa Cruz, CA. [2.]University of California Observatories, Santa Cruz, CA. [3.]NASA/Marshall Space Flight Center, Huntsville, AL.

114.09 Modelling the gamma-ray flares of the Crab Nebula
Tavani, Marco[1, 2]
[1.]INAF, Rome, Italy. [2.]University of Rome 'Tor Vergata', Rome, Italy.

115 QSOs, AGN

Monday, 10:00 AM - 11:30 AM; National Harbor 11

Chair(s):
Laura Brenneman, *Harvard-Smithsonian Center for Astrophysics*

115.01 Hosts of High-Redshift Quasars and Their Clustering Properties
Zhao, Xinghai[1]; Li, Yuexing[1]; Shandera, Sarah[1]; Jeong, Donghui[2]
[1.]Pennsylvania State University, University Park, PA. [2]Johns Hopkins University, Baltimore, MD.

115.02 Luminous Radio-Quiet Red Quasars at z ? 2.5: Feedback and Massive Black Hole Assembly
Glikman, Eilat[1, 5]; Urrutia, Tanya[2]; Lacy, Mark[3]; Djorgovski, Stanislav G.[4]; Graham, Matthew[4]; Urry, C. M.[5]
[1.]Middlebury College, Middlebury, VT. [2.]Leibniz Institut fur Astrophysik , Potsdam, Germany. [3.]NRAO, Charlottesville, VA. [4.]California Institute of Technology, Pasadena, CA. [5.]Yale University, New Haven, CT.

115.03 Physical Properties of Luminous Dust Poor Quasars
Jun, Hyunsung David[1]; Im, Myungshin[1]
[1.]Seoul National University, Seoul, Seoul, Korea, Republic of.

115.04 The Host Galaxies of High-Luminosity Obscured Quasars at z~2.5
Ross, Nicholas[1, 2]; Strauss, Michael A.[3]; Greene, Jenny E.[3]; Zakamska, Nadia L.[4]; Brandt, W. N.[5]; Alexandroff, Rachael[4]; Liu, Guilin[4]; Smith, Paul S.[6]
[1.]Drexel University, Philadelphia, PA. [2.]Lawrence Berkeley National Lab, Berkeley, CA. [3.]Princeton University, Princeton, NJ. [4.]Johns Hopkins University, Baltimore, MD. [5.]Penn State University, State College, PA. [6.]University of Arizona, Tuscon, AZ.
Contributing teams: The SDSS-III BOSS Quasar Working Group

115.05 Galaxy Clustering around Low Redshift Quasars
Rafiee, Alireza[1]; Scott, Jennifer E.[1, 4]; Bechtold, Jill[2]; Ellingson, Erica[3]
[1.]Towson University, Towson, MD. [2.]University of Arizon, Tucson, AZ. [3.]University of Colorado, Boulder, CO. [4.]NASA's Goddard Space Flight Center, Greenbelt, MD.

115.06 The Role AGN Play in the Evolution of Quasars Host Galaxies with Spectral Signatures of Post-Starburst Stellar Polulations
Cales, Sabrina[1]; Brotherton, Michael S.[2]; Shang, Zhaohui[3]; Bennert, Vardha Nicola[4]; Canalizo, Gabriela[5]; Diamond-Stanic, Aleksandar M.[6]
[1.]Universidad de Concepcion, Concepcion, Bio-Bio, Chile. [2.]University of Wyoming, Laramie, WY. [3.]Tianjin Normal University, Tianjin, China. [4.]Cal Poly San Luis Obispo, San Luis Obispo, CA. [5.]University of California, Riverside, Riverside, CA. [6.]University of California, San Diego, San Diego, CA.

115.07 Identifying Ionized Gas Outflows in the Narrow-line Region of Type 2 AGNs
Bae, Hyun-Jin[1, 3]; Woo, Jong-Hak[2, 3]
[1.]Yonsei University, Seoul, Korea, Republic of. [2.]Seoul National University, Seoul, Korea, Republic of. [3.]Carnegie Observatories, Pasadena, CA.

115.08 The Third Catalog of Active Galactic Nuclei Detected by the Fermi Large Area Telescope
Cutini, Sara[1, 2]; Lott, Benoit[4]; Gasparrini, Dario[1, 2]; Ciprini, Stefano[1, 2]; Cavazzuti, Elisabetta[3]
[1.]ASI Science Data Center, Roma, Rome, Italy. [2.]Osservatorio Astronomico di Roma, Roma, Rome, Italy. [3.]Agenzia Spaziale Italiana, Roma, Rome, Italy. [4.]Centre d'Etudes Nucleaires de Bordeaux , Bordeaux, Bordeaux, France.
Contributing teams: Fermi-LAT collaboration

116 Results from the Pan-STARRS1 Surveys

Monday, 10:00 AM - 11:30 AM; Maryland Ballroom B

PS1, the Pan-STARRS1 Telescope is completing its 3.5 year PS1 Science Mission, supported by the PS1 Science Consortium. The PS1 Surveys include: (1) A 3pi Steradian Survey, (2) A Medium Deep survey of 10 PS1 footprints spaced around the sky; (3) A solar system survey optimized for Near Earth Objects, (4) a Stellar Transit Survey; and (5) a Deep Survey of M31. The PS1 3pi Survey will have covered the sky north of dec=-30 with 12 visits in five bands: g,r,i,z and y or over 60 epochs per point on the sky. This session will focus on the science results to date from the PS1 Science Mission, including discoveries of NEO's, KBO's, brown dwarfs, mapping the dust in the Milky Way, the structure of the Milky Way, galaxies in the local group, ultra luminous supernovae, cosmological supernova, high redshift quasars, galaxy counts and clusters, and Baryon Acoustic Oscillations. We will also present details about the public data release of all PS1 data products through the STScI MAST PS1 Archive. The PS1 Science Consortium consists of The Institute for Astronomy at the University of Hawai'i in Manoa, the Max Planck Institute for Astronomy, Heidelberg and the Max Planck Institute for Extraterrestrial Physics, Garching, The Johns Hopkins University, the University of Durham, the University of Edinburgh, the Queen's University Belfast, the Harvard-Smithsonian Center for Astrophysics, the Los Cumbres Observatory Global Telescope Network Incorporated, and the National Central University of Taiwan, NASA, NSF, University of Maryland, and the Eotvos University.

Organizer(s):
Kenneth Chambers, *Univ. of Hawaii*

116.01 The Pan-STARRS1 Surveys
Chambers, Kenneth C.[1]
[1.] Univ. of Hawaii, Honolulu, HI.

116.02 The Pan-STARRS-1 Outer Solar System Key Project: A Status Report
Holman, Matthew J.[1]
[1.] Harvard-Smithsonian, CfA, Cambridge, MA.
Contributing teams: The PS1 Outer Solar System Team

116.03 Probing the atmospheres of brown dwarf with benchmark objects identified in Pan-STARRS1
Deacon, Niall[1]; Liu, Michael C.[2]; Magnier, Eugene A.[2]; Allers, Katelyn N.[3]; Dupuy, Trent J.[4]; Bowler, Brendan P.[2, 5]; Aller, Kimberly M.[2]; Best, William M.[2]; Kotson, Michael C.[2]
[1.] Max Planck Institute for Astronomy, Heidelberg, Germany. [2.] Institute for Astronomy, University of Hawaii, Honolulu, HI. [3.] Bucknell University, Lewisburg, PA. [4.] Harvard-Smithsonian CfA, Cambridge, MA. [5.] California Institute of Technology, Pasadena, CA.
Contributing teams: Pan-STARRS1 Builders

116.04 The Dust to 5 kpc from Pan-STARRS1
Schlafly, Eddie[1]; Green, Gregory[2]; Finkbeiner, Douglas P.[2]; Rix, Hans-Walter[1]
[1.] MPIA, Heidelberg, Baden Wuerttemberg , Germany. [2.] Harvard, Cambridge, MA.

116.05 A 3D Dust Reddening Map from Pan-STARRS1
Green, Gregory[1]; Schlafly, Eddie[2]; Finkbeiner, Douglas P.[1]
[1.] Harvard Univ., Cambridge, MA. [2.] MPIA, Heidelberg, Baaden-Wuerttemberg, Germany.

116.06 A Panoramic View of the Monoceros Ring
Slater, Colin[1]; Bell, Eric F.[1]; Schlafly, Eddie[2]; Morganson, Eric[3]; Martin, Nicolas[4, 2]; Rix, Hans-Walter[2]
[1.] University of Michigan, Ann Arbor, MI. [2.] Max Planck Institute for Astronomy, Heidelberg, Germany. [3.] Harvard-Smithsonian Center for Astrophysics, Boston, MA. [4.] University of Strasbourg, Strasbourg, France.
Contributing teams: The Pan-STARRS1 Consortium

116.07 Pan-STARRS-1 Medium Deep Survey Status
Huber, Mark[1]
[1.] Institute for Astronomy, Univ. of Hawaii, Honolulu, HI.
Contributing teams: PS1SC/IPP Team

116.08 The Pan-STARRS 1 Medium Deep Field Variable Star Catalog
Flewelling, Heather[1]
[1.] University of Hawaii, Honolulu, HI.

116.09 Systematic Uncertainties Associated with the Cosmological Analysis of the First Pan-STARRS1 Type Ia Supernova Sample
Scolnic, Daniel[1]; Rest, Armin[2]
[1.] Johns Hopkins University, Baltimore, MD. [2.] Space Telescope Science Institute, Baltimore, MD.
Contributing teams: PS1 Transients Group

116.10 SN IA in the IR: RAISIN A progress report
Kirshner, Robert P.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA.
Contributing teams: The RAISIN TEAM

116.11 Early science from the Pan-STARRS1 Optical Galaxy Survey (POGS): Maps of stellar mass and star formation rate surface density obtained from distributed-computing pixel-SED fitting
Thilker, David A.[1]; Vinsen, Kevin[2]
[1.]Johns Hopkins Univ., Baltimore, MD. [2.]International Centre for Radio Astronomy Research (ICRAR), Perth, WA, Australia.
Contributing teams: PS1 Galaxy Properties Key Project

116.12 Discovery of high-redshift quasars from Pan-STARRS1.
Banados, Eduardo[1]; Venemans, Bram[1]; Morganson, Eric[2]; Decarli, Roberto[1]; Walter, Fabian[1]; Chambers, Kenneth C.[3]; Rix, Hans-Walter[1]; Farina, Emanuele[1]; De Rosa, Gisella[4]
[1.]Max Planck Institute for Astronomy, Heidelberg, Germany. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]Institute for Astronomy, University of Hawaii, Manoa, HI. [4.]Department of Astronomy, The Ohio State University, Columbus, OH.
Contributing teams: Pan-STARRS

116.13 A Pan-STARRS-1 Astrometric and Photometric Search for Substellar Young Moving Group Members
Aller, Kimberly M.[1]; Liu, Michael C.[1]; Magnier, Eugene A.[1]
[1.]University of Hawaii, Manoa, Honolulu, HI.

116.14 A Pan-STARRS1-based recalibration of the Sloan Digital Sky Survey photometry
Finkbeiner, Douglas P.[1]; Schlafly, Eddie[2]; Green, Gregory[1]
[1.]Harvard Univ., Cambridge, MA. [2.]MPIA, Heidelberg, Germany.

116.15 Early Results and Plans for the Time Domain Spectroscopic Survey
Green, Paul J.[1]; Anderson, Scott F.[2]; Morganson, Eric[1]; Ruan, John J.[2]
[1.]Harvard-Smithsonian CfA, Cambridge, MA. [2.]University of Washington, Seattle, WA.
Contributing teams: PS1, SDSS-III, SDSS-IV

117 Star Formation I

Monday, 10:00 AM - 11:30 AM; Potomac Ballroom C

Chair(s):
Lynn Carlson

117.01 Structure of massive star forming clumps from the Red MSX Source Survey
Figura, Charles C.[1]; Urquhart, James S.[2]; Morgan, Lawrence[3]
[1.]Wartburg College, Waverly, IA. [2.]Max Planck Institute for Radio Astronomy, Bonn, Germany. [3.]University of Hertfordshire, Hatfield, United Kingdom.

117.02 [CII] 158 ?m Emission as a Star Formation Tracer
Herrera-Camus, Rodrigo[1]; Bolatto, Alberto D.[1]; Wolfire, Mark G.[1]; Calzetti, Daniela[2]
[1.]University of Maryland, College Park, MD. [2.]University of Massachusetts, Amherst , MA.
Contributing teams: KINGFISH Team

117.03 Star Formation Rate and Gas Relations in the Arp 299 Merger from the VIXENS Survey

Heiderman, Amanda L.[1,2]; Evans , Neal J.[3]; Gebhardt, Karl[3]; Blanc, Guillermo A.[4]; Davis, Timothy[5]; Papovich, Casey J.[6]; van den Bosch, Remco[7]; Iono, Daisuke[8]; Yun, Min Su[9]

[1.]University of Virginia, Charlottesville, VA. [2.]NRAO, Charlottesville, VA. [3.]University of Texas at Austin, Austin, TX. [4.]Observatories of the Carnegie Institution, Pasadena, CA. [5.]ESO, Garching, Germany. [6.]Texas A&M University, College Station, TX. [7.]MPIA, Heidelberg, Germany. [8.]Nobeyama Radio Observatory, Minamisaku, Nagano, Japan. [9.]University of Massachusetts, Amherst, MA.

Contributing teams: VIXENS team

117.04 Relationship Between Dense Gas and Total Infrared Luminosity Along Spiral Arms in M51

Louie, Melissa N.[1]; Koda, Jin[1]; Egusa, Fumi[2]

[1.]Stony Brook University, Stony Brook, NY. [2.]JAXA, Sagamihara, Kanagawa, Japan.

117.05 Bridging the Galactic-Extragalactic divide with WISE: a Galactic perspective on star-formation-rate to gas density relations in massive star forming regions

Koenig, Xavier[1]; Leisawitz, David[2]

[1.]Yale University, New Haven, CT. [2.]NASA Goddard Space Flight Center, Greenbelt, MD.

117.06 Point Sources in Herschel's HERITAGE Key Project: Star Formation in the Mag ellanic Clouds

Seale, Jonathan P.[1]; Meixner, Margaret[1]

[1.]Space Telescope Science Institute, Baltimore, MD.

Contributing teams: HERITAGE

117.07D Massive Star Formation Viewed through Extragalactic-Tinted Glasses

Willis, Sarah[1,2]; Marengo, Massimo[1]; Smith, Howard A.[2]; Allen, Lori[3]

[1.]Iowa State University, Ames, IA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]National Optical Astronomy Observatory, Tucson, AZ.

118 The Sun

Monday, 10:00 AM - 11:30 AM; Maryland Ballroom C

Chair(s):
Thomas Ayres, *University of Colorado*

118.01 Solar Activity and Motions in the Solar Chromosphere and Corona at the 2012 and 2013 Total and Annular Eclipses in the U.S., Australia, and Africa

Pasachoff, Jay M.[1]; Babcock, Bryce A.[1]; Davis, Allen B.[1]; Demianski, Marek[1]; Lucas, Robert[1]; Lu, Muzhou[1,2]; Dantowitz, Ronald[3]; Rusin, Vojtech[4]; Saniga, Metod[4]; Seaton, Daniel B.[5]; Gaintatzis, Pavlos[6]; Voulgaris, Aristeidis[6]; Seiradakis, John H.[6]; Gary, Dale E.[7]; Shaik, Shaheda B.[7]

[1.]Williams College, Williamstown, MA. [2.]Barrie School, Silver Spring, MD. [3.]Dexter Southfield School, Brookline, MA. [4.]Astronomical Institute, Tatranska Lomnica, Slovakia. [5.]Royal Obs. Belgium, Brussels, Belgium. [6.]Aristotle U. Thessaloniki, Thessaloniki, Greece. [7.]NJIT, Newark, NJ.

118.02 Fermi Large Area Telescope observations of high-energy gamma-ray emission from solar flares
Pesce-Rollins, Melissa[1]; Omodei, Nicola[2]; Petrosian, Vahe[2]
[1.]INFN-Pisa, Pisa, Pi, Italy. [2.]Stanford University, Stanford, CA.
Contributing teams: Fermi LAT Collaboration

118.03D STUDYING THE POLARIZATION OF HARD X-RAY SOLAR FLARES WITH THE GAMMA RAY POLARIMETER EXPERIMENT (GRAPE)
Ertley, Camden[1]
[1.]The University of New Hampshire, Durham, NH.

118.04 Probing Magnetic Energy Release in a Solar Flare with Radio Dynamic Imaging Spectroscopy
Chen, Bin[1, 2]; Bastian, Timothy S.[3]; Gary, Dale E.[2]; White, Stephen M.[4]
[1.]University Corporation for Atmospheric Research, Boulder, CO. [2.]New Jersey Institute of Technology, Newark, NJ. [3.]National Radio Astronomy Observatory, Charlottesville, VA. [4.]Air Force Research Lab, Albuquerque, NM.

118.05 Self-generated Three Dimensional Turbulence in Magnetic Reconnection Layers Sharply Increases Reconnection Rates
Oishi, Jeffrey S.[1]; Mac Low, Mordecai-Mark[1]; Collins, David C.[2]
[1.]American Museum of Natural History, New York, NY. [2.]Florida State University, Tallahassee, FL.

118.06 Reflection and Wave Coupling of Torsional Alfven Waves in 3D Solar Magnetic Flux Tubes
Musielak, Zdzislaw E.[1]; Murawski, Krzysztof[2]; Srivastava, Abhishek K.[3]
[1.]Univ. of Texas, Arlington, Arlington, TX. [2.]Uni. M. Curie-Sklodowska, Lublin, Poland. [3.]ARIES, Nainital, India.

119 Linking Visualization and Understanding in Astronomy

Monday, 11:40 AM - 12:30 PM; Potomac Ballroom A

Chair(s):
Edward Churchwell, *Univ. of Wisconsin*

119.01 Linking Visualization and Understanding in Astronomy
Goodman, Alyssa A.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA.

Career Hour 1: Having the Right Stuff: Outstanding Resumes/CVs for Outstanding Career Opportunities in Academia and Industry

Monday, 12:30 PM - 1:30 PM; National Harbor 2

Resumes/CVs don't get you jobs, they get you interviews. Learn the secrets of making your resume/CV one that stands out from the crowd, ensuring it will actually be read, and articulates your value to the organization and your field.

Chair(s):
Alaina Levine, *Quantum Success Solutions*
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

120 HAD Business Meeting

Monday, 12:45 PM - 1:45 PM; National Harbor 5

Annual business meeting of the Historical Astronomy Division.

Organizer(s):
James Ulvestad, *National Science Foundation*
Chair(s):
Jay Pasachoff, *Williams College*

121 NSF Town Hall

Monday, 12:45 PM - 1:45 PM; Maryland Ballroom C

Personnel from the NSF Division of Astronomical Sciences (AST) will discuss the status of their programs. This will include the resolution of the FY 2013 (now past) budget, the status of the FY 2014 budget request, and the impact of these budgets and the AST Portfolio Review on programs of interest to the attendees. The status of major AST construction projects (ALMA, ATST, and LSST) also will be discussed.

Chair(s):
James Ulvestad, *National Science Foundation*

122 The International Astronomical Union: Roles and Goals

Monday, 12:45 PM - 1:45 PM; Potomac Ballroom D

Towards the 2015 General Assembly in Honolulu 1) The IAU and science: - introduction to the IAU, including history, current national/individual membership, associates, divisions/commissions/working groups, executive committee, GA & symposia, etc. - importance of global collaboration for advancing the science of astronomy (examples: ALMA, SKA, CTA, next-generation large optical telescopes) - the USA as a special case ? - perspectives 2) The IAU and society - a new Division on “Education, Outreach, and Heritage” - UNESCO/ICOMOS and World Heritage sites - strategic plan and OAD and related bodies, e.g., TF1, TF2, TF3; ROADs - public outreach and legacy of IYA 2009; OAO - public involvement in naming of celestial objects (e.g., Pluto’s moons, exoplanets) - perspectives

Chair(s):
Thierry Montmerle, *IAU*

123 The NASA Kepler Mission Town Hall: 2014 and Beyond

Monday, 12:45 PM - 1:45 PM; Potomac Ballroom C

The NASA Kepler mission is currently operating under a mission extension granted through the NASA Astrophysics Senior Review process. This Town Hall will present a summary of the past year of the Kepler project in order to update the community on the programmatic, technical, and scientific aspects. We will also present our plans for a second mission extension if deemed acceptable by the 2014 NASA Astrophysics Senior Review process. We will highlight the availability of new project and archive products, avenues for community involvement and the Guest Observer program. Please come join us for this town hall, meet the Kepler team, and learn about the future mission plans for both planet discovery and astrophysics using Kepler data. You are encouraged to visit the Kepler mission Science Center at http://keplergo.arc.nasa.gov/

Chair(s):
Steve Howell, *NASA ARC*
Organizer(s):
Steve Howell, *NASA ARC*

124 WGLE Town Hall

Monday, 12:45 PM - 1:45 PM; National Harbor 4

The Working Group on LGBTIQ Equality (WGLE) is tasked with promoting equality for lesbian, gay, bisexual, transgender, intersex, and questioning (LGBTIQ) individuals within our profession. Equality begins at home. If you would like your department or institution to be more welcoming to LGBTIQ students and colleagues, join us for a presentation of our new report, "Supporting LGBT+ Physicists and Astronomers: A Best Practices Guide for Departments." Jointly developed by WGLE and the LGBT+ Physicists Organization of the American Physical Society, this document presents ideas for improving the climate in your department, both today and for the long term, tips for addressing hiring and personnel issues, and suggestions for advocacy at the institutional level. Time will be provided for comments and questions from the audience.

Chair(s):
William Van Dyke Dixon*, Space Telescope Science Institute*
Organizer(s):
William Van Dyke Dixon, *Space Telescope Science Institute*

Amateur Talk: Origins of Habitable Planets

Monday, 1:30 PM - 2:00 PM; Maryland Ballroom A

The diversity of planets in and around the habitable zone of stars is astonishing. This diversity must originate during planet formation, and I will compare what we know about Solar System formation to what we are learning about the formation of other planetary systems. I will present observations of circumstellar disks, the birthplaces of planets, and discuss the various processes that shape them and their progeny.

Chair(s):
Alycia Weinberger, *Carnegie Inst. Of Washington*

125 Variable Stars

Monday, 2:00 PM - 3:30 PM; National Harbor 4

Chair(s):
Massimo Marengo, *Iowa State University*

125.01 Predicting Fundamental Stellar Parameters From Photometric Light Curves
Miller, Adam[1, 2]; Richards, Joseph[1]; Bloom, Joshua S.[1]
[1.] UC Berkeley, Berkeley, CA. [2.] JPL/Caltech, Pasadena, CA.
Contributing teams: on behalf of a larger team

125.02 Searching Kepler Variable Stars with the Eclipsing Binary Factory Pipeline
Parvizi, Mahmoud[1, 2]; Paegert, Martin[2]
[1.] Austin Peay State University, Clarksville, TN. [2.] Vanderbilt University, Nashville, TN.

125.03 Update on the asteroseismology of the Kepler field hot pulsating white dwarf
Kim, Agnes[1]
[1.] Penn State University, Dunmore, PA.

125.04D The Rejuvenation of RR Lyrae Stars as Precise Distance Indicators
Klein, Christopher R.[1]
[1.] UC Berkeley, Berkeley, CA.

125.05 Observations of Suspected RR Lyrae Stars by Undergraduate Students
Powell, William L.[1]; Smith, Stephanie N.[1]; Wilhelm, Ronald J.[2]; De Lee, Nathan M.[1]
[1.] University of Nebraska at Kearney, Kearney, NE. [2.] University of Kentucky, Lexington, KY.

125.06 Cepheid period jitter is caused by convective cell
Neilson, Hilding[1]; Ignace, Richard[1]
[1.] Dept of Physics & Astronomy, East Tennessee State University, Johnson City, TN.

126 AGN on Sub-kiloparsec Scales

Monday, 2:00 PM - 3:30 PM; National Harbor 11

Chair(s):
Steven Kraemer, *Catholic University of America*

126.01 Broad Absorption Line Variability on Multi-Year Timescales in a Large Quasar Sample
Brandt, W. N.[1]; Filiz Ak, N.[1]; Hall, Patrick B.[2]; Schneider, Donald P.[1]
[1.] Penn State Univ., University Park, PA. [2.] York University, Toronto, ON, Canada.
Contributing teams: The SDSS-III BAL Variability Team

126.02 On the Absence of Broad Forbidden Lines in the Low Luminosity Active Galactic Nucleus; NGC 3227
Devereux, Nicholas A.[1]
[1.] Embry-Riddle Aeronautical Univ., Prescott, AZ.

126.03 The Broad Line Region in AGNs: Structure, Physics, and the f Factor
Grier, Catherine[1]; Peterson, Bradley M.[1, 2]; Martini, Paul[1, 2]; Pogge, Richard W.[1]; Pancoast, Anna[3]; Treu, Tommaso[3]; Watson, Linda C.[4]
[1.] The Ohio State University, Columbus, OH. [2.] Center for Cosmology and AstroParticle Physics, Columbus, OH. [3.] UCSB, Santa Barbara, CA. [4.] Harvard Center for Astrophysics, Cambridge, MA.

126.04 The NLR Size - IR Luminosity Relationship: An Upper Limit on the Size of the Narrow-Line Region?
Hainline, Kevin[1]; Hickox, Ryan C.[1]; Greene, Jenny E.[2]; Myers, Adam D.[3]; Zakamska, Nadia L.[4]; Liu, Guilin[4]
[1.]Dartmouth College, Hanover, NH. [2.]Princeton University, Princeton, NJ. [3.]University of Wyoming, Laramie, WY. [4.]Johns Hopkins University, Baltimore, MD.

126.05 Long-term Absorption Variation in AGN: A High-resolution Study of the Seyfert Galaxy NGC 3783
Scott, Amy[1]
[1.]The Pennsylvania State University, University Park, PA.

126.06 Black Hole Spin Properties of 130 AGN
Daly, Ruth A.[1]
[1.]Penn State University, Reading, PA.

126.07 The Black Hole in the Compact, High-dispersion Galaxy NGC 1271
Walsh, Jonelle[1]; van den Bosch, Remco[2]; Gebhardt, Karl[1]; Yildirim, Akin[2]; Gultekin, Kayhan[3]; Richstone, Douglas O.[3]
[1.]The University of Texas - Austin, Austin, TX. [2.]Max Planck Institute for Astronomy, Heidelberg, Germany. [3.]University of Michigan, Ann Arbor, MI.

126.08D Intervening broad-line region clouds' effects on the optical/ultraviolet spectrum
Wang, Ye[1]; Ferland, Gary J.[1]; Hu, Chen[2]; Wang, Jian-Min[2]; Du, Pu[2]
[1.]Department of Physics and Astronomy, University of Kentucky, Lexington, KY. [2.]Institute of High Energy Physics, Chinese Academy of Sciences, Beijing, China.

127 Cosmology & CMB II

Monday, 2:00 PM - 3:30 PM; Potomac Ballroom D

Chair(s):
Jack Burns, *Univ. of Colorado at Boulder*

127.01 Testing Quantum Mechanics with Observations of Causally Disconnected Cosmological Events
Friedman, Andrew S.[1, 2]; Kaiser, David I.[1]; Gallicchio, Jason[3]; Guth, Alan H.[1]
[1.]Massachussetts Institute of Technology, Center for Theoretical Physics, Cambridge, MA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]University of Chicago, Kavli Institute for Cosmological Physics, Chicago, IL.

127.02 Effects of Local Inhomogeneity on Cosmological Observables
Hornstein, John[1]
[1.], Silver Spring, MD.

127.03D New Constraints on the Amplitude of Cosmic Density Fluctuations and Intracluster Gas from the Thermal SZ Signal Measured by the Atacama Cosmology Telescope (ACT) and Planck
Hill, James[1]; Spergel, David N.[1]
[1.]Princeton University, Princeton, NJ.
Contributing teams: Atacama Cosmology Telescope Collaboration

127.05 Micro-Jy imaging at 150 MHz for the LOFAR EoR project
Brentjens, Michiel A.[1]; Yatawatta, Sarod[1]; Pandey, Vishambar[1]; Jelic, Vibor[1]; de Bruyn, A. G.[1, 2]; Koopmans, Leon[2]; Zaroubi, Saleem[2]
[1.]Astron, Dwingeloo, Drenthe, Netherlands. [2.]Kapteyn Astronomical Institute, University of Groningen, Groningen, Groningen, Netherlands.

127.06 The Stratospheric Kinetic Inductance Polarimeter (SKIP)
Flanigan, Daniel[1]; Ade, Peter[4]; Araujo, Derek[1]; Bradford, Kristi J.[2]; Chapman, Daniel [1]; Che, George[2]; Day, Peter[5]; Didier, Joy[1]; Doyle, Simon[4]; Eriksen, Hans[8]; Groppi, Christopher E.[2]; Hillbrand, Seth N.[1]; Johnson, Bradley[1]; Jones, Glenn[1, 7]; Limon, Michele[1]; Mauskopf, Philip[2]; McCarrick, Heather[1]; Miller, Amber D.[1]; Mroczkowski, Tony[6]; Reichborn-Kjennerud, Britt[1]; Smiley, Brian[1]; Sobrin, Joshua[1]; Wehus, Ingunn K.[3, 5]; Zmuidzinas, Jonas[3]
[1.]Columbia University, New York City, NY. [2.]Arizona State University, Phoenix, AZ. [3.]California Institute of Technology, Pasadena, CA. [4.]Cardiff University, Cardiff, Wales, United Kingdom. [5.]Jet Propulsion Laboratory, Pasadena, CA. [6.]Naval Research Laboratory, Washington, DC. [7.]National Radio Astronomy Observatory, Charlottesville, VA. [8.]University of Oslo, Oslo, Oslo, Norway.

MONDAY

128 Dynamics and Habitability of Exoplanets - What have we learned from Kepler?

Monday, 2:00 PM - 3:30 PM; Potomac Ballroom A

We now know that many, and perhaps most, planetary systems contain multiple planets with periods from a few to ~100 days, and masses intermediate between those of Earth and Neptune, as seen in the Kepler multi-transiting systems. At the same time, as the Kepler data continue to be processes, planets with longer periods are being discovered, reaching into the habitable zones of their host stars. The three invited speakers in this session will explore broadly the theoretical implications of these recent discoveries.

Chair(s):
Frederic Rasio, *Northwestern Univ.*
Organizer(s):
David Ciardi, *Caltech*

128.01 Overstable Librations can account for the Paucity of Mean Motion Resonances among Exoplanet Pairs
Schlichting, Hilke[1]
[1.]MIT, Cambridge, CA.

128.02 Reaching into the Habitable Zones of Kepler Stars
Kane, Stephen R.[1]; Gelino, Dawn M.[2]; Hinkel, Natalie R.[1]
[1.]San Francisco State University, San Francisco, CA. [2.]California Institute of Technology, Pasadena, CA.

128.03 Lessons From Kepler
Lithwick, Yoram[1]
[1.]Northwestern University, Evanston, IL.

129 Evolution of Elliptical Galaxies and Black Holes

Monday, 2:00 PM - 3:30 PM; Maryland Ballroom D

Chair(s):
Yuexing Li, *Penn State University*

129.01 A New Population of Recently Quenched Elliptical Galaxies in the SDSS
McIntosh, Daniel H.[1]; Wagner, Cory[2]; Cooper, Andrew[3]; Bell, Eric F.[4]; Keres, Dusan[5]; van den Bosch, Frank C.[6]; Gallazzi, Anna[7]; Haines, Tim[8]; Mann, Justin[9]; Pasquali, Anna[10]
[1.]University of Missouri-Kansas City, Kansas City, MO. [2.]Queens University, Kingston, ON, Canada. [3.]University of North Carolina, Chapel Hill, Chapel Hill, NC. [4.]University of Michigan, Ann Arbor, MI. [5.]University of California, San Diego, San Diego, CA. [6.]Yale University, New Haven, CT. [7.]INAF-Osservatorio Astrofisico di Arcetri, Firenze, Italy. [8.]University of Wisconsin-Madison, Madison, WI. [9.]University of Kansas, Lawrence, KS. [10.]University of Heidelberg, Heidelberg, Germany.

129.02D Diagnosing the Formation of Elliptical Galaxies
Snyder, Gregory F.[1, 2]; Hernquist, Lars E.[2]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Harvard University, Cambridge, MA.

129.03 Evidence of Inside-out Multi-stage Formation History in UV-bright Early Type Galaxies Observed in the Mid-IR
Petty, Sara M.[1]; Neill, James D.[2]; Jarrett, Tom[3]; Blain, Andrew[4]; Farrah, Duncan[1]; Rich, Robert M.[5]; Tsai, Chao-Wei[2]; Benford, Dominic J.[6]; Bridge, Carrie[2]; Lake, Sean E.[5]; Masci, Frank J.[7]; Wright, Edward L.[5]
[1.]Physics, Virginia Tech, Blacksburg, VA. [2.]Caltech, Pasadena, CA. [3.]University of Cape Town, Rondebosch, Cape Town, South Africa. [4.]University of Leicester, Leicester, Leicestershire, United Kingdom. [5.]UCLA, Los Angeles, CA. [6.]NASA, Goddard Space Flight Center, Greenbelt, MD. [7.]IPAC, Caltech, Pasadena, CA.
Contributing teams: WISE

129.04 Dwarf Galaxies with Active Massive Black Holes
Reines, Amy E.[1]; Greene, Jenny E.[2]; Geha, Marla C.[3]
[1.]National Radio Astronomy Observatory, Charlottesville, VA. [2.]Princeton University, Princeton, NJ. [3.]Yale University, New Haven, CT.

129.05D Modeling the Co-Evolution of Black-Holes and Galaxies Across Cosmic Time
Angles-Alcazar, Daniel[1]
[1.]University of Arizona, Tucson, AZ.

129.06 Systematic Errors in Black Hole Mass Measurements
McConnell, Nicholas J.[1]
[1.]IfA, University of Hawaii, Honolulu, HI.

130 Evolution of Star Formation and Dust in Galaxies

Monday, 2:00 PM - 3:30 PM; National Harbor 2

Chair(s):
Lerothodi Leeuw, *SETI Institute*

130.01 Connecting Dust and Galaxy Properties at High Redshift
Perley, Daniel A.[1]; Kruehler, Thomas[2]; Kasliwal, Mansi M.[3]; Greiner, Jochen[4]; Schady, Patricia[4]; Watson, Darach[5]; Zafar, Tayyaba[6]; Bloom, Joshua S.[7]; Morgan, Adam[7]; Cenko, Stephen B.[8]; Levan, Andrew J.[9]; Tanvir, Nial R.[10]
[1.]Caltech, Pasadena, CA. [2.]European Southern Observatory, Santiago, Chile. [3.]Carnegie Institution for Science, Pasadena, CA. [4.]MPE, Garching, Germany. [5.]Dark Cosmology Centre, Copenhagen, Denmark. [6.]Aix Marseille Université, Marseille, France. [7.]University of California, Berkeley, Berkeley, CA. [8.]Goddard Space Flight Center, Greenbelt, MD. [9.]University of Warwick, Coventry, United Kingdom. [10.]University of Leicester, Leicester, United Kingdom.

130.02D How Environment Affects Star Formation: Tracing Activity in High Redshift Galaxy Clusters
Alberts, Stacey[1]; Pope, Alexandra[1]; Brodwin, Mark[2]; Atlee, David W.[3]; Lin, Yen-Ting[4]; Chary, Ranga-Ram[11]; Dey, Arjun[3]; Eisenhardt, Peter R.[5]; Gettings, Daniel[6]; Gonzalez, Anthony H.[6]; Jannuzi, Buell[12]; Mancone, Conor[6]; Moustakas, John[7]; Snyder, Gregory F.[8]; Stanford, S. A.[9]; Stern, Daniel[5]; Weiner, Benjamin J.[12]; Zeimann, Gregory[10]
[1.]University of Massachusetts, Amherst, MA. [2.]University of Missouri, Kansas City, MO. [3.]National Optical Astronomy Observatory, Tucson, AZ. [4.]Academia Sinica, Taipei, Taiwan. [5.]Jet Propulsion Laboratory, Pasadena, CA. [6.]University of Florida, Gainesville, FL. [7.]Siena College, Loudonville, NY. [8.]Harvard-Smithsonia Center for Astrophysics, Cambridge, MA. [9.]University of California, Davis, CA. [10.]Pennsylvania State University, University Park, PA. [11.]California Institute for Technology, Pasadena, CA. [12.]Steward Observatory, Tucson, AZ.

130.03D Chemical Evolution of Star-Forming Galaxies
Zahid, Harus[1]
[1.]University of Hawaii at Manoa, Honolulu, HI.

130.04 ALMA Dust Continuum for ISM Mass Estimates in High-z Galaxies
Scoville, Nicholas[1]; Aussel, Herve[1]; Sheth, Kartik[1]; Scott, Kimberly S.[1]; Sanders, David B.[1]; Ivison, Rob[1]; Pope, Alexandra[1]; Capak, Peter L.[1]; Manohar, Swarnima[1]; Kartaltepe, Jeyhan S.[1]; Lilly, Simon[1]
[1.]Caltech, Pasadena, CA.

130.05D Star Formation in Cosmological N-body Simulations
Munshi, Ferah[1]
[1.]University of Washington, Seattle, WA.

130.06 Galaxy formation in preheated IGM
Lu, Yu[1]
[1.]Stanford University, Stanford, CA.

131 Extrasolar Planet Characterization & Theory II

Monday, 2:00 PM - 3:30 PM; Maryland Ballroom A

Chair(s):
Nikku Madhusudhan, *Yale University*

131.01D Understanding Kepler's Super-Earths and Sub-Neptunes: Insights from Thermal Evolution and Photo-Evaporation
Lopez, Eric[1]
[1.]UC Santa Cruz, Santa Cruz, CA.

131.02 Characterizing the Hot Kepler Objects of Interest
Rogers, Leslie[1]; Price, Ellen[1]; Shporer, Avi[1]; Crepp, Justin R.[2]; Swift, Jonathan[1]; Muirhead, Philip S.[3]; Johnson, John A.[4]
[1.]California Institute of Technology, Pasadena, CA. [2.]Notre Dame, Notre Dame, IN. [3.]Boston University, Boston, MA. [4.]Harvard University, Cambridge, MA.

131.03 Water Clouds in Y Dwarfs and Exoplanets
Morley, Caroline[1]; Marley, Mark S.[2]; Fortney, Jonathan J.[1]; Lupu, Roxana E.[3]
[1.]University of CA - Santa Cruz, Santa Cruz, CA. [2.]NASA Ames, Mountain View, CA. [3.]SETI Institute, Mountain View, CA.

131.04 Synthesizing Exoplanet Demographics from Radial Velocity and Microlensing Surveys
Clanton, Christian[1]; Gaudi, B. S.[1]
[1.]Department of Astronomy, The Ohio State University, Columbus, OH.

131.05 Validation by Asteroseismology for the Rocky Planet KOI 69.01
Ballard, Sarah[1, 2]
[1.]University of Washington, Seattle, WA. [2.]NASA Carl Sagan Fellow, Pasadena, CA.

131.06 Multiwavelength Photometric and Imaging observations of the Putative Disintegrating super-Mercury KIC 12557548b
Croll, Bryce[1]
[1.]Massachusetts Institute of Technology, Cambridge, MA.

131.07 A Review of Correlated Noise in Exoplanet Light Curves
Cubillos, Patricio[1]; Harrington, Joseph[1]; Hardin, Matthew R.[2]; Blecic, Jasmina[1]; Hardy, Ryan A.[3]
[1.]University of Central Florida, Orlando, FL. [2.]Clemson University, Clemson, SC. [3.]University of Colorado at Boulder, Boulder, CO.

131.08 Warm Ice Giant GJ 3470b: Revised Planetary and Stellar Parameters from Optical to Near-infrared Transit Photometry
Biddle, Lauren I.[1]; Pearson, Kyle[1]; Crossfield, Ian[2]; Barman, Travis S.[3]; Fulton, Benjamin J.[4]; Ciceri, Simona[2]; Eastman, Jason[5]; Howard, Andrew[4]; Mann, Andrew[4]; Henry, Gregory W.[6]; Williamson, Michael W.[6]; Sinukoff, Evan[4]; Dragomir, Diana[5]; Vican, Laura[8]; Greenberg, Adam[8]; Turner, Jake[9]; Thompson, Robert[1]; Mancini, Luigi[2]; Taylor, Brian W.[3]; Levine, Stephen[3]; Webber, Matthew W.[7]
[1.]University of Arizona, Tucson, AZ. [2.]Max-Planck Institut fur Astronomie, Heidelberg, Königstuhl, Germany. [3.]Lunar and Planetary Laboratory, University of Arizona, Tucson, AZ. [4.]Institute for Astronomy, University of Hawaii at Manoa, Manoa, HI. [5.]Las Cumbres Observatory Global Telescope Network, Santa Barbara, CA. [6.]Center of Excellence in Information Systems, Tennessee State University, Nashville, TN. [7.]Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology, Cambridge, MA. [8.]Department of Physics and Astronomy, UCLA, Los Angeles, CA. [9.]Department of Astronomy, University of Virginia, Charlottesville, VA.

132 Extrasolar Planet Detection - Ultra-Short-Period, Circumbinary, and Exomoons From Kepler

Monday, 2:00 PM - 3:30 PM; National Harbor 12

Chair(s):
David Spiegel, *Princeton University*

132.01D A study of the shortest-period planets
Sanchis Ojeda, Roberto[1]; Winn, Joshua N.[1]; Rappaport, Saul A.[1]
[1.]MIT, Cambridge, MA.

132.02 A Survey for Very Short-Period Planets in the Kepler Data
Jackson, Brian K.[1]; Stark, Christopher C.[2]; Adams, Elisabeth R.[3]; Chambers, John E.[1]; Deming, Drake[4]
[1.]Carnegie DTM, Washington, DC. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Planetary Science Institute, Tucson, AZ. [4.]Department of Astronomy, University of Maryland at College Park, College Park, MD.

132.03D Discovery and characterization of circumbinary planets from Kepler
Kostov, Veselin[1]; McCullough, Peter R.[2]; Carter, Joshua A.[7]; DELEUIL, Magali[3]; Diaz, Rodrigo[3]; Fabrycky, Daniel C.[6]; Hebrard, Guillaume[4]; Hinse, Tobias[8]; Orosz, Jerome A.[5]; Tsvetanov, Zlatan I.[1]
[1.]Johns Hopkins University, Baltimore, MD. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]Laboratoire d'Astrophysique de Marseille, Marseiile, France. [4.]L'Institut d'astrophysique de Paris, Paris, France. [5.]San Diego State University, San Diego, CA. [6.]University of Chicago, Chicago, IL. [7.]Harvard University, Boston, MA. [8.]Korea Astronomy and Space Science Institute, Daejeon, Korea, Republic of.

132.04 A Kepler Transiting Circumbinary Planet
Welsh, William F.[1]; Orosz, Jerome A.[1]; Fabrycky, Daniel C.[2]; Haghighipour, Nader[3]; Short, Donald R.[1]
[1.]San Diego State University, San Diego, CA. [2.]University of Chicago, Chicago, IL. [3.]University of Hawaii, Honolulu, HI.
Contributing teams: Kepler Team

132.05 The Hunt for Exomoons with Kepler: Results from a Survey of M-Dwarf Host Stars
Kipping, David M.[1]; Hartman, Joel D.[2]; Bakos, Gaspar[2]; Nesvorny, David[3]; Buchhave, Lars A.[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Princeton University, Princeton, NJ. [3.]Southwest Research Institute, Boulder, CO.

133 Galaxy Evolution at z > 2

Monday, 2:00 PM - 3:30 PM; Maryland Ballroom C

Chair(s):
Amanda Bauer, *Australian Astronomical Observatory*

133.01 The effect of Active Galactic Nuclei on the dust properties of high redshift Ultra Luminous Infrared Galaxies
Kirkpatrick, Allison[1]; Pope, Alexandra[1]; Sajina, Anna[2]; Roebuck, Eric[2]
[1.]University of Massachusetts, Amherst, MA. [2.]Tufts University, Medford, MA.
Contributing teams: GOODS-Herschel

133.02 Restframe UV colors of 1 < z < 4 star-forming galaxies in the Hubble Ultraviolet UltraDeep Field (UVUDF)
Kurczynski, Peter[1]; Gawiser, Eric J.[1]; Teplitz, Harry I.[2]; Rafelski, Marc[2]; Finkelstein, Steven L.[3]
[1.]Rutgers, The State University of New Jersey, Piscataway, NJ. [2.]Infrared Processing and Analysis Center, MS 100-22,CalTech, Pasadena, CA. [3.]University of Texas, Austin, TX.
Contributing teams: UVUDF Team

133.03 The Undiscovered CO: Charting the Molecular Gas of the Universe at High Redshift
Keating, Garrett K.[1]; Bower, Geoffrey C.[1]; DeBoer, David R.[1]; Heiles, Carl E.[1]; Marrone, Daniel P.[2]
[1.]UC Berkeley, Berkeley, CA. [2.]University of Arizona, Tuscon, AZ.

133.04D THE SIZE-LUMINOSITY DISTRIBUTIONS OF LYMAN-BREAK GALAXIES
Huang, Kuang-Han[1, 2]
[1.]University of California Davis, Davis, CA. [2.]Johns Hopkins University, Baltimore, MD.
Contributing teams: The CANDELS collaboration

133.05 Galaxies Under the Cosmic Microscope
Livermore, Rachael[1]
[1.]University of Texas at Austin, Austin, TX.

133.06 Are All Galaxies the Same? A Synchronized, Uniform Model for Galaxy and Black Hole Evolution
Steinhardt, Charles L.[1, 2]; Speagle, Josh S.[3, 2]
[1.]California Institute of Technology, Pasadena, CA. [2.]Kavli Institute for the Physics and Mathmatics of the Universe, Kashiwa, Chiba, Japan, Japan. [3.]Harvard University, Cambridge, MA.

133.07 BoRG: Luminosity Function and Spectroscopic Follow-Up of Galaxies at z~8
Schmidt, Kasper B.[1]; Trenti, Michele[2]; Bradley, Larry D.[3]; Kelly, Brandon C.[1]; Treu, Tommaso[1]; Oesch, Pascal[4]
[1.]Physics & Astronomy, University of California Santa Barbara (UCSB), Santa Barbara, CA. [2.]Kavli Institute for Cosmology and Institute of Astronomy, University of Cambridge, Cambridge, United Kingdom. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]UCO/Lick Observatory, University of California, Santa Cruz, CA.
Contributing teams: The BoRG Collaboration

134 HAD V: History of Astronomy

Monday, 2:00 PM - 3:30 PM; National Harbor 3

Chair(s):
Linda French, *Illinois Wesleyan Univ.*

134.01 Astronomical Beliefs in Medieval Georgia: Innovative Approaches
Sauter, Jefferson[1, 2]; Orchiston, Wayne[2]; Stephenson, F. R.[3]
[1.]University of Southern Queensland, Toowoomba, QLD, Australia. [2.]National Astronomical Research Institute of Thailand, Chiang Mai, Thailand. [3.]University of Durham, Durham, United Kingdom.

134.02 Habitability and the Possibility of Extraterrestrial Life in the Early Telescope Era
Reynolds, Sarah[1]
[1.]Indiana University, Bloomington, IN.

134.03 What exactly was William Herschel's Milky Way and how did he construct it?
Sullivan, Woodruff T.[1]; Sharma, Ramon[1]
[1] Univ. of Washington, Seattle, WA.

134.05 Simon Newcomb, Other Aspects of His Career
Corbin, Brenda G.[1]
[1] U. S. Naval Observatory (retired), Washington, DC.

134.06 Celebrating 130 Years of the Alvan Clark Telescope at Albion College
Zellner, Nicolle[1]; Garrett Smeltekop, Nicole[1]
[1] Albion College, Albion, MI.

134.07 Lemaître's Limit(s) to our Universe(s)
Steer, Ian[1]
[1] NED, Toronto, ON, Canada.

135 HEAD II: Consistent Cluster Cosmology: What are Planck, SZ telescopes, and X-ray observations telling us?

Monday, 2:00 PM - 3:30 PM; National Harbor 5

The recent flood of results from Planck, ACT and SPT combined with over a decade of work with Chandra, XMM-Newton, and other X-ray satellites have provided a wealth of cluster survey data. While largely consistent, there are discrepancies that could be calibration issues but might also be pointing the way to new discoveries. This session will feature talks by leaders in each area, followed by a moderated debate discussing both the possible solutions to these inconsistencies and what the future might bring.

Chair(s):
Joel Bregman, *Univ. of Michigan*
Organizer(s):
Jan Vrtilek, *Harvard-Smithsonian, CfA*

135.01 Planck Cluster Cosmology Results
Bartlett, James G.[1]
[1] Jet Propulsion Laboratory and APC Univ. Paris 7, Pasadena, CA.
Contributing teams: Planck Collaboration

135.02 The South Pole Telescope Cluster Survey
Benson, Bradford[2, 1]
[1] Enrico Fermi Institute, Chicago, IL. [2] University of Chicago, Chicago, IL.
Contributing teams: The SPT, SPTpol, and SPT-3G Collaborations

135.03 X-ray Cluster Cosmology from Einstein to eROSITA
Jones, Christine[1]
[1] Harvard-Smithsonian, CfA, Cambridge, MA.

136 Instrumentation II: Ground Missions

Monday, 2:00 PM - 3:30 PM; Maryland 2

Chair(s):
Richard Green, *University of Texas at Austin*

136.01D Heterodyne Arrays for Terahertz/Sub-millimeter Astronomy
Kloosterman, Jenna[1]; Walker, Christopher K.[1]
1.University of Arizona, Tucson, AZ.
Contributing teams: SORAL, SRON, TU-Delft, JPL, APL, ASU, MIT

136.02 Prototype Development of the GMT Fast Steering Mirror
Kim, Young-Soo[1]; Koh, Ju Heon[1]; Jung, Hwa Kyoung[1]; Jung, Ho June[1]; Cho, Myung K.[2]; Park, Won Hyun[3]; Yang, Ho-Soon[4]; Kim, Ho-Sang[5]; Lee, Kyoung-Don[5]; Ahn, Hyo-Sung[6]; Park, Byeong-Gon[1]
[1.]KASI, Daejeon, [2.]NOAO, Tucson, AZ. [3.]The University of Arizona, Tucson, AZ. [4.]KRISS, Daejeon, Korea, Republic of. [5.]IAE, Yongin, Korea, Republic of. [6.]GIST, Gwangju, Korea, Republic of.

136.03 Astrophysical Observations with the HEROES Balloon-borne Payload
Wilson, Colleen[1]; Gaskin, Jessica[1]; Christe, Steven[2]; Shih, Albert Y.[2]; Swartz, Douglas A.[3]; Tennant, Allyn F.[1]; Ramsey, Brian[1]
[1.]NASA's MSFC, Huntsville, AL. [2.]NASA's GSFC, Greenbelt, MD. [3.]USRA/MSFC, Huntsville, AL.

136.04D FIREBall, CHAS, and dusty Galactic Clouds
Hamden, Erika T.[1]; Schiminovich, David[1]; Gordon, Sam[1]
[1.]Columbia University, New York, NY.

136.05 NRES: The Network of Robotic Echelle Spectrographs
Eastman, Jason[1, 2]; Brown, Timothy M.[3, 1]; Hygelund, John[1]; Van Eyken, Julian C.[2, 1]
[1.]Las Cumbres Observatory Global Network, Goleta, CA. [2.]University of California Santa Barbara, Santa Barbara, CA. [3.]University of Colorado Boulder, Boulder, CO.

136.06 Improvements to the Flux Density Scale between 220 and 460 MHz
Perley, Richard A.[1]; Intema, Huib[1]; Mao, Minnie[1]; Scaife, Anna[2]
[1.]National Radio Astronomy Observatory, Socorro, NM. [2.]University of Southampton, Southhampton, United Kingdom.

137 Intergalactic Medium & QSO II

Monday, 2:00 PM - 3:30 PM; Potomac Ballroom C

Chair(s):
Benjamin Weiner, *University of Arizona*

137.01 The Rapid Evolution of HI Rich Galaxies at z~5
Rafelski, Marc[1]; Neeleman, Marcel[2]; Wolfe, Arthur M.[2]; Prochaska, Jason X.[3]; Fumagalli, Michele[4, 5]
[1.]IPAC / Caltech, Pasadena, CA. [2.]UCSD, La Jolla, CA. [3.]UCSC, Santa Cruz, CA. [4.]Carnegie Observatories, Pasadena, CA. [5.]Princeton University, Princeton, CA.

137.02 The large-scale distribution of gas
Zhu, Guangtun[1]; Ménard, Brice[1, 2]; Bizyaev, Dmitry[3]; Ho, Shirley[4]; More, Surhud[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]Kavli IPMU (WPI), the University of Tokyo, Kashiwa, Japan. [3.]Apache Point Observatory and New Mexico State University, Sunspot, NM. [4.]Carnegie Mellon University, Pittsburgh, PA.

137.03D Glimpsing Host Galaxies of High-Redshift Quasars Using Strong Damped Ly man-Alpha Systems as Coronagraphs
Finley, Hayley L.[1]; Petitjean, Patrick[1]; Paris, Isabelle[2]; Noterdaeme, Pasquier[1]
[1.]Pierre and Marie Curie University (Paris 6), Paris, France. [2.]Universidad de Chile, Santiago, Chile.
Contributing teams: SDSS III - BOSS

137.04 Proposal for Definitive Survey for Fast Radio Bursts at the Allen Telescope Array
Harp, Gerald[1, 2]; Tarter, Jill C.[1, 2]; Welch, William J.[2]
[1.]SETI Institute, Mountain View, CA. [2.]Allen Telescope Array, Hat Creek, CA.
Contributing teams: Allen Telescope Array Team

137.05 Variation of Fundamental Constants: the Impact of Wavelength Miscalibrations
Whitmore, Jonathan B.[1]
[1.]Swinburne University of Technology, Hawthorn, VIC, Australia.

137.06 The Covering Factor of the Dense Circumgalactic Medium in the COSMOS Field at z < 1
Ribaudo, Joseph[1]; Lehner, Nicolas[2]; Howk, J. C.[2]
[1.]Utica College, Utica, NY. [2.]University of Notre Dame, Notre Dame, IN.

137.07 Spatially Resolved Emission of a High Redshift DLA Galaxy with the Keck/ OSIRIS IFU
Jorgenson, Regina[1]; Wolfe, Arthur M.[2]
[1.]Institute for Astronomy, University of Hawaii, Honolulu, HI. [2.]University of California, San Diego, San Diego, CA.

138 Interstellar Medium & Dust II

Monday, 2:00 PM - 3:30 PM; Maryland 1

Chair(s):
Thomas Wilson, *none*

138.01D SPINR Sounding Rocket Measurements of Far-Ultraviolet Dust Scattering Properties in Orion
Mendillo, Christopher[1]; Cook, Timothy[1]; Chakrabarti, Supriya[1]; Gordon, Karl D.[2]
[1.]UMASS Lowell, Lowell, MA. [2.]Space Telescope Science Institute, Baltimore, MD.

138.02 [CI] and CO in local galaxies from the Beyond the Peak Project
Crocker, Alison F.[1]; Pellegrini, Eric W.[1]; Smith, John-David T.[1]
[1.]University of Toledo, Toledo, OH.
Contributing teams: Beyond The Peak Team

138.03 Estimating PAH Contribution To YSO Spectra Via IR And UV Band Strengths Of Pyrene Frozen In Water Ice
Hardegree-Ullman, Emily E.[1]; Boogert, Abraham C.[2]; Gudipati, Murthy[3]; Lignell, Hanna[4]
[1.]Rensselaer Polytechnic Institute, Troy, NY. [2.]California Institute of Technology, Pasadena, CA. [3.]Jet Propulsion Laboratory, Pasadena, CA. [4.]University of California at Irvine, Irvine, CA.

138.04 Towards a Full-sky, High-resolution Dust Extinction Map with WISE and Planck
Meisner, Aaron M.[1, 2]; Finkbeiner, Douglas P.[1, 2]
[1.] Harvard University, Cambridge, MA. [2.] Harvard-Smithsonian CfA, Cambridge, MA.

138.05D Are far-IR fluxes good measures of cloud mass?
Wagle, Gururaj[1]; Ferland, Gary J.[1]; Troland, Thomas H.[1]; Abel, Nicholas[2]
[1.] Physics and Astronomy, University of Kentucky, Lexington, KY. [2.] University of Cincinnati: Clermont College, Batavia, OH.

138.06 KAT-7 Science Verification: Using HI Observations of NGC 3109 to Understand its Kinematics and Mass Distribution
Lucero, Danielle M.[1]; Carignan, Claude[1]; Hess, Kelley M.[1]; Frank, Bradley S.[1]; Randriamampandry, Toky H.[1]; Goedhart, Sharmila[2]; Passmoor, Sean S.[2]
[1.] Department of Astronomy, University of Cape Town, Rondebosch, South Africa. [2.] SKA South Africa, Pinelands, South Africa.

139 New Science from the CLASH/CANDELS Multi-Cycle Treasury Programs

Monday, 2:00 PM - 3:30 PM; Maryland Ballroom B

The Cosmic Assembly Near-infrared Deep Extragalactic Legacy Survey (CANDELS) and the Cluster Lensing and Supernova survey with Hubble (CLASH) will complete their 3-year Hubble Space Telescope observations in 2013. A special session highlighting the scientific results derived from these two HST Multi-cycle Treasury Programs will be very timely. The two surveys offer a complementary approach to studying cosmic evolution, with CANDELS surveying some of the best-studied fields with the deepest multi-wavelength data, and CLASH surveying some of the most massive and relaxed moderate-redshift gravitational-lens clusters. These programs provide complementary approaches to finding and studying very high redshift (z>5) galaxies, studying structure of galaxies at redshifts $0.5 1. Data from both surveys are non-proprietary, and have already been the subject of intense study. Eight oral presentations will include the latest constraints on luminosity functions and stellar populations in the most distant galaxies, important new constraints on galaxy and cluster formation and their implications for structure formation, and the latest estimates of the evolution Type Ia supernova rate at high redshift.

Chair(s):
Marc Postman, *STScI*

139.01 The Concentration-Mass Relation from CLASH
Merten, Julian[1]
[1.] JPL / Caltech, Pasadena, CA.
Contributing teams: CLASH

139.02 Studying Galaxy Evolution at High-Redshift with CANDELS
Finkelstein, Steven L.[1]
[1.] University of Texas, Austin, TX.
Contributing teams: CANDELS Team

139.03 High Redshift Galaxies in CLASH
Bradley, Larry D.[1]
[1.] Space Telescope Science Institute, Baltimore, MD.
Contributing teams: CLASH Team

139.04 Confronting theoretical models with CANDELS observations
Lu, Yu[1]
[1.]Stanford University, Stanford, CA.
Contributing teams: The CANDELS collaboration

139.05 Baryon-Derived Scaling Relations from CLASH
Czakon, Nicole G.[1]; Donahue, Megan[2]; Medezinski, Elinor[3]
[1.]California Institute of Technology, Pasadena, CA. [2.]Michigan State University, Lansing, MI. [3.]Johns Hopkins University, Baltimore, MD.
Contributing teams: CLASH,Bolocam

139.06 Type Ia Supernovae in the Early Universe from CANDELS
Rodney, Steven A.[1]
[1.]Johns Hopkins University, Baltimore, MD.
Contributing teams: The CANDELS+CLASH SN Team

139.07 The CLASH Type-Ia Supernova Rates Out to Redshift 2.4
Graur, Or[1, 2]
[1.]The Johns Hopkins University, Baltimore, MD. [2.]Tel Aviv University, Tel Aviv, Israel.
Contributing teams: CLASH, CANDELS

139.08 CANDELS Measurements of Structure and Morphology Over Cosmic Time
Kartaltepe, Jeyhan S.[1]
[1.]National Optical Astronomy Observatory, Tucson, AZ.
Contributing teams: The CANDELS Collaboration

140 Pulsars & Neutron Stars II

Monday, 2:00 PM - 3:30 PM; National Harbor 13

Chair(s):
Herman Marshall, *MIT*

140.01 Pulsar Observations Using the First Station of the Long Wavelength Array
Stovall, Kevin[1]; Demorest, Paul[2]; Dowell, Jayce[1]; Ray, Paul S.[3]; Schinzel, Frank[1]; Taylor, Gregory B.[1]
[1.]University of New Mexico, Albuquerque, NM. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]Naval Research Laboratory, Washington, DC.

140.02 Observations of Rotating Radio Transients Using the Long Wavelength Array
Miller, Rossina B.[1]; McLaughlin, Maura[1]
[1.]West Virginia University, Morgantown, WV.

140.03 Detection of Pulsed Emission from the Millisecond Pulsar PSR J2145-0750 Below 100 MHz
Taylor, Gregory B.[1]; Dowell, Jayce[1]
[1.]Univ. of New Mexico, Albuquerque, NM.
Contributing teams: Long Wavelength Array

140.04 A Millisecond Pulsar in a Stellar Triple System
Ransom, Scott M.[1]; Stairs, Ingrid H.[2]; Archibald, Anne[3]; Hessels, Jason[3]; Kaplan, David L.[4]; van Kerkwijk, Marten[5]; Boyles, Jason[6]; Lorimer, Duncan[7]; Deller, Adam[3]; Chatterjee, Shami[8]
[1.]NRAO, Charlottesville, VA. [2.]U. British Columbia, Vancouver, BC, Canada. [3.]ASTRON, Dwingeloo, Netherlands. [4.]U. Wisconsin-Milwaukee, Milwaukee, WI. [5.]U. Toronto, Toronto, ON, Canada. [6.]W. Kentucky U., Bowling Green, KY. [7.]W. Virginia U., Morgantown, WV. [8.]Cornell U., Ithaca, NY.
Contributing teams: The GBT Driftscan Collaboration

140.05 PSR J2021+4026 in the Gamma Cygni region: the first variable gamma-ray pulsar seen by the Fermi Large Area Telescope
Razzano, Massimiliano[1]; Tibaldo, Luigi[2]
[1.]University of Pisa & INFN-Pisa, Pisa, Italy. [2.]KIPAC/SLAC, Menlo Park, CA.
Contributing teams: Fermi-LAT Collaboration

140.06 Discovery of a Highly Eccentric Binary Millisecond Pulsar in a Gamma-Ray-Detected Globular Cluster
DeCesar, Megan E.[1]; Ransom, Scott M.[2]; Ray, Paul S.[3]; Kaplan, David L.[1]
[1.]Physics, University of Wisconsin-Milwaukee, Shorewood, WI. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]Naval Research Laboratory, Washington, DC.
Contributing teams: Fermi Large Area Telescope Collaboration

140.07 Discovery of the radio and gamma-ray pulsar PSR J2339-0533 associated with the Fermi LAT bright source 0FGL J2339.8-0530
Ray, Paul S.[1]; Belfiore, Andrea M.[2]; Saz Parkinson, Pablo[2, 9]; Polisensky, Emil[1]; Ransom, Scott M.[5]; Romani, Roger W.[6]; Hessels, Jason[4]; Razzano, Massimiliano[7]; Bhattacharyya, Bhaswati[3]; Roy, Jayanta[3]; Cognard, Ismael[8]
[1.]NRL, Washington, DC. [2.]UCSC, Santa Cruz, CA. [3.]NCRA, Pune, India. [4.]ASTRON, Dwingeloo, Netherlands. [5.]NRAO, Charlottesville, VA. [6.]Stanford, Stanford, CA. [7.]University of Pisa & INFN, Pisa, Italy. [8.]CNRS, Orleans, France. [9.]University of Hong Kong, Hong Kong, Hong Kong.
Contributing teams: Fermi Pulsar Search Consortium

140.08 Gamma-Ray Pulsar Emission: From Theory to Observations
Kalapotharakos, Constantinos[1, 2]; Harding, Alice K.[2]; Kazanas, Demosthenes[2]
[1.]University of Maryland, College Park, MD. [2.]Goddard Space Flight Center, NASA, Greenbelt, MD.

141 The Dark Energy Camera and the Dark Energy Survey

Monday, 2:00 PM - 3:30 PM; National Harbor 10

The Dark Energy Camera is a 3-square-degree imager on the CTIO Blanco 4-meter telescope, now fully commissioned and available for community use. The Dark Energy Survey is a five-year, 5000-square-degree multicolor survey which began in August 2013, with the primary goal of exploring the cause of the Hubble acceleration. This session will describe the capabilities and on-sky performance of the camera and the new active optics system; the progress of the Survey and the data to become publicly available; and initial science results from the Survey.

Chair(s):
Gary Bernstein, *Univ. of Pennsylvania*
Organizer(s):
Gary Bernstein, *Univ. of Pennsylvania*

141.01 Overview of DECam and DES
Bernstein, Gary[1]
[1.] *Univ. of Pennsylvania, Philadelphia, PA.*
Contributing teams: The Dark Energy Survey Collaboration

141.02 DECam Image Quality
Roodman, Aaron[1]
[1.] *Kavli Institute for Particle Astrophysics & Cosmology, SLAC National Accelerator Laboratory, Stanford University, Menlo Park, CA.*
Contributing teams: Dark Energy Survey Collaboration

141.03 DES Gravitational Lensing Results
Melchior, Peter[1]
[1.] *Center for Cosmology and Astro-Particle Physics, The Ohio State University, Columbus, OH.*

141.04 DES Large-scale Structure Results
Sevilla, Ignacio[1]
[1.] *CIEMAT, Madrid, Spain.*
Contributing teams: The Dark Energy Survey Collaboration

141.05 DES Supernova Results
D'Andrea, Christopher[1]
[1.] *Institute for Cosmology and Gravitation, University of Portsmouth, Portsmouth, Hants, UK, United Kingdom.*
Contributing teams: The Dark Energy Survey

141.06 DES Galaxy Cluster Results
Rykoff, Eli S.[1]
[1.] *SLAC National Accelerator Laboratory, Menlo Park, CA.*
Contributing teams: DES Cluster Working Group

159 Developing Our Own Future: Undergraduate Research and Enrichment Through Peer-Led Programs

Monday, 2:00 PM - 3:30 PM; Maryland 3

This session is a collaboration between undergraduates at astronomy departments across country to showcase undergraduate research and initiative. Having undergraduate research is essential to getting into a graduate program. Because many students go into research, getting experience as an undergraduate helps them determine the path they take after their undergraduate degree. We especially focus on the social and academic support, and career networking, aspects of undergraduate-led programs. Undergraduate research and peer-mentoring helps to promote science to a new generation of astronomers. The session features speakers from multiple undergraduate astronomy programs, and will particularly focus on the benefits and potential of peer networks as opposed to purely faculty-led initiatives. This session will build on the regular oral session presented by the University of Arizona Astronomy Club at the 221st AAS meeting in Indianapolis in June.

Chair(s):
Gina Brissenden, *Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona*
Organizer(s):
Gina Brissenden, *Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona*

159.01 Welcome Address
Towner, Allison P.[1]; Hardegree-Ullman, Kevin[2]; Brissenden, Gina[3, 1]; Walker-LaFollette, Amanda[1]
[1.] University of Arizona, Tucson, AZ. [2.] University of Toledo, Toledo, OH. [3.] Center for Astronomy Education, Tucson, AZ.

159.02 The League of Astronomers
Thomas, Nancy H.[1]; Brandel, Andrew[1]; Paat, Anthony M.[1]; Schmitz, Denise[1]; Sharma, Ramon[1]; Trujillo, Juan[1]; Laws, Christopher S.[1]
[1.] University of Washington, Seattle, WA.

159.03 Bridging the gap between undergrads and grads: The mentor next door
Gruberg, Aaron[1]
[1.] San Francisco State Univ, San Francisco, CA.
Contributing teams: Aaron White

159.04 PEER DEVELOPMENT OF UNDERGRADUATE ASTRONOMERS AND PHYSICISTS AT THE UNIVERSITY OF WISCONSIN – MADISON
Abler, Melissa[1]
[1.] Univ of Wisconsin, Madison, Madison, WI.
Contributing teams: Physics Club of UW-Madison

159.05 Peer mentoring of telescope operations and data reduction at Western Kentucky University
Williams, Joshua[1]; Carini, Michael T.[1]
[1], Bowling Green, KY.

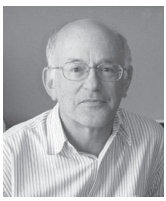
159.06 The Society of Astronomy Students: From the Ground Up
Rees, Shannon[1]; Maldonado, Mercedes[1]; Beasley, Dana[1]; Campos, Angelica[1]; Medina, Amber[1]; Chanover, Nancy J.[1]
[1]New Mexico State Univ, Las Cruces, NM.

159.07 Results and Implications of Seven Years of the University of Arizona Astronomy Club
Walker-LaFollette, Amanda[1]; Towner, Allison P.[1]; Hardegree-Ullman, Kevin[2]; Brissenden, Gina[3, 1]
[1]University of Arizona/Steward Observatory, Tucson, AZ. [2]University of Toledo, Toledo, OH. [3]Center for Astronomy Education, Tucson, AZ.

142 Henry Norris Russell Lecture: New Developments in Galactic Archaeology

Monday, 3:40 PM - 4:30 PM; Potomac Ballroom A

Chair(s):
David Helfand, *Quest University Canada*



Kenneth C. Freeman - Henry Norris Russell Lectureship
(Photo credit: Emily Moylan)
The 2013 Henry Norris Russell Lectureship of the American Astronomical Society is awarded to Kenneth C. Freeman, Duffield Professor and Distinguished Professor at the Australian National University, for a lifetime of seminal contributions to the fields of galaxy structure and dynamics and stellar populations. Throughout his career, Ken Freeman has been a leader in our understanding of the structure and evolution of galaxies by combining theory and modeling with observations. Through his many Ph.D. students and his generous interactions with countless colleagues, his influence on Galactic and extragalactic astronomy has extended far beyond his own research.

142.01 New Developments in Galactic Archaeology
Freeman, Kenneth C.[1]
[1]Australian National Univ., Weston Creek, ACT, Australia.
Contributing teams: HERMES/GALAH team

143 HAD Doggett Prize Lecture: Applied Historical Astronomy

Monday, 4:30 PM - 5:20 PM; Potomac Ballroom A

Chair(s):
Jarita Holbrook, *University of the Western Cape*

F. Richard Stephenson - HAD Doggett Prize Lecture: Applied Historical Astronomy
F. Richard Stephenson for his lifetime achievements in leading the development of the new field of applied historical astronomy, including the use of ancient records to determine changes in the rotation rate of the Earth and to help modern astronomers observe the sites of galactic supernovae observed over the last two thousand years.

143.01 Applied Historical Astronomy
Stephenson, F. Richard[1]
[1.]Durham University, Durham, United Kingdom.

Evening Poster Session

Monday, 5:30 PM - 6:30 PM; Exhibit Hall ABC

Career Hour 2: Work-Life Balance: It Can Be Done, You Can Have Fun in Both Worlds

Monday, 5:30 PM - 6:30 PM; National Harbor 2

Crafting a career that is intellectually stimulating and satisfying, AND provides time and opportunities for excitement outside the profession is not impossible and not improbable in science and engineering. It's all about identifying and articulating your priorities and ensuring that they align with the values of the organization for which you work. We will address how to orchestrate a career plan that includes avenues for "life" activities (whatever they may be) and how to ensure that your work and your personal life provide a balance for a fulfilling experience. Audience: students, postdocs, early- and mid-career professionals Facilitator: Alaina G. Levine, President, Quantum Success Solutions Alaina G. Levine is a science careers consultant, science writer, and professional speaker and comedian. Her new book on networking strategies for scientists and engineers will be published by Wiley in 2014.

Chair(s):
Alaina Levine, *Quantum Success Solutions*
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

Observatory Site Protection: Challenges & Solutions

Monday, 6:30 PM - 8:00 PM; National Harbor 3

In the 1970s optical astronomers publicly identified the degradation of the night sky from the increase in lighting associated with development and growth. Although many communities have passed anti-light pollution ordinances, there is still need to protect dark skies near our research and college observatories and surrounding communities. Radio astronomers have also been interacting with industry and regulatory agencies to protect critical frequencies against broadcast interference and to establish radio-quiet zones around research facilities. The AAS Committee on Light Pollution, Radio Frequency Interference (RFI) and Space Debris; IAU's Commission 50 on Observatory Site Protection; and the International Dark-Sky Association are teaming to propose presentations on 3 timely topics. Richard Wainscoat (U. Hawaii) will give a talk on the recent success in passing lighting ordinances in Hawaii. Bob Parks (IDA Executive Director) will talk on the Model Lighting Ordinance, how it has been applied so far and can be applied to benefit research and college observatory communities. Similarly, Harvey Liszt (NRAO) will talk about how the most significant challenges in RFI facing the radio astronomy community are being addressed. These presentations will tie to the new category "Observatory Site Protection" poster session and two oral sessions on Public Policy and Astronomy Education Policy that involve talks on light pollution issues. After the presentations, the splinter session will hold a discussion moderated by Richard Green (U. Arizona, President of IAU Commission 50) on how can we (AAS, IAU, IDA) help communities establish ordinances to protect dark skies and the radio spectrum, as well as on any related presentation made during the oral and poster sessions. We will post all presentations on the AAS Committee's web site for future reference, along with a packet for what professional astronomers can do to combat light and spectrum pollution and a videotape of the session.

Organizer(s):
Constance Walker, *NOAO*

LGBTIQ Networking Dinner

Monday, 6:30 PM - 8:30 PM; AAS Registration Desk

The AAS Working Group on LGBTIQ Equality (WGLE) works to promote equality for lesbian, gay, bisexual, transgender, intersex, and questioning individuals within our profession. Join us for dinner on Monday evening, January 6. We'll meet in front of the AAS Meeting Registration Desk at 6:30 and walk to a local restaurant. Please bring a method of payment for this dinner.

Organizer(s):
William Van Dyke Dixon,

SOFIA Mission Status and Science Update

Monday, 6:30 PM - 8:00 PM; Maryland Ballroom A

SOFIA, the Stratospheric Observatory for Infrared Astronomy, is a 2.5-meter infrared telescope in a Boeing 747SP that operates at altitudes up to 45,000 feet (14 km), a joint program of NASA and the German Aerospace Center (DLR). SOFIA's Cycle 1 science programs were conducted during 2013. This splinter session will highlight the successful southern hemisphere deployment in July-August 2013, ongoing upgrades of mission systems, and status of the Cycle 2 (calendar year 2014) science program. Results from commissioning and science observations by GREAT (far-IR heterodyne spectrometer) and FORCAST (mid-IR camera) will also be presented. Upcoming commissioning of EXES (mid-IR spectrometer) and FIFI LS (far-IR imaging spectrometer) as well as future science and instrument proposal calls will be discussed. Session Agenda: (1) SOFIA Program & Science Mission Status: Pam Marcum (SOFIA Project Scientist, NASA), & Erick Young (SOFIA Science Mission Operations Director, USRA); (2) GREAT (far-IR spectrometer) Commissioning & Science: Rolf Guesten (GREAT Principal Investigator, MPIfR); (3) FORCAST (mid-IR camera) Commissioning & Science: Andrew Helton (SOFIA staff instrument scientist, USRA); (4) Questions and Answers

Organizer(s):
Dana Backman, *SETI Institute*

144 AAS Publications Town Hall

Monday, 6:30 PM - 8:00 PM; Potomac Ballroom C

The AAS publishing program continues to evolve, and this Town Hall offers the community an opportunity to hear from and interact with the leaders of the program about current issues and concerns as well as new initiatives and future directions.

Chair(s):
Christopher Biemesderfer, *American Astronomical Society*

Tales from the Twitterverse, and Other Media Excursions, Neil deGrasse Tyson, American Museum of Natural History

Monday, 8:00 PM - 9:00 PM; Potomac Ballroom A

The public's access to our field has historically occurred through traditional conduits of communication such as television documentaries, planetarium shows, and media reports. But in the past five years social media has arisen as a means of attracting people who would have never imagined they had an interest in the universe, or in science at all. The results are stunning and unexpected, with millions of people responding to various offerings of the universe made in these media. Twitter and Facebook lead the way, but other Internet social media have proven potent as well, including YouTube, Reddit, Google+, and, more broadly, the blogosphere. We give first-hand stories and accounts of forays on this landscape and offer suggestions on how such efforts may benefit the long-term health of modern astrophysics from having cultivated public support at its deepest levels.

Chair:
David Helfand, *Quest University Canada*

POSTERS

145 New Science from the CLASH/CANDELS Multi-Cycle Treasury Programs Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

145.01 Optical And Near-infrared Variability Among Distant Galactic Nuclei Of The CANDELS EGS Field
Grogin, Norman A.[1]; Dahlen, Tomas[1]; Donley, Jennifer[2]; Koekemoer, Anton M.[1]; Salvato, Mara[3]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Los Alamos National Laboratory, Los Alamos, NM. [3.]Max Planck Institute for Extraterrestrial Physics, Garching, Germany.
Contributing teams: The CANDELS Collaboration

145.02 Automated PSF Modeling for Hubble Images
Hamilton, Timothy S.[1]
[1.]Shawnee State Univ., Portsmouth, OH.

145.03 Red CANDELS: Physical Properties of IRAC Sources Undetected in the F160W Band in CANDELS Fields
Stefanon, Mauro[1]; Yan, Haojing[1]
[1.], Columbia, MO.
Contributing teams: CANDELS

145.04 Unsupervised Machine Learning to Track Galaxy Morphological Evolution in CANDELS
Peth, Michael[1]; Lotz, Jennifer M.[2]; Freeman, Peter E.[3]; McPartland, Conor[4, 2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]STSci, Baltimore, MD. [3.]Carnegie Mellon University, Pittsburgh, PA. [4.]University of Hawai'i, Honolulu, HI.
Contributing teams: the CANDELS Collaboration

145.05 To Stack or Not to Stack: Physical Properties of Lyman-? Emitting Galaxies at z = 2.1
Bish, Hannah[1]; Vargas, Carlos J.[1, 2]; Acquaviva, Viviana[3]; Gawiser, Eric J.[1]; Finkelstein, Steven L.[4]; Ciardullo, Robin[5]
[1.]Rutgers, The State University of New Jersey, Metuchen, NJ. [2.]New Mexico State University, Las Cruces, NM. [3.]New York City College of Technology, Brooklyn, NY. [4.]The University of Texas at Austin, Austin, TX. [5.]The Pennsylvania State University, University Park, PA.
Contributing teams: the MUSYC collaboration, the CANDELS collaboration

145.06 Evolution of Visually Disturbed Galaxies from 0.6<z<2.5 in the CANDELS UDS Field
Cook, Joshua[1]; McIntosh, Daniel H.[1]; Kartaltepe, Jeyhan S.[2]; Koekemoer, Anton M.[3]; Lotz, Jennifer M.[3]; Wuyts, Stijn[4]; Bell, Eric F.[5]; Conselice, Christopher[6]
[1.]University of Missouri-Kansas City, Kansas City, MO. [2.]National Optical Astronomy Observatory, Tucson, AZ. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]Max Planck Institute for Extraterrestrial Physics, Munich, Germany. [5.]University of Michigan, Ann Arbor, MI. [6.]University of Nottingham, Nottingham, United Kingdom.
Contributing teams: The CANDELS Collaboration

145.07 Probing the Reionization Epoch At Redshift ~8

Tilvi, Vithal[1]; Finkelstein, Steven L.[2]; Papovich, Casey J.[1]; Dickinson, Mark[3]; Song, Mimi[2]; Ferguson, Henry C.[4]; Koekemoer, Anton M.[4]; Giavalisco, Mauro[5]
[1.]Texas A and M, College Station, TX. [2.]University of Texas, Austin, TX. [3.]NOAO, Tuscon, AZ. [4.]STScI, Baltimore, MD. [5.]University of Massachusetts, Amherst, MA.

145.08 A progenitor of today's typical galaxy clusters at z=1.84

Mei, Simona[1]; Scarlata, Claudia[2]; Pentericci, Laura[3]; Newman, Jeffrey[4]; Teplitz, Harry I.[5]; Weiner, Benjamin J.[6]; Ashby, Matthew[7]; Castellano, Marco[3]; Conselice, Christopher[8]; Finkelstein, Steven L.[9]; Galametz, Audrey[3]; Koekemoer, Anton M.[10]; Lucas, Ray A.[10]; Rafelski, Marc[5]
[1.]University of Paris - IPAC Caltech, Pasadena, CA. [2.]University of Minnesota, Minneapolis, MN. [3.]INAF - Observatory of Monteporzio, Roma, Roma, Italy. [4.]University of Pittsburgh, Pittsburgh, PA. [5.]IPAC Caltech, Pasadena, CA. [6.]University of Arizona, Tucson, AZ. [7.]CfA Harvard, Boston, MA. [8.]University of Nottingham, Nottingham, Nottingham, United Kingdom. [9.]The University of Texas, Austin, TX. [10.]Space Telescope Science Institute, Baltimore, MD.
Contributing teams: CANDELS team

145.09 Comparing SFR estimators for IR-luminous galaxies at z~2 in CANDELS

Pforr, Janine[1]; Dickinson, Mark[1]; Kartaltepe, Jeyhan S.[1]; Inami, Hanae[1]; Penner, Kyle[2]
[1.]NOAO, Tucson, AZ. [2.]University of Arizona, Tucson, AZ.
Contributing teams: The CANDELS collaboration

145.10 High-Redshift Supernovae Behind CLASH Galaxy Clusters

Patel, Brandon[1]; McCully, Curtis[1]; Holoien, Thomas[1, 5]; Graur, Or[2, 3]; Rodney, Steven A.[4]; Riess, Adam G.[4]
[1.]Rutgers University, Piscataway, NJ. [2.]American Museum of Natural History, New York, NY. [3.]Tel-Aviv University, Tel-Aviv, Israel. [4.]The Johns Hopkins University, Baltimore, MD. [5.]Ohio State University, Columbus, OH.
Contributing teams: CLASH Collaboration

145.11 UV-bright Clumps in Star-forming Galaxies at 0.5<z<3 in CANDELS Fields: Clump Detection and Number Count

Guo, Yicheng[1]; Koo, David C.[1]; Primack, Joel R.[2]
[1.]UCO/Lick Observatory, Santa Cruz, CA. [2.]UCSC, Santa Cruz, CA.
Contributing teams: The CANDELS collaboration

145.12 CLASH: Assembly Histories of Brightest Cluster Galaxies

Moustakas, John[1]; Donahue, Megan[2]; Ford, Holland[3]; Kelson, Daniel[4]; Moustakas, Leonidas A.[5]; Postman, Marc[6]
[1.]Siena College, Loudonville, NY. [2.]Michigan State University, East Lansing, MI. [3.]The Johns Hopkins University, Baltimore, MD. [4.]Observatories of the Carnegie Institution of Washington, Pasadena, CA. [5.]Jet Propulsion Laboratory, Pasadena, CA. [6.]Space Telescope Science Institute, Baltimore, MD.
Contributing teams: CLASH Collaboration

145.13 The Concentration-Mass Relation from CLASH clusters using galaxy dynamics
Lemze, Doron[1]; Biviano, Andrea[2]; Medezinski, Elinor[1]; Rosati, Piero[3]; Balestra, Italo[2, 4]; Mercurio, Amata[4]; Jouvel, Stephanie[5]; Nonino, Mario[2]; Umetsu, Keiichi[6]; Postman, Marc[7]; Ford, Holland[1]; Kelson, Daniel[8]; Pereira, Maria[9]; Egami, Eiichi[9]
[1.]Johns Hopkins University, Baltimore, MD. [2.]NAF/Osservatorio Astronomico di Trieste, Trieste, Italy. [3.]University of Ferrara, Ferrara, Italy. [4.]INAF/Osservatorio Astronomico di Capodimonte, Napoli, Italy. [5.]Institut de Cincies de l'Espai, Barcelona, Spain. [6.]Academia Sinica Institute of Astronomy and Astrophysics (ASIAA) , Taipei, Taiwan. [7.]Space Telescope Science Institute, Baltimore, MD. [8.]Carnegie Institute for Science, Pasadena, CA. [9.]University of Arizona, Tucson, AZ.

145.15 Massive Quiescent Disk Galaxies in the CANDELS survey
Kesseli, Aurora[1]; McGrath, Elizabeth J.[1]
[1.]Colby College, Waterville , ME.
Contributing teams: CANDELS collaboration

145.16 KPC-SCALE STUDY OF SUBSTRUCTURES INSIDE GALAXIES out to z ~ 1.3
Hemmati, Shoubaneh[1]; Mobasher, Bahram[1]; Miller, Sarah[1, 2]; Nayyeri, Hooshang[1]
[1.]UC Riverside, Riverside, CA. [2.]California Institute of Technology, Pasadena, CA.

145.17 Evolutionary Trends of Massive Spheroidal Galaxies from 0.6<z<2.5 in the CANDELS UDS Field
Rizer, Zachary[1]; McIntosh, Daniel H.[1]; Kartaltepe, Jeyhan S.[2]; Koekemoer, Anton M.[3]; van der Wel, Arjen[4]; Wuyts, Stijn[5]; Bell, Eric F.[6]; Conselice, Christopher[7]
[1.]University of Missouri - Kansas City, Kansas City, MO. [2.]National Optical Astronomy Observatory, Tucson , AZ. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]Max Planck Institute for Astronomy, Heidelberg, Germany. [5.]Max-Planck-Institut für Extraterrestrische Physik, Garching, Germany. [6.]University of Michigan, Ann Arbor, MI. [7.]University of Nottingham, Nottingham, United Kingdom.
Contributing teams: The CANDELS Collaboration

146 Exoplanets and Kepler Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

146.01 Photometry Using Kepler 'Superstamps' of Open Clusters NGC 6791 & NGC 6819
Kuehn, Charles A.[1]; Drury, Jason[1]; Stello, Dennis[1]; Bedding, Timothy R.[1]
[1.]University of Sydney, Redfern, NSW, Australia.

146.02 Long-Term Quadrature Light Variability in Early Type Interacting Binary Systems
Peters, Geraldine J.[1]; Wilson, Robert E.[2]; Vaccaro, Todd R.[3]
[1.]University of Southern California, Los Angeles, CA. [2.]University of Florida, Gainesville, FL. [3.]St. Cloud State University, Saint Cloud, MN.

146.03 Algorithms for Kepler Long-Cadence Observations of Periodic Variable Stars
Mighell, Kenneth J.[1]
[1.]NOAO, Tucson, AZ.

146.04 Mining the Kepler Data using Machine Learning
Walkowicz, Lucianne[1]; Howe, Alex R.[1]; Nayar, Revant[1]; Turner, Edwin L.[1]; Scargle, Jeffrey[2]; Meadows, Victoria[3]; Zee, Anthony[4]
[1.]Princeton University, Princeton, NJ. [2.]NASA Ames Research Center, Moffet Field, CA. [3.]University of Washington, Seattle, WA. [4.]Kavli Institute of Theoretical Physics, Santa Barbara, CA.

147 HAD III: Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

147.01 Urania in the Marketplace: The Timepieces
Rumstay, Kenneth S.[1]
[1.]Valdosta State Univ., Valdosta, GA. w

147.02 50 Years of the Astro-Science Workshop at the Adler Planetarium
Hammergren, Mark[1]; Martynowycz, Michael W.[2, 1]; Ratliff, Gayle[2, 1]
[1.]Adler Planetarium, Chicago, IL. [2.]Illinois Institute of Technology, Chicago, IL.

147.03 Could our Understanding of Post-Main Sequence Stellar Evolution have been Hastened? The, Errantly Dismissed, 1930's Discovery of Subgiant Stars by the Mount Wilson Observatory Spectroscopists
Beaton, Rachael[1]; Sandage, Alan[2]; Majewski, Steven R.[1]
[1.]Univ. of Virginia, Charlottesville, VA. [2.]Carnegie Observatories, Pasedena, CA.

148 Instrumentation: Ground or Airborne Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

148.01 RIMAS - rapid reaction near infrared imager-spectrometer
Kutyrev, Alexander[2, 1]; Toy, Vicki[2]; Veilleux, Sylvain[2]; Capone, John[2]; Robinson, Frederick D.[3, 2]; Lotkin, Gennadiy N.[3, 2]; Moseley, Samuel H.[1]; Gehrels, Neil[1]; Vogel, Stuart N.[2]
[1.]NASA's GSFC, Greenbelt, MD. [2.]UMCP, College Park, MD. [3.]Global Science & Technology, Inc., Greenbelt, MD.

148.02 Rapid GRB Photometry with RIMAS
Toy, Vicki[1]; Kutyrev, Alexander[2, 1]; Veilleux, Sylvain[1]; Capone, John[1]; Robinson, Frederick D.[3, 2]; Lotkin, Gennadiy N.[3, 2]; Moseley, Samuel H.[2]; Gehrels, Neil[2]; Vogel, Stuart N.[1]
[1.]University of Maryland, College Park, College Park, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Global Science & Technology, Inc., Greenbelt, MD.

148.03 The future of rapid GRB afterglow spectroscopy with RIMAS
Capone, John[1]; Kutyrev, Alexander[2, 1]; Veilleux, Sylvain[1]; Toy, Vicki[1]; Robinson, Frederick D.[3, 2]; Lotkin, Gennadiy N.[3, 2]; Moseley, Samuel H.[2]; Gehrels, Neil[2]; Vogel, Stuart N.[1]
[1.]University of Maryland, College Park, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Global Science & Technology, Inc., Greenbelt, MD.

148.04 The Balloon Experimental Twin Telescope for Infrared Interferometry (BETTII): System Design, Progress, and Plans

Rinehart, Stephen[1]; Rizzo, Maxime[2]; Veach, Todd[1, 4]; Dhabal, Arnab[2]; Benford, Dominic J.[1]; Silverberg, Robert F.[1]; Fixsen, Dale J.[2]; Barry, Richard K.[1]; Barclay, Richard[1]; Staguhn, Johannes[3]; Maher, Stephen F.[1]; Leisawitz, David[1]; Mundy, Lee G.[2]; Jhabvala, Christine[1]

[1.]NASA's GSFC, Greenbelt, MD. [2.]University of Maryland, College Park, College Park, MD. [3.]Johns Hopkins University, Baltimore, MD. [4.]ORAU, NASA Postdoctoral Program Fellow, Oak Ridge, TN.

148.05 The Balloon Experimental Twin Telescope for Infrared Interferometry (BETTII): Optical Design

Veach, Todd[1]; Mentzell, Eric[1]; Rinehart, Stephen[1]; Fixsen, Dale J.[1, 2]; Rizzo, Maxime[2]; Benford, Dominic J.[1]; Dhabal, Arnab[2]

[1.]Goddard Space Flight Center, Greenbelt, MD, MD. [2.]University of Maryland , College Park, MD.

148.06 The Balloon Experimental Twin Telescopes for Infrared Interferometry (BETTII): targets and calibration

Rizzo, Maxime[1, 2]; Rinehart, Stephen[2]; Benford, Dominic J.[2]; Dhabal, Arnab[1, 2]; Fixsen, Dale J.[1, 2]; Leisawitz, David[2]; Mundy, Lee G.[1]

[1.]University of Maryland, College Park, College Park, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD.

148.07 Timing Sunsets with Smartphones: Proof of Concept for a Citizen Science Project that Quantifies the Atmosphere and Supports Astronomical Observations

Wilson, Teresa[1]; Kantamneni, Abhilash[1]; Bartlett, Jennifer L.[2]; Nemiroff, Robert J.[1]

[1.]Michigan Technological University, Houghton, MI. [2.]United States Naval Observatory, Washington , DC.

148.08 Shared Skies Partnership: A Dual-Site All-Sky Live Remote Observing Initiative for Research and Education

Kielkopf, John F.[1, 2]; Hart, Rhodes[2]; Carter, Brad[2]; Collins, Karen A.[1]; Brown, Carolyn[2]; Hay, Jeff[1]; Hons, Alex[2]; Marsden, Stephen[2]

[1.]Univ. of Louisville, Louisville, KY. [2.]Univ. of Southern Queensland, Toowoomba, QLD, Australia.

148.09 Performance Characterization of KAPAO, a Low-Cost Natural Guide Star Adaptive Optics Instrument

Long, Joseph[1]; Choi, Philip I.[1]; Severson, Scott A.[2]; Littleton, Erik[4]; Badham, Katherine[2]; Bolger, Dalton[1]; Guerrero, Christian[4]; Ortega, Fernando[1]; Wong, Jonathan[1]; Baranec, Christoph[3]; Riddle, Reed L.[3]

[1.]Pomona College, Claremont, CA. [2.]Sonoma State University, Sonoma, CA. [3.]California Institute of Technology, Pasadena, CA. [4.]Harvey Mudd College, Claremont, CA.

148.10 Assembly and First-Light of KAPAO, a Low-Cost Natural Guide Star Adaptive Optics System

Badham, Katherine[2]; Severson, Scott A.[2]; Choi, Philip I.[1]; Bolger, Dalton[1]; Guerrero, Christian[3]; Long, Joseph[1]; Ortega, Fernando[1]; Wong, Jonathan[1]

[1.]Pomona College, Claremont, CA. [2.]Sonoma State University, Rohnert Park, CA. [3.]Harvey Mudd College, Claremont, CA.

148.11 LoFASM's FPGA-based Digital Acquisition System
Dartez, Louis P.[1]; Jenet, Fredrick[1]; Creighton, Teviet D.[1]; Ford, Anthony J.[1, 2]; Hicks, Brian[3]; Hinojosa, Jesus[1]; Kassim, Namir E.[3]; Price, Richard H.[1]; Stovall, Kevin[1, 4]; Ray, Paul S.[3]; Taylor, Gregory B.[4]
[1.]University of Texas - Brownsville, Brownsville, TX. [2.]Arecibo Observatory, Arecibo, Puerto Rico. [3.]U.S. Naval Research Lab, Washington, DC. [4.]University of New Mexico, Albuquerque, NM.

148.12 Progress on the Low Frequency All Sky Monitor
Murray, James[1]; Jenet, Fredrick[1]; Craig, Joseph[3]; Creighton, Teviet D.[1]; Dartez, Louis P.[1]; Ford, Anthony J.[1]; Hicks, Brian[2]; Hinojosa, Jesus[1]; Jaramillo, Ricardo[1]; Kassim, Namir E.[2]; Lunsford, Grady[1]; Miller, Rossina B.[1]; Ray, Paul S.[2]; Rivera, Jesus[1]; Taylor, Gregory B.[3]
[1.]University of Texas at Brownsville, Brownsville, TX. [2.]Naval Research Laboratory, Washington, DC. [3.]University of New Mexico, Albuquerque, NM.

148.13 Preliminary Results from CINDERS: Circularized IFUs Now Deployed using Economical Robots on SOAR
McBride, JoEllen[1]; Cecil, Gerald N.[1]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC.

148.14 Concept for SAMOS: SOAR Adaptive-optics Multi-object Spectrograph
Robberto, Massimo[1]
[1.]STScI, Baltimore, MD.
Contributing teams: M. Donahue, A. Tokovinin, S. Smee, R. Barkhauser, S. Deustua, M. Gennaro, J. Kalirai, J. MacKenty, K. Pontoppidan

148.15 The Gemini Observatory Fast-Turnaround Program
Mason, Rachel[1]; Adamson, Andy[1]; Crabtree, Dennis[2]; Cote, Stephanie[2]; Kissler-Patig, Markus[1]; Levenson, Nancy[1]
[1.]Gemini Observatory, Hilo, HI. [2.]Herzberg Institute of Astrophysics, Victoria, BC, Canada.

148.16 Gemini Multi-Object Spectrograph Upgrades: Hamamatsu CCDs and AO
Roth, Katherine[1]; Gimeno, German[2]; Murowinski, Richard[3]; Kleinman, Scot[1]; Trujillo, Chadwick A.[1]; Lai, Olivier[1]
[1.]Gemini Observatory, Hilo, HI. [2.]Gemini Observatory, La Serena, Chile. [3.]NRC Herzberg, Victoria, BC, Canada.

148.17 Monitoring Atmospheric Transmission with FLAME
Zimmer, Peter C.[1]; McGraw, John T.[1]; Zirzow, Daniel C.[1]; Koppa, Matt[1]; Buttler-Pena, Karina[1]
[1.]Univ. of New Mexico, Albuquerque, NM.

148.18 Learning from AESoP: NIST-traceable Spectroradiometric Calibration of Stars
McGraw, John T.[1]; Zimmer, Peter C.[1]; Zirzow, Daniel C.[1]; Koppa, Matt[1]; Buttler-Pena, Karina[1]
[1.]Univ. of New Mexico, Albuquerque, NM.

148.19 The WIYN One Degree Imager: Upgrading for the Future
Harbeck, Daniel R.[1]; Liu, Wilson M.[1]; Rajagopal, Jayadev[2]
[1.]WIYN Observatory, Tucson, AZ. [2.]NOAO, Tucson, AZ.
Contributing teams: ODI Team

148.20 Science with ODI: An overview of ongoing and upcoming research with the WIYN Observatory's new large format imager
Hooper, Eric[1, 2]; Harbeck, Daniel R.[1]
[1.] WIYN Observatory, Tucson, AZ. [2.] Univ. of Wisconsin-Madison, Madison, WI.
Contributing teams: WIYN Consortium

148.21 Silicon Powder Filters for Large-Aperture Cryogenic Receivers
Boone, Fletcher[1]; Essinger-Hileman, Thomas[1]; Bennett, Charles L.[1]; Marriage, Tobias[1]; Xu, Zhilei[1]
[1.] Physics and Astronomy, Johns Hopkins University, Baltimore, MD.

148.22 Monitoring of Cyg A and Cas A flux densities below 100 MHz
Schinzel, Frank[1]; Cutchin, Sean E.[2]; Polisensky, Emil[2]; Helmboldt, Joseph F.[2]; Dowell, Jayce[1]; Kassim, Namir E.[2]; Taylor, Gregory B.[1]
[1.] University of New Mexico, Albuquerque, NM. [2.] Naval Research Laboratory, Washington, DC, DC.
Contributing teams: on behalf of the LWA1 collaboration

148.23 A Positional X-ray Instrumentation Test Stand For Beam-Line Experiments
Nikoleyczik, Jonathan[1]; Prieskorn, Zachary[1]; Burrows, David N.[1]; Falcone, Abraham[1]
[1.] The Pennsylvania State University, University Park, PA.

148.24 Development of a Low Cost Spectrometer for the Small Radio Telescope (SRT), Very Small Radio Telescope (VSRT), and Ozone spectrometer
Higginson-Rollins, Marc[1, 2]; Rogers, Alan E.[2]
[1.] University of Kentucky, Lexington, KY. [2.] MIT Haystack Observatory, Westford, MA.

148.25 Time-Domain and Transient Astronomy with the Liverpool Telescope
Davis, Christopher[1]
[1.] Liverpool John Moores University, Liverpool, Merseyside, United Kingdom.

148.26 Astrometric and Photometric Accuracy of the 1.3 m Robotically Controlled Telescope on Kitt Peak
McGruder, Charles H.[1]; Carini, Michael T.[1]; Engle, Scott G.[3]; Gelderman, Richard[1]; Guinan, Edward F.[3]; Laney, David[1]; Strolger, Louis-Gregory[1]; Treffers, Richard R.[4]; Walter, Donald K.[2]
[1.] Western Kentucky Univ., Bowling Green, KY. [2.] South Carolina State University, Orangeburg, SC. [3.] Villanova University, Villanova, PA. [4.] Starman Systems, Tucson, AZ.

148.27 Lunar Laser Ranging with Imaging Atmospheric Cherenkov Telescopes
Reitzes, Sarah[1]; Perkins, Jeremy[2]
[1.] Tufts University, Medford, MA. [2.] NASA-GSFC, Greenbelt, MD.

148.28 Analysis of DECal Scans for the Dark Energy Survey Camera
Wester, William[1]
[1.] Fermilab, Batavia, IL.
Contributing teams: Texas A&M University, Cerro Tololo Inter-American Observatory

148.29 Design and Construction of a New 1420 MHz Receiver System for a 12-meter Radio Telescope
Lemley, Cameron[1, 2]; Castelaz, Michael W.[1]
[1.] Pisgah Astronomical Research Institute, Rosman, NC. [2.] Columbia University, New York, NY.

148.30 Experiences with the Design and Construction of Astronomical Instrumentation using CASPER: The Digital Backend System

Prestage, Richard M.[1]; Bloss, Martin[1]; Brandt, Joe[1]; Creager, Ramon[1]; Demorest, Paul[2]; Ford, John[1]; Jones, Glenn[2, 3]; Luo, Jintao[2]; McCullough, Randy[1]; Ransom, Scott M.[2]; Ray, Jason[1]; Watts, Galen[1]; Whitehead, Mark[1]

[1.]NRAO, Green Bank, WV. [2.]NRAO, Charlottesville, VA. [3.]Columbia University, New York, NY.

148.31 MINERVA: Small Telescopes, Small Planets

Wright, Jason[1]; Johnson, John A.[2]; McCrady, Nate[3]; Swift, Jonathan[4]; Muirhead, Philip S.[6]; Zhao, Ming[1]; Plavchan, Peter[5]; Bottom, Michael[4]; Wittenmyer, Robert A.[7]

[1.]Penn State University, University Park, PA. [2.]Center for Astrophysics, Cambridge, MA. [3.]University of Montana, Missoula, MT. [4.]Caltech, Pasadena, CA. [5.]NExScI, Pasadena, CA. [6.]Boston University, Boston, MA. [7.]University of New South Wales, Kensington, NSW, Australia.

148.32 Winter sky brightness & cloud cover over Dome A

Yang, Yi[3, 2]; Moore, Anna M.[1]; Fu, Jianning[2]; Ashley, Michael C. B.[4]; Cui, Xiangqun[5]; Feng, Longlong[6, 7]; Gong, Xuefei[5, 7]; Hu, Zhongwen[5, 7]; Laurence, Jon[8, 9]; LuongVan, Daniel[4]; Riddle, Reed L.[1]; Shang, Zhaohui[7, 10]; Sims, Geoffrey[4]; Storey, John[4]; Tothill, Nick[11]; Travouillon, Tony[12]; Wang, Lifan[3, 6]; Yang, Huigen[7, 13]; Yang, Ji[6]; Zhou, Xu[7, 14]; Zhu, Zhenxi[6, 7]; Burton, Michael G.[4]

[1.]Caltech Optical Observatories, California Institute of Technology, Pasadena, CA. [2.]Department of Astronomy, Beijing Normal University, Beijing, China. [3.]Department of Physics and Astronomy, Texas A&M University, College Station, TX. [4.]School of Physics, University of New South Wales, Sydney, NSW, Australia. [5.]Nanjing Institute Astronomy Optics-Technology, Chinese Academy of Sciences, Nanjing, Jiangsu, China. [6.]Purple Mountain Observatory, Chinese Academy of Sciences, Nanjing, Jiangsu, China. [7.]Chinese Center for Antarctic Astronomy, Nanjing, JIangsu, China. [8.]Department of Physics and Astronomy, Macquarie University, Sydney, NSW, Australia. [9.]Australian Astronomical Observatory, Sydney, NSW, Australia. [10.]Tianjin Normal University, Tianjin, China. [11.]School of Computing, Engineering & Mathematics, University of Western Sydney, Sydney, NSW, Australia. [12.]California Institute of Technology, Pasadena, CA. [13.]Polar Research Institute of China, Shanghai, China. [14.]National Astronomical Observatories, Chinese Academy of Science, Beijing, China.

148.33 The New Instrument Suite of the TSU/Fairborn 2m Automatic Spectroscopic Telescope

Muterspaugh, Matthew W.[1]; Maxwell, Ted[1]; Williamson, Michael W.[1]; Fekel, Francis C.[1]; Ge, Jian[2]; Kelly, John[1]; Ghasempour, Askari[1]; Powell, Scott[2]; Zhao, Bo[2]; Varosi, Frank[2]; Schofield, Sidney[2]; Liu, Jian[2]; Warner, Craig[2]; Jakeman, Hali[2]; Avner, Louis[2]; Swihart, Samuel[3]; Harrison, Chelsea[1]; Fishler, Dan[1]

[1.]Tennessee State University, Franklin, TN. [2.]University of Florida, Gainsville, FL. [3.]University of Michigan, Ann Arbor, MI.

148.34 Final Design of the CHARIS Integral Field Spectrograph for the Subaru Telescope

Groff, Tyler D.[1]; Peters, Mary Anne[1]; Kasdin, N. J.[1]; Galvin, Michael[1]; Brandt, Timothy[1]; Carr, Michael[1]; Knapp, Gillian R.[1]; McElwain, Michael W.[2]; Janson, Markus[3]; Loomis, Craig[1]; Guyon, Olivier[4]; Martinache, Frantz[4]; Jovanovic, Nemanja[4]; Mede, Kyle[6]; Takato, Naruhisa[4]; Hayashi, Masahiko[5]
[1.]Princeton University, Princeton, NJ. [2.]Goddard Space Flight Center, Greenbelt, MD. [3.]Queen's University of Belfast, Belfast, Northern Ireland, United Kingdom. [4.]Subaru Telescope, Hilo, HI. [5.]National Astronomical Observatory of Japan, Mitaka, Tokyo, Japan. [6.]University of Tokyo, Bunkyo-ku, Tokyo, Japan.

148.35 The HPOL Spectropolarimeter and the First 1.5 Years of Operation at Ritter Observatory

Davidson, James W.[1]; Bjorkman, Karen S.[1]; Bjorkman, Jon E.[1]; Hoffman, Jennifer L.[2]; Babler, Brian L.[3]; Meade, Marilyn[3]; Lomax, Jamie R.[4]; Nordsieck, Kenneth H.[3]; Wisniewski, John P.[4]; Kamunen, Kody A.[5, 1]
[1.]The University of Toledo, Toledo, OH. [2.]University of Denver, Denver, CO. [3.]University of Wisconsin, Madison, WI. [4.]University of Oaklahoma, Norman, OK. [5.]Minnesota State University, Mankato, MN.

148.36 The Advancement of Radio Astronomy at Brigham Young University

Honick, Charles[1]; Migenes, Victor[1]; Blakley, Daniel[1]
[1.]Brigham Young University, Provo, UT.

148.37 CHaS, the Circumgalactic H-alpha Spectrograph

Gordon, Sam[1]; Schiminovich, David[1]; Hamden, Erika T.[1]
[1.]Columbia University, New York, NY.

148.38 Finding Radio Transients with the Murchison Widefield Array

Kaplan, David L.[1]
[1.]University of Wisconsin, Milwaukee, Milwaukee, WI.
Contributing teams: The Murchison Widefield Array Collaboration

148.39 SOFIA: Review of Initial Science Operations, 2010 – 2013

Meyer, Allan W. [1]
[1.]USRA / SOFIA, Moffett Field, CA.

148.40 Performance of Electroluminescent Flats for Precision Light Curve Photometry

Avril, Ryan L.[1]; Oberst, Thomas E.[1]
[1.]Physics, Westminster College, New Wilmington, PA.

148.41 Precision Astronomy with Imperfect Deep Depletion CCDs

Stubbs, Christopher[1]
[1.]Harvard University, Cambridge, MA.
Contributing teams: LSST sensor team, PanSTARRS team.

148.42 Characteristics and Early Science Results of the Virgin Islands Robotic Tele scope at the Etelman Observatory

Morris, David C.[1]; Neff, James E.[2]; Hakkila, Jon E.[2]
[1.]College of Science and Mathematics, University of the Virgin Islands, St Thomas, Virgin Islands, U.S.. [2.]College of Charleston, Charleston, SC.

149 Instrumentation: Space Missions Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

149.01 WFC3: Enhanced Data Processing Software
Sosey, Megan L.[1]
[1.]STScI, Baltimore, MD.
Contributing teams: WFC3 Instrument Team

149.02 WFC3: Status and Advice for Cycle 22 Proposers
MacKenty, John W.[1]; Baggett, Sylvia M.[1]; Deustua, Susana E.[1]; Hammer, Derek[1]; Lee, Janice C.[1]; McCullough, Peter R.[1]; Pirzkal, Norbert[1]; Kozhurina-Platais, Vera[1]; Riess, Adam G.[1]
[1.]STScI, Baltimore, MD.
Contributing teams: Wide Field Camera 3

149.03 WFC3: Understanding and Mitigating UVIS Charge Transfer Efficiency Losses and IR Persistence Effects
Baggett, Sylvia M.[1]; Anderson, Jay[1]; Long, Knox S.[1]; MacKenty, John W.[1]; Noeske, Kai[1]; Biretta, John A.[1]
[1.]STScI, Columbia, MD.
Contributing teams: WFC3 Team

149.04 WFC3: Improved WFC3 Calibration Products
Gunning, Heather C.[1]; Sosey, Megan L.[1]; Anderson, Jay[1]; Lee, Janice C.[1]; Pirzkal, Norbert[1]; MacKenty, John W.[1]; Kozhurina-Platais, Vera[1]; Deustua, Susana E.[1]; Hammer, Derek[1]; Dahlen, Tomas[1]; Sabbi, Elena[1]; Mack, Jennifer[1]; Baggett, Sylvia M.[1]
[1.]Space Telescope Science Institute, Baltimore, MD.
Contributing teams: WFC3 Team

149.05 A New, Deeper Long Baseline Study of ACS/WFC Extended Source CTE Effects
Lucas, Ray A.[1]; Grogin, Norman A.[1]; Chiaberge, Marco[1]; Maybhate, Aparna[1]; Koekemoer, Anton M.[1]
[1.]STScI, Baltimore, MD.

149.06 ACS/WFC Geometric Distortion: a time dependency study
Ubeda, Leonardo[1]; Kozhurina-Platais, Vera[1]; Bedin, Luigi R.[2]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Osservatorio Astronomico di Padova, Padua, Italy.

149.07 Wide-field spatio-spectral interferometry for far-infrared space applications: A progress report
Leisawitz, David[1]; Armstrong, J. T.[2]; Bolcar, Matthew R.[1]; Lyon, Richard[1]; Maher, Stephen F.[3, 1]; Memarsadeghi, Nargess[1]; Rinehart, Stephen[1]; Sinukoff, Evan[4, 1]
[1.]NASA GSFC, Greenbelt, MD. [2.]NRL, Washington, DC, DC. [3.]SSAI, Inc., Greenbelt, MD. [4.]Univ. of Hawaii, Honolulu, HI.

149.08 Technology Demonstration Milestone #1 for the EXoplanetary Circumstellar Environments and Disk Explorer (EXCEDE) II. Science Drivers and Implications.
Schneider, Glenn[1]; Belikov, Ruslan[2]; Guyon, Olivier[1]; Lozi, Julien[1]; Eduardo, Bendek[3]; Davis, Paul[2]; Greene, Thomas P.[2]; Lynch, Dana[2]; Eugene, Pluzhnik[2]; Sandrine, Thomas[4]; Witteborn, Fred[4]; Duncan, Alan[5]; Kendrick, Rick[5]; Hix, Troy[5]; Mihara, Roger[5]; Smith, Eric[5]; Irwin, Wes[5]; Debes, John H.[6]; Carson, Joseph[7]; Hines, Dean C.[6]; Grady, Carol A.[8]; Perrin, Marshall D.[6]; Silverstone, Murray D.[9]; Wisniewski, John P.[10]; Hinz, Phil[1]; Moro-Martin, Amaya[11]; Henning, Thomas[12]; Tamura, Motohide[13]; Jang-Condell, Hannah[14]; Weinberger, Alycia J.[15]; Woodgate, Bruce E.[16]; Goto, Miwa[17]; Serabyn, Gene[18]; Rodigas, Timothy[1]; Kuchner, Marc J.[16]; Stark, Christopher C.[16]
[1.]Univ. of Arizona, Tucson, AZ. [2.]NASA Ames Research Center, Moffett Field, CA. [3.]Oak Ridge Associated Universities, Oak Ridge, TN. [4.]University of California Santa Cruz, Santa Cruz, CA. [5.]Lockheed Martin, Palo Alto, CA. [6.]Space Telescope Science Institute, Baltimore, MD. [7.]College of Charleston, Charleston, SC. [8.]Eureka Scientific, Oakland, CA. [9.]University of Alabama - Tuscaloosa, Tuscaloosa, AL. [10.]University of Oklahoma, Norman, OK. [11.]INTA-CSIC, Madrid, Spain. [12.]MPIA, Heidelberg, Germany. [13.]NAOJ, Tokyo, Japan. [14.]University of Wyoming, Laramie, WY. [15.]Carnegie Inst. Of Washington , Washington, D.C., DC. [16.]NASA Goddard Space Flight Center, Greenbelt, MD. [17.]USM, Munich, Germany. [18.]Jet Propulsion Laboratory, Pasadena, CA.
Contributing teams: EXCEDE Project Technology Development Team, HST GO 12228 Team

149.09 Developing Astrometric Drift Scans for the Spitzer Space Telescope
Carey, Sean J.[1]; Ingalls, James[1]; Stauffer, John R.[1]; Grillmair, Carl J.[1]
[1.]Caltech, Pasadena, CA.

149.10 Recent Results and Future Plans for the Gamma Ray Polarimeter Experiment (GRAPE)
McConnell, Mark L.[1]; Bloser, Peter F.[1]; Ertley, Camden[1]; Legere, Jason[1]; Ryan, James M.[1]; Wasti, Sambid [1]
[1.]Univ. of New Hampshire, Durham, NH.

149.11 The Speedster-EXD - A New Event-Triggered Hybrid CMOS X-ray Detector
Griffith, Christopher[1]; Falcone, Abraham[1]; Prieskorn, Zachary[1]; Burrows, David N.[1]
[1.]Penn State, University Park, PA.

149.12 New Worlds / New Horizons Science with an X-ray Astrophysics Probe
Smith, Randall K.[1]; Bookbinder, Jay A.[1]; Hornschemeier, Ann E.[2]; Bandler, Simon[3,2]; Brandt, W. N.[4]; Hughes, John P.[6]; McCammon, Dan[5]; Matsumoto, Hironori[7]; Mushotzky, Richard[3]; Osten, Rachel A.[8]; Petre, Robert[2]; Plucinsky, Paul P.[1]; Ptak, Andrew[2]; Ramsey, Brian[9]; Reynolds, Christopher S.[3]; Schattenburg, Mark[10]
[1.]Smithsonian Astrophysical Observatory, Cambridge, MA. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]University of Maryland College Park, College Park, MD. [4.]Pennsylvania State University, State College, PA. [5.]University of Wisconsin - Madison, Madison, WI. [6.]Rutgers University, Piscataway, NJ. [7.]University of Nagoya, Nagoya, Japan. [8.]STSci, Baltimore, MD. [9.]NASA Marshall Space Flight Center, Huntsville, AL. [10.]MIT, Cambridge, MA.

149.13 High-contrast imager for Complex Aperture Telescopes (HiCAT): testbed design and coronagraph developments

N'Diaye, Mamadou[1]; Choquet, Elodie[1]; Pueyo, Laurent[1, 2]; Elliot, Erin[1]; Perrin, Marshall D.[1]; Wallace, J. Kent[3]; Anderson, Rachel E.[1]; Carlotti, Alexis[5]; Groff, Tyler D.[4]; Hartig, George F.[1]; Kasdin, Jeremy[4]; Lajoie, Charles-Philippe[1]; Levecq, Olivier[8, 1]; Long, Chris[1]; Macintosh, Bruce[7]; Mawet, Dimitri[6, 3]; Norman, Colin A.[1]; Shaklan, Stuart[3]; Sheckells, Matt[2]; Sivaramakrishnan, Anand[1]; Soummer, Remi[1]
[1.]STScI, Baltimore, MD. [2.]Johns Hopkins University, Baltimore, MD. [3.]JPL, Pasadena, CA. [4.]Princeton University, Princeton, NJ. [5.]Institut de Planetologie et d'Astrophysique de Grenoble, Grenoble, France. [6.]European Southern Observatory, Santiago, Chile. [7.]Lawrence Livermore National Laboratory, Livermore, CA. [8.]Institut d'Optique, Orsay, France.

149.14 X-ray Polarization Capabilities of the Gravity and Extreme Magnetism Small Explorer Mission Concept

Jahoda, Keith[1]
[1.]NASA's GSFC, Greenbelt, MD.
Contributing teams: GEMS team

149.15 Cosmic Ray Nuclei in the Fermi-LAT ACD

Green, David[1, 2]; Hays, Elizabeth A.[2]; Brandt, Theresa J.[2]
[1.]University of Maryland, College Park, MD. [2.]NASA: GSFC, Greenbelt, MD.

149.16 Scientific Implications of the Modified Observing Strategy of the Fermi Gamma-ray Space Telescope

McEnery, Julie E.[1]
[1.]NASA's GSFC, Greenbelt, MD.
Contributing teams: Fermi-LAT Collaboration, Fermi-GBM team

149.17 ACCESS: Detector Control and Performance

Morris, Matthew J.[1]; Kaiser, Mary Elizabeth[1]; McCandliss, Stephan R.[1]; Rauscher, Bernard J.[2]; Kimble, Randy A.[2]; Kruk, Jeffrey W.[2]; Wright, Edward L.[4]; Bohlin, Ralph[3]; Kurucz, Robert L.[7]; Riess, Adam G.[1, 3]; Pelton, Russell[1]; Deustua, Susana E.[3]; Dixon, William V.[3]; Sahnow, David J.[3]; Mott, David B.[2]; Wen, Yiting[2]; Benford, Dominic J.[2]; Gardner, Jonathan P.[2]; Feldman, Paul D.[1]; Moos, H. W.[1]; Lampton, Michael[6]; Perlmutter, Saul[5]; Woodgate, Bruce E.[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]University of California, Los Angeles, Los Angeles, CA. [5.]University of California, Berkeley, Berkeley, CA. [6.]Space Sciences Laboratory, Berkeley, Berkeley, CA. [7.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

149.18 ACCESS: Thermal Mechanical Design, Performance, and Status

Kaiser, Mary Elizabeth[1]; Morris, Matthew J.[1]; McCandliss, Stephan R.[1]; Rauscher, Bernard J.[2]; Kimble, Randy A.[2]; Kruk, Jeffrey W.[2]; Wright, Edward L.[4]; Bohlin, Ralph[3]; Kurucz, Robert L.[7]; Riess, Adam G.[1, 3]; Pelton, Russell[1]; Deustua, Susana E.[3]; Dixon, William V.[3]; Sahnow, David J.[3]; Benford, Dominic J.[2]; Gardner, Jonathan P.[2]; Feldman, Paul D.[1]; Moos, H. W.[1]; Lampton, Michael[6]; Perlmutter, Saul[5]; Woodgate, Bruce E.[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]University of California, Los Angeles, Los Angeles, CA. [5.]University of California, Berkeley, Berkeley, CA. [6.]Space Sciences Laboratory, Berkeley, Berkeley, CA. [7.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

149.19 Characterization of Si Hybrid CMOS Detectors for use in the Soft X-ray Band
Prieskorn, Zachary[1]; Griffith, Christopher[1]; Bongiorno, Stephen[1, 2]; Falcone, Abraham[1]; Burrows, David N.[1]
[1.]Astronomy and Astrophysics, Penn State University, University Park, PA. [2.]The Johns Hopkins University, Baltimore, MD.

149.20 Enhanced Fluoride Over-coated Al Mirrors for FUV Space Astronomy
Quijada, Manuel[1]; Rice, Stephen[1]; Threat, Felix T.[1]; Del Hoyo, Javier G.[1]
[1.]NASA-GSFC Code 551,Greenbelt, MD.

149.21 Investigation of the Back-reflection from an On-axis Telescope for Space-based Gravitational Wave Detectors
Mueller, Guido[1]; Spector, Aaron[1]
[1.]University of Florida, Gainesville, FL.

149.22 Astrometry with small-size collapsible space telescope
Bendek, Eduardo[1]; Ennico, Kimberly[1]; Rademacher, Abraham[1]; Lynch, Dana[1]; Guyon, Olivier[3, 2]
[1.]NASA Ames Research Center, Moffett Field, CA. [2.]Subaru Telescope, Hi, HI. [3.]University of Arizona, Tucson, AZ.

149.23 Lightweight ZERODUR®: A Candidate Material for Affordable Future UVOIR Space Telescopes of All Apertures
Hull, Anthony B.[1]; Westerhoff, Thomas[2]; Leys, Antoine[2]
[1.]University of New Mexico, Albuquerque, NM. [2.]SCHOTT AG, Mainz, Germany.

149.24 Improved Characterization of the HST/STIS CCD
Lockwood, Sean A.[1]; Proffitt, Charles R.[2]; Bostroem, K. A.[1]; Debes, John H.[3]; Hernandez, Svea[1]; Hodge, Philip[1]; Oliveira, Cristina M.[3]
[1.]AURA/STScI, Baltimore, MD. [2.]CSC/STScI, Baltimore, MD. [3.]ESA-AURA/STScI, Baltimore, MD.

149.25 Update to the Cosmic Origins Spectrograph FUV Calibration: Improved Characterization Below 1150 Angstroms and Improved Absolute Flux Calibration at all Wavelengths.
Sonnentrucker, Paule[1]; Bostroem, K. A.[1]; Ely, Justin[1]; Debes, John H.[1]; DiFelice, Audrey[1]; Hernandez, Svea[1]; Hodge, Philip E.[1]; Lindsay, Kevin[1]; Lockwood, Sean A.[1]; Massa, Derck[1]; Oliveira, Cristina M.[1]; Roman-Duval, Julia[1]; Penton, Steven V.[1]; Proffitt, Charles R.[1, 2]; Taylor, Joanna M.[1]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]CSC, Baltimore, MD.

149.26 A New HST FGS Astrometry Capability
Bradley, Arthur J.[1]; Nelan, Edmund P.[2]
[1.]Spacecraft System Eng. Services, Annapolis Junction, MD. [2.]Space Telescope Science Institute, Baltimore, MD.

149.27 Solar System Science with HST and JWST: Connecting the Past, Present, and Future
Roman, Anthony[1]; Hines, Dean C.[1]; Mutchler, Maximilian J.[1]
[1.]STScI, Baltimore, MD.

149.28 Simulations of MIRI Four-Quadrant Phase Mask Coronagraphy
Lajoie, Charles-Philippe[1]; Soummer, Remi[1]; Hines, Dean C.[1]
[1.]Space Telescope Science Institute, Baltimore, MD.

149.29 Overview and status of the JWST science instrument payload
Greenhouse, Matthew A.[1]; Kimble, Randy A.[1]; Rauscher, Bernard J.[1]; Dunn, Jamie[1]; Voyton, Mark[1]
[1.]NASA's GSFC, Greenbelt, MD.
Contributing teams: The JWST ISIM Team, The JWST Science Working Group

149.30 James Webb Space Telescope Synergy with Dark Energy Missions
Gardner, Jonathan P.[1]
[1.]NASA's GSFC, Greenbelt, MD.

149.31 Status of the James Webb Space Telescope Observatory
Clampin, Mark[1]; Bowers, Charles W.[1]
[1.]NASA's GSFC, Greenbelt, MD.

149.32 Solar System Observing Capabilities With The James Webb Space Telescope
Sonneborn, George[1]; Milam, Stefanie N.[1]; Hines, Dean C.[2]; Stansberry, John A.[2]; Hammel, Heidi B.[3]; Lunine, Jonathan I.[4]
[1.]NASA's GSFC, Greenbelt, MD. [2.]STScI, Baltimore, MD. [3.]AURA, Washington, DC. [4.]Cornell Univ., Ithaca, NY.

149.33 Providing user guidance for the Micro-Shutter Array Planning Tool for JWST/NIRSpec
Soderblom, David R.[1]; Karakla, Diane M.[1]; Beck, Tracy L.[1]; Curtis, Gary[1]; Shyrokov, Alexander[1]; Peterson, Karla[1]; Blair, William P.[1]; Valenti, Jeff A.[1]
[1.]STScI, Baltimore, MD.
Contributing teams: STScI NIRSpec team

149.34 Planning JWST/NIRSpec Multi-Object Spectroscopy: Galaxy Kinematics at Redshifts 2-3
Kassin, Susan A.[1]; Beck, Tracy L.[1]; Karakla, Diane M.[1]; Soderblom, David R.[1]
[1.]Space Telescope Science Center (STScI), Baltimore, MD.

149.35 Algorithms for Planning Multi-Object Spectroscopy Observations with the JWST Near-Infrared Spectrograph
Karakla, Diane M.[1]; Pontoppidan, Klaus[1]; Shyrokov, Alexander[1]; Beck, Tracy L.[1]; Valenti, Jeff A.[1]; Soderblom, David R.[1]; Tumlinson, Jason[1]; Muzerolle, James[1]
[1.]STScI, Baltimore, MD.

149.36 First Cryo-Vacuum Test of the JWST Integrated Science Instrument Module
Kimble, Randy A.[1]; Antonille, Scott R.[1]; Balzano, Vicki[2]; Comber, Brian J.[3, 1]; Davila, Pamela S.[1]; Drury, Michael D.[4, 1]; Glasse, Alistair[5]; Glazer, Stuart D.[1]; Lundquist, Ray[1]; Mann, Steven D.[6, 1]; McGuffey, Douglas B.[1]; Novo-Gradac, Kevin J.[7, 1]; Penanen, Konstantin[8]; Ramey, Deborah D.[7, 1]; Sullivan, Joseph[9]; Van Campen, Julie[7, 1]; Vila, Maria B.[10]
[1.]NASA's GSFC, Greenbelt, MD. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]Orbital Sciences, Co, Dulles, VA. [4.]Sigma Space, Lanham, MD. [5.]UK Astronomy Technology Centre, Edinburgh, United Kingdom. [6.]Hammers Company, Greenbelt, MD. [7.]Stinger Ghaffarian Technologies, Greenbelt, MD. [8.]Jet Propulsion Laboratory, Pasadena, CA. [9.]Ball Aerospace and Technologies Corporation, Boulder, CO. [10.]Com Dev International, Ottawa, ON, Canada.

149.37 The Planning Process for Multi-Object Spectroscopy with the JWST Near-Infrared Spectrograph
Beck, Tracy L.[1]; Karakla, Diane M.[1]; Shyrokov, Alexander[1]; Pontoppidan, Klaus[1]; Soderblom, David R.[1]; Valenti, Jeff A.[1]; Kassin, Susan A.[1]; Gilbert, Karoline[1]; Blair, William P.[1]; Muzerolle, James[1]; Tumlinson, Jason[1]; Keyes, Charles D.[1]; Pavlovsky, Cheryl M.[1]; LeBlanc, Thompson[1]
[1.]Space Telescope Science Institute, Baltimore, MD.

149.38 Imaging Polarimetry With Polarization-Sensitive Focal Planes
Vorobiev, Dmitry[1]; Ninkov, Zoran[1]
[1.]Rochester Institute of Technology, Rochester, NY.

149.39 New and Better H2RG Detectors for the JWST Near Infrared Spectrograph
Rauscher, Bernard J.[1]
[1.]NASA's GSFC, Greenbelt, MD.

149.40 ISS-Lobster
Camp, Jordan[1]; Barthelmy, Scott D.[1]; Petre, Robert[1]; Gehrels, Neil[1]; Marshall, Francis E.[1]; Racusin, Judith L.[1]; Ptak, Andrew[1]
[1.]NASA / Goddard Space Flight Center, Greenbelt, MD.

149.42 H4RG Near-IR Detectors with 10 micron pixels for WFIRST and Space Astro physics
Kruk, Jeffrey W.[1]; Rauscher, Bernard J.[1]
[1.]NASA - GSFC, Greenbelt, MD.

150 AGN, QSO, Blazars Poster Session III

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

150.01 Imaging Redshift Estimates for Fermi BL Lacs
Stadnik, Matthew[1]; Romani, Roger W.[1]
[1.]Stanford University, Stanford, CA.

150.02 The XMM-Newton View of Weak Emission-Line Quasars
Stein, Matthew[1]; Shemmer, Ohad[1]; Anderson, Scott F.[2]; Brandt, W. N.[3]; Diamond-Stanic, Aleksandar M.[4]; Fan, Xiaohui[5]; Luo, Bin[3]; Plotkin, Richard[6]; Richards, Gordon T.[7]; Schneider, Donald P.[3]; Strauss, Michael A.[8]; Wu, Jianfeng[9]
[1.]Physics, University of North Texas, Roanoke, TX. [2.]University of Washington, Seattle, WA. [3.]The Pennsylvania State University, University Park, PA. [4.]University of California at San Diego, San Diego, CA. [5.]University of Arizona, Tucson, AZ. [6.]University of Michigan, Ann Arbor, MI. [7.]Drexel University, Philadelphia, PA. [8.]Princeton University, Princeton, NJ. [9.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

150.03 Bayesian Multiscale Analysis of X-Ray Jet Features in High Redshift Quasars
McKeough, Kathryn[1]; Siemiginowska, Aneta[2]; Kashyap, Vinay[2]; Stein, Nathan[3]
[1.]Carnegie Mellon University, Pittsburgh, PA. [2.]Harvard- Smithsonian Center for Astrophysics, Boston, MA. [3.]Harvard University, Boston, MA.

150.04 The Impact of Gamma-ray Halos on the Angular Anisotropy of the Extragalactic Gamma-ray Background
Venters, Tonia M.[1]; Pavlidou, Vasiliki[2]
[1.]Goddard Space Flight Center, Greenbelt, MD. [2.]University of Crete, Heraklion, Crete, Greece.

150.05 The Largest X-ray Selected Sample of z > 3 AGNs: C-COSMOS + ChaMPS
Kalfountzou, Eleni[1, 3]; Civano, Francesca M.[4]; Elvis, Martin[1]; Trichas, Markos[2]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]EADS Astrium, Stevenage, United Kingdom. [3.]University of Hertfordshire, Hatfield, United Kingdom. [4.]Yale University, New Haven, CT.

150.06 The Study of AGN with an Improved Fermi LAT Event Reconstruction
Perkins, Jeremy[1]
[1.]NASA/GSFC, Greenbelt, MD.
Contributing teams: The Fermi LAT Collaboration

150.07 Exploring The Quasar Wind Parameter Space With QWIND
McDowell, Jonathan C.[1]; Ursini, Francesco[1]; Risaliti, Guido[2]; Elvis, Martin[1]
[1.]Harvard-Smithsonian CfA, Cambridge, MA. [2.]INAF-Arcetri, Florence, Italy.

150.08 Fermi's Greatest Hits - Insights into the Nature of High Energy Blazar Emission
Ojha, Roopesh[1, 2]; Dutka, Michael[3]; Finke, Justin[4]; Kadler, Matthias[5]; D'Ammando, Filippo[6]
[1.]NASA/GSFC, Greenbelt, MD. [2.]CRESST/UMBC, Baltimore, MD. [3.]Catholic University of America, Washington, DC. [4.]Naval Research Laboratory, Washington, DC. [5.]University of Wurzburg, Wurzburg, Bavaria, Germany. [6.]Istituto Nazionale di Astrofisica (INAF), Bologna, Bologna, Italy.
Contributing teams: on behalf of the Fermi-LAT Collaboration

150.09 Microlensing Measurements of the X-ray Continuum Emitting Region of the Gravitational Lens SDSS0924+0219
MacLeod, Chelsea[1]; Morgan, Christopher W.[1]; Mosquera, Ana[2]; Kochanek, Christopher S.[2]; Tewes, Malte[3]; Courbin, Frederic[3]; Meylan, Georges[3]
[1.]U.S. Naval Academy, Annapolis, MD. [2.]The Ohio State University, Columbus, OH. [3.]Ecole Polytechnique Federale de Lausanne (EPFL), Observatoire de Sauverny, Sauverny, Versoix, Switzerland.

150.10 An elusive X-ray iron absorption line in a candidate recoiling supermassive black hole.
Marchesi, Stefano[1, 4]; Civano, Francesca M.[1, 3]; Lanzuisi, Giorgio[1, 2]; Comastri, Andrea[5]; Costantini, Elisa[6]; Elvis, Martin[3]; Mainieri, Vincenzo[7]; Hickox, Ryan C.[1]; Jahnke, Knud[8]; Komossa, Stefanie[9]; Piconcelli, Enrico[10]; Vignali, Cristian[4]; Brusa, Marcella[4]; Cappelluti, Nico[5]; Fruscione, Antonella[3]
[1.]Department of Physics and Astronomy, Dartmouth College, Hanover, NH. [2.]Institute of Astronomy Astrophysics, National Observatory of Athens, Athens, Greece. [3.]Smithsonian Astrophyisical Observatory, Cambridge, MA. [4.]Dipartimento di Astronomia Università degli Studi di Bologna, Bologna, Italy. [5.]INAF-Osservatorio Astronomico di Bologna, Bologna, Italy. [6.]SRON, Netherlands Institute for Space Research, Utrecht, Netherlands. [7.]European Southern Observatory, Garching bei Munchen, Germany. [8.]Max Planck Institute for Astronomy, Heidelberg, Germany. [9.]Max-Planck-Institut fuer Radioastronomie, Bonn, Germany. [10.]INAF-Osservatorio Astronomico di Roma, Roma, Italy.

150.11 Determining Black Hole Mass of Active Galactic Nuclei Using FWHM of the H? Emission Line and Luminosity Relations
Burris, Debra L.[1]; Jacobs, Jeremy[1]; Clark, Steven[1]; Hankins, Matthew[1]
[1.]Univ. of Central Arkansas, Conway, AR.

150.12 Check This Out: A Minor Merger in Mrk 509?
Fischer, Travis C.[1]; Crenshaw, D. M.[1]; Kraemer, Steven B.[2]; Schmitt, Henrique R.[3]; Storchi-Bergmann, Thaisa[4]; Riffel, Rogemar A.[5]
[1.]Georgia State University, Atlanta, GA. [2.]The Catholic University of America, Washington D.C., DC. [3.]Naval Research Laboratory, Washington D.C., DC. [4.]Universidade Federal do Rio Grande do Sul, Rio Grande do Sul, Brazil. [5.]Universidade Federal Santa Maria, Santa Maria, Brazil.

150.13 WPVS 007: Dramatic Broad Absorption Line Variability in a Narrow-line Seyfert 1
Cooper, Erin M.[1]; Leighly, Karen[1]; Hamann, Frederick W.[2]; Grupe, Dirk[3]; Dietrich, Matthias[4]
[1.]University of Oklahoma, Norman, OK. [2.]University of Florida, Gainesville, FL. [3.]Penn State University, University Park, PA. [4.]Ohio University, Athens, OH.

150.14 Rehabilitating CIV-based Black Hole Mass Estimates in Quasars
Runnoe, Jessie C.[1]; Brotherton, Michael S.[2]; Shang, Zhaohui[3]
[1.]The Pennsylvania State University, State College, PA. [2.]University of Wyoming, Laramie, WY. [3.]Tianjin Normal University, Tianjin, China.

150.15 RCT photometry and HCT spectroscopy of blazar candidates in the Kepler field of view.
Carini, Michael T.[1]; Goyal, Arti[2]; Jose, Jessy[3]
[1.]Western Kentucky Univ., Bowling Green, KY. [2.]Obserwatorium Astronomiczne, Uniwersytet Jagiellonski, Krakow, Poland. [3.]Indian institute of Astrophysics, Bangalore, India.

150.16 Multi-wavelength Investigation of Potential Active Galactic Nuclei
Mowry, William[1]; Schmitt, Henrique R.[2]; Secrest, Nathan[1]; Satyapal, Shobita[1]
[1.]George Mason University, Fairfax, VA. [2.]U.S. Naval Research Lab, Washington, DC.

150.17 Breaking the Obscuring Screen: A Resolved Molecular Outflow in a Buried QSO
Rupke, David[1]; Veilleux, Sylvain[2]
[1.]Rhodes College, Memphis, TN. [2.]University of Maryland, College Park, MD.

150.18 BVRI Photometric Standards in Several AGN Fields
Carroll, Carla[1]; Joner, Michael D.[1]
[1.]Brigham Young University, Provo, UT.

150.19 Measuring the Clustering Around Normal and Dust-Obscured Quasars at z~2 in the Spitzer Extragalactic Representative Volume Survey (SERVS)
Jones, Kristen M.[1, 2]; Lacy, Mark[2]
[1.]University of Virginia, Charlottesville, VA. [2.]National Radio Astronomy Observatory, Charlottesville, VA.
Contributing teams: Spitzer Extragalactic Representative Volume Survey team

150.20 The Far-IR View of an Ultra-Hard X-ray Selected Sample of AGN
Shimizu, Thomas[1]; Melendez, Marcio[1]; Mushotzky, Richard[1]; Barger, Amy J.[2]; Cowie, Lennox L.[3]
[1.]University of Maryland, College Park, MD. [2.]University of Wisconsin, Madison, WI. [3.]University of Hawaii, Institute for Astronomy, Honolulu, HI.

150.21 Local Galaxy Density around X-ray AGN and Radio Galaxies in Clusters at Low-z
Klein, Christian[1]; Hart, Quyen N.[1]
[1.]Regis University, Denver, CO.

150.22 Dust-reddened Quasars in SDSS-III: Trends with Evolution or Orientation?
Herbst, Hanna[1]; Hamann, Frederick W.[1]
[1.] University of Florida, Gainesville, FL.

150.23 The luminosity function of AGN selected in the mid-infrared and its implications for cosmic black hole growth
Lacy, Mark[1]; Ridgway, Susan E.[2]; Petric, Andreea[3]; Sajina, Anna[4]; Gates, Elinor L.[5]; Urrutia, Tanya[6]
[1.] NRAO, Charlottesville, VA. [2.] NOAO, Tucson, AZ. [3.] Caltech, Pasadena, CA. [4.] Tufts, Medford, MA. [5.] Lick Observatory, Santa Cruz, CA. [6.] AIP, Potsdam, Germany.

150.24 The WISE View on Water Maser Galaxies
Dick, Emily[1]; Constantin, Anca[1]; Braatz, James A.[2]; Corcoran, James[1]
[1.] James Madison University, Harrisonburg, VA. [2.] NRAO, Charlottesvile, VA.

150.25 The AKARI 2.5–5.0?m Spectral Atlas of 83 Local Type-1 Active Galactic Nuclei
Kim, Dohyeong[1]; Im, Myungshin[1]; Kim, Ji Hoon[1]; Woo, Jong-Hak[1]; Jun, Hyunsung David[1]
[1.] Seoul National University, Seoul, Korea, Republic of.
Contributing teams: QSONG team

150.26 IFU Observations of Feedback from Radio-Quiet Quasars at z~0.5
Liu, Guilin[1]; Zakamska, Nadia L.[1]; Greene, Jenny E.[2]; Nesvadba, Nicole [3]; Liu, Xin[4]
[1.] Johns Hopkins University, Baltimore, MD. [2.] Princeton University, Princeton, NJ. [3.] IAS, CNRS, Universite Paris-Sud, Orsay, France. [4.] University of California, Los Angeles, CA.

150.27 A multi-parameter statistical analysis of the connection between water maser emission and nuclear galactic activity
Christensen, Emil[1]; Constantin, Anca[1]; Braatz, James A.[2]; Roten, Robert[1]; Nutter, Andrew[1]
[1.] James Madison University, Harrisonburg, VA. [2.] National Radio Astronomy Observatory, Charlottesville, VA.

150.28 Discovery of Misaligned Radio Emission in Galaxy Cluster Zw CL 2971
Wallack, Nicole[1]; Migliore, Christina [2]; Resnick, Alexander[3]; White, Tyreke[4]; Liu, Charles[5]
[1.] SUNY University at Albany , Albany, NY. [2.] Tenafly High School , Tenafly, NJ. [3.] Plainview-Old Bethpage John F. Kennedy High School , Plainview, NY. [4.] Harvard University, Cambridge, MA. [5.] CUNY College of Staten Island, Staten Island, NY.

150.29 Diffuse radio emission around FR II sources as exemplified by 3C452
Wiita, Paul J.[1]; Sirothia, Sandeep K.[2]; Gopal-Krishna, ..[2]
[1.] The College of New Jersey, Ewing, NJ. [2.] National Centre for Radio Astrophysics/ TIFR, Pune, Maharastra, India.

150.30 Decomposition of Host Galaxies of Nearby Type 1 Active Galactic Nuclei
Kim, Minjin[1, 2]; Ho, Luis C.[1]; Peng, Chien Y.[5]; Barth, Aaron J.[3]; Im, Myungshin[4]
[1.] The Carnegie Observatories, Pasadena, CA. [2.] KASI, Daejoen, Korea, Republic of. [3.] University of California at Irvine, Irvine, CA. [4.] Seoul National University, Seoul, Korea, Republic of. [5.] Giant Magellan Telescope Organization , Pasadena, CA.

150.31 The Low-Luminosity End of the Radius-Luminosity Relationship for Active Galactic Nuclei
Bentz, Misty C.[1]; Denney, Kelly[2, 3]; Grier, Catherine[3]; Barth, Aaron J.[4]; Peterson, Bradley M.[3]; Vestergaard, Marianne[2]
[1.] Georgia State University, Atlanta, GA. [2.] Dark Cosmology Center, Niels Bohr Institute, Copenhagen, Denmark. [3.] The Ohio State University, Columbus, OH. [4.] University of California, Irvine, Irvine, CA.

150.32 HI Spectroscopy of Reverberation-Mapped Active Galactic Nuclei Host Galaxies
Ou-Yang, Benjamin[1]; Bentz, Misty C.[1]; Johnson, Megan C.[2]
[1.]Georgia State University, Atlanta, GA. [2.]NRAO, Green Bank, WV.

150.33 The Black Hole Mass-Bulge Luminosity Relationship for Reverberation-Mapped AGNs in the Near-IR
Nicholas, Emily[1]; Bentz, Misty C.[1]
[1.]Physics and Astronomy, Georgia State University, Atlanta, GA.

150.34 Alignments of Radio Sources in the GMRT ELAIS N1 Deep Field
Jagannathan, Preshanth[1, 2]; Taylor, Russ[1]
[1.]University of Calgary, Calgary, AB, Canada. [2.]National Radio Astronomy Organization, Socorro, NM.

150.35 Mean and Extreme Radio Properties of Quasars and the Origin of Radio Emission
Richards, Gordon T.[1]; Kratzer, Rachael[1]
[1.]Drexel Univ., Philadelphia, PA.

150.36 The Complex North Transition Region of Centaurus A
Neff, Susan G.[1]; Eilek, Jean[2, 3]; Owen, Frazer N.[3]
[1.]NASA's GSFC, Glenn Dale, MD. [2.]New Mexico Tech, Socorro, NM. [3.]NRAO, Socorro, NM.
Contributing teams: GALEX Science Team

150.37 The Periodicity of the Tev Blazar Mrk 501
Holden, Marcus[1]; McCombs, Thayne[1]; Bates, Kimberly[1]; McNeff, Mathew[1]; Boizelle, Benjamin[1]; Moody, Joseph[1]
[1.]Brigham Young University, Provo, UT.
Contributing teams: BYU's Remote Observatory for Variable Object Research (ROVOR)

150.38 A spectroscopic survey of WISE-selected obscured quasars with SALT
Hickox, Ryan C.[1]; Hainline, Kevin[1]; Myers, Adam D.[2]
[1.]Dartmouth College, Hanover, NH. [2.]University of Wyoming, Laramie, WY.

151 Stellar Atmospheres, Winds Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

151.01 Are the Winds of Young Sun-like Stars Strong or Weak?
Wood, Brian[1]; Mueller, Hans R.[2]; Redfield, Seth[3]
[1.]Naval Research Laboratory, Washington, DC. [2.]Dartmouth College, Hanover, NH. [3.]Wesleyan University, Middletown, CT.

151.02 Reinvestigating the Lambda Boo Stars
Cheng, Kwang-Ping[1]; Corbally, Christopher J.[2]; Gray, Richard O.[3]; Murphy, Simon[4]; Neff, James E.[5]; Desai, Abhishek Desai[1]; Newsome, Ian[3]; Steele, Patricia[5]
[1.]Cal. State Univ., Fullerton, Fullerton, CA. [2.]Vatican Observatory, Tucson, AZ. [3.]Appalachian State Univ., Boone, NC. [4.]The University of Sydney, Sydney, NSW, Australia. [5.]College of Charleston, Charleston, SC.

151.03 Analyzing Starspots with TiO bands: Comparing Fits Using Synthetic Spectra to Proxy Stars
O'Neal, Douglas B.[1]; Skivington, Joel R.[1]
[1.]Keystone College, La Plume, PA.

151.04 Mapping the interacting winds of Eta Carinae: Changes Across the Apastron
Gull, Theodore R.[1]; Madura, Thomas[2, 1]; Corcoran, Michael F.[3, 1]; Hamaguchi, Kenji[4, 1]; Teodoro, Mairan[5, 1]
[1.]NASA/GSFC, Ellicott City, MD. [2.]NPP, Oakridge Associates, Greenbelt, MD. [3.]CRESST, Columbia, MD. [4.]UMBC, Baltimore, MD. [5.]Science w/o Borders/Brazil, Greenbelt, MD.

151.05 Mining the HST 'Advanced Spectral Library (ASTRAL) - Hot Stars': The High Definition UV Spectrum of the Ap Star HR 465
Carpenter, Kenneth G.[1]; Ayres, Thomas R.[2]; Nielsen, Krister E.[3]; Kober, Gladys V.[3]; Wahlgren, Glenn M.[3]; Adelman, Saul J.[4]; Cowley, Charles R.[5]
[1.]NASA's GSFC, Greenbelt, MD. [2.]University of Colorado, Boulder, CO. [3.]Catholic University of America, Washington, DC. [4.]The Citadel, Charleston, SC. [5.]University of Michigan, Ann Arbor, MI.

151.06 High-Dispersion IR Spectroscopy of Mira Variables with the Spitzer IRS
Luttermoser, Donald G[1]; Creech-Eakman, Michelle J.[2]; Gueth, Tina[2]
[1.]East Tennessee State Univ., Johnson City, TN. [2.]New Mexico Inst. of Mining and Technology, Socorro, NM.

151.07 Time-Resolved X-ray Spectroscopy of the Massive Binary delta Ori
Nichols, Joy S.[1]; Naze, Y.[2]; Corcoran, Michael F.[3]; Pollock, A.[4]; Moffat, Anthony F.[7]; Ignace, R.[5]; Waldron, Wayne L.[6]; Evans, Nancy R.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA. [2.]Universite of Liege, Liege, Belgium. [3.]USRA CRESST, Greenbelt, MD. [4.]ESA XMM-Newton SOC, Madrid, Spain. [5.]East Tennessee State University, Johnson City, TN. [6.]Eureka Scientific, Inc., Oakland, CA. [7.]Universite de Montreal, Montreal, QC, Canada.

151.08 Strong-Flare Rates of Solar-Like Stars in Kepler Cluster NGC 6811
Wright, Paul J.[1, 2]; Saar, Steven H.[1]; Meibom, Soren[1]; Kashyap, Vinay[1]; Drake, Jeremy J.[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]University of Southampton, Southampton, Hampshire, United Kingdom.

151.09 Eta Carinae's change of state: First new HST/NUV data since 2010, and the first new FUV since 2004
Martin, John C.[1]; Mehner, Andrea[4]; Ishibashi, Kazunori[3]; Davidson, Kris[2]; Humphreys, Roberta M.[2]
[1.]U of Illinois Springfield, Springfield, IL. [2.]University of Minnesota, Minneapolis, MN. [3.]Nagoya University, Nagoya, Japan. [4.]ESO - Chile, Santiago, Chile.

151.10 Measurements of the Stellar Wind Strengths of Planet-Hosting G- and K-Type Stars
Edelman, Eric[1]; Redfield, Seth[1]; Wood, Brian[2]; Linsky, Jeffrey[3]; Mueller, Hans R.[4]
[1.]Astronomy Department, Van Vleck Observatory, Wesleyan University, Middletown, CT. [2.]Naval Research Laboratory, Space Science Division, Washington, DC. [3.]University of Colorado and NIST, Boulder, CO. [4.]Department of Physics and Astronomy, Dartmouth College, Hanover, NH.

151.11 X-ray Emission from Eta Carinae near Periastron in 2009: Origin of the X-ray Minimum

Hamaguchi, Kenji[1, 2]; Corcoran, Michael F.[1, 3]; Russell, Christopher M.[4]; Pollock, Andrew M.[5]; Gull, Theodore R.[1]; Teodoro, Mairan[1]; Madura, Thomas[1]; Damineli, Augusto[6]; Pittard, Julian M.[7]

[1.]NASA's GSFC, Greenbelt, MD. [2.]UMBC, Baltimore, MD. [3.]USRA, Columbia, MD. [4.]Hokkai-Gakuen University, Sapporo, Hokkaido, Japan. [5.]ESAC, Madrid, Spain. [6.]Universidade de Sao Paulo, Sao Paulo, Brazil. [7.]The University of Leeds, Leeds, United Kingdom.

151.12 Metallicity Analysis of Planetary Hosts Kepler 37, 62, & 68

Vaz, Zachary[1]; Schuler, Simon C.[1]

[1.]University of Tampa, Tampa, FL.

151.13 Interplanetary proton flux and solar wind conditions for different solar activities interacting with spacecraft and astronauts in space

Nejat, Cyrus[1]

[1.]University of Southern California, Los Angeles, CA.

151.14 The Delta Ori Very Large Project: X-ray Emission and Stellar Variability

Corcoran, Michael F.[1, 2]; Nichols, Joy S.[4]; Moffat, Anthony F.[5]; Richardson, Noel[5]; Pollock, A.[6]; Gull, Theodore R.[1]; Hamaguchi, Kenji[1, 3]; Russell, Christopher M.[7]; Evans, Nancy R.[4]; Owocki, Stanley P.[8]; Waldron, Wayne L.[11]; Hoffman, Jennifer L.[9]; Lomax, Jamie R.[10]; Gayley, Kenneth G.[14]; Oskinova, Lida[16]; Hamann, Wolf-Rainer[16]; Iping, Rosina[1, 3]; Ignace, Richard[13]; Naze, Y.[15]; Leutenegger, Maurice A.[1, 3]; Hole, Tabetha[12]

[1.]USRA, Greenbelt, MD. [2.]NASA-GSFC, Greenbelt, MD. [3.]University of Maryland, Catonsville, MD. [4.]SAO, Cambridge, MA. [5.]University of Montreal, Montreal, QC, Canada. [6.]ESA, Vilspa, Spain. [7.]Hokkai-Gakuen University, Sapporo, Japan. [8.]University of Delaware, Newark, DE. [9.]University of Denver, Denver, CO. [10.]University of Oklahoma, Norman, OK. [11.]Eureka Scientific, Oakland, CA. [12.]Weber State University, Ogden, UT. [13.]East Tennessee State University, Johnson City, TN. [14.]University of Iowa, Iowa City, IA. [15.]Universty of Liege, Liege, Belgium. [16.]Universitat Potsdam, Potsdam, Germany.

151.15 Modeling the Dusty Envelope Around AGB Stars

Villaume, Alexa[1]; Conroy, Charlie[1]

[1.]Astronomy & Astrophysics, UCSC, Santa Cruz, CA.

151.16 The 'Horns' of FK Comae and the Complex Structure of its Outer Atmosphere

Saar, Steven H.[1]; Ayres, Thomas R.[2]; Kashyap, Vinay[1]

[1.]Harvard-Smithsonian, CfA, Cambridge, MA. [2.]University of Colorado, Boulder, CO.

151.17 The Atmospheric Response to High Fluxes of Nonthermal Electrons during M Dwarf Flares

Kowalski, Adam[1]; Allred, Joel C.[1]; Carlsson, Mats[2]; Hawley, Suzanne L.[3]; Holman, Gordon D.[1]; Mathioudakis, Mihalis[4]; Osten, Rachel A.[5]; Uitenbroek, Han[6]

[1.]NASA-GSFC, Greenbelt, MD. [2.]University of Oslo, Oslo, Norway. [3.]University of Washington, Seattle, WA. [4.]Queen's University Belfast, Belfast, United Kingdom. [5.]Space Telescope Science Institute, Baltimore, MD. [6.]National Solar Observatory, Sunspot, NM.

151.18 Detection of Thermal Radio Emission from Evolved Solar-Type Stars with the Jansky VLA
Villadsen, Jackie[1]; Hallinan, Gregg[1]; Bourke, Stephen[1]
[1.]California Institute of Technology, Pasadena, CA.

152 Stellar Evolution, Stellar Populations Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

152.01 Stellar Populations of 16 Galaxies from the Hubble Space Telescope WFC3/IR Surface Brightness Fluctuation Observations
Lee, Hyun-chul[1]; Le Grice, Victoria [1]; Blakeslee, John P.[2]; Jensen, Joseph B.[3]; Lee, Young-Wook[4]
[1.]The University of Texas - Pan American, Edinburg, TX. [2.]HIA, Victoria, BC, Canada. [3.]UVU, Orem, UT. [4.]Yonsei University, Seoul, Korea, Republic of.

152.02 The Massive Star Population in M101
Grammer, Skyler[1]; Humphreys, Roberta M.[1]
[1.]University of Minnesota, Minneapolis, MN.

152.03 Profiling Andromeda's Metal Poor Population
Gregersen, Dylan[1]; Seth, Anil[1]; Dalcanton, Julianne[2]; Williams, Benjamin F.[2]; Dorman, Claire[3]; Guhathakurta, Puragra[3]
[1.]The University of Utah, Salt Lake City, UT. [2.]The University of Washington, Seattle, WA. [3.]University of California Santa Cruz, Santa Cruz, CA.
Contributing teams: The PHAT Team

152.04 The Main Sequence Turnoff Age of the Metal Rich Open Cluster NGC 6253
Margaret, Maruschak[1]; Jeffery, Elizabeth[1]
[1.]James Madison University, Harrisonburg, VA.

152.05 High Resolution Spectroscopic Measurements of Stars in the Milky Way
Debs, Caroline[1]; Kirby, Evan N.[2]; Guhathakurta, Puragra[1]
[1.]University of California, Santa Cruz, Santa Cruz, CA. [2.]University of California, Irvine, Irvine, CA.

152.06 The Evolving Mixture of Barium Isotopes in Milky Way Halo Stars
Choudhury, Zareen[3]; Kirby, Evan N.[2]; Guhathakurta, Puragra[1]
[1.]University of California, Santa Cruz, Santa Cruz, CA. [2.]University of California, Irvine, Irvine, CA. [3.]The Harker School, San Jose, CA.

152.07 Stellar Isotopic Abundances in the Milky Way: Insights into the Origin of Carbon and Neutron-Capture Elements
Guo, Michelle[1]; Zhang, Andrew[2]; Kirby, Evan N.[3]; Guhathakurta, Puragra[4]
[1.]Irvington High School, Fremont, CA. [2.]The Harker School, Fremont, CA. [3.]University of California, Irvine, Irvine, CA. [4.]University of California, Santa Cruz, Santa Cruz, CA.

152.08 Fluorine in the Local Thin Disk
Pilachowski, Catherine A.[1]
[1.]Indiana University, Bloomington, IN.

152.09 Ages of Solar Neighborhood Stars Using APOGEE

Feuillet, Diane[1]; Holtzman, Jon A.[1]; Girardi, Leo[2, 3]; Allende-Prieto, Carlos[4, 5]; Beers, Timothy C.[6]; Cunha, Katia M.[7]; Fabbian, Damian[4]; Frinchaboy, Peter M.[8]; Hayden, Michael R.[1]; Majewski, Steven[9]

[1.]New Mexico State University, Las Cruces, NM. [2.]Osservatorio Astronomico di Padova, Padova, Italy. [3.]Laboratorio Interinstitucional de e-Astronomia, Rio de Janeiro, Brazil. [4.]Instituto de Astrofisica de Canarias, La Laguna, Tenerife, Spain. [5.]Departament de Astrofisica, Universidad de La Laguna, La Laguna, Tenerife, Spain. [6.]National Optical Astronomy Observatory, Tucson, AZ. [7.]Observatorio Nacional, Rio de Janerio, Brazil. [8.]Department of Physics and Astronomy, Texas Christian University, Fort Worth, TX. [9.]Department of Astronomy, University of Virginia, Charlottesville, VA.

152.10 Carbon Enhanced Stars in the Sloan Digital Sky Survery

Keeling, Chloe[1]; Wilhelm, Ronald J.[1]

[1.]University of Kentucky, Lexington, KY.

152.11 Comparison of Frequency of Carbon-Enhanced Metal-Poor Stars in SDSS/SEGUE with Binary Population Synthesis Models

Lee, Young S.[1]; Suda, Takuma[2]; Beers, Timothy C.[3, 4]

[1.]New Mexico State University (NMSU), Las Cruces, NM. [2.]National Astronomical Observatory of Japan (NAOJ), Mitaka, Japan. [3.]National Optical Astronomy Observatory (NOAO), Tucson, AZ. [4.]Joint Institute for Nuclear Astrophysics (JINA), East Lansing, MI.

Contributing teams: the SEGUE Collaboration

152.12 Search for Carbon-Rich Asymptotic Giant Branch Stars in Milky Way Globular Clusters

Indahl, Briana[1, 2]; Pessev, Peter [3]

[1.]University of Wisconsin-Madison , Madison, WI. [2.]Cerro Tololo Inter-American Observatory , La Serena, Chile. [3.]Gemini South Observatory, La Serena, Chile.

152.13 They Might Be Giants: Using Kepler Data to Classify the Evolutionary State of Red Giant Stars

Miller, Danielle[1]; Bensel, Holly[2]; Donelson, Fred[3]; Seebode, Sally[4]; Ciardi, David R.[5]; Howell, Steve B.[6]; Da, Rick[4]; Figueroa, Alejandro[1]; Grgurich, Aaron[3]; Holliday, Cody[2]; Harrison, Deanna[1]; Keiser, Emelyn[1]; Kung, Sandra[4]; Merickel, Emily[3]; Quinones, Zuheily[1]; Stegner, Laura[3]; Vicente, Sydney[1]; Wang, Eric[4]; Warner, Elizabeth[1]; We, Iris[1]; Yanai, Kirstie[3]

[1.]University High School, Orlando, FL. [2.]St. Mary's School, Medford, OR. [3.]Gahanna Lincoln High School, Gahanna, OH. [4.]San Mateo High School, San Mateo, CA. [5.]Caltech, Pasadena, CA. [6.]NASA Ames, Mountain View, CA.

152.14 Characterizing the Protostars in the Herschel Survey of Cygnus-X

Kirk, James[1, 2]; Hora, Joseph L.[2]; Smith, Howard A.[2]

[1.]University of Southampton, Southampton, Hampshire, United Kingdom. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

Contributing teams: Herschel Cygnus-X group

152.15 X-ray Constraints on Magnetic Activity and Star Formation Associated with the Red Supergiant VY CMa

Montez, Rodolfo[1]; Humphreys, Roberta M.[2]; Kastner, Joel H.[3]; Turok, Rebecca L.[1]

[1.]Vanderbilt University, Nashville, TN. [2.]University of Minnesota, Minneapolis, MN. [3.]Rochester Institute of Technology, Rochester, NY.

152.16 Study of the Impact of Stellar Multiplicity on Planet Occurrence and Properties
Thorp, Rachel[1]; Desert, Jean-Michel[1, 2]; Baranec, Christoph[1, 3]; Law, Nicholas M.[4]; Johnson, John A.[1, 5]; Riddle, Reed L.[1]
[1.]California Institute of Technology, Pasadena, CA. [2.]University of Colorado Boulder, Boulder, CO. [3.]Institue for Astronomy, University of Hawaii, Hilo, HI. [4.]Dunlap Institute for Astronomy & Astrophysics, University of Toronto, Toronto, ON, Canada. [5.]Harvard University, Cambridge, MA.

152.17 Finding the Elusive Substellar Members of Young Moving Groups
Aller, Kimberly M.[1]; Liu, Michael C.[1]; Magnier, Eugene A.[1]
[1.]University of Hawaii, Manoa, Honolulu, HI.

152.18 Population III Stars: Evolution and Explosions
Lawlor, Timothy M.[1]; MacDonald, James[2]; Young, Timothy[3]
[1.]Penn State Univiversity - Brandywine, Media, PA. [2.]University of Delaware , Newark , DE. [3.]University of North Dakota, Grand Forks, ND.

153 Pulsars & Neutron Stars Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

153.01 Searching for Millisecond Pulsars in Fermi Unidentified Gamma-Ray Sources
Cromartie, H. Thankful[1]; Camilo, Fernando M.[2]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC. [2.]Arecibo Observatory, Arecibo, Puerto Rico.

153.02 The Second Fermi Large Area Telescope Catalog of Gamma-ray Pulsars
Johnson, Tyrel J.[1]; Smith, David A.[2]; Kerr, Matthew[3]; den Hartog, Peter R.[4]
[1.]NRC Fellow at NRL, Washington, DC. [2.]CNRS/IN2P3/Univ. of Bordeaux, Bordeaux, France. [3.]ATNF, Epping, NSW, Australia. [4.]Stanford, Menlo Park, CA.
Contributing teams: Fermi Large Area Telescope Collaboration, Pulsar Timing Consortium, Pulsar Search Consortium

153.03 Bowshock Hunting: an All Sky Survey of Fermi-Pulsars to Catalogue H? Bowshocks
Brownsberger, Sasha R.[1]; Romani, Roger W.[1]
[1.]Stanford University, Stanford, CA.

153.04 A Case Study of Three NANOGrav Millisecond Pulsars
Jones, Megan[1]; McLaughlin, Maura[1]; Levin, Lina[1]
[1.]West Virginia University, Morgantown, WV.
Contributing teams: NANOGrav Collaboration Timing Group

153.05 Creation of a galactic millisecond pulsar database
McMann, Natasha[1]; Lorimer, Duncan[1]
[1.]West VIrginia University, Morgantown, WV.

153.06 Population Synthesis of Radio & Gamma-Ray Millisecond Pulsars
Frederick, Sara[1]; Gonthier, Peter L.[2]; Harding, Alice K.[3]
[1.]University of Rochester, Rochester, NY. [2.]Hope College, Holland, MI. [3.]NASA Goddard Space Flight Center, Greenbelt, MD.

153.07 Population Synthesis of Double Neutron Stars
Tenney, Craig[1]; Lorimer, Duncan[1]; Bagchi, Manjari[1]
[1.]West Virginia University , Morgantown, WV.

153.08 Timing PSR J0453+1559: A likely asymmetric double neutron star system
Martinez, Jose[1]; Stovall, Kevin[2, 1]; Freire, Paulo[3]; Deneva, Julia S.[4]; Jenet, Fredrick[1]; McLaughlin, Maura[5]
[1.]University of Texas at Brownsville, Brownsville, TX. [2.]University of New Mexico, Albuquerque, NM. [3.]Max Planck Institute for Radio Astronomy, Bonn, North Rhine-Westphalia, Germany. [4.]National Astronomy and Ionosphere Center, Arecibo, Puerto Rico. [5.]West Virginia University , Morgantown, WV.

153.09 A Bayesian Approach to Pulsar Timing
Vigeland, Sarah[1]; Vallisneri, Michele[1]
[1.]Jet Propulsion Laboratory, Pasadena, CA.

153.10 An Analysis of Models of Black Hole – Neutron Star Binary Systems
Liska, April[1]; Lorimer, Duncan[1]; Bates, Samuel[1]; Dominik, Michal[2]; Stovall, Kevin[3]; Jenet, Fredrick[4]; Benacquista, Matthew[4]; Belczynski, Chris[2, 4]
[1.]West Virginia University, Morgantown, WV. [2.]Astronomical Observatory, University of Warsaw, Warsaw, Poland. [3.]University of Texas-San Antonio, San Antonio, TX. [4.]Department of Physics and Astronomy and Center for Advanced Radio Astronomy, University of Texas at Brownsville, Brownsville, TX.

153.11 2003 VLA Archival Data Search for Fast Radio Bursts
Vatchinsky, Adrian K.[1, 2]
[1.]New York University, Bayport, NY. [2.]NASA JPL, Pasadena, CA.
Contributing teams: Sarah Burke-Spolaor, Joseph Lazio

153.12 A Search for Fast Radio Transients with LWA-1
Akukwe, Bernadine[1]; Gough, Jonathan[1]; Cutchin, Sean E.[2, 3]; Kavic, Michael[1]; Simonetti, John H.[4]; Bear, Brandon[4]; Tsai, Jr-Wei[4]; Kassim, Namir E.[3]
[1.]Long Island University, Brooklyn, NY. [2.]National Research Council, Washington, DC. [3.]Naval Research Laboratory, Washington, DC. [4.]Virginia Tech, Blacksburg, VA.

153.13 New Results from the AO327 Drift Pulsar Survey
Deneva, Julia S.[1]; Stovall, Kevin[2]; McLaughlin, Maura[3]; Bates, Samuel[3]; Freire, Paulo[5]; Martinez, Jose[4]; Jenet, Fredrick[4]; Bagchi, Manjari[3]
[1.]Naval Research Laboratory, Washington, DC. [2.]University of New Mexico, Albuquerque, NM. [3.]West Virginia University, Morgantown, WV. [4.]University of Texas at Brownsville, Brownsville, TX. [5.]Max Planck Institute for Radioastronomy, Bonn, Germany.

153.14 Pulsar Search Results from the Arecibo Remote Command Center
Garcia, Alejandro[1]; Stovall, Kevin[4]; Banaszak, Shawn A.[2]; Becker, Alison[2]; Biwer, Christopher M.[2]; Boehler, Keith[1]; Caballero, Keeisi[1]; Christy, Brian[3]; Cohen, Stephanie[1]; Crawford, Fronefield[3]; Cuellar, Andres[1]; Danford, Andrew[1]; Dartez, Louis P.[1]; Day, David [2]; Flanigan, Joseph D.[2]; Gonzalez, Adolfo[1]; Gustavson, Kathy[5]; Handzo, Emma[3]; Hinojosa, Jesus[1]; Jenet, Fredrick[1]; Kaplan, David L.[2]; Kayal, Khalid[1]; Lommen, Andrea N.[3]; Longoria , Chasity[1]; Lopez, Janine[1]; Lunsford, Grady[1]; Mahany, Nicolas[3]; Martinez, Jose[1]; Mata, Alberto[1]; Miller, Andy[1]; Murray, James[1]; Pankow, Chris[2]; Ramirez, Ivan [1]; Reser, Jackie[1]; Rojas, Pablo[1]; Rohr, Matthew[2]; Rolph, Kristina[3]; Rose, Caitlin[3]; Rudnik, Philip[1]; Siemens, Xavier[2]; Tellez, Andrea[1]; Tillman, Nicholas[2]; Walker, Arielle[2]; Wells, Bradley L.[2;] Zermeno, Adrienne[1]
[1.]University of Texas at Brownsville, Brownsville, TX. [2.]University of Wisconsin-Milwaukee , Milwaukee, WI. [3.]Franklin and Marshall College, Lancaster, PA. [4.]University of New Mexico, Albuquerque, NM. [5.]Nicolet High School, Glendale, WI.
Contributing teams: GBNCC Consortium, PALFA Consortium, GBTDrift Consortium, AO327 Consortium

153.15 I(don't)C 10: An Attempt to Find Pulsars in the Starburst Galaxy IC 10
Al Noori, Hind[1]; Roberts, Mallory[1, 2]; Champion, David[3]; McLaughlin, Maura[4]; Ransom, Scott M.[5]; Ray, Paul S.[6]
[1.]New York University Abu Dhabi, Abu Dhabi, United Arab Emirates. [2.]Eureka Scientific, Oakland, CA. [3.]Max-Planck-Institut für Radioastronomie, Bonn, Germany. [4.]West Virginia University, Morgantown, WV. [5.]National Radio Astronomy Observatory, Charlottesville, VA. [6.]Naval Research Lab, Washington D.C, DC.

153.16 Developing Precision Pulsar Timing Capability for the DSN
Majid, Walid A.[1]; Kuiper, T. B.[1]; Lazio, Joseph[1]; Monroe, Ryan[1]; Preston, Robert A.[1]; Spolaor, Sarah[2]; Teitelbaum, Lawrence[1]; Trinh, Joseph[1]
[1.]JPL/Caltech, Pasadena, CA. [2.]Caltech, Pasadena, CA.

153.17 Recent Results on Pulse Jitter and Other Single Pulse Properties of Pulsar J1713+0747
Rosenblum, Jason[1]; Chatterjee, Shami[2]; Cordes, James M.[2]; Crawford, Fronefield[4]; Dolch, Timothy[2]; Lam, Michael T.[2]; McLaughlin, Maura[3]; Palliyaguru, Nipuni[3]; Stinebring, Dan[1]
[1.]Oberlin College, Oberlin, OH. [2.]Cornell University, Ithaca, NY. [3.]West Virginia University, Morgantown, WV. [4.]Franklin and Marshall College, Lancaster, PA.

153.18 Rotation Measures of Globular Cluster Pulsars as a Unique Probe of the Galactic Magnetic Field
Ho, Anna[1, 2]; Ransom, Scott M.[2]; Demorest, Paul[2]
[1.]MIT, Cambridge, MA. [2.]National Radio Astronomy Observatory, Charlottesville, VA.

153.19 Observations of Giant Pulses from Pulsar B0950+08 using LWA1
Tsai, Jr-Wei[1]; Simonetti, John H.[1]; Kavic, Michael[2]; Cutchin, Sean E.[3, 4]; Kassim, Namir E.[3]; Gough, Jonathan[2]; Akukwe, Bernadine[2]; Bear, Brandon[1]
[1.]Virginia Tech, Blacksburg, VA. [2.]Long Island University, Brooklyn, NY. [3.]Naval Research Laboratory, Washington, DC. [4.]National Research Council, Washington, DC.

153.20 Exceptional Flares from the Crab Nebula in the Fermi Large Area Telescope
Hays, Elizabeth A.[1]
[1.]NASA/GSFC, Greenbelt, MD.
Contributing teams: The Fermi LAT Collaboration

153.21 Chandra and Suzaku observations of two galactic TeV sources
Hare, Jeremy[1]; Rangelov, Blagoy[1]; Posselt, Bettina[2]; Kargaltsev, Oleg[1]; Pavlov, George G.[2]
[1.]The George Washington University, Washington D.C., DC. [2.]Pennsylvania State University, University Park, PA.

153.22 Gamma-ray and X-ray Properties of Pulsar Wind Nebulae and Unidentified Galactic TeV Sources
Rangelov, Blagoy[1]; Kargaltsev, Oleg[1]; Pavlov, George G.[2]
[1.]George Washington University, Washington, DC. [2.]Penn State University, University Park, PA.

153.23 Can X-ray Observations Provide Accurate Pulsar Distances?
Roberts, Mallory[1, 2]; Bognar, Kristof[2]; Chatterjee, Shami[3]
[1.]Eureka Scientific, Oakland, CA. [2.]New York University Abu Dhabi, Abu Dhabi, Abu Dhabi, United Arab Emirates. [3.]Cornell University, Ithaca, NY.

153.24 X-Ray Observations of PSR J0337+1715
Spiewak, Renée[1]; Kaplan, David L.[1]; Stovall, Kevin[2]; Lorimer, Duncan[3]; McLaughlin, Maura[3]; Stairs, Ingrid H.[4]; Lynch, Ryan[5]; Ransom, Scott M.[6]; Hessels, Jason[7]; Archibald, Anne[7]
[1.]University of Wisconsin, Milwaukee, Milwaukee, WI. [2.]University of New Mexico, Albuquerque, NM. [3.]West Virginia University, Morgantown, WV. [4.]University of British Columbia, Vancouver, BC, Canada. [5.]McGill University, Montreal, QC, Canada. [6.]NRAO, Charlottesville, VA. [7.]ASTRON, Dwingeloo, Netherlands.
Contributing teams: The GBT Driftscan Collaboration

153.25 Orbital Phase-Resolved X-ray Observations of the Black-Widow Pulsar J1446-4701
Arumugasamy, Prakash[1]; Pavlov, George G.[1]
[1.]Pennsylvania State University, University Park, PA.

153.26 A Model for the Electrically Charged Current Sheet of a Pulsar
DeVore, C. R.[1]; Antiochos, Spiro K.[1]; Black, Carrie E.[2, 1]; Harding, Alice K.[1]; Kalapotharakos, Constantinos[3, 1]; Kazanas, Demosthenes[1]; Timokhin, Andrey[4, 1]
[1.]NASA GSFC, Greenbelt, MD. [2.]CUA, Washington, DC. [3.]UMd, College Park, MD. [4.]ORAU, Oak Ridge, TN.

153.27 Kinetic Simulations of the Electrically Charged Current Sheet of a Pulsar
Black, Carrie[1, 2]; Antiochos, Spiro K.[2]; DeVore, C. R.[2]; Harding, Alice K.[2]; Kalapotharakos, Constantinos[3, 2]; Kazanas, Demosthenes[2]; Timokhin, Andrey[4, 2]
[1.]Catholic University of America, Greenbelt, MD. [2.]NASA/GSFC, Greenbelt, MD. [3.]UMd, College Park, MD. [4.]ORAU, Greenbelt, MD.

153.28 Deep Chandra observations of pulsar tails: PSR B0355+54
Klingler, Noel[1]; Rangelov, Blagoy[1]; Kargaltsev, Oleg[1]; Pavlov, George G.[2]; Romani, Roger W.[3]; Slane, Patrick O.[4]
[1.]George Washington University, Washington, DC. [2.]Pennsylvania State University, University Park, PA. [3.]Stanford University, Stanford, CA. [4.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.
Contributing teams: The XVP PWN Collaboration

153.29 Investigating Variability of Quiescent Neutron Stars in the Globular Clusters NGC 6440 and Terzan 5
Walsh, Ashley[1]; Cackett, Edward[1]
[1.]Wayne State University, Detroit, MI.

153.30 Is SNR G12.8-0.0 Really Associated with Star Forming Region W33?
Dahal, Sumit[1]; Gelfand, Joseph[1]
[1.]New York University Abu Dhabi, Abu Dhabi, United Arab Emirates.

154 Novae, Cataclysmic Variables, Evolved Stars

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

154.01 The 100 year DASCH Transient Search
Miller, George F.[1]; Grindlay, Jonathan E.[1]; Tang, Sumin[2]; Los, Edward[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Division of Physics, Mathematics, & Astronomy, California Institute of Technology, Pasadena, CA.

154.02 Mining the Stony Brook/SMARTS Atlas of (mostly) Southern Novae: Photometric Studies of Dust Formation in Novae
Walter, Frederick M.[1]; Fernandez, Davin[1]
[1.]Stony Brook University, Stony Brook, NY.

154.03 The Search for Cataclysmic Variables using Pan-STARRS1
Jadhav, Yashashree[1, 2]; Deacon, Niall[2]; Magnier, Eugene A.[3]; Hoard, D. W.[4]; Huber, Mark[3]
[1.]Ohio University, Athens, Ohio, USA, OH. [2.]Max Planck Institute for Astronomy, Heidelberg, Baden-Württemberg, Germany. [3.]University of Hawaii, Honolulu, HI. [4.]Eureka Scientific, Inc., Oakland, CA.

154.04 The Search for Cataclysmic Variables in Dense Globular Clusters
Perez, Lucia[1]; Lewis, Megan[1]
[1.]American Museum of Natural History, New York, NY.

154.05 Nova Delphini 2013: Backyard Analysis of a Classical Nova
Reid, Piper[1]
[1.], Austin, TX.

154.06 Development of the H? profile in Nova Del 2013
Storrs, Alex[1]; Mahmoudian, Tina[1]
[1.]Towson Univ., Baltimore, MD.

154.07 The Old Nova V603 Aquila: A Far Ultraviolet Synthetic Spectral Analysis using its New Hubble FGS Parallax
Sion, Edward M.[1]; Bisol, Alexandra C.[1]; Godon, Patrick[1]
[1.]Villanova Univ., Villanova, PA.

154.08 Modeling the Light Curve of the Classical Nova v723 Cas
Lane, Ryan[1]; Hamilton, Catrina M.[1]
[1.]Dickinson College, Carlisle, PA.

154.09 Identification of Recurrent Novae in M31
Shafter, Allen W.[1]; Rector, Travis A.[2]; Schweizer, Francois[3]; Bryan, James[4]
[1.]San Diego State Univ., San Diego, CA. [2.]University of Alaska, Anchorage, AK. [3.]Carnegie Observatories, Pasadena, CA. [4.]McDonald Observatory, Austin, TX.

154.10 Identifying and Quantifying Recurrent Novae Masquerading as Classical Novae
Pagnotta, Ashley[1] Schaefer, Bradley E.[2]
[1.]American Museum of Natural History, New York, NY. [2.]Louisiana State University, Baton Rouge, LA.

154.11 Evidence for non-thermal radio emission from a classical nova - V1723 Aql
Zheng, Yong[1]; Sokoloski, Jennifer L.[1]; Rupen, Michael P.[2]; Weston, Jennifer[1]; Chomiuk, Laura[2, 3]; Mioduszewski, Amy J.[2]; Mukai, Koji[4, 5]; Krauss, Miriam I.[2]; Roy, Nirupam[2]; Nelson, Thomas[6]
[1.]Astronomy Department, Columbia University, New York, NY. [2.]National Radio Astronomy Observatory, Socorro, NM. [3.]Department of Physics and Astronomy, Michigan State University, East Lansing, MI. [4.]GRESST and X-ray Astrophysics Laboratory, Greenbelt, MD. [5.]Department of Physics, University of Maryland, Baltimore, MD. [6.]School of Physics and Astronomy, University of Minnesota, Minneapolis, MN.

154.12 Optical Observations of the Cataclysmic Variable FL Ceti, Evidence for a Decrease in Orbital Period

Gomez, Sebastian[1]; Mason, Paul A.[1]; Robinson, Edward L.[2]
[1.]University of Texas-El Paso, El Paso, TX. [2.]The University of Texas at Austin, Austin, TX.

154.13 The High and Low Accretion States of the Eclipsing Polar LSQ 1725-64

Fuchs, Joshua T.[1]; Dunlap, Bart H.[1]; Barlow, Brad[2]; O'Donoghue, Darragh[3, 4]; Clemens, J. Christopher[1]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC. [2.]High Point University, High Point, NC. [3.]South African Astronomical Observatory, Observatory, 7935,South Africa. [4.]The Southern African Large Telescope, Observatory, 7935,South Africa.

154.14 Near-Infrared Photometry of Low Accretion Rate Polars

Smith, Lois[1]
[1.]University of Michigan, Ann Arbor, MI.

154.15 Optical Photometry of BY Cam Modeled Using a Multipolar Magnetic Field Structure

Morales, John[1]; Mason, Paul A.[1, 2]; Zhilkin, Andrey[3]; Bisikalo, Dmitry V.[3]; Robinson, Edward L.[4]
[1.]University of Texas at El Paso, El Paso, TX. [2.]New Mexico State University, Las Cruces, NM. [3.]Institute for Astronomy, Russian Academy of Sciences, Moscow, Russian Federation. [4.]University of Texas at Austin, Austin, TX.

154.16 The Second Eclipsing AM CVn Star

Levitan, David B.[1]; Groot, Paul J.[1, 2;] Kupfer, Thomas[2]; Margon, Bruce H.[3]; Prince, Thomas A.[1]; Hallinan, Gregg[1]; Harding, Leon K.[1]; Kyne, Gillian[4]; Rutten, René G.[5]
[1.]California Institute of Technology, Pasadena, CA. [2.]Radboud University, Nijmegen, Netherlands. [3.]University of California, Santa Cruz, CA. [4.]National University of Ireland, Galway, Ireland. [5.]GRANTECAN S.A., La Palma, Spain.
Contributing teams: Palomar Transient Factory Collaboration

154.17 Sakurai's Object Evolving to Higher Temperature

Hinkle, Kenneth H.[1]; Joyce, Richard R.[1]
[1.]NOAO, Tucson, AZ.

154.18 Using Light Echoes to Map the Three-Dimensional Dust Structures Around V838 Monocerotis

Vogt, Frédéric P.A.[1, 2]; Bond, Howard E.[3, 4]; Cracraft, Misty M.[3]; Sparks, William B.[3]; Corradi, Romano L.M.[5]; Crause, Lisa[6]; Dopita, Michael A.[1, 7]; Henden, Arne A.[8]; Levay, Zoltan G.[3]; Munari, Ulisse[9]; Panagia, Nino[3]; Starrfield, Sumner[10]; Sugerman, Ben[11]; Sutherland, Ralph[1]; Wagner, R. Mark[12]; White, Richard L.[3]
[1.]Research School of Astronomy and Astrophysics, Australian National University, Weston Creek, ACT, Australia. [2.]Johns Hopkins University, Baltimore, MD. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]Pennsylvania State University, University Park, PA. [5.]Instituto de Astrofísica de Canarias, La Laguna, Spain. [6.]South African Astronomical Observatory, Cape Town, South Africa. [7.]King Abdulaziz University, Jeddah, Saudi Arabia. [8.]AAVSO, Cambridge, MA. [9.]Universita di Padova, Padova, Italy. [10.]Arizona State University, Tempe, AZ. [11.]Goucher College, Baltimore, MD. [12.]University of Arizona, Tucson, AZ.

154.19 Imaging Polarimetry of the Yellow Hypergiant IRC+10420 at 2.2 µm with MMTPOL

Shenoy, Dinesh[1]; Jones, Terry J.[1]; Packham, Christopher C.[2]; Lopez-Rodriguez, Enrique[2]; Warner, Craig[3]; Krejny, Megan M.[1]; DeWahl, Kathleen[1]

[1.]MN Institute for Astrophysics, University of Minnesota, Minneapolis, MN. [2.]University of Texas - San Antonio, San Antonio, TX. [3.]University of Florida - Gainsville, Gainsville, FL.

154.20 A Far Ultraviolet Spectroscopic Analysis of the Hot Components in Six S-Type Symbiotic Variables

Kolobow, Craig[1]; Sion, Edward M.[1]; Godon, Patrick[1]; Sabra, Bassem[2]; Mikolajewska, Joanna[3]

[1.]Villanova University, Villanova, PA. [2.]Notre Dame University, Louaize, Lebanon. [3.]Nicholas Copernicus Astronomical Center, Warsaw, Poland.

154.21 FUV, UV, and Optical Observations of the He-sdO Star BD+39 3226

Chayer, Pierre[1]; Green, Elizabeth M.[2]; Fontaine, Gilles[3]

[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Steward Observatory, Tucson, AZ. [3.]University of Montreal, Montreal, QC, Canada.

154.22 Does Episodic Mass Loss Dominate the Evolution of Massive Stars?

Khan, Rubab M.[1]

[1.]Ohio State University, Columbus, OH.

154.23 The Role of the Magnetorotational Instability in the Late Stages of Stellar Evolution

Wheeler, J. C.[1]; Kagan, Daniel[2]; Chatzopoulos, Emmanouil[3]

[1.]The University of Texas at Austin, Austin, TX. [2.]University of Tel Aviv, Tel Aviv, Israel. [3.]University of Chicago, Chicago, IL.

154.24 Polarization of circumstellar bow shocks due to electron scattering

Shrestha, Manisha[1]; Hoffman, Jennifer L.[1]; Neilson, Hilding[2]; Ignace, Richard[2]

1.University of Denver, Denver, CO. 2.East Tennessee State University, Johnson City, TN.

154.25 The Morphology and Uniformity of Circumstellar OH and H2O Maser Shells Surrounding OH/IR Stars

Felli, Derek[1]; Migenes, Victor[1]

[1.]BYU, Springville, UT.

154.26 VISION: Next Generation Beam Combiner for the Navy Precision Optical Interferometer

Garcia, Eugenio[1, 2]; van Belle, Gerard[2]; Muterspaugh, Matthew W.[3]; Swihart, Samuel[4]

[1.]Vanderbilt University, Nashville, TN. [2.]Lowell Observatory, Flagstaff, AZ. [3.]Tennessee State University, Nashville, TN. 4.University of Michigan, Ann Arbor, MI.

154.27 110-day Spectral Record of the Classical Nova Delphini 2013

Wiethoff, William[1]; Mooers, Howard D.[1]; Habig, Alec T.[1]

[1.]Earth and Environmental Sciences, University of Minnesota, Duluth, MN.

154.28 The Radio-Emitting Ejecta from Classical Nova V1723 Aql
Weston, Jennifer[1]; Sokoloski, Jennifer L.[1]; Zheng, Yong[1]; Chomiuk, Laura[2]; Mioduszewski, Amy J.[3]; Mukai, Koji[4]; Rupen, Michael P.[3]; Krauss, Miriam I.[3]; Roy, Nirupam[3]; Nelson, Thomas[5]
[1.]Columbia University, New York, NY. [2.]Michigan State University, East Lansing, MI. [3.]National Radio Astronomy Observatory, Socorro, NM. [4.]CRESST and X-ray Astrophysics Laboratory, NASA/GSFC, Greenbelt, MD. [5.]University of Minnesota, Minneapolis, MN.

155 Binary Stellar Systems, X-ray Binaries

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

155.01 The Cygnus OB2 Radial Velocity Survey: Solutions of Four More Systems
Burke, Jamie[2, 1]; Kobulnicky, Henry A.[1]; Dale, Daniel A.[1]; Rolen, Emily[3, 1]; Lester, Katie V.[4, 1]; Keller, Erica[5, 1]; Chapman, James E.[6, 1]; Topel, Eric[7, 1]
[1.]University of Wyoming, Laramie, WY. [2.]Swarthmore College, Swarthmore, PA. [3.]Vanderbilt University, Nashville, TN. [4.]Lehigh University, Bethlehem, PA. [5.]Mt. Holyoke College, South Hadley, MA. [6.]Massachusetts College of Liberal Arts, North Adams, MA. [7.]St. Olaf College, Northfield, MN.

155.02 Massive OB Binary Star Characterization in the Cygnus OB2 Association
Chapman, James E.[4, 1]; Burke, Jamison F.[3, 1]; Keller, Erica[5, 1]; Lester, Katie V.[2, 1]; Rolen, Emily[6, 1]; Topel, Eric[7, 1]; Lundquist, Michael J.[1]; Brotherton, Michael S.[1]; Kobulnicky, Henry A.[1]; Dale, Daniel A.[1]
[1.]University of Wyoming, Laramie, WY. [2.]Lehigh University , Bethlehem, PA. [3.]Swarthmore College, Swarthmore , PA. [4.]Physics, MCLA, Dudley, MA. [5.]Mount Holyoke College, South Hadley, MA. [6.]Vanderbilt University , Nashville , TN. [7.]St. Olaf College, Northfield , MN.

155.03 The Cygnus OB2 Radial Velocity Survey: Discovery of three new single-lined massive binary systems
Keller, Erica[1, 2]; Burke, Jamison F.[3, 2]; Chapman, James E.[4, 2]; Lester, Katie V.[5, 2]; Rolen, Emily[6, 2]; Topel, Eric[7, 2]; Lundquist, Michael J.[2]; Brotherton, Michael S.[2]; Dale, Daniel A.[2]; Kobulnicky, Henry A.[2]
[1.]Mount Holyoke College, South Hadley, MA. [2.]University of Wyoming, Laramie, WY. [3.]Swarthmore College, Swarthmore, PA. [4.]Massachusetts College of Liberal Arts, North Adams, MA. [5.]Lehigh University, Bethlehem, PA. [6.]Vanderbilt University, Nashville, TN. [7.]St. Olaf College, Northfield, MN.

155.04 The Cygnus OB2 Radial Velocity Survey: Three new massive binaries MT216, MT234, MT485
Lester, Kathryn V.[1, 2]; Burke, Jamison F.[3, 2]; Chapman, James E.[4, 2]; Keller, Erica[5, 2]; Rolen, Emily[6, 2]; Topel, Eric[7, 2]; Lundquist, Michael J.[2]; Brotherton, Michael S.[2]; Dale, Daniel A.[2]; Kobulnicky, Henry A.[2]
[1.]Lehigh University, Bethlehem, PA. [2.]University of Wyoming, Laramie, WY. [3.]Swarthmore College, Swarthmore, PA. [4.]Massachusetts College of Liberal Arts, North Adams, MA. [5.]Mount Holyoke College, South Hadley, MA. [6.]Vanderbilt University, Nashville, TN. [7.]St. Olaf College, Northfield, MN.

155.05 The Cygnus OB2 Radial Velocity Survey: A Study of Six Additional Massive Systems

Rolen, Emily[1, 2]; Burke, Jamison F.[1, 3]; Chapman, James E.[1, 4]; Keller, Erica1, 5; Lester, Katie V.[1, 6]; Topel, Eric[1, 7]; Lundquist, Michael J.[1]; Brotherton, Michael S.[1]; Dale, Daniel A.[1]; Kobulnicky, Henry A.[1]

[1.]University of Wyoming, Laramie, WY. [2.]Vanderbilt University, Nashville, TN. [3.]Swarthmore College, Swarthmore, PA. [4.]Massachusetts College of Liberal Arts, North Adams, MA. [5.]Mount Holyoke College, South Hadley, MA. [6.]Lehigh University, Bethlehem, PA. [7.]St. Olaf College, Northfield, MN.

155.06 The Cygnus OB2 Radial Velocity Survey: MT378, MT601, MT268, and MT646

Topel, Eric[1, 2]; Burke, Jamison F.[1, 3]; Chapman, James E.[1, 4]; Keller, Erica[1, 5]; Lester, Katie V.[1, 6]; Rolen, Emily[1, 7]; Lundquist, Michael J.[1]; Brotherton, Michael S.[1]; Dale, Daniel A.[1]; Kobulnicky, Henry A.[1]

[1.]University of Wyoming, Laramie, WY. [2.]St. Olaf College, Northfield, MN. [3.]Swarthmore College, Swarthmore, PA. [4.]Massachusetts College of Liberal Arts, North Adams, MA. [5.]Mount Holyoke College, South Hadley, MA. [6.]Lehigh University, Bethlehem, PA. [7.]Vanderbilt University, Nashville, TN.

155.07 Radial Velocity Monitoring of Composite-Spectra Hot Subdwarf Stars with the HET

Barlow, Brad[1, 2]; Wade, Richard A.[2]; Liss, Sandra[3]

[1.]High Point University, High Point, NC. [2.]Pennsylvania State University, University Park, PA. [3.]University of Virginia, Charlottesville, VA.

155.08 Exploring Binary Populations in Open Clusters

Thompson, Benjamin A.[1]; Frinchaboy, Peter M.[1]; Kinemuchi, Karen[2]; Sarajedini, Ata[3]

[1.]Texas Christian University, Fort Worth, TX. [2.]Apache Point Obs. / New Mexico State Uni., Las Cruces, NM. [3.]University of Florida, Gainesville, FL.

155.09 Period Discovery and Light Curve Analysis of the Young 25 Ori Association Eclipsing Binary GSC 118-199

Bradstreet, David H.[1]; Sanders, Steven J.[1]; Regi, Andrew[1]

[1.]Eastern Univ., Saint Davids, PA.

155.10 Light Curve Analyses of the Short Period, Totally Eclipsing Binaries V449 & V463 And

Okimoto, Jensen[1]; Schwartz, William H.[1]; Sanders, Steven J.[1]; Bradstreet, David H.[1]

[1.]Eastern University, St. Davids, PA.

155.11 SARA South Observations of the W U Ma Pre-Contact Binary, ZZ Eridani and its Near-Brown Dwarf Companion

Faulkner, Danny R.[1]; Clark, Jeremy[2]; Samec, Ronald G.[2]; Hill, Robert L.[2]; Kring, James[2]; Flaaten, Daniel[2]; Van Hamme, Walter V.[3]

[1.]University of South Carolina Lancaster, Lancaster, SC. [2.]BobJones University, Greenville, SC. [3.]Florida International University, Miami, FL.

155.12 V530 Andromedae: A Totally Eclipsing Near-Contact Solar Type Binary

Samec, Ronald G.[1]; Kring, James[1]; Flaaten, Daniel[1]; Faulkner, Danny R.[2]; Van Hamme, Walter V.[3]

[1.]Bob Jones Univ., Greenville, SC. [2.]University of South Carolina, Lancaster, Lancaster, SC. [3.]Florida International University, Miami, FL.

155.13 Position angle and separation of binary stars selected from the Washington Double Star Catalog
Muller, Rafael J.[1]; Cersosimo, Juan C.[1]; Franco, Eframir[1]; Rodriguez, Roberto A.[1]; Diaz Rodriguez, Mariangelly[1]; Rosario, Marialis[1]; Nieves, Yamil[1]; Torres, Brian[1]; Rodriguez, Julymar[1]; Vergara, Nelson[1]
[1.]Univ. of Puerto Rico, Humacao, Humacao, Puerto Rico.

155.14 Separated Fringe Packet Binary Star Astrometry at the CHARA Array - An Update
Ten Brummelaar, Theo[1]; Farrington, Christopher D.[1]; Mason, Brian D.[2]; Roberts, Lewis C.[3]; Turner, Nils H.[1]
[1.]Georgia State Univ., Mount Wilson, CA. [2.]USNO, Washington, DC. [3.]JPL/NASA, Pasadena, CA.

155.15 Wide Binaries in the Kepler Field: Using Rotation Periods to Constrain Gyrochronology Models and Planetary Occurrence Rates
Weisenburger, Kolby L.[1]; West, Andrew A.[1]; Janes, Kenneth[1]; Dhital, Saurav[2]
[1.]Boston University, Boston, MA. [2.]Embry-Riddle Aeronautical University, Daytona Beach, FL.

155.16 Masses and Radii of Low-Mass Companions in Short Period Eclipsing Binary Systems Selected from STEREO Data
Tsvetanov, Zlatan I.[1]; Markov, Harry[2]; Belcheva, Maya[2]; Iliev, Ilian[2]; Stateva, Ivanka[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]Institute of Astronomy, Sofia, Bulgaria.

155.17 Revealing Imposters: A Target Pixel View of Eclipsing Binary False Positives
Abdul-Masih, Michael[1]; Matijevic, Gal[1]; Prsa, Andrej[1]
[1.]Villanova University, Villanova, PA.

155.18 Beyond Binarity: Spots, Pulsations, and Triple Systems
Johnston, Cole[1]; Prsa, Andrej[1]
[1.]Villanova University, Villanova, PA.

155.19 Inferred Eccentricity and Period Distributions of Kepler Eclipsing Binaries
Prsa, Andrej[1]; Matijevic, Gal[1]
[1.]Villanova University, Villanova, PA.

155.20 A Triple Eclipsing System as a Test Case for Close Binary Formation Through Kozai Cycles
Conroy, Kyle E.[1, 2]; Prsa, Andrej[2]; Stassun, Keivan[1, 3]
[1.]Vanderbilt University, Nashville, TN. [2.]Villanova University, Villanova, PA. [3.]Fisk University, Nashville, TN.

155.21 Analysis of Refined Parameters of the Eclipsing Hierarchical Triple Stellar System KOI-126
Earl, Nicholas M.[1]; Orosz, Jerome A.[1]; Welsh, William F.[1]
[1.]San Diego State University, San Diego, CA.

155.22 Characterizing the Eclipsing Binary KOI 1120
Gonzales, Alexandria[2]; Swift, Jonathan[1]; Shporer, Avi[1, 5]; Sanchis Ojeda, Roberto[3]; Johnson, John A.[4]
[1.]California Institute of Technology, Pasadena, CA. [2.]Scripps College, Claremont, CA. [3.]Massachusetts Institute of Technology, Cambridge, MA. [4.]Harvard University, Cambridge, MA. [5.]Jet Propulsion Laboratory, Pasadena, CA.

155.23 Accurate Parameters of Two Bright Eclipsing Binaries with Potential for Asteroseismology

Sharp, Haley[1]; Orosz, Jerome A.[1]; Welsh, William F.[1]; Stevick, Justin[1]; Pepper, Joshua[3]; Bieryla, Allyson[2]; Latham, David W.[2]; Collins, Karen A.[4]; Kielkopf, John F.[4]; Jensen, Eric L.[5]; Reed, Phillip A.[6]

[1.]San Diego State University, San Diego, CA. [2.]Center of Astrophysics, Cambridge, MA. [3.]Lehigh University, Bethlehem, PA. [4.]University of Louiseville, Louisville, KY. [5.]Swarthmore College, Swarthmore, PA. [6.]Kutztown University, Kutztown, PA.

155.24 Mass Transfer and Tidal Dynamics in White Dwarf Binary Systems

Gerber, Jeffrey[1]; Fuller, Jim[2]

[1.]Appalachian State University, Boone, NC. [2.]California Institute of Technology, Pasadena, CA.

155.25 A Physical Mechanism for State Transitions in Black Hole X-ray Binaries

Salvesen, Greg[1, 2]; Nixon, Chris[2]

[1.]Astrophysical and Planetary Sciences, University of Colorado at Boulder, Boulder, CO. [2.]JILA, Boulder, CO.

155.26 Constraints on decreases in Eta Carinae's mass loss from 3D SPH simulations of its binary colliding winds

Madura, Thomas[1, 2]; Gull, Theodore R.[2]; Okazaki, Atsuo T.[3]; Russell, Christopher M.[3]; Owocki, Stanley P.[4]; Groh, Jose H.[5]; Corcoran, Michael F.[6, 7]; Hamaguchi, Kenji6, [8]; Teodoro, Mairan[9]

[1.]Oak Ridge Associated Universities (ORAU), Oak Ridge, TN. [2.]Astrophysics Science Division, Code 667,NASA GSFC, Greenbelt, MD. [3.]Hokkai-Gakuen University, Sapporo, Hokkaido, Japan. [4.]University of Delaware, Newark, DE. [5.]Geneva Observatory, Geneva, Sauverny, Switzerland. [6.]CRESST and X-ray Astrophysics Lab, NASA GSFC, Greenbelt, MD. [7.]Universities Space Research Association, Columbia, MD. [8.]Department of Physics, University of Maryland, Baltimore County, Baltimore, MD. [9.]CNPq/Science without Borders Fellow, São Paulo, São Paulo, Brazil.

155.27 Constraints on Common Envelope Magnetic Fields from Observations of Jets in Planetary Nebulae

De Marco, Orsola[1]; Tocknell, James[1]; Wardle, M.[1]

[1.]Macquarie University, Sydney, NSW, Australia.

155.28 Hydrodynamic Simulations of AGB Binaries in Eccentric Orbits

Staff, Jan E.[1]; De Marco, Orsola[1]; Galaviz, Pablo[1]; Macdonald, Daniel[1]

[1.]Macquarie University, Sydney, NSW, Australia.

155.29 Constraints on Inspiralling Binaries from First LWA Data

Papadopoulos, Joanna[1]; Gough, Jonathan[2]; Cutchin, Sean E.[3, 4]; Kavic, Michael[1]; Simonetti, John H.[5]; Akukwe, Bernadine[1]; Bear, Brandon[5]; Tsai, Jr-Wei[5]; Kassim, Namir E.[4]

[1.]The College of New Jersey, Ewing, NJ. [2.]Long Island University, Brooklyn, NY. [3.]National Research Council, Washington, DC. [4.]Naval Research Laboratory, Washington, DC. [5.]Virginia Tech, Blacksburg, VA.

155.30 The Kozai Mechanism and Black Hole Binaries in Galactic Centers

VanLandingham, John[1]; Miller, M. C.[1]; Richardson, Derek C.[1]; Hamilton, Douglas P.[1]

[1.]University of Maryland, College Park, MD.

155.31 Disk-jet coupling in the Galactic black hole X-ray binary MAXI J1836-194
Russell, Thomas[1]
[1] ICRAR - Curtin University, Perth, WA, Australia.

155.32 An Optical Survey for Black Holes in the Kepler Field
Orosz, Jerome A.[1]; Welsh, William F.[1]; Windmiller, Gur[1]; Short, Donald R.[1]
[1] San Diego State Univ., San Diego, CA.

155.33 Examining XMM Observations in the Galactic Bulge Survey Region
Estrada-Carpenter, Vicente[1, 2]; Hynes, Robert I.[2]; Britt, Christopher[2]; Johnson, Chris[2]; Jonker, Peter[3]; Maccarone, Thomas J.[4]; Torres, Manuel[3]; Steeghs, Danny[5]; Greiss, Sandra[5]; Nelemans, Gijs[6]
[1] Southwestern University, Georgetown, TX. [2] Louisiana State University, Baton Rouge, LA. [3] Netherlands Institute for Space Research, Utrecht, Netherlands. [4] Texas Tech University, Lubbock, TX. [5] The University of Warwick, Coventry, United Kingdom. 6.Radboud University Nijmegen, Nijmegen, Netherlands.
Contributing teams: The Galactic Bulge Survey Collaboration

155.34 An Improved Limit on the Orbital Period Derivative of the LMXB, UW CrB
Segura, Jacob[1]; Mason, Paul A.[1]; Robinson, Edward L.[2]
[1] University of Texas at El Paso, El Paso, TX. [2] University of Texas at Austin, Austin, TX.

155.35 Simultaneous Filter Photometry of V1727 Cygni
Sundin, Emma[1]; Mason, Paul A.[1, 3]; Robinson, Edward L.[2]; Morales, John1; Gomez, Sebastian[1]; Gonzalez, Rodolfo[1]; Lopez, Isaac[1]; Bell, Keaton[2]
[1] University of Texas at El Paso, El Paso, TX. [2] University of Texas at Austin, Austin, TX. [3] New Mexico State University, Las Cruces, NM.

155.36 Clump Accretion in Supergiant Fast X-Ray Transients
Chase, Eve[1, 2]; Raymer, Eric[1]; Blondin, John M.[1]
[1] North Carolina State University, Raleigh, NC. [2] College of William & Mary, Williamsburg, VA.

155.37 Swift Optimized Strategy for Supergiant Fast X-ray Transients Study
Mangano, Vanessa[1]; Romano, Patrizia[2]; Kennea, Jamie A.[1]; Vercellone, Stefano[2]; Burrows, David N.[1]; Ducci, Lorenzo[3]; Esposito, Paolo[5]; Krimm, Hans A.[4]; Barthelmy, Scott D.[4]; Gehrels, Neil[4]
[1] Penn State University, State College, PA. [2] INAF/IASF Palermo, Palermo, Italy. [3] University of Tubingen, Tubingen, Germany. [4] NASA/GSFC, Greenbelt, MD. [5] INAF/IASF Milano, Milano, Italy.
Contributing teams: Swift

155.38 X-ray Polarization Properties of High Mass X-ray Binaries
Kallman, Timothy R.[1]; Dorodnitsyn, Anton[1, 2]
[1] NASA's GSFC, Greenbelt, MD. [2] CRESST/UMCP, College Park, MD.

155.39 Orbital variability and magnetic field of Centaurus X-3 with Suzaku
Gottlieb, Amy[1, 2]; Pottschmidt, Katja[2]; Marcu, Diana[1, 2]; Suchy, Slawomir[4]; Wilms, Jörn[3]
[1] University of Maryland, Baltimore County, Baltimore, MD. [2] CRESST/NASA-GSFC, Greenbelt, MD. [3] ECAP & Remeis Observatory, Bamberg, Germany. [4] IAAT, Tübingen, Germany.

155.40 Spectral Modeling of the Comptonized Continua of Accreting X-Ray Pulsars: Recent Progress
Wolff, Michael T.[1]; Becker, Peter A.[2]; Marcu, Diana[3]; Pottschmidt, Katja[3]; Wilms, Jörn[4]; Wood, Kent S.[1]
[1] NRL, Washington, DC. [2] George Mason University, Fairfax, VA. [3] University of Maryland, Baltimore County, Baltimore, MD. [4] Universitat Erlangen-Nuernberg, Erlangen, Germany.

155.41 Looking for Periodicity in X-Ray Emission Data
Cuellar, Andres[1]; Cohen, Stephanie[1]; Benacquista, Matthew[1]
[1] University of Texas at Brownsville, Brownsville, TX.

155.42 The Two-Faced Behavior of XTE J1946+274 Revealed by Suzaku
Marcu, Diana[1, 2]; Pottschmidt, Katja[1, 2]; Kuehnel, Matthias[3, 4]; Mueller, Sebastian[3, 4]; Caballero, Isabel[5]; Fuerst, Felix[6]; Mahmoud, Aisha[7]; Kreykenbohm, Ingo[3, 4]; Klochkov, Dmitry[7]; Rothschild, Richard E.[8]; Terada, Yukikatsu[9]; Enoto, Teruaki[1, 10]; Iwakiri, Wataru[9]; Nakajima, Motoki[11]; Wilms, Jörn[3, 4]
[1.]NASA-GSFC, Greenbelt, MD. [2.]UMBC, Baltimore, MD. [3.]Remeis, FAU, Bamberg, Germany. [4.]ECAP, FAU, Erlangen, Germany. [5.]CEA, CNRS, Paris, France. 6.Caltech, Pasadena, CA. [7.]IAAT, Tubingen, Germany. [8.]CASS-UCSD, San Diego, CA. [9.]Saitama Univeristy, Saitama, Japan. [10.]RIKEN, Saitama, Japan. [11.]Nihon University, Tokyo, Japan.

155.43 X-ray and Ultraviolet Spectral Evolution of LMC X-3 During Normal and Anomalous Low States
Torpin, Trevor[1, 2]; Boyd, Patricia T.[2]; Smale, Alan P.[2]
[1.]Catholic University of America, Washington, DC. [2.]NASA's Goddard Space Flight Center, Greenbelt, MD.

155.44 The First Suzaku Observation of 4U 1538-522
Hemphill, Paul B.[1]; Rothschild, Richard E.[1]; Pottschmidt, Katja[2, 4]; Wilms, Jörn[3]
[1.]Physics, University of California, San Diego, La Jolla, CA. [2.]Univeristy of Maryland, Baltimore County, Cantonsville, MD. [3.]Dr. Karl Remeis-Sternwarte, University of Erlangen-Nuremberg, Bamberg, Bavaria, Germany. [4.]NASA Goddard Space Flight Center, Greenbelt, MD.

155.45 Multiwavelength Analysis of the Gamma-ray Binary LS I +61 303
Alexander, Michael J.[1]; Napier, Sean1; McSwain, M. V.[1]
[1.]Physics, Lehigh Univeristy, Bethlehem, PA.

155.46 Spectral Analysis of the Gamma-ray Binary Candidates 2FGL J0642.9+0319 and 2FGL J1151.5-1347
Schmitz, Erich[1, 2]; McSwain, M. V.[1]; Alexander, Michael J.[1]
[1.]Lehigh University, Bethlehem, PA. [2.]Benedictine College, Atchison, KS.

155.47 Standing Shock Instability in Advection-Dominated Accretion Flows
Le, Truong V.[1, 2]; Wood, Kent S.[2]; Wolff, Michael T.[2]; Becker, Peter A.[3]; Putney, Joy[4]
[1.]College of Charleston, Charleston, SC. [2.]Naval Research Laboratory, Washington, DC. [3.]George Mason University, Fairfax, VA. [4.]Washington & Lee University, Lexington, VA.

155.48 Results of the Swift Monitoring Campaign of the X-ray Binary 4U 1957+11
Maitra, Dipankar[3, 1]; Miller, Jon M.[1]; Reynolds, Mark[1]; Reis, Ruben C.[1]; Nowak, Michael[2]
[1.]Univ. of Michigan, Ann Arbor, MI. [2.]MIT, Cambridge, MA. [3.]Wheaton College, Norton, MA.

155.49 The dynamics of jets in circum-binary environment of HMXBs
Yoon, Doosoo[1]; Heinz, Sebastian[1]
[1.]University of Wisconsin,Madison, Madison, WI.

155.50 A Rare Eclipse Event: The Eclipsing Variable Radio Source b Per
Sanborn, Jason[1, 2]; Zavala, Robert T.[3]; Collins, Donald [4]; Hummel, Christian [5]; Dvorakova, Sarka[7]; Templeton, Matthew R.[6]
[1.]Lowell Observatory, Flagstaff, AZ. [2.]Northern Arizona University, Flagstaff, AZ. [3.]United States Naval Observatory - Flagstaff Station, Flagstaff, AZ. [4.]Warren Wilson College, Asheville, NC. [5.]European Southern Observatory Karl-Schwarzschild-Str., Munchen, Germany. [6.]American Association of Variable Star Observers, Cambridge, MA. [7.]Academy of Sciences of the Czech Republic, Prague, Czech Republic.

155.51 UBVRI Observations, Analysis and Spectra of the Mature W UMa Contact Binary, V444 And
Shebs, Travis[1]; Samec, Ronald G.[1]; Monroe, Sharyl [1]; Faulkner, Danny R.[2]; Robb, Russell M.[3]; Van Hamme, Walter V.[4]; Chamberlain, Heather[5]
[1.]Bob Jones University , Greenville, SC. [2.]University of South Carolina at Lancaster, Lancaster, SC. [3.]University of Victoria, Victoria , BC, Canada. [4.]Florida International University, Miami, FL. [5.]University of Alaska, Anchorage, AK.

155.52 Productive Observing with a Small Telescope at an Urban Site
Mason, Brian D.[1]; Hartkopf, William I.[1]
[1.]U.S. Naval Obs., Washington, DC.

156 Variable Stars Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

156.01 Sixty Thousand Periodic Variables from the Catalina Surveys
Drake, Andrew J.[1]; Graham, Matthew[1]; Djorgovski, Stanislav G.[1]; Catelan, Marcio[3]; Mahabal, Ashish A.[1]; Prieto, Jose[4]; Donalek, Ciro[1]; Christensen, Eric J.[2]; Larson, Stephen M.[2]; Boattini, Andrea[2]; Gibbs, Alex[2]; Grauer, Albert D.[2]; Hill, Richard[2]; Kowalski, Richard[2]; Johnson, Jess[2]; Shelly, Frank[2]; Torrealba, Gabriel[3]
[1.]Caltech, Pasadena, CA. [2.]UA/LPL, Tucson, AZ. [3.]PUC, Santiago, Chile. [4.]Princeton, Princeton, NJ.

156.02 A catalog of 7000 optically faint periodic variable stars from the LINEAR survey
Ivezic, Zeljko[1]; Palaversa, Lovro[2]; Sesar, Branimir[3]; Stuart, J. Scott[4]
[1.]Univ. of Washington, Seattle, WA. [2.]Geneva Observatory, Geneva, Switzerland. [3.]Caltech, Pasadena, CA. [4.]Lincoln Laboratory, Lexington, MA.

156.03 Twinkle, Twinkle: Characterizing Variable Stars in Young Open Clusters
Nava, Chantanelle[1, 3]; Stetson, Peter B.[2]; Walker, Gary E.[3]; West, Michael[3]
[1.]University of Montana, Missoula, MT. [2.]NRC Herzberg Institute of Astrophysics, Victoria, BC, Canada. [3.]Maria Mitchell Observatory, Nantucket, MA.

156.04 Identification of BY Draconis Variable Stars in ASAS Data
Larsen, Kristine[1]; Johnson, Jessica[1]
[1.]Central Connecticut State University, New Britain, CT.

156.05 Starspots on LO Pegasi, 2006-2013
Harmon, Robert O.[1]; Cole, Brendan[2]; Denison, Josh[1]; Gray, Katie[3]
[1.]Ohio Wesleyan University, Delaware, OH. [2.]Wesleyan University, Middletown, CT. [3.]Whitman College, Walla Walla, WA.

156.06 A Mid-Infrared Search for Variable Stars in the Milky Way Galaxy
Brooks, Brian H.[1, 2]; Benjamin, Robert A.[3, 2]; Babler, Brian L.[2]
[1.]Old Dominion University , Norfolk , VA. [2.]University of Wisconsin-Madison, Madison, WI. [3.]University of Wisconsin-Whitewater, Whitewater , WI.
Contributing teams: the GLIMPSE team

156.07 Expanded RR Lyrae Search in the Southern Hemisphere with the La Silla-QUEST Survey
Horowitz, Benjamin[1]; Zinn, Robert[1]; Charles, Baltay[1]; Coppi, Paolo S.[1]; Ellman, Nancy E.[1]; Fowler, Genevieve[1]; Hadjiyska, Ellie I.[1]; Rabinowitz, David L.[1]; Vivas, Katherina[2]
[1.]Yale University, New Haven, CT. [2.]Centro de Investigaciones de Astronomia, Merida, Merida, Venezuela, Bolivarian Republic of.

156.08 An Automated Search for RR Lyrae Stars in M5
Raney, Catie[1]; Benacquista, Matthew[2]; Kayal, Khalid[2]
[1.]University of Oklahoma, Norman, OK. [2.]University of Texas at Brownsville, Brownsville, TX.

156.09 Spectroscopic Identification and Metallicity Determination of RR Lyrae Variables in Sloan, with a New Metallicity Calibration Including High-Temperature Phase Regions
Spalding, Eckhart[1]; Wilhelm, Ronald J.[1]; De Lee, Nathan M.[2, 3]
[1.]University of Kentucky, Lexington, KY. [2.]University of Nebraska at Kearney, Kearney, NE. [3.]Vanderbilt University, Nashville, TN.

156.10 Observations of Suspected RR Lyrae Variable Stars
Smith, Stephanie[1]; Powell, William L.[1]; Wilhelm, Ronald J.[2]; De Lee, Nathan M.[1]
[1.]University of Nebraska at Kearney, Kearney, NE. [2.]University of Kentucky, Lexington, KY.

156.11 A Mid-infrared Study of RR Lyrae Stars with the WISE Full-Sky Data Release
Gavrilchenko, Tatyana[1]; Klein, Christopher R.[1]; Bloom, Joshua S.[1]; Richards, Joseph[1]; Butler, Nathaniel[2]
[1.]University of California, Berkeley, Berkeley, CA. [2.]Arizona State University, Phoenix, AZ.

156.12 Changing Amplitudes: Detecting RR Lyrae Light Curve Shape Variations in the Galactic Disk and Inner Halo
De Lee, Nathan M.[1, 2]; Kinemuchi, Karen[3]; Pepper, Joshua[4, 2]; Rodriguez, Joseph E.[2]
[1.]Univ. Nebraska Kearney, Kearney, NE. [2.]Vanderbilt University, Nashville, TN. [3.]Apache Point Observatory/New Mexico State University, Sunspot, NM. [4.]Lehigh University, Bethlehem, PA.

156.13 Photometry of the Under Observed RR Lyrae Star GM Orionis
Brown, Justin[1]; Boyle, Robert J.[1]
[1.]Dickinson College, Carlisle, PA.

156.14 An Automated Search for RR Lyrae Stars in Globular Clusters
Kayal, Khalid[1]; Benacquista, Matthew[1]; Raney, Catie[1]
[1.]University of Texas at Brownsville, TX, TX.

156.15 A Photometric Survey for Rapidly-Pulsating Hot Subdwarf Stars with SKYNET
Vultaggio, Stephen[1]; Barlow, Brad1, [2]
[1.]High Point University, High Point, NC. [2.]University of North Carolina, Chapel Hill, NC.

156.16 Asteroseismology of 23 pulsating stars in eclipsing binaries
Guo, Zhao[1]; Gies, Douglas R.[1]; Matson, Rachel A.[1]; Williams, Stephen[1]
[1.]Georgia State University, Atlanta, GA.

156.17 Precision Asteroseismology of Compact Subdwarf B Stars using Kepler Observations.
Reed, Mike[1]
[1.]Missouri State Univ., Springfield, MO.

156.18 The Brightening of the North Star: Has Polaris' Brightness Steadily Increased for Centuries and, perhaps, even Millennia?
Engle, Scott G.[1, 2;] Guinan, Edward F.[1]; Harmanec, Petr[3]; Boži?, Hrvoje[4]; Ruzdjak, Domagoj[4]; Sudar, Davor[4]
[1.]Villanova University, Villanova, PA. [2.]James Cook University, Townsville, QLD, Australia. [3.]Astronomical Institute of the Charles University, Holesovickach, Praha, Czech Republic. [4.]Hvar Observatory, Zagreb University, Kaciceva, Zagreb, Croatia.

156.19 Hydrogen Alpha Temperature Curves for 8 Classical Cepheids
Hintz, Eric G.[1]; Joner, Michael D.[1]
[1.]Brigham Young Univ., Provo, UT.

156.20 Metallicity and Crowding Effects on the Cepheid Period-Luminosity Relation for M101
Mager, Violet[1, 2]; Madore, Barry F.[2]; Freedman, Wendy L.[2]
[1.]Susquehanna University, Selinsgrove, PA. [2.]Carnegie Observatories, Pasadena, CA.

156.21 Measuring Stellar Rotation Periods Over Multiple Kepler Quarters
Hyatt, Justin[1]
[1.]The University of Arizona, Tucson, AZ.
Contributing teams: The University of Arizona Kepler Project Students

156.22 Variable Circumstellar Disks of "Classical" Be Stars, Part 2
Gerhartz, Cody[1]; Davidson, James W.[1]; Bjorkman, Karen S.[1]; Wisniewski, John P.[2]
[1.]University of Toledo, Toledo, OH. [2.]University of Oklahoma, Norman, OK.

156.23 Photometric Variability in Proto-Planetary Nebulae: Extending to a Fainter (V=13-15) Sample
Hrivnak, Bruce J.[1]; Lu, Wenxian[1]; Henson, Gary D.[2]; Hillwig, Todd C.[1]; Kaitchuck, Ronald H.[3]; Murphy, Brian W.[4]; Reed, Justin M.[1]; Cheek, Wesley J.[1]
[1.]Valparaiso Univ., Valparaiso, IN. [2.]East Tennessee State Univ., Johnson City, TN. [3.]Ball State Univ., Muncie, IN. [4.]Butler Univ., Indianapolis, IN.

156.24 Time Series Photometry on Different Scales at the BYU West Mountain Observatory
Joner, Michael D.[1]
[1.]Brigham Young Univ., Provo, UT.

156.25 Photometric Evidence of Changes in Pulsation Characteristics of Hot Subdwarf B Stars
Raghavan, Arjun[1]
[1.]University of North Carolina, Chapel Hill, NC.

156.26 High-cadence high-resolution spectroscopy of the prototype RR Lyrae
Kolenberg, Katrien[1, 2]
[1.]Harvard Smithsonian, CfA, Cambridge, MA. [2.]University of Leuven, Leuven, Belgium.
Contributing teams: Zoey Bergstrom, Robert L. Kurucz, Thomas G. Barnes, Luca Fossati

157 White Dwarfs

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

157.01 Effect of Radial Grain Settling on the Infrared Emission from White Dwarf Circumstellar Disks: An application to G29-38 and GD 56
Dupuis, Jean[1]; Podmore, Hugh[2]
[1.]Canadian Space Agency, Saint-Hubert, QC, Canada. [2.]York University, Toronto, ON, Canada.

157.02 A Search for Relic Planetary Systems within 25 Parsecs of the Sun
Cox, Andrew[1]; Sion, Edward M.[1]; Debes, John H.[2]
[1.]Villanova University, Villanova, PA. [2.]Space Telescope Science Institute, Baltimore, MD.

157.03 Dynamical Masses of Cool White Dwarfs in Double-Degenerate Visual Binaries
Bond, Howard E.[2, 1]; Nelan, Edmund P.[1]; Schaefer, Gail[3]
[1.]STScI, Cockeysville, MD. [2.]Penn State University, University Park, PA. [3.]Georgia State University, Atlanta, GA.

157.04 COS UV Spectroscopy of Pulsating DB White Dwarfs
Provencal, Judith L.[1, 2]; Nitta, Atsuko[3]; Shipman, Harry L.[1]; Dalessio, James[1]; Montgomery, Mike[4]; Thompson, Susan E.[1]
[1.]University Of Delaware, Newark, DE. [2.]Mt. Cuba Observatory, Greenville, DE, DE. [3.]Gemini Observatory, Northern Operations, Hilo, HI. [4.]University of Texas, Austin, TX.

157.05 High-Resolution EUV Spectroscopy of White Dwarfs
Kowalski, Michael P.[1]; Wood, Kent S.[1]; Barstow, Martin A.[2]
[1.]NRL, Washington, DC. 2.U of Leicester, Leicester, United Kingdom.

157.06 Deep Observations of the Open Cluster NGC 6253
Jeffery, Elizabeth[1]
[1.]James Madison University, Harrisonburg, VA.

158 The Sun Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

158.01 A Combined Study of Photospheric Magnetic and Current Helicities and Subsurface Kinetic Helicities of Solar Active Regions during 2006-2012
Seligman, Darryl[1]; Petrie, Gordon[1]; Komm, Rudolph[1]
[1.]National Solar Observatory, Tucson, AZ.

158.02 Kinematics of Waves in the Solar Corona: Analyzing Potential Shock Waves to Predict Solar Energetic Particle Fluxes in Space Weather
Hammer, Michael[1, 2]; Kozarev, Kamen A.[2]; Korreck, Kelly E.[2]
[1.]Cornell University, Ithaca, NY. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

158.03 The Use of ACE Electron, Proton, and Alpha Monitor (EPAM) Data in Severe Geomagnetic Storm Forecasting
Strait, Victoria[1, 2]; Murtagh, William[2]; Rutledge, Robert[2]
[1.]Furman University, Greenville, SC. [2].NOAA/SWPC, Boulder, CO.

158.04 Atmospheric Effects on Cosmic Ray Air Showers Observed with HAWC
Young, Steven[1]
[1.]University of Wisconsin - Madison, Madison, WI.

158.05 Variation of the Diameter of the Sun as Measured by the Solar Disk Sextant (SDS)
Girard, Terrence[1]; Sofia, Sabatino[1]; Sofia, Ulysses J.[2]; Twigg, Laurence W.[3]; Heaps, William[3]; Thuillier, Gerard[4]
[1.]Yale Univ., New Haven, CT. [2.]American University, Washington, DC. [3.]NASA/GSFC, Greenbelt, MD. [4.]LATMOS-CNRS, Guyancourt, France.

158.06 Recent VLA Observations of Coronal Faraday Rotation
Kooi, Jason E.[1]; Fischer, Patrick D.[1]; Buffo, Jacob J.[1]; Spangler, Steven R.[1]
[1.]University of Iowa, Iowa City, IA.

158.07 Annual solar motion and spy satellites
Jensen, Margaret1; Larson, Shane L.[1]
[1.]Utah State University, Logan, UT.

158.08 Two-dimensional Hydrodynamic Simulations of Angular Momentum Balance and Meridional Circulation in the Solar Convective Zone, Using a Viscoelastic Model for the Turbulent Maxwell Stresses due to Magnetoconvection
Williams, Peter T.[1]
[1.]Agilent Technologies, Santa Clara, CA.

158.09 Design and Construction of a Solar Observatory in a Liberal Arts Environment: Austin College's Gnomon and Meridian Line
Baker, David D.[1]; Salisbury, Donald[1]
[1.]Austin College, Sherman, TX.

158.10 A Search for Flare Related Systematic Changes in Stokes V Asymmetries in NOAA 11429
Sinotte, Tyler1[1, 2]; Harker, Brian[1]
[1.]National Solar Observatory, Tucson, AZ. [2.]University of Wisconsin-Madison, Madison, WI.

158.11 Predicting Ground Illuminance
Lesniak, Michael V.[1]
[1.]U.S. Naval Observatory, Washington, DC.

160 Developing Our Own Future: Undergraduate Research and Enrichment Through Peer-Led Programs Poster Session

Monday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

160.01 How to Make a Club from Scratch: The Beginning of the University of Arizona Astronomy Club
Robertson, Amy[1]; Hardegree-Ullman, Kevin[2]; Towner, Allison P.[1]; Walker-LaFollette, Amanda[1]; Carleton, Timothy[3]; McCarthy, Donald W.[1]
[1.]University of Arizona, Tucson, AZ. [2.]University of Toledo, Toledo, OH. [3.]University of California, Irvine, Irvine, CA.

160.02 Undergraduate Skills Laboratories at Sonoma State University
Gill, Amandeep[1]; Zack, Kevin[1]; Mills, Hunter[1]; Cunningham, Ben[1]; Jackowski, Stephan[1]
[1.]Sonoma State University, Rohnert Park, CA.

160.03 The Cornell Astronomical Society: The Student Experience of Running an Observatory
Hammer, Michael[1]; Blackburn, Brecken[1]; Fredricks, Jeremy[1]; Garcia, Kelly[1]; Poniatowski, Adrian[1]; Schindler, Kevin[1]; Wilk, Arthur[1]
[1.]Cornell University, Ithaca, NY.

160.04 Bridging the gap between Undergrads and Grads: The mentor next door
White, Aaron[1]
[1.]San Francisco State University, San Francisco, CA.
Contributing teams: Aaron Gruberg

160.05 Astronomy at the Market
Roten, Robert[1]; Constantin, Anca[1]; Christensen, Emil[1]; Dick, Emily[1]; Lapolla, Josiah[1]; Nutter, Andrew[1]; Corcoran, James[1]; DiDomenico, Nathan[1]; Eskridge, Brandon Kyle[2, 1]; Saikin, Anthony[3, 1]
[1.]James Madison University, Harrisonburg, VA. [2.]College of William and Mary, Williamsburg, VA. [3.]University of New Hampshire, Durham, NH.

160.06 Albion's Astronomy Club--A Community of Many Faces
Ganem, Alysandra[1]; Matti, Carlos[1]; Ciastko, Lindsay[1]; Zellner, Nicolle[1]
[1.]Albion College, Albion, MI.

160.07 The League of Astronomers: Outreach
Paat, Anthony[1]; Brandel, Andrew[1]; Schmitz, Denise[1]; Sharma, Ramon[1]; Thomas, Nancy H.[1]; Trujillo, Juan[1]; Laws, Christopher S.[1]
[1.]University of Washington, Seattle, WA.
Contributing teams: League of Astronomers

160.08 Undergraduate Research in the University of Arizona Astronomy Club
Cates, Ian[1]; Towner, Allison P.[1]; Walker-LaFollette, Amanda[1]; Turner, Jake[2]; Hardegree-Ullman, Kevin[3]; Pearson, Kyle[1]
[1.]University of Arizona, Tucson, AZ. [2.]University of Virginia, Charlottesville, VA. [3.]University of Toledo, Toledo, OH.

160.09 Outreach and Astronomy-Education Activities of the University of Arizona Astronomy Club
McGraw, Allison M.[1]; Hardegree-Ullman, Kevin[2]; Walker-LaFollette, Amanda[1]; Towner, Allison P.[1]
[1.]The University of Arizona, Tucson, AZ. [2.]The University of Toledo, Toledo, OH.

160.10 Mizzou Student Astronomical Society – benefiting everyone
Briggs, Jason[1]; Speck, Angela[1]; Ruzhitskaya, Lanika[1]
[1.]University of Missouri, Columbia, MO.

160.11 Revealing the Universe to Our Community: NMSU's Society of Astronomy Students' Dedication to Public Outreach
Maldonado, Mercedes[1]; Rees, Shannon[1]; Medina, Amber[1]; Beasley, Dana[1]; Campos, Angelica[1]; Chanover, Nancy J.[1]; Uckert, Kyle[1]; McKeever, Jean[1]
[1.]New Mexico State University, Las Cruces, NM.

160.12 Reaching Beyond The Stars
Baker, Mariah[1]; Rosenthal, Lee[1]; Gaughan, Andrea[1]; Hopkins, Erica[1]
[1.]Haverford College, Haverford, PA.

160.13 Peer Development of Undergraduate Astronomers and Physicists at the University of Wisconsin - Madison
Abler, Melissa[1]
[1.]Univ of Wisconsin, Madison, Madison, WI.
Contributing teams: Physics Club of UW-Madison

TUESDAY, 7 JANUARY 2014

200 The Thick and Thin Disks in Spiral Galaxies

Tuesday, 8:30 AM - 9:20 AM; Potomac Ballroom A

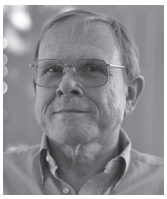
Chair(s):
Edward Churchwell, *Univ. of Wisconsin*

200.01 The Thick and Thin Disks in Spiral Galaxies
Wyse, Rosemary F.[1]
[1]*Johns Hopkins Univ., Baltimore, MD.*

201 AAS Prize Presentations: Education Prize, Joseph Weber Award presented by AAS President David Helfand

Tuesday, 9:20 AM - 9:40 AM; Potomac Ballroom A

John R. Percy - AAS Education Prize
For 40+ years of tireless advocacy for K-12 astronomy education in Canada and around the world, during which he has trained and mentored many people who themselves have made major contributions to astronomy, astronomy education, and amateur astronomy, For leading and promoting effective partnerships with amateur astronomers and informal educators, For his public outreach efforts and leadership through the IAU, the AAS, the ASP and the AAVSO, For his role in programs that use astronomy to inspire youth all around Canada and in underserved communities throughout the world, and For inspiring the international Galileo Project combining Astronomy, Music and visual Arts.



Keith Matthews - Joseph Weber Award for Astronomical Instrumentation
Keith Matthews has been selected for the 2013 Weber Prize in recognition of his many contributions to infrared astronomical instrumentation at the Palomar and Keck Observatories. The reliability, sensitivity and innovative qualities of his instruments have enabled ground breaking scientific discoveries for decades. For example, his NIRC2 camera behind the Adaptive Optics bench at Keck 2 was responsible for the characterization of the supermassive black hole at the center of our galaxy.

Amateur Talk: Observing Asteroids for Fun and (Astronomical) Profit

Tuesday, 9:30 AM - 10:00 AM; Maryland Ballroom A

Making observations of asteroids is within the capability of many amateur and small campus observatories. Observations from "backyard astronomers" have led to the identification of the YORP (Yarkovsky-O'Keefe-Radzievskii-Paddack) effect, the discovery of many binary asteroids, and the inversion of lightcurves to determine asteroid shapes and pole directions. Such observations are ideal for students, as an individual can determine the rotation properties of an object in a short period of time while contributing to a larger ongoing research project. Resources for getting started in asteroid research will be presented.

Chair(s):
Linda French, *Illinois Wesleyan Univ.*

202 Instrumentation III: Ground or Airborne Missions

Tuesday, 10:00 AM - 11:30 AM; Maryland 2

Chair(s):
Daniel Harbeck, *WIYN Observatory*

202.01D Imaging and Modeling Nearby Stellar Systems through Infrared Interferometers
Che, Xiao[1]; Monnier, John D.[1]; Ten Brummelaar, Theo[2]; Sturmann, Laszlo[2]; Millan-Gabet, Rafael[3]; Baron, Fabien[4]; Kraus, Stefan[5]; Zhao, Ming[6]
[1.]University of Michigan, Ann Arbor, MI. [2.]The CHARA Array, Mountain Wilson, CA. [3.]Caltech, Pasadena, CA. [4.]Georgia State University, Atlanta, GA. [5.]University of Exeter, Exeter, United Kingdom. [6.]Penn State University, University Park, PA.
Contributing teams: CHARA

202.02 Progress in the expansion of the Navy Precision Optical Interferometer
Armstrong, J. T.[1]; Restaino, Sergio R.[1]; Clark, James. H.[1]; Schmitt, Henrique R.[1]; Baines, Ellyn K.[1]; Hutter, Donald J.[2]; Benson, James A.[2]; Zavala, Robert T.[2]; Shankland, Paul D.[2]; van Belle, Gerard[3]; Jorgensen, Anders M.[4]
[1.]NRL, Washington, DC. [2.]USNO, Flagstaff, AZ. [3.]Lowell Observatory, Flagstaff, AZ. [4.]New Mexico Tech, Socorro, NM.

202.03 Improving the Visibility Amplitude Calibration of the NPOI with Photometric Information
Schmitt, Henrique R.[1]; Mozurkewich, David[2]; Armstrong, J. T.[1]; Benson, James A.[3]; Jorgensen, Anders M.[4]; Baines, Ellyn K.[1]
[1.]Naval Research Laboratory, Washington, DC. [2.]Seabrook Engineering, Seabrook, MD. [3.]US Naval Observatory, Flagstaff, AZ. [4.]New Mexico Tech, Socoroo, NM.

202.04D Development and Commissioning of the Integral Field Spectrograph for the Gemini Planet Imager
Chilcote, Jeffrey K.[1]; Larkin, James E.[1]
[1.]UC Los Angeles, Los Angeles, CA.
Contributing teams: Gemini Planet Imager instrument and science teams

202.05 Simulation and Laboratory results of the Hard X-ray Polarimeter: X-Calibur
Guo, Qingzhen[1]; Beilicke, Matthias[1]; Kislat, Fabian[1]; Krawczynski, Henric[1]
[1.]Washington University in Saint Louis, Saint Louis, MO.

202.06 Low-Cost InGaAs Detectors for Near-Infrared Imaging and Photometry
Sullivan, Peter[1]; Croll, Bryce[1]; Simcoe, Robert A.[1]
[1.]Massachusetts Institute of Technology, Cambridge, MA.

203 Building the Astronomical Information Sciences: From NASA's AISR Program to the New AAS Working Group on Astroinformatics and Astrostatistics

Tuesday, 10:00 AM - 11:30 AM; National Harbor 4

Do you rely on the ADS database for literature research and citation management? Do you use SAOImage DS9 to visualize astronomical images and other data? Do you access data using Virtual Observatory (VO) tools and protocols? Does your research rely on new statistical, machine learning, or data mining methods? If you answered "yes" to any of these questions, then you are benefiting from research in the astronomical information sciences. This session will begin with a retrospective look at projects funded by NASA's Applied Information Systems Research (AISR) Program that laid groundwork for this emerging area of interdisciplinary research; it will culminate with an introduction to the new AAS Working Group on Astroinformatics and Astrostatistics (AIAS), including overviews of current research in AIAS. The AISR program, led by NASA Senior Science Program Executive Joseph Bredekamp, operated from 1991 to 2012. It supported research tying together new developments in information sciences (high-performance computing, statistics, machine learning, data mining, etc.) and scientific concerns across all of NASA's science divisions: Astrophysics, Planetary Science, Heliophysics, and Earth Science. Presentations in this session will cover the history, status, and future of AISR-funded research on tools and methods for accessing, visualizing, and analyzing astronomy data across diverse applications and dataset scales. Topics to be covered include: ADS, SAOImage DS9, VAO resources, and various AIAS methods and software. The session will end with an introduction to the activities of the new Working Group on AIAS, charged by the AAS to develop and spread awareness of the applications of advanced information science tools and methods to further the goals of astronomical and astrophysical research. This will include brief overviews of several current AIAS research projects. A companion poster session will provide more detail on current AIAS research.

Chair(s):
Thomas Loredo, *Cornell Univ.*
Organizer(s):
Thomas Loredo, *Cornell Univ.*
Zeljko Ivezic, *Univ. of Washington*

203.01 Conflict and Reconciliation in Software Design
Mandel, Eric[1]
[1.] *Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.*

203.02 From AISR to the Virtual Observatory
Szalay, Alexander S.[1]
[1.] *Johns Hopkins Univ., Baltimore, MD.*

203.03 Astrostatistics in X-ray Astronomy: Systematics and Calibration
Siemiginowska, Aneta[1]
[1.] *Harvard-Smithsonian, CfA, Cambridge, MA.*
Contributing teams: Vinay Kashyap, CHASC

203.04 Hyperspectral Image Analysis in Planetary Science and Astronomy
Merenyi, Erzsebet[1]
[1.] *Rice Univ., Houston, TX.*

203.05 Reflections on the AISR Program
Bredekamp, Joseph[1]
[1.] NASA HQ (Ret.), Washington, DC.

203.06 Introducing the AAS Working Group on Astroinformatics and Astrostatistics
Ivezic, Zeljko[1]
[1.] Univ. of Washington, Seattle, WA.

204 Cosmology & CMB III

Tuesday, 10:00 AM - 11:30 AM; Maryland Ballroom C

Chair(s):
Soma De, *Arizona State University*

204.01D SPTpol: A Cosmic Microwave Background Polarization Experiment on the South Pole Telescope
Henning, Jason[1]
[1.] University of Colorado at Boulder, Boulder, CO.
Contributing teams: SPTpol Collaboration

204.02 Exploring the Epoch of Reionization with the South Pole Telescope
Reichardt, Christian L.[1]
[1.] UC Berkeley, Berkeley, CA.
Contributing teams: SPT collaboration

204.03 Recent Results from the Atacama Cosmology Telescope
Spergel, David N.[1]
[1.] Princeton Univ. Obs., Princeton, NJ.

204.04 The Atacama B-Mode Search
Sievers, Jonathan L.[1]
[1.] University of KwaZulu-Natal, Durban, South Africa.
Contributing teams: ABS Collaboration

204.05 Measuring the Thermal Sunyaev-Zel'dovich Effect Through the Cross Correlation of Planck and WMAP with ROSAT
Battaglia, Nicholas[1]; Hajian, Amir[2]; Spergel, David N.[3]; Bond, John R.[2]; Pfrommer, Christoph[4]; Sievers, Jonathan[5, 3]
[1.] Carnegie Mellon University, Pittsburgh, PA. [2.] CITA, Toronto, ON, Canada. [3.] Princeton, Princeton, NJ. [4.] HITS, Heidelberg, Germany. [5.] UKZN, Durban, South Africa.

204.06 POLARBEAR2: A new multichroic receiver for precision measurements of cosmic microwave background polarization
Barron, Darcy[1]
[1.] UC San Diego, La Jolla, CA.
Contributing teams: POLARBEAR Collaboration

205 Evolution of Galaxy Structure

Tuesday, 10:00 AM - 11:30 AM; Potomac Ballroom A

Chair(s):
John Moustakas, *Siena College*

205.01D Galaxy Zoo: Observing Secular Evolution Through Bars
Cheung, Edmond[1]; Athanassoula, Lia [2]; Masters, Karen[3]; Faber, Sandra M.[1]; Koo, David C.[1]
[1.]University of California Santa Cruz, Santa Cruz, CA. 2.Aix-Marseille Universite, Marseille, France. 3.University of Portsmouth, Portsmouth, United Kingdom.
Contributing teams: Galaxy Zoo

205.02 Using Bars in S4G and COSMOS to Identify the Fastest Evolving Galaxy Disks at All Epochs
Sheth, Kartik[1]
[1.]NRAO, Charlottesville, VA.
Contributing teams: S4G team

205.03D Structural Properties of Barred Galaxies
Kim, Taehyun[1, 2]; Gadotti, Dimitri A.[3]; Sheth, Kartik[4]; Lee, Myung Gyoon[1]
[1.]Seoul National University, Seoul, Korea, Republic of. [2.]Carnegie Observatories, Pasadena, CA. [3.]ESO, Santiago, Chile. [4.]NRAO, Charlottesville, VA.
Contributing teams: S4G Team

205.04 A Characteristic Mass in the Low Redshift Tully Fisher Relation
Simons, Raymond[1]; Kassin, Susan A.[2]; Weiner, Benjamin J.[3]; Lee, Janice C.[2, 4]
[1.]Johns Hopkins University, Baltimore, MD. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]Steward Observatory, University of Arizona, Tucson, AZ. [4.]Spitzer Science Center, Caltech, Pasadena, CA.

205.05 The Wavelength Dependence of High-Redshift Galaxy Structure in the Rest-Frame Ultraviolet
Bond, Nicholas A.[1]; Gardner, Jonathan P.[1]; De Mello, Duilia F.[2]; Teplitz, Harry I.[3]; Rafelski, Marc[3]; Koekemoer, Anton M.[4]; Coe, Dan A.[4]
[1.]Goddard Space Flight Center, Greenbelt, MD. [2.]The Catholic University of America, Washington, DC. [3.]IPAC, California Institute of Technology, Pasadena, CA. [4.]Space Telescope Science Institute, Baltimore, MD.

205.06 On the Reliability of Structural Parameters for Compact, High-redshift Galaxies
Davari, Roozbeh[1, 3]; Ho, Luis C.[2, 3]; Peng, Chien Y.[4]; Huang, Song[5]
[1.]University of California, Riverside , Riverside, CA. [2.]Kavli Institute for Astronomy and Astrophysics, Peking University, Beijing, China. [3.]The Carnegie Observatories, Pasadena, CA. [4.]Giant Magellan Telescope Organization, Pasadena, CA. [5.]School of Space Science and Astronomy, Nanjing University , Nanjing, China.

205.07 The SAMI Galaxy Survey: One Year, 50000 Spectra
Konstantopoulos, Iraklis[1]; Croom, Scott[2]
[1.]Australian Astronomical Observatory, North Ryde, NSW, Australia. [2.]University of Sydney, Sydney, NSW, Australia.
Contributing teams: The SAMI Galaxy Survey team

206 Extrasolar Planet Detection - Identification, Classification, and Validation of Kepler Candidates

Tuesday, 10:00 AM - 11:30 AM; Maryland Ballroom A

Chair(s):
John Armstrong, *Weber State Univ.*

206.01 The Applicability of Emerging Quantum Computing Capabilities to Exo-Planet Research
Correll, Randall[2, 1]; Worden, Simon[1]
[1.]NASA Ames Research Center, Mountain View, CA. [2.]RRC Research, Arlington, VA.

206.02 Likely Planet Candidates Identified by Machine Learning Applied to Four Years of Kepler Data
Jenkins, Jon M.1; McCauliff, Sean D.[2]; Catanzarite, Joseph[1]; Twicken, Joseph D.[1]; Burke, Christopher J.[1]; Campbell, Jennifer[2]; Seader, Shawn[1]
[1.]SETI Institute, Moffett Field, CA. [2.]Orbital Sciences Corporation, Moffett Field, CA.

206.03 Increasing the sensitivity of the Kepler legacy archive to transiting planets
Still, Martin D.[1]
[1.]NASA Ames Research Center, Moffett Field, CA.

206.04 Updating the M Dwarf Planet Occurrence Rate by Injecting and Detecting Transits in Kepler Light Curves
Dressing, Courtney D.[1]; Charbonneau, David[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

206.05 Probabilistic Model-Based Analysis of Kepler Transit Signal Locations
Bryson, Steve[1]; Morton, Tim[2]
[1.]NASA Ames Research Center, Moffett Field, CA. [2.]Princeton University, Princeton, NJ.
Contributing teams: The Kepler Team

206.06 VALFAST: Secure Probabilistic Validation of Hundreds of Kepler Planet Candidates
Morton, Tim[1]; Petigura, Erik[2]; Johnson, John A.[3]; Howard, Andrew[4]; Marcy, Geoffrey W.[2]; Baranec, Christoph[4]; Law, Nicholas M.[5]; Riddle, Reed L.[6]; Ciardi, David R.[7]
[1.]Princeton, Princeton, NJ. [2.]UC Berkeley, Berkeley, CA. [3.]Harvard, Cambridge, MA. [4.]University of Hawaii, Honolulu, HI. [5.]University of North Carolina, Chapel Hill, NC. [6.]Caltech, Pasadena, CA. [7.]NASA Exoplanet Science Institute, Pasadena, CA.
Contributing teams: Robo-AO Team

207 Extrasolar Planet: Atmospheres

Tuesday, 10:00 AM - 11:30 AM; Maryland Ballroom B

Chair(s):
David Latham, *Harvard-Smithsonian, CfA*

207.01D Diamonds in the Rough: A Cautionary Tale of C/O Ratios in Exoplanet Host Stars
Teske, Johanna K.[1]; Cunha, Katia M.[2, 1]; Schuler, Simon C.[3]; Griffith, Caitlin A.[4]; Smith, Verne V.[5]
[1.]Steward Observatory, University of Arizona, Tucson, AZ. [2.]Observatorio Nacional, Rio de Janeiro, RJ, Brazil. [3.]University of Tampa, Tampa, FL. [4.]Lunar and Planetary Lab, University of Arizona, Tucson, AZ. [5.]NOAO, Tucson, AZ.

207.02 Constraints on Elemental Abundance Ratios in Hot Jupiter Atmospheres and Implications for Their Formation Conditions
Madhusudhan, Nikku[1]
[1.] Yale University, New Haven, CT.

207.03 Characterizing the Atmospheres of Super-Earths and Hot-Jupiters with Narrow-Band Photometry
Colon, Knicole D.[1]; Gaidos, Eric[2]; Wilson, Paul A.[3]; Ford, Eric B.[4]; Sing, David K.[3]; Ballester, Gilda E.[5]; Desert, Jean-Michel[6]; Ehrenreich, David[7]; Fortney, Jonathan J.[8]; Lecavelier des Etangs, Alain[7]; Lopez-Morales, Mercedes[9]; Morley, Caroline[8]; Pettitt, Alex[3]; Pont, Frederic[3]; Vidal-Madjar, Alfred[10]
[1.] Lehigh University, Bethlehem, PA. [2.] University of Hawaii, Honolulu, HI. [3.] University of Exeter, Exeter, United Kingdom. [4.] Pennsylvania State University, University Park, PA. [5.] University of Arizona, Tucson, AZ. [6.] California Institute of Technology, Pasadena, CA. [7.] Observatoire astronomique de l'Universite de Geneve, Sauverny, Switzerland. [8.] University of California, Santa Cruz, Santa Cruz, CA. [9.] Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [10.] Institut d'astrophysique de Paris, CNRS; Universite Pierre et Marie Curie, Paris, France.

207.04 Significance of Trends in Exoplanetary Atmospheres
Harrington, Joseph[1]; Bowman, M. Oliver[1]; Blumenthal, Sarah D.[1]; Loredo, Thomas J.[2]
[1.] University of Central Florida, Orlando, FL. [2.] Cornell University, Ithaca, NY.
Contributing teams: the UCF Exoplanets Group

207.05 Exoplanet transits in X-rays: a new observational window to the exoplanetary atmosphere
Poppenhaeger, Katja[1]; Wolk, Scott J.[1]; Schmitt, Juergen[2]
[1.] Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.] Hamburg Observatory, Hamburg, Germany.

207.06 A Survey of the Hottest Jupiter Atmospheres via Secondary Eclipses
Zhao, Ming[1, 3]; O'Rourke, Joseph[2]; Knutson, Heather[2]; Wright, Jason[1, 3]
[1.] Penn State University, University Park, PA. [2.] California Institute of Technology, Pasadena, CA. [3.] Center for Exoplanets and Habitable Worlds, University Park, PA.

207.07 New Frontiers for Comparative Exoplanetology
Desert, Jean-Michel[1]
[1.] University of Colorado, Boulder, CO.

208 Galaxy Clusters: Cosmology and Evolution

Tuesday, 10:00 AM - 11:30 AM; National Harbor 10

Chair(s):
Michael West

208.01 Galaxy clusters in DES
Soares-Santos, Marcelle[1]
[1.] Fermi National Accelerator Laboratory, Batavia, IL.
Contributing teams: DES Collaboration

208.02D MUSTANG and MUSTANG 1.5: High-Resolution Measurements of the Sunyaev-Zel'dovich Effect in Galaxy Clusters.
Young, Alexander[1]; Romero, Charles[2]; Dicker, Simon[1]; Mason, Brian S.[2]; Mroczkowski, Tony[5]; Reese, Erik D.[6]; Sarazin, Craig L.[2]; Sayers, Jack[3]; Czakon, Niclole G.[3]; Devlin, Mark J.[1]; Korngut, Phillip[3]; Sievers, Jonathan[4]
[1.]University of Pennsylvania, Philadelphia, PA. [2.]University of Virginia, Charlottesville, VA. [3.]Caltech, Pasadena, CA. [4.]University of Kwazulu-Natal, Durban, South Africa. [5.]Naval Research Lab, Washington, DC. [6.]Moorpark College, Moorpark, CA.

208.03D Investigations of Galaxy Clusters Using Gravitational Lensing
Wiesner, Matthew P.[1]; Lin, Huan[2]; Soares-Santos, Marcelle[2]
[1.]Northern Illinois University, Dekalb, IL. [2.]Fermi National Accelerator Laboratory, Batavia, IL.

208.04 A view of massive compact galaxies in nearby galaxy clusters with GeMS/GSAOI
Carrasco Damele, Eleazar R.[1]; Trujillo, Ignacio[2]
[1.]Gemini Observatory, La Serena, Chile. [2.]Instituto de Astrofisica de Canarias, Tenerife, Spain.

208.05 Determining the Halo Mass Scale Where Gas Accretion onto Galaxies Stops
Rudnick, Gregory[1, 2]
[1.]University of Kansas, Lawrence, KS. [2.]Max-Planck-Institute for Astronomy, Heidelerbg, Germany.
Contributing teams: ESO Distant Cluster Survey (EDisCS)

208.06 Improved LRG Selection Algorithms combining Optical And WISE (Infrared) Photometry
Prakash, Abhishek[1]; Newman, Jeffrey[1]
[1.]University of Pittsburgh, Pittsburgh, PA.
Contributing teams: eBOSS collaboration

209 HAD VI: History of Astronomy

Tuesday, 10:00 AM - 11:30 AM; National Harbor 3

Chair(s):
Jay Pasachoff, *Williams College*

209.01 The Recurrent Nova T CrB; Two Discoveries from the 102,000 Magnitude Light Curves from 1855 to 2013 in Johnson B & V
Schaefer, Bradley E.[1]
[1.]Louisiana State Univ., Baton Rouge, LA.

209.02 Barnard's Star: Planets or Pretense
Bartlett, Jennifer L.[1]; Ianna, Philip A.[2]
[1.]US Naval Observatory, Washington, DC. [2.]University of Virginia, Charlottesville, VA.

209.03 The Instability of Astrophysics Witnessed in the Twentieth Century
Harwit, Martin[1]
[1.]Cornell University, Ithaca, NY.

209.04 The Largest Feasible Steerable Telescope
Kellermann, Kenneth I.[1]; Bouton, Ellen N.[1]
[1.]NRAO, Charlottesville, VA.

209.05 Radio Frequency Interference and the National Radio Astronomy Observatory
Smith, Sierra[1]
[1.]National Radio Astronomy Observatory, Charlottesville, VA.

209.06 Hubble Space Telescope: The Real 'First Light' Observation
Benedict, G. F.[1]; McArthur, Barbara[1]
[1.]University of Texas, Austin, TX.

209.07 The National Science Foundation and the History of Science
Rothenberg, Marc[1]
[1.]National Science Foundation, Arlington, VA.

210 Jets and Outflows from AGN

Tuesday, 10:00 AM - 11:30 AM; National Harbor 11

Chair(s):
Jonathan McDowell, *Harvard-Smithsonian CfA*

210.01 On the relationship between jet and broad emission lines variability in Flat Spectrum Radio Quasars
Fossati, Giovanni[1]
[1.]Rice Univ., Houston, TX.

210.02 A Fast Moving Polarization Event in the Jet of BL Lacertae
Homan, Daniel C.[1]; Cohen, Marshall H.[2]; Kovalev, Yuri Y.[3, 4]; Lister, Matthew L.[5]; Meier, David L.[6]; Pushkarev, Alexander B.[7, 8]
[1.]Denison Univ., Granville, OH. [2.]California Institute of Technology, Pasadena, CA. [3.]Astro Space Center of Lebedev Physical Institute, Moscow, Russian Federation. [4.]Max-Planck-Institut für Radioastronomie, Bonn, Germany. [5.]Purdue University, West Lafayette, IN. [6.]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA. [7.]Pulkovo Observatory, St. Petersburg, Russian Federation. [8.]Crimean Astrophysical Observatory, Crimea, Ukraine.

210.03D Probing the Disk-Jet Connection in Fermi Gamma-Ray Bright Blazars
Isler, Jedidah[1]; Urry, C. M.[1]; Coppi, Paolo S.[1]; Bailyn, Charles D.[1]; Chatterjee, Rita-ban[2]; Fossati, Giovanni[3]; Bonning, Erin W.[4]; Maraschi, Laura[5]; Buxton, Michelle[1]
[1.]Yale University, New Haven, CT. [2.]Presidency University, Kolkata, WB, India. [3.]Rice University, Houston, TX. [4.]Quest University, Squamish, BC, Canada. [5.]INAF - Osservatorio Astronomica di Brera, Brera, Milano, Italy.
Contributing teams: SMARTS

210.04D Interaction of Relativistic Jets with Their Environments
Kohler, Susanna[1]; Begelman, Mitchell C.[1]
[1.]JILA, University of Colorado and NIST, Boulder, CO.

210.05 'New Proper Motion Measurements of the Superluminal Velocities in the M87 Optical Jet with HST'
Meyer, Eileen T.[1]; Sparks, William B.[1]; Biretta, John A.[1]; Sohn, S. Tony[1]; Anderson, Jay[1]; Van Der Marel, Roeland P.[1]; Norman, Colin A.[2, 1]; Nakamura, Masanori[3]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Johns Hopkins University, Baltimore, MD. [3.]Academia Sinica Institute of Astronomy & Astrophysics, Taipei, Taiwan.

210.06D Observation of Radio-Jet Driven Feedback
Shih, Hsin-Yi[1]; Stockton, Alan N.[1]
[1.]University of Hawaii, Honolulu, HI.

211 Lenses & Waves I

Tuesday, 10:00 AM - 11:30 AM; Maryland 1

Chair(s):
Jonah Kanner, *NASA Goddard*

211.01 Concept and Analysis of a Satellite for Space-Based Radio Detection of Ultra-High Energy Cosmic Rays
Romero-Wolf, Andrew[1]; Gorham, Peter[2]; Booth, Jeff[1]; Chen, Pisin[4]; Duren, Riley M.[1]; Liewer, Kurt[1]; Nam, Jiwoo[4]; Saltzberg, David[3]; Schoorlemmer, Harm[2]; Wissel, Stephanie[3]; Zairfian, Pezhman[1]
[1.]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA. [2.]University of Hawaii at Manoa, Honolulu, HI. [3.]University of California, Los Angeles, Los Angeles, CA. [4.]National Taiwan University, Taipei City, Taiwan.

211.02 Coincidently Searching for Gravitational Waves and Low Frequency Radio Transients
Kavic, Michael[1]; Yancey, Cregg[2]; Shawhan, Peter S.[2]; Cutchin, Sean[3, 4]; Simonetti, John H.[5]; Bear, Brandon[5]; Tsai, Jr-Wei[5]
[1.]Long Island University, Brooklyn, NY. [2.]University of Maryland, College Park, MD. [3.]National Research Council, Washington, DC. [4.]Naval Research Laboratory, Washington, DC. [5.]Virginia Tech, Blacksburg, VA.

211.03 Ultra-relativistic X-ray counterparts of Compact Object Mergers.
Nissanke, Samaya[1, 2]; Hirata, Chris[2, 1]
[1.]Caltech, Pasadena, CA. [2.]Ohio State University, Columbus, OH.

211.04 The first two years of gravitational-wave astronomy with Advanced LIGO and Virgo
Singer, Leo[1]; Price, Larry[1]; Urban, Alex[2]; Pankow, Chris[2]
[1.]LIGO Laboratory, California Institute of Technology, Pasadena, CA. [2.]Leonard E. Parker Center for Gravitation, Cosmology, and Astrophysics, University of Wisconsin-Milwaukee, Milwaukee, WI.

211.05 Astronomical guidance for directed searches for continuous gravitational waves
Owen, Benjamin[1]
[1.]Penn State, University Park, PA.

211.06 Detecting Compact Objects with Microlensing
Schnittman, Jeremy[1, 2]; Littenberg, Tyson[3]; Sahu, Kailash C.[4]; Thieme, Nicholas[5]
[1.]NASA/GSFC, Greenbelt, MD. [2.]Joint Space Science Institute, College Park, MD. [3.]Northwestern University, Evanston, IL. [4.]STScI, Baltimore, MD. [5.]Rensselaer Polytechnic Institute, Troy, NY.

211.07 Detection and measurement of heavy black holes
Graff, Philip[1]; Buonanno, Alessandra[2]; Sathyaprakash, Bangalore S.[3]
[1.]NASA/GSFC, Greenbelt, MD. [2.]University of Maryland, College Park, MD. [3.]University of Cardiff, Cardiff, United Kingdom.

211.08 Uncovering the population of binary black holes in the local universe with space-based gravitational wave detectors.
Hinojosa, Jesus[1]; Benacquista, Matthew[1]; Mata, Alberto[1]
[1.]Center for Gravitational Wave Astronomy, Brownsville, TX.

212 Pulsars & Neutron Stars III

Tuesday, 10:00 AM - 11:30 AM; National Harbor 13

Chair(s):
Mallory Roberts, *Eureka Scientific*

212.01 Studies of Pulsars Using Space VLBI with RadioAstron
Johnson, Michael[2]; Gwinn, Carl[1]; Popov, Mikhail[3]; Smirnova, Tatyana[4]; Shishov, Vladimir[4]; Anderson, James[5]; Andrianov, Andrei[3]; Bartel, Norbert[6]; Buchner, Sarah[7]; Deller, Adam[8]; Hankey, Warren[9]; Horiuchi, Shinji[10]; Joshi, Bhal Chandra[11]; Kardashev, Nikolay[3]; Karuppusamy, Ramesh[5]; Kovalev, Yuri Y.[3]; Kramer, Michael[5]; McCallum, Jamie[9]; Phillips, Chris[12]; Quick, Jonathan[7]; Reynolds, John[12]; Rudnitsky, Alexey[3]; Safutdinov, Yegor[3]; Soglasnov, Vladimir[3]; Tzioumis, A.[12]; Zensus, Anton[5]; Zhuravlev, Vladimir[3]
[1.]Univ. California, Santa Barbara, Goleta, CA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]Lebedeev Physical Institute, Moscow, Russian Federation. [4.]Pushchino Radio Astronomy Observatory, Pushchino, Russian Federation. [5.]Max-Planck-Institut fur Radioastronomie, Bonn, Germany. [6.]York University, Toronto, ON, Canada. [7.]Hartebeesthoek Radio Astronomy Observatory, Krugersdorp, South Africa. [8.]ASTRON, Dwingeloo, Netherlands. [9.]University of Tasmania, Hobart, TAS, Australia. [10.]Canberra Deep Space Communication Complex, NASA, ACT, Australia. [11.]National Centre for Radio Astrophysics, Pune, India. [12.]Australia Telescope National Facility, Epping, NSW, Australia.
Contributing teams: the RadioAstron Pulsar Group

212.02D Investigating astrophysical plasmas using LOFAR observations of pulsars
Sobey, Charlotte[1, 2]
[1.]ASTRON, Dwingeloo, Netherlands. [2.]MPIfR, BONN, Germany.
Contributing teams: LOFAR collaboration

212.03 Radio Pulsars - Intermittent Particle Accelerators
Timokhin, Andrey[1]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD.

212.04 SGR J1745-29: Swift discovery and monitoring of a new SGR near Sgr A*
Kennea, Jamie A.[1]; Burrows, David N.[1]; Kouveliotou, Chryssa[3]; Palmer, David[9]; Gogus, Ersin[5]; Kaneko, Yuki[5]; Evans, Phil[4]; Degenaar, Nathalie[6]; Reynolds, Mark[6]; Miller, Jon M.[6]; Wijnands, Rudy[7]; Mori, Kaya[8]; Gehrels, Neil[2]
[1.]Penn State Univ., State College, PA. [2.]NASA/GSFC, Greenbelt, MD. [3.]NASA/MSFC, Huntsville, AL. [4.]University of Leicester, Leicester, United Kingdom. [5.]Sabanci University, Istanbul, Turkey. [6.]University of Michigan, Ann Arbor, MI. [7.]University of Amsterdam, Amsterdam, Netherlands. [8.]Columbia University, New York, NY. [9.]Los Alamos National Lab, Los Alamos, NM.

212.05D The neutron star radius and the dense-matter equation of state
Guillot, Sebastien[1]; Servillat, Mathieu[2]; Webb, Natalie[3]; Rutledge, Robert E.[1]
[1.]McGill University, Montreal, QC, Canada. [2.]CEA Saclay, Gif-sur-Yvette, France. [3.]IRAP/CNRS, Toulouse, France.

212.06 The Neutron Star Interior Composition Explorer (NICER): Future X-ray Astrophysics from the International Space Station
Arzoumanian, Zaven[1, 2]; Gendreau, Keith[2]
[1.]CRESST/USRA, Greenbelt, MD. [2.]NASA GSFC, Greenbelt, MD.
Contributing teams: NICER team

212.07 A new crystalline phase in magnetar crusts
Mahmoodifar, Simin[1]; Bedaque, Paulo F.[1]; Sen, Srimoyee[1]
[1.]Physics, University of Maryland, College Park, MD.

213 Spitzer Space Telescope: The Next Ten Years

Tuesday, 10:00 AM - 11:30 AM; Potomac Ballroom C

NASA's Spitzer Space Telescope passed its ten-year launch anniversary in 2013 marking a decade of exciting, ground-breaking infrared science programs. The observatory excels at observations aimed at characterizing exoplanets, brown dwarf weather, and studies of the high-redshift universe, and continues to support programs across a wide spectrum of astrophysical disciplines. The science synergy with other NASA missions, in particular the Hubble Space Telescope and the Kepler Observatory, continues to be outstanding. The current engineering assessment shows that Spitzer can continue operations into at least 2017. While it will not be taking observations in ten years, Spitzer observations will have a major impact on future missions and science programs planned in the next decade. Spitzer science programs already play a major role in defining the source lists and science for the James Webb Space Telescope. This special session highlights the current state of the art of Spitzer science programs in the fields of high-redshift galaxies, high-redshift clusters, exoplanets, and stellar variability. The speakers will also look to the future when Spitzer will have ceased to operate but will continue to have a substantial scientific impact.

Chair(s):
Michael Skrutskie, *Univ. Of Virginia*
Organizer(s):
Michael Skrutskie, *Univ. Of Virginia*

213.01 Introduction: Spitzer -- The Next Ten Years
Storrie-Lombardi, Lisa J.[1]
[1.]Caltech, Pasadena, CA.

213.02 Pushing the Frontiers to z>10 with the Spitzer Space Telescope
Capak, Peter L.[1]; Steinhardt, Charles L.[1]; Speagle, Josh S.[2]; Petric, Andreea[1]; Elvis, Martin[2]
[1.]Caltech, Pasadena, CA. [2.]Harvard Smithsonian Center for Astrophysics, Cambridge, MA.
Contributing teams: The Frontiers Fields Team, The SPLASH team, The COSMOS team

213.03 Spitzer and Variable Young Stars: Shining a Spotlight on Circumstellar Disks
Cody, Ann Marie[1]
[1.]Caltech, Pasadena, CA.
Contributing teams: The CSI 2264 Team

213.04 The Spitzer View of Galaxy Clusters in the Distant Universe
Papovich, Casey J.[1]
[1.]Texas A and M University, College Station, TX.

214 Star Formation II

Tuesday, 10:00 AM - 11:30 AM; National Harbor 12

Chair(s):
Xavier Koenig, *NASA Goddard Space Flight Center*

214.01 Do Binary Stars Primarily Originate in Multiple Protostar Systems?
Boss, Alan P.[1]
[1.]Carnegie Inst. of Washington, Washington, DC.

214.02 Inferring the Evolutionary Stages of High-mass Star-forming Regions from Chemistry
Feng, Siyi[1]; Beuther, Henrik[1]; Henning, Thomas[1]; Semenov, Dmitry[1]; Linz, Hendrik[1]
[1.]Max-Planck Institute for Astronomy, Heidelberg, Germany.
Contributing teams: Max-Planck Institute for Astronomy

214.03 Radio Emission from Stars in the Central Young Cluster Orbiting Sgr A*
Yusef-Zadeh, Farhad[1]; Roberts, D. A.[1]; Bushouse, Howard A.[3]; Cotton, William D.[2]; Wardle, M.[4]; Royster, Marc[2]
[1.]Northwestern University, Evanston, IL. [2.]NRAO, Charlottesville, VA. [3.]STScI, Baltimore, MD. [4.]Mcquarie, Sydney, NSW, Australia.

214.04 A Census of Diverse Environments in Infrared Dark Clouds: Where Do Massive Stars Form?
Dirienzo, William J.[1]; Brogan, Crystal L.[2]; Indebetouw, Remy[1, 2]; Chandler, Claire J.[3]; Devine, Kathryn E.[4]
[1.]University of Virginia, Charlottesville, VA. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]National Radio Astronomy Observatory, Socorro, NM. [4.]The College of Idaho, Caldwell, ID.

214.05 Kinematics and Temperature Structures of Filaments in Serpens Main and Serpens South
Lee, Katherine[1]; Mundy, Lee G.[1]; Fernandez Lopez, Manuel[2]; Storm, Shaye[1]; Looney, Leslie[2]; Segura-Cox, Dominique[1]; Teuben, Peter J.[1]; Rosolowsky, Erik[3]; Arce, Hector G.[4]; Shirley, Yancy L.[5]; Plunkett, Adele[4]; Isella, Andrea[6]; Tobin, John J.[7]
[1.]University of Maryland, College Park, MD. [2.]University of Illinois at Urbana-Champaign, Urbana-Champaign, IL. [3.]University of Alberta, Edmonton, AB, Canada. [4.]Yale University , New Haven, CT. [5.]University of Arizona, Tucson, AZ. [6.]Caltech, Pasadena, CA. [7.]NRAO, Charlotteville, VA.

214.06 Dendrogram Analysis of Large-Area CARMA Images in Perseus: the Dense Gas in NGC 1333, Barnard 1, and L1451
Storm, Shaye[1]; Mundy, Lee G.[1]; Teuben, Peter J.[1]; Lee, Katherine[1]; Looney, Leslie[2]; Fernandez Lopez, Manuel[2]; Rosolowsky, Erik[3]; Arce, Hector G.[4]; Shirley, Yancy L.[5]; Segura-Cox, Dominique[2]; Isella, Andrea[6]
[1.]University of Maryland, College Park, MD. [2.]University of Illinois, Urbana-Champaign, IL. [3.]University of Alberta, Edmonton, AB, Canada. [4.]Yale, New Haven, CT. [5.]University of Arizona, Tucson, AZ. [6.]Caltech, Pasadena, CA.
Contributing teams: CLASSy Team

214.07 PROTOBINARY EVOLUTION DRIVEN BY MAGNETIC BRAKING
Zhao, Bo[1]; Li, Zhi-Yun[1]; Kratter, Kaitlin M.[2]
[1.]University of Virginia, Charlottesville, VA. [2.]JILA, University of Colorado, Boulder, CO.

214.08D From clouds to cores to envelopes to disks: a multi-scale view of magnetized star formation
Hull, Charles[1]; Plambeck, Richard L.[1]
[1.]UC Berkeley, Berkeley, CA.
Contributing teams: TADPOL survey team

215 Stars - M & L Dwarfs

Tuesday, 10:00 AM - 11:30 AM; National Harbor 5

Chair(s):
Todd Henry, *RECONS*

215.01 The CASTOFFS Survey: Pursuit of Young M Dwarfs Adrift in the Solar Neighborhood
Schlieder, Joshua E.[1]; Bonnefoy, Mickael[7, 1]; Deacon, Niall[1]; Herbst, Tom[1]; Johnston, Katharine[1]; Lepine, Sebastien[2, 3]; Olofsson, Johan[1]; Rice, Emily L.[4, 3]; Berger, Edo[5]; Skemer, Andrew[6]; Hinz, Philip[6]; Chauvin, Gael[7]; Bergfors, Carolina[8]; Henning, Thomas[1]; Gaidos, Eric[9]
[1.]Max Planck Institute for Astronomy, Heidelberg, Germany. [2.]Georgia State University, Atlanta, GA. [3.]American Museum of Natural History, New York, NY. [4.]College of Staten Island, CUNY, New York, NY. [5.]Harvard University, Cambridge, MA. [6.]University of Arizona, Tucson, AZ. [7.]IPAG/CNRS, Grenoble, France. [8.]University of Cambridge, Cambridge, United Kingdom. [9.]University of Hawaii, Manoa, HI.

215.02 Kepler's Cool Eclipsing Binaries
Swift, Jonathan[1]; Muirhead, Philip S.[2]; Johnson, John A.[3]; Gonzales, Alexandria[4]; Shporer, Avi[1]; Plavchan, Peter[5]; Lockwood, Alex[1]; Morton, Tim[6]
[1.]Caltech, Pasadena, CA. [2.]Boston University, Boston, MA. [3.]Harvard, Cambridge, MA. [4.]Scripps College, Claremont, CA. [5.]IPAC, Pasadena, CA. [6.]Princeton, Princeton, NJ.

215.03 HAZMAT I: The Evolution of Far- and Near-UV Emission from Early M Stars
Shkolnik, Evgenya[1]; Barman, Travis S.[2]; Peacock, Sarah[2]
[1.]Lowell Observatory, Flagstaff, AZ. [2.]University of Arizona, Tucson, AZ.

215.04 Gyrochronology of Low-mass Stars - Age-Rotation-Activity Relations for Young M Dwarfs
Kidder, Benjamin[1]; Shkolnik, Evgenya[2]; Skiff, Brian[2]
[1.]University of Redlands, Redlands, CA. [2.]Lowell Observatory, Flagstaff, AZ.

215.05 The SDSS-III APOGEE Radial Velocity Survey of M Dwarfs
Deshpande, Rohit[1]; Bender, Chad F.[1]; Mahadevan, Suvrath[1]; Blake, C. H.[2]; Terrien, R. C.[1]; Carlberg, Joleen K.[3]; Zasowski, Gail[4]; Crepp, Justin R.[5]
[1.]Pennsylvania State University , University Park , PA. [2.]University of Pennsylvania, Philadelphia, PA. [3.]Department of Terrestrial Magnetism, Washington, D.C., DC. [4.]Johns Hopkins University, Baltimore, MD. [5.]Notre Dame, South Bend, IN.
Contributing teams: APOGEE M dwarfs

215.06 Empirical Estimates of Fundamental Properties for Nearby M Dwarfs Based on Near Infrared Spectra
Newton, Elisabeth R.[1]; Charbonneau, David[1]; Irwin, Jonathan[1]; Berta-Thompson, Zachory K.[2, 1]; Rojas Ayala, Barbara D.[3]; Covey, Kevin[5]; Lloyd, James P.[4]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Massachusetts Institute of Technology, Cambridge, MA. [3.]Universidade do Porto, Porto, Portugal. [4.]Cornell University, Ithaca, NY. [5.]Lowell Observatory, Flagstaff, AZ.

215.07 Discovery of a Benchmark, Extremely-Red, Young L Dwarf
Allers, Katelyn N.[1]; Liu, Michael C.[2]; Kotson, Michael C.[2]; Magnier, Eugene A.[2]; Deacon, Niall[3]; Dupuy, Trent J.[4]; Aller, Kimberly M.[2]
[1.]Bucknell University, Lewisburg, PA. [2.]Institute for Astronomy, University of Hawai'i, Honolulu, HI. [3.]Max Planck Institute for Astronomy, Heidelberg, Germany. [4.]Harvard-Smithsonian Center for Astrophysics, Boston, MA.

216 Supernovae & Nebulae I

Tuesday, 10:00 AM - 11:30 AM; National Harbor 2

Chair(s):
Eric Lentz, *Univ. of Tennessee*

216.01 Type IIP supernova progenitor properties from Pan-STARRS1 light curves
Sanders, Nathan[1]; Soderberg, Alicia M.[1]
[1.]Harvard University, Cambridge, MA.
Contributing teams: Pan-STARRS1 CfA Supernova Group

216.02D The UV Properties of Core Collapse Supernovae
Pritchard, Tyler A.[1]; Roming, Peter[2, 1]
[1.]Pennsylvania State University, University Park, PA. [2.]Southwest Research Institute, San Antonio, TX.

216.03 Core Collapse Supernova Models For Nucleosynthesis
Casanova, Jordi[1]; Frohlich, Carla[1]; Perego, Albino[3]; Hempel, Matthias[2]
[1.]North Carolina State University, Raleigh, NC. [2.]University of Basel, Basel, Switzerland. [3.]Institute of Nuclear Physics, Technische Universitat Darmstadt, Darmstadt, Germany.

216.04 Multidimensional Radiation Hydrodynamic Simulations of Core-Collapse Supernovae
Dolence, Joshua[1]; Burrows, Adam S.[1]; Zhang, Weiqun[2]
[1.]Princeton University, Princeton, NJ. [2.]Lawrence Berkeley National Laboratory, Berkeley, CA.

216.05 Revival of The Stalled Core-Collapse Supernova Shock Triggered by Precollapse Asphericity in the Progenitor Star
Couch, Sean M.[1]; Ott, Christian D.[2]
[1.]University of Chicago, Chicago, IL. [2.]Caltech, Pasadena, CA.

216.06 Core Collapse or Thermonuclear? New Evidence for the Ambiguous Cases of SNe 2005gj and 2012ca
Fox, Ori D.[1]
[1.]UC Berkeley, Berkeley, CA.

216.07 Host Galaxies of High Ejecta-Velocity Core-Collapse Explosions
Kelly, Patrick[1]
[1.]California - Berkeley, University of, Berkeley, CA.

217 Surveys and Large Programs I

Tuesday, 10:00 AM - 11:30 AM; Maryland Ballroom D

Chair(s):
Andrej Prsa, *Villanova University*

217.01 LEGUS: A Legacy ExtraGalactic UV Survey of Nearby Galaxies with HST
Lee, Janice C.[1, 20]; Calzetti, Daniela[2]; Adamo, Angela[3]; Aloisi, Alessandra[1]; Andrews, Jennifer E.[2]; Brown, Thomas M.[1]; Chandar, Rupali[4]; Christian, Carol A.[1]; Cignoni, Michele[5]; Clayton, Geoffrey C.[6]; Da Silva, Robert L.[7]; de Mink, Selma E.[10]; Dobbs, Claire[8]; Elmegreen, Bruce[9]; Elmegreen, Debra M.[11]; Evans, Aaron S.[12]; Fumagalli, Michele[10]; Gallagher, John S.[13]; Gouliermis, Dimitrios[3]; Grebel, Eva[14]; Herrero-Davo`, Artemio[15]; Hilbert, Bryan[1]; Hunter, Deidre A.[16]; Johnson, Kelsey E.[12]; Kennicutt, Robert[17]; Kim, Hwihyun[18]; Krumholz, Mark R.[7]; Lennon, Danny J.[19]; Martin, Christopher D.[20]; Nair, Preethi[1]; Nota, Antonella[22]; Pellerin, Anne[21]; Prieto, Jose[29]; Regan, Michael W.[1]; Sabbi, Elena[22]; Schaerer, Daniel[23]; Schiminovich, David[24]; Smith, Linda J.[22]; Thilker, David A.[25]; Tosi, Monica[26]; Van Dyk, Schuyler D.[20]; Walterbos, Rene A.[27]; Whitmore, Bradley C.[1]; Wofford, Aida[28]
[1.]STScI, Baltimore, MD. [2.]U. Mass, Amherst, Amherst, MA. [3.]MPIA, Heidelberg, Heidelberg, Germany. [4.]U. Toledo, Toledo, OH. [5.]U. Bologna , Bologna , Italy. [6.]Louisiana State, Baton Rouge, LA. [7.]UC Santa Cruz, Santa Cruz, CA. [8.]U Exeter , Exeter , United Kingdom. [9.]IBM, Yorktown Heights, NY. [10.]Carnegie Observatories, Pasadena, CA. [11.]Vassar, Poughkeepsie, NY. [12.]U Virginia, Charlottesville, VA. [13.]U Wisconsin, Madison, Madison, WI. [14.]Heidelberg U., Heidelberg, Germany. [15.]Instituto de Astrofisica de Canarias , La Laguna, Spain. [16.]Lowell Observatory , Flagstaff, AZ. [17.]U. Cambridge , Cambridge , United Kingdom. [18.]Arizona State , Tempe, AZ. [19.]ESA, ESTEC , Noordwijk, Netherlands. [20.]California Institute of Technology , Pasadena, CA. [21.]Mount Allison University , Sackville, NB, Canada. [22.]STScI, ESA, Baltimore, MD. [23.]Observatoire de Geneve, Geneve, Switzerland. [24.]Columbia , NYC, NY. [25.]Johns Hopkins, Baltimore, MD. [26.]INAF, Osservatorio Astronomico di Bologna , Bologna , Italy. [27.]New Mexico State, Las Cruces, NM. [28.]Institut d'Astrophysique de Paris, Paris, France. 29.Princeton, Princeton, NJ.

217.02 Improved spectral energy distribution fitting of galaxies at 1 < z <3.5 in the SFR-M* plane and their morphological properties
Lee, Bomee[1]; Giavalisco, Mauro[1]; Acquaviva, Viviana[2]
[1.]University of Massachusetts at Amherst, Amherst, MA. [2.]CUNY NYC College of Technology, Brooklyn, NY.
Contributing teams: The CANDELS collaboration

217.03 Herschel-CANDELS: The Infrared Luminosity Function and its Evolution
Inami, Hanae[1]; Dickinson, Mark[1]; Elbaz, David[2]; Pforr, Janine[1]; Kartaltepe, Jeyhan S.[1]
[1.]NOAO, Tucson, AZ. [2.]CEA, Saclay, France.
Contributing teams: CANDELS+Herschel Team, The CANDELS collaboration

217.04D The formation of the compact early-type galaxies at high-redshift
Williams, Christina C.[1]; Giavalisco, Mauro[1]
[1.]University of Massachusetts, Amherst, Amherst, MA.
Contributing teams: The CANDELS Collaboration

217.05 Live fast, die small: compact SFGs at z=2-3, the building blocks of the red-sequence
Barro, Guillermo[1]; Faber, Sandra M.[1]; Perez-Gonzalez, Pablo[2]; Pacifici, Camilla[3]; Trump, Jonathan R.[1]; Koo, David C.[1]; Guo, Yicheng[1]
[1.]UCO/Lick, Santa Cruz, CA. [2.]Universidad Complutense de Madrid, Madrid, Madrid, Spain. [3.]Yonsei University, Seoul, Korea, Republic of.
Contributing teams: The CANDELS collaboration

217.06 Are Compton-Thick AGN the Missing Link Between Mergers and Black Hole Growth?
Kocevski, Dale[1]; Nandra, Kirpal[2]; Brightman, Murray[2]
[1.]University of Kentucky, Lexington, KY. [2.]Max-Planck-Institut fur extraterrestrische Physik , Garching, Germany.
Contributing teams: The CANDELS Collaboration

217.07 The Mass Function of the First Galaxies from the CANDELS Survey
Conselice, Christopher[1]; Duncan, Kenneth[1]; Hartley, William[1]; Mortlock, Alice[1]
[1.]Univ. of Nottingham, University Park, England, UK, United Kingdom.
Contributing teams: The CANDELS collaboration

217.08 NEOWISE: A Mid-Infrared Synoptic Survey
Mainzer, Amanda K.[1]; Bauer, James M.[1, 2]; Cutri, Roc M.[2]; Grav, Tommy[3]; Masiero, Joseph R.[1]; Wright, Edward L.[4]; Nugent, Carolyn[1]; Stevenson, Rachel[1]; Fabinsky, Beth[1]
[1.]JPL, Pasadena, CA. [2.]Infrared Processing and Analysis Center, California Institute of Technology, Pasadena, CA. [3.]Planetary Science Institute, Tucson, AZ. [4.]University of California Los Angeles, Los Angeles, CA.

218 The Solar System

Tuesday, 10:00 AM - 11:30 AM; Potomac Ballroom D

Chair(s):
Alex Storrs, *Towson Univ.*

218.01 Saturn's Ring Rain: Water Influx and Ring Lifetime Estimates
Moore, Luke[1]; O'Donoghue, James[2]; Mueller-Wodarg, Ingo[3]; Mendillo, Michael[1]
[1.]Boston University, Boston, MA. [2.]University of Leicester, Leicester, United Kingdom. [3.]Imperial College London, London, United Kingdom.

218.02 New Studies of Jovian Decametric Emission using the Long Wavelength Array Station 1
Clarke, Tracy E.[1]; Skarda, Jinhie[2]; Higgins, Charles[3]; Imai, Kazumasa[4]; Imai, Masafumi[5]; Reyes, Francisco J.[6]
[1.]Naval Research Lab., Washington, DC. [2.]Stanford University, Stanford, CA. [3.]Middle Tennessee State University, Murfreesboro, TN. [4.]Kochi National College of Technology, Kochi City, Kochi Prefecture, Japan. [5.]Kyoto University, Kyoto, Kyoto Prefecture, Japan. [6.]University of Florida, Gainesville, FL.
Contributing teams: Long Wavelength Array

218.03 Fine Structure in Jupiter's Decametric Emission using the Long Wavelength Array Station 1
Higgins, Charles[1]; Clarke, Tracy E.[2]; Skarda, Jinhie[3]; Imai, Kazumasa[4]; Imai, Masafumi[5]; Reyes, Francisco J.[6]
[1.]Middle Tennessee St. Univ., Murfreesboro, TN. [2.]Naval Research Labs, Washington, DC. [3.]Stanford University, Stanford, CA. [4.]Kochi National College of Technology, Kochi, Japan. [5.]Kyoto University, Kyoto, Japan. [6.]University of Florida, Gainesville, FL.

218.04 Trojan Asteroid Lightcurves from the Palomar Transient Factory Survey
Waszczak, Adam[1]; Ofek, Eran[2]
[1.]California Institute of Technology, Pasadena, CA. [2.]Weizmann Institute of Science, Rehovot, Israel.
Contributing teams: PTF Team

218.05D A dynamical model for the impact rate and angular distribution of long period comets
Feng, Fabo[1]; Bailer-Jones, Coryn[1]
[1.]MPIA, Heidelberg, Germany.

218.06 The Characteristics and Evolution of the Dust Coma of Comet C/2012 S1 (ISON)
Li, Jian-Yang[1]; Kelley, Michael S.[2]; Knight, Matthew M.[3, 4]; Farnham, Tony[2]; Weaver, Harold A.[4]; A'Hearn, Michael F.[2]; Mutchler, Maximilian J.[5]; Kolokolova, Ludmilla[2]; Lamy, Philippe L.[6]; Toth, Imre[7]; Xia, Karen[8]
[1.]Planetary Science Institute, Tucson, AZ. [2.]Department of Astronomy, University of Maryland College Park, College Park, MD. [3.]Lowell Observatory, Flagstaff, AZ. [4.]Johns Hopkins University, Applied Physics Laboratory, Laurel, MD. [5.]Space Telescope Science Institute, Baltimore, MD. [6.]Laboratoire d'Astrophysique de Marseille, Marseille, France. [7.]Konkoly Observatory, Research Center for Astronomy and Earth Sciences, Hungarian Academy of Science, Budapest, Hungary. [8.]Thomas Jefferson High School for Science and Technology, Alexandria, VA.

218.07 Linear Polarization Measurements of Comet Lovejoy from STEREO and SOHO, and their Application to Comet ISON
Thompson, William T.[1]; Battams, Karl[2]
[1.]Adnet Systems, Inc., Lanham, MD. [2.]Naval Research Laboratory, Washington, DC.

218.08 Modeling Results for Optically Thick Deep Impact Spectra
Gersch, Alan[1]; A'Hearn, Michael F.[1]; Feaga, Lori M.[1]
[1.]Univ. of Maryland, College Park, MD.

Education and Public Outreach, Student Welcome: Dr. John Grunsfeld, NASA

Tuesday, 11:30 AM - 12:00 PM; Maryland Ballroom C

219 Cannon Award: Giant Planets in Dusty Disks

Tuesday, 11:40 AM - 12:30 PM; Potomac Ballroom A

Chair(s):
David Helfand, *Quest University Canada*

Sarah Dodson-Robinson - Annie Jump Cannon Award
The 2013 Annie Jump Cannon Award is given to Sarah Dodson-Robinson for her outstanding contributions to the study of the formation of planetary systems. Especially notable is how her insights into giant planet formation in our own Solar System and in exoplanetary systems arise from broadly combining theoretical modeling with stellar and disk observations. She formed new models meshing disk structure, dynamics and chemistry and connected the metal and molecular content of disks with their mode of planet formation. She showed that both core-accretion and gravitational instability may operate in different regions around stars of different masses to form giant planets. She highlighted the importance of snow lines of different ice compositions for observers to measure.

219.01 Giant Planets in Dusty Disks
Dodson-Robinson, Sarah E.[1, 2]; Brugamyer, Erik[1]; Teiser, Jens[3]
[1.] University of Texas at Austin, Austin, TX. [2.] University of Delaware, Newark, DE. [3.] University of Duisburg-Essen, Duisburg & Essen, Ruhr, Germany.

Education and Public Outreach, Student Hands On Science

Tuesday, 12:00 PM - 2:00 PM; Exhibit Hall ABC

Proposing for NRAO Instruments

Tuesday, 12:30 PM - 3:30 PM; Potomac 1

This splinter, hosted by the National Radio Astronomy Observatory, is aimed at those who are interested in proposing observations with NRAO instruments (ALMA, GBT, VLA, VLBA), especially new users. After an introduction about facility capabilities and the proposing process, we will have an hands-on session to work on proposals using your own laptop, during which NRAO staff experts will be available to assist and answer questions. We encourage participants to register ahead of time in the NRAO User Database at http://my.nrao.edu. Refreshments will be provided.

Organizer(s):
Gustaaf Van Moorsel, *NRAO*

Career Hour 3: Network Yourself to a Great Career

Tuesday, 12:30 PM - 1:30 PM; National Harbor 2

It's elementary—networking is an absolute necessity in any career, and especially in science and engineering, and math. In fact, networking is not only critical to advancing your own career, but also to advancing scholarship itself. But what exactly is "networking"? It's more than just saying hello at a conference! Learn how to appropriately promote yourself and build a network. Discover how to "work a room", start conversations with people you have never met before, and obtain information that can set you on a path to career victory. The importance of and use of social networks will be emphasized. Audience: students, postdocs, early- and mid-career professionals Facilitator: Alaina G. Levine, President, Quantum Success Solutions Alaina G. Levine is a science careers consultant, science writer, and professional speaker and comedian. Her new book on networking strategies for scientists and engineers will be published by Wiley in 2014.

Chair(s):
Alaina Levine, *Quantum Success Solutions*
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

220 CSWA Demographics Survey 2013

Tuesday, 12:45 PM - 1:45 PM; National Harbor 12

The AAS Committee on the Status of Women in Astronomy (CSWA) has been conducting demographics surveys of major astronomy departments and divisions since 1992 to track the representation of women across the field. In 2013 we updated the survey for the first time in 10 years. This town hall will present the results of the demographics survey and invite discussion about the implications for policy in our field.

Chair(s):
A. Meredith Hughes, *UC Berkeley*

221 NASA Town Hall

Tuesday, 12:45 PM - 1:45 PM; Potomac Ballroom A

Senior representatives from NASA's Science Mission Directorate and Astrophysics Division will discuss NASA's science program and outlook. Topics will include the status of the research program, highlights of operating missions, NASA's response to the Astro2010 decadal survey, progress of missions in development, and anticipated opportunities for both non-flight basic research awards (grants) and flight mission investigations.

Chair(s):
Paul Hertz, *NASA Headquarters*
Organizer(s):
Linda Sparke, *NASA Headquarters*

222 Thirty Meter Telescope (TMT) Town Hall

Tuesday, 12:45 PM - 1:45 PM; Potomac Ballroom C

The TMT design has been under development since 2003 and is now technically mature. With the completion of the Design Development Phase in March 2009, the project entered the Preconstruction Phase, and is ready to enter the Construction Phase at the Mauna Kea site in April 2014. In this town hall, the latest status of the TMT project will be presented. As well, TMT is continuing a new era in planning to develop a public-private partnership in TMT, with opportunities for all members (individuals and institutions) of the US astronomy community to become engaged and involved in TMT through a potential-partnership planning exercise with the NSF. Opportunities for the community include continued development of the TMT science case, the organization of the national and international scientific programs, planning for the first-light and next-generation instrumentation programs, planning for observatory operations, data access and archiving, and long-term international development of the Mauna Kea site. In summary, TMT is a telescope with a 30-meter, filled aperture primary mirror composed of 492 x 1.46-meter segments. Instruments and an adaptive optics (AO) system will be housed on two large, stable Nasmyth platforms. TMT will have a broad suite of capabilities ranging from wide-field, multi-object, seeing-based spectrometers to instruments that operation at the diffraction limit of the telescope behind a high-performance AO system. The TMT project is an international partnership involving Canada, the USA, Japan, China, and India. It represents a unique combination of technical, industrial, and scientific collaboration that benefits all partners. Sited near existing, complementary facilities on Mauna Kea in Hawaii, TMT will unite the Pacific Rim astronomical community about its vantage point, and will exclusively provide extremely-large telescope (ELT) access to the northern sky.

Chair(s):
Michael Bolte*, Univ. Of California, Santa Cruz*
Organizer(s):
Michael Bolte*, Univ. Of California, Santa Cruz*

Engaging Scientists in NASA Astrophysics E/PO

Tuesday, 1:00 PM - 2:00 PM; National Harbor 4

This workshop will provide an opportunity for scientists and the NASA Astrophysics education and public outreach (E/PO) community to connect directly with each other, explore how to make NASA E/PO resources and activities more accessible to scientists, and assist scientists in making their E/PO efforts more effective. The NASA Science Mission Directorate (SMD) Astrophysics E/PO portfolio includes a large number of resources and opportunities that have proven to be helpful for scientists and educators. Making these readily available to the scientific community is a priority and a challenge we are trying to address. In this special session, we will highlight specific opportunities for scientists to work with NASA E/PO teams. E/PO teams from several NASA Astrophysics programs will be on hand for one-on-one conversations with astronomers and astronomy educators. They will learn about the variety of field-tested educational resources and products with time for hands-on exploration. As part of the interaction, we will seek input on specific ways to collaborate in E/PO, taking into account the individual scientist's interests and time availability.

Organizer(s):
Bonnie Meinke, STScI

Amateur Talk: Hunting the Oldest Stars in the Neighborhood

Tuesday, 1:30 PM - 2:00 PM; Maryland Ballroom A

The ultra-faint dwarf galaxies are Milky Way satellites discovered in the Sloan Digital Sky Survey and the subject of intense scrutiny by the Keck Observatory and the Hubble Space Telescope. They are the least luminous, most dark-matter dominated, and least chemically- evolved galaxies known. These galaxies offer a new front in the efforts to understand the missing satellite problem - the fact that theory predicts far more satellites than those actually observed as dwarf galaxies around the Milky Way and Andromeda. As the best candidate fossils from the early universe, the ultra-faint dwarfs are ideal places to test the physics of galaxy formation from that era.

Chair(s):
Thomas Brown, *STScI*

223 AGN Theory and Techniques

Tuesday, 2:00 PM - 3:30 PM; National Harbor 11

Chair(s):
Giovanni Fossati, *Rice Univ.*

223.01 Advection-Dominated Black Hole Accretion: Two-Fluid Hydrodynamics, Particle Acceleration, and Outflows
Lee, Jason P.[1]; Becker, Peter A.[1]
[1.]George Mason University, Fairfax, VA.

223.02 Making Intermediate mass black holes around Supermassive black holes: like making Jupiters around stars.
McKernan, Barry[1, 2]; Ford, Saavik[1, 2]; Kocsis, Bence3; Lyra, Wladimir[4, 2]
[1.]BMCC-CUNY, New York, NY. [2.]American Museum of Natural History, New York, NY. [3.]Institute for Advanced Study, Princeton, NJ. [4.]Jet Propulsion Laboratory, Pasadena, CA.

223.03 Hiding a supermassive black hole behind dusty, infrared-driven flows in Type-2 AGN: results from radiation-hydrodynamics simulations
Dorodnitsyn, Anton[1]
[1.]NASA GSFC/UMD, Greenbelt, MD.
Contributing teams: T. Kallman, G.S. Bisnovatyi-Kogan

223.04 A New Analytical Model for X-Ray Time Lags from Accreting Black Holes
Kroon, John J.[1]; Becker, Peter A.[1]
[1.]George Mason University, Fairfax, VA.

223.05 Constraining MHD Disk-Winds with X-ray Absorbers
Fukumura, Keigo[4]; Tombesi, Francesco[3]; Shrader, Chris R.[5]; Kazanas, Demosthenes[5]; Contopoulos, John[2]; Behar, Ehud[1]
[1.]Technion, Haifa, Israel. [2.]Academy of Athens, College ParkAthens, Greece. [3.]UMD, College Park, MD. [4.]James Madison University, Harrisonburg, VA. [5.]NASA/GSFC, Greenbelt, MD.

223.06 Polarization Features of AGN Dusty Plasmas
Lopez, Ericson[1, 2]; Deustua, Susana E.[2]
[1.]Quito Astronomical Observatory of National Polytechnic School, Quito, Ecuador. [2.]Space Telescope Sciences Institute, Baltimore, MD.

223.07 Advances in Reverberation Mapping of Quasars: Techniques, Experiments, and Implications
Denney, Kelly[1]
[1.]Ohio State University, Columbus, OH.

223.08 Space-Based Aperture-Masking Interferometry of Active Galactic Nuclei
Ford, K.E. S.[1, 2]; McKernan, Barry[1, 2]; Sivaramakrishnan, Anand[3, 2]; Martel, Andre[3]; Lafreniere, David[5]; Parmentier, Sebastien[4]; Koekemoer, Anton M.[3]
[1.]Borough of Manhattan Community College - CUNY, New York, NY. [2.]American Museum of Natural History, New York, NY. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]Stony Brook University - SUNY, Stony Brook, NY. [5.]University of Montreal, Montreal, QC, Canada.

224 Astronomy Education Policy, EPO Programs, and Undergraduate Education

Tuesday, 2:00 PM - 3:30 PM; Maryland 2

Chair(s):
Catharine Garmany, *NOAO*

224.01 Science Education & Advocacy: Tools to Support Better Education Policies
O'Donnell, Christine[1, 2]; Cunningham, Beth[2]; Hehn, Jack G.[2]
[1.]University of Virginia, Charlottesville, VA. [2.]American Association of Physics Teachers, College Park, MD.

224.02 Impact of NASA's Astrophysics Education and Public Outreach Programs
Smith, Denise A.[1]; Hasan, Hashima[2]
[1.]STScI, Baltimore, MD. [2.]NASA Headquarters, Washington, DC.

224.03 The ASP at 125: Advancing Science Literacy in an Age of Acceleration
Manning, Jim[1]
[1.]Astronomical Society of the Pacific, San Francisco, CA.

224.04 Findings from a NASA SMD Survey of Two-Year College Faculty
Schultz, Gregory R.[1]; Low, Russanne[2]; CoBabe-Ammann, Emily[3]; Gross, Nicholas[4]; Buxner, Sanlyn[5]
[1.]Astronomical Society of the Pacific, San Francisco, CA. [2.]Institute for Global Environmental Strategies, Arlington, VA. [3.]University Corporation for Atmospheric Research, Boulder, CO. [4.]Boston University, Boston, MA. [5.]Planetary Science Institute, Tucson, AZ.

224.05 Introductory Astronomy Student-Centered Active Learning at The George Washington University
Cobb, Bethany[1]
[1.]George Washington University, Washington, DC.

224.06 SkyServer Voyages: Next-Generation Educational Activities using the Sloan Digital Sky Survey
Meredith, Kate[1]; Raddick, Jordan[1]; Lundgren, Britt[2]
[1.]Johns Hopkins University, Baltimore , MD. [2.]University of Wisconsin , Madison, WI.

224.07 THE SPACE PUBLIC OUTREACH TEAM (SPOT)
Williamson, Kathryn[1]
[1.] *Montana State University, Bozeman, MT.*
Contributing teams: National Radio Astronomy Observatory, Montana Space Grant Consortium, West Virginia Space Grant Consortium, NASA Independent Verification and Validation Center

224.08 Inspiring a future generation of Astronomer and Astrophysicists during the 48th and 49th annual Astro-Science Workshop
Martynowycz, Michael[1, 2]; Ratliff, Gayle[1, 2]; Gyuk, Geza2; Hammergren, Mark[2]
[1.] *Illinois Institute of Technology, Chicago, IL.* [2.] *Adler Planetarium & Astronomy Museum, Chicago, IL.*

224.09 Dark Skies Africa: an NOAO and IAU OAD Program on Light Pollution
Walker, Constance E.[1]; Tellez, Daniel[1]; Pompea, Stephen M.[1]
[1.] *NOAO, Tucson, AZ.*

225 Astrophysics Code Sharing II: The Sequel

Tuesday, 2:00 PM - 3:30 PM; National Harbor 5

Research in astronomy is increasingly dependent on software methods, yet these methods are often not revealed, inhibiting re-use and undermining a basic tenet of scientific research: reproducibility. Building on the findings of the January 2013 AAS splinter meeting "Astrophysics Code Sharing?", which brought to light issues with sharing computational research methods, this session, organized by the AAS's Working Group on Software (WGAS) and the Astrophysics Source Code Library (ASCL), explores how we as a community can better support making codes used in research available for others to examine. A panel of speakers will discuss the state of code sharing, funding agencies' policies, and, illustrated by case studies, the benefits and pitfalls of releasing code. The case studies are presented by the authors of codes with varying times in the community, from new efforts to well-entrenched software. They will share the issues that arose when they released their codes, how they dealt with or mitigated the issues, and what benefits arose from releasing their software. They will also discuss what they learned through the process and their best practices. The floor will then be open for discussion on ways to encourage code sharing to improve the transparency and efficiency of research and mitigate the negative aspects of releasing code.

Chair(s):
Robert Hanisch, *STScI*
Peter Teuben, *Univ. of Maryland*
Organizer(s):
Alice Allen, *Astrophysics Source Code Library*

225.01 Occupy Hard Drives: Making your work more valuable by giving it away
Weiner, Benjamin J.[1]
[1.] *University of Arizona, Tucson, AZ.*

225.02 Maintaining A User Community For The Montage Image Mosaic Toolkit.
Berriman, G. B.[1]
[1.] *Caltech, Pasadena, CA.*

225.03 Cloudy – simulating the non-equilibrium microphysics of gas and dust, and its observed spectrum
Ferland, Gary J.[1]
[1.] Univ. of Kentucky, Lexington, KY.

225.04 NSF Policies on Software and Data Sharing and their Implementation
Katz, Daniel[1]
[1.] National Science Foundation, Arlington, VA.

225.05 The Astropy Project's Self-Herding Cats Development Model
Tollerud, Erik J.[1]
[1.] Yale University, New Haven, CT.

225.06 Costs and benefits of developing out in the open
Hogg, David W.[1]
[1.] New York Univ., New York, NY.

226 Cosmology & CMB IV

Tuesday, 2:00 PM - 3:30 PM; Maryland Ballroom C

Chair(s):
Alan Kogut, *NASA's GSFC*

226.01 Innovative Cosmology with Cosmic Voids
Sutter, Paul M.[1, 2]; Wandelt, Benjamin[1, 3]; Weinberg, David H.[2]; Warren, Michael S.[4]; Hamaus, Nico[1]
[1.] Paris Institute of Astrophysics, Paris, Ile-de-France, France. [2.] Ohio State University, Columbus, OH. [3.] University of Illinois at Urbana-Champaign, Urbana, IL. [4.] Los Alamos National Laboratory, Los Alamos, NM.

226.02 A Path to the Past: Observing High Redshifts Using Cross-Correlations
Fernandez, Elizabeth R.[1]
[1.] Kapteyn Astronomical Institute, Groningen, Netherlands.

226.03 Fermat Potentials of Embedded Lensing, the Integrated Sachs-Wolfe Effect, and Weak-Lensing of CMB by Cosmic Voids
Chen, Bin[1]; Kantowski, Ronald[1]; Dai, Xinyu[1]
[1.] University of Oklahoma, Norman, OK.

226.04 Finding the 99% Today: The Cosmological Role of Dwarf Galaxies
Venkatesan, Aparna[1]
[1.] Univ. of San Francisco, San Francisco, CA.

226.05 Cosmological Constraints from applying SHAM to rescaled cosmological simu lations
Simha, Vimal[1]
[1.] Durham University, Durham, United Kingdom.

226.06 Large-Scale Structure Formation with Dark Energy and Massive Neutrinos
Upadhye, Amol[1, 2]; Biswas, Rahul[1]; Pope, Adrian C.[1]; Heitmann, Katrin[1, 2]; Habib, Salman[1, 2]; Finkel, Hal[1]; Frontiere, Nicholas[1, 2]
[1.] Argonne National Laboratory, Argonne, IL. [2.] University of Chicago, Chicago, IL.

226.07 Using gaps in N-body tidal streams to probe missing satellites
Ngan, Wayne[1]; Carlberg, Raymond G.[1]
[1.] University of Toronto, Toronto, ON, Canada.

226.08 Objects Appear Smaller as They Recede: How Proper Motions Can Directly Reveal the Cosmic Expansion, Provide Geometric Distances, and Measure the Hubble Constant

Darling, Jeremiah K.[1]
[1.] Univ. of Colorado, Boulder, Boulder, CO.

226.09 A Novel Suite of Hydrodynamical Simulations of the Lyman-Alpha Forest with Massive Neutrinos

Rossi, Graziano[1]; Palanque-Delabrouille, Nathalie[1]; Yeche, Christophe[1]; Viel, Matteo[2, 3]; Rich, James[1]; LeGoff, Jean-Marc[1]; Borde, Arnaud[1]
[1.] CEA, Centre de Saclay, Irfu/SPP, Gif-sur-Yvette, France. [2.] INAF - Osservatorio Astronomico di Trieste, Trieste, Italy. [3.] INFN/National Institute for Nuclear Physics, Trieste, Italy.

227 Evolution of Emission Line Galaxies

Tuesday, 2:00 PM - 3:30 PM; Potomac Ballroom D

Chair(s):
Dale Kocevski, *University of California, Santa Cruz*

227.01 "Direct" Gas-Phase Metallicities, Stellar Properties, and Local Environments of Emission-Line Galaxies at Redshifts below 0.9'

Ly, Chun[1, 2]; Malkan, Matthew A.[3]; Nagao, Tohru[4]; Kashikawa, Nobunari[6]; Shimasaku, Kazuhiro[5]; Hayashi, Masao[6]
[1.] NASA GSFC, Greenbelt, MD. [2.] STScI, BALTIMORE, MD. [3.] UCLA, Los Angeles, CA. [4.] Kyoto University, , Tokyo, Japan. [5.] University of Tokyo, Tokyo, Japan. [6.] NAOJ, , Tokyo, Japan.

227.02 The NewHα Survey: Investigating the Fundamental Metallicity Relation at z~0.8

De Los Reyes, Mithi[1]; Lee, Janice C.[2]; Ly, Chun[2]; Salim, Samir[3]; Momcheva, Ivelina G.[4, 5]; Feddersen, Jesse[4, 3]; Dale, Daniel A.[6]; Ouchi, Masami[7]; Ono, Yoshiaki[7]; Finn, Rose[8]
[1.] North Carolina State University, Raleigh, NC. [2.] Space Telescope Science Institute, Baltimore, MD. [3.] Indiana University, Bloomington, IN. [4.] Yale University, New Haven, CT. [5.] Carnegie Observatories, Pasadena, CA. [6.] University of Wyoming, Laramie, WY. [7.] University of Tokyo, Kashiwa City, Chiba, Japan. [8.] Siena College, Loudonville, NY.

227.03D Physical Properties of Emission-Line Galaxies at z~2 from Near-Infrared Spectroscopy with Magellan FIRE

Masters, Daniel C.[1, 2]; McCarthy, Patrick J.[2]; Malkan, Matthew A.[3]; Siana, Brian D.[1]; Scarlata, Claudia[5]; Hathi, Nimish P.[6]; Atek, Hakim[7]; Henry, Alaina L.[4]
[1.] Physics & Astronomy, University of California, Riverside, Pasadena, CA. [2.] Carnegie Observatories, Pasadena, CA. [3.] University of California, Los Angeles, Los Angeles, CA. [4.] Goddard Space Flight Center, Greenbelt, MD. [5.] University of Minnesota, Minneapolis, MN. [6.] Laboratoire d'Astrophysique de Marseilles, Marseilles, France. [7.] Laboratoire d'Astrophysique Ecole Polytechnique, Sauverny, Switzerland.

Contributing teams: WISP team

227.04 Simulating Future Near-Infrared Grism Spectroscopy Using The WFC3 Infrared Spectroscopic Parallels (WISP)

Colbert, James W.[1]; Teplitz, Harry I.[1]; Atek, Hakim[4]; Bunker, Andrew J.[5]; Rafelski, Marc[1]; Scarlata, Claudia[2]; Ross, Nathaniel[3]; Malkan, Matthew A.[3]; Bedregal, Alejandro[6]; Dominguez, Alberto[7]; Dressler, Alan[8]; Henry, Alaina L.[9]; Martin, Crystal L.[10]; Masters, Daniel[7]; McCarthy, Patrick J.[8]; Siana, Brian D.[7]

[1.]Caltech, Pasadena, CA. [2.]University of Minnesota, Minneapolis, MN. [3.]University of California, Los Angeles, Los Angeles, CA. [4.]Ecole Polytechnique Federale de Lausanne, Lausanne, Switzerland. [5.]University of Oxford, Oxford, United Kingdom. [6.]Tufts University, Medford, MA. [7.]University of California, Riverside, Riverside, CA. [8.]Observatories of Carnegie Institution for Science, Pasadena, CA. [9.]Goddard Space Flight Center, Greenbelt, MD. [10.]University of California, Santa Barbara, Santa Barbara, CA.

227.05 Science Highlights from the 3D-HST Survey

Momcheva, Ivelina G.[1]

[1.]Yale Univeristy, New Haven, CT.

Contributing teams: 3D-HST Survey Team

227.06D Recently Quenched Galaxies at z=2 in the 3D-HST Survey

Whitaker, Katherine E.[1]; Van Dokkum, Pieter G.[2]; Brammer, Gabriel[3]; Momcheva, Ivelina G.[2]; Skelton, Rosalind[4]; Franx, Marijn[5]

[1.]NASA/GSFC, Greenbelt, MD. [2.]Yale University, New Haven, CT. [3.]STScI, Baltimore, MD. [4.]SAAO, Cape Town, South Africa. [5.]Leiden Observatory, Leiden, Netherlands.

Contributing teams: 3D-HST collaboration

227.07 Star formation rates and extinction at z=1-2 from the AGHAST HST infrared grism survey

Weiner, Benjamin J.[1]

[1.]University of Arizona, Tucson, AZ.

Contributing teams: AGHAST team

228 Extrasolar Planet Detection - Kepler Mission and Microlensing Surveys

Tuesday, 2:00 PM - 3:30 PM; Maryland Ballroom A

Chair(s):
Natalie Batalha, *San Jose State University*

228.01 The Kepler Mission on Two Reaction Wheels is K2

Haas, Michael R.[1]; Barclay, Thomas[4, 1]; Batalha, Natalie M.[1]; Bryson, Steve[1]; Caldwell, Douglas A.[2, 1]; Campbell, Jennifer[3, 1]; Coughlin, Jeffrey[2, 1]; Howell, Steve B.[1]; Jenkins, Jon M.[2, 1]; Klaus, Todd C.[3, 1]; Mullally, Fergal[2, 1]; Sanderfer, Dwight T.[1]; Sobeck, Charles K.[1]; Still, Martin D.[4, 1]; Troeltzsch, John[5]; Twicken, Joseph D.[2, 1]

[1.]NASA Ames Research Center, Moffett Field, CA. [2.]SETI Institute, Mountain View, CA. [3.]Orbital Sciences Corp, Dulles, VA. [4.]BAER Institute, Sonoma, CA. [5.]Ball Aerospace, Boulder, CO.

228.02 The Kepler Q1-Q12 Planet Candidate Catalogue

Rowe, Jason[1, 2]

[1.]NASA Ames Recenter Center, Moffett Field, CA. [2.]SETI Institute, Moffett Field, CA.

Contributing teams: The Kepler Team

228.03 An Estimate of Eta-Earth, Based on a New Analysis of Kepler Completeness
Traub, Wesley A.[1]
[1.]Jet Propulsion Laboratory, Pasadena, CA.

228.04 Bridging the Habitable Gap: Combining Kepler and AFTA-WFIRST to Obtain a More Robust Estimate of ?_Earth
Penny, Matthew[1]; Gaudi, B. S.[1]
[1.]Ohio State University, Columbus, OH.

228.05 Enabling an Exoplanet Census with the Korean Microlensing Telescope Network: Optimal Survey Strategies and Predicted Planet Yields
Henderson, Calen B.[1]; Gaudi, B. S.[1]; Han, Cheongho[2]; Nataf, David[3]; Skowron, Jan[4]; Penny, Matthew[1]; Gould, Andrew[1]
[1.]The Ohio State University, Columbus, OH. [2.]Chungbuk National University, Cheongju, Korea, Republic of. [3.]Australian National University, Weston Creek, ACT, Australia. [4.]Warsaw University Observatory, Warsaw, Poland.

228.06 New Programs to Promote Mass Measurements and Planet Discovery via Gravitational Lensing Events
Di Stefano, Rosanne[1]; Bryk, William[2]; Ginsburg, Idan[1]; Kunapuli, Nikhil[3]; Murphy, Max[1]; Oprescu, Antonia[1]; Primini, Francis[1]; Tunbridge, Ben[1]
[1.]Harvard-Smithsonian CfA, Cambridge, MA. [2.]Ramaz Upper School , New York, NY. [3.]Bridgewater-Raritan High School, Bridgewater, NJ.

TUESDAY

229 Extrasolar Planet Detection - Occultations, Coronagraphy, and Astrometry

Tuesday, 2:00 PM - 3:30 PM; National Harbor 13

Chair(s):
Ruslan Belikov, *NASA Ames Research Center*

229.01D Laboratory Verification of Occulter Contrast Performance and Formation Flight
Sirbu, Dan[1]
[1.]Princeton University, Princeton, NJ.

229.02 The Gemini Planet Imager
Macintosh, Bruce[1, 2]
[1.]LLNL, Livermore, CA. [2.]Stanford University, Stanford, CA.
Contributing teams: Gemini Planet Imager instrument team, Gemini Planet Imager Exoplanet Survey, Gemini Observatory

229.03 Archival Legacy Investigation of Circumstellar Environments (ALICE): Overview and First Results
Soummer, Remi[1]; Barman, Travis S.[1]; Chen, Christine[1]; Choquet, Elodie[1]; Comeau, Thomas[1]; Debes, John H.[1]; Golimowski, David A.[1, 3]; Hagan, J. Brendan[1]; Hines, Dean C.[1]; Lonsdale, Sean[2]; Marois, Christian[7]; Mawet, Dimitri[6]; Mittal, Tushar[1]; Moerchen, Margaret[1]; N'Diaye, Mamadou[1]; Perrin, Marshall D.[1]; Pueyo, Laurent[5]; Rajan, Abhijith[1]; Reid, Iain N.[4]; Schneider, Glenn[1]; Wolff, Schulyer[4]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]HIA-NRC, Victoria, BC, Canada. [3.]Purdue University, Lafayette, IN. [4.]University of Arizona, Tucson, AZ. [5.]Arizona State University, Phoenix, AZ. [6.]Berkeley, Berkeley, CA. [7.]ESO, La Serena, Chile.

229.04 On-Sky Tests of High Precision Astrometry and Implications for Exoplanet Mass Measurement

Ammons, Stephen[1]; Macintosh, Bruce[1]; Savransky, Dmitry[1]; Marois, Christian[4]; Neichel, Benoit5; Guyon, Olivier2; Bendek, Eduardo3

[1.]Lawrence Livermore National Laboratory, Livermore, CA. [2.]University of Arizona, Tucson, AZ. [3.]NASA Ames, Mountain View, CA. [4.]Herzberg Institute for Astrophysics, Victoria, BC, Canada. [5.]Gemini Telescope, La Serena, Chile.

229.05 Kappa Andromedae B: New Constraints on the Companion Mass, System Age and Further Multiplicity

Hinkley, Sasha[1]; Pueyo, Laurent[2]; Faherty, Jacqueline K.[3]; Oppenheimer, Ben R.[4]; Mamajek, Eric E.[5]; Kraus, Adam L.[6]; Rice, Emily L.[7, 3]; Ireland, Michael[8, 9]; David, Trevor[1]; Hillenbrand, Lynne[1]; Vasisht, Gautam[10]; Cady, Eric[10]; Brenner, Douglas[4]; Veicht, Aaron[4]; Nilsson, Ricky[4]; Zimmerman, Neil[11]; Parry, Ian[12]; Beichman, Charles A.[13]; Dekany, Richard[14]; Roberts, Lewis C.[10]; Baranec, Christoph[14]; Crepp, Justin R.[15]

[1.]California Institute of Technology, Pasadena, CA. [2.]STScI, Baltimore , MD. [3.]Universidad de Chile, Cerro Calan, Las Condes, Chile, Chile. [4.]AMNH, New York, NY. [5.]University of Rochester, Rochester, NY. [6.]Harvard-Smithsonian CfA, Cambridge, MA. [7.]College of Staten Island, New York, NY. [8.]MacQuarie University, Sydney, NSW, Australia. [9.]AAO, Epping, NSW, Australia. [10.]JPL, Pasadena, CA. [11.]MPIA, Heidelberg, Konigstuhl, Germany. [12.]IoA , Cambridge, Cambridge, United Kingdom. [13.]NExScI, Pasadena, CA. [14.]Caltech Optical Observatories, Pasadena, CA. [15.]University of Notre Dame, South Bend, IN.

230 Extrasolar Planet: Spectroscopy, Metallicity, and Composition

Tuesday, 2:00 PM - 3:30 PM; Maryland Ballroom B

Chair(s):
Drake Deming, *Univ. of Maryland*

230.01D Elemental Compositions of Extrasolar Planetesimals

Xu, Siyi[1]; Jura, Michael[1]

[1.]UCLA, Los Angeles, CA.

230.02 The Intrinsic EUV, Lyman-alpha, and UV Emission from Exoplanet Host Stars

Linsky, Jeffrey[1]; France, Kevin[2]; Fontenla, Juan[3]

[1.]JILA/Univ. of Colorado and NIST, Boulder, CO. [2.]CASA/Univ. of Colorado , Boulder, CO. [3.]NorthWest Research Associates, Boulder, CO.

230.03 Planet-Metallicity Correlation For Planets of Different Sizes

Wang, Ji[1]

[1.]Yale University, New Haven, CT.

230.04 Detecting water at high-spectral resolution in hot Jupiter atmospheres

Birkby, Jayne[1]; Snellen, Ignas[1]; de Kok, Remco[2]; Brogi, Matteo[1]; Schwarz, Henriette[1]; Albrecht, Simon[3]; de Mooij, Ernst[4]

[1.]Leiden Observatory, Leiden, Zuid Holland, Netherlands. [2.]SRON, Utrecht, Holland, Netherlands. [3.]MIT, Cambridge, MA. [4.]University of Toronto, Toronto, ON, Canada.

230.05 Transmission Spectroscopy of the Super-Earth GJ 1214b
Kreidberg, Laura[1]
[1.]University of Chicago, Chicago, IL.

230.06 The Power of High Resolution Exoplanet Transmission Spectroscopy -- Constraining Winds, Circulation, Tidal Locking, and Clouds
Kempton, Eliza[1]; Perna, Rosalba[2]; Heng, Kevin[3]; Rauscher, Emily[4]
[1.]Grinnell College, Grinnell, IA. [2.]University of Colorado, Boulder, CO. [3.]ETH Institute for Astronomy, Zurich, Switzerland. [4.]Princeton University, Princeton, NJ.

230.07 Revisited Transit Spectroscopy of Giant Exoplanets Using HST/NICMOS
Deming, Drake[1]; Wilkins, Ashlee N.[1]; Madhusudhan, Nikku[2]
[1.]Univ. of Maryland, Bowie, MD. [2.]Yale University, New Haven, CT.

230.08 Exoplanet Secondary Eclipses Using WFC3
Haynes, Korey[1, 2]; Mandell, Avi[2]; Deming, Drake[3]
[1.]George Mason University, Fairfax, VA. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]University of Maryland, College Park, College Park, MD.

TUESDAY

231 Galaxy Evolution in Groups/Clusters

Tuesday, 2:00 PM - 3:30 PM; National Harbor 2

Chair(s):
Simona Mei, *University of Paris - IPAC Caltech*

231.01 A Study of the Cold Gas and Stellar Populations of the Antlia Cluster with KAT-7 and WISE
Hess, Kelley[1]; Carignan, Claude[1]; Jarrett, Tom[1]; Goedhart, Sharmila[2]; Passmoor, Sean S.[2]; Wilcots, Eric M.[3]
[1.]University of Cape Town, Rondebosch, South Africa. [2.]SKA-SA, Cape Town, South Africa. [3.]University of Wisconsin-Madison, Madison, WI.

231.02 The role of pre-processing in SDSS groups and clusters
Hou, Annie[1, 2]; Parker, Laura C.[2]; Harris, William E.[2]
[1.]KIAS, Seoul, Korea, Republic of. [2.]McMaster University, Hamilton, ON, Canada.

231.03D Spatio-Temporal Sequencing Of Mass Dependent Galaxy Transformation Mechanisms In The Complex Environment Of SuperGroup Abell 1882
Sengupta, Aparajita[1]; Keel, William C.[1]; Morrison, Glenn E.[2, 3]; Windhorst, Rogier A.[4]; Smith, Brent[4]
[1.]Physics and Astronomy, University of Alabama, TUSCALOOSA, AL. [2.]University of Hawaii, Honolulu, HI. [3.]Canada-France-Hawaii Telescope (CFHT) Corp., Kamuela, HI. [4.]Arizona State University, Tempe, AZ.

231.04 Exploring the interconnectedness of halo mass, stellar mass, and environment of galaxies
Shattow, Genevieve[1]; Croton, Darren[2]
[1.]Swinburne University of Technology, Hawthorn, VIC, Australia. [2.]Swinburne University of Technology, Hawthorn, VIC, Australia.

231.05D The Spitzer-South Pole Telescope Survey: Linking galaxies and haloes at z=1.5
Martinez-Manso, Jesus[1]; Gonzalez, Anthony H.[1]; Ashby, Matthew[2]; Stanford, S. A.[3]; Brodwin, Mark[4]; Holder, Gilbert P.[5]
[1.]University of Florida, Gainesville, FL. [2.]Harvard CfA, Cambridge, MA. [3.]UC Davis, Davis, CA. [4.]University of Missouri, Kansas City, KS. [5.]McGill University, Montreal, QC, Canada.

231.06D How do galaxies populate dark matter halos across cosmic time?
Palamara, David P.[1, 2]; Brown, Michael J.[1]; Jannuzi, Buell[2]; White, Martin[3]; Norberg, Peder[4]
[1.] School of Physics, Monash University, Clayton, VIC, Australia. [2.] University of Arizona, Tucson, AZ. [3.] University of California, Berkeley, Berkeley, CA. [4.] Durham Unversity, Durham City, Durham, United Kingdom.
Contributing teams: GAMA team, NDWFS team

232 Laboratory Astrophysics

Tuesday, 2:00 PM - 3:30 PM; Maryland 1

Chair(s):
Angela Speck, *Univ. of Missouri*

232.01D Improved Transition Probabilities for Fe-group Elements to Resolve Unexpected Trends in Metal-Poor Stars
Wood, Michael P.[1]
[1.] University of Wisconsin-Madison, Madison, WI.

232.02 Benchmarking Charge Exchange Theory with Experiments Using an X-ray Calorimeter at an Electron Beam Ion Trap
Betancourt-Martinez, Gabriele[1, 2]; Porter, Frederick S.[2]; Leutenegger, Maurice A.[2]; Brown, Gregory V.[3]; Beiersdorfer, Peter[3]
[1.] University of Maryland, College Park, MD. [2.] NASA Goddard Space Flight Center, Greenbelt, MD. [3.] Lawrence Livermore National Laboratory, Livermore, CA.

232.03 AtomDB 3.0: Atomic Data for Non-equilibrium Ionization Studies
Foster, Adam[1]; Smith, Randall K.[1]; Yamaguchi, Hiroya[2, 1]; Ji, Li[3]; Wilms, Jörn[4]
[1.] Harvard Smithsonian, CfA, Cambridge, MA. [2.] NASA GSFC, Greenbelt, MD. [3.] Purple Mountain Observatory, Nanjing, Jiangsu, China. [4.] Friedrich-Alexander-Universität, Erlangen-Nürnberg, Bavaria, Germany.

232.04 Madison Plasma Dynamo Experiment
Kostadinova, Evdokiya[1, 2]; Forest, Cary[2]; Cooper, Christopher[2]; Coquerel, Martin[2]
[1.] Furman University, Greeville, SC. [2.] University Of Wisconsin, Madison, Madison, WI.

233 Lenses & Waves II

Tuesday, 2:00 PM - 3:30 PM; National Harbor 12

Chair(s):
Fredrick Jenet, *Univ. of Texas at Brownsville*

233.01 SALT Redshift Determinations of Herschel Discovered Strong Gravitational Lenses
Leeuw, Lerothodi[1, 2]; Crawford, Steve[3]
[1.] University of South Africa, Pretoria, Gauteng Province, South Africa. [2.] SETI Institute, Mountain View, CA. [3.] South African Astronomical Observatory, Cape Town, Western Cape Province, South Africa.
Contributing teams: The Herschel-ATLAS Team

233.02D A new pixel-based method for analyzing spatially resolved, gravitationally lensed images
Tagore, Amitpal S.[1]; Keeton, Charles R.[1]; Baker, Andrew J.[1]
[1.] Rutgers University, Piscataway, NJ.

233.03 Fundamental Constants, New Physics and the Dark Energy Equation of State
Thompson, Rodger I.[1]
[1.]Univ. of Arizona, Tucson, AZ.

233.04 Optimal Measurement of Dark Energy Parameters with Weak Gravitational Lensing Magnification
Schneider, Michael[1, 2]
[1.]Lawrence Livermore Natl Lab, Livermore, CA. [2.]UC Davis, Davis, CA.

233.05D Gravitational lensing as a tool for cosmology: Sources of bias and techniques for achieving its full potential
Troxel, Michael A.[1]; Ishak-Boushaki, Mustapha B.[1]
[1.]University of Texas at Dallas, Richardson, TX.

234 Reports from NASA's Astrophysics Program Analysis Groups

Tuesday, 2:00 PM - 3:30 PM; Potomac Ballroom A

This special session will report on the current activities of NASA's Program Analysis Groups (PAGs.) These groups serve as forums for soliciting and coordinating input and analysis from the scientific community in support of the Astrophysics Division's program objectives. This session will begin with an introduction to the PAGs by representatives from NASA Headquarters and then include reports on current activities from the Chairs of the Exoplanet Exploration PAG (ExoPAG), the Cosmic Origins PAG (COPAG), and Physics of the Cosmos PAG (PhysPAG).

Chair(s):
Ann Hornschemeier, *NASA GSFC*
Organizer(s):
Ann Hornschemeier, *NASA GSFC*

234.01 Overview of NASA Astrophysics Program Analysis Groups
Garcia, Michael R.[1]; Hudgins, Douglas M.[1]; Sambruna, Rita M.[1]
[1.]Astrophysics , NASA HQ, Washington, DC.

234.02 The Cosmic Origins Program Analysis Group (COPAG)
Sembach, Kenneth[1]
[1.]STScI, Baltimore, MD.

234.03 Report from the Exoplanet Exploration Program Analysis Group (ExoPAG)
Gaudi, B. S.[1]
[1.]Ohio State Univ., Columbus, OH.
Contributing teams: The Exoplanet Exploration Program Analysis Group

234.04 Summary of PhysPAG Activity
Nousek, John A.[1]
[1.]Penn State Univ., University Park, PA.

235 Supernovae & Nebulae II

Tuesday, 2:00 PM - 3:30 PM; National Harbor 10

Chair(s):
W. Wood-Vasey, *University of Pittsburgh*

235.01D Searching for Failed Supernovae
Gerke, Jill[1]; Kochanek, Christopher S.[1]; Stanek, Krzysztof Z.[1]
[1.]The Ohio State University, Columbus, OH.

235.02 Supernova flash spectroscopy: a new observational window into stellar death
Gal-Yam, Avishay[1]
[1.]Weizmann Institue of Science, Rehovot, Israel.

235.03 Observation of Dust Grain Sputtering in a Shock
Raymond, John C.[1]; Ghavamian, Parviz[2]; Williams, Brian J.[3]; Blair, William P.[4]; Borkowski, Kazimierz J.[5]; Gaetz, Terrance J.[1]; Sankrit, Ravi[6]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA. [2.]Towson University, Baltimore, MD. [3.]NASA Goddard Space Flight Center, Greenbelt, MD. [4.]Johns Hopkins University, Baltimore, MD. [5.]North Carolina State University, Raleigh, NC. [6.]SOFIA Science Center, Mountain View, CA.

235.04 Physical Conditions in Shocked Clouds of the Vela Supernova Remnant: New Results from High-Resolution HST/STIS Observations of HD 72350 and HD 72648
Ritchey, Adam M.[1]; Jenkins, Edward B.[2]; Wallerstein, George[1]
[1.]University of Washington, Seattle, WA. [2.]Princeton University Observatory, Princeton, NJ.

235.05 Water, Hydroxyl and Carbon Monoxide Emission in Molecular Supernova Remnants with Herschel
Rho, Jeonghee[1]; Hewitt, John W.[2]
[1.]SETI Institute and SOFIA Science Center, NASA Ames, Mountain View, CA. [2.]NASA/GSFC, Greenbelt, MD.

235.06 Particle Acceleration and Magnetic Fields: Looking at the Northwestern Rim of RCW 86 with Chandra
Castro, Daniel[1]
[1.]MIT, Cambridge, MA.

235.07 The First Fermi-LAT Catalog of Supernova Remnants
Brandt, Theresa J.[1]; Acero, Fabio[2, 1]; Ballet, Jean[3]; dePalma, Francesco[4, 5]; Giordano, Francesco[5]; Hewitt, John W.[6, 1]; Johannesson, Gudlaugur[7]; Tibaldo, Luigi[8]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]NASA Postdoctoral Program, Greenbelt, MD. [3.]Laboratoire AIM, Service d'Astrophysique, CEA Saclay, Gif sur Yvette, France. [4.]Pegaso University, Naples, Italy. [5.]INFN, Bari, Italy. [6.]CRESST/UMBC, Baltimore, MD. [7.]Science Institute, University of Iceland, Reykjavik, Iceland. [8.]Kavli Institute for Particle Astrophysics & Cosmology, SLAC National Accelerator Laboratory, Stanford, CA.
Contributing teams: on behalf of the Fermi-LAT Collaboration

236 Surveys and Large Programs II

Tuesday, 2:00 PM - 3:30 PM; Maryland Ballroom D

Chair(s):
Heidi Newberg, *Rensselaer Polytechnic Inst.*

236.01 The Karl G. Jansky Very Large Array Sky Survey (VLASS)
Myers, Steven T.[1]; Baum, Stefi A.[2]; Chandler, Claire J.[1]
[1.]NRAO, Socorro, NM. [2.]Rochester Institute of Technology, Rochester, NY.

236.02 Exploring the Dynamic Radio Sky
Mooley, Kunal P.[1]; Myers, Steven T.[2]; Hallinan, Gregg[1]; Frail, Dale A.[2]; Kulkarni, Shrinivas R.[1]; Horesh, Assaf[1]; Bourke, Stephen[1]
[1.]California Institute of Technology, Pasadena, CA. [2.]National Radio Astronomy Observatory, Socorro, NM.

236.03D All Sky Automated Survey for SuperNovae (ASAS-SN or 'Assassin')
Shappee, Benjamin[1]; Prieto, Jose[2]; Stanek, Krzysztof Z.[1, 6]; Kochanek, Christopher S.[1, 6]; Holoien, Thomas[1]; Jencson, Jacob[1]; Basu, Udit[1]; Beacom, John F.[1, 6]; Szczygiel, Dorota[3]; Pojmanski, Grzegorz[3]; Brimacombe, Joseph[5]; Dubberley, Matt[4]; Elphick, Mark[4]; Foale, Steve[4]; Hawkins, Eric[4]; Mullins, Dave[4]; Rosing, Wayne[4]; Ross, Rachel[4]; Walker, Zachary[4]
[1.]The Ohio State University, Columbus, OH. [2.]Princeton University, Princeton, NJ. [3.]Warsaw University, Warsaw, Poland. [4.]Las Cumbres Observatory Global Telescope Network, Santa Barbara, CA. [5.]Coral Towers Observatory, Cairns, QLD, Australia. [6.]Center for Cosmology and AstroParticle Physics, Columbus, OH.

236.04 The Low Band Observatory (LOBO): A VLA-based Radio LSST for Continuous, sub-GHz Observations in the LSST Era.
Kassim, Namir E.[1]; Clarke, Tracy E.[1]; Hicks, Brian[1]; Helmboldt, Joseph F.[1]; Peters, Wendy M.[1]; Wilson, Thomas L.[1]; Cutchin, Sean[3]; Hyman, Scott D.[5]; Owen, Frazer N.[2]; Perley, Richard A.[2]; Durand, Steven[2]; Intema, Huib[2]; Brisken, Walter[2]; Lazio, Joseph[4]
[1.]NRL, Washington, DC. [2.]NRAO, Socorro, NM. [3.]NRL-NRC, Washington, DC. [4.]JPL-Caltech, Pasadena, CA. [5.]SBC, Sweetbriar, VA.

236.05 The VLA Low Frequency Sky Survey Redux (VLSSr)
Peters, Wendy M.[1]; Cotton, William D.[2]; Kassim, Namir E.[1]
[1.]Naval Research Lab., Washington, DC. [2.]National Radio Astronomy Observatory, Charlottesville, VA.

236.06D DES SN Survey Search Strategy: First-Year Results and the Type Ia rate.
Fischer, John A.[1]
[1.]University of Pennsylvania, Philadelphia, PA.
Contributing teams: Dark Energy Survey, DES SN Working Group

236.07 The LOFAR Multifrequency Snapshot Sky Survey (MSSS): Status and Results
Heald, George[1, 2]
[1.]ASTRON, Dwingeloo, Netherlands. [2.]Kapteyn Astronomical Institute, University of Groningen, Groningen, Netherlands.
Contributing teams: LOFAR collaboration

237 The Cosmic Origins Spectrograph view of the Circumgalactic Medium

Tuesday, 2:00 PM - 3:30 PM; National Harbor 4

Installed in 2009, the Cosmic Origins Spectrograph (COS) is the most sensitive ultraviolet spectrograph yet flown on Hubble. Deep quasar spectra taken with COS contain a wealth of information on foreground absorption systems, which probe the halos of galaxies lying near the line-of-sight. In this Special Session we highlight the progress made by COS in our understanding of the circumgalactic medium (CGM), the interface where galaxies adjoin and interact with intergalactic space. The CGM plays several important roles in galaxy evolution, channeling gas flows into and out of galaxies, harboring substantial reservoirs of metals and baryons, and regulating star formation. COS observations have shown it to be a complex, multi-phase medium with properties that depend on the host galaxy. We will discuss these observations and identify the key remaining CGM questions to be answered in the final years of Hubble's lifetime.

Chair(s):
Andrew Fox, *STScI*
Organizer(s):
Andrew Fox, *STScI*

237.01 The Circumgalactic Medium over Three Decades of Mass: Results from COS-Halos and COS-Dwarfs
Tumlinson, Jason[1]
[1.]Space Telescope Science Institute, Baltimore, MD.
Contributing teams: The COS-Halos Team

237.02 The Significant Contribution of Photo-ionized Circumgalactic Gas to the Total Baryonic Budget of L* Galaxies
Werk, Jessica[1]; Prochaska, Jason X.[1]; Tumlinson, Jason[2]; Peeples, Molly S.[2]; Tripp, Todd M.[3]; Fox, Andrew[2]; Lehner, Nicolas[4]
[1.]University of California, Santa Cruz, CA. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]University of Massachusetts, Amherst, MA. [4.]Notre Dame, South Bend, IN.
Contributing teams: COS-Halos

237.03 Large Reservoirs Of Metal-Poor Gas Around z<1 Galaxies
Lehner, Nicolas[1]; Howk, J. C.[1]; Wotta, Christopher[1]; Tumlinson, Jason[2]; Tripp, Todd M.[3]; Prochaska, Jason X.[4]; O'Meara, John[5]; Werk, Jessica[4]; Fox, Andrew[2]; Ribaudo, Joseph[6]
[1.]Univ. Of Notre Dame, Notre Dame, IN. [2.]STScI, Baltimore, MD. [3.]UMass, Amherst, MA. [4.]UCO/Lick Observatory, SANTA CRUZ, CA. [5.]St Michael College, Colchester, VT. [6.]Utica College, Utica, NY.

237.04 The Signatures of Star formation on the Properties of the Circumgalactic Medium
Borthakur, Sanchayeeta[1]
[1.]Johns Hopkins University, Baltimore, MD.

237.05 Characterizing the Circumgalactic Medium of Nearby Galaxies
Keeney, Brian A.[1]; Stocke, John T.[1]; Danforth, Charles[1]; Savage, Blair D.[2]; Froning, Cynthia S.[1, 3]; Green, James C.[1]
[1.]Univ. of Colorado, Boulder, CO. [2.]Univ. of Wisconsin, Madison, WI. [3.]Univ. of Texas, Austin, TX.

237.06 Bridging the Observational Gaps: Milestones toward Understanding the Circumgalactic Medium
Churchill, Christopher W.[1]
[1.]New Mexico State Univ., Las Cruces, NM.

238 The Galactic Center

Tuesday, 2:00 PM - 3:30 PM; Potomac Ballroom C

Chair(s):
Douglas Roberts, *Adler Planetarium*

238.01 Extreme Gas Properties in the Central 10 Parsecs
Mills, Elisabeth A.[2, 1]; Güsten, Rolf[4]; Requena Torres, Miguel A.[4]; Lang, Cornelia C.[3]; Morris, Mark[1]; Butterfield, Natalie[3]; Ludovici, Dominic[3]; Schmitz, Susan[3]; Ott, Juergen[2]
[1.]UCLA, Santa Monica, CA. [2.]NRAO, Socorro, NM. [3.]U. Iowa, Iowa City, IA. [4.]MPIfR, Bonn, Germany.

238.02D Plasma evolution around Sgr A*
Dibi, Salome[1]; Markoff, Sera[1]; Belmont, Renaud[2]; Malzac, Julien[2]; Barriere, Nicolas[3]; Tomsick, John[3]
[1.]Anton Pannekoek Institute, Amsterdam, Amsterdam, Netherlands. [2.]IRAP, Toulouse, France. [3.]SSL, Berkeley, CA.

238.03 Sensitive X-ray and Radio Monitoring of the Sgr A*/G2 Encounter
Haggard, Daryl[1]; Baganoff, Frederick K.[2]; Ponti, Gabriele[6]; Heinke, Craig O.[5]; Yusef-Zadeh, Farhad[1]; Roberts, Douglas A.[1]; Cotton, William D.[8]; Gillessen, Stefan[6]; Genzel, Reinhard[6]; Markoff, Sera[4]; Nowak, Michael[2]; Neilsen, Joseph[3]; Schulz, Norbert S.[2]; Rea, Nanda[7]
[1.]Northwestern University/CIERA, Evanston, IL. [2.]MIT/Kavli, Boston, MA. [3.]Boston University, Boston, MA. [4.]University of Amsterdam, Amsterdam, Netherlands. [5.]University of Alberta, Alberta, AB, Canada. [6.]Max-Planck-Institut für extraterrestrische Physik, Munich, Germany. [7.]Institute of Space Sciences, CSIC-IEEC, Barcelona, Spain. [8.]NRAO, Charlottesville, VA.

238.04 NIR variability of Sgr A*
Witzel, Gunther[1]
[1.]UCLA, Los Angeles, CA.

238.05 Is G2 Alone? Other Infrared Sources in the Central 0.04 Parsecs of the Galactic Center
Sitarski, Breann[1]; Do, Tuan[2]; Witzel, Gunther[1]; Ghez, Andrea M.[1]; Meyer, Leo[1]; Boehle, Anna[1]; Lu, Jessica R.[3]; Yelda, Sylvana[1]; Morris, Mark[1]; Becklin, Eric E.[1, 4]
[1.]UCLA, Los Angeles, CA. [2.]Dunlap Institute for Astronomy and Astrophysics, University of Toronto, Toronto, ON, Canada. [3.]Institute for Astronomy, University of Hawaii, Honolulu, HI. [4.]NASA-Ames Research Center, Moffet Field, CA.

238.06 A CARMA Spectral Line and Continuum Survey of the Central Molecular Zone
Pound, Marc W.[1]; Yusef-Zadeh, Farhad[2]
[1.]Univ. of Maryland, College Park, MD. [2.]Northwestern University, Evanston, IL.

238.07 Multi-epoch Measurements of the Galactic Center (~6667 MHz) and the Blazar 0716+714 (1 & 3 MHz) taken from the Allen Telescope Array at Hat Creek Radio Observatory in 2013
Castellanos, Aaron[1, 2]; Harp, Gerald[2, 3]
[1.]California State Polytechnic University, Pomona, CA. [2.]SETI Institute, Mountain View, CA, CA. [3.]Institute of Electrical and Electronic Engineers (IEEE), Mountain View, CA, CA.

259 HAD VII: Oral History Project

Tuesday, 2:00 PM - 2:15 PM; National Harbor 3

259.01 HAD Oral History Project
Holbrook, Jarita[1]
[1.]University of the Western Cape, Bellville, Western Cape, South Africa.

HAD Workshop: Oral History Interviewing Techniques

Tuesday, 2:15 PM - 3:30 PM; National Harbor 3

In this workshop, participants will learn appropriate techniques to conduct oral history interviews. Dr. Gregory Good, Director of the Center for the History of Physics of the American Institute of Physics (AIP), will coach the session participants in the nuts and bolts of preparing for, conducting, and following up after an oral history interview session. Dr. Good is very experienced with collecting oral histories. If you are interested in the history of astronomy and in preserving that history, the AAS HAD invites you to participate in this workshop. Oral histories are a very important part of documenting the background and motivations for administrative and scientific contributions, the part of history that is not usually available in the printed record, such as peer-reviewed publications. So oral histories fill in the gaps on why someone dedicated much of their professional life to a particular topic or describes the journey they traveled to reach notable goals and/or make lasting contributions to the field. Your help is needed to preserve this history, the history of acoustics. Thanks for participating!

Chair(s):
Gregory Good, *AIP*
Organizer(s):
Joseph Tenn, *Sonoma State Univ.*

239 Heineman Prize: The Formation of Galaxies and Supermassive Black Holes: Insights and Puzzles

Tuesday, 3:40 PM - 4:30 PM; Potomac Ballroom A

Chair(s):

Catherine O'Riordan, *AIP*

Rachel Somerville - Dannie Heineman Award for Astrophysics
The Heineman Prize for Astrophysics is awarded to Rachel Somerville for providing fundamental insights into galaxy formation and evolution using semi-analytic modeling, simulations and observations.

239.01 The Formation of Galaxies and Supermassive Black Holes: Insights and Puzzles
Somerville, Rachel S.[1]
[1.]Rutgers University, Piscataway, NJ.

240 HEAD Rossi Prize: The Amazing Pulsar Machine, Alice K. Harding and The Pulsing Gamma-ray Sky, Roger Romani

Tuesday, 4:30 PM - 5:20 PM; Potomac Ballroom A

Chair(s):
Joel Bregman, *Univ. of Michigan*

240.01 The Amazing Pulsar Machine
Harding, Alice K.[1]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD.
Contributing teams: Fermi Large Area Telescope

240.02 The Pulsing Gamma-ray Sky
Romani, Roger W.[1, 2]
[1.]Dept. of Physics, Stanford University, CA. [2.]KIPAC, Stanford University, CA.

Evening Poster Session

Tuesday, 5:30 PM - 6:30 PM; Exhibit Hall ABC

Career Hour 4: Developing Your 30-Second Value Statement (aka Your Elevator Pitch)

Tuesday, 5:30 PM - 6:30 PM; National Harbor 2

I have a brand and you have a brand. A brand is simply a promise of value and every successful professional and company is successful in part because they know how to articulate their brand. The ability to communicate your promise of value is vitally important for not only crafting your own career path, but also for finding out about hidden opportunities and jobs. In this workshop, we learn the fundamentals of branding as it relates to career development and planning strategy. We will work together to develop your own 30-second brand statement which you can use in networking, and informational and job interviews. We will discuss the connection between brand, attitude and reputation, and why every interaction with someone affects how people perceive your brand. You will leave this workshop with the ability to elucidate your own brand to whomever you meet, giving you a critical competitive edge in your career and the job market. Audience: students, postdocs, early-career professionals Facilitator: Alaina G. Levine, President, Quantum Success Solutions Alaina G. Levine is a science careers consultant, science writer, and professional speaker and comedian. Her new book on networking strategies for scientists and engineers will be published by Wiley in 2014.

Chair(s):
Alaina Levine, *Quantum Success Solutions*
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

Gemini Observatory Open House

Tuesday, 6:30 PM - 8:00 PM; National Harbor 10

Join the Gemini Director and other staff to learn about recent developments at Gemini Observatory, including new capabilities and observing modes. We seek open discussion and community input to guide future developments that will best serve users. Members of advisory bodies including the Science and Technology Advisory Committee and the Users' Committee for Gemini will also participate.

Exoplanet Exploration Program News

Tuesday, 6:30 PM - 8:00 PM; National Harbor 3

Research in the field of exoplanets continues to amaze, with new discoveries announced almost every week. There are a lot of new activities in NASA's Exoplanet Exploration Program, as we work towards missions that will characterize Earth-like planets. In this session you can learn about what's new in NASA's quest to detect and characterize extrasolar planetary systems, and participate in the discussion of objectives and methods. The Exoplanet Exploration Program Analysis Group (ExoPAG), a community-based group that meets a few times each year to analyze science trends and instrument development, will report on its ongoing work and describe how you can participate. Two Science and Technology Definition Teams (STDTs) started work recently on probe-scale mission concepts for direct detection and spectroscopy of exoplanets, and will provide status updates. There will be a overview of missions in the Program, including Kepler, LBTI , and WFIRST-AFTA, which will use microlensing and direct imaging for exoplanet study (see also the Wednesday evening session on WFIRST-AFTA). We will allow plenty of time for questions and discussion.

Organizer(s):
Stephen Unwin, *JPL*

SPS Evening of Undergraduate Science

Tuesday, 6:30 PM - 8:00 PM; Chesapeake 7

The Society of Physics Students (SPS) invites undergraduate scientists to attend this event with noted astronomer Kathryn Flanagan (STScI). Flanagan will give a short talk (15-20 minutes) on astronomy as a personal endeavor, providing a perspective on the field and its future as well as an introduction to her extensive research and education interests. Undergraduates are encouraged to bring their posters for an hour of informal discussion with each other and with the featured speaker. The evening will provide an opportunity to network in an informal setting while celebrating the accomplishments of undergraduates. Refreshments will be served.

Organizer(s):
Daniel Golombek, *STScI*

241 HEAD Business Meeting

Tuesday, 6:30 PM - 7:30 PM; National Harbor 2

The annual meeting of the HEAD Division, known in the HEAD bylaws as the "Regular Meeting." Open to all HEAD members, the meeting will include a Business Session devoted exclusively to the reports of officers and committees, and to the transaction of business affairs. In particular, the results of the upcoming HEAD elections of a new Vice Chair and two new Executive Committee members will be announced, and there will be time for discussion of the proposed new bylaws that would allow for a new class of 'Affiliate' HEAD members.

Chair(s):
Joel Bergman, *Univ. of Michigan*
Organizer(s):
Randall Smith, *Smithsonian Astrophysical Observatory*

242 National Radio Astronomy Observatory Town Hall

Tuesday, 6:30 PM - 8:30 PM; Potomac Ballroom C

This Town Hall will inform the AAS membership about the status of National Radio Astronomy Observatory (NRAO) science and science operations, development programs, and construction projects. This Town Hall will open with a reception that will be followed by a presentation by NRAO Director Tony Beasley that will update the membership regarding: (a) Construction progress at the Atacama Large Millimeter/submillimeter Array (ALMA); (b) Science opportunities and development programs at ALMA, the Jansky Very Large Array (VLA), the Green Bank Telescope (GBT), and the Very Long Baseline Array (VLBA); (c) Recent science results from across NRAO; and (d) Technical development for the next generation of radio astronomy research facilities. The NRAO Town Hall will include at least 30 minutes for answering audience questions.

Chair(s):
Anthony Beasley, *NRAO*
Organizer(s):
Mark Adams, *NRAO*

Star Party

Tuesday, 7:30 PM - 10:30 PM; Gaylord Pier (Wednesday if cloudy)

Come see the Moon and the stars high in the sky and meet professional astronomers. The AAS will co-host a star party with the DC area amateur astronomers, including the Southern Maryland Astronomical Society, the Howard Astronomical League, the Astronomical Society of Greenbelt, Hands-on Optics, and the Northern Virginia Astronomy Club. Depending on the weather, there will be telescopes right at the Convention Center. Featured in our winter sky will the giant planet Jupiter and the great Orion Nebula (both favorite targets of the Hubble Space Telescope). We'll also have a great first quarter Moon. Suitable for adults and kids of all ages, telescopes will be provided by members of the AAS and wonderful people from right in your neighborhood. In the event of clouds, we'll have a public slideshow at the observing site featuring highlights from the great telescopes of the world, and stay warm with coffee and cookies. It's a great opportunity to see the stars with professional astronomers and meet the local astronomers in your hometown. Star Party Updates, including weather and logistic updates, will occur on Facebook. Follow us https://www.facebook.com/AmericanAstronomicalSociety

Organizer(s):
Jason Kendall, *William Paterson University*

AAS Open Mic Night

Tuesday, 8:00 PM - 9:00 PM; Maryland Ballroom C

For the first time, the AAS will be holding an open-mic night for our talented members to share their musical and other talents with their friends and colleagues. Held Tuesday evening, we invite all musicians, singers, story tellers, comedians, poets, spoken word enthusiasts or other performers (e.g. jugglers) to participate. We welcome all styles and genres of music from bluegrass to speed metal….seriously! Come have some fun and strut your stuff. Cocktails, wine and beer will be available for purchase. Sign up online to ensure a spot and let us know what kind of equipment you need to perform. You can decide to participate on-site as well, but signing up early helps us ensure the proper equipment is available. Ukulele performers are especially encouraged to participate.

Organizer(s):
James Webb, *Florida International Univ.*

Telescopes for Cosmic Dawn and 21 cm Cosmology

Tuesday, 8:00 PM - 9:30 PM; National Harbor 12

One of the key approaches recognized for tracking the transition of the Universe from a neutral to an ionized state during Cosmic Dawn is the highly redshifted 21 cm line from neutral hydrogen. A number of groups, within the U.S. and internationally, are developing the techniques and technologies for making the requisite measurements. This session will review the current state of various projects, assess paths forward, and discuss complementary observations that could be conducted with the various telescopes.

Organizer(s):
Joseph Lazio, *Jet Propulsion Laboratory*

POSTERS

243 The Cosmic Origins Spectrograph view of the Circumgalactic Medium Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

243.01 The High-Ion Content and Kinematics of Low-Redshift Lyman Limit Systems
Fox, Andrew[1]; Lehner, Nicolas[2]; Tumlinson, Jason[1]; Howk, J. C.[2]; Tripp, Todd M.[3]; Prochaska, Jason X.[4]; O'Meara, John[5]; Werk, Jessica[4]; Bordoloi, Rongmon[1]; Katz, Neal[3]; Oppenheimer, Benjamin[6, 7]; Dave, Romeel [8]
[1.]STScI, Baltimore, MD. [2.]University of Notre Dame, Notre Dame, IN. [3.]University of Massachusetts, Amherst, MA. [4.]UCO/Lick Observatory, Santa Cruz, CA. [5.]St Michael's College, Colchester, VT. [6.]University of Leiden, Leiden, Netherlands. [7.]University of Colorado, Boulder, CO. [8.]University of the Western Cape, Bellville, South Africa.

243.02 The First Detection of Deuterated Molecular Hydrogen at z < 1.7 Beyond the Milky Way Galaxy
Oliveira, Cristina M.[1]; Tumlinson, Jason[1]; Sembach, Kenneth[1]; O'Meara, John[2]; Thom, Christopher[1]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Saint Michaels College, Colchester, VT.

243.03 The CGM around Dwarf Galaxies
Tumlinson, Jason[1]; Bordoloi, Rongmon[1]
[1.]Space Telescope Science Institute, Baltimore, MD.
Contributing teams: The COS-Halos Team

243.04 Searching for Diffuse Ly? Emission in the Local IGM/CGM with HST/COS
Penton, Steven V.[1]; Green, James C.[2]; Danforth, Charles[2]
[1.]STScI, Baltimore, MD. [2.]University of Colorado, Boulder, CO.
Contributing teams: HST/COS GTO

243.05 The Metallicity Distribution of the Circumgalactic Medium at z < 1 Traced by Lyman Limit Systems
Wotta, Christopher[1]; Howk, J. C.[1]; Lehner, Nicolas[1]; O'Meara, John[2]
[1.]University of Notre Dame, Notre Dame, IN. [2.]Saint Michael's College, Colchester, VT.

243.06 C IV In Our Cosmic Backyard: Which Neighbor Put It There?
Burchett, Joseph[1]; Burchett, Joseph[1]; Tripp, Todd M.[1]; Werk, Jessica[2]; Prochaska, Jason X.[2]; Tumlinson, Jason[3]; Howk, J. C.[4]
[1.]University of Massachusetts - Amherst, Amherst, MA. [2.]University of California Observatories - Lick Observatory, Santa Cruz, CA. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]University of Notre Dame, Notre Dame, IN.

244 Star Formation Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

244.01 Stellar populations and Star Formation Rates in NGC 6872, the Condor galaxy
Eufrasio, Rafael T.[1, 2]; De Mello, Duilia F.[2, 1]; Dwek, Eli[1]; Arendt, Richard G.[3, 1]; Gadotti, Dimitri A.[4]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]The Catholic University of America, Washington, DC. [3.]CRESST UMBC, Baltimore, MD. [4.]European Southern Observatory, Santiago, Chile.

244.02 High-Mass Star Formation in NGC6822: The Ultraviolet as a Tool for Identification
Hedlund, Anne[1, 2]; Madore, Barry F.[2]; Penprase, Bryan E.[1]; Choi, Philip I.[1]
[1.]Pomona College, Claremont, CA. [2.]Carnegie Institute of Science, Pasadena, CA.

244.03 New Star Formation in NGC 3690
Abdullah, Ajamu[1]
[1.]Howard University, Washington D.C., DC.

244.04 Stacking Spectra of High Critical Density Tracers in ALMA Cycle 0 Observations of the Antennae Galaxies
Kadowaki, Jennifer[1, 2]; Leroy, Adam K.[2]; Barcos, Loreto[3]; Lee, Cheoljong[3]; Whitmore, Bradley C.[4]; Brogan, Crystal L.[2]; Hibbard, John E.[2]; Johnson, Kelsey E.[3]; Chandar, Rupali[5]; Privon, George C.[3]; Evans, Aaron S.[2, 3]; Remijan, Anthony J.[2]; Sheth, Kartik[2]
[1.]University of California, Los Angeles, Fullerton, CA. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]Univeristy of Virginia, Charlottesville, VA. [4.]Space Telescope Science Institute, Baltimore, MD. [5.]University of Toledo, Toledo, OH.

244.05 The Green Bank Telescope Maps the Dense Molecular Gas in the Starburst Galaxy M82
Kepley, Amanda A.[1]; Leroy, Adam K.[2]; Frayer, David T.[1]; Usero, Antonio[3]; Marvil, Joshua[4, 5]; Walter, Fabian[6]
[1.]National Radio Astronomy Observatory, Green Bank, WV. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]Observatorio Astronómico Nacional, Madrid, Spain. [4.]New Mexico Institute of Mining and Technology, Socorro, NM. [5.]National Radio Astronomy Observatory, Socorro, NM. [6.]Max Planck Institute fur Astronomie, Heidelberg, Germany.

244.06 Modeling the Star Formation Properties of Massive Galaxies with the COLD GASS Survey
Hopkins, Erica[1, 2]; Shetty, Rahul[2]; Bigiel, Frank[2]; Klessen, Ralf[2]; Saintonge, Amelie[3]; Willman, Beth[1]
[1.]Haverford College, Haverford, PA. [2.]Zentrum für Astronomie der Universität Heidelberg, Institut für Theoretische Astrophysik, Heidelberg, Baden-Württemberg, Germany. [3.]Max-Planck-Institut für Extraterrestrische Physik, Munich, Bavaria, Germany.

244.07 13CO Survey of Northern Intermediate-Mass Star-Forming Regions
Lundquist, Michael J.[1]; Kobulnicky, Henry A.[1]; Kerton, Charles R.[2]
[1.]University of Wyoming, Laramie, WY. [2.]Iowa State University, Ames, IA.

244.08 MYSTIX: AGE GRADIENTS IN STELLAR POPULATIONS OF MASSIVE STAR FORMING REGIONS BASED ON A NEW STELLAR CHRONOMETER

Getman, Konstantin V.[1]; Feigelson, Eric[1]; Kuhn, Michael A.[1]; Broos, Patrick S.[1]; Townsley, Leisa K.[1]; Naylor, Tim[2]; Povich, Matthew S.[3]; Luhman, Kevin1; Garmire, Gordon[4]

[1.]Pennsylvania State University, University Park, PA. [2.]University of Exeter, Exeter, Devon, United Kingdom. [3.]California State Polytechnic University, Pomona, CA. [4.]Huntingdon Institute for X-ray Astronomy, Huntingdon, PA.

244.09 MYSTIX: THE STRUCTURE AND DYNAMICAL STATE OF YOUNG STELLAR CLUSTERS

Kuhn, Michael A.[1]; Feigelson, Eric[1]; Getman, Konstantin V.[1]; Baddeley, Adrian[2]; Townsley, Leisa K.[1]; Broos, Patrick S.[1]; Povich, Matthew S.[3]; Luhman, Kevin[1]; Busk, Heather[1]; Naylor, Tim[4]; King, Robert[4]

[1.]Pennsylvania State University, University Park, PA. [2.]University of Western Australia, Perth, WA, Australia. [3.]California State Polytechnic University, Pomona, CA. [4.]University of Exeter, Exeter, United Kingdom.

244.10 Outflow-protostar interactions in the Serpens South Cluster

Bourke, Tyler L.[1, 2]; Gutermuth, Robert A.[3]; Matthews, Brenda C.[4]; Dunham, Michael M.[2]

[1.]Square Kilometre Array Organisation, Macclesfield, United Kingdom. [2.]Harvard-Smithsonian, CfA, Cambridge, MA. [3.]Univ. of Massachusetts, Amherst, MA. [4.]National Research Council, Canada, Victoria, BC, Canada.

244.11 The Structure of Dense Gas in Perseus and Serpens: CLASSy Results

Mundy, Lee G.[1]; Storm, Shaye[1]; Fernandez Lopez, Manuel[2]; Lee, Katherine[1, 2]; Looney, Leslie[2]; Teuben, Peter J.[1]; Rosolowsky, Erik[3]; Shirley, Yancy L.[4]; Arce, Hector G.[5]; Plunkett, Adele[5]; Isella, Andrea[6]

[1.]University of Maryland, College Park, MD. [2.]University of Illinois, Champaign-Urbana, IL. [3.]University of Alberta, Edmonton, AB, Canada. [4.]University of Arizona, Tucson, AZ. [5.]Yale University, New Haven, CT. [6.]Caltech, Pasadena, CA.

Contributing teams: CLASSy Team

244.12 Analysis of the Serpens South Filamentary Cloud: CLASSy Results

Looney, Leslie[1]; Fernandez Lopez, Manuel[1]; Segura-Cox, Dominique[1]; Arce, Hector G.[3]; Lee, Katherine[2, 1]; Storm, Shaye[2]; Mundy, Lee G.[2]; Teuben, Peter J.[2]; Isella, Andrea[5]; Plunkett, Adele[3]; Rosolowsky, Erik[4]; Shirley, Yancy L.[7]; Tobin, John J.[6]

[1.]University of Illinois, Urbana, IL. [2.]University of Maryland, College Park, MD. [3.]Yale University, New Haven, CT. [4.]University of Alberta, Edmonton, AB, Canada. [5.]California Institute of Technology, Pasadena, CA. [6.]NRAO, Charlottesville, VA. [7.]University of Arizona, Tucson, AZ.

Contributing teams: CLASSy Team

244.13 Infall as a Function of Position and Molecular Tracer in L1544 and L694

Keown, Jared A.[1, 2]; Schnee, Scott[2]; Bourke, Tyler L.[3]; Friesen, Rachel[4]

[1.]Department of Physics and Astronomy, University of Louisville, Louisville, KY. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [4.]Dunlap Institute for Astronomy and Astrophysics, University of Toronto, Toronto, ON, Canada.

244.14 An accretion disks in the high-mass star forming region IRAS~23151+5912.
Migenes, Victor[1]; Rodríguez-Esnard, Tatiana[2]; Trinidad, Miguel A.[3]
[1.]Brigham Young University, Provo, UT. [2.]Instituto de Geofísica y Astronomía, La Havana, Havana, Cuba. [3.]University of Guanajuato, Guanajuato, Guanajuato, Mexico.

244.15 Stellar and Circumstellar Properties of Low-Mass, Young, Subarcsecond Binaries
Bruhns, Sara[1, 2]; Prato, Lisa A.[1]
[1.]Lowell Observatory, Flagstaff, AZ. [2.]University of Virginia, Charlottesville, VA.

244.16 You Can Touch This! Bringing HST images to life as 3-D models
Christian, Carol A.[1]; Nota, Antonella[1]; Grice, Noreen A.[3]; Sabbi, Elena[1]; Shaheen, Natalie[2]; Greenfield, Perry[1]; Hurst, Amy[5]; Kane, Shaun[5]; Rao, Roshan[6]; Dutterer, Josh[5]; de Mink, Selma E.[4]
[1.]STScI, Baltimore, MD. [2.]National Federation of the Blind, Baltimore, MD. [3.]You Can Do Astronomy LLC, Baltimore, MD. [4.]Carnegie Observatories, Baltimore, MD. [5.]University Of Maryland Baltimore County, Baltimore, MD. [6.]Brown University, Providence, RI.

244.17 The First Stars: A Low-Mass Formation Mode
Stacy, Athena[1, 2]
[1.]Goddard Space Flight Center, College Park, MD. [2.]UC Berkeley, Berkeley, CA.

244.18 Stringent Limits of O2 Abundance Toward a Low-mass Protostar with Herschel-HIFI
Yildiz, Umut[1, 2]; Acharyya, Kinsuk[3]; Goldsmith, Paul[1]; van Dishoeck, Ewine[2, 4]
[1.]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA. [2.]Leiden Observatory, Leiden University, Leiden, Netherlands. [3.]S.N. Bose National Centre for Basic Sciences, Kolkata, India. [4.]Max Planck Institut fuer Extraterrestrische Physik, Garching, Germany.
Contributing teams: HOP (Herschel Oxygen Project) Team

244.19 Using Class 0/I Protostars to Study Triggered Star Formation in NGC 281 with Herschel Photometry
Ivers, Carol B[4]; Booker, Melissa[3]; Piper, Margaret (Peggy)[5]; Powers, Lynn[6]; Ali, Babar[1]; Wolk, Scott J.[2]
[1.]NASA Herschel Science Center/IPAC, Pasadena, CA. [2.]Chandra X-Ray Observatory, Cambridge, MA. [3.]Robinson Secondary School, Fairfax, VA. [4.]Foran High School, Milford, CT. [5.]Lincoln-Way North High School, Frankfort, IL. [6.]Bozeman High School, Bozeman, MT.
Contributing teams: NITARP

244.20 A Numerical Simulation of Star Formation in Nuclear Rings of Barred-Spiral Galaxies.
Seo, Woo-Young[1]; Kim, Woong-Tae[1]
[1.]Seoul National University, Seoul, Korea, Republic of.

244.21 ALMA observations of the extremely high velocity, massive and compact molecular outflow G331.512-0.103.
Merello, Manuel[1]; Evans , Neal J.[1]; Bronfman, Leonardo[2]; Garay, Guido[2]; Lo, Nadia[2]; Nyman, Lars-Ake[3]; Cortés, Juan R.[3]; Cunningham, Maria R.[4]
[1.]University of Texas , Austin, TX. [2.]Universidad de Chile, Santiago, Santiago, Chile. [3.]Joint ALMA Observatory, Santiago, Santiago, Chile. [4.]School of Physics, UNSW, Sydney, NSW, Australia.

245 Cosmology Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

245.01 Challenges of Measuring Cosmic Dawn with the 21-cm Sky-Averaged, Global Signal
Burns, Jack O.[1]; Harker, Geraint[1]; Mirocha, Jordan[1]; Datta, Abhirup[1]
[1].Univ. of Colorado at Boulder, Boulder, CO.

245.02 Multiple Deflections in Galaxy-Galaxy Lensing
Blumenthal, Kelly[1]; Brainerd, Tereasa G.[1]
[1].Boston University, Short Hills, NJ.

245.03 Foreground Cleaning for Primordial Gravitational Wave Detection
Watts, Duncan[1]; Larson, David[1]; Marriage, Tobias[1]
[1].Johns Hopkins University, Baltimore, MD.
Contributing teams: CLASS Collaboration

245.04 An Exposition on Friedmann Cosmologies with Negative Energy Densities
Joshi, Ravi[1]; Nemiroff, Robert J.[1]; Patla, Bijunath[2]
[1].Michigan Tech University, Houghton, MI. [2].Harvard University, Cambridge, MA.

245.05 Probing Primordial Magnetic Fields with 21-cm Line Observations of the High-redshift Intergalactic Medium
Oklopcic, Antonija[1]; Gluscevic, Vera[2]; Hirata, Christopher M.[3]; Mishra, Abhilash[1]; Venumadhav, Tejaswi N.[1]
[1].California Institute of Technology, Pasadena, CA. [2].Institute for Advanced Study, Princeton, NJ. [3].Ohio State University, Columbus, OH.

245.06 Intergalactic Dust and the Darkness of the Night Sky
Prins, Nathan[1]; Overduin, James[2]; Strobach, Edward J.[1]
[1].Towson University, Towson, MD. [2].University of Maryland Baltimore County, Baltimore, MD.

245.07 Comparing the clustering of galaxies and galaxy group by using the SDSS DR7
Wang, Yiran[1]; Brunner, Robert J.[1]
[1].University of Illinois at Urbana-Champaign, Urbana, IL.

245.08 Detecting the Relative Velocity Effect with SDSS
Slepian, Zachary[1]; Eisenstein, Daniel[1]
[1].Harvard University, Cambridge, MA.

245.09 Updates to the Union SNe Ia Compilation
Rubin, David[1, 3]; Aldering, Gregory S.[3]; Amanullah, Rahman[4]; Barbary, Kyle H.[3, 10]; Bruce, Adam[2]; Dawson, Kyle S.[7]; Deustua, Susana E.[5]; Doi, Mamoru[6]; Fakhouri, Hannah[2, 3]; Fruchter, Andrew S.[5]; Gibbons, Rachel A.[11]; Goobar, Ariel[4]; Hsiao, Eric[13, 3]; Huang, Xiaosheng[14, 3]; Ihara, Yutaka[6]; Kim, Alex G.[3]; Knop, Robert A.[12, 11]; Kowalski, Marek[15]; Krechmer, Evan[2]; Lidman, Chris[16]; Linder, Eric[3]; Meyers, Joshua[2, 8]; Morokuma, Tomoki[6]; Nordin, Jakob[3]; Perlmutter, Saul[3, 2]; Ripoche, Pascal[3]; Rykoff, Eli S.[3, 9]; Saunders, Clare[3]; Sofiatti, Caroline[2, 3]; Spadafora, Anthony L.[3]; Suzuki, Nao[6]; Takanashi, Naohiro[6]; Yasuda, Naoki[6]
[1].Florida State University, Tallahassee, FL. [2].UC Berkeley, Berkeley, CA. [3].LBNL, Berkeley, CA. [4].Stockholm University, Stockholm, Sweden. [5].STScI, Baltimore, MD. [6].University of Tokyo, Tokyo, Japan. [7].University of Utah, Salt Lake City, UT. [8].Stanford, Stanford, CA. [9].SLAC, Menlo Park, CA. [10].Argonne, Lemont, IL. [11].Vanderbilt University, Nashville, TN. [12].Quest University, Squamish, BC, Canada. [13].Las Campanas Observatory, Atacama, Chile. [14].University of San Francisco, San Francisco, CA. [15].University of Bonn, Bonn, Germany. [16].Australian Astronomical Observatory, Marsfield, NSW, Australia.
Contributing teams: Supernova Cosmology Project

245.10 Measuring the Cosmic Distance Scale to 1% with Baryon Acoustic Oscillations in the Sloan Digital Sky Survey III Galaxy Clustering

Eisenstein, Daniel[1]; Beutler, Florian[2]; Bolton, Adam S.[5]; Burden, Angela[3]; Chuang, Chia-Hsun[4]; Dawson, Kyle S.[5]; Gunn, James E.[6]; Ho, Shirley[7]; Manera, Marc[3]; McBride, Cameron[1]; Mena, Olga[8]; Montesano, Francesco[9]; Nuza, Sebastian[10]; Padmanabhan, Nikhil[11]; Percival, William[3]; Reid, Beth A.[2]; Ross, Ashley[3]; Ross, Nicholas[2, 12]; Samushi, Lado[3, 13]; Sanchez, Ariel[9]; Schlegel, David J.[2]; Seo, Hee-Jong[14, 15]; Tinker, Jeremy[16]; Vargas-Magana, Mariana[7]; White, Martin[2, 14]; Weinberg, David H.[15]

[1.]Harvard Univ., Cambridge, MA. [2.]Lawrence Berkeley National Lab, Berkeley, CA. [3.]University of Portsmouth, Portsmouth, United Kingdom. [4.]Universidad Automoma de Madrid, Madrid, Spain. [5.]University of Utah, Salt Lake City, UT. [6.]Princeton University, Princeton, NJ. [7.]Carnegie-Mellon University, Pittsburgh, PA. [8.]Universidad de Valencia, Valencia, Spain. [9.]Max Planck Institut fur Extraterrestrische Physik, Garching, Germany. [10.]Leibniz-Institut fur Astrophysik, Potsdam, Germany. [11.]Yale University, New Haven, CT. [12.]Drexel University, Philadelphia, PA. [13.]Ilia State University, Tbilisi, Georgia. [14.]University of California Berkeley, Berkeley, CA. [15.]Ohio State University, Columbus, OH. [16.]New York University, New York, NY.

245.11 Kinematic Weak Lensing: Forecasts for a Next-Generation Lensing Measurement

Huff, Eric M.[1]; George, Matthew R.[2, 4]; Krause, Elisabeth[3]; Eifler, Tim[3]; Schlegel, David J.[4]

[1.]the Ohio State University, Columbus, OH. [2.]UC Berkeley, Berkeley, CA. [3.]University of Pennsylvania, Philadelphia, PA. [4.]Lawrence Berkeley National Laboratory, Berkeley, CA.

245.12 Simulations of 21-cm Intensity Mapping Observations of Baryon Acoustic Oscillations

Stucky, Thomas[2, 1]; Timbie, Peter T.[1, 2]

[1.]University of Wisconsin-Madison, Madison, WI. [2.]University of Utah, Salt Lake City, UT.

Contributing teams: Tianlai Project

245.13 Simulating a Non-Gaussian CMB Sky

Calafut, Victoria[1]; Bean, Rachel[2]; Byun, Joyce[2]

[1.]The College of New Jersey, Ewing, NJ. [2.]Cornell University, Ithaca, NY.

245.14 Variable-delay Polarization Modulators for the CLASS Telescope

Harrington, Kathleen[1]; Ali, Aamir[1]; Amiri, Mandana[6]; Appel, John W.[1]; Araujo, Derek[7]; Bennett, Charles L.[1]; Boone, Fletcher[1]; Chan, Manwei[1]; Cho, Hsiao-Mei[3]; Chuss, David T.[2]; Colazo, Felipe[2]; Crowe, Erik[2]; Denis, Kevin[2]; Dünner, Rolando[4]; Eimer, Joseph[1]; Essinger-Hileman, Thomas[1]; Gothe, Dominik[1]; Halpern, Mark[6]; Hilton, Gene[3]; Hinshaw, Gary F.[6]; Huang, Caroline[1]; Irwin, Kent[3]; Jones, Glenn[7]; Karakla, John[1]; Kogut, Alan J.[2]; Larson, David[1]; Limon, Michele[7]; Lowry, Lindsay[1]; Marriage, Tobias[1]; Mehrle, Nicholas[1]; Miller, Amber D.[7]; Miller, Nathan[2]; Mirel, Paul[2]; Moseley, Samuel H.[2]; Novak, Giles[8]; Reintsema, Carl[3]; Rostem, Karwan[2]; Stevenson, Thomas[2]; Towner, Deborah[2]; U-Yen, Kongpop[2]; Wagner, Emily[1]; Watts, Duncan[1]; Wollack, Edward[2]; Xu, Zhilei[1]; Zeng, Lingzhen[5]

[1.]Johns Hopkins University, Baltimore, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]NIST, Boulder, CO. [4.]Pontificia Universidad Catholica de Chile, Santiago, Chile. [5.]CfA-SAO, Cambridge, MA. [6.]University of British Columbia, Vancouver, BC, Canada. [7.]Columbia University, New York, NY. [8.]Northwestern University, Chicago, IL.

245.15 The Cosmology Large Angular Scale Surveyor

Marriage, Tobias[1]; Ali, Aamir[1]; Amiri, Mandana[5]; Appel, John W.[1]; Araujo, Derek[6]; Bennett, Charles L.[1]; Boone, Fletcher[1]; Chan, Manwei[1]; Cho, Hsiao-Mei[3]; Chuss, David T.[2]; Colazo, Felipe[2]; Crowe, Erik[2]; Denis, Kevin[2]; Dünner, Rolando[4]; Eimer, Joseph[1]; Essinger-Hileman, Thomas[1]; Gothe, Dominik[1]; Halpern, Mark[5]; Harrington, Kathleen[1]; Hilton, Gene[3]; Hinshaw, Gary F.[5]; Huang, Caroline[1]; Irwin, Kent[9]; Jones, Glenn[6]; Karakla, John[1]; Kogut, Alan J.[2]; Larson, David[1]; Limon, Michele[6]; Lowry, Lindsay[1]; Mehrle, Nicholas[1]; Miller, Amber D.[6]; Miller, Nathan[2]; Moseley, Samuel H.[2]; Novak, Giles[7]; Reintsema, Carl[3]; Rostem, Karwan[2]; Stevenson, Thomas[2]; Towner, Deborah[2]; U-Yen, Kongpop[2]; Wagner, Emily[1]; Watts, Duncan[1]; Wollack, Edward[2]; Xu, Zhilei[1]; Zeng, Lingzhen[8]

[1.]Johns Hopkins University, Baltimore, MD. [2.]Goddard Space Flight Center, Greenbelt, MD. [3.]National Institute of Standards and Technology, Boulder, CO. [4.]P. U. Catolica, Santiago, Chile. [5.]University of British Columbia, Vancouver, BC, Canada. [6.]Columbia University, New York, NY. [7.]Northwestern, Evanston, IL. [8.]CfA-SAO, Cambridge, MA. [9.]Stanford University, Stanford, CA.

245.16 Enabling Dark Energy and Beyond Science with Precise Absolute Photometry

Deustua, Susana E.[1]; Hines, Dean C.[1]; Bohlin, Ralph[1]; Gordon, Karl D.[1]

[1.]Space Telescope Science Institute, Baltimore, MD.

245.17 Cross-Correlation Functions of Galaxies with Grouped and Isolated Quasars in SDSS DR10

Rhodes, Will[1, 2]; West, Michael[1]

[1.]Maria Mitchell Association, Nantucket, MA. [2.]The College of New Jersey, Ewing, NJ.

245.18 Primordial Inflation Explorer (PIXIE): Limits of Systematic Effects in CMB Measurement

Fixsen, Dale J.[2, 1]; Chuss, David T.[1]; Dotson, Johanna[1]; Dwek, Eli[1]; Halpern, Mark[5]; Hinshaw, Gary F.[5]; Kogut, Alan J.[1]; Meyer, Stephan[3]; Seiffert, Michael D.[6]; Moseley, Samuel H.[1]; Spergel, David N.[4]; Wollack, Edward[1]

[1.]NASA's GSFC, Greenbelt, MD. [2.]University of Maryland, College Park, MD. [3.]University of Chicago, Chicago, IL. [4.]Princeton University, Princeton, NJ. [5.]University of British Columbia, Vancouver, BC, Canada. [6.]Jet Propulsion Lab, Pasadena, CA.

245.19 The Discovery and Characterization of Surprisingly Luminous Galaxy Candidates at z~9-10: The Power of Combining HST and Spitzer

Illingworth, Garth D.[1]; Oesch, Pascal[1, 2]; Bouwens, Rychard[3]; Labbe, Ivo[3]

[1.]UC Santa Cruz, Santa Cruz, CA. [2.]Yale University, New Haven , CT. [3.]Leiden University, Leiden, Netherlands.

Contributing teams: XDF/HUDF09 team

245.20 Simulation of interferometric observations of cosmic microwave background polarization

Bunn, Emory F.[1]; Karakci, Ata[2]; Zhang, Le[3]; Sutter, Paul M.[5]; Korotkov, Andrei[2]; Timbie, Peter T.[3]; Tucker, Gregory S.[2]; Wandelt, Benjamin[4]

[1.]Univ. of Richmond, Richmond, VA. [2.]Brown University, Providence, RI. [3.]University of Wisconsin, Madison, WI. [4.]Institut d, Paris, France. [5.]Ohio State University, Columbus, OH.

246 Evolution of Galaxies Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

246.01 The Average Properties Of CaII And NaI Absorbing Galaxies From Stacked Quasar Spectra
Schulte-Ladbeck, Regina E.[1]; Cherinka, Brian[2]
[1.]Univ. of Pittsburgh, Pittsburgh, PA. [2.]Dunlap Institute for Astrpnpmy & Astrophysics, University of Toronto, Toronto, ON, Canada.

246.02 Probing Star Formation in Polar Ring Galaxy NGC 2685
Ackman, Laiya[1, 2]; Donovan Meyer, Jennifer[2]; Muñoz-Mateos, Juan Carlos[3, 2]
[1.]Wesleyan University, Middletown, CT. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]European Southern Observatory, Santiago, RM, Chile.

246.03 SAMI Galaxy Survey: Spectrally Dissecting 3400 Galaxies By the Dozen
Cecil, Gerald N.[1, 2]; Croom, Scott[2]
[1.]Univ. of North Carolina, Chapel Hill, NC. [2.]The University of Sydney, Sydney, NSW, Australia.
Contributing teams: The SAMI Galaxy Survey team

246.04 Stellar Masses, Star Formation Rates and X-ray Constraints on Galaxies in the Coma Cluster
Hrinda, Greg[1]; Desjardins, Tyler D.[2]; Hornschemeier, Ann E.[3]; Gallagher, Sarah[2]; Hammer, Derek[4]; Miller, Neal A.[5]; Ptak, Andrew[3]; Tzanavaris, Panayiotis[6, 3]; Johnson, Kelsey E.[7]; Walker, Lisa May[7]
[1.]Baltimore County Public Schools, Baltimore, MD. [2.]University of Western Ontario, London, ON, Canada. [3.]NASA Goddard Space Flight Center, Greenbelt, MD. [4.]Space Telescope Science Institute, Baltimore, MD. [5.]Stevenson University, Owings Mills, MD. [6.]University of Maryland, Baltimore County, Baltimore, MD. [7.]University of Virginia, Charlottesville, VA.

246.05 The X-ray Properties of PS1 Optical Galaxy Survey Galaxies
Heeter, Doug[1]; Ptak, Andrew[2]; Thilker, David A.[3]; Hornschemeier, Ann E.[2]
[1.]Harford County Public Schools, Pylesville, MD. [2.]NASA/GSFC, Greenbelt, MD. [3.]The Johns Hopkins University, Baltimore, MD.

246.06 What Makes a Tidal Tail?
Rodruck, Michael[1]; Konstantopoulos, Iraklis[2]; Charlton, Jane C.[1]
[1.]Pennsylvania State University, State College, PA. [2.]Australian Astronomical Observatory, North Ryde, NSW, Australia.

246.07 EDGES: A Mass Estimate of the Tidal Streamer in M 63
Staudaher, Shawn[1]; Dale, Daniel A.[1]; van Zee, Liese[2]; Barnes, Kate L.[2]
[1.]University of Wyoming, Laramie, WY. [2.]Indiana University, Bloomington, IN.
Contributing teams: EDGES

246.08 Early-Type Galaxy Star Formation Histories in Different Environments
Fitzpatrick, Patrick[1]; Graves, Genevieve[2, 1]
[1.]Department of Astronomy, University of California, Berkeley, Berkeley, CA. [2.]Department of Astrophysical Sciences, Princeton University, Princeton, NJ.

246.09 Requirements for Radial Migration: How does the migrating fraction depend on stellar velocity dispersion?
Tolfree, Kathryne[1]; Wyse, Rosemary F.[1]
[1.]Johns Hopkins University, Baltimore, MD.

246.10 Determining the Importance of Shocks on Galaxy Evolution in Compact Groups: a Herschel and CARMA View

Alatalo, Katherine A.[1]; Appleton, Philip N.[1]; Lisenfeld, Ute[2]; Cluver, Michelle E.[3]; Bitsakis, Theodoros[4]; Guillard, Pierre[5]; Charmandaris, Vassilis[4]
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246.11 Infrared and X-ray Cooling in the Taffy Bridge: Herschel and Chandra weigh in!

Appleton, Philip N.[1]; Wang, Junfeng[2]; Peterson, Bradley W.[3]; Helou, George[1]; Cluver, Michelle E.[8]; Gao, Yu[4]; Guillard, Pierre[5]; Boulanger, Francois[5]; Alatalo, Katherine A.[1]; Ogle, Patrick M.[1]; Sturm, Eckhard[6]; van der Werf, Paul[7]; Xu, C. K.[1]; Lu, Nanyao Y.[1]; Jarrett, Tom[10]; Duc, Pierre-Alain[13]; Lisenfeld, Ute[9]; Falgarone, Edith[11]; Struck, Curtis[12]
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246.12 Arecibo Galaxy Environment Survey: Visualizing the Volumes of Isolated Galaxies NGC 5523 & UGC 2082

Rodriguez, Roberto A.[1]; Minchin, Robert F.[2]; Taylor, Rhys[2]
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246.13 Mapping the Characteristics of NCG 7081 as a Function of Galactic Radius

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246.14 The Sagittarius Dwarf Galaxy Tidal Debris in the south Galactic Cap

Thompson, Jeffery[1]; Newby, Matthew[1]; Newberg, Heidi J.[1]; Desell, Travis[2]
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246.15 Exploring Evolution Through the Effects of Galaxy-Galaxy and Group Interactions on Gas Content

Fertig, Derek[1]; Rosenberg, Jessica L.[1]; Patton, David R.[2, 3]; Ellison, Sara L.[3]
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246.16 A Study of Galaxy Populations with Red [3.4]-[4.6] Colors

O'Connor, Jessica[1]; Rosenberg, Jessica L.[1]; Satyapal, Shobita[1]; Secrest, Nathan[1]; Stiffler, Daniel[1]
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246.17 Galaxy Zoo 2: Statistics of Morphological Sub-Populations

Pace, Zachary[1]; Willett, Kyle[2]; Fortson, Lucy[2]
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246.18 Insight into Gas Processing in Compact Groups of Galaxies
Walker, Lisa May[1]; Johnson, Kelsey E.[1]; Charlton, Jane C.[2]; Desjardins, Tyler D.[3]; Gallagher, Sarah[3]; Hornschemeier, Ann E.[4]; Kepley, Amanda A.[5]; Privon, George C.[1]; Tzanavaris, Panayiotis[4]; Whelan, David G.[6]
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246.19 Metallicities of Extraplanar H II Regions in Edge-on Spiral Galaxies
Rueff, Katherine M.[1]; Howk, J. C.[1]; Wotta, Christopher[1]; Croxall, Kevin V.[2]; Savage, Blair D.[3]; O'Meara, John[4]
[1.]University of Notre Dame, Notre Dame, IN. [2.]Ohio State University, Columbus, OH. [3.]University of Wisconsin, Madison, WI. [4.]St. Michael's College, Colchester, VT.

246.20 Magellanic Clues to Spatially-resolved Extinction Corrections for Distant Galaxies in the HST/JWST Era
Jansen, Rolf A.[1]; Kim, Duho[1]; Shewcraft, Timothy[1]; Windhorst, Rogier A.[1]; Tamura, Kazuyuki[2]
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246.21 The Green Valley is a Red Herring: Different Evolutionary Pathways for Spheroidal and Disk Galaxies
Urry, C. M.[1]; Schawinski, Kevin[2]; Simmons, Brooke D.[3]; Fortson, Lucy[4]; Kaviraj, Sugata[5]; Keel, William C.[6]; Lintott, Chris[3, 7]; Masters, Karen[8]; Nichol, Robert[8]; Sarzi, Marc[5]; Skibba, Ramin A.[9]; Treister, Ezequiel[10]; Willett, Kyle[4]; Wong, Oiwei[11]; Yi, Sukyoung[12]
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Contributing teams: Galaxy Zoo Citizen Scientists

246.22 A GBT HI Survey of the HALOGAS Galaxies
Pingel, Nickolas[1]; Pisano, Daniel J.[1]
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246.23 The Local Cluster Survey: Probing Gas Stripping in Nearby Galaxy Groups and Clusters
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Contributing teams: Local Cluster Survey Team

246.24 Physical and Morphological Parameters of [O II] Emitting Galaxies in the HET DEX Pilot Survey
Bridge, Joanna[1]; Gronwall, Caryl[1]; Ciardullo, Robin[1]; Hagen, Alex[1]; Zeimann, Gregory[1]
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Contributing teams: HETDEX Collaboration

246.25 850 µm source counts from a high-resolution survey with ALMA
Scott, Kimberly S.[1]; Sheth, Kartik[1]; Scoville, Nicholas[2]
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Contributing teams: COSMOS

246.26 Dependence of Galaxy Clustering on Stellar Mass and sSFR at z~1
Kim, Jae-Woo[1]; Im, Myungshin[1]; Lee, Seong-Kook[1]; Edge, Alastair[2]; Wake, David[3]
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246.27 The Influence of Bars in Triggering Star Formation Since z = 1
Powell, Diana[1, 2]
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Contributing teams: Kartik Sheth, Kimberley Scott

246.28 Luminosity and Color Dependence in Galaxy Cross-Correlations since z = 1 in PRIMUS
Bray, Aaron[1]; Blanton, Michael R.[2]; Coil, Alison L.[3]; Cool, Richard J.[4, 5]; Eisenstein, Daniel[1]; Moustakas, John[6]; Skibba, Ramin A.[3]; Zhu, Guangtun[7]
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246.29 Using Morphology to Identify Galaxy Mergers at High Redshift
Blancato, Kirsten[1]; Kartaltepe, Jeyhan S.[2]
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Contributing teams: CANDELS Collaboration

246.30 2D kinematics and physical properties of distant galaxies
Lemoine-Busserolle, Marie[1, 2]; Lamareille, Fabrice[3]; Bunker, Andrew J.[2]; Kissler-Patig, Markus[1]
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246.31 Spectral Energy Distribution Fitting of HETDEX Pilot Survey Lyman-alpha Emitters in COSMOS and GOODS-N
Hagen, Alex[1]; Gronwall, Caryl[1]; Ciardullo, Robin[1]; Acquaviva, Viviana[2]; Zeimann, Gregory[1]; Bridge, Joanna[1]; Gawiser, Eric J.[3]; Bond, Nicholas A.[4]
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Contributing teams: HETDEX Team

246.32 Galaxy Stellar Mass Functions from ZFOURGE/CANDELS: An Excess of Low-Mass Galaxies Since z=2 and the Rapid Buildup of Quiescent Galaxies
Tomczak, Adam R.[1]; Quadri, Ryan[2]; Tran, Kim-Vy[1]; Labbe, Ivo[3]; Straatman, Caroline[3]; Papovich, Casey J.[1]; Glazebrook, Karl[4]; Allen, Rebecca[4]; Kacprzak, Glenn[4]; Kawinwanichakij, Lalitwadee[1]; Kelson, Daniel[2]; McCarthy, Patrick J.[2]; Mehrtens, Nicola[1]; Monson, Andrew[2]; Persson, Eric[2]; Spitler, Lee[4]; Tilvi, Vithal[1]; Van Dokkum, Pieter G.[5]
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Contributing teams: ZFOURGE, CANDELS

246.33 SED Modeling of z~0.3-4 IR-Luminous Galaxies Using Hydrodynamic Simulations

Roebuck, Eric[1]; Sajina, Anna[1]; Pope, Alexandra[2]; Kirkpatrick, Allison[2]; Yan, Lin[3]; Hayward, Christopher C.[4]

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246.34 A large JVLA molecular & continuum deep field: First continuum results

Hodge, Jacqueline[1, 3]; Riechers, Dominik A.[2]; Walter, Fabian[3]; Carilli, Chris L.[4]; Wagg, Jeff[5]; Lentati, Lindley[6]; Sharon, Chelsea E.[7]

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246.35 Tadpole Galaxies in the Near-Infrared

Straughn, Amber[1]; Eufrasio, Rafael T.[2, 1]; Voyer, Elysse[3]; De Mello, Duilia F.[2]; Kassin, Susan A.[4]; Gardner, Jonathan P.[1]; Ravindranath, Swara[4]; Soto, Emmaris[2, 1]

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246.36 Advantages to Having Low Pollution Environments: X-ray Binary Populations in Nearby and Distant UV-selected Galaxies

Basu-Zych, Antara[1]; Lehmer, Bret[2, 1]; Hornschemeier, Ann E.[1, 2]; Fragos, Tassos[3]; Ptak, Andrew[1, 2]

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246.37 The Fundamental Metallicity Relation of High-Redshift Emission-Line Galaxies

Gebhardt, Henry[1, 2]; Zeimann, Gregory[1, 2]; Ciardullo, Robin[1, 2]; Gronwall, Caryl[1, 2]; Hagen, Alex[1, 2]

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246.38 Understanding the Physical Conditions that Drive Line Emission in Nebular Regions of High-Redshift Galaxies

Zeimann, Gregory[1]; Gebhardt, Henry[1]; Ciardullo, Robin[1]; Gronwall, Caryl[1]; Hagen, Alex[1]

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246.39 Cosmic Variance in the Physical Properties of Ly-alpha Emitting Galaxies at 2<z<3

Gronwall, Caryl[1]; Ciardullo, Robin[1]; Matkovic, Ana[1]; Feldmeier, John J.[2]; Hay, Jack[1]

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Contributing teams: MUSYC Collaboration

246.40 Constraints on Ly? Blob Number Densities at z~2.1 and z~3.1

Hay, John[1]; Ciardullo, Robin[1, 2]; Feldmeier, John J.[3]; Gronwall, Caryl[1, 2]; Hagen, Alex[1, 2]

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Contributing teams: MUSYC Collaboration

246.41 The Search for Diversities in Clumpy Galaxies
Soto, Emmaris[1]; De Mello, Duilia F.[1, 2]; Bond, Nicholas A.[2]; Rafelski, Marc[4]; Gardner, Jonathan P.[2]; Teplitz, Harry I.[3]
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Contributing teams: UV UDF Team

246.42 Outflow Properties of Star-forming Galaxies at z~2 from the MOSDEF Survey
Freeman, William R.[1]; Siana, Brian D.[1]; Shapley, Alice E.[2]; Coil, Alison L.[4]; Kriek, Mariska T.[3]; Mobasher, Bahram[1]; Reddy, Naveen[1]
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246.43 Further Studies of Lyman-alpha Galaxy Halos in MUSYC-LAE Fields
Feldmeier, John J.[1]; Hagen, Alex[2]; Ciardullo, Robin[2]; Gawiser, Eric J.[3]; Gronwall, Caryl[2]
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Contributing teams: MUSYC Collaboration

246.44 Parallel Galaxy Main Sequence and Quasar Evolution from z=0-6: A Unified View of Black Hole and Galaxy Evolution?
Speagle, Josh S.[1, 2]; Steinhardt, Charles L.[3, 2]; Capak, Peter L.[3]; Silverman, John D.[2]; Elvis, Martin[4]; Feldstein, Brian S.[5, 2]
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Contributing teams: SPLASH

246.45 Dynamically Modeling of Major Galaxy Mergers - Testing IDENTIKIT Using GADGET SPH Simulations
Mortazavi, S. Alireza[1]; Lotz, Jennifer M.[2]
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246.46 The Effect of Baryons on the Distribution of Dark Matter in Galactic Halos
Butsky, Iryna[1, 2]; Macciò, Andrea V.[2]
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246.47 Baryon Cycling in Cosmological Simulations of Spiral Galaxies
Christensen, Charlotte[1]; Dave, Romeel [2, 1]; Pontzen, Andrew[3]; Governato, Fabio[4]; Quinn, Thomas R.[4]
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246.48 Examining the dark matter distribution of a simulated dwarf galaxy undergoing a merger
Cates, Ian[1]; Christensen, Charlotte[1]
[1.] Steward Observatory, Tucson, AZ.

246.49 galaxy formation and evolution with an improved SPH code
Zhu, Qirong[1]; Li, Yuexing[1]
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246.50 A WISE View of Almost Dark ALFALFA Galaxies
Pérez, Jonathan[1]; Arrieta, Andres[1]; Pantoja, Carmen[1]; Lebron, Mayra E.[1]; Leisman, Luke[2]; Koopmann, Rebecca A.[3]; Haynes, Martha P.[2]
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246.51 Very Large Array HI Imaging of ALFALFA-Discovered 'Almost Dark' Galaxies
Martinkus, Charlotte[1]; Cannon, John M.[1]; Adams, Elizabeth A.[2]; Giovanelli, Riccardo[3]; Hallenbeck, Gregory[3]; Haynes, Martha P.[3]; Jones, Michael[3]; Jozsa, Gyula[2]; Koopmann, Rebecca A.[4]; Leisman, Luke[3]; Nichols, Nathan[5]; Papastergis, Emmanouil[6]; Rhode, Katherine L.[7]; Salzer, John J.[7]; Troischt, Parker[5]
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246.52 The Low CO Luminosity of Three Extremely Metal-Poor Star-Forming Galaxies
Molter, Edward[1]; Warren, Steven R.[2]; Bolatto, Alberto D.[2]; Cannon, John M.[1]; Adams, Elizabeth A.[3]; Elson, Edward C.[4]; Giovanelli, Riccardo[5]; Haynes, Martha P.[5]; McQuinn, Kristen B.[6]; Rhode, Katherine L.[7]; Salzer, John J.[7]; Skillman, Evan D.[6]
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246.53 The UAT Groups Project: HI Deficiency and Mass Function for Galaxies in Groups
Egner, Joanna[1]; Crone-Odekon, Mary[1]; Raskin, Mark[1]
[1.]Skidmore College, Saratoga Springs, NY.
Contributing teams: Undergraduate ALFALFA Team

246.54 Constraints on First-Stars Models From Observations of Local Low-Mass Dwarf Galaxies and Galactic Metal-Poor Halo Stars
Yung, Long Yan[1]; Venkatesan, Aparna[1]
[1.]University of San Francisco, San Francisco, CA.

246.55 L-Band Wide Follow-up Survey: Interesting Candidates and IDL Routines
Nichols, Nathan[1]; Grzeskowiak, Steven[1]; Murray, Kyle[1]; Troischt, Parker[1]
[1.]Hartwick College, Oneonta, NY.
Contributing teams: ALFALFA Team

246.56 Star Formation and Gas Content in the NRGb 168 Galaxy Group
Murray, Kyle[1]; Nichols, Nathan[1]; Grzeskowiak, Steven[1]; Troischt, Parker[1]
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Contributing teams: ALFALFA Team

246.57 Star Formation and Gas Content in the NRGb 301 Galaxy Group
Grzeskowiak, Steven[1]; Nichols, Nathan[1]; Murray, Kyle[1]; Troischt, Parker[1]
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Contributing teams: ALFALFA Team

246.58 Spitzer, Gaia, and the Potential of the Milky Way
Price-Whelan, Adrian M.[1]; Johnston, Kathryn V.[1]; Hogg, David W.[2]; Madore, Barry F.[3]; Majewski, Steven R.[4]
[1.]Columbia University, New York, NY. [2.]New York University, New York, NY. [3.]Carnegie Observatories , Pasadena, CA. [4.]University of Virginia, Charlottesville, VA.

246.59 Detection of CO2-1 in an ALMA [CII]-detected galaxy at z = 4.44
Huynh, Minh T.[1]
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246.60 Herschel-detected LBGs at z~2
Wojno, Jennifer L.[1]; Nichols, Matthew T.[1]; Haberzettl, Lutz[1]; Williger, Gerard M.[1]; Leist, Brian[1]
[1.]University of Louisville, Louisville, KY.

246.61 Cosmic evolution of star formation properties of galaxies
Kim, Sungeun[1]
[1.]Sejong University, Seoul, Korea, Republic of.

246.62 Strategies to observe JWST First Light objects at z=10--20 based on recent results from the HUDF XDF.
Windhorst, Rogier A.[1]
[1.]Arizona State Univ., Tempe, AZ.
Contributing teams: S. H. Cohen, R. A. Jansen (ASU), S. P. Driver, A. Robotham, M. Alpaslan, R. Lange (ICRAR, U-WA), A. M. Hopkins, M. Cluver, I. Konstantopoulos (AAO, Sydney), J. Stuart B. Wyithe, and Robert L. Barone-N

247 The Solar System Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

247.01 Lightcurve Analysis of Three Asteroids
Hayes-Gehrke, Melissa N.[1]
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247.02 Characterization of Asteroid 9983 Rickfienberg
Arion, Douglas N.[1]; Odden, Caroline[2]
[1.]Carthage College, Whitefield, NH. [2.]Phillips Academy, Andover, MA.

247.03 Rogue Asteroids in the Inner Main Asteroid Belt
DeMeo, Francesca E.[1]; Binzel, Richard P.[2]; Carry, Benoit[3]; Moskovitz, Nicholas[2]; Polishook, David[2]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Massachusetts Institute of Technology, Cambridge, MA. [3.]Institut de Mecanique Celeste et de Calcul des Ephemerides, Paris, France.

247.04 Capture of Asteroids and Transport of Asteroid Materials to Earth
Chiu, Hong-Yee[1]
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Contributing teams: no team

247.05 A Troop of Trojans: Photometry of 24 Jovian Trojan Asteroids
French, Linda M.[1]; Stephens, Robert D.[2]; Coley, Daniel[2]; Wasserman, Lawrence H.[3]; La Rocca, Daniel[1]; Vilas, Faith[4]
[1.]Illinois Wesleyan Univ., Bloomington, IL. [2.]Center for Solar System Studies, Rancho Cucamonga, CA. [3.]Lowell Observatory, Flagstaff, AZ. [4.]Planetary Science Institute, Tucson, AZ.

247.06 Identification and Investigation of Martian Dust Source Regions from Orbital Observation

Kulowski, Laura[1]; Wang, Huiqun[2]

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247.07 Extraction of Thermal Spectra of the Four Large Satellites of Uranus

Zivick, Paul[1]; Lebouteiller, Vianney[2]; Lunine, Jonathan I.[2]

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247.08 Observation and Analysis of a Single-Chord Stellar Occultation by Kuiper Belt Object (50000) Quaoar

Davis, Allen B.[1]; Pasachoff, Jay M.[1]; Babcock, Bryce A.[1]; Person, Michael J.[2]; Zuluaga, Carlos A.[2]; Bosh, Amanda S.[2]; Levine, Stephen[3]; Naranjo, Orlando A.[4]; Navas, Giuliat R.[5]; Gulbis, Amanda A.S.[2, 6]; Winters, Jennifer G.[7, 8]; Bianco, Federica[9, 10]

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247.09 Variable Features of Saturn's B-ring

Salmon, Rachel[1]; Hedman, Matthew M.[2]; Nicholson, Philip D.[2]

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247.10 Applying Advection-Corrected Correlation Image Velocimetry techniques to Saturn's winds

White, Aaron[1]; Barranco, Joseph A.[1]; Marcus, Philip[2]; Solari, Omid[2]; Sayanagi, Kunio M.[3]

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247.11 Geolocation of Terrestrial Gamma Ray Flashes in Gamma Rays Using the Fermi Large Area Telescope

Schaal, Meagan[1, 2]; Grove, J. E.[2]; Chekhtman, Alexandre[3, 2]; Xiong, Shaolin[4]; Fitzpatrick, Gerard[5]; Cummer, Steven[6]; Holzworth, Robert H.[7]

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247.12 Infrared Spectroscopy of Comet C/2012 S1 (ISON)

Sitko, Michael L.[2, 1]; Russell, Ray W.[3]; Yanamandra-Fisher, Padma A.[2]; Lisse, Carey M.[4]; Kelley, Michael S.[5]; Wooden, Diane H.[7]; Woodward, Charles E.[6]; Harker, David E.[8]; Grady, C. A.[10, 9]

[1.]Univ. of Cincinnati, Cincinnati, OH. [2.]Space Science Institute, Boulder, CO. [3.]The Aerospace Corporation, Los Angeles, CA. [4.]Applied Physics Lab, Laurel, MD. [5.]Univ. of Maryland, College Park, MD. [6.]Univ. of Minnesota, Minneapolis, MN. [7.]NASA Ames Research Center, Moffett Field, CA. [8.]UCSD/CASS, San Diego, CA. [9.]NASA Goddard Space Flight Center, Greenbelt, MD. [10.]Eureka Scientific., Inc, Oakland, CA.

247.13 Pilot Study of Enhanced Minor Planet Detection Using NEOWISE Data
Cukrov, Greta[1, 2]; Mainzer, Amanda K.[2]; Bauer, James M.[2, 3]; Grav, Tommy[4]; Masiero, Joseph R.[2]; Cutri, Roc M.[3]; Wright, Edward L.[5]; Nugent, Carolyn[2]; Stevenson, Rachel[2]; Clyne, Elisabeth[2]; Masci, Frank J.[3]
[1.]San Jose State University, San Jose, CA. [2.]Jet Propulsion Laboratory, La Cañada Flintridge, CA. [3.]Infrared Processing and Analysis Center, Pasadena, CA. [4.]Planetary Sciences Institute, Tucson, AZ. [5.]University of California, Los Angeles, Los Angeles, CA.

247.14 MCMC Radiometric Diameter Uncertainties Applying a Rotating Cratered Ther mophysical Model to WISE Data
Wright, Edward L.[1]; Mainzer, Amy[2]
[1.]UC, Los Angeles, Los Angeles, CA. [2.]JPL, Pasadena, CA.

247.15 The Pre-Perihelion Size of the Nucleus of Comet C/2012 S1 (ISON)
Kelley, Michael S.[1]; Li, Jian-Yang[2]; Mutchler, Maximilian J.[3]; Weaver, Harold A.[4]; Knight, Matthew M.[5]
[1.]Univ. of Maryland, College Park, MD. [2.]Planetary Science Institute, Tucson, AZ. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]Johns Hopkins University Applied Physics Laboratory, Laurel, MD. [5.]Lowell Observatory, Flagstaff, AZ.
Contributing teams: HST ISON Imaging Science Team

247.16 Observations of the Black-Drop Effect at the 2012 Transit of Venus
Rogoszinski, Zeeve[1, 2]; Pasachoff, Jay M.[2]; Babcock, Bryce A.[2]; Schneider, Glenn[3]; Reardon, Kevin P.[4]
[1.]Vassar College, Poughkeepsie, NY. [2.]Williams College, Williamstown, MA. [3.]University of Arizona, Tucson, AZ. [4.]National Solar Observatory, Sacramento Peak, NM.

247.17 Interpreting the Thermal Lightcurve of Iapetus at 1.3mm
Hagen, Norland Raphael[2, 1]; Moullet, Arielle[1]; Gurwell, Mark A.[3]
[1.]National Radio Astronomy Observatory , Charlottesville, VA. [2.]University of Montana, Missoula, MT. [3.]Harvard-Smithsonian CfA, Cambridge , MA.

247.18 Lunar Sodium and Potassium Exospheric Emissions
Oliversen, Ronald J.[1]; Mierkiewicz, Edwin J.[2]; Roesler, Fred L.[3]; Lupie, Olivia L.[1]; Garnder, Derek D.[3]; Derr, Nicholas[3]; Kurapparatchi, Dona[2]; Walter, Nicholas M.[3]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]Embry-Riddle Aeronautical University, Daytona Beach, FL. [3.]University of Wisconsin, Madison, WI.

247.19 January and February Meteor Showers Detected by CAMS: the Cameras for Allsky Meteor Surveillance
Johnson, Beth[1, 2]; Jenniskens, Petrus M.[1, 3]
1.SETI Institute, Mountain View, CA. [2.]San Jose State University, San Jose, CA. [3.]NASA Ames Research Center, Mountain View, CA.

247.20 Explanatory Supplement to the Astronomical Almanac (3rd Edition)
Urban, Sean E.[1]; Seidelmann, P. K.[2]
[1.]U.S. Naval Obs., Washington, DC. [2.]Univ. of Virginia, Charlottesville, VA.

247.21 The Astronomical Almanac: Recent Improvements to a Standard Resource
Stewart, Susan G.[1]; Kaplan, George H.[1]; Urban, Sean E.[1]
[1.]U.S. Naval Obs., Washington, DC.

247.22 Prediction and Archival Tools for Asteroid Radar Observations
Miles, Brittany[1]; Margot, Jean-Luc[1, 2]
[1.]Earth, Planetary, and Space Sciences, UCLA, Los Angeles, CA. [2.]UCLA - Department of Physics and Astronomy, Los Angeles, CA.

248 Lenses & Waves Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

248.01 Using Variability to Search for Lensed Quasars in the Dark Energy Survey
Buckley-Geer, Elizabeth J.[1]
[1.]Fermi Nat'l Accelerator Laboratory, Batavia, IL.
Contributing teams: Dark Energy Survey Collaboration

248.02 Modelling Gravitational Microlenseing Events from Large Scale Surveys: Point-like to Planets
Tunbridge, Ben[1, 2]; Di Stefano, Rosanne[1]; Primini, Frank[1]; Ginsburg, Idan[1]; Bryk, William[3]; Murphy, Max[1]; Oprescu, Antonia[1]; Kunapuli, Nikhil[4]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]School of Physics and Astronomy, University of Southampton, Southampton, Hampshire, United Kingdom. [3.]Ramaz Upper School, New York, NY. [4.]Bridgewater-Raritan High School, Bridgewater, NJ.

248.03 A framework for modeling line-of-sight effects in strong gravitational lensing
Keeton, Charles R.[1]; McCully, Curtis[1]; Wong, Kenneth C.[2]; Zabludoff, Ann I.[3]
[1.]Rutgers Univ., Piscataway, NJ. [2.]ASIAA, Taipei, Taiwan. [3.]Univ. Arizona, Tucson, AZ.

248.04 Laying the Foundation for Space-based Gravitational Wave Detection: LISA Pathfinder, the LISA Test Package, and ST7-DRS
Thorpe, James[1]; Ziemer, John[2]; McNamara, Paul[3]
[1.]NASA GSFC, Greenbelt, MD. [2.]NASA JPL, Pasadena, CA. [3.]ESA ESTEC, Noordwijk, Netherlands.
Contributing teams: LPF Team, LTP Team, ST7-DRS Team

248.05 Calculations of Null Geodesics in the Schwarzschild Metric
Kwiatkowski, Luke[1]
[1.]The University of Toledo, Toledo, OH.

248.06 Optical observations of lensing candidates for millimeter-wave sources
Blackman, Ryan[1, 2]; Hughes, John P.[2]
[1.]Northern Arizona University, Flagstaff, AZ. [2.]Rutgers, The State University of New Jersey, New Brunswick, NJ.

248.07 Seeking fast transient counterparts to gravitational triggers from LIGO & Virgo
Kanner, Jonah[1]
[1.]Caltech, Pasadena, CA.
Contributing teams: LIGO Scientific Collaboration, Virgo Collaboration

248.08 Electromagnetic Counterparts to massive black hole mergers
Baker, John G.[1]
[1.]NASA/GSFC, Greenbelt, MD.

248.09 Pulsar Timing Data Simulator for the testing of Gravitational Wave Analysis Pipelines
Luo, Jing[1, 2]; Jenet, Fredrick[1]; Ransom, Scott M.[4]; Demorest, Paul[4]; Lazio, Joseph[3]; Wang, Yan[1]
[1.]The University of Texas at Brownsville, Brownsville, TX. [2.]The University of Texas at San Antonio, San Antonio, TX. [3.]JPL, Pasadena, CA. [4.]NARO, Charlottesville, VA.

248.10 Limiting alternative theories of gravity with multi-messenger gravitational wave observations
Larson, Shane L.[1]; Hazboun, Jeffrey S.[2]
[1.]CIERA/Northwestern University, Evanston, IL. [2.]Utah State University, Logan, UT.

248.11 Creating A Robust And Efficient Pipeline For Detection Of A Gravitational Wave Stochastic Background For Pulsar Timing Data
Simon, Joseph[1]; Siemens, Xavier[1]; Ellis, Justin[1]
[1.]University of Wisconsin Milwaukee, Milwaukee, WI.

248.12 Recovering Hardware Injections in LIGO S5 Data
Disbrow, Ashley[1]; Kanner, Jonah[2]; Williams, Roy[2]; Vallisneri, Michele[3, 2]; Weinstein, Alan J.[2]
[1.]Carnegie Mellon University , Pittsburgh, PA. [2.]California Institute of Technology, Pasadena, CA. [3.]Jet Propulsion Laboratory, Pasadena, CA.

248.13 eLISA: A mission to study the entire universe with gravitational waves
Hewitson, Martin[1]
[1.]AEI Hannover, Hannover, Niedersachsen, Germany.
Contributing teams: eLISA Consortium

248.14 A new torsion pendulum for testing enhancements to the LISA Gravitational Reference Sensor
Conklin, John[1]; Chilton, Andrew[1]; Ciani, Giacomo[1]; Mueller, Guido[1]; Olatunde, Taiwo[1]; Shelley, Ryan[1]
[1.]University of Florida, Gainesville, FL.

248.15 Analysis Method for the Drift-Mode Experiment on LISA Pathfinder
Cutler, Curt[1]; Thorpe, James[2]
[1.]Jet Propulsion Laboratory, Pasadena, CA. [2.]Goddard Space Flight Center, Greenbelt, MD.

249 NITARP: The NASA/IPAC Training in Archival Research Program

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

249.01 NITARP: Impact Assessment, 2005-2013
Rebull, Luisa M.[1]; Gorjian, Varoujan[1]; Brinkworth, Carolyn[1]; Squires, Gordon K.[1]; Burtnyk, Kim[2]
[1.]Caltech, Pasadena, CA. [2.]Science for Society, South Pasadena, CA.

249.02 NITARP Alignment with Common Core Literacy and Mathematics Standards
Granucci, Nicole[3]; Gorjian, Varoujan[1]; Paulsen, Theresa[4]; Rutherford, Thomas[2]; Blackwell, John[5]
[1.]JPL/California Institute of Technology, Pasadena, CA. [2.]Sullivan South High School, Kingsport, TN. [3.]Oxford High School, Oxford, CT. [4.]Ashland High School, Ashland, WI. [5.]Phillips Exeter Academy, Exeter, NH.

249.03 Extending the invitation: Supporting learners from gateway experiences to participating in astronomical research
Laurence, Wendi[1]; Gibbs, John[2]; Marshall, Robert[3]; Murphy, Michael[4]; Orr, Laura[5]; Rebull, Luisa M.[6]; Whitworth, Christi[7]
[1.]Portland State University, Porltand , OR. [2.]Glencoe High School, Hillsboro, OR. [3.]Carnegie Science Center, Pittsburgh, PA. [4.]Ravenscroft School, Raleigh, NC. [5.]Ukiah High School, Ukian, OR. [6.]Caltech, Pasadena, CA. [7.]Pisgah Astronomical Research Institute, Asheville, NC.

249.04 An Initial Analysis of Learning Styles Exhibited by High School Science Students
Donelson, Frederick[1]; Bensel, Holly[2]; Miller, Danielle[3]; Seebode, Sally[4]; Ciardi, David R.[5]; Howell, Steve B.[6]
[1.]Gahanna Lincoln High School, Gahanna, OH. [2.]St. Mary's School, Medford, OR. [3.]University High School, Orlando, FL. [4.]San Mateo High School, San Mateo, CA. [5.]NExScI, Pasadena, CA. [6.]NASA ARC, Mountain View, CA.

249.05 Enhancing Scientific Literacy in the Northeast Kingdom
Blackwell, John[1, 2]; Moss, Ben[2]; Wanzer, Sidney[2]
[1.]Phillips Exeter Academy, Exeter, NH. [2.]Northeast Kingdom Astronomy Foundation, Peacham, VT.

249.06 Charming the Snake: Student Experiences with Python Programming as a Data Analysis Tool
Booker, Melissa[1]; Ivers, Carol B.[3]; Piper, Margaret (Peggy)[4]; Powers, Lynn[5]; Ali, Babar[2]
[1.]Robinson Secondary, Centreville, VA. [2.]Caltech, Pasadena, CA. [3.]Foran High School, Milford, CT. [4.]Lincoln-Way North High School, Frankfort, IL. [5.]Bozeman High School, Bozeman, MT.

249.07 Looking Inside XX Cygni
Pereira, Vincent[1]; Doyle, Thomas[1]; Robles, Rebecca[1]; Rebull, Luisa M.[2]
[1.]Freeport Public Schools, Freeport, NY. [2.]Caltech, Pasadena, CA.

250 AGN, QSO, Blazars Poster Session I

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

250.01 Analysis of Quasar Variability Using Kepler Quarter 14 and 15 Data
Nowak, David[1]; Revalski, Mitchell[1]; Wiita, Paul J.[1]; Wehrle, Ann E.[2]; Unwin, Stephen C.[3]
[1.]The College of New Jersey, Ewing, NJ. [2.]Space Science Institute, Boulder, CO. [3.]Jet Propulsion Lab, Pasadena, CA.

250.02 Investigating AGN Variability Using Combined Multi-Quarter Kepler Data
Revalski, Mitchell[1]; Nowak, Dawid[1]; Wiita, Paul J.[1]; Wehrle, Ann E.[2]; Unwin, Stephen C.[3]
[1.]The College of New Jersey, Glen Gardner, NJ. [2.]Space Science Institute, Boulder, CO. [3.]Jet Propulsion Laboratory, Pasadena, CA.

250.03 Analysis of Kepler Lightcurves Using Turbulent Jet Model
Dhalla, Sarah M.[1]; Webb, James R.[1]; Bhatta, Gopal[2]; Laurence, Douglas[1]
[1.]Florida International University, Miami, FL. [2.]Jagiellonian University, Krakow, Poland.

250.04 Photometric Monitoring of the Active Galactic Nucleus in NGC 7469
Roberts, Caroline A.[1]; Bentz, Misty C.[2]
[1.]Sewanee: The University of the South, Sewanee, TN. [2.]Georgia State University, Atlanta, GA.
Contributing teams: Stare Collaboration

250.05 Using Swift to Search for Fast X-ray Variability from Blazars and Study Jet Emission
Pryal, Matthew[1]; Falcone, Abraham[1]; Stroh, Michael[1]
[1.]The Pennsylvania State University, University Park, PA.

250.06 Detecting a Jet and Tidal Tail in HST Images of Pictor A
Gentry, Eric S.[1]; Marshall, Herman L.[1]; Perlman, Eric S.[3]; Birkinshaw, Mark[4]; Hardcastle, Martin[2]; Harris, D. E.[6]; Lenc, Emil[5]; Siemiginowska, Aneta[6]; Urry, C. M.[7]; Worrall, Diana M.[4]
[1.]Massachusetts Institute of Technology, Cambridge, MA. [2.]University of Hertfordshire, Hatfield, United Kingdom. [3.]Florida Institute of Technology, Melbourne, FL. [4.]University of Bristol, Bristol, United Kingdom. [5.]CSIRO Australia Telescope National Facility, Epping, NSW, Australia. [6.]Smithsonian Institution Astrophysical Observatory, Cambridge, MA. [7.]Yale University, New Haven, CT.

250.07 Investigating C IV Line Variability and Multiple Epoch C IV SMBH Mass Estimates
Sharma, Ramon[1]
[1.]University of Washington, Seattle, WA.

250.08 Monitoring the Lensed Quasars FBQ 0951+2635 and SDSS 1650+4251 in the Near-Infrared: Technical Challenges
Demers, Aaron[1]; Gerlach, Gregory[1]; Morgan, Christopher W.[1]; MacLeod, Chelsea[1]; Vrba, Frederick J.[2]
[1.]US Naval Academy, Annapolis, MD. [2.]us Naval Observatory, flagstaff, AZ.

250.09 II ZW 229.015: The most complete optical light curve of any AGN.
Williams, Joshua[1]; Carini, Michael T.[1]
[1.], Bowling Green, KY.

250.10 Outburst in the Gamma-ray Bright Quasar CTA26
Foord, Adi[1]; Jorstad, Svetlana G.[1]; Marscher, Alan P.[1]
[1.]Boston University, Boston, MA.

250.11 Quasar Ionization Echoes -- 100,000 Year Baseline AGN Light Curves
Schirmer, Mischa[1]; Keel, William C.[2]; Fu, Hai[4]; Nagao, Tohru[3]; Levenson, Nancy[1]; Diaz, Ruben[1]; Turner, James[1]; Holhjem, Karianne[5]
[1.]Gemini Observatory, La Serena, Chile. [2.]University of Alabama, Tuscaloosa, AL. [3.]University of Kyoto, Kyoto, Japan. [4.]University of Iowa, Iowa City, IA. [5.]SOAR telescope, La Serena, Chile.

250.12 Time-Correlation Between Optical and Gamma-ray Activity in Blazars
Cohen, Daniel P.[1]; Romani, Roger W.[2]; Filippenko, Alexei V.1; Cenko, Stephen B.[3]; Lott, Benoit[4, 5]
[1.]UC Berkeley, Berkeley, CA. [2.]Stanford University, Stanford, CA. [3.]NASA / Goddard Space Flight Center , Greenbelt, MD. [4.]CENBG, Bordeaux Gradignan, France. [5.]SLAC, Stanford, CA.

250.13 TANAMI Discovery of a Milliarcsecond-scale Symmetric Radio Structure in the Gamma-ray Source PMN J1603-4904
McConville, William[1]; Mueller, Cornelia[2]; Ojha, Roopesh[3]
[1.]NASA GSFC / University of Maryland, Adelphi, MD. [2.]Universitat Wurzburg / Universitat Erlangen-Nurnberg, Bamberg, Germany. [3.]NASA GSFC, Greenbelt, MD.
Contributing teams: TANAMI Collaboration, Fermi-LAT Collaboration

250.14 SMARTS Optical and Near-Infrared Observations of Fermi LAT Blazars
Buxton, Michelle[1]; Isler, Jedidah[1]; Urry, C. M.[1]; Hasan, Imran[1]; MacPherson, Emily[1]; Bailyn, Charles D.[1]; Coppi, Paolo S.[1]
[1.]Yale University, New Haven, CT.
Contributing teams: Fermi Gamma-ray Space Telescope

250.15 Spectroscopic Monitoring of Supermassive Black Hole Binary Candidates
Mathes, Gavin[1]; Eracleous, Michael[1]; Sigurdsson, Steinn[1]; Runnoe, Jessie C.[1]; Bogdanovic, Tamara[2]
[1.]Penn State University, State College, PA. [2.]Georgia Institue of Technology, Atlanta, GA.

250.16 Time Variation of the Broad H? Emission Line in Local Active Galaxies
Scott, Bryan[1]; Bennert, Vardha Nicola[1]; Komossa, Stefanie[2]; Treu, Tommaso[3]; Auger, Matthew[4]; Malkan, Matthew A.[5]
[1.]California Polytechnic State University, San Luis Obispo, CA. [2.]Max Planck Institute for Radio Astronomy, Bonn, Germany. [3.]University of California, Santa Barbara, Santa Barbara, CA. [4.]Institute of Astronomy, Cambridge, United Kingdom. [5.]University of California, Los Angeles, Los Angeles, CA.

250.17 Exploring the Variability of the Fermi LAT Blazar Population
Macomb, Daryl J.[1]; Shrader, Chris R.[2]
[1.]Boise State Univ., Boise, ID. [2.]NASA/GSFC, Greenbelt, MD.

250.18 Variability in the Intrinsic Absorption in the Seyfert 1 Galaxy NGC 3783
Gabel, Jack[1]; Crenshaw, D. M.[2]; Dunn, Jay P.[3]; Kraemer, Steven B.[4]
[1.]Creighton University, Omaha, NE. [2.]Georgia State University, Atlanta, GA. [3.]Augusta State University, Augusta, GA. [4.]The Catholic University of America, Washington, DC.

250.19 A systematic search for X-ray cavities in galaxy clusters, groups, and elliptical galaxies
Shin, Jaejin[1, 2]; Woo, Jong-Hak[1, 2]; Mulchaey, John S.[2]
[1.]Seoul National University, Republic of Korea, Seoul, Seoul, Korea, Republic of. [2.]Carnegie Observatories, Pasadena, CA.

250.20 Feedback in the Local Universe: The Relation Between Star Formation and AGN Activity in Typical Elliptical Galaxies
Vaddi, Sravani[1]; O'Dea, Christopher P.[1]; Baum, Stefi A.[1]; Jones, Christine[2]; Forman, Bill[2]; Whitmore, Samantha[3]; Ahmed, Rabeea[3]
[1.]Rochester Institute of Technology, Rochester, NY. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]Harvard University Cambridge, Cambridge, MA.

250.21 Large Radio Sources Hosted by Spiral Galaxies (aka: The Wrong Type of Host!)
Duffin, Ryan[1, 2]; Mao, Minnie[1]; Owen, Frazer N.[1]
[1.]National Radio Astronomy Observatory, Socorro, NM. [2.]University of Virginia, Charlottesville, VA.

250.22 Morphological Classifications of the Nuclear Disks and Radio Jets for a Complete Sample of Nearby Radio-Loud Elliptical Galaxies
Chari, Vignesh[1, 2]; Noel-Storr, Jacob[1]; Paradis, Jeff[2]; Keenan, Josephine[2, 1]; Dioguardi, Patrick[2, 1]
[1.]Rush-Henrietta Senior High School, Henrietta, NY. [2.]Rochester Institute of Technology, Rochester, NY.
Contributing teams: The UGC FR-I Collaboration

250.23 From Starburst to Quiescence: Testing AGN Feedback in Post-Starbursts Galaxies.
Yesuf, Hassen M.[1]; Faber, Sandra M.[1]; Trump, Jonathan R.[1]; Koo, David C.[1]; Fang, Jerome J.[1]
[1.]UCSC, Santa Cruz, CA.

250.24 Relative Influence of Galaxy Mergers and Clusters on AGN Activity
Khabiboulline, Emil[1]; Steinhardt, Charles L.[1, 2]; Silverman, John D.[2]; Ellison, Sara L.[3]; Mendel, Trevor[4]
[1.]California Institute of Technology, Pasadena, CA. [2.]Kavli Institute for the Physics and Mathematics of the Universe, Kashiwanoha, Japan. [3.]University of Victoria, Victoria, BC, Canada. [4.]Max Planck Institute for Extraterrestrial Physics, Garching, Germany.

250.25 Active Galactic Nuclei in Dwarf Galaxies
Hein, Megan[1]; Secrest, Nathan[1]; Satyapal, Shobita[1]
[1.]George Mason University, Fairfax, VA.

250.26 Obscured Active Galactic Nuclei in Dwarf Galaxies
Hrebinka, Jesse[1]; Satyapal, Shobita[1]; Secrest, Nathan[1]; Koju, Raj K.[1]; Schmitt, Henrique R.[1]
[1.]George Mason University, Fairfax, VA.

250.27 Color-Magnitude Relationship of Type I Seyfert Galaxies with Redshifts from 0.1<z<0.8 Using Data From Sloan and GALEX
Rutherford, Thomas[1]; Gorjian, Varoujan[2]; Granucci, Nicole[3]; Paulsen, Theresa[4], [5]; Blackwell, John[6]; Boyd, Matthew[1]; Cox, Wesley[1]; Fratt, Ellie[5]; Goetsch, Brendan[5]; Hatlehol, Thomas[5]; Hiester, Luke[1]; Juoni, Hannah[4]; McGee, Clara[3]; Meyer, Brian[5]; Michel, Shayla[4]; Miner, Mackenzie[3]; Nanney, Peyton[1]; Pankratz, Elizabeth[4]; Paulsen, Laura[7]; Ramsay, Dylan[3]; Spahr, Ariadne[6]; Westgate, Brian[3]
[1.]Sullivan South High School, Kingsport, TN. [2.]JPL/California Insitute of Technology, Pasadena, CA. [3.]Oxford High School, Oxford, CT. [4.]Mellen High School, Mellen, WI. [5.]Ashland High School, Ashland, WI. [6.]Phillips Exeter Academy , Exeter, NH. [7.]Washburn High School , Washburn, WI.

250.28 Red Quasars: Hunting For Hidden Rubies in the Sky
Calapa, Marie[1, 3]; Gregg, Michael[2]; West, Michael[3]
[1.]University of Massachusetts Amherst, Amherst, MA. [2.]University of California Davis, Davis, CA. [3.]Maria Mitchell Association, Nantucket, MA.

250.29 Extending the Fermi – Swift Joint AGN Sample
Shrader, Chris R.[1]; Macomb, Daryl J.[2]
[1.]NASA's GSFC, Greenbelt, MD. [2.]Boise State University, Boise, ID.

250.30 UV Emission of AGN in the 2Jy Sample of Southern Radio Galaxies
Every, Michael[1]; O'Dea, Christopher P.[1]; Baum, Stefi A.[1]; Noel-Storr, Jacob[1]; Vaddi, Sravani[1]
[1.]Rochester Institute of Technology, Rochester, NY.

250.31 A Far-UV to Mid-IR Survey of Nearby Interacting Galaxies and Mergers
Weston, Madalyn[1]; McIntosh, Daniel H.[1]; Rigby, Jane R.[2]
[1.]University of Missouri-Kansas City, Kansas City, MO. [2.]NASA/GSFC, Greenbelt, MD.

250.32 Investigating black hole - galaxy connection from present to past
Woo, Jong-Hak[1]; Park, Daeseong[1]; Bennert, Vardha Nicola[2]; Treu, Tommaso[3]; Malkan, Matthew A.[4]; Auger, Matt[5]
[1.]Seoul National University, Seoul, Korea, Republic of. [2.]California Polytechnic State University, San luis Obispo, CA. [3.]UC Santa Barbara, Santa Barbara, CA. [4.]UCLA, LA, CA. [5.]Cambrige, Cambrige, United Kingdom.

250.33 GeMS/GSAOI imaging of z ~ 0.3 BL Lacs
Ridgway, Susan E.[1]; Pessev, Peter [2]; Floyd, David[3]
[1.]NOAO, Tucson, AZ. [2.]Gemini Telescope, La Serena, Chile. [3.]Monash University, Melbourne, ACT, Australia.

250.34 Black Hole Growth in Low-redshift LoBAL QSOs
Lazarova, Mariana S.[1]; Canalizo, Gabriela[2]
[1.]Colorado College, Colorado Springs, CO. [2.]UC, Riverside, Riverside, CA.

251 AGN, QSO, Blazars Poster Session II

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

251.01 The Parsec-scale Structure and Kinematics of Radio-Loud Narrow-Line Seyfert 1 Galaxies
Richards, Joseph L.[1]; Lister, Matthew L.[1]; Foschini, Luigi[2]; Savolainen, Tuomas[3]; Homan, Daniel C.[4]; Kadler, Matthias[5]; Hovatta, Talvikki[6]; Readhead, Anthony C.[6]; Arshakian, Tigran[7]; Chavushyan, Vahram[8]
[1.]Purdue University, West Lafayette, IN. [2.]INAF, Brera, Italy. [3.]MPIfR, Bonn, Germany. [4.]Denison University, Granville, OH. [5.]University of Würzburg, Würzburg, Germany. [6.]Caltech, Pasadena, CA. [7.]University of Cologne, Cologne, Germany. [8.]INAOE, Puebla, Mexico.

251.02 Deconvolving Contributions to the Narrow Emission-Line Spectra of Narrow-Line Seyfert 1s
Kraemer, Steven B.[1]; Crenshaw, D. M.[2]; Schmitt, Henrique R.[3]; Dietrich, Matthias[4]
[1.]Catholic University of America, Washington, DC. [2.]Georgia State University, Atlanta, GA. [3.]NRL, Washington, DC. [4.]University of Ohio, Athens, OH.

251.03 Size of the Narrow Line Region in Low Luminosity AGNS
Soto, Edith[1]; Hainline, Kevin[2]; Hickox, Ryan C.[2]
[1.]California State University Los Angeles, Los Angeles, CA. [2.]Dartmouth College, Hanover, NH.

251.04 Reverberation Mapping of the Dusty Torus of AGN NGC 6418
Vazquez, Billy[1]; Galiani, Pasquale[2]; Richmond, Michael W.[1]; Robinson, Andrew[1]; Horne, Keith D.[2]; Almeyda, Triana[1]; Bottorff, Mark[3]; Batcheldor, Daniel[4]; Peterson, Bradley M.[5]; Gallimore, Jack F.[6]; Buchanan, Catherine[7]; Capetti, Alessandro[8]; Elitzur, Moshe[9]; Kishimoto, Makoto[10]; Marconi, Alesandro[11]; Mason, Rachel[12]; Netzer, Hagai[13]; Packham, Christopher C.[14]; Perez, Enrique[15]; Tadhunter, Clive[16]; Stirpe, Giovanna[17]; Storchi-Bergmann, Thaisa[18]; Upton, John[3]; Axon, David[1]
[1.]Rochester Institute of Technology, Rochester, NY. [2.]University of St. Andrews, St. Andrews, Scotland, United Kingdom. [3.]Southwestern University, Georgetown, TX. [4.]Florida Institute of Technology, Melbourne, FL. [5.]Ohio State University, Columbus, OH. [6.]Bucknell University, Lewisburg, PA. [7.]University of Melbourne, Parkville, VIC, Australia. [8.]Istituto Nazionale di Astrofisica, Roma, Roma, Italy. [9.]University of Kentucky, Lexington, KY. [10.]Max Planck Institute, Bonn, Bonn, Germany. [11.]University of Florence, Florence, Florence, Italy. [12.]Gemini Observatory, Hilo, HI. [13.]Telaviv University, Telaviv, Israel, Israel. [14.]University of Texas, San Antonio, TX. [15.]Instituto de Astrofísica de Andalucía , Granada, Andalucia, Spain. [16.]The University of Sheffield, Western Bank, Sheffield, United Kingdom. [17.]Osservatorio Astronomico di Bologna, Bologna, Bologna, Italy. [18.]Universidade Federal do Rio Grande do Sul, Porto Algre, RS, Brazil.

251.05 Angular Distribution of the X-ray Reflection in Accretion Disks
Garcia, Javier[1]; Dauser, Thomas [4, 5]; Lohfink, Anne M.[2]; Kallman, Timothy R.[3]; McClintock, Jeffrey E.[1]; Steiner, James F.[1]; Brenneman, Laura[1]; Wilms, Jörn[4, 5]; Reynolds, Christopher S.[2]; Tombesi, Francesco[2, 3]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]University of Maryland, Greenbelt, MD. [3.]NASA Goddard Space Flight Center, Greenbelt, MD. [4.]Dr. Karl Remeis-Observatory, Bamberg, Germany. [5.]Erlangen Centre for Astroparticle Physics, Bamberg, Germany.

251.06 Correlations of Circumnuclear Water Maser Luminosity with AGN Activity and SMBH Mass
Mei, Ming-Yi Jeffrey[2]; Zaw, Ingyin[1, 2]; Greenhill, Lincoln J.[3]
[1.]Center for Cosmology and Particle Physics, Department of Physics, New York University, New York, NY. [2.]New York University Abu Dhabi, Abu Dhabi, Abu Dhabi, United Arab Emirates. [3.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

251.07 Gas Flows in the Inner Kiloparsec of NGC 1386
Lena, Davide[1]; Robinson, Andrew[1]; Seelig, Trent[1]; Schnorr-Muller, Allan[2]; Riffel, Rogemar A.[3]; Storchi-Bergmann, Thaisa[2]; Couto, Guilherme[2]
[1.]Rochester Institute of Technology, Rochester, NY. [2.]Universidade Federal do Rio Grande do Sul, Porto Alegre, Rio Grande do Sul, Brazil. [3.]Universidade Federal de Santa Maria, Santa Maria, Rio Grande do Sul, Brazil.

251.08 Spitzer and Kepler Space Telescope Detection of Reverberation in the Seyfert 1 Galaxy Zw 229-015
Gorjian, Varoujan[1]; Barth, Aaron J.[2]; Bloom, Joshua S.[3]; Edelson, Richard[4]; Filippenko, Alexei V.[3]; Hoenig, Sebastian[5]; Joner, Michael D.[6]; Li, Weidong[3]; Malkan, Matthew A.[7]; Mushotzky, Richard[4]; Nguyen, My L.[8]; Vaughan, Simon[9]
[1.]JPL/Caltech, Pasadena, CA. [2.]UCI, Irvine, CA. [3.]UCB, Berkeley, CA. [4.]U. of Maryland, College Park, MD. [5.]U. of Copenhagen, Copenhagen, Denmark. [6.]BYU, Provo, UT. [7.]UCLA, Los Angeles, CA. [8.]U. of Wyoming, Laramie, WY. [9.]U. of Leicester, Leicester, United Kingdom.

251.09 A Statistical Investigation of the Connection between X-ray and Water Maser Emission in Galaxy Centers
Nutter, Andrew[1]; Constantin, Anca[1]
[1.]James Madison University Department of Physics and Astronomy, Harrisonburg, VA.

251.10 The SEDs of Gapped Accretion Disks surrounding Binary Black Holes
Gultekin, Kayhan[1]; Miller, Jon M.[1]
[1.]Univ. Of Michigan, Ann Arbor, MI.

251.11 Probing Systematic Bias in the Reverberation Mapped Quasar Sample
Smith, Robyn[1]; Richards, Gordon T.[1]; Gallagher, Sarah[2]
[1.]Drexel University, Philadelphia, PA. [2.]University of Western Ontario, London, ON, Canada.

251.12 The Importance of Winds for AGN Feedback
Crenshaw, D. M.[1]; Kraemer, Steven B.[2]; Schmitt, Henrique R.[3]; Fischer, Travis C.[1]; Gagne, Justin[1]
[1.]Georgia State Univ., Atlanta, GA. [2.]The Catholic University of America, Washington, DC. [3.]Naval Research Laboratory, Washington, DC.

251.13 The Brightest AGN: Characterizing Their Hot Gas Environments and the Accretion of Cooling Gas Onto Their SMBHs
Calzadilla, Michael[1, 2]; Jones, Christine[2]; Santos, Felipe A.[2]; Evans, Daniel A.[2, 3]; Forman, William R.[2]; Goulding, Andy D.[2]; Van Weeren, Reinout J.[2]
[1.]University of South Florida, Tampa, FL. [2.]Harvard-Smithsonian, CfA, Cambridge, MA. [3.]National Science Foundation, Washington, DC.

251.14 Radiative deceleration in relativistic jets.
Rivas, David[1]; Arsham, Aryana[1]; Georganopoulos, Markos[1]
[1.]UMBC, Baltimore, MD.

251.15 Investigating the emission mechanisms of the jet in the quasar PKS 1127-145
Duffy, Ryan T.[1, 2]; Siemiginowska, Aneta[1]; Kashyap, Vinay[1]; Stein, Nathan[3]; Migliori, Giulia[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]University of Southampton, Southampton, Hampshire, United Kingdom. [3.]University of Pennsylvania, Philadelphia, PA.

251.16 Trans-Relativistic Particle Acceleration in Astrophysical Plasmas
Becker, Peter A.[1]; Subramanian, Prasad[2]
[1.]George Mason University, Fairfax, VA. [2.]Indian Institute of Science Education and Research, Pashan, Maharashtra, India.

251.17 Testing the Twisted Torus Model of Quasar Obscuration
Elvis, Martin[1]; Rose, Marvin[1]; Lawrence, Andy[2]; Roseboom, Isaacq[2]
[1.]Harvard-Smithsonian CfA, Cambridge, MA. [2.]University of Edinburgh, Edinburgh, Scotland, United Kingdom.

251.18 Tests of Excitation and Reverberation in the Sub-pc Megamaser Disks of Near by AGN
Pesce, Dominic[1, 2]; Braatz, James A.[2]
[1.]University of Virginia, Charlottesville, VA. [2.]NRAO, Charlottesville, VA.
Contributing teams: Megamaser Cosmology Project

251.19 Observed Accelerations Due to Bends in Extragalactic Radio Jets
Meier, Eric J.[1]; Homan, Daniel C.[1]; Lister, Matthew L.[2]
[1.]Denison University, Granville, OH. [2.]Purdue, West Lafayette, IN.

251.20 A Black Hole Recoil Candidate in a Nearby Dwarf Galaxy
Koss, Michael[1, 2]; Blecha, Laura[3]; Mushotzky, Richard[3]; Veilleux, Sylvain[3]; Hung, Chao-Ling[1]; Man, Allison[4]; Li, Yanxia[1]
[1.]University of Hawaii, Honolulu, HI. [2.]ETH Zurich, Zurich, Switzerland. [3.]University of Maryland, College Park, MD. [4.]Dark Cosmology Centre, Copenhagen, Denmark.

251.21 Quasar Outflows and AGN Feedback in the Extreme UV: HST/COS Observations of QSO HE0238-1904
Arav, Nahum[1, 2]; Borguet, Benoit[1]; Chamberlain, Carter[1]; Edmonds, Doug[1]; Danforth, Charles[2]
[1.]Virginia Tech, Blacksburg, VA. [2.]CU , Boulder, CO.

251.22 Morphology of the AGN Outflow from FBQS J0209-0438
Chamberlain, Carter[1]; Arav, Nahum[1]; Kriss, Gerard A.[2]; Muzahid, Sowgat[3]
[1.]Virginia Tech, Blacksburg, VA. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]Inter-University Centre for Astronomy and Astrophysics, Ganeshkhind, Pune, India.

251.23 Time Dependent Leptonic Modeling for the Flat Spectrum Radio Quasars: 3C 273 and 3C 279
Diltz, Chris[1]; Boettcher, Markus[2]
[1.]Ohio University, Athens, OH. [2.]North Western University, Potchefstroom, South Africa.

251.24 Self Regulated Growth of Stars and Black Holes in Galaxies via Feedback
Sherman, Sydney[1]; Li, Yuexing1; Zhu, Qirong[1]
[1.]The Pennsylvania State University, University Park, PA.

251.25 The ICRF3 Roadmap to the next generation International Celestial Reference Frame
Jacobs, Christopher S.[1]
[1.]Jet Propulsion Laboratory, Pasadena, CA.
Contributing teams: ICRF-3 working group

251.26 The Efficiency of Jet Production in Radio Galaxies
Nemmen, Rodrigo[1, 2]
[1.]NASA GSFC, Greenbelt, MD. [2.]CRESST/UMBC, Baltimore, MD.

251.27 Five Years of the Fermi LAT Flare Advocate
Carpenter, Bryce[1, 2]; Ojha, Roopesh[2]; Gasparrini, Dario[3, 4]; Ciprini, Stefano[3, 4]
[1.]The Catholic University of America, Washington, DC. [2.]NASA/GSFC, Greenbelt, MD. [3.]Agenzia Spaziale Italiana Science Data Center, Rome, Italy. [4.]INAF Osservatorio Astronomico di Roma, Rome, Italy.
Contributing teams: on behalf of the Fermi LAT collaboration; on behalf of the Fermi LAT Flare Advocates

251.28 Diffuse X-Ray Emission in Active and Normal Galaxies in the Extended Groth Strip
Bhattacharjee, Anirban[1]; Chatterjee, Suchetana[1, 10]; Myers, Adam D.[1]; Brotherton, Michael S.[1]; Newman, Jeffrey[2]; Aird, James[3]; Cooper, Michael[4]; Jeltema, Tesla E.[5]; Nandra, Kirpal[8]; Yan, Renbin[9]; Willmar, Christopher[11]; Montero-Dorta, Antonio[7]; Laird, Elise[6]
[1.]University of wyoming, Laramie, WY. [2.]University of Pittsburgh, Pittsburgh, PA. [3.]Durham university, Durham, Durham, United Kingdom. [4.]University of Californa- Irvine, Irvine, CA. [5.]University of Californa- Sant Cruz, Santa Cruz, CA. [6.]Imperial College, London, London, United Kingdom. [7.]University of Utah, Salt Lake City, UT. [8.]Max Planck Institut für Extraterrestrische Physik, Garching, Bavaria, Germany. [9.]University of Kentucky, Lexington, KY. [10.]Presidency University, Kolkata, West Bengal, India. [11.]University of Arizona- Steward Observatory, Tucson, AZ.

252 Starburst Galaxies Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

252.01 Identifying the Physical Parameter Responsible for the Ionization Sequence in Star Forming Galaxies
Richardson, Chris T.[1]; Allen, James T.[2]; Baldwin, Jack A.[3]; Hewett, Paul C.[4]; Ferland, Gary J.[5]
[1.]Elon University, Elon, NC. [2.]University of Sydney, Sydney, NSW, Australia. [3.]Michigan State University, East Lansing, MI. [4.]University of Cambridge, Cambridge, United Kingdom. [5.]University of Kentucky, Lexington, KY.

252.02 Imaging the Spatial Density Within Starburst Galaxies M82 and Arp220
Kern, Nicholas S.[1, 2]; Mangum, Jeffrey G.[2]; Darling, Jeremiah K.[3]; Henkel, Christian[4]; Menten, Karl[4]
[1.]Department of Astronomy & Astrophysics, University of Michigan, Ann Arbor, MI. [2.]National Radio Astronomy Observatory, Charlottesville , VA. [3.]University of Colorado, Boulder, CO. [4.]Max Planck Institute for Radio Astornomy, Bonn, Germany.

252.03 First extragalactic detection of far-infrared CH rotational lines from the Herschel Space Observatory
Rangwala, Naseem[1, 2]; Glenn, Jason[1]; Wilson, Christine[3]; Maloney, Phil [1]; Spinoglio, Luigi[4]; Kamenetzky, Julia R.[1]; Schirm, Max[3]; Santaella, Miguel P.[4]
[1.]University of Colorado, Boulder, Boulder, CO. [2.]NASA Ames Research Center, Moffet Field, CA. [3.]McMaster University, Hamilton, ON, Canada. [4.]Istituto di Fisica dello Spazio Interplanetario, Roma, Rome, Italy.

252.04 Molecular Gas in Starburts: Understanding Mergers using High Density Gas Tracers
Manohar, Swarnima[1]; Scoville, Nicholas[1]; Walter, Fabian[2]; Sheth, Kartik[3]
[1.]California Institute of Technology, Pasadena, CA. [2.]Max Planck Institut für Astronomie, Heidelberg , Germany. [3.]National Radio Astronomy Observatory, Charlottesville , VA.

252.05 IDEOS: Fitting Infrared Spectra from Dusty Galaxies
Viola, Vincent[1]; Rupke, David[1]
[1.]Rhodes College, Memphis, TN.

252.06 A Deep Arecibo Spectral Scan of Arp 220
Vick, Michelle[1]; Ghosh, Tapasi[2]; Salter, Christopher J.[2]; Minchin, Robert F.[2]
[1.]Harvey Mudd College, Claremont, CA. [2.]NAIC, Arecibo, Puerto Rico.

252.07 Velocity Dispersion and Kinetic Energy in CGCG048A And CGCG048B
Lanes, Olivia[1]; Wilcots, Eric M.[2]; Nielsen, Danielle[2]
[1.]Dickinson College, Carlisle, PA. [2.]University Of Wisconsin, Madison, Madison, WI.

252.08 Do Cosmic Rays Sample the Mean ISM Density of Starburst Galaxies?
Boettcher, Erin[1]; Zweibel, Ellen G.[1]; Yoast-Hull, Tova[1]; Gallagher, John S.[1]
[1.]University of Wisconsin - Madison, Madison, WI.

252.09 Exploring the Dust Content of Galactic Winds with Herschel: Nearby Dwarf Galaxies
McCormick, Alexander[1]; Veilleux, Sylvain[1]; Melendez, Marcio[1]; Bland-Hawthorn, Jonathan[2]; Cecil, Gerald [3]; Engelbracht, Chad [4]; Heitsch, Fabian[3]; Martin, Crystal L.[5]; Mueller, Thomas[6]; Rupke, David[7]; Trippe, Margaret[8]; Zastrow, Jordan[9]
[1.]University of Maryland, College Park, MD. [2.]University of Sydney, Sydney, NSW, Australia. [3.]University of North Carolina, Chapel Hill, NC. [4.]University of Arizona, Tucson, AZ. [5.]University of California, Santa Barbara, CA. [6.]Max Planck Institute for Extraterrestrial Physics, Garching, Germany. [7.]Rhodes College, Memphis, TN. [8.]Johns Hopkins University Applied Physics Laboratory, Laurel, MD. [9.]University of Michigan, Ann Arbor, MI.

252.10 Exploring the Dust Content of Galactic Winds with Herschel: NGC 3079 and NGC 4631

Melendez, Marcio[1]; Veilleux, Sylvain[1]; McCormick, Alexander[1]; Martin, Crystal L.[2]; Engelbracht, Chad [5]; Bland-Hawthorn, Jonathan[3]; Cecil, Gerald [4]; Heitsch, Fabian[4]; Mueller, Thomas[6]; Rupke, David[7]; Trippe, Margaret[1]; Zastrow, Jordan[8]
[1.]University of Maryland, Rockville, MD. [2.]University of California, Santa Barbara, CA. [3.]University of Sydney, Sydney, NSW, Australia. [4.]University of North Carolina, Chapel Hill, NC. [5.]University of Arizona, Tucson, AZ. [6.]The Max Planck Institute for Extraterrestrial Physics , Garching, Bavaria, Germany. [7.]Rhodes College, Memphis, TN. [8.]University of Michigan, Ann Arbor, MI.

252.11 Numerical Models of Starburst Galaxies: A Study of Outflows and ISM Morphology in Galactic Cores

Tanner, Ryan[1]; Cecil, Gerald N.[1]; Heitsch, Fabian[1]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC.

252.12 What Do Star Clusters in Nearby Starburst Galaxies Tell Us?

Lim, Sungsoon[1]; Lee, Myung Gyoon[1]; Hwang, Narae[2]
[1.]Seoul National University, Seoul, Korea, Republic of. [2.]Korea Astronomy and Space Science Institute, Daejeon, Korea, Republic of.

252.13 Imaging Arp 220 in CO 6-5 and dust at 100 pc resolution with ALMA

Wilson, Christine[1]; Rangwala, Naseem[2, 3]; Glenn, Jason[2]; Maloney, Phil [2]; Kamenetzky, Julia R.[2]; Santaella, Miguel P.[4]; Schirm, Max[1]; Spinoglio, Luigi[4]
[1.]McMaster Univ., Hamilton, ON, Canada. [2.]University of Colorado, Boulder, CO. [3.]NASA Ames, Moffet Field, CA. [4.]Instituto de Fisica della Spazio Interplanetario, Rome, Italy.

252.14 He II-Emitting Galaxies

Heap, Sara R.[1]
[1.]NASA's GSFC, Greenbelt, MD.

252.15 Far Infrared Fine Structure Lines in Ultraluminous Infrared Galaxies

Farrah, Duncan[1]
[1.]Virginia Tech, Blacksburg, VA.

252.16 Hinge Clumps in Interacting Galaxies: Extra-Nuclear Starbursts

Smith, Beverly[1]; Soria, Roberto[2]; Struck, Curtis[3]; Giroux, Mark[1]; Swartz, Douglas A.[4]; Yukita, Mihoko[5]
[1.]East Tennessee State Univ., Johnson City, TN. [2.]Curtin University, Bentley, WA, Australia. [3.]Iowa State University, Ames , IA. [4.]NASA Marshall Space Flight Center, Huntsville, AL. [5.]Johns Hopkins University, Baltimore, MD.

252.17 Probing star formation in local luminous compact blue galaxies

Rabidoux, Katherine[1]; Pisano, Daniel J.[1, 2]; Kepley, Amanda A.[2]; Johnson, Kelsey E.[3, 4]
[1.]West Virginia University, Morgantown, WV. [2.]National Radio Astronomy Observatory, Green Bank, WV. [3.]University of Virginia, Charlottesville, VA. [4.]National Radio Astronomy Observatory, Charlottesville, VA.

252.18 Constraining Stellar Feedback: Shock–ionized Gas in Nearby Starburst Galaxies

Hong, Sungryong[1, 2]; Calzetti, Daniela[2]
[1.]University of Massachusetts, Amherst, Amherst, MA. [2.]NOAO, Tucson, AZ.

252.19 Age-Dating Star Clusters in the Luminous Infrared Galaxy VV340
Yarber, Aara'L[1]; Evans, Aaron S.[1]
[1.]Howard University, Washington DC, DC.

252.20 The Properties of submm Galaxies in the CANDELS GOODS-S Field -- Combining ALMA with HST
Wiklind, Tommy[1]
[1.]European Southern Observatory, Santiago, Vitacura, Chile.
Contributing teams: CANDELS Team

253 Astroinformatics and Astrostatistics Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

253.01 AstroML: Python-powered Machine Learning for Astronomy
Vander Plas, Jake[1]; Connolly, Andrew J.[1]; Ivezic, Zeljko[1]
[1.]University of Washington, Seattle, WA.

253.02 The Astrostatistics and Astroinformatics Portal
Feigelson, Eric[1]; Hilbe, Joseph M.[2]
[1.]Penn State Univ., University Park, PA. [2.]Arizona State Univ., Tempe, AZ.

253.03 Adventures in Modern Time Series Analysis: From the Sun to the Crab Nebula and Beyond.
Scargle, Jeffrey[1]
[1.]NASA Ames Research Center, Moffett Field, CA.

253.04 The Virtual Observatory for the Python Programmer
Plante, Raymond L.[1]; Fitzpatrick, Michael J.[4]; Graham, Matthew[2]; Tody, Douglas[3]
[1.]Univ. of Illinois, Urbana, IL. [2.]Caltech, Pasadena, CA. [3.]National Radio Astronomy Observatory, Socorro, NM. [4.]National Optical Astronomy Observatory, Tucson, AZ.
Contributing teams: US Virtual Astronomical Observatory

253.05 Filtergraph: A fast, intuitive, online data visualization system for large astronomy datasets
Stassun, Keivan[1, 2]; Burger, Dan[1]; Pepper, Joshua[3, 1]; De Lee, Nathan M.[1]; Siverd, Robert[1]; Paegert, Martin[1]
[1.]Vanderbilt University, Nashville, TN. [2.]Fisk University, Nashville, TN. [3.]Lehigh University, Bethlehem, PA.

253.06 NED in the Era of Very Large Extragalactic Surveys
Fadda, Dario[1]; Mazzarella, Joseph M.[1]; Ogle, Patrick M.[1]; Madore, Barry F.[1]; Ebert, Rick[1]; Baker, Kay[1]; Chan, Hiu Pan[1]; Chen, Xi[1]; Frayer, Cren[1]; Helou, George[1]; Jacobson, Jeffery D.[1]; LaGue, Cheryl[1]; Lo, Tak M.[1]; Pevunova, Olga[1]; Schmitz, Marion1; Terek, Scott[1]; Steer, Ian[2]
[1.]CalTech, Pasadena, CA. [2.]Toronto, Toronto, ON, Canada.

253.07 Spectroscopic and Photometric Variability in the A0 Supergiant HR 1040
Corliss, David[1]; Morrison, Nancy D.[1]; Adelman, Saul J.[2]
[1.]University of Toledo, Toledo, OH. [2.]The Citadel, Charleston, SC.

253.08 Managing the Big Data Avalanche in Astronomy - Data Mining the Galaxy Zoo Classification Database
Borne, Kirk D.[1]
[1.]George Mason Univ., Fairfax, VA.

254 Surveys and Large Programs Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

254.01 The HST Frontier Fields

Lotz, Jennifer[1]; Mountain, Matt[1]; Grogin, Norman A.[1]; Koekemoer, Anton M.[1]; Capak, Peter L.[2]; Mack, Jennifer[1]; Coe, Dan A.[1]; Barker, Elizabeth A.[1]; Adler, David S.[1]; Avila, Roberto J.[1]; Anderson, Jay[1]; Casertano, Stefano[1]; Christian, Carol A.[1]; Gonzaga, Shireen[1]; Ferguson, Henry C.[1]; Fruchter, Andrew S.[1]; Jenkner, Helmut[1]; Jordan, Ian J.[1]; Hammer, Derek[1]; Hilbert, Bryan[1]; Lawton, Brandon L.[1]; Lee, Janice C.[1]; Lucas, Ray A.[1]; MacKenty, John W.[1]; Mutchler, Maximilian J.[1]; Ogaz, Sara[1]; Reid, Iain N.[1]; Royle, Patrica[1]; Robberto, Massimo[1]; Sembach, Kenneth[1]; Smith, Linda J.[1]; Sokol, Josh[1]; Surace, Jason A.[2]; Taylor, Denise[1]; Tumlinson, Jason[1]; Viana, Alex[1]; Williams, Robert E.[1]; Workman, William[1]

[1.]STScI, Baltimore, MD. [2.]SSC, Pasadena, CA.

254.02 The HST Frontier Fields: Science Data Pipeline, Products, and First Data Release

Koekemoer, Anton M.[1]; Avila, Roberto J.[1]; Hammer, Derek[1]; Mack, Jennifer[1]; Ogaz, Sara[1]; Anderson, Jay[1]; Barker, Elizabeth A.[1]; Hilbert, Bryan[1]; Gonzaga, Shireen[1]; Grogin, Norman A.[1]; Fruchter, Andrew S.[1]; Lotz, Jennifer[1]; Lucas, Ray A.[1]; Mountain, Matt[1]; Sokol, Josh[1]

[1.]STScI, Baltimore, MD.

254.03 The HST Frontier Fields: DrizzlePac Workflow

Avila, Roberto J.[1]; Hammer, Derek[1]; Mack, Jennifer[1]; Fruchter, Andrew S.[1]; Koekemoer, Anton M.[1]; Anderson, Jay[1]; Barker, Elizabeth A.[1]; Hilbert, Bryan[1]; Gonzaga, Shireen[1]; Grogin, Norman A.[1]; Lotz, Jennifer[1]; Lucas, Ray A.[1]; Mountain, Matt[1]; Ogaz, Sara[1]; Sokol, Josh[1]

[1.]Space Telescope Science Institute, Baltimore, MD.

254.04 The HST Frontier Fields: Gravitational Lensing Models Release

Coe, Dan A.[1]; Lotz, Jennifer[1]; Natarajan, Priyamvada[2]; Richard, Johan[3]; Zitrin, Adi[4]; Kneib, Jean-Paul[5]; Ebeling, Harald[6]; Sharon, Keren[7]; Johnson, Traci[7]; Limousin, Marceau[8]; Bradac, Marusa[9]; Hoag, Austin[9]; Cain, Benjamin[9]; Merten, Julian[10]; Williams, Liliya L.[11]; Sebesta, Kevin[11]; Meneghetti, Massimo[12]; Koekemoer, Anton M.[1]; Barker, Elizabeth A.[1]

[1.]STScI, Baltimore, MD. [2.]Yale, New Haven, CT. [3.]CRAL Lyon, Lyon, France. [4.]Caltech, Pasadena, CA. [5.]EPFL Lausanne, Lausanne, Switzerland. [6.]IfA, University of Hawaii, Honolulu, HI. [7.]University of Michigan, Ann Arbor, MI. [8.]LAM Marseille, Marseille, France. [9.]UC Davis, Davis, CA. [10.]JPL/Caltech, Pasadena, CA. [11.]University of Minnesota, Minneapolis, MN. [12.]INAF/INFN Bologna, Bologna, Italy.

254.05 The Frontier Field Supernova Survey

Rodney, Steven A.[1]

[1.]Johns Hopkins University, Baltimore, MD.

Contributing teams: The FrontierSN Team

254.06 First results from the HST Grism Lens-Amplified Survey from Space (GLASS)

WANG, XIN[1]; Schmidt, Kasper B.[1]; Treu, Tommaso[1]

[1.]University of California, Santa Barbara, Santa barbara, CA.

Contributing teams: GLASS team

254.07 The Ultraviolet Frontier: Deep near-UV imaging of the Hubble Frontier Fields

Siana, Brian D.[1]; Alavi, Anahita[1]; Richard, Johan[2]; Stark, Daniel[3]; Scarlata, Claudia[4]; Robertson, Brant E.[3]; Rafelski, Marc[5]; Teplitz, Harry I.[5]; Freeman, William R.[1]; Dominguez, Alberto[1]; Desai, Vandana[5]; Rutkowski, Michael J.[4]
[1.]UC Riverside, Riverside, CA. [2.]Centre de Recherche Astronomique de Lyon, Lyon, France. [3.]University of Arizona, Tucson, AZ. [4.]University of Minnesota, Minneapolis, MN. [5.]California Institute of Technology, Pasadena, CA.

254.08 Legacy ExtraGalactic UV Survey (LEGUS): The HST View of Star Formation in Nearby Galaxies

Calzetti, Daniela[1]; Lee, Janice C.[2]; Adamo, Angela[3]; Aloisi, Alessandra[2]; Andrews, Jennifer E.[1]; Brown, Thomas M.[2]; Chandar, Rupali[4]; Christian, Carol A.[2]; Cignoni, Michele[5]; Clayton, Geoffrey C.[6]; Da Silva, Robert L.[7]; de Mink, Selma E.[8]; Dobbs, Claire[21]; Elmegreen, Bruce[9]; Elmegreen, Debra M.[10]; Evans, Aaron S.[11]; Fumagalli, Michele[8]; Gallagher, John S.[12]; Gouliermis, Dimitrios[22]; Grebel, Eva[22]; Herrero-Davo`, Artemio[23]; Hilbert, Bryan[2]; Hunter, Deidre A.[13]; Johnson, Kelsey E.[11]; Kennicutt, Robert[24]; Kim, Hwihyun[14]; Krumholz, Mark R.[7]; Lennon, Danny J.[25]; Martin, Christopher D.[15]; Nair, Preethi[2]; Nota, Antonella[2, 28]; Pellerin, Anne[16]; Prieto, Jose[17]; Regan, Michael W.[2]; Sabbi, Elena[2, 28]; Schaerer, Daniel[26]; Schiminovich, David[18]; Smith, Linda J.[2, 28]; Thilker, David A.[19]; Tosi, Monica[5]; Van Dyk, Schuyler D.[15]; Walterbos, Rene A.[20]; Whitmore, Bradley C.[2]; Wofford, Aida[27]
[1.]Univ. of Massachusetts, Amherst, MA. [2.]STScI, Baltimore, MD. [3.]MPIA, Heidelberg, Germany. [4.]University of Toledo, Toledo, OH. [5.]University of Bologna, Bologna, Italy. [6.]Louisiana University, Baton Rouge, LA. [7.]University of California, Santa Cruz, Santa Cruz, CA. [8.]Carnegie Observatories, Pasadena, CA. [9.]IBM T.J. Watson Research Center, Yorktown Heights, NY. [10.]Vassar College, Poughkeepsie, NY. [11.]University of Virginia, Charlottesville, VA. [12.]University of Wisconsin, Madison, WI. [13.]Lowell Observatory, Flagstaff, AZ. [14.]Arizona State University, Phoenix, AZ. [15.]Caltech, Pasadena, CA. [16.]SUNY-Geneseo, Geneseo, NY. [17.]Princeton University, Princeton, NJ. [18.]Columbia University, New York, NY. [19.]The Johns Hopkins University, Baltimore, MD. [20.]New Mexico State University, Las Cruces, NM. [21.]University of Exeter, Exeter, Devon, United Kingdom. [22.]University of Heidelberg, Heidelberg, Germany. [23.]Instituto de Astrofísica de Canarias, La Laguna, Spain. [24.]Institute of Astronomy, University of Cambridge, Cambridge, United Kingdom. [25.]ESA-ESAC, Madrid, Spain. [26.]Geneva Observatory, Versoix, Switzerland. [27.]Institute of Astrophysics - Paris, Paris, France. [28.]ESA, Baltiomore, MD.

254.09 The Ultraviolet Sky: final catalogs of unique UV sources from GALEX, and characterization of the UV-emitting sources across the sky, and of the Milky Way extinction.

Bianchi, Luciana[1]; Conti, Alberto[1]; Shiao, Bernie[1]; Keller, Graziela R.[1]; Thilker, David A.[1]
[1.]Johns Hopkins Univ., Baltimore, MD.

254.10 The Dark Energy Camera and Survey

Diehl, H. Thomas[1]
[1.]Fermi National Accelerator Laboratory, Batavia, IL.
Contributing teams: The Dark Energy Survey Collaboration

254.11 The Photometric Calibration of the Dark Energy Survey (DES): Results from the Summer 2013 Re-processing of the DES Science Verification Data

Tucker, Douglas L.[1]; Allam, Sahar S.[2]; Annis, James T.[1]; Armstrong, Robert[3]; Bauer, Anne[4]; Bernstein, Gary[3]; Burke, David[5]; Fix, Mees[6, 1]; Foust, William[6, 1]; Gruendl, Robert A.[7, 8]; Head, Hope[6, 1]; Kuehn, Kyler[9]; Kuhlmann, Stephen[10]; Li, Ting[11]; Lin, Huan[1]; Rykoff, Eli S.[5]; Smith, J. Allyn[6, 1]; Wester, William[1]; Wyatt, Samuel6, [1]; Yanny, Brian[1]

[1.]FNAL, Batavia, IL. [2.]STScI/CSC, Baltimore, MD. [3.]UPenn, Philadelphia, PA. [4.]ICE, IEEC/CSIC, Bellaterra, Barcelona, Spain. [5.]SLAC, Menlo Park, CA. [6.]APSU, Clarksville, TN. [7.]UIUC, Urbana, IL. [8.]NCSA, Urbana, IL. [9.]AAO, Sydney, NSW, Australia. [10.]ANL, Lemont, IL. [11.]TAMU, College Station, TX.

Contributing teams: Dark Energy Survey

254.12 White Dwarfs for Calibrating the Dark Energy Survey

Smith, J. Allyn[1]; Wester, William[2]; Tucker, Douglas L.[2]; Fix, Mees[1]; Head, Hope[1]; Allam, Sahar S.[3]; Marriner, John[2]; James, David[4]

[1.]Austin Peay State Univ., Clarksville, TN. [2.]Fermilab, Batavia, IL. [3.]STScI, Baltimore, ME. [4.]CTIO, La Serena, Chile.

Contributing teams: DES Calibration

254.13 Photometric Calibrations of Standard Star Fields for the Dark Energy Survey

Wyatt, Samuel[1]; Tucker, Douglas L.[2]; Smith, Allyn[1]

[1.]Austin Peay State University, Clarksville, TN. [2.]FermiLab National Accelerator Laboratory, Batavia, IL.

254.14 Spectroscopic Characterization of White Dwarf Candidates for Calibrating Dark Energy Survey

Fix, Mees[1, 2]; Smith, J. Allyn[1, 2]; Tucker, Douglas L.[2]; Wester, William[2]

[1.]Austin Peay State University, Clarksville, TN. [2.]Fermilab, Batavia, IL.

Contributing teams: DES

254.15 OzDES: 100 Nights of AAT Spectroscopy on DES Sources.

D'Andrea, Christopher[1]

[1.]Institute for Cosmology and Gravitation, University of Portsmouth, Portsmouth, Hants, UK, United Kingdom.

Contributing teams: OzDES

254.16 First observations of supernovae from the Dark Energy Survey

March, Marisa C.[1]

[1.]University of Pennsylvania, Philadelphia, PA.

Contributing teams: Dark Energy Survey

254.17 Exploring the Dependence of Galaxy Properties on Group Halo Environment in RESOLVE

Baker, Ashley[1]; Berlind, Andreas A.[2]; Kannappan, Sheila[1]; Moffett, Amanda J.[1]

[1.]UNC Chapel Hill, Chapel Hill, NC. 2.Vanderbilt University, Nashville, TN.

Contributing teams: The RESOLVE Team

254.18 Toward Detection of Low-Metallicity AGN in the RESOLVE Survey

Rivera, Angelica B.[1]; Hoversten, Erik A.[2]; Kannappan, Sheila[2]; Behmard, Aida[3]; Norman, Dara J.[5]; Bellovary, Jillian M.[4]

[1.]vassar, Goshen, NY. [2.]University of North Carolina at Chapel Hill, Chapel Hill, NC. [3.]Yale University, New Haven, CT. [4.]Vanderbilt, Nashville, TN. 5.NRAO, Tuscon, AZ.

Contributing teams: RESOLVE

254.19 RESOLVE'd AGN: Refining Active Galactic Nuclei Classification Techniques
Behmard, Aida[1]; Norman, Dara J.[2]; Kannappan, Sheila[3]; Hoversten, Erik A.[3]; Rivera, Angelica B.[4]; Bellovary, Jillian M.[5]
[1.]Yale University, New Haven, CT. [2.]NOAO, Tucson, AZ. [3.]University of North Carolina , Chapel Hill, NC. [4.]Vassar College, Poughkeepsie, NY. [5.]Vanderbilt University, Nashville, TN.
Contributing teams: the RESOLVE Team

254.20 RESOLVE Survey Early Results: The Environment Driven shape of the Baryonic Mass Function
Eckert, Kathleen D.[1]; Kannappan, Sheila[1]; Stark, David[1]; Moffett, Amanda J.[1]; Berlind, Andreas A.[2]; Norris, Mark A.[3]
[1.]University of North Carolina, Chapel Hill, Chapel Hill, NC. [2.]Vanderbilt University, Nashville, TN. [3.]MPIA, Heidelberg, Germany.
Contributing teams: and the RESOLVE team

254.21 Metallicities of Galaxies in the Dwarf-Dominated RESOLVE Survey
Hoversten, Erik A.[1]; Kannappan, Sheila[1]; Baker, Ashley[1]; Eckert, Kathleen D.[1]; Hall, Kirsten[1]; Moffett, Amanda J.[1]; Stark, David[1]
[1.]UNC-Chapel Hill, Chapel Hill, NC.
Contributing teams: RESOLVE team

254.22 Determining the Intrinsic Shapes of Galaxies in the RESOLVE and ECO Surveys
Litke, Katrina[1]; Kannappan, Sheila[2]; Stark, David[2]; Moffett, Amanda J.[2]; Eckert, Kathleen D.[2]
[1.]University of Illinois at Urbana-Champaign, Urbana-Champaign, IL. [2.]University of North Carolina at Chapel Hill, Chapel Hill, NC.
Contributing teams: the RESOLVE team

254.23 The Fueling Diagram and the RESOLVE Survey: Assessing External Drivers of Galaxy Gas Content
Stark, David[1]; Kannappan, Sheila[1]; Wei, Lisa H.[2]; Baker, Andrew J.[3]; Leroy, Adam K.[4]; Eckert, Kathleen D.[1]; Vogel, Stuart N.[5]
[1.]University of North Carolina-Chapel Hill, Chapel Hill, NC. [2.]Atmospheric and Environmental Research, Lexington, MA. [3.]Rutgers, the State University of New Jersey, Piscataway, NJ. [4.]National Radio Astronomy Observatory, Charlottesville, VA. [5.]University of Maryland, College Park, MD.
Contributing teams: the RESOLVE team

254.24 RESOLVE: Constructing a Baryonic Tully-Fisher Relation Reference Sample across Environments
Rosenberg, Daniel[1]; Kannappan, Sheila[1]; Miller, Sarah[2]; Hoversten, Erik A.[1]; Hall, Kirsten[1]; Stark, David[1]; Moffett, Amanda J.[1]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC. [2.]California Institute of Technology, Pasadena, CA.
Contributing teams: RESOLVE Team

254.25 RESOLVE and ECO: Galaxy Refueling Transitions in Environmental Context
Kannappan, Sheila[1]; Moffett, Amanda J.[1]; Eckert, Kathleen D.[1]; Stark, David[1]; Norris, Mark A.[1, 3]; Berlind, Andreas A.[2]
[1.]Univ. of North Carolina, Chapel Hill, NC. [2.]Vanderbilt, Nashville, TN. [3.]MPIA, Heidelberg, Germany.
Contributing teams: the RESOLVE team

254.26 Compact Core Galaxies in the RESOLVE Survey
Snyder, Elaine[1]; Kannappan, Sheila[1]; Stark, David[1]; Eckert, Kathleen D.[1]; Norris, Mark A.[2]; Norman, Dara J.[3]
[1.]University of North Carolina, Chapel Hill, NC. [2.]Max-Planck-Institut für Astronomie, Heidelberg, Germany. [3.]NOAO, Tucson, AZ.
Contributing teams: The RESOLVE Team

254.27 Kinematic Anomalies in the RESOLVE Survey and the Gas-Star Formation Connection
Hall, Kirsten[1]; Kannappan, Sheila[1]; Baker, Andrew J.[2]; Stark, David[1]; Hoversten, Erik A.[1]; Eckert, Kathleen D.[1]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC. [2.]Rutgers, the State University of New Jersey, New Brunswick, NJ.
Contributing teams: the RESOLVE Team

254.28 A Precision Multi-Band Two-Epoch Photometric Catalog of 45 Million Sources from Combination of the USNO-B and Sloan Digital Sky Survey Catalogs
Gaensler, Bryan M.[1, 2]; Madsen, Gregory J.[2, 3]
[1.]The University of Sydney, Sydney, NSW, Australia. [2.]ARC Centre of Excellence for All-sky Astrophysics (CAASTRO), Sydney, NSW, Australia. [3.]University of Cambridge, Cambridge, United Kingdom.

254.29 A Long Term High-Cadence Nova Survey
Castelaz, Michael W.[1]; Rottler, Lee[1]; Barker, Thurburn[1]; Coker, Michele[2, 1]
[1.]Pisgah Astronomical Research Inst., Rosman, NC. [2.]Western Carolina Univeristy, Cullowhee, NC.

254.30 Surveys, Fields, and Collections in the Astronomical Photographic Data Archive at PARI
Cline, J. D.[1]; Castelaz, Michael W.[1]; Barker, Thurburn[1]
[1.]Pisgah Astronomical Research Institute, Greensboro, NC.

254.31 Mapping Nearby Galaxies at APO: The MaNGA IFU Galaxy Survey
Law, David R.[1]
[1.]Dunlap Institute, University of Toronto, Toronto, ON, Canada.
Contributing teams: MaNGA Team

254.32 URAT - year 2
Finch, Charlie T.[1]; Zacharias, Norbert[1]; Crockett, Christopher[2]; DiVittorio, Mike[2]; Furgason, Eric[1]; Killian, Christopher[1]; Rhodes, Albert[2]; Schultheis, Michael[2]; Subasavage, John P.[2]; Tilleman, Trudy[2]; Wieder, Gary[1]
[1.]US Naval Observatory, Washington, DC. [2.]US Naval Observatory Flagstaff station, Flagstaff, AZ.

254.33 CRTS2: A Continuation of the Catalina Real-Time Transient Survey
Djorgovski, Stanislav G.[1]; Drake, Andrew J.[1]; Mahabal, Ashish A.[1]; Graham, Matthew[1]; Donalek, Ciro[1]; Larson, Stephen M.[2]; Christensen, Eric J.[2]
[1.]Caltech, Pasadena, CA. [2.]University of Arizona, Tucson, AZ.
Contributing teams: CRTS Team

254.34 The Strong Lensing Time Delay Challenge (2014)

Liao, Kai[1]; Dobler, Gregory[1]; Fassnacht, Christopher D.[2]; Treu, Tommaso[1]; Marshall, Philip J.[3]; Rumbaugh, Nick[2]; Linder, Eric[4]; Hojjati, Alireza[5]

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254.35 The Swift/BAT hard X-ray transient monitor: Seven years and 246 sources, still going strong!

Krimm, Hans A.[1, 2]; Holland, Stephen[3, 2]; Corbet, Robin H.[4, 2]; Pearlman, Aaron[5, 2]; Romano, Patrizia[6]; Kennea, Jamie A.[7]; Bloom, Joshua S.[8]; Barthelmy, Scott D.[2]; Baumgartner, Wayne H.[4, 2]; Cummings, Jay[4, 2]; Gehrels, Neil[2]; Lien, Amy Y.[2]; Markwardt, Craig[2]; Palmer, David[9]; Sakamoto, Takanori[10]; Stamatikos, Michael[11]; Ukwatta, Tilan N.[12]

[1.]Universities Space Research Association, Columbia, MD. [2.]NASA's GSFC, Greenbelt, MD. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]University of Maryland, Baltimore County, Baltimore, MD. [5.]California Institute of Technology, Pasadena, CA. [6.]INAF, Palermo, Italy. [7.]Pennsylvania State Univerisity, University Park, PA. [8.]University of California, Berkeley, Berkeley, CA. [9.]Los Alamos National Laboratory, Los Alamos, NM. [10.]Aoyama Gakuin University, Sagamihara-shi, Kanagawa, Japan. [11.]Ohio State University, Columbus, OH. [12.]Michigan State University, East Lansing, MI.

254.36 Optical Photometry of the Local Volume Legacy (LVL) Survey

Cook, David O.[1]; Dale, Daniel A.[1]; van Zee, Liese[2]; Johnson, Benjamin D.[4]; Lee, Janice C.[3]; Cales, Sabrina[5]

[1.]University of Wyoming, Laramie, WY. [2.]Indiana University, Bloomington, IN. [3.]STScI, Baltimore, MD. [4.]Institut d'Astrophysique de Paris, Paris, France. [5.]Universidad de Concepcion, Concepcion, Chile.

Contributing teams: LVL Team

254.37 The Advanced Spectral Library (ASTRAL) Project

Ayres, Thomas R.[1]

[1.]University of Colorado, Boulder, CO.

Contributing teams: The ASTRAL I & II Science Teams

254.38 Spatial Variation of Deep Galaxy Number Counts: A Method Of Constraining Extinction With LSST

Wallace, Spencer[1]; Connolly, Andrew J.[2]

[1.]Astronomy, University of Arizona, Tucson, AZ. [2.]University of Washington, Seattle, WA.

254.39 Impact of LSST filter properties on simulated supernovae samples

Gjergo, Eda[1, 6]; Kuhlmann, Stephen[1]; Gilmore, D. K.[3, 4]; Kessler, Richard[2, 5]

[1.]Argonne National Laboratory, Argonne, IL. [2.]Kavli Institute for Cosmological Physics, Chicago, IL. [3.]SLAC National Accelerator Laboratory, Menlo Park, CA. [4.]Kavli Institute for Particle Astrophysics and Cosmology, Menlo Park, CA. [5.]University of Chicago, Chicago, IL. [6.]Illinois Institute of Technology, Chicago, IL.

Contributing teams: LSST Collaboration, LSST-DESC, LSST Supernova

254.40 Sloan Digital Sky Survey Infrastructure Preparations at Las Campanas Observatory

Hearty, Frederick R.[1,2]; Wilson, John C.[1]; Majewski, Steven R.[1]; Leger, French[3]; Harding, Paul[4]; Parejko, John K.[5]; Roman, Alexandre[7]; Ebelke, Garrett6
[1.]University of Virginia, Charlottesville, VA. [2.]Pennsylvania State University, University Park, PA. [3.]University of Washington, Seattle, WA. [4.]Case Western Reserve University, Cleveland, OH. [5.]Yale University, New Haven, CT. [6.]New Mexico State University, Las cruces, NM. [7.]Universidad de La Serena, La Serena, Coquimbo, Chile.
Contributing teams: SDSS-IV, APOGEE-1/2

254.41 Massive Spectroscopic Followup of Transients from the Multi-Epoch Nearby Cluster Survey

O'Brien, Greg[1]; Sand, David J.[1]; Graham, Melissa L.[2]; Zaritsky, Dennis F.[3]; Pritchet, Christopher[3]; Hoekstra, Henk[4]
[1.]Texas Tech University, Lubbock, TX. [2.]University of California Berkeley, Berkeley, CA. [3.]University of Arizona, Tucson, AZ. [4.]Leiden Observatory, Leiden, Leiden, Netherlands.

254.42 Infrared Study of Galaxies in the Zone of Avoidance

Arrieta, Andres[1]; Lebron, Mayra E.[1]; Pantoja, Carmen[1]
[1.]University of Puerto Rico- Río Piedras, San Juan, Puerto Rico.

254.43 The LCOGT Science Collaboration

Brown, Timothy M.[1,3]; Boroson, Todd A.[1]; Howell, Dale A.[1,2]; Street, Rachel[1]; Lister, Tim[1]
[1.]Las Cumbres Global Telescope Network, Inc., Goleta, CA. [2.]UCSB, Goleta, CA. [3.]CU/CASA, Boulder, CO.

254.44 SMASH: The Survey of the MAgellanic Stellar History

Olsen, Knut A.[1]; Nidever, David L.[2]; Gruendl, Robert A.[3]; Blum, Robert D.[1]; Walker, Alistair R.[4]; Saha, Abhijit[1]; Olszewski, Edward W.[5]; Munoz, Ricardo[6]; Kunder, Andrea M.[4,7]; Kaleida, Catherine C.[4]; Conn, Blair[8]; Besla, Gurtina[9,5]; Majewski, Steven R.[10]; Gallart, Carme[11]; Monelli, Matteo[11]; Stringfellow, Guy S.[12]; Zaritsky, Dennis F.[5]; Chu, You-Hua[3]; Van Der Marel, Roeland P.[13]; Martin, Nicolas[14]; Noel, Noelia[15]; Jin, Shoko[16]; Kim, Hwihyun[17]; Cioni, Maria-Rosa[18]; Bell, Eric F.[2]; Monachesi, Antonela[2]; Vivas, Katherina[4]; de Boer, Thomas[19]
[1.]NOAO, Tucson, AZ. [2.]U. Michigan, Ann Arbor, MI. [3.]U. Illinois, Urbana-Champaign, IL. [4.]CTIO, La Serena, Chile. [5.]U. Arizona, Tucson, AZ. [6.]U. Chile, Santiago, Chile. [7.]U. Potsdam, Potsdam, Germany. [8.]Gemini Observatory, La Serena, Chile. [9.]Columbia U., New York, NY. [10.]U. Virginia, Charlottesville, VA. [11.]Instituto de Astrofísica de Canarias, Tenerife, Spain. [12.]U. Colorado, Boulder, CO. [13.]STScI, Baltimore, MD. [14.]Strasbourg Observatory, Strasbourg, France. [15.]MPIA, Heidelberg, Germany. [16.]U. Groningen, Groningen, Netherlands. [17.]Arizona State U., Tempe, AZ. [18.]U. Hertfordshire, Hertfordshire, United Kingdom. [19.]Kapteyn Astronomical Institute , Groningen, Netherlands.

254.45 Photometric Analysis of Clusters in the Vista Variables in the Via Lactea (VVV) Survey

Deich, Alex[1,2]; Roman, Alexandre[3]; Kunder, Andrea M.[4]
[1.]Humboldt State University, Arcata, CA. [2.]Reed College, Portland, OR. [3.]Universidad de La Serena, La Serena, Coquimbo, Chile. [4.]CTIO, La Serena, Coquimbo, Chile.

254.46 First results from the Chandra COSMOS Legacy survey
Civano, Francesca M.[1, 2]
[1.] Dartmouth College, Cambridge, MA. [2.] SAO, Cambridge, MA.
Contributing teams: and the Chandra COSMOS Legacy Team

254.47 The NEWFIRM HETDEX Survey - Studying Galaxy Growth with 400,000 Galaxies at 2 < z < 3.5
Stevans, Matthew L.[1]; Finkelstein, Steven L.[1]; Gebhardt, Karl[1]; Jogee, Shardha[1]; Papovich, Casey J.[2]; Ciardullo, Robin[3]; Gronwall, Caryl[3]; Acquaviva, Viviana[4]; Weinzirl, Tim[1]
[1.] The University of Texas at Austin, Austin, TX. [2.] Texas A&M University, College Station, TX. [3.] Penn State University, University Park, PA. [4.] New York City College of Technology, New York, NY.
Contributing teams: HETDEX

254.48 Selecting Variables for the Time Domain Spectroscopic Survey
Morganson, Eric1
[1.] CFA, Somerville, MA.
Contributing teams: TDSS, SDSS, Pan-STARRS1

254.49 Structural Evolution of Early-type Galaxies to z=2.5 in CANDELS
Chang, Yu-Yen[1]; van der Wel, Arjen[1]; Rix, Hans-Walter[1]
[1.] Max Planck Institute for Astronomy, Heidelberg, Germany.
Contributing teams: The CANDELS collaboration

255 Computation, Data Handling, & Image Analysis Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

255.01 The LCOGT Observation Portal, Data Pipeline and Science Archive Lister, Tim[1]
[1.] Las Cumbres Observatory, Goleta, CA.
Contributing teams: LCOGT Science Archive Team

255.02 The ADS All Sky Survey: footprints of astronomy literature, in the sky
Pepe, Alberto[1]; Goodman, Alyssa A.[1]; Muench, August A.[1]
[1.] Harvard Smithsonian Center for Astrophysics, Cambridge, MA.
Contributing teams: Seamless Astronomy Group at the CfA

255.03 Introducing ADS 2.0
Accomazzi, Alberto[1]; Kurtz, Michael J.[1]; Henneken, Edwin A.[1]; Grant, Carolyn S.[1]; Thompson, Donna[1]; Luker, James[1]; Chyla, Roman[1]; Murray, Stephen S.[1]
[1.] Harvard Smithsonian, CfA, Cambridge, MA.

255.04 Virtual Astronomy: The Legacy of the Virtual Astronomical Observatory
Hanisch, Robert J.[1, 10]; Berriman, G. B.[2, 10]; Lazio, Joseph[3, 10]; Szalay, Alexander S.[4, 10]; Fabbiano, Giuseppina[5, 10]; Plante, Raymond L.[6, 10]; McGlynn, Thomas A.[7, 10]; Evans, Janet[5, 10]; Emery Bunn, Sarah[8, 10]; Claro, Maricel[9, 10]
[1.] Space Telescope Science Institute, Baltimore, MD. [2.] Infrared Processing and Analysis Center, Pasadena, CA. [3.] Jet Propulsion Laboratory, Pasadena, CA. [4.] The Johns Hopkins University, Baltimore, MD. [5.] Smithsonian Astrophysical Observatory, Cambridge, MA. [6.] University of Illinois, Champaign-Urbana, IL. [7.] NASA's Goddard Space Flight Center, Greenbelt, MD. [8.] California Institute of Technology, Pasadena, CA. [9.] Associated Universities, Inc., Washington, DC. [10.] Virtual Astronomical Observatory, Washington, DC.
Contributing teams: VAO Project Team

255.05 Accessing Multi-Dimensional Images and Data Cubes in the Virtual Observatory

Tody, Douglas[1, 10]; Plante, Raymond L.[2, 10]; Berriman, G. B.[3, 10]; Cresitello-Dittmar, Mark[4, 10]; Good, John [3, 10]; Graham, Matthew[5, 10]; Greene, Gretchen[6, 10]; Hanisch, Robert J.[6, 10]; Jenness, Timothy[7, 10]; Lazio, Joseph[8, 10]; Norris, Pat[9, 10]; Pevunova, Olga[3, 10]; Rots, Arnold H.[4, 10]

[1.]National Radio Astronomy Observatory, Socorro, NM. [2.]University of Illinois, Champaign-Urbana, IL. [3.]Infrared Processing and Analysis Center, Pasadena, CA. [4.]Smithsonian Astrophysical Observatory, Cambridge, MA. [5.]California Institute of Technology, Pasadena, CA. [6.]Space Telescope Science Institute, Baltimore, MD. [7.]Cornell University, Ithaca, NY. [8.]Jet Propulsion Laboratory, California Institute of Technology , Pasadena, CA. [9.]National Optical Astronomy Observatory, Tucson, AZ. [10.]Virtual Astronomical Obsevatory, Washington, DC.

255.06 Software Reproduceability for Science Data

Teuben, Peter J.[1]; Mundy, Lee G.[1]; Storm, Shaye[1]; Looney, Leslie[2]; Lee, Katherine[1, 2]; Fernandez Lopez, Manuel[2]

[1.]Univ. of Maryland, College Park, MD. [2.]University of Illinois, Urbana-Champaign, IL.

255.07 Quantifying Deep-Imaging Limits of the VLA

Mayeshiba, Julia[1, 2]; Mayeshiba, Julia[1, 2]; Rau, Urvashi[1]; Owen, Frazer N.[1]

[1.]National Radio Astronomy Observatory, Socorro, NM. [2.]University of Wisconsin - Madison, Madison, WI.

255.08 Extracting information using Spitzer IRAC color analysis

Ybarra, Jason E.[1]; Román-Zuñíga, Carlos[1]; Arvidsson, Kim[2]; Wolf-Chase, Grace A.[3]; Lada, Elizabeth A.[4]

[1.]Instituto de Astronomía, UNAM, Ensenada, Baja California, Mexico. [2.]Schreiner Univ., Kerrville, TX. [3.]Adler Planetarium, Chicago, IL. [4.]Univ. of Florida, Gainesville, FL.

255.09 Image reduction of multi-chip near-IR data using the THELI pipeline

Holhjem, Karianne[1]

[1.]Southern Astrophysical Research (SOAR) telescope, La Serena, Coquimbo, Chile.

255.10 Automating OSIRIS Data Reduction for the Keck Observatory Archive

Tran, Hien D.[1]; Holt, Jen[1]; Goodrich, Robert W.[1]; Lyke, James E.[1]; Gelino, Christopher R.[2]; Berriman, G. B.[2]

[1.]W. M. Keck Observatory, Kamuela, HI. [2.]NASA Exoplanet Science Institute , Pasadena, CA.

Contributing teams: KOA Team

255.11 Examining the Point Spread Function Using the Active Optics System on DECam

Davis, Christopher[1, 2]; Roodman, Aaron[2, 1]

[1.]Stanford University, Stanford, CA. [2.]SLAC National Accelerator Laboratory, Menlo Park, CA.

Contributing teams: Dark Energy Survey

255.12 Instrument Performance Monitoring at Gemini North

Emig, Kimberly[1]; Pohlen, Michael[2]; Chene, Andre-Nicolas[2]

[1.]Arizona State University, Tempe, AZ. [2.]Gemini Observatory, North, Hilo, HI.

255.13 Automated classification of Chandra X-ray sources
Brehm, Derek[1]; Kargaltsev, Oleg[1]; Rangelov, Blagoy[1]; Volkov, Igor[1]; Pavlov, George G.[2]
[1.]The George Washington University, Washington, DC. [2.]Pennsylvania State University, University Park, PA.

255.14 Neutrino-Gamma Multi-Messenger Source Detection via the Astrophysical Multi-Messenger Observatory Network
Fixelle, Josh[1]; Miles, Smith[1]
[1.]Penn State, University Park, PA.
Contributing teams: AMON

255.15 Constraining Very High-Energy Gamma Ray Sources Using IceCube Neutrino Observations
Vance, Gregory[2, 1]; Feintzeig, Jacob[1]; Karle, Albrecht[1]
[1.]University of Wisconsin-Madison, Madison, WI. [2.]Connecticut College, New London, CT.
Contributing teams: IceCube Collaboration

255.16 Scalable Machine Learning for Massive Astronomical Datasets
Ball, Nicholas M.[1]
[1.]Skytree, Inc., San Jose, CA.
Contributing teams: Canadian Astronomy Data Centre

255.17 GREAT3: The Third Gravitational Lensing Accuracy Testing Challenge
Simet, Melanie[1]; Mandelbaum, Rachel[1]; Rowe, Barnaby[2]
[1.]Carnegie Mellon University, Pittsburgh, PA. [2.]University College London, London, United Kingdom.
Contributing teams: the Great3 collaboration

255.18 Electron-Impact Uncertainty Analysis and its Impact on Certain Temperature Diagnostics
Sutherland, Robert[1]; Foster, Adam[1]; Loch, Stuart[1]; Smith, Randall K.[1]; Ballance, Connor P.[1]
[1.]Auburn University, Auburn , AL.

255.19 Exploring How Different Mass-loss Schemes Influence the Properties of Nascent White Dwarfs
Zins, Brianne[1, 4]; Nordhaus, Jason[2, 3]
[1.]Allegheny College, Meadville, PA. [2.]Center for Computational Relativity and Gravitation, Rochester Institute of Technology, Rochester, NY. [3.]National Technical Institute for the Deaf, Rochester Institute of Technology, Rochester, NY. [4.]Research Experience for Undergraduates, Center for Imaging Science, Rochester Institute of Technology, Rochester, NY.

255.20 Relation between star formation and AGN activity in typical elliptical galaxies: Analysis of the 2MASS K-band galaxy images
Pierce, Katherine[1]
[1.]Rochester Institute of Technology, Rochester, NY.

255.21 Difference Image Analysis of De-Focused 2009 CSTAR Observations
Oelkers, Ryan J.[1]; Macri, Lucas M.[1]; Wang, Lifan[1, 2]
[1.]Texas A&M University, College Station, TX. [2.]Purple Mountain Observatory, Nanjing, Jiangsu, China.
Contributing teams: PLATO, CSTAR

255.22 ANALYSIS OF PHOTOMETRIC EFFICIENCY AND ACCURACY OF THE IDL PROCUDURE, PHAST
Kutsop, Nicholas[1, 2]; Mighell, Kenneth J.[2]; Allen, Lori[2]; Trueblood, Mark[3]; Crawford, Robert[4]
[1.]Northern Arizona University, Flagstaff, AZ. [2.]National Optical Astronomy Observatory, Tucson, AZ. [3.]Winer Observatory, Sonoita, AZ. [4.]Rincon Ranch Observatory, Tucson, AZ.

255.23 Visualizing Astronomical Data with Blender
Kent, Brian R.[1]
[1.]NRAO, Charlottesville, VA.

255.24 Astropy: Community Python Software for Astronomy
Greenfield, Perry[1]; Tollerud, Erik J.[2]; Robitaille, Thomas[3]
[1.]STScI, Baltimore, MD. [2.]Yale University, New Haven, CT. [3.]Max-Plank-Institut für Astronomie, Heidelberg, Germany.
Contributing teams: Astropy Developers

255.25 You've Written a Cool Astronomy Code! Now What Do You Do with It?
Allen, Alice[1]; Accomazzi, Alberto[2]; Berriman, G. B.[3]; DuPrie, Kimberly[1]; Hanisch, Robert J.[4]; Mink, Jessica D.[5]; Nemiroff, Robert J.[6]; Shamir, Lior[7]; Shortridge, Keith[8]; Taylor, Mark B.[9]; Teuben, Peter J.[10]; Wallin, John F.[11]
[1.]Astrophysics Source Code Library, Calverton, MD. [2.]Smithsonian Astrophysical Observatory, Cambridge, MA. [3.]Infrared Processing and Analysis Center, California Institute of Technology, Pasadena, CA. [4.]Space Telescope Science Institute/Virtual Astronomical Observatory, Baltimore, MD. [5.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [6.]Michigan Technological University, Houghton, MI. [7.]Lawrence Technological University, Southfield, MI. [8.]Australian Astronomical Observatory, North Ryde, NSW, Australia. [9.]University of Bristol, Bristol, United Kingdom. [10.]University of Maryland, College Park, MD. [11.]Middle Tennessee State University, Murfreesboro, TN.

255.26 Data publication and sharing using the SciDrive service
Mishin, Dmitry[1]; Medvedev, Dmitry[1]; Szalay, Alexander S.[1]; Plante, Raymond L.[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]NCSA, Urbana, IL.

255.27 A Mobile Data Application for the Fermi Mission
Stephens, Thomas E.[1]
[1.]Fermi Science Support Center, Greenbelt, MD.
Contributing teams: Fermi Science Support Center

255.28 Understanding and Using the Fermi Science Tools
Asercion, Joseph[1]
[1.]ADNET Systems, Rockville, MD.
Contributing teams: Fermi Science Support Center

255.29 A Search on the Internet for Evidence of Time Travel
Nemiroff, Robert J.[1]; Wilson, Teresa[1]
[1.]Michigan Technological Univ., Houghton, MI.

255.30 Detection of a Small Fast Moving Near Earth Asteroid with Synthetic Tracking
Shao, Michael[1]; Zhai, Chengxing[1]; Werne, Thomas[1]; Nemati, Bijan[1]; Harding, Leon K.[2]; Hallinan, Gregg[2]
[1.]JPL, pasadena, CA. [2.]Caltech, Pasadena, CA.

255.31 A Method to Automate Identification of Spiral Arms in Galaxies
Lacey, Christina K.[1]; Mercer, Kevin[1]
[1.] Hofstra University, Hempstead, NY.

255.32 Synergy with HST and JWST Data Management Systems
Greene, Gretchen[1]
[1.] Space Telescope Science Institute, Baltimore, MD.
Contributing teams: Space Telescope Data Management Team

256 Catalogs Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

256.01 The Third Fermi LAT Catalog of High-Energy Gamma-ray Sources
Thompson, David J.[1]; Ballet, Jean[2]; Burnett, Thompson[3]
[1.] NASA's GSFC, Greenbelt, MD. [2.] Laboratoire AIM, CEA-IRFU/CNRS/Universite Paris Diderot, Service d'Astrophysique CEA, Saclay, France. [3.] University of Washington, Seattle, WA.
Contributing teams: Fermi Large Area Telescope Collaboration

256.02 Enigmas of the Fermi-LAT Unassociated Sources
Ferrara, Elizabeth C.[1, 2]
[1.] NASA/GSFC, Greenbelt, MD. [2.] University of Maryland, College Park, MD.
Contributing teams: The Fermi-LAT Collaboration

256.03 Pass 8: Transforming the Scientific Performance of the Fermi Large Area Telescope
Grove, J. E.[1]
[1.] NRL, Washington, DC.
Contributing teams: on behalf of the Fermi LAT Collaboration

256.04 Searching for Variability in the Gamma-ray Sky using the Fermi All-sky Variability Analysis (FAVA)
Kocevski, Daniel[1]
[1.] NASA Goddard Space Flight Center, Greenbelt, MD.

256.05 A Catalog of Stellar Targets and Calibrators for Next Generation Optical Interferometers
Swihart, Sam[1]; Muterspaugh, Matthew W.[2]; Garcia, Eugenio[3, 4]; van Belle, Gerard[3]; Stassun, Keivan[4, 5]
[1.] University of Michigan, Ann Arbor, MI. [2.] Tennessee State University, Nashville, TN. [3.] Lowell Observatory, Flagstaff, AZ. [4.] Vanderbilt University, Nashville, TN. [5.] Fisk University, Nashville, TN.

256.06 Modeling Spiral Galaxy Surface Luminosity to Explain Non-Uniform Inclination Distributions
Rozum, Jordan C.[1]; Larson, Shane L.[1]
[1.] Utah State University, Logan, UT.

257 Laboratory Astrophysics Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

257.01 Improved log(gf) Values for Lines of Ni I and New Nickel Abundances in the Sun and the Metal-Poor Star HD 84937
Lawler, James E.[1]; Wood, Michael P.[1]; Sneden, Chris[2]; Cowan, John J.[3]
[1.]University of Wisconsin, Madison, WI. [2.]University of Texas, Austin, TX. [3.]University of Oklahoma, Norman, OK.

258 Observatory Site Protection Poster Session

Tuesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

258.01 Spectral and Illuminance Assessment of Tucson, Arizona Light Pollution Hot Spots
Chmielewski, Jeanine[1]; Pompea, Stephen M.[2]
[1.]Michigan Technological University, Houghton, MI. [2.]National Optical Astronomy Observatory, Tucson, AZ.

258.02 Characterizing and Quantifying Time Dependent Night Sky Brightness In and Around Tucson, Arizona
Nydegger, Rachel[2, 1]
[1.]National Optical Astronomy Observatory, Tucson, AZ. [2.]Utah State University, Logan, UT.

WEDNESDAY, 8 JANUARY 2014

300 Pierce Prize: Exploring the Stellar Graveyard of the Milky Way

Wednesday, 8:30 AM - 9:20 AM; Potomac Ballroom A

Chair(s):
David Helfand, *Quest University Canada*

Jason Kalirai - Newton Lacy Pierce Prize in Astronomy
The Newton Lacy Pierce Prize in Astronomy is awarded to Jason Kalirai for major contributions to the field of stellar and Galactic astrophysics, including establishing a fundamental relation of stellar astrophysics, the initial-final mass relation, that maps the fraction of mass loss that stars experience over their lives.

300.01 Exploring the Stellar Graveyard of the Milky Way
Kalirai, Jason S.[1, 2]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Johns Hopkins University, Center for Astrophysical Sciences, Baltimore, MD.

Amateur Talk: Blazars and Gamma Rays

Wednesday, 9:30 AM - 10:00 AM; Maryland Ballroom A

At the heart of every distant galaxy lurks a supermassive black hole. About a quarter of these black holes emit jets of relativistic particles which create gamma rays. When the jets are pointed towards Earth, NASA's Fermi Gamma-ray Space Telescope detects gamma rays from these sources, which are then known as gamma-ray "blazars." Blazars are the most ubiquitous source of high-energy (> 100MeV) gamma rays in the Universe, yet many questions remain as to the nature of their jets. This talk will discuss how ground-based visible-light monitoring campaigns can provide answers to some of these questions.

Chair(s):
Lynn Cominsky, *Sonoma State Univ.*

Workshop for Journal Authors and Referees, Part I

Wednesday, 9:30am-11:30am; Chesapeake 7

The AAS is sponsoring a workshop for journal authors and referees at the AAS Winter meeting in Washington DC. The workshop is aimed mainly at young and early career astronomers. The topics that will be covered in the workshop include how to write a good paper, how to be an effective reviewer, and how the modern scholarly journal system works. There will be opportunities for workshop participants to interact with editors and publishers, and to have questions answered.

Chair:
Christopher Biemesderfer, *AAS*

NICER: Future X-ray Astrophysics from the ISS

Wednesday, 10:00 AM - 11:30 AM; Maryland 1

All are welcome to attend a series of brief presentations on NASA's newest planned X-ray astrophysics mission, the Neutron star Interior Composition Explorer (NICER), scheduled to launch in 2016 for installation as an externally attached payload on the International Space Station (ISS). As a successor to the highly productive Rossi X-ray Timing Explorer, NICER offers capabilities that will appeal to a large community of prospective users. This session will provide an overview of the NICER mission, its core science agenda, and its expected contributions across an array of X-ray astrophysics investigations enabled by a proposed Guest Observer program. The fundamental physics of the ultra-dense matter that exists nowhere but in the cores of neutron stars is a longstanding unsolved problem. NICER is designed to probe the exotic interiors of neutron stars by inferring stellar masses and radii through time-resolved soft X-ray spectroscopy. In addition to exploring neutron star structure, NICER will study dynamic phenomena powered by accretion and strong gravity, and the extreme physics of pulsar magnetospheres, perhaps the most powerful cosmic particle accelerators known. NICER is particularly timely given the tremendous rate of pulsar discovery currently enabled by the Fermi gamma-ray telescope. NICER exploits established infrastructure on the iSS to offer a low-cost, highly capable instrument to the X-ray astrophysics community. NICER's unique combination of photon time-tagging precision, energy resolution, and sensitivity in the soft X-ray (0.2-12 keV) band represents both a novel capability for studying neutron stars and exploration of new discovery space in time-domain astrophysics.

Organizer(s):
Zaven Arzoumanian, *Arecibo Observatory*

301 AGN Across the Spectrum: I

Wednesday, 10:00 AM - 11:30 AM; National Harbor 11
Chair(s):
W. Brandt, *Penn State Univ.*

301.01D Using Fermi Variability to Locate the Blazar GeV Emission Zone
Dotson, Amanda[1]; Georganopoulos, Markos[1, 2]; Meyer, Eileen T.[3]
[1.]UMBC, Baltimore, MD. [2.]NASA GSFC, Greenbelt, MD. [3.]STScI, Baltimore, MD.

301.02 The Extragalactic Background Light and the Detection of the Cosmic Gamma-Ray Horizon
Finke, Justin[1]; Dominguez, Alberto[2]; Primack, Joel R.[3]; Prada, Francisco[4]; Kitaura, Francisco[5]; Siana, Brian D.[2]
[1.]US Naval Research Laboratory, Washington, DC. [2.]University of California-Riverside, Riverside, CA. [3.]University of California-Santa Cruz, Santa Cruz, CA. [4.]Universidad Autonoma de Madrid, Madrid, Spain. [5.]Leibniz-Institut fuer Astrophysik, Potsdam, Germany.
Contributing teams: Fermi-LAT Collaboration

301.03 The Cosmic Evolution of Fermi BL Lacertae Objects
Gasparrini, Dario[1, 2]; Ajello, Marco[3]; Romani, Roger W.[4]; Shaw, Michael S.[4]
[1.]ASDC, Roma, RM, Italy. [2.]INAF-OAR, Monteporzio Catone, RM, Italy. [3.]Space Sciences Laboratory, Berkeley, CA. [4.]Stanford University, Stanford, CA.

301.04 Fermi rules out the IC/CMB model for the Large-Scale Jet X-ray emission of 3C 273
Georganopoulos, Markos[1]; Meyer, Eileen T.[2]
[1.]UMBC, Baltimore, MD. 2.STScI, Baltimore, MD.

301.05 Using Swift to Obtain X-ray Monitoring of Fermi Blazars and X-ray Counter parts to Fermi Unassociated Sources
Falcone, Abraham[1]; Stroh, Michael[1]; Pryal, Matthew[1]
[1.]Penn State University, University Park, PA.

301.06 Tracing the evolution of AGN host galaxies over the last 9 Gyrs
Goulding, Andy D.[1]; Forman, William R.[1]; Hickox, Ryan C.[2]; Jones, Christine[1]; Murray, Stephen S.[3]; Paggi, Alessandro[1]; Ashby, Matthew[1]; Coil, Alison L.[4]; Cooper, Michael[5]; Huang, Jiasheng[1]; Kraft, Ralph P.[1]; Newman, Jeffrey[6]; Willner, Steven P.[1]
[1.]Harvard Smithsonian, CfA, Cambridge, MA. [2.]Dartmouth College, Hanover, NH. [3.]Johns Hopkins University, Baltimore, MD. [4.]University of California, San Diego, CA. [5.]University of California, Irvine, CA. [6.]University of Pittsburgh, Pittsburgh, PA.

301.07 Detection of cm to sub-mm band radio and gamma-ray correlated variability in Fermi bright blazars
Fuhrmann, Lars[1]; Larsson, Stefan[2]; Chiang, James[3]; Angelakis, Emmanouil[1]; Zensus, Anton[1]
[1.]Max-Planck-Institut fuer Radioastronomie, Bonn, NRW, Germany. [2.]Oskar Klein Centre, Department of Astronomy, Stockholm University, Stockholm, Sweden. [3.]Department of Physics and SLAC National Accelerator Laboratory, Stanford University, Stanford, CA.
Contributing teams: F-GAMMA team, Fermi collaboration

301.08 AGNs in Dwarf Galaxies? Evidence from WISE and XMM-Newton
Secrest, Nathan[1]; Satyapal, Shobita[1]; Gliozzi, Mario[1]; Cheung, Teddy[2]
[1.]George Mason University, Fairfax, VA. [2.]Naval Research Labratory, Washington, DC.

302 Data Handling & Catalogs

Wednesday, 10:00 AM - 11:30 AM; National Harbor 5

Chair(s):
Robert Hanisch, *STScI*

302.01 Using Cloud Computing To Create A Multi-Wavelength Atlas Of The Galactic Plane
Berriman, G. B.[1]; Good, John [1]; Rynge, Mats [2]; Juve, Gideon[2]; Deelman, Ewa[2]; Kinney, Jamie[3]; Merrihew, Ann[3]
[1.]Caltech, Pasadena, CA. [2.]Information Sciences Institute, USC, Marina del Rey, CA. [3.]Amazon Web Services, Seattle, WA.

302.02 Noise characteristics of LCOGT time series photometry
Dragomir, Diana[1]; Brown, Timothy M.[1]
[1.]LCOGT/UCSB, Santa Barbara, CA.

302.03 The Astrophysical Multimessenger Observatory Network (AMON)
Tešic, Gordana[1]
[1.]The Pennsylvania State University, University Park, PA.
Contributing teams: AMON development team

302.04 Explosive Growth and Advancement of the NASA/IPAC Extragalactic Database (NED)
Mazzarella, Joseph M.[1]; Ogle, Patrick M.[1]; Fadda, Dario[1]; Madore, Barry F.[1]; Ebert, Rick[1]; Baker, Kay[1]; Chan, Hiu Pan[1]; Chen, Xi[1]; Frayer, Cren[1]; Helou, George[1]; Jacobson, Jeffery D.[1]; LaGue, Cheryl[1]; Lo, Tak M.[1]; Pevunova, Olga[1]; Schmitz, Marion[1]; Terek, Scott[1]; Steer, Ian[2]
[1.]Caltech, Pasadena, CA. [2.]Toronto, Toronto, ON, Canada.

302.05 Best Practices for Data Publication to Facilitate Integration into NED: A Reference Guide for Authors
Schmitz, Marion[1]; Mazzarella, Joseph M.[1]; Madore, Barry F.[1]; Ogle, Patrick M.[1]; Ebert, Rick[1]; Baker, Kay[1]; Chan, Hiu Pan[1]; Chen, Xi[1]; Fadda, Dario[1]; Frayer, Cren[1]; Jacobson, Jeffery D.[1]; LaGue, Cheryl[1]; Lo, Tak M.[1]; Pevunova, Olga[1]; Terek, Scott[1]; Steer, Ian[2]
[1.]Caltech, Pasadena, CA. [2.]Self, Toronto, ON, Canada.

302.06 Using WorldWide Telescope in Observing, Research and Presentation
Roberts, Douglas A.[1]; Fay, Jonathan[1]
[1.]Northwestern University, Evanston, IL.

302.07 Enhancing Science with the Hubble Source Catalog
Whitmore, Bradley C.[1]; Allam, Sahar S.[1]; Budavari, Tamas[2, 1]; Casertano, Stefano[1]; Lubow, Stephen H.[1]; Quick, Lee[1]; Strolger, Louis-Gregory[1]; White, Richard L.[1]
[1.]STScI, Baltimore, MD. [2.]Johns Hopkins University, Baltimore, MD.

302.08D Combing Large Samples of Type Ia Supernovae To Constrain Dark Energy
Scolnic, Daniel[1]; Riess, Adam G.[1, 2]
1.Johns Hopkins University, Baltimore, MD. 2.Space Telescope Science Institute, Baltimore, MD.
Contributing teams: PS1 Transients Group

WEDNESDAY

303 Debris Disks Around Young Stars and Planet Formation I

Wednesday, 10:00 AM - 11:30 AM; Potomac Ballroom C

Chair(s):
Alycia Weinberger, *Carnegie Inst. Of Washington*

303.01 SMACK: A New Algorithm for Modeling Collisions and Dynamics of Planetesimals in Debris Disks
Nesvold, Erika[1]; Kuchner, Marc J.[2]; Rein, Hanno[3, 4]; Pan, Margaret[2]
[1.]University of Maryland, Baltimore County, Baltimore, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Institute for Advanced Study, Princeton, NJ. [4.]University of Toronto Scarborough, Toronto, ON, Canada.

303.02D A Multi-Wavelength Study of Grain Growth in Protoplanetary Disks
Ubach, Catarina[1]
[1.]Swinburne University, Melbourne, VIC, Australia.

303.03 The Migrating Embryo Model for Planet Formation
Basu, Shantanu[1]; Vorobyov, Eduard[2]
[1.]Western University, London, ON, Canada. 2.The University of Vienna, Vienna, Austria.

303.04D Evolution of Protoplanetary Disks in the Orion A Star-Forming Region
Kim, Kyoung Hee[1, 2]
[1.]Univ. Of Rochester, Rochester, NY. [2.]Korea Astronomy and Space Science Institute, Daejeon, Korea, Republic of.

303.05D High-Contrast Near-Infrared Imaging and Modeling of Planets and Debris Disks
Rodigas, Timothy[1, 2]; Hinz, Philip[2]; Weinberger, Alycia J.[1]; Close, Laird M.[2]; Debes, John H.[3]
[1.]Carnegie DTM, Washington, DC. [2.]University of Arizona, Tucson, AZ. [3.]STSCI, Baltimore, MD.

303.06 HD 181327 Debris Disk Asymmetries: Signs of a Planet or Geometric Projection Effects?
Stark, Christopher C.[1]; Schneider, Glenn[5]; Weinberger, Alycia J.[2]; Debes, John H.[3]; Jang-Condell, Hannah[4]; Grady, Carol A.[1]; Carson, Joseph[12]; Henning, Thomas[9]; Hines, Dean C.[3]; Hinz, Phil5; Kuchner, Marc J.[1]; Moro-Martin, Amaya10; Perrin, Marshall D.[3]; Tamura, Motohide[8]; Serabyn, Gene[6]; Silverstone, Murray D.[11]; Goto, Miwa[7]; Wisniewski, John P.[13]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]Carnegie Institution of Washington, Washington, DC. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]University of Wyoming, Laramie, WY. [5.]University of Arizona, Tucson, AZ. [6.]NASA JPL, Pasadena, CA. [7.]Universitäts-Sternwarte München, Munich, Germany. [8.]National Astronomical Observatory of Japan, Tokyo, Japan. [9.]Max-Planck-Institut für Astronomie, Heidelberg, Germany. [10.]Instituto Nacional de Técnica Aeroespacial, Madrid, Spain. [11.]University of Alabama, Tuscaloosa, AL. [12.]College of Charleston, Charleston, SC. [13.]University of Oklahoma, Norman, OK.

304 Demographic Studies and the AAS

Wednesday, 10:00 AM - 11:30 AM; National Harbor 3

In its report, the 2010 Decadal Survey (New Worlds New Horizons) recommended that the American Astronomical Society, the American Physical Society, astronomy and astrophysics departments, and federal agencies should gather and disseminate demographic data on astronomers in the workforce to provide students information about career choices. The same report noted that minority Americans continue to be seriously underrepresented in the profession. To promote and increase the numbers of minorities, and promote gender equity, it is important to know what factors affect entry and retention into astronomy and astrophysics. Hence, in this special session, sponsored by the AAS Demographics Committee, the focus is on how demographic information can help address both workforce and representation issues. Debbie Elmegreen will discuss the importance of demographic studies for the profession and to the 2010 Decadal Survey. Marc Postman will present the AAS Workforce Survey, Pat Knezek will discuss why a Longitudinal Survey is important, and Rachel Ivie will present results to date from the Longitudinal Survey.

Chair(s):
Susana Deustua, *Space Telescope Science Institute*
Organizer(s):
Susana Deustua, *Space Telescope Science Institute*

304.01 The Importance of Demographic Data in Astronomy
Elmegreen, Debra M.[1]
[1.]Vassar College, Poughkeepsie, NY.

304.02 The AAS Workforce Survey
Postman, Marc[1]; Norman, Dara J.[3]; Evans, Nancy R.[2]; Ivie, Rachel[4]
[1.]STScI, Baltimore, MD. [2.]Center for Astrophysics, Cambridge, MA. [3.]NOAO, Tucson, AZ. [4.]AIP, College Park, MD.

304.03 Results from the Longitudinal Study of Astronomy Graduate Students
Ivie, Rachel[1]
[1.]AIP, College Park, MD.

304.04 The Importance of Longitudinal Studies
Knezek, Patricia[1]
[1.]NSF, Arlington, VA.

305 Developing Career Opportunities in Science Policy and Industry at All Career Levels

Wednesday, 10:00 AM - 11:30 AM; National Harbor 2

The AAS Employment Committee will host a panel discussion on career opportunities beyond academia, focusing on several possibilities that can be explored through fellowships and temporary positions, particularly in science policy/administration and industry. Short term fellowships, internships, and temporary assignments are excellent ways to explore potential careers, and to gain the experience and make the connections that enable career transitions at all career levels. The goals of the session are to provide information on the ways to become involved in these kinds of positions and on the career benefit they bring, and to open a dialog with the community about how they can be incorporated in current educational programs. The panel will feature speakers with a variety of backgrounds in astronomy, and whose diverse experiences will offer a range of perspectives on how one can become involved in science policy, industry, and other areas outside of academic or research positions. There will be ample opportunity for audience questions and discussion with panel members.

Chair(s):
Mario Perez, *NASA Headquarters*
Organizer(s):
Eileen Friel*, Indiana University*

307 Evolution of Local Group Galaxies

Wednesday, 10:00 AM - 11:30 AM; Maryland Ballroom C

Chair(s):
Susan Kassin, *NASA/GSFC*

307.02D Exploiting Large Multi-element Stellar Abundance Surveys
Andrews, Brett[1]
[1.]The Ohio State University, Columbus, OH.

307.03D Clouds of neutral hydrogen between M31 and M33 and around the Milky Way.
Wolfe, Spencer A.[1]; Pisano, Daniel J.[1]; Lockman, Felix J.[2]; McGaugh, Stacy S.[3]; Shaya, Edward J.[4]
[1.]West Virginia University, Morgantown, WV. [2.]National Radio Astronomy Observatory, Green Bank, WV. [3.]Case Western Reserve University, Cleveland, OH. [4.]University of Maryland, College Park, MD.

307.04 NANOGrav and the Astrophysics of Galaxies
Jenet, Fredrick[1, 2]
[1.]Univ. of Texas at Brownsville, Brownsville, TX. [2.]Center for Advanced Radio Astronomy, Brownsville, TX.
Contributing teams: NANOGrav

308 Exoplanets: Interiors, Evolution, and Planetarydisks

Wednesday, 10:00 AM - 11:30 AM; Maryland Ballroom A

Chair(s):
Sasha Hinkley, *California Institute of Technology*

308.01D Circumplanetary Debris Disks in the Solar System and Beyond: Is the Fomalhaut System on the Verge of a Late Heavy Bombardment?
Tamayo, Daniel1; Burns, Joseph A.[1]
[1.]Cornell University, Ithaca, NY.

308.02D Protoplanetary Disks on a Moving Mesh, and other applications.
Duffell, Paul[1]
[1.]New York University, New York, NY.

308.03 Particle Trapping in the Outer Regions of Protoplanetary Disks
Simon, Jacob B.[1, 2]; Armitage, Philip J.[3]
[1.]Sagan Fellow, Boulder, CO. 2.Sagan Fellow, Southwest Research Institute, Boulder, CO. [3.]University of Colorado, Boulder, CO.

308.04 Interior structure of solid super-Earths: temperature-dependent H2O structure and new online tools
Zeng, Li[1]; Sasselov, Dimitar D.[1]
[1.]Harvard University, Cambridge, MA.

308.05 Giant-Planet Structure and Evolution, and Its Dependence on Atmospheric and Interior Thermal Processes
Spiegel, David S.[1]; Burrows, Adam S.[2]
[1.]Institute for Advanced Study, Princeton, NJ. [2.]Princeton University, Princeton, NJ.

308.06 Uneven Cooling: The Influence of Differential Heating and Circulation on the Thermal Evolution of Gas Giants
Rauscher, Emily[1]; Showman, Adam P.[2]
[1.]Princeton University, Princeton, NJ. [2.]Univ. of Arizona, Tucson, AZ.

309 Galaxies I - Motions, Velocities, Kinematics, Masses

Wednesday, 10:00 AM - 11:30 AM; National Harbor 12

Chair(s):
Robert Minchin, *NAIC, Arecibo Observatory*

309.01 The Steeply Rising Stellar Velocity Dispersion of M87 from Integrated Starlight
Murphy, Jeremy[1]; Gebhardt, Karl[2]
[1.]Princeton University, Princeton, NJ. [2.]University of Texas, Austin, TX.

309.02D Determination of Resonance Locations in Spiral Galaxies using Multi-band Photometry
Sierra, Amber[1]; Seigar, Marc[1]; Treuthardt, Patrick M.[2]; Puerari, Ivanio[3]
[1.]University of Arkansas at Little Rock, Little Rock, AR. [2.]North Carolina Museum of Natural Sciences, Raleigh, NC. [3.]INAOEP, Puebla, Mexico.

309.03 Kinematics of Andromeda's Stellar Disk
Dorman, Claire1; Guhathakurta, Puragra[1]
[1.]UC Santa Cruz, Santa Cruz, CA.
Contributing teams: PHAT collaboration, SPLASH collaboration

309.04 The Inner Mass Structure of Observed Galaxies
Kuzio de Naray, Rachel[1]; McGaugh, Stacy S.[2]
[1.]Georgia State University, Atlanta, GA. [2.]Case Western Reserve University, Cleveland, OH.

309.05 Supermassive Black Holes in Low-Mass Bulges, Pseudobulges, and Composite Bulges
Erwin, Peter[1, 2]; Saglia, Roberto[1, 2]; Thomas, Jens[1, 2]; Fabricius, Maximilian[1, 2]; Rusli, Stephanie[1, 2]; Nowak, Nina[3]; Opitsch, Michael[1, 2]; Bender, Ralf[1, 2]; Williams, Michael J.[1, 2]; Mazzalay, Ximena[1, 2]
[1.]MPE, Garching b. Muenchen, Germany. [2.]Universitaets Sternwarte Muenchen, Munich, Germany. [3.]MPP, Munich, Germany.

309.06 Modeling and Fitting Tidal Stellar Streams
Fardal, Mark A.[1]; Huang, Shuiyao1; Weinberg, Martin D.[1]
[1.]University of Massachusetts, Amherst, MA.
Contributing teams: PAndAS, SPLASH

309.07 Powerful Molecular Outflows in Nearby ULIRGs and Quasars
Veilleux, Sylvain[1]; Melendez, Marcio[1]
[1.]Univ. of Maryland, College Park, MD.
Contributing teams: The SHINING Team

309.08 Suppression of star formation in the galaxy NGC 253 by a starburst-driven molecular wind
Warren, Steven R.[1]; Bolatto, Alberto D.[1]; Leroy, Adam K.[2]; Walter, Fabian[3]; Veilleux, Sylvain[1]; Ostriker, Eve C.[4]; Ott, Juergen[5]; Zwaan, Martin[6]; Fisher, David B.[1]; Weiss, Axel[7]; Rosolowsky, Erik[8]; Hodge, Jacqueline[3]
[1.]University of Maryland, College Park, MD. [2.]NRAO, Charlottesville, VA. [3.]Max-Planck Institut für Astronomie, Heidelberg, Germany. [4.]Princeton University, Princeton, NJ. [5.]NRAO, Socorro, NM. [6.]ESO, Garching, Germany. [7.]Max-Planck Institut für Radioastronomie, Bonn, Germany. [8.]University of British Columbia, Kelowna, BC, Canada.

310 Galaxy Evolution at z~2

Wednesday, 10:00 AM - 11:30 AM; Potomac Ballroom A

Chair(s):
Eilat Glikman, *Yale University*

310.01 Ultra-Faint Ultraviolet Galaxies at the Epoch of Peak Star Formation 1 < z < 3
Alavi, Anahita[1]; Siana, Brian D.[1]; Richard, Johan[2]; Stark, Daniel[3]; Scarlata, Claudia[4]; Teplitz, Harry I.[5]; Freeman, William R.[1]; Dominguez, Alberto[1]; Rafelski, Marc[5]; Robertson, Brant E.[3]; Desai, Vandana[6]
[1.]University of California Riverside, Riverside, CA. [2.]Centre de Recherche Astronomique de Lyon, Saint-Genis-Laval, France. [3.]University of Arizona, Tucson, AZ. [4.]University of Minnesota, Minneapolis, MN. [5.]California Institute of Technology, Pasadena, CA. [6.]Jet Propulsion Laboratory, Pasadena, CA.

310.02 Physical properties of dwarf galaxies at z~2 from bursty star formation rate histories.
Dominguez, Alberto[1]; Siana, Brian D.[1]
[1.]University of California, Riverside, CA.

310.03 A VIRUS-P Survey of Galaxy Clusters to Find Faint Ly?-emitting Galaxies
McLinden, Emily[1]; Finkelstein, Steven L.[2]; Siana, Brian D.[3]; Alavi, Anahita[3]
[1.]UT Austin - McDonald Observatory, Austin, TX. [2.]University of Texas - Austin, Austin, TX. [3.]University of California Riverside, Riverside, CA.

310.04 To Stack or Not To Stack: Spectral Energy Distribution Properties of Lyman Alpha Emitting Galaxies at z=2.1
Vargas, Carlos J.[1, 2]; Bish, Hannah[1]; Acquaviva, Viviana[3]; Gawiser, Eric J.[1]; Finkelstein, Steven L.[4]; Ciardullo, Robin[5]
[1.]Rutgers University, New Brunswick, NJ. [2.]New Mexico State University, Las Cruces, NM. [3.]New York City College of Technology, City University of New York, New York, NY. [4.]The University of Texas at Austin, Austin, TX. [5.]The Pennsylvania State University, University Park, PA.
Contributing teams: The CANDELS Collaboration, The MUSYC Collaboration

310.05 A multi-wavelength imaging study of a large sample of galaxies at z?2: Implications for star formation and dust properties at high redshift
Shivaei, Irene[1]; Reddy, Naveen[1]
[1.]Univ of CA, Riverside, Riverside, CA.

310.06D The impact of stellar radiation on the formation of dwarf galaxies
Trujillo-Gomez, Sebastian[1]; Klypin, Anatoly A.[1]; Colín, Pedro[2]; Ceverino, Daniel[4]; Arraki, Kenza S.[1]; Primack, Joel R.[3]
[1.]Astronomy Department, New Mexico State University, Las Cruces, NM. [2.]Centro de Radioastronomia y Astrofísica, Universidad Nacional Autónoma de México, Morelia, Michoacán, Mexico. [3.]Department of Physics, University of California at Santa Cruz, Santa Cruz, CA. [4.]Departamento de Física Teórica, Universidad Autónoma de Madrid, Madrid, Madrid, Spain.

310.07 The insignificance of major mergers in the early Universe
Kaviraj, Sugata[1, 2]; Cohen, Seth H.[3]; Windhorst, Rogier A.[3]; Silk, Joseph I.[2]; Ellis, Richard S.[4]; Dekel, Avishai[5]
[1.]University of Hertfordshire, Hatfield, Hertfordshire, United Kingdom. [2.]University of Oxford, Oxford, Oxfordshire, United Kingdom. [3.]Arizona State University, Phoenix, AZ. [4.]Caltech, Pasadena, CA. 5.Hebrew University of Jerusalem, Jerusalem, Jerusalem, Israel.
Contributing teams: WFC3 Science Organising Committee

311 Gamma Ray Bursts: Multi-wavelength and Afterglow

Wednesday, 10:00 AM - 11:30 AM; Maryland Ballroom D

Chair(s):
Judith Racusin, *NASA/GSFC*

311.01D Unveiling the Progenitors of Short-duration Gamma-ray Bursts
Fong, Wen-fai[1]
[1.]Havard Center for Astrophysics, Cambridge, MA.

311.02 Radio Observations Of GRB 100418a: Test Of An Energy Injection Model Explaining Long-Lasting GRB Afterglows
Moin, Aquib[1, 2]; Chandra, Poonam[5]; Miller-Jones, James[3]; Tingay, Steven[3]; Taylor, Gregory B.[7, 4]; Frail, Dale A.[4]; Wang, Zhongxiang[2]; Reynolds, Cormac[3]; Phillips, Chris[6]
[1.]New York University Abu Dhabi, Abu Dhabi, Abu Dhabi, United Arab Emirates. [2.]Shanghai Astronomical Observatory, Shanghai, Shanghai, China. [3.]ICRAR/ Curtin University, Perth, WA, Australia. [4.]NRAO, Socorro, NM. [5.]NCRA TIFR, Pune, Maharashtra, India. [6.]ATNF CASS, Sydney, NSW, Australia. [7.]University of New Mexico, Albuquerque, NM.

311.03 Limits on GRB Prompt Radio Emission Using the LWA1
Obenberger, Kenneth S.[1]; Hartman, Jacob M.[2]; Taylor, Gregory B.[1]; Craig, Joseph[1]; Dowell, Jayce[1]; Helmboldt, Joseph F.[3]; Henning, Patricia A.[1]; Schinzel, Frank[1]; Wilson, Thomas L.[3]
[1.]University of New Mexico, Albuquerque, NM. [2.]NASA Jet Propulsion Laboratory, Pasadena, CA. [3.]US Naval Research Laboratory, Washington, DC.

311.04 Shocked by the Very Bright Radio Flare and Afterglow of GRB 130427A
van der Horst, Alexander J.[1]
[1.]Astronomical Institute, University of Amsterdam, Amsterdam, Netherlands.

311.05 An Account of the GRB afterglow steep-decline-and-plateau phase
Kazanas, Demosthenes1; Sultana, Joseph2; Mastichiadis, Apostolos3
1.NASA's GSFC, Greenbelt, MD. 2.University of Malta, Msida, Malta. 3.University of Athens, Athens, Greece.

311.07 Fast Radio Bursts: Further Detections and Multi-wavelength Searches
Spolaor, Sarah1, 2
1.California Institute of Technology, Pasadena, CA. 2.Jet Propulsion Laboratory, Pasadena, CA.
Contributing teams: High Time Resolution Universe Survey, V-Fastr Collaboration

312 Interstellar Medium & Dust III

Wednesday, 10:00 AM - 11:30 AM; National Harbor 13

Chair(s):
John Vaillancourt, *SOFIA / USRA*

312.01 The WISE Catalog of Galactic HII Regions Website
Anderson, Loren D.[1]
[1.]West Virginia University, Morgantown, WV.

312.02D Rotationally Excited H2 in the Magellanic Clouds
Xue, Rui[1]; Wong, Tony H.[1]; Welty, Daniel E.[2]
[1.]University of Illinois, Urbana, IL. [2.]University of Chicago, Chicago, IL.

312.03 The Role of Stellar Feedback in the Dynamics of HII Regions
Lopez, Laura A.[1]
[1.] MIT, Cambridge, MA.

312.04 The CO-to-H2 Conversion Factor and Dust-to-Gas Ratio on Kiloparsec Scales in Nearby Galaxies
Sandstrom, Karin[1]; Leroy, Adam K.[2]; Kennicutt, Robert[3]
[1.] University of Arizona, Tucson, AZ. [2.] NRAO, Charlottesville, VA. [3.] Institute of Astronomy, University of Cambridge, Cambridge, United Kingdom.
Contributing teams: KINGFISH team, HERACLES team

312.05 Anomalous Microwave Emission in HII regions: is it really anomalous? The case of RCW 49
Paladini, Roberta[1]; Ingallinera, Adriano[1]; Agliozzo, Claudia[1]; Tibbs, Christopher[1]; Dickinson, Clive[1]; Trigiglio, Corrado[1]; Umana, Grazia[1]; Noriega-Crespo, Alberto[1]; Flagey, Nicolas[1]
[1.] NHSC/Caltech, Pasadena, CA.

312.06 Diagnosing Pressure in Molecular Clouds through Observations and Simulations
Faesi, Christopher[1]; Offner, Stella[2]; Goodman, Alyssa A.[1]; Bisbas, Thomas[3]
[1.] Harvard Univ., Cambridge, MA. [2.] Yale University, New Haven, CT. [3.] University College London, London, United Kingdom.

312.07 Modelling Photo Dissociation Region near Ultracompact H II region
Roshi, D. Anish[1]; Jeyakumar, S.[2]
[1.] National Radio Astronomy Observatory, Charlottesville, VA. [2.] Departamento de Astronom{\'i}a, Universidad de Guanajuato, Guanajuato, CP 36000,Mexico.

312.08 Sensitive Survey of Molecular lines in the Taurus Molecular Cloud in frequency 39 to 47 GHz
Langston, Glen[1]
[1.] National Science Foundation, Washington, DC.

313 Large Scale Structure & Cosmic Distance I

Wednesday, 10:00 AM - 11:30 AM; National Harbor 4

Chair(s):
Mark Neyrinck, *Johns Hopkins Univ.*

313.01D Observations give us CLUES to Cosmic Flows' origins
Sorce, Jenny[1, 2]; Courtois, Helene[1, 5]; Gottloeber, Stefan [2]; Hoffman, Yehuda[3]; Pomarede, Daniel[4]; Tully, R. B.[5]
[1.] University of Lyon, CNRS/IN2P3,Nuclear Physics Institute, Villeurbanne, France. [2.] Leibniz-Institut fur Astrophysik, Potsdam, Germany. [3.] Racah Institute of Physics, Hebrew University, Jerusalem, Israel. [4.] CEA/IRFU, Saclay, Gif-sur-Yvette, France. [5.] Institute for Astronomy, University of Hawaii, Honolulu, HI.
Contributing teams: Cosmic Flows, CLUES

313.02 Improving cosmic distance meaurements by reconstructing the WiggleZ Dark Energy Survey density field
Kazin, Eyal[1]; Blake, Chris[1]; Koda, Jun[1]; Padmanabhan, Nikhil[2]
[1.] Swinburne University of Technology, Melbourne, VIC, Australia. [2.] Yale, New Haven, CT.

313.03D Probing Galaxy Evolution and Cosmology using Cosmic Voids in SDSS-III
Mao, Qingqing[1]; Berlind, Andreas A.[1]; Scherrer, Robert[1]; McBride, Cameron[2]; Neyrinck, Mark C.[3]; Scoccimarro, Roman[4]; Tinker, Jeremy[4]
[1.]Vanderbilt University, Nashville, TN. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]Johns Hopkins University, Baltimore, MD. [4.]New York University, New York, NY.

313.04D Configuring the Cosmos: New Approaches to Modeling Nonlinear Structure Formation
McCullagh, Nuala[1]; Szalay, Alexander S.[1]; Neyrinck, Mark C.[1]; Jeong, Donghui[1]
[1.]Johns Hopkins University, Baltimore, MD.

314 Scientific Opportunities with the James Webb Space Telescope

Wednesday, 10:00 AM - 11:30 AM; Maryland Ballroom B

The James Webb Space Telescope (JWST) will be a general purpose observatory that will provide research opportunities and support for thousands of astronomers. In this special session, speakers will describe JWST's potential for advancing a number of core scientific topics that are at the forefront of astrophysical research, with specific links to JWST's observing efficiency and multiple modes of imaging, spectroscopy, and coronography. Among the range of topics that will be covered in the session are Solar System science, planet formation and exoplanet characterization, star formation and the IMF, and galaxy formation and assembly.

Chair(s):
Jason Kalirai, *Space Telescope Science Institute*
Organizer(s):
Jason Kalirai, *Space Telescope Science Institute*

314.01 Supernova Forensics
Soderberg, Alicia M.[1]
[1.]Harvard Smithsonian, CfA, Cambridge, MA.

314.02 Observing the solar system with JWST
Tiscareno, Matthew S.[1]; Hammel, Heidi B.[2, 3]; Norwood, James[4]; Milam, Stefanie N.[5]; Lunine, Jonathan I.[1]; Chanover, Nancy J.[4]; Stansberry, John A.[6]; Hines, Dean C.[6]; Sonneborn, George[5]; Brown, Michael E.[7]; Ferruit, Pierre[8]
[1.]Cornell University, Ithaca, NY. [2.]Association of Universities for Research in Astronomy, Washington, DC. [3.]Space Science Institute, Boulder, CO. [4.]New Mexico State University, Las Cruces, NM. [5.]NASA Goddard Space Flight Center, Greenbelt, MD. [6.]Space Telescope Science Institute, Baltimore, MD. [7.]California Institute of Technology, Pasadena, CA. [8.]European Space Agency, Noordwijk, Netherlands.

314.03 Directly Measuring the Low Mass IMF Outside the Milky Way with JWST
Geha, Marla C.[1]
[1.]Yale University, New Haven, CT.

314.04 Insights into planetary systems through JWST imaging of debris disks
Wyatt, Mark[1]
[1.]Institute of Astronomy, Cambridge, United Kingdom.

314.05 JWST Exoplanet Characterization: Big Opportunities for Small Planets Around Small Stars
Johnson, John A.[1]
[1.]Harvard, Cambridge, MA.

315 Stars

Wednesday, 10:00 AM - 11:30 AM; Maryland 2

Chair(s):
Andrew West, *Boston Univ.*

315.01 Plans for Unprecedented Imaging of Stellar Surfaces with the NPOI
Jorgensen, Anders M.[1]; Schmitt, Henrique R.[2]; Mozurkewich, David[3]; van Belle, Gerard[4]; Hutter, Donald J.[5]; Armstrong, J. T.[2]; Baines, Ellyn K.[2]
[1.]New Mexico Tech, Socorro, NM. [2.]Naval Research Laboratory, Washington, DC. [3.]Seabrook Engineering, Seabrook, MD. [4.]Lowell Observatory, Flagstaff, AZ. [5.]Naval Observatory Flagstaff Station, Flagstaff, AZ.

315.02D Empirically Interrelating Stellar Magnetic Activity, Photometric Variability and Radial Velocity "Jitter" to Enhance Planet Discovery
Bastien, Fabienne A.[1]
[1.]Vanderbilt University, Madison, TN.

315.03 Tracing Detailed Starspot Evolution with Kepler
Davenport, James R.[1]; Hebb, Leslie[2]; Hawley, Suzanne L.[1]
[1.]University of Washington, Seattle, WA. 2.Hobart and William Smith Colleges, Geneva, NY.

315.04 ASASSN-13bc: A Dramatic Flare on an Ultracool Dwarf
Schmidt, Sarah J.[1]; Prieto, Jose[2]; Stanek, Krzysztof Z.[1]; Shappee, Benjamin[1]
[1.]Ohio State University, Columbus, OH. [2.]Princeton University, Princeton, NJ.

315.05 The intriguing X-ray variability of HD 150136
Leyder, Jean-Christophe[1]; Pollock, Andrew M.[1]
[1.]European Space Astronomy Center, European Space Agency, Villanueva de la Cañada, Madrid, Spain.

315.06 Innocent Bystanders and Smoking Guns: Dwarf Carbon Stars
Green, Paul J.[1]
[1.]Harvard-Smithsonian CfA, Cambridge, MA.

315.07 3D Model Atmospheres of White Dwarfs
Tremblay, Pier-Emmanuel[1]; Ludwig, Hans-Günter[2]; Steffen, Matthias[3]; Freytag, Bernd[4]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Zentrum für Astronomie der Universität Heidelberg, Heidelberg, Germany. [3.]Leibniz Institute for Astrophysics Potsdam, Potsdam, Germany. [4.]Centre de Recherche Astronomique de Lyon - Ecole Normale Supérieure, Lyon, France.

315.08 The white dwarf cooling sequence of the Galactic bulge
Calamida, Annalisa[1]; Sahu, Kailash C.[1]; Anderson, Jay[1]; Casertano, Stefano[1]; Brown, Thomas M.[1]; Cassisi, Santino[2]; Sokol, Josh[1]; Bond, Howard E.[1]; Ferguson, Henry C.[1]; Livio, Mario[1]; Salaris, Maurizio[3]; Ferraro, Ivan[4]; Valenti, Jeff A.[1]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Osservatorio Astronomico di Teramo - INAF, Teramo, Italy. [3.]Astrophysics Research Institute - Liverpool John Moores University, Liverpool, United Kingdom. [4.]Osservatorio Astronomico di Roma - INAF, Rome, Italy.

316 Supernovae & Nebulae III

Wednesday, 10:00 AM - 11:30 AM; National Harbor 10

Chair(s):
Alexei Poludnenko, *Naval Research Lab*

316.01D Observations of Type Iax Supernovae
McCully, Curtis[1]; Jha, Saurabh[1]; Foley, Ryan J.[2]
[1.]Rutgers, The State University of New Jersey, Piscataway, NJ. [2.]University of Illinois at Urbana-Champaign, Champaign, IL.

316.02 Kepler Supernovae
Olling, Robert[1]; Shaya, Edward J.[1]; Mushotzky, Richard[1]; Rest, Armin[2]; Tucker, Bradley E.[3]; Kasen, Daniel[4]; Margheim, Steven J.[5]
[1.]Univ. Of Maryland, College Park, MD. [2.]STScI, Baltimore, MD. [3.]Australian National University , Weston Creek, ACT, Australia. [4.]Univ Of California, Berkeley, Berkeley, CA. [5.]Gemini Obs., Tuscon, AZ.

316.03 High-Velocity Features in the Spectra of Type-Ia Supernova
Silverman, Jeffrey M.[1]; Marion, G. H.[1]; Wheeler, J. C.[1]; Vinko, Jozsef[1, 2]
[1.]University of Texas at Austin, Austin, TX. [2.]University of Szeged, Szeged, Hungary.

316.04 SN 2012fr: A Type Ia Supernova with Extreme High Velocity Features and Stratefied Ejecta
Childress, Michael[1, 2]; Scalzo, Richard A.[1, 2]; Sim, Stuart[3]; Tucker, Bradley E.[1, 4]; Yuan, Fang[1, 2]; Schmidt, Brian P.[1, 2]
[1.]Australian National University, Canberra, ACT, Australia. [2.]ARC Centre of Excellence for All-Sky Astrophysics (CAASTRO), Sydney, ACT, Australia. [3.]Queen's University Belfast, Belfast, Northern Ireland, United Kingdom. [4.]University of California, Berkeley, Berkeley, CA.
Contributing teams: Carnegie Supernova Project, PESSTO, Filippenko Supernova Group

316.05 Interaction of Type Ia Supernovae With The Circumstellar Environment
Dragulin, Paul[1]; Hoeflich, Peter[1]; Khokhlov, Alexei[2]
[1.]Tallahassee, FL, FL. [2.]University of Chicago, Chicago, IL.

316.06 Pulsating Instability of Turbulent Thermonuclear Flames in Type Ia Supernovae
Poludnenko, Alexei Y.[1]
[1.]Naval Research Lab, Washington, DC.

316.07 Cosmological Constraints Measurements of Type Ia Supernovae Discovered during the first 1.5 Years of the Pan-STARRS1 Survey
Rest, Armin[1]; Scolnic, Daniel[2]
[1.]Space Telescope Science Institute, Timonium, MD. [2.]John Hopkins University, Baltimore, MD.
Contributing teams: Pan-STARRS1 survey

317 Time Domain Astronomy, the Large Synoptic Survey Telescope, and Transient Follow-up

Wednesday, 10:00 AM - 11:30 AM; Potomac Ballroom D

Time Domain Astronomy (TDA) has emerged as a major field of Astrophysics, providing data and insights into astrophysical phenomena on timescales of milliseconds to a century. This special session will discuss both current and planned optical TDA surveys and some of the discoveries that on-going programs are making. Full exploitation of these discoveries requires extensive follow-up beyond the initial identification: additional photometry, spectroscopic identification, and observations in wavebands from gamma-rays to radio. The Large Synoptic Survey Telescope expects to start its 10-year mission to image the sky in late 2021. Roughly half the Celestial Sphere will be surveyed in six broad bands, ugrizy, with each patch of sky visited 850 times over the survey lifetime, leading to fundamentally new discoveries in the time domain of the faint universe. The session will conclude with a Panel and audience discussion on how the community can optimize scientific opportunities for TDA in the era of LSST.

Chair(s):
Jonathan Grindlay, *LBTO*
Organizer(s):
Michael Strauss, *Princeton Univ.*

317.01 Synoptic Sky Surveys: Lessons Learned and Challenges Ahead
Djorgovski, Stanislav G.[1]
[1.] *Caltech, Pasadena, CA.*
Contributing teams: CRTS team

317.02 Time-Domain Astrophysics: Results and Lessons from Pan-STARRS
Berger, Edo[1]
[1.] *Harvard Univ., Cambridge, MA.*

317.03 Opportunities and challenges for time domain astronomy with LSST
Ivezic, Zeljko[1]
[1.] *Univ. of Washington, Seattle, WA.*

317.04 Transients and Variable Stars: Followup in the Era of LSST
Walkowicz, Lucianne[1]
[1.] *Princeton University, Princeton, NJ.*
Contributing teams: the LSST Transients and Variable Stars Science Collaboration

318 Warner Prize: The Origin of Stellar Masses

Wednesday, 11:40 AM - 12:30 PM; Potomac Ballroom A

Chair(s):
David Helfand, *Quest University Canada*

Mark Krumholz - Helen B. Warner Prize for Astronomy
The Helen B. Warner Prize is awarded to Mark Krumholz for his major theoretical contributions in the areas of massive star formation and the interstellar medium, both in the Galaxy and in the early universe.

318.01 The Origin of Stellar Masses
Krumholz, Mark R.[1]
[1.] *University of California, Santa Cruz, Santa Cruz, CA.*

Career Hour 5: The Interview: What you need to do before, during, and after to get the job

Wednesday, 12:30 PM - 1:30 PM; National Harbor 2

What you need to know and do to get the job from the first moment of contact to the moment you leave the interview. Audience: students, postdocs, early- and mid-career professionals Facilitator: Alaina G. Levine, President, Quantum Success Solutions Alaina G. Levine is a science careers consultant, science writer, and professional speaker and comedian. Her new book on networking strategies for scientists and engineers will be published by Wiley in 2014. Organizer: Kelle Cruz and the Employment Committee

Chair(s):
Alaina Levine, *Quantum Success Solutions*
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

319 The Hubble and James Webb Space Telescopes Town Hall Meeting

Wednesday, 12:45 PM - 1:45 PM; Potomac Ballroom A

The Hubble Space Telescope is more powerful and productive than ever. Hubble is pressing forward with new instrument capabilities and ambitious observing programs to establish new scientific frontiers. As it has done throughout its history, the next wave of Hubble observations will transform our understanding of the universe, inspire generations of students, and influence popular culture. In this AAS Town Hall, we will feature a short summary of the scientific promise of Hubble for the next several years of Astrophysics, and the current status of its instrumentation. Beyond Hubble, the James Webb Space Telescope will be the most powerful telescope that astronomers have ever constructed, and is essential for answering many of the top science questions outlined in the Astronomy and Astrophysics 2000 and 2010 Decadal Surveys. The observatory made excellent progress in 2013 by achieving several important milestones, including the completion and delivery of all four science instruments, and all of the mirrors, to NASA. JWST has now entered a detailed integration and testing phase, in preparation for the 2018 launch. We will give a short presentation related to the overall status of the JWST program. Following the two updates on Hubble and Webb, we will feature an innovative science talk to be delivered by 2011 Nobel Prize recipient Adam G. Riess on measuring dark energy and the Hubble constant with both telescopes. There will ample time available for audience questions and open discussion. Speaker Summary: Ken Sembach (STScI) - HST Update Eric Smith (NASA HQ) - JWST Update Adam Riess (STScI/JHU) - The Hubble Constant and Dark Energy

Chair(s):
Jason Kalirai, *Space Telescope Science Institute*

320 U.S. National Research Council's Committee on Astronomy and Astrophysics Town Hall

Wednesday, 12:45 PM - 1:45 PM; National Harbor 3

A joint activity of the National Research Council's Board on Physics and Astronomy and the Space Studies Board, the overarching purpose of the Committee on Astronomy and Astrophysics (CAA) is to support scientific progress in astronomy and astrophysics and assist the federal government in integrating and planning programs in these fields. The CAA provides an independent, authoritative forum for identifying and discussing issues in astronomy and astrophysics between the research community, the federal government, and the interested public. The National Research Council's Committee on Astronomy and Astrophysics requests a town hall at the January 2014 meeting for the committee to communicate directly with the astronomy and astrophysics community to discuss issues the fields are facing and to collect input from the broad community. Encouraged by its engagement with the community at its 2013 AAS Winter Meeting Town Hall, the CAA would like to hold a town hall meeting in 2014 to solicit input from and engage with the astronomy and astrophysics community on the many issues that have arisen in the past year. The CAA is and will continue to deal with a complex set of issues that will affect future NASA, NSF, and DOE research and spending priorities. Involving the broad astronomy community is critical to the CAA's work and will help committee members provide the most informed advice to stakeholders. In addition, the town hall would allow CAA representatives to communicate the committee's recent activities to the community.

Chair(s):
David Spergel, *Princeton Univ. Obs.*
Organizer(s):
David Spergel, *Princeton Univ. Obs.*

Amateur Talk: Bringing the Nearby Stars Closer to Home

Wednesday, 1:30 PM - 2:00 PM; Maryland Ballroom A

The solar neighborhood holds a special place in the human psyche because, by our very nature, we humans explore the nearest locales first. Space is no exception. The nearest stars provide the framework upon which stellar astrophysics is based because the nearby star population contains the most easily studied representatives of their kinds. The nearest stars hold the greatest promise for the discovery and detailed characterization of other worlds, and ultimately, any life that may be found on them. During this talk, we'll take a tour of the solar neighborhood and gain a perspective of how our Sun, our Earth, and we fit into the cosmos.

Chair(s):
Todd Henry, *RECONS*

321 AGN Across the Spectrum: II

Wednesday, 2:00 PM - 3:30 PM; National Harbor 11

Chair(s):
Dale Kocevski, *University of California, Santa Cruz*

321.01D Probing the Brightest QSOs Though the Spatial Distribution of Galaxies and (Fluorescent) Lya Emitters
Trainor, Ryan[1]; Steidel, Charles C.[1]
[1.]Caltech, Pasadena, CA.

321.02 The Most Bolometrically Luminous Quasars
Kimball, Amy E.[1, 2]; Lacy, Mark[2]; Lonsdale, Carol J.[2]; Condon, James J.[2]; Maiolino, Roberto[3]
[1.]CSIRO Astronomy and Space Science, Sydney, NSW, Australia. [2.]NRAO, Charlottesville, VA. [3.]Cavendish Laboratory, Department of Physics, Cambridge, United Kingdom.

321.03D Diversity in the 2MASS Red AGN Population - Anomalous Reddening and Excess Hot Dust?
Rose, Marvin[1, 2]
[1.]Harvard Smithsonian, Cambridge, MA. [2.]University of Sheffield, Sheffield, Yorkshire, United Kingdom.

321.04 Evidence for Large Temperature Fluctuations in Quasar Accretion Disks from Spectral Variability
Ruan, John J.[1]; Anderson, Scott F.[1]; Agol, Eric[1]; Dexter, Jason[2]
[1.]University of Washington, Seattle, WA. [2.]UC Berkeley, Berkeley, CA.

321.05D Probing the Central Regions of Active Galactic Nuclei
Lohfink, Anne M.[1]; Reynolds, Christopher S.[1]; Mushotzky, Richard[1]; Nowak, Michael[2]
[1.]University of Maryland, College Park, MD. [2.]MIT Kavli Institute, Cambridge, MA.

WEDNESDAY

322 Astronomy Education Research

Wednesday, 2:00 PM - 3:30 PM; Maryland 1

Chair(s):
Gina Brissenden, *Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona*

322.01 The Effect of Stereoscopic ('3D') vs. 2D Presentation on Learning through Video and Film
Price, Aaron[1, 2]; Kasal, Evan[3, 2]
[1.]Museum of Science and Industry, Chicago, Chicago, IL. [2.]AAVSO, Cambridge, MA. [3.]University of Michigan, Ann Arbor, MI.

322.02 Visualizing Moon Phases in the Classroom with WorldWide Telescope
Udomprasert, Patricia S.[1]; Goodman, Alyssa A.[1]; Sunbury, Susan[1]; Zhang, Zhihui[1]; Sadler, Philip M.[1]; Dussault, Mary E.[1]; Lotridge, Erin[1]; Jackson, Jonathan[1]; Constantin, Ana-Maria[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

322.03 How Faculty can Affect Student Texting, Distraction, Grades, and Attitudes
Duncan, Douglas K.[1]; Hoekstra, Angel[1]; Wilcox, Bethany[1]
[1.]Univ. of Colorado, Boulder, CO.

322.04 Assessment of Teaching Methods and Critical Thinking in a Course for Science Majors
Speck, Angela[1]; Ruzhitskaya, Lanika[1]; Whittington, Alan G.[1]
[1.]Univ. of Missouri, Columbia, MO.

322.05 Science Literacy's Neglected Twin: Numeracy
Follette, Katherine B.[1]; McCarthy, Donald W.[1]; Dokter, Erin F.[1]; Buxner, Sanlyn[1]
[1.]University of Arizona, Tucson, AZ.

322.06 CHARACTERIZATION AND MEASUREMENT OF INTRODCUTORY COLLEGE ASTRONOMY AND PHYSICS STUDENT UNDERSTANDING OF NEWTONIAN GRAVITY
Williamson, Kathryn[1]
[1.]Montana State University, Bozeman, MT.

322.07 The Collaboration of Astronomy Teaching Scholars (CATS) – Reporting from the Nationion's Largest College-Level, Astronomy Education Research Initiative.
Prather, Edward E.[1]; Brissenden, Gina[1]; Impey, Chris D.[2]; Lee, Kevin M.[3]
[1.]Center for Astronomy Education (CAE) Univ. of Arizona, Tucson, AZ. [2.]Steward Observatory, Univ. of Arizona, Tucson, AZ. [3.]Univ. of Nebraska-Lincolin, Lincolin, NE.
Contributing teams: Collaboration of Astronomy Teaching Scholars (CATS)

322.08 Findings from Five Years Investigating Science Literacy and Where Students Get their Information about Science
Buxner, Sanlyn[1]; Impey, Chris D.[2]; Nieberding, Megan N.[2]; Romine, James M.[2]; Antonellis, Jessie C.[4]; Llull, Jenna[3]; Tijerino, Kitina[2]
[1.]University of Arizona, Tucson, AZ. [2.]Steward Observatory, University of Arizona, Tucson, AZ. [3.]Arizona Space Grant Consortium, University of Arizona, Tucson, AZ. [4.]Little Priest Tribal College, Winnebago, NE.
Contributing teams: Collaborations of Astronomy Teaching Scholars (CATS), Steward Observatory, University of Arizona

322.09 A Research-Informed Approach to Teaching About Light & Matter in STEM Classrooms
Hornstein, Seth D.[1]; Wallace, Colin S.[2]; Schlingman, Wayne M.[1]; Prather, Edward E.[2]
[1.]University of Colorado Boulder, Boulder, CO. [2.]Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona, Tucson, AZ.

323 Binary Systems

Wednesday, 2:00 PM - 3:30 PM; Maryland 2

Chair(s):
Colleen Wilson, *NASA's MSFC*

323.01D A holistic view of a black hole binary: bringing together spectral, timing, and polarization analysis of Cygnus X-1
Grinberg, Victoria[1]
[1.]Dr. Remeis Observatory & ECAP, Bamberg, Germany.

323.02 Emphasize the difference: On the energy dependance of power spectral states in Black Hole X-ray Binaries
Stiele, Holger[1]; Yu, Wenfei[1]
[1.]Shanghai Astronomical Observatory, Shanghai, Shanghai, China.

323.03 Improved Constraint on the Mass of the Black Hole in Nova Muscae 1991
Wu, Jianfeng[1]; McClintock, Jeffrey E.[1]; Steeghs, Danny[2, 1]; Longa, Penelope[2]; Torres, Manuel[3]; Ho, Luis C.[4]; Callanan, Paul[5]; Reynolds, Mark[6]; Orosz, Jerome A.[7]; Jonker, Peter[3, 1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]University of Warwick, Coventry, United Kingdom. [3.]SRON Netherlands Institute for Space Research, Utrecht, Netherlands. [4.]The Carnegie Observatories, Pasadena, CA. [5.]University College Cork, Cork, Ireland. [6.]University of Michigan, Ann Arbor, MI. [7.]San Diego State University, San Diego, CA.

323.04 Direct Constraints on the Evolution of LMXBs from Deep Chandra and HST Observations of Nearby Early-Type Galaxies
Lehmer, Bret[1, 2]; Berkeley, Matthew[2]; Alexander, D. M.[3]; Basu-Zych, Antara[2]; Bauer, Franz E.[4]; Brandt, W. N.[5]; Fragos, Tassos[6]; Hornschemeier, Ann E.[2]; Jenkins, Leigh[2]; Kalogera, Vassiliki[7]; Ptak, Andrew[2]; Sivakoff, Gregory R.[8]; Tzanavaris, Panayiotis[2]; Yukita, Mihoko[2]; Zezas, Andreas[9]
[1.]Johns Hopkins University, Baltimore, MD. [2.]GSFC, Greenbelt, MD. [3.]Durham, Durham, United Kingdom. [4.]Pontifica Catolica de Chile, Santiago, Chile. [5.]Penn State, State College, PA. [6.]Harvard, Cambridge, MA. [7.]Northwestern, Evanston, IL. [8.]University of Alberta, Edmonton, AB, Canada. [9.]University of Crete, Crete, Greece.

323.05 Multi-wavelength Observations of the Binary System PSR B1259?63/LS 2883 Around the 2010-2011 Periastron Passage
Wood, Kent S.[1]; Chernyakova, Masha[2, 3]; Abdo, Aous[4]; Neronov, Andrii[5]; McSwain, M. V.[6]; Moldon, J.[7, 8]; Ribo, M.[7]; Paredes, J. M.[7]; Susch, I.[9, 10]; de Naurois, M.[12]; Schwanke, U.[11]; Uchiyama, Y.[13]; Johnston, Simon[14]; Chaty, S.1[5, 16]; Coleiro, Alexis[15]; Malyshev, D.[17]; Babyk, Iu[2, 3]
[1.]NRL, Washington, DC. [2.]Dublin City University, Dublin , Ireland. [3.]Dublin Institute for Advanced Studies, Dublin , Ireland. [4.]Operational Evaluation Division, Institute for Defense Analyses, Alexandria, VA. [5.]INTEGRAL Science Data Center, Versoix, Switzerland. [6.]Department of Physics, Lehigh University, Bethlehem, PA. [7.]ICC, Universitat de Barcelona , Barcelona, Spain. [8.]ASTRON, Dwingeloo, Netherlands. [9.]Centre for Space Research, North-West University, Potchefstroom, South Africa. [10.]Astronomical Observatory of Ivan Franko National University of L'viv, L'viv, Ukraine. [11.]Institut fur Physik, Humboldt-Universitat zu Berlin, Berlin, Germany. [12.]Universites Paris VI et Paris VII, Paris, France. [13.]SLAC National Accelerator Laboratory , Menlo Park, CA. [14.]CSIRO , PO BOX 76,NSW , NSW, Australia. [15.]Service d'Astrophysique, CEA-Saclay, Gif-sur-Yvette Cedex, France. [16.]Institut Universitaire de France, Paris, France. [17.]Bogolyubov Institute for Theoretical Physics, Kiev, Ukraine.

323.06 Hoyle-Lyttleton Accretion from a Planar Wind
Raymer, Eric[1]
[1.]North Carolina State University, Raleigh, NC.

323.07 Formation and Evolution of the SS 433 Jets
Marshall, Herman L.[1]; Heinz, Sebastian[2]; Schulz, Norbert S.[1]
[1.]MIT, Cambridge, MA. [2.]U. Wisconsin, Madison, WI.

323.08 Superorbital Periodic Modulation in Wind-Accretion High-Mass X-ray Binaries from Swift BAT Observations
Corbet, Robin H.[1, 2]; Krimm, Hans A.[3, 2]
[1.]UMBC, Greenbelt, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Universities Space Research Association, Columbia, MD.

324 Evolution of Galaxy Mergers

Wednesday, 2:00 PM - 3:30 PM; National Harbor 2

Chair(s):
David Law, *University of Toronto*

324.01 Galaxy Mergers on a Moving Mesh
Hayward, Christopher C.[1]; Torrey, Paul A.[2]; Springel, Volker[1]; Hernquist, Lars E.[2]; Vogelsberger, Mark[2]
[1.]Heidelberg Institute for Theoretical Studies, Heidelberg, Germany. [2.]Harvard-Smithsonian CfA, Cambridge, MA.

324.02D A Pipeline for Constructing A Catalog of Multi-Method Models of Interacting Galaxies
Holincheck, Anthony[1]
[1.]George Mason University, Fairfax, VA.

324.03 Galaxy Pairs in the Galaxy And Mass Assembly (GAMA) Survey
Bauer, Amanda E.[1]
[1.]Australian Astronomical Observatory, Sydney, NSW, Australia.
Contributing teams: GAMA Survey Team

324.04 Over the Peak: Full Spectrum Far-Infrared Velocity-Resolved Spectroscopy of Three Extreme Gas-Rich Mergers
Fischer, Jacqueline[1]; González-Alfonso, Eduardo[2]; Sturm, Eckhard[3]; Graciá-Carpio, Javier[3]; Polisensky, Emil[1]; Abel, Nicholas[4]; Hailey-Dunsheath, Steve[5]; Veilleux, Sylvain[6]; Melendez, Marcio[6]; Verma, Aprajita[7]; Poglitsch, Albrecht[3]; Contursi, Alessandra[3]
[1.]NRL, Washington, DC. [2.]Universidad de Alcalá, Madrid, Alcalá de Henares, Spain. [3.]MPE, Garching, Germany. [4.]Univ. of Cincinnati, Claremont College, Batavia, OH. [5.]Caltech, Pasadena, CA. [6.]Univ. of Maryland, College Park, MD. [7.]Univ. of Oxford, Oxford, United Kingdom.

324.05 Nuclear Disks in Gas-Rich Galaxy Mergers
Medling, Anne[1, 2]; U, Vivian[3, 6]; Guedes, Javiera[4]; Max, Claire E.[2]; Mayer, Lucio[4]; Armus, Lee[5]; Holden, Bradford[2]; Roskar, Rok[4]; Sanders, David B.[6]
[1.]RSAA - Australian National University, Canberra, ACT, Australia. [2.]UC Santa Cruz, Santa Cruz, CA. [3.]UC Riverside, Riverside, CA. [4.]University of Zurich, Zurich, Zurich, Switzerland. [5.]Spitzer Science Center, Pasadena, CA. [6.]IfA - University of Hawaii, Manoa, HI.

324.06 The Origin and Evolution of (Ultra)Luminous Infrared Galaxies Over Cosmic Time
Kartaltepe, Jeyhan S.[1]
[1.]National Optical Astronomy Observatory, Tucson, AZ.
Contributing teams: The CANDELS Collaboration

324.07D Photometric Study of Massive Evolved Galaxies in the CANDELS GOODS-S at z>3
Nayyeri, Hooshang[1]; Mobasher, Bahram[1]; Ferguson, Henry C.[2]; Wiklind, Tommy[2]; Hemmati, Shoubaneh[1]; De Barros, Stephane[1]; Fontana, Adriano[3]; Dahlen, Tomas[2]; Koekemoer, Anton M.[2]
[1.]UC Riverside, Riverside, CA. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]INAF, Rome, Italy.

325 Exoplanet Models

Wednesday, 2:00 PM - 3:30 PM; Potomac Ballroom D

Chair(s):
Avi Mandell, *NASA GSFC*

325.01 Remastering the RV Classics: Self-Consistent Dynamical Models for the 55 Cnc and GJ 876 Planetary Systems
Nelson, Benjamin E.[1, 2]; Ford, Eric B.[1, 2]; Wright, Jason[1]; Fischer, Debra[3]
[1.]Pennsylvania State University, State College, PA. [2.]University of Florida, Gainesville, FL. [3.]Yale, New Haven, CT.

325.02 Finding the Needle in the Haystack: A High-Fidelity Model of the Solar System for Simulating Exoplanet Observations
Wilkins, Ashlee N.[1, 2]; Roberge, Aki[2]; Rizzo, Maxime[1, 2]; Nesvold, Erika[3, 2]; Stark, Christopher C.[2]; McElwain, Michael W.[2]; Kuchner, Marc J.[2]; Robinson, Tyler D.[4]; Meadows, Victoria[4]; Straughn, Amber[2]; Turnbull, Margaret C.[5]
[1.]University of Maryland, College Park, MD. [2.]NASA GSFC, Greenbelt, MD. [3.]University of Maryland, Baltimore County, Baltimore, MD. [4.]University of Washington, Seattle, WA. [5.]Global Science Institute, Antigo, WI.

325.03 Transiting Exoplanet Simulations with the James Webb Space Telescope
Batalha, Natasha[1, 3]; Kalirai, Jason S.[1]; Lunine, Jonathan I.[2]; Mandell, Avi[4]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Cornell University, Ithaca, NY. [3.]Pennsylvania State University, State College, PA. [4.]Goddard Space Flight Center, Greenbelt , MD.

325.04 Just How Earth-like are Extrasolar Super-Earths? Constraints on H+He Envelope Fractions from Kepler's Planet Candidates
Wolfgang, Angie[1]; Lopez, Eric[1]
[1.]University of California, Santa Cruz, Santa Cruz, CA.
Contributing teams: Kepler Team, SAMSI Bayesian Characterization of Exoplanet Populations Working Group

325.05 Habitable Evaporated Cores: Converting Mini-Neptunes into Super-Earths in the Habitable Zone of M Dwarfs
Luger, Rodrigo[1, 2]; Barnes, Rory[1, 2]; Lopez, Eric[3]; Fortney, Jonathan J.[3, 2]; Jackson, Brian K.[4]; Meadows, Victoria1,[2]
[1.]Astronomy Department, University of Washington, Seattle, WA. [2.]Virtual Planet Laboratory, Seattle, WA. [3.]Department of Astronomy and Astrophysics, University of California, Santa Cruz, CA. [4.]Carnegie Department of Terrestrial Magnetism, Washington, DC.

325.06 Detectable Spectral Fingerprints of Super- and Mini-Earths in the HZ
Rugheimer, Sarah[1]; Kaltenegger, Lisa[1, 2]; Sasselov, Dimitar D.[1]
[1.]Harvard University - CFA, Cambridge, MA. [2.]MPIA, Heidelberg, Germany.

325.07 Water Cycling Between Ocean and Mantle: Super-Earths Need Not be Waterworlds
Cowan, Nicolas B.[1]; Abbot, Dorian S.[2]
[1.]Northwestern University, Evanston, IL. 2.University of Chicago, Chicago, IL.

325.08 Effects of Extreme Obliquity Change on the Habitability of Extrasolar Planets
Armstrong, John C.[1]; Barnes, Rory[2]; Domagal-Goldman, Shawn[3]
[1.]Weber State Univ., Ogden, UT. [2.]University of Washington, Seattle, WA. [3.]NASA Goddard, Washington, DC, DC.
Contributing teams: Virtual Planetary Laboratory

326 Extrasolar Planet Detection - Optical RV Surveys

Wednesday, 2:00 PM - 3:30 PM; Maryland Ballroom A

Chair(s):
Sarah Ballard, *Harvard University*

326.01 Correcting Astrophysical Noise in HARPS-N RV Measurements
Gettel, Sara[1]; Charbonneau, David[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.
Contributing teams: the HARPS-N Collaboration

326.02 The Solar Twin Planet Search
Bedell, Megan[1]; Bean, Jacob[1]; Melendez, Jorge[2]; Monroe, TalaWanda[2]
1.University of Chicago, Chicago, IL. 2.Universidade de Sao Paulo, Sao Paulo, SP, Brazil.

326.03 Early Doppler Performance from New Generation High Resolution Optical and near Infrared Planet-hunting Spectrographs
Ge, Jian[1]; Varosi, Frank[1]; Powell, Scott[1]; Zhao, Bo[1]; Schofield, Sidney[1]; Liu, Jian[1]; Warner, Craig[1]; Sithajan, Sirinrat[1]; Li, Rui[1]; Muterspaugh, Matthew W.[2]; Williamson, Michael W.[2]; Avner, Louis[1]; Jakeman, Hali[1]
[1.]Univ. of Florida, Gainesville, FL. [2.]Tennessee State University, Nashville, TN.

326.04 Survey of Close-in Super-Earths Using a New Generation Optical High Resolution Spectrograph
Sithajan, Sirinrat[1]; Ge, Jian[1]; Muterspaugh, Matthew W.[2]; Varosi, Frank[1]; Li, Rui[1]; Ma, Bo[1]; Thomas, Neil B.[1]; Wang, Ji[3]; Barnes, Rory[4]; Maxwell, Ted[2]
[1.]University of Florida, Gainesville, FL. [2.]Tennessee State University, Nashville, TN. [3.]Yale University, New Haven, CT. [4.]University of Washington, Seattle, WA.

326.05 Early Giant Planet Candidates from the SDSS-III MARVELS Planet Survey
Thomas, Neil[1]; Ge, Jian[1]; Li, Rui[1]; Sithajan, Sirinrat[1]; Chen, Yunmei[1]; Shi, Jiangli[1]; Ma, Bo[1]; Liu, Jian[1]
[1.]University of Florida, Gainesville, FL.

327 From Protostars to Lensed Galaxies: The Immense Riches from Herschel

Wednesday, 2:00 PM - 3:30 PM; Maryland Ballroom C

The 3.5-m Herschel Space Telescope has pioneered the deepest explorations of the infrared/sub-mm wavelength regime to date. Although it exhausted its cryogen in April 2013, new results will continue to pour out from Herschel for many years to come. These include science done by astronomers with targeted programs, as well as from users of the huge Herschel Science Archive compiled from over four years of observations. This Special Session begins close by, with studies of the earliest signs of star-birth in the Galaxy, and rapidly expands out to include galaxies near and far. The topics are chosen to emphasize the remarkable power of Herschel at mapping gas and dust in nearby galaxies in great detail, as well as the probing of very distant dusty galaxies amplified by gravitational lenses. The talks will span from the heating and cooling of diffuse and dense gas in nearby galaxies, to feedback from starburst and active galactic nuclei (AGN) over cosmic time. The speakers are members of Herschel Key Programs, which collectively used 50% of all Herschel time. An important goal of the Session is to emphasize the incredible richness of the Herschel archive, to allow synergy with other facilities (Planck, CCAT, ALMA, SOFIA, JWST, SPICA), and to help provide a springboard to foster potentially new research programs at other wavelengths.

Chair(s):
David Ardila, *Caltech*
Organizer(s):
David Ardila, *Caltech*

327.01 From Protostars to Lensed Galaxies: The Immense Riches from Herschel
Helou, George[1]; Pilbratt, Göran L.[2]
[1.]Caltech, Pasadena, CA. [2.]ESTEC, ESA, Noordwijk, Netherlands.

327.02 Unraveling the Evolution of Protostars in Diverse Environments: The Herschel Orion Protostar Survey
Megeath, S. Thomas[1]
[1.]Univ. Of Toledo, Toledo, OH.
Contributing teams: and the Herschel Orion Protostar Survey Team

327.03 Herschel's Unique View of Nearby Galaxies
Calzetti, Daniela[1]
[1.]Univ. of Massachusetts, Amherst, MA.
Contributing teams: KINGFISH Team

327.04 Observations of Luminous Infrared Galaxies with Herschel
Armus, Lee[1]
[1.]Caltech, Pasadena, CA.

327.05 Herschel's Far-Infrared View of Galaxy Formation and Evolution
Bock, James[1, 2]
[1.]California Institute of Technology, Pasadena, CA. [2.]Jet Propulsion Laboratory, Pasadena, CA.

328 Galaxies II - Starbursts

Wednesday, 2:00 PM - 3:30 PM; Potomac Ballroom C

Chair(s):
Sara Petty, *Virginia Tech*

328.01 Atomic Gas Distribution in HCG31 and HCG92
Borthakur, Sanchayeeta[1]; Yun, Min Su[2]; Verdes-Montenegro, Lourdes[3]; Heckman, Timothy M.[1]; Zhu, Guangtun[1]
[1.]Johns Hopkins University, Baltimore, MD. 2.University of Massachusetts, Amherst, MA. 3.Instituto de Astrofisica de Andalucia,, Granada, Spain.

328.02 Do Lyman-alpha photons escape from star-forming galaxies through dust holes?
France, Kevin[1]; Wofford, Aida[2]; Leitherer, Claus[3]; Fleming, Brian[4, 1]; McCandliss, Stephan R.[4]; Nell, Nicholas[1]
[1.]CASA / Colorado, Boulder, CO. [2.]IAP, Paris, France. [3.]STScI, Baltimore, MD. [4.]JHU, Baltimore, MD.

328.03D Neutral Gas and Low-Redshift Starbursts: From Infall to Ionization
Jaskot, Anne[1]; Oey, M. S.[1]; Salzer, John J.[2]; Van Sistine, Angela[2]; Haynes, Martha P.[3]
[1.]University of Michigan, Ann Arbor, MI. [2.]Indiana University, Bloomington, IN. [3.]Cornell University, Ithaca, NY.

328.04 Discovery of GeV Gamma-ray Emission from the Circinus Galaxy with the Fermi-LAT
Madejski, Grzegorz M.[1]; Hayashida, Masaaki[2, 1]; Stawarz, Lukasz[5]; Cheung, Chi C.[4]; Bechtol, Keith[3, 1]
[1.]Stanford Linear Accelerator Ctr / KIPAC., Menlo Park, CA. [2.]Institute for Cosmic Ray Research / Univ. of Tokyo, Kashiwa City, Chiba, Japan. [3.]Naval Research Lab, Washington, DC. [4.]KITP, Univ. of Chicago, Chicago, IL. [5.]ISAS / JAXA, Tokyo, Japan.
Contributing teams: On Behalf of the Fermi - LAT Team

328.05D A Survey of the Cool Molecular ISM Properties of Nearby Galaxies using the Herschel FTS
Kamenetzky, Julia R.[1]
[1.]University of Colorado, Boulder, CO.

329 Galaxies III - Andromeda and Nearby Disks

Wednesday, 2:00 PM - 3:30 PM; National Harbor 3

Chair(s):
Peter Yoachim, *University of Washington*

329.01D Understanding the Structure and Evolution of Nearby Disk Galaxies
Zheng, Zheng[1]
[1.]Johns Hopkins University, Baltimore, MD.

329.02D The Survey of Lines in M31 (SLIM): Origin of [CII] Emission
Kapala, Maria[1]; Sandstrom, Karin[1, 2]; Groves, Brent[1]; Croxall, Kevin V.[3]; Dalcanton, Julianne[4]; Gordon, Karl D.[5]; Krause, Oliver[1]; Kreckel, Kathryn[1]; Leroy, Adam K.[6]; Rix, Hans-Walter[1]; Schinnerer, Eva[1]; Walter, Fabian[1]
[1.]Max Planck Institute for Astronomy, Heidelberg, Germany. [2.]University of Arizona, Tucson, AZ. [3.]Ohio State University, Columbus, OH. [4.]University of Washington, Seattle, WA. [5.]Space Telescope Science Institute, Baltimore, MD. [6.]National Radio Astronomy Observatory, Charlottesville, VA.

329.03D Life in the Outer Limits: Insight into Hierarchical Merging from the Outermost Structure of the Andromeda Stellar Halo
Beaton, Rachael[1]; Majewski, Steven R.[1]; Patterson, Richard J.[1]; Guhathakurta, Puragra[2]; Gilbert, Karoline[3]; Kalirai, Jason S.[3]; Tollerud, Erik J.[4]
[1.]Univ. of Virginia, Charlottesville, VA. [2.]UC-Santa Cruz, Santa Cruz, CA. [3.]STSci, Baltimore, MD. [4.]Yale, New Haven, CT.
Contributing teams: SPLASH Team

330 Gamma Ray Bursts: Phenomenology and Model

Wednesday, 2:00 PM - 3:30 PM; Maryland Ballroom D

Chair(s):
Jon Hakkila, *College of Charleston*

330.01D UV/Optical and X-ray Flares in Gamma-ray Burst Light Curves
Swenson, Craig A.[1]; Roming, Peter[1, 2]; de Pasquale, Massimiliano[3]; Oates, Sam[3]
[1.]The Pennsylvania State University, University Park, PA. [2.]Southwest Research Institute, San Antonio, TX. [3.]Mullard Space Science Laboratory, Surrey, United Kingdom.

330.02D Classification, Follow-up, and Analysis of GRBs and their Early-time NIR/Optical Afterglows
Morgan, Adam[1]; Bloom, Joshua S.[1]; Perley, Daniel A.[2]; Christian, Pierre[4]; Richards, Joseph[1]; Cenko, Stephen B.[3]; Klein, Christopher R.[1]
[1.]UC Berkeley, Berkeley, CA. [2.]Caltech, Pasadena, CA. [3.]Goddard, Greenbelt, MD. [4.]Harvard, Boston, MA.

330.03 Classification and Energetics of Cosmological Gamma-Ray Bursts
Shahmoradi, Amir[1]; Nemiroff, Robert J.[2]
[1.]The University of Texas at Austin, Austin, TX. [2.]Michigan Technological University, Houghton, MI.

330.04 Observations of GRBs at high-energy: the first Fermi LAT catalog, and a new and improved detection algorithm
Vianello, Giacomo[1]; Omodei, Nicola[1]; Vasileiou, Vlasios[2]; Piron, Frederic[2]; Razzaque, Soebur[3]; Vianello, Giacomo[1]
[1.]Stanford University, Stanford, CA. [2.]Laboratoire Univers et Particules de Montpellier, Montpellier, France. [3.]University of Johannesburg, Johannesburg, South Africa.

330.05 On the Metallicity Aversion of LGRBs
Graham, John[1]; Fruchter, Andrew S.[1]
1.Space Telescope Science Inst. and Johns Hopkins Univ., Baltimore, MD.

330.06 A New Model for GRB Prompt Emission Using Multiple Spectral Components & Impact on a Epeak-Luminosity Relation for Cosmology
Guiriec, Sylvain[1, 2]
[1.] NASA Goddard Space Flight Center, Washington, DC. [2.] University of Maryland College Park, College Park, MD.

330.07 Jet-powered supernovae and GRBs
Morsony, Brian J.[1]; Lazzati, Davide[2]; Blackwell, Christopher[2, 3]; Begelman, Mitchell C.[4]
[1.] Univ. Of Wisconsin Madison, Madison, WI. [2.] North Carolina State University, Raleigh, NC. [3.] Universityy of Alabama, Huntsville, AL. [4.] Universityy of Colorado, Boulder, Boulder, CO.

331 Interstellar Medium & Dust IV

Wednesday, 2:00 PM - 3:30 PM; National Harbor 12

Chair(s):
Shantanu Basu, *Univ. of Western Ontario*

331.01 Effects of an Embedded B-Star Wind on the Properties of a Molecular Cloud: Ophiuchus
Chen, How-Huan[1]; Goodman, Alyssa A.[1]
[1.] Harvard University, Cambrdige, MA.

331.02D New Diagnostics of MHD Turbulence in the Multiphase ISM
Burkhart, Blakesley K.[1]
[1.] University of Wisconsin Madison, Madison, WI.

331.03 Ammonia Masers in W51: Interferometric Studies
Wilson, Thomas L.[1]
[1.] Naval Research Laboratory, Washigton, DC.
Contributing teams: T. E. Clarke (NRL), D. A. Boboltz NSF), C. Henkel (MPIfR), R. Mauersberger (Joint ALMA Observatory), H.A. Wootten (NRAO), N. Broulliet (Observatoire de Bordeaux), A. Baudry (Observatoire de Bordeaux),

331.04 A Systematic Deuteration Survey in the Gemini OB1 Molecular Cloud
Shirley, Yancy L.[1]
[1.] Univ. of Arizona, Tucson, AZ.

331.05 Young Photodissociation Complexes in NGC 6822: Stars and PDRs
Carlson, Lynn[1]
[1.] Leiden Observatory, Leiden, Netherlands.
Contributing teams: Dwarf Galaxy Survey Team

331.06 The chemical inventory of pre/proto-stellar cores
Marcelino, Nuria[1]; Cernicharo, Jose[2]; Roueff, Evelyne[3]; Gerin, Maryvonne[4]; Fuente, Asuncion[5]
[1.] National Radio Astronomy Observatory, Charlottesville, VA. [2.] Centro de Astrobiologia. INTA-CSIC, Madrid, Spain. [3.] Observatoire de Paris-Meudon, Meudon, France. [4.] Laboratoire de Radioastronomie ENS-LERMA, Paris, France. [5.] Observatorio Astronomico Nacional, Madrid, Spain.

331.07 Hydrogen Halides in the Local Universe
Monje, Raquel R.[1]; Lis, Dariusz C.[1]; Phillips, Thomas G.[1]; Neufeld, David A.[2]
[1.] California Institute of Technology, Pasadena, CA. [2.] Johns Hopkins Univ., Baltimore, MD.

332 Large Scale Structure & Cosmic Distance II

Wednesday, 2:00 PM - 3:30 PM; National Harbor 4

Chair(s):
Michael West

332.01D The Nature of the Cross-Correlation Between the Unresolved near-IR and X-ray Backgrounds: Contributions of Galaxies, AGN and Diffuse Emissions
Helgason, Kari[1, 2]; Cappelluti, Nico[3]; Hasinger, Guenther[4]; Kashlinsky, Alexander[2]; Ricotti, Massimo[1]
[1.]University of Maryland College Park, College Park, MD. [2.]NASA GSFC, Greenbelt, MD. [3.]INAF-Osservatorio Astronomico di Bologna, Bologna, Italy. [4.]IfA University of Hawaii, Honolulu, HI.

332.02 The Large-Scale-Structural evolution of galaxies in the CANDELS and COSMOS fields
Darvish, Behnam[1]; Mobasher, Bahram[1]
[1.]University of California, Riverside, Riverside, CA.
Contributing teams: CANDELS team, COSMOS team

332.03 Bridging the gap between theory and observations of galaxies across cosmic times
Li, Yuexing[1]; Zhu, Qirong[1]; Zhao, Xinghai[1]; Yajima, Hidenobu[2]
[1.]Penn State University, University Park, PA. [2.]The University of Edinburgh, Edinburgh, Midlothian, United Kingdom.

332.04D Assembly Bias Has a Non-monotonic Dependence on Halo Age
Walker, Jean P.[1]; Gawiser, Eric J.[1]; Padilla, Nelson[2]
[1.]Rutgers University, Piscataway, NJ. [2.]Pontificia Universidad Católica de Chile, Santiago, Chile.

333 Public Policy: Perspectives from Congressional and White House Staff

Wednesday, 2:00 PM - 3:30 PM; Potomac Ballroom A

Funding for astronomy projects and research support in the US is in jeopardy due to deficit reduction measures. There may be improving prospects as the Nation's economy improves, but all depends on the support that science receives in the administration and Congress. This is a good time for a lively panel discussion at the AAS involving science staff members from Congress and the White House. Having the meeting in Washington provides a unique opportunity to attract an expert panel. Panel members will be given questions to answer to stimulate discussion. There will also be time for audience questions.

334 Stars - Brown Dwarfs and YSOs

Wednesday, 2:00 PM - 3:30 PM; National Harbor 13

Chair(s):
Stanimir Metchev, *SUNY Stony Brook*

334.01 Retrieval of Temperatures and Abundances in Brown Dwarf Atmospheres
Line, Michael R.[1]; Fortney, Jonathan J.[1]; Marley, Mark S.[2]; Morley, Caroline[1]
[1.]University of California-Santa Cruz, Santa Cruz, CA. [2.]NASA Ames Research Center, Mountain View , CA.

334.02 Cloud Indicators in the Spectrum of the Closest Brown Dwarf Binary System
Faherty, Jacqueline K.[1, 2]
[1.]Carnegie Institution of Washington, Washington, DC. [2.]American Museum of Natural History, New York, NY.

334.03 LHS 6343: Precise Constraints on the Mass and Radius of a Transiting Brown Dwarf Discovered by Kepler
Montet, Benjamin[1]; Johnson, John A.[2]; Muirhead, Philip S.[4]; Shporer, Avi[1, 7]; Howard, Andrew[3]; Baranec, Christoph[6]; Albert, Loic[5]
[1.]California Institute of Technology, Pasadena, CA. [2.]Harvard University, Cambridge, MA. [3.]University of Hawaii, Manoa, HI. [4.]Boston University, Boston, MA. [5.]Universite de Montreal, Montreal, QC, Canada. [6.]University of Hawaii, Hilo, HI. [7.]Jet Propulsion Laboratory, Pasadena, CA.
Contributing teams: The Robo-AO Collaboration

334.04 Unusual Slowly Rotating Brown Dwarfs Discovered through Precision Spitzer Photometry
Heinze, Aren[1]; Metchev, Stanimir[2, 1]
[1.]Stony Brook University, Stony Brook, NY. [2.]University of Western Ontario, London, ON, Canada.

334.05D Are Extreme T Dwarf Color Outliers Revealing Their Ages?
Mace, Gregory N.[1]
[1.]UCLA, Los Angeles, CA.

334.06 The GALEX Nearby Young-Star Survey
Rodriguez, David[1]; Zuckerman, Ben M.[2]; Kastner, Joel H.[3]; Vican, Laura[2]; Bessell, Michael S.[4]; Faherty, Jacqueline K.[5, 6]; Murphy, Simon[7]
[1.]Universidad de Chile, Santiago, Chile. [2.]UCLA, Los Angeles, CA. [3.]Rochester Institute of Technology, Rochester, NY. [4.]Australian National University, Canberra, ACT, Australia. [5.]Carnegie Department of Terrestrial Magnetism, Washington, DC. [6.]American Museum of Natural History, New York, NY. [7.]Astronomisches Rechen-Institut, Heidelberg, Germany.

334.07D Near-Infrared JHK Spectroscopy of Young Stellar and Substellar Objects in Orion
Ingraham, Patrick[1, 2]
[1.]Stanford, Stanford, CA. [2.]Université de Montréal, Montréal, QC, Canada.

335 Supernovae & Nebulae IV

Wednesday, 2:00 PM - 3:30 PM; National Harbor 10

Chair(s):
Howie Marion, *Harvard - CfA*

335.01D Host Galaxy Spectra and Consequences for SN Typing From the SDSS SN Survey
Olmstead, Matt[1]; Brown, Peter [1, 2]; Dawson, Kyle S.[1]; Nichol, Robert[3]; Hlozek, Renee[4]
[1.]Physics and Astronomy, University of Utah, Salt Lake City, UT. [2.]Texas A. & M. University, College Station, TX. [3.]University of Portsmouth, Portsmouth, United Kingdom. [4.]Princeton University, Princeton, NJ.

335.02 Type Ia Supernova Colors and Si II Velocities: Hierarchical Bayesian Regression with Non-Gaussian Distributions
Mandel, Kaisey[1]; Foley, Ryan J.[2]; Kirshner, Robert P.[1]
[1.]Harvard University, Cambridge, MA. [2.]University of Illinois-Urbana Champaign, Urbana-Champaign, IL.

335.03 Inferring Ejected Masses of Type Ia Supernovae from Nearby Supernova Factory Data
Scalzo, Richard A.[1]; Aldering, Gregory S.[2]; Antilogus, Pierre[3]; Aragon, Cecilia[2, 4]; Bailey, Stephen J.[2]; Baltay, Charles[5]; Bongard, Sebastien[3]; Buton, Clement[6]; Canto, Arnaud[3]; Cellier-Holzem, Flora[3]; Childress, Michael[1, 7]; Chotard, Nicolas[8]; Copin, Yannick[8]; Fakhouri, Hannah[2, 7]; Gangler, Emmanuel[8]; Guy, Julien[3]; Kowalski, Marek[6]; Kromer, Markus[9]; Nugent, Peter E.[10]; Pain, Reynald[3]; Pecontal, Emmanuel[11]; Pereira, Rui[8]; Perlmutter, Saul[2, 7]; Rabinowitz, David L.[5]; Rigault, Mickael[8]; Runge, Karl[2]; Saunders, Clare[2, 7]; Sim, Stuart[1, 12]; Smadja, Gerard[8]; Tao, Charling[13, 14]; Taubenberger, Stefan[9]; Thomas, Rollin[10]; Weaver, Benjamin[15]
[1.]Australian National University, Weston, ACT, Australia. [2.]Lawrence Berkeley National Laboratory, Berkeley, CA. 3.LPNHE, Universite Pierre et Marie Curie Paris [6],Paris, France. [4.]University of Washington, Seattle, WA. [5.]Yale University, New Haven, CT. [6.]Universitat Bonn, Bonn, Germany. [7.]University of California, Berkeley, Berkeley, CA. [8.]Universite de Lyon, Lyon, France. [9.]Max-Planck-Institut fur Astrophysik, Garching, Germany. [10.]Computational Cosmology Center, LBNL, Berkeley, CA. [11.]CRAL, Universite Lyon [1],Lyon, France. [12.]Queen's University Belfast, Belfast, United Kingdom. [13.]CPPM, Marseilles, France. [14.]Tsinghua University, Beijing, China. [15.]New York University, New York, NY.
Contributing teams: Nearby Supernova Factory

335.04 Recurrent Novae Are Not Progenitors Of Type Ia Supernovae (Nor Are Any Binaries With Red Giant Or Sub-Giant Companion Stars)
Schaefer, Bradley E.[1]
[1.]Louisiana State Univ., Baton Rouge, LA.

335.05 Supernova Simulations with a Quark-Gluon Plasma Phase
Olson, J. Pocahontas[1]; Meixner, Matthew[1]; Mathews, Grant J.[1]; Nguyen, Lan[2]; Dalhed, Hollis E.[3]
[1.]Physics, University of Notre Dame, Notre Dame, IN. [2.]Hanoi National University of Education, Hanoi, Viet Nam. [3.]Lawrence Livermore National Laboratory, Livermore, CA.

335.06 Multidimensional Simulations of Rotating Pair Instability Supernovae
Chatzopoulos, Emmanouil1, 2
[1.]Department of Astronomy & Astronophysics, University of Chicago, Chicago, IL. [2.]FLASH Center for Computational Science, Chicago, IL.
Contributing teams: J. Craig Wheeler, Sean M. Couch

336 The Milky Way

Wednesday, 2:00 PM - 3:30 PM; Maryland Ballroom B

Chair(s):
Douglas Roberts, *Adler Planetarium*

336.01 Mapping the X-Shaped Structure of the Galactic Bulge

Nataf, David[1]
1.Australian National University, Canberra, ACT, Australia.
Contributing teams: Optical Gravitational Lensing Experiment

336.02D The SEGUE K Giant Survey

Ma, Zhibo[1]; Morrison, Heather L.[1]; Harding, Paul[1]; Rockosi, Constance M.[2]; Lee, Young Sun[3, 7]; Janesh, William[1, 5]; Xue, Xiang-xiang[4]; Johnson, Jennifer[6]; Reding, Thomas[1]
[1.]Case Western Reserve University, Cleveland, OH. [2.]UCO/Lick Observatory, Santa Cruz, CA. [3.]NMSU, Las Cruces, NM. [4.]MPIA, Heidelberg, Germany. [5.]Indiana University, Bloomington, IN. [6.]OSU, Columbus, OH. [7.]MSU, East Lansing, MI.
Contributing teams: SEGUE Collaboration

336.03 Relating Dark Matter to Tidal Streams with MilkyWay@home

Newberg, Heidi J.[1]; Newby, Matthew[1]; Arsenault, Matthew[1]; Bauer, Jacob[1]; Desell, Travis[2]; Thompson, Jeffery[1]; Weiss, Jake[1]; Magdon-Ismail, Malik[1]; Szymanski, Bolek[1]; Varela, Carlos[1]
[1.]Rensselaer Polytechnic Inst., Troy, NY. [2.]University of North Dakota, Grand Forks, ND.

336.04 Improved Constraints on the Milky Way's Star Formation Rate and Stellar Mass from Hierarchical Bayesian Analysis

Licquia, Timothy[1]; Newman, Jeffrey[1]
[1.]University of Pittsburgh, Pittsburgh, PA.

336.05 A MIPSGAL 24 micron Source Catalog for the Community

Gutermuth, Robert A.[1]; Heyer, Mark H.[1]
[1.]Univ. of Massachusetts, Amherst, MA.

336.06 First hard X-ray detection of the non-thermal emission around the Arches cluster: morphology and spectral studies with NuSTAR

Krivonos, Roman[1]; Tomsick, John[1]; Bauer, Franz E.[2, 3]; Baganoff, Frederick K.[4]; Barriere, Nicolas[1]; Bodaghee, Arash[1]; Boggs, Steven E.[1]; Christensen, Finn[5]; Craig, William W.[6, 1]; Grefenstette, Brian[7]; Hailey, Charles J.[8]; Harrison, Fiona[7]; Hong, JaeSub[9]; Madsen, Kristin[7]; Mori, Kaya[8]; Nynka, Melania[8]; Stern, Daniel[10]; Zhang, William[11]
[1.]Space Science Lab, UC Berkeley, Berkeley, CA. [2.]Instituto de Astrofisica, Facultad de Fisica, Pontificia Universidad Catlica de Chile, Santiago, Chile. [3.]Space Science Institute, Boulder, CO. [4.]MIT Kavli Institute for Astrophysics and Space Research, Cambridge, MA. [5.]DTU Space - National Space Institute, Technical University of Denmark, Lyngby, Denmark. [6.]Lawrence Livermore National Laboratory, Livermore, CA. [7.]Cahill Center for Astronomy and Astrophysics, California Institute of Technology, Pasadena, CA. [8.]Columbia Astrophysics Laboratory, Columbia University, New York, NY. [9.]Harvard-Smithsonian Center for Astrophysics, 60 Garden Street, Cambridge, MA. [10.]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA. [11.]NASA Goddard Space Flight Center, Greenbelt, MD.
Contributing teams: The NuSTAR Team

336.07 XMM-Newton Observations of Fermi bubbles and the Magnetic Field of the Structure

Su, Meng[1]
[1.]MIT, Cambridge, MA.

336.08 Morphology and gamma-ray spectrum of the Fermi bubbles
Malyshev, Dmitry[1]; Franckowiak, Anna[1]; Petrosian, Vahe[2]
[1.]SLAC, KIPAC, Menlo Park, CA. [2.]Stanford University, Stanford, CA.
Contributing teams: Fermi Large Area Telescope collaboration

337 The Proper Use of GRE Scores and Noncognitive Measures for Enhancing Diversity and Excellence in Astronomy Graduate Programs

Wednesday, 2:00 PM - 3:30 PM; National Harbor 5

Standardized test scores (GREs) are a staple of graduate admissions criteria in physics and astronomy graduate programs. It has long been known that GRE scores are powerfully correlated with gender and ethnicity. New research (Miller & Stassun, 2013, Science, submitted) shows that women score on average ~60 points lower than men and African Americans score on average ~150 points lower than Caucasians on the General GRE Quantitative exam. These results apply for students who were undergraduate physical sciences majors and whose undergraduate GPAs were 3.7 or higher. It is common practice in top-tier physics and astronomy graduate programs to adopt a GRE "cutoff" on the quantitative GRE of ~700, either as a matter of policy or else as a subjective but strong weight. The new research shows that applying such a cutoff immediately eliminates more than two-thirds of women, roughly three-quarters of Hispanics, and nearly all African Americans from the applicant pool. This session will present a summary of this crucially important new research (including any similarly comprehensive research on the Physics GRE subject exam), will present complementary admissions strategies including psychometrically vetted noncognitive attributes such as "grit" that have been demonstrated to successfully predict success, and will engage the community in an open discussion of best practices for sustaining a commitment to broadened participation while maintaining standards of excellence focused on successful scientific careers. An aim of the session will be to produce a follow-up white paper for use by the community summarizing findings and recommendations.

Chair(s):
Keivan Stassun, *Vanderbilt University*
Organizer(s):
Keivan Stassun, *Vanderbilt University*

337.01 Using Minimum Acceptable GRE Scores for Graduate Admissions Suppresses Diversity
Miller, Casey1
1.Univ of South Florida, Tampa, FL.

337.02 Why Doesn't The GRE or GPA Work in Selecting Graduate Students & What Alternatives Are There ?
Sedlacek, William[1]
[1.]Univ of Maryland, College Park, MD.

337.03 Going beyond standardized exam scores in graduate admissions: Enhancing diversity and predicting success
Stassun, Keivan[1, 2]
[1.]Vanderbilt University, Nashville, TN. [2.]Fisk University, Nashville, TN.

Panel Discussion

U.S. Science Policy Talk

Wednesday, 3:40 PM - 4:30 PM; Potomac Ballroom A

Chair(s):
David Helfand, *AAS President*

Senior U.S. Government Official (Invited)
Assistant to the President for Science and Technology
Director of the Office of Science and Technology Policy

With the U.S. focused on deficit reduction, there is little prospect for real growth in federal funding for the astronomical sciences in the near future. As we face these austere times, it is important to understand how U.S. science policy is shaped within the federal government. Our invited speaker will deliver remarks on the current and potential future state of U.S. science policy, especially as it relates to the astronomical sciences, and take questions from the audience as time permits.

338 Astronomy and Public Policy

Wednesday, 4:30 PM - 5:20 PM; Potomac Ballroom A

Astronomy and Public Policy

Chair(s):
Paula Szkody, *Univ. of Washington*

338.01 Astronomy and Public Policy
Suntzeff, Nicholas B.[1]
[1.] *Texas AandM University, College Station, TX.*

Evening Poster Session

Wednesday, 5:30 PM - 6:30 PM; Exhibit Hall ABC

The First Annual Buchalter Cosmology Prize

Wednesday, 5:30 PM - 6:30 PM; National Harbor 11

The Buchalter Cosmology Prize is designed to stimulate truly innovative breakthrough research in cosmology, specifically around ideas that explain the cosmic expansion from basic principles. It was created to support the development of bold new thinking that might challenge currently accepted paradigms such as inflation and dark energy. This session will briefly introduce the work that inspired the prize, and present details, qualifications, and logistics around submissions for the prize. Multiple prizes are expected to be awarded annually, with $10,000 awarded for first place. This is a public session open to all interested attendees who work in theoretical or observational cosmology, with no pre-registration required.

Organizer(s):
Ari Buchalter, *Caltech*

Korean Astronomer Symposium

Wednesday, 6:30 PM - 8:00 PM; Maryland 1

Korean astronomers both in USA and in Korea get together and present their science and telescope projects and discuss future direction as a community. Korean astronomy community is rapidly growing. Recently, Korean astronomers have been participating in various observations, strong theoretical work, and space/ground-based missions such as GALEX, AKARI and GMT. The main goal of this event is to establish the network among the Korean astronomers in this field and to introduce their research activities in the US and Korea to each other. We invite astronomers from international communities, including the AAS members who are interested in science and telescope project collaborations or exploring future collaborations with Korean Astronomy community. To participate presentation at the session, contact Dr. Jeonghee Rho, jrho@sofia.usra.edu or Prof. Sangwook Park, s.park@uta.edu.

Organizer(s):
Sangwook Park, *University of Texas at Arlington*
Jeonghee Rho, *SETI Institute and NASA Ames Research*

Career Discovery Networking Reception

Wednesday, 6:30 PM - 7:30 PM; Maryland Ballroom D

339 Preparing for Future NASA Missions: The Strategic Astrophysics Technology Program

Wednesday, 6:30 PM - 8:00 PM; National Harbor 2

Over the next decade and beyond, NASA's Astrophysics Division anticipates soliciting space flight missions to explore the nature of the universe. These missions will study how galaxies and stars formed and evolved to shape the universe we see today, and will search out and characterize the planets and planetary systems orbiting other stars. As compelling as these future missions will be, implementing them presents many daunting technological challenges. NASA's Astrophysics Division has established the Strategic Astrophysics Technology (SAT) program to overcome these challenges and pave the way to ever more ambitious missions. The SAT program is intended to mature key technologies to the point at which they are feasible for implementation in space flight missions. In this session, NASA representatives will present an overview of the SAT program including technologies of interest for all three themes (Physics of the Cosmos, Cosmic Origins and Exoplanets), targeted technology readiness levels (TRL), and the scope of already approved investigations and their promised outcomes. Following this introduction, a series of presenters, all current participants in the SAT program, will provide a snapshot of their individual technology development and relate how they could enable or enhance future NASA missions. A companion poster session will showcase the full breadth of SAT research across all three.

Chair(s):
Mario Perez, *NASA Headquarters*
Organizer(s):
Mario Perez, *NASA Headquarters*

339.01 Starshades for Exoplanet Imaging and Characterization
Kasdin, N. J.[1]; Vanderbei, Robert J.[1]; Shaklan, Stuart[2]; Lisman, Doug[2]; Thomson, Mark[2]; Cady, Eric[2]; Macintosh, Bruce[3]; Sirbu, Dan[1]; Lo, Amy[4]
[1.]Princeton University, Princeton, NJ. [2.]Jet Propulsion Labortory, Pasadena, CA. [3.]Lawrence Livermore National Laboratory, Livermore, CA. [4.]Northrop-Grumman Aerospace Systems, Redondo Beach, CA.

339.02 Next Generation X-ray Optics: High Angular Resolution, Light Weight, and Low Production Cost
Zhang, William[1]
[1.]NASA's GSFC, Greenbelt, MD.
Contributing teams: NGXO

339.03 Advanced Antenna-Coupled Superconducting Detector Arrays for CMB Polarimetry
Bock, James[1, 2]
[1.]California Institute of Technology, Pasadena, CA. [2.]Jet Propulsion Lab, Pasadena, CA.

339.04 Cross strip anode readouts for microchannel plate detectors: developing flight qualified prototypes.
Vallerga, John[1]; Cooney, Michael[2]; Raffanti, Rick[3]; Varner, Gary[2]; Siegmund, Oswald[1]; McPhate, Jason B.[1]; Tremsin, Anton[1]
[1.]University of California, Berkeley, Berkeley, CA. [2.]University of Hawaii at Manoa, Honolulu, HI. 3.Techne Instruments, Oakland, CA.

339.05 Advanced Mirror Technology Development for Very Large Space Telescopes
Stahl, H. P.[1]
[1.]NASA, Huntsville, AL.

340 The Millimetron Space Mission

Wednesday, 6:30 PM - 8:00 PM; National Harbor 10

Millimetron is a space mission approved by the Russian Space Agency, which is being developed in Russia by a government, academic, and industrial collaboration, led by Dr. N. Kardashev of the Astro Space Center in Moscow. Key parameters include a 10 m diameter deployable telescope operating to 200 microns wavelength, with central 3 m portion operating to wavelengths as short as 50 microns. The spacecraft will be in a L2 halo orbit, and the telescope cooled by a combination of radiation shields and cryocoolers to a temperature fo 4.5 K. Building on the success of the Radioastron mission (launched 18 July 2011), a major research area for Millimetron is to extend earth-space VLBI to millimeter and submillimeter wavelengths with ALMA and other facilities, covering frequencies up to 950 GHz. The highest angular resolution of 40 nanoarcseconds (2x10 in unprecedented detail of supermassive black holes, jets, and accretion processes. It will also be possible to study water megamasers with ~10 microarcseconds resolution binary objects and gravitational lenses at high redshift. Millimetron instrumentation will include a low-resolution imaging spectrometer covering 100 to 1000 GHz in 4 bands with frequency resolution of 1.25 GHz. This will be used to study the SZ effect in a large sample of clusters, and make a survey of 1000+ high z galaxies in the C+ fine structure line. A high spectral resolution multipixel heterodyne spectrometer is also envisioned, covering key spectral ranges between 350 GHz and 6000 GHz. With an angular resolution of 4" at [CII] 158 ?m and 5" at [OI] 63 ?m, dramatically detailed studies of molecular cloud formation, evolution, and star formation in nearby galaxies will be enabled, complementing CO data anticipated from ALMA. Other species that will be observable include CH, HeH+ session will review the plan for the mission, the instrumentation envisioned, and present some of the astronomical highlights of the science program.

Chair(s):
Paul Goldsmith, *JPL*
Organizer(s):
Paul Goldsmith, *JPL*

340.01 Millimetron Mission and Instruments
Smirnov, A.[1]
[1.]Astro Space Center of P.N. Lebedev Physical Institute, Moscow, Russian Federation.

340.02 Millimetron and Earth-Space VLBI
Likhachev, S.[1]
[1.]Astro Space Center, Moscow, Russian Federation.

340.03 Millimetron and Submillimeter Spectroscopy
Goldsmith, Paul[1]
[1.]JPL, Pasadena, CA.

340.04 Millimetron and the universe of galaxies and clusters
de Bernardis, Paolo[1]
[1.]University La Sapienza, Roma, Italy, Italy.
Contributing teams: the MRI collaboration

340.05 Millimetron Cosmology and Fundamental Physics
Colafrancesco, Sergio[1, 2]
[1.]WITS University, Johannesburg, South Africa. 2.SKA South Africa, Johannesburg, South Africa.

340.06 Millimetron in the age of ALMA
de Graauw, Thijs[1]
[1.]Astro Space Centre of P.N. Lebedev Physical Institute, Moscow, Russian Federation.

341 Wide Field InfraRed Space Telescope (WFIRST)

Wednesday, 6:30 PM - 8:00 PM; National Harbor 3

WFIRST is the top ranked large space mission of the Astro2010 Decadal Survey. NASA has recently acquired two "Hubble class" 2.4m mirror telescopes, one of which is being baselined for WFIRST. The NASA name for this configuration of the mission is the Astrophysics Focused Telescope Assets (AFTA). The predicted performance is impressive with IR surveys covering 1000's of square degrees to 27th magnitude. In addition to a wide-field imaging camera with a grism and an IFU spectrograph, a high contrast coronagraph will significantly advance exoplanet direct imaging, the highest ranked ASTRO2010 mid-scale priority. Observing time will be available to the community through a vigorous Guest Investigator program. The mission will make large advances in studies of dark energy, exoplanets, galaxy formation and many other areas of extragalactic, galactic and solar system astrophysics. This session will examine the scientific opportunities made available by the utilization of one of the 2.4m telescopes for the WFIRST-AFTA mission.

Chair(s):
Neil Gehrels, *NASA's GSFC*
Organizer(s):
Neil Gehrels, *NASA's GSFC*
David Spergel, *Princeton University*

341.01 How a 2.4 meter telescope makes WFIRST a more powerful and wide-randing mission
Spergel, David N.[1]
[1.]Princeton Univ. Obs., Princeton, NJ.

341.02 Exoplanet Demographics with WFIRST-AFTA
Gaudi, B. S.[1]
[1.]Ohio State Univ., Columbus, OH.
Contributing teams: WFIRST-AFTA Science Definition Team

341.03 Coronagraphy on AFTA-WFIRST
Kasdin, N. J.[1]; Guyon, Olivier[5]; Greene, Thomas P.[3]; Macintosh, Bruce[4]; Traub, Wesley A.[2]
[1.]Princeton University, Princeton, NJ. [2.]Jet Propulsion Laboratory, Pasadena, CA. [3.]NASA Ames Research Center, Mountain View, CA. [4.]Lawrence Livermore National Laboratory, Livermore, CA. [5.]University of Arizona, Tucson, AZ.

341.04 WFIRST Supernova Dark Energy Program Capabilities
Perlmutter, Saul[1]
[1.]UC, Berkeley, Berkeley, CA.

341.05 WFIRST dark energy observations in the context of Euclid and LSST
Bean, Rachel [1]
[1.]Cornell Univ., Ithaca, NY.

341.06 Galactic Science with WFIRST
Hillenbrand, Lynne[1]
[1.] *California Institute of Technology, Pasadena, CA.*

Anomalous Properties of Galaxies in the Perseus Cluster

Wednesday, 7:00 PM - 8:30 PM; National Harbor 12

A discussion of anomalous structural features and dynamics, interactions, and contents of member galaxies in the extremely dense environment of the Perseus Cluster. Perseus is one of the nearest rich clusters and a detailed, multiwavelength study of unusual individual galaxies, interactions between members and subtle fine-scale features which have become observable with the new class of high-resolution telescopes will offer great insight into the evolutionary processes of early type galaxies in clusters, as well as the proposed transformation of late-type to early type galaxies that is likely to occur during infall into the gravitational well of the cluster. NGC-1275 itseld, the central (cD) galaxy of the cluster, has some very interesting features which deserve further examination by comparing features across a variety of wavebands.

342 ESO: Present and Future

Wednesday, 7:00 PM - 8:00 PM; Potomac Ballroom A

Chair(s):
Fred Lo

342.01 ESO: Present and Future
de Zeeuw, P. T.[1]
[1.] *ESO, Garching, Germany.*

RAS Gold Medal Lecture: Some Puzzles in High-Energy Astrophysics, Roger Blandford

Wednesday, 8:00 PM - 9:00 PM; Potomac Ballroom A

Despite extraordinary observational and interpretive progress over the past half century, there are many puzzles that challenge our understanding of fundamental physics and the astronomical context in which they arise. Some are longstanding, such as validating the general-relativistic description of black holes, understanding how neutron stars operate, and locating the origin of ultrahigh-energy cosmic rays. Some are of more recent provenance, such as explaining rapid variability in extended sources, identifying the nature of short gamma-ray bursts, and accounting for distant blasts of coherent radio emission. All are connected, and observations using current and upcoming facilities should lead to significant progress on each of them as well as to new discoveries — which will, no doubt, beget fresh puzzles.

Chair(s):
David Helfand, *Quest University Canada*

POSTERS

343 Time Domain Astronomy, the Large Synoptic Survey Telescope, and Transient Follow-up Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

343.01 Variable target discovery rates in the LSST survey
Ridgway, Stephen T.[1]; Matheson, Thomas[1]; Mighell, Kenneth J.[1]; Olsen, Knut A.[1]; Howell, Steve B.[2]
[1.]NOAO, Tucson, AZ. 2.NASA Ames Research Center, Moffett Field, CA.

343.02 ANTARES: A Prototype Transient Broker System
Matheson, Thomas[1]; Saha, Abhijit[1]; Snodgrass, Richard[2]; Kececioglu, John[2]
[1.]NOAO, Tucson, AZ. [2.]University of Arizona, Department of Computer Science, Tucson, AZ.

343.03 LSST Capability for Transiting Exoplanet Detections
Lund, Michael[1]; Pepper, Joshua[3, 1]; Stassun, Keivan[1, 2]
[1.]Vanderbilt University, Nashville, TN. [2.]Fisk University, Nashville, TN. [3.]Lehigh University, Bethlehem, PA.

343.04 Multidimensional Quasar Classification for Next Generation Surveys
Peters, Christina M.[1]; Richards, Gordon T.[1]
[1.]Drexel University, Philadelphia, PA.

343.05 Towards Precision Quasar Light Curve Photometry with the Pan-STARRS1 Survey
Liu, Tingting1; Gezari, Suvi[1]
[1.]University of Maryland, College Park, MD.
Contributing teams: The Pan-STARRS1 Science Collaboration

343.06 Photometric and Astrometric Characterization of the La Silla QUEST AGN Variability Survey
Coppi, Paolo S.[1]; Cartier, Regis A.[2]
[1.]Yale Univ., New Haven, CT. [2.]University of Chile, Santiago, Chile.
Contributing teams: The QUEST Team

343.07 Improving the LSST Observing Cadence for Type Ia Supernovae
Carroll, Christopher M.[1, 2]; Gawiser, Eric J.[1]; Jha, Saurabh[1]; Kurczynski, Peter[1]; Biswas, Rahul[4]; Cinabro, David[5]; Jones, R. L.[3]; Wood-Vasey, W. M.[6]
[1.]Dartmouth College, Hanover, NH. [2.]Rutgers University, New Brunswick, NJ. [3.]University of Washington, Seattle, WA. [4.]Argonne National Laboratory, Lemont, IL. [5.]Wayne State University, Detroit, MI. [6.]University of Pittsburgh, Pittsburgh, PA.

343.08 Optimizing the LSST Dither Pattern for Dark Energy Studies
Gawiser, Eric J.[1]; Carroll, Christopher M.[2, 1]; Kurczynski, Peter[1]; Jones, R. L.[3]; Sonawalla, Aneesa[4, 1]; Bailey, Rachel[1]; Krughoff, K. S.[3]
[1.]Rutgers University, Piscataway, NJ. [2.]Dartmouth College, Hanover, NH. [3.]University of Washington, Seattle, WA. [4.]University of Chicago, Chicago, IL.
Contributing teams: LSST Dark Energy Science Collaboration

344 Preparing for Future NASA Missions Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

344.01 Overview and Summary of the Advanced Mirror Technology Development Project
Stahl, H. P.[1]
[1.]NASA, Huntsville, AL.

344.02 Protective coatings for FUV to NIR advanced telescope mirrors
Balasubramanian, Kunjithapatham[1]; Nikzad, Shouleh[1]; Hennessy, John[2]; Raouf, Nasrat[1]; Green, James C.[4]; Scowen, Paul A.[3]
[1.]Jet Propulsion Laboratory, Pasadena, CA. [2.]California Institute of Technology, Pasadena, CA. [3.]Arizona State University, Tempe, AZ. [4.]University of Colorado, Boulder, CO.

344.03 MEMS Deformable Mirror Technology Development for Space-Based Exoplanet Detection
Bierden, Paul[1]; Cornelissen, Steven[1]; Ryan, Peter[1]
[1.]Boston Micromachines Corp., cambridge, MA.

344.04 Telescope Design for a Space-Based Gravitational-Wave Observatory
Livas, Jeffrey C.[1]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD.

344.05 Demonstrating Enabling Technologies for the High-Resolution Imaging Spectrometer of the Next NASA X-ray Astronomy Mission
Kilbourne, Caroline[1]; Adams, Joseph S.[1]; Bandler, Simon[1]; Chervenak, James[1]; Chiao, Meng[1]; Doriese, Randy[2]; Eckart, Megan[1]; Finkbeiner, Fred[1]; Fowler, Joseph W.[2]; Hilton, Gene[2]; Irwin, Kent[3]; Kelley, Richard L.[1]; Moseley, Samuel J.[1]; Porter, Frederick S.[1]; Reintsema, Carl[2]; Sadleir, John[1]; Smith, Stephen J.[1]; Swetz, Daniel[2]; Ullom, Joel[2]
[1.]NASA GSFC, Greenbelt, MD. 2.NIST – Boulder, Boulder, CO. 3.Stanford University, Stanford, CA.

344.06 Physics of the Cosmos (PCOS) Technology Development Program Overview
Pham, B. Thai1; Clampin, Mark[1]; Werneth, Russ L.[1]
[1.]NASA, Greenbelt Md, MD.

344.07 Cosmic Origins (COR) Technology Development Program Overview
Werneth, Russell[1]; Pham, B. Thai[1]; Clampin, Mark[1]
[1.]NASA, Greenbelt Md, MD.

344.08 Recent progress in adjustable X-ray optics for astronomy
Reid, Paul B.[1]; Allured, Ryan[1]; Cotroneo, Vincenzo[1]; McMuldroch, Stuart[1]; Marquez, Vanessa[1]; Schwartz, Daniel A.[1]; Vikhlinin, Alexey[1]; O'Dell, Stephen L.[2]; Ramsey, Brian[2]; Trolier-McKinstry, Susan[3]; Johnson-Wilke, Raegan[3]; Wilke, Rudeger H.3
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]NASA MSFC, Huntsville, AL. [3.]The Pennsylvania State University, State College, PA.

344.09 Toward Directly-Deposited Optical Blocking Filters for High-performance, Back-illuminated Imaging X-ray Detectors
Bautz, Mark W.[1]; Kissel, Steven E.[1]; Ryu, Kevin[2]; Suntharalingam, Vyshnavi[2]
[1.]MIT, Cambridge, MA. [2.]MIT Lincoln Laboratory, Lexington, MA.

344.10 The Next Generation of X-Ray Reflection Gratings
McEntaffer, Randall L.[1]
[1.]University of Iowa, Iowa City, IA.
Contributing teams: The Off-Plane X-ray Grating Spectrometer Team

344.11 Progress with NASA Technology Development for Exoplanet Missions (TDEM)
Lawson, Peter R.[1]
[1.]Jet Propulsion Laboratory, Pasadena, CA.
Contributing teams: Exoplanets, technology, coronagraphs, starshades

344.12 Colloid Microthruster Feed System Development for Fine Pointing and Drag-Free Control of Multi-Year Astronomical Observatories
Ziemer, John1; Mueller, Juergen[1]; Spence, Douglas[2]; Hruby, Vlad[2]
[1.]Jet Propulsion Laboratory, Pasadena, CA. [2.]Busek Co., Inc., Natick, MA.

344.13 Testing Starshade Manufacturing and Deployment Through NASA's Technology Development for Exoplanet Missions Program
Kasdin, N. J.[1]; Shaklan, Stuart[2]; Lisman, Doug[2]; Thomson, Mark[2]; Cady, Eric[2]; Lo, Amy[3]; Macintosh, Bruce[4]
[1.]Princeton University, Princeton, NJ. [2.]Jet Propulsion Laboratory, Pasadena, CA. [3.]Northrop Grumman Aerospace Systems, Redondo Beach, CA. [4.]Lawrence Livermore National Laboratory, Livermore, CA.

344.14 High Contrast Phase Occulted Visible Nulling Coronagraph for Arbitrary Telescope Apertures
Lyon, Richard[1]; Clampin, Mark[1]
[1.]NASA/Goddard Space Flight Center, Greenbelt, MD.

344.15 Achieving High Contrast for Exoplanet Imaging with a Kalman Filter and Stroke Minimization
Riggs, A J Eldorado[1]; Groff, Tyler D.[1]; Kasdin, N. J.[1]; Carlotti, Alexis[1]; Vanderbei, Robert J.[1]
[1.]Princeton University, Princeton, NJ.

345 Young Stellar Objects Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

345.01 The Brood of the Swan: A Multigenerational Stellar Population in M17?
Sanchez, Natalie1; Povich, Matthew S.[1]
[1.]Cal Poly Pomona, Pomona, CA.

345.02 Mid-Infrared Variability in Several Star Formation Regions.
Wolk, Scott J.[1]; Guenther, Hans Moritz[1]; Poppenhaeger, Katja[1]; Forbrich, Jan2, [1]
[1.]SAO, Cambridge, MA. [2.]University of Vienna, Vienna, Austria.
Contributing teams: The YSOVAR Team

345.03 Young, Subarcsecond Binaries: Laboratories for Early Stellar and Circumstellar Disk Evolution
Prato, Lisa A.1
1.Lowell Observatory, Flagstaff, AZ.

345.04 How Cool Is That? An IRTF/SPEX Spectroscopic Study of the Close Binary T Tauri System V4046 Sgr
Smith, Carter-Thaxton[1, 2]; Rapson, Valerie[2]; Sargent, Benjamin A.[2]; Kastner, Joel H.[2]; Rayner, John[3]
[1.]University of Arizona, Tucson, AZ. 2.Rochester Institute of Technology, Rochester, NY. 3.NASA Infrared Telescope Facility, Honolulu, HI.

345.05 Pulsed Accretion in Young Stellar Objects: A Tale of Two Binaries
Muzerolle, James[1]; Flaherty, Kevin M.[2]; Balog, Zoltan[3]; Beck, Tracy L.[1]; Furlan, Elise[4]; Gutermuth, Robert A.[5]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Wesleyan University, Middletown, CT. [3.]MPIA, Heidelberg, Germany. [4.]IPAC, Pasadena, CA. [5.]University of Massachusetts, Amherst, MA.

345.06 YSOVAR: The Age of the Cepheus C Star Cluster
Luna, Jessica[2]; Covey, Kevin[1]
[1.]Lowell Observatory, Flagstaff, AZ. [2.]University of Redlands, Redlands, CA.
Contributing teams: YSOVAR

345.07 YSOVAR: Young Star Variations on Timescales of Years
Rebull, Luisa M.[1]
[1.]Caltech, Pasadena, CA.
Contributing teams: YSOVAR team

345.08 Detection of Masers Toward Young Stellar Objects in the LMC
Johanson, Adam[1]; Migenes, Victor[1]
[1.]Brigham Young University, Provo, UT.

345.09 Study of the Outflow and Disk surrounding a Post-Outburst FU-Orionis Star
Mellon, Samuel N.[1]; Perez, Laura M.[2]
1.Westminster College, New Wilmington, PA. 2.National Radio Astronomy Observatory, Socorro, NM.

345.10 Heating the Primordial Soup: X-raying the Circumstellar Disk of T Cha
Principe, David[1]; Huenemoerder, David[2]; Kastner, Joel H.[1]; Bessell, Michael S.[3]; Sacco, Giuseppe[4]
[1.]Rochester Institute of Technology, Rochester, NY. [2.]Massachusetts Institute of Technology, Cambridge, MA. [3.]Australia National University, Acton, ACT, Australia. [4.]INAF-Osservatorio Astrofisico di Arcetri, Firenze, Italy.

345.11 X-ray and Characteristic Properties of Young Stellar Objects Identified in NGC 3576
O'Donnell, Christine[1]; Dirienzo, William J.[1, 2]; Indebetouw, Remy[1, 2]; Beaton, Rachael[1]
[1.]University of Virginia, Charlottesville, VA. [2.]National Radio Astronomy Observatory, Charlottesville, VA.

345.12 A Chandra X-ray Observation of the Jet-Driving T Tauri Star RW Aur
Skinner, Steve L.[1]; Guedel, Manuel[2]
[1.]Univ. Of Colorado, Boulder, CO. [2.]Univ. of Vienna, Vienna, Austria.

345.13 Emission Line Profiles in T Tauri Stars
Podel, Jennifer[1]; Edwards, Suzan[1]; Feng, Wanda[1]
[1.]Smith College, Northampton, MA.

345.14 A Comparative Study of YSO Classification Techniques using WISE Observations of the KR 120 Molecular Cloud.
Kang, Sung-Ju[1]; Kerton, Charles R.[1]
[1.]Iowa State University, Ames, IA.

345.15 WISE Identified Young Stellar Objects In BRC 38
Gibbs, John[1]; Rebull, Luisa M.[2]; Laurence, Wendi[3]; Marshall, Robert[4]; Murphy, Michael[5]; Orr, Laura[6]; Whitworth, Christi[7]; Burton, Anna[1]; Corris, Taylor[1]; Goodey, Sean[1]; McGinnis, Stewart[1]; Laurence, Connor[8]; Aschman, Olivia[5]; Kikuchi , Robin [5]; Prather, Jonathan [5]; Whitley, Lee [5]; Billings, Chad[6]; Mader, Caleb[6]
[1.]Glencoe High School, Hillsboro, OR. [2.]Caltech, Pasadena, CA. [3.]Portland State University, Portland , OR. [4.]Carnegie Science Center, Pittsburgh, PA. [5.]Ravenscroft School , Raleigh, NC. [6.]Ukiah High School, Ukiah, OR. [7.]Pisgah Astronomical Research Institute , Rosman, NC. [8.]Treasure Mountain Junior High , Park City, UT.

345.16 Evidence for UV Shielding of H2O in DG Tau
Carr, John S.[1]; Najita, Joan R.[2]
[1.]Naval Research Laboratory, Washington, DC. [2.]National Optical Astronomy Observatory, Tucson, AZ.

345.17 Abundances in the High-Latitude Herbig Ae Star PDS2
Cowley, Charles R.[1]; Hubrig, Swetlana[2]; Przybilla, Norbert[3]
[1.]University of Michigan, Ann Arbor, MI. [2.]Leibnitz-Institute fur Astrophysik, Potsdam, Germany. [3.]Inst. fur Astro- und Teilchen Physik, Innsbruck, Austria.

345.18 The curious morphology and orientation of Orion proplyd HST10
Shuping, Ralph[1, 2]; Kassis, Marc[3]; Bally, John[4]; Morris, Mark[5]
[1.]Space Science Institute, Boulder, CO. [2.]USRA-SOFIA, Moffett Field, CA. [3.]W. M. Keck Observatory, Kamuela, HI. [4.]Center for Astrophysics and Space Astronomy, CU Boulder, Boulder, CO. [5.]Dept. of Physics, Astronomy Division, UCLA, Los Angeles, CA.

345.19 Inferring Magnetic Fields in Low-Velocity Radiative Shocks
Wright, Anna[1]
[1.]Rice University, Houston, TX.
Contributing teams: Patrick Hartigan

345.20 The VLA Perseus Young Protostellar Disk and Multiplicity Survey: A First Look
Segura-Cox, Dominique[1]; Tobin, John J.[2]; Chandler, Claire J.[3]; Dunham, Michael M.[4]; Kratter, Kaitlin M.[5]; Li, Zhi-Yun[6]; Looney, Leslie[1]; Melis, Carl[7]; Perez, Laura M.[3]; Sadavoy, Sarah[8]
[1.]University of Illinois, Urbana, IL. [2.]NRAO, Charlottesville, VA. [3.]NRAO, Socorro, NM. [4.]Yale University, New Haven, CT. [5.]University of Arizona, Tucson, AZ. [6.]University of Virginia, Charlottesville, VA. [7.]University of San Diego, San Diego, CA. [8.]MPIA, Heidelberg, Germany.

345.21 Our Youngest Neighbors: Brown Dwarfs in Nearby Moving Groups
Riedel, Adric R.[1, 2]; Blunt, Sarah C.[4, 2]; Cruz, Kelle L.[1, 2]; Rice, Emily L.[3, 2]; Faherty, Jacqueline K.[5, 2]
[1.]Hunter College, New York City, NY. [2.]American Museum of Natural History, New York City, NY. [3.]The College of Staten Island, New York City, NY. [4.]Brown University, Providence, RI. [5.]Carnegie Institute of Washington, Washington, DC.
Contributing teams: BDNYC

345.22 Herschel Shines Light on the Episodic Evolutionary Sequence of Protostars
Green, Joel D.[1]
[1.]University of Texas at Austin, Austin, TX.
Contributing teams: DIGIT, FOOSH, and COPS teams

345.23 Time-Series Position-Velocity Diagrams of the Jet and Low-Velocity Components in HH 444
Hartigan, Patrick M.[1]; Jones, Sharad K.[1]
[1.] Rice Univ., Houston, TX.

345.34 Detection of Radio Outbursts of Young Low-Luminosity Protostars
Choi, Minho[1]; Lee, Jeong-Eun[2]; Kang, Miju[1]
[1.] Korea Astronomy and Space Science Institute, Daejeon, Daejeon, Korea, Republic of. [2.] Kyung Hee University, Yongin, Kyungki, Korea, Republic of.

346 The Milky Way, The Galactic Center Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

346.01 The Radial Velocity Experiment RAVE
Steinmetz, Matthias[1]
[1.] Leibniz-Institut fuer Astrophysik Potsdam (AIP), Potsdam, Brandenburg, Germany.
Contributing teams: RAVE collaboration

346.02 The Radial Velocity Experiment (RAVE): Fourth Data Release
Kordopatis, Georges[1]
[1.] University of Cambridge, Institute of Astronomy, Cambridge, United Kingdom.
Contributing teams: RAVE collaboration

346.03 A new stellar chemo-kinematic relation reveals the merger history of the Milky Way disk
Minchev, Ivan[1]
[1.] Leibniz Institue for Astrophysics Potsdam (AIP), Potsdam, Germany.
Contributing teams: RAVE collaboration

346.04 The low metallicity tail of the thick disc seen by RAVE
Gilmore, Gerard[1]; Kordopatis, Georges[1]
[1.] Institute of Astronomy, Cambridge, United Kingdom.
Contributing teams: RAVE collaboration

346.05 Kinematic Modeling Of The Milky Way Using The RAVE And GCS Stellar Surveys
Sharma, Sanjib[1]
[1.] Univeristy Of Sydney, Sydney, NSW, Australia.
Contributing teams: Rave Collaboration

346.06 Mapping Tidal Streams and Tails around Galactic Globular Clusters using RAVE
Kunder, Andrea[1]; Steinmetz, Matthias[1]
[1.] Leibniz Institute of Astrophysics, Potsdam, Germany.
Contributing teams: RAVE collaboration

346.07 Constructing a three dimensional map of the diffuse interstellar band at 862 nm from RAVE data
Kos, Janez[1]; Zwitter, Tomaz[1]; Steinmetz, Matthias[2]
[1.] University of Ljubljana, Faculty of mathematics and physics, Ljubljana, Slovenia. [2.] Leibniz-Institut fuer Astrophysik Potsdam (AIP), Potsdam, Germany.
Contributing teams: RAVE team

346.08 Finding ultra-faint dwarf galaxies with RR Lyrae
Baker, Mariah[1]; Willman, Beth[1]
[1.] Haverford College, Haverford, PA.

346.09 Accretion History and Mass of the Milky Way Halo: HST Proper Motions and Keck Spectra
Cunningham, Emily C.[1]; Deason, Alis J.[1]; Guhathakurta, Puragra[1]; Rockosi, Constance M.[1]; Barro, Guillermo[1]; Van Der Marel, Roeland P.[2]; Sohn, S. Tony[2]; Anderson, Jay[2]
[1.]UCSC, Santa Cruz, CA. 2.STScI, Baltimore, MD.
Contributing teams: HSTPROMO Collaboration, HALO7D Collaboration

346.10 Action-space clustering of tidal streams to infer the Galactic potential
Sanderson, Robyn[1]; Helmi, Amina[1]; Hogg, David W.[2, 3]
[1.]Kapteyn Astronomical Institute, Groningen, Netherlands. [2.]Center for Cosmology and Particle Physics, Department of Physics, New York University, New York, NY. [3.]Max-Planck-Institut für Astronomie, Heidelberg, Germany.

346.11 Painting a More Accurate Picture of the Sagittarius Dwarf Tidal Stream
Weiss, Jake[1]; Arsenault, Matthew[1]; Bechtel, Torrin[2]; Desell, Travis[3]; Newberg, Heidi J.[1]; Newby, Matthew[1]; Thompson, Jeffery[1]
[1.]Rensselaer Polytechnic Institute, Troy, NY. [2.]University of Wisconsin - Madison, Madison, WI. [3.]University of North Dakota, Grand Forks, ND.

346.12 Testing the Caustic Ring Dark Matter Theory Against Observations in the Milky Way
Dumas, Julie[1]; Newberg, Heidi J.[1]; Susser, Adam[1]
[1.]Rensselaer Polytechnic Institute, Troy, NY.

346.13 LAMOST observations of substructure in bulk velocities of Milky Way disk stars
Carlin, Jeffrey L.[1]; DeLaunay, James[1, 2]; Newberg, Heidi J.[1]; Deng, Licai[3]; Gole, Daniel[4, 5]; Grabowski, Kathleen[1]; Jin, Ge[6]; Liu, Chao[3]; Liu, Xiaowei[7]; Luo, A-Li[3]; Yuan, Haibo[7]; Zhang, Haotong[3]; Zhao, Gang[3]; Zhao, Yongheng[3]
[1.]Rensselaer Polytechnic Institute, Troy, NY. [2.]Penn State University, University Park, PA. [3.]National Astronomical Observatories, Chinese Academy of Sciences, Beijing, China. [4.]SUNY-Geneseo, Geneseo, NY. [5.]University of Colorado, Boulder, CO. [6.]University of Science and Technology of China, Hefei, China. [7.]Kavli Institute for Astronomy and Astrophysics, Peking University, Beijing, China.

346.14 Extending stellar density maps of the Orphan Tidal Stream
Varilly, Taylor[1]; Carlin, Jeffrey L.[1]; Newberg, Heidi J.[1]; Beaton, Rachael[2]; Majewski, Steven R.[2]
[1.]Rensselaer Polytechnic Institute, Troy, NY. [2.]University of Virginia, Charlottesville, VA.

346.15 Contributions to the nearby stellar halo of the Milky Way from in situ, kicked-out disk, and accreted populations.
Sheffield, Allyson[1]; Majewski, Steven R.[2]; Johnston, Kathryn V.[1]; Cunha, Katia M.[3, 4]; Smith, Verne V.[3]
[1.]Columbia University, New York, NY. [2.]University of Virginia, Charlottesville, VA. [3.]National Optical Astronomy Observatories, Tucson, AZ. [4.]Observatorio Nacional, Rio de Janeiro, Brazil.

346.16 Hypervelocity Star Candidates in SEGUE

Palladino, Lauren E.[1]; Schlesinger, Katharine[2]; Holley-Bockelmann, Kelly[1, 3]; Callende Prieto, Carlos4, 5; Beers, Timothy C.[6]; Lee, Young Sun[7]; Schneider, Donald P.[8]

[1.]Vanderbilt University, Nashville, TN. [2.]The Australian National University, Weston, ACT, Australia. [3.]Fisk University, Nashville, TN. [4.]Instituto de Astrofisica de Canarias, Tenerife, Spain. [5.]Universidad de La Laguna, Tenerife, Spain. [6.]National Optical Astronomy Observatory, Tucson, AZ. [7.]New Mexico State University, Las Cruces, NM. [8.]The Pennsylvania State University, University Park, PA.

346.17 Red Runaways

Vickers, John[1]; Smith, Martin C.[2]; Grebel, Eva[1]

[1.]Astronomisches Rechen-Institut, Heidelberg, Baden - Wuerttemberg, Germany. [2.]Shanghai Astronomical Observatory, Shanghai, Shanghai, China.

346.18 Exploring Biases and Sample Selection Effects for Chemical Cartography with SDSS-III/APOGEE

Hayden, Michael R.[1]; Holtzman, Jon A.[1]; Zasowski, Gail[2]; Girardi, Leo[4]; Schultheis, Mathias[3]; Hasselquist, Sten[1]; Feuillet, Diane[1]; Nidever, David L.[6]; Frinchaboy, Peter M.[7]; Schiavon, Ricardo[8]; Garcia Perez, Ana Elia[5]

[1.]New Mexico State University, Las Cruces, NM. 2.Johns Hopkins University, Baltimore, MD. [3.]Observatoire de la Cote d'Azur, Nice, Provence-Alpes-Côte d'Azur, France. [4.]Osservatorio Astronomico di Padova, INAF, Padova, Veneto, Italy. [5.]University of Virginia, Charlottesville, VA. [6.]University of Michigan, Ann Arbor, MI. [7.]Texas Christian University, Fort Worth, TX. [8.]Liverpool John Moores University, Liverpool, Merseyside, United Kingdom.

346.19 The Blanco DECam Bulge Survey (BDBS): Status and Early Results

Clarkson, Will I.[1]; Rich, Robert M.[2]; Johnson, Christian I.[3]; Kunder, Andrea[4]; Michael, Scott[5, 6]; Young, Michael[5]; Pilachowski, Catherine A.[6]; Ivezic, Zeljko[7]; Ibata, Rodrigo[8]; Irwin, Michael[9]; de Propris, Roberto[10, 11]; Koch, Andreas[12]; Robin, Annie[13]; Soto, Mario[14]; Vivas, Katherina[15]; Clyne, Elizabeth[1]

[1.]Department of Natural Sciences, University of Michigan-Dearborn, Dearborn, MI. [2.]Division of Astronomy and Astrophysics, University of California, Los Angeles, Los Angeles, CA. [3.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [4.]Astronomisches Institut Potsdam, Potsdam, Brandenburg, Germany. [5.]Pervasive Technology Institute, Indiana University Bloomington, Bloomington, IN. [6.]Department of Astronomy, Indiana University, Bloomington, Bloomington, IN. [7.]Astronomy Department, University of Washington, Seattle, WA. [8.]Strasbourg Observatory, Strasbourg, Alsace, France. [9.]Institute of Astronomy, Cambridge, Cambridgeshire, United Kingdom. [10.]National Optical Astronomy Observatory, Tucson, Coquimbo, Chile. [11.]Cerro Tololo Inter-American Obseratory, Tucson, Coquimbo, Chile. [12.]Zentrum fur Astronomie, University of Heidelberg, Heidelberg, Baden-Württemberg, Germany. [13.]Besancon Observatory, Besancon, Franche-Comte, France. [14.]Space Telescope Science Institute, Baltimore, MD. [15.]Centro de Investigaciones de Astrobnomia (CIDA), Merida, Merida, Venezuela, Bolivarian Republic of.

346.20 Analyzing the Milky Way's Hot Gas Halo with OVII and OVIII Emission Lines

Miller, Matthew J.[1]; Bregman, Joel N.[1]

[1.]University of Michigan, Ann Arbor, MI.

346.21 Dust ring at the Camelopardalis and Perseus border
Cepas, Vytautas[1, 2]; Boyle, Richard P.[3]; Zdanavicius, Justas[1]; Straizys, Vytautas[1]; Zdanavicius, Kazimieras[1]; Laugalys, Vygandas[1]
[1.]Vilnius university, Vilnius, Lithuania. [2.]Baltic institute of advanced technologies, Vilnius, Lithuania. [3.]Vatican observatory Research group, Tucson, AZ.

346.22 Emission lines in the Near-infrared Spectra of the IR Quintuplet Stars in the Galactic Center
Geballe, Thomas R. [1]; Najarro, Francisco[2]; de la Fuente, Diego[2]; Figer, Donald F.[3]
[1.]Gemini Obs., Hilo, HI. [2.]Center for Astrobiology, Madrid, Spain. [3.]Rochester Institute of Technology, Rochester, NY.

346.23 Line Diagnostics Across the Galactic Nucleus from Mid-Infrared Emission Line Mapping
An, Deokkeun[1]; Sellgren, Kristen[2]; Ramirez, Solange[3]
[1.]Ewha Womans University, Seoul, Korea, Republic of. [2.]Ohio State University, Columbus, OH. [3.]NExScI/Caltech, Pasadena, CA.

346.24 A pilot study to monitor the Galactic Center for radio transients with the First Station of the Long Wavelength Array
Cutchin, Sean E.[1]; Hyman, Scott D.[3]; Kassim, Namir E.[2]; Lazio, Joseph[4]
[1.]NRC/NRL, Washington, DC. [2.]NRL, Washington, DC. [3.]Sweet Briar College, Sweet Briar, VA. [4.]JPL/Cal Tech, Pasadena, CA.

346.25 Simulating the effect of the \sgra accretion flow on the appearance of G2 after pericenter.
Sadowski, Aleksander1; Abarca, David1; Sironi, Lorenzo[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

346.26 Transient Events in Archival VLA Observations of the Galactic Center
Chiti, Anirudh[1]; Chatterjee, Shami[1]; Wharton, Robert[1]; Cordes, James M.[1]; Lazio, Joseph[2]; Kaplan, David L.[3]; Bower, Geoffrey C.[4]; Croft, Steve[4, 3]
[1.]Cornell University, Ithaca, NY. [2.]JPL, Pasadena, CA. [3.]UW Milwaukee, Milwaukee, WI. [4.]UC Berkeley, Berkeley, CA.

346.27 Radio Observations of Star Formation in the Galactic Center
Butterfield, Natalie[1]; Lang, Cornelia C.[1]
[1.]University of Iowa, Iowa City, IA.

346.28 Monitoring for Low Frequency Radio Transients in the Galactic Center
Hyman, Scott D.[1]; Kassim, Namir E.[2]; Cutchin, Sean E.[5]; Lazio, Joseph[3]; Intema, Huib[4]
[1.]Sweet Briar College, Sweet Briar, VA. [2.]Naval Research Laboratory, Washington, DC. [3.]JPL-Caltech, Pasadena, CA. [4.]NRAO, Socorro, NM. [5.]NRL-NRC, Washington, DE.

346.29 Multi-Wavelength Studies of Inner Galactic Gas Clouds in Clump 2: IGGC 22
Tolls, Volker[1]; Smith, Howard A.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA.
Contributing teams: HIGGS Team

346.30 Evidence for a Massive Photon in the Milky Way
Bartlett, David F.[1]; Cumalat, John P.[1]
[1.]Univ. of Colorado, Boulder, CO.

346.32 SOFIA/FORCAST Observations of the Luminous Blue Variables in the Galactic Center
Lau, Ryan M.1; Herter, Terry L.[1]; Morris, Mark[2]; Adams, Joseph D.[1]
[1.]Cornell University, Ithaca, NY. [2.]University of California Los Angeles, Los Angeles, CA.

346.33 Gemini GNIRS/NIFS Study of the Radial Velocities of Eight Massive Stars in the Galactic Center
Dong, Hui[1]; Mauerhan, Jon[2]; Morris, Mark[3]; Wang, Q. D.[4]; Cotera, Angela[5]
[1.]NOAO, Tucson, AZ. [2.]University of California, Berkeley, Berkeley, CA. 3.University of California, Los Angeles, Los Angeles, CA. [4.]University of Massachusetts, Amherst, Amherst, MA. [5.]SETI, Mountain View, CA.

346.34 The Fermi bubbles: gamma-ray, microwave and polarization signatures of leptonic AGN jets
Yang, Hsiang-Yi Karen[1]; Ruszkowski, Mateusz[1]; Zweibel, Ellen G.[2]
[1.]University of Michigan, Ann Arbor, MI. [2.]University of Wisconsin-Madison, Madison, WI.

346.35 Astrometry in the Galactic Center with the Thirty Meter Telescope
Yelda, Sylvana[1]; Meyer, Leo[1]; Ghez, Andrea M.[1]; Do, Tuan[2]
[1.]University of California - Los Angeles, Los Angeles, CA. [2.]Dunlap Institute for Astronomy and Astrophysics, University of Toronto, Toronto, ON, Canada.

347 Extrasolar Planet Characterization Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

347.01 A Statistical Analysis of Exoplanets in Their Habitable Zones
Adams, Arthur[1]; Kane, Stephen R.[1]
[1.]San Francisco State University, San Francisco, CA.

347.02 A Statistical Characterization of the Atmospheres of Kepler's Planet Candidates
Sheets, Holly[1]; Deming, Drake[1]
[1.]University of Maryland, College Park, MD.

347.03 Direct modeling of transiting planet light curves from model stellar atmospheres
Mcneil, Joseph[1]; Neilson, Hilding[1]; Ignace, Richard[1]
[1.]East Tennessee State University, Johnson City, TN.

347.04 Gaseous Mean Opacities for Giant Planet and Brown Dwarf Atmospheres
Lustig-Yaeger, Jacob A.[1]; Fortney, Jonathan J.[1]; Freedman, Richard[2, 3]; Marley, Mark S.[3]; Lupu, Roxana E.[2]
[1.]University of California, Santa Cruz, Santa Cruz, CA. 2.SETI Institute, Mountain View, CA. 3.NASA Ames Research Center, Mountain View, CA.

347.05 Searching for Extended Planetary Atmospheres Signatures In Kepler Light Curves
Barbosa de Souza, Estella[1]; Redfield, Seth[2]; Jensen, Adam G.[3]
[1.]Bryn Mawr College, Bryn Mawr, PA. [2.]Wesleyan University, Middletown, CT. [3.]University of Nebraska, Lincoln, NE.

347.06 Tidal Evolution of Exomoons using a Self-Consistent Tidal and Dynamical Model
Zollinger, Rhett[1, 2]; Armstrong, John C.[2]; Bromley, Benjamin C.[1]
[1.]University of Utah, Salt Lake City, UT. 2.Weber State University, Ogden, UT.

347.07 Chasing Luna: Detecting Exomoons
Lovell, Megan[1]; Deneault, Ethan A.[1]
[1.]University of Tampa, Tampa, FL.

347.08 Investigations of Planet Formation with Combined Hydrodynamics and Radiative Transfer
Jang-Condell, Hannah[1]; Kloster, Dylan[1]
[1.]University of Wyoming, Laramie, WY.

347.09 Exoplanent Science with OSCAAR
Morris, Taylor[1]; Durig, Douglas T.[1]; Morris, Brett M.[2]
[1.]Sewanee: The University of the South, Sewanee, TN. [2.]University of Washington, Seattle, WA.

347.10 Effects of Roche Lobe Overflow from Eccentric Hot Jupiters Created by Planet-Planet Scattering
Sepinsky, Jeremy F.[1]; Salmon, Rachel L.[1]; Chatterjee, Sourav[2]
[1.]University of Scranton, Scranton, PA. 2.The University of Florida, Gainesville, FL.

347.11 Earth-like Planet on a Highly Eccentric Orbit: A 1-D Dynamical Model of Atmospheric Response at Periastron
Gonzales, Erica[1]; Laughlin, Greg[1]
[1.]University of California, Santa Cruz, CA.

347.12 Examining Photometric Orbital Modulations in Kepler Transiting Planet Candidates
Fetherolf, Tara[1]; Shporer, Avi[2]; Knutson, Heather[2]; Johnson, John A.[3, 2]
[1.]San Diego State Univesity, San Diego, CA. [2.]California Institute of Technology, Pasadena, CA. [3.]Harvard University, Cambridge, MA.

347.13 Constraining the Magnetic Fields of Transiting Exoplanets through Ground-based Near-UV Observations
Turner, Jake[1, 2]; Smart, Brianna[2, 3]; Pearson, Kyle[2]; Biddle, Lauren I.[2]; Cates, Ian[2]; Berube, Michael[2]; Thompson, Robert[2]; Smith, Carter-Thaxton[2]; Teske, Johanna K.[2]; Hardegree-Ullman, Kevin[4]; Robertson, Amy[2]; Crawfod, Benjamin[2]; Zellem, Robert[2]; Nieberding, Megan N.[2]; Raphael, Brandon A.[2]; Tombleson, Ryan[2]; Cook, Kendall[2]; Hoglund, Shelby[2]; Hofmann, Ryan[2]; Jones, Christen[2]; Towner, Allison P.[2]; Small, Lindsay[2]; Walker-LaFollette, Amanda[2]; Sanford, Brent[2]; Sagan, Thomas A.G.[2]
[1.]University of Virginia, Charlottesville, VA. [2.]University of Arizona, Tucson, AZ. [3.]University of Wisconsin–Madison, Madison, WI. [4.]University of Toledo, Toledo, OH.

347.14 Disentangling the Planetary and Stellar Components of Transit Light Curves
Mayorga, Laura[1]; Gaulme, Patrick1; Ule, Nicholas1; Maldonado, Mercedes[1]; Jackiewicz, Jason[1]
[1.]New Mexico State University, Las Cruces, NM.

347.15 Chaotic dynamics of the highly inclined planet in HD 196885 AB
Satyal, Suman[1]; Quarles, Billy L.[2]; Hinse, Tobias[3]
[1.]University of Texas at Arlington, Arlington, TX. [2.]NASA Ames Research Center, Moffett Field, CA. [3.]Korea Astronomy and Space Science Institute, Daejeon, Korea, Republic of.

347.16 Near-UV and Optical Observations of the transiting hot Jupiter WASP-1b
Pearson, Kyle[1]; Zellem, Robert[2]; Griffith, Caitlin A.[2]
[1.]University of Arizona, Tucson, AZ. [2.]Lunar and Planetary Laboratory, Tucson, AZ.

347.17 Detailed Abundances of Stars with Small Planets Discovered by Kepler
Schuler, Simon C.[1]; Cunha, Katia M.[2]; Howell, Steve B.[3]; Smith, Verne V.[2]
[1.]Universty of Tampa, Tampa, FL. [2.]NOAO, Tucson, AZ. [3.]NASA Ames, Moffett Field, CA.

347.18 Using N2-N2 Collisionally-Induced Absorption to Detect N2 and Determine Pressure in Planetary Atmospheres
Schwieterman, Edward[1, 2]; Robinson, Tyler D.[3, 2]; Meadows, Victoria[1, 2]; Crisp, David[4, 2]; Misra, Amit[1, 2]
[1.]University of Washington Astronomy Department, Seattle, WA. [2.]NASA Astrobiology Institute Virtual Planetary Laboratory, Seattle, WA. [3.]NASA Ames Research Center, Mountain View, CA. [4.]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA.

347.19 Multiple Scattering in Transit Transmission Spectroscopy
Misra, Amit[1]; Meadows, Victoria[1]; Crisp, David[2]
[1.]University of Washington, Seattle, WA. [2.]JPL-Caltech, Pasadena, CA.

347.20 PISCES Development and Status: An Integral Field Spectrograph for the High Contrast Imaging Testbed
McElwain, Michael W.[1]; Perrin, Marshall D.[2]; Gong, Qian[1]; Wilkins, Ashlee N.[3]; Stapelfeldt, Karl R.[1]; Woodgate, Bruce E.[1]; Brandt, Timothy[4]; Heap, Sara R.[1]; Hilton, George M.[1]; Kruk, Jeffrey W.[1]; Moody, Dwight[5]; Trauger, John T.[1]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]University of Maryland, College Park, MD. [4.]Institute for Advanced Study, Princeton, NJ. [5.]Jet Propulsion Laboratory, Pasadena, CA.

347.21 WFC3: Precision Infrared Spectrophotometry with Spatial Scans of HD 189733b and Vega
McCullough, Peter R.[1]; Crouzet, Nicolas[1]; Deming, Drake[3]; Madhusudhan, Nikku[2]; Deustua, Susana E.[1]
[1.]STScI, Baltimore, MD. [2.]Yale, New Haven, CT. [3.]University of Maryland, College Park, MD.
Contributing teams: WFC3

347.22 Day-side Spectrum of the hot-Jupiter WASP-1b
Bloemhard, Heather[1]; Creech-Eakman, Michelle J.[1, 2]; Swain, Mark R.[3]; Deroo, Pieter[3]; Line, Michael R.[4]
[1.]New Mexico Institute of Mining and Technology, Socorro, NM. [2.]Magdalena Ridge Observatory, Socorro, NM. [3.]NASA JPL, Pasadena, CA. [4.]UC-Santa Cruz, Santa Cruz, CA.

347.23 Modeled Near-Infrared Water Vapor Absorption in a Habitable Super-Earth Orbiting a Late-M Dwarf
Koenig, Lenore[1]; Deming, Drake[1]
[1.]UMD, College Park, MD.

347.24 How Low Can You Go? The Photoeccentric Effect for Planets of Various Sizes
Price, Ellen[1]; Rogers, Leslie[1]; Dawson, Rebekah I.[3]; Johnson, John A.[2]
[1.]California Institute of Technology, Pasadena, CA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]University of California, Berkeley, Berkeley, CA.

347.25 Physical Properties of Known Exoplanet and Host Stars Within Ten Parsecs: X-ray/UV Fluxes, Rotation, Ages, and Potential of Habitability
Kullberg, Evan[1]; Guinan, Edward F.[1]; Engle, Scott G.[1]
[1.]Villanova University, Villanova, PA.

347.26 A Simple Estimate of Mass Transfer on Tidally Locked Heated Super-Earths
Saxena, Prabal1; Summers, Michael[1]
[1.]George Mason University, Fairfax, VA.

347.27 Stellar Parameters for HD 69830, a Nearby Star with Three Neptune Mass Planets and an Asteroid Belt
Tanner, Angelle M.[1]; Boyajian, Tabetha S.[2]; von Braun, Kaspar[4]; van Belle, Gerard[3]; Beichman, Charles A.[4]; Fischer, Debra[2]; Brewer, John M.[2]
[1.]Mississippi State University, MSU, MS. [2.]Yale University, New Haven, CT. [3.]Lowell Observatory, Flagstaff, AZ. [4.]NEXScI, Pasadena, CA.
Contributing teams: GSU CHARA Team

347.28 Astrometry with a high-contrast Integral Field Spectrograph in the high contrast: orbital motion of the HR8799 planetary system.
Pueyo, Laurent[1]; Soummer, Remi[1]; Vasisht, Gautam[4]; Oppenheimer, Ben R.[2]; Cady, Eric[4]; Crepp, Justin R.[3]; Hoffmann, Jordan[1]; Hinkley, Sasha[3]; Sivaramakrishnan, Anand[1]; Veicht, Aaron[2]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]AMNH, New York City, NY. [3.]California Institute of technology, Pasadena, CA. [4.]Jet propulsion Laboratory, Pasadena, CA.
Contributing teams: Palm 3000 Adaptive Optics Team, Project 1640 team

347.29 The University of Arizona Astronomy Club Follow-up Observations of Known Exoplanets
Small, Lindsay[1, 3]; Pearson, Kyle[1]; Turner, Jake[2, 1]; Biddle, Lauren I.[1]; Nguyen, Chi[1]; Watson, Zachary[1, 3]; Mango, Dylan[1]; Romine, James M.[1]; Hume, Jeff[1]; Sinor, Kathryn[1]; Amaya, Hector[1]; Stanford-Jones, Charles[1]; Qu, Dezheng[1]; Liu, Yiv
[1.]The University of Arizona, Tucson, AZ. [2.]The University of Virginia, Charlottesville, VA. [3.]National Optical Astronomy Observatory, Tucson, AZ.

347.30 The Impact of Stellar Multiplicity on Planet Occurrence
Kraus, Adam L.[1]; Ireland, Michael[2]; Mann, Andrew[1]; Huber, Daniel[3]; Dupuy, Trent J.[4]
[1.]Univ. of Texas at Austin, Austin, TX. [2.]Macquarie University, Sydney, NSW, Australia. [3.]NASA-Ames, Mountain View, CA. [4.]Harvard-Smithsonian CfA, Cambridge, MA.

347.31 Effect of Initial Stellar Metallicity on the Evolution of the Habitable Zone and the Search for Life
Danchi, William C.[1]; Lopez, Bruno[2]
[1.]NASA's GSFC, Greenbelt, MD. [2.]Observatoire de la Côte d'Azur, Nice, France.

347.32 Reducing Radius and Temperature Uncertainties for Low-Mass Kepler Objects of Interest With Proxy Stars
Brown, Justin[1]; Ballard, Sarah[1, 2]
[1.]University of Washington, Seattle, WA. [2.]NASA Sagan Fellow, Pasadena, CA.

347.33 Quantifying the Effect of Stellar Binaries on the Formation and Evolution of Planetary Systems

Bryan, Marta[1]; Knutson, Heather[1]; Batygin, Konstantin[2]; Hinkley, Sasha[1]; Crepp, Justin R.[4]; Johnson, John A.[2]; Howard, Andrew[3]; Ngo, Henry[1]
[1.]California Institute of Technology, Pasadena, CA. [2.]Harvard University, Cambridge, MA. [3.]University of Hawaii, Hilo, HI. [4.]University of Notre Dame, Notre Dame, IN.

347.34 X-ray and Hubble/COS UV Measures of Kapteyn's Star: A Crucial Proxy of X-UV Irradiances for Old Red Dwarf Stars that May Host Habitable Zone Planets

Durbin, Allyn J.[1]; Guinan, Edward F.[1]; Engle, Scott G.[1]
[1.]Villanova University, Villanova, PA.

347.35 Chemistry in an Evolving Protoplanetary Disk: Implications for Carbon Rich Systems

Moriarty, John[1]; Fischer, Debra[1]; Madhusudhan, Nikku[1]
[1.]Yale University, New Haven, CT.

347.36 vis.SME -- Building a Visualization Tool to Analyze and Share Spectral Synthesis Stellar Characterization

Rosario Franco, Marialis[1, 2]; Cargile, Phillip[2]; Hebb, Leslie[3]; Johnson, John A.[4]
[1.]University of Puerto Rico - Humacao, Guaynabo, Puerto Rico. [2.]Vanderbilt University, Nashville, TN. [3.]Hobart & William Smith Colleges, Geneva, NY. [4.]Harvard Univesity, Cambridge, MA.

347.37 False Positives for Life: Atmospheric Ozone and Oxygen on Lifeless Rocky Exoplents

Domagal-Goldman, Shawn[1, 6]; Segura, Antígona[2, 6]; Meadows, Victoria[3, 6]; Claire, Mark[4, 6]; Robinson, Tyler D.[5, 6]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]Universidad Nacional Autónoma de México, Mexico City, DF, Mexico. [3.]University of Washington, Seattle, WA. 4.University of St. Andrews, St. Andrews, Fife, United Kingdom. [5.]Oak Ridge Associated Universities, Oak Ridge, TN. [6.]Virtual Planetary Laboratory, Seattle, WA.

347.38 H? Absorption During Hot Jupiter Transits

Christie, Duncan[1]; Li, Zhi-Yun[1]; Arras, Phil[1]
[1.]University of Virginia, Charlottesville, VA.

347.39 A Comprehensive Study of Kepler Phase Curves and Secondary Eclipses

DeLarme, Emily[1]; Angerhausen, Daniel[1]; Morse, Jon A.[1]
[1.]Rensselaer Polytechnic Institute, Troy, NY.

347.40 An Analysis of Occultations and Phase Curves of Different KOIs

Roberts, Jessica[1]; Rowe, Jason[2]; Quintana, Elisa V.[2,] Barclay, Thomas[2]; Batalha, Natalie M.[1, 2]
[1.]San Jose State University, San Jose, CA. [2.]NASA Ames Research Center, Mountain View, CA.

348 Extrasolar Planet Detection

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

348.01 Improving the RV Precision of HET/HRS - The Tale of Two Iodine Atlases
Wang, Sharon Xuesong[1]; Wright, Jason[1]; Zhao, Ming[1]
[1.]Pennsylvania State University, University Park, PA.

348.02 Investigating Systematic Errors in Iodine Cell Radial Velocity Measurements
Vanderburg, Andrew[1]; Marcy, Geoffrey W.[2]; Johnson, John A.[1]
[1.]Harvard University, Cambridge, MA. [2.]University of California, Berkeley, Berkeley, CA.

348.03 Minerva exoplanet detection sensitivity from simulated observations
McCrady, Nate1; Nava, Chantanelle[1]
[1.]University of Montana, Missoula, MT.

348.04 Update on the SDSS-III MARVELS data pipeline development
Li, Rui[1]; Ge, Jian[1]; Thomas, Neil B.[1]; Petersen, Eric[1]; Wang, Ji2,[1]; Ma, Bo[1]; Sithajan, Sirinrat[1]; Shi, Jiangli[3]; Ouyang, Yuyuan[3]; Chen, Yunmei[3]
[1.]Department of Astronomy, University of Florida, Gainesville, FL. [2.]Department of Astronomy, Yale University, New Haven, CT. [3.]Department of Mathematics, University of Florida, Gainesville, FL.

348.05 Exploring Exoplanets Out to the Snowline with LCOGT
Street, Rachel[1]
[1.]Las Cumbres Global Telescope Network, Inc., Goleta, CA.
Contributing teams: RoboNet

348.06 Gravitational Microlensing Observations of Two New Exoplanets Using the Deep Impact High Resolution Instrument
Barry, Richard K.[1]; Bennett, David P.[2]; Klaasen, Kenneth[4]; Becker, Andrew C.[1]; Christiansen, Jessie[4]; Albrow, Michael[3]
[1.]NASA's GSFC, Greenbelt, MD. [2.]University of Notre Dame, Notre Dame, IN. [3.]Canterbury University, christchurch, New Zealand. [4.]Jet Propulsion Laboratory, Pasadena, CA.

348.07 Transiting Exoplanet Observations at Grinnell College
Sauerhaft, Julia[1]; Slough, Patrick[1]; Cale, Bryson[1]; Kempton, Eliza[1]
[1.]Grinnell College, Grinnell, IA.

348.08 Detection of an Extrasolar Planet Candidate in Habitable Zone of a Low-Mass Binary
Ponte, Sophie[1, 2]; Bochanski, John J.[2]; Willman, Beth[2]; Guinan, Edward F.[3]; Engle, Scott G.[3]; Law, Nicholas M.[4]; Baranec, Christoph[5]; Riddle, Reed L.[6]
[1.]Conestoga High School, Berwyn, PA. [2.]Haverford College, Haverford, PA. [3.]Villanova University, Villanova, PA. [4.]University of North Carolina at Chapel Hill, Chapel Hill, NC. [5.]University of Hawaii, Honolulu, HI. [6.]Caltech Optical Observatories, Pasadena, CA.

348.09 Project PANOPTES: Crowdsourcing the Search for Exoplanets
Stump, Chad[1]
[1.]Shawnee State University, Portsmouth, OH.

348.10 Planet Hunters: Two New Confirmed Planets and the First Kepler Seven Candidate System
Schmitt, Joseph[1]; Wang, Ji[1]; Jek, Kian[2]; Fischer, Debra[1]; Agol, Eric[3]
[1.]Yale University, New Haven, CT. [2.]Planet Hunters, San Francisco, CA. [3.]University of Washington, Seattle, WA.
Contributing teams: Planet Hunters

348.11 Progress Toward Reliable Planet Occurrence Rates with Kepler
Batalha, Natalie M.[1]
[1.]NASA Ames Research Center, Moffett Field, CA.
Contributing teams: Kepler Team

348.12 A TTV-fueled study of non-resonant companions to multiple-transiting systems in the Kepler sample
Becker, Juliette[1]; Montet, Benjamin[1]; Swift, Jonathan[1]; Johnson, John A.[2]
[1.]California Institute of Technology, Pasadena, CA. [2.]Harvard-Smithonian Center for Astrophysics, Cambridge, MA.

348.13 A focal plane mask for the PIAA Complex Mask Coronagraph
Newman, Kevin[1, 2]; Guyon, Olivier[1]; Balasubramanian, Kunjithapatham[3]; Wilson, Daniel[3]
[1.]University of Arizona, Tucson, AZ. [2.]NASA Ames Research Center, Moffett Field, CA. [3.]NASA Jet Propulsion Laboratory, Pasadena, CA.

348.14 Gemini Planet Imager Data Analysis Methods, Software, and First Data Release
Perrin, Marshall D.[1]
[1.]STScI, Baltimore, MD.
Contributing teams: The Gemini Planet Imager instrument and science teams

348.15 Non-Redundant Masking Science on the Gemini Planet Imager
Greenbaum, Alexandra[1]; Sivaramakrishnan, Anand[2]; Pueyo, Laurent[2]; Wolff, Schuyler[1]; Perrin, Marshall D.[2]; Ingraham, Patrick[3]; Thomas, Sandrine4; Norris, Barnaby[5]; Tuthill, Peter[5]
[1.]The Johns Hopkins University, Baltimore, MD. [2].Space Telescope Science Institute, Baltimore, MD. [3.]Universite de Montreal, Montreal, QC, Canada. [4.]UARC/NASA Ames Research Center, Moffett Field, CA. [5.]The University of Sydney, Sydney, NSW, Australia.

348.16 Archival Legacy Investigation of Circumstellar Environments (ALICE). Candidates point sources and high-level science products
Elodie, Choquet[1]; Chen, Christine[1]; Debes, John H.[1]; Golimowski, David A.[1]; Hagan, J. Brendan[1, 2]; Hines, Dean C.[1]; Lonsdale, Sean[1]; Marois, Christian[7]; Mawet, Dimitri[6]; Mittal, Tushar[5]; Moerchen, Margaret[1]; N'Diaye, Mamadou[1]; Perrin, Marshall D.[1]; Pueyo, Laurent[1]; Rajan, Abhijith[3]; Reid, Iain N.[1]; Schneider, Glenn[4]; Wolff, Schuyler[1]; Soummer, Remi[1]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Purdue University, Lafayette, IN. [3.]Arizona State University, Phoenix, AZ. [4.]University of Arizona, Tucson, AZ. [5.]Berkeley, Berkeley, CA. [6.]ESO, La Serena, Chile. [7.]HIA-NRC, Victoria, BC, Canada.

348.17 LEECH: Hunting for Planets with LBTI-LMIRcam
Leisenring, Jarron[1]; Skemer, Andrew[1]
[1.]University of Arizona, Tucson, AZ.
Contributing teams: LEECH Survey Team

348.18 High Resolution Active Optics Observations from the Kepler Follow-up Observation Program

Gautier, Thomas N.[1]; Ciardi, David R.[2]; Marcy, Geoffrey W.[3]; Hirsch, Lea[4]
[1.]Jet Propulsion Laboratory, Pasadena, CA. [2.]IPAC/CalTech, Pasadena, CA. [3.]University of California, Berkeley, Berkeley, CA. [4.]University of California, Berkeley, Berkeley, CA.

348.19 A Unified Analysis of Brown Dwarf and Exoplanet Companions from Direct Imaging Surveys

Nielsen, Eric L.[1]; Liu, Michael C.[1]; Wahhaj, Zahed[2]; Biller, Beth[3]; Hayward, Thomas[4]; Close, Laird M.[5]; Ftaclas, Christ[1]; Chun, Mark R.[1]; Toomey, Douglas[6]
[1.]Institute for Astronomy, Honolulu, HI. [2.]ESO, Santiago, Chile. [3.]University of Edinburgh, Edinburgh, United Kingdom. [4.]Gemini, La Serena, Chile. [5.]Steward Observatory, Tucson, AZ. [6.]Mauna Kea Infrared, Hilo, HI.
Contributing teams: The Gemini NICI Planet-Finding Campaign Team

348.20 iLocater: A Diffraction-Limited Doppler Spectrometer for the Large Binocular Telescope

Crepp, Justin R.[1]; Bechter, Andrew[1]; Bechter, Eric[1]; Berg, Michelle[2]; Carroll, Jay[1]; Collins, Keegan[1]; Corpuz, Taylor[1]; Ketterer, Ryan[1]; Kielb, Edward[1]; Stoddard, Robert[1]; Eisner, Joshua A.[4]; Gaudi, B. S.[3]; Hinz, Philip[4]; Kratter, Kaitlin M.[4]; Macela, Giusi[5]; Quirrenbach, Andreas[6]; Skrutskie, Michael F.[7]; Sozzetti, Alessandro[5]; Woodward, Charles E.[8]; Zhao, Bo[9]
[1.]University of Notre Dame, Notre Dame, IN. [2.]Florida Institute of Technology, Melbourne, FL. [3.]Ohio State, Columbus, OH. [4.]University of Arizona, Tucson, AZ. [5.]INAF, Roma, Italy. [6.]U. Heidelberg, Heidelberg, Germany. [7.]University of Virginia, Charlottesville, VA. [8.]U. Minnesota, Minneapolis, MN. [9.]University of Florida, Gainesville, FL.

348.21 PULSE: the Palomar Ultraviolet Laser for the Study of Exoplanets

Bottom, Michael[1]; Dekany, Richard[1]; Bowler, Brendan P.[1]; Baranec, Christoph[2]; Burruss, Rick[3]
[1.]California Institute of Technology, Pasadena, CA. [2.]Institute for Astronomy, University of Hawaii, Hilo, HI. [3.]Jet Propulsion Lab, Pasadena, CA.

348.22 The Planetary System to KIC 11442793: A Compact Analogue to the Solar System

Fridlund, Carl[1, 2]; Cabrera, Juan[1]; Csizmadia, Szilard[1]; Lehman, H.[3]; Dvorak, Rudolf[4]; Gandolfi, Davide[5]; Rauer, Heike[1, 6]; Erikson, Anders[1]; Dreyer, Claudia[1]; Eigmueller, Philipp[1]; Hatzes, Artie[3]
[1.]Institute of Planetary Research, German Aerospace Center, Berlin, Germany. [2.]Leiden Observatory, Leiden University, , Netherlands, Germany. [3.]Thueringer Landessternwarte, Tautenburg, Germany. [4.]Universitaetssternwarte, Vienna, Austria. [5.]INAF - Catania Astrophysical Observatory, Catania, Italy. [6.]Center for Astronomy and Astrophysics, TU Berlin, Berlin, Germany.

348.23 WISE Zoo: Discovering Disks In The WISE Database

Thaller, Michelle[1]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD.
Contributing teams: Marc Kuchner, Deborah Padgett, Mike McElwain, and Carol Grady (NASA Goddard), John Debes (STScI), Scott Kenyon (Smithsonian/CfA), Thayne Currie (U. Toronto), Laura Whyte, Ed Padget, Chris Lintott, Ali

348.24 Optimized spectral sampling for next generation spectrographs
Giguere, Matthew J.[1]; Fischer, Debra[1]
[1.] Yale University, New Haven, CT.

348.25 Measuring Transit Signal Recovery in the Kepler Pipeline II: The First Multi-Quarter Results
Christiansen, Jessie[1]
[1.] NExScI, Pasadena, CA.
Contributing teams: the Kepler Completeness Working Group

349 Astrobiology Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

349.01 A Mid-Infrared Search for Kardashev Civilizations
Sigurdsson, Steinn[1]; Wright, Jason[1]; Griffith, Roger[2]; Povich, Matthew S.[3]
[1.] Pennsylvania State Univ., University Park, PA. [2.] Infrared Processing and Analysis Center, Pasadena, CA. [3.] California Polytechnic, Pomona, CA.

349.02 Micelles Protect and Concentrate Activated Acetic Acid
Todd, Zoe[1]; House, Christopher[1]
[1.] Penn State University, University Park, PA.

349.03 Seeding Life on the Moons of the Outer Planets via Lithopanspermia
Worth, Rachel[1, 2]; Sigurdsson, Steinn[1, 2]; House, Christopher[1, 2]
[1.] Penn State University, University Park, PA. [2.] Penn State Astrobiology Research Center, University Park, PA.

349.04 Beyond the Drake Equation: On the Probability of the Nature of Extraterrestrial Life Forms in Our Galaxy Today
Geller, Harold A.[1]
[1.] George Mason University, Burke, VA.

349.05 Galactic Cosmic Ray (GCR) Model of Titan and Formation of HCNO Exobiological Molecules
Sittler, Edward C.[1]; Cooper, John F.[1]
[1.] NASA'S GSFC, Greenbelt, MD.

350 Circumstellar Disks Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

350.01 Colliding dust grains in a turbulent protoplanetary disk
Kuznetsova, Aleksandra[1, 2]; Hubbard, Alexander2
[1.] University of Rochester, Rochester, NY. [2.] American Museum of Natural History, New York, NY.

350.02 Modeling of Expected PICTURE Observations of Exozodiacal Dust Around Epsilon Eridani
Douglas, Ewan S.[1]; Mendillo, Christopher[2]; Hicks, Brian[2]; Cook, Timothy[2, 1]; Polidan, Ronald S.[3]; Chakrabarti, Supriya[2, 1]
[1.] Boston University, Boston, MA. [2.] University of Massachusetts Lowell, Lowell, MA. [3.] Northropp Grumman Aerospace Systems, Redondo Beach, CA.

350.03 Searching for faint exozodi: pushing the precision limits of ground-based mid-IR photometry
Trollo, Joseph[1]; Metchev, Stanimir[1]
[1.]The University of Western Ontario, London, ON, Canada.

350.04 Exozodi disk models for the HOSTS survey on the LBTI
Wyatt, Mark[1]; Kennedy, Grant[1]; Skemer, Andrew[2]; Bryden, Geoffrey[3]; Danchi, William C.[4]; Defrere, Denis[2]; Haniff, Chris[1]; Hinz, Philip[2]; Mennesson, Bertrand[3]; Millan-Gabet, Rafael[5]; Panic, Olja[1]; Rieke, George[2]; Roberge, Aki[4]; Serabyn, Gene[3]; Shannon, Andrew B.[1]; Stapelfeldt, Karl R.[4]; Weinberger, Alycia J.[6]
[1.]University of Cambridge, Cambridge, United Kingdom. [2.]University of Arizona, Tucson, AZ. [3.]NASA JPL, Pasadena, CA. [4.]NASA GSFC, Greenbelt, MD. [5.]NExScI, Pasadena, CA. [6.]Carnegie Inst of Washington, Washington, DC.
Contributing teams: LBTI-HOSTS

350.05 Target Selection for the LBTI Hunt for Observable Signatures of Terrestrial Planetary Systems
Weinberger, Alycia J.[1]; Roberge, Aki[2]; Kennedy, Grant[3]; Hinz, Philip[4]; Bryden, Geoffrey[5]; Defrere, Denis[4]; Wyatt, Mark[3]; Stapelfeldt, Karl R.[2]; Rieke, George[4]; Danchi, William C.[2]; Mennesson, Bertrand[5]; Millan-Gabet, Rafael[6]; Serabyn, Gene[5]; Skemer, Andrew[4]
[1.]Carnegie Inst. Of Washington, Washington, DC. [2.]GSFC, Greenbelt, MD. [3.]University of Cambridge, Cambridge, United Kingdom. [4.]University of Arizona, Tucson, AZ. [5.]JPL, Pasadena, CA. [6.]NExScI, Pasadena, CA.
Contributing teams: LBTI-HOSTS

350.06 An interferometric mini-survey of dust disks around post-AGB stars
Rajagopal, Jayadev[1]; Ridgway, Stephen T.[1]
[1.]NOAO, Tucson, AZ.
Contributing teams: CHARA Team

350.07 A Spitzer and Herschel Study of the Protoplanetary Disk Around the Young Nearby System V4046 Sgr
Rapson, Valerie[1]; Kastner, Joel H.[1]; Sacco, Giuseppe[2]; Sargent, Benjamin A.[1]
[1.]Rochester Institute of Technology, Rochester, NY. [2.]Osservatorio Astrofisico di Arcetri, Florence, Italy.

350.08 The Effects of Internal Stellar Modes on the Evolution of Protoplanetary Star-Disk Systems
Smith, Daniel[1, 2]; Hadley, Kathryn Z.[1, 2]; Imamura, James N.[2]; Dumas, William[2]; Tumblin, Rebecka[2]; Meades, Marin[1]; Dederick, Ethan[1]
[1.]Whitman College, Walla Walla, WA. [2.]University of Oregon, Eugene, OR.

350.09 An Infrared Examination of Young Stars in Upper Centaurus Lupus
Johnson, Chelen H.[1]; Linahan, Marcella[3]; Barge, Jacqueline[4]; Rebull, Luisa M.[2]; Aranda, Donovan[4]; Canlas, Nuriel G.[3]; Donahoe, Katherine E.[3]; Ernst, Madison K.[1]; Ford, Sydney[4]; Fox, Megan E.[3]; Gutierrez, Elizabeth[3]; Haecker, Lille W.[1]; Hibbs, Cecily A.[1]; Maddaus, Maya R.[1]; Martin, Taylor A.[1]; Ng, Emily[4]; Niedbalec, Adam P.[3]; O'Bryan, Sophie E.[1]; Searls, Elizabeth F.[1]; Zeidner, Amanda B.[1]; Zegeye, David[4]
[1.]Breck School, Minneapolis, MN. [2.]Caltech, Pasadena, CA. [3.]Carmel Catholic High School, Mundelein, IL. [4.]Walter Payton College Prep High School, Chicago, IL.

350.10 Herschel-resolved Outer Dust Belts of Two-belt Spitzer Debris Disks around Nearby A-type and Solar Type Stars
Morales, Farisa Y.[1]; Bryden, Geoffrey[1]; Werner, Michael W.[1]; Stapelfeldt, Karl R.[2]
[1.]JPL, Sylmar, CA. [2.]Goddard Space Flight Center, Greenbelt, MD.

350.11 Modeling the Short Timescale Inner Disk Changes of HD169142
Wagner, Kevin[1, 2]; Sitko, Michael L.[1, 2]; Whitney, Barbara[3, 2]; Swearingen, Jeremy R.[1]; Champney, Elizabeth H.[1]; Johnson, Alexa N.[1]; Warren, Chelsea C.[1]; Russell, Ray W.[4]; Grady, Carol A.[5, 6]; Fukagawa, Misato[7]; Hashimoto, Jun[8]
[1.]University of Cincinnati, Cincinnati, OH. [2.]Space Science Institute, Boulder, CO. [3.]University of Wisconsin, Madison, WI. [4.]The Aerospace Corporation, El Segundo, CA. [5.]Eureka Scientific, Oakland, CA. [6.]Goddard Space Flight Center, Greenbelt, MD. [7.]Osaka University, Suita, Osaka, Japan. [8.]National Astronomical Observatory of Japan, Mitaka, Tokyo, Japan.

350.12 Archival Legacy Investigations of Circumstellar Environments (ALICE): A Resolved Scattered-Light Image of the Debris Disk around HD 202917 from HST/NICMOS
Golimowski, David A.1; Perrin, Marshall D.1; Chen, Christine1; Choquet, Elodie1; Debes, John H.1; Hagan, J. Brendan2; Hines, Dean C.1; Moerchen, Margaret1; Mittal, Tushar3; N'Diaye, Mamadou1; Pueyo, Laurent1; Reid, Iain N.1; Schneider, Glenn4; Wolff, Schuyler5; Soummer, Remi1
1.Space Telescope Science Institute, Baltimore, MD. 2.Purdue University, West Lafayette, IN. 3.University of California at Berkeley, Berkeley, CA. 4.University of Arizona, Tucson, AZ. 5.Johns Hopkins University, Baltimore, MD.

350.13 Archival Legacy Investigations of Circumstellar Environments (ALICE): Debris Disks Newly Resolved in Scattered Light from the HST NICMOS Archive
Moerchen, Margaret[1]; Perrin, Marshall D.[1]; Chen, Christine[1]; Choquet, Elodie[1]; Debes, John H.[1]; Golimowski, David A.[1]; Hagan, J. Brendan[1, 5]; Hines, Dean C.[1]; Mittal, Tushar[1, 4]; N'Diaye, Mamadou[1]; Pueyo, Laurent[1, 2]; Reid, Iain N.[1]; Schneider, Glenn[3]; Wolff, Schuyler[2]; Soummer, Remi[1]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Johns Hopkins University, Baltimore, MD. [3.]University of Arizona, Tucson, AZ. [4.]University of California, Berkeley, CA. [5.]Purdue University, West Lafayette, IN.

350.14 Near-IR Scattered Light Imagery of the DoAr 28 Transitional Disk
Wisniewski, John P.[1]; Rich, Evan[1]; Hashimoto, Jun[1]; Mayama, Satoshi[2]
[1.]University of Oklahoma, Norman, OK. [2.]Sokendai, Hayama-cho, Kanagawa, Japan.
Contributing teams: SEEDS/HiCIAO/AO-188 Team

350.15 Ground-based Observations of Water Vapor in Planet-forming Regions
Salyk, Colette[1]; Zhang, Ke[2]; Pontoppidan, Klaus[3]; Blake, Geoffrey A.[2]
[1.]NOAO, Tucson, AZ. [2.]California Institute of Technology, Pasadena, CA. [3.]Space Telescope Science Institute, Baltimore, MD.

350.16 HST Imaging of New Edge-on Circumstellar Disks in Nearby Star-forming Regions
Stapelfeldt, Karl R.[1]; Duchene, Gaspard[2]; Padgett, Deborah[1]; Perrin, Marshall D.[3]; Wolff, Schulyer[4]; Krist, John E.[5]; Menard, Francois[6, 7]; Pinte, Christophe[6, 7]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]UC Berkeley, Berkeley, CA. [3.]Space Telescope Science Institute, Baltimore, MD. [4.]Johns Hopkins University, Baltimore, MD. [5.]JPL / Caltech, Pasadena, CA. [6.]Univ. de Chile, Santiago, Chile. [7.]IPAG , Grenoble, France.

350.17 HST Scattered Light Imaging and Modeling of the Edge-On Protoplanetary Disk ESO Halpha 569

Wolff, Schuyler[1, 2]; Perrin, Marshall D.[2]; Stapelfeldt, Karl R.[3]; Duchene, Gaspard[4], [5]; Menard, Francois[5, 6]; Padgett, Deborah[3]; Pinte, Christophe[5, 6]
[1.]Johns Hopkins University, Baltimore, MD. [2.]STScI, Baltimore, MD. [3.]NASA GSFC, Greenbelt, MD. [4.]UC Berkeley, Berkeley, CA. [5.]IPAG, Grenoble, France. [6.]U. de Chile, Santiago, Chile.

350.18 Modeling Planet-Building Stellar Disks with Radiative Transfer Code

Swearingen, Jeremy[1]; Sitko, Michael L.[1, 2]; Whitney, Barbara[3, 2]; Wagner, Kevin[1, 2]; Champney, Elizabeth H.[1]; Johnson, Alexa N.[1]; Warren, Chelsea C.[1]; Russell, Ray W.[4]; Grady, Carol A.[5, 6]; Hammel, Heidi B.[2, 13]; Lisse, Carey M.[7]; Cure, Michel[8]; Kraus, Stefan[10, 9]; Fukagawa, Misato[11]; Calvet, Nuria[10]; Espaillat, Catherine[9]; Monnier, John D.[10]; Millan-Gabet, Rafael[12]; Wilner, David J.[9]
[1.]University of Cincinnati, Cincinnati, OH. [2.]Space Science Institute, Boulder, CO. [3.]University of Wisconsin, Madison, WI. [4.]The Aerospace Corporation, El Segundo, CA. [5.]Eureka Scientific, Oakland, CA. [6.]Goddard Space Flight Center, Greenbelt, MD. [7.]Applied Physics Laboratory, Laurel, MD. [8.]Universidad de Valparaiso, Valparaiso, Chile. [9.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [10.]University of Michigan, Ann Arbor, MI. [11.]Osaka University, Osaka, Japan. [12.]California Institute of Technology, Pasadena, CA. [13.]Associated Universities for Research in Astronomy, Washington, DC.

350.19 Modeling the Light Curve of a Rotating, Non-radially Pulsating Star

Lange, Jacob[1, 2;] McSwain, M. V.[1]
[1.]Lehigh University, Bethlehem, PA. 2.Florida Institute of Technology, Melbourne, FL.

350.20 Imaging and modeling SSTTau J042021+281349, a new prototypical edge-on protoplanetary disk

Duchene, Gaspard[1, 2]; Stapelfeldt, Karl R.[3]; Isella, Andrea[4]; Perrin, Marshall D.[5]; Menard, Francois[2, 6]; Padgett, Deborah[3]; Pinte, Christophe[2]; Wolff, Schuyler[7]; Ghez, Andrea M.[8]; Konopacky, Quinn M.[9]
[1.]University of California Berkeley, Berkeley, CA. [2.]Institut de Planetologie et d'Astrophysique de Grenoble, Grenoble, France. [3.]NASA Goddard Space Flight Center, Greenbelt, MD. [4.]California Institute of Technology, Pasadena, CA. [5.]Space Telescope Science Institute, Baltimore, MD. [6.]Universidad de Chile, Santiago, Chile. [7.]Johns Hopkins University, Baltimore, MD. [8.]University of California Los Angeles, Los Angeles, CA. [9.]Dunlap Institute, Toronto, ON, Canada.

350.21 Revealing Circumstellar Disks Through NPOI Observations and non-LTE Models

Lembryk, Ludwik[1]; Tycner, Christopher[1]; Sigut, T. A.[2]; Jansen, Brian[1]; Zavala, Robert T.[3]
[1.]Central Michigan Univ., Mount Pleasant, MI. [2.]Western University, London, ON, Canada. [3.]United States Naval Observatory, Flagstaff Station, Flagstaff, AZ.

350.22 Omicron Aquarii: Numerical Analysis of the Circumstellar Disk

Jansen, Brian[1]; Tycner, Christopher[1]; Sigut, T. A.[2]; Lembryk, Ludwik[1]; Zavala, Robert T.[3]
[1.]Central Michigan University, Mount Pleasant, MI. [2.]Western University, London, ON, Canada. [3.]United States Naval Observatory, Flagstaff Station, Flagstaff, AZ.

350.23 The Incidence of Debris Disks Around M Dwarfs Within 25pc

Gallagher, Molly[1, 2]; Trilling, David E.[2]
[1.]Grinnell College, Grinnell, IA. [2.]Northern Arizona University, Flagstaff, AZ.

350.24 Resolved Millimeter-Wavelength Observations of Debris Disks around Sun-like Stars
Steele, Amy[1]; Hughes, A. M.[1]
[1.]Wesleyan University, Middletown, CT.

350.25 Planetary Remnants Orbiting White Dwarfs
Barber, Sara D.[1]; Kilic, Mukremin[1]; Brown, Warren R.[2]
[1.]University of Oklahoma, Norman, OK. [2.]Smithsonian Astrophysical Observatory, Cambridge, MA.

350.26 Analysis of Hydrogen Recombination Masers Around MWC349A
Claus, Brian[1]; Zhang, Qizhou[1]; Watson, Linda C.[1]; Moran, James M.[1]
[1.]Harvard Smithsonian Center for Astrophysics, Mansfield, MA.

350.27 A WISE Survey of Circumstellar Disks in Taurus
Esplin, Taran[1]; Luhman, Kevin[1]; Mamajek, Eric E.[2]
[1.]Pennsylvania State University, University Park, PA. [2.]University of Rochester, Rochester, NY.

350.28 Transitional Disks Associated With Intermediate-Mass Stars in the SEEDS Survey
Grady, C. A.[1]
[1.]Eureka Scientific, Laurel, MD.
Contributing teams: SEEDS Consortium

350.29 Discovery and Variability of More Than 100 New Be Stars with SDSS-III/APOGEE
Chojnowski, S. Drew[1]; Wisniewski, John P.[2]; Whelan, David G.[3]; Hall, Matthew[1]; Majewski, Steven[1]; Eikenberry, Stephen S.[4]; Nidever, David L.[5]; Shetrone, Matthew D.[6]; Zasowski, Gail[7]; Beaton, Rachael[1]; Damke, Guillermo[1]; Hearty, Fred[1]; Holtzman, Jon A.[9]; Pepper, Joshua[8]; Skrutskie, Michael F.[1]; Wilson, John C.[1]
[1.]University of Virginia, Charlottesville, VA. [2.]University of Oklahoma, Norman, OK. [3.]Hampden-Sydney College, Hampden Sydney, VA. [4.]University of Florida, Charlottesville, FL. [5.]University of Michigan, Ann Arbor, MI. [6.]University of Texas, Austin, TX. [7.]Johns Hopkins University, Baltimore, MD. [8.]Lehigh University, Bethlehem, PA. 9.New Mexico State University, Las Cruces, NM.

350.30 Optical Spectroscopy of Be Stars Identified in SDSS-III/APOGEE Data
Hall, Matthew[1]; Chojnowski, S. Drew[1]; Wisniewski, John P.[2]; Whelan, David G.[3]; Majewski, Steven R.[1]; Eikenberry, Stephen S.[4]; Nidever, David L.[5]; Shetrone, Matthew D.[6]; Hearty, Frederick R.[1]; Zasowski, Gail[7]; Wilson, John C.[1]; Skrutskie, Michael F.[1]; Pepper, Joshua8; Beaton, Rachael[1]; Damke, Guillermo[1]; Holtzman, Jon A.[9]
[1.]University of Virginia, Charlottesville, VA. [2.]University of Oklahoma, Norman, OK. [3.]Hamdenn-Sydney College, Hamden Sydney, VA. [4.]University of Florida, Gainesville, FL. [5.]University of Michigan, Ann Arbor, MI. [6.]University of Texas, Austin, TX. [7.]Johns Hopkins University, Baltimore, MD. [8.]Lehigh University, Bethlehem, PA. [9.]New Mexico State University, Las Cruces, NM.

350.31 Extending Accretion Diagnostics to the Mid-Infrared Wavelengths
Rigliaco, Elisabetta[1]
[1.]Planetary Science, University of Arizona, Tucson, AZ.

350.32 Misaligned Protoplanetary Disks in a Young Binary System: Sufficient Misalignment to Drive Kozai Oscillations of Planetary Orbits
Jensen, Eric L.[1]; Akeson, Rachel L.[2]
[1.]Swarthmore College, Swarthmore, PA. [2.]NASA Exoplanet Science Institute, Pasadena, CA.

351 Dust Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

351.01 The UV Interstellar Extinction Properties in M31
Clayton, Geoffrey C.[1]; Gordon, Karl D.[2]; Bianchi, Luciana[3]; Bohlin, Ralph[2]; Massa, Derck[2]; Fitzpatrick, Edward L.[4]; Wolff, Michael J.[5]
[1.]Louisiana State Univ., Baton Rouge, LA. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]The Johns Hopkins University, Baltimore, MD. [4.]Villanova University, Villanova, PA. [5.]Space Science Institute, Boulder, CO.

351.02 Numeric Modeling of Granular Asteroid Growth
Beaumont, Benjamin[1]; Lazzati, Davide[1]
[1.]North Carolina State University, Raleigh, NC.

351.03 Using Spatially-Resolved Spectroscopy to Study Stardust
Daniels, Lacey[1]; Speck, Angela[1]; De Souza, Nelson[1]; Guha Niyogi, Suklima[1]
[1.]University of Missouri-Columbia, Columbia, MO.

351.04 The Fitting of the Broad 8-21 Micron Feature of O-Rich AGB Stars with the Summation of Two Gaussian Curves
Arrant, David J.[1]; Speck, Angela[1]
[1.]University of Missouri, Columbia, MO.

351.05 An Exploration of the Dust Spectral Features of the Carbon-Rich Star V Cyg Through Time and Space
Reel, Matthew[1]; Speck, Angela[1]; Sloan, Gregory C.[2]; Volk, Kevin[3]
[1.]University of Missouri, Columbia, MO. [2.]Cornell, Ithaca, NY. [3.]STScI, Baltimore, MD.

351.06 Global Modeling of Dust Evolution in the ISM
Slavin, Jonathan D.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA.

351.07 The effect of aluminum on silicate spectral features
Williams, Lucie[1]; Speck, Angela[1]; Whittington, Alan G.[1]; Hofmeister, Anne M.[2]; Arrant, David J.[1]
[1.]University of Missouri, Columbia, MO. [2.]Washington University, Saint Louis, MO.

351.08 Constraining the Spatial Scales and Composition of Dust in the Diffuse Interstellar Medium
Anderson, Rachel E.[1]; Chen, Christine[1]; Hines, Dean C.[1]
[1.]STScI, Baltimore, MD.
Contributing teams: IPAC

351.09 Testing the effect of continuum elimination methods on studies of infrared dust features from AGB star spectra
Delisle, Colby[1]; Speck, Angela[1]
[1.]University of Missouri, Columbia, MO.

351.10 Distances and Reddenings for a Billion Stars: Constructing a 3D Reddening Map
Green, Gregory[1]; Schlafly, Eddie[2]; Finkbeiner, Douglas P.[1]
[1.]Harvard Univ., Cambridge, MA. [2.]MPIA, Heidelberg, Baaden-Wuerttemberg, Germany.

351.11 A Catalog of Distances to Molecular Clouds from Pan-STARRS1
Schlafly, Eddie[1]; Green, Gregory[2]; Finkbeiner, Douglas P.[2]; Rix, Hans-Walter[1]
[1.]MPIA, Heidelberg, Baden-Wuerttemberg, Germany. [2.]Harvard, Cambridge, MA.

352 Gamma Ray Bursts Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

352.01 Fermi-LAT Observations of GRB 130427A
Zhu, Sylvia[1,2]; Chiang, James[3]; Dermer, Charles D.[4]; Omodei, Nicola[5]; Vianello, Giacomo[5]; Xiong, Shaolin[6]
[1.]University of Maryland, College Park, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]SLAC National Accelerator Laboratory, Stanford, CA. [4.]Naval Research Lab, Washington, DC. [5.]Stanford University, Stanford, CA. [6.]University of Alabama, Huntsville, AL.

352.02 Search for Sub-Planckian Length Scales in GRB 090510A and GRB 130427A
Brisbois, Chad[1]; Nemiroff, Robert J.[1]; Kostinski, Alexander[1]
[1.]Michigan Technological University, Houghton , MI.

352.03 The Future of Fermi-LAT Gamma-ray Burst Studies with Improved Event Reconstruction
Racusin, Judith L.[1]
[1.]NASA/GSFC, Greenbelt, MD.
Contributing teams: Fermi Large Area Telescope Collaboration

352.04 Chasing short duration gamma-ray bursts with Swift and Fermi
Troja, Eleonora[1, 2]; Lien, Amy Y.[1, 2]; Connaughton, Valerie[2]; Gehrels, Neil[2]; Pelassa, Veronique[2]; Troja, Eleonora[2]
[1.]University of Maryland, College Park, MD. [2.]NASA/GSFC, GREENBELT, DC.

352.05 Distribution of Gamma-Ray Bursts
Diaz Rodriguez, Mariangelly[1, 2]; Smith, Miles[2]; Tešic, Gordana[2]
[1.]University of Puerto Rico at Humacao, Humacao, Puerto Rico. [2.]Penn State University, State College, PA.

352.06 Probing the Gamma-Ray Burst Rate with Trigger Simulations of the Swift Burst Alert Telescope
Lien, Amy Y.[1, 2]; Sakamoto, Takanori[3]; Gehrels, Neil[4]; Palmer, David[5]; Barthelmy, Scott D.[4]; Graziani, Carlo[6]; Cannizzo, John K.[1, 2]
[1.]University of Maryland, Baltimore County, Baltimore, MD. [2.]CRESST and NASA Goddard Space Flight Center, Greenbelt, MD. [3.]Aoyama Gakuin University, Fuchinobe, Kanagawa, Japan. [4.]NASA Goddard Space Flight Center, Greenbelt, MD. [5.]Los Alamos National Laboratory, Los Alamos, NM. [6.]University of Chicago, Chicago, IL.

352.07 Very High Energy Gamma Ray Bursts: Predictions for New Ground Based Telescopes
Morgan, Ian[1, 2]; Racusin, Judith L.[3]; Perkins, Jeremy[3]
[1.]St. Mary's College of Maryland, St. Mary's City, MD. [2.]CRESST, Baltimore, MD. [3.]NASA/GSFC, Greenbelt, MD.
Contributing teams: on behalf of the Fermi-Large Area Telescope Collaboration

352.08 Modeling the Afterglows of Gamma Ray Bursts for Arbitrary Viewing Angles
Ryan, Dominic[1]; Morsony, Brian J.[2]
[1.]University of Nebraska - Lincoln, Lincoln, NE. [2.]University of Wisconsin - Madison, Madison, WI.

352.09 Modeling the Composition and Emissions of Gamma-Ray Burst Jet Cocoons
Meskhidze, Helen[1, 2]; Masdea, Clifton J.[1, 3]; Lazzati, Davide[1]; Lopez-Camara, Diego[1]
[1.]North Carolina State University, Elon, NC. [2.]Elon University, Elon, NC. [3.]Brandeis University, Boston, MA.

352.10 Pulse Decomposition of Gamma-Ray Burst Light Curves Using Bayesian Droplets
Loredo, Thomas J.[1]; Hakkila, Jon E.[2]; Broadbent, Mary E.[3]; Wolpert, Robert L.[3]
[1.]Cornell University, Ithaca, NY. [2.]College of Charleston, Charleston, SC. [3.]Duke University, Durham, NC.

352.11 Template Reproduction of GRB Pulse Light Curves
Hakkila, Jon E.[1]; Preece, Robert D.[2]; Loredo, Thomas J.[3]; Wolpert, Robert L.[4]; Broadbent, Mary E.[4]
[1.]College of Charleston, Charleston, SC. [2.]University of Alabama in Huntsville, Huntsville, AL. [3.]Cornell University, Ithaca, NY. [4.]Duke University, Durham, NC.

352.12 Extrapolating Dust Composition from GRB SEDs: A Cautionary Tale
Updike, Adria C.[1]; Jacobson, Robert L.[1]
[1.]Roger Williams University, Bristol, RI.

352.13 Missing High-Energy Gamma-ray Afterglows of Gamma-ray Bursts
Holt, Carrie[1, 2]; Racusin, Judith L.[3]; Kocevski, Daniel[4]
[1.]CRESST/UMBC, Baltimore, MD. [2.]Wagner College, Staten Island, NY. [3.]NASA/GSFC, Greenbelt, MD. [4.]NASA/GSFC/ORAU, Greenbelt, MD.
Contributing teams: Fermi Large Area Telescope Collaboration

352.14 The Nature of the Most Extreme Cosmic Explosions: Broadband Studies of Fermi LAT GRB Afterglows
Kidd, Lauren[1]; Troja, Eleonora[2]
[1.]University of Colorado at Boulder, Centennial, CO. [2.]NASA Goddard Space Flight Center, Greenbelt, MD.

353 Planetary Nebulae, Supernova Remnants

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

353.01 XMM-Newton X-ray studies of Supernova Remnants in the Large Magellanic Cloud
Ambrosino, William[1, 2]; Guinan, Edward F.[1]
[1.]Villanova University, Villanova, PA. [2.]Max Planck Institute for Extraterrestrial Physics, Garching, Bavaria, Germany.
Contributing teams: High Energy Group at Max Planck Institute for Extraterrestrial Physics

353.02 XMM-Newton Large Program of SN1006
Li, Jiang-Tao[1]; Decourchelle, Anne[1]
[1.]Service d'Astrophysique, CEA Saclay, Gif-sur-Yvette, France.
Contributing teams: XMM-Newton LP team of SN1006

353.03 Shock and Awe: Measuring the Expansion of the Shock Front of Supernova Remnant SN1006
Dills, Sidney[1]; McKinney, Lilly[1]; Moffett, David A.[1]; Reynoso, Estela[2]
[1.]Furman University, Greenville, SC. [2.]IAFE, University of Buenos Aires, Buenos Aires, Argentina.

353.04 Spatio-temporal Spectral Variability in Cas A
Nambiar, Yamini[1]; Kashyap, Vinay[2]; Patnaude, Daniel[2]
[1.]Acton-Boxborough Regional High School, Acton, MA. [2.]Harvard Smithsonian, CfA, Cambridge, MA.

353.05 Using Low Frequency Radio Absorption to Measure the Density and Mass of Unshocked Ejecta in Cassiopeia A
DeLaney, Tracey[1]; Kassim, Namir E.[2]; Rudnick, Lawrence[3]; Perley, Richard A.[4]
[1.]West Virginia Wesleyan College, Buckhannon, WV. [2.]Naval Research Laboratory, Washington, DC. [3.]University of Minnesota, Minneapolis, MN. [4.]National Radio Astronomy Observatory, Socorro, NM.

353.06 Using Rotation Measure Synthesis to Study Shocks in Cassiopeia A
Stadelman, Matt[1]; DeLaney, Tracey[1]; Rupen, Michael P.[2]; Rudnick, Lawrence[3]; Rau, Urvashi[2]; Bhatnagar, Sanjay[2]; Greisen, Eric[2]; Petre, Robert[4]
[1.]West Virginia Wesleyan College, Buckhannon, WV. [2.]National Radio Astronomy Observatory, Socorro, NM. [3.]University of Minnesota, Minneapolis, MN. [4.]NASA Goddard Space Flight Center, Greenbelt, MD.

353.07 Herschel Constraints on the Mass of Shocked Dust in the O-rich Supernova Remnant G292.0+1.8
Ghavamian, Parviz[1]; Williams, Brian J.[2]
[1.]Towson University, Towson, MD. [2.]NASA/Goddard Space Flight Center, Greenbelt, MD.

353.08 X-Ray Kinematics of the Galactic Core-Collapse Supernova Remnant G292.0+1.8
Park, Sangwook[1]; Bhalerao, Jayant[1]; Dewey, Daniel[2]; Hughes, John P.[3]; Slane, Patrick O.[4]; Burrows, David N.[5]; Lee, Jae-joon[7]; Mori, Koji[6]
[1.]University of Texas at Arlington, Arlington, TX. [2.]MIT, Cambridge, MA. [3.]Rutgers, Piscataway, NJ. [4.]SAO, Cambridge, MA. [5.]Penn State, University Park, PA. [6.]U of Miyazaki, Miyazaki, Japan. [7.]KASI, Daejeon, Korea, Republic of.

353.09 A Hubble Space Telescope Measurement of the Forward Shock Velocity of the Supernova Remnant 0509?67.5 in the Large Magellanic Cloud
Hovey, Luke[1]; Hughes, John P.[1]; Eriksen, Kristoffer[2]
[1.]Rutgers University, New Brunswick, NJ. [2.]Los Alamos National Laboratory, Los Alamos, NM.

353.10 Near IR Spectroscopic Analysis of Molecular Hydrogen in the Dumbbell Nebula (NGC 6853)
Baldridge, Sean[1]; Speck, Angela[1]; Matsuura, Mikako[2]
[1.]University of Missouri, Columbia, MO. [2.]University of Manchester, Manchester, United Kingdom.

353.11 Using [FeII] to Search for Supernova Remnants in NGC 6946
Bruursema, Justice[1]; Meixner, Margaret[2]; Long, Knox S.[2]; Otsuka, Masaaki[3]
[1.]Johns Hopkins University, Baltimore, MD. [2.]STSCI, Baltimore, MD. [3.]ASIAA, Taipei, Taiwan.

353.12 The Young Core-Collapse Supernova Remnant G11.2-0.3: An Asymmetric Circumstellar Medium and a Variable Pulsar Wind Nebula
Borkowski, Kazimierz J.[1]; Moseby, Andrew[1]; Reynolds, Stephen P.[1]
[1.]North Carolina State Univ., Raleigh, NC.

353.13 High-Resolution Near-Infrared Spectra of the Proto-Planetary Nebula, MWC 922
Whelan, David G.[1, 2]; Chojnowski, S. Drew[2]; Zasowski, Gail[3]; Wisniewski, John P.[5]; Nidever, David L.[4]; Majewski, Steven[2]
[1.]Department of Physics and Astronomy, Hampden-Sydney College, Hampden-Sydney, VA. [2.]University of Virginia, Charlottesville, VA. [3.]Johns Hopkins University, Baltimore, MD. [4.]University of Michigan, Ann Arbor, MI. [5.]University of Oklahoma, Norman, OK.
Contributing teams: The SDSS-III/APOGEE Team

353.14 Chandra observations of SNR RCW 103
Burrows, David N.[1]; Frank, Kari A.[1]; Park, Sangwook[2]
[1.]Penn State Univ., University Park, PA. [2.]UT-Arlington, Arlington, TX.

353.15 X-ray Measurements of Tycho Supernova Remnant's Dynamics
Brchnelova, Michaela[1]
[1.]High School Jura Hronca, Bratislava, Slovakia.

353.16 Understanding the Balmer Bubble in the Vela Supernova Remnant
Chinn, Brian[2, 1]; Smith, Chris[1]; Points, Sean[1]; Heathcote, Steve[1]
[1.]Cerro Tololo Inter-American Observatory, La Serena, Chile. [2.]University of Florida, Roswell, FL.

353.17 Fermi-LAT Observations of Supernova Remnants Interacting with Molecular Clouds
Cohen, Jamie[1, 2]; Hays, Elizabeth A.[2]
[1.]University of Maryland, College Park, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD.
Contributing teams: Fermi-LAT Collaboration

353.18 Investigating Possible Departures from Maxwellian Energy Distributions in Nebulae using High-Resolution Emission Line Spectra
Turbyfill, Amanda[1]; Dinerstein, Harriet L.[1]; Sterling, Nicholas C.[2]
[1.]University of Texas at Austin, Austin, TX. [2.]University of West Georgia, Carrollton, GA.

353.19 GAMMA-RAY EMISSION FROM SUPERNOVA REMNANT INTERACTION WITH MOLECULAR CLUMPS
Tang, Xiaping[1]; Chevalier, Roger[1]
[1.]University of Virginia, Charlottesville, VA.

353.20 Protrusions Beyond the Blast Waves of Young Type Ia Supernova Remnants: Hydrodynamic Instabilities or Ejecta Bullets?
Dyer, Ashton[1]; Blondin, John M.[1]; Reynolds, Stephen P.[1]
[1.]North Carolina State University, Raleigh, NC.

353.21 Analysis of Shock Interactions and Supernova Morphology from Molecular Emission Around Young Supernova Remnants
Kilpatrick, Charles[1]; Bieging, John H.[1]; Rieke, George[1]
[1.]University of Arizona, Tucson, AZ.

353.22 Electron Heating, Magnetic Field Amplification, and Cosmic Ray Precursor Length at Supernova Remnant Shocks
Laming, J. M.[1]; Hwang, Una[2]; Ghavamian, Parviz[3]; Rakowski, Cara E.[4]
[1.]NRL, Washington, DC. [2.]NASA/GSFC, Greenbelt, MD. [3.]Towson University, Towson, MD. [4.]formerly of NRL, Washington, DC.

353.23 Electron-Ion Equilibrium and Shock Precursors in the Northeast Limb of The Cygnus Loop
Medina, Amber[1, 2]; Raymond, John C.[1]; Edgar, Richard J.[1]; Caldwell, Nelson[1]; Fesen, Robert A.[3]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge , MA. [2.]New Mexico State University, Las Cruces, NM. [3.]Darthmouth College, Hanover, NH.

353.24 3D Simulations of Supernova Remnants from Type Ia Supernova Models
Johnson, Heather[1, 2]; Reynolds, Stephen P.[2]; Frohlich, Carla[2]; Blondin, John M.[2]
[1.]University of Texas at Austin, Austin, TX. [2.]North Carolina State University, Raleigh, NC.

353.25 Are Planetary Nebulae in Globular Clusters a Binary Phenomenon?
Jacoby, George H.[1]; De Marco, Orsola[2]; Davies, James E.[3]; Harrington, J. P.[4]; Bond, Howard E.[5]
[1.]GMTO Corporation, Pasadena, CA. [2.]Macquarie Univ., North Ryde, NSW, Australia. [3.]Harvard Univ, Cambridge, MA. [4.]STScI, Baltimore, MD. [5.]Univ of Maryland, College Park, MD.

353.26 Post-Ejection Evolution of the Orbital Components in the Common Envelope Phase
Politano, Michael[1]
[1.]Marquette Univ., Milwaukee, WI.

353.27 The Chandra Planetary Nebula Survey (ChanPlaNS): Results from Cycle 14
Freeman, Marcus[1]; Kastner, Joel H.[1]; Montez, Rodolfo[2]
[1.]Rochester Institute of Technology, Rochester, NY. [2.]Vanderbilt, Nashville, TN.
Contributing teams: ChanPlaNS Team

353.28 Chemical Abundances of Compact Planetary Nebulae in the Galactic Disk
Lee, Ting-Hui[1]; Shaw, Richard A.[2]; Stanghellini, Letizia[2]
[1.]Western Kentucky University, Bowling Green, KY. [2.]NOAO, Tucson, AZ.

353.29 The Chemical Diversity of Planetary Nebulae
Dinerstein, Harriet L.[1]; Geballe, Thomas R.[2]; Sterling, Nicholas C.[3]
[1.]Univ. of Texas, Austin, Austin, TX. [2.]Gemini Observatory, Hilo, HI. [3.]University of West Georgia, Carrollton, GA.

354 Supernovae Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

354.01 SweetSpot: A 3-year NOAO Survey to Observe 150 Type Ia Supernovae in the Near Infrared in the Nearby Hubble Flow
Wood-Vasey, W. M.[1]; Weyant, Anja[1]; Allen, Lori[2]; Garnavich, Peter M.[3]; Jahan, Nabila[1]; Jha, Saurabh[4]; Joyce, Richard R.[2]; Matheson, Thomas[2]; Rest, Armin[5]
[1.]University of Pittsburgh, Pittsburgh, PA. [2.]National Optical Astronomy Observatory, Tucson, AZ. [3.]Notre Dame, Notre Dame, IN. [4.]Rutgers, the State University of New Jersey, Piscataway, NJ. [5.]Space Telescope Science Institute, Baltimore, MD.

354.03 Analysis of Nearby Supernova Factory Type Ia Spectra with SYNAPPS: Maximum-Light Sample

Sofiatti, Caroline[1, 2]; Thomas, Rollin[1]; Aldering, Gregory S.[1]; Bailey, Stephen[1]; Birchall, Dan[1]; Childress, Michael[1]; Fakhouri, Hannah[1]; Hayden, Brian[1]; Kim, Alex G.[1]; Nordin, Jakob[1]; Nugent, Peter E.[1]; Perlmutter, Saul[1]; Rubin, David[1]; Runge, Karl[1]; Saunders, Clare[1]; Suzuki, Nao[1]; Weaver, Benjamin[1]; Pecontal, Emmanuel[3]; Buton, Clement[4]; Copin, Yannick[4]; Chotard, Nicolas[4]; Gangler, Emmanuel[4]; Pereira, Rui[4]; Rigault, Mickael[4]; Smadja, Gerard[4]; Cellier-Holzem, Flora[5]; Canto, Arnaud[5]; Antilogus, Pierre[5]; Bongard, Sebastien[5]; Fleury, Mathilde[5]; Guy, Julien[5]; Pain, Reynald[5]; Chen, Juncheng[6]; Tao, Charling[6]; Feindt, Ulrich[7]; Greskovic, Peter[7]; Kowalski, Marek[7]; Lombardo, Simona[7]; Baltay, Charles[8]; Rabinowitz, David L.[8]
[1.]Lawrence Berkeley National Lab, Berkeley, CA. [2.]UC Berkeley, Berkeley, CA. [3.]Centre de Recherche Astronomique de Lyon, Lyon, France. [4.]Institut de Physique Nucleaire de Lyon, Lyon, France. [5.]Laboratoire de Physique Nucleaire et des Hautes Énergies, Paris, France. [6.]Tsinghua Center for Astrophysics, Beijing, China. [7.]University of Bonn, Bonn, China. [8.]Yale University, New Haven, CT.

354.04 Signatures of Explosion Asymmetry, Progenitor Density, and Magnetic Fields in Late-Time NIR Spectra of Type Ia SNe

Diamond, Tiara[1]; Gerardy, Christopher L.[1]; Hoeflich, Peter[1]
[1.]Florida State University, Tallahassee, FL.

354.05 Probing Type Ia Supernova Host Galaxy Correlations: Insights from Model Testing

Hayden, Brian[1]; Aldering, Gregory S.[1]; Bailey, Stephen[1]; Birchall, Dan[1]; Childress, Michael[1]; Fakhouri, Hannah[1]; Kim, Alex G.[1]; Nordin, Jakob[1]; Nugent, Peter E.[1]; Perlmutter, Saul[1]; Rubin, David[1]; Runge, Karl[1]; Saunders, Clare[1]; Sofiatti, Caroline[1]; Suzuki, Nao[1]; Thomas, Rollin[1]; Weaver, Benjamin[1]; Pecontal, Emmanuel[2]; Buton, Clement[3]; Copin, Yannick[3]; Chotard, Nicolas[3]; Gangler, Emmanuel[3]; Pereira, Rui[3]; Smadja, Gerard[3]; Cellier-Holzem, Flora[4]; Canto, Arnaud[4]; Antilogus, Pierre[4]; Bongard, Sebastien[4]; Fleury, Mathilde[4]; Guy, Julien[4]; Pain, Reynald[4]; Chen, Juncheng[5]; Tao, Charling[5]; Feindt, Ulrich[6]; Greskovic, Peter[6]; Kowalski, Marek[6]; Lombardo, Simona[6]; Rigault, Mickael[6]; Baltay, Charles[7]; Rabinowitz, David L.[7]
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354.06 On Numerical Considerations for Modeling Reactive Astrophysical Shocks

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354.07 Advancing Nucleosynthesis in Core-Collapse Supernovae Models Using 2D CHIMERA Simulations

Harris, J. A.[1]; Hix, William R.[2, 1]; Chertkow, Merek A.[1]; Bruenn, Stephen W.[3]; Lentz, Eric J.[1, 2]; Messer, O. E. B.[4, 1]; Mezzacappa, Anthony[1, 5]; Blondin, John M.[6]; Marronetti, Pedro[3, 7]; Yakunin, Konstantin[1, 2]
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354.08 Multidimensional simulations of core-collapse supernovae with CHIMERA
Lentz, Eric J.[1, 2]; Bruenn, Stephen W.[3]; Yakunin, Konstantin[1, 2]; Endeve, Eirik[2]; Blondin, John M.[4]; Harris, J. A.[1]; Hix, William R.[2, 1]; Marronetti, Pedro[5, 3]; Messer, O. E. B.[2]; Mezzacappa, Anthony[1, 2]
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354.09 3D Core-Collapse Supernova Models: Gravitational and Neutrino Signatures
Yakunin, Konstantin[1]; Marronetti, Pedro[2, 4]; Messer, O. E. B.[1, 3]; Mezzacappa, Anthony[1, 3]; Lentz, Eric J.[1, 3]; Bruenn, Stephen W.[2]; Hix, William R.[1, 3]; Harris, J. A.[1]; Blondin, John M.[5]
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354.10 Testing an Asymmetric Explosion Model for Type Ia Supernovae with Optical Spectroscopy from SALT
Camacho, Yssavo[1]; Pandya, Viraj[2]; McCully, Curtis[2]; Patel, Brandon[2]; Jha, Saurabh[2]
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354.11 Supernova Shock Breakout Light Curves and Spectra from CASTRO Multigroup Radiation Simulations
Lovegrove, Elizabeth[1]; Woosley, Stan E.[1]
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354.12 Lightcurves of Type Ia Supernovae from the La Silla-QUEST Survey and the Carnegie Supernova Project
Walker, Emma S.[1]; Baltay, Charles[1]; Rabinowitz, David L.[1]; Mckinnon, Ryan[1]; Contreras, Carlos[2]; Hsiao, Eric[2]; Phillips, Mark[2]; Morrell, Nidia[2]; Campillay, Abdo[2]; Gonzalez, Consuelo[2]; Seron, Jacquline[2]; Krisciunas, Kevin[3]; Tucker, Bradley E.[4]
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354.13 The Metrology of Supernova Light Curves
Rust, Bert W.[1]; Mullen, Katharine M.[2]
[1.]NIST, Gaithersburg, MD. [2.]UCLA, Los Angeles, CA.

354.14 A Sample of Light Curves of Type II-n and other Unclassified Supernova
Mock, Justin[1]; Martin, John C.[1]; Hambsch, Franz-Joseph[2]; Strickland, William[3]; Cason, Andy[4]
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354.15 Bolometric Lightcurves and SEDs of Type Ia Supernovae
Smitka, Michael T.[1]; Brown, Peter[1]; Suntzeff, Nicholas B.[1]
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354.16 NIR Spectra of Type Ia Supernovae: High-Cadence Observations
Marion, Howie H.[1, 2]; Hsiao, Eric[3]; Vinko, Jozsef[1, 4]; Parrent, Jerod T.[5]; Silverman, Jeffrey M.[1]; Kirshner, Robert P.[2]; Phillips, Mark[3]; Wheeler, J. C.[1]; Burns, Christopher R.[6]; Morrell, Nidia[3]; Contreras, Carlos[3]; Challis, Peter[2]
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Contributing teams: Carnegie Supernova Project II, CfA Supernova Group

354.17 Principal Component Analysis of Type Ia Supernova Spectrophotometric Time Series
Saunders, Clare[1, 2]; Aldering, Gregory S.[1]; Bailey, Stephen J.[1]; Birchall, Dan[1]; Childress, Michael[1]; Fakhouri, Hannah[1, 2]; Hayden, Brian[1]; Kim, Alex G.[1]; Nordin, Jakob[1]; Nugent, Peter E.[1]; Perlmutter, Saul[1, 2]; Rubin, David[1]; Runge, Karl[1]; Sofiatti, Caroline[1, 2]; Suzuki, Nao[1]; Thomas, Rollin[1]; Weaver, Benjamin[1]; Pecontal, Emmanuel[5]; Buton, Clement[8]; Copin, Yannick[8]; Chotard, Nicolas[8]; Gangler, Emmanuel[8]; Pereira, Rui[8]; Smadja, Gerard[8]; Cellier-Holzem, Flora[3]; Canto, Arnaud[3]; Antilogus, Pierre[3]; Bongard, Sebastien[3]; Fleury, Mathilde[3]; Guy, Julien[3]; Pain, Reynald[3]; Chen, Juncheng6; Tao, Charling6; Feindt, Ulrich7; Greskovic, Peter7; Kowalski, Marek[7]; Lombardo, Simona[7]; Rigault, Mickael[7]; Baltay, Charles[4]; Rabinowitz, David L.[4]
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354.18 TIME VARIATION OF AV AND RV FOR TYPE Ia SUPERNOVAE BEHIND INTERSTELLAR DUST
Huang, Xiaosheng[1, 2]; Biederman, Moriah[1]; Herger, Brendan[1]; Aldering, Gregory S.[2]
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354.19 Understanding U-band Spectroscopic Variations in Type Ia Supernovae
Nordin, Jakob[1, 2]; Aldering, Gregory S.[1]; Bailey, Stephen J.[1]; Birchall, Dan[1]; Childress, Michael[1]; Fakhouri, Hannah[1, 2]; Hayden, Brian[1]; Kim, Alex G.[1]; Nugent, Peter E.[1, 2]; Perlmutter, Saul[1, 2]; Rubin, David[1]; Runge, Karl[1]; Saunders, Clare[1, 2]; Sofiatti, Caroline[1, 2]; Suzuki, Nao[1]; Thomas, Rollin[1]; Weaver, Benjamin[1]; Pecontal, Emmanuel[3]; Buton, Clement[4]; Copin, Yannick[4]; Chotard, Nicolas[4]; Gangler, Emmanuel[4]; Pereira, Rui[4]; Rigault, Mickael[4]; Smadja, Gerard[4]; Cellier-Holzem, Flora[5]; Canto, Arnaud[5]; Antilogus, Pierre[5]; Bongard, Sebastien[5]; Fleury, Mathilde[5] Guy, Julien5; Pain, Reynald[5]; Chen, Juncheng[6]; Tao, Charling[6]; Feindt, Ulrich[7]; Greskovic, Peter[7]; Kowalski, Marek[7]; Lombardo, Simona[7]; Baltay, Charles[8]; Rabinowitz, David L.[8]
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354.20 Supernova Spectroscopy with the Southern African Large Telescope
Pandya, Viraj[1]; Jha, Saurabh[1]; McCully, Curtis[1]; Patel, Brandon[1]; Camacho, Yssavo[2]
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354.21 The Supernova Spectropolarimetry Project: Evolution of Asymmetries in the Very Luminous Type Ib SN 2012au
Hoffman, Jennifer L.[1]; Smith, Nathan[2]; Bilinski, Christopher[2]; Dessart, Luc[3]; Huk, Leah N.[1]; Leonard, Douglas C.[4]; Milne, Peter[2]; Smith, Paul S.[2]; Williams, G. Grant[5]
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354.22 The Supernova Spectropolarimetry Project: Results from Multi-Epoch Observations of the Type IIn SN 2010jl
Williams, George G.[1, 2]; Dessart, Luc[5]; Hoffman, Jennifer L.[3]; Huk, Leah N.[3]; Leonard, Douglas C.[4]; Milne, Peter[2]; Smith, Nathan[2]; Smith, Paul S.[2]
[1.]MMT Observatory, Tucson, AZ. [2.]University of Arizona, Tucson, AZ. [3.]University of Denver, Denver, CO. [4.]San Diego State University, San Diego, CA. [5.]Laboratoire Lagrange, Nice, Provence-Alpes-Côte d'Azur, France.

354.23 The Supernova Spectropolarimetry Project: Results from Multi-Epoch Observations of the Type IIb SN 2011dh
Bilinski, Christopher[1]; Williams, George G.[5]; Smith, Paul S.[1]; Smith, Nathan[1]; Milne, Peter[1]; Hoffman, Jennifer L.[2]; Huk, Leah N.[2]; Leonard, Douglas C.[3]; Dessart, Luc[4]
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354.24 Permitted spectral line features at late times in SN 2011fe?
Friesen, Brian[1]; Baron, Edward A.[1, 2]; Parrent, Jerod T.[3, 4]; Thomas, Rollin[5]; Branch, David[1]
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354.25 BVRI Photometry of SN 2013ej in M74
Richmond, Michael W.[1]
[1.]Rochester Inst. of Tech., Rochester, NY.

354.26 Comprehensive Optical Observations of the Nearby Type Ia SN 2012fr
Sand, David J.[1]; Valenti, Stefano[3, 2]; Parrent, Jerod T.[3]; Graham, Melissa L.[4]; Howell, Dale A.[3, 2]
[1.]Texas Tech University, Lubbock, TX. [2.]UC Santa Barbara, Santa Barbara, CA. [3.]Las Cumbres Observatory Global Telescope Network, Goleta, CA. [4.]UC Berkeley, Berkeley, CA.

354.27 Examining the Late Time Evolution of the Luminous Type IIn Supernova 2010jl
Jencson, Jacob[1]; Prieto, Jose[2]; Stanek, Krzysztof Z.[1, 3]; Shappee, Benjamin[1]
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354.28 SN 2011ja: A Case of Circumsteller Interaction and Early Dust Formation
Krafton, Kelsie[1]; Andrews, Jennifer E.[1]; Clayton, Geoffrey C.[3]; Sugerman, Ben[2]; Montiel, Edward J.[3]
[1.]UMass Amherst, Amherst, MA. [2.]Goucher College, Baltimore, MD. [3.]LSU, Baton Rouge, LA.

354.29 SN 2012im/2013ek: A Supernova Double Take in NGC 6984
Milisavljevic, Dan[1]; Drout, Maria[1]; Margutti, Raffaella[1]; Soderberg, Alicia M.[1]; Fesen, Robert A.[2]; Parker, Stuart[3]; Brimacombe, Joseph[4]; Sanders, Nathan[1]; Kamble, Atish[1]; Berger, Edo[1]; Kirshner, Robert P.[1]; Drake, Andrew J.[5]; Howerton, Stan[6]; Hsiao, Eric[7]; Morrell, Nidia[7]
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354.30 The remarkably similar explosions of SN2009ip and SN2010mc, and the late fading of Type IIn supernovae
Smith, Nathan[1]; Mauerhan, Jon[1, 3]; Prieto, Jose[2]
[1.]U. of Arizona, Tucson, AZ. [2.]Princeton U., Princeton, NJ. [3.]UC Berkeley, Berkeley, CA.

354.31 High velocity lines due to interaction between Type Ia supernova ejecta and a circumstellar shell: 1-D simulations
Mulligan, Brian W.[1]; Wheeler, J. C.[1]
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354.32 How Stellar Mixing Can Explain the Overabundance of Type Ic Supernovae in Long-Duration Gamma-Ray Bursts
Frey, Lucille[1, 2]; Fryer, Chris[1, 3]; Young, Patrick A.[4]; Even, Wesley P.[1]
[1.]Los Alamos National Lab, Los Alamos, NM. [2.]University of New Mexico, Albuquerque, NM. [3.]University of Arizona, Tucson, AZ. [4.]Arizona State University, Tempe, AZ.

354.33 STELLAR AUTOPSIES: THE ANALYSIS OF TWO GRB-SNE IN THE NEBULAR PHASE
Villar, Victoria[1, 2]; Soderberg, Alicia M.[2]; Milisavljevic, Dan[2]; Drout, Maria[2]
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354.34 Galactic SNRs in the WISE all sky survey
Powell, Jason[1]
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354.35 Supernova science with LCOGT
Howell, Dale A.[1, 2]; Valenti, Stefano[1, 2]; Sand, David J.[3]; Parrent, Jerod T.[1, 4]; Arcavi, Iair[1, 5]; Graham, Melissa L.[6]
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354.36 The Effects of Collective Neutrino Oscillations on Supernova Nucleosynthesis
Seadrow, Shaquann[1, 2]; Frohlich, Carla[2]; Duan, Huaiyu[3]; Friedland, Alexander [4]; McLaughlin, Gail[2]; Keohane, Jonathan W.[1]
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354.37 ALMA resolves SN 1987A's dust factory and particle accelerator.
Indebetouw, Remy[1]
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Contributing teams: SN1987A ALMA Cycle 0 Team

354.38 Recalibration of the Lightcurve of SN 2011fe
Hasson, Benjamin[1]; Storrs, Alex[1]
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354.39 Spectropolarimetry of SN 2011fe
Milne, Peter[1]; Williams, G. Grant[1]; Smith, Paul S.[1]; Smith, Nathan[1]
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354.40 Impact of Rotation to the Pair-Instability Supernovae
Chen, Ke-Jung[1, 2]
[1.] UC Santa Cruz, Santa Cruz, CA. [2.] University of Minnesota, Twin Cities, Minneapolis, MN.

354.41 A study of colliding white dwarfs acting as a progenitor of Supernova 1a
Wozniak, Thomas[2, 1]; Chang, Philip[1]
[1.] UW-Milwaukee, Milwaukee, WI. [2.] Rufus King HS, Milwaukee, WI.

354.42 Discovery of a Gravitationally Lensed Type Ia Supernova
Quimby, Robert[1]; Quimby, Robert[1]
[1.] Kavli IPMU, Kashiwa, Chiba, Japan.

354.43 Using the UV Lever Arm To Probe Type IIn Supernovae Shells
Roming, Peter[1]; de la Rosa, Janie[2]; Whalen, Daniel J.[3]; Bayless, Amanda J.[1]
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355 Dwarf & Irregular Galaxies Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

355.01 A Quest For Stellar Streams
Mao, Shengkai[1]; Caldwell, Nelson[2]; Walker, Matthew G.[3]
[1.] UC Berkeley, Berkeley, CA. [2.] CfA, Cambridge, MA. [3.] Carnegie Mellon University, Pittsburgh, PA.

355.02 Machine Learning Identification of Dwarf Galaxy Satellites around Milky Way Analogs
Sandford, Emily[1]; Geha, Marla C.[1]; Wechsler, Risa H.[2]; Tollerud, Erik J.[1]; Marshall, Philip J.[2]; Cunha, Carlos E.[2]
[1.] Yale University, New Haven, CT. [2.] Stanford University, Stanford, CA.

355.03 The M31 Asymptotic Giant Exploration Survey: Intermediate-Age Stellar Content in Andromeda VII
Hamm, Karen[1]; Beaton, Rachael[1]; Hamren, Katherine[2]; Boyer, Martha L.[3]; Guhathakurta, Puragra[2]; Majewski, Steven R.[1]
[1.] University of Virginia, Charlottesville, VA. [2.] University of California Santa Cruz, Santa Cruz, CA. [3.] NASA Goddard Space Flight Center, Greenbelt, MD.
Contributing teams: M31AGES collaboration

355.04 Metallicity Distribution Functions and Chemical Evolution Models of 4 Local Group Dwarf Galaxies.

Ross, Teresa[1]; Holtzman, Jon A.[1]; Anthony-Twarog, Barbara J.[2]; Saha, Abhijit[3]
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355.05 The Formation History of the Ultra-Faint Dwarf Galaxies

Brown, Thomas M.[1]; Tumlinson, Jason[1]; Geha, Marla C.[2]; Kirby, Evan N.[3]; VandenBerg, Don A.[4]; Kalirai, Jason S.[1]; Simon, Joshua D.[5]; Avila, Roberto J.[1]; Munoz, Ricardo[6]; Guhathakurta, Puragra[7]; Renzini, Alvio[8]; Ferguson, Henry C.[1]; Vargas, Luis C.[2]; Gennaro, Mario[1]
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355.06 The Haverford Variable Star Search: Ursa Major II and Bootes III

Gaughan, Andrea[1]; Smith, Eric[1]; Dillaire, Alexander[1]; Bechtel, Marian[1]; Willman, Beth[1]; Boettcher, Erin[2]
[1.]Haverford College, Haverford, PA. [2.]University of Wisconsin, Madison, WI.

355.07 Discovery of Extreme AGB Stars in the Dwarf Galaxies of the Local Group: First Results from the DUST In Nearby Galaxies with Spitzer (DUSTINGS) program

Boyer, Martha L.[1, 2]; McQuinn, Kristen B.[3]; Barmby, Pauline[4]; Bonanos, Alceste Z.[5]; Gehrz, Robert D.[3]; Gordon, Karl D.[6]; Groenewegen, Martin[7]; Lagadec, Eric[8]; Lennon, Daniel[6]; Marengo, Massimo[9]; Meixner, Margaret[6]; Skillman, Evan D.[3]; Sloan, Gregory C.[8]; Sonneborn, George[1]; van Loon, Jacco T.[10]; Zijlstra, Albert[11]
[1.]NASA Goddard Space Flight Center, Code 665,Greenbelt, MD. [2.]Oak Ridge Associated Universities, Oak Ridge, TN. [3.]Institute for Astrophysics, University of Minnesota , Minneapolis, MN. [4.]University of Western Ontario, London, ON, Canada. [5.]National Observatory of Athens, Greece, Athens, Greece. [6.]STScI, Baltimore, MD. [7.]Royal Observatory of Belgium, Brussels, Belgium. [8.]Astronomy Department, Cornell University, Ithaca, NY. [9.]Department of Physics & Astronomy, Iowa State University, Ames, IA. [10.]Astrophysics Group, Lennard-Jones Laboratories, Keele University, Staffordshire, United Kingdom. [11.]Jodrell Bank Centre for Astrophysics, University of Manchester, Manchester, United Kingdom.

355.08 Spectral results for the blue plume stars in Canis Major Overdensity

Rafiul Islam, Mirza Sharoz[1]; Wilhelm, Ronald J.[1]
[1.]University of Kentucky, Lexington, KY.

355.09 Dynamical and Population Gradients Within the Sagittarius dSph Galaxy

Hasselquist, Sten[1]; Frinchaboy, Peter M.[4]; Majewski, Steven R.[2]; Damke, Guillermo[2]; Holtzman, Jon A.[1]; Garcia Perez, Ana Elia[2]; Nidever, David L.[6]; Schiavon, Ricardo[5]; Shetrone, Matthew D.[7]; Zasowski, Gail[3]
[1.]New Mexico State University, Las Cruces, NM. [2.]University of Virginia, Charlottesville, VA. [3.]Johns Hopkins University, Baltimore, MD. [4.]Texas Christian University, Fort Worth, TX. [5.]Liverpool John Moores University, Liverpool, Merseyside, United Kingdom. [6.]University of Michigan, Ann Arbor, MI. [7.]University of Texas at Austin, Austin, TX.
Contributing teams: APOGEE Team

355.10 A Photometric Classification of the SAGE LMC Point Source Catalog
Marengo, Massimo[1]; Antoniou, Vallia[2, 1]
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Contributing teams: SAGE Collaboration

355.11 The GALEX Catalog of UV Sources in the Magellanic Clouds
Thilker, David A.[1]; Bianchi, Luciana[1]; Simons, Raymond[1]
[1.]Johns Hopkins University, Baltimore, MD.

355.12 Identifying Ranges of Stellar Ages and Metallicities for Blue Supergiants in the Starburst Galaxy IC 10
Bordwell, Baylee[1, 2]; Ho, Ngoc-Nhung[3]; Geha, Marla C.[3]; West, Michael[2]
[1.]University of California Berkeley, Berkeley, CA. [2.]Maria Mitchell Observatory, Nantucket, MA. [3.]Yale University, New Haven, CT.

355.13 Westerbork Synthesis Radio Telescope HI Imaging of HI-selected Local Group Galaxy Candidates
Adams, Elizabeth A.[1, 2]; Cannon, John M.[3]; Oosterloo, Tom[1]; Giovanelli, Riccardo[2]; Haynes, Martha P.[2]
[1.]ASTRON, Dwingeloo, Netherlands. [2.]Cornell University, Ithaca, NY. [3.]Macalester College, St. Paul, MN.

355.14 Very Large Array HI Imaging of 'H Alpha Dots'
Alfvin, Erik[1]; Allan, John[2]; Cannon, John M.[1]; Kellar, Jessica[3]; Salzer, John J.[4]; Gronwall, Caryl[5]; Rosenberg, Jessica L.[6]; Wegner, Gary A.[3]; Williams, Anna[7]
[1.]Physics & Astronomy, Macalester College, Saint Paul, MN. [2.]University of Virginia, Charlottesville, VA. [3.]Dartmouth College, Hanover, NH. [4.]Indiana University, Bloomington, IN. [5.]Penn State University, University Park, PA. [6.]George Mason University, Fairfax, VA. [7.]University of Wisconsin, Madison, WI.

355.15 Very Large Array 14 GHz Continuum Imaging of Nearby, Star-Forming Galaxies
Nizami, Asra[1]; Cannon, John M.[1]; Kepley, Amanda A.[2]; Chomiuk, Laura[3]; Lee, Janice C.[4]; McQuinn, Kristen B.[5]; Skillman, Evan D.[5]; Wilcots, Eric M.[6]; Williams, Anna[6]
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355.16 Structural Parameters of the SHIELD Galaxies From Hubble Space Telescope Images
Hagen, Cedric[1]; Cannon, John M.[1]; Cave, Ian[1]; McQuinn, Kristen B.[2]; Dolphin, Andrew E.[3]; Skillman, Evan D.[2]; Adams, Elizabeth A.[4]; Elson, Edward C.[5]; Giovanelli, Riccardo[6]; Haynes, Martha P.[6]; Ott, Juergen[7]; Saintonge, Amelie[8]; Salzer, John J.[9]
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355.17 Magnetic Fields in the Irregular Galaxy NGC1156
Schmitz, Susan[1, 3]; Kepley, Amanda A.[3]; Beck, Rainer[4]; Lang, Cornelia C.[1]; Wilcots, Eric M.[2]
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355.18 Radial Color and Mass Profile Trends of Dwarf Irregular Galaxies
Herrmann, Kimberly A.[1, 2]; Hunter, Deidre A.[2]
[1.]Penn State Mont Alto, Mont Alto, PA. 2.Lowell Observatory, Flagstaff, AZ.
Contributing teams: LITTLE THINGS

355.19 Globular Cluster Systems of Dwarf Elliptical Galaxies in Virgo and Fornax
Miller, Bryan[1]; Puzia, Thomas[2]; Hilker, Michael[3]; Kissler-Patig, Markus[4]
[1.]Gemini Observatory, La Serena, IV Region, Chile. [2.]Pontifica Universidad Católica de Chile, Santiago, Región Metropolitana, Chile. [3.]European Southern Observatory, Garching, Bavaria, Germany. [4.]Gemini Observatory, Hilo, HI.

355.20 Keck spectroscopy and NGVS photometry in the direction of the Virgo cluster: Globular cluster satellites of dwarf ellipticals, Milky Way halo substructure, and large-scale structure in the background
Muller, Meredith[1]; Toloba, Elisa[1, 2]; Guhathakurta, Puragra[1]; Yagati, Samyukta[3]; Chen, Jingjing[4]; Cote, Patrick[5]; Dorman, Claire[1]; Ferrarese, Laura[5]; Peng, Eric W.[6]
[1.]University of California at Santa Cruz, Santa Cuz, CA. [2.]Carnegie Observatories, Pasadena, CA. [3.]Harker School, San Jose, CA. [4.]Columbia University, New York, NY. [5.]Herzberg Institute of Astrophyiscs, Victoria, BC, Canada. [6.]Peking University, Beijing, Haidian, China.
Contributing teams: Next Generation Virgo Cluster Survey collaboration

355.21 Globular Clusters as Tracers of Dark Matter in Virgo Cluster Dwarf Elliptical Galaxies
Chen, Stephanie[1;] Toloba, Elisa[2, 3]; Guhathakurta, Puragra[2]; Chen, Jingjing[4]; Cote, Patrick[5]; Ferrarese, Laura[5]; Peng, Eric W.[6]
[1.]Harker School, San Jose, CA. [2.]University of California at Santa Cruz, Santa Cruz, CA. [3.]Carnegie Observatories, Pasadena, CA. [4.]Columbia University, New York, NY. [5.]Herzberg Institute of Astrophysics, Victoria, BC, Canada. [6.]Peking University, Beijing, China.
Contributing teams: NGVS collaboration

355.22 Probing the Nature and Origin of Ultra-compact Dwarfs in Coma
Chiboucas, Kristin[1]; Tully, R. B.[2]; Carter, David[3]; Peng, Eric W.[4, 6]; Phillipps, Steve[5]
[1.]Gemini Observatory, Hilo, HI. [2.]Institute for Astronomy, Honolulu, HI. [3.]Liverpool John Moores University, Liverpool, United Kingdom. [4.]Peking University, Beijing, China. [5.]University of Bristol, Bristol, United Kingdom. [6.]Kavli Institute for Astronomy and Astrophysics, Beijing, China.

355.23 ESO 243-49's Small Friends: Finding Satellite Galaxies
Smullen, Rachel1; Pforr, Janine2; Servillat, Mathieu3; Farrell, Sean4
1.University of Wyoming, Laramie, WY. 2.National Optical Astronomy Observatory, Tucson, AZ. 3.CEA Saclay, Saclay, Île-de-France, France. 4.Sydney Institute for Astronomy, Redfern, NSW, Australia.

355.24 A Spectral Analysis of a Rare 'Dwarf Eat Dwarf' Cannibalism Event
Theakanath, Kuriakose[1]; Toloba, Elisa[2, 5]; Guhathakurta, Puragra[2]; Romanowsky, Aaron J.[3]; Ramachandran, Neel[4]; Arnold, Jacob[5]
[1.]Bellarmine College Prep, San Jose, CA. [2.]UCSC, Santa Cruz, CA. [3.]San Jose State University, San Jose, CA. [4.]St. Francis High School, Mountain View, CA. [5.]Carnegie Observatories, Pasadena, CA.

355.25 Star Formation in Dwarf-Dwarf Mergers: Fueling Hierarchical Assembly
Stierwalt, Sabrina[1]; Johnson, Kelsey E.[1]; Kallivayalil, Nitya[1]; Patton, David R.[2]; Putman, Mary E.[3]; Besla, Gurtina[3]; Geha, Marla C.[4]
[1.]University of Virginia, Charlottesville, VA. [2.]Trent University, Peterborough, ON, Canada. [3.]Columbia University, New York, NY. [4.]Yale University, New Haven, CT.

355.26 The Clustering of Star Formation in Nearby Galaxies
McElwee, Sean[1]; Calzetti, Daniela1; Andrews, Jennifer E.[1]
[1.]University of Massachusetts Amherst, Amherst, MA.

358 Galaxy Clusters Poster Session

Wednesday, 9:00 AM - 6:30 PM; Exhibit Hall ABC

358.01 Dwarf Galaxy Alignment in Nearby Galaxy Clusters
Barkhouse, Wayne[1]; Archer, Haylee[1]; Eaton, Philip[1]; Byrd, Matthew[1]; Burgad, Jaford[1]; Williamson, Mark[1]; Foote, Gregory[1]; Koiner, Katelyn[1]; Lopez-Cruz, Omar[2]
[1.]Univ. of North Dakota, Grand Forks, ND. [2.]Instituto Nacional de Astrofisica, Optica y Electronica, Tonantzintla, Puebla, Mexico.

358.02 Merger Hydrodynamics of the Luminous Cluster RXJ1347.5-1145
Kreisch, Christina[1, 2]; Machacek, Marie E.[2]; Randall, Scott W.[2]; Jones, Christine[2]
[1.]Washington University in St. Louis, St. Louis, MO. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

358.03 Redshift Survey of a Sample of Galaxy Clusters
Finney, Emily[1, 3]; Schirmer, Mischa[2]
[1.]Cerro Tololo Inter-American Observatory, La Serena, Chile. [2.]Gemini Observatory, La Serena, Chile. [3.]Keck Science Department of the Claremont Colleges, Claremont, CA.

358.04 A Joint Optical & X-ray Analysis of the Triple Merging Cluster MACS J1226.8+2153
Ferrara, Jocelyn[1, 2]; Bulbul, Esra[2]; Bayliss, Matthew[2, 3]
[1.]Barnard College, New York, NY. 2.Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. 3.Harvard Department of Physics, Cambridge, MA.

358.05 Analysis Of The Velocity Data Of Cluster A562
Calderón Espinoza, Diego Nicolás[1]; Gomez, Percy L.[2]
[1.]Instituto de Astrofísica, Facultad de Física, Pontificia Universidad Católica de Chile, Santiago, Santiago, Chile. [2.]Gemini South Observatory, La Serena, Coquimbo, Chile.

358.06 Star Formation and Substructure in Galaxy Clusters
Cohen, Seth A.[1]; Hickox, Ryan C.[1]; Wegner, Gary A.[1]; Einasto, Maret[2]; Vennik, Jaan[2]
[1.]Dartmouth College, White River Junction, VT. [2.]Tartu Observatory, Toravere, Estonia.

358.07 Estimating Radio Source Contamination for Large SZ Cluster Surveys with Data from the Atacama Cosmology Telescope
Crichton, Devin[1]; Gralla, Megan B.[1]; Marriage, Tobias[1]
[1].The Johns Hopkins University, Baltimore, MD.
Contributing teams: Atacama Cosmology Telescope

358.08 The Gas Dynamics of Elliptical Galaxies in Virgo: Motion and Infall Toward M87
Wood, Ryan A.[1, 2]; Jones, Christine[1]; Machacek, Marie E.[1]; Kraft, Ralph P.[1]; Santos, Felipe A.[1]; Paggi, Alessandro[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]University of Southampton, Southampton, Hampshire, United Kingdom.

358.09 Novel, Efficient Way to Study Origins of Globular Cluster Bimodality - Calibration on MC Cluster NGC 1850a & Application to GCs in the Sombrero Galaxy
Cui, Yang[1]; Cecil, Gerald[1]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC.

358.10 Effect of Halo Mass on HI Gas Content of Galaxies in Groups and Clusters
Yoon, Ilsang[1]; Rosenberg, Jessica L.[1]
[1.]George Mason University, Fairfax, VA.

358.11 Hot gas and the evolution of spiral-rich groups
Vrtilek, Jan M.[1]; O'Sullivan, E. J.[1]; Giacintucci, Simona[2]; David, Laurence P.[1]; Raychaudhury, Somak[3, 4]; Forman, William R.[1]; Jones, Christine[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA. [2.]University of Maryland, College Park, MD. [3.]Presidency University, Calcutta, India. [4.]University of Birmingham, Birmingham, United Kingdom.

358.12 The Environment Within Galaxy Clusters as Measured by the Gravitational Potential
Twadelle, Kyle[1]; Miller, Christopher J.[1]; Kern, Nicholas S.[1]; Gifford, Daniel[1]
[1.]University of Michigan - Ann Arbor, Ann Arbor, MI.

358.13 Determining Photometric Redshifts for Galaxy Cluster Candidates Detected by the Planck Mission
Head, Hillary[1]; Desai, Shantanu[2]; Liu, Jiayi[2]; Hennig, Christina[2]
[1.]Austin Peay State University, Clarksville, TN. [2.]Universitäts-Sternwarte München, Munich, Bavaria, Germany.

358.14 Constraining the Viscosity of the Intracluster Medium with Cold Fronts
ZuHone, John A.[1]; Markevitch, Maxim L.[1]; Stone, James M.[2]; Kunz, Matthew[2]
[1.]NASA/Goddard Space Flight Center, Greenbelt, MD. [2.]Princeton University, Princeton, NJ.

358.15 Quantifying the Nature of Intracluster Light in a Fornax-like Cluster
Harris, Kathryn[1, 2]; Debattista, Victor P.[2, 3]; Clarke, Adam[2]; Thompson, Benjamin B.[2]; Farrah, Duncan[1]; Petty, Sara M.[1]
[1.]Virginia Polytechnic Institute and State University, Blacksburg, VA. [2.]University of Central Lancashire, Preston, Lancashire, United Kingdom. [3.]University of Washington, Seattle, WA.

358.16 Investigation of Extended Emission Line Regions in Intermediate Redshift BCGs.
Cooke, Kevin[1]; O'Dea, Christopher P.[1]; Tremblay, Grant[1]
[1.]Rochester Institute of Technology, Rochester, NY.

358.17 The most distant galaxy clusters in the SPT Spitzer Deep Field Survey
Rettura, Alessandro[1]; Stanford, S. A.[2]; Stern, Daniel[1]; Mei, Simona[3]; Brodwin, Mark[4]; Gonzalez, Anthony H.[5]; Gettings, Daniel[5]; Ashby, Matthew[6]; Bartlett, James G.[1]; Rosati, Piero[7]
[1].JPL / Caltech, Pasadena, CA. [2.]UC Davis, Davis, CA. [3.]IPAC / Caltech, Pasadena, CA. [4.]University of Missouri Kansas City, Kansas City, MO. [5.]University of Florida, Gainsville, FL. [6.]Harvard-Smithsonian CfA, Cambridge, MA. [7.]European Southern Observatory, Garching, Bavaria, Germany.

358.18 Searching for the Most Distant Galaxy Clusters
Yen, Steffi[1, 2]; Muzzin, Adam[2]; van der Burg, Remco[2]
[1.]University of Maryland, College Park, College Park, MD. [2.]Leiden Observatory, Leiden University, Leiden, Netherlands.

358.19 Evolution of Star Formation and H I Gas Content in Galaxy Groups
Birenbaum, Adam[1]; Hess, Kelley M.[2]; Wilcots, Eric M.[1]
[1.]University of Wisconsin, Madison, WI. [2.]University of Cape Town, Cape Town, Western Cape, South Africa.

358.20 On the Origin of Bias, Scatter, and Evolution in Sunyaev-Zeldovich Effect Scaling Relations
Yu, Liang[1]; Nelson, Katherine L.[1]; Nagai, Daisuke[1]; Lau, Erwin[1]
[1.]Yale University, New Haven, CT.

358.21 MApping the Most Massive Overdensity Through Hydrogen (MAMMOTH)
Cai, Zheng[1]; Fan, Xiaohui1; Bian, Fuyan[2]; McGreer, Ian D.[1]; Frye, Brenda L.[1]; Yang, Yujin3; Zabludoff, Ann I.[1]; Zheng, Zhenya[4]
[1.]Steward Observatory, University of Arizona, Tucson, AZ. [2.]Mt Stromlo Observatory, The Australian National University, Canberra, ACT, Australia. [3.]Argelander-Institut für Astronomie, Bonn, Bonn, Germany. [4.]Arizona State University, Tempe, AZ.

358.22 Thermal and Shock Histories of Gas in Galaxy Clusters
Benjamin, Sarah[1]; Nagai, Daisuke[1]; Wetzel, Andrew R.[2, 3]
[1.]Yale University, New Haven, CT. [2.]Caltech, Pasadena, CA. [3.]Carnegie Observatories, Pasadena, CA.

THURSDAY, 9 JANUARY 2014

400 Engineering Considerations for Large Astrophysics Projects

Thursday, 8:30 AM - 9:20 AM; Potomac Ballroom A

Chair(s):
Chryssa Kouveliotou, *NASA/MSFC*

400.01 Engineering considerations for large astrophysics projects
Hogg, David W.[1, 2]
[1.]New York Univ., New York, NY. [2.]Max-Planck-Institut für Astronomie, Heidelberg, Baden-Württemburg, Germany.

Hack Day

Thursday, 10:00 AM - 7:00 PM; Chesapeake 7

A day to work intensively on collaborative projects. A wide-variety of projects will be undertaken and will be everything from software development and coding to creative outreach projects. Projects that take advantage of the unique gathering of enthusiasm and expertise at the Winter AAS Meeting are particularly encouraged. Hack ideas and participants will be solicited before and during the meeting. Participants can either lead a project or join a project and should plan on focusing primarily on only one hack. In addition, we ask participants to commit to hacking for the majority of the day. Registration is encouraged to facilitate pre-meeting coordination, but not required.

Sponsored By: Northrop Grumman and Microsoft Research WorldWide Telescope

Organizer(s):
Kelle Cruz, Hunter College/CUNY and AMNH
David Hogg, New York Univ.
Megan Schwamb, Institute of

401 A Melange of Circumstellar and Stellar Presentations

Thursday, 10:00 AM - 11:30 AM; Maryland Ballroom B

Chair(s):
Lee Mundy, *Univ. of Maryland*

401.01 Orbit evolution of disk-embedded masses: Directly observed in Saturn's rings
Tiscareno, Matthew S.[1]; Moran, Allegra E.[1]
[1.]Cornell Univ., Ithaca, NY.

401.02 Exocomet Gas: Now You See It, Now You Don't
Montgomery, Sharon L.[1]; Welsh, Barry[2]; Lallement, Rosine[3]; Timbs, Bryon W.[1]
[1.]Clarion University, Clarion, PA. [2.]Space Science Laboratory, University of California Berkeley, Berkeley, CA. [3.]GEPI - Paris Observatory, Meudon, France.

401.03 Finding the Faintest Exozodi and Asteroid Belt Analogs in WISE
Patel, Rahul[1]; Metchev, Stanimir[2, 1]; Heinze, Aren[3]
[1.]SUNY Stony Brook, East Setauket, NY. [2.]University of Western Ontario, London, ON, Canada. [3.]Stony Brook University, Stony Brook, NY.

401.04 CHASING DISK DISPERSAL INDICATORS: THE ORIGIN OF THE [OI] LOW-VELOCITY COMPONENT FROM YOUNG STELLAR OBJECTS
Rigliaco, Elisabetta[1]; Pascucci, Ilaria[1]; Gorti, Uma[2, 3]; Edwards, Suzan[4]; Hollenbach, David J.[3]
[1.]University of Arizona, Department of Planetary Science, Tucson, AZ. [2.]NASA Ames Research Center, Mountain View, CA. [3.]SETI Institute, Mountain View, CA. [4.]Smith College, Northampton, MA.

401.05 Analyzing the Shock Heating Rate in O-Star Winds
Li, Zequn[1]; Cohen, David H.[1]
[1.]Swarthmore College, Swarthmore, PA.

402 AGN Across Cosmic Time

Thursday, 10:00 AM - 11:30 AM; National Harbor 11

Chair(s):
Laura Blecha, *Univ. of Maryland - College Park*

402.01 Half-Megasecond Spectral Imaging of the Galactic Winds in Mrk 231
Teng, Stacy H.[1]; Veilleux, Sylvain[2]; Rupke, David[3]; Maiolino, Roberto[4]; Sturm, Eckhard[5]
[1.]NASA/GSFC, Greenbelt, MD. [2.]University of Maryland, College Park, MD. [3.]Rhodes College, Memphis, TN. [4.]University of Cambridge, Cambridge, United Kingdom. [5.]MPE, Garching, Germany.

402.02 Investigating the AGN-Star formation Connection in the Local Universe
LaMassa, Stephanie M.[1]; Heckman, Timothy M.[2]; Ptak, Andrew[3]; Urry, C. M.[1]
[1.]Yale University, New Haven, CT. [2.]The Johns Hopkins University, Baltimore, MD. [3.]NASA Goddard Space Flight Center, Greenbelt, MD.

402.03 A ~3.8 hour Periodicity from an Ultrasoft Active Galaxy
Lin, Dacheng[1]; Irwin, Jimmy[1]; Godet, Olivier[2]; Webb, Natalie[2]; Barret, Didier[2]
[1.]University of Alabama, Tuscaloosa, AL. [2.]IRAP, Toulouse, France.

402.04D Exploring Quasar SEDs as a Function of Black Hole Properties
Krawczyk, Coleman M.[1]; Richards, Gordon T.[1]
[1.]Drexel University, Philadelphia, PA.

402.05 The AGN Census at Cosmic Noon: the Unbiased Galaxy-AGN Connection from Spatially Resolved Line Ratios
Trump, Jonathan R.[1]; Brandt, W. N.[1]; Weiner, Benjamin J.[2]; Juneau, Stephanie[3]
[1.]Penn State, University Park, PA. [2.]University of Arizona, Tucson, AZ. [3.]CEA-Saclay, Gif-sur-Yvette, France.
Contributing teams: CANDELS, 3D-HST

402.06 Exploring black hole seed formation and early growth at z>6
Schawinski, Kevin[1]; Weigel, Anna[1]; Treister, Ezequiel[3]; Urry, C. M.[2]
[1.]ETH Zurich, Zurich, Switzerland. [2.]Yale University, New Haven, CT. [3.]Universidad de Concepcion, Concepcion, Chile.

403 APOGEE - A Fresh View Into the Stellar Populations of the Milky Way

Thursday, 10:00 AM - 11:30 AM; National Harbor 3

Our understanding of the formation of the Milky Way Galaxy is on the verge of a revolution, with several massive surveys of the stellar populations of the Galaxy currently in operation, and others in design stage. At the cutting edge of that trend, the Apache Point Observatory Galactic Evolution Experiment (APOGEE), is collecting high resolution (R=23,000), high S/N (100/res. el.) for 100,000 mostly giant stars from all components of the Galaxy, from which accurate radial velocities and elemental abundances are being derived. As the world's only major high-resolution NIR survey of Galactic stars, APOGEE has unique power to probe the disk and bulge populations. Thus, APOGEE will make a transformational contribution in a range of scientific fronts, including abundance gradients in the Galactic disk, the metallicity distribution of the Galactic bulge, kinematic signatures of the Galactic bar and its interplay with the bulge and disk, as well as a number of fundamental astrophysical problems, including diffuse interstellar bands, the ages of field stars, the dynamical masses of eclipsing binaries, and the envelopes of Be stars. With the first APOGEE public data release (as part of SDSS-III DR10), and the publication of the first several science results, the time is ripe for a focused discussion of key APOGEE science and the future exploitation of the growing APOGEE data base. This Special Session will include a survey overview and a combination of invited and contributed talks and posters, highlighting the first important APOGEE science results.

Chair(s):
Ricardo Schiavon, *Gemini Observatory*
Organizer(s):
Ricardo Schiavon, *Gemini Observatory*

403.01 Status of the Apache Point Observatory Galactic Evolution Experiment (APOGEE)
Majewski, Steven R.[1]
[1.]Univ. of Virginia, Charlottesville, VA.
Contributing teams: The SDSS-III/APOGEE Collaboration

403.02 Chemical Cartography with APOGEE
Holtzman, Jon A.[1]; Hayden, Michael R.[1]; Bovy, Jo[4]; Majewski, Steven[2]; Johnson, Jennifer[5]; Zasowski, Gail[5]; Girardi, Leo[9]; Allende-Prieto, Carlos[8]; Garcia Perez, Ana Elia[2]; Meszaros, Szabolcs[7]; Nidever, David L.[3]; Schiavon, Ricardo P.[10]; Shetrone, Matthew D.[6]
[1.]New Mexico State Univ., Las Cruces, NM. [2.]University of Virginia, Charlottesville, VA. [3.]University of Michigan, Ann Arbor, MI. [4.]Institute of Advanced Studies, Princeton, NJ. [5.]Ohio State University, Columbus, OH. [6.]McDonald Observatory, Fort Davis, TX. [7.]Indiana University, Bloomington, IN. [8.]IAC, Tenerife, Spain. [9.]OAPD, Padova, Italy. [10.]Liverpool John Moores, Liver, United Kingdom.

403.03 Mapping the Bulge Metallicity Distribution Function with APOGEE

Garcia Perez, Ana Elia[1]; Johnson, Jennifer[2]; Cunha, Katia M.[3]; Allende-Prieto, Carlos[4]; Shetrone, Matthew D.[5]; Majewski, Steven R.[1]; Schiavon, Ricardo[6]; Frinchaboy, Peter M.[7]; Hayden, Michael R.[8]; Nidever, David L.[9]; Robin, Annie[10]; Schultheis , Mathias[11]; Zasowski, Gail[12]

[1.]University of Virginia, Charlottesville, VA. [2.]The Ohio State University, Columbus, OH. [3.]Observatorio Nacional, Rio de Janeiro, Rio de Janeiro, Brazil. [4.]Instituto de Astrofisica de Canarias, La Laguna, Tenerife, Spain. [5.]McDonald Observatory, For Davis, TX. [6.]Texas Christian Univesity, Fort Worth, TX. [7.]New Mexico State University, Las Cruces, NM. [8.]University of Michigan, Ann Arbor, MI. [9.]Institut Utinam, Besancon, France. [10.]University of Liverpool, Liverpool, Merseyside, United Kingdom. [11.]Observatoire de la Cote d'Azur, Nice, France. [12.]John Hopkins University, Baltimore, MD.

403.04 Exploring Stellar Populations and Asteroseismology with APOGEE and Kepler

Epstein, Courtney R.[1]; Elsworth, Yvonne P.[2]; Shetrone, Matthew D.[3]; Mosser, Benoit[4]; Tayar, Jamie[1]; Harding, Paul[5]; Pinsonneault, Marc H.[1]; Silva Aguirre, Víctor[6]; Basu, Sarbani[7]; Bizyaev, Dmitry[8]; Bedding, Tim[9]; Chaplin, William J.[2]; Garcia, Rafael[10]; Garcia Perez, Ana Elia[11]; Hearty, Fred[11]; Hekker, Saskia[12]; Huber, Daniel[13]; Ivans, Inese I.[14]; Majewski, Steven[11]; Mathur, Savita[15]; Serenelli, Aldo[16]; Schiavon, Ricardo[17]; Schoenrich, Ralph[1]; Sobeck, Jennifer[18]; Zasowski, Gail[19]

[1.]Ohio State University, Columbus, OH. [2.]University of Birmingham, Birmingham, United Kingdom. [3.]The University of Texas at Austin, Austin, TX. [4.]LESIA, CNRS, Université Pierre et Marie Curie, Université Denis Diderot, Observatoire de Paris, Meudon Cedex, France. [5.]Case Western Reserve University, Cleveland, OH. [6.]Aarhus University, Aarhus, Denmark. [7.]Yale University, New Haven, CT. [8.]Apache Point Observatory, Sunspot, NM. [9.]University of Sydney, Sydney, NSW, Australia. [10.]Laboratoire AIM, CEA/DSM-CNRS, Université Paris, Gif-sur-Yvette, France. [11.]University of Virginia, Charlottesville, VA. [12.]Max Planck Institute for Solar System Research, Katlenburg-Lindau, Germany. [13.]NASA Ames Research Center, Moffett Field, CA. [14.]The University of Utah, Salt Lake City, UT. [15.]Space Science Institute, Boulder, CO. [16.]Institute of Space Sciences, Bellaterra, Spain. [17.]Astrophysics Research Institute, Liverpool, United Kingdom. [18.]Université de Nice, Nice, France. [19.]Johns Hopkins University, Baltimore, MD.

403.05 Exploring the Diffuse Interstellar Medium with SDSS-III APOGEE

Zasowski, Gail[1]; Ménard, Brice[1]; Majewski, Steven[2]; Schultheis , Mathias[3]; Sellgren, Kristen[4]

[1.]Johns Hopkins University, Baltimore, MD. [2.]University of Virginia, Charlottesville, VA. [3.]Observatoire de la Cote d'Azur, Nice, France. [4.]The Ohio State University, Columbus, OH.

403.06 CHARACTERIZING KEPLER ECLIPSING BINARIES & PLANET HOSTS WITH SDSS-III APOGEE

Mahadevan, Suvrath[1]

[1.]Penn State, University Park, PA.

Contributing teams: SDSS-III EB ancillary program team, SDSS-III Kepler dark time team

403.07 The APOGEE view of Be stars

Eikenberry, Stephen S.[1]; Chojnowski, S. Drew[2]; Wisniewski, John P.[3]; Majewski, Steven R.[2]; Shetrone, Matthew D.[4]; Whelan, David G.[5, 2]; Bizyaev, Dmitry[6]; Borish, H. Jacob[2]; Davenport, James R.[7]; Ebelke, Garrett[6]; Feuillet, Diane[6]; Garner, Alan[1]; Hearty, Fred[2]; Holtzman, Jon A.[6]; Li, Zhi-Yun[2]; Meczaros, Sz[8]; Nidever, David L.[9]; Schneider, Donald P.[10]; Skrutskie, Michael F.2; Wilson, John C.[2]; Zasowski, Gail[11]
[1.]University of Florida, Gainesville, FL. [2.]University of Virginia, Charlottesville, VA. [3.]University of Oklahoma, Norman, OK. [4.]University of Texas, Austin, TX. [5.]Hampden-Sydney College, Hampden-Sydney, VA. [6.]New Mexico State University, Las Cruces, NM. [7.]University of Washington, Seattle, WA. [8.]Instituto de Astrofisica de Canarias, La Laguna, Tenerife, Spain. [9.]University of Michigan, Ann Arbor, MI. [10.]The Pennsylvania State University, State College, PA. [11.]Johns Hopkins University, Baltimore, MD.

404 Astronomy Across Africa: A New Dawn

Thursday, 10:00 AM - 11:30 AM; Maryland 1

One of the youngest and fastest growing astronomy communities in the world is on the African continent. In the past couple of decades and in the upcoming decades an explosion of cutting edge multi-wavelength facilities have begun or are expected to be operating namely SALT, HESS, MITRA, AVN, PAPER, MeerKAT, African VLBI and the SKA (Acronyms described at the end of this document). At the same time countries across the continent are developing human capacity in science and technology using astronomy as a gateway science. As astronomy is set to explode across Africa, its astronomy community, facilities and on-going science remain relatively unknown to the US community. With this special session(s) request we seek to change this situation by providing an overview of facilities, human capacity development programs and astronomy development work from a diverse set of both US and African astronomers engaged in these activities.

Chair(s):
Kartik Sheth, *NRAO*
Organizer(s):
Kartik Sheth, *NRAO*

404.01 Astronomy Across Africa

Williams, Ted[1, 2]
[1.]South African Astronomical Observatory, Cape Town, South Africa. [2.]Rutgers University, New Brunswick, NJ.

404.02 Dissecting galaxies with the Southern African Large Telescope (SALT)

Loubser, Ilani[1]
[1.]North-West University, Potchefstroom, South Africa.

404.03 Legacy Science Surveys with the MeerKAT

Blyth, Sarah[1]
[1.]University of Cape Town, Cape Town, Western Cape, South Africa.

404.04 Exploring Our Cosmic Dawn from South Africa

Parsons, Aaron[1]
[1.]University of California, Berkeley, Berkeley, CA.
Contributing teams: PAPER, Square Kilometre Array South Africa

404.05 Building the Next Generation of Scientists with US-Africa Exchange Programs
Sheth, Kartik[1]
[1.]NRAO, Charlottesville, VA.

404.06 Astronomy for Development in Africa
Govender, Kevin[1]
[1.]IAU Office of Astronomy for Development, Cape Town, Western Cape, South Africa.

404.07 Vision for Astronomy in South Africa and partnership with the US
Nemaungani, Takalani[1]
[1.]Department of Science and Technology, Pretoria, Gauteng, South Africa.

405 Binary Systems - Dwarfs and Giants

Thursday, 10:00 AM - 11:30 AM; Maryland 2

Chair(s):
Eric Schlegel, *Univ. of Texas, San Antonio*

405.01D The X-ray and Spectropolarimetric View of Mass Loss and Transfer in Massive Binary Stars
Lomax, Jamie R.[1, 2]
[1.]University of Denver, Denver, CO. [2.]University of Oklahoma, Norman, OK.

405.02 A Cornucopia of Massive Binary Star Systems in the Cygnus OB2 Association: Fifty and Counting
Kobulnicky, Henry A.[1]; Kiminki, Daniel C.[2, 1]; Burke, Jamison F.[1, 3]; Chapman, James E.[1, 4]; Keller, Erica[1, 5]; Lester, Katie V.[1, 6]; Rolen, Emily[1, 7]; Topel, Eric[1, 8]; Lundquist, Michael J.[1]; Bhattacharjee, Anirban[1]; Vargas Alvarez, Carlos A.[1]; Runnoe, Jessie C.[9, 1]; Dale, Daniel A.[1]
[1.]Univ. of Wyoming, Laramie, WY. [2.]University of Arizona, Tucson, AZ. [3.]Swarthmore College, Swarthmore, PA. [4.]Massechusetts College of Liberal Arts, North Adams, MA. [5.]Mount Holyoke College, South Hadley, MA. [6.]Leheigh University, Bethlehem, PA. [7.]Vanderbilt University, Nashville, TN. [8.]St. Olaf College, Northfield, MN. [9.]Penn State University, University Park, PA.

405.03 Eta Carinae: An Astrophysical Laboratory to Study Conditions During the Transition Between a Pseudo-Supernova and a Supernova
McKinnon, Darren[1]; Gull, Theodore R.[2]; Madura, Thomas[2]
[1.]Utah State University, Logan, UT. [2.]NASA GSFC, Greenbelt, MD.

405.04 A Tale of Two Red Giants: Testing Asteroseismic Scaling Relations with KIC 9246715
Rawls, Meredith L.[1]; Gaulme, Patrick[1]; McKeever, Jean[1]; Orosz, Jerome A.[2]; Latham, David W.[3]; Jackiewicz, Jason[1]
[1.]New Mexico State University, Las Cruces, NM. [2.]San Diego State University, San Diego, CA. [3.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

405.05 Fundamental Properties of Eclipsing Binaries in the Kepler field of view
Matson, Rachel A.[1]; Gies, Douglas R.[1]; Guo, Zhao[1]
[1.]GSU, Atlanta, GA.

406 Black Holes I

Thursday, 10:00 AM - 11:30 AM; National Harbor 10

Chair(s):
Roman Shcherbakov, *University of Maryland*

406.01 Twisted Disks: General Relativistic Simulations of Thin Accretion Disks With A Tilted Black Hole
Avara, Mark J.[1]; McKinney, Jonathan C.[1, 2]; Reynolds, Christopher S.[1, 2]
[1.]University of Maryland, College Park, College Park, MD. [2.]Joint Space-Science Institute, University of Maryland, College Park, MD.

406.02 Tidal Disruption Events from Archival X-ray Observations of Dwarf Galaxies
Maksym, W. P.[1]; Irwin, Jimmy[1]; Ulmer, Melville P.[2]; Roth, Katherine[3]; Dupke, Renato A.[4, 5]; Ho, Luis C.[6]; Keel, William C.[1]; Adami, Christophe[7]; Lin, Dacheng[1]
[1.]University of Alabama, Tuscaloosa, AL. [2.]Northwestern University, Evanston, IL. [3.]Gemini Observatory North, Hilo, HI. [4.]Observatorio Nacional, Río de Janeiro, Rio de Janeiro, Brazil. [5.]University of Michigan, Ann Arbor, MI. [6.]Carnegie Observatories, Pasadena, CA. [7.]Laboratoire d'Astrophysique de Marseille, Marseille, Bouches-du-Rhône, France.

406.03D Understanding X-ray Reflection as a Probe of Accreting Black Holes
Wilkins, Dan[1, 2]
[1.]Institute of Astronomy, University of Cambridge, Cambridge, United Kingdom. [2.]St Mary's University, Halifax, NS, Canada.

406.04 The Relativistically Beamed Tidal Disruption Event Sw J1644+57
Cannizzo, John K.[1]
[1.]NASA/GSFC/CRESST/UMBC, Columbia, MD.

406.05 The Megasecond Chandra X-ray Visionary Project Observation of NGC 3115: Nature of Hot Gas within the Bondi Radius
Wong, Ka-Wah[1]; Irwin, Jimmy[1]; Shcherbakov, Roman V.[2]; Yukita, Mihoko[1, 3]; Million, Evan[1]; Bregman, Joel N.[4]
[1.]University of Alabama - Tuscaloosa, Tuscaloosa, AL. [2.]University of Maryland, College Park, MD. [3.]Johns Hopkins University, Baltimore, MD. [4.]University of Michigan, Ann Arbor, MI.

406.06 Evidence for Enhanced Formation Rate of Black Hole LMXBs in the Galaxy from Historical Outbursts from DASCH
Grindlay, Jonathan E.[1]; Miller, George F.[1]; Tang, Sumin[2]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA. [2.]UCSB, Santa Barbara, CA.

407 Cosmology & CMB V

Thursday, 10:00 AM - 11:30 AM; National Harbor 13

Chair(s):
Daniel Eisenstein, *Harvard Univ.*

407.01 CMB cosmology on small scales with ACT and ACTPol
Hlozek, Renee[1]
[1.]Princeton University, Princeton, NJ.
Contributing teams: ACT and ACTPol teams

407.02D The Cosmology Large Angular Scale Surveyor (CLASS)

Eimer, Joseph[1]; Ali, Aamir[1]; Amiri, Mandana[6]; Appel, John W.[1]; Araujo, Derek[7]; Bennett, Charles L.[1]; Boone, Fletcher[1]; Chan, Manwei[1]; Cho, Hsiao-Mei[3]; Chuss, David T.[2]; Colazo, Felipe[2]; Crowe, Erik[2]; Denis, Kevin[2]; Dünner, Rolando[4]; Essinger-Hileman, Thomas[1]; Gothe, Dominik[1]; Halpern, Mark[6]; Harrington, Kathleen[1]; Hilton, Gene[3]; Hinshaw, Gary F.[6]; Huang, Caroline[1]; Irwin, Kent[3]; Jones, Glenn[7]; Karakla, John[1]; Kogut, Alan J.[2]; Larson, David[1]; Limon, Michele[7]; Lowry, Lindsay[1]; Marriage, Tobias[1]; Mehrle, Nicholas[1]; Miller, Amber D.[7]; Miller, Nathan[2]; Moseley, Samuel H.[2]; Novak, Giles[8]; Reintsema, Carl[3]; Rostem, Karwan[2]; Stevenson, Thomas[2]; Towner, Deborah[2]; U-Yen, Kongpop[2]; Wagner, Emily[1]; Watts, Duncan[1]; Wollack, Edward[2]; Xu, Zhilei[1]; Zeng, Lingzhen[5]

[1.]Johns Hopkins University, Baltimore, MD. [2.]NASA Goddard Space Flight Center, Greenbelt, MD. [3.]NIST, Boulder, CO. [4.]Pontifica Universidad Catolica de Chile, Santiago, Chile. [5.]CfA-SAO, Cambridge, MA. [6.]University of British Columbia, Vancouver, BC, Canada. [7.]Columbia University, New York, NY. [8.]Northwestern University, Chicago, IL.

407.03D EBEX: A Balloon-Borne CMB Polarization Experiment

Chapman, Daniel[1]; Aboobaker, Asad M.[2]; Ade, Peter[3]; Aubin, Francois[2]; Baccigalupi, Carlo[4]; Bandura, Kevin[5]; Bao, Chaoyun[2]; Borrill, Julian[6, 7]; Didier, Joy[1]; Dobbs, Matt[5]; Gold, Ben[2]; Grain, Julien[8]; Grainger, Will[3]; Hanany, Shaul[2]; Helson, Kyle[9]; Hillbrand, Seth N.[1]; Hilton, Gene[10]; Hubmayr, Hannes[2]; Irwin, Kent[10]; Johnson, Bradley[11]; Jaffe, Andrew [12]; Jones, Terry J.[2]; Kisner, Theodore[6]; Klein, Jeffrey[2]; Korotkov, Andrei[9]; Leach, Samuel[4]; Lee, Adrian T.[11]; Levinson, Lorne[13]; Limon, Michele[1]; MacDermid, Kevin[5]; Miller, Amber D.[1]; Milligan, Michael[2]; Pascale, Enzo[3]; Raach, Kate[2]; Reichborn-Kjennerud, Britt[1]; Sagiv, Ilan[13]; Smecher, Graeme[5]; Stompor, Radek[14]; Tristram, Matthieu[15;] Tucker, Gregory S.[9]; Westbrook, Benjamin[11]; Zilic, Kyle[2]

[1.]Columbia University, New York, NY. [2.]University of Minnesota School of Physics and Astronomy, Minneapolis, MN. [3.]Cardiff University, Cardiff, Glamorgan, United Kingdom. [4.]Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Trieste, Italy. [5.]McGill University, Montreal, QC, Canada. [6.]Lawrence Berkeley National Laboratory, Berkeley, CA. [7.]University of California, Berkeley, Space Sciences Lab, Berkeley, CA. [8.]Institut d'Astrophysique Spatiale, Universite Paris-Sud, Orsay, Ile-de-France, France. [9.]Brown University, Providence, RI. [10.]NIST Quantum Devices Group, Boulder, CO. [11.]University of California, Berkeley, Berkeley, CA. [12.]Imperial College, London, Greater London, United Kingdom. [13.]Weizmann Institute of Science, Rehovot, Rehovot, Israel. [14.]CNRS, Laboratoire Astroparticule et Cosmologie (APC), Universite Paris Diderot, Paris, Ile-de-France, France. [15.]Laboratoire de l'Accélérateur Linéaire, Universite Paris-Sud, Orsay, Ile-de-France, France.

407.04D Design of the detectors for EBEX, a balloon-borne cosmic microwave background polarimeter

Westbrook, Benjamin[1, 7]; Aboobaker, Asad M.[2]; Ade, Peter[3]; Aubin, Francois[2]; Baccigalupi, Carlo[4]; Bandura, Kevin[5]; Bao, Chaoyun[2]; Borrill, Julian[6, 7]; Chapman, Daniel [11]; Didier, Joy[11]; Dobbs, Matt[5]; Gold, Ben[2]; Grain, Julien[8]; Grainger, Will[3]; Hanany, Shaul[2]; Helson, Kyle[9]; Hillbrand, Seth N.[11]; Hilton, Gene[10]; Hubmayr, Hannes[10]; Irwin, Kent[10]; Johnson, Bradley[11]; Jaffe, Andrew [12]; Jones, Terry J.[2]; Kisner, Theodore[6]; Klein, Jeff[2]; Korotkov, Andrei[9]; Leach, Samuel[4]; Lee, Adrian T.[1]; Levinson, Lorne[13]; Limon, Michele[11]; MacDermid, Kevin[5]; Miller, Amber D.[11]; Milligan, Michael[2]; Pascale, Enzo[3]; Raach, Kate[2]; Reichborn-Kjennerud, Britt[11]; Sagiv, Ilan[13]; Smecher, Graeme[5]; Stompor, Radek[14]; Tristram, Matthieu[15]; Tucker, Gregory S.[9]; Zilic, Kyle[2]

[1.]UC Berkeley, Berkeley, CA. [2.]University of Minnesota, Minneapolis, MN. [3.]Cardiff University, Cardiff, Glamorgan, United Kingdom. [4.]Scuola Internazionale Superiore di Studi Avanzati (SISSA),, Trieste, Trieste, Italy. [5.]McGill University, Montreal, QC, Canada. [6.]Lawrence Berkeley National Laboratory, Berkeley, CA. [7.]University of California, Berkeley, Space Sciences Lab,, Berkeley, CA. [8.]Institut d'Astrophysique Spatiale, Université Paris-Sud, Orsay, Paris, Île-de-France, France. [9.]Brown University, Providence, RI. [10.]NIST, Boulder, CO. [11.]Columbia University, New York, NY. [12.]Imperial College, London, Greater London, United Kingdom. [13.]Weizmann Institute of Science, Rehovot, Rehovot, Israel. [14.]Laboratoire Astroparticule et Cosmologie (APC), Université Paris, Diderot, Paris, Île-de-France, France. [15.]Laboratoire de l'accélérateur linéaire, Université Paris-Sud [11],Paris, Île-de-France, France.

407.05D The First Season of POLARBEAR Observations

Boettger, David[1]

[1.]University of California, San Diego, San Diego, CA.

Contributing teams: The POLARBEAR Collaboration

408 Dark Matter & Dark Energy I

Thursday, 10:00 AM - 11:30 AM; Maryland Ballroom C

Chair(s):

Rodger Thompson, *Univ. of Arizona*

408.01 Locating the Transition Red Shift from the Scale Factor vs Look-back Time Plot

Ringermacher, Harry I.[1]; Mead, Lawrence R.[1]

[1.]Dept. of Physics & Astronomy, U. of Southern Miss., Hattiesburg, MS.

408.02 Establishing the Robustness of Cosmological Tests of General Relativity to Dark Energy Perturbations

Dossett, Jason[1]; Ishak, Mustapha[2]

[1.]The University of Queensland, St Lucia, QLD, Australia. [2.]The University of Texas at Dallas, Richardson, TX.

408.03 Too Big To Fail: A Sensitive Test of Cosmological Parameters and Dark Matter Properties

Polisensky, Emil[1]; Ricotti, Massimo[2, 3]

[1.]Naval Research Lab., Washington, DC. [2.]University of Maryland, College Park, MD. [3.]Institut Lagrange de Paris, Paris, France.

408.04 Present and future insights into the particle physics of dark matter through strong gravitational lensing observations
Moustakas, Leonidas A.[1]; Cyr-Racine, Francis-Yan[1, 2]; Keeton, Charles R.[3]
[1.]JPL/Caltech, Pasadena, CA. [2.]Keck Institute for Space Studies, Pasadena, CA. [3.]Rutgers, The State University of New Jersey, New Brunswick, NJ.

408.05 Warm Dark Matter N-Body Simulations and the Core-Cusp Problem of Cold Dark Matter
Bozek, Brandon[1]; Wyse, Rosemary F.[1]; Elder, Ben[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]Massachusetts Institute of Technology, Cambridge, MA.

408.06 The Dwarfs Beyond: The Stellar-to-Halo Mass Relation For New Low Mass Galaxies to z~1
Miller, Sarah[1, 2]
[1.]University of California, Irvine, Irvine, CA. [2.]California Institute of Technology, Pasadena, CA.

408.07 Dark Matter Density Profiles in Late-type Dwarfs from Stellar Kinematics
Adams, Joshua J.[1]; Simon, Joshua D.[1]; Fabricius, Maximilian[2]; van den Bosch, Remco[3]; Gebhardt, Karl[4]
[1.]Observatories of the Carnegie Institution of Washington, Pasadena, CA. [2.]Max Planck Institute for Extraterrestrial Physics, Garching, Germany. [3.]Max Planck Institute for Astronomy, Heidelberg, Germany. [4.]University of Texas at Austin, Austin, TX.

408.08 Search for Line Features in Galaxy Clusters with the Fermi-LAT
Anderson, Brandon[1]
[1.]University of Stockholm, Stockholm, Sweden.
Contributing teams: Fermi-LAT Collaboration

408.09 Dark Matter and the Diffuse Galactic Ultraviolet Background
Tyler, Joshua[1]; Overduin, James[1]
[1.]Towson University, Towson, MD.

THURSDAY

409 Debris Disks Around Young Stars and Planet Formation II

Thursday, 10:00 AM - 11:30 AM; National Harbor 12

Chair(s):
Joel Green, *Harvard Smithsonian, CfA*

409.01 Modeling Eccentric Debris Rings with SMACK: Collisions Change Everything
Kuchner, Marc J.[1]; Nesvold, Erika[1]
[1.]NASA's GSFC, Greenbelt, MD.

409.02D Filling in the Gaps: Illuminating Clearing Mechanisms in Transitional Circumstellar Disks
Follette, Katherine B.[1]; Close, Laird M.[1]; Grady, C. A.[2]; Males, Jared[1]
[1.]University of Arizona, Tucson, AZ. [2.]Eureka Scientific, Oakland, CA.
Contributing teams: MagAO team, SEEDS team

409.03 [PZ99] J160421.7-213028, a transition disk with ring shaped dust accumulation
Zhang, Ke[1]; Isella, Andrea[1]; Carpenter, John M.[1]; Blake, Geoffrey A.[1]
[1.]Caltech, Pasadena, CA.

409.05 Carbon but No CO? Circumstellar Gas Absorption in FUV Spectra of the Unusual 49 Ceti Debris Disk
Roberge, Aki[1]; Welsh, Barry[2]; Kamp, Inga[3]; Grady, C. A.[1]; Weinberger, Alycia J.[4]
[1.]NASA GSFC, Greenbelt, MD. [2.]University of California Berkeley, Berkeley, CA. [3.]Kapteyn Institute , Groningen, Netherlands. [4.]Carnegie DTM, Washington, DC.

409.06 Imitation is the sincerest form of flattery: is 49 Ceti the new Beta Pictoris?
Welsh, Barry[1]; Montgomery, Sharon L.[2]; Alu, Dylan[2]; Lallement, Rosine[3]
[1.]UC, Berkeley, Pleasant Hill, CA. [2.]Clarion University, Clarion, PA. [3.]Paris Observatory, Meudon, France.

409.07 Hubble Space Telescope STIS Coronagraphy of WISE Debris Disk Candidates
Padgett, Deborah[1]; Stapelfeldt, Karl R.[1, 2]; Krist, John E.[2]; Liu, Wilson M.[3]; Leisawitz, David[1]; Fajardo-Acosta, Sergio[4]; Debes, John H.[5]
[1.]NASA/Goddard Space Flight Center, Greenbelt, MD. [2.]Jet Propulsion Laboratory, Pasadena, CA. [3.]NOAO, Tucson, AZ. [4.]IPAC, Pasadena, CA. [5.]STScI, Baltimore, MD.

410 Evolution of Nearby Galaxies

Thursday, 10:00 AM - 11:30 AM; Maryland Ballroom D

Chair(s):
Erik Hoversten, *Pennsylvania State University*

410.01 Galaxies as Clocks: the Radius -- Velocity Relationship of HI Rich Galaxies
Meurer, Gerhardt[1]; Obreschkow, Danail[1]; Hanish, Daniel[2]; Wong, Oiwei[3]; Zheng, Zheng[4]; de Blok, Erwin WJG[5]; Thilker, David A.[4]
[1.]ICRAR / U Western Australia, Perth, WA, Australia. [2.]Spitzer Science Center, Caltech, Pasadena, CA. [3.]CSIRO Astronomy & Space Science, Epping, NSW, Australia. [4.]The Johns Hopkins University, Baltimore, MD. [5.]ASTRON, Dwingeloo, Netherlands.
Contributing teams: SINGG Team, SUNGG Team

410.02D High-Resolution HI and CO Observations of HIghMass Galaxies - High HI Mass, HI-rich Galaxies at z~0
Hallenbeck, Gregory[1]
[1.]Cornell University, Ithaca, NY.
Contributing teams: The ALFALFA Team

410.03 A Hard X-ray View of Starburst Galaxies with NuSTAR
Hornschemeier, Ann E.[1, 2]; Wik, Daniel R.[1]; Lehmer, Bret[2, 1]; Ptak, Andrew[1, 2]; Antoniou, Vallia[3]; Argo, Megan[4]; Bechtol, Keith[5]; Harrison, Fiona[6]; Krivonos, Roman[7]; Leyder, Jean-Christophe[1]; Maccarone, Tom[8]; Stern, Daniel[9]; Venters, Tonia M.[1]; Yukita, Mihoko[2, 1]; Zezas, Andreas[3]; Zhang, William[1]
[1.]NASA GSFC, Greenbelt, MD. [2.]Johns Hopkins University, Baltimore, MD. [3.]Smithsonian Astrophysical Observatory, Cambridge, MA. [4.]ASTRON, Dwingeloo, Netherlands. [5.]Kavli Institute for Cosmological Physics, Chicago, IL. [6.]Caltech, Pasadena, CA. [7.]UC Berkeley, Berkeley, CA. [8.]Texas Tech University, Lubbock, TX. [9.]NASA JPL, Pasadena, CA.
Contributing teams: NuSTAR Team

410.04 Starburst Galaxy NGC 253 in a Hard (X-ray) Light: Resolving its Emission with NuSTAR
Wik, Daniel R.[1, 2]; Lehmer, Bret[2, 1]; Yukita, Mihoko[2, 1]; Hornschemeier, Ann E.[1, 2]; Ptak, Andrew[1, 2]; Zezas, Andreas[3]; Bechtol, Keith[4]; Venters, Tonia M.[1]; Argo, Megan[5]; Antoniou, Vallia[3]; Harrison, Fiona[6]; Krivonos, Roman[7]; Leyder, Jean-Christophe[1]; Maccarone, Thomas J.[8]; Stern, Daniel[9]; Zhang, William[1]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]Johns Hopkins University, Baltimore, MD. [3.]Smithsonian Astrophysical Observatory, Cambridge, MA. [4.]Kavli Institute for Cosmological Physics, Chicago, IL. [5.]ASTRON, Dwingeloo, Netherlands. [6.]Caltech, Pasadena, CA. [7.]UC Berkeley, Berkeley, CA. [8.]Texas Tech University, Lubbock, TX. [9.]NASA JPL, Pasadena, CA.
Contributing teams: NuSTAR Team

410.05D The Dynamics and Cold Gas Content of Luminous Infrared Galaxies in the Local Universe
Privon, George C.[1]
[1.]University of Virginia, Charlottesville, VA.

411 Extrasolar Planet Detection - Ground-Based Observations

Thursday, 10:00 AM - 11:30 AM; Maryland Ballroom A

Chair(s):
Peter McCullough, *STScI*

411.01D Results and Lessons Learned From the KELT-North Wide-angle Transit Survey of Bright Stars
Beatty, Thomas G.[1]
[1.]Ohio State University, Columbus, OH.

411.02 Observation of a Transit Ingress of HD 80606b in Polarized Light
Wiktorowicz, Sloane[1]; Laughlin, Gregory P.[1]
[1.]University of California, Santa Cruz, Santa Cruz, CA.

411.03 Limits on Stellar Companions to Exoplanet Host Stars With Eccentric Planets
Kane, Stephen R.[1]; Howell, Steve B.[2]; Horch, Elliott[3]; Ciardi, David R.[4]; Howard, Andrew[5]; Feng, Ying[6]; Wright, Jason[6]
[1.]San Francisco State University, San Francisco, CA. [2.]NASA Ames Research Center, Moffett Field, CA. [3.]Southern Connecticut State University, New Haven, CT. [4.]California Institute of Technology, Pasadena, CA. [5.]University of Hawaii, Honolulu, HI. [6.]Pennsylvania State University, University Park, PA.

411.04 Search for Magnetospheric Radio Emissions from Upsilon Andromeda
Winterhalter, Daniel[1]; Majid, Walid A.[1]; Knapp, Mary[2]; Chandra, Ishwar[3]
[1.]Jet Propulsion Laboratory, California Institute of Technology, Pasadena, CA. [2.]Massachusetts Institute of Technology, Cambridge, MA. [3.]National Center for Radio Astrophysics, Pune, Maharashtra, India.

412 Galaxy Clusters in the X-rays

Thursday, 10:00 AM - 11:30 AM; National Harbor 5

Chair(s):
Mark Bautz, *MIT*

412.01 Some Like It Hot: Linking Diffuse X-ray Luminosity, Baryonic Mass, and Star Formation Rate in Compact Groups of Galaxies
Desjardins, Tyler D.[1]; Gallagher, Sarah[1]; Hornschemeier, Ann E.[2]; Mulchaey, John S.[3]; Walker, Lisa May[4]; Brandt, W. N.[5]; Charlton, Jane C.[5]; Johnson, Kelsey E.[4]; Tzanavaris, Panayiotis[2, 6]
[1.]Department of Physics and Astronomy, The University of Western Ontario, London, ON, Canada. [2.]Laboratory for X-ray Astrophysics, NASA/Goddard Space Flight Center, Greenbelt, MD. [3.]Carnegie Observatories, Pasadena, CA. [4.]Department of Astronomy, University of Virginia, Charlottesville, VA. [5.]Department of Astronomy and Astrophysics, The Pennsylvania State University, University Park, PA. [6.]Department of Physics and Astronomy, The Johns Hopkins University, Baltimore, MD.

412.02 X-ray scaling relations in Compact Group Galaxies: Compact Object Populations with Chandra
Tzanavaris, Panayiotis[1, 2]; Brandt, W. N.[4]; Johnson, Kelsey E.[5]; Charlton, Jane C.[4]; Gallagher, Sarah[3]; Desjardins, Tyler D.[3]; Lenkic, Laura[3]
[1.]NASA Goddard Space Flight Center, Greenelt, MD. [2.]Johns Hopkins University, Baltimore, MD. [3.]University of Western Ontario, London, ON, Canada. [4.]The Pennsylvania State University, University Park, PA. [5.]University of Virginia, Charlottesville, VA.

412.03D A Comprehensive Study of the Outskirts of Galaxy Clusters
George, Jithin V.[1]; Mushotzky, Richard[1]; Miller, Eric D.[2]
[1.]University of Maryland, Seabrook, MD. [2.]MIT, Cambridge, MA.

412.04 Probing X-Ray Mass-Temperature Relation and Gas Mass Fraction with A Chandra Sample of 350 Galaxy Clusters and Groups out to z $\simeq$ 1.4
Wang, Jingying[1]
[1.]Shanghai Jiao Tong University, Shanghai, China.

412.05 Joint Constraints on Concentration, Slope, and Nonthermal Pressure Support in X-ray and Weak Lensing Observations of Galaxy Clusters
Mahdavi, Andisheh[1]; Hoekstra, Henk[2]; Babul, Arif[3]; Berti, Angela[1]
[1.]San Francisco State University, San Francisco, CA. [2.]Sterrewacht Leiden, Amsterdam, Netherlands. [3.]University of Victoria, Victoria, BC, Canada.

412.06 Quantifying Substructure Measures In X-ray Images of Galaxy Cluster Mergers With SLAM
Chatzikos, Marios[1]; Sarazin, Craig L.[2]; O'Shea, Brian W.[3]
[1.]Univ. of Kentucky, Lexington, KY. [2.]University of Virginia, Charlottesville, VA. [3.]Michigan State University, East Lansing, MI.

413 Public Policy

Thursday, 10:00 AM - 11:30 AM; National Harbor 2

Chair(s):
Harold Geller, *George Mason University*

413.02 An Astronomer's View of Climate Change
Morton, Donald C.[1]
[1.]National Research Council of Canada, Herzberg Astronomy and Astrophysics Programs, Victoria, BC, Canada.

413.03 The IAU Office of Astronomy Development
Mauduit, Jean-Christophe[1]; Govender, Kevin[1]
[1.]International Astronomical Union, Office of Astronomy for Development, Cape Town, Western Cape, South Africa.

413.04 Dark Skies Yuma: An NOAO and APS Program on Light Pollution Education
Pompea, Stephen M.[1]; Walker, Constance E.[1]; Dugan, Chuck[1]; Roddy, William T.[2]; Newhouse, Mark[1]
[1.]NOAO, Tucson, AZ. [2.]University of Arizona, Tucson, AZ.

413.05 Progress in Dark Sky Protection in Southern Arizona
Green, Richard F.[1, 2]; Allen, Lori[2, 11]; Alvarez Del Castillo, Elizabeth M.[3]; Brocious, Daniel K.[4]; Corbally, Christopher J.[5]; Davis, Donald R.[6]; Falco, Emilio E.[4]; Gabor, Paul[5]; Hall, Jeffrey C.[7]; Jannuzi, Buell[1, 13]; Larson, Stephen M.[8, 13]; Mighell, Kenneth J.[11]; Nance, Craig[9, 1]; Shankland, Paul D.[10]; Walker, Constance E.[11]; Williams, G. Grant[12, 1]; Zaritsky, Dennis F.[1]
[1.]Steward Observatory, Tucson, AZ. [2.]Kitt Peak National Observatory, Tucson, AZ. [3.]AdC Consulting, Tucson, AZ. [4.]Smithsonian Astrophysical Observatory, Tucson, AZ. [5.]Vatican Observatory, Tucson, AZ. [6.]Planetary Sciences Institute, Tucson, AZ. [7.]Lowell Observatory, Flagstaff, AZ. [8.]Lunar & Plantetary Laboratory, Tucson, AZ. [9.]Mt. Graham International Observatory, Tucson, AZ. [10.]U.S. Naval Observatory, Flagstaff, AZ. [11.]National Optical Astronomy Observatory, Tucson, AZ. [12.]MMT Observatory, Tucson, AZ. [13.]University of Arizona, Tucson, AZ.

413.06 Recent Local and State Action in Arizona to Maintain Sky Quality
Hall, Jeffrey C.[1]; Shankland, Paul D.[2]; Green, Richard F.[3]; Jannuzi, Buell[3]
[1.]Lowell Obs., Flagstaff, AZ. [2.]United States Naval Observatory, Flagstaff, AZ. [3.]Steward Observatory, Tucson, AZ.

413.07 IAU Commission 50 on Astronomical Site Protection
Walker, Constance E.[1]; Green, Richard F.[2]
[1.]NOAO, Tucson, AZ. [2.]Univ. of Arizona, Tucson, AZ.

414 Science Highlights from NASA's Astrophysics Data Analysis Program

Thursday, 10:00 AM - 11:30 AM; Potomac Ballroom A

Over the years, NASA has invested heavily in the development and execution of an extensive array of space astrophysics missions that span the electromagnetic spectrum. The magnitude and scope of the archival data from those missions enables science that transcends traditional wavelength regimes and allows researchers to answer questions that would be difficult, if not impossible, to address through an individual observing program. To capitalize on this invaluable asset and enhance the scientific return on NASA mission investments, the Astrophysics Data Analysis Program (ADAP) provides support for investigations whose focus is on the analysis of archival data from NASA space astrophysics missions. This session highlights recent research results in the general area of galactic astrophysics from investigators supported under the ADAP Program.

415 Stellar Evolution I

Thursday, 10:00 AM - 11:30 AM; Potomac Ballroom C

Chair(s):
John Martin, *University of Illinois Springfield*

415.01D Stellar Ages from Rotation and Asteroseismology
Epstein, Courtney R.[1]
[1.]Ohio State University, Columbus, OH.

415.02 Characterization of Kepler Exoplanet Host Stars
Howell, Steve B.[1]; Everett, Mark[2]; Ciardi, David R.[3]; Silva, David[2]; Szkody, Paula[4]
[1.]NASA ARC, Moffett Field, CA. [2.]NOAO, tucson, AZ. [3.]NASA Exoplanet Archive, pasadena, CA. [4.]University of Washington, seattle, WA.

415.03D Variability of Elemental Abundances in the Local Neighborhood and its Effect on Planetary Systems
Pagano, Michael D.[1]; Young, Patrick A.[1]
[1.]Arizona State University, Tempe, AZ.

415.04D Better Stars, Better Planets: Using Stellar Rotation to Refine Estimates of Stellar Parameters
Van Saders, Jennifer[1]
[1.]The Ohio State University, Columbus, OH.

415.05 Implementing New Semi-Convection and Overshooting Prescriptions in KEPLER
Brown, Justin[1]; Garaud, Pascale[1]; Woosley, Stan E.[1]
[1.]University of California - Santa Cruz, Santa Cruz, CA.

415.06 In situ Ca and Mg abundancies in the stellar halo of the Galaxy
Fernandez-Alvar, Emma[1]; Allende-Prieto, Carlos[1]
[1.]Instituto de Astrofísica de Canarias, La Laguna, Tenerife, Spain.

416 The Nuclear Spectroscopic Telescope Array (NuSTAR)

Thursday, 10:00 AM - 11:30 AM; Potomac Ballroom D

The Nuclear Spectroscopic Telescope Array (NuSTAR), launched on 2012 June 13, is the first focussing hard X-ray mission in orbit. With approximately 10 times greater spatial resolution and more than 100 times greater sensitivity than previous missions in this energy band, NuSTAR has opened the high-energy sky to sensitive study. Over the first year of the mission, NuSTAR has undertaken a range of studies, from observations of energetic events towards the center of the Milky Way galaxy to detailed studies of distant supermassive black holes. During our Special Session we will describe the status and performance of NuSTAR, and present science results from the first 18 months in orbit.

Chair(s):
Daniel Stern, *JPL/ Caltech*
Organizer(s):
Daniel Stern, *JPL/ Caltech*

416.01 The Nuclear Spectroscopic Telescope Array (NuSTAR)
Stern, Daniel[1]
[1.]JPL/ Caltech, Pasadena, CA.
Contributing teams: NuSTAR Team

416.02 NuSTAR Observations of the Cassiopeia A Supernova Remnant
Grefenstette, Brian[1]
[1.]California Institute of Technology, Pasadena, CA.
Contributing teams: The NuSTAR Team

416.03 NuSTAR Reveals Intrinsically X-ray Weak Broad Absorption Line (BAL) Quasars
Teng, Stacy H.[1]; Brandt, W. N.[2]; Luo, Bin[2]; Harrison, Fiona[3]
[1.]NASA/GSFC, Greenbelt, MD. [2.]Penn State University, University Park, PA. [3.]Caltech, Pasadena, CA.
Contributing teams: The NuSTAR Science Team

416.04 The NuSTAR Black Hole Spin Program
Walton, Dom[1]
[1.]Caltech, Pasadena, CA.
Contributing teams: The NuSTAR Team

416.05 A first look at the distant high energy X-ray population with NuSTAR
Civano, Francesca M.[1, 2]
[1.]Dartmouth College, Cambridge, MA. [2.]SAO, Cambridge, MA.
Contributing teams: the NuSTAR Team

THURSDAY

417 Young Stellar Objects I

Thursday, 10:00 AM - 11:30 AM; National Harbor 4

Chair(s):
Lisa Prato*, Lowell Observatory*

417.01 VLA and CARMA Observations of Binaries and Disks in the Protostellar Phase
Tobin, John J.[1]
[1.]National Radio Astronomy Observatory, Charlottesville, VA.

417.02 Connecting diverse molecular cloud environments with nascent protostars in Orion
Stutz, Amelia M.[2, 1]; Megeath, S. Thomas[3]; Fischer, William J.[3]; Ali, Babar[6]; Furlan, Elise[7, 6]; Tobin, John J.[4]; Stanke, Thomas[5]; Henning, Thomas[2]; Krause, Oliver[2]; Puravankara, Manoj[9]; Osorio, Mayra[8]; Robitaille, Thomas[2]
[1.]University of Arizona/Steward Observatory, Tucson, AZ. [2.]MPIA, Heidelberg, Germany. [3.]University of Toledo, Toledo, OH. [4.]NRAO, Charlottesville, VA. [5.]ESO, Garching, Germany. [6.]NHSC, Pasadena, CA. [7.]NOAO, Tucson, AZ. [8.]IAA/CSIC, Granada, Andalucia, Spain. [9.]TIFR, Mumbai, India.
Contributing teams: HOPS team

417.03 YSOVAR: Infrared Reverberation Mapping of a Protoplanetary Disk
Meng, Huan[1, 2]; Plavchan, Peter[1]; Gueth, Tina[3]; Stauffer, John R.[4]; Covey, Kevin[5]; Akeson, Rachel L.[1]; Carey, Sean J.[4]; Carpenter, John M.[6]; Ciardi, David R.[1]; Gutermuth, Robert A.[7]; Ogle, Patrick M.[4]; Rebull, Luisa M.[4]; Stapelfeldt, Karl R.[8]; Whitney, Barbara[9]; Morales-Calderon, Maria[10]; Watson, Alan[11]; Cody, Ann Marie[1]; Rieke, George[2]; Flaherty, Kevin M.[2, 12]
[1.]IPAC, Caltech, Pasadena, CA. [2.]University of Arizona, Tucson, AZ. [3.]New Mexico Institute of Mining and Technology, Socorro, NM. [4.]Spitzer Science Center, Pasadena, CA. [5.]Lowell Observatory, Flagstaff, AZ. [6.]Caltech, Pasadena, CA. [7.]University of Massachusetts, Amherst, MA. [8.]NASA Goddard Space Flight Center, Greenbelt, MD. [9.]University of Wisconsin, Madison, Madison, WI. [10.]Centro de Astrobiología, Villanueva de la Canada, Madrid, Spain. [11.]Universidad Nacional Autonoma de Mexico, Morelia, Michoacan, Mexico. [12.]Wesleyan University, Middletown, CT.
Contributing teams: YSOVAR Collaboration

417.04D Signatures of disk structure from line profile variability
Powell, Stacie[1]; Latham, David W.[2]; Irwin, Michael[1]; Bouvier, Jerome[3]; Clarke, Cathie[1]; Facchini, Stefano[1]
[1.]Institute of Astronomy, University of Cambridge, Cambridge, Cambridgeshire, United Kingdom. [2.]Harvard-Smithsonian CfA, Boston, MA. 3.IPAG, Grenoble, France.

417.05D Probing Young Star Physics with Aperiodic Variability
Findeisen, Krzysztof[1]
[1.]Caltech, Pasadena, CA.

417.06D OBSERVATIONS OF WARM WATER AND VOLATILES IN YOUNG PROTOPLANETARY DISKS, AND THE CONNECTION TO DISK EVOLUTION AND PLANET FORMATION
Banzatti, Andrea[1, 2]; Meyer, Michael[2]; Pontoppidan, Klaus[1]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]ETH Zurich, Zurich, Switzerland.

418 An Astronomical Time Machine: Light Echoes from Historic Supernovae and Stellar Eruptions

Thursday, 11:40 AM - 12:30 PM; Potomac Ballroom A

Chair(s):
Paula Szkody

418.01 An Astronomical Time Machine: Light Echoes from Historic Supernovae and Stellar Eruptions
Rest, Armin[1]
[1.]*Space Telescope Science Institute, Timonium, MD.*

Career Hour 6: Negotiation Strategy and Tactics

Thursday, 12:30 PM - 1:30 PM; National Harbor 2

Did you know that the salary of your very first job after graduation or your postdoc determines your salaries for the rest of your life? Learn how to create a win-win situation and negotiate right from start to finish in the job decision process. Clarifying your needs and wants, and those of the other party are key. The negotiation skills you learn are valuable in that they can be applied to any situation in your professional (and even personal) life. Audience: students, postdocs, early- and mid-career professionals Facilitator: Alaina G. Levine, President, Quantum Success Solutions Alaina G. Levine is a science careers consultant, science writer, and professional speaker and comedian. Her new book on networking strategies for scientists and engineers will be published by Wiley in 2014.

Chair(s):
Alaina Levine, *Quantum Success Solutions*
Organizer(s):
Kelle Cruz, *Hunter College/CUNY and AMNH*

419 Giant Magellan Telescope Organization Town Hall

Thursday, 12:45 PM - 1:45 PM; National Harbor 3

The GMT Project will hold a town hall to inform the AAS community regarding the status of the project and opportunities for participation in large-scale science projects. We will make short presentations on the status of the project and two science areas. These presentations will be followed by an open discussion of opportunities for community involvement. Members of the GMT Board and project team will be on hand as will members of the instrument science teams.

Chair(s):
Patrick McCarthy, *GMTO*
Organizer(s):
Patrick McCarthy, *GMTO*

420 Transforming NOAO, A Town Hall Discussion

Thursday, 12:45 PM - 1:45 PM; Maryland Ballroom C

The NSF Astronomy Division has begun to clarify the mission and scope of NOAO in the post Portfolio Review era. Please come and hear about the emerging plans to transform NOAO in the coming years. We invite the community to provide input and commentary as NOAO embarks on a process of change toward large data science in the era of DES, DESI, and LSST.

Chair(s):
David Silva, *National Optical Astronomy Observatory*

Afternoon Poster Session

Thursday, 1:00 PM - 2:00 PM; Exhibit Hall ABC

421 AGN at Radio to IR Wavelengths

Thursday, 2:00 PM - 3:30 PM; National Harbor 11

Chair(s):
Laura Brenneman, *Harvard-Smithsonian Center for Astrophysics*

421.01 Widefield Surveys of the Low-Frequency Radio Sky with the Murchison Widefield Array
Morgan, John[1]; Hurley-Walker, Natasha[1]; Wayth, Randall1
[1.] Curtin University, Perth, WA, Australia.
Contributing teams: MWA

421.02 Millimeter Properties of Radio Sources and the Sunyaev-Zel'dovich Effect
Gralla, Megan B.[1]; Crichton, Devin[1]; Marriage, Tobias[1]
[1.] Johns Hopkins University, Baltimore, MD.
Contributing teams: ACT Collaboration, HerMES Collaboration

421.03 Search for unassociated Fermi sources
Petrov, Leonid[1]; Schinzel, Frank[2]; Edwards, Phillip[4]; Mahony, Elizabeth[3]; Sadler, Elaine[5]; McConnell, David[4]; Taylor, Gregory B.[2]
[1.] Astrogeo Center, Falls Church, VA. [2.] University of New Mexico, Albuquerque, NM. [3.] ASTRON, the Netherlands Institute for Radio Astronomy, Dwingeloo, Netherlands. [4.] CSIRO Astronomy and Space Science, Epping, NSW, Australia. [5.] The University of Sydney, Sydney, NSW, Australia.

421.04 RadioAstron Measurement of High Brightness Temperature of 3C 273
Kellermann, Kenneth I.[1]
[1.] NRAO, Charlottesville, VA.
Contributing teams: RadioAstron AGN Early Science Team

421.05 Detection of a High Brightness Temperature Radio Core in the AGN-Driven Molecular Outflow Candidate NGC 1266
Nyland, Kristina[1]; Alatalo, Katherine A.[2, 3]; Young, Lisa[1]; Wrobel, J. M.[4]; Morganti, Raffaella[5, 6]; Davis, Timothy[7]; de Zeeuw, P. T.[7, 8]; Deustua, Susana E.[9]; Bureau, Martin[10]
[1.]New Mexico Tech, Socorro, NM. [2.]Infrared Processing and Analysis Center, Caltech, Pasadena, CA. [3.]University of California, Berkeley, CA. [4.]National Radio Astronomy Observatory, Socorro, NM. [5.]Netherlands Institute for Radio Astronomy, Dwingeloo, Netherlands. [6.]Kapteyn Astronomical Institute, Groningen, Netherlands. [7.]European Southern Observatory, Garching, Germany. [8.]Sterrewacht Leiden, Leiden, Netherlands. [9.]Space Telescope Science Institute, Baltimore, MD. [10.]University of Oxford, Oxford, United Kingdom.

421.06 RoboPol: AGN optical linear polarization monitoring
King, Oliver G.[1]
[1.]California Institute of Technology, Pasadena, CA.
Contributing teams: The RoboPol collaboration

421.07 Newly Discovered AGN and their Multi-year Light Curves from Kepler
Shaya, Edward J.[1]; Olling, Robert[1]; Mushotzky, Richard[1]
[1.]Univ. of Maryland, College Park, MD.

422 Binary Systems - ULXs and Stellar Collisions

Thursday, 2:00 PM - 3:30 PM; Maryland 2

Chair(s):
Geraldine Peters, *Univ. of Southern California*

422.01D Probing the nature of ultraluminous X-ray sources through fast (a few milliseconds) and slow (a few years) X-ray variability
Dheeraj, Pasham[1, 2]
[1.]University of Maryland College Park, College park, MD. [2.]NASA/GSFC, Greenbelt, MD.

422.02 An Environmental Study of the Ultraluminous X-ray Source Population in Early-type Galaxies
Plotkin, Richard[1]; Gallo, Elena[1]; Miller, Brendan P.[2, 1]; Baldassare, Vivienne[1]; Treu, Tommaso[3]; Woo, Jong-Hak[4]
[1.]Astronomy, University of Michigan, Ann Arbor, MI. [2.]Macalester College, Saint Paul, MN. [3.]University of California Santa Barbara, Santa Barbara, CA. [4.]Seoul National University, Seoul, Korea, Republic of.

422.03D Observations and Origins of the Hot DQ White Dwarf Stars
Dunlap, Bart H.[1]
[1.]University of North Carolina at Chapel Hill, Chapel Hill, NC.

422.04 More than scratching the surface: dredge-up in simulations of double white dwarf mergers
Motl, Patrick M.[1]; Staff, Jan E.[2]; Raskin, Cody[3]; Marcello, Dominic[4]; Clayton, Geoffrey C.[4]; Fryer, Chris[5]; Frank, Juhan[4]
[1.]Indiana University Kokomo, Kokomo, IN. [2.]Macquarie University, Sydney, NSW, Australia. [3.]Lawrence Berkeley National Laboratory, Berkeley, CA. [4.]Louisiana State University, Baton Rouge, LA. [5.]Los Alamos National Laboratory, Los Alamos, NM.

422.05 Stellar Collisions within Very Wide Binaries
Kaib, Nathan A.[1]; Raymond, Sean N.[2, 3]
[1.]Northwestern University, Evanston, IL. [2.]Univ. Bordeaux, Foirac, France. [3.]CNRS, LAB, Foirac, France.

423 Black Holes II

Thursday, 2:00 PM - 3:30 PM; National Harbor 10

Chair(s):
Steven Kraemer, *Catholic University of America*

423.01 Chandra and XMM-Newton identify ~50 black hole binary candidates in M31
Barnard, Robin[1]; Primini, Frank[1]; Murray, Stephen S.[2, 1]; Garcia, Michael R.[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Johns Hopkins University, Baltimore, MD.

423.02 Modeling Hot Gas Flow in the Low-Luminosity Active Galactic Nucleus of NGC3115
Shcherbakov, Roman V.[1, 2]; Wong, Ka-Wah[3]; Irwin, Jimmy[3]; Reynolds, Christopher S.[1, 2]
[1.]University of Maryland, College Park, MD. [2.]Joint Space Science Institute, College Park, MD. [3.]University of Alabama, Tuscaloosa, AL.

423.03 Modeling Single and Dual Narrow-Line Active Galactic Nuclei
Blecha, Laura[1]
[1.]Univ. of Maryland - College Park, College Park, MD.

423.04D Outflows from Accreting Black Holes Across the Mass Scale.
King, Ashley L.[1]
[1.]University of Michigan, Ann Arbor, MI.

423.05 Local Supermassive Black Hole Scaling Relations Imply Compton Thick or Super Eddington Accretion
Novak, Gregory[1]
[1.]Paris Observatory, Paris, France.

423.06 X-ray Constraints on the Local Supermassive Black Hole Occupation Fraction
Miller, Brendan P.[2, 1]; Gallo, Elena[1]; Greene, Jenny E.[3]; Kelly, Brandon C.[4]; Treu, Tommaso[4]; Woo, Jong-Hak[5]; Baldassare, Vivienne[1]
[1.]University of Michigan, Ann Arbor, MI. [2.]Macalester College, Saint Paul, MN. [3.]Princeton University, Princeton, NJ. [4.]UCSB, Santa Barbara, CA. [5.]Seoul National University, Seoul, Korea, Republic of.

423.07 The formation of rare massive black holes at redshift 30
Tanaka, Takamitsu[1]; Li, Miao[2]
[1.]Max Planck Institute for Astrophysics, Garching, Germany. [2.]Columbia University, New York, NY.

424 Circumstellar Disk Topics with some Evolved Star Talks to Boot

Thursday, 2:00 PM - 3:30 PM; Maryland Ballroom B

Chair(s):
Margaret Moerchen, *Space Telescope Science Institute*

424.01 Evolution of Stellar Coronae: From the Sun to a Red Giant
Airapetian, Vladimir[1, 2]; Leake, James E.[2]; Carpenter, Kenneth G.[3]
[1.]Sigma Space/NASA/GSFC, Greenbelt, MD. [2.]George Mason University, Fairfax, VA. [3.]NASA/GSFC, Greeenbelt, MD.

424.02D Toward Unraveling the Nature of the Mysterious 21 and 30 Micrometer Emission Features of Evolved Stars
Mishra, Ajay[1, 2]; Li, Aigen[1, 2]
[1.]University of Missouri, Columbia, MO. [2.]University of Missouri, Columbia, MO.

424.03 Formation of Jets and Vortices on Brown Dwarfs
Zhang, Xi[1]; Showman, Adam P.[1]
[1.]University of Arizona, Tucson, AZ.

424.04 Searching for spectroscopic binaries within transition disk objects
Kohn, Saul[1]; Shkolnik, Evgenya[2]; Weinberger, Alycia J.[3]; Carlberg, Joleen K.[3]
[1.]University of Edinburgh, Edinburgh, Midlothian, United Kingdom. [2.]Lowell Obsevatory, Flagstaff, AZ. [3.]Carnegie Institution of Washington, Washington, DC.

424.05D Peering into Terrestrial Planet Formation: New Studies of Young Debris Disks
Donaldson, Jessica[1]; Roberge, Aki[2]
[1.]University of Maryland, College Park, MD. [2.]NASA/GSFC, Greenbelt, MD.
Contributing teams: Herschel GASPS Team

424.06 STIS High Contrast Imaging of HD 15745 on Solar System Scales: Inspecting the Fan
Debes, John H.[1]; Nunez-Quiroga, Luis[2]; Schneider, Glenn[3]; Carson, Joseph[4]; Goto, Miwa[5]; Grady, Carol A.[6]; Henning, Thomas[5]; Hines, Dean C.[1]; Hinz, Phil[3]; Jang-Condell, Hannah[7]; Kuchner, Marc J.[8]; Moro-Martin, Amaya[9]; Perrin, Marshall D.[1]; Rodigas, T. J.[11]; Serabyn, Gene[10]; Stark, Christopher C.[8]; Tamura, Motohide[12]; Weinberger, Alycia J.[11]; Wisniewski, John P.[13]; Woodgate, Bruce E.[8]
[1.]STScI, Baltimore, MD. [2.]University of Leiden, Leiden, Netherlands. [3.]University of Arizona, Tuscon, AZ. [4.]College of Charlston, Charleston, NC. [5.]MPIA, Heidelberg, Germany. [6.]Eureka Scientific, Oakland, CA. [7.]University of Wyoming, Laramie, WY. [8.]NASA/GSFC, Greenbelt, MD. [9.]CISC-INTA, Granada, Spain. [10.]JPL/Caltech, Pasadena, CA. [11.]CIW/DTM, Washington, DC. [12.]NAOJ, Tokyo, Japan. [13.]University of Washington, Seattle, WA.

424.07 Accretion as a function of Orbital Phase in Young Close Binaries.
Ardila, David R.[1]; Herczeg, Gregory[2]; Johns-Krull, Christopher M.[4]; Mathieu, Robert D.[3]; Vodniza, Alberto[5]; Tofflemire, Benjamin M.[3]
[1.]NHSC / Caltech, Pasadena, CA. [2.]The Kavli Institute for Astronomy and Astrophysics, Beijing, China. [3.]University of Wisconsin at Madison, Madison, WI. [4.]Rice University, Houston, TX. [5.]University of Narino Observatory, Pasto, Colombia.

425 Clouds in Brown Dwarfs and Giant Planets

Thursday, 2:00 PM - 3:30 PM; National Harbor 3

Clouds play an important role in shaping the emergent spectra of both brown dwarfs and exoplanets. Our poor understanding of the cloud properties (e.g. vertical extent, particle size distribution, and coverage fraction) severely limits our ability to estimate the fundamental physical parameters of brown dwarfs and giant planets. For example, the inferred effective temperatures of the 2M1207b and HR8799 planets differ by up to 600 K depending on the flavor of the cloud models. Atmospheric condensates are also well recognized as a limiting factor in explaining the M/L, L/T, and T/Y spectral type transitions. Periodic variability in cool brown dwarfs, likely caused by uneven cloud coverage, provides a convenient probe of the cloud structure in rotating substellar atmospheres. Mapping the time evolution of cloud-induced variability in brown dwarfs also provides a novel way to study atmospheric circulation in non-irradiated ultracool atmospheres: a regime not accessible from observations of hot Jupiter-type transiting planets. The proposed Special Session shines a timely spotlight on this new approach to exploring ultra-cool atmospheres enabled by recent breakthroughs in precision photometry. On-going ground- and space-based surveys are using this technique to systematically study large samples of brown dwarfs. Several among the invited and confirmed speakers are leading large Spitzer and HST programs to study this phenomenon (3,000+ Spitzer hours and 100+ HST orbits). By the time of the January 2014 AAS meeting, most data will have been obtained and the results can be presented in press releases. The pressing interest in unraveling the cloud structure of directly imaged extrasolar planets and cool brown dwarfs makes the Session broadly relevant to the wider substellar astrophysics community. Through a series of short, exciting talks the community will share in the newest, unpublished results from this rapidly developing field.

Chair(s):
Stanimir Metchev, *SUNY Stony Brook*
Organizer(s):
Stanimir Metchev, *SUNY Stony Brook*

425.01 Clouds and Binaries Across the L/T Transition
Burgasser, Adam J.[1]
[1.] UC San Diego, La Jolla, CA.

425.02 Brown Dwarf Variability: What's Varying and Why?
Marley, Mark S.[1]
[1.] NASA Ames Research Center, Moffett Field, CA.

425.03 Brown Dwarf Variability: Past, Present, and Future
Radigan, Jacqueline[1]
[1.] STScI, Baltimore, MD.

425.04 Weather on Other Worlds: Results from Variability Monitoring of an Unbiased Sample of L and T Dwarfs with Spitzer
Metchev, Stanimir A.[1, 2]
[1.] University of Western Ontario, London, ON, Canada. [2.] Stony Brook University, Stony Brook, NY.
Contributing teams: Weather on Other Worlds Spitzer Exploration Science Team

425.05 Spectral Mapping and Long-Term Monitoring: Details and Dynamics of Condensate Cloud Layers

Apai, Daniel[1]; Buenzli, Esther[4]; Flateau, Davin C.[1]; Metchev, Stanimir[3]; Radigan, Jacqueline[2]; Marley, Mark S.[7]; Showman, Adam P.[1]; Reid, Iain N.[2]; Yang, Hao[1]; Heinze, Aren[6]; Karalidi, Theodora[1]; Burgasser, Adam J.[10]; Lowrance, Patrick[8]; Artigau, Etienne[9]; Mohanty, Subhanjoy[5]

[1.]The University of Arizona, Tucson, AZ. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]Western University, London, ON, Canada. [4.]Max Planck Institute for Astronomy, Heidelberg, Germany. [5.]Imperial College, London, United Kingdom. [6.]Stony Brook University, New York, NY. [7.]NASA Ames, Mountain View, CA. [8.]Spitzer Science Center, Pasadena, CA. [9.]University of Montreal, Montreal, QC, Canada. [10.]University of California, San Diego, San Diego, CA.

Contributing teams: Spitzer Exploration Science Team: Extrasolar Storms

425.06 Mapping Clouds on Brown Dwarfs

Crossfield, Ian[1]; Biller, Beth[1, 2]; Schlieder, Josh[1]; Deacon, Niall[1]; Bonnefoy, Mickael[1]; Homeier, Derek[3]; Allard, France[3]; Buenzli, Esther[1]; Henning, Thomas[1]; Brandner, Wolfgang[1]; Goldman, Bertrand[1]; Kopytova, Taisiya[1, 4]

[1.]MPIA, Heidelberg, Germany. [2.]Institute for Astronomy, Edinburgh, United Kingdom. [3.]CRAL-ENS, Lyon, France. [4.]IMPRS, Heidelberg, Germany.

425.07 Atmospheric Dynamics of Brown Dwarfs and Directly Imaged Giant Planets

Showman, Adam P.[1]; Kaspi, Yohai[2]

[1.]Univ. Of Arizona, Tucson, AZ. [2.]Weizmann Institute of Science, Rehovot, Israel.

425.08 Are Y Dwarfs Partly Cloudy?

Cushing, Michael[1]

[1.]University of Toledo, Toledo, OH.

Contributing teams: Kevin Hardegree-Ullman, Jesica Trucks

425.09 A Mid-Infrared View of Clouds on Extrasolar Planets

Skemer, Andy[1]

[1.]University of Arizona, Tucson, AZ.

426 Cosmology & CMB VI

Thursday, 2:00 PM - 3:30 PM; National Harbor 13

Chair(s):
Renee Hlozek, *Princeton University*

426.01D Intrinsic alignments: cosmology from the large scales & constraining the non-linear regime

Chisari, Nora Elisa[1]; Dvorkin, Cora[2]; Mandelbaum, Rachel[3]; Strauss, Michael A.[1]; Bahcall, Neta A.[1]; Huff, Eric M.[4]

[1.]Princeton University, Princeton, NJ. [2.]Institute for Advanced Study, Princeton, NJ. [3.]Carnegie Mellon University, Pittsburgh, PA. [4.]CCAPP, Ohio State University, Columbus, OH.

426.02 The Effects of Halo Environment on Halo Occupation Distributions and the Galaxy-Galaxy Correlation Function.

Mehta, Kushal[1]; Eisenstein, Daniel[2]; Weinberg, David H.[3]

[1.]University of Arizona, Tucson, AZ. [2.]Harvard University, Cambridge, MA. [3.]Ohio State University, Columbus, OH.

426.04 Carbon Monoxide Intensity Mapping at Redshift 2-3
Breysse, Patrick[1]; Kovetz, Ely[2]; Kamionkowski, Marc[1]
[1.]Johns Hopkins University, Baltimore, MD. [2.]University of Texas at Austin, Austin, TX.

426.05 Hydrogen Recombination Lines from the First Luminous Objects
Pomerantz, Brian[1]; Li, Yuexing[1]
[1.]The Pennsylvania State University, University Park, PA.

426.06 The Seeds of a Magnetic Universe
Naoz, Smadar[1]; Narayan, Ramesh[1]
[1.]Harvard University Smithsonian CfA/ITC, Cambridge, MA.

426.07 Transformationally Describing Halo Bias and Exposing Cosmological Information
Neyrinck, Mark C.[1]; Aragon-Calvo, Miguel Angel[1, 2]; Jeong, Donghui[1]; Wang, Xin[1]
[1.]Johns Hopkins Univ., Baltimore, MD. [2.]University of California at Riverside, Riverside, CA.

426.08 The intensity of isotropic diffuse emission measured with the Fermi Large Area Telescope
Bechtol, Keith[1]
[1.]Kavli Institute for Cosmological Physics, Chicago, IL.
Contributing teams: Fermi Large Area Telescope Collaboration

427 Dark Matter & Dark Energy II

Thursday, 2:00 PM - 3:30 PM; Maryland Ballroom C

Chair(s):
Michael Schneider, *Lawrence Livermore Natl Lab*

427.01D Lensing B-mode measurements by the POLARBEAR telescope
Feng, Chang[1]
[1.]University of California, San Diego, La Jolla, CA.
Contributing teams: the POLARBEAR Collaboration

427.02D New Microlensing Constraints of Primordial Black Hole Dark Matter based on First Two Years of Kepler Data
Cieplak, Agnieszka[1]; Griest, Kim[2]; Lehner, Matthew[3, 4]
[1.]Brookhaven National Laboratory, Upton, NY. [2.]University of California San Diego, La Jolla, CA. [3.]Academia Sinica, Taipei, Taiwan. 4.University of Pennsylvania, Philadelphia, PA.

427.03D The Intrinsic Alignment of Galaxies and Weak Gravitational Lensing
Blazek, Jonathan[1, 2]
[1.]Ohio State University, Columbus, OH. [2.]University of California, Berkeley, Berkeley, CA.

427.04 Improved cosmological constraints from a joint analysis of the SNLS and SDSS surveys
Betoule, Marc[1]; Guy, Julien[1]; Kessler, Richard[3]; Mosher, Jennifer[2]; Astier, Pierre[1]; Biswas, Rahul[3]; El Hage, Patrick[1]; Hardin, Delphine[1]; Marriner, John[4]; Pain, Reynald[1]; Regnault, Nicolas[1]
[1.]LPNHE (CNRS), PARIS, France. [2.]University of Pennsylvania, Philadelphia, PA. [3.]University of Chicago, Chicago, IL. [4.]FNAL, Batavia, IL.

427.05 Black Hole Universe Model for Explaining GRBs, X-Ray Flares, and Quasars as Emissions of Dynamic Star-like, Massive, and Supermassive Black Holes
Zhang, Tianxi[1]
[1.]Alabama AandM University, Normal, AL.

428 Dwarf & Irregular Galaxies

Thursday, 2:00 PM - 3:30 PM; National Harbor 12

Chair(s):
Amanda Kepley, *National Radio Astronomy Observatory*

428.01 Finding tiny, gas-rich galaxies in the Local Group
Donovan Meyer, Jennifer[1, 2]; Grcevich, Jana[2]; Saul, Destry R.[2]; Peek, Joshua G.[2]; Putman, Mary E.[2]
[1.]NRAO, Charlottesville, VA. [2.]Columbia University, New York, NY.

428.02D The H I Chronicles of LITTLE THINGS BCDs
Ashley, Trisha L.[1]; Simpson, Caroline E.[1]
[1.]Florida International University, Miami, FL.
Contributing teams: LITTLE THINGS

428.03 The HI Neighborhoods of Starburst Dwarf Galaxies
Johnson, Megan C.[1]; McQuinn, Kristen B.[1]; Koribalski, Baerbel[1]; Ford, Alyson[1]; Bailin, Jeremy[1]
[1.]NRAO - Green Bank, Arbovale, NSW, Australia.

428.04D Bright and dark: Satellite galaxies as a test of galaxy formation and the nature of dark matter.
Nierenberg, Anna[1]
[1.]UCSB, Santa Barbara, CA.

428.05 Tidal Dwarf Galaxies In Gas-rich Interacting Galaxy Groups
Eigenthaler, Paul[1]
[1.]Pontificia Universidad Católica de Chile, Santiago, Region Metropolitana, Chile.

428.06 Kinematically-Decoupled Cores in Dwarf Ellipticals in the Virgo Cluster: Implications for Infallen Groups in Clusters
Toloba, Elisa[1, 2]; Guhathakurta, Puragra[1]; van de Ven, Glenn[3]; Boselli, Alessandro[4]; Lisker, Thorsten[5]; Peletier, Reynier[6]
[1.]University of California Santa Cruz, Santa Cruz, CA. [2.]Carnegie Observatories, Pasadena, CA. [3.]Max Planck Institute for Astronomy, Heidelberg, Germany. [4.]Laboratoire d'Astrophysique de Marseille-LAM, Marseille, France. [5.]Astronomisches Rechen-Institut, Heidelberg, Germany. [6.]Kapteyn Astronomical Institute, Groningen, Netherlands.
Contributing teams: SMAKCED collaboration

428.07 X-ray Binaries and Feedback in Lyman-? Galaxies
Prestwich, Andrea H.[1]; Jackson, Floyd[2]; Kaaret, Philip[3]; Brorby, Matthew[3]; Roberts, Timothy P.[4]; Saar, Steven H.[1]
[1.]Harvard-Smithsonian, CfA, Cambridge, MA. [2.]University of Toledo, Toledo, OH. [3.]University of Iowa, Iowa City, IA. [4.]University of Durham, Durham, Durham, United Kingdom.

429 Emerging Impacts on Structure Formation and AGN Science from NanoHz Gravitational Wave Studies

Thursday, 2:00 PM - 3:30 PM; Maryland 1

This session will feature presentations and panel-led discussions on astrophysical problems addressed by current and upcoming capabilities of Pulsar Timing Arrays (PTAs). PTAs are uniquely sensitive to the low-frequency (nHz-uHz) gravitational wave spectrum, and are capable of detecting gravitational waves (GWs) from cosmic string loops, inflationary expansion, and binary supermassive black hole binaries formed in galaxy mergers. Excitingly, the sensitivity of pulsar timing has reached the upper range of the GW signal predictions for standard cosmological structure formation scenarios, and electromagnetic observational studies are beginning to discover discrete binary supermassive systems that may offer target systems for PTAs. The presentations in this session will outline: a) the current status of PTAs and realistic near-term sensitivity predictions; b) how the parameters of hierarchical structure formation models affect the expected GW signal; and c) the discovery potential of current electromagnetic surveys for discrete SMBH binary systems. A panel-led discussion will follow on the astrophysical consequences of a GW detection or strict upper limits from a timing array, focusing on unknowns in Universe structure formation, galaxy dynamics, active nucleus formation, and supermassive black hole growth. We also welcome relevant contributed posters, to provide a broader view to the focused discussion in the session. The primary goal of this session is to encourage collaborative thinking between theorists, pulsar timers, and electromagnetic observers on realistic goals in GW astrophysics with supermassive black hole binaries in the coming 1-10 years.

Chair(s):
Sarah Spolaor, *Jet Propulsion Laboratory*
Organizer(s):
Sarah Spolaor, *Jet Propulsion Laboratory*

429.01 A Crash Course in using Pulsars to Detect Gravitational Waves
Lommen, Andrea N.[1]
[1.] Franklin and Marshall College, Lancaster, PA.
Contributing teams: NANOGrav

429.02 When will NANOGrav detect gravitational waves?
Siemens, Xavier[1]
[1.] University of Wisconsin -- Milwaukee, Milwaukee, WI.

429.03 Electromagnetic Signatures of Supermassive Binaries and their Hosts
Schnittman, Jeremy[1, 2]
[1.] NASA/GSFC, Greenbelt, MD. [2.] Joint Space Science Institute, College Park, MD.

429.04 I Get By With A Little Help From My Friends: Enhancing PTA Sensitivity to GWs With EM Counterparts
Ellis, Justin[1]; Burke-Spolaor, Sarah[2]
[1.] University of Wisconsin Milwaukee, Milwaukee, WI. [2.] Caltech, Pasedena, CA.

429.05 Probing Massive Black Hole Binaries with Pulsar Timing Arrays
Sesana, Alberto[1]
[1.] Albert Einstein Institute, Munich, Germany.

430 Extrasolar Planet Detection - M Dwarfs and Young Stars

Thursday, 2:00 PM - 3:30 PM; Maryland Ballroom A

Chair(s):
Natalie Batalha, *San Jose State University*

430.01D Planets, Cycles, and Starspots: Disentangling Stellar Activity from Radial Velocity for Cool Stars
Robertson, Paul[1, 2]; Endl, Michael[3, 2]; Cochran, William D.[3, 2]; Dodson-Robinson, Sarah E.[4]; MacQueen, Phillip[3, 2]
[1.]Center for Exoplanets and Habitable Worlds, Penn State University, University Park, PA. [2.]The University of Texas, Austin, TX. [3.]McDonald Observatory, Austin, TX. [4.]The University of Delaware, Newark, DE.

430.02 Precise Near-Infrared Radial Velocities
Plavchan, Peter[1, 2]; Gao, Peter[1]; Bottom, Michael[1]; Davison, Cassy[3]; Mills, Sean[12]; Ciardi, David R.[1, 2]; Brinkworth, Carolyn[1]; Tanner, Angelle M.[10]; Beichman, Charles A.[1, 2]; Catanzarite, Joseph[13]; Crawford, Sam[4]; Wallace, J. Kent[4]; Mennesson, Bertrand[4]; Johnson, John A.[5]; White, Russel J.[3]; Anglada-Escudé, Guillem[6]; von Braun, Kaspar[7]; Walp, Bernie[11]; Vasisht, Gautam[4]; Kane, Stephen R.[9]; Prato, Lisa A.[8]
[1.]Caltech, Pasadena, CA. [2.]NExScI, Pasadena, CA. [3.]Georgia State University, Atlanta, GA. [4.]Jet Propulsion Laboratory, Pasadena, CA. [5.]Harvard University, Cambridge, MA. [6.]University of Goettingen, Goettingen, Germany. [7.]Max Planck Institute for Astronomy, Heidelberg, Germany. [8.]Lowell Observatory, Flagstaff, AZ. [9.]San Francisco State University, San Francisco, CA. [10.]Mississippi State University, Mississippi State, MS. [11.]SOFIA, Moffett Field, CA. [12.]University of Chicago, Chicago, IL. [13.]NASA Ames, Moffett Field, CA.
Contributing teams: NIRRVs

430.03 Observations of the Pre-Main Sequence Exoplanet Candidate PTFO 8-8695
Ciardi, David R.[1, 2]; Beichman, Charles A.[1, 2]; Carey, Sean J.[1, 3]; Crockett, Christopher[4]; Johns-Krull, Christopher M.[5]; Kane, Stephen R.[6]; McLane, Jacob[7, 4]; Plavchan, Peter[1, 2]; Prato, Lisa A.[4]; Stauffer, John R.[1, 3]; van Belle, Gerard[4]; Van Eyken, Julian C.[8, 9]; von Braun, Kaspar[10]
[1.]Caltech, Pasadena, CA. [2.]NExScI, Pasadena, CA. [3.]Spitzer, Pasadena, CA. [4.]Lowell Obs., Flagstaff, AZ. [5.]Rice University, Houston, TX. [6.]SFSU, San Francisco, CA. [7.]NAU, Flagstaff, AZ. [8.]UCSB, Santa Barbara, CA. [9.]LCOGT, Santa Barbara, CA. [10.]MPIA-Heidelberg, Heidelberg, Germany.

430.04 A Confirmed Directly Imaged Planet Orbiting a Nearby Young, Dusty Star
Currie, Thayne M.[1]; Rameau, Julien[2]; Chauvin, Gael[2]; Lagrange, Anne-Marie[2]; Boccaletti, Anthony[3]; Meshkat, Tiffany[4]; Quanz, Sascha[5]; Girard, Julien[6]; Bonnefoy, Mickael[7]; Kenworthy, Matthew A.[4]
[1.]University of Toronto, Toronto, ON, Canada. [2.]IPAG, Grenoble, France. [3.]LESIA/ Observatoire de Paris, Paris, France. [4.]Leiden Observatory, Leiden, Netherlands. [5.]ETH-Zurich, Zurich, Switzerland. [6.]ESO, Santiago, Chile. [7.]MPIA-Heidelberg, Heidelberg, Germany.

431 Galaxy Clusters in High Energies and Radio

Thursday, 2:00 PM - 3:30 PM; National Harbor 5

Chair(s):
Tracy Clarke, *Naval Research Lab.*

431.01D Characterization of ICM Temperature Distributions of 62 Galaxy Clusters with XMM-Newton
Frank, Kari A.[1]; Peterson, John R.[2]; Andersson, Karl[3]; Fabian, Andy C.[4]; Sanders, Jeremy S.[4]
[1.]Pennsylvania State University, State College, PA. [2.]Purdue Univ., West Lafayette, IN. [3.]Ludwig-Maximilians-Universität, München, Germany. [4.]Institute of Astronomy, Cambridge, United Kingdom.

431.02 X-ray and Radio Results for Abell 2443, a Sloshing Galaxy Cluster Hosting an Ultra-Steep Spectrum Radio Source
Mroczkowski, Tony[1]; Clarke, Tracy E.[1]; Randall, Scott W.[2]; Sarazin, Craig L.[3]; Blanton, Elizabeth L.[4]; Giacintucci, Simona[5]; Intema, Huib[6]; ZuHone, John A.[7]
[1.]Naval Research Laboratory, Washington, D.C, DC. [2.]Chandra X-ray Center, Cambridge, MA. [3.]University of Virginia, Charlottesville, VA. [4.]Boston University, Boston, MA. [5.]University of Maryland, College Park, MD. [6.]NRAO, Charlottesville, VA. [7.]Goddard Space Flight Center, Greenbelt, MD.

431.03 Deep Radio Observations of the Toothbrush Galaxy Cluster
Van Weeren, Reinout J.[1]; Jones, Christine[1]; Forman, William R.[1]; Röttgering, Huub[2]; Brüggen, Marcus[3]; Brunetti, Gianfranco[4]; de Gasperin, Francesco[3]; Bonafede, Annalisa[3]; Pizzo, Roberto[6]; Ferrari, Chiara[5]; Orrù, Emanuela[6]; Ogrean, Georgiana A.[3]
[1.]Smithsonian Astrophysical Observatory, Cambridge, MA. [2.]Leiden University, Leiden, Netherlands. [3.]University of Hamburg, Hamburg, Germany. [4.]INAF Istituto di Radioastronomia, Bologna, Italy. [5.]Observatoire de la Côte d'Azur, Nice, France. [6.]ASTRON, Dwingeloo, Netherlands.
Contributing teams: LOFAR Busyweek team, LOFAR surveys KSP

431.04 Search for Cosmic-ray induced γ-ray Emission in Galaxy Clusters
Zimmer, Stephan[1, 2;] Pinzke, Anders[1]; Pfrommer, Christoph[3]
[1.]Oskar Klein Center for Cosmoparticle Physics and Department of Physics, Stockholm University, Stockholm, Stockholm, Sweden. [2.]for the Fermi-LAT Collaboration, Stanford, CA. [3.]Heidelberg Institute for Theoretical Studies, Heidelberg, Germany.
Contributing teams: The Fermi-LAT Collaboration

431.05 Recent Results on Clusters of Galaxies with LOFAR
Wise, Michael W.[1, 2]
[1.]ASTRON (Netherlands Institute for Radio Astronomy), Dwingeloo, Netherlands. [2.]Astronomical Institute Anton Pannekoek, University of Amsterdam, Amsterdam, Netherlands.
Contributing teams: The LOFAR Surveys KSP Cluster Working Group

431.06 Understanding the Toothbrush Merging Galaxy Cluster to Constrain Dark Matter
Dawson, William[1, 2]; Brüggen, Marcus[1]; Van Weeren, Reinout J.[1]; Wittman, David M.[2]
[1.]LLNL, Livermore, CA. [2.]University of California Davis, Davis, CA.

432 Galaxy Evolution at z~1

Thursday, 2:00 PM - 3:30 PM; Potomac Ballroom A

Chair(s):
Ann Hornschemeier, *NASA GSFC*

432.01 A search for z <1.2 Ly-alpha Blobs using SWIFT
Ashcraft, Teresa[1]; Hegel, Paul[1]; Jansen, Rolf A.[1]; Rutkowski, Michael J.[2]; Windhorst, Rogier A.[1]
[1.]School of Earth & Space Exploration, Arizona State University, Tempe, AZ. [2.]Institute for Astrophysics, University of Minnesota , Minneapolis, MN.

432.02D Star Formation Quenching and Identifying AGN in Galaxies
Mendez, Alexander[1]; Coil, Alison L.[1]; Lotz, Jennifer M.[2]; Aird, James[6]; Diamond-Stanic, Aleksandar M.[7]; Moustakas, John[4]; Salim, Samir[3]; Simard, Luc[5]; Blanton, Michael R.[8]; Eisenstein, Daniel[10]; Wong, Kenneth C.[11]; Cool, Richard J.[9]; Zhu, Guangtun[12]
[1.]UCSD, La Jolla, CA. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]Indiana University, Bloomington, IN. [4.]Siena College, Siena, NY. [5.]University of Victoria, Victoria, BC, Canada. [6.]Durham University, Durham, United Kingdom. [7.]University of Wisconsin, Madison, WI. [8.]New York University, New York, NY. [9.]MMT Observatory, Tucson, AZ. [10.]Harvard, Cambridge, MA. [11.]University of Arizona, Tucson, AZ. [12.]Johns Hopkins University, Baltimore, MD.
Contributing teams: PRIMUS, AEGIS

432.03 The Starburst-AGN Connection in Luminous and Ultraluminous Infrared Galaxies
Fiorenza, Stephanie[1, 2]; Takeuchi, Tsutomu T.[3]; Malek, Katarzyna E.[3]; Liu, Charles[2]
[1.]CUNY Graduate Center, New York, NY. [2.]CUNY College of Staten Island, Staten Island, NY. [3.]Nagoya University, Nagoya, Aichi Prefecture, Japan.

432.04 Massive Star-Forming Host Galaxies of Quasars on SDSS Stripe 82
Matsuoka, Yoshiki[1, 2]; Strauss, Michael A.[1]
[1.]Princeton University, Princeton, NJ. [2.]National Astronomical Observatory of Japan, Mitaka, Tokyo, Japan.

432.05D The 3.4 ?m Extragalactic Background Light as Measured Using WISE
Lake, Sean E.[1]; Wright, Edward L.[1]; Petty, Sara M.[2]; Assef, Roberto J.[3]; Cutri, Roc M.[5]; Stanford, S. A.[7]; Stern, Daniel4, [6]
[1.]UCLA, Los Angeles, CA. [2.]Virginia Tech, Blacksburg, VA. [3.]Universidad Diego Portales, Santiago, Chile. [4.]JPL, Pasadena, CA. [5.]IPAC, Pasadena, CA. [6.]CalTech, Pasadena, CA. [7.]UC Davis, Pasadena, CA.

432.06 Implications for Galaxy Evolution Inferred from Virial-Mass Self-Similarity of the Circumgalactic Medium
Churchill, Christopher W.[1]; Nielsen, Nikole M.[1]; Kacprzak, Glenn[2]
[1.]New Mexico State Univ., Las Cruces, NM. [2.]Swinburne University of Technology, Hawthorn, VIC, Australia.

433 Star Clusters and Associations, Galactic and Extragalactic

Thursday, 2:00 PM - 3:30 PM; National Harbor 2

Chair(s):
Catherine Pilachowski, *Indiana University*

433.01 Modelling of Proper Motions in Globular Clusters
Watkins, Laura[1]; Bellini, Andrea[1]; Van Der Marel, Roeland P.[1]; Anderson, Jay[1]
[1.]STScI, Baltimore, MD.
Contributing teams: HSTPROMO

433.02 Mass segregation for the young star clusters
YU, Jincheng[1]
[1.]Pontificia Universidad Católica de Chile, Santiago, Metropolitan Region, Chile.

433.03D Abundances of Local Group Globular Clusters Using High Resolution Integrated Light Spectroscopy
Sakari, Charli[1]; McWilliam, Andrew[2]; Venn, Kim[1]; Shetrone, Matthew D.[3]; Dotter, Aaron L.[4]; Mackey, Dougal[4]
[1.]University of Victoria, Victoria, BC, Canada. [2.]The Observatories of the Carnegie Institute of Washington, Pasadena, CA. [3.]McDonald Observatory, University of Texas at Austin, Fort Davis, TX. [4.]Research School of Astronomy and Astrophysics, The Australian National University, Weston, ACT, Australia.

433.04 Wide-Field HST Observations of the Globular Cluster System in NGC 1399
Puzia, Thomas H.[1]
[1.]Pontificia Universidad Catolica, Santiago, RM, Chile.
Contributing teams: Maurizio Paolillo, Paul Goudfrooij, Thomas J. Maccarone, Giuseppina Fabbiano, Lorella Angelini

433.05 Stellar clusters formed from debris of colliding galaxies
De Mello, Duilia F.[1]; Mendes de Oliveira, Claudia [2]; Torres-Flores, Sergio[3]; Urrutia-Viscarra, Fernanda[2, 4]
[1.]Catholic University of America, Washington, DC. [2.]IAG/USP, Sao Paulo, SP, Brazil. [3.].Univ. de La Serena, La Serena, Chile. [4.]ESO, Garching, Germany.

433.06 De-confusing Herschel images by using bayesian priors.
Safarzadeh, Mohammadtaher[1]; Ferguson, Henry C.[2]; Lu, Yu[3]; Inami, Hanae[4]; Dickinson, Mark[4]; Elbaz, David[5]
[1.]The Johns Hopkins University, Baltimore, MD. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]Stanford University, Stanford, CA. [4.]NRAO, Tucson, AZ. [5.]Laboratoire AIM-Paris-Saclay, Paris, Paris, France.
Contributing teams: The CANDELS, GOODS-Herschel, CANDELS-Herschel collaborations

434 Stellar Evolution II

Thursday, 2:00 PM - 3:30 PM; Potomac Ballroom C

Chair(s):
Robert Olling, *Univ. Of Maryland*

434.01D The Mass-Transfer Formation of Blue Stragglers as Revealed by their White Dwarf Companions
Gosnell, Natalie M.[1]
[1.]University of Wisconsin-Madison, Madison, WI.

434.02 Carbon Stars in Andromeda. I. Detection and Spectroscopic Properties
Hamren, Katherine[1]; Toloba, Elisa[1, 3]; Dorman, Claire[1]; Guhathakurta, Puragra[1]; Chang, Matthew[2]; Guha, Sumedh[4]
[1.]University of California Santa Cruz, Santa Cruz, CA. [2.]Mountain View High School, Mountain View, CA. [3.]OCIW, Pasadena, CA. [4.]Yale University, New Haven, CT.
Contributing teams: PHAT collaboration, SPLASH collaboration

434.03 Carbon Stars In Andromeda. II. Demographics and Photometric Properties
Guhathakurta, Puragra[1]; Hamren, Katherine[1]; Dorman, Claire[1]; Toloba, Elisa[1, 5]; Seth, Anil[2]; Dalcanton, Julianne[3]; Nayak, Avinash[4]
[1.]UC, Santa Cruz, Santa Cruz, CA. [2.]Univ of Utah, Salt Lake City, UT. [3.]Univ of Washington, Seattle, WA. [4.]Harker School, San Jose, CA. [5.]OCIW, Pasadena, CA.
Contributing teams: PHAT collaboration, SPLASH collaboration

434.04 Nonadiabatic Pulsation Analysis of Supermassive Stars
White, Christopher J.[1]; Goodman, Jeremy[1]
[1.]Astrophysical Sciences, Princeton University, Princeton, NJ.

434.05 Fast or Slow? The Implications of Core Rotation Measurements for Stellar Angular Momentum Evolution
Pinsonneault, Marc H.[1]; Tayar, Jamie[1]
[1.]Ohio State Univ., Columbus, OH.

434.06 Studying Magnetic Fields in Young Stellar Objects with MoogStokes
Deen, Casey[1]; Jaffe, Daniel T.[2]; Brandner, Wolfgang[1]; Johns-Krull, Christopher M.[3]
[1.]Max Planck Institut für Astronomie, Heidelberg, Baden-Würtemberg, Germany. [2.]University of Texas, Austin, TX. [3.]Rice University, Houston, TX.

435 The Exciting Future of Cosmic Microwave Background Measurements

Thursday, 2:00 PM - 3:30 PM; Potomac Ballroom D

Measurements of the cosmic microwave background (CMB) have produced tight constraints on cosmological parameters; provided insights into inflation; and enabled sensitive tests for extensions beyond the standard six parameter cosmological model. While measurements of the temperature angular power spectrum are approaching the cosmic variance limit, CMB instrumentation has progressed to the point where faint new signals are now accessible. In polarization the CMB may encode a detectable signal from the imprint of a background of gravitational waves Produced by inflation moments after the Big Bang. In addition, polarization can probe the weak gravitational lensing of the CMB which represents a new cosmological tool for measuring large scale structures, which are sensitive to neutrino mass, early dark energy, and galaxy formation in combination with multi-wavelength surveys. Recently the Planck satellite provided spectacular measurements over the entire sky and over a frequency range between 30 and 857 GHz, and in 2014 Planck will release new polarization data. A new generation of receivers with higher sensitivity than Planck, enabled by rapid advances in detector technology, are pushing CMB polarization measurements to very low levels from ground-based and sub-orbital platforms. Improvements to instrumentation over the past quarter century also provide an avenue to improve our understanding of the CMB blackbody spectrum by three orders of magnitude beyond the 50 parts-per-million accuracy to which it was measured by COBE, the Cosmic Background Explorer. A new experiment could detect distortions at this level providing new constraints on processes ranging from inflation and the nature of the first stellar objects to exotic phenomena including primordial black holes, cosmic strings, and the decay or annihilation of dark matter. In this session we review the current state of the CMB field and offer a roadmap for upcoming results and ambitious future instruments.

Chair(s):
Jeff McMahon, *University of Michigan, Ann Arbor*
Organizer(s):
Jens Chluba, *Johns Hopkins University*
Jeff McMahon, *University of Michigan, Ann Arbor*

435.01 Planck and the State of the Art in CMB Measurements
Lawrence, Charles R.[1]
[1] *JPL, Pasadena, CA.*

435.02 What we know and what we don't know about the CMB spectrum
Mather, John C.1
[1] *NASA's GSFC, Greenbelt, MD.*
Contributing teams: COBE team, PIXIE team

435.03 Cosmic Microwave Background as a Probe of the Low Redshift Universe
Spergel, David N.[1]
[1] *Princeton Univ. Obs., Princeton, NJ.*

435.04 Constraints on Inflation from Polarization and CMB Spectral Distortions
Kamionkowski, Marc[1]
[1] *Johns Hopkins University, Baltimore, MD.*

435.05 The Once and Future Signal: CMB Science from Sub-orbital and Proposed Satellite Missions
Kogut, Alan J.[1]
[1.]NASA's GSFC, Greenbelt, MD.

435.06 Latest CMB Measurement Results
Bock, James[1]
[1.]Caltech, Pasadena, CA.

436 Young Stellar Objects II

Thursday, 2:00 PM - 3:30 PM; National Harbor 4

Chair(s):
John Tobin, *National Radio Astronomy Observatory*

436.01 Magnetically Aligned Dust Grains in Young Stellar Objects
Rodgers, Erica[1]; Cotera, Angela[2]; Whitney, Barbara[1, 3]
[1.]Space Science Institute, Boulder, CO. [2.]SETI, Avondale, AZ. [3.]University of Wisconsin - Madison, Madison, WI.

436.02 HST FUV monitoring of TW Hya
Guenther, Hans[1]; Brickhouse, Nancy S.[1]; Dupree, Andrea K.[1]; Luna, Gerardo[1, 3]; Schneider, Peter C.[2]; Wolk, Scott J.[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Hamburger Sternwarte, Hamburg, Germany. [3.]Instituto de Astronomia y Fisica del Espacio, Buenos Aires, Argentina.

436.03 Massive Stellar Outflows From the Combined Action of Multiple Stellar Jets
Mac Low, Mordecai-Mark[1, 4]; Peters, Thomas[2]; Klaassen, Pamela[3]; Schrön, Martin[4, 5]; Klessen, Ralf[4]
[1.]American Museum of Natural History, New York, NY. [2.]Universität Zürich, Zürich, Switzerland. [3.]Universiteit Leiden, Leiden, Netherlands. [4.]Universität Heidelberg, Heidelberg, Germany. [5.]Helmholtz Zentrum für Umweltforschung, Leipzig, Germany.

436.04D Powerful jets driven by intermediate-mass protostars in the Carina Nebula
Reiter, Megan[1]; Smith, Nathan[1]
[1.]The University of Arizona, Tucson, AZ.

436.05D Cep OB3b: A Multi-Wavelength Survey of a Nearby Rich Young Stellar Cluster
Allen, Thomas[1]; Megeath, S. Thomas[1]; Prchlik, Jakub[3]; Gutermuth, Robert A.[7]; Pipher, Judith[2]; Naylor, Tim[4]; Jeffries, Rob[5]; Wolk, Scott J.[6]
[1.]University of Toledo, Toledo, OH. [2.]University of Rochester, Rochester, NY. [3.]Case Western, Cleveland, OH. [4.]University of Exeter, Exeter, United Kingdom. [5.]Keele University, Keele, United Kingdom. [6.]Center for Astronomy, Cambridge, MA. [7.]University of Massachusetts, Amherst, MA.

437 AIP Gemant Award Lecture: Star Trek: The Search for the First Alleged Crab Supernova Rock Art

Thursday, 3:40 PM - 4:30 PM; Potomac Ballroom A

Chair(s):
Catherine O'Riordan, *AIP*

437.01 Star Trek: The Search for the First Alleged Crab Supernova Rock Art
Krupp, E. C.[1]
[1.] *Griffith Obs., Los Angeles, CA.*

460 Berkeley Prize: Using the SDO Atmospheric Imaging Assembly to Study Solar Activity

Thursday, 4:30 PM - 5:20 PM; Potomac Ballroom A

James Lemen - Berkeley Prize
For leading the design and construction of the Atmospheric Imaging Assembly for the Solar Dynamics Observatory, which has enabled forefront advances into understanding of solar activity. He is awarded the Berkeley Prize for his widely cited paper entitled "The Atmospheric Imaging Assembly on the Solar Dynamics Observatory".

460.01 Using the SDO Atmospheric Imaging Assembly to Study Solar Activity
Lemen, James[1]
[1.] *Lockheed Martin Solar & Astrophysics Lab, Palo Alto, CA.*

AAS Closing Reception

Thursday, 5:30 PM - 7:00 PM; Cherry Blossom Ballroom

Please join us as we close the 223rd AAS Meeting, and say goodbye to old friends and new, with light refreshments provided.

POSTERS

438 The Nuclear Spectroscopic Telescope Array (NuSTAR) Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

438.01 Public NuSTAR Archive at the HEASARC
Marshall, Francis E.[1]; Corcoran, Michael F.[3]; Drake, Stephen A.[3]; Sabol, Edward[2]; Forster, Karl[4]; Smale, Alan P.[1]; Zonak, Stephanie G.[2]
[1.]NASA/GSFC, Greenbelt, MD. [2.]Adnet, Lanham, MD. 3.USRA/CRESST, Greenbelt, MD. [4.]Caltech, Pasadena, CA.

438.02 Sagittarius A* X-ray Flares Simultaneously Detected by NuSTAR And Chandra
Zhang, Shuo[1]; Barriere, Nicolas[2]; Tomsick, John[2]; Baganoff, Frederick K.[3]; Dexter, Jason[2]; Neilsen, Joseph[4, 3]
[1.]Columbia University, New York, NY. [2.]UC Berkeley, Berkeley, CA. [3.]MIT, Cambridge, MA. [4.]Boston University, Boston, MA.
Contributing teams: NuSTAR team

438.03 Detection of hard X-ray point sources above 10 keV in the NuSTAR Galactic Center Survey
Mori, Kaya[1]; Hailey, Charles J.[1]; Tomsick, John[2]; Krivonos, Roman[2]; Hong, JaeSub[3]
[1.]Columbia University, New York City , NY. [2.]University of California Berkeley, Berkeley, CA. [3.]Harvard University, Boston, MA.
Contributing teams: NuSTAR team

438.04 NGC 4151 as Revealed by NuSTAR and Suzaku
Keck, Mason[1]; Brenneman, Laura[2]; Elvis, Martin[2]; Fuerst, Felix[3]; Madejski, Grzegorz M.[4]; Matt, Giorgio[5]; Harrison, Fiona[3]; Stern, Daniel[6, 3]
[1.]Boston University, Boston, MA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]California Institute of Technology, Pasadena, CA. [4.]Stanford Linear Accelerator Center, Menlo Park, CA. [5.]Università Roma Tre, Roma, Italy. [6.]NASA Jet Propulsion Laboratory, Pasadena, CA.
Contributing teams: The NuSTAR team

438.05 NuSTAR observatory operations and data analysis
Forster, Karl[1]; Harrison, Fiona[1]; Grefenstette, Brian[1]; Madsen, Kristin[1]; Miyasaka, Hiromasa[1]; Rana, Vikram[1]; Hubbard, Min[1]; Davis, Andrew[1]; Perri, Matteo[2, 3]; Puccetti, Simonetta[2, 3]; Spagnuolo, Nino[2]; Giommi, Paolo[2]; Bester, Manfred[4]; Lewis, Mark[4]; Roberts, Bryce[4]; Craig, William W.[4, 8]; Marchant, William[4]; Markwardt, Craig[6]; Marshall, Francis E.[6]; Zonak, Stephanie[7]; Dodd, Suzanne R.[5]; Stern, Daniel[5]
[1.]Caltech, Pasadena, CA. [2.]ASI-Science Data Center, Rome, Italy. [3.]INAF – Osservatorio Astronomico di Roma, Monteporzio Catone, Italy. [4.]Space Sciences Laboratory, UCB, Berkeley, CA. [5.]NASA/JPL, Pasadena, CA. [6.]NASA/GSFC, Greenbelt, MD. [7.]ADNET systems, Inc., Bethesda, MD. [8.]Lawrence Berkeley National Laboratory, Berkeley, CA.

438.06 Simultaneous Broadband Observations of Mrk 501 with NuSTAR
Furniss, Amy[1]; Paneque, David[2]; Madejski, Grzegorz M.[3]; Noda, Koji[2]; Giommi, Paolo[4]; Fuhrmann, Lars[5]; Hughes, Zachary[6]; Balokovic, Mislav[7]; Harrison, Fiona[7]; Urry, C. M.[8]
[1.]Stanford University, Menlo Park, CA. [2.]Max-Planck-Institut für Physik, München, Germany. [3.]Kavli Institute for Particle Astrophysics and Cosmology, SLAC National Accelerator Laboratory, Menlo Park, CA. [4.]ASI – Science Data Center, Frascati, Italy. [5.]Max-Planck-Institut für Radioastronomie, Bonn, Gabon. [6.]University of California, Santa Cruz, Santa Cruz, CA. [7.]California Institute of Technology, Pasadena, CA. [8.]Department of Physics, Yale University, New Haven, CT.

438.07 A NuSTAR Perspective on the X-ray Binary Populations of Starburst Galaxies
Yukita, Mihoko[1]; Lehmer, Bret[1, 2]; Wik, Daniel R.[1, 2]; Hornschemeier, Ann E.[2]; Ptak, Andrew[2, 1]; Antoniou, Vallia[3]; Argo, Megan[4]; Bechtol, Keith[5]; Harrison, Fiona[6]; Krivonos, Roman[7]; Leyder, Jean-Christophe[1]; Maccarone, Thomas J.[8]; Stern, Daniel[6]; Venters, Tonia M.[1]; Zezas, Andreas[3]; Zhang, William[2]
[1.]The Johns Hopkins University, Baltimore , MD. [2.]NASA Goddard Space Flight Center, Greenbelt , MD. [3.]Smithsonian Astrophysical Observatory, Cambridge, MA. [4.]ASTRON, Postbus, Dwingeloo, Netherlands. [5.]Kavli Institute for Cosmological Physics, Chicago, IL. [6.]Caltech, Pasadena, CA. [7.]University of California, Berkeley, Berkeley, CA. [8.]Texas Tech University, Lubbock, TX.
Contributing teams: NuSTAR Team

438.08 NuSTAR analysis of the PWN and SNR in G21.5-0.9
Nynka, Melania[1]; Hailey, Charles J.[1]; Reynolds, Stephen P.[2]; Madsen, Kristin[3]; Grefenstette, Brian[3]
[1.]Columbia University, New York, NY. [2.]North Carolina State University, Raleigh, NC. [3.]California Institute of Technology, Pasadena, CA.
Contributing teams: NuSTAR Team

438.09 First Results from NuSTAR observations of Galactic Center Non-thermal Filaments
Hailey, Charles J.[1]; Nynka, Melania[1]; Zhang, Shuo[1]; Mori, Kaya[1]
[1.]Columbia Univ., New York, NY.
Contributing teams: NuSTAR Team

438.10 Revealing Fundamental Physical Properties of AGN with NuSTAR, XMM and Suzaku
Brenneman, Laura[1]; Fuerst, Felix[2]; Walton, Dom[2]; Madejski, Grzegorz M.[3]; Matt, Giorgio[4]; Marinucci, Andrea[4]; Risaliti, Guido[5, 1]; Elvis, Martin[1]; Fabian, Andy C.[6]; Ballantyne, David R.[7]; Harrison, Fiona[2]; Stern, Daniel[8]
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Contributing teams: the NuSTAR team

438.11 Results from the 2013 Multi-wavelength Campaign on Mkn 421

Balokovic, Mislav[1]; Ajello, Marco[2]; Blandford, Roger D.[3]; Boggs, Steven E.[2]; Borracci, Francesco[4]; Chiang, James[3]; Christensen, Finn[5]; Craig, William W.[2]; Forster, Karl[1]; Furniss, Amy[3]; Fuerst, Felix[1]; Ghisellini, Gabriele[6]; Giebels, Berrie[7]; Giommi, Paolo[8]; Grefenstette, Brian[1]; Hailey, Charles J.[9]; Harrison, Fiona[1]; Hayashida, Masaaki[3]; Humensky, Brian[9]; Inoue, Yoshiyuki[3]; Koglin, Jason[9]; Krawczynski, Henric[10]; Madejski, Grzegorz M.[3]; Madsen, Kristin[1]; Meier, David L.[11, 1]; Nelson, Thomas[12]; Ogle, Patrick M.[13, 1]; Paneque, David[4]; Perri, Matteo[8, 14]; Puccetti, Simonetta[8, 14]; Reynolds, Christopher S.[15]; Sbarrato, Tulia[16]; Stern, Daniel[11, 1]; Tagliaferri, Gianpiero[6]; Urry, C. M.[17]; Wehrle, Ann E.[18]; Zhang, William[19]
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Contributing teams: NuSTAR, Swift, MAGIC, VERITAS

438.12 The first broadband study of a black hole transient in quiescence with NuSTAR and XMM-Newton

Rana, Vikram[1]; Tomsick, John[2]; Corbel, Stephane[3]; Chakrabarty, Deepto[4]; Miller, Jon M.[5]; Harrison, Fiona[1]; Smith, David M.[6]; Stern, Daniel[7]
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438.13 NuSTAR observations of SMC X-1 at two different superorbital phases

Pottschmidt, Katja[1, 2]; Bachetti, Matteo[3]; Leyder, Jean-Christophe[4]; Boggs, Steven E.[5]; Chakrabarty, Deepto[6]; Christensen, Finn[7]; Craig, William W.[5, 8]; Fuerst, Felix[9]; Grefenstette, Brian[9]; Hailey, Charles J.[10]; Harrison, Fiona[9]; Hornschemeier, Ann E.[2]; Madsen, Kristin[9]; Markwardt, Craig[2]; Stern, Daniel[11, 9]; Tang, Rebecca[9]; Tomsick, John[5]; Wilms, Jörn[12]; Zhang, William[2]
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438.14 Morphology of the Galactic Center with NuSTAR

Perez, Kerstin[1]; Hailey, Charles J.[1]; Mori, Kaya[1]
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Contributing teams: NuSTAR Team

438.15 NuSTAR Effective Area Calibration

Markwardt, Craig[1]; Madsen, Kristin[3]; An, Hongjun[2]; Barriere, Nicolas[4]; Brejholt, Nicolai F.[7]; Christensen, Finn[7]; Craig, William W.[5]; Forster, Karl[3]; Fuerst, Felix[3]; Grefenstette, Brian[3]; Hailey, Charles J.[6]; Harrison, Fiona[3]; Kitaguchi, Takao[3]; Miyasaka, Hiromasa[3]; Nynka, Melania[6]; Pivovaroff, Michael[5]; Rana, Vikram[3]; Vogel, Julia[5]; Walton, Dom[3]; Westergaard , Niels Jørgen[7]; Wik, Daniel R.[1]; Zhang, Shuo[6]; Zoglauer, Andreas[3]

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Contributing teams: NuSTAR Team

438.16 In Search of AGN in Starburst Galaxies with NuSTAR

Ptak, Andrew[1, 2]; Hornschemeier, Ann E.[1, 2]; Zezas, Andreas[3]; Antoniou, Vallia[3]; Argo, Megan[4]; Bechtol, Keith[5]; Harrison, Fiona[6]; Krivonos, Roman[8]; Lehmer, Bret[2, 1]; Leyder, Jean-Christophe[1]; Maccarone, Thomas J.[9]; Stern, Daniel[6, 7]; Venters, Tonia M.[1]; Wik, Daniel R.[2]; Yukita, Mihoko[2, 1]; Zhang, William[1]

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438.17 The reflection component from Cygnus X-1 in the soft state measured by NuSTAR and Suzaku

Tomsick, John[1]; Nowak, Michael[2]; Parker, Michael[3]; Miller, Jon M.[4]; Fabian, Andy C.[3]; Harrison, Fiona[5]; Bachetti, Matteo[6, 7]; Barret, Didier[6, 7]; Boggs, Steven E.[1]; Christensen, Finn[8]; Craig, William W.[9]; Forster, Karl[5]; Fuerst, Felix[5]; Grefenstette, Brian[5]; Hailey, Charles J.[10]; King, Ashley L.[4]; Madsen, Kristin[5]; Natalucci, Lorenzo[11]; Pottschmidt, Katja[12, 13]; Ross, Randy R.[14]; Stern, Daniel[15]; Walton, Dom[5]; Wilms, Jörn[16]; Zhang, William[13]

1.UC Berkeley/SSL, Berkeley, CA. [2.]MIT, Cambridge, MA. [3.]University of Cambridge, Cambridge, United Kingdom. [4.]Univeristy of Michigan, Ann Arbor, MI. [5.]Caltech, Pasadena, CA. [6.]Universite de Toulouse, Toulouse, France. [7.]CNRS, Toulouse, France. [8.]DTU Space, Lyngby, Denmark. [9.]LLNL, Livermore, CA. [10.]Columbia University, New York, NY. [11.]INAF-IAPS, Rome, Italy. [12.]CRESST, Baltimore, MD. [13.]NASA/GSFC, Greenbelt, MD. [14.]College of the Holy Cross, Worcester, MA. [15.]JPL, Pasadena, CA. [16.]Dr. Karl-Remeis-Sternwarte, Bamberg, Germany.

438.18 Observations of a hard state of 1E 1740.7-2942 by NuSTAR and INTEGRAL

Natalucci, Lorenzo[1]; Tomsick, John[2]; Bazzano, Angela[1]; Smith, David M.[3]; Bachetti, Matteo[4, 5]; Barret, Didier[4, 5]; Boggs, Steven E.[2]; Christensen, Finn[6]; Craig, William W.[7]; Fiocchi, Mariateresa[1]; Fuerst, Felix[8]; Grefenstette, Brian[8]; Hailey, Charles J.[9]; Harrison, Fiona[8]; Krivonos, Roman[2]; Kuulkers, Erik[10]; Miller, Jon M.[11]; Pottschmidt, Katja[12, 13]; Stern, Daniel[14]; Ubertini, Pietro[1]; Walton, Dom[8]; Zhang, William[15]

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438.19 NuSTAR/XMM-Newton Detection of a Hard Cut-Off in Cen X-4

Chakrabarty, Deepto[1]; Tomsick, John[2]; Grefenstette, Brian[3]; Barret, Didier[4, 5]; Boggs, Steven E.[2]; Christensen, Finn[6]; Craig, William W.[7, 2]; Hailey, Charles J.[8]; Harrison, Fiona[3]; Psaltis, Dimitrios[9]; Stern, Daniel[10]; Wik, Daniel R.[11]; Zhang, William[11]

[1.]MIT, Cambridge, MA. [2.]University of California, Berkeley, CA. [3.]Caltech, Pasadena, CA. [4.]Universite de Toulouse, Toulouse, France. [5.]CNRS/IRAP, Toulouse, France. [6.]DTU National Space Institute, Lyngby, Denmark. [7.]LLNL, Livermore, CA. [8.]Columbia University, New York, NY. [9.]University of Arizona, Tucson, AZ. [10.]JPL/ Caltech, Pasadena, CA. [11.]NASA/GSFC, Greenbelt, MD.

438.20 NuSTAR discovery of a luminosity dependent cyclotron line energy in Vela X-1

Fuerst, Felix[1]; Pottschmidt, Katja[2]; Wilms, Jörn[3]; Tomsick, John[4]; Bachetti, Matteo[5]; Boggs, Steven E.[4]; Christensen, Finn[6]; Craig, William W.[7]; Grefenstette, Brian[1]; Hailey, Charles J.[8]; Harrison, Fiona[1]; Madsen, Kristin[1]; Miller, Jon M.[9]; Stern, Daniel[10]; Walton, Dom[1]; Zhang, William[11]

[1.]Caltech, Pasadena, CA. [2.]UMBC/CRESST and NASA-GSFC, Greenbelt, MD. [3.]Remeis-Sternwarte & ECAP, Bamberg, Germany. [4.]SSL, Berkeley, CA. [5.]Universite de Toulouse & CNRS, Toulouse, France. [6.]DTU Space, Lyngby, Denmark. [7.]LLNL, Livermore, CA. [8.]Columbia University, New York, NY. [9.]University of Michigan, Ann Arbor, MI. [10.]JPL, Pasadena, CA. [11.]NASA-GSFC, Greenbelt, MD.

438.21 NuSTAR Imaging of Pulsar Wind Nebulae MSH 15-52 and the Crab

Madsen, Kristin[1]; Reynolds, Stephen P.[4]; Harrison, Fiona[1]; Grefenstette, Brian[1]; Miyasaka, Hiromasa[1]; Stern, Daniel[1]; Zoglauer, Andreas[7]; Boggs, Steven E.[7]; Fryer, Chris[6]; Hailey, Charles J.[2]; Nynka, Melania[2]; Kaspi, Victoria M.[8]; An, Hongjun[8]; Kitaguchi, Takao[5]; Forster, Karl[1]; Craig, William W.[9]; Wik, Daniel R.[3]

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439 The Exciting Future of Cosmic Microwave Background Measurements Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

439.01 The Primordial Inflation Explorer (PIXIE)

Kogut, Alan J.[1]; Chuss, David T.[1]; Dotson, Jessie L.[2]; Dwek, Eli[1]; Fixsen, Dale J.[1,3]; Halpern, Mark[4]; Hinshaw, Gary F.[4]; Meyer, Stephan[5]; Moseley, Samuel H.[1]; Seiffert, Michael D.[6]; Spergel, David N.[7]; Wollack, Edward[1]

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439.02 PIPER: Primordial Inflation Polarization Explorer

Lazear, Justin[1]; Ade, Peter[6]; Benford, Dominic J.[2]; Bennett, Charles L.[1]; Chuss, David T.[2]; Dotson, Jessie L.[2]; Eimer, Joseph[1]; Fixsen, Dale J.[2]; Halpern, Mark[3]; Hinderks, James[2]; Hinshaw, Gary F.[3]; Irwin, Kent[5]; Jhabvala, Christine[2]; Johnson, Bradley[4]; Kogut, Alan J.[2]; Mirel, Paul[2]; Moseley, Samuel H.[2]; Staguhn, Johannes[2,1]; Switzer, Eric[2]; Tucker, Carole E.[6]; Weston, Amy[2]; Wollack, Edward[2]

[1.]Johns Hopkins University, Baltimore, MD. [2.]NASA-GSFC, Greenbelt, MD. [3.]University of British Columbia, Vancouver, BC, Canada. [4.]Columbia University, New York, NY. [5.]NIST, Boulder, CO. [6.]Cardiff University, Cardiff, Wales, United Kingdom.

439.03 Feedhorn-coupled Bolometer Detectors at 40 GHz Implemented on the Cosmology Large Angular Scale Surveyor (CLASS)

Chuss, David T.[1]; Ali, Aamir[2]; Appel, John W.[2]; Bennett, Charles L.[2]; Colazo, Felipe[1]; Crowe, Erik[1]; Denis, Kevin[1]; Eimer, Joseph[2]; Essinger-Hileman, Thomas[2]; Marriage, Tobias[2]; Moseley, Samuel H.[1]; Rostem, Karwan[1,2]; Stevenson, Thomas[1]; Towner, Deborah[1]; U-Yen, Kongpop[1]; Wollack, Edward[1]; Zeng, Lingzhen[3]

[1.]NASA's GSFC, Greenbelt, MD. [2.]The Johns Hopkins University, Baltimore, MD. [3.]Center for Astrophysics, Cambridge, MA.

439.04 Observing the Large Scale CMB Polarization using Variable-delay Polarization Modulators

Miller, Nathan[1]; Chuss, David T.[1]; Wollack, Edward[1]; Marriage, Tobias[2]

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439.05 The Primordial Inflation Polarization Explorer: Science from Circular Polarization Measurements

Switzer, Eric[1]; Ade, Peter[6]; Benford, Dominic J.[1]; Bennett, Charles L.[1]; Chuss, David T.[1]; Dotson, Jessie L.[1]; Eimer, Joseph[2]; Fixsen, Dale J.[1]; Halpern, Mark[3]; Hinshaw, Gary F.[3]; Irwin, Kent[5]; Jhabvala, Christine[1]; Johnson, Bradley[4]; Kogut, Alan J.[1]; Lazear, Justin[2]; Mirel, Paul[1]; Moseley, Samuel H.[1]; Staguhn, Johannes[1,2]; Tucker, Carole E.[6]; Weston, Amy[1]; Wollack, Edward[1]

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439.06 Beam characterization and systematics of Bicep2 and the Keck Array
Wong, Chin Lin[1]
[1.]*Harvard University, Cambridge, MA.*
Contributing teams: Bicep2/Keck Collaboration

439.07 Measuring the CMB Dipole at 11 GHz—for cheap!
Markowitz, Aaron[1]; Harrison, Samuel[1]; Karkare, Kirit[1, 2]; Kimbert, Robert[2]; Kovac, John M.[1, 2]
[1.]*Harvard University, Cambridge, MA.* [2.]*Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.*

440 APOGEE - A Fresh View Into the Stellar Populations of the Milky Way Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

440.01 APOGEE: The Apache Point Observatory Galactic Evolution Experiment
Majewski, Steven R.[1]
[1.]*Univ. of Virginia, Charlottesville, VA.*
Contributing teams: The SDSS-III/APOGEE Collaboration

440.02 DR10 SDSS-III release of APOGEE data
Shetrone, Matthew D.[1]; Allende-Prieto, Carlos[8]; Beers, Timothy C.[4]; Cunha, Katia M.[4]; Fabbian, Damian[8]; Feuillet, Diane[7]; Frinchaboy, Peter M.[3]; Garcia Perez, Ana Elia[6]; Johnson, Jennifer[2]; Majewski, Steven R.[6]; Nidever, David L.[5]; Pinsonneault, Marc H.[2]; Smith, Verne V.[4]; Zasowski, Gail[9]
[1.]*Univ. of Texas, McDonald Observatory, TX.* [2.]*Ohio State University, Columbus, OH.* [3.]*Texas Christian University, Fort Worth, TX.* [4.]*NOAO, Tuscon, AZ.* [5.]*Univ. of Michigan, Ann Arbor, MI.* [6.]*Univ. of Virginia, Charlottesville, VA.* [7.]*New Mexico State University, Las Cruces, NM.* [8.]*IAC, La Laguna, Tenerife, Spain.* [9.]*John Hopkins University, Baltimore, MD.*
Contributing teams: The SDSS-III/APOGEE Collaboration

440.03 SDSS-III/APOGEE: Survey Target Selection
Meyer, Brianne[1]; Zasowski, Gail[2]; Frinchaboy, Peter M.[1]; Johnson, Jennifer[3]; Majewski, Steven R.[4]; Andrews, Brett[3]; Chojnowski, S. Drew[4]; Fabbian, Damian[8]; Hayden, Michael R.[7]; Hearty, Fred[4]; Jackson, Kelly[5]; Nidever, David L.[6]; Skrutskie, Michael F.[4]
[1.]*TCU, Fort Worth, TX.* [2.]*JHU, Baltimore, MD.* [3.]*OSU, Columbus, OH.* [4.]*UVA, Charlottesville, VA.* [5.]*UT Dallas, Dallas, TX.* [6.]*U Michigan, Ann Arbor, MI.* [7.]*NMSU, Las Crusas, NM.* [8.]*IAC, La Laguna , Spain.*

440.04 The APOGEE Data Reduction pipeline
Holtzman, Jon A.[1]; Nidever, David L.[2]; Nguyen, Duy Cuong[3]; Shetrone, Matthew D.[4]; Majewski, Steven[5]; Schiavon, Ricardo[6]
1.New Mexico State Univ., Las Cruces, NM. [2.]*University of Michigan, Ann Arbor, MI.* [3.]*University of Toronto, Toronto, ON, Canada.* [4.]*McDonald Observatory, Fort Davis, TX.* [5.]*University of Virginia, Charlottesville, VA.* [6.]*Liverpool John Moores, Liverpool, United Kingdom.*

440.05 Model Stellar Spectral Libraries for Analysis of the SDSS-III Apache Point Observatory Galactic Evolution Experiment (APOGEE)

Allende-Prieto, Carlos[1, 16]; Koesterke, Lars[2]; Shetrone, Matthew D.[3]; Zamora, Olga[1, 16]; Ruffoni, Matthew P.[4]; Smith, Verne V.5, [6]; Cunha, Katia M.[6, 7]; Lawler, James E.[8]; Pickering, Juliet C.[4]; Nave, Gillian[9]; Garcia Perez, Ana Elia[10]; Bizyaev, Dmitry[11]; Edvardsson, Bengt[12]; Gustafsson, Bengt[12]; Plez, Bertrand[13]; Castelli, Fiorella[14]; Majewski, Steven R.[10]; Schiavon, Ricardo[15]; Meszaros, Szabolcs[1, 16]; de Vicente, Angel[1, 16]

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440.06 APOGEE-2: The Second Phase of the Apache Point Observatory Galactic Evolution Experiment in SDSS-IV

Sobeck, Jennifer[2, 1]; Majewski, Steven[2]; Hearty, Fred[2]; Schiavon, Ricardo[6]; Holtzman, Jon A.[3]; Johnson, Jennifer[4]; Frinchaboy, Peter M.[5]; Skrutskie, Michael F.[2]; Munoz, Ricardo[9]; Pinsonneault, Marc H.[4]; Nidever, David L.[11]; Zasowski, Gail[16]; Garcia Perez, Ana Elia[2]; Fabbian, Damian[7, 8]; Meza Cofre, Andres[12]; Cunha, Katia M.[18]; Smith, Verne V.[14]; Chiappini, Cristina[10]; Beers, Timothy C.[14, 19]; Steinmetz, Matthias[10]; Anders, Frederich[10]; Bizyaev, Dmitry[15, 3]; Roman, Alexandre[17]; Fleming, Scott W.[13]; Crane, Jeffrey D.[20]

[1.]UChicago, Chicago, IL. [2.]UVA, Charlottesville, VA. [3.]NMSU, Las Cruces, NM. [4.]OSU, Columbus, OH. [5.]TCU, Fort Worth, TX. [6.]LJMU, Liverpool, United Kingdom. [7.]IAC, La Laguna, Spain. [8.]ULL, La Laguna, Tenerife, Spain. [9.]UChile, Santiago, Chile. [10.]AIP, Potsdam, Germany. [11.]UM, Ann Arbor, MI. [12.]UNAB, Santiago, Chile. [13.]STScI, Baltimore, MD. [14.]NOAO, Tucson, AZ. [15.]APO, Sunspot, NM. [16.]JHU, Baltimore, MD. [17.]USerena, La Serena, Chile. [18.]ON-MCTI, Rio de Janeiro, Brazil. [19.]JINA, Notre Dame, IN. [20.]OCIW, Pasadena, CA.

Contributing teams: The SDSS-IV/APOGEE-2 Collaboration

440.07 The APOGEE Stellar Parameters and Chemical Abundances Pipeline (ASPCAP)

Garcia Perez, Ana Elia[1]; Allende-Prieto, Carlos[2]; Cunha, Katia M.[3]; Holtzman, Jon A.[4]; Johnson, Jennifer[5]; Majewski, Steven[1]; Meszaros, Szabolcs[2]; Schiavon, Ricardo[6]; Shetrone, Matthew D.[7]; Smith, Verne V.[8]

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Contributing teams: The SDSS-III/APOGEE Collaboration

441 Stars, Cool Dwarfs, Brown Dwarfs

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

441.01 Accuracy of Astrometry Positions, Parallaxes, and Proper Motions
Harris, Hugh C.[1]
[1.]U.S. Naval Obs., Flagstaff, AZ.

441.02 20 Years of RECONS
Henry, Todd J.[1]
[1.]RECONS, Atlanta, GA.
Contributing teams: RECONS

441.03 Going the Distance: Parallaxes for SuperCOSMOS-RECONS (SCR) Stars
Winters, Jennifer G.[2, 1]; Dieterich, Sergio[2, 1]; Hambly, Nigel C.[3, 2]; Henry, Todd J.[2], 1; Jao, Wei-Chun2[, 1]; Lurie, John C.[4, 2]; Riedel, Adric R.[5, 2]; Subasavage, John P.[6, 2]
[1.]Georgia State University, Atlanta, GA. [2.]RECONS, Atlanta, GA. [3.]University of Edinburgh/Royal Observatory, Edinburgh, Scotland, United Kingdom. [4.]University of Washington, Seattle, WA. [5.]Hunter College/National Museum of Natural History, New York City, NY. [6.]US Naval Observatory, Flagstaff, AZ.
Contributing teams: RECONS

441.04 Exploring The Wide Main Sequence of Low Mass Stars
Pewett, Tiffany[1]; Henry, Todd J.[1]; Hosey, Altonio D.[1]; Jao, Wei-Chun[1]; Lepine, Sebastien[1]; Riedel, Adric R.[2]; Winters, Jennifer G.[1]
1.Georgia State University, Atlanta, GA. [2.]American Musem of Natural History, New York City, NY.
Contributing teams: RECONS Team

441.05 The Hydrogen Burning Limit
Dieterich, Sergio[1]; Henry, Todd J.[1]; Jao, Wei-Chun[1]; Winters, Jennifer G.[1]; Hosey, Altonio D.[1]; Riedel, Adric R.[2]; Subasavage, John P.[3]
[1.]Georgia State University, Atlanta, GA. [2.]American Museum of Natural History, New York, NY. [3.]U.S. Naval Observatory, Flagstaff, AZ.
Contributing teams: RECONS

441.06 A study of the wide, low-mass companion population with Pan-STARRS1
Deacon, Niall[1]; Liu, Michael C.[2]; Magnier, Eugene A.[2]; Aller, Kimberly M.[2]; Best, William M.[2]; Bowler, Brendan P.[2, 3]; Kotson, Michael C.[2]
[1.]Max Planck Institute for Astronomy, Heidelberg, Germany. [2.]Institute for Astronomy, University of Hawaii, Honolulu, HI. [3.]California Institute of Technology, Pasadena, CA.
Contributing teams: Pan-STARRS1 Builders

441.07 Thirty-one new nearby binary systems discovered in archived Hubble Space Telescope images.
Lepine, Sebastien[1, 2]; Lee, Fred[3]; Rich, Robert M.[4]
[1.]Dept. Physics and Astronomy, Georgia State University, Atlanta, GA. [2.]American Museum of Natural History, New York, NY. [3.]Plainview Old-Bethpage JFK High School, Plainview, NY. 4.UCLA, Los Angeles, CA.

441.08 A Spitzer Survey for Wide Substellar Companions to Nearby Stars
Melso, Nicole[1]; Kaldon, Kristina[1]; Luhman, Kevin[1]
[1.]The Pennsylvania State University, University Park, PA.

441.09 Coronal heating of M dwarfs: The flare-energy distribution of fully convective stars

Feng, Ying[1]; Poppenhaeger, Katja[2]; Goulding, Andy D.[2]; Bulbul, Esra[2]
[1.]Astronomy & Astrophysics, The Pennsylvania State University, University Park, PA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

441.10 Magnetic Dynamos and X-ray Activity in Ultracool Dwarfs (UCDs): Constraining the Role of Rotation

Cook, Benjamin A.[1]; Williams, Peter K.[2]; Berger, Edo[2]
[1.]Princeton University, Princeton, NJ. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

441.11 Magnetic Dynamos and X-Ray Activity in Ultracool Dwarfs (UCDs): Surprises in the Radio Band

Williams, Peter K.[1]; Cook, Benjamin A.[2]; Berger, Edo[1]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Princeton University Department of Astrophysical Sciences, Princeton, NJ.

441.12 Rotation Rates and other Physical Properties in a Sample of M-dwarfs from the Kepler Mission

Bachmakov, Eduard[1]; Gouravajhala, Sai[1]; Guinan, Edward F.[1]
[1.]Villanova University, Villanova, PA.

441.13 Measuring the Rotational Velocities of Young M Stars

Martlin, Catherine[1]; Jensen, Eric L.[1]; Shkolnik, Evgenya[2]
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441.14 Quantifying an Age-Activity Relation using Wide White Dwarf - M Dwarf Binary Pairs

Morgan, Dylan P.[1]; West, Andrew A.[1]; Dhital, Saurav[2]; Garcés, Ane[4]; Catalán, Silvia[3]
[1.]Boston Univ., Cambridge, MA. [2.]Embry-Riddle Aeronautical University,, Daytona Beach, FL. [3.]University of Hertfordshire, Hatfield, UK, United Kingdom. [4.]Institut de Ciències de l'Espai (IEEC-CSIC), Bellaterra, Spain.

441.15 A Color-Metallicity Relation for SDSS M Dwarfs

West, Andrew A.[1]; Davenport, James R.[2]; Mann, Andrew[3]; Massey, Angela P.[1]; Dhital, Saurav[4]
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441.16 SDSS M-dwarfs with WISE Signatures of Infrared Excess: Evidence of Warm Circumstellar Material in Low-Mass Field Populations

Theissen, Christopher[1]; West, Andrew A.[1]
[1.]Boston University, Boston, MA.

441.17 Photometric and Spectral Analysis of Blue and Red L Dwarfs

Rice, Emily L.[1, 2]; Alam, Munazza[3, 4]; Camnasio, Sara[3, 4]; Cruz, Kelle L.[3, 2]; Faherty, Jacqueline K.[5, 2]; Mace, Gregory N.[6]; McLean, Ian S.[6]
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441.18 Spectral Variability and Cloud Structure in Luhman 16AB
Burgasser, Adam J.[1]; Gillon, Michaël[2]; Faherty, Jacqueline K.[3, 6]; Triaud, Amaury[4]; Street, Rachel[5]
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441.19 A Volume-Limited Search for L/T Transition Brown Dwarfs With the Pan-STARRS and WISE Surveys
Best, William M.[1]; Liu, Michael C.[1]; Magnier, Eugene A.[1]; Aller, Kimberly M.[1]; Deacon, Niall[2]
[1.]University of Hawaii, Honolulu, HI. [2.]Max Planck Institute for Astronomy, Heidelberg, Germany.

441.21 A Survey of L/T-transition and Peculiar Brown Dwarfs from an SDSS/2MASS/WISE Cross-match
Kellogg, Kendra[1, 2]; Metchev, Stanimir[1, 2]
[1.]Western University, London, ON, Canada. [2.]Stony Brook University, Stony Brook, NY.

441.22 Photometric Variability of Y Dwarfs
Trucks, Jesica[1]; Cushing, Michael[1]; Hardegree-Ullman, Kevin[1]; Gelino, Christopher R.[2]; Kirkpatrick, J. D.[2]; Mace, Gregory N.[3]; Gizis, John[4]; Marley, Mark S.[5]; Morley, Caroline[6]; Fortney, Jonathan J.[6]
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441.23 A USNO Search for Astrometric Companions to Brown Dwarfs IV
Bartlett, Jennifer L.[1]; Vrba, Frederick J.[2]; Munn, Jeffrey A.[2]; Luginbuhl, Christian B.[2]; Tilleman, Trudy[2]; Henden, Arne A.[3]
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441.24 New Evidence for a Substellar Luminosity Problem
Dupuy, Trent J.[1]; Liu, Michael C.[2]; Ireland, Michael[3, 4]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Institute for Astronomy, University of Hawai'i, Honolulu, HI. [3.]Australian Astronomical Observatory, Epping, NSW, Australia. [4.]Macquarie University, North Ryde, NSW, Australia.

441.25 Spectral Energy Distributions as Photometric and Spectroscopic Probes of Brown Dwarf Atmospheres
Filippazzo, Joe[1, 2]; Rice, Emily L.[2, 3]; Cruz, Kelle L.4[, 3]; Faherty, Jacqueline K.[3, 5]
[1.]CUNY Graduate Center, Brooklyn, NY. [2.]College of Staten Island, Staten Island, NY. [3.]American Museum of Natural History, Manhattan, NY. [4.]Hunter College, Manhattan, NY. [5.]Universidad de Chile, Cerro Calán, Chile.
Contributing teams: BDNYC

441.26 Microlensing as a New Tool for Measuring the Masses of Nearby Brown Dwarfs
Cisneros, Freddy[1, 2]; Kirkpatrick, J. D.[2]
[1.]Cal Poly Pomona, Pomona, CA. [2.]Infrared Processing and Analysis Center, Pasadena, CA.

441.27 A Proper Motion Census of Ophiuchus
Frezza, Damon[1]; Allers, Katelyn N.[1]; Kraus, Adam L.[2]
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441.28 Searching for Local Evidence of Supernova Enrichment in the Scorpius Centaurus OB Association
Bubar, Eric J.[1, 2]; Mamajek, Eric E.[2]; Young, Patrick A.3
[1.]Marymount University, Arlington, VA. [2.]University of Rochester, Rochester, NY. [3.]Arizona State University, Phoenix, AZ.

441.29 Spectroscopic Observations of Nearby Low Mass Stars
Vican, Laura[1]; Zuckerman, Ben M.[1]; Rodriguez, David[2]
[1.]UCLA, Los Angeles, CA. [2.]Universidad de Chile, Santiago, Chile.

441.30 Serendipitous Chandra X-ray Spectroscopy of GALEX Nearby Young-Star Survey (GALNYSS) Candidates
Kastner, Joel H.[1]; Baum, Noah[2, 1]; Principe, David[1]; Rodriguez, David[3]
[1.]RIT Center for Imaging Science, Rochester, NY. [2.]Carnegie-Mellon University, Pittsburg, PA. [3.]Universidad de Chile, Santiago, Chile.

441.31 Insights on Li Depletion from the Oldest Solar Twin HIP 102152
Monroe, TalaWanda[1]; Melendez, Jorge[1]
[1.]Universidade de São Paulo, São Paulo, Brazil.

441.32 Rapidly Rotating Red Giants in APOGEE
Bizyaev, Dmitry[1]; Carlberg, Joleen K.[2]; Nidever, David L.[8]; Majewski, Steven R.[3]; Shetrone, Matthew D.[4]; Smith, Verne V.[5]; Cunha, Katia M.[6]; Holtzman, Jon A.[7]; O'Connell, Robert W.[3]; Pan, Kaike[1]; Garcia Perez, Ana Elia[3]
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441.33 The PTI Giant Star Angular Size Survey: Effective Temperatures & Linear Radii
van Belle, Gerard[1]; Ciardi, David R.[2]; von Braun, Kaspar[3]
[1.]Lowell Observatory, Flagstaff, AZ. [2.]Caltech, Pasadena, CA. [3.]MPIA, Heidelberg, Germany.

441.34 Chemical Abundances in Exoplanet Host Stars
Hernandez, Luis[1]; Bubar, Eric J.[1, 2]; Mamajek, Eric E.[2]; Young, Patrick A.[3]
[1.]Marymount University, Arlington, VA. [2.]University of Rochester, Rochester, NY. [3.]Arizona State University, Phoenix, AZ.

441.35 Mapping small-scale starspots on Kepler transiting planet host stars
Hebb, Leslie[1, 2]; Davenport, James R.[2]; Hawley, Suzanne L.[2]; Jardine, Moira M.[3]; Llama, Joseph[3]
[1.]Hobart and William Smith Colleges, Geneva, NY. [2.]University of Washington, Seattle, WA. [3.]University of St Andrews, St Andrews, United Kingdom.

441.36 A Spitzer Search for Substellar Companions of Nearby Planet-Host Stars
Hulsebus, Alan[1]; Marengo, Massimo[1]; Carson, Joseph[2]; Stapelfeldt, Karl R.[3]
[1.]Iowa State University, Ames, IA. [2.]College of Charleston, Charleston, SC. [3.]NASA Goddard Space Flight Center, Greenbelt, MD.

441.37 WISE colors of the MK spectral standard stars.
Ali, Babar[1]
[1.]Caltech, Pasadena, CA.

441.38 New GALEX UV Data Products At MAST For Stellar Astrophysics
Shiao, Bernie[1]; Fleming, Scott W.[1]; Million, Chase[2]; Seibert, Mark[3]; Bianchi, Luciana[4]; Thompson, Randy1; Tseng, Shui-Ay1; Adler, William J.5; Hubbard, Min6; Levay, Karen[1]; Madore, Barry F.[3]; Martin, Christopher D.[6]; Nieto-Santisteban, Maria A.[1]; Sahai, Raghvendra[5]; Schiminovich, David[7]; White, Richard L.[1]; Wyder, Ted K.[8]
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441.39 New Kepler Data Products At MAST For Stellar Astrophysics
Fleming, Scott W.[1]; Shiao, Bernie[1]; Tseng, Shui-Ay[1]; Million, Chase[2]; Thompson, Randy[1]; Seibert, Mark[3]; Abney, Faith[1]; Donaldson, Tom[1]; Dower, Theresa[1]; Fraquelli, Dorothy A.[1]; Handy, Steven[1]; Koekemoer, Anton M.[1]; Levay, Karen[1]; Matuskey, Jacob[1]; McLean, Brian[1]; Quick, Lee[1]; Rogers, Anthony[1]; Wallace, Geoff[1]; White, Richard L.[1]
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441.40 Double the Lightcurves, Double the Fun: Stellar Activity on the M Dwarfs GJ 1245 A and B with Kepler
Lurie, John C.[1]; Davenport, James R.[1]; Hawley, Suzanne L.[1]
[1.]University of Washington, Seattle, WA.

442 Star Associations, Star Clusters - Galactic & Extra-galactic Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

442.01 The Discovery of an Extreme Molecular Super Star Cluster Precursor with ALMA
Johnson, Kelsey E.[1, 2]; Brogan, Crystal L.[2]; Chandar, Rupali[4]; Evans, Aaron S.[1, 2]; Hibbard, John E.[2]; Leroy, Adam K.[2]; Sheth, Kartik[2]; Whitmore, Bradley C.[3]
[1.]Univ. of Virginia, Charlottesville, VA. [2.]NRAO, Charlottesville, VA. [3.]STScI, Baltimore, MD. [4.]U. Toledo, Toledo, OH.

442.02 Characterizing the AB Doradus Moving Group Using High Resolution Spectroscopy and Kinematic Traceback
McCarthy, Kyle[1]; Wilhelm, Ronald J.[1]
[1.], Lexington, KY.

442.03 Deep Seven-color Photometry and Classification of Stars in the Cyg OB2 Association
Boyle, Richard P.[1]; Janusz, Robert[2, 1]; Straizys, Vytautas[3]; Laugalys, Vygandas[3]
[1.]Vatican Observatory, Castelgandolfo, Holy See (Vatican City State).
[2.]Ignatianum College, Cracow, Poland. 3.Vilnius University, Vilnius, Lithuania.

442.04 Searching for Stellar Sub-Structure in the Galactic Bulge
Hsyu, Tiffany[1]; Johnson, Christian I.[2, 1]; Kunder, Andrea[3]; Rich, Robert M.[1]; de Propris, Roberto[4]; Koch, Andreas[5]
[1.]California - Los Angeles, Univesity of, Los Angeles, CA. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [3.]Leibniz-Institut fuer Astrophysik Potsdam, Potsdam, Germany. [4.]European Southern Observatory, Garching, Germany. [5.]Zentrum fuer Astronomie der Universitaet Heidelberg, Heidelberg, Germany.

442.05 Moving group or cluster members?
O'Connell, Julia[1]; Frinchaboy, Peter M.[1]
[1.]Texas Christian University, Fort Worth, TX.

442.06 Is Loden 1 an old and nearby star cluster?
Han, Eunkyu[1]; Curtis, Jason L.[1]; Wright, Jason[1]
[1.]Pennsylvania State University, University Park, PA.

442.07 Rotational Velocities Of PMS Stars In NGC2362
Kimock, Benjamin[1]; Hamilton, Catrina M.[1]; James, David[2]; Johns-Krull, Christopher M.[3]
[1.]Dickinson College, Carlisle, PA. [2.]CTIO, La Serena, Chile. [3.]Rice University, Houston, TX.

442.08 Rotation and activity at 3 Gyr with Ruprecht 147
Curtis, Jason L.[1]; Wright, Jason[1]
[1.]The Pennsylvania State University, University Park, PA.

442.09 Using MASSCLEAN to Describe Stellar Clusters Found in the Vista Variables in the Via Lactea (VVV) Survey
Popescu, Bogdan[1]; Hanson, Margaret M.[1]; Borissova, Jura[2]; Kurtev, Radostin[2]; Ivanov, Valentin[3]; Catelan, Marcio[5]; Larsen, Soeren S.[4]; Minniti, Dante[5]; Lucas, Philip[6]
[1.]Univ of Cincinnati, Cincinnati, OH. [2.]Universidad de Valparaiso, Valparaiso, Chile. [3.]ESO, Santiago, Chile. [4.]Radboud Universiteit Nijmegen, Nijmegen, Netherlands. [5.]Pontificia Universidad Catolica, Santiago, Chile. [6.]University of Hertfordshire, Hertfordshire, United Kingdom.

442.10 A Kinematic Survey in the Perseus Molecular Cloud: Results from the APOGEE Infrared Survey of Young Nebulous Clusters (IN-SYNC)
Covey, Kevin R.[1]; Cottaar, Michiel[2]; Foster, Jonathan B.[3]; Nidever, David L.[4]; Meyer, Michael[2]; Tan, Jonathan[5]; Da Rio, Nicola[5]; Flaherty, Kevin M.[6]; Stassun, Keivan[7]; Frinchaboy, Peter M.[8]; Majewski, Steven[9]
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Contributing teams: APOGEE IN-SYNC Team

442.11 The Gaia-ESO Survey: a public spectroscopic survey of the Milky Way
Friel, Eileen D.[1]; Magrini, L.[2]; Jacobson, H. R.[3]; Bragaglia, A.[4]; Donati, Paolo[4]; Randich, S.[2]; Cantat-Gaudin, T.[5]; Vallenari, A.[5]; Maiorca, E.[2]
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Contributing teams: the GES Consortium

442.12 The Open Cluster Chemical Abundances and Mapping (OCCAM) Survey
Frinchaboy, Peter M.[1]; Thompson, Benjamin A.[1]; O'Connell, Julia[1]; Meyer, Brianne[1]; Majewski, Steven[4]; Beaton, Rachael[4]; Cunha, Katia M.[7]; Holtzman, Jon A.[6]; Schiavon, Ricardo[5]; Zasowski, Gail2, [3]
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442.13 Radial Velocities, Metallicities, and Improved Fundamental Parameters of Outer Disk Open Clusters
Zasowski, Gail[1]; Hamm, Karen[2]; Beaton, Rachael[2]; Damke, Guillermo[2]; Carlberg, Joleen K.[3]; Majewski, Steven R.[2]; Frinchaboy, Peter M.[4]
[1.]Johns Hopkins University, Baltimore, MD. [2.]University of Virginia, Charlottesville, VA. [3.]Carnegie Institution, Department of Terrestrial Magnetism, Washington, DC. [4.]Texas Christian University, Fort Worth, TX.

442.14 Analysis of Spectral-type A/B Stars in Five Open Clusters
Wilhelm, Ronald J.[1]; Rafuil Islam, Mirza Sharoz[1]
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442.15 Spectroscopic Binary Orbits in the Young Open Cluster M35
Leiner, Emily[1]; Mathieu, Robert D.[1]; Geller, Aaron M.[2]
[1.]University of Wisconsin-- Madison, Madison, WI. [2.]Northwestern University, Evanston, IL.

442.16 NGC6791: A case study of using CN and CH band strengths to detect chemical inhomogeneities in open clusters.
Boberg, Owen[1]; Martell, Sarah L.[2]; Friel, Eileen D.[1]
[1.]Indiana University, Bloomington, IN. [2.]Australian Astronomical Observatory, Sydney, NSW, Australia.

442.17 New Deep Photometry and Stellar Luminosity Functions for Ko 1 and Ko 2
Paust, Nathaniel[1]; Wilson, Danielle[1]; van Belle, Gerard[2]
[1.]Whitman College, Walla Walla, WA. [2.]Lowell Observatory, Flagstaff , AZ.

442.18 A Swift/UVOT Survey of Galactic Open and Globular Clusters
Siegel, Michael[1]; Porterfield, Blair L.[1]; Linevsky, Jacquelyn S.[2, 1]
[1.]Pennsylvania State University, University Park, PA. [2.]Cypress Bay High School, Weston, FL.

442.19 A Swift/UVOT NUV Study of RR Lyrae Stars in the Globular Cluster M3
Porterfield, Blair[1]; Siegel, Michael[1]
[1.]The Pennsylvania State University, University Park, PA.
Contributing teams: Swift, UVOT

442.20 Physical Parameters of the Bulge Globular Cluster Terzan 5 from Long-Term Millisecond Pulsar Timing
Prager, Brian[1]; Ransom, Scott M.[2]
[1.]University of Virginia, Charlottesville, VA. [2.]NRAO, Charlottesville, VA.

442.21 Photometric Metallicities of Stars in the Retrograde Globular Cluster, NGC 3201
Stone, Myra[1]; Hughes, Joanne D.[2]; Wallerstein, George[3]; Albright, Meagan[3]
[1.]University of Maryland, College Park, MD. [2.]Seattle University, Seattle, WA. [3.]University of Washington, Seattle, WA.

442.22 Chemical Abundance Patterns of Galactic Bulge Globular Clusters
Johnson, Christian I.[1]; Rich, Robert M.[2]; Kunder, Andrea3; Pilachowski, Catherine A.[4]
[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]University of California, Los Angeles, Los Angeles, CA. [3.]Leibniz-Institut für Astrophysik Potsdam, Potsdam, Germany. [4.]Indiana University, Bloomington, IN.

442.23 Comparing Light Element Abundances for 47 Tucanae (NGC 104) and M71 (NGC 6838)
Cordero, Maria J.[1]; Pilachowski, Catherine A.[1]; Johnson, Christian I.[2]
[1.]Indiana University, Bloomington, IN. [2.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA.

442.24 New Stellar Debris Streams in the Sloan Digital Sky Survey
Grillmair, Carl J.[1]
[1.]Caltech, Pasadena, CA.

442.25 Rapid dynamical processes in the cores of young star clusters in the Large Magellanic Cloud
de Grijs, Richard[1, 2]; Li, Chengyuan[2, 1]; Deng, Licai[3]
[1.]Kavli Institute for Astronomy and Astrophysics, Peking University, Beijing, Beijing, China. [2.]Department of Astronomy, Peking University, Beijing, Beijing, China. [3.]National Astronomical Observatories, Chinese Academy of Sciences, Beijing, Beijing, China.

442.26 Consequences of Dynamical Disruption and Mass Segregation for the Binary Frequencies of Star Clusters
Geller, Aaron M.[1, 2]; de Grijs, Richard[3, 4]; Li, Chengyuan[4, 3]; Hurley, Jarrod[5]
[1.]Northwestern University, Evanston, IL. [2.]University of Chicago, Chicago, IL. [3.]Kavli Institute for Astronomy and Astrophysics, Beijing, Hai Dian District, China. [4.]Peking University, Beijing, Hai Dian District, China. [5.]Swinburne University of Technology, Melbourne, VIC, Australia.

442.27 The Hubble Tarantula Treasury Project
Sabbi, Elena1; Lennon, Danny J.[2]; Anderson, Jay[1]; Van Der Marel, Roeland P.[1]; Aloisi, Alessandra[1]; Boyer, Martha L.[3, 4]; Cignoni, Michele[1]; De Marchi, Guido[6]; de Mink, Selma E.[7]; Evans, Chris J.[8]; Gallagher, John S.[9]; Gordon, Karl D.[1]; Gouliermis, Dimitrios[10]; Grebel, Eva[10]; Koekemoer, Anton M.[1]; Larsen, Soeren S.[11]; Panagia, Nino1[, 12]; Ryon, Jenna E.[9]; Smith, Linda J.[13]; Tosi, Monica[5]; Zaritsky, Dennis F.[14]
[1.]STScI, Baltimore, MD. [2.]ESA-European Space Astronomy Center, Madrid, Spain. [3.]Goddard Space Flight Center, Greenbelt, MD. [4.]Oak Ridge Associated Universitie, Oak Ridge, TN. [5.]INAF-Osservatorio Astronomico di Bologna, Bologna, Italy. [6.]ESA-Space Science Department, Noordwijk, Netherlands. [7.]Carnegie Observatories, Pasadena, CA. [8.]Royal Observatory Edinburgh, Edimburgh, United Kingdom. [9.]University of Wisconsin, Madison, WI. [10.]ARI, Heidelberg, Germany. [11.]Department of Astrophysics/IMAPP, Nijmegen, Netherlands. [12.]INAF-Osservatorio Astrofisico di Catania, Catania, Italy. [13.]ESA/STScI, Baltimore, MD. [14.]University of Arizona, Tucson, AZ.

442.28 Spectral Types and Wind Velocities for Massive Stars in R136
Bostroem, K. A.[1]; Maíz Apellániz, Jesús[3]; Caballero-Nieves, Saida M.[2]; Walborn, Nolan R.[1]; Crowther, Paul A.[2]
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442.29 The Low-Mass Luminosity Function in Globular Clusters
Dickey, Claire[1]; Madore, Barry F.[2]
[1.]Pomona College, Claremont, CA. 2.Carnegie Observatories, Pasadena, CA.

442.30 First Results from the Swift/UVOT Near-Ultraviolet Survey of the SMC
Hagen, Lea1; Siegel, Michael[1]; Gronwall, Caryl[1]; Hoversten, Erik A.[2]; Immler, Stefan[3]
[1.]Pennsylvania State University, State College, PA. [2.]University of North Carolina, Chapel Hill, NC. [3.]Goddard Space Flight Center, Greenbelt, MD.

442.31 Detecting Reddening by Dust for Star Clusters in the Andromeda Galaxy
Cohn, Amy[2]; Dorman, Claire[1]; Guhathakurta, Puragra[1]
[1.]University of California, Santa Cruz, Santa Cruz, CA. [2.]Park Tudor School, Indianapolis, IN.
Contributing teams: PHAT collaboration

442.32 The Andromeda Project: Final Results of Citizen Science Cluster Identification
Seth, Anil[1]; Johnson, Lent C.[2]; Wallace, Matthew[1]; Dalcanton, Julianne[2]; Kapadia, Amit[3]; Lintott, Chris[4]; Simpson, Robert[4]; Skillman, Evan D.[5]
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Contributing teams: PHAT Team, Andromeda Project Team

442.33 Early Results from Star Date: M83 - A Citizen Science Project to Age Date Star Clusters in the Southern Pinwheel Galaxy
Heartley, Jeremy[1, 3]; Whitmore, Bradley C.[1]; Blair, William P.[2]; Christian, Carol A.[1]; Donaldson, Tom[1]; Hammer, Derek[1]; Smith, Stephanie[1]; Viana, Alex[1]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]John Hopkins University, Baltimore, MD. [3.]University of Virginia, Charlottesville, VA.

442.34 Cluster Ages in the Tidal Tail of the Merger NGC 3256
Mulia, Alexander[1]; Chandar, Rupali[1]
[1.]The University of Toledo, Toledo, OH.

442.35 The Luminosity Function of Star Clusters in 20 Star-Forming Galaxies Based on Hubble Legacy Archive Photometry
Bowers, Ariel[1]; Whitmore, Bradley C.[1]; Chandar, Rupali[2]; Larsen, Soeren S.[3]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]University of Toledo, Toledo, OH. [3.]Radboud University, Nijmegen, Netherlands.

442.36 The Size Scales of Stellar Groupings in NGC 628 and NGC 2841
Williams, Molly[2]; Kaleida, Catherine C.[1]
[1.]Cerro Tololo Inter-American Observatory, La Serena, Chile. [2.]Eastern Kentucky University, Richmond, KY.

442.37 Age and Mass Distributions of Resolved Stellar Populations in NGC 4214 based on HST/WFC3 ERS Observations
Kim, Hwihyun[1]; Whitmore, Bradley C.[2]; Cohen, Seth H.[1]; Chandar, Rupali[3]; Kaleida, Catherine C.[4]
[1.]Arizona State University, Tempe, AZ. [2.]STScI, Baltimore, MD. [3.]University of Toledo, Toledo, OH. [4.]CTIO, La Serena, Chile.
Contributing teams: WFC3 SOC

442.38 Testing the Universality of the IMF with Unresolved Stellar Clusters
Andrews, Jennifer E.[1]; Calzetti, Daniela[1]; Chandar, Rupali[2]; Whitmore, Bradley C.[3]; Da Silva, Robert L.[4]; Krumholz, Mark R.[4]; Kim, Hwihyun[5]
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Contributing teams: WFC3 ERS

442.39 The Spatial Distribution of Virgo's Globular Clusters
Durrell, Patrick R.[1]; Cote, Patrick[2]; Peng, Eric W.[3]; Blakeslee, John[2]; Ferrarese, Laura[2]; Mihos, Chris[4]
[1.]Youngstown State Univ., Youngstown, OH. [2.]NRC-CNRC, Victoria, BC, Canada. [3.]Peking University, Beijing, China. [4.]Case Western Reserve Univ., Cleveland, OH.
Contributing teams: NGVS Team

442.40 The Projected Spatial Distributions of Giant Galaxy Globular Cluster Systems: Analysis of Four Giant Early-Type Galaxies
Hargis, Jonathan R.[1, 2]; Rhode, Katherine L.[1]
[1.]Indiana University, Bloomington, IN. [2.]Haverford College, Haverford, PA.

442.41 Highlights from a Wide-field Photometric Survey of the Globular Cluster Populations of Giant Galaxies
Rhode, Katherine L.[1]
[1.]Indiana Univ., Bloomington, IN.

442.42 Investigating the Evolutionary Role and Structure of Binaries in Milky Way Globular Clusters through Correlational Studies of Binary Fraction
Ravi, Namita[1]; Hamren, Katherine[1]
[1.]UC Santa Cruz, Santa Cruz, CA.

442.43 A Variable [OIII] Emission Source in Black Hole Host Globular Cluster RZ2109
Steele, Matthew M.[1]; Zepf, Steve E.[2]; Maccarone, Thomas J.[3]; Kundu, Arunav[4]; Rhode, Katherine L.[5]; Salzer, John J.[5]
[1.]Northern Michigan University, Marquette, MI. [2.]Michigan State University, East Lansing, MI. [3.]Texas Tech University, Lubbock, TX. [4.]Eureka Scientific, Oakland, CA. [5.]Indiana University, Bloomington, IN.

442.44 Extragalactic Globular Cluster Systems Properties as a Function of the Environment
Pessev, Peter[1]
[1.]Gemini Observatory South, La Serena, Chile.

442.45 Modeling Gas Evacuation Mechanisms in Globular Clusters
Soares-Furtado, Melinda[1]; Naiman, Jill[1]; Ramirez-Ruiz, Enrico[1]
[1.]University of California, Santa Cruz, Santa Cruz, CA.

443 Black Holes Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

443.01 The NuSTAR Ultraluminous X-ray Source Program
Walton, Dom[1]
[1.]Caltech, Pasadena, CA.
Contributing teams: The NuSTAR Team

443.02 The ALMA Phasing Project: New Frontiers in Ultra-High Resolution Astronomy Enabled by a Beamformed ALMA

Matthews, Lynn D.[1]; Alef, W.[2]; Anderson, James[2]; Barkats, D.[3]; Crew, Geoffrey B.[1]; Doeleman, S. S.[1]; Fish, Vincent L.[1]; Greenberg, J.[4]; Hecht, M. H.[1]; Hiriart, R.[4]; Honma, M.[5]; Impellizzeri, Caterina[3]; Inoue, M.[6]; Lacasse, R.[4]; Lopez, B.[3]; Mora-Klein, M.[4]; Nagar, N.[7]; Pankratius, V.[1]; Pradel, N.[6]; Rottmann, H.[2]; Roy, A.[2]; Ruszczyk, C.[1]; Saez, A.[3]; Shillue, B.[4]; Treacy, R.[4]

[1.]MIT Haystack Observatory, Westford, MA. [2.]Max Planck Institut für Radioastronomie, Bonn, Germany. [3.]Joint ALMA Observatory, Santiago, Chile. [4.]National Radio Astronomy Observatory, Charlottesville, VA. [5.]National Astronomical Observatory of Japan, Tokyo, Japan. [6.]Academia Sinica Institute of Astronomy and Astrophysics, Taipei, Taiwan. [7.]University of Concepción, Concepción, Chile.

Contributing teams: The ALMA Phasing Project Team

443.03 Selection of Dual AGN Candidate Using Wise & Galaxy Zoo: A Chandra Pilot Study

Koju, Raj K.[1]

[1.]SPACS, George Mason University, Fairfax, VA.

443.04 New Developments with the Event Horizon Telescope

Fish, Vincent L.[1]; Doeleman, Sheperd[1]; Krichbaum, Thomas[2]; Zensus, Anton[2]

[1.]MIT Haystack Observatory, Westford, MA. [2.]Max-Planck-Institut für Radioastronomie, Bonn, Germany.

Contributing teams: Event Horizon Telescope Collaboration

443.05 Black holes under the microscope: Prospects for imaging with the Event Horizon Telescopes

Lu, Rusen[1]; Fish, Vincent L.[1]; Doeleman, Sheperd[1, 2]; Monnier, John D.[3]; Baron, Fabien[4]

[1.]MIT Haystack Observatory, Westford, MA. [2.]Harvard Smithsonian Center for Astrophysics, cambridge, MA. [3.]University of Michigan, Ann Arbor, MI. [4.]Georgia State University, Atlanta, GA.

443.06 Moving Toward Polarimetry with the Event Horizon Telescope

Kosowsky, Michael[1]; Fish, Vincent L.[3]; Doeleman, Sheperd[2, 3]; Johnson, Michael[2]; Lu, Rusen[3]; Marrone, Daniel P.[5]; Moran, James M.[2]; Plambeck, Richard L.[4]; Wardle, John F.[1]

[1.]Brandeis University, Waltham, MA. [2.]Harvard University, Cambridge, MA. [3.]Massachusetts Institute of Technology, Cambridge, MA. [4.]University of California, Berkely, Berkely, CA. [5.]University of Arizona, Tuscon, AZ.

Contributing teams: EHT Collaboration

443.07 Hyperaccretion during tidal disruption events: weakly bound debris envelopes and jets

Coughlin, Eric[1, 2]; Begelman, Mitchell C.[1, 2]

[1.]JILA, University of Colorado at Boulder and National Institute of Standards and Technology, Boulder, CO. [2.]Department of Astrophysical and Planetary Sciences, University of Colorado at Boulder, Boulder, CO.

443.08 Propagating Fluctuations In A Global Accretion Disk Simulation

Hogg, J. Drew[1]; Reynolds, Christopher S.[1]; O'Neill, Sean M.[2]

[1.]University of Maryland, College Park, MD. [2.]University of Colorado - Boulder, Boulder, CO.

443.09 Propagation of excess mass through a radiatively inefficient accretion disk
Abarca, David[1]; Sadowski, Aleksander[1]; Narayan, Ramesh[1]
[1.]Harvard Smithsonian Center for Astrophysics, Cambridge, MA.

443.11 Spacetime Geometry Around an Accreting, Spinning Black Hole
Pardo, Kristina[1]; Bertschinger, Edmund[2]
[1.]Furman University, Greenville, SC. [2.]Massachusetts Institute of Technology, Cambridge, MA.

443.12 Measuring the black hole mass in Ultraluminous X-ray Sources with the X-ray Scaling Method
Jang, Insuk[1]; Gliozzi, Mario[1]
[1.]George Mason University, Fairfax, VA.

443.13 Stellar Black Holes in Globular Clusters
Rasio, Frederic A.[1]; Morscher, Meagan[1]
[1.]Northwestern Univ., Evanston, IL.

444 Education and Public Outreach Events and Programs

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

444.01 Skynet Junior Scholars- Sharing the Universe with Blind/Low Vision Youth
Hoette, Vivian L.[1]; Kron, Richard G.[1]; Meredith, Kate[1]; Heatherly, Sue Ann[2]; Williamson, Kathryn[2]; Gurton, Suzanne[3]; Reichart, Daniel[4]; Haislip, Joshua[4]
[1.]University of Chicago, Williams Bay, WI. [2.]National Radio Astronomy Observatory, Green Bank, WV. [3.]Astronomical Society of the Pacific, San Francisco, CA. [4.]University of North Carolina, Chapel Hill, NC.

444.02 Skynet Junior Scholars: Sharing the Universe with Youth
Heatherly, Sue Ann[1]; Williamson, Kathryn[1]; Hoette, Vivian L.[2]; Gurton, Suzanne[3]; Kron, Richard G.[2]; Meredith, Kate[2]; Haislip, Joshua[4]; Reichart, Daniel[4]
[1.]National Radio Astronomy Observatory, Green Bank, WV. [2.]University of Chicago Yerkes Observatory, Williams Bay, WI. [3.]Astronomical Society of the Pacific, San Francisco, CA. [4.]University of North Carolina, Chapel Hill, NC.

444.03 Imagine Astronomy at the Rochester Institute of Technology
Rapson, Valerie[1]; Almeyda, Triana[1]; Freeman, Marcus[1]; Lena, Davide[1]; Principe, David[1]; Punzi, Kristina[1]; Sargent, Benjamin A.[1]; Vaddi, Sravani[1]; Vazquez, Billy[1]; Vorobiev, Dmitry[1]
[1.]Rochester Institute of Technology, Rochester, NY.

444.04 Dark Skies, Bright Kids! Year 5
Prager, Brian[1]; Johnson, Kelsey E.[1]; Barcos-Munoz, Loreto D.[1]; Beaton, Rachael[1]; Bittle, Lauren[1]; Borish, H. Jacob[1]; Burkhardt, Andrew[1]; Corby, Joanna[1]; Damke, Guillermo[1]; Dean, Janice[1]; Dorsey, Gregory[1]; Graninger, Dawn[1]; Lauck, Trish[1]; Liss, Sandra[1]; Oza, Apurva[1]; Peacock, Sarah[1]; Romero, Charles[1]; Sokal, Kimberly R.[1]; Stierwalt, Sabrina[1]; Walker, Lisa May[1]; Wenger, Trey[1]; Zucker, Catherine[1]
[1.]University of Virginia, Charlottesville, VA.

444.05 Astronomy on Tap: A New Event Series for Outreach and Professional Development
Rice, Emily L.[1, 2]; Schwamb, Megan E.[3]; Muna, Demitri[4]
[1.]College of Staten Island, Staten Island, NY. [2.]American Museum of Natural History, New York, NY. [3.]Institute of Astronomy & Astrophysics, Academia Sinica , Taipei, Taiwan. [4.]The Ohio State University, Columbus, OH.

444.06 Reaching to the Star
Ruzhitskaya, Lanika[1]; Speck, Angela[1]; Baldridge, Sean[1]; Briggs, Jason[1]
[1.]University of Missouri, Columbia, MO.

444.07 Radio Jove: Jupiter Radio Astronomy for Citizens
Higgins, Charles[1]; Thieman, James R.[2]; Flagg, Richard[3]; Reyes, Francisco J.[4]; Sky, Jim[5]; Greenman, Wes[6]; Brown, Jim[7]; Typinski, Dave[8]; Ashcraft, Thomas[9]; Mount, Andrew[10]
[1.]Middle Tennessee St. Univ., Murfreesboro, TN. [2.]NASA/GSFC, Greenbelt, MD. [3.]RF Associates LLC, Honolulu, HI. [4.]University of Florida, Gainesville, FL. [5.]Radio-Sky Publishing, Captain Cook, HI. [6.]Wes Greenman Consultants, Alachua, FL. [7.]Hawk's Nest Radio Observatory, Industry, PA. [8.]AJ4CO Observatory, High Springs, FL. [9.]Heliotown Observatory, Heliotown, NM. [10.]Mountain Rest Astronomical Observatory, Mountain Rest, SC.

444.08 Modernizing a Public Outreach Department by Harnessing the Power of the Digital Age
Guvenen, Blythe[1, 2]
[1.]National Optical Astronomy Observatory, Tucson, AZ. [2.]The University of Arizona, Tucson, AZ.

444.09 Youth for Astronomy & Engineering Program: Engaging Local Families and Partners
Anderson, Tania[1]; Eisenhamer, Bonnie[1]; Ryer, Holly[1]
[1.]Space Telescope Science Institute, Baltimore, MD.

444.10 Astronomy Education Programs at the Smithsonian National Air and Space Museum
Nagy, Katie[1]; de Messieres, Genevieve[1]; Edson, Shauna[1]
[1.]Smithsonian National Air and Space Museum, Washington, DC.

445 Upper-Level Undergradutae and Graduate Education, Research Opportunities, and Diversity

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

445.01 A course on professional development for astronomy graduate students
Friel, Eileen D.[1]
[1.]Indiana University, Bloomington, IN.

445.02 Raising Awareness in Science Education for Women (RAISE-W)
Faherty, Jacqueline K.[1, 2]; Holford, Mande[3, 2]
[1.]Carnegie Institution of Washington, Washington, DC. [2.]American Museum of Natural History, New York, NY. [3.]Hunter College, New York, NY.

445.03 The CAMPARE Program:A New Model Promoting Minority Participation in Astronomy Research and Education
Rudolph, Alexander L.[1]; Impey, Chris D.[2]; Bieging, John H.[2]; Phillips, Cynthia B.[3]; Tieu, Jenny[4]; Povich, Matthew S.[1]
[1.]California State Polytechnic Univ., Pomona, CA. [2.]University of Arizona, Tucson, AZ. [3.]SETI Institute, Mountain View, CA. [4.]JPL, Pasadena, CA.

445.04 Update on the NSF PAARE Project at South Carolina State University
Walter, Donald K.[1]; Brittain, Sean D.[2]; Cash, Jennifer[1]; Hartmann, Dieter[2]; Hinkle, Kenneth H.[3]; Howell, Steve B.[4]; King, Jeremy R.[2]; Leising, Mark D.[2]; Mighell, Kenneth J.[3]; Smith, Daniel M.[1]
[1.]South Carolina State Univ., Orangeburg, SC. [2.]Clemson University, Clemson , SC. [3.]National Optical Astronomy Observatory, Tucson, AZ. [4.]NASA Ames Research Center, Mountain View, CA.

445.05 Stepping Stones to Research: Providing Pipelines from Middle School through PhD
Noel-Storr, Jacob[1]; Baum, Stefi A.[1]
[1.]Rochester Inst. Of Technology, Rochester, NY.
Contributing teams: RIT Insight Lab SSR Team, Chester F. Carlson Center for Imaging Science Faculty

445.06 The 2013 Summer Undergraduate Research Internship Program at the Pisgah Astronomical Research Institute
Castelaz, Michael W.[1]; Cline, J. D.[1]; Whitworth, Christi[1]; Clavier, David[1]; Barker, Thurburn[1]
[1.]Pisgah Astronomical Research Inst., Rosman, NC.

445.07 The Contributions of the WIYN Observatory to Undergraduate Education
Hooper, Eric[1, 2]
[1.]WIYN Observatory, Tucson, AZ. [2.]Univ. of Wisconsin-Madison, Madison, WI.
Contributing teams: WIYN Consortium

445.08 Research Experience for Undergraduate and Early College High School Students at University of Texas at El Paso
Medrano, Omar[1]; Gonzalez, Emmanuel[1]; Mason, Paul A.[1]
[1.]University of Texas at El Paso, El Paso, TX.

445.09 The Lowell Observatory Predoctoral Fellowship Program
Prato, Lisa A.[1]; Shkolnik, Evgenya[1]
[1.]Lowell Observatory, Flagstaff, AZ.

445.10 The Cerro Tololo Inter-American Observatory Summer Student Programs in La Serena, Chile
Kaleida, Catherine C.[1]; Smith, Chris[1]; Van Der Bliek, Nicole S.[1]; James, David[1]
[1.]Cerro Tololo Inter-American Observatory, La Serena, IV, Chile.

445.11 AstroCom NYC: A Partnership Between Astronomers at CUNY, AMNH, and Columbia University
Paglione, Timothy[1, 4]; Ford, K.E. S.[2, 4]; Robbins, Dennis[3]; Mac Low, Mordecai-Mark[4]; Agueros, Marcel A.[5]
[1.]York College, CUNY, Jamaica, NY. [2.]Borough Manhattan Comm. College, CUNY, New York, NY. [3.]Hunter College, CUNY, New York, NY. [4.]AMNH, New York, NY. [5.]Columbia Univ., New York, NY.

445.12 Promoting the Understanding of Scientific Reasoning, Mathematical Modeling and Data Analysis: A Course for Astrophysics Majors
Robbins, Dennis[1, 2]; Ford, Saavik[3, 1]
[1.]Hunter College (CUNY), New York City, NY. [2.]American Museum of Natural History, New York City, NY. [3.]Borough of Manhattan Community College (CUNY), New York City, NY.

445.13 Updates from Astrobites: The Astro-ph Reader's Digest
Montet, Benjamin[1]; Chisari, Nora Elisa[5]; Donaldson, Jessica[4]; Dressing, Courtney D.[3]; Drout, Maria[3]; Faesi, Christopher[3]; Fuchs, Joshua T.[6]; Kohler, Susanna[2]; Lovegrove, Elizabeth[8]; Mills, Elisabeth A.[11]; Nesvold, Erika[10]; Newton, Elisabeth R.[3]; Olmstead, Alice[4]; Vasel, Justin A.[9]; Weiss, Lauren M.[7]
[1.]California Institute of Technology, Pasadena, CA. [2.]University of Colorado, Boulder, CO. [3.]Harvard University, Cambridge, MA. [4.]University of Maryland, College Park, College Park, MD. [5.]Princeton University, Princeton, NJ. [6.]University of North Carolina, Chapel Hill, NC. [7.]University of California, Berkeley, Berkeley, CA. [8.]University of California, Santa Cruz, Santa Cruz, CA. [9.]University of Minnesota Duluth, Duluth, MN. [10.]University of Maryland, Baltimore County, Baltimore, MD. [11.]National Radio Astronomy Observatory, Socorro, NM.
Contributing teams: The Astrobites Team

445.14 Tablet Computing Devices to Bridge the Gap Between Planetarium and Night Sky
Smolinski, Jason P.[1]
[1.]State University of New York College at Oneonta, Oneonta, NY.

446 Observatories for Education and Public Outreach

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

446.01 CSU's MWV Observatory: A Facility for Research, Education and Outreach
Hood, John[1]; Carpenter, Nicholas D.[1]; McCarty, Cameron B.[1]; Samford, James H.[1]; Johnson, Michael[1]; Puckett, Andrew W.[1]; Williams, Rosa N.[1]; Cruzen, Shawn T.[1]
[1.]Columbus State University, Columbus, GA.

446.02 The Stocker AstroScience Center at Florida International University
Webb, James R.[1]
[1.]Florida International Univ., Miami, FL.

446.03 The Center for Advanced Radio Astronomy: Graduates, Undergraduates and High School Students Engaged in the Exploration of Astrophysics
Miller, Andy[2]; Jenet, Fredrick A.[1]
[1.]University of Texas-Brownsville, Brownsville, TX. [2.]Saint Joseph Academy, Brownsville, TX.

446.04 Design and Construction of a Polarimeter for Small Telescopes
Topasna, Gregory A.[1]; Topasna, Daniela M.[1]
[1.]Virginia Military Inst., Lexington, VA.

447 Astronomy Programs and Resources for High School Students and Teachers

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

447.01 Implementation of the 2013 Astro-Science Workshop, a Hands-on High Altitude Ballooning Program at the Adler Planetarium
Ratliff, Gayle[1, 2]; Martynowycz, Michael W.[1, 2]; Hammergren, Mark[1]
[1.]Adler Planetarium, Chicago, IL. [2.]Illinois Institute of Technology, Chicago, IL.

447.02 Developing a Curriculum for Remote Research Mentoring of Virginia High School Students
Dirienzo, William J.[1]; Corby, Joanna[1]; Beaton, Rachael[1]; Barcos-Munoz, Loreto D.[1]; Jones, Kristen M.[1]; Pennucci, Tim[1]
[1.]University of Virginia, Charlottesville, VA.

447.03 WorldWide Telescope in High School Astronomy Competitions
Constantin, Ana-Maria[1]; Goodman, Alyssa A.[2]; Udomprasert, Patricia S.[3]
[1.]Harvard University, Cambridge, MA. [2.]Harvard Smithsonian Center for Astrophysics, Cambridge, MA. [3.]Harvard Smithsonian Center for Astrophysics, Cambridge, MA.

447.04 Multiwavelength Astronomy Modules for High School Students
Thomas, Christie[1]; Brazas, Julia[1]; Lane, Steven[1]; York, Donald G.[1]
[1.]The University of Chicago, Chicago, IL.

448 Astronomy Education Research

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

448.01 STEMdex: A Searchable Database of Education Research for Our Community
Brinkworth, Carolyn[1]; Nichols-Yehling, Michelle[2]; Bartolone, Lindsay[2]; Llamas, Jacob[1]; Crane, Megan[1]; Martin, Ann[4]; Wenger, Mathew[3]; Squires, Gordon K.[1]; Hurt, Robert L.[1]
[1.]Caltech, Pasadena, CA. [2.]Adler Planetarium, Chicago, CA. [3.]University of Arizona, Arizona, CA. [4.]NASA Langley, Virginia, CA.

448.02 Evaluation of a College Freshman Diversity Research Program in Astronomy
Tremmel, Michael J.[1]; Garner, Sarah M.[1]; Schmidt, Sarah J.[2]; Wisniewski, John P.[3]; Agol, Eric[1]
[1.]University of Washington, Seattle, WA. [2.]The Ohio State University, Columbus, OH. [3.]University of Oklahoma, Norman, OK.

448.03 A Research-Informed Approach to Teaching About Exoplanet Detection in STEM Classrooms
Brissenden, Gina[1]; Wallace, Colin S.[1]; Prather, Edward E.[1]; Traub, Wesley A.[2]; Greene, W. M.[2]; Biferno, Anya A.[2]
[1.]Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona, Tucson, AZ. [2.]NASA Exoplanet Exploration Program (ExEP), Jet Propulsion Laboratory, Pasadena, CA.

448.04 Worldviews of Introductory Astronomy Students
Green, Chrystin[1]; Wallace, Colin S.[2]; Brissenden, Gina[2]; Prather, Edward E.[2]
[1.]California State Polytechnic University, Pomona, Pomona, CA. [2.]Center for Astronomy Education (CAE), Steward Observatory, Univ. of Arizona, Tucson, AZ.
Contributing teams: Collaboration of Astronomy Teaching Scholars (CATS)

448.05 Investigating Science Literacy: Students' Conceptions of Radiation
Romine, James[1]; Buxner, Sanlyn[1]; Impey, Chris D.[1]; Nieberding, Megan N.[1]; Antonellis, Jessie C.[2]
[1.]Steward Observatory, University of Arizona, Tucson, AZ. [2.]Little Priest Tribal College, Winnebago, NE.
Contributing teams: Collaborations of Astronomy Teaching Scholars (CATS), Steward Observatory, University of Arizona

448.06 Exploring the Potential of the Massive, Open, Online Astronomy Course
Austin, Carmen[1]; Impey, Chris D.[1]; Wenger, Mathew[1]
[1.]University of Arizona, Tucson, AZ.

448.07 Learning Curve for Teaching Constellations in a Planetarium
Hintz, Eric G.[1]; Smith, Nicole[1]; Moody, J. W.[1]; Stephens, Denise C.[1]; Joner, Michael D.[1]; Hintz, Maureen[1]; Lawler, Jeannette[1]; Jones, Michael[1]; Bench, Nathan[1]
[1.]Brigham Young Univ., Provo, UT.

448.08 Driven to Distraction: Does the Infamous Earth Shadow Distractor Divert Student Attention in the Cause of the Phases of the Moon Question?
Caton, Daniel B.[1]
[1.]Appalachian State Univ., Boone, NC.

448.09 CosmoQuest Year 2: Citizen Science Progress, Motivations, and Education
Gugliucci, Nicole E.[1]; Gay, Pamela L.[1]; Antonenko, Irene[2]; Bracey, Georgia[1]; Costello, Kathy[1]; Lehan, Cory[1]; Moore, Joseph[1]; Reilly, Ellen[1]; Robbins, Stuart J.[3]; Schmidt, Britney E.[4]
[1.]Southern Illinois University Edwardsville, Edwardsville, IL. [2.]Planetary Institute of Toronto, Toronto, ON, Canada. [3.]Southwest Research Institute, Boulder, CO. [4.]University of Texas, Austin, TX.
Contributing teams: CosmoQuest Collaboration

448.10 iMap: A stable layout for navigating the Astronomy Picture of the Day image collection with embedded search
Nemiroff, Robert J.[1]; Wang, Chaoli[1]; Reese, John P.[1]; Zhang, Huan[1]; Tao, Jun[1]; Bonnell, Jerry[2, 3]
[1.]Michigan Technological Univ., Houghton, MI. [2.]NASA's GSFC, Greenbelt, MD. [3.]University of Maryland, College Park, MD.

448.11 A Comparison of Astronomy/Science Attitudes Among Students and Secondary Teachers
Kareva, Anna[1]; Miller, Scott[1]; Foster, Andrea[1]; James, C. R.[1]
[1.]Sam Houston State University, Huntsville, TX.

448.12 Gains in Astronomy Content Knowledge an ASSET to East Texas Secondary Teachers
Lewis, Cale[1]; Miller, Scott[1]; Foster, Andrea[1]; James, C. R.[1]
[1.]Sam Houston State University, Huntsville, TX.

449 Professional Development Workshops and Programs for Teachers

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

449.01 From the Universe to the Classroom : A Professional Development Program for Hubble and Webb
Eisenhamer, Bonnie[1]; Summers, Frank[1]; McCallister, Dan[1]; Ryer, Holly[1]; Knisely, Linda[1]
[1.]STScI, Baltimore, MD.

449.02 Teacher Professional Development in Laredo, TX
Finkelstein, Keely D.[1]; Macri, Lucas M.[2]; Hemenway, Mary Kay[1]; Wetzel, Marc[3]; Preston, Sandra[1]; Rood, Magdalena[4]
[1.]University of Texas at Austin, Austin, TX. [2.]Texas A&M University, College Station, TX. [3.]McDonald Observatory, Fort Davis, TX. [4.]Third Coast Research, Austin, TX.

449.03 Network for Astronomy School Education
Deustua, Susana E.[1]; Ros, Rosa M.[2]; Garcia, Beatriz[3]
[1.]Space Telescope Science Institute, Baltimore, MD. [2.]Universitat Politècnica de Catalunya, Barcelona, Spain. [3.]Instituto en Tecnologias de Deteccion y Astroparticulas, Mendoza, Argentina.

449.04 Collaboration between research scientists and educators to prepare new Earth Science teachers
Pagnotta, Ashley[1]; Grcevich, Jana[1]; Shara, Michael[1]; Mac Low, Mordecai-Mark[1]; Flores, Kennet[1]; Nadeau, Patricia A.[1]; Sessa, Jocelyn[1]; Ustunisik, Gokce[1]; Zirakparvar, Nasser[1]; Ebel, Denton[1]; Harlow, George[1]; Webster, James D.[1]; Kinzler, Rosamond[1]; MacDonald, Maritza B.[1]; Contino, Julie[1]; Cooke-Nieves, Natasha[1]; Howes, Elaine[1]; Zachowski, Marion[1]
[1.]American Museum of Natural History, New York, NY.

449.05 The Arizona Galileoscope Project: A 5th Grade Rural Education Program
Sparks, Robert T.[1]; Pompea, Stephen M.[1]; Dugan, Chuck[1]; Walker, Constance E.[1]
[1.]NOAO, Tucson, AZ.

450 Education and Public Outreach Resources

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

450.01 Using Kepler Light Curves for Astronomy Education and Public Outreach
Cash, Jennifer[1]; Rivers, Shillindria[1]; Eleby, Johnae[1]; Gould, Alan[2]; Komatsu, Toshi[2]
[1.]South Carolina State Univ., Orangeburg, SC. [2.]The Lawrence Hall of Science, Berkeley, CA.

450.02 On-line Eclipse Resources from the U.S. Naval Observatory: Planning Ahead for April 2024
Fredericks, Amy C.[1]; Bartlett, Jennifer L.[1]; Bell, Steve[2]; Stapleton, James C.[3, 1]
[1.]US Naval Obs., Washington, DC. [2.]Her Majesty's Nautical Almanac Office, Taunton, United Kingdom. [3.]SEAP, Washington, DC.

450.03 Educating the Public about Meteorites and Impacts through Virtual Field Trips and Classroom Experience Boxes
Ashcraft, Teresa[1]; Hines, Rebekah[1]; Minitti, Michelle[2]; Taylor, Wendy[3, 4]; Morris, Melissa A.[1]; Wadhwa, Meenakshi[1]
[1.]Center for Meteorite Studies, School of Earth & Space Exploration, Arizona State University, Tempe, AZ. [2.]Applied Physics Laboratory, Johns Hopkins University, Laurel, MD. [3.]University of Cape Town, Cape Town, South Africa. [4.]School of Earth & Space Exploration, Arizona State University, Tempe, AZ.

450.04 Make Movies out of Your Dynamical Simulations with OGRE!
Tamayo, Daniel[1]; Douglas, Robert W.[2]; Ge, Heming W.[1]; Burns, Joseph A.[1]
[1.]Cornell University, Ithaca, NY. [2.]Science Solved, Chicago, IL.

450.05 The Fulldome Curriculum for the Spitz SciDome Digital Planetarium: Volume 2
Bradstreet, David H.[1]; Sanders, Steven J.[1]; Huggins, Scott[2]
[1.]Eastern Univ., Saint Davids, PA. [2.]Spitz, Inc., Chadds Ford, PA.

450.06 Locating the Great Red Spot: Yesterday, Today, and Tomorrow
Lesniak, Michael V.[1]; Stapleton, James C.[1, 2]
[1.]U.S. Naval Observatory, Washington, DC. [2.]Science & Engineering Apprenticeship Program (SEAP), Washington, DC.

450.07 Exploring the Early Universe on Mobile Devices
Kocevski, Dale[1]; McGrath, Elizabeth J.[2]
[1.]University of Kentucky, Lexington, KY. [2.]Colby College, Waterville, ME.
Contributing teams: The CANDELS collaboration

450.08 How did the Supreme Court ruling on DOMA affect astronomers?
Rigby, Jane R.[1]
[1.]NASA Goddard, Greenbelt, MD.
Contributing teams: The AAS Working Group on LGBTIQ Equality

450.09 Developing Spatial Reasoning Through 3D Representations of the Universe
Summers, Frank[1]; Eisenhamer, Bonnie[1]; McCallister, Dan[1]
[1.]STScI, Baltimore, MD.

451 Astronomy 101: Courses and Resources

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

451.01 A Coherent Content Storyline Approach for Introductory Astronomy
Palma, Christopher[1]; Flarend, Alice[2, 1]; McDonald, Scott[1]; Kregenow, Julia M.[1]
[1.]Penn State Univ., University Park, PA. [2.]Bellwood-Antis High School, Bellwood, PA.

451.02 Student Mastery of the Sun-Earth-Moon System in a Flipped Classroom of Pre-service Elementary Education Students
Larsen, Kristine[1]
[1.]Central Connecticut State University, New Britain, CT.

451.04 Astro101 at Tohono O'odham Community College
Garmany, Catharine D.[1]; Salyk, Colette[1]
[1.]NOAO, Tucson, AZ.

451.05 Crank Astronomy as a Teaching Tool. II.
Bridgman, William T.[1]; Young, C. Alex[2]; Robbins, Stuart[3]
[1.]Global Science and Technology, Inc., Silver Spring, MD. [2.]NASA/GSFC, Greenbelt, MD. [3.]University of Colorado, Boulder, CO.

451.06 The Astronomy Workshop Extragalactic: Web Tools for Use by Students
Hayes-Gehrke, Melissa N.[1]; Bolatto, Alberto D.[1]
[1.]Univ. of Maryland, College Park, MD.

451.07 Building a Comprehensive Online Homework System for Astro 101 within Sapling Learning
Urban, Andrea[1]
[1.]Sapling Learning, Austin, TX.

451.08 A FERPA-compliant Workflow for Efficiently Returning Classwork to Students in Large Lecture Classes
Clarkson, William I.[1]
[1.]University of Michigan-Dearborn, Dearborn, MI.

451.09 101 Astro Honors Laboratory Exercises using the Hubble Legacy Archive, the Digitized Sky Survey on MAST, and Stellar Spectral Catalogs.
Kendall, Jason S.[1]
[1.]William Paterson University, Wayne, NJ.

452 Increasing the Accessibility of Astronomy Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

452.01 The SMARTS Observatory: Rich Science Accessible for Everyone
Hasan, Imran[1, 2]; Misenti, Victoria[1, 2]; Henry, Todd J.[3, 1]
[1.]SMARTS Observatory, Cerro Tololo, Chile. [2.]Yale University, New Haven, CT. [3.]Georgia State University, Atlanta, GA.

452.02 AstroDance: Teaching Astrophysics Through Dance?
Noel-Storr, Jacob[1]; Campanelli, Manuela[1]; Bochner, Joseph[1]; Warfield, Thomas[1]; Bischof, Hans-Pieter[1]; Zlochower, Yosef[1]; Nordhaus, Jason[1]; Watkins, Greyson[1]
[1.]Rochester Inst. Of Technology, Rochester, NY.
Contributing teams: NSF CRPA AstroDance Team

453 Spiral Galaxies Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

453.01 A Two-Parameter Model for the Infrared/Submillimeter/Radio Spectral Energy Distributions of Galaxies and AGN
Dale, Daniel A.[1]; Helou, George[2]; Magdis, Georgios[3, 4]; Rigopoulou, Dimitra[3]
[1.]Univ. of Wyoming, Laramie, WY. [2.]Spitzer Science Center, Pasadena, CA. [3.]University of Oxford, Oxford, United Kingdom. [4.]Rutherford Appleton Laboratory, Chilton, United Kingdom.
Contributing teams: 5MUSES,HerMES

453.02 Constraining dark matter halo profiles using spiral arm morphologies: Dark and stellar mass concentrations for 13 nearby face-on galaxies
Seigar, Marc[1]; Davis, Benjamin L.[2]; Berrier, Joel C.[2]; Kennefick, Daniel[2]; Kennefick, Julia D.[2]
[1.]University of Arkansas at Little Rock, Little Rock, AR. [2.]University of Arkansas at Fayetteville, Fayetteville, AR.

453.03 A Stacking Analysis of the Free-Free Opacity of Spiral Galaxy Disks
Stil, Jeroen M.[1]; Klassen, Tristan[1]; Keller, Benjamin W.[1, 2]
[1.]Univ. of Calgary, Calgary, AB, Canada. [2.]McMaster University, Hamilton, ON, Canada.

453.04 How Galaxy Orientation Affects Measurements of Bulge Velocity Dispersion and the Consequences for the M-Sigma Relation
Bellovary, Jillian M.[1]; Holley-Bockelmann, Kelly[1]; Christensen, Charlotte[2]; Brooks, Alyson[3]; Governato, Fabio[4]
[1.]Vanderbilt University, Nashville, TN. [2.]University of Arizona, Tucson, AZ. [3.]Rutgers University, New Brunswick, NJ. [4.]University of Washington, Seattle, WA.

453.05 IFU Observations of Giant Low Surface Brightness Galaxies
Yoachim, Peter[1]; Schmitz, Denise[1]; Loebman, Sarah[2]; Debattista, Victor P.[3]; Kwak, SungWon[1]
[1.]University of Washinton, Seattle, WA. [2.]University of Michigan, Ann Arbor, MI. [3.]University of Central Lancashire, Preston, United Kingdom.

453.06 Bulge Kinematics of Giant Low Surface Brightness Galaxies
Schmitz, Denise[1]; Yoachim, Peter[1]; Loebman, Sarah[2]; Debattista, Victor P.[3]; Kwak, SungWon[1]
[1.]University of Washington, Seattle, WA. [2.]University of Michigan, Ann Arbor, MI. [3.]University of Central Lancashire, Preston, United Kingdom.

453.07 Burst and Quench? The Life Story of Low Surface Brightness Galaxies
Young, Jason[1]; Wang, Sharon Xuesong[1]; Kuzio de Naray, Rachel[2]
[1.]Pennsylvania State Univ., University Park, PA. [2.]Georgia State University, Atlanta, GA.

453.08 Wide-band Jansky Very Large Array polarization observations of M51
Mao, Sui Ann[1, 2]; Ott, Juergen[1]; Zweibel, Ellen G.[2]
[1.]NRAO, Socorro, NM. [2.]UW Madison, Madison, WI.

453.09 A Study of Supermassive Black Holes and the Properties of Their Host Galaxies
Akhlite Al-Baidhany, Ismaeel Ahdulla[1]; Seigar, Marc[2]; Treuthardt, Patrick M.[3]; Sierra, Amber[4]; Davis, Ben N.[5]; Kennefick, Daniel[6]; Kennefick, Julia D.[7]; Lacy, Claud H.[8]
[1.]University of Arkansas at Little Rock, Little Rock, AR. [2.]University of Arkansas at Little Rock, Little Rock, AR. [3.]University of Arkansas at Little Rock, Little Rock, AR. [4.]University of Arkansas at Little Rock, Little Rock, AR. [5.]University of Arkansas at Fayetteville, Little Rock, AR. [6.]University of Arkansas at Fayetteville, Little Rock, AR. [7.]University of Arkansas at Fayetteville, Little Rock, AR. [8.]University of Arkansas at Fayetteville, Little Rock, AR.
Contributing teams: Team 1, Ismaeel , Marc, Patrick, Amber, Team 2,Ben, Daniel, Julia, Claud

453.10 The effects of storm fronts over galaxy disks
Smith, Daniel C.[1]; Struck, Curtis[2]
[1.]Space Department, Johns Hopkins University Applied Physics Laboratory, Laurel, MD. [2.]Iowa State University, Ames, IA.

453.11 Diffuse Emission in Nearby, Face-on Spiral Galaxies
Schlegel, Eric M.[1]; Vega, Laura D.[2]; Moore, Marilyn[3]
[1.]Univ. of Texas, San Antonio, San Antonio, TX. [2.]Univ. of Texas, San Antonio, San Antonio, TX. [3.]Univ. of Texas, San Antonio, San Antonio, TX.

453.12 The Dust Lane Curvature in a Sample of Galactic Bars
Treuthardt, Patrick M.[1]; Beauchemin, Ryan[2]; De Los Reyes, Mithi[3]
[1.]North Carolina Museum of Natural Sciences, Raleigh, NC. [2.]University of North Carolina, Chapel Hill, NC. 3.North Carolina State University, Raleigh, NC.

453.13 The Arecibo Galaxy Environments Survey Isolated Galaxies Sample
Minchin, Robert F.[1]; Taylor, Rhys[2]; Rodriguez, Roberto A.[3]; Taber, Tim[4]; Auld, Robbie[5]; Davies, Jonathan I.[5]
[1.]NAIC, Arecibo Observatory, Arecibo, Puerto Rico. [2.]Academy of Sciences of the Czech Republic, Prague, Czech Republic. [3.]UPR Humacao, Humacao, Puerto Rico. [4.]McAuliffe-Shepard Discovery Center, Concord, NH. [5.]Cardiff University, Cardiff, United Kingdom.
Contributing teams: AGES

453.14 The Unusual Young Supernova Remnant Population in M83
Blair, William P.[1, 2]; Dopita, Michael A.[7]; Ghavamian, Parviz[4]; Kuntz, K. D.[1]; Long, Knox S.[2]; Plucinsky, Paul P.[5]; Soria, Roberto[6]; Winkler, P. F.[3]
[1.]Johns Hopkins Univ., Baltimore, MD. [2.]STScI, Baltimore, MD. [3.]Middlebury College, Middlebury, VT. [4.]Towson University, Towson, MD. [5.]CXC/SAO, Cambridge, MA. [6.]Curtin University, Perth, WA, Australia. [7.]Australian National University, Weston Creek, ACT, Australia.

453.15 A VLA Low Frequency Survey of the Supernova Remnant Population in M83
Stockdale, Christopher[1]; Pritchard, Tyler A.[2]; Blair, William P.[3]; Cowan, John J.[4]; Godfrey, Leith[5]; Miller-Jones, James[6]; Kuntz, K. D.[3]; Long, Knox S.[7]; Maddox, Larry A.[8]; Plucinsky, Paul P.[9]; Soria, Roberto[10]; Whitmore, Bradley C.[3]; Winkler, P. F.[11]
[1.]Marquette University, Milwaukee, WI. [2.]Pennsylvania State University, University Park, PA. [3.]Johns Hopkins University, Baltimore, MD. [4.]University of Oklahoma, Norman, OK. [5.]ASTRON, Dwingeloo, Netherlands. [6.]ICRAR - Curtin University, Bentley, WA, Australia. [7.]Space Telescope Science Institute, Baltimore, MD. [8.]Northrop Grumman Corp., Oklahoma City, OK. [9.]Smithsonian Astrophysical Observatory, Cambridge, MA. [10.]Curtin University, Bentley, WA, Australia. [11.]Middlebury College, Middlebury, VT.

453.16 Reconstructing the stellar mass distributions of galaxies using S4G IRAC 3.6 and 4.5 ?m images: the conversion from light to mass
Meidt, Sharon[1]; Schinnerer, Eva[1]; Querejeta, Miguel[1]; van de Ven, Glenn[1]; Zaritsky, Dennis F.[2]; Peletier, Reynier[3]; Knapen, Johan[4]; Sheth, Kartik[5]
[1.]MPIA, Heidelberg, Germany. [2.]University of Arizona, Tucson, AZ. [3.]Kapteyn Astronomical Institute, Gronigen, Netherlands. [4.]IAC, La Laguna, Spain. [5.]NRAO, Charlottesville, VA.
Contributing teams: S4G, DAGAL

453.17 Exponential Galaxy Disks from Stellar Scattering
Elmegreen, Bruce[1]; Struck, Curtis[2]
[1]IBM Research Div., Yorktown Heights, NY. [2]Iowa State University, Ames, IA.

453.18 The Upside Down Assembly of Simulated Disk Galaxies
Bird, Jonathan C.[1, 2]; Kazantzidis, Stelios[2]; Weinberg, David H.[2]; Guedes, Javiera[3]; Callegari, Simone[4]; Mayer, Lucio[5]; Madau, Piero[6]
[1]Vanderbilt University, Nashville, TN. [2]Ohio State University, Columbus, OH. [3]Institute for Astronomy, University of Zürich, Zürich, Switzerland. [4]Anthropology Institute and Museum, University of Zürich, Zürich, Switzerland. [5]Institute for Theoretical Physics, University of Zürich, Zürich, Switzerland. [6]University of California, Santa Cruz, Santa Cruz, CA.

453.19 Ionized Gas Velocities from Multi-slit Spectroscopy for Nearby, Edge-on Galaxies
Wu, Catharine J.[1]; Walterbos, Rene A.[1]; Rand, Richard J.[2]; Heald, George[3]
[1]New Mexico State University, Las Cruces, NM. [2].University of New Mexico, Albuquerque, NM. [3]Netherlands Institute for Radio Astronomy, Dwingeloo, Netherlands.
Contributing teams: HALOGAS team

453.20 Mass Distribution & Morphology of Simulated Spiral Galaxies
Berlanga Medina, Jazmin[1]; Berrier, Joel[2]; Hartley, Matthew[1]; Kennefick, Daniel[1]; Davis, Benjamin L.[1]; Shields, Douglas W.[2]; Seigar, Marc[3]; Kennefick, Julia D.[1]
[1]University of Arkansas, Fayetteville, AR. [2]Rutgers University, Piscataway, NJ. [3]University of Arkansas at Little Rock, Little Rock, AR.
Contributing teams: Arkansas Galaxy Evolution Survey (AGES), Arkansas High Performance Computing Center (AHPCC)

453.21 Molecular gas mass and star formation of 12 Virgo spiral galaxies along the ram pressure time sequence
Chung, Eun Jung[1]; Kim, Sungeun[1]
[1]Department of Astronomy & Space Science, Sejong University, Seoul, Korea, Republic of.

453.22 The Molecular Gas Properties of M100 as seen by ALMA
Vlahakis, Catherine[1, 5]; Martin, Sergio[3]; Zwaan, Martin[2]; Bendo, George J.[4]; Leon, Stephane[1, 5]; Garcia, Diego[1, 5]
[1]Joint ALMA Observatory, Santiago, Chile. [2]European Southern Observatory, Garching, Germany. [3]Institut de RadioAstronomie Millimétrique , Grenoble, France. [4]UK ALMA Regional Centre Node, Jodrell Bank Centre for Astrophysics, Manchester, United Kingdom. [5]European Southern Observatory, Santiago, Chile.

454 Molecular Clouds, HII Regions, Interstellar Medium Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

454.01 Column Density Maps of the I-GALFA HI Survey: Evidence for Dark Gas?
Gibson, Steven J.[1]; Koo, Bon-Chul[2]; Douglas, Kevin A.[3]; Newton, Jonathan H.[4]; Peek, Joshua E.[5]; Hughes, James M.[6, 1]; Spraggs, Mary[1]; Park, Geumsook[2]; Kang, Ji-hyun[7]; Heiles, Carl E.[8]; Korpela, Eric J.[8]
[1.]Western Kentucky University, Bowling Green, KY. [2.]Seoul National University, Seoul, Korea, Republic of. [3.]Okanagan College, Kelowna, BC, Canada. [4.]McMaster University, Hamilton, ON, Canada. [5.]Columbia University, New York, NY. [6.]Gatton Academy, Bowling Green, KY. [7.]Yonsei University, Seoul, Korea, Republic of. [8.]University of California, Berkeley, CA.

454.02 Tracing molecular gas content through optical extinction within nearby galaxies
Ray Avalani, Bianca[1, 2]; Groves, Brent[1]; Kreckel, Kathryn[1]
[1.]Max-Planck-Institut für Astronomie, Heidelberg, Baden-Württemberg, Germany. [2.]California Institute of Technology, Pasadena, CA.

454.03 Molecular Gas in the Andromeda Galaxy
Gerard, Benjamin[1]; Darling, Jeremiah K.[1]; Amiri, Nikta[1]
[1.]Center for Astronomy and Space Astrophysics, University of Colorado at Boulder, Boulder, CO.

454.04 Massive Cold Clumps in NGC 7538 revealed by Herschel
Fallscheer, Cassandra L.[1, 2]; Reid, Mike[3]; Di Francesco, James[2, 1]
[1.]University of Victoria, Victoria, BC, Canada. [2.]NRC-Herzberg, Victoria, BC, Canada. [3.]University of Toronto, Toronto, ON, Canada.
Contributing teams: Herschel HOBYS Team

454.05 Improved Probing of the Rosette Nebula Superbubble with Faraday Rotation
Savage, Allison H.[1]; Buffo, Jacob J.[1]; Spangler, Steven R.[1]
[1.]University of Iowa, Iowa City, IA.

454.06 Evolution of the ISM at z < 1
Mohamed, Zaarah[1, 2]
[1.]National Radio Astronomy Observatory, Cleveland, VA. [2.]Case Western Reserve University, Cleveland, OH.

454.07 Examining the Initial Conditions of Star Formation Through Dense Gas Kinematics
Mead, Adrian T.[1, 2]; Tobin, John J.[2]; Smith, Rowan[3]
[1.]University of Virginia, Charlottesville, VA. [2.]National Radio Astronomy Observatory, Charlottesville, VA. [3.]University of Heidelberg, Heidelberg, Germany.

454.08 Probing interstellar extinction in the Tarantula Nebula with red giant stars
De Marchi, Guido[1]; Panagia, Nino[2]; Girardi, Leo[3]; Sabbi, Elena[2]
[1.]Space Science Dept, European Space Agency, Noordwijk, Netherlands. [2.]Space Telescope Science Institute, Baltimore, MD. [3.]INAF - Osservatorio Astronomico di Padova, Padova, Italy.

454.09 The Distribution of Oxygen in the Magellanic Clouds
Pramanick, Smriti[1, 2]; Bajwa, Ayesha[1, 2]; Werk, Jessica[2]
[1.] Castilleja School, Palo Alto, CA. [2.] University of California, Santa Cruz, Santa Cruz, CA.

454.10 Interstellar Organics, the Solar Nebula, and Saturn's Satellite Phoebe
Pendleton, Yvonne J.[1]; Cruikshank, Dale P.[1]
[1.] NASA Ames Research Center, Sunnyvale, CA.

454.11 Investigation of Interstellar Formation Routes Using Molecular Abundance Ratios of C3H2O Isomers
Loomis, Ryan A.[1]; Johnson, Chelen H.[2]; Remijan, Anthony J.[3]
[1.] University of Virginia, Charlottesville, VA. [2.] Breck School, Golden Valley, MN. [3.] NRAO, Charlottesville, VA.

454.12 Molecular Lines in NGC660
Arias de Saavedra Benitez, Maria[1]; Ghosh, Tapasi[2]; Salter, Christopher J.[2]
[1.] Duke University, Durham, NC. [2.] NAIC, Arecibo Observatory, Arecibo, Puerto Rico.

454.13 WHAM Southern Sky Survey early results: Ionized gas in the Scutum-Centaurus Arm
Hill, Alex S.[1]; Haffner, L. M.[2, 3]; Benjamin, Robert A.[4]; Gostisha, Martin[4]; Barger, Kathleen[5]
[1.] CSIRO Astronomy and Space Science, Epping, NSW, Australia. [2.] UW-Madison, Madison, WI. [3.] Space Science Institute, Boulder, CO. [4.] UW-Whitewater, Whitewater, WI. [5.] University of Notre Dame, South Bend, IN.

454.14 Pilot Search for 54-MHz Maser Emission from Interstellar Hydroxyl Using LOFAR
Hoffman, Ian M.[1]; Heald, George[2]; Oonk, Raymond[2]; McKean, John[2]; Mol, Jan David[2]; Hessels, Jason[2]; Toribio, Carmen[2]
[1.] Wittenberg University, Springfield, OH. [2.] Netherlands Institute for Radio Astronomy (ASTRON), Dwingeloo, Netherlands.
Contributing teams: The LOFAR Collaboration

454.15 A Survey of the Local Interstellar Medium Using COS Observations of Nearby White Dwarfs
Tweed, Benjamin[1]; Redfield, Seth[1]; Gaensicke, Boris T.[3]; Koester, Detlev[2]
[1.] Wesleyan University, Middletown, CT. [2.] University of Kiel, Kiel, Schleswig-Holstein, Germany. [3.] University of Warwick, Warwick, Coventry, United Kingdom.

454.16 Dust in the Rosette Nebula
Huber, Jeremy[1, 2]; Kielkopf, John F.[1]
[1.] University of Louisville, Louisville, KY. [2.] University of Kentucky, Lexington, KY.

454.17 What is the G2 cloud?
Walker, Mark A.[1]
[1.] Manly Astrophysics, Manly, NSW, Australia.

454.18 A Spectral Analysis of the Interstellar Medium Using Sagittarius B2 as the Bright Continuum Source

Chueh, Christopher[1]; Manning, Brant[1]; Frady, Nicholas[1]; Shane, Galen[1]; Beasley, Shannon[1]; Corby, Joanna[2]; Dirienzo, William J.[2]; Beaton, Rachael[2]; Jones, Kristen M.[2]; Barcos-Munoz, Loreto D.[2]; Remijan, Anthony J.[3]

[1.]Central Virginia Governor's School for Science and Technology, Lynchburg, VA. [2.]University of Virginia, Charlottesville, VA. [3.]National Radio Astronomy Observatory, Charlottesville, VA.

454.19 A Survey of Hidden Molecular Clouds in the Milky Way

Hughes, James[1, 2]; Gibson, Steven J.[1]

[1.]Western Kentucky University, Bowling Green, KY. [2.]Carol Martin Gatton Academy of Mathematics and Science in Kentucky, Bowling Green, KY.

Contributing teams: I-GALFA Survey Consortium

454.20 Configuration of the local interstellar magnetic field

Frisch, Priscilla C.[1]; Andersson, B-g[3]; Berdhyugin, Andrei[2]; Funsten, Herbert O.[10]; DeMajistre, Robert[6]; Magalhaes, Antonio Mario[5]; McComas, Dave[4, 11]; Piirola, Vilppu[2]; Schwadron, Nathan[7]; Seriacopi, Daiane[5]; Slavin, Jonathan D.[9]; Wiktorowicz, Sloane[8]

[1.]University of Chicago, Chicago, IL. [2.]Finnish Centre for Astronomy with ESO, University of Turku, , Turku, Finland. [3.]SOFIA-USRA, Moffet Field, CA. [4.]Southwest Research Institute, San Antonio, TX. [5.]Inst. de Astronomia, Geofisica e Ciencias Atmosfericas, Universidade de Sao Paulo, Sao Paulo, Brazil. [6.]John Hopkins University Applied Physics Lab, Laurel, MD. [7.]University of New Hampshire, Durham, NH. [8.]University of California, Santa Cruz, CA. [9.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [10.]Los Alamos National Laboratory, Los Alamos, NM. [11.]University of Texas, San Antonio, TX.

Contributing teams: IBEX Team

454.21 Time Variation of Cosmic Ray Arrival Directions

Corbett, Henry[1]; Desiati, Paolo[2]

[1.]Guilford College , Greensboro, NC. [2.]University of Wisconsin - Madison, Madison, WI.

454.22 The Molecular Gas - Star Formation Connection in an Extended Ultraviolet (XUV) Disk

Watson, Linda C.[1]; Martini, Paul[2]; Lisenfeld, Ute[3]; Boeker, Torsten[4]; Gil de Paz, Armando[5]; Schinnerer, Eva[6]

[1.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [2.]Ohio State University, Columbus, OH. [3.]Universidad de Granada, Granada, Spain. [4.]European Space Agency, Noordwijk, Netherlands. [5.]Universidad Complutense de Madrid, Madrid, Spain. [6.]Max-Planck-Institut für Astronomie, Heidelberg, Germany.

454.23 Characterizing the Dense Gas in the Eagle and Pelican Pillars

Grand, Erin[1]; Pound, Marc W.[1]; Mundy, Lee G.[1]

[1.]University of Maryland, College Park, MD.

454.24 X-ray Properties of the Peculiar HII Region IC 131 in M33

Pannuti, Thomas[1]; Williams, Benjamin F.[2]; Wold, Brian[2]; Garofali, Kristen[2]; Tuellmann, Ralph[3]; Gaetz, Terrance J.[4]; Kosakowski, Alekzander R.[1]

[1.]Morehead State University, Morehead, KY. [2.]University of Washington, Seattle, WA. [3.]DLR GfR mbH, Oberpfaffenhofen, Bavaria, Germany. [4.]CXC/SAO, Cambridge, MA.

Contributing teams: XMM-Newton Legacy Survey of M33 Team

454.25 Examination of the Applicability of Quasi-time-dependent Truncated CJ Shock Wave Models in Interstellar Molecular Clouds
Menzel, Raymond L.[1, 2]; Ciolek, Glenn E.[1, 2]; Suarez, Pablo[3]; Roberge, Wayne G.[1, 2]
[1.]New York Center for Astrobiology, Troy, NY. [2.]Rensselaer Polytechnic Institute, Troy, NY. [3.]Delaware State University, Dover, DE.

454.26 Diffusion, Self-Similarity, and the Formation of Multifluid Shock Waves
Ciolek, Glenn E.[1]; Roberge, Wayne G.[1, 2]; Katz, Maximilian P.[2, 3]
[1.]New York Center for Astrobiology,Rensselaer Polytechnic Inst., Troy, NY. [2.]Dept. of Physics, Applied Physics, and Astronomy,Rensselaer Polytechnic Inst., Troy, NY. [3.]Dept. of Physics and Astronomy, Stony Brook University, Stony Brook, NY.

454.27 A Multi-wavelength Analysis of Cold Evolving Interstellar Clouds
Spraggs, Mary[1]; Gibson, Steven J.[1]
[1.]Western Kentucky University, Bowling Green, KY.

454.28 The Northern Intermediate-Velocity Molecular Clouds (IVMCs): Distances and Environments.
McGehee, Peregrine M.[1]
[1.]Caltech, Pasadena, CA.

454.30 A multi-wavelength study of the GSH 006-15+7: A local Galactic supershell
Jo, Young-soo[1]; Min, Kyoung-wook[1]; Seon, Kwang-il[2]
[1.]Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, Republic of. [2.]Astronomy and Space Science Institute (KASI), Daejeon, Korea, Republic of.

454.31 Far-Ultraviolet Study in the Ophiuchus cloud complex and the Upper Scorpius subgroup of the Sco OB2 association
Lim, Taeho[1]; Min, Kyoung-Wook[1]; Seon, Kwang-il[2]
[1.]KAIST, Daejeon, Daejeon, Korea, Republic of. [2.]KASI, Daejeon, Daejeon, Korea, Republic of.

454.32 Power law structure of the interstellar medium: Fractal dimension of the HI, CO and mid-IR in nearby galaxies
Bowman, Lorraine[1]; Ott, Juergen[2]; Westpfahl, Dave[1, 2]
[1.]NMT, Socorro, NM. [2.]NRAO, Socorro, NM.

454.33 Kinematic Results From a Systematic Search for Infall Signatures Towards the Starless Core Population in the Perseus Molecular Cloud
Walker-LaFollette, Amanda[1]; Shirley, Yancy L.[1, 2]; Amaya, Hector[1]; Becker, Samantha L.[4]; Biddle, Lauren I.[1]; Lichtenberger, Matthew[1]; Nieberding, Megan N.[1]; Raphael, Brandon A.[1]; Romine, James M.[1]; Small, Lindsay[1]; Stanford-Jones, Charles[1]; Smith, Carter-Thaxton[1]; Thompson, Robert[1]; Towner, Allison P.[1]; Turner, Jake[5]; Watson, Zachary[1]; Cates, Ian[1]; McGraw, Allison M.[1]; Pearson, Kyle[1]; Robertson, Amy[3]; Tombleson, Ryan[1]
[1.]University of Arizona/Steward Observatory, Tucson, AZ. [2.]Adjunct Astronomer, The National Radio Astronomy Observatory, Socorro, AZ. [3.]Arizona Radio Observatory, Tucson, AZ. [4.]University of Arizona, Tucson, AZ. [5.]University of Virginia, Charlottesville, VA.

454.34 Into the Darkness: Interstellar Extinction Near the Cepheus OB3 Molecular Cloud
Fitzpatrick, Edward L.[1]; Jacklin, Savannah[1]; Massa, Derck[2]
[1.]Villanova University, Villanova, PA. [2.]Space Science Institute, Boulder, CO.

454.36 A Possible Protostar in IGGC 22
Towner, Allison P.[1]; Walker, Christopher K.[1]; Tolls, Volker[2]; Martin, Christopher D.[3]
[1.]University of Arizona, Tucson, AZ. [2.]Harvard Smithsonian Center for Astrophysics, Cambridge, MA. [3.]California Institute of Technology, Pasadena, CA.

454.37 Temperature, Density, and Collision Rates in the IC63 Nebula
Vaillancourt, John E.[1]; Andersson, Bengt-Goran[1]; Polehampton, Edward[2, 3]; Sanders, James[4]; Widicus-Weaver, Susanna[4]
[1.]SOFIA / USRA, Mountain View, CA. [2.]University of Lethbridge, Lethbridge, AB, Canada. [3.]Rutherford Appleton Laboratory, Didcot, Oxfordshire, United Kingdom. [4.]Emory University, Atlanta, GA.

454.38 NH2D in Orion KL: Results from ALMA, EVLA, and IRAM
Lucy, Adrian B.[1, 2]; Wootten, Al[1]; Marcelino, Nuria[1]
[1.]NRAO-CV, Charlottesville, VA. [2.]University of Oklahoma, Norman, OK.

454.39 Far Ultraviolet Observations of the ? Ophiuchi HII region
Choi, Yeon-Ju[1]; Min, Kyoung-wook[1]; Seon, Kwang-il[2]
[1.]KAIST, Daejeon, Korea, Republic of. [2.]KASI, Daejeon, Korea, Republic of.

454.40 A Multi-Wavelength Study of Water Maser-Emitting Regions in the Andromeda Galaxy
Amiri, Nikta[1]; Darling, Jeremiah K.[1]; Gerard, Benjamin[1]
[1.]University of Colorado at Boulder, Boulder, CO.

454.41 Molecular Hydrogen as a Finite-density and Temperature Indicator
Wang, Xiang[1]; Ferland, Gary J.[1;] Baldwin, Jack A.[2]
[1.]Physics and Astronomy, University of Kentucky, Lexington, KY. [2.]Michigan State University, East Lansing, MI.

454.42 Vibrationally Excited Molecular Hydrogen Near Herschel 36
Rachford, Brian L.[1]; Snow, Theodore P.[2]; Ross, Teresa[3]
[1.]Embry-Riddle Aeronautical Univ., Prescott, AZ. [2.]University of Colorado, Boulder, CO. [3.]New Mexico State University, Las Cruses, NM.

454.43 OH+ and H2O+: Probes of the Molecular Hydrogen Fraction and Cosmic-Ray Ionization Rate
Indriolo, Nick[1]; Neufeld, David A.[1]; Gerin, Maryvonne[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]LERMA, CNRS, Observatoire de Paris, ENS, Paris, France.
Contributing teams: PRISMAS, WISH

454.44 Thermal OH emission and Dark Gas in the Galaxy
Allen, Ronald J.[1, 3]; Hogg, David E.[2]; Engelke, Philip[3]
[1.]STScI, Baltimore, MD. [2.]NRAO, Charlottesville, VA. [3.]JHU Physics/Astronomy, Baltimore, MD.

454.45 Spitzer 8?m Emission as a Tracer of Neutral Gas in the Large Magellanic Cloud
Wong, Tony H.[1, 2]; Xue, Rui[1]; Whitney, Barbara[2]; Heitsch, Fabian[3]; Hughes, Annie[4]; Bolatto, Alberto D.[5]; Robitaille, Thomas[4]
[1.]University of Illinois, Urbana, IL. [2.]University of Wisconsin, Madison, WI. [3.]University of North Carolina, Chapel Hill, NC. [4.]MPIA, Heidelberg, Germany. [5.]University of Maryland, College Park, MD.
Contributing teams: MAGMA team

454.46 Ice Formation and Grain Growth in the Quiescent Medium of the Lupus Molecular Clouds

Boogert, Abraham C.[1, 2]; Chiar, Jean E.[3]; Knez, Claudia[4, 5]; Oberg, Karin I.[6]; Mundy, Lee G.[4]; Pendleton, Yvonne J.[7]; Tielens, Xander[8]; van Dishoeck, Ewine[8, 9]
[1.]California Institute of Tech., Pasadena, CA. [2.]SOFIA/USRA, Moffett Field, CA. [3.]SETI Institute, Mountain View, CA. [4.]Department of Astronomy, University of Maryland, College Park, MD. [5.]Johns Hopkins University Applied Physics Laboratory, Laurel, MD. [6.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [7.]NASA Ames Research Center, Moffett Field, CA. [8.]Leiden Observatory, Leiden University,, Leiden, Netherlands. [9.]Max Planck Institut fur Extraterrestrische Physik, Garching, Germany.

454.47 Micro-Spec: an Integrated, Direct-Detection Spectrometer for Far-Infrared and Sub-Millimeter Astronomy

Cataldo, Giuseppe[1, 2]; Moseley, Samuel H.[1]; Hsieh, Wen-Ting[1]; Huang, Wei-Chung[1]; Stevenson, Thomas[1]; Wollack, Edward[1]
[1.]NASA Goddard Space Flight Center, Greenbelt, MD. [2.]Universities Space Research Association (USRA), Columbia, MD.

455 Elliptical Galaxies Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

455.01 EVIDENCE FOR A CONSTANT IMF IN EARLY-TYPE GALAXIES BASED ON THEIR X-RAY BINARY POPULATIONS

Zepf, Stephen E.[1]; Maccarone, Thomas J.[2]; Kundu, Arunav[3, 4]; Gonzalez, Anthony H.[5]; Lehmer, Bret[6, 7]; Maraston, Claudia[8]
[1.]Michigan State Univ., East Lansing, MI. [2.]Texas Tech University, Lubbock, TX. [3.]Eureka Scientific, Oakland, CA. [4.]TIFR, Mumbai, India. [5.]University of Florida, Gainesville, FL. [6.]Johns Hopkins University, Baltimore, MD. [7.]NASA GSFC, Greenbelt, MD. [8.]University of Portsmouth, Portsmouth, United Kingdom.

455.02 Isolated Early-type Galaxies in the 2dFGRS

Fuse, Christopher R.[1]; Lamir, Cameron[1]
[1.]Rollins College, Winter Park, FL.

455.03 Listening to Shells: Galaxy Masses from Disrupted Satellites

Westfall, Kyle1; Sanderson, Robyn1
[1.]Kapteyn Astronomical Institute, Groningen, Groningen, Netherlands.

456 Dark Matter & Dark Energy Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

456.01 The Dark Matter Contribution to the Galactic Diffusion Gamma Ray Emission

Yang, Lin F.[1]; Szalay, Alexander S.[1]; Silk, Joseph I.[1]; Wyse, Rosemary F.[1]; Kuhlen, Michael[2]; Madau, Piero[2]
[1.]Johns Hopkins University, Baltimore, MD. [2.]UC, Santa Cruz, Santa Cruz, CA.

456.02 Status and Prospects for Indirect Dark Matter Searches with the Fermi Large Area Telescope

Charles, Eric[1]
[1.]SLAC National Lab., Menlo Park, CA.
Contributing teams: Fermi-LAT Collaboration

456.03 Dark Matter Content of Dwarf Galaxies, Measured from Tidal Debris

Bauer, Jacob[1]; Arsenault, Matthew[1]; Desell, Travis[2]; Magdon-Ismail, Malik[1]; Newberg, Heidi J.[1]; Newby, Matthew[1]; Rice, Colin[1]; Thompson, Jeffrey[1]; Ulin, Steve[1]
[1.]Rensselaer Polytechnic Institute, Troy, NY. [2.]University of North Dakota, Grand Forks, ND.

456.04 Probing Gravity in the High-Redshift Universe with HETDEX

Malz, A.I.[1]; Shandera, Sarah[1]
[1.]The Pennsylvania State University, State College, PA.

456.05 Measurements of D_A and H at z=2.4 from the SDSS-III/DR11 BOSS Lyman-alpha sample

Schlegel, David J.[1]; Delubac, Timoth\'ee[2]; Busca, Nicol\'as G.[3]; Rich, James[2]; Bailey, Stephen J.[1]; Bautista, Julian[3]; Front, Andreu[4, 1]; Kirkby, David[5]; Le Goff, Jean-Marc[2]; Pieri, Matthew[6]; Slosar, Anze[7]; Aubourg, Eric[3]; Blomqvist, Michael[5]; Bolton, Adam S.[8]; Borde, Arnaud[1]; Carithers, William[1]; Croft, Rupert A.[9]; Dawson, Kyle S.[8]; Eisenstein, Daniel[10]; Hamilton, Jean-Christophe[3]; Ho, Shirley[9]; Hogg, David W.[11]; Lee, Khee-Gan[12]; Lundgren, Britt[13]; Margala, Daniel5; Miralda-Escudé, Jordi[14, 15]; Myers, Adam D.[16]; Noterdaeme, Pasquier[17]; Palanque-Delabrouille, Nathalie[2]; Paris, Isabelle[17, 18]; Petitjean, Patrick1[7]; Ross, Nicholas[19]; Rossi, Graziano[2]; Viel, Matteo[20, 22]; Weinberg, David H.[21]; White, Martin[1, 23]; Yeche, Christophe[2]
[1.]LBNL, Berkeley, CA. [2.]CEA, Centre de Saclay, IRFU, Gif-sur-Yvette, France. [3.]APC, Universit\'e Paris Diderot-Paris 7,Paris, France. [4.]Institute of Theoretical Physics, University of Zurich, Zurich, Switzerland. [5.]Department of Physics and Astronomy, University of California, Irvine, Irvine, CA. [6.]Institute of Cosmology and Gravitation, University of Portsmouth, Portsmouth, United Kingdom. [7.]Brookhaven National Laboratory, Upton, NY. [8.]Department of Physics and Astronomy, University of Utah, Salt Lake City, UT. [9.]Bruce and Astrid McWilliams Center for Cosmology, Carnegie Mellon University, Pittsburgh, PA. [10.]Harvard-Smithsonian Center for Astrophysics, Harvard University, Cambridge, MA. [11.]Center for Cosmology and Particle Physics, New York University, New York, NY. [12.]Max-Planck-Institut f\'ur Astronomie, Heidelberg, Germany. [13.]Department of Astronomy, University of Wisconsin, Madison, WI. [14.]Instituci\'o Catalana de Recerca i Estudis Avan\c ats, Barcelona, Spain. [15.]Catalonia, Institut de Ci\`encies del Cosmos, Universitat de Barcelona/IEEC, Barcelona, Spain. [16.]Department of Physics and Astronomy, University of Wyoming, Laramie, WY. [17.]Universit\'e Paris 6 et CNRS, Institut d'Astrophysique de Paris, Paris, France. [18.]Universidad de Chile, Santiago, Chile. [19.]Department of Physics, Drexel University, Philadelphia, PA. [20.]INAF, Osservatorio Astronomico di Trieste, Trieste, Italy. [21.]Department of Astronomy, Ohio State University, Columbus, OH. [22.]INFN/National Institute for Nuclear Physics, Trieste, Trieste, Italy. [23.]University of California, Berkeley, Berkeley, CA.

Contributing teams: Sloan Digital Sky Survey III (SDSS-III) Baryon Oscillation Spectroscopic Survey (BOSS)

457 Large Scale Structure, Cosmic Distance Scale Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

457.01 MEGA-SH0ES: Revising the Cepheid Distance to NGC 1365
Hoffmann, Samantha L.[1]; Macri, Lucas M.[1]; Riess, Adam G.[2, 3]
[1.]Texas AandM University, College Station, TX. [2.]Johns Hopkins University, Baltimore, MD. [3.]STScI, Baltimore, MD.
Contributing teams: MEGA-SH0ES Team

457.02 MEGA-SH0ES: A Cepheid distance to M101 based on WFC3 H-band photometry
Yuan, Wenlong[1]; Hoffmann, Samantha L.[1]; Macri, Lucas M.[1]; Riess, Adam G.[2, 3]
[1.]Texas A&M Univ., College Station, TX. [2.]Johns Hopkins Univ., Baltimore, MD. [3.]STScI, Baltimore, MD.
Contributing teams: the MEGA-SH0ES team

457.03 The Tip of the Red Giant Branch Distance to NGC 1316 Hosting Four Type Ia Supernova and the Hubble Constant
Jang, In Sung[1]; Lee, Myung Gyoon[1]
[1.]Seoul National University, Seoul, Korea, Republic of.

457.04 The Detection of Megamasers to Identify Supermassive Black Holes
Beisser, Megan[1]; Mathone, Prabdeep[1]; Zhang, Jason[1]; Norvelle, William[1]; Good, Averie[1]; Beasley, Shannon[1]; Dirienzo, William J.[2]; Corby, Joanna[2]; Beaton, Rachael[2]; Barcos-Munoz, Loreto D.[2]; Jones, Kristen M.[2]; Braatz, James A.[3]
[1.]Central Virginia Governor's School for Science and Technology, Lynchburg, VA. [2.]University of Virginia, Charlottesville, VA. [3.]National Radio Astronomy Observatory, Charlottesville, VA.

457.05 The Corona Borealis Supercluster - I: Observational Analysis of the Inter-Cluster Dynamics
Batiste, Merida[1]; Pearson, David[1]; Batuski, David J.[1]
[1.]University of Maine, Bangor, ME.

457.06 The Corona Borealis Supercluster - II: Mass Estimation & Simulations
Pearson, David[1]; Batiste, Merida[1]; Batuski, David J.[1]
[1.]University of Maine, Orono, ME.

457.07 A Extragalactic Spectral Survey Of The SSA22 Field
Saez, Cristian1[, 2]; Lehmer, Bret[5]; Bauer, Franz E.[1]; Stern, Daniel[4]; Gonzales, Alexandria[3]; Harrison, Fiona[3]
[1.]Pontificia Universidad Catolica De Chile, University Park, PA. [2.]University of Maryland, College Park, MD. [3.]Caltech, Pasadena, CA. [4.]JPL, Pasadena, CA. [5.]Johns Hopkins University, Baltimore, MD.

457.08 The galaxy environment of a QSO at z~5.7
Banados, Eduardo[1]; Venemans, Bram[1]; Walter, Fabian[1]; Kurk, Jaron[2]; Overzier, Roderik[3, 4]; Ouchi, Masami[5, 6]
[1.]Max Planck Institute for Astronomy, Heidelberg, Germany. [2.]Max Planck fuer Extraterrestrische Physik, Garching, Germany. [3.]Department of Astronomy, The University of Texas at Austin, Austin, TX. [4.]Observatorio Nacional, Rio de Janeiro, Brazil. [5.]Institute for Cosmic Research, University of Tokyo, Kashiwa, Japan. [6.]Kavli Institute for the Physics and Mathematics of the Universe, The University of Tokyo, Kashiwa, Japan.

457.09 Weak Lensing with Galaxy Kinematics

George, Matthew R.[1, 2]; Huff, Eric M.[3]; Schlegel, David J.[2]
[1.]UC Berkeley, Berkeley, CA. [2.]Lawrence Berkeley National Lab, Berkeley, CA. [3.]Ohio State University, Columbus, OH.

457.10 Baryon Acoustic Oscillations in Lyman Alpha Forest - Quasar Cross-Correlations

Ho, Shirley[1]; Aubourg, Eric[2]; Bailey, Stephen J.[3]; Bautista, Julian[2]; Beutler, Florian[3]; Bizyaev, Dmitry[4]; Blomqvist, Michael[5]; Bolton, Adam S.[6]; Brewington, Howard[4]; Brinkmann, Jonathan V.[4]; Brownstein, Joel[6]; Busca, Nicol\'as G.[2]; Carithers, William[3]; Croft, Rupert A.[1]; Dawson, Kyle S.[6]; Delubac, Timoth\'ee[7]; Ebelke, Garrett[4]; Eisenstein, Daniel[8]; Feng, Yu[1]; Font-Ribera, Andreu[3, 9]; Hogg, David W.[10]; Kinemuchi, Karen[4]; Kirkby, David[5]; Le Goff, Jean-Marc[7]; Lee, Khee-Gan[11]; Malanushenko, Elena[4]; Malanushenko, Viktor[4]; Marchante, Moses[4]; Margela, Daniel[5]; Miralda-Escudé, Jordi[12, 13]; Muna, Demitri[14]; Myers, Adam D.[15]; Nichol, Robert[16]; Oravetz, Daniel[4]; Palanque-Delabrouille, Nathalie[7]; Pan, Kaike[4]; Noterdaeme, Pasquier[17]; O'Connel, Ross[1]; Paris, Isabelle[17, 24]; Petitjean, Patrick[17]; Pieri, Matthew[14]; Rollinde, Emmanuel[17]; Ross, Nicholas[3, 18]; Rossi, Graziano[7]; Schlegel, David J.[3]; Schneider, Donald P.[19]; Simmons, Audrey[4]; Slosar, Anze[20]; Viel, Matteo[21, 22]; Weinberg, David H.[14]; Xu, Xiaoying[1]; Yeche, Christophe[7]; York, Donald G.[23]
[1.]Carnegie Mellon University , Pittsburgh, PA. [2.]APC, Universite Paris Diderot-Paris 7,Paris, France. [3.]Lawrence Berkeley National Laboratory, Berkeley, CA. [4.]Apache Point Observatory and New Mexico State University, Sunspot, NM. [5.]University of California, Irvine, Irvine, CA. [6.]University of Utah, Salt Lake City, UT. [7.]CEA, Centre de Saclay,, Gif-sur-Yvette, France. [8.]Harvard-Smithsonian Center for Astrophysics, Cambridge, MA. [9.]University of Zurich, Zurich, Switzerland. [10.]New York University, New York, NY. [11.]Max Planck Institute for Astronomy, Heidelberg, Germany. [12.]Instituci\'{o} Catalana de Recerca i Estudis Avan\c{c}ats, Catalonia, Spain. [13.]Institut de Ci\`{e}ncies del Cosmos (IEEC/UB), Barcelona, Spain. [14.]Ohio State University, Columbus, OH. [15.]University of Wyoming, Laramie, WY. [16.]University of Portsmouth, Portsmouth, United Kingdom. [17.]Institut d'Astrophysique de Paris, Paris, France. [18.]Drexel University, Philadelphia, PA. [19.]The Pennsylvania State University, University Park, PA. [20.]Brookhaven National Laboratory, Upton, NY. [21.]Osservatorio Astronomico di Trieste, Trieste, Italy. [22.]INFN/National Institute for Nuclear Physics, Trieste, Italy. [23.]University of Chicago, Chicago, IL. [24.]Universidad de Chile, Casilla, Chile.

457.11 Mapping 3D Large-Scale Structure at z?2 with Lyman-? Forest Tomographic Mapping

Lee, Khee-Gan[1]; Hennawi, Joseph F.[1]; White, Martin[2, 3]; Croft, Rupert A.[4]; Prochaska, Jason X.[8]; Schlegel, David J.[3]; Suzuki, Nao[5]; Kneib, Jean-Paul[7]; Bailey, Stephen J.[3]; Spergel, David N.[6]; Rix, Hans-Walter[1]; Strauss, Michael A.[6]
[1.]MPIA, Heidelberg, Baden-Wuerttemberg, Germany. [2.]UC Berkeley, Berkeley, CA. [3.]LBNL, Berkeley, CA. [4.]Carnegie-Mellon University, Pittsburgh, PA. [5.]University of Tokyo, Tokyo, Tokyo, Japan. [6.]Princeton University, Princeton, NJ. [7.]EPFL, Lausanne, Switzerland. [8.]UC Santa Cruz, Santa Cruz, CA.

457.12 Red Galaxy Structures Toward a Large Quasar Group Field
Williger, Gerard M.[1, 2]; Feil, Eric C.[1]; Haberzettl, Lutz[1]; Clowes, Roger[2]; Campusano, Luis[3]; Haines, Christopher P.[3]; Valls-Gabaud, David [4]; Lehnert, Matt[5]; Nesvadba, Nicole [6]
[1.] Univ. of Louisville, Louisville, KY. [2.] U. Central Lancashire, Preston, United Kingdom. [3.] U. de Chile, Santiago, Chile. [4.] Obs. de Paris-Meudon, Paris, France. [5.] Institute d'Astrophysique, Paris, France. [6.] U. de Paris-Sud, Orsay, France.
Contributing teams: LQG Team

457.13 The Very Small Scale Clustering of SDSS-II and SDSS-III Galaxies
Piscionere, Jennifer[1]; Berlind, Andreas A.[1]
[1.] Vanderbilt, Nashville, TN.

457.14 Tilted Infall Regions?
Praton, Elizabeth A.[1]; Abdullah, Mohamed[2]
[1.] Franklin & Marshall College, Lancaster, PA. [2.] National Research Institute of Astron. & Geoph., Helwan, Egypt.

457.15 Faster, Better, Cheaper N-Body with Abacus
Ferrer, Douglas[1]; Eisenstein, Daniel[1]; Metchnik, Marc V.[1]; Pinto, Philip A.[2]
[1.] Harvard, Cambridge, MA. [2.] University of Arizona, Tuscon, AZ.

457.16 Kinematic Morphology of Large-scale Structure: Evolution from Potential to Rotational Flow
Wang, Xin[1]; Szalay, Alexander S.[1]; Aragon-Calvo, Miguel A.[1]; Neyrinck, Mark C.[1]; Eyink, Gregory L.[2, 1]
[1.] Department of Physics & Astronomy, Johns Hopkins University, Baltimore, MD. [2.] Department of Applied Mathematics & Statistics, Johns Hopkins University, Baltimore, MD.

457.17 A Large number of fast cosmological simulations
Koda, Jun[1]; Kazin, Eyal[1]; Blake, Chris[1]
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457.18 Dark Matter Halo Clustering in the LasDamas Simulations
Salcedo, Andres[1]; Berlind, Andreas A.[2]; Maller, Ariyeh[3]
[1.] Lehigh University, Bethlehem, PA. [2.] Vanderbilt University, Nashville, TN. [3.] New York City College of Technology, New York City, NY.

458 Intergalactic Medium, QSO Absorption Line Systems Poster Session

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

458.01 High-Metallicity Outflows from QSOs: A Homogeneous Survey of Associated OVI Absorption with the Cosmic Origins Spectrograph
Grasha, Kathryn[1]; Tripp, Todd M.[1]
[1.] University of Massachusetts - Amherst, Amherst, MA.

458.02 Constraining the Properties of OVI in the 0.4<z<1.0 Circumgalactic Medium
Rosenwasser, Ben[1]; Muzahid, Sowgat[1]; Norris, Jackson[1]; Charlton, Jane C.[1]; Rodriguez Hidalgo, Paola[1, 7]; Wakker, Bart P.[2]; Narayanan, Anand[3]; Misawa, Toru[4]; Churchill, Christopher W.[6]; Mathes, Nigel[6]; Nielsen, Nikki[6]; Ganguly, Rajib[5]
[1.] The Pennsylvania State University, University Park, PA. [2.] University of Wisconsin-Madison, Madison, WI. [3.] Indian Institute of Space Science and Technology, Thiruvananthapuram, Kerala, India. [4.] Shinshu University, Matsumoto, Nagano Prefecture, Japan. [5.] University of Michigan-Flint, Flint, MI. [6.] New Mexico State University, Las Cruces, NM. [7.] York University, Toronto, ON, Canada.

458.03 Probing Quasar Winds Using Intrinsic Narrow Absorption Lines
Culliton, Christopher S.[1]; Charlton, Jane C.[1]; Eracleous, Michael[1]; Misawa, Toru[2]
[1.]Pennsylvania State University, University Park, PA. [2.]Shinshu University, Matsumoto, Nagano, Japan.

458.04 Evolution in the Frequency of Heavy Element Absorbers Approaching the Epoch of Reionization
Simcoe, Robert A.[1]; Cooksey, Kathy[1, 2]; Sullivan, Peter[1]; Cooper, Thomas[1]; Venemans, Bram[3]; deRosa, Gisella[4]
[1.]MIT, Cambridge, MA. [2.]University of Hawaii at Hilo, Hilo, HI. [3.]MPIA, Heidelberg, Germany. [4.]Ohio State University, Columbus, OH.

458.05 High-z QSO Absorption Systems: Metal-Poor Cold Flows and Mg II Absorber Host Galaxies
Cooper, Thomas[1]; Simcoe, Robert A.[1]; Cooksey, Kathy[1]; O'Meara, John[2]
[1.]Massachusetts Institute of Technology, Cambridge, MA. [2.]Saint Michael's College, Colchester, VT.

458.06 The Varied Conditions of Low Redshift Weak MgII Absorbers
Fonseca, Gloria[1]; Rosenwasser, Benjamin[1]; Roberts, Amber[1]; Koury, Alex[1]; Culliton, Christopher S.[1]; Muzahid, Sowgat[1]; Narayanan, Anand[2]; Rodriguez Hidalgo, Paola[3]; Charlton, Jane C.[1]
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458.07 PROBING THE LARGE SCALE OUTFLOWS OF THE DARK SIDE OF THE LMC BY PIERCING THROUGH THE DISK
Barger, Kathleen A.[1]; Howk, J. C.[1]; Lehner, Nicolas[1]
[1.]University of Notre Dame, Notre Dame, IN.

458.08 Properties of Two Strong MgII Absorbers Towards Q0454-220
Norris, Jackson[1]; Charlton, Jane C.[1]; Muzahid, Sowgat[1]; Rosenwasser, Ben[1]
[1.]Pennsylvania State University, University Park, PA.

458.09 Investigating TeV Gamma Ray Propagation: an Integration Approach along Blazar/Absorber Sightlines to Establish Minimum Photon Densities
Davis, Julie[1]; Danforth, Charles[1]; Keeney, Brian A.[1]; Stocke, John T.[1]
[1.]University of Colorado, Boulder, CO.

458.10 Intergalactic Extinction
Mills, Bradley[1]; Li, Aigen[1]
[1.]University of Missouri, Columbia, MO.

458.11 Understanding Low-Redshift Quasar Outflows Using Intrinsic NV Absorption Lines.
Roberts, Amber[1]; Christopher, Culliton[1]; Derseweh, Jeffery A.[2]; Muzahid, Sowgat[1]; Charlton, Jane C.[1]; Ganguly, Rajib[2]
[1.]The Pennsylvania State University, University Park, PA. [2.]University of Michigan-Flint, Flint, PA.

458.12 A Comparison of the Circumgalactic Medium of Present-Day Dwarf and Milky Way Galaxies using Absorption Line Analysis through Hydrodynamic Cosmological Simulations
Vander Vliet, Jacob R.[1]; Churchill, Christopher W.[1]; Trujillo-Gomez, Sebastian[1]; Klimek, Elizabeth S.[1]; Klypin, Anatoly A.[1]
[1.]New Mexico State University, Las Cruces, NM.

458.13 A Statistical Study of Mg II Absorption Selected Galaxies in the SDSS at z~0.4
Curtis, Brittney[1]; Lundgren, Britt[2]
[1.]Ohio State University, Columbus, OH. [2.]University of Wisconsin- Madison, Madison, WI.

459 The NASA SMD Science Education and Public Outreach Forum

Thursday, 9:00 AM - 2:00 PM; Exhibit Hall ABC

459.01 The NASA SMD Science Education and Public Outreach Forums: Engaging Scientists in NASA Education and Public Outreach
Smith, Denise A.[1]; Peticolas, Laura[2]; Schwerin, Theresa[3]; Shipp, Stephanie[4]
[1.]STScI, Baltimore, MD. [2.]UC-Berkeley, Berkeley, CA. [3.]IGES, Arlington, VA. [4.]LPI, Houston, TX.

459.02 Engaging Scientists in NASA Education and Public Outreach: Tools for Scientist Engagement
Buxner, Sanlyn[1]; Meinke, Bonnie K.[2]; Hsu, Brooke[3]; Shupla, Christine[3]; Grier, Jennifer A.[1]
[1.]Planetary Science Institute, Tucson, AZ. [2.]STScI, Baltimore, MD. [3.]Lunar and Planetary Institute, Houston, TX.
Contributing teams: SMD E/PO Community

459.03 Engaging Scientists in NASA Education and Public Outreach: Informal Science Education and Outreach
Lawton, Brandon L.[1]; Smith, Denise A.[1]; Bartolone, Lindsay[2]; Meinke, Bonnie K.[1]
[1.]STScI, Baltimore, MD. [2.]Adler Planetarium, Chicago, IL.
Contributing teams: Universe Discovery Guides Collaborative, NASAScience 4Girls Collaborative, SEPOF Informal Education Working Group, SMD E/PO Community

459.04 Engaging Scientists in NASA Education and Public Outreach: K - 12 Formal Education
Bartolone, Lindsay[1]; Smith, Denise A.[2]; Eisenhamer, Bonnie[2]; Lawton, Brandon L.[2]
[1.]Adler Planetarium, Chicago, IL. [2.]Space Telescope Science Institute, Baltimore, MD.
Contributing teams: Multiwavelength Universe Professional Development Collaborative, Use of NASA Data Collaborative, SEPOF K-12 Formal Education Working Group, SMD E/PO Community

459.05 Engaging Scientists in NASA Education and Public Outreach: Higher Education
Meinke, Bonnie K.[1]; Smith, Denise A.[1]; Schultz, Gregory R.[2]; Lawton, Brandon L.[1]; Bianchi, Luciana[3]; Blair, William P.[3]; Buxner, Sanlyn[4]
[1.]STScI, Baltimore, MD. [2.]Astronomical Society of the Pacific, San Francisco, CA. [3.]The Johns Hopkins University, Baltimore, MD. [4.]Planetary Science Institute, Tucson, AZ.
Contributing teams: SEPOF Higher Education Working Group, SMD E/PO Community

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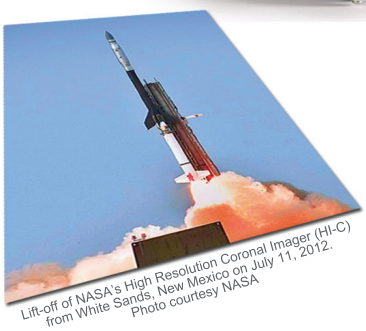

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