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## MPEC 2019-W05 : DAILY ORBIT UPDATE (2019 November 17)

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M.P.E.C. 2019-W05

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DAILY ORBIT UPDATE (2019 November 17)

Update to 2019-W02

Full-precision elements for the objects listed here are available at <https://www.minorplanetcenter.net/iau/MPCORB.html>

New identification:

K19B02H K19A00F

Lopez

New multiple-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Opp	C
J88P01F	16.7	0.15	K194R	324.992	46.682	304.275	4.256	0.44717	3.00895	4	X
J98R48U	16.8	0.15	K194R	312.545	162.556	180.299	12.769	0.35488	3.07103	3	X
J98SF1D	16.6	0.15	K194R	318.317	17.716	6.147	9.579	0.26361	3.02284	5	X
J98T19Y	18.9	0.15	K194R	202.937	98.037	19.556	21.570	0.08198	1.90426	5	X
J98U100	16.6	0.15	K194R	302.667	28.631	22.780	9.877	0.14879	3.03223	6	X
J99U18E	16.8	0.15	K194R	354.397	306.188	31.618	11.818	0.16439	2.92650	5	X
J99XF00	16.5	0.15	K194R	312.721	150.704	243.730	10.017	0.03255	2.96348	7	X
K00SK2V	17.7	0.15	K194R	317.353	98.740	271.020	0.364	0.21159	2.43782	8	X
K00SS5X	17.0	0.15	K194R	337.862	326.397	343.621	6.495	0.15269	2.45696	8	X
K00Y20D	16.6	0.15	K194R	88.520	326.528	276.019	5.383	0.05670	2.48100	10	X
K01Q02S	18.3	0.15	K194R	337.132	240.350	81.796	2.965	0.16875	2.07196	8	X
K01SV3B	16.7	0.15	K194R	301.394	351.264	44.926	5.487	0.16259	2.72604	9	X
K01T01S	17.1	0.15	K194R	341.006	344.162	4.262	26.088	0.32907	2.32986	5	X
K01TB2S	16.9	0.15	K194R	279.253	218.362	223.320	7.249	0.21734	2.72866	7	X
K01TH3J	17.2	0.15	K194R	325.685	153.660	201.221	7.171	0.32682	2.75121	5	X
K01TQ0C	17.2	0.15	K194R	8.178	288.723	25.085	12.748	0.17851	2.72197	6	X
K01W72S	18.7	0.15	K194R	306.768	175.455	199.889	2.200	0.21279	2.36893	5	X
K01Y55Y	17.9	0.15	K194R	291.650	10.904	41.259	4.075	0.21293	2.36973	6	X
K02AD3Z	16.1	0.15	K194R	228.067	207.790	275.956	8.066	0.10383	2.80573	12	X
K02G09Y	18.6	0.15	K194R	18.770	58.771	211.308	27.575	0.16568	1.78021	5	X
K02JF1M	15.9	0.15	K194R	64.909	3.313	256.386	5.747	0.17568	3.00570	11	X
K02P08S	17.5	0.15	K194R	324.793	130.144	232.681	4.937	0.29260	2.60267	5	X
K02P20M	17.2	0.15	K194R	354.647	35.447	277.188	2.007	0.21865	2.60148	10	X
K02P68X	17.2	0.15	K194R	321.484	30.922	324.780	14.722	0.35881	2.62862	5	X
K02Q11U	17.4	0.15	K194R	325.454	95.177	270.191	2.924	0.25983	2.60270	7	X
K02QF6D	18.6	0.15	K194R	320.844	10.420	345.786	6.064	0.22519	2.25378	4	X
K02R05Q	17.0	0.15	K194R	348.358	114.714	218.652	11.892	0.19304	2.61878	9	X
K02RF6Q	16.2	0.15	K194R	329.414	36.145	343.610	9.292	0.09214	3.14198	11	X
K02RJ1A	16.8	0.15	K194R	318.512	351.880	12.361	15.118	0.26165	2.62951	9	X
K02RN0Q	17.7	0.15	K194R	351.268	284.569	24.932	3.996	0.18728	2.25804	10	X
K02RT2F	16.7	0.15	K194R	21.883	73.442	209.745	12.748	0.25879	2.61762	9	X

K02RT5E	16.4	0.15	K194R	82.865	22.805	216.487	11.930	0.20960	2.57192	8	X
K02RT5L	17.3	0.15	K194R	348.717	118.795	200.432	14.583	0.25766	2.62000	6	X
K02TC3L	16.7	0.15	K194R	300.076	155.973	226.794	11.661	0.12531	2.63409	8	X
K02TF2S	17.5	0.15	K194R	5.529	335.893	340.241	1.696	0.20220	2.61916	7	X
K02TG6S	17.5	0.15	K194R	328.095	106.274	239.911	11.375	0.29995	2.62994	7	X
K02TG9X	16.2	0.15	K194R	354.378	60.307	248.792	11.039	0.16643	2.64113	10	X
K02TL9C	16.7	0.15	K194R	287.849	205.887	218.069	13.373	0.17499	2.61840	7	X
K02Tc0G	15.7	0.15	K194R	66.982	237.357	10.015	26.728	0.26902	3.17448	7	X
K02U21A	18.0	0.15	K194R	296.393	23.469	5.582	6.715	0.22128	2.27021	4	X
K02U37A	17.2	0.15	K194R	292.843	26.576	32.235	6.624	0.19436	2.63335	6	X
K02X15N	15.6	0.15	K194R	344.657	134.310	245.578	12.589	0.16964	3.18001	9	X
K03B23P	16.3	0.15	K194R	209.559	254.179	252.146	11.776	0.19021	2.72223	9	X
K03QB5B	17.8	0.15	K194R	355.496	34.529	273.098	5.100	0.22339	2.16030	7	X
K03S86G	16.0	0.15	K194R	304.729	42.263	330.633	11.662	0.16919	3.10442	9	X
K03SH8R	18.5	0.15	K194R	305.928	174.511	191.460	4.851	0.26107	2.17453	4	X
K03SU0S	16.3	0.15	K194R	311.724	182.467	219.005	8.514	0.17020	3.02632	7	X
K03SV2N	17.5	0.15	K194R	305.222	67.544	311.070	13.636	0.21123	2.51952	8	X
K03SW7T	16.2	0.15	K194R	295.692	17.647	30.329	11.033	0.13883	3.05819	7	X
K03SX4Z	16.3	0.15	K194R	330.522	359.194	19.603	11.634	0.10613	3.03230	5	X
K03SZ2Q	16.7	0.15	K194R	311.810	13.956	15.089	12.909	0.25671	3.05270	4	X
K03T24V	16.5	0.15	K194R	28.434	24.676	283.599	4.747	0.10277	3.04287	10	X
K03UQ2X	17.4	0.15	K194R	339.021	146.455	215.898	10.514	0.21945	3.05387	4	X
K03UU5G	16.7	0.15	K194R	276.895	197.278	243.783	10.178	0.11165	3.05630	7	X
K03UW1F	16.0	0.15	K194R	358.156	106.230	236.642	9.840	0.11573	3.04915	10	X
K03Ub9E	17.5	0.15	K194R	304.918	272.421	135.186	2.177	0.28487	3.04773	4	X
K03Y28T	16.5	0.15	K194R	317.747	166.745	254.023	17.229	0.25773	3.06130	3	X
K04EA5Q	17.3	0.15	K194R	271.192	78.212	11.103	6.720	0.17082	2.61823	6	X
K04FF8J	17.5	0.15	K194R	249.235	243.190	224.658	1.364	0.16361	2.63365	10	X
K04R85P	17.0	0.15	K194R	294.277	250.219	163.036	2.207	0.05384	2.88373	7	X
K04RA7O	18.0	0.15	K194R	321.253	340.143	12.762	1.621	0.22527	2.41892	4	X
K04RG8M	17.9	0.15	K194R	324.867	141.592	210.788	7.198	0.25850	2.40517	5	X
K04TE7Y	17.9	0.15	K194R	289.569	240.177	207.024	12.243	0.30880	2.91613	5	X
K04TF7M	15.9	0.15	K194R	335.976	116.832	233.283	10.495	0.03678	2.98714	11	X
K04TR5K	18.0	0.15	K194R	312.784	109.947	264.544	0.642	0.19576	2.43393	6	X
K04TT4T	16.9	0.15	K194R	9.095	245.448	84.137	3.527	0.08335	2.95438	7	X
K04TU6O	15.4	0.15	K194R	201.372	240.609	246.697	9.334	0.05967	2.96199	11	X
K04TV5M	18.2	0.15	K194R	341.053	118.576	211.604	3.368	0.23503	2.41982	5	X
K04V87J	17.1	0.15	K194R	256.576	172.746	268.438	5.947	0.06773	2.44408	11	X
K04X91H	15.3	0.15	K194R	311.671	147.651	269.303	7.659	0.18651	3.98358	6	X
K05G85A	18.1	0.15	K194R	270.122	16.062	16.574	21.437	0.07893	1.91939	4	X
K05GM0Q	16.0	0.15	K194R	279.929	61.555	21.420	18.995	0.19531	3.16120	5	X
K05J66F	16.9	0.15	K194R	39.254	54.680	227.929	12.477	0.15266	2.65777	7	X
K05N50H	17.3	0.15	K194R	345.311	83.772	263.127	4.352	0.19784	2.73855	6	X
K05Q11X	17.6	0.15	K194R	334.549	34.379	308.841	7.007	0.20042	2.28725	7	X
K05Q94G	18.4	0.15	K194R	311.330	191.234	179.302	1.398	0.25137	2.29529	6	X
K05R04Y	16.7	0.15	K194R	10.149	81.466	229.447	14.195	0.19228	2.78552	6	X
K05S79D	17.8	0.15	K194R	323.592	343.840	15.079	7.766	0.12806	2.30458	7	X
K05S93U	18.0	0.15	K194R	329.499	338.840	19.264	4.696	0.15139	2.30963	5	X
K05SA7Q	16.7	0.15	K194R	305.872	66.775	314.094	12.059	0.18545	2.80621	8	X
K05SI3X	18.2	0.15	K194R	341.878	134.773	206.547	6.790	0.12771	2.30539	5	X
K05SL4S	16.8	0.15	K194R	335.871	120.199	242.076	11.178	0.23617	2.78630	6	X
K05SN1G	18.0	0.15	K194R	296.326	203.633	193.204	8.892	0.24930	2.31003	4	X
K05T63X	18.6	0.15	K194R	324.206	350.255	4.229	2.356	0.23978	2.30772	3	X
K05TD5K	17.2	0.15	K194R	346.486	317.515	23.030	9.952	0.22621	2.79324	7	X
K05U44L	18.4	0.15	K194R	319.871	168.966	194.718	4.596	0.21930	2.31873	3	X
K05UC2Q	18.4	0.15	K194R	305.885	353.250	33.392	6.796	0.21943	2.31631	4	X
K05UC2R	18.5	0.15	K194R	308.707	158.383	224.028	4.624	0.24975	2.31539	4	X
K05UD5T	17.3	0.15	K194R	313.185	16.873	19.905	13.026	0.13432	2.78460	5	X
K05UE4Z	17.0	0.15	K194R	344.206	324.800	34.421	17.858	0.26668	2.79563	5	X
K05UP7Z	18.5	0.15	K194R	312.661	262.548	105.006	1.189	0.21779	2.32273	4	X
K05Uk7R	17.7	0.15	K194R	222.662	219.434	256.032	7.370	0.06521	2.33097	7	X
K05V58Y	17.7	0.15	K194R	337.783	54.771	296.159	2.975	0.12126	2.31500	9	X
K05W00D	21.9	0.15	K194R	308.280	160.967	227.679	26.157	0.56005	2.30736	3	X
K05WA1M	16.5	0.15	K194R	339.767	81.215	275.548	9.294	0.14866	2.87953	8	X
K05X55N	17.9	0.15	K194R	17.114	236.413	53.913	2.798	0.22162	2.35737	7	X
K05YR6S	18.1	0.15	K194R	317.279	58.436	318.497	3.556	0.17588	2.34845	7	X
K06BR2U	18.3	0.15	K194R	242.930	350.920	116.033	2.499	0.14595	2.37154	8	X
K06C51A	16.3	0.15	K194R	346.028	168.719	163.897	1.250	0.16148	3.01516	12	X
K06DG8P	16.6	0.15	K194R	250.291	85.314	16.005	10.140	0.06707	3.01036	7	X
K06J24W	15.7	0.15	K194R	109.115	353.177	237.377	12.036	0.17912	3.15075	10	X
K06J61P	16.0	0.15	K194R	312.076	182.500	214.853	26.906	0.09694	3.10081	10	X
K06J62Q	17.6	0.15	K194R	24.298	301.252	352.380	4.605	0.17324	2.46294	6	X
K06K00E	19.4	0.15	K194R	333.724	70.424	232.495	19.445	0.49358	2.18824	3	X
K06KA0J	17.4	0.15	K194R	18.645	260.628	23.800	5.495	0.31470	2.57559	7	X
K06KA5X	16.6	0.15	K194R	186.126	291.900	223.024	13.861	0.03949	2.45351	11	X
K06O16R	17.0	0.15	K194R	336.057	33.475	295.716	12.904	0.27072	2.64008	5	X
K06P17Y	19.1	0.15	K194R	268.411	133.077	310.070	2.847	0.64073	1.89568	5	X
K06Q43H	17.9	0.15	K194R	324.325	11.752	345.520	3.088	0.29753	2.65952	3	X
K06Q49S	17.7	0.15	K194R	337.454	321.949	15.720	5.489	0.26632	2.65035	4	X
K06Q83H	17.0	0.15	K194R	329.918	15.320	331.750	12.949	0.17496	2.64978	5	X
K06SF9H	17.6	0.15	K194R	301.538	200.922	191.908	13.289	0.20557	2.68088	5	X
K06SU7K	17.5	0.15	K194R	359.529	323.940	0.306	12.025	0.19856	2.65691	3	X
K06Se7G	17.4	0.15	K194R	298.045	179.109	232.320	6.351	0.22533	2.66134	5	X
K06Sf5W	17.3	0.15	K194R	358.086	322.923	8.319	12.443	0.17561	2.63900	4	X
K06T01D	21.0	0.15	K194R	275.115	5.806	57.195	2.418	0.36104	1.89309	3	X
K06T23T	17.4	0.15	K194R	336.183	308.625	50.365	3.728	0.16799	2.67543	6	X
K06T31O	17.6	0.15	K194R	311.799	177.007	207.209	14.055	0.25836	2.67962	3	X
K06T80F	18.2	0.15	K194R	292.841	161.984	239.790	6.840	0.13471	2.20174	5	X
K06T87L	18.1	0.15	K194R	279.676	229.995	226.636	7.914	0.35566	2.67706	3	X
K06TA4Y	17.3	0.15	K194R	8.234	106.395	205.165	11.941	0.18662	2.68943	4	X
K06TD3T	18.0	0.15	K194R	304.043	352.276	22.932	10.251	0.23374	2.21557	7	X
K06UK4A	17.4	0.15	K194R	322.742	149.664	226.256	6.424	0.32482	2.66785	6	X
K06UK4J	17.2	0.15	K194R	278.034	89.523	355.443	12.486	0.24714	2.68047	7	X

K06Ua1D	17.0	0.15	K194R	323.111	109.266	243.048	11.685	0.28984	2.69701	4	X
K06Ua5F	17.4	0.15	K194R	319.397	172.706	203.609	10.012	0.14602	2.70927	8	X
K06V37F	17.0	0.15	K194R	322.534	141.727	249.476	14.466	0.19350	2.66300	4	X
K06VB4H	18.1	0.15	K194R	306.735	343.370	22.795	6.179	0.18257	2.21702	6	X
K06WC8O	17.2	0.15	K194R	328.329	117.080	249.650	6.317	0.31456	2.68793	6	X
K06WF5G	17.2	0.15	K194R	4.398	78.007	241.995	7.800	0.21292	2.69957	9	X
K06X45S	17.3	0.15	K194R	317.328	111.583	261.295	22.713	0.28519	2.20334	3	X
K07B45D	18.3	0.15	K194R	289.364	86.422	322.122	3.153	0.14210	2.25120	6	X
K07B64J	16.5	0.15	K194R	302.753	105.239	297.391	7.980	0.08722	2.79211	7	X
K07B76Z	17.1	0.15	K194R	259.486	237.837	235.119	5.814	0.25838	2.73944	8	X
K07P34E	16.2	0.15	K194R	357.477	20.743	327.785	18.277	0.32042	3.24505	6	X
K07Te4L	18.6	0.15	K194R	306.298	151.635	242.618	3.119	0.25523	2.53866	4	X
K07V31A	18.7	0.15	K194R	265.617	178.745	229.338	20.248	0.08177	1.79940	5	X
K07V89X	16.8	0.15	K194R	255.601	231.992	222.193	21.203	0.08099	2.55005	6	X
K07VA8F	16.6	0.15	K194R	41.937	36.463	234.063	11.557	0.17910	2.58887	9	X
K07VG6E	17.8	0.15	K194R	309.112	159.060	231.819	8.358	0.12223	2.56315	4	X
K07VH6T	17.3	0.15	K194R	236.339	250.245	216.772	13.186	0.05479	2.55050	4	X
K07W11F	16.8	0.15	K194R	302.359	180.741	213.211	15.241	0.12824	2.56402	7	X
K07Y40T	18.1	0.15	K194R	288.972	45.949	19.167	4.896	0.19075	2.57773	5	X
K08A38Z	16.8	0.15	K194R	254.420	147.592	290.671	11.605	0.26153	2.64551	6	X
K08A93Y	17.2	0.15	K194R	258.926	57.382	34.238	3.423	0.11212	2.61973	10	X
K08AD2Q	17.9	0.15	K194R	265.604	143.607	307.933	3.364	0.17887	2.60945	5	X
K08GA5N	17.7	0.15	K194R	41.581	352.458	277.778	4.416	0.16565	2.24631	7	X
K08L12P	18.7	0.15	K194R	209.103	256.976	220.972	20.320	0.08653	1.87969	3	X
K08O10D	15.4	0.15	K194R	348.304	4.017	321.099	16.309	0.25010	3.10937	8	X
K08P00Y	15.9	0.15	K194R	342.281	351.020	299.057	15.505	0.18432	3.14869	6	X
K08Q02T	16.2	0.15	K194R	319.630	179.819	196.144	13.802	0.17404	3.08528	10	X
K08R24B	16.8	0.15	K194R	340.902	58.574	311.535	8.970	0.33354	3.07836	5	X
K08R59L	17.5	0.15	K194R	50.508	68.275	201.500	5.321	0.11046	2.36191	9	X
K08R73N	17.7	0.15	K194R	312.306	168.379	204.690	1.934	0.23330	2.37153	6	X
K08RB3N	17.9	0.15	K194R	307.821	133.857	249.686	5.660	0.12281	2.37557	7	X
K08RB9S	16.8	0.15	K194R	354.853	319.471	23.475	11.527	0.17149	3.09971	6	X
K08RD0A	16.6	0.15	K194R	351.666	337.956	340.494	15.638	0.27611	3.12613	3	X
K08S07J	16.4	0.15	K194R	328.739	0.037	21.121	11.770	0.18572	3.10282	6	X
K08S38Q	15.9	0.15	K194R	70.058	238.705	18.234	25.146	0.18522	3.12080	6	X
K08S40G	16.0	0.15	K194R	337.526	339.520	25.215	11.493	0.25633	3.11280	5	X
K08S55Y	16.1	0.15	K194R	309.856	203.824	198.960	9.744	0.13782	3.13071	8	X
K08S98E	16.6	0.15	K194R	309.786	197.775	206.947	10.805	0.24000	3.12794	7	X
K08SC2D	18.1	0.15	K194R	310.127	63.481	307.868	0.538	0.18445	2.39987	6	X
K08SG2K	18.1	0.15	K194R	305.172	7.011	21.546	4.717	0.22374	2.37839	4	X
K08SH0J	17.0	0.15	K194R	255.117	212.994	251.433	3.521	0.11016	3.06594	7	X
K08SQ3R	16.4	0.15	K194R	318.620	193.310	200.073	15.595	0.18536	3.14258	5	X
K08T41W	17.8	0.15	K194R	337.635	113.870	228.609	10.669	0.22658	2.37986	5	X
K08TE6J	16.7	0.15	K194R	303.895	236.426	159.942	2.927	0.16891	3.13867	4	X
K08TJ3Q	17.8	0.15	K194R	19.380	263.550	22.694	20.820	0.06558	1.98046	7	X
K08U27V	17.8	0.15	K194R	276.220	220.411	206.880	6.529	0.09235	2.39689	7	X
K08U80M	16.2	0.15	K194R	22.537	4.666	306.487	5.946	0.14248	3.18414	6	X
K08UC1W	16.4	0.15	K194R	277.564	62.641	17.377	10.770	0.10895	3.18715	5	X
K08UE2V	16.1	0.15	K194R	207.157	272.287	227.520	17.788	0.04879	3.23000	6	X
K08UH2S	16.2	0.15	K194R	1.289	96.731	231.423	15.521	0.21903	3.18166	5	X
K08UK1V	16.0	0.15	K194R	315.365	191.654	223.816	17.010	0.19868	3.12820	7	X
K08UL2K	16.3	0.15	K194R	71.489	258.321	12.688	9.206	0.05458	3.16053	9	X
K08UN8L	17.5	0.15	K194R	294.559	47.442	32.654	14.414	0.28747	3.15435	3	X
K08UQ9Q	16.7	0.15	K194R	327.511	274.719	107.117	3.095	0.11358	3.15873	6	X
K08UT7O	16.4	0.15	K194R	145.885	181.230	22.266	11.542	0.00446	3.19704	6	X
K08UW6G	16.3	0.15	K194R	69.328	323.032	310.810	8.389	0.05955	3.16951	8	X
K08Ua7G	16.7	0.15	K194R	22.027	105.181	216.193	8.905	0.04029	3.16947	6	X
K08V05K	15.8	0.15	K194R	280.527	111.081	327.658	9.791	0.11387	3.11381	8	X
K08V28U	16.1	0.15	K194R	317.061	136.737	256.952	8.133	0.07754	3.16462	5	X
K08V52K	16.3	0.15	K194R	278.271	189.292	246.469	9.403	0.09881	3.17555	4	X
K08W60Y	17.9	0.15	K194R	295.009	157.626	241.638	19.282	0.08855	1.96975	5	X
K08W85A	18.0	0.15	K194R	253.734	154.459	303.000	2.249	0.12630	2.42692	5	X
K08WD6U	18.1	0.15	K194R	317.510	112.521	266.800	9.913	0.38041	2.39004	2	X
K09BH0Z	16.0	0.15	K194R	314.376	85.162	314.113	8.777	0.06399	3.40271	5	X
K09BJ2V	17.5	0.15	K194R	273.492	142.206	305.162	3.790	0.23864	2.47658	8	X
K09H67X	20.7	0.15	K194R	328.444	81.204	215.951	53.975	0.43086	1.83853	3	X
K09O16T	16.7	0.15	K194R	299.040	194.892	214.980	11.401	0.11227	2.84820	6	X
K09R02J	18.4	0.15	K194R	296.428	17.262	3.565	46.740	0.38825	2.25098	2	X
K09R26B	16.3	0.15	K194R	323.253	357.344	8.180	11.596	0.13684	2.97103	6	X
K09R35F	16.6	0.15	K194R	293.060	35.955	23.704	17.293	0.13900	2.94827	5	X
K09S77T	16.6	0.15	K194R	285.342	237.136	207.109	4.759	0.25531	2.90360	6	X
K09SN0E	16.4	0.15	K194R	309.742	183.930	163.631	15.680	0.31981	3.02089	5	X
K09SU21K	18.7	0.15	K194R	318.307	12.428	345.851	3.448	0.21599	2.21226	5	X
K09U40V	16.5	0.15	K194R	301.973	41.173	9.844	7.843	0.06924	2.87639	10	X
K09UA5G	18.1	0.15	K194R	313.959	314.849	30.550	9.704	0.35647	2.26303	3	X
K09V43A	15.6	0.15	K194R	349.523	100.349	246.894	10.809	0.17594	3.00162	11	X
K09VA8Z	17.7	0.15	K194R	220.999	214.505	275.643	4.129	0.18135	2.27325	7	X
K09W82C	16.3	0.15	K194R	344.249	74.882	279.032	9.495	0.10204	3.00899	9	X
K09WI2L	18.2	0.15	K194R	261.201	42.807	44.929	5.518	0.18642	2.26743	7	X
K09Y01G	16.0	0.15	K194R	43.606	53.038	239.339	8.902	0.06122	2.99190	7	X
K09Y24E	16.8	0.15	K194R	253.397	182.645	250.231	6.154	0.12388	2.30556	8	X
K10A39D	16.0	0.15	K194R	114.120	318.534	269.322	9.254	0.04029	3.12641	8	X
K10B39J	15.7	0.15	K194R	75.507	280.754	344.501	11.971	0.06235	2.96840	8	X
K10C86Z	16.3	0.15	K194R	354.203	37.471	313.400	9.769	0.06600	3.21234	5	X
K10CC8G	15.6	0.15	K194R	208.295	164.788	352.630	16.846	0.17446	3.18917	9	X
K10F05N	17.6	0.15	K194R	288.400	50.534	3.143	9.927	0.21702	2.36471	6	X
K10G77L	18.1	0.15	K194R	282.256	178.496	245.857	7.897	0.17770	2.28602	5	X
K10L56S	15.9	0.15	K194R	247.823	110.063	20.252	26.598	0.20199	3.18362	4	X
K10M31Q	16.9	0.15	K194R	298.718	174.130	246.701	8.798	0.27815	2.70660	7	X
K10M37K	16.9	0.15	K194R	356.450	129.270	214.333	10.999	0.20314	2.68487	10	X
K10M62Z	17.3	0.15	K194R	102.193	309.524	281.007	5.952	0.05582	2.43458	10	X
K10M95K	17.6	0.15	K194R	305.599	34.093	11.900	8.130	0.22486	2.71654	6	X
K10NA7A	17.2	0.15	K194R	308.259	343.640	54.364	5.068	0.12491	2.72731	8	X

K10O62G	17.5	0.15	K194R	337.379	34.748	316.042	19.502	0.35149	2.74502	4	X
K10P01K	16.7	0.15	K194R	345.740	351.438	313.751	13.026	0.18141	2.71788	10	X
K10P30D	16.9	0.15	K194R	259.706	244.243	228.957	17.031	0.27408	2.76178	4	X
K10R62D	17.0	0.15	K194R	313.345	135.172	279.700	4.307	0.27350	2.68224	6	X
K10R76W	16.3	0.15	K194R	44.289	333.855	298.358	6.553	0.19357	2.67981	10	X
K10RF9Z	17.6	0.15	K194R	339.512	165.327	193.202	3.420	0.11505	2.68265	6	X
K10RH7L	17.3	0.15	K194R	272.536	240.081	206.715	12.863	0.15594	2.71375	5	X
K10RI9J	17.3	0.15	K194R	32.387	283.376	13.223	12.435	0.10961	2.72390	5	X
K10S34G	16.5	0.15	K194R	304.937	197.999	200.059	9.541	0.20786	2.75166	8	X
K10T20K	16.4	0.15	K194R	329.127	115.818	250.579	12.344	0.16487	2.73098	7	X
K10TB0D	16.6	0.15	K194R	8.764	283.194	29.928	14.240	0.17396	2.72621	10	X
K10TB3M	17.6	0.15	K194R	283.914	229.568	207.994	8.997	0.21727	2.72847	7	X
K10TG5T	17.1	0.15	K194R	279.853	219.409	208.185	6.423	0.18994	2.76481	6	X
K10TH4M	17.4	0.15	K194R	338.049	162.501	172.001	4.984	0.32833	2.75857	5	X
K10TI6E	16.6	0.15	K194R	286.571	188.409	234.928	10.378	0.07532	2.72499	10	X
K10TI7T	17.0	0.15	K194R	320.161	174.098	208.835	14.298	0.10783	2.69189	9	X
K10TJ3Z	17.5	0.15	K194R	314.210	203.013	185.664	6.065	0.06507	2.72923	8	X
K10U48Q	17.5	0.15	K194R	322.231	299.467	71.748	3.005	0.33811	2.76268	3	X
K10U61W	16.3	0.15	K194R	290.419	171.281	244.070	12.156	0.28990	2.77407	6	X
K10V07X	17.2	0.15	K194R	290.782	41.786	12.796	5.703	0.02966	2.75451	7	X
K10V43W	17.0	0.15	K194R	290.986	172.321	239.834	7.381	0.10237	2.75818	7	X
K10V77H	17.6	0.15	K194R	324.852	136.003	242.404	9.010	0.30774	2.77099	5	X
K10V85N	16.8	0.15	K194R	6.534	297.709	32.707	5.143	0.07049	2.77140	10	X
K10VI2K	18.0	0.15	K194R	280.757	85.861	14.309	8.584	0.33230	2.74629	3	X
K10VJ8F	16.9	0.15	K194R	344.798	346.311	1.893	9.717	0.23213	2.76393	5	X
K10VK3Q	17.6	0.15	K194R	291.403	33.666	34.742	15.821	0.23458	2.74660	3	X
K10VK6M	16.7	0.15	K194R	11.890	44.774	272.689	5.723	0.11694	2.77839	10	X
K10W29N	17.0	0.15	K194R	276.993	234.946	216.303	7.939	0.26347	2.77597	6	X
K10W54Z	17.0	0.15	K194R	321.879	343.248	39.550	5.671	0.16891	2.78720	6	X
K10W70E	17.0	0.15	K194R	327.730	172.736	210.363	7.821	0.32492	2.74695	8	X
K10X06Q	16.8	0.15	K194R	204.387	294.767	208.205	12.265	0.06108	2.83833	7	X
K10X07K	16.7	0.15	K194R	338.543	105.422	214.982	12.388	0.21743	2.89543	6	X
K10X09L	17.1	0.15	K194R	313.329	133.626	253.254	7.618	0.09513	2.75285	10	X
K11A34G	16.5	0.15	K194R	260.903	51.485	42.795	7.442	0.10065	2.89111	9	X
K11B38N	15.7	0.15	K194R	71.291	294.628	333.114	8.994	0.07122	3.15732	9	X
K11C25F	15.7	0.15	K194R	302.228	61.303	326.829	12.956	0.09559	3.03489	8	X
K11D05W	17.5	0.15	K194R	121.270	256.921	309.714	5.401	0.08518	2.22852	12	X
K11D39T	16.6	0.15	K194R	270.880	115.260	329.659	9.573	0.09436	3.00025	8	X
K11E81T	16.7	0.15	K194R	254.023	53.795	51.820	3.169	0.11665	3.01609	11	X
K11O11X	18.0	0.15	K194R	300.392	236.437	156.127	2.515	0.20987	2.45796	5	X
K11O35F	17.8	0.15	K194R	342.271	345.403	345.869	2.276	0.18669	2.45821	6	X
K11R14L	15.8	0.15	K194R	317.458	140.507	270.831	7.621	0.22418	3.97818	4	X
K11S33T	19.2	0.15	K194R	289.799	38.974	3.499	14.879	0.22509	1.92056	4	X
K11S53U	18.0	0.15	K194R	305.218	2.823	31.459	14.398	0.27763	2.55620	3	X
K11S66T	17.7	0.15	K194R	313.318	156.175	196.588	5.341	0.32017	2.57416	4	X
K11S94D	17.1	0.15	K194R	323.231	4.595	331.577	4.354	0.25831	2.58679	5	X
K11SG4B	18.3	0.15	K194R	303.310	337.810	24.026	20.918	0.06515	1.94821	4	X
K11SJ1D	16.7	0.15	K194R	324.717	106.892	268.768	25.674	0.46993	2.55354	4	X
K11SL2X	18.2	0.15	K194R	334.169	318.216	14.826	19.975	0.09556	1.91614	7	X
K11U09M	17.9	0.15	K194R	315.969	156.526	220.772	10.946	0.16445	2.56633	3	X
K11U22X	18.9	0.15	K194R	324.912	358.183	5.071	8.918	0.31073	2.53056	3	X
K11U28A	18.2	0.15	K194R	320.867	64.414	305.264	3.636	0.31955	2.54557	4	X
K11U28S	16.5	0.15	K194R	320.062	340.072	10.465	6.675	0.31522	2.58386	9	X
K11U37P	17.9	0.15	K194R	346.994	85.364	245.049	8.481	0.22596	2.56265	4	X
K11U63H	17.0	0.15	K194R	317.490	66.234	325.499	15.666	0.28647	2.52975	4	X
K11U77X	17.9	0.15	K194R	184.653	275.270	224.101	20.528	0.06306	1.94270	5	X
K11UA3M	16.6	0.15	K194R	354.137	69.870	253.967	11.141	0.21206	2.58827	8	X
K11UB7N	17.6	0.15	K194R	328.232	25.758	297.839	4.960	0.33009	2.58444	4	X
K11UD7B	17.6	0.15	K194R	23.504	62.729	232.454	13.873	0.17591	2.57003	5	X
K11UH0B	17.4	0.15	K194R	274.304	184.392	246.936	6.969	0.16065	2.53346	6	X
K11UI2B	16.9	0.15	K194R	321.909	3.103	342.374	4.301	0.27989	2.59739	9	X
K11UR6E	17.5	0.15	K194R	310.427	125.324	260.432	7.994	0.17387	2.57241	6	X
K11UR7D	17.2	0.15	K194R	340.545	317.174	21.460	6.850	0.14749	2.60730	8	X
K11US7Y	17.1	0.15	K194R	331.632	9.463	334.697	6.019	0.19526	2.57657	8	X
K11UW5K	17.3	0.15	K194R	192.698	130.895	21.385	14.982	0.06537	2.53745	7	X
K11UX0U	18.3	0.15	K194R	314.718	307.365	67.179	4.179	0.21902	2.52674	5	X
K11Ue6R	18.2	0.15	K194R	281.794	15.370	19.020	20.659	0.07697	1.91838	5	X
K11W06Z	16.3	0.15	K194R	16.924	37.803	240.041	13.142	0.23919	2.64875	9	X
K11W12O	17.7	0.15	K194R	346.138	101.686	243.224	6.892	0.11236	2.57386	7	X
K11W16L	16.8	0.15	K194R	290.581	198.497	211.098	4.739	0.25775	2.59042	8	X
K11W28M	18.0	0.15	K194R	323.995	119.124	248.653	11.798	0.20383	2.56382	4	X
K11W43Q	16.8	0.15	K194R	285.996	162.868	237.128	12.777	0.17936	2.62779	8	X
K11W47Y	18.2	0.15	K194R	301.848	16.236	27.852	5.293	0.26085	2.56029	3	X
K11WD0W	17.0	0.15	K194R	293.566	192.517	229.195	4.570	0.22490	2.56560	7	X
K11Y38J	16.1	0.15	K194R	317.668	119.211	278.001	13.674	0.19121	2.61762	8	X
K11Y65Y	18.1	0.15	K194R	307.384	154.831	261.530	6.083	0.32228	2.56851	4	X
K11Y77N	17.9	0.15	K194R	294.178	60.220	352.273	4.657	0.28979	2.62119	4	X
K12B16E	17.9	0.15	K194R	283.092	93.478	339.972	2.659	0.18883	2.59519	6	X
K12B25B	18.5	0.15	K194R	303.913	153.741	251.063	3.531	0.28433	2.61577	3	X
K12BF8Y	16.1	0.15	K194R	352.130	321.896	315.608	26.946	0.16616	3.09164	5	X
K12C59R	17.1	0.15	K194R	298.807	84.661	322.124	7.047	0.07638	2.73087	6	X
K12D01G	17.0	0.15	K194R	281.964	111.187	316.548	1.613	0.06788	2.75521	11	X
K12E20F	17.3	0.15	K194R	277.877	74.671	12.886	11.945	0.26423	2.69273	5	X
K12F79W	16.5	0.15	K194R	12.315	183.932	143.647	2.792	0.05260	2.89591	9	X
K12G06L	16.9	0.15	K194R	16.079	316.646	9.638	4.371	0.03852	2.93355	13	X
K12G09M	15.9	0.15	K194R	9.045	119.571	205.905	15.670	0.16009	3.02243	9	X
K12P06E	18.5	0.15	K194R	333.108	117.568	219.775	3.763	0.24680	2.28054	5	X
K12P15R	16.9	0.15	K194R	242.017	177.135	253.568	5.880	0.18869	2.32314	9	X
K12P31A	17.9	0.15	K194R	317.302	149.323	212.118	5.056	0.25513	2.28250	7	X
K12Q39C	17.7	0.15	K194R	346.007	54.141	256.491	3.229	0.24296	2.30146	8	X
K12S00C	17.4	0.15	K194R	13.780	19.167	272.225	7.169	0.23229	2.29250	8	X
K12S54N	17.8	0.15	K194R	328.150	316.787	31.013	6.631	0.14109	2.35099	6	X
K12S64P	17.0	0.15	K194R	344.176	23.507	294.427	6.647	0.14537	2.33197	10	X

K12T31M	17.9	0.15	K194R	347.981	88.140	244.454	5.949	0.14692	2.28622	6	X
K12T35P	18.8	0.15	K194R	300.621	24.000	12.703	5.501	0.15731	2.29617	5	X
K12T54K	18.1	0.15	K194R	327.282	95.520	256.910	5.674	0.23530	2.33101	4	X
K12TA0B	17.7	0.15	K194R	311.187	354.464	21.037	22.131	0.15822	2.33128	3	X
K12TE5F	17.9	0.15	K194R	323.287	6.923	1.131	7.442	0.25980	2.28076	5	X
K12TV0N	18.4	0.15	K194R	300.541	183.593	215.124	25.374	0.27404	2.31976	2	X
K12TV4H	17.0	0.15	K194R	12.677	201.209	92.653	4.303	0.13866	2.32131	11	X
K12U29D	18.5	0.15	K194R	288.170	211.854	198.892	10.510	0.26141	2.30038	4	X
K12U34U	17.5	0.15	K194R	351.077	294.333	31.274	6.624	0.18650	2.32395	7	X
K12UC3S	17.9	0.15	K194R	316.174	135.320	241.026	6.407	0.13863	2.34306	6	X
K12UD9T	18.1	0.15	K194R	304.158	84.313	304.480	7.579	0.12298	2.31660	7	X
K12V36F	18.0	0.15	K194R	295.733	314.631	81.469	4.204	0.18325	2.35052	5	X
K12V56D	17.7	0.15	K194R	278.585	196.143	221.670	6.009	0.06371	2.34651	8	X
K12X04S	16.8	0.15	K194R	19.680	124.268	158.938	4.582	0.16809	2.43909	11	X
K12X06F	18.1	0.15	K194R	288.702	209.079	197.288	5.987	0.20629	2.36229	7	X
K12XA3A	18.3	0.15	K194R	290.302	309.499	95.350	3.245	0.20537	2.34372	3	X
K12XE7X	18.2	0.15	K194R	263.510	239.970	209.530	5.609	0.19901	2.35487	6	X
K13A01P	16.6	0.15	K194R	152.971	229.847	313.210	5.740	0.07008	2.48258	10	X
K13AB8U	17.1	0.15	K194R	331.366	59.675	304.079	10.365	0.34009	2.38476	7	X
K13AI6N	18.3	0.15	K194R	263.940	153.741	290.769	1.979	0.13934	2.43254	4	X
K13B55W	18.4	0.15	K194R	312.116	114.252	264.296	3.832	0.24306	2.42196	3	X
K13C27Q	17.3	0.15	K194R	310.212	131.909	253.277	5.090	0.11317	2.44042	6	X
K13C57F	16.8	0.15	K194R	138.516	306.620	248.459	8.852	0.03144	2.55301	9	X
K13C82P	18.2	0.15	K194R	313.464	320.163	37.053	20.251	0.03405	1.84430	6	X
K13CM4G	17.2	0.15	K194R	77.014	334.014	284.339	2.072	0.03522	2.59096	9	X
K13E04X	18.7	0.15	K194R	340.520	297.745	24.820	32.040	0.08571	1.89972	4	X
K13EB0M	16.7	0.15	K194R	204.227	141.808	355.907	10.395	0.01317	2.61916	9	X
K13EB8R	18.6	0.15	K194R	38.179	248.465	20.911	24.744	0.04894	1.89369	3	X
K13EF4W	18.6	0.15	K194R	19.109	258.676	23.223	20.306	0.10183	1.91755	5	X
K13G58J	16.6	0.15	K194R	287.610	20.698	35.448	6.431	0.08033	2.61188	10	X
K13G80D	17.4	0.15	K194R	221.108	294.172	211.121	26.465	0.26911	2.59112	3	X
K13G80G	20.1	0.15	K194R	228.203	30.013	38.457	19.260	0.10253	1.50778	3	X
K13J29D	15.3	0.15	K194R	332.480	131.085	256.833	26.044	0.21725	3.20365	5	X
K13J47H	16.9	0.15	K194R	243.534	35.823	73.821	22.822	0.04231	2.68049	7	X
K13N01C	18.2	0.15	K194R	334.396	105.052	248.186	18.857	0.09448	1.94457	4	X
K13O01T	15.7	0.15	K194R	53.888	11.357	265.063	7.808	0.10734	3.12727	12	X
K13P16M	16.6	0.15	K194R	343.091	95.474	262.975	6.625	0.14906	3.16239	5	X
K13P46L	16.6	0.15	K194R	306.384	137.130	269.479	8.430	0.11350	3.04519	5	X
K13P81P	16.9	0.15	K194R	301.330	23.955	37.984	5.249	0.19046	3.19736	4	X
K13Q08E	16.9	0.15	K194R	314.288	202.666	198.704	10.100	0.21779	3.16959	4	X
K13R58P	16.6	0.15	K194R	4.006	95.684	237.629	4.027	0.18702	3.21833	5	X
K13R69X	15.6	0.15	K194R	323.419	26.008	2.291	14.857	0.07798	3.18536	8	X
K13S87G	16.1	0.15	K194R	249.783	123.832	339.520	11.665	0.03721	3.19795	7	X
K13T54L	15.9	0.15	K194R	244.634	239.910	233.549	7.298	0.08607	3.36384	8	X
K13TC4D	18.6	0.15	K194R	328.115	349.921	342.462	2.276	0.21638	2.10030	6	X
K13WB4A	17.7	0.15	K194R	328.856	321.863	12.190	8.011	0.16226	2.14545	8	X
K13Y63B	17.4	0.15	K194R	237.048	177.219	283.148	4.848	0.08213	2.20580	8	X
K14D32N	17.3	0.15	K194R	42.591	263.224	3.726	9.802	0.09764	2.40052	9	X
K14E07G	17.1	0.15	K194R	209.040	129.966	3.515	6.159	0.06586	2.28477	8	X
K14E41Q	16.2	0.15	K194R	289.420	186.562	169.857	15.089	0.20155	2.53737	7	X
K14EL4Q	16.5	0.15	K194R	302.760	90.285	246.427	4.202	0.17901	2.52221	7	X
K14G26S	17.2	0.15	K194R	90.981	356.121	246.456	4.672	0.06999	2.42851	8	X
K14J49T	17.2	0.15	K194R	339.342	150.553	185.183	15.467	0.28957	2.70041	5	X
K14J64V	17.8	0.15	K194R	1.799	93.142	223.077	12.744	0.20172	2.60399	6	X
K14L15H	15.9	0.15	K194R	296.160	85.471	286.862	11.475	0.05103	2.85171	9	X
K14L20R	17.6	0.15	K194R	352.223	93.893	230.709	11.349	0.30294	2.72699	4	X
K14M36A	16.4	0.15	K194R	180.274	256.959	242.706	14.217	0.07361	2.53024	11	X
K14M66P	17.3	0.15	K194R	7.276	89.419	225.770	11.868	0.19715	2.75301	5	X
K14N00J	17.1	0.15	K194R	333.326	119.109	235.250	11.718	0.28700	2.69676	6	X
K14N62A	16.0	0.15	K194R	326.861	23.385	307.969	9.847	0.03599	2.81355	11	X
K14O05W	16.6	0.15	K194R	43.634	319.277	309.344	8.273	0.26235	2.73718	8	X
K14O62J	17.2	0.15	K194R	358.316	330.317	1.894	4.960	0.17451	2.76832	5	X
K14OL5R	16.8	0.15	K194R	303.380	123.806	308.686	30.413	0.34894	2.62282	4	X
K14Oe2B	15.9	0.15	K194R	354.325	335.320	16.416	14.768	0.03889	3.01173	7	X
K14Q75A	16.6	0.15	K194R	330.638	57.753	248.715	7.413	0.23757	3.03169	5	X
K14Q85O	17.0	0.15	K194R	282.633	190.724	241.808	8.808	0.13374	2.72013	5	X
K14Qf9M	15.9	0.15	K194R	168.157	253.275	263.787	8.769	0.02524	3.05226	6	X
K14Qi7K	15.9	0.15	K194R	292.232	224.366	141.875	17.444	0.21022	3.13803	7	X
K14Qj1X	17.3	0.15	K194R	21.461	282.928	20.725	15.071	0.15511	2.84271	4	X
K14Qj3K	17.2	0.15	K194R	284.918	53.625	14.312	9.464	0.13003	2.85855	5	X
K14R09C	16.7	0.15	K194R	348.609	344.159	3.981	9.937	0.15264	2.81265	9	X
K14R64V	16.1	0.15	K194R	309.078	142.898	249.723	9.120	0.04227	2.92965	7	X
K14S18X	16.9	0.15	K194R	279.893	134.094	292.099	1.073	0.05463	2.84457	8	X
K14SG7A	15.6	0.15	K194R	316.182	123.320	246.069	8.375	0.07022	3.01492	8	X
K14SI7O	16.9	0.15	K194R	309.235	350.101	45.704	7.401	0.22299	2.91904	5	X
K14SV0K	17.0	0.15	K194R	325.658	352.430	20.999	3.609	0.24871	3.02956	5	X
K14SZ4H	16.4	0.15	K194R	30.971	271.234	33.701	11.784	0.09919	3.00651	6	X
K14T15T	16.3	0.15	K194R	21.091	87.398	236.766	9.576	0.03347	2.95764	7	X
K14T15V	16.0	0.15	K194R	154.748	291.580	259.641	8.986	0.03475	2.99218	11	X
K14T55O	15.7	0.15	K194R	334.646	62.645	283.634	10.023	0.11636	3.12463	8	X
K14T65D	16.8	0.15	K194R	311.433	185.627	213.477	9.773	0.12421	2.98857	5	X
K14T78E	16.4	0.15	K194R	281.937	206.181	220.887	11.323	0.04040	2.92261	5	X
K14T81U	18.9	0.15	K194R	324.696	127.934	212.826	19.311	0.09624	1.87834	3	X
K14T87T	16.5	0.15	K194R	34.097	252.961	45.665	1.304	0.14744	3.04597	12	X
K14U05D	16.0	0.15	K194R	287.741	211.599	224.182	17.841	0.16605	3.07024	6	X
K14U39E	16.6	0.15	K194R	245.404	273.721	195.174	10.093	0.07842	2.96931	6	X
K14U42H	16.4	0.15	K194R	258.634	231.581	231.107	12.433	0.16014	3.12634	7	X
K14U52Z	16.6	0.15	K194R	312.971	165.200	251.503	27.711	0.27951	2.87699	4	X
K14U57K	16.6	0.15	K194R	304.549	183.053	267.913	20.460	0.53915	2.88816	5	X
K14U64P	16.0	0.15	K194R	20.051	85.518	238.683	11.146	0.05561	2.93468	6	X
K14U95W	16.4	0.15	K194R	29.545	85.832	215.373	15.370	0.09610	3.08881	5	X
K14UB5N	18.6	0.15	K194R	148.179	131.647	35.696	21.414	0.06011	1.83891	3	X
K14UC0U	16.8	0.15	K194R	299.919	190.945	221.567	8.761	0.06470	3.01369	6	X

K14UD3G	16.6	0.15	K194R	353.242	153.371	195.581	10.079	0.09580	3.02553	7	X
K14UD6G	15.9	0.15	K194R	188.380	288.355	229.112	16.209	0.02686	3.10730	7	X
K14UE9B	16.1	0.15	K194R	85.405	27.722	226.084	8.634	0.05028	3.12787	8	X
K14UF6B	16.8	0.15	K194R	325.851	119.869	257.556	6.872	0.16568	3.07714	5	X
K14UF7W	18.9	0.15	K194R	296.191	160.054	213.816	21.050	0.08338	1.86730	3	X
K14UL2K	16.6	0.15	K194R	318.945	154.999	230.846	9.615	0.08805	2.96758	6	X
K14UM1H	16.2	0.15	K194R	337.915	109.846	237.728	9.795	0.11031	3.00202	7	X
K14UM6R	16.8	0.15	K194R	301.108	351.932	64.878	4.772	0.16571	3.03717	6	X
K14V06D	15.9	0.15	K194R	301.393	144.171	263.859	10.441	0.09984	2.97483	9	X
K14V15M	16.2	0.15	K194R	287.692	183.510	242.527	11.765	0.08228	3.07663	6	X
K14W40U	16.5	0.15	K194R	264.287	194.841	271.139	6.075	0.20081	3.02784	8	X
K14W41C	16.5	0.15	K194R	310.265	135.336	262.845	6.770	0.09541	3.04174	8	X
K14W61K	16.6	0.15	K194R	340.319	163.099	202.415	9.432	0.09472	3.03559	7	X
K14W69K	16.5	0.15	K194R	328.185	345.118	33.492	10.464	0.04720	3.07713	8	X
K14WD5G	16.5	0.15	K194R	310.444	171.313	225.058	11.864	0.06120	3.13594	5	X
K14WE5G	15.4	0.15	K194R	186.225	241.471	279.011	9.844	0.03195	3.15330	12	X
K14WE8Y	16.6	0.15	K194R	334.839	145.883	210.297	8.830	0.14818	3.05654	7	X
K14WG9B	16.5	0.15	K194R	230.144	266.205	220.222	11.807	0.08298	3.04587	8	X
K14WN7J	16.0	0.15	K194R	304.632	35.273	7.988	11.494	0.21457	3.19759	5	X
K14WQ2U	16.4	0.15	K194R	337.778	128.100	232.718	14.086	0.20080	2.83426	7	X
K14WT3J	15.7	0.15	K194R	15.807	117.284	203.262	19.609	0.07119	3.19599	10	X
K14WZ2Q	16.7	0.15	K194R	329.558	135.880	239.417	14.843	0.13875	3.06490	7	X
K14WZ5J	16.2	0.15	K194R	321.756	127.907	274.006	22.316	0.35478	3.15334	5	X
K14Wi0Q	16.0	0.15	K194R	270.801	152.773	289.647	8.810	0.08306	3.15757	6	X
K14Wi2Y	16.1	0.15	K194R	241.014	198.541	275.124	8.218	0.05737	3.17195	7	X
K14Wp6R	16.5	0.15	K194R	341.213	148.158	221.355	9.411	0.07692	3.18844	9	X
K14Wq4J	16.9	0.15	K194R	322.400	111.396	282.229	5.748	0.18155	3.12049	5	X
K14X21V	16.4	0.15	K194R	330.772	45.879	310.880	11.366	0.30066	3.13238	4	X
K15AR6J	15.6	0.15	K194R	318.552	74.846	338.896	18.075	0.16216	3.22123	8	X
K15BK5W	15.9	0.15	K194R	331.451	84.654	297.457	20.097	0.23590	3.18094	5	X
K15DA4C	15.6	0.15	K194R	328.058	281.233	110.669	25.805	0.35627	3.20310	5	X
K15J01D	20.7	0.15	K194R	252.613	127.880	221.192	19.140	0.22210	1.21685	2	X
K15KD7D	17.9	0.15	K194R	95.057	184.271	46.243	4.850	0.04867	2.14802	8	X
K15M93J	17.6	0.15	K194R	336.776	117.440	222.772	6.174	0.13277	2.28308	10	X
K15O32Q	17.4	0.15	K194R	335.916	302.769	59.582	7.469	0.14881	2.41749	6	X
K15O38L	17.1	0.15	K194R	86.506	309.752	288.951	6.220	0.07748	2.37786	6	X
K15O54U	18.0	0.15	K194R	314.757	344.850	33.337	8.802	0.24374	2.43852	5	X
K15O67F	16.2	0.15	K194R	212.729	282.301	142.727	14.205	0.08906	2.58165	13	X
K15O75L	17.8	0.15	K194R	358.759	74.722	252.219	5.738	0.10332	2.42838	6	X
K15O85O	16.4	0.15	K194R	13.176	309.837	317.296	12.507	0.17848	2.77832	9	X
K15P00W	16.7	0.15	K194R	294.141	206.663	204.413	13.477	0.23937	2.60964	7	X
K15P88D	18.3	0.15	K194R	325.271	343.559	13.054	2.339	0.19181	2.41238	3	X
K15PS0Z	16.5	0.15	K194R	341.787	23.158	323.340	13.303	0.34370	2.55682	5	X
K15PS5L	17.7	0.15	K194R	270.311	36.248	36.345	6.956	0.09980	2.40521	6	X
K15Q07B	17.8	0.15	K194R	315.399	78.067	288.820	1.237	0.20560	2.47184	6	X
K15Q09U	16.2	0.15	K194R	328.414	115.864	252.470	23.266	0.28992	2.58257	5	X
K15Q11K	16.6	0.15	K194R	324.668	330.136	40.830	14.299	0.18654	2.58303	6	X
K15Q11M	17.3	0.15	K194R	319.087	332.916	45.536	5.792	0.28185	2.57735	7	X
K15R12W	17.8	0.15	K194R	308.363	343.861	35.699	1.737	0.18760	2.45334	7	X
K15R22U	17.7	0.15	K194R	327.486	39.031	328.191	5.744	0.12957	2.42847	6	X
K15R27R	16.9	0.15	K194R	274.798	64.259	16.526	29.814	0.31147	2.60034	5	X
K15R27S	16.6	0.15	K194R	233.623	260.572	197.532	21.636	0.08957	2.66009	5	X
K15R85Y	17.7	0.15	K194R	7.170	61.662	245.207	10.026	0.24064	2.46044	4	X
K15RA4V	18.0	0.15	K194R	306.549	118.334	270.301	2.407	0.19777	2.48537	5	X
K15RQ6V	17.3	0.15	K194R	0.383	111.625	205.858	11.506	0.17650	2.61633	9	X
K15RQ7V	17.0	0.15	K194R	227.352	276.846	213.429	3.676	0.14122	2.65571	11	X
K15T04C	18.1	0.15	K194R	331.041	0.117	341.122	2.191	0.18893	2.45851	5	X
K15T09X	17.2	0.15	K194R	310.757	102.616	267.371	8.485	0.16816	2.51807	6	X
K15T33K	17.8	0.15	K194R	7.559	284.760	25.624	14.582	0.17228	2.44323	3	X
K15T60Y	17.9	0.15	K194R	244.036	127.728	330.661	6.881	0.07560	2.46727	5	X
K15T64H	16.7	0.15	K194R	40.026	262.216	20.181	9.701	0.16166	2.61559	5	X
K15T65C	17.9	0.15	K194R	314.954	3.737	16.961	5.006	0.21870	2.58469	5	X
K15T67K	17.0	0.15	K194R	254.125	75.802	21.270	13.699	0.13723	2.61108	5	X
K15T69J	17.2	0.15	K194R	2.620	285.666	20.450	12.351	0.29260	2.60067	5	X
K15T79S	17.4	0.15	K194R	15.619	277.655	26.326	11.374	0.16799	2.63691	5	X
K15T83E	16.8	0.15	K194R	299.004	185.353	221.752	14.180	0.11389	2.60434	8	X
K15T88C	17.7	0.15	K194R	308.254	179.270	212.575	11.963	0.09328	2.63753	2	X
K15T99P	16.9	0.15	K194R	307.389	12.790	15.105	4.849	0.27579	2.60264	8	X
K15TB0Y	17.9	0.15	K194R	338.419	141.150	208.753	13.584	0.22124	2.63059	5	X
K15TK2J	17.6	0.15	K194R	325.090	217.607	139.761	5.570	0.26866	2.57147	7	X
K15TK8H	17.6	0.15	K194R	313.627	356.273	15.861	34.731	0.22572	2.59612	3	X
K15TK9T	17.4	0.15	K194R	306.180	22.081	3.346	5.046	0.26478	2.60280	4	X
K15TM4N	17.4	0.15	K194R	296.098	24.749	18.696	14.268	0.26493	2.62126	4	X
K15TQ0J	17.0	0.15	K194R	330.688	315.279	37.062	6.706	0.16749	2.63989	8	X
K15TT0P	17.0	0.15	K194R	71.949	264.698	346.098	5.945	0.11848	2.49649	11	X
K15TT8S	16.0	0.15	K194R	8.384	357.780	288.700	10.557	0.07324	2.79223	9	X
K15TT9Y	17.8	0.15	K194R	306.214	50.924	335.803	11.492	0.28249	2.60801	3	X
K15Ta5M	17.4	0.15	K194R	307.696	164.756	227.879	1.806	0.01409	2.62485	9	X
K15U21Q	18.8	0.15	K194R	316.188	345.252	37.938	12.493	0.24352	2.52350	6	X
K15U66R	17.1	0.15	K194R	337.620	157.645	185.610	13.332	0.17304	2.68651	6	X
K15V22Z	17.7	0.15	K194R	247.384	243.423	208.432	14.536	0.07445	2.53755	7	X
K15V36O	17.5	0.15	K194R	314.671	344.666	40.200	7.102	0.15754	2.58053	4	X
K15V37E	17.2	0.15	K194R	329.549	299.794	50.181	4.827	0.22804	2.62298	9	X
K15V38S	17.9	0.15	K194R	324.977	342.055	29.107	15.803	0.14601	2.57184	3	X
K15V40T	16.9	0.15	K194R	260.991	231.439	207.155	21.290	0.03830	2.64037	7	X
K15V55E	17.4	0.15	K194R	267.440	236.231	204.138	12.940	0.23991	2.59572	5	X
K15V57E	17.5	0.15	K194R	301.856	216.128	178.673	5.290	0.25650	2.57589	5	X
K15V63L	17.8	0.15	K194R	298.651	212.635	192.851	12.922	0.26836	2.63533	6	X
K15V73A	17.5	0.15	K194R	314.192	347.730	28.701	7.072	0.12783	2.58375	6	X
K15V74S	17.2	0.15	K194R	267.860	208.384	243.767	12.874	0.20307	2.60542	5	X
K15VB6K	17.4	0.15	K194R	283.561	17.681	44.010	6.785	0.21929	2.61080	5	X
K15VB8U	16.7	0.15	K194R	324.866	168.891	205.122	15.061	0.07034	2.62919	10	X
K15VB9B	17.3	0.15	K194R	311.519	193.223	189.210	7.372	0.20205	2.61788	8	X

K15VC2U	16.7	0.15	K194R	24.080	290.947	10.677	12.301	0.14111	2.59286	8	X
K15VE1U	15.7	0.15	K194R	276.726	196.393	245.872	26.635	0.07797	2.59881	6	X
K15VE2L	16.7	0.15	K194R	353.479	276.332	20.777	24.469	0.59606	2.55477	4	X
K15W02A	21.1	0.15	K194R	286.271	273.288	31.703	14.601	0.62936	1.59946	3	X
K15W07O	17.8	0.15	K194R	331.174	355.380	8.639	5.780	0.32026	2.57234	3	X
K15W09J	16.8	0.15	K194R	317.184	289.517	122.351	29.168	0.41881	2.59287	5	X
K15X50C	17.3	0.15	K194R	346.726	101.078	225.538	10.888	0.28771	2.64547	3	X
K15X64L	17.1	0.15	K194R	327.110	155.966	214.841	12.958	0.16167	2.63110	6	X
K15X66C	15.9	0.15	K194R	269.603	192.721	258.290	21.227	0.04114	2.62692	10	X
K15X75R	18.0	0.15	K194R	303.870	157.954	245.428	5.123	0.28249	2.61375	3	X
K15X80M	15.8	0.15	K194R	237.360	185.978	304.570	20.815	0.06055	2.73554	6	X
K15XE6K	17.6	0.15	K194R	309.488	172.368	218.831	5.888	0.04186	2.69955	7	X
K15XF2A	16.1	0.15	K194R	306.717	10.755	10.817	15.883	0.18676	2.70251	7	X
K15XH1A	17.4	0.15	K194R	326.307	47.880	322.490	5.712	0.35608	2.55665	7	X
K15XH1F	17.7	0.15	K194R	309.910	74.637	320.430	4.604	0.36171	2.57675	5	X
K15XI0P	17.4	0.15	K194R	297.424	206.171	189.400	4.641	0.15858	2.72912	8	X
K15Xb0R	17.0	0.15	K194R	2.966	35.010	301.075	5.082	0.05584	2.76006	9	X
K15Xe4R	17.8	0.15	K194R	335.301	142.779	211.790	13.087	0.20737	2.63213	3	X
K15Y13D	16.7	0.15	K194R	313.201	180.352	206.924	12.526	0.07717	2.76689	8	X
K15Y17P	15.8	0.15	K194R	346.796	329.062	17.019	18.425	0.08200	3.11857	8	X
K15Y23G	16.6	0.15	K194R	257.090	190.972	261.810	8.481	0.07648	2.91077	7	X
K16AA4W	16.5	0.15	K194R	330.497	27.989	347.888	5.669	0.08914	3.01613	12	X
K16AH1K	17.3	0.15	K194R	312.705	127.739	281.536	11.625	0.27759	2.60988	5	X
K16AL5X	15.8	0.15	K194R	266.301	86.978	15.916	24.675	0.21125	3.21080	3	X
K16AP1O	16.0	0.15	K194R	127.406	275.582	299.757	9.416	0.04663	3.14973	8	X
K16AQ9K	16.9	0.15	K194R	317.558	147.136	242.669	11.939	0.12675	3.09423	4	X
K16B39A	21.3	0.15	K194R	228.549	152.449	319.331	23.419	0.31812	1.59623	3	X
K16B73J	16.3	0.15	K194R	338.025	2.313	5.153	6.376	0.14199	3.01930	9	X
K16B76D	16.9	0.15	K194R	259.761	108.181	345.159	9.152	0.06086	3.04914	6	X
K16B94E	16.1	0.15	K194R	301.760	40.413	15.073	19.374	0.11456	3.03790	6	X
K16C00Y	16.2	0.15	K194R	92.366	315.403	297.231	7.960	0.05363	3.17101	8	X
K16C23L	16.2	0.15	K194R	288.553	49.476	21.481	12.384	0.17410	3.11020	8	X
K16CB8H	16.5	0.15	K194R	242.596	193.180	277.006	8.422	0.04401	3.11460	6	X
K16CE2Z	16.4	0.15	K194R	274.031	84.284	3.845	10.393	0.12180	3.14708	6	X
K16CK0E	16.3	0.15	K194R	47.501	325.288	335.296	9.418	0.00827	3.19529	10	X
K16CT2R	16.2	0.15	K194R	139.831	285.104	282.812	7.521	0.06138	3.12860	7	X
K16E27X	20.0	0.15	K194R	324.326	38.032	237.197	11.672	0.74338	2.15078	3	X
K16EL6G	17.1	0.15	K194R	288.719	76.018	4.610	16.083	0.22891	3.08877	4	X
K16G34M	17.1	0.15	K194R	287.287	82.966	356.890	9.337	0.20872	3.13090	4	X
K16N01T	18.8	0.15	K194R	1.567	76.386	229.534	20.261	0.06202	1.87444	5	X
K16N16B	17.2	0.15	K194R	16.735	39.988	264.127	18.758	0.05851	1.90238	7	X
K16P66X	18.7	0.15	K194R	347.904	277.154	346.043	20.180	0.49616	2.13786	3	X
K16S23B	17.7	0.15	K194R	337.723	345.405	10.386	22.647	0.14223	2.00773	7	X
K16T92S	20.1	0.15	K194R	341.491	9.621	278.044	14.851	0.59868	2.04853	2	X
K16W01J	21.3	0.15	K194R	153.935	87.675	82.048	2.889	0.50316	1.33958	4	X
K17A01J	17.0	0.15	K194R	335.345	304.513	27.270	11.883	0.24654	2.44425	7	X
K17A14R	17.7	0.15	K194R	204.914	241.109	258.899	1.134	0.13891	2.36036	8	X
K17B08U	18.0	0.15	K194R	230.611	91.691	33.519	6.361	0.18807	2.35538	6	X
K17B23L	18.4	0.15	K194R	278.322	191.546	233.880	3.510	0.12514	2.34477	3	X
K17B42Z	18.0	0.15	K194R	276.944	283.698	137.193	3.030	0.21135	2.29343	6	X
K17B79O	17.8	0.15	K194R	313.585	238.328	133.952	2.079	0.19915	2.43144	7	X
K17BD7Q	15.7	0.15	K194R	10.104	67.580	243.989	10.816	0.02983	2.96096	7	X
K17C03C	17.9	0.15	K194R	269.968	141.597	296.783	4.885	0.18315	2.33573	8	X
K17D09H	15.9	0.15	K194R	8.774	18.026	282.297	11.004	0.07968	2.86316	9	X
K17D58S	16.6	0.15	K194R	40.705	275.966	15.484	14.790	0.14686	2.85428	6	X
K17D77V	17.4	0.15	K194R	256.967	225.518	226.229	4.260	0.12869	2.39958	3	X
K17D99W	17.1	0.15	K194R	285.017	180.565	235.853	5.048	0.03016	2.73265	11	X
K17DA3X	16.6	0.15	K194R	229.884	103.541	19.262	27.590	0.16600	2.65250	3	X
K17DA6F	18.0	0.15	K194R	250.885	136.406	332.679	6.794	0.25730	2.33855	5	X
K17DA7J	17.1	0.15	K194R	333.060	112.372	248.885	10.185	0.05987	2.70797	9	X
K17E19O	17.4	0.15	K194R	260.594	58.148	25.978	20.475	0.20206	2.41751	5	X
K17F39M	17.3	0.15	K194R	285.134	44.290	16.042	12.055	0.06322	2.57953	5	X
K17F76X	16.9	0.15	K194R	170.026	300.607	233.951	5.089	0.03192	2.90534	5	X
K17F91V	16.9	0.15	K194R	229.032	117.111	7.328	15.329	0.14646	2.55748	6	X
K17FB8A	16.2	0.15	K194R	56.303	284.968	355.487	15.390	0.10442	3.06170	7	X
K17FC2K	16.7	0.15	K194R	279.926	34.741	28.723	15.321	0.03308	2.70411	8	X
K17FC5W	16.8	0.15	K194R	245.646	242.086	224.591	11.552	0.04690	2.78896	7	X
K17H15C	17.5	0.15	K194R	247.651	259.240	215.519	11.951	0.24922	2.58052	6	X
K17H41Z	16.8	0.15	K194R	277.435	217.715	220.492	10.562	0.09583	3.04156	6	X
K17J00N	16.0	0.15	K194R	170.551	333.882	206.807	12.533	0.07514	3.07101	9	X
K18B01O	20.6	0.15	K194R	275.146	23.087	350.637	11.272	0.44448	1.67768	3	X
K18B02Y	20.5	0.15	K194R	189.500	330.159	202.477	8.993	0.38150	1.64087	3	X
K18G08U	17.0	0.15	K194R	53.494	214.691	50.026	7.276	0.15907	2.44376	8	X
K19P00A	19.4	0.15	K194R	336.860	103.613	228.642	15.063	0.57779	3.01361	2	X
K19P03J	18.6	0.15	K194R	320.324	129.822	258.566	13.603	0.39953	2.61386	3	X
K19S02F	23.3	0.15	K194R	219.908	127.093	293.910	3.321	0.21149	1.33186	2	X
K19S07Y	18.2	0.15	K194R	189.188	276.509	215.750	19.583	0.10939	1.91319	7	X
K19U02Y	18.1	0.15	K194R	285.977	75.295	356.575	28.031	0.37416	2.57711	2	X
K19U04G	18.6	0.15	K194R	197.198	258.646	225.601	21.117	0.07966	1.84171	4	X

New perturbed one-opposition orbits:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc	C
K19B02H	19.6	0.15	K194R	11.185	161.442	336.470	13.118	0.59242	3.25001	93	V
K19O05B	17.0	0.15	K194R	340.804	6.963	345.375	15.364	0.48066	2.96838	110	X
K19P01P	22.2	0.15	K194R	322.766	349.887	344.824	4.705	0.50321	2.18751	100	X
K19Q03L	19.9	0.15	K194R	313.886	157.310	243.389	13.476	0.48949	2.62856	86	X
K19Q06L	19.8	0.15	K194R	328.885	126.957	228.258	5.793	0.43194	2.63441	85	X
K19S05V	21.5	0.15	K194R	324.794	349.526	9.881	10.677	0.52832	2.65015	51	X
K19S07L	25.7	0.15	K194R	308.797	243.688	198.677	2.642	0.70067	2.51260	13	X
K19T02S	25.6	0.15	K194R	282.801	204.489	180.062	8.663	0.37773	1.69615	26	X
K19T04L	19.1	0.15	K194R	302.920	263.898	220.567	15.943	0.68098	3.02525	49	X
K19T07R	20.9	0.15	K194R	295.939	36.086	40.808	23.870	0.41977	2.23865	40	X

K19U00X	19.8	0.15	K194R	301.980	185.006	277.676	5.724	0.63814	2.64860	41	X
K19U01Y	23.9	0.15	K194R	273.458	198.982	47.651	6.038	0.26419	0.89846	28	X
K19U02J	19.5	0.15	K194R	293.462	236.093	215.890	30.271	0.50483	2.46708	29	X
K19U02R	22.1	0.15	K194R	298.470	231.123	228.860	10.468	0.65045	2.43529	26	X
K19U03V	19.8	0.15	K194R	274.259	201.562	249.382	17.750	0.43083	2.17383	30	X
K19U04N	22.8	0.15	K194R	331.038	41.470	220.204	20.807	0.13528	1.11177	26	X
K19U05G	22.3	0.15	K194R	268.349	208.175	232.854	17.242	0.44302	1.86926	26	X
K19U06S	20.5	0.15	K194R	309.990	148.721	256.942	12.124	0.51970	2.67033	25	X
K19U08J	24.8	0.15	K194R	318.070	190.665	218.247	6.482	0.61065	2.80933	24	X
K19U09C	23.9	0.15	K194R	241.693	201.247	225.642	5.910	0.31379	1.49802	22	X
K19U09G	24.6	0.15	K194R	304.899	241.290	177.775	1.235	0.54680	2.41158	23	X
K19U09O	19.8	0.15	K194R	237.383	148.115	7.746	5.473	0.57906	1.91293	43	X
K19U09W	21.3	0.15	K194R	312.606	282.514	162.537	8.121	0.55334	2.96727	24	X
K19U10L	24.8	0.15	K194R	308.888	37.980	18.158	2.540	0.55116	2.50956	21	X
K19U10S	20.5	0.15	K194R	286.011	304.136	43.285	26.966	0.38593	1.45401	21	X
K19U11V	23.3	0.15	K194R	218.430	191.778	240.563	11.852	0.18956	1.38610	25	X
K19U12F	24.6	0.15	K194R	307.248	348.430	72.892	5.768	0.56728	2.49505	23	X
K19U12R	24.2	0.15	K194R	247.141	342.804	39.723	10.114	0.24024	1.32433	11	X
K19U13L	21.2	0.15	K194R	317.565	216.154	61.076	21.532	0.18982	1.11843	21	X
K19U13P	23.5	0.15	K194R	227.927	49.595	220.288	15.797	0.51165	0.93415	19	X
K19U13V	20.8	0.15	K194R	308.630	231.522	68.194	7.972	0.59127	1.78945	17	X
K19U14C	23.2	0.15	K194R	278.933	73.602	52.865	1.940	0.67367	2.10258	28	X
K19U14N	20.7	0.15	K194R	239.934	52.159	48.271	32.538	0.31848	1.75128	17	X
K19U14R	22.7	0.15	K194R	262.127	225.912	217.398	14.351	0.31230	1.80659	17	X
K19V00S	24.2	0.15	K194R	287.489	55.147	265.026	1.821	0.47481	1.48944	15	X
K19V00V	25.4	0.15	K194R	240.728	26.452	255.585	0.306	0.29590	0.94086	15	X
K19V01D	23.5	0.15	K194R	206.503	239.567	232.256	19.631	0.26223	1.43209	16	X
K19V01O	22.3	0.15	K194R	141.899	283.905	237.981	12.559	0.33755	1.21918	23	X
K19V01X	22.0	0.15	K194R	272.649	158.221	327.278	9.422	0.66061	2.06605	22	X
K19V01Y	21.9	0.15	K194R	309.633	335.079	345.686	7.543	0.58664	1.92041	15	X
K19V01Z	23.4	0.15	K194R	294.506	250.243	48.455	29.611	0.66586	1.61449	14	X
K19V02D	21.4	0.15	K194R	309.618	257.063	38.832	33.512	0.73592	1.97238	13	X
K19V02T	24.2	0.15	K194R	83.460	293.085	228.859	9.280	0.21464	1.03456	20	X
K19V04B	25.7	0.15	K194R	246.215	292.839	54.631	6.350	0.10258	1.11954	12	X
K19V04J	23.0	0.15	K194R	308.050	76.768	215.892	2.747	0.78673	1.93658	12	X
K19V04L	19.6	0.15	K194R	265.084	287.646	260.509	10.245	0.83829	2.02640	14	X
K19V05H	23.6	0.15	K194R	113.265	102.583	65.598	4.587	0.35662	1.10017	9	X
K19V05J	25.1	0.15	K194R	263.635	129.765	218.055	7.482	0.33386	1.32601	10	X
K19V05U	24.5	0.15	K194R	298.861	268.033	47.833	6.543	0.70525	1.83827	1	B
K19V05V	26.7	0.15	K194R	308.274	302.822	37.682	6.225	0.57162	1.97882	3	B

New one-opposition orbit:

Object	H	G	Epoch	M	Peri.	Node	Incl.	e	a	Arc	C
K19J06B	19.0	0.15	K195H	353.229	40.599	225.311	58.725	0.33179	1.99086	15	W

New observations:

K05W00D	KC2019	11	17.22677	01	56	12.77	-19	49	52.0	17.4	RoEW005691
K05W00D	KC2019	11	17.23337	01	56	19.04	-19	51	17.7	17.7	RoEW005691
K05W00D	KC2019	11	17.23989	01	56	25.28	-19	52	42.5	17.9	RoEW005691
K06K00E	C2019	11	17.23405	00	10	40.917+15	20	28.03		21.1	wUEW005F51
K06K00E	C2019	11	17.25578	00	10	42.651+15	20	01.54		21.3	wUEW005F51
K06P17Y	C2019	11	17.20526	19	56	26.683-17	11	57.61		20.4	wUEW005F51
K06P17Y	C2019	11	17.21429	19	56	27.280-17	11	54.71		20.6	wUEW005F51
K06P17Y	C2019	11	17.21878	19	56	27.579-17	11	53.13		20.9	wUEW005F51
K06T01D	C2019	11	17.27651	00	58	39.578+04	03	38.20		19.9	wUEW005F51
K06T01D	C2019	11	17.28675	00	58	39.963+04	03	47.68		19.9	wUEW005F51
K06T01D	C2019	11	17.29697	00	58	40.344+04	03	57.05		20.0	wUEW005F51
K06T01D	C2019	11	17.30721	00	58	40.713+04	04	06.43		20.0	wUEW005F51
K09H67X	KC2019	11	16.06228500	40	07.26	+05	13	55.1		22.1	VuEW005H21
K09H67X	KC2019	11	16.07955000	40	07.62	+05	13	00.2		22.1	VuEW005H21
K09H67X	KC2019	11	16.08990700	40	07.83	+05	12	27.1		22.1	VuEW005H21
K15J01D	C2019	11	16.42572102	24	02.80	-31	10	56.5		16.97	oVEW005T08
K15J01D	C2019	11	16.42853802	24	03.63	-31	11	03.4		16.85	oVEW005T08
K15J01D	C2019	11	16.43596902	24	05.89	-31	11	22.2		16.88	oVEW005T08
K15J01D	C2019	11	16.43922002	24	06.85	-31	11	30.4		16.86	oVEW005T08
K15J01D	C2019	11	16.44668702	24	09.12	-31	11	48.9		17.72	oVEW005T08
K15J01D	C2019	11	16.44900802	24	09.83	-31	11	54.9		16.84	oVEW005T08
K15J01D	C2019	11	16.45869902	24	12.75	-31	12	18.8		17.28	oVEW005T08
K15VE2L	C2019	11	15.23626002	21	04.91	+37	01	37.6		19.77	gUEW005I41
K15VE2L	C2019	11	15.23764002	21	04.81	+37	01	37.2		19.87	gUEW005I41
K15VE2L	C2019	11	16.19037002	19	24.31	+36	59	04.0		20.03	gUEW005I41
K15VE2L	C2019	11	16.26706902	19	16.04	+36	58	51.5		19.32	rUEW005I41
K15VE2L	C2019	11	16.27698002	19	15.01	+36	58	49.7		19.34	rUEW005I41
K15VE2L	C2019	11	16.28203002	19	14.46	+36	58	48.7		19.59	rUEW005I41
K15W02A	C2019	11	17.10109	21	40	43.43	-04	18	13.2	21.0	GVEW005I52
K15W02A	C2019	11	17.10206	21	40	44.10	-04	18	06.7	20.4	GVEW005I52
K15W02A	C2019	11	17.10303	21	40	44.75	-04	18	00.0	20.0	GVEW005I52
K15W02A	C2019	11	17.10400	21	40	45.38	-04	17	53.2	20.2	GVEW005I52
K16B39A	KC2019	11	16.01407321	06	47.30	+73	28	38.3		22.5	VuEW005H21
K16B39A	KC2019	11	16.02516021	06	44.91	+73	28	32.8		22.2	VuEW005H21
K16B39A	KC2019	11	16.03662121	06	42.38	+73	28	27.3		22.3	VuEW005H21
K16E27X	C2019	11	17.22395	00	14	46.848+12	11	32.60		21.0	wUEW005F51
K16E27X	C2019	11	17.24559	00	14	48.672+12	11	15.27		21.1	wUEW005F51
K16E27X	C2019	11	17.25642	00	14	49.589+12	11	06.46		21.1	wUEW005F51
K16P66X	KC2019	11	16.01816522	39	16.43	+05	40	20.3		22.4	VuEW005H21
K16P66X	KC2019	11	16.02465622	39	16.76	+05	40	23.1		22.3	VuEW005H21
K16P66X	KC2019	11	16.03155822	39	17.14	+05	40	25.5		22.2	VuEW005H21
K16T92S	KC2019	11	16.16665902	27	20.30	+38	16	09.1		22.0	VuEW005H21
K16T92S	KC2019	11	16.17339602	27	19.69	+38	16	00.5		22.4	VuEW005H21
K16T92S	KC2019	11	16.18324602	27	18.76	+38	15	49.2		22.2	VuEW005H21
K16W01J	KC2019	11	17.17171	00	49	43.37	+00	03	00.3		oEW005291
K16W01J	KC2019	11	17.18617	00	49	41.65	+00	02	54.0		oEW005291
K16W01J	KC2019	11	17.20060	00	49	39.98	+00	02	47.1		oEW005291



K18B01O	C2019	11	17.09617	20	14	49.89	+03	07	51.1	21.5	GVEW005I52
K18B01O	C2019	11	17.09783	20	14	50.29	+03	07	57.6	21.1	GVEW005I52
K18B01O	C2019	11	17.09950	20	14	50.73	+03	08	03.5	21.8	GVEW005I52
K18B02Y	C2019	11	17.25106	03	36	28.32	+07	52	41.5		VEW005I52
K18B02Y	C2019	11	17.25439	03	36	27.98	+07	52	38.6	20.9	GVEW005I52
K18B02Y	C2019	11	17.25773	03	36	27.62	+07	52	35.7		VEW005I52
K19P00A	C2019	11	17.22459	00	03	03.159	+09	42	17.72	20.7	wUEW005F51
K19P00A	C2019	11	17.23539	00	03	04.509	+09	42	09.77	20.6	wUEW005F51
K19P00A	C2019	11	17.25709	00	03	07.225	+09	41	53.79	20.8	wUEW005F51
K19P01P	KC2019	11	16.03331201	34	01.71	+23	48	48.4	22.0	VuEW005H21	
K19P01P	KC2019	11	16.03970701	34	01.91	+23	48	47.0	22.1	VuEW005H21	
K19P01P	KC2019	11	16.04493901	34	02.09	+23	48	45.3	22.1	VuEW005H21	
K19S02F	KC2019	11	17.20325	22	37	24.40	+13	40	00.1		oEW005691
K19S02F	KC2019	11	17.21359	22	37	26.08	+13	40	05.8	20.7	RoEW005691
K19S05V	KC2019	11	16.00492600	05	31.07	+17	12	32.2	22.1	VuEW005H21	
K19S05V	KC2019	11	16.01083900	05	31.75	+17	12	40.2	22.4	VuEW005H21	
K19S05V	KC2019	11	16.01743000	05	32.48	+17	12	49.0	21.7	VuEW005H21	
K19S07L	KC2019	10	05.86333300	12	29.73	+10	55	15.5	19.2	GVEW005C95	
K19S07L	KC2019	10	05.87191200	12	30.68	+10	55	57.0	18.8	GVEW005C95	
K19S07L	KC2019	10	05.88050100	12	31.64	+10	56	38.4	19.5	GVEW005C95	
K19T02S	C2019	10	31.53495004	57	41.830	-30	49	57.84	23.00	GVEW005T12	
K19T02S	C2019	10	31.54213904	57	42.841	-30	49	55.98	22.91	GVEW005T12	
K19T04L	C2019	11	17.27182	00	23	24.846	+06	47	27.83	20.7	wUEW005F51
K19T04L	C2019	11	17.28208	00	23	24.368	+06	47	13.81	20.9	wUEW005F51
K19T04L	C2019	11	17.29232	00	23	23.906	+06	46	59.79	20.7	wUEW005F51
K19T04L	C2019	11	17.30255	00	23	23.429	+06	46	45.89	20.8	wUEW005F51
K19T07R	C2019	11	17.32943	06	19	27.77	+55	59	12.2	20.6	GVEW005I52
K19T07R	C2019	11	17.33068	06	19	27.88	+55	59	17.2	21.1	GVEW005I52
K19T07R	C2019	11	17.33193	06	19	28.12	+55	59	22.3	21.7	GVEW005I52
K19U00O	KC2019	11	06.16434000	03	17.32	+22	36	49.3	19.4	VuEW005H21	
K19U00O	KC2019	11	06.16647800	03	17.07	+22	36	48.4	19.6	VuEW005H21	
K19U00O	KC2019	11	06.16861400	03	16.82	+22	36	47.1	19.5	VuEW005H21	
K19U00O	KC2019	11	06.17075000	03	16.56	+22	36	46.1	19.2	VuEW005H21	
K19U00O	KC2019	11	06.17288800	03	16.32	+22	36	45.2	19.3	VuEW005H21	
K19U00O	KC2019	11	06.17474200	03	16.11	+22	36	44.4	19.3	VuEW005H21	
K19U00O	HC2019	11	17.08358	23	45	32.41	+20	47	39.5	18.8	RoEW005691
K19U00O	HC2019	11	17.09459	23	45	31.33	+20	47	32.1	18.9	RoEW005691
K19U00O	HC2019	11	17.10561	23	45	30.27	+20	47	24.8	18.9	RoEW005691
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K19U00O	C2019	11	17.11110	23	45	29.67	+20	47	20.0	18.6	GVEW005I52
K19U00O	C2019	11	17.11408	23	45	29.38	+20	47	18.0	18.5	GVEW005I52
K19U01Y	KC2019	11	17.24739	00	34	43.16	+04	14	19.4	21.7	RoEW005691
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K19U01Y	KC2019	11	17.27220	00	34	41.14	+04	14	56.0	21.1	RoEW005691
K19U02J	C2019	11	17.11980	01	26	38.66	-05	08	19.1	19.6	GVEW005I52
K19U02J	C2019	11	17.12101	01	26	38.66	-05	08	24.4	19.9	GVEW005I52
K19U02J	C2019	11	17.12209	01	26	38.69	-05	08	27.7	19.5	GVEW005I52
K19U02J	C2019	11	17.12369	01	26	38.70	-05	08	33.9	19.8	GVEW005I52
K19U02R	KC2019	11	06.14760123	27	44.16	+16	07	46.0	18.9	VuEW005H21	
K19U02R	KC2019	11	06.14975823	27	43.45	+16	07	34.0	18.9	VuEW005H21	
K19U02R	KC2019	11	06.15192123	27	42.73	+16	07	21.9	19.0	VuEW005H21	
K19U02R	KC2019	11	06.15408623	27	41.99	+16	07	09.9	19.0	VuEW005H21	
K19U02R	KC2019	11	06.15625123	27	41.27	+16	06	57.9	19.2	VuEW005H21	
K19U02R	KC2019	11	06.15841523	27	40.56	+16	06	45.9	19.4	VuEW005H21	
K19U03V	C2019	11	17.20920	23	21	16.12	+21	47	46.6	22.1	GVEW005I52
K19U03V	C2019	11	17.21238	23	21	16.30	+21	47	41.7	21.2	GVEW005I52
K19U03V	C2019	11	17.21556	23	21	16.46	+21	47	37.1	21.6	GVEW005I52
K19U03V	C2019	11	17.21875	23	21	16.68	+21	47	32.8	21.8	GVEW005I52
K19U04N	KC2019	11	17.41380	03	04	16.15	-04	33	42.6	21.3	RoEW005691
K19U04N	KC2019	11	17.42683	03	04	14.68	-04	34	30.2	21.7	RoEW005691
K19U04N	KC2019	11	17.43986	03	04	13.14	-04	35	18.6	21.5	RoEW005691
K19U05G	C2019	11	17.20388	23	24	57.28	+09	50	02.1	20.3	GVEW005I52
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K19U05G	C2019	11	17.20637	23	24	57.64	+09	49	49.9	20.6	GVEW005I52
K19U05G	C2019	11	17.20762	23	24	57.86	+09	49	43.9	20.8	GVEW005I52
K19U06S	C2019	11	17.08826	22	37	39.44	+13	24	09.8		VEW005I52
K19U06S	C2019	11	17.09159	22	37	39.95	+13	24	09.0	21.4	GVEW005I52
K19U08J	C2019	11	17.22682	02	58	49.90	-00	15	28.0	22.6	GVEW005I52
K19U08J	C2019	11	17.22848	02	58	50.67	-00	15	30.9	21.9	GVEW005I52
K19U08J	C2019	11	17.23182	02	58	52.18	-00	15	35.9	22.2	GVEW005I52
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K19U09O	KC2019	11	17.09679	01	09	23.33	+14	09	21.0	21.2	RoEW005691
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K19U10L	C2019	11	17.19093	03	08	13.54	+30	08	55.5	21.6	GVEW005I52
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K19U11V	KC2019	11	15.99589323	45	08.53	+16	40	17.5	22.4	VuEW005H21	
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21.8 GVEW005I52  
20.9 GVEW005I52  
21.4 GVEW005I52  
20.8 GVEW005I52  
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21.2 GVEW005I52  
21.5 RoEW005291  
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21.2 RoEW005291  
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21.0 RoEW005691  
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20.5 GVEW005I52  
21.2 GVEW005I52  
21.7 GVEW005I52  
21.2 GVEW005I52  
21.1 GVEW005I52  
20.4 GVEW005I52  
21.2 GVEW005I52  
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19.7 GVEW005I52  
19.3 GVEW005I52  
19.4 GVEW005I52  
19.7 VoEW005691  
19.8 VoEW005691  
19.6 VoEW005691  
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22.2 VuEW005H21  
22.1 VuEW005H21  
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21.1 GVEW005I52  
20.9 GVEW005I52  
VEW005I52  
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20.1 RoEW005691  
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20.4 RoEW005691  
20.2 RoEW005691  
20.6 RoEW005691  
21.0 RoEW005691  
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19.3 RoEW005291  
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20.3 RoEW005691  
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20.7 wUEW005F52  
20.4 wUEW005F52  
20.1 wUEW005F52  
16.4 VuEW005H21  
16.3 VuEW005H21

02059	C2019	11	09.06378422	29	39.85	-11	03	48.3	16.5	VuEW005H21	
02059	C2019	11	09.06522122	29	40.13	-11	03	48.9	16.4	VuEW005H21	
02059	C2019	11	09.06665622	29	40.40	-11	03	49.6	16.4	VuEW005H21	
04660	C2019	11	17.20628	21	38	52.946	-12	27	25.16	20.7	wUEW005F52
04660	C2019	11	17.20692	21	38	52.989	-12	27	25.06	20.8	wUEW005F52
04660	C2019	11	17.21150	21	38	53.372	-12	27	23.12	21.1	wUEW005F52
04660	C2019	11	17.21541	21	38	53.696	-12	27	20.94	20.8	wUEW005F52
04660	C2019	11	17.21605	21	38	53.743	-12	27	21.01	20.9	wUEW005F52
04660	C2019	11	17.21995	21	38	54.054	-12	27	19.25	20.7	wUEW005F52
04660	C2019	11	17.22059	21	38	54.124	-12	27	19.31	21.1	wUEW005F52
05131	C2019	11	16.42242003	07	00.52	-44	16	08.0	17.80	oVEW005T08	
05131	C2019	11	16.42526003	07	00.20	-44	16	05.3	17.83	oVEW005T08	
05131	C2019	11	16.43179103	06	59.43	-44	16	01.5	17.81	oVEW005T08	
05131	C2019	11	16.44198703	06	58.02	-44	15	53.6	17.77	oVEW005T08	
05143	C2019	11	17.20590	19	50	53.916	-19	14	37.16	18.4	wUEW005F51
05143	C2019	11	17.21042	19	50	54.445	-19	14	35.35	18.4	wUEW005F51
05143	C2019	11	17.21493	19	50	54.966	-19	14	33.63	18.3	wUEW005F51
05143	C2019	11	17.21943	19	50	55.495	-19	14	31.83	18.4	wUEW005F51
09400	KC2019	11	09.04733521	14	25.03	-16	41	32.7	17.3	VuEW005H21	
09400	KC2019	11	09.04880121	14	25.05	-16	41	29.5	17.4	VuEW005H21	
09400	KC2019	11	09.05034921	14	25.09	-16	41	25.7	17.6	VuEW005H21	
09400	KC2019	11	09.05219921	14	25.11	-16	41	21.2	17.6	VuEW005H21	
29075	C2019	11	17.22589	00	24	51.553	+12	39	27.06	21.0	wUEW005F51
29075	C2019	11	17.23669	00	24	51.168	+12	39	24.59	21.1	wUEW005F51
29075	C2019	11	17.24756	00	24	50.747	+12	39	21.57	21.0	wUEW005F51
29075	C2019	11	17.25842	00	24	50.357	+12	39	18.77	20.9	wUEW005F51
96744	C2019	11	16.59259608	03	37.41	-27	13	55.2	18.50	oVEW005T08	
96744	C2019	11	16.59584508	03	37.56	-27	14	00.3	18.07	oVEW005T08	
96744	C2019	11	16.60599808	03	38.03	-27	14	18.1	17.93	oVEW005T08	
96744	C2019	11	16.61113108	03	38.27	-27	14	27.2	17.94	oVEW005T08	
D8852	C2019	11	16.44106402	04	51.82	-24	45	44.2	17.82	oVEW005T08	
D8852	C2019	11	16.44437302	04	50.64	-24	45	07.3	17.51	oVEW005T08	
D8852	C2019	11	16.44993002	04	48.72	-24	44	05.9	17.51	oVEW005T08	
D8852	C2019	11	16.46054302	04	45.01	-24	42	07.2	17.38	oVEW005T08	
F2685	C2019	11	17.29743	23	42	47.032	-02	12	51.31	20.3	wUEW005F52
F2685	C2019	11	17.30937	23	42	45.977	-02	12	57.72	20.2	wUEW005F52
F2685	C2019	11	17.32129	23	42	44.927	-02	13	03.83	20.3	wUEW005F52
F2942	C2019	11	17.28224	23	12	26.133	-01	22	01.25	20.1	wUEW005F52
F2942	C2019	11	17.29420	23	12	26.249	-01	21	54.23	20.0	wUEW005F52
F2942	C2019	11	17.30616	23	12	26.358	-01	21	47.13	20.2	wUEW005F52
F2942	C2019	11	17.31808	23	12	26.478	-01	21	40.06	20.3	wUEW005F52
F3842	KC2019	11	15.43811	01	28	47.04	-21	09	28.4	17.2	RqEW005E89
F3842	KC2019	11	15.45183	01	28	48.55	-21	09	02.6	17.1	RqEW005E89
F3842	KC2019	11	15.46432	01	28	49.89	-21	08	38.9	17.3	RqEW005E89
F3842	C2019	11	16.43688701	30	42.65	-20	38	22.5	17.59	oVEW005T08	
F3842	C2019	11	16.44014301	30	43.01	-20	38	16.2	16.62	oVEW005T08	
F3842	C2019	11	16.44345001	30	43.37	-20	38	09.8	16.76	oVEW005T08	
F3842	C2019	11	16.44761001	30	43.81	-20	38	01.8	16.63	oVEW005T08	
F3842	C2019	11	16.45962101	30	45.12	-20	37	38.8	16.62	oVEW005T08	
F9399	C2019	11	16.50594604	24	54.75	-17	39	14.2	17.79	oVEW005T08	
F9399	C2019	11	16.50963204	24	54.38	-17	39	22.8	18.26	oVEW005T08	
F9399	C2019	11	16.51610604	24	53.74	-17	39	37.6	18.17	oVEW005T08	
F9399	C2019	11	16.52629204	24	52.71	-17	40	00.1	18.20	oVEW005T08	
G2082	C2019	11	16.44244803	25	28.10	-39	18	20.3	16.78	oVEW005T08	
G2082	C2019	11	16.44621103	25	28.29	-39	18	26.2	16.62	oVEW005T08	
G2082	C2019	11	16.45132803	25	28.50	-39	18	35.0	17.52	oVEW005T08	
G2082	C2019	11	16.46425803	25	29.13	-39	18	55.9	17.77	oVEW005T08	
H8871	C2019	11	17.20461	19	59	31.611	-14	11	14.58	21.0	wUEW005F51
H8871	C2019	11	17.20913	19	59	32.457	-14	11	11.89	21.4	wUEW005F51
H8871	C2019	11	17.21365	19	59	33.275	-14	11	09.27	21.1	wUEW005F51
H8871	C2019	11	17.21814	19	59	34.093	-14	11	06.60	21.5	wUEW005F51
M5900	KC2019	11	16.04486900	38	41.40	+13	40	23.0	22.4	VuEW005H21	
M5900	KC2019	11	16.05034500	38	41.11	+13	40	21.1	22.5	VuEW005H21	
M5900	KC2019	11	16.05521200	38	40.84	+13	40	19.3	22.5	VuEW005H21	
V3538	KC2019	11	16.06402901	47	12.78	+29	01	36.7	22.3	VuEW005H21	
V3538	KC2019	11	16.07193501	47	12.19	+29	01	30.8	22.5	VuEW005H21	
V3538	KC2019	11	16.07864401	47	11.71	+29	01	26.5	22.4	VuEW005H21	
W6291	C2019	11	16.39683900	48	45.90	-28	48	23.0	18.85	oVEW005T08	
W6291	C2019	11	16.40056100	48	46.19	-28	48	34.9	18.59	oVEW005T08	
W6291	C2019	11	16.40612800	48	46.57	-28	48	53.1	18.58	oVEW005T08	
W6291	C2019	11	16.41826500	48	47.32	-28	49	32.9	18.28	oVEW005T08	
Z5256	C2019	11	17.24117	22	11	58.325	+01	38	50.55	19.9	wUEW005F52
Z5256	C2019	11	17.25319	22	11	59.793	+01	38	51.02	20.1	wUEW005F52
Z5256	C2019	11	17.26516	22	12	01.247	+01	38	51.67	20.1	wUEW005F52
f6217	C2019	11	17.29873	23	52	34.836	+00	30	07.68	20.7	wUEW005F52
f6217	C2019	11	17.31067	23	52	34.551	+00	30	27.31	20.7	wUEW005F52
f6217	C2019	11	17.32257	23	52	34.261	+00	30	46.62	20.7	wUEW005F52
i2243	C2019	11	13.21831901	50	10.04	+36	43	30.3	18.87	gUEW005I41	
i2243	C2019	11	14.20144001	49	17.81	+36	49	35.6	18.99	gUEW005I41	
i2243	C2019	11	15.20525001	48	27.97	+36	55	15.2	19.06	gUEW005I41	
i2243	C2019	11	15.21034001	48	27.69	+36	55	17.0	18.91	gUEW005I41	
i2243	C2019	11	15.23531001	48	26.36	+36	55	25.0	18.95	gUEW005I41	
i2243	C2019	11	16.19175001	47	42.66	+37	00	17.0	19.03	gUEW005I41	
i2243	C2019	11	16.24419001	47	40.00	+37	00	32.8	18.52	rUEW005I41	
i2243	C2019	11	16.25397001	47	39.49	+37	00	35.7	18.56	rUEW005I41	
i2243	C2019	11	16.27926001	47	38.22	+37	00	42.7	18.35	rUEW005I41	
i2243	C2019	11	16.28156001	47	38.10	+37	00	43.4	18.37	rUEW005I41	
m1542	C2019	11	17.22914	22	17	32.588	+01	01	15.66	19.8	wUEW005F52
m1542	C2019	11	17.25319	22	17	34.123	+01	01	56.09	19.8	wUEW005F52
m1542	C2019	11	17.26516	22	17	34.901	+01	02	16.40	19.8	wUEW005F52
o9353	KC2019	11	16.06560023	25	59.86	+22	17	36.4	22.0	VuEW005H21	
o9353	KC2019	11	16.06986023	25	59.81	+22	17	33.6	22.1	VuEW005H21	
o9353	KC2019	11	16.07817523	25	59.69	+22	17	27.7	22.1	VuEW005H21	

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