Institute of Theoretical
and Experimental Physics

19-00

N. V. Lazarev

Brief Handbook of Accelerator Facilities, Some Special Terms and Institutions Addresses

Moscow 2000

UDK 621.384.64 M-16

BRIEF HANDBOOK OF ACCELERATOR FACILITIES, SOME SPECIAL TERMS AND INSTITUTIONS ADDRESSES: Preprint ITEP I9-00/

N.V. Lazarev - M., 2000 - 56p.

In supposed brief handbook next three alphabetical lists are given:

- accelerator facilities with decoding of their abbreviated name, with indication their parameters and location (accelerator's center, town, country), year of launching and references containing more detail data;
- some of abbreviations used in literature on accelerators and their control systems;
- basic accelerator's centers, institutes and firms with post and E-mail addresses of their employee (mainly PAC-99 authors) on their names or mottos.

КРАТКИЙ СПРАВОЧНИК ПО УСКОРИТЕЛЬНЫМ УСТАНОВКАМ, НЕКОТОРЫМ СПЕЦИАЛЬНЫМ ТЕРМИНАМ И АДРЕСАМ УСКОРИТЕЛЬНЫХ ЦЕНТРОВ:

Н. В. Лазарев.

В предлагаемом кратком справочнике даны на английском языке три алфавитных перечня:

- ускорительных установок с расшифровкой их сокращенных названий, указанием их параметров и местонахождения (ускорительный центр или город), приведены год их запуска, а также одна или несколько публикаций с более подробными данными;
- некоторых аббревиатур, используемых в литературе по ускорителям и системам управления ими;
- основных ускорительных центров, институтов и фирм с почтовыми адресами и электронными адресами сотрудников этих организаций (в основном, авторов конференции PAC-99) по их фамилиям или девизам.

Foreword

Reading clauses CERN Courier on subjects slightly away from the narrow specialisation or looking through the reports in works of international conferences on accelerators it is frequently one's "stumbles" over specific abbreviations which are not having of universal character. Besides the abundance of the greatly various accelerating installations, despite of their sonorous names, not always allows to remember decoding these names, parameters of installations and other details.

The given below alphabetic list "FACILITIES" - accelerating installations under their names (or types and assignments) is made on the basis of a reference media which is let out in limited spreading only for the participants of conferences. The list contains decoding the name of each accelerating installation, its basic parameters, year of start, country, city or scientific centre, and also publications allowing to receive the more detail information.

In the second part "TERMS" the brief decoding of abbreviations used in the literature on accelerators and on their control systems is given where the unsophisticated reader meets the most difficulties for understanding.

The third part "INSTITUTIONS" contains given for a prompt finding E-mail and post addresses of the colleagues from the most known accelerating centres, laboratories and organisations located in alphabetic order, surnames (or mottos) of these colleagues in a place of their employment also are located in the same order.

It seems, that these lists can appear useful (especially if they to put in PC) not only for author. Unconditionally list of the terms, choice of installations and list of scientific centres are not complete, they show only circle of interests of the author, and each specialist can make most useful for him of addition and cutting. Moreover, the data from conferences, spent everyone year, will be natural additions easily inlet with the help PC.

The noticeable advantages in practical activity could be brought to the developers due to use such material as the list of the original publications on key words, however their choice is so individual, that should be done only by everyone for himself personally, differently volume of the edition can increase up to the sizes of the encyclopaedia.

The author hopes, that the absence of translation on Russian will not create superfluous difficulties to the readers, and noted inexactness, errors, responses and possible propositions the request to inform N.V. Lazarev on the address: 117259, Moscow, B. Cheremuschkinskaia ul. 25, ITEP or E-mail: Nikolay.V.Lazarev @itep.ru

Предисловие

Читая статьи CERN Courier по тематике чуть в стороне от своей узкой специализации или просматривая доклады в трудах международных конференций по ускорителям приходится часто "спотыкаться" на специфических аббревиатурах, не имеющих универсального характера. Кроме того, изобилие самых различных ускорительных установок, несмотря на звучные их названия, не всегда позволяет вспомнить расшифровку этих названий, параметры установок и другие подробности.

Приведенный ниже алфавитный перечень "FACILITIES" - ускорительных установок по их названиям (или типам и назначениям) составлен на основе справочных изданий, выпускавшихся малыми тиражами только для участников конференций. Перечень содержит расшифровку названия каждой ускорительной установки, ее основные параметры, год запуска, страну, город или научный центр, а также публикации, позволяющие получить большую информацию.

Во второй части "TERMS" приведена краткая расшифровка некоторых аббревиатур, используемых в литературе по ускорителям и по системам управления ими, где неискушенному читателю разобраться бывает особенно трудно.

Третья часть "INSTITUTIONS" содержит данные для быстрого нахождения E-mail и почтового адреса коллег из наиболее известных ускорительных центров, лабораторий и организаций, расположенных в алфавитном порядке, также расположены и фамилии (или девизы) этих коллег по месту их работы.

Представляется, что эти перечни могут оказаться полезными (особенно при введении в PC) не только автору-составителю. Безусловно перечень терминов, выбор установок и список научных центров далеко не полны, они показывают только круг интересов автора, а каждый специалист может сделать наиболее полезные для него дополнения и сокращения. Более того, данные из проводимых каждый год конференций будут являться естественными дополнениями, легко вводимыми с помощью PC.

Большую пользу в практической деятельности мог бы принести разработчикам справочный материал в виде списка оригинальных публикаций по ключевым словам, однако выбор последних настолько индивидуален, что должен делаться каждым для себя лично, иначе объем издания может возрасти до размеров энциклопедии

Автор надеется, что отсутствие перевода на русский язык не создаст лишних затруднений читателям, а замеченные неточности, ошибки, отзывы и возможные предложения просьба сообщить Н.В.Лазареву по адресу: 117259, Москва, Б.Черемушкинская 25, ИТЭФ или E-mail: Nikolay.V.Lazarev@itep.ru

Facilities, their short and full names, affiliation (Institute and country), parameters and last or important references.

Abbreviations: *Latin* and English accepted here and/or elsewhere	avg. – average; *ca* – *circa* – approximately, примерно; *cf* (*cf.*) – *confer* – сравни; c.m. (c. of m.) – center of mass; CW – continues wave; *e.g.* *(eg)* – *exemply gratia* - например; *et al* – *et alii* – и другие люди, (- *et alia* – и другие вещи); *etc* – *et cetera* – и так далее; *ibid.* – *ibidem* – там же; *i.e.* *(ie)* – *id est* – то есть; NA – not available; NC – normal conditions; NB – *nota bene* – особое примечание; p.a. *(pa)* – *per annum* - за год, ежегодно; pps – pulse per second; R&D – research and development; RT – room temperature; s. – since; *viz* – *videlicet* – namely, именно. References from English & Russian Conf. and Sci. Magazines: AC-98 = Accelerators Catalogue of HEACC'98 Conf. (Dubna, 1998); ADTT(A) = Accelerator Driven Transmutation Technology (and Application) Conf.; APAC = Asian Particle Accelerator Conf.; HEACC'98 Conf. (Dubna, 1998); C-89 = Catalogue of High Energy Accelerators, Tsukuba, 1989; C-96 = Compendium of Scientific Linacs CERN/PS 96-32 (DI); CC = CERN Courier; EPAC = European Particle Accelerator Conf.; NIM = Nuclear Instruments and Methods; NPN Int. = Nuclear Physics News International; PAC = Particle Accelerator Conf.; 1 - 16СУЗЧ = 1 - 16-е Совещание по Ускорителям Заряженных Частиц 1998 г.
Accelerators for Neutron Generators or SNS (Spallation Neutron Sources) in the world: Short pulse, Long pulse and CW. Facilities: operated, constructed, proposed.	1) **IPNS** (ANL, USA): 50 MeV H^- Linac and 450 MeV PS: 15 μA, 30 Hz, 7 kW, in operation since 1981, beam yield in 1997 is 63mAxhr; I.S.K. Gardner, "A Review of SNS Accelerators", EPAC-98, p. 98. 2) **KENS** (KEK, Japan): 40 MeV H^- Linac and 500 MeV PS: 4.6 μA, 20 Hz, 2.3 kW, (in operation since 1980, beam yield in 1997 is 4.5mAxhr), *ibid.*, p.98. 3) **MLNSCE** (*see here*, former LANSCE, LANL, USA): 800 MeV Linac and SR: 70 μA, 20 Hz, 56 kW, (since 1985, upgraded now to 200μA, and 30 Hz, yield in 1997 is 144mAxhr), *ibid.*, p.98. Only a small part of full 1mAavg. (17mA, 1 ms, 120 Hz pulse) output Linac current is used for this Neutron Source. Besides of that S.A. Wender (ADTT-94, p.663) proposed to direct full 1mA 800 MeV beam on 4 MWth molten salt target surrounded blanket (with 3kg Pu) giving 21n/p. 4) **ISIS** (RAL, UK): 70MeV H^- Linac and 800 MeV PS: 200 μAavg., 50 Hz, 160 kW, (in operation since 1985, beam yield in 1997 is 672mAxhr), *ibid.*, p.98 (And J. Carpenter, "Accelerators in Action: SNS's", CC Vol. 36, March 1996, pp. 4-8; and C-96, p.183). 5) **SINQ** (PSI, Switzerland): 72 MeV and 590 MeV Two Proton Cyclotrons: 1400 - 1520 μA, CW, 885 kW, (in operation since 1996, beam yield in 1997 is 500mAxhr), *ibid.*, p.98 (And "Villigen. World Record Cyclotron Beam Power", CC, Vol. 36, April/May 1996, p.5). 6) **SNS** (*see here*) proposal (Oak Ridge et al.): 1GeV, $130mA_{pulse}$, 1ms, 60 Hz, (~1mAavg.) H^- Linac and two Proton SR, *ibid.*, p.98. 7) **JHF** proposal (KEK, Japan): 200 MeV, 30mA, 0.5 ms, 25 Hz, H^-

	Linac and 3 GeV, PS, (0.2mAavg., 600 kW beam current), *ibid.*, p.98. 8) **NSP** proposal (JAERI, Japan), 1.5 GeV, 17mA, 2 ms, 50 Hz, SC H^- Linac (1mAavg., 1.5 MW beam current) and 1 or 2 SR, *ibid.*, p.98. 9) **ESS** (*see here*) proposal (Europe): 1.33 GeV, 107mA, 1.2 ms, 50 Hz, H^- Linac (3.7mAavg., 5 MW beam current with 175 MHz RFQ, 350 MHz DTL, 700 MHz CCL) and 2 Proton SR, *ibid.*, p.98. 10) **AUSTRON II** (*see here*) proposal (Austria): 130 MeV, 33mA, 187μs, 25 Hz H^- Linac and 1.6 GeV Proton Synchrotron (0.13mAavg., 200 kW beam current), *ibid.*, p.98. (And CC Vol.38, No.9, p.24, 1998). 11) **APT** (*see here*) proposal (LANL): 1.7 GeV, 100mA CW, 170 MW Proton Linac with 10 MeV, 100mA head part LEDA (*see here*). 12) **TRISPAL** (*see here*) proposal (CEA, France), 600 MeV, 352 MHz, 40mA CW, 24 MW Proton Linac;: J.-M. Lagniel, "High Intensity Linac Studies in France", Linac-98 p.706, " Beam Dynamics in RFQ", p.115 and M. Prome, "Major Projects for the Use of High Power Linacs", Linac-96, p.9. 13) **TRASCO** (*see here*): C. Pagani et al., "Status of the INFN High Current SC Proton Linac for Waste Transmutation", Linac-98, p.1013. 14) **KOMAC** *(see here):* At KAERI (Korea Atomic Energy Research Institute) from 1997 has been developed Project KOMAC with 20mA, 1 GeV proton/H^- pulse/CW Linac. 15) **KURRI** (*see here*): Kyoto University Research Reactor Institute has been proposed a hybrid system of an 20 MeV deuteron Linac and an existing small critical nuclear fuel assembly as a future neutron source. 16) **ENERGY AMPLIFIER**: C. Rubbia and J.A. Rubio, "A Tentative Program towards a Full Scale Energy Amplifier", CERN/LHC/96-11 (EET). There are two options: 1 GeV, 25-30mA CW H^+ Linac or two 88 MHz Cyclotrons as 120 MeV H^+ Injector and 0.12-2.5 GeV, 352 MHz 10-12mA CW SC Linac. 17) 25 MeV, 20mA, 1.2μs, 100 Hz, e^- Linac since 1969 is in operation at Bariloche (Argentina) as Pulsed n-Source; C-96, p.3. 18) 2 MeV, 20mA, 20-160μs, 120 Hz Proton RFQ (type PL-2, production of AccSys Technology) since 1991 is in operation at Idaho State U. as Pulsed n-Source for biomedical uses; C-96, p.24. 19) **MIT/FAA**: 900keV/u D^+, 8mAe, 425 MHz, 100μs, 640 Hz, 0.7m RFQ (DL-1 AccSys Technology) since 1989 is in operation at MIT, Cambridge for n-Radiography; C-96, p.39. 20) **PL-2** Proton (or Deuteron) RFQ: 1.75 MeV /u (1.92m), 5-50μs, 150-1500 Hz, 25mA, (0.5mAavg.) was constructed at LANL and since 1994 is in operation with Be target at ORNL; C-96, p.48. 21) Deuteron or Proton 1.7 MeV/u, 1mAe, 103 MHz (1.9m) IH Linac for PET Radio-Isotope production since 1991 is in operation at RLNR, Tokyo Inst. of Technology; C-96, p.91. 22) **GELINA**: e^- 200 MeV, 2.8 GeV, 12 A, 10ns-2μs (1ns, 100 A after compression), 800 Hz, 15m Linac since 1965 is in operation at Geel, Belgium for n-Physics; C-96, p.113.

	23) **MLUD-3**: Small-size 1.65 MeV/u, 97.8 MHz (p, D^+, H_3^+) Linac at Kharkov (in operation since 1975); C-96, p.182. 24) **MMFL**, (*see here* and C-96, p.158), during the March 1998 run at the 1st time worked for the Pulse Neutron Source, S.K. Esin, "MMFL Operations and Improvements", Linac-98, p.433. 25) Joint ITEP, MRTI, IHEP, INR RAS, JINR, Efremov Institute et al. Proposal (1 GeV, 30mA) described by O.V. Shvedov et al., "High Power Proton Linac - Electronuclear System Driver", Preprint ITEP 35-99, 1999.
AD	Antiproton Decelerator (from 2.76 GeV to 5.31 MeV, D=54 m) at CERN; S. Baird et al., "Design Study of the Antiproton Decelerator AD", CERN/PS 96-43 (AR); first beam – Sept. 1998 (goal); AC-98, p.11.
AFEL	20 MeV, 1.3 GHz, 20μs, 60 Hz e^- Linac for FEL is operated (since 1992) at LANL; C-96, p.42. e-mail: *sheff@lanl.gov*
AGS	Alternating Gradient Synchrotron on 24/33 GeV, (D=256.9 m), $6x10^{13}$ p/pulse (up to $4x10^{13}$ p/s), is operating since 1960 at BNL (Upton, NY); AC-98, p.72. e-mail: *alessi@bnl.gov*
AGS Booster	AGS Booster (since 1991) is proton synchrotron on 1.9-4 GeV for p and 95 MeV/n for Au used as injector AGS. AC-98, p.73.
AGS Linac (BNL Proton Linac)	AGS Linac on 200 MeV, 100mA, 10 pulses/s (constructed 1967/1970, upgraded in 1989 and 1996) was used early as AGS proton injector, then as AGS Booster 35-40mA H^- injector. C-96, p.56; AC-98, p.74. J.G. Alessi, "Upgrade of the BNL 200 MeV Linac", Linac-96, p.773. The 200 MHz Linac with $I_{avg.}$=146μA (37mA in pulse 530μs, 7.5 Hz) has now a BIRC – Brookhaven Isotope Resource Center (early named BLIP) that used for Radio-Chemistry, Radio-Biology and Isotope Production. e-mail: *alessi@bnl.gov*
AHF	Three Projects of Advanced Hydrotest Facility dedicated for conducting of explosively-driven hydrodynamic experiments have been proposed by LANL, LLNL and Sandia (SNL) laboratories. They are completely different ones: 1) 25-50 GeV, 10^{11} p/pulse Proton Linac; 2) 16-20 MeV, 3-6 kA LIA Induction e^- Linac; and 3) 12 MeV, 40 kA Accelerator HERMES III type; A.I. Toepfer, Linac-98, p.719.
AIRIX and PIVAIR	AIRIX flash X-Ray Radiographic Facility (CEA/CESTA, France) will consist of 60ns pulse e^- injector and 16 MeV Induction LIA (PIVAIR is its operating 8 MeV prototype). PAC-97, Reports 7P71-72; E. Merle, "Status of …", PAC-99, p.3260; C-96, p.115.
ALPI	Heavy Ion 6-20 MeV/u SC 80/160 MHz with 52 independently phased resonators CW Linac at INFN LNL, Legnaro Italy. Species from S to U; A. Danielli, EPAC-96, p.301; C-96, p.149. e-mail: *fortuna@lnl.infn.it*
ALS Linac	Advanced Light Source: 56 MeV e^- Linac was constructed at LBNL in 1987/1991 to serve as preinjector for ALS Center Facility. C.H. Kim, C-96, p.8; C.C. Lo, PAC-99, p.3131. e-mail: *chkim@lbl.gov*

ANKA	Angstrom Karlsruhe: it is Project of intense 0.2nm X-ray SRS Facility for advance technology processes (LIGA: Lithography, Electroforming and Plastic Molding); it will consist of 50 MeV, 10mA e^- Linac, 500 MeV Booster and 2.5 GeV SR; H.O. Moser, EPAC-96, p.276; and EPAC-98, p.632, p.635; В.П. Белов, 15 СУЗЧ, том 2, с.374.
ANL H^- Linac	50 MeV, 12mA Argonne National Laboratory IPNS (Intense Pulsed Neutron Source) H^- Injector Linac (s. 1962 ZGS Injector, then upgraded and now it is: H^- beam 50mA, 70μs, 30 Hz); V. Stipp, "The ANL 50 MeV H^- Injector", Linac-96, p.74; C-96, p.29. e-mail: *vstipp@anl.gov*
APS, APS Linac	Advanced Photon Source (at ANL, USA) is 7 GeV e^+/e^- storage ring with e^- current up to 18mA. From 1995 it produced 500 kW of X-ray power. A.H. Lumpkin, Linac-98, Reports TH4058, TU4059, TH4042, -4102, -4103; APS 450 MeV, 0.03μs, 48 pps, 60 Hz burst (each 0.5s) Injector Linac: C-96, pp.25-26. e-mail: *mwhite@aps.anl.gov*
APT	R&D of Accelerator Production of Tritium for the "APT Project" begin at LANL, it is CW Proton Linac on 1.7 (or 1.013) GeV, 100mA beam current, (i.e. up to 170 MW average power, that, as it is became now known, will be enough for ~3 kg/year yield of tritium). RFQ, CCDTL and CCL up to 211MeV cavities are NC, then – SC. LEDA (*see*) is the 1st part of APT Linac. G. Lawrence, "High-Power Proton Linac for APT; Status of Design and Development", Linac-98, p.26, and, *ibid.*, Reports: L.W. Funk, "Development of a Commissioning Plan for the APT Linac" p.412; S.S.Kurennoi, "Analyses of Methods to Decrease Beam Loss Below of 1nA/m", p.121, P. Balleyander, "Q Computation for SC Cavities", p.133; R.W. Street, "AC/DC Converter Power Supply for 250x1 MW Klystrons"; D. Rees, "Test of 700 and 350 MHz Klystrons", p.231; R.L. Wood, "Engineering Development of CCDTL", p.267; M. Cole, "Test Results for CCDTL Cold Model", p.279; D. Doily, "Simulation of High Average Power Windows", p.297; L.M. Young, "Beam Dynamic Design up to 211 MeV NC Section", p.421; J.T. Bradley, "High Power Controlled Solid State High Voltage Modulator", p.561; S. Chapelle, "Development of a Raster Electronics System for Expanding the APT Beam"; p.612; D.W. Doll, "Low to High Energy Beamstops" p.615; K.M. Redler, TU 4091, "Thermal and Hydraulic Analysis of Beamstops"; K. Kishiyama, "Testing of Vacuum Pumps for the APT / LEDA RFQ", p.624; M.R. Buckner "Medical Isotope Production with APT Facility", p.636; T.P. Wangler, "Basis for Low Beam Loss in the High-Current APT Linac", p.657; S. Habib, "Needs of Particle-In-Cell simulations with up to 10E8 particles), p.701; B. Dolphin, TH 4037, "RAMI – Reliability, Availability, Maintainability and Inspectability – Modelling of the APT Accelerator"; M. McCarthy, "Overview of the APT RF Power Distribution System"; J.A. Waynert, "Thermal Analysis and Optimization of the APT 210 kW Power Coupler"; W.B. Haynes, TH 4092, "Low-β, Single-Cell SC Cavity Tests" ; G.Laughon, TH 4095, "APT Cryogenic System Design"; B.M. Campbell, "Engineering Design of the APT Cryomodules"; K.C.D. Chan,

	"Progress of APT SC Linac Engineering Development"; R. Floersch, "Resonance Control Cooling System APT/LEDA RFQ", p.992; M.T. Lynch, "APT and LEDA High Power RF Systems", p.1021; Many data of APT systems design are considered on next EPAC-98, PAC-99 and ADTTA-99 Conferences (in the last one: see P.W. Lisowski, pp.643-652). Details may be asked by: (http://www.apt.lanl.gov)
ARUS	Yerevan 6 GeV Electron Synchrotron D=69 m was constructed in 1967 at YerPhI (Armenia); AC-98, p.41. e-mail: *oksuzian@vx1.yerphi.am*
ASTRID SR	J.S. Nielson et al, "New Development at the ASTRID SR", D=40m, 580 MeV, 200mA stored e^-, and to 80 MeV up to 1μA stored ions (at ISA Univ. of Aarhus, Denmark) EPAC-98, p.406.
ATF (BNL)	Accelerator Test Facility at Brookhaven is (s.1991) a laser Linac complex (CO_2 laser system with 50 MeV e^- Linac that may be upgraded to up 100 MeV) dedicated for beam physics and radiation source R&D. X.J. Wang, "Brookhaven Accelerator Test Facility Energy Upgrade", Linac-98, MO4001; C-96 p.55. e-mail: *ilan@bnl.gov*
ATF (KEK) and its e^- Injector Linac	Accelerator Test Facility at KEK is Electron Synchrotron with orbit length 138.6 m, that comprises (s.1995) of 1.54 GeV (2 GeV) S-band Linac and Damping Ring, M. Kihara, "The Japan Linear Collider Project", EPAC-98, p.63; CC Vol.37, No.8, p.16; AC-98, pp.52-53; C-96, p.95. e-mail: *takeda@kekvax.kek.jp*
ATLAS	Argonne (s. 1978, ANL, USA) Tandem Linear Accelerator System and CW, 97 MHz SC post-accelerator can now accelerate ions up to uranium to energies so high as 1.9 GeV. CC, Vol.36, No.4, June 1996, p.18; K.W. Shepard, "A Low Charge State RFQ", Linac-98, p.382; and R.C. Pardo, *ibid.*, p.995; C-96, p.30. e-mail: *pardo@anlphy.phy.anl.gov*
ATR	ATR (at BNL, USA) is AGS – Transfer Line - to RHIC, which transport beams from Booster Synchrotron. In tern the Booster received input beams from either a Tandem Van de Graaf (heavy ions) or Linac (protons); D. Bruno, "Overview of the ATR ", PAC-97, Report 5P1.
AURORA – 2D	It is new racetrack type compact e^- SR Ring on 700 MeV, (stored current 300mA), together with 7 T SC wiggler (λ=nm), that is very suitable for X-ray lithography at Lab. for Quantum Equipment Technology, Tanashi, Tokyo; G.H. Luo, T. Hori et al, EPAC-98, p.581.
AUSTRON II	It is proposal (Austria): 130 MeV, 33mA, 187μs, 25 Hz H^- Linac and 1.6 GeV Proton Synchrotron (0.13mAavg., 200 kW beam current) will be used as SNS; I.S.K. Gardner, "A Review of SNS Accelerators", EPAC-98, p. 98; and CC Vol.38, No.9, p.24, 1998.
AWA	Argonne Wakefield Accelerator: 18 MeV, 1.3 GHz, 25μs, 30 Hz, 7kW e^- Linac (since 1994); C-96, p.28. e-mail: *jds@hep.anl.gov*
Beijing e^+/e^- Linac	1.8 GeV, 2.8 GHz, 2.4A (e^-), 9mA (e^+), 3μs, 25 Hz, 200 m Linac is operating (since 1987) as Injector of Beijing e^-/e^+ Collider; C-96, pp.67-68. e-mail: *wangj@bepc2.ihep.ac.cn*

Beijing FEL	Beijing FEL Facility Driver is 30 MeV, 0.2A, 2.8 GHz, 4.5μs, 10 Hz e^- Linac; C-96, p.69. e-mail: *xiejl@bepc3.ihep.ac.cn*
Beijing p Linac	Beijing 35 MeV, 60mA, 201 MHz, 150μs, 12.5 Hz Proton Linac (1985) for Physics and Medicine; C-96, p.70. e-mail: *luozh@bepc3.ihep.ac.cn*
BEPC and its Linac-Injector	Beijing Electron-Positron Collider at IHEP on 1.55-2.0 GeV, (2.8 MeV - Project), luminosity $1.7x10^{31}$, Beijing (Пекин), construction 1984 / 1988. Y. Wu "BEPC Upgrade and BTCF Design": EPAC-98, p.48; G. Pei, "BEPC Injector Upgrades", Linac-98, MO4002; AC-98, p.45. Its 1.8GeV, 3μs, 2.4A, e^-/e^+ Injector: C-96, p.67-68. e-mail: *wangj@bepc2.ihep.ac.cn*
BESSY II	It is 3rd generation of Synchrotron Radiation machines, which consists of 50 MeV Racetrack Microtron, 1.7 GeV Synchrotron and Storage Ring. Commissioning at 10mA beam began on April 1998, on 3 month ahead of schedule. D. Kramer et al, (Berlin Univ.) "Status of the High Brilliance Synchrotron Radiation Source BESSY II", EPAC-98, pp. 262, 436, 900, 1482, 2163.
BIRC, BLIP	BIRC – Brookhaven Isotope Resource Center (early named BLIP – Brookhaven Linac Isotope Production Facility); A, Kponou et al., "A New Optical Design for the BNL BLIP Transport Line", Linac-96, p.770.
BNL Linac	BNL 200 MeV H^- Injector Linac (1970, upgraded 1989, 1996); C-96, p.56 and *see here* AGS Linac. e-mail: *alessi@bnl.gov*
Boeing Linac and its Injector	Linac is ultraviolet-infrared FEL Driver (120 MeV, 100mA, 1.3 GHz, 7ps during 200μs, 30 Hz) at Seattle (1997); J.L. Adamski, PAC-95, p.251; C-96, p.61. Its 25 MeV, 230mA, 433 MHz, 800μs e^- Injector, *ibid*, p.62. e-mail: *vetamx00@ccmail.ca.boeing.com*
Booster SC and NC Linacs (Post-Accelerators)	*1)* Florida State U. HI 97 MHz Post-Tandem Linac (1987) consists of 12 SC independently phased cavities 10 MeV/u, 25nAe, Si^{8+} Project description: E.G. Myers in NIM B40/41, 1989, p.904; C-96, p.23. e-mail: *myers@nucmar.physics.fsu.edu* 2) ATLAS - Argonne Tandem Linear Accelerator System and CW, 97 MHz SC Linac, *see here.* 3) Kansas State U. HI 3-5 MeV/u, 97 MHz Post-Tandem SC Linac (1989); C-96, p.34. e-mail: *tgray@phys.ksu.edu* 4) Sandia EN-Tandem HI Au^{28+}, (NC) Booster 1.9 MeV/u, 6m long Linac; C-96, p.40. e-mail: *hschon@somnet.sandia.gov* *5)* Washington U. HI 5-15 MeV /u, 150 MHz Post-Tandem Linac (in operation since 1987) consists of 24 SC quarter wave resonators. Project description: D.W. Storm, IEEE NS-32, 1985, p.3262; its parameters: C-96, p.63. e-mail: *storm@npl.washington.edu* 6) ISOL – Isotope Separator On-Line: 1.05 MeV/u, 51 MHz, 5.6m, 50μs-3ms, up to 1kHz, 200μA for N^+ (and other ions and other q/A) Linac is operating at INS, Tokyo (since 1996); C-96, p.84. e-mail: *arai@ins.u-tokyoac.jp* 7) JAERI Tandem-Booster 30 Q/A MeV/u (from C to Au at q=12-28)

	130 MHz Linac (operational since 1993); C-96, p.87. e-mail: *takeuchi@tdm.alph1.tokai.jaeri.go.jp* 8) TIT-IH-2 Booster HI Linac (3.4 MeV/u, 96 MHz, for C, O, Cl, P ions) is operating (s. 1987) at Tokyo Inst. of Technology; C-96, p.89. e-mail: *thattori@nr.titech.ac.jp* 9) Heavy Ion Post-Accelerator: 6 MeV/u, 78/156 MHz Linac is operating (s. 1976) at Garching; C-96, p.146. e-mail: *nolte@physik.tu-muenchen.de* 10) Heidelberg Heavy Ion 15 MeV/u, 108.5 MHz, 1μAe Booster for 12 MV Tandem (1979) at Max-Planck Inst.; C-96, p.143 and 2nd High Current Injector: C-96, p.144. e-mail: *rep@hering.mpi-hd.mpg.de* 11) SchweIN Heavy Ion Booster after MP 2.4MeV/u Tandem at Garching. It is 6 MeV/u 78/156 MHz IH Linac (s. 1976); C-96, p.146. e-mail: *nolte@physik.tu-muenchen.de*
BTCF	Beijing Tau-Charm Factory, Y. Wu "BEPC Upgrade and BTCF Design", EPAC-98, p.48. e-mail: *ccappiello@lanl.gov*
CAMD Linac	200 MeV, 3 GHz, 25-70 A, 0.2μs Linac is (since 1991) Injector for SLC (Syn. Light Source) in Center for Advanced Microstructures and Devices at Baton Rouge; C-96, p.35. e-mail: *bluem@rocamd.camd.lsu.edu*
CANDELA	3.5 MeV, 3 GHz, 1000 A, 15ps, 12.5 Hz e^- RF gun is Photo-injector for Laser at LAL, Orsay; C-96, p.127. e-mail: *travier@lalcls.in2p3.fr*
CEBAF (TJNAF)	On SC Continuous Electron Beam Accelerator Facility project parameters 4.0 GeV, 200μA CW was achieved. Output energy in August 1998 for e^-/e^+ raised to 4,5-5.0-5.5 GeV; C.E. Reece, "Achieving 800 kW CW Beam Power and Continuing Energy Improvements in CEBAF", Linac-98, TU4025; C-96, p.60; AC-98, p.69. e-mail: *xiejl@bepc3.ihep.ac.cn*
CELSIUS	Cooling with Electrons and Storing of Ions from the Uppsala 1.36 GeV Synchrotron (Storage Ring).M, Bengtsson et al., "New Developments at CELSIUS ", EPAC-98, p.514.
CERN Linac2	50 MeV, 202 MHz, 180mA Proton Linac (CERN); E. Boltezar et al., "The New 50 MeV Linac", Linac-79, p.66; RFQ Modification - C.E. Hill et al., "Performance of the CERN Linac2 with a High Intensity Proton RFQ", Linac-94, p,175; Recent Operation – H. Charmot et al., "Operational Experience with the CERN Hadron Linacs", Linac-96, p.360; C.E. Hill et al., "Present Performance of the CERN Proton Linac", Linac-98, p.427; AC-98, p.12; C-96, p.173. e-mail: *ceh@ps.msm.cern.ch*
CERN Linac3	CERN Heavy Ion Linac, Ion Species – Pb^{53+}, 4.2 MeV/amu; Design – D. Warner, "CERN Heavy-Ion Facility Design Report", CERN 93-01, 1993; First Results – H. Haseroth, Pb Injector at CERN", Linac-96, p.283, Recent Operation - H. Charmot et al., "Operational Experience with the CERN Hadron Linacs", Linac-96, p.360; AC-98, p.13; C-96, p.175. e-mail: *ceh@ps.msm.cern.ch*
CERN PS, SPS and PSB	Super Proton Synchrotron / heavy ion accelerator; 450 GeV; D.J. Simon, "The CERN PS Complex: a Versatile Particle Factory", EPAC-96, p.295;

	K. Schindl, "The PS Booster as Pre-Injector for LHC", Particle Accelerators, 1997, Vol.58 pp. 63-78; K. Schindl, "High Brightness Hadron Injector for TeV Colliders", Proc. of the HEACC'98, (Dubna); AC-98, pp.8-10. " 40 Years of CERN's PS ", CC Vol.39, No.10, p.15.
CESR, CESR Linac	Cornell Electron-Positron Storage Ring – 6 GeV Collider with Luminosity 6x10^{32}, constructed 1978 / 1979 at Cornell Univ. D. Rice, "CESR: Steps Toward a B Factory", EPAC-96, p.17; AC-98, p.59; CC, Vol.38, No.6, 1998, p.20; Linac-98, TH4044. CESR e^-/e^+ 350 MeV Injector Linac: C-96, p.50-51. e-mail: *ric@lns62.lns.cornell.edu*
CLIC	Compact Linear Collider (CERN). Study of proposed Project: C-96, pp.188-9; J.P. Delahaye, " CLIC a 0.5 to 5TeV e^+/e^- Compact Linear Collider", it will consists of two 13.75 km e^+ and e^- (30 GHz, 100 MV/m) Linacs and RT Ring, orbit length 768m. EPAC-98, p.58. CC, Vol.38, No.6, 1998, p.18; and "SILUND-21 as a CLIC Driver", 15 СУЗЧ, с. 58.
CLIO	Centre Laser Infra-red Orsay 70 MeV, 3 GHz, 20A, 12μs, 50 Hz e^- Linac (1991) for FEL; C-96, p.125. e-mail: *chaput@lure.u-psud.fr*
COLLIDERS, ***see here:***	BEPC; BTCF; CESR; CLIC; DAFNE (DAPHNE); HERA; JLCP; KEKB; LEP2; LHC; Muon $\mu^+ \mu^-$ Collider; NLC; PEP2; RHIC; SBLC; SLC; TESLA; TEVATRON; VLEPP; VLHC. Review of Colliders see: И.Н. Мешков, 16СУЗЧ, том1, с 9.
COSY	Cooler Synchrotron at Julich is stochastic cooling system for both – transversal and longitudinal direction polarized p^- to max. momentum from 600keV/c to 3.3 GeV/c; its performance: U. Bechstedt, EPAC-98, p.541.
CPS	CERN Proton Synchrotron, 28 GeV, was commissioned in 1959, attained 2.7x10^{13} p/pulse in July 1997. D.J. Simon, "The CERN PS Complex: a Versatile Particle Factory", EPAC-96, p.295. AC, p.9.
CRITS RFQ	Chalk River Injector Test Stand was passed to LANL where it used now in LEDA Program. Linac-98, TH4045, -54; J.D. Schneider, "Installation CW RFQ at LANL", Linac-94, p.149. C-96, p.49. e-mail: *jsherman@lanl.gov*
CTF, CTF I and CTF II	CLIC Test Facility, C-96, p.172. CTF I was operated from 1990-1995. The 2nd phase of the Compact Linear Collider (CLIC) Test Facility (CTF II) at CERN aims to demonstrate the feasibility of a linear e^-/e^+ collider based on 30 GHz technology using high-charge drive beam, parallel to the main beam, as the RF power source. I. Wilson et al., "Demonstration of Two Beam Acceleration in CTF II", Linac-98, MO4017-18. See also CC, Vol.38, No.6, 1998, p.18.
DARHT and DARHT ITS	Dual-Axis Radiographic Hydrodynamics Test Facility is under construction at Los Alamos by efforts of LANL, LLNL and LBNL. The facility will contain two (1999 and 2001) e^- LIA accelerators (20 MeV, 60ns, 4kA bursts) arranged perpendicular to each other. H.L. Rutkowski, "An Induction Linac for the Second Phase of DARHT", Linac-98, Reports

	MO2001, -4033, -4054, TU4028, -4033, TH4056, TH4040; C-96, p.43. DARHT ITS: is 6 MeV, 3kA, 60ns single shot pulse (1991) Integrated Test Stand - engineering prototype for DARHT; C-96, p.44. Long pulses: E.C. Burges, PAC-99, p.3257. e-mail: *burns_michael_j@lanl.gov*
DAΦNE BOOSTER	DAΦNE Booster Ring (Accumulating Ring D=20 m) is Electron (Positron) Synchrotron on 510 MeV and 10^{11} e^-/s or e^-/pulse constructed at INFN-LNF (1993/1996), it serves as Injector for DAΦNE Collider. M, Preger et al, "Performance and Operation of the DAΦNE Accumulator", EPAC-98, p.415 and p.406; AC-98, p.24.
DAΦNE LINAC	DAΦNE Electron/Positron Linac on 700 MeV, 30 mA (e^-), 550 MeV, 70mA (e^+), 60 m length was constructed 1992/1996 and used as injector DAΦNE Booster (Accumulating) Ring at INFN LNF, Frascati Italy. R. Boni et ai., EPAC-98, p.764. AC-98, p.25. C-96, pp.147-8. e-mail: *sannibale@lnf.infn.it*
DAΦNE, (DAFNE, DAPHNE)	Collider e^+/e^- on 2x0.51 GeV, 2x5 A (with e^+/e^- Linac and Booster or Accumulator ring - Frascati Phi-Factory) was constructed at INFN-LNF 1993 / 1997. AC-98, pp. 23-25; G. Vignala, " DAΦNE: The First Φ Factory", EPAC-96, p.22; Biscari, "Performances of ...", EPAC-98, p.81.
DELTA Inj. Linac	100 MeV, 3 GHz, 0.6A, 2-20ns, 100 Hz e^- Linac serves as injector of 1.5 GeV SRLS DELTA Facility at Dortmund U. (s. 1994); T. Weis, EPAC-96, p.834; C-96, p.137. e-mail: *weis@marvin.physik.uni-dortmund.de*
DESY	The Deutsche Electron Synchrotron: DESY – accelerator complex consisting of the HERA (30/820GeV e^- and p Collider - Storage Ring), DORIS 3 (since 1993 dedicated light source) and the injector and booster machines: Linac 1 (200 MeV e^-), Linac 2 with PIA (450 MeV e^+/e^-), Linac 3 (50 MeV H^-), Synchrotron DESY 2 (7 GeV e^+/e^-), proton Synchrotron DESY 3 (7.5 GeV p), PETRA 2 – injector for HERA.
DESY 2	Deutsche Electronen e^+/e^- Synchrotron on 7 GeV (now 8 GeV) is injector for DORIS and PETRA constructed in 1985 at Hamburg; AC-98, p.19.
DESY 3	7.5 GeV proton synchrotron - injector for PETRA 2, (1989); AC-98, p.20.
DIAMOND	DIAMOND – 3 GeV, 500 MHz, C=340.8m Light Source Project was proposed in CLRC Daresbury Lab. J.A. Clarke, EPAC-98, p.614. In CC Vol.40 (May, 2000), No.4, p.7 have been noted that their own SOLEIL Project France government was cancelled and decided instead to become a major partner in UK DIAMOND SRS Project that should be operational in 2006 at RAL (Rutherford Lab., Oxford).
DORIS 3	Collider e^+/e^- on 4.5 GeV at DESY (1973, Hamburg). AC-98, p.18.
Duke Linac	295 MeV, 0.2 A, 30ns - 1μs, 5 Hz, 2.8 GHz e^- Linac - Injector (1994) of SR for FEL at Durham; see paper P.G. O'Shea in PAC-95; C-96, p.57. e-mail: *ashea@fel.duke.edu*
EGP-15	Status and Development of the 6.5 MV Tandem (IPPE, Obninsk), V.A.

	Romanov, EPAC-98, p.693.
Electron and e+ Linacs for scientific purposes (without of names, from C-96)	1) 25 MeV, 1.2μs, 100 Hz, 20mA in operation s.1969 as Pulsed n-Source at Bariloche (Argentina); C-96, p.3. e-mail: *granada@cab.cnea.edu.ar* 2) 300 MeV, 2μs, 360 Hz, 220mA in operation (since 1965) at Saskatchewan U. (Canada); C-96, p.6. e-mail: *jjm@skatter.usask.ca* 3) 165 MeV, 1-20ns, 1440 Hz, 10A, or 3μs, 300 Hz, 0.8A in operation (s. 1969) at LLNL (USA); C-96, p.10. e-mail: *tcovan@llnl.gov* 4) 100 MeV, 1μs, 60 Hz, 2.8 GHz, in operation (s.1967) at Monterey (USA); C-96, p.15. e-mail: *maruyama@physics.nps.navy.mil* 5) 22 MeV, 5-30ps up to 1kA, 100ns-3μs, 1.5-3 A_{peak}, 1-800 Hz, (since 1968), at ANL (USA); C-96, p.27. *jonah@anlchm.chm.anl.gov* 6) 9.5 MeV, 2ns-1.5μs, 1- 60 Hz, 4A, 4kW, 2.8 GHz, in operation (since 1994) at Notre Dame(USA); C-96, p.33. e-mail: *bentley.1@nd.edu* 7) 30 MeV, 4.5μs, 10 Hz, 0.2A, 2.8 GHz FEL-Driver for e^- Linac (s. 1991), at IHEP, Beijing, C-96, p.69. e-mail: *xiejl@bepc3.ihep.ac.cn* 8) 45 MeV, 10ns-3μs, 200 Hz, 2A, 2.8 GHz for e^- Linac operating (s. 1974) at Hokkaido U.; C-96, p.79. e-mail: *tem@hune.hokudai.ac.jp* 9) 300 MeV, 3μs, 300 Hz, 100mA, 2.8 GHz, e^- Linac operating (s. 1967) at Tohoku U.; C-96, p.82. e-mail: *oyamada@thklnl.lns.tohoku.ac.jp* 10) 120 MeV, 2.8 GHz, 5-10μs, 50-100 Hz, 1mAavg., 20m e^- Linac is tuning (1996) at Yerevan; C-96, p.108. e-mail: *oksuzian@vx1.yerphy.am* 11) 75 MeV, 2.8 GHz, 0.5-1μs, 50 Hz, 10μAavg., 25m e^- Linac operating (s. 1965) at Yerevan; C-96, p.109. e-mail: *oksuzian@vx1.yerphy.am* 12) 15 MeV, 3 GHz, 14μs, 2-5kHz, 0.1A, 7m e^- Linac operated (s.1984) at Gent, Belgium; C-96, p.114. e-mail: *wim.mondelaers@rug.ac.be* 13) 15 MeV, 1.3 GHz, 6A, 2ns-2μs, 50 Hz, 5m length e^- Linac (s. 1969, at Hahn-Meitner Inst.) ; C-96, p.129. e-mail: *janata@hmi.de*
ELECTRONICA U-006, (-3)	1) U-006 is 10 MeV, 1.9 GHz, 5μs, 1-200 Hz e^- Linac operating s. 1990 at YerPhI (Armenia,); C-96, p.107. And 2) U-003: 5 MeV, 1.9 GHz, 5μs, 1-200 Hz e^- Linac is operating s. 1989 at YerPhI; C-96, p.111.
ELETTRA and its Injectors	ELETTRA (Trieste, Italy) is 2 GeV (circumference 259.2m) Synchrotron Light Source of 3rd generation and the world's brightest sources of VUV and soft X-ray radiation. J. Bocehetta, "Operational Experience with ELETTRA", EPAC-96, p.76. Preinjector 100 MeV, 3 GHz, 10-300ns, 10 Hz e^- NC Linac and 1.2 GeV, 3 GHz, 20mA Main Injector NC Linac; C-96, pp.150-152. C.J. Bocchetta, EPAC-98, p.568, p.587. e-mail: *carlo.rossi@elettra.trieste.it*
ELFE	Electron Laboratory For Europe - G. Geschonke & E. Keil Proposal (CERN SL/98-060 RF) of Recirculating 25 GeV, 150μA, quasi-CW e^- Accelerator, using dismounted the LEP SC RF cavities. See too CERN NuPECC 99-10, Ed. H, Burkhardt.
ELIOS	100 MeV, 3 GHz, 11mA, 5-300 ns, 10 Hz NC e^- Linac will be Injector for Booster of SOLEIL SR; C-96, p.124. e-mail: *chaput@lure.u-psud.fr*
ELISA	S.P. Moller, (Univ. of Aarhus, Denmark),"Design and first operation of

	the 25keV Electrostatic Storage Ring ELISA", C= 7.6 m. EPAC-98, p.73.
ELSA	20 MeV, 433 MHz, 500A, 150μs, 20 Hz e^- Linac for FEL is operating since 1991 at CEA, France; C-96, p.117. e-mail: *joly@bruyeres.cea.fr*
ELSA Injector Linac 1 and Linac 2	ELSA (Electron Stretcher Accelerator – Synchrotron) Injectors are: 1) 20 MeV, 3 GHz, 0.8A, 1μs, 50 Hz e^- Linac 1 (s. 1966) at Bonn U.; C-96, p.131. And 2) 30 MeV, 3 GHz, 0.6A, 1μs, 50 Hz e^- Linac 2 (s. 1995) at Bonn U.; C-96, p.132. e-mail: *husmann@axpib.physik.uni-bonn.de*
ELYSE	M. Gaillard, et al., "A High Charge Photoinjector for the Pulsed Radiolysis Facility - ELYSE" (at LAL, Univ. de Paris), it will produce 4-9 MeV, 1nC, 5ps width pulses of e^- beam. Linac-98, TU4102.
EPLUS	Project of 340 MeV, 3 GHz, 0.7A, 5-300 ns, 10 Hz e^+/e^- Linac for e^+ production and injection in SOLEIL SR at LURE, Orsay; C-96, pp.122-123.; R. Chaput, "Linac Injector for SOLEIL", EPAC-96, p.801. e-mail: *chaput@lure.u-psud.fr*
ESRF and its Preinjector	European Synchrotron Radiation Facility (C= 850 m) at CEN (Grenoble, France) is the 3rd generation of Synchrotron Radiation machines. J.M. Lefebvre, "Higher Brilliance at the ESRF", EPAC-96, p.67. Its Preinjector 200 MeV, 3 GHz, 20mA, 2ns-1.2μs, 10 Hz e^- Linac (1991); C-96, p.118.
ESS	Project of European Spallation Source (at KFA Julich) consists of 1.33 GeV, 107mA, 1.2 ms, 50 Hz (3.7mAavg., 5 MW) Proton (H^-) Linac and two compressor Storage Rings. Linac-98, TU4056, TH4057 (70mA, 1.2 ms, 50 Hz, 120 mA/cm^2 Volume H^- Ion Source). W.F. Braeutigam, "Design of SC Linac as Option for ESS", PAC-99, p.3549 and p.959.
ETA II	6 MeV, 2kA, 70ns, 1kHz e^- LIA (Induction Linac) constructed (in 1989) at LBNL; C-96, p.12. e-mail: *gw@llnl.gov*
FACILITIES proposed on Linac-98 Conference (without of facilities name)	1. "Feasibility Study of a 2 GeV SC H^- Linac as Injector for the CERN PS", H. Haseroth et al., Linac-98, MO4026. 2. "LINACs for Exotic [Radioactive Ion] Beams", P. Bricault, *ibid.*, Report MO2004. 3. "Design of a High-Power [100 MeV, 100 kW] Electron Linac for the Positron Factory", H.Sunaga et al., *ibid.*, Report MO4003. 4. "Construction of the 8 GeV e^-/ 3.5 GeV e^+ Injector Linac for KEKB", A. Enomoto, *ibid.*, Report MO4006. 5. "Parameters of the RFQ for a New IHEP Booster Linac" and "Commissioning of the RFQ Linac" V.A. Teplyakov et al., *ibid.*, Reports MO4008 and TH4003. 6. "A 100MeV SC Proton Linac: Beam Dynamics Issues", A. Pisent (INFN), *ibid.*, Report MO4010. 7. "Status of the SC Heavy Ion Tandem-booster Linac at JAERI, S. Takeuchi, *ibid.*, Report MO4011. 8. "Laser Driven Subpicosecond Electron Linac", R.A. Crowell (ANL), *ibid.*, Report MO4025. 9. "The LINAC of the Munich Fission Fragment Accelerator", O. Kester et al., *ibid.*, Report MO4028.

	10. "Beam Dynamics in a High Current (25mA, 100 MeV – 1.6 GeV) SC Proton Linac for Waste Transmutation and Energy Production", P. Pierini et al., (INFN), *ibid.*, Report MO4046. 11. "Design of 1 GeV, 30mA Proton Linac with SC Cavities", B.P. Murin, *ibid.*, Report MO4099 (and ADTTA-99, p.764).
FAKEL	*See here*: Linac-60.
FELI	Free Electron Laser Research Institute 165 MeV, 80 A, 2.8 GHz, 24μs, 10 Hz e^- Linac in operation s. 1994 at Osaca; T, Tomimasu, NIM, June 1996 and NIM, A375, p.626; C-96, p.72.
FELIX	Free Electron Laser for Infrared Experiments is 45 MeV, 0.2 A, 3 GHz, 20μs, 10 Hz e^- Linac - FEL-Driver (s.1991) at Netherlands; C-96, p.153. e-mail: *meer@rijnh.nl*
Fermilab 400 MeV Proton Linac	FNAL 200 MeV, up to 250-300mA Proton Linac was constructed 1968/1970, then it upgraded 1989/1993 and achieved energy 401 MeV at 50mA H^- ions. It is part of Tevatron (*see here*) and served as Injector for 8 GeV PS Booster Synchrotron. AC-98, p.67; C.W. Schmidt, "Commissioning of the 400 MeV Linac at Fermilab", EPAC-94, Linac-96, p.329; "Fermilab Linac Operations, Studies and Improvements", Linac-98, TU4019. C-96, p.31. e-mail: *cschmidt@fnal.gov*
Fermilab Accumulator	It is 8 GeV Proton Synchrotron (Antiproton Storage Ring D=505 m) constructed 1982/1985, it is part of Tevatron (*see here*) and served as Injector for Main Ring. AC-98, p.65.
Fermilab Booster	8-10 GeV Proton Synchrotron (D=151 m), it is part of Tevatron (*see here*) and serves as antiproton source and Injector for Fermilab Main Ring. AC-98, p.66.
Fermilab Debuncher	It is 8 GeV Proton Synchrotron (D=477 m) and it is a part of Tevatron (*see here*) and serves as Antiproton Injector for outer relative it Accumulator Ring (D=505 m). AC-98, p.64.
Fermilab Main Injector	120-150 GeV Proton Synchrotron Ring D=1056 m that will be Tevatron's Injector constructed 1992/1998 (goal) at FNAL. AC-98, p.63.
FNAL 1 GeV LINAC	A proposed Linac injector for a new proton source complex at Fermilab would be sized to accelerate ~100mA of H^- beam in ~200 μs pulse at 15 Hz repetition rate (10^{14}ppp). An alternative proposal is to add 600 MeV, 805 MHz SCC Linac to the existing 400 MeV Linac. C.W. Schmidt et al., "1GeV Linac at Fermilab", Linac-98, TU4009 and PAC-99, WEA113.
FXR	16-19 MeV, 2.5kA, 60-80ns (1980/1982) e^- beam LIA for production of X-rays at LLNL; C-96, p.11.
Gaertner	Gaertner 90 MeV, 1.3 GHz, 15ns-5μs, up to 3A e^- Linac for research at Troy NY (s. 1960); C-96, p.53. e-mail: *brandt@rpi.edu*
GELINA	200 MeV, 3 GHz, 12 A, 0.01-2μs, 800 Hz e^- Linac for n-physics at Geel (since 1965, Belgium), C-96, p.113.

GENEPI	(Generateur de Neutrons Pulses Intenses). J.M. De Conto " GENEPI: A High Intensity Deutron Accelerator for Pulse Neutron Production", EPAC–98, p.685. It is HV 240 kV, ~1μs, up to 3 kHz rep. rate, 50mA pulse (200μAavg.) current D-T neutron generator, that will be used (after 1999) in Caradashe (France) with exp. reactor MASURCA.
HELIOS-1, (-2)	HELIOS-1 and –2 are SC 700 MeV Compact Synchrotrons use as SRS for X-ray lithography, constructed at Oxford and CLRC Daresbury Lab., UK; R. Anderson, EPAC-98, p.259.
HERA	HERA is a 6-km orbit length proton/electron (positron) double Ring Collider constructed 1984/1990 at DESY (Hamburg). The proton and electron (positron) beams are accelerated up to 820 and 27.5 GeV respectively (since 1992) and collide at two IP; W. Bialowons, "Status of HERA", EPAC-96, p.3; E. Gianfelice-Wendt, "HERA Upgrade Plans", EPAC-98, p.118; AC-98, p.16.
High Power p and H^- Linacs, Review of …	M. Mizumoto, LINAC-94, pp.317-321; G.H. Rees, EPAC-94, p.249; A. Jason, PAC-95, p.1183; G.P. Lawrence, PAC-95, p.35; H. Klein, LINAC-96, pp.322-327; K. Bongardt and M. Pabst, EPAC-96, p.158; M. Prome, LINAC-96, pp.9-14; Y. Yamazaki, LINAC-96, pp.592-596; J-M. Lagniel, EPAC-98, pp.93-97; I.S.R. Gardner, EPAC-98, pp.98-102. See here Projects: APT, LEDA, SNS, NSP, JHF, ESS, TRISPAL, TRASCO, KOMAC, KURRI, IFMIF. See: CERN 6-7 Dec. 1999 Symp.
HIIF Linac or HIDIF Linac	On a phase of feasibility study of Bi^+ ions 10 GeV, 400mA Linac for Heavy Ion (Driven) Inertial Fusion facility proposed by H. Deitinghoff, H. Klein et al., "Parameter Study for a High Current Heavy Ion Linac", Linac-98, Report MO 4015; "The HIDIF-Study", Report GSI-98-06.
HIL for HLS	HIL – HLS Injector Linac, C-96, p.71. HLS – Hefei Light Source. See here: "UST 200 MeV e^- Linac". e-mail: *sdong@mail.nsrl.ustc.edu.cn*
HIMAC Injector at NIRS	6 MeV/u, 100 MHz Heavy Ion (Ar^{6+}-Ar^{18+}, 6 MeV/u, 200μAe, 100 MHz, 300μs, 3 Hz) Medical Accelerator at National Institute of Radiological Science (in operation s. 1993) at Chiba have already (1998) been treated using carbon beams, but have possibility to use ions from protons to Xe. Y. Sato, "Recent Developments at NIRS-HIMAC Injector", Linac-98, Report MO4014; C-96, p.75. e-mail: *yamada_s@nirs.go.jp*
HSI	Hoch Storm (High Current) Injector: In 1999 at GSI the 1.4 MeV/u prestripper section will be replaced by the HSI with an accepted mass over charge ratio for heavy ions up to 65 at d.f. raised up to 2%. A 36 MHz RFQ and two IH drift tube tanks will replace the four tank Wideroe section. W. Vinzenz, Linac-98, Report MO4070.
I-100	Three cavities 148.5 MHz DTL Proton Linac (100 MeV, 100mA, 100μs, 1 Hz) total length 80 m was in operation since 1967. It about 2 years was the world's highest machine of that class and served up to 1983 as the 1st injector of the U-70 synchrotron at IHEP (Protvino). Peculiar features: it uses 700kV pulse (1ms) transformer preinjector and two-stage vacuum

	system. C-96, p.165; AC-98, p.31. It proposed now to use it for acceleration of C^{4+} ions: I. Maltsev, 16СУЗЧ, Protvino, Oct. 1998, c.212. e-mail: *zherebtsov@vx.olu.decnet.ihep.su*
I-2	Proton Linac on 24.6 MeV since 1967 is Injector the 2nd (after Van de Graaf EG-5) of the U-10 Synchrotron at ITEP (Moscow). Two-cavities (2βλ and βλ, length 6 and 12 m, 148.5 MHz) Linac constructed 1962/1966, its preinjector has 700 kV pulse (1ms) transformer supply. See: Special Issue of magazine "Pribori i Technika Eksperimenta", No. 5, 1967, pp.9-70; N.V. Lazarev et al., "30 Years Operation of 25MeV Proton Linac I-2 in ITEP at Beam Current of 200-230mA" with reach references, Linac-96, p. 542; C-96, p.160; AC-98, p.38. e-mail: *Nikolay.V.Lazarev@itep.ru*
I-30	Proton RFQ Linac - Injector on 30 MeV (constructed 1973/1983) since 1985 is (together with 1.5 GeV Fast Cycling Booster Synchrotron) the 2nd, after Linac I-100, injector of the U-70 Synchrotron at IHEP (Protvino). C-96, p.166. V.A. Teplyakov et al., "30 MeV RFQ Linac Parameters". EPAC-88, p.605; AC-98, p.32. e-mail: *zherebtsov@vx.olu.decnet.ihep.su*
IASA	The IASA (Inst. Acc. Syst. and Application, Athens, Greece) is 240 MeV, 2380 MHz, 100μA RTM (Racetrack Microtron); M. Barbarason, EPAC-98, p.752.
ICR e⁻ Linac	100 MeV, 2.8 GHz, 0.1A, 1μs, 20 Hz e^- Linac was constructed (in 1995) at Kyoto U.; C-96, p.99. e-mail: *noda@kyticr.kuicr.kyoto-u.ac.jp*
ICR p Linac	7 MeV, 433 MHz 0.6mA Proton Linac use s.1992 for material irradiation at Kyoto U.; C-96, p.100. e-mail: *noda@kyticr.kuicr.kyoto-u.ac.jp*
IFMIF	International Fusion Material Irradiation test Facility, Project comprises complex of two 40 MeV, 125mA CW deutron (D^+) 175 MHz Linacs, 3 lithium targets and irradiation chamber (V=0.5 l) with neutron flux of 9.10^{13} n/cm²s or 2 MW/m². Cost of the Project design and realization in 10 years evaluates in 1996 as 910 M$ US. M. Martone, R.A. Jameson, V.A. Teplyakov at al. (Collaboration consists of authors from JAERI, LANL, Ass. Euroatom ENEA, Frascati, FZK Ass. Karlsruhe, Oak Ridge, IHEP), "IFMIF: A High Intensity Deutron Beam Applications", EPAC-98, p.231.
INFN SC Linac	INFN (Genova and Milano-LASA), jointly with ENEA, is working at the design study for a 30 MW, 350 MHz SC Linac driven waste transmutation subcritical system, TRASCO. C. Pagani, "Status of the INFN High Current SC Proton Linac for Waste Transmutation" Linac-98, TH4108 and "A High Current 352 MHz SC Proton Linac", Linac-96, p.107.
INS-ES Linac	15 MeV, 2.8 GHz, 1.2μs, 21.5 Hz, 150 mA e^- Linac is in operation since 1974 at INS Tokyo U. C-96, p.83. e-mail: *muto@ins.u-tokyo.ac.jp*
IPHI	Injector Proton High Intensity is R&D program (s.1997) of CEA-CRNS in France for the front end (up to 10 MeV, 100mA CW)of high-power Linac. The first stage is SILHI - High-Intensity Light-Ion Source *see here.*

IPNS Injector H⁻ Linac	50 MeV, 12mA, 60-90μs, 30 Hz H⁻ or Proton Linac (constructed 1959/1962) serves now as Injector of IPNS (Intense Pulsed Neutron Source) at ANL, USA. C-96, p.28. e-mail: *jds@hep.anl.gov*
IREN	The Intense Resonant Neutron Source with 200 MeV driver e⁻ Linac with beam power 10 kW (plan) is being created at JINR (Dubna). E. Laziev, "Linac LUE-200 Test Facilities" and "Research Program of IREN Test Facilities", Linac-98, Reports MO4004 and MO4005; "IREN Project", A.K. Krasnykh, JINR, 1994 and 15 СУЗЧ, том 2, с.46.
ISAC, ISAC II	Isotope Separator and Accelerator of Light Radioactive Ions at TRIUMF, 3 MeV/u, planned 1995/2000, (Canada). P. Schmor, "The High Intensity Radioactive Beam Facility at TRIUMF", EPAC-98, p.2386; R. Laxdal, "Status of the ISAC Accelerator for Radioactive Beams", Linac-98, p.786; K. Fong, "Frequency Source [35 MHz] for the ISAC RFQ", and "First Beam Test with the ISAC RFQ", *ibid.*, Reports TH4009, -4066, -TU4087 (RFQ RF Tests); e-mail: *dutto@triumf.ca*
ISIR S- and L-Band Linacs	1) 150 MeV, 2.8 GHz, 0.65 A, 1.5μs, 60 Hz, 10m e⁻ Linac in operation s.1989 at Osaka U.; C-96, p.73. 2) 38 MeV, 1.3 GHz, 1 A, 20ns, 720 Hz, 10m length e⁻ Linac in operation since 1978 at Osaka U.; C-96, p.74. e-mail: *s-okuda@sanken.osaka-u.ac.jp*
ISIS and ISIS Injector	ISIS (RAL, UK): 70 MeV, 25mApeak, 97.8 MHz H⁻ Linac (C-96, p.183) and 800 MeV 200 μA, 50 Hz, 160 kW RCS - Rapid Cycling Synchrotron. In operation since 1985, beam yield in 1997 is 672mAxhr, I.S.K. Gardner, "A Review of SNS Accelerators", EPAC-98, p.98; and J. Carpenter, "Accelerators for SNS's", CC, Vol. 36, No.2, March 1996, p.4; see too A. Taylor at al., CC Vol.40, No.3, p.20. e-mail: *cwp45@isise.pl.ac.uk*
ISOLDE	Isotope Separator On-Line at CERN. Using of it: CC, Vol.38, No.7, p.17.
ISTRA-36	Proton Linac on 36 MeV (to 1998 is working with 100mA beam 3 MeV RFQ section and the first 10 MeV DTL cavity of two ones) at ITEP (Moscow). I.V. Chuvilo et al., "Proton 36 MeV, 0.5mA Linac ISTRA-36 as a Driver of Multipurpose Irradiation Test Facility", EPAC-96, p.2674; A.M. Kozodaev et al., "Program of Activities for the Linac-Driver of ITEP Subcritical Facility", PAC-97, 7P117; C-96, p.159; AC-98, p.37. e-mail: *kozodaev@itep.ru*
IUCF	Indiana U. Cyclotron Facility; D.Frisel: EPAC-96, p.548, EPAC-98, p.496
JHF	Japan Hadron Facility at KEK is a new Accelerator Project in Japan to build a complex consisting of a 200 MeV Proton Linac, a 3 GeV Booster Proton Ring and a 50 GeV, 2.10^{14} ppp (10μAavg.) Main Proton Synchrotron Ring (see schema on p.12 of NPN Int., Vol.8, No.4, 1998). "JHF Project Proposal", KEK Report 97-3, JHF-97-1.
JHF Linac	The Project of 200 MeV Proton Linac of Japanese Hadron Facility at KEK will have average beam current of 0.2mA (later- 0.8mA). T. Kato, Linac-98, Reports MO4012,-4013, TU4011.

JLC/NLC, JLCP	Japan Linear Collider (or Nippon Linear Collider) Project used X- band (14 GHz), C- band (6 GHz) and S-band (3 GHz) Linacs: *see here* "ATF"; M. Kihara, "The Japan Linear Collider Project", EPAC-98, MOZ03A; C-96, pp.188-9.
KEK e^+/e^- Injector Linac	There are now two 600 m separate e^+/e^- Linacs on energy 2.5 GeV, they had been used to fill both the Photon Factory (2.5 GeV storage ring) and the TRISTAN Accumulating Ring (2.5 GeV). They will be after upgrade united ones on 8 GeV Electron and 3.5 GeV Positron Linac that will serve as injector of KEKB rings. AC-98, p.49.
KEK H^- Linac	5.4 MeV, 432 MHz, 20mA, 600µs, 50 Hz H^- Test Stand Linac (s. 1997) with PMQ focusing; C-96, p.97. e-mail: *yoshishi@kekvax.kek.jp*
KEK Injector Proton Linac	40 MeV two cavities (15.5 and 12.9 m) 201 MHz, 10mA, 20 Hz repetition rate H^- Linac - Injector for 12 GeV KEK PS constructed 1971/1974. In the 2[nd] cavity used PMQ - permanent magnet quadrupoles. AC-98, p.50; C-96, p.96. e-mail: *eiichi@kekvax.kek.jp*
KEKB and KEKB Linac	Collider e^+/e^- on 8 GeV (electron) and 3.5 GeV (positron), D=960 m is constructed at KEK Lab since 1994 with goal to finish to December 1998. S. Kurokawa, "Present Status of KEKB Project", EPAC-98, p.123; E-96, p.448; AC-98, p.51. Y. Ogawa, "Commissioning of the KEKB Linac", Linac-98, WE2005 and PAC-99, p. 2984; CC, Vol. 39, No.7, 1999, p.5.
KEK-PF	KEK-PF slow-positron facility. T. Shidara, Linac-98, MO4101; 2.5 GeV, 2.8 GHz, 1ns-1µs, 50 Hz Injector e^+/e^- Linac: C-96, p.93-94. e-mail: *hitoshik@kekvax.kek.jp*
KEK-PS and Booster	12 GeV Proton Synchrotron, $4.5\text{-}5.7.10^{12}$ppp or $1.8.10^{12}$ part/s, (1976) at KEK (Tsukuba). AC-98, p.47 (0.5 GeV Booster, p.48).
KMTA	Kharkov Material Test Accelerator is 22.5 MeV, 100mA, 152.5 MHz, 1000µs, 20 Hz Proton Linac (s. 1985) at Kharkov Phys. Tech. Inst.; C-96, p.180. e-mail: *kfti@rocket.kharkov.ua*
KOMAC	At KAERI (Korea Atomic Energy Research Institute) from 1997 has been developed 20mA, 1 GeV proton/H^- pulse/CW Linac for Project KOMAC (Korea Multipurpose Accelerator Complex). In the 2[nd] stage 2003-2006 the machine will be completed and dedicated to experiments for a hybrid system. B.H. Choi, "Status of the KOMAC Project", ADTTA-99, p.200; R&D of its RFQ: J.M. Han, Linac-98 p.774 and PAC-99, p.3525.
KSR	Kyoto Storage Ring on 300 MeV. H. Dewa, Kyoto U., "Electron Storage and Stretcher Ring KSR", EPAC-96, p.451; T. Shirai, PAC-99, p.3110.
KSU Linac	Kansas U. HI SC Booster (after Tandem) Linac: 3 MeV/u (for Cu) and 5 MeV/u (for F)) (s. 1989); C-96, p.34. e-mail: *tgray@phys.ksu.edu*
KURRI NG proposal and KURRI e^- Linac	Kyoto University Research Reactor Institute has been proposed a hybrid system of an 20 MeV deuteron LInac and an existing small critical nuclear fuel assembly as a future neutron source – test stand for the final goal which is composed of a 300 MeV proton Linac and 5 MW subcritical

	assembly. Y. Kawase and M. Inoue, Linac-98, p.300; Until now (since 1967) at KURRI operate 46 MeV, 1.3 GHz, 10ns-4μs, up to 480 Hz e^- Linac; C-96, p.81. e-mail: *takami@rri.kyoto-u.ac.jp*
LAE-8, LAE-4	1) 8 MeV, 1.9 GHz, 4μs, 150-250 Hz irradiation Linac operating s. 1986 at YerPhI; C-96, p.110. 2) 4 MeV, 1.9 GHz, 4μs, 150-250 Hz irradiation Linac (s. 1984) at YerPhI; C-96, p.112. e-mail: *yeritsian@vxc.yerphi.am*
LAMPF	Constructed 1968/1972 Los Alamos Meson Physics Facility: 800 MeV, 17mA pulse, 1.0mAavg. beam current is the most world's powerful (800kW) Proton and H^- Linac. M.S. Livingston, "LAMPF A Nuclear Research Facility", LA-6878-MS, 1977. O. Van Dyck, "LAMPF Reliability", ADTT-1994 Conf., p.575. Now it is the most significant part of an LANSCE (MLNSCE) Complex *see here*. Linac-98, Report TH4031.
LANSCE (MLNSCE)	LANSCE (Los Alamos Neutron Science Center, USA) - its new name is MLNSCE, *see here*. It uses Linac LAMPF, which provides a 800 MeV 17mA, proton 825μs 120Hz pulse beam (1mAavg.) and injects H^- pulses (100 of 120 Hz) to WNR – Weapon Neutron Research and rest 20 Hz H^- pulses - to the SPSS – Short Pulse Spallation Source (upgraded PSR – Proton Storage Ring); Linac-98: J. Lyles, MO4074; R.W. Garnet, TU4021, TU4053 and TU4054 (M. Williams et al., Development of 40mA, 1 ms, 120 Hz, 12% d.f., H^- Ion Source), TU4094 (100 kV power supply of ISTS), TH4053. C-96, p.47. e-mail: *earl@lanl.gov*
LASREF	Historically the Los Alamos Spallation Radiation Effect Facility (LANL, USA) has used manual control to position of the 800 MW, 800 MeV proton beam on targets. New experiments require more stringent position control more frequently than can be done manually for long periods of time. Results and details of system are presented. C. Pillai et al., PAC-97, Report 5P44.
LCLS Linac	Linac Coherent Light Source at SLAC (USA) which will produce of high peak power coherent X-rays. The design utilizes 14.3 GeV electrons from the last km of the SLAC Linac. P. Emma, Linac-98, TU2002; C-96, p.18. e-mail: *vinod@slac.stanford.edu*
LEAR, LEIR	Low Energy Antiproton Ring (CERN) on 0.005–1.2 GeV (antiproton, p and H^-) constructed 1981/1982. It has ring D=25 m and allows p-p~ colliding beams and slow (10 min - 4 h) ejection. At the end of 1996 experimental program was prematurely terminated to concentrate more resources for LHC Project (as in1984 was done with ISR for LEP); CC, Vol.38, No.6, p.31. LEAR will now be converted into the LEIR - ion ring fore injection of ions Pb into LHC.
LEDA	The Low Energy Demonstration Accelerator (LEDA) on 10 MeV, 100mA CW proton beam being constructed at LANL (USA) will serve as the prototype for the low energy section of the APT Project. D. Rees, J. Bradley et al., EPAC-98, p.1912. H.V. Smith, "Status Update of the LEDA", Linac-98 Reports: MO4059 (Diagnostics). -4087 (CCDTL). -4088 (RFQ tuning). -4091 (CCDTL choice and test),.-4108 (CCDTL heat

	transfer). TU4014 (LEDA Status Update). -4044 (HEBT Beam Line). -4052 (LEBT Mechanical Design). -4060 (APT and LEDA Beam Position). -4061 (Phase and Energy Measurements). -4071 (Modulator Design),.-4072 (D. Rees, "Design, Operation and Test Results of 350 MHz LEDA RF System"). -4082 (1.25MeV CW RFQ Beam Study). -4083 (Mechanical Design and Fabrication). -4090 (LEDA and APT Beamstops). -4091 (Thermal and Hydraulic Analysis of Beamstops). -4092 (CRITS and LEDA Beamstops). -4095 (Testing of Vacuum Cryopumps and ST185 sintered NEG Cartriges – used in RF windows). WE1003 (CW RFQ Fabrication & Engineering), TH4045 (Tuning Proton Source), -4054 (Test of Proton Injector with 1.25 MeV CW RFQ) -4055 (Operation of Proton Source in Pulse Mode). -4062 (Beam Profile Measurements by Residual Gas Fluorescence). -4073 (1 MW, CW 350 MHz Coaxial Vacuum Windows Tests). -4075 (Low Level RF Control System). -4076 (350 and 700 MHz RF Power Distribution System). -4099 (Resonance Control Cooling System for the APT/LEDA RFQ). FR 1001 (APT and LEDA High Power RF System).
LELIA	Laser a Electrons Libres on Induction Accelerator: 3 MeV, 1kA, 80ns, 0.1 Hz is in operation s. 1992 at CEA/CESTA (France); C-96, p.116.
LEP, LEP2	Large Electron Positron Collider, (CERN), 93.5 GeV (1997), D=8486 m, 27 km ring, luminosity up to $5.6x10^{31}$; Construction s. 1983, first beam collisions – 1989. AC-98, p.7; K.Hubner, "LEP2: Present and Future Performance and Limitations", EPAC-98, p.38; S. Mayers,"LEP2: Present and Future Performance and Limitations", PAC-97, Report 1BC2; CC, Vol.39, No.8, p.14.
LEP1	Large Electron Positron Collider, G. Arduini, "LEP1 Operation 1989 – 1995", EPAC-96, p.286.
LHC	Large Hadron Collider (CERN), proton-proton 2x7000 GeV, D=8486 m, L= 27 km and 5 km tunnel to transfer particles from existing SPS Ring; Construction: 1995/2005, besides of European members of CERN community, USA paid $531 million. LHC Project Design – in CERN/AC 95-05 October 1995; L.R. Evans, "LHC Status and Plans", PAC-97, Report 2B4; L.R. Evans, "LHC Accelerator Physics and Technology Challenges", EPAC-98, p.3; AC-98, p.14.
LIAXF, LIAXFU	Linear Induction Accelerator (10 MeV, 2 kA, 90ns, e^-) X-ray Facility (LIAXFU - Upgraded). Linac-98, J. Deng, TU4001.
LIBO	A feasibility study of 3 GHz Booster Linac is proposed to upgrade the beam energy of existing in several hospitals Proton Cyclotrons from 60-70 MeV to 200 MeV, required to treat deeply seated cancerous tumors. U. Amaldi et al., Linac-98, Reports TU4098 and TU4097.
LIC	20 MeV, 1300mA, 2.8 GHz, 2.5μs, 6.25 Hz e^- Linac at Kharkov Phys. Tech. Inst. (1993); C-96, p.179. e-mail: *kushnir@nik.kharkov.ua*
LIL	LEP e^+/e^- 0.5 GeV Injector Linacs was operated at CERN since 1986;

	C-96, pp.170-171. e-mail: *potier@cernvm.cern.ch*
Linac 2	50 MeV, 202 MHz, 20-150μs, 1-2 Hz Proton Injector for CERN Acc. Complex since 1978; C-96, p.173; and *see here* CERN Linac 2.
Linac 3, DESY	50 MeV, 202 MHz, 30μs, 0.25-1 Hz Proton Injector for DESY Acc. Complex since 1988; C-96, p.142. e-mail: *rep@hering.mpi-hd.mpg.de*
Linac 3,CERN	4.2 MeV/u, 101/202 MHz, 2μs, 1-10 Hz Heavy Ion (Pb^{55+}) Injector for CERN Acc. Complex since 1994; C-96, p.175; *see here* CERN Linac 3.
Linac-60	60 MeV, 1 A, 1.8 GHz, 5.5μs, 150 Hz e^- Linac (**FAKEL**) is operated with breeding assembly as NG at Kurchatov Inst. since 1973; C-96, p.162. e-mail: *kalach@facel.ssspi.msk.ru*
Linear Colliders:	Table with all parameters of Linear Colliders: C-96, pp.188-189.
LISA	8ps, 5 A (or 40pC), 50 MHz rep. rate during of 1ms, 10 Hz $2mA_{avg}$. Injector-Linac at INFN-LNF, Italy; M. Castellano, EPAC-96, p.765.
LLNL e^+/e^-	2.86 GHz, 17m e^- Linac (s. 1969) with beam: 100 MeV, 300 Hz, 3μs, 0.8 A, or 1440 Hz, 20ns, 10 A; C-96, p.10. e-mail: *tcowan@llnl.gov*
LU-20, (ЛУ-20)	LU-20, (ЛУ-20: 145 MHz, 14.4m length) is operational s. 1973 at JINR, now as 5 MeV/u, 5-100μs Nuclotron Injector of ions from p^+ and deuteron up to $_{84}Kr^{34+}$, В.А. Андреев, 15СУЗЧ, том 1, с.102; C-96, p.156. e-mail: *edik@sunhe.jinr.dubna.su*
LU-50 (and LU-10-20)	75 MeV, 2.4mA, 1.8 GHz, 0.01μs, 2.4kHz e- Linac in operation since 1981 at VNIIEF, Arzamas-16; C-96, p.167. LU-10-20 see C-96, p.168. e-mail: *zavyalov@expd.rfnc.nnov.su*
LUE-200	"Linac LUE Test Facilities", E. Laziev, Linac-98; *see here* "IREN".
LUE-2000	2 GeV, 1mA, 2.8 GHz, 2.5μs, 100 Hz e^- Linac (s. 1964) at Kharkov Phys. Tech. Inst.; C-96, p.176. e-mail: *tur@nik.kharkov.ua*
LUE-40	40 MeV, 1000mA, 2.8 GHz, 10μs, 100 Hz e^- Linac (s. 1964) at Kharkov Phys. Tech. Inst.; C-96, p.178. e-mail: *tur@nik.kharkov.ua*
LUE-60	60 MeV, 100mA, 2.8 GHz, 1.2μs, 25 Hz e^- Linac (s. 1990) at Kharkov Phys. Tech. Inst.; C-96, p.177. e-mail: *tur@nik.kharkov.ua*
MACSE	25 MeV, 1.5 GHz, 0.1mA, CW SC e^- Linac (s. 1991) at CEA/Saclay; Linac-90, p.141; C-96, p.128. e-mail: *jablonka@hep.saclay.cea.fr*
MAMI (ILAC)	Injector to the CW-RTM-Cascade MAMI (Mainz 3 Microtrons at IfK). It is 3.5 MeV, 2.45 MHz e^- Linac (since 1988); C-96, p.145. e-mail: *eut@vkpmza.kph.uni-mainz.de*
MEA	Medium Energy Electron Accelerator is 800 MeV, 40mA, 2.86 GHz, 2-3.5μs, 250 Hz e^- Injector for AmPS; in operation since 1978 at NITHEF, Amsterdam; C-96, p.152. . e-mail: *frans@nikhefk.nikhef.nl*
MILAC	Multi Charged Ion (Ar^{12+}) Linac 8.5 MeV/u, 2μAe, 47.2 MHz, 500μs, 5 Hz Linac at Kharkov Phys. Tech. Inst.; C-96, p.181. e-mail:

	kfti@rocket.kharkov.ua
MIRF	Medical Industrial Radiation Facility at NIST (constructed 1973/1974 for New Haven Hospital at Gaithersburg, USA) uses 32 MeV, 7μs, 100 Hz, 3 GHz, 10μA e^- Linac; C-96, p.37. e-mail: *cedick@enh.nist.gov*
MIT-Bates Linac	Massachussets Institute of Technology – Bates Linear Accelerator Center (constructed 1967/1971) 1 GeV, (150m), 40mA, 16μs, 1kHz, $100kW_{avg.}$, 2.8 GHz e^- Research Linac; C-96, p.38. e-mail: *sk@mitlns.mit.edu*
MLNSCE	Manuel Lujan Neutron Scattering Center (at LANL): a new name of LANSCE (*see here*), 800 MeV Linac (beam line from LAMPF, *see here*) and SR: 70 μA, 20 Hz, 56 kW, (in operation since 1985, upgraded now to 200μA, and 30 Hz, yield in 1997 is 144mAxhr).
MLUD-3	1.65 MeV, 65mAe, 97.8 MHz, 250μs, 10 Hz D^+ Linac (1975) at Kharkov Phys. Tech. Inst.; C-96, p.182. e-mail: *kfti@rocket.kharkov.ua*
MMFL	600 MeV, 500μA (by Project) Proton Linac. S.K. Esin, "Moscow Meson Factory Linac", its new injection system will increase the average beam current from resent 70 μA to ~200 μA; during the March 1998 run MMFL at the 1st time worked for the Pulse Neutron Source, Linac-98, TU4020. Its description: V.D. Burlakov, Linac-84, p.9; and C-96, p.158; L.V. Kravchuk, "Upgrade of INR Proton Lianc for Production of 3 MW Beam", PAC-99, p.3282. e-mail: *ostroumov@al20.inr.troitsk.ru*
Muon μ+ μ- Collider	Proposal of Muon "2x2 TeV μ+ μ- Collider" by A.N. Skrinsky and D. Neuffer (see: N.V. Mokhov and R.J. Noble, 15 СУЗЧ, том 2, с.75); R.J. Noble, "Muon Collider Progress", EPAC-98, p.108.
MUSES	A new type of experimental facility, the Multi-Use Experimental Storage Ring is being proposed for the RIKEN RI beam factory in Japan. It will be consist of 4 rings: Double-Storage Rings (DSR), an accumulator cooler ring (ACR), and a booster-synchrotron ring (BSR), where ions with A/q=2 will accelerate to 1400A MeV. In addition, electrons from 300 MeV e^- Linac will accelerate up to 2500 MeV by the BSR. I. Tanibata, NPN Int., Vol. 8, No.4, 1998, pp.4-8.
NEPAL	100 MeV, 3 GHz, 40 A, 0.2-3μs, 25 Hz Experimental 80 MeV/m e^- Linac at LAL, Orsay, (s. 1980); C-96, p.126. e-mail: *bienvenu@lalcls.in2p3.fr*
NIJI-III	It is 120 MeV, 2.8 GHz, 1-10μs, 25 Hz e^- Linac SR Injector (s. 1993) at Sumimoto Electric; C-96, p.78. e-mail: *emura@okk.sumiden.co.jp*
NLC, NLCTA	Next 500 GeV (c.m.) Linear Collider is SLAC's Project, it based on two 11.4 GHz, 35-65 MV/m RT Linacs; there is also 0.5 GeV NLC Test Accelerator (1992/1996) that will serve as a test bed. R.D. Ruth, PAC-97, Report 5B4; C-96, p.19 and p.188. e-mail: *rruth@slac.stanford.edu*
NSLS Linac	National Synchrotron Light Source 120 MeV, 2.8 GHz, 2.5μs, 2 Hz e^- Injector Linac (1980); C-96, p.54. e-mail: *blum@bnllsi.bnl.gov*
NSNS	National Spallation Neutron Source, the same as SNS – *see here.*

NSP Linac	Neutron Science Project (JAERI, Japan) based on 1.5 GeV, 600 MHz 1mAavg., 1.5 MW pulse Linac (much more later: 5.3mAavg., 8 MW, CW beam); cavities up to 100 MeV – RT, up to 1.5 GeV – SC. M. Mizumoto, Linac-98, Reports: TU1004 and, for its RF System, -TH4068; M. Mizumoto, "High Intensity Proton Accelerator for Neutron Science Project at JAERI", EPAC-98, p.746 and *ibid.*, p.719 (beam dynamics), p. 734 (SC cavities), p. 749 (RFQ). Combine NSP-JHF Project as of 1999 see: Y. Yamazaki, (about 400 MeV Linac + RCS) PAC-99, p.513 and M. Mizumoto, ADTTA-99, p.724 and K. Hasegava "Development of NSP Linac", PAC-99, p.3546. e-mail: *hasegava@linac.tokai.jaeri.go.jp*
Nuclotron	Proton Synchrotron on 6 GeV/n (D=40 m) for ions p, d, d↑, α, $_{12}C$, $_{84}Kr$, max beam int. 5.10^{11}. Constructed at JINR (Dubna) in 1993. AC-98, p.27.
ORELA	178 MeV, 15 A 2-50ns e^- Linac for Production of Neutrons and Slow Positrons at Oak Ridge (since 1969); C-96, p.59. e-mail: *levista@ornl.gov*
Orsay Linacs	Three Orsay 1-2.3 GeV, 3 GHz, 3-100 A, 20ns-1.5μs, 50 Hz e^-/e^+ Linacs are in operation (s. 1968) at LURE for e^- experiments, for e^+ production and as e^+ Injector of 800 MeV Super-ACO and 1.1 GeV DCI Storage Rings; E-94, p.170; C-96, pp.119-121. e-mail: *tordeux@lalcls.in2p3.fr*
PEP	Positron–Electron Project, Collider on 13.7-16 GeV, 20mA/beam was constructed at SLAC (in 1980). J.R. Rees, "The PEP Storage Ring: Current Status", PAC-1981, Washington DC; C-89, p.69.
PEP-II, PEP2	PEP-II is an asymmetric 9 GeV two-ring B-Factory Facility (e^-/e^+ collider) with luminosity of $\sim10^{34}$/sq.cm.s, constructed at SLAC since January 1994 with finish planned on July 1998. PAC-97, Reports: 6P52, -54,-55,-56. J. Dorfman, "PEP-II Status Report", Proc. EPAC-98, p.33. AC-98, 1998, p.55. (23 July the first e^-/e^+ collisions were really observed, CC, Vol.38, No.6, September 1998, p.17).
PETRA 2	Until the end of 1986 PETRA used as 12, 12, 40 GeV e^+, e^- and p Collider at DESY. From 1987 to 1989 PETRA is being modified and from 1990 it used as e^-/e^+ and p injector for the HERA main ring and intense SR Source; W. Bialowons, EPAC-96, p.3.
PHERMEX	Pulsed High Energy Machine Emitting X-Rays 30 MeV, 50 MHz, 0.2μs, 1 Hz, 1000 A e^- Linac in operation at LANL since 1963; C-96, p.41. e-mail: *scottw@lanl.gov*
PIAVE	PIAVE (Positive Ion Accelerator for Very-low Energy at INFN) Linac, Linac-98, TH4085.
PIMMS	Proton-Ion Medical Machine Study – application of accelerated proton beams at CERN facilities for production such ultra-short radio-nuclides as ^{201}Tl (τ/2=73h), ^{111}In (τ/2=67,2h), ^{67}Ga (τ/2=78,3h) and ^{123}I (τ/2=13,2h). *See e.g.* CC Vol.38, No.7, p.20.
PIVAIR	Prototype of Induction 8 MeV, 3.5kA, 80ns, single shot Linac for AIRIX (*see here*) is operating (s. 1994) in CEA/CESTA (France); C-96, p.115.

PL-2 RFQ	Proton or deuteron 1.75 MeV RFQ constructed (in 1994) LANL for a small ORNL n-source; C-96, p.48. e-mail: *ccappiello@lanl.gov*
PL-7 Linac	An AccSys Technology Model PL-7 H^- Linac (3 MeV RFQ and 4 MeV DTL with 1mA beam current) use to pre-accelerate H^- ions to 7 MeV for strip injection into a new 2.3 Tm injector synchrotron now being commissioned at IUCF. R.W. Hamm, (AccSys Technology) et al., "Performance of an AccSys Technology PL-7 Linac as an Injector for the IUCF Cooler Injector Cyclotron", Linac-98, MO4009. e-mail: *rhamm@linacs.com*
PLS Linac	The 2 GeV e^- Linac at the Pohang Accelerator Laboratory has been operated continuously as injector for the Pohang Light Source (PLS) since 1994. M.H. Cho, W. Namkung et al., Linac-98, TU4024; S.H. Nam, PAC-99, p.3504. C-96, p.102. e-mail: *namkung@vision.postech.ac.kr*
PNC Linac	10 MeV, 100mA, 1.25 GHz, 10μs-4ms, 50 Hz, 18m e^- Linac in operation (s. 1996) at PNC, Japan; C-96, p.80. e-mail: *lemoto@oec.pnc.go.jp*
Post-Acc.	Post-Accelerators, *see here*: Booster Linacs.
PSB	Proton Synchrotron Booster (CERN), four rings stacked vertically, 1.0 GeV (0.95/amu); K, Schindl, "The PS Booster as Pre-Injector for LHC", Particle Accelerators, 1997, Vol.58, p.63, K, Schindl, "High Brightness Hadron Injector for TeV Colliders", HEACC'98 Conf.; *ibid*, AC-98, p.10.
PSI Acc. Facility	The same as SINQ *see here* and Th. Stammbach, CERN Symposium on R&D for High Intensity Proton Accelerators Dec 6-7, 1999.
Radioactive Beam Facilities	J.A. Nolen, "Overview of Linac Applications at Future Radioactive Beam Facilities", Linac-96, pp.32-36. There are principle description and up-date state of next facilities (or projects) with primary and secondary beams accelerators: HRIBF at Oak Ridge – 100 MeV Cyclotron+25 MV Tandem and 250 MeV Cyclotron+50 MV (Tandem +SC Booster); INS at Tokyo – 67 MeV Cyclotron+14 MV (RFQ+IH Linac), and at Tsukuba – 3 GeV Synchrotron + (RFQ+IH Linac); ARENAS at Louvain-la-Neuve – 110 MeV Cyclotron+44 MeV Cyclotron; SPIRAL/GANIL at Caen – 400 MeV HI Cyclotron+265 MeV Cyclotron; REX-ISOLDE (see here) at CERN – 1 GeV Synchrotron + 16 MV (RFQ+IH Linac); ISAC/TRIUMF at Vancouver (see here) – 500 MeV H^- Cyclotron+13 MV (RFQ+IH Linac); PIAFE at Grenoble – Reactor (thermal n) +160 MeV (k=88) Cyclotron; ATLAS at Argonne – 245 MV Linac + 70 MV (RFQ+ SC Linac). See too last Proc. of the Fourth Int. Conf. on Radioactive Nuclear Beams.
REX-ISOLDE	The Radioactive beam Experiment REX-ISOLDE proposed for testing a new concept of post acceleration of radioactive ions is under progress at CERN. It uses EBIS, RFQ then IH structure and tree 7-gaps resonators accelerated ions A/q≤4.5 to 0.8-2.2 MeV/u. O. Kester, Linac-98, TH4021; H. Bongers, EPAC-98, p.728.
RFQ Linacs in Linac-98 Conf.	1) J.M. Lagniel, "Field Description in an RFQ and its Effect on Beam Dynamics", Linac-98, MO4029.

2) J. Staples (LBNL) et al., "The SNS Front End Accelerator System", ibid., MO4056 and "Prototype Models for the SNS RFQ", *ibid.*,TU4084.

3) R.E. Laxdalet al., "Status of the ISAC Accelerator for Radioactive Beams", and "First Beam Test with the ISAC RFQ", and "RF Tests of 2.8 m Section" and "ISAC RFQ Frequency Source" and " 8 m ISAC RFQ Mechanical Design ", *ibid.*, MO4066, TU4087, TH4009, -4010, -4020, –4094.

4) L.M. Young et al., "LEDA 6.7 MeV RFQ tuning", *ibid.*, MO4088; L.D. Hansborough et al., "Mechanical Engineering for the LEDA LEBT System", *ibid.*, TU4052; J.D. Gilpatrick et al., "LEDA and APT Beam Position Measurement System: Design and Initial Tests", ibid., TU4060; J. Power et al., "The Design and Initial Results of a Beam Phase and Energy Measurement for LEDA", ibid., TU4061; K. Kishiyama et al., "Testing of Vacuum Pumps for the APT/LEDA RFQ", *ibid.*, TU4095; J.D. Sherman et al., "Test Results of the 1.25 MeV LEDA Section", *ibid.*, TH4054 and "CW RFQ Fabrication & Engineering", *ibid.*, WE1003.

5) A. Ratti et al., "Conceptual Design of the SNS RFQ", *ibid.*, MO4090.

6) K. Bongardt and M. Pabst, "High Intensity Injector Linacs for Spallation Source", *ibid.*, TU1002.

7) A.M. Lombardi, "Decelerating and Accelerating RFQs", particular use for AD at CERN, *ibid.*, TU2005.

8) K.W. Shepard (ANL), "A Low-charge-state CW RFQ" *ibid.*, TU2006.

9) H. Smith,Jr., J.D. Schneider (LANL), "Status Update on the LEDA" *ibid.*, TU4014.

10) B. Bondarev (MRTI), J.M. Lagniel (SEA, CEA), et al., "Using of LIDOS.RFQ Codes for CW RFQ Designing", *ibid.*, TU4046.

11) V. Kapin et al., (Kyoto Univ.), "Design Considerations for Multiple-Beam RFQ Structures", *ibid.*, TU4081.

12) R. Valdiviez (LANL), et al., "The Mechanical Design and Fabrication of a Ridge-Loaded Waveguide for an RFQ", *ibid.*, TU4083.

13) BPL-RFQ is planned as the Beijing Proton Linac's Injector instead of the present bulky C-W. Commissioning of 201 MHz, 40–750 MeV, 60mA pulse RFQ will start soon. Z.H. Luo, Linac-98, TH4001.

14) A new 2 MeV, 433 MHz, 15 mA pulse RFQ fabricated of aluminum alloy AMG-6 has been built and tested at NPK LUTS (NIIEFA, St. Petersburg), M.F. Vorogushin et al., *ibid.*, TH4002.

15) V.A. Teplyakov, "Parameters of the RFQ for a New IHEP Booster Linac", *ibid.*, MO4008 and "Commissioning of the RFQ for a New IHEP Booster Linac", *ibid.*,TH4003.

16) J.M. Han et al., "Design of the KOMAC H^+/H^- RFQ Linac", *ibid.*, TH4005.

17) T. Sieber et al., "RFQ Accelerators for Radioactive Ion Beams", *ibid.*, TH4006.

18) O. Kamigaito et al., "Recent Developments of the Folded-Coaxial RFQ for the RIKEN Heavy Ion Linac", *ibid.*, TH4008.

19) A. Schempp et al., "Operation of the VE-RFQ Injector for the ISL Cyclotron" at Hahn-Meitner-Institut (HMI at Berlin); 14 GHz ECR + 85-

	120 MHz 4-rod RFQ for acceleration HI (q/A ≥ 0.15) to 90 – 360keV/u, *ibid.*, TH4011; (*see too* RQ13 in C-96, p.130). 20) H. Vormann et al., "Design of a High Current RFQ Injector with High Duty Factor". The Four-Rod 202 MHz RFQ with directly cooled electrodes will provide 665keV H^- beam current up to 50mA, *ibid.*, TH4012. 21) O. Kestler, "Status of the REX-ISOLDE Linac", *ibid.*, TH4021. 22) P.N. Ostroumov, A. Ueno et al., "Bunch Length and Velocity h ahead of schedule. D. Kramer et al, (Berlin Univ.) "Status 23) V. Andreev et al., (INFN-LNL and ICR-Kyoto Univ.) "Scale RT Model of the SC RFQ1 for the PIAVE", *ibid.*, TH4085. 24) A. Pisent (INFN-LNL) et al., *ibid.*, TH4086. 25) V. Andreev (ITEP) et al., "Progress Work in a 27 MHz HI RFQ", *ibid.*, TH4089. 26) R. Floersch, G. Domer, "Resonance Control Cooling System for the APT/LEDA RFQ", *ibid.*, TH4099. 27) R.W. Hamm (AccSys Technology) et al., "Variable Energy Deutron RFQ System for Neutron Production", *ibid.*, TH4106. 28) R.W. Hamm (AccSys Technology) et al., "Performance of an AccSys Technology PL-7 Linac as an Injector for the IUCF Cooler Injector Cyclotron", *ibid.*, MO4009. 29) P. Young (FNAL), based on RFQ $_3$He Linac for PET, *ibid.*, TH4107. 30) A. Schempp, "RFQ and Funneling Experiments for HIDIF", "The HIDIF Study"–Report GSI-98-06. 31) JAERI 2 MeV, 70mA, 100μs, 100 Hz RFQ; (and C-96, p.86). 32) TIT-RFQ: 0.22 MeV/uHeavy Ion (He, Xe^{10+}) Linac for plasma experiment of Tokyo Institute of Technology, C-96, p.92. 33) 750 keV, 165mA, 202 MHz, 500μs, 1Hz RFQ is new (1978) Pre-Injector of CERN 50 MeV Linac-2; C-96, p.173. 34) PL-2 on 1.85 MeV, 7mA, 150 Hz RFQ Linac at CERN for L-3 Calorimeter calibration; C-96, p.174. 35) 250 keV/u Heavy Ion (Pb^{53+}) Pre-Injector for Linac 3 at CERN; C-96, p.175.
RHIC	Relativistic Heavy Ion Collider on 100 GeV/Amu (orbit length 3833 m) for protons and ions up to gold, with SC magnets and AGS as injector, constructed 1990/1999 (plan) at BNL (Upton). M. Harrison, "The RHIC Project", EPAC-96, p.13; S. Peggs, "RHIC Progress Report", Proc. EPAC-98, p.13; AC-98, p.71; CC, Vol.39, No.8, p.7.
RIB facilities	Radioactive Ion Beam facilities (operated, constructed or proposed): INS Tanashi; ATLAS (ANL); BEARS (Berkley); REX-ISOLDE (CERN); ISAC and ISAC-II (TRIUMF); at ORNL; at Munich; SPIRAL (GANIL); BRNBF (Beijing); RIKEN; INR (Trinity), etc; *see e.g.* M. Lieuvin,"Design Issues of RIB Facilities", EPAC-96, TUX02T, P. Bricault, "Linacs for Exotic Beams" (with up-date state and table of Linac's parameters), LINAC-98, p.36; J.A. Lettry, Review of RIB facilities, PAC-99, p.92.
RIKEN - RI Beam	Radioactive Ion Beam Factory at RIKEN – the Institute of Physical and

Factory (or RARF)	chemical Research (or RIKEN Accelerator Research Facility, Waco-shi, Saitama, Japan) consists now of 540 MeV Ring Cyclotron, 70 MeV AVF Cyclotron and Heavy Ion Linac (see NPN Int. Vol.5, No.1, 1995). A new complex will be based on MUSES Project (*see here* and NPN Int. Vol.8, No.4, 1998, pp.4-8).
RILAC	RIKEN Linear Accelerator is Heavy Ion 16 MV, 30m, 6-tanks CW Linac – Injector for the Ring Cyclotron. It was constructed 1974/1981 at RIKEN (Waco-shi, Saitama, Japan), Linac-98, TU4085; C-96, p.101. e-mail: *goto@ringps.riken.go.jp*
RQ13	In list "RFQ" *see* A. Schempp; e-mail: *a.schempp@em.uni-frankfurt.de*
RTM Injector	11.5 MeV, 2.5mA CW Injector of Race Track Microtron at Moscow State U.; C-96, p.157. e-mail: *shved@cdfe.npi.msu.su*
S-20	22 MeV, 200 mA, 3 GHz, 7μs, 100 Hz e^- Linac at Soltan INS, Swierk, Poland; C-96, p.155. e-mail: *sinsp@cx1.cyf.gov.pl*
SANDIA HI	SANDIA HI Post Accelerator 1.9 MeV/u (for Au^{28+}) 425 MHz Linac; C-96, p.40. e-mail: *hschon@somnet.sandia.gov*
SASE	Self Amplified Spontaneous Emission FEL (SLAC)
SATURNUS	15 MeV, 5 Hz, 2.5 μs e^- Linac constructed 1990/1993 at Los Angeles (UCLA); C-96, p.14. e-mail: *pellegrini@physics.ucla.edu*
SBLC	S-Band (3 GHz) Linear Collider Concept (DESY), PAC-97, Report 5P6; C-96, pp.188-9.
SBTF	S-Band Test Facility for Linear Collider at DESY: it is 450 MeV, 3 GHz, 0.4A, 2μs, 50 Hz e^- NC Linac, constructed in 1995; C-96, p.141. e-mail: *mpyhol@mint2.desy.de*
SC 2 GeV H^- CERN Linac	R. Garoby et al., "Feasibility Study of a 2 GeV SC H^- Linac as Injector for the CERN PS". This preliminary feasibility study is based on the availability of the CERN LEP2 SC RF system after LEP decommissioning. The option supposes to use this system as part of a 2 GeV H^- Linac for two-fold increase of injecting beam brightness, that is useful for LHC. Linac-98, MO4026.
SCA	50 MeV, 40 A, 2ps, from 10ms (at 200-500 A) to CW 10kW, 25m Linear Accelerator with 55 SC cell 1.3 GHz, cavities constructed in 1971 at HEPL (Stanford) for FEL; C-96, p.21. e-mail: *todtt.smith@stanford.edu*
SCARLET	JAERI SC Accelerator (23 MeV, 0.5 GHz, 50μs-1ms, 10 Hz e^- Linac) for Research of Light Emission in operation (s.1993) at Tokai; C-96, p.85. e-mail: *minehara@felwu0.tokai.jaeri.go.jp*
S-DALINAC	SC 3-fold Recirculating 130 MeV, 3 GHz, 60μA, CW e^- Linac at IfK, TH Darmstadt; C-96, p.136. e-mail: *graef@linac.ikp.physik.th-darmstadt.de*
SILHI	High-Intensity Light-Ion (ECR) Source is a part of IPHI (for 5 MeV RFQ

	+ 10 MeV DTL approved 50 MFF and 45 man-years/year) and TRISPAL (*see here*) CEA CRNS-IN2P3 R&D programs; *see* J.M. Lagniel, "High Intensity Linac Studies in France" Linac-98, p.706 and CERN Symposium on R&D for High Intensity Proton Accelerators Dec 6-7, 1999.
SINQ	On September 18, 1995 the PSI Cyclotron crew (PSI - Paul Scherrer Inst., early SIN, Swiss) reached output beam current 1.52mA at 590MeV i.e., 900 kW, world record! CC, Vol.36, No3, April/May 1996, p.5. Next plans to rise beam current on Cyclotrons: Th. Stammbach, CERN Symposium on R&D for High Intensity Proton Accelerators Dec 6-7, 1999.
SIS	Schwer Ionen Synchrotron (18 T-m, 50-2000 MeV/u for ions up to U^{73+}) constructed 1986/1989 at Darmstadt; N. Anget EPAC-96, p.125; C-89, p.51; K. Blasche, "SIS Status Report", GSI 99-1, May 1999, p.122; In 1998 machine operated 5340h. Its e^- cooler: M. Steck, EPAC-98, p.510.
SLAC – 3-km (Two – Mile) e^+/e^- Linac	Stanford 56 GeV e^+/e^- total length 3050 m Linac was constructed 1962/1966. This S-band RF Linac is capable of producing single bunch and multibunch electron beams, and single bunch positron beams in range of energies from several GeV up to 56 GeV. C-96, p.16-17; AC-98, p.57. It will serve as PEP II Injector: EPAC-98, p.33; F.J. Deckeretal, "SLAC Linac during the PEP-II Era", PAC-99, p.2987. e-mail: *decker@stanford.edu*
SLC	SLAC Linear e+/e- Collider on 46.5GeV, total length 3050 m with Luminosity reached to 10E31 was constructed 1983/1987 in Stanford. N. Phinney, EPAC-98, p.245. AC-98, p.56. But the last one-year successful run SLC finished 8 June 1998 may be will be really the last one, *see* CC, Vol.38, No7, October 1998, p.29.
SLS	Swiss Light Source is Project of Synchrotron Radiation Facility (100 MeV Linac, 2.1 GeV Booster and SR r=288m) approved at the Paul Scherrer Institute with planned operation in 2001. CC, Vol. 37, No.9, 1997, p.3.
SNS Linac	Project of 402.5/805 MHz Linac for Spallation Neutron Source proposed by LANL. It intends to accelerate 600ns 60 Hz pulses of H^- ions to an energy of 1.0 GeV with an average current of 1mA for 1200 turns injection in an accumulator ring that produces the short intense (10^{14}) burst of protons needed for the SNS. A.J. Jason, "A Linac for SNS", Linac-98, P.J. Tallerico, "The RF Power System for the SNS LINC", *ibid.*, TU4073; J. Staples, "The SNS Front End Accelerator Systems", *ibid.*, Reports: MO4056, MO4090, TU4045, TU4084 (J.Staples, LBNL: 35-70mA H^- ion source, 402.5 MHz, 2.5 MeV RFQ Prototype with d.f. 6-12 %).
SNS Project (ANL, LANL, BNL , LBNL, ORNL)	Spallation 1 MW Neutron Source (upgradable significantly) was proposed by five members: LBNL will provide high brightness 35mA H^- ion source and 2.5 MeV RFQ; LANL will provide linac to bring the beam to the full energy of 1 GeV; BNL will provide the accumulator ring to compress the linac beam into sharp pulse 10^{14} protons on the target; Oak Ridge will provide the mercury target and all conventional facilities; ANL

	will coordinate Project and design experimental base. SNS is DOE/ER's number one priority for new construction starts for FY99 and $157M requested on the first year. J.R. Alonso: "Status Report on SNS Project", EPAC-98, p.493 and "The SNS Project", PAC-99, p.574.
SOLEIL	SC Storage Ring for FEL (after 2002 with ELIOS - 100 MeV e^- Injector Linac and 2.5 GeV Booster Synchrotron) at Lure, Orsay. M.P. Level, "Status of SOLEIL Project", EPAC-98, p.599. But in CC Vol.40 (May, 2000), No.4, p.7 have been noted that their own SOLEIL Project France government was cancelled and decided instead to become a major partner in UK DIAMOND SRS Project that should be operational in 2006 at RAL (Rutherford Lab., Oxford).
SPIRAL	It is Radioactive Ion Beam Facility under reconstruction at GANIL (Caen, France). M. Lieuvin, "Commissioning of SPIRAL", EPAC–98, p.63.
SPring-8	Project SPring-8 (Super Proton ring-8 GeV) at RIKEN (Institute of Physical and Chemical Research and JAERI) consists of a 1.2 GeV electron Linac, an 8 GeV Booster Synchrotron and a low emittance Storage Ring with 40 straight sections of 6.5 m long and 4 ones of 30 m long. Project since August 1996 is in stage of commissioning, it will be world's most brilliant synchrotron radiation (SR) source, its design goal is 10^{20} photons/sxsq.mmxsq.mrad. H. Kamitsubo, "First Commissioning of Spring-8", PAC-97, 1BC4 and PAC-99, TUCL1. C-96, pp.76-77. e-mail: *yokomizo@haru01.spring8.or.jp*
SPS	Super Proton Synchrotron / heavy ion accelerator; 450GeV D=4400 m; Construction started – 1971, first beam – 1976 (1986 – for heavy ions). X. Altune et al., "The SPS as Lead-Ion Accelerator", EPAC-96, p.383. AC-98, p.8.
SRRC	Preinjector 50 MeV, 3 GHz, 24mA, 0.2-2μs, 10 Hz electron Linac (since 1992) for SRRC 1.3 GeV Booster Synchrotron; J. Ching, EPAC-98, p.608 C-96, p.103. e-mail: *ueng@srrc01.srrc.gov.tw*
SRS, SRS Review	Synchrotron Radiation Source at CLRC, Daresbury, UK; its 15 MeV, 30mA, 3 GHz, 2μs, 10 Hz e^- Linac-Injector; C-96, p.184. e-mail: *d.m/dykes@dl.ac.uk* "Overview of Synchrotron Radiation and FEL Projects", R.P. Walker, EPAC-98, p.133.
SSC	Project of 20 TeV, 87 km length proton Superconducting Supercollider in Texas was proposed (1987), preliminary approved (1990) and begins detail development, but then (28 October 1993) it was canceled by US Senate and Bill Clinton. Some of SSC decisions are used now in LHC.
SSRL Linac	Stanford Synchrotron Radiation Laboratory 110 MeV, 2.8 GHz RF e^- Linac – Injector for SPEAR constructed 1988/1990; C-96 p.20; Linac-98, MO4104. e-mail: *spark@slac.stanford.edu*
Stony Brook HI SC Linac	Heavy Ion (Li_6-Zr_{90}) 12 MeV/u 16 Quarter-Wave 150 MHz SC (lead-tin on copper) Post-Tandem Linac constructed (1983) at Stony Brook U; J.W. Noe, Rev. Sci. Instr. Vol. 57, p.757, 1986; C-96, p.52. e-mail:

	john.noe@sunysb.edu
SUNSHINE	33 MeV, 0.4 A, 2.86 GHz, 1.5μs, 10 Hz e^- Linac for sub-ps bunches (1992/1993) at Stanford; C-96, p.22. e-mail: *widemann@slac.stanford.edu*
SuperACO	800 MeV, 100 MHz Linac for SR FEL at ESPCI, Paris; M. Billardon, EPAC-98, p.670.
SVAAP	SC Vertical Accelerator to Applied Purposes: 5-7.5 MeV, 10μA CW e^- beam current for Tc thin SC layers preparation. L.M. Sevryukova et al., EPAC-98, p.1342 and p.1344.
TELL	Tsukuba Electrotechnical Laboratory Linac at Ibaraki: 0.5 GeV, 2.8 GHz, 1-500ns, 250 Hz, 0.25 A e^- Injector for 3 storage rings Linac; C-96, p.98. e-mail: *tyamazak@etl.go.jp*
TESLA, TESLA FEL TESLA-500 (and *see here* **TTF)**	TeV Superconducting Linear Accelerator- Linear Collider total length 29 km at DESY. C-96, pp.188-9; B. Anne, " TESLA Test Facility: Status and Results", EPAC-96, p.52; D. Trines, "Status of the TESLA Design", Linac-98 Conf., Chicago, 1998; R.Brinkmann, "Linear Collider Projects at DESY", Proc. EPAC-1998, p.53; CC Vol. 37, 1997, p.12. J. Rossbach, "The TESLA Free Electron Laser – Concept and Status", Linac-98, TU2001; M.V. Yurkov, "TESLA-500 Project" 15СУЗЧ, том 1, с.27.
TEUFEL	7 MeV, 2 A (5-7nC), 1.3 GHz, FEL-Driver and e^- Injector for 25 MeV Microtron at U. of Twenty, Netherlands (since 1993); C-96, p.154. e-mail: *j.w.j.verschuur@tn.utwente.nl*
TEVATRON, Debuncher Accumulator (FermiLab)	Hadron (proton-antiproton) Collider: Proton Synchrotron on 800 GeV/1.8 TeV and 2x1000 GeV Storage Ring D=2 km, with Luminosity $2.5x10^{31}$) constructed at FNAL in 1979/1985. AC-98, p.62; J.P.Mariner, "TEVATRON Luminosity Upgrade Project", EPAC–98, p.8. "FNAL 8 GeV Accumulator Ring", D=477 m. AC-98, p.65. "FNAL Antiproton Debuncher Ring", D=505 m, *ibid.* p.64; D.A. Finley, "Tevatron Status and Future Plans", 15СУЗЧ, том 1, с.13.
TIPr-1 (ITEP)	Heavy metallic ion (from Cu^+ to U^{4+}) Linac – Prototype of HIF Driver, C-96, p.161. e-mail: *kulevoj@mvax3.itep.ru*
TIT-IH-2 Linac	2.4 MeV/u, 47 MHz, HI q/A >¼ from He to Cl (P, Cl^{4+} and Cl^{9+}) Tokyo Institute of Technology Linac; C-96, p.90. e-mail: *thattori@nr.titech.ac.jp*
TJNAF	Thomas Jefferson National Accelerator Facility - *see here* CEBAF.
TRAK RF	An integrated software system has been developed to model EM fields and charged particle orbits in high-power RF devices. The primary application (for APT Project) is simulation of electron multipactoring in linac vacuum windows: S. Humphries, D. Rees, PAC-97, 5C10.
TRASCO	INFN (Genova and Milano-LASA), jointly with ENEA, is working at the design study for a 30 MW, 350 MHz SC Linac driven waste transmutation subcritical system, TRASCO (TRAnsmutazione SCOrie). C. Pagani,

	"Status of the INFN High Current SC Proton Linac for Waste Transmutation" Linac-98, TH4108 and EPAC-98, p.1870, and Linac-96, "A High Current 352 MHz SC Proton Linac", p.107; A. Pisent, "INFN-LNS and LNL R&D for a 100 MeV p/d Linac", CERN Symposium on R&D for High Intensity Proton Accelerators Dec 6-7, 1999.
TRISPAL	TRItium SPALlation is the French Project for production of tritium needed for warheads. It consists of 600 MeV, 40mA CW proton NC Linac (5 MeV RFQ, 100 MeV DTL and then CCL, 350 MHz everywhere). It is shown that choice so low frequency for CCL do not deteriorate effective shunt impedance. M. Prome, (CEA Saclay), Linac-96, p.9; J.M. Lagniel, "High Intensity Linac Studies in France", Linac-98, WE2003; H. Safa, ADTTA-99, p.955-963.
TRISTAN	30 GeV e^+/e^- Collider (orbit length 3018 m) worked at KEK (Tsukuba, Japan) in 1986-1995, then it reconstructed in KEKB.
TRITRON	Project of seprated orbit Cyclotron with SC RF cavities and magnet. Cazan, EPAC-98, p.556.
TTF, TTF Linac	TESLA Test Facility (DESY) will test components required by DESY's candidate for a future high-energy linear collider TESLA. Now TTF has just one module (with beam). In its first stage in 1999 it will produce 390 MeV beams using 3 SC modules. By 2002 it will be upgraded (with 8 modules) up to 1 GeV: CC, Vol.37, No.7, p.4 and Vol.38, No.6, p.22; E. Colby, Linac-98, TH2006; M.V. Yurkov, "TESLA-500 Project" 15СУЗЧ, c.27; TTF e^- Linac: construction of 0.4-0.6GeV, $8mA_{avg.}$, 800μs, 10 Hz machine started 1995; O. Hensler, 16СУЗЧ, c.145; C-96, p.140. e-mail: *weise@desy.de*
TWAC	TeraWatt Accumulator Project at ITEP aims to produce TW power (100 kJ/100ns) intense HI beams concentrated on target. Project (began in 1997) based on existing chain: Laser Co25+ Ion Source, 2MV/2.7 MHz I-3 HI injector, the UK 13Tm Booster Ring and the U-10 Tm Synchrotron. B.Yu. Sharkov, CC, Vol. 38, No4, May 1998, p.16; N.N. Alexeev et al., EPAC-98, p.1147 and Report on 16СУЗЧ, Protvino, 1998, V.1, p.57; M.M. Katz et al., EPAC-98, p.2360. e-mail: *Boris.Sharkov@vxitep.itep.ru*
U-10 and Heavy Ions Booster Synchrotron	10 GeV Proton Synchrotron D=80 m, constructed 1955/1961 at ITEP (Moscow), upgrade 1967, 1973, 1985, 1997. The 1st description in special issue of "Pribori i Technika Eksperimenta", No. 2, 1962; the last – N.N. Alexeev et al., "Slow Extraction System Investigation at U-10 Synchrotron", 15СУЗЧ, Protvino, 1996, p.310 and AC-98, p.35. Booster Synchrotron (D=70 m) on 20 – 700 MeV for ions from He to U constructed 1985/1990 and 1997/1998 (goal). AC-98, p.36. e-mail: *nalex@vxitep.itep.ru*
U-70	76 GeV, $1.5x10^{13}$ p/pulse Proton Synchrotron D=472 m at IHEP (Protvino) was constructed with Linac-Injector I-100 in 1961/1967, then since 1985 injection changed on Linac I-30 and 1.5 GeV Fast Cycling

	Booster). AC-98, pp. 29-32.
UNILAC	Universal Linear Accelerator of all ions from p to U28+can be accelerated on a pulse-to-pulse basis on 108.4MHz to 1.4-15MeV/u for injection in SIS. It consists of 320kV and RFQ injectors, Main Linac and 15 single gap cavities constructed 1972/1975 and upgraded (1991) at Darmstadt; C-96, pp.133-135, see too Linac-88, Linac-90, Linac-92 and Linac-98, TU4027. e-mail: *j.klabunde@GSI.de*
UNK	Project of Hadron SC Collider on 3 TeV (or NC on 600 GeV) with orbit length 20772 m was started in 1987. Yu. Fedotov, (IHEP), "UNK Status", EPAC-96, p.407; AC-98, p.33. In November 1998 Project was postponed due to financial reasons.
URAL-30	30 MeV, 100mA, 148.5 MHz, 5-10μs, 16,6 Hz Linac – since 1983 in operation as Proton Injector for IHEP Accelerator Complex (see EPAC-88), C-96, p.166. e-mail: *zherebtsov@vx.olu.decnet.ihep.su*
UST 200 MeV e⁻ Linac or HIL for HLS	University of Science & Technology of China at Hefei. Y.I. Pei et al. "Status of 200 MeV Electron Linac and Its Applications". The 200 MeV, 50mA Linac since 1987 has been running well for nuclear physics experiments and for production isotopes ^{123}I, ^{11}C, ^{15}O, ^{18}F etc.; Y.I. Pei, RSI, Vol. 60, No.7, 1991, p.1701.
VEPP-2M, (-3)	Collider e+/e- with 2E energy 0.4-1.4 GeV consists of 3 MeV Linac and 2 synchrotrons serve as injector: И.Я. Протопопов, 15СУЗЧ, том 1, с.35.
VEPP-4M	Collider e+/e- on 5.5-6 GeV (orbit length 360 m) started after reconstruction in 1990 at BINP (Novosibirsk). AC-98, p.43; V. Anachin, A. Skrinsky et al., "VEPP-4M Collider Status and Plans", EPAC-98, p.400. И.Я. Протопопов, 15СУЗЧ, том 1, с.35.
VEPP-5	Проект VEPP-5, В.В. Пархомчук, 15СУЗЧ, том 1, с.43. Its 510 MeV e^- Pre-injector Linac: C-96, p.163-4. e-mail: *logatchov@inp.nsk.su*
VLEPP	Proposal of 500 GeV (c.m.) Linear Collider Project, C-96, p.188-9
VLHC	Very Large Hadron Collider is BNL, LBNL and FNAL proposal study of SC p-p Collider on range scale of 10-100 TeV as next "discovery machine". K. Hubner, "Future Accelerators", CERN-SL-98-065.
YerPhI Injector Linacs	1) 50-75 MeV, 2.8 GHz, 1μs, 50 Hz Linac in operation (since 1965) at YerPhI as Synch. Injector; C-96, p.109. 2) 120 MeV, 2.8 GHz, 5-10μs, 50-100 Hz Linac is in construction at YerPhI as Synchr. Injector; C-96, p.108. e-mail: *oksuzian@vx1.yerphi.am*
ZGS	Zero Gradient Synchrotron on 12.5 GeV, $3.8x10^{12}$ p/pulse ($1.5x10^{12}$ p/s), D=54.7 m in 1964 began operation at ANL as world's highest energy weak-focusing Proton Synchrotron.
ZGS Linac – Injector IPNS	Proton Linac on 50 MeV, 12mA, 90μs, 30 Hz (L=33.3 m), constructed 1959/1962 at ANL. V. Stipp, "The ANL 50 MeV H^- Injector – 50 Years Anniversary", Linac-96, p.74. Now it uses as Injector IPNS (*see here*).

TERMS

Abbreviations accepted here	A98=APAC-98; CC=CERN Courier; E92=EPAC-92, etc to E98= EPAC-98; L92=Linac-92, etc to L98=Linac-98; P93=PAC-93, etc to P99=PAC-99; от 1 СУЗЧ до 16 СУЗЧ (или СУЗЧ-98) = XVI Совещание по Ускорителям Заряженных Частиц 1998 г.
Abbreviations *Latin* **& English**	1) ac – *anni currentis* – текущего года; 2) AD – *Anno Domini* – нашей эры; 3) ad – *ante diem* – before the day – до этого дня; 4) a. m. – above mentioned – вышеупомянутое; 5) au – arbitrary units, atomic unit; 6) avg. – average – среднее, в среднем; 7) BC – Before Christ - до нашей эры; 8) c, ca – *circa* – approximately, примерно; 9) c.f. – *confer* – (and cp.) - compare with, сравни; 10) ckw – clockwise – по часовой стрелке; 11) C.V. – *curriculum vitae* – жизнеописание; 12) e.c. – *exempli causa* and e.g. – *exempli gratia* – for example, например; 13) et al – *et alii* – and other people, и другие люди (*et alie* - and other things - и другие); 14) etc – *et cetera* – и так далее; 15) H.C. – *honoris causa* – почетная ученая степень за заслуги; 16) h.e. – *hic est* - то есть; 17) ibid. – *ibidem* - там же; 18) i.e. – *id est* – то есть; 19) n.a.c.s. – necessary and sufficient condition – необходимое и достаточное условие; 20) NB – *nota bene* – особое примечание; 21) p.a. (pa) – *per annum* – за год, ежегодно; 22) *per diem* – per day – в день, за день; 23) P.S. – *post scriptum* – примечание; 24) v. (and vs) – *versus* - против; 25) *via* – через; 26) *vide* – смотри; 27) viz – *videlicet* – namely, именно; 28) v.v. – *vice versa* - наоборот;
ACID	Automated Classification and Interpretation of Data
ACOP	Accelerator Component Oriented Programming
ACS	Annual-ring Coupled Structures (с кольцевыми ячейками связи см., например, В.В. Парамонов, 15 СУЗЧ, том1, с.161)
ADC, (cp. DAC)	Analog – Digital Conversion, (cp. Digital – Analog Conversion)
ADO	Accelerator Device Object
ADS	Accelerator Driven System(s)
ADT, (ADTT)	Accelerator Driven Transmutation (Technology)
AFE	Analog Front End
AGC	Automatic Gain Control (АРУ)
AIP	Artificial Intelligence Processor
ALC	Adaptive Logic Circuit
ALF	Advanced Lithography Facility
APCS	Automatic Phase Control System
APD	Avalanche Photodiode
API	Application Programming Interface; программный интерфейс прикладных задач; (e.g. см. 15 СУЗЧ, том 1, с. 309).
ASM	Accelerator Systems Modelling
AVC	Automatic Voltage Control
AVC (	Azimuthally Varying (magnetic field) Cyclotron
Bands of RF	See here "RF Bands" by IEEE standard (L-, S-, C-, X-, Ku-, etc)
BBA	Beam Based Alignment

BBU	Beam Blow-Up
BCM	Beam Current Monitor
BCSID	Beam Cross-section Ionization Detector
BIOS	Basic Input / Output System
BLM	Beam Loss Monitor
BLVD	Bunch Length Velocity Detector (e.g., see P.N. Ostroumov, Linac-98, p.905)
BM	Bending Magnet
BNCT	Boron Neutron Capture Therapy
BPC	Binary Pulse Compression
BPF	Band-Pass Filter
BPM	Beam Position Monitor
BRED	Browser and Editor – graphical interface; (e.g., see J.M. Bouche 15 СУЗЧ, том1, с. 219-221).
BST	Beam Switch Tube
CA	Cannel Access; see J.M. Bouche, 15 СУЗЧ, том1, с. 219-221.
CAMAC	Computer Application to Measurement and Control, cp. VME
CAS (cp. LAS)	Central Alarm System, (cp. Local Alarm System)
CBI	Coupled Bunch Instability
CCDTL	Coupled Cavity Drift Tube Linac
CCL	Coupled Cavity Linac
CCS	Coaxial Coupled Structures (с коаксиальными ячейками связи см. В.В. Парамонов, 15 СУЗЧ, 1996, том1, с.161)
CDEV	Control panel DEVice
CDR	Conceptual Design Report (or Review)
CDS	Cutted Disk Structures (с разрезными диафрагмами, e.g., see В.В. Парамонов: 15 СУЗЧ, т.1, с.161; 16 СУЗЧ, т.1, с.95)
CEDAR	CERN EDMS (see here) for Detectors and Accelerators (CERN LHC/97-03 VAC)
CFA	Cross-Field Amplifier
CFC	Current-to-Frequency Converter
CGA	Color Graphics Adapter
CIS	Control and Interlock System (and Collaboration of Independent States of former USSR)
CMB	Cosmic Microwave Background
CMOS	Read-out chip
CMS, cms,	Compact Muon Solenoid experiment (and cms - Center-Mass-System)
COM, cms	Center of Mass system, Center-Mass-System
CORBA	Common Object Request Broker Architecture
COTS	Commercial Off-The-Shelf Software
CP	Combined Parity (Violation); and CP – Colliding Point
CPA	Chirped Pulse Amplification (see Linac-98, Report TU4058)
CPI	Common Programming Interface; (Character per Inch – число символов на дюйм)
CPL	Current Privilege Level – текущий уровень преимущественного права

CPU	Central Processing Unit
CRT	Cathode – Ray Tube
CSM	Charge – State Multiplier system
CSR	Coherent Synchrotron Radiation
CTP	Core Technology Plan
CW, C-W	Continuous Wave; Cockcroft-Walton HV facility
DAC, ADC	Digital – Analog Conversion, Analog – Digital Conversion
DC, (dc)	Direct current; Directional coupler; Drift tracking Chamber
DCCT	DC Current Transformer; e.g. see: В В Калиниченко, ИППТ, 15 СУЗЧ, том1, с. 278.
DCS	Distributed Control Systems; e.g., see: CERN AT/92-31 (IC), p.9
DDD	DOOCS Data Display program is graphical editor to create and run control panel
DDN	Design Data Needs
DDS	Direct Digital Synthesizer
DFE	Digital Front End
DLC	Diamond-like Carbon Structure (for generation in long wavelength range)
DLDS	Delay Line Distribution System
DOOCS	Distributed Object Oriented Control System
DSC	Device Stub Controller; see: CERN AT/92-31 (IC); J.M. Bouche,15 СУЗЧ, том1, с. 219-221.
DSP	Digital Signal Processor and DSP chip
DXRL	Deep X-ray Lithography
EBIS	Electron Beam Ion Source
EBL	Electron Beam Lithography
EBQA	Electron Beam Charge (q) State Amplifier
EBW	Electron Beam Welding
ECA	Equipment Control Assembly; see: CERN AT/92-31 (IC)
ECRIS (ECR IS)	Electron Cyclotron Resonance Ion Source. (CC Vol. 39, No.9, p.9)
ECRIT	ECR Ion Trap
ED&D	Experiment, Design and Development
EDM	Electrical Discharge Machining
EDMS	Engineering Data Management System is a collection of tools and rules to create and maintain in safety an easily accessible body of reliable information; (CERN LHC/97-03)
EDR	Electronic Data Processing
EM	Equipment Module
EMU	Emittance Measurement Unit
ENS	Equipment Name Server; see:15 СУЗЧ, т.1, сс. 227, 309, 321.
EPCS	Experimental Physics Control System
EPIC	Explicitly Parallel Instruction Computing technology
EPICS	Experimental and Physics Industrial Control System; e.g. see: 15 СУЗЧ, т.1, с. 219-221, с. 303.
ESQ	Electrostatic Quadrupole
ESS	Electrostatic Septum; (European Spallation Source)

EVP	Engineering Validation Package
FCM	Field Control Module
FEBIAD	Forced Electron Beam Induced Arc Discharge
FEC	Front End Computer; (Managers can be served as virtual FEC)
FEL	Free Electron Laser
FEM	Free Electron Maser
FSDM	Fast Shut Down Mode (-ule)= Crowbar, аварийный разрядник
FWHM	Full Width at Half of Maximum
GB, SB	Gas Bremsstrahlung, Single Bremsstrahlung
GEM	Gas Electron Multiplier, CC Vol.38, No9, Dec.1998, p.19
GRIB	Interface chart for connection of PC IBM with other PC or another equipment's
GTO	Gate Turn-Off switch (e.g. bipolar thyristor or trinistor)
GUT	Grand Unified Theory
GUI	Graphic User Interface
HEBT	High Energy Beam Transport
HER, (LER)	High Energy Ring, (Low Energy Ring)
HESQ	Helical Electrostatic Quadrupole
HIDIF	Heavy Ion Driven Inertial Fusion (used elsewhere); and Heavy Ion Driven Ignition Facility (used in IAP)
HOM	High Order Mode
HPD	Hybrid Photodetector
HPRF	High Power RF
HVPS	High Voltage Power Supply
I&Q	In-phase and Quadrature-phase
I/O	Input / Output
I/Q (or I-Q)	In Phase and/or in Quadrature (signal at 0° and/or at 90°)
IBBM	Inhomogeneous Big Bang Model of Universal
IBS	Intra-Beam Scattering
ICALEPCS	Int. Conf. On Accelerator and Large Experimental Physics Control Systems *see:* CC Vol.40 No.4 (May 2000), pp.26-28.
ICE	Independent Cost Evaluation
ICF	Inertial Confinement Fusion
ID	InterDigital structure
IFEL	Inverse Free Electron Laser
IGLIS	Ion Guide Laser Ion Source
IGBT	Insulated Gate-Bipolar Transistors (Linac-98, MO4077)
IGISOL	Ion Guide Isotope On Line (facility)
IH	Interdigital H-type Structure
IOC	Input-Output Controller, (Integrated Optical Circuit)
IOT	Inductive Output Tube (some kind of Klystrode)
IP	Intersection Point (in colliders),
IP Address	The name of client
IPM, IPMS	Ionization Profile Monitor, Ion Profile Monitor System
IR	Infra-Red; Interaction Region

IRFEL	Infra-Red Free Electron Laser
ISOL-type	Isotope Separator On-Line (method)
ITF	Integral Transfer Function
IVA	Inductive Voltage Adders
LADR	Linear Accelerator Driven Reactor
LAFER	Linear Accelerator Fuel Enricher/Regenerator
LAFP	Linear Accelerator Fuel Producer
LAS (cp. CAS)	Local Alarm System, (cp. Central Alarm System)
LCLS	Linac Coherent Light Source
LEBT	Low Energy Beam Transport
LER, (HER)	Low Energy Ring, (High Energy Ring)
LEUTL	Low Energy Undulator Test Line
LIA	Linear Induction Accelerator
LIS	Laser Ion Source
LLRF	Low Level RF system or control system
LPSS	Long Pulse Spallation Source
LWFA	Laser Wakefield Accelerator
LWIR	Long Wavelength Infrared Radiation λ=8 -12 μm (c. SWIR)
MB RFQ	Multi-Beam RFQ
MCP	Micro-channel-plate (to collect the charges)
MD	Multipactor Discharge
MDI	Multiple Document Interface; 15 СУЗЧ, т. 1, с. 227.
MDT	Mean Down Time
MEBT	Medium Energy Beam Transport
MITL	Magnetically Isolated Transmitting Line
MMI	Man Machine Interface
MOSFET	Metal-Oxide Silicon Field Effect Transistor (Bipolar transistor)
MPU	Microprocessor Unit
MTBF (MTTR)	Mean Time Between Failures, (Mean Time to Repair or Replace)
MTDTL	Multi-Tank Drift Tube Linac
MTF, (MTR)	Mean Time to Failures, (Mean Time to Repairs)
MTG	Master Timing Generator
MTR, (MTF)	Mean Time to Repairs, (Mean Time to Failures)
MTTR, MTBF	Mean Time to Repair (or Replace), Mean Time Between Failures
NC, (RT)	Normal Conducting, (Room Temperature)
NCC, (RTC)	Normal Conducting Cavity, (Room Temperature Cavity)
NEG	Non-Evaporating Getters (pumps)
NEG	Non-Evaporable Getters
NFS	Network File System
NHPP	Non-Homogenous Poisson Process
NMR	Nuclear Magnetic Resonance (effect)
NPB	Neutral Particle Beam
NPP	Nuclear Power Plant
OCS	On-axis Coupled Structures (с внутренними ячейками связи см. В.В. Парамонов: 15 СУЗЧ, т.1, с.161; 16 СУЗЧ, т.1, с.99)

OFE, (OFHC)	Oxygen Free Electroplating (Oxygen Free High Conductivity) copper
OFHC	Oxygen Free High Conductivity
OODBS	Object Oriented Data Base System
OPI	Operator Interface
OTR	Optical Transition Radiation
PA, (pa)	Power Amplifier; (per annum – за год)
PBWA	Plasma Beat Wave Accelerator
PC	Pad tracking Chamber; Personal Computer
PCA	Process Control Assembly; see: CERN AT/92-31 (IC)
PCMMI	Process Control Man Machine Interface
PDM	Pulse – Duration Modulation
PDP	Project Development Plan
PET	Positron Emission Tomography
PFM	Pulse Frequency Modulate
PFN, pfn	Pulse Forming Network
PFNA	Pulse Fast Neutron Analysis (method)
PIS	Post Interdigital Structure, В.В. Парамонов, 16 СУЗЧ,т.1, с.103
PIXE	Particle Induced X-ray Emission
PLC	Programmable Logic Controller; see: CERN AT/92-31 (IC)
PLL	Phase Locked Loop
PMT	Photo-Multiplier Tube
POP, pop	Proof of Principle
p-p	Pick-to-pick; push-pull; pick power.
ppb	Parts per billion
ppc	Proton per cycle
ppm, (PPM)	Parts per million; pulses per minute; pulse-to-pulse modulation: 15 СУЗЧ, т.1, с. 219 and 16 СУЗЧ, т.1, с. 176; (or Periodic Permanent Magnets).
ppp	Protons per pulse; peak pulse power
pps	Proton per second; pulses per second;
prr	Pulse repetition rate
PSC	Power Supply Controller
PWM	Pulse Width Modulate
QCC	Quartz Crystal Controlled
QCD	Quantum Chromodynamics
QED	Quantum Electrodynamics
QFT	Quantum Field Theory
QWR	Quarter Wave Resonators (Structure)
R&D	Research and Development
RAM	Random - Access Memory (задающее устройство с произвольным доступом); e.g., see 15 СУЗЧ, т.1, с. 219;
RAMI	Reliability, Availability, Maintainability and Inspectability
RBS	Rutherford Backscattering (effect)
RC	Remote Control
RCCS	Resonant-Control Cooling Subsystem
RCS	Rapid Cycling Synchrotron

RDBMS	Relational Data Base Management System
RDCB	Rectangular Directly Coupled Bridges (Linac-98, TU4078)
RDDS	Rounded Damped Detuned Structure e.g. for NLC (Linac-98, TU4037)
RF Bands (by IEEE)	"UHF": 300 MHz–1GHz; "L-band": 1–2GHz (19.35-77.19 cm); "S-band": 2–4GHz (5.77-19.35 cm); "C-band": 4 – 8GHz; "X-band": 8–12GHz; "Ku-band": 12 – 18GHz; "K-band": 18– 27GHz; "Ka-band": 27– 40GHz; "mm-band": 40-300GHz.
RFCL	RF Crossed Lens (accelerator or section)
RFQ	Radio Frequency Quadrupole, (ПОКФ)
RGB	Red, Green, Blue – basic colors for monitor screen
RG-BPM	Residual Gas Beam Profile Monitor
RGDTL	Ramped Gradient DTL
RIB	Radioactive Ion Beams (e.g.: M. Lieuvin, E-96, p.115)
RICH	Ring Imaging Cherenkov Counter
rms (r.m.s.)	Root-mean-square
RNB	Radioactive Nuclear Beams
RO	Read-Only: мода доступа, e.g., see 15СУЗЧ, т.1, с. 219-221.
ROCOF	Rate of Occurrence Of Failures
ROCOR	Rate of Occurrence Of Repairs
RPC	Remote Procedure Calls; see: O. Hensler, 15 СУЗЧ, т.1, с.308
RRR (dc, ac)	Residual Resistance Ratio (W. Singer, 15 СУЗЧ, т.1, с.127)
RT, (NC)	Room Temperature, (Normal Conducting)
RTDB	Real -Time Database
RTM	Racetrack Microtron
RTMR	Race-Track Microtron-Recuperator (at BINP, Novosibirsk)
RW	Read-Write: мода доступа, e.g., see 15 СУЗЧ, т.1, с. 219-221.
SASE (FEL)	Self Amplified Spontaneous Emission (FEL)
SB, GB	Single Bremsstrahlung, Gas Bremsstrahlung
SCADA	Supervisory Controls and Data Acquisition systems
SCC	Side Coupled Cavity, (or SC Cavity)
SCL	Side Coupled Linac, (or SC Linac)
SCM	Software Configuration Management system
SCR	SC (or Split Coaxial) Resonator; Silicon Controlled Rectifier
SCS	Side Coupled Structures (структуры с боковыми ячейками связи, e.g., see В.В. Парамонов, 15 СУЗЧ, т.1, с.161)
SDTL	Separated type DTL (with quadrupoles between cavities)
SEBL	Scanning Electron Beam Lithography (method)
SEDAC	E.g., see M. Clausen, 15 СУЗЧ, т.1, с.307)
SEED	Secondary Emission Electron Detector
SILHI	High Intensity Light Ion Source
SIS	Spiral Interdigital Structure, В. Парамонов,16 СУЗЧ, т.1, с. 103
SLED, -2.	SLAC Linac Energy Doubler; e.g., see:15 СУЗЧ, т. 1, с. 92.
SLS	Synchrotron Light Source
SMLWFA	Self-Modulated Laser Wake Field Accelerator
SOS	Signal Observation System

SPARC	Sun Workstation (hardware)
SQUID	SC Quantum Interface Device is new type of non-destructive low-intensity beam monitor.
SR	Synchrotron Radiation; Storage Ring
SRD	Step-Recovery Diode (диод с накоплением заряда)
SRFC	Superconducting RF Cavity = SCR (SC Resonator)
SRIS	Split Ring Interdigital Structure, 16 СУЗЧ, т.1, с.103
SRS	Synchrotron Radiation Source
SSP	Solid State Physics
SUSY	Super Symmetry (principle)
SWIR	Short Wavelength Infrared Radiation (c. LWIR)
SXR	Soft X-ray Radiation (or Soft X-Ray radiation)
T/B	Target / Blanket Assembly
TAC	Time-to-Amplitude Converter
TACO-ESRF	ESRF (European Synchrotron Rad. Facility) Control System
TBA	Two Beam Acceleration
TC	Thermocouple
TEC	Time Expansion tracking Chamber
TMC	Time Memory Cell chips
TOF, tof	Time-of-Flight (method)
TORVIS	Toroidal Volume Ion Source
TPC	Total Project Cost
TTF	Transit Time Factor
TW, TWT	Traveling Wave, (Tera Watt), Traveling Wave Tube
V.S.O.P.	Very Superior Old Pale (very good liquid)
VCRs	Vane Coupling Rings (in RFQ)
VDU	Visual Display Unite
VHS	Video Home System
VI	Virtual Instruments; see O. Hensler, 15 СУЗЧ, т. 1, с. 310.
VME	Versa bus Memory Extended (on 32 bit International Standard) or Versa Module European, ср. CAMAC
VPM	VLEPP Pulse Multiplier (see Linac-98, Report TH2001; see too B.E. Балакин, 15 СУЗЧ, том1, с.92.)
VSWR	Voltage Standing Wave Ratio
VUV	Very far (or Vacuum) in range λ from 10 to 200nm Ultra-Violet.
VUV/SXR	VUV/Soft X-Ray
VXIbus	module
WBS	Work Breakdown Structure
WC	Water-cooled
WG	Waveguide - волновод, or Wire Gauge -сортамент проводов
XDR	eXternal Data Representation; e.g., see 15 СУЗЧ, т. 1, с. 308.
XHV	eXtreme High Vacuum
Xtal, xtl	Crystal, quartz (or quartz generator)
XUV	eXtreme Ultraviolet
XUV FEL	X-ray Ultraviolet FEL

THE INSTITUTIONS RELATED TO ACCELERATORS, THEIR AVAILABLE POSTAL AND MAIL ADDRESSES WITH NAMES (OR MOTTOS) OF ACTIVE SCIENTIFIC WORKERS

ACCEL Instruments GmbH, Friedrich Ebert Str. 1, D-51429 Bergisch, Gladbach, Germany accel@accel.de klein@accel.de krischel@accel.de
Accsys Technology, Inc., 1177A Quarry Lane, Pleasanton, CA 94566, USA rhamm@linacs.com
Acctek Associates, 901 S. Kensington, Lagrange, IL 60525, USA rmartin45@aol.com
Advanced Energy Systems, Inc., 9 Jeffrey Lane, Princeton Junction, NJ 08550, USA ammt@home.com
Advanced Energy, 4336 Cape Cod Crescent, Fort Collins, CO 80525, USA brook@frii.com
Advanced Ferrite Technology Inc., 15200 Shady Grove Road - Suite 350, Rockville, MD 20850, USA
AET Associates, Inc., 20370 Town Center Lane #252, Cupertino, CA 95014, USA aetaus@aol.com
Alpha Scientific Electronics, 1868 National Avenue, Hayward, CA 94545, USA
American Physical Society, Ova Physics Ellipse, College Park, MD 20740, USA ripin@aps.org
American Science & Engineering, Inc., 3300 Keller Street, #101, Santa Clara, CA 95054, USA avm-src@aol.com amishin@compuserve.com
Amersham Medi & Physics, Amersham Healthcare, 900 Durham Avenue, South Plainfield, NJ 07080, USA bill.mcclain@amersham.com
AML, 2730 Kirby Avenue NE, #5, Palm Bay, FL 32905, USA rmeinke@magnetlab.com
ANL, 9700 S. Cass Avenue, Bldg. 401, Argonne, IL 60439, USA asd-div@aps.anl.gov borland@aps.anl.gov bxyang@aps.anl.gov carwar@aps.anl.gov chae@aps.anl.gov conde@anlhep.hep.anl.gov cyao@aps.anl.gov decker@aps.anl.gov dgm@aps.anl.gov doose@aps.anl.gov emery@aps.anl.gov emil@aps.anl.gov frl@aps.anl.gov gluskin@aps.anl.gov grg@aps.anl.gov harkay@aps.anl.gov horan@aps.anl.gov isaac@aps.anl.gov jcdooling@anl.gov jones@aps.anl.gov jp@hep.anl.gov kwangje@aps.anl.gov ldjohns@anl.gov lessner@aps.anl.gov lumpkin@aps.anl.gov mcmichael@anl.gov milton@aps.anl.gov mjk@aps.anl.gov mooney@aps.anl.gov mrk@aps.anl.gov mwhite@aps.anl.gov norem@hep.anl.gov pardo@anlphy.phy.anl.gov pdenhartog@anl.gov pvs@hep.anl.gov rsk@hep.anl.gov sereno@aps.anl.gov teng@aps.anl.gov wg@hep.anl.gov wiemer@aps.anl.gov wpm@aps.anl.gov xus@aps.anl.gov yc@aps.anl.gov ywkang@aps.anl.gov
ANL, APS, 9700 S. Cass Avenue, Argonne, IL 60439-4815, USA dohan@aps.anl.gov travish@aps.anl.gov
ANL, APS, XFD - 401, 9700 S. Cass Avenue, Argonne, IL 60439, USA moog@aps.anl.gov
ANL, Physics Div., D-203, 9700 S. Cass Avenue, Argonne, IL 60439, USA nolen@anl.gov
Bergoz, PO Box 2578, Redwood City, CA 94064, USA
BESSY, Berlin, Lentze Allee 100, D-14195 Berlin, Germany mueller@bessy.de
BESSY, Berlin, Rudower Chaussee 5, D-12489 Berlin, Germany jaeschke@bessy.de
BESSY-II, GEB. 15.1 Rydower Chaussee 5, D-12489 Berlin, Germany khan@port.exp.bessy.de wuestefeld@bessy.de
BNL, AGS Dept., Upton, NY 11973, USA agr@bnl.gov brown10@bnl.gov glenn@bnldag.ags.bnl.gov jgwang@bnl.gov huang@bnldag.bnl.gov ingrassia@bnl.gov neville@bnl.gov okamura@bnldag.ags.bnl.gov reece@bnl.gov roser@bnl.gov syzhang@bnldag.ags.bnl.gov weng@bnl.gov
BNL, P.O. Box 5000, Upton, NY 11973-5000, USA ahrens@bnl.gov alessi@bnl.gov

bking@sun2.bnl.gov bruno@bnl.gov carls@bnl.gov connolly@bnl.gov dejan@bnl.gov fernow@bnl.gov gassner@bnl.gov hahnh@bnl.gov harrison@bnl.gov hartman1@bnl.gov hayes@bnl.gov hershcovitch@bnl.gov hkirk@bnl.gov hoff@bnl.gov ilan@bnl.gov wfischer@bnl.gov kahn1@bnl.gov leonhar1@bnl.gov luccio@bnl.gov mmb@bnl.gov muratore@bnl.gov nawrocky@bnl.gov palmer@bnl.gov parsa@bnl.gov peggs1@bnl.gov raparia@bnl.gov rlbrown@bnl.gov rose3@bnl.gov sajaev@bnl.gov shea@bnl.gov slawomir@owl.rhic.bnl.gov takahashi@bnlarm.bnl.gov tallerico@bnldag.ags.bnl.gov tuozzolo@bnl.gov uspas@fnal.gov waldo@bnl.gov willen@bnl.gov witkover@bnl.gov yannis2@bnl.gov yylee@bnl.gov yamazaki@bnl.gov yzhao@muon.cap.bnl.gov zaltsman@bnl.gov

BNL, NSLS 725 (B, C, D), P.O. Box 5000, Upton, NY 11973-5000, USA avanst@bnl.gov blum@bnlls1.nsls.bnl.gov graves@bnl.gov jbm@bnl.gov jmwang@bnlls1.nsls.bnl.gov heese@bnlls1.nsls.bnl.gov klaffky@bnl.gov krinsky@bnlls1.nsls.bnl.gov payman@bnl.gov rakowsk1@bnl.gov susila@bnlls1.nsls.bnl.gov thomas@bnlls1.nsls.bnl.gov towne@bnl.gov wang@bnlls1.nsls.bnl.gov woodle1@bnl.gov yakimenk@bnlls1.nsls.bnl.gov

BNL, RHIC, Bldg. 1005S, Upton, NY 11973-5000, USA johannes@bnl.gov pilat@owl.rhic.bnl.gov vanasselt@bnl.gov

BNL/Indiana U., AGS Dept., Upton, NY 11973-5000, USA bai@bnldag.ags.bnl.gov

Boeing D&SG, MS 2T-50, P.O. Box 3999, Seattle, WA 98124-2499, USA arthur.m.vetter@boeing.com

Boeing North America, 12000 West 12th Street, Ogden, UT 84401, USA kenneth.a.bliss@boeing.com

Boeing Physical Sciences Research Centre, MS 2T-50, P.O. Box 3999, Seattle, WA 98124-2499, USA david.h.dowell@boeing.com

Bonn U., Physics Inst., Nussallee 12, D-53115 Bonn, Germany gentner@physik.uni-bonn.de

Boston U., 22927 Drake Lane, Summerland Key, FL 33042, USA krienen@bnldag.ags.bnl.gov

Box 40, Gabriola Island, BC, Canada, V0R 1X0 servranc@island.net

BP 2, SICN, F-38113 Veurev Vorozze, France

Branch of Budker INP, RU-142284 Protvino, Moscow Region, Russia balakin@vlepp.serpukhov.su kazakov@vlepp.serpukhov.su sery@vlepp.serpukhov.su vogel@vlepp.serpukhov.su

Budker INP, Novosibirsk, Academician Lavrentiev Prospect 11, RU-630090 Novosibirsk, Russia e.m.lisman@inp.nsk.su a.s.medvedko@inp.nsk.su b.i.grishanov@inp.nsk.su perevedent@inp.nsk.su shatilov@inp.nsk.su vnvolkov@inp.nsk.su yu.m.shatunov@inp.nsk.su

Campus UAB, LSB-IFAE, Lab. del Sincrotro de Barcelona, Edifici Ciencies Nord, E-08193 Bellaterra, Spain mmunoz@ifae.es

CEA Saclay, DSM/DAPNIA/SEA, Bat. 701 (706), Orme des Merisiers, F-91191 Gif sur Yvette, France jmlagniel@cea.fr pybeauvais@cea.fr rferdinand@cea.fr

CEA, DSM/DAPNIA/SEA, F-91191 Gif-sur-Yvette CEDEX, France meot@drfmc.ceng.cea.fr

CEA-CESTA, BP #2, F-33114 (F-33170) Le Barp, France

CEA-CNRS - Projet SOLEIL, DRIF du CNRS, Avenue de la Terrasse, Batiment 5, F-91198 Gif-sur-Yvette CEDEX, France laclare@sol.cnrs-gif.fr level@lure.u-psud.fr mosnier@cea.fr nadji@lure.u-psud.fr phi@sol.cnrs-gif.fr

CEA-DAM, 16 Residence Beausoleil, F-92210 Saint Cloud, France

CEA-DAM, 5 Rue Pasteur, F-92210 Saint-Cloud, France

CEA-Saclay, CEA/DAPNIA/STCM, F-91191 Gif-sur-Yvette CEDEX, France peyrot@hep.saclay.cea.fr

CEA-Saclay, F-91191 Gif sur Yvette, France faure@lns.cea.fr payet@picpus.saclay.cea.fr
CEA-Saclay, STCM, BAV 123, F-91191 Gif sur Yvette, France kircher@hep.saclay.cea.fr jmlagniel@cea.fr safa@hep.saclay.cea.fr
Ceramic Magnetics, Inc., 16 Law Drive, Fairfield, NJ 07004, USA
CERN Accelerator School, AC Division, CH-1211 Geneva 23, Switzerland
CERN Courier, CERN, CH-1211 Geneva 23, Switzerland james.gillies@cern.ch
CERN, 4, Chemin du Sautoir d'Or, CH-1294 Geneva 23, Switzerland jukka.klem@cern.ch
CERN, AC Division, CH-1211 Geneva 23, Switzerland ejn@mail.cern.ch
CERN, AC Division, HIDIF Collaboration, CH-1211 Geneva 23, Switzerland gunther.plass@cern.ch
CERN, CH-1211 Geneva 23, Switzerland alberto.scaramelli@cern.ch autin@ps.msm.cern.ch bosser@ps.msm.cern.ch dekkers@ps.msm.cern.ch erk.jensen@cern.ch evans@mail.cern.ch f.perriollat@cern.ch francesco.ruggiero@cern.ch gilbert.drouet@cern.ch gilbert.guignard@cern.ch Gunnar.Fernqvist@cern.ch Jean.Boillot@cern.ch jean-pierre.koutchouk@cern.ch karlheinz.schindl@cern.ch louis.walckiers@cern.ch luc.durieu@cern.ch oswald.grobner@cern.ch paul.cruikshank@cern.ch paul.proudlock@cern.ch philippe.lebrun@cern.ch Roberto.saban@cern.ch s.myers@cern.ch stephan.maury@cern.ch willem.middelkoop@cern.ch
CERN, EST Division, CH-1211 Geneva 23, Switzerland gregoire.kantardjian@cern.ch
CERN, LHC Division, CH-1211 Geneva 23, Switzerland perinid@mail.cern.ch theodor.tortschanoff@cern.ch thomas.taylor@cern.ch
CERN, PPE Division, ATLAS, CH-1211 Geneva 23, Switzerland herman.tenkate@cern.ch
CERN, PS Division, CH-1211 Geneva 23, Switzerland christian.serre@cern.ch franck.di.maio@cern.ch pedersen@mail.cern.ch roberto.corsini@cern.ch tranquil@ps.msm.cern.ch walter.wuensch@cern.ch
CERN, PS/DI, CH-1211 Geneva 23, Switzerland niels.madsen@cern.ch
CERN, SL Division, CH-1211 Geneva 23, Switzerland daniel boussard@cern.ch Daniel.Brandt@cern.ch eberhard.keil@cern.ch elsener@mail.cern.ch ghislain.roy@cern.ch gianluigi.arduini@cern.ch helmut.burkhardt@cern.ch hermann.schmickler@cern.ch johan.dieperink@cern.ch manfred.sassowsky@cern.ch romeo.perin@cern.ch trevor.linnecar@cern.ch werner.herr@cern.ch
CE-Saclay, CEA/DAPNIA/SEA, F-91191 Gif-sur-Yvette CEDEX, France fartouk@hep.saclay.cea.fr
China IAE, P.O. Box 275 (15), Beijing, 102413, P.R. China gxl@mipsa.ciae.ac.cn
Columbia U., 630 West 168th Street, New York, NY 11709, USA
Columbia U., Code 4701, Applied Physics Dept., New York, NY 10027, USA tcm2@columbia.edu
Communications and Power Industries, 301 Industrial Way, San Carlos, CA 94070, USA
Communications and Power Industries, B-450, 811 Hansen Way, Palo Alto, CA 94304-1031, USA heinz.bohlen@mptp.cpii.com
Continental Electronics Corp., PO Box 270879, Dallas, TX 75227-0879, USA jrogers@contelec.com
Copley Controls Corp., 410 University Avenue, Westwood, MA 02154, USA mursino@copleycontrols.com
Cornell U., 311 Dryden Road, Ithaca, NY 14850-4746, USA edwin@tristan.tn.cornell.edu
Cornell U., 325 Rhodes Hall, Ithaca, NY 14853, USA jnation@lps.cornell.edu
Cornell U., LNS, High Voltage Lab, 909 Mitchell Street, Ithaca, NY 14853, USA jivers@lps.cornell.edu shahid@lps.cornell.edu talman@lns62.lns.cornell.edu

Cornell U., Newman Lab, Ithaca, NY 14853-5001, USA dlr@cesr10.tn.cornell.edu epc@lns62.lns.cornell.edu gfd1@cornell.edu jtr1@cornell.edu hsp@cesr10.lns.cornell.edu nbm@lns62.lns.cornell.edu sab@lns62.lns.cornell.edu
Cornell U., Wilson Lab, 271, Ithaca, NY 14853-5001, USA cytan@tristan.tn.cornell.edu dcs@lns62.lns.cornell.edu dhr1@cornell.edu kwo1@cornell.edu malitsky@mail.lns.cornell.edu mgb@cesr10.lns.cornell.edu rem@lns62.lns.cornell.edu sdh9@lns62.lns.cornell.edu sg@cesr10.lns.cornell.edu st@lns.cornell.edu welch@lns62.lns.cornell.edu wrl@lns62.lns.cornell.edu zipi@cesr10.lns.cornell.edu
CREOL/UCF, 1500 E. Ridgewood Street, Orlando, FL 32803-5451, USA tesch@lorien.creol.ucf.edu
Danfysik A/S, PO Box 2578, Redwood City, CA 94064, USA
DAPNIA/SEA, CEA-Saclay, F-91191 Gif-sur-Yvette CEDEX, France juillard@hep.saclay.cea.fr
Daresbury Lab, CLRC, Synchrotron Radiation Dept., Warrington, Cheshire, UK, WA4 4AD m.w.poole@dl.ac.uk
Daresbury Lab, CLRC, Warrington, Cheshire, UK, WA4 4AD d.m.dykes@dl.ac.uk h.owen@dl.ac.uk n.marks@dl.ac.uk
Dehnel Consulting Ltd., P.O. Box 201, Nelson, BC, Canada, V1L 5P9 mdehnel@awinc.com
Dept of Physics, SLAC, 9500 Gilman Drive, La Jolla, CA 92093-0319, USA nkroll@ucsd.edu
Dept. 9541, SNL, MS 1188, Albuquerque, NM 87185-1188, USA clolson@sandia.gov
Dept. EECE, U. New Mexico, Albuquerque, NM 87131, USA humphrie@warlock.eece.unm.edu
Dept. of Electrical Engineering, Lab for Plasma Research, U. Maryland, College Park, MD 20742-3511, USA poshea@eng.umd.edu
Dept. of Electrical Engineering, Technion-Israel Inst. of Technology, Haifa, 32000, Israel levi@ee.technion.ac.il
Dept. of Nuclear Physics, Inst. Physics of the SAS, Bratislava, Dubravska cesta 9, SK-84228 Bratislava, Slovak Republic pivarc@nrsun.jinr.ru
Dept. of Nuclear Science, National Tsing Hua U. & SRRC, Hsinchu, 300, Taiwan ichsu@ins.nthu.edu.tw
Dept. of Physics and Astronomy, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90095-1547, USA yliu@physics.ucla.edu
Dept. of Physics, Indiana U., SW117, Bloomington, IN 47405, USA shylee@indiana.edu
Dept. of Physics, INFN-Milan and U. Milan, Via Celoria 16, I-20133 Milan, Italy luca.serafini@mi.infn.it
Dept. of Physics, PBPL, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90095, USA suk@vesta.physics.ucla.edu
Dept. of Physics, Texas A&M U., College Station, TX 77843, USA mcintyre@phys.tamu.edu
Dept. of Physics, U. Maryland, College Park, MD 20742, USA dabell@quark.umd.edu dragt@quark.umd.edu fedotov@quark.umd.edu venturin@quark.umd.edu
Dept. of Physics, U. Mississippi, University, MS 38677, USA summers@umsphy.phy.olemiss.edu
Dept. of Physics, UC Irvine, Irvine, CA 92697-4575, USA hboehme@uci.edu
Dept. of Physics, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90095-1444, USA tremaine@physics.ucla.edu
Dept. of Quantum Matter, Grad. School of Adv. Sciences of Matter, Hiroshima U., 1-3-1 Kagamiyama, Higashi-Hiroshima 739-8526, Japan okamoto@kyticr.kuicr.kyoto-u.ac.jp
Dept. of Radio Science & Engineering, Kwangwoon U., 447-1, Wolgae-Dong, Nowon-Ku, Seoul 139-701, S. Korea jinchoi@daisy.kwangwoon.ac.kr
Dept. of Radiology, Vanderbilt U. Medical Center, 1161 21st Avenue South, 920 VUH, Nashville,

TN 37232-2675, USA frank.carroll@mcmail.vanderbilt.edu
DESY Zeuthen, Platanenallee 6, D-15738 Zeuthen, Germany rlorenz@ifh.de
DESY, MIN Group, Notkestrasse 85, D-22603 Hamburg, Germany michael.schmitz@desy.de
DESY, MPY, Notkestrasse 85, D-22603 Hamburg, Germany seidel@slac.stanford.edu
DESY, Notkestrasse 85, D-22603 Hamburg, Germany bacher@desy.de brinkmann@desy.de clausen@desy.de dohlus@mail.desy.de ebeling@mail.desy.de gavoss@mail.desy.de gerd.woebke@desy.de hans-joerg.eckoldt@desy.de jacel@teslahe.desy.de jensenp@mail.desy.de kelly@x4u2.desy.de kleffner@mail.desy.de mais@mail.desy.de meyners@desy.de michael.ebert@desy.de michael@pekeler.desy.de mkikri@mail.desy.de reichesv@x4u2.desy.de rossbach@desy.de schlarb@x4u2.desy.de trines@teslavb.desy.de willeke@desy.de
Dip. Di. Fisica, INFN/U. Diroma Torvergata, Viale Ricerca Scientifica 1, I-00133 Roma, RM, Italy tazzari@roma2.infn.it
Dipart. Fisica, U. Padova, I-35131 Padova, Italy pusterla@pd.infn.it
Dipartimento di Fisica, Bari U., Via Amendola 173, I-70126 Bari, Italy raino@ba.infn.it
Division of High Energy Physics, DOE, ER - 224, 19901 Germantown Road, Germantown, MD 20874, USA hep-tech@oer.doe.gov jerry.peters@oer.doe.gov
Division Systems & Information Eng., Hokkaido U., Kita 13, Nishi 8, Kita-ku, Sapporo, 060, Japan kawa@em.huee.hokudai.ac.jp
DOE, 19901 Germantown Road, Germantown, MD 20874, USA phil.debenham@oer.doe.gov
DOE, ER - 55, 19901 Germantown Road, Germantown, MD 20874-1290, USA mark.wilson@oer.doe.gov
Dortmund, IBS, Emil-Figge-Str. 74R, D-44221 Dortmund, Germany
Dortmund, Institute for Accelerator Physics, Maria-Goeppert-Mayer-Strasse 2, D-44221 Dortmund, Germany janko@delta.uni-dortmund.de
DRIF/DPTA/SP2A, CEA-Bruyeres-le-Chatel, BP12-Bruyeres-le-Chatel, F-91680 Bruyeres-le-Chatel, France jlemaire@bruyeres.cea.fr
Duke U., FEL Lab, La Salle Street Ext., Durham, NC 27708, USA lewisj@fel.duke.edu vl@phy.duke.edu
DULY Research Inc., 19112 MacArthur Street, Rancho Palos Verdes, CA 90275-1111, USA
Ebco Technologies Inc., 7851 Alderbridge Way, Richmond, BC, Canada, V6X 2A4
EEV Inc., 4 Westchester Plaza, Elmsford, NY 10523, USA
EEV Ltd., Waterhouse Lane, Chelmsford, Essex, UK, CM1 2QU cliff.weatherup@eev.com david.wilcox@eev.com graeme.clark@eev.com john.ashton@eev.com ron.sheldrake@eev.com
Eindhoven U. of Technology, P.O. Box 513, Cyclotron Lab, Room 2.13, NL-5600 MB Eindhoven, The Netherlands w.h.c.theuws@tue.nl
Electronic Measurements - ALE Systems, 278 Spring Street, Red Bank, NJ 07753, USA emiapps@emipower.com
Elekta Oncology Systems, Linac House, Fleming Way, Crawley, UK, RH10 ZRR john allen@eos.elekta.com
Elettra, Sincrotrone Trieste, SS 14 km 163.5, in Area Science Park - Basovizza, I-34012 Trieste, TS, Italy lonzam@elettra.trieste.it
Engineered Magnetics, Inc., 18435 Susana Road, Rancho Dominguez, CA 90221, USA
Engineering School, UCLA, 405 Hilgard Avenue, Los Angeles, CA 90095, USA gordond@ucla.edu
ESRF, BP 220, F-38043 Grenoble CEDEX, France berkvens@esrf.fr chavanne@esrf.fr filhol@esrf.fr jacob@esrf.fr hardy@esrf.fr ropert@esrf.fr
Everson Electric, 2000 City Line Road, Bethlehem, PA 18017, USA

Faculty of Science, Osaka U., Lab of Nuclear Studies, Toyonaka, Osaka 560, Japan
FEL Laboratory, Duke U., Durham, NC 27708-0319, USA wu@fel.duke.edu
FG Theorie Elektromagnetischer Felder, Darmstadt U. of Tech., FB 18, Schlossgarten Str. 8, D-64287 Darmstadt, Germany petra.schuett@t-online.de
Florida A& M U., 2114 Broad Street, Tallahassee, FL 32301, USA williams@cennas.nhmfl.gov
FM Technologies, 10529-B, Braddock Road, Fairfax, VA 22032, USA len@ppd.nrl.navy.mil
FNAL, P.O. Box 500, Batavia, IL 60510, USA ahahn@fnal.gov alennox@fnal.gov alvin@fnal.gov assadi@adcalc.fnal.gov Bartelson@fnal.gov bcbrown@fnal.gov blokland@fnal.gov capista@fnal.gov ccjensen@fnal.gov champion@fnal.gov chase@fnal.gov chou@fnal.gov church@fnal.gov cjf@fnal.gov cjj@fnal.gov cschmidt@fnal.gov damon@fnal.gov darrenq@fnal.gov dej@fnal.gov dey@fnal.gov drendel@fnal.gov drozhdin@fnal.gov fehers@fnal.gov finley@fnal.gov fowler@fnal.gov glass@fnal.gov gwf@fnal.gov jct@fnal.gov jjohnstone@adcalc.fnal.gov hanft@fnal.gov holmes@fnal.gov lamm@fnal.gov leibfritz@fnal.gov marshw@fnal.gov martens@fnal.gov mcgee@fnal.gov mikemay@fnal.gov mokhov@fnal.gov msyphers@fnal.gov neuffer@fnal.gov ng@fnal.gov nsergei@fnal.gov ostiguy@fnal.gov pasquin@fnal.gov peop@fnal.gov pjlimon@fnal.gov pmartin@fnal.gov pruss@fnal.gov reich@fnal.gov russell@fnal.gov sabbi@fnal.gov sharonov@fnal.gov tartaglia@fnal.gov tecker@fnal.gov tnicol@fnal.gov yarba@fnal.gov zagel@fnal.gov zlobin@fnal.gov
Forschungszentrum J¨ ulich, ISI, D-52425 Julich, Germany m.pabst@fz-juelich.de
Forschungszentrum Karlsruhe/ANKA, PO Box 3640, D-76021 Karlsruhe, Germany einfeld@anka.fzk.de huttel@anka.fzk.de moser@anka.fzk.de
Free Electron Laser Research Inst., Hirakata Tsuda Yamate 2-9-5, Osaka, 573-01, Japan
FriesIUCF, 2401 Milo B. Sampson Lane, Bloomington, IN 47408, USA friesel@iucf.indiana.edu
Fusion and Accelerator Research, 3146 Bunche Avenue, San Diego, CA 92122-2247, USA u11726@nersc.gov
G.H. Gillespie Associates, Inc., 10855 Sorrento Valley Road, Suite 201, San Diego, CA 92121, USA ghga@millennianet.com
GE Medical Systems, 9815 North Melrose Court, Mequon, WI 53907, USA bruce.dunham@med.ge.com
General Atomics Co., 2237 Trinity Drive, Los Alamos, NM 87544, USA greg.campbell@gat.com tooker@gat.com
General Atomics, 3550 General Atomics Court, San Diego, CA 92121-1194, USA john.rawls@gat.com trevor.overett@gat.com
General Atomics, 5527 Chelsea Avenue, La Jolla, CA 92037, USA ed hubbard@compuserve.com
Glassman Europe Ltd., 21 Campbell Court, Bramley, Hampshire, UK, RG26 5EG
GMW Associates, PO Box 2578, Redwood City, CA 94064, USA
GSI Darmstadt, Planck Str. 1, D-64291 Darmstadt, Germany h.eickhoff@gsi.de struck@gsi.de
GSI Darmstadt, POB 11 05 52, D-64220 Darmstadt, Hessen, Germany n.angert@gsi.de j.klabunde@gsi.de
Haimson Research Corp., 3350 Scott Boulevard, Bldg. 60, Santa Clara, CA 95054-3104, USA haimson@aol.com
Harding, D.J. FNAL, MS 343, P.O. Box 500, Batavia, IL 60510-0500, USA harding@fnal.gov
HEA Division, Thomson - CSF Airsys, 7-9, rue des Mathurins - BP150, F-92223 Bagneux, France
Hiramoto, K. Hitachi, Ltd., 1-1 Omika-cho, 7-chome, Hitachi, Ibaraki-ken 319-12, Japan hiramoto@erl.hitachi.co.jp
Hiroshima U., Beam Physics Laboratory, Graduate School of Advanced Sciences of Matter, 1-3-1 Kagamiyama, Higashi-Hiroshima 739-8526, Japan ogata@sci.hiroshima-u.ac.jp

Hitachi, Ltd., 6 Kanda-Surugadai, 4-chome, Chiyoda-ku, Tokyo 101, Japan

Holec Power Protection BU, P.O. Box 4, NL-7550 Hengelo, The Netherlands U. Rostock, Fachbereich Elektrotechnik und Informationstechnik, D-18051 Rostock, Germany van.rienen@e-technik1.uni-rostock.de

Hubertushoehe 3, D-49497 Mettingen, Germany wdecking@lbl.gov

IAP, Frankfurt/Main, Robert-Mayer-Str. 2-4, D-60054 Frankfurt am Main, Germany hklein@mikro1.physik.uni-frankfurt.de engels@em.uni-frankfurt.de marhauser@em.uni-frankfurt.de peha@sunkist.physik.uni-frankfurt.de deitinghoff@em.uni-frankfurt.de

IAP, Frankfurt/Main, Robert-Mayer-Str. 2-4, D-60325 Frankfurt am Main, Germany, Germany a.schempp@em.uni-frankfurt.de vormann@em.uni-frankfurt.de

IBA, Chemin du Cyclotron, 3, B-1348 Louvain la Neuve, Belgium

IEEE, 22151 Berkeley Cr., Los Altos, CA 94024-7411, USA v.price@ieee.org

IFTAR Accelerator Lab., Inst. of Atomic Physics, P.O. Box MG-36, R-76900 Bucharest, Romania martin@roifa.ifa.ro

IHEP, P.O. Box 918, Chinese Academy of Sciences, Beijing, 100039, P.R. China guozy@bepc3.ihep.ac.cn wuyz@bepc3.ihep.ac.cn

IHEP, RU-142284 Protvino, Moscow Region, Russia ageev@mx.ihep.su biryukov@mx.ihep.su chesnokov@mx.ihep.su maslov@mx.ihep.su yazynin@mx.ihep.su

IHEP, RU-142284 Protvino, Moscow Region, Russia

IHEP, RU-142284 Protvino, Moscow Region, Russia

Imatron Inc., 389 Oyster Point Boulevard, South San Francisco, CA 94080, USA rer@imatron.com

Imatron Inc., 389 Oyster Point Boulevard, South San Francisco, CA 94080, USA ghz@imatron.com

INFN-Bari, Via Amendola 173, I-70126 Bari, Italy variale@ba.infn.it

INFN-LNF, Via E. Fermi, I-00044 Frascati, RM, Italy boni@lnf.infn.it ghigo@lnf.infn.it lpalumbo@axlnf1.lnf.infn.it mikhail@lnf.infn.it milardi@lnf.infn.it mserio@lnf.infn.it patteri@lnf.infn.it preger@lnf.infn.it

INFN-LNL, I-35020 Legnaro, PD, Italy cervellera@lnl.infn.it

INFN-LNL, Via Romea 14, I-35020 Legnaro, PD, Italy alombardi@lnl.infn.it bisoffi@lnl.infn.it comunian@lnl.infn.it facco@lnl.infn.it moisio@legnaro.infn.it porcellato@lnl.infn.it

INFN-LNS, Catania, Via s. 8-0 Fia, 44, I-85223 Catania, Italy ciavola@lns.infn.it rovelli@lns.infn.it

INP of Moscow State U., RU-119899 Moscow, Russia grishin@depni.npi.msu.su

INR of RAS, 60th October Anniversary PR. 7A, RU-117312 Moscow, Russia bylinsky@al20.inr.troitsk.ru kravchuk@al20.inr.troitsk.ru novikov@al20.inr.troitsk.ru paramono@al20.inr.troitsk.ru toni@kaon-inr.msk.su

Inst. for Nuclear Study, U. Tokyo, 3-2-1, Midori-cho, Tanashi, Tokyo 188, Japan tomizawa@insac7.tanashi.kek.jp

Inst. for Plasma Research, U. Maryland, Energy Research Facility #223, College Park, MD 20742, USA guharay@lpf.umd.edu mreiser@glue.umd.edu vlg@plasma.umd.edu

Inst. fuer Angewandte Physik, IAP, Frankfurt/Main, Robert-Mayer-Str. 2-4, D-60054 Frankfurt am Main, Germany parisi@mikro1.physik.uni-frankfurt.de

Inst. of Fluid Physics CAEP, P.O. Box 523-56, Cheng-du, 61003, P.R. China dingbn@sun.ihep.ac.cn

Inst. Physics, Acad. Sciences of Czech Republic, NA Slovance 2, CZ-18040 Prague, Czech Republic sedlak@fzu.cz

Instrumentation Technologies, Srebrnicev Trg 4a, SI-5250 Solkan, Slovenia rok@i-tech.si
International Isotopes Inc., 3100 Jim Christal Road, Denton, TX 76207, USA
International Isotopes Inc., 7401 Jordan Lane, Midlothian, TX 76065, USA
Inverpower Controls Ltd., 835 Harrington Court, Burlington, ON, Canada, L7N 3P3 popp@rapidpower.com
Ion Beam Applications SA, Chemin du Cyclotron, 3, B-1348 Louvain-la-Neuve, Belgium
IPN Orsay, F-91406 Orsay CEDEX, France laune@ipncls.in2p3.fr
ISA, U. Aarhus, DK-8000 Aarhus, Denmark fyssp@dfi.aau.dk senichev@dfi.aau.dk ugh@dfi.aau.dk
ITEP, B. Cheremushkinskaya, 25, RU-117259 Moscow, Russia nalex@vxitep.itep.ru balabin@vxitep.itep.ru batalin@vxitep.itep.ru katz@vxitep.itep.ru kolomiets@vxitep.itep.ru koshkarev@vxitep5.itep.ru kozodaev@vitep5.itep.ru Nikolay.V.Lazarev@itep.ru lyakin@vxitep.itep.ru plotnikov@vxitep.itep.ru boris.sharkov@itep.ru skachkov@vxitep.itep.ru pershin@vxitep.itep.ru valery.stolbunov@itep.ru yaramishev@vxitep.itep.ru zavodov@vxitep.itep.ru zenkevich@vxitep.itep.ru
IUCF, 2401 Milo B. Sampson Lane, Bloomington, IN 47408, USA gpberg@iucf.indiana.edu kang@iucf.indiana.edu schwandt@iucf.indiana.edu
IUCF, 336 Evermann Apts, Bloomington, IN 47408, USA cmchu@iucf.indiana.edu
JAERI, Proton Accelerator Lab, Tokai-mura, Ibaraki-ken 319-11, Japan hasegawa@linac.tokai.jaeri.go.jp mizumoto@aelsun1.tokai.jaeri.go.jp
JAERI-RIKEN SPring-8, 323-3, Mihara, Mikazuki-cho, Sayo-gun, Hyogo 679-5198, Japan hara@sp8sun.spring8.or.jp
JAERI-RIKEN SPring-8, Kamigori - cho, Ako-gun, Hyogo 678-12, Japan kamitsub@sp8sun.spring8.or.jp miyahara@sp8sun.spring8.or.jp
JINR, RU-141980 Dubna, Moscow Region, Russia barashenkov@jinr.ru dol@sunse.jinr.ru edic@sunhe.jinr.su fateev@sunse.jinr.ru ivanov@sunse.jinr.ru i.n.meschkov: kitti@nusun.jinr.ru mikhail@lhe36.jinr.dubna.su molod@sunse.jinr.ru monva@sunhe.jinr.ru olm@nusun.jinr.ru volkov@sunhe.jinr.ru
KAERI/KCCH, Woosung APT 106-201, Bang-hag-dong, Dohong-gu, Seoul, S. Korea jschai@kcchsun.kcch.re.kr
Kaman Instrumentation, MS 63, Box 7463, Colorado Springs, CO 80933, USA tdillahunty-cos2@kaman.com
Kangwon National U., Dept. of Physics, Chunchon, Kangwon do 200-701, S. Korea sknam@cc.kangwon.ac.kr
KEK, 1-1 Oho, Tsukuba-shi, Ibaraki-ken 305, Japan endok@kekvax.kek.jp ezura@kekvax.kek.jp fukuma@kekvax.kek.jp funakosi@kekvax.kek.jp hirata@kekvax.kek.jp hiroshi.matsumot@kek.jp ishimaru@kekvax.kek.jp junji.urakawa@kek.jp kaoru.yokoya@kek.jp kasugat@kekvax.kek.jp mitunobu@kekvax.kek.jp mizuno@kekvax.kek.jp naitot@kekvax.kek.jp noboru.yamamoto@kek.jp nobumasa.akasaka@kek.jp sakanaka@mail.kek.jp satoh@kekvax.kek.jp seishi.takeda@kek.jp shin-ichi.kurokawa@kek.jp shuji@kekvax.kek.jp takata@kekvax.kek.jp takayama@kekvax.kek.jp tatsuya.kageyama@kek.jp toshio@kekvax.kek.jp toyama@kekvax.kek.jp yongho@kekvax.kek.jp yoshishi@kekvax.kek.jp
KEK, 3-2-1 Midori-cho, Tanashi-shii, Tokyo 188, Japan moriy@kekvax.kek.jp uesugi@insuty.tanashi.kek.jp
KEK, Photon Factory, 1-1, Oho, Tsukuba, 305, Japan kanaya@kekvax.kek.jp
KEK-Tanashi, KEK, 3-2-1 Midori-cho, Tanashi, Tokyo 188, Japan chihiro@kekvax.kek.jp
Kharkov Inst. of Phys. and Tech. (KFTI), UA-310108 Kharkov, Ukraine aizatsky@nik.kharkov.ua

dovbnya@nik.kharkov.ua tur@nik.kharkov.ua
Kharkov State U., P.O. Box 60, UA-310052 Kharkov, Ukraine popov@pem.kharkov.ua
Kurchatov Inst., Kurchatov Sq., RU-123182 Moscow, Russia yale@ksrs.msk.su
Kyoto U., Gokasho Uji, Kyoto 611, Japan sugimura@kyticr.kuicr.kyoto-u.ac.jp
Kyoto U., NSRF, ICR, Gokanosho, Uji, Kyoto 611, Japan ikegami@jpnyitp.yukawa.kyoto-u.ac.jp iwashita@kyticr.kuicr.kyoto-u.ac.jp noda@kyticr.kuicr.kyoto-u.ac.jp
Lab of High Energies, JINR, RU-141980 Dubna, Moscow Region, Russia issinsky@jinr.ru
Lab. of Nuclear Problems, JINR, RU-141980 Dubna, Moscow Region, Russia perel@nu.jinr.ru
LAL Orsay, B.P. 34, F-91898 Orsay CEDEX, France gao@lalcls.in2p3.fr
LAL Orsay, Bldg. 200, Universite de Paris Sud, F-91405 Orsay CEDEX, France garvey@lalcls.in2p3.fr
LANL, APT, TA-53, MS H813, Bldg. 31, Room 262, Los Alamos, NM 87545, USA funk@lanl.gov
LANL, APT/TPO, MS H816, P.O. Box 1663, Los Alamos, NM 87545, USA glawrence@lanl.gov
LANL, Group LANSCE-1, MS H817, Los Alamos, NM 87545, USA lyoung@lanl.gov sellyey@lanl.gov
LANL, MS 808, P.O. Box 1663, Los Alamos, NM 87545, USA ajason@lanl.gov bcarlsten@lanl.gov bjo@lanl.gov borden@lanl.gov j bradley@lanl.govbray@lanl.gov brusnak@lanl.gov carlson rl@lanl.gov crose@lanl.gov dbarlow@lanl.gov dcnguyen@lanl.gov dls@lanl.gov drees@lanl.gov enelson@lanl.gov fitzg@lanl.gov fkrawczyk@lanl.gov friedrichs@lanl.gov funk@lanl.gov gbolme@lanl.gov gilpatrick@lanl.gov glawrence@lanl.gov gurd@lanl.gov jdonahue@lanl.gov jdschneider@lanl.gov johill@lanl.gov jpower@lanl.gov hat@lanl.gov kcchan@lanl.gov kcummings@lanl.gov kurennoy@lanl.gov lash@lanl.gov ldalesio@lanl.gov lisowski@lanl.gov lrybarcyk@lanl.gov macek@lanl.gov mfazio@lanl.gov mtlynch@lanl.gov mthuot@lanl.gov mzumbro@lanl.gov oothoudt@lanl.gov osander@lanl.gov plum@lanl.gov rshafer@lanl.gov rusthoi@lanl.gov rwright@lanl.gov ryne@lanl.gov sheff@lanl.gov snath@lanl.gov sschriber@lanl.gov takeda@lanl.gov tallerico@lanl.gov tjtk@lanl.gov twangler@lanl.gov wilkinson@lanl.gov wlysenko@lanl.gov ymwang@lanl.gov
LANSCE, LANL, MS H812, P.O. Box 1663, Los Alamos, NM 87545, USA lyoung@lanl.gov pillai@lanl.gov schaller@lanl.gov sellyey@lanl.gov
LASTI/Himeji Inst. of Tech., 2167 Shosha, Himeji, Hyogo 671-22, Japan ando@lasti.himeji-tech.ac.jp
LBNL, MS 71-259, 1 Cyclotron Road, Berkeley, CA 94720, USA aazholents@lbl.gov admcinturff@lbl.gov af@llnl.gov akbiocca@lbl.gov amsessler@lbl.gov aratti@lbl.gov awengrow@lbl.gov baludewigt@lbl.gov bangerter@lbl.gov s caspi@lbl.gov catimossi@lbl.gov cclo@lbl.gov chapon@lbl.gov chkim@lbl.gov cmcelata@lbl.gov cmlyneis@lbl.gov deanderson@lbl.gov DGCollins@lbl.gov djclark@lbl.gov dsrobin@lbl.gov dwcheng@lbl.gov dwplate@lbl.gov dwutte@mh1.lbl.gov ehhoyer@lbl.gov esarey@beams.lbl.gov fawley@lbl.gov b feinberg@lbl.gov gidevries@lbl.gov giportmann@lbl.gov r govil@lbl.gov gupta1@bnl.gov gwthur@lbl.gov jahinkson@lbl.gov japaterson@lbl.gov jmbyrd@lbl.gov jncorlett@lbl.com jrosborn@lbl.gov jtkrupnick@lbl.gov jwkwan@lbl.gov henri@mh1.lbl.gov kdkennedy@lbl.gov keller@lbl.gov khalbach@lbl.gov khberkner@lbl.gov knleung@lbl.gov kpchow@lbl.gov g krebs@lbl.gov n li@lbl.gov llreginato@lbl.gov mafurman@lbl.gov magreen@lbl.gov s marks@lbl.gov mdhoff@lbl.gov mdwilliams@lbl.gov mingxie@lbl.gov MJChin@lbl@gov mleitner@lbl.gov oaanderson@lbl.gov paseidl@lbl.gov pavel@lbl.gov ragough@lbl.gov rarimmer@lbl.gov rmscanlan@lbl.gov salewis@lbl.gov scram@physics.berkeley.edu ssyu@lbl.gov wcturner@lbl.gov yylee@lbl.gov zisman@lbl.gov max zolotorev@lbl.gov

zqxie@lbl.gov
LBNL, UCLA/LBNL, 71-259, One Cyclotron Road, Berkeley, CA 94708, USA garren@lbl.gov
LBNL/FAR, 1 Cyclotron Road, Berkeley, CA 94720, USA eylon@csam.lbl.gov
Lebedev Physical Inst., Leninsky Prospect 53, RU-117924 Moscow, Russia agafonov@sci.lpi.msk.su
Linac Systems, 1640 Greathouse Road, Waxahachie, TX 75167, USA fglinac//@hachie.citylimits.net
Linac Systems, 2167 N. Highway 77, Waxahachie, TX 75165, USA
Linac Systems, 2167 N. Highway 77, Waxahachie, TX 75165, USA daswenson@aol.com
LLNL, L-153, P.O. Box 808, 7000 East Avenue, Livermore, CA 94550, USA avallel@llnl.gov bertolinil@llnl.gov caporasol@llnl.gov chen29@llnl.gov franksl@llnl.gov grotel@llnl.gov gw@llnl.gov jjbarnard@llnl.gov ho@llnl.gov houckl@llnl.gov kvanbibber@llnl.gov lund@hif.llnl.gov molvikl@llnl.gov poolel@llnl.gov rar@llnl.gov sangsterl@llnl.gov shangl@llnl.gov sharp@hif.llnl.gov shen@maverick.llnl.gov vitello@llnl.gov weir2@llnl.gov yjchen@llnl.gov
LLNL/SSC/Retired, 173 Montair Drive, Danville, CA 94526, USA nexsenl@llnl.gov
LNLS - Brazil, Caixa Postal 6192, BR-13093-970 Campinas, SP, Brazil daniel@lnls.br liu@lnls.br ricardo@lnls.br ruy@lnls.br
LNS - Saclay, F-91191 Gif sur Yvette, France
LSU - CAMD, 6980 Jefferson Hwy, Baton Rouge, Louisiana 70806, USA larry@rocamd.camd.lsu.edu
LURE, Centre Universitaire, Bat 207A, B.P. 34, F-91898 Orsay CEDEX, France darpentigny@lure.u-psud.fr
Magnet Lab., Texas A&M U., 3801 Harvey Road, College Station, TX 77845, USA latypov@tdl.harc.edu
Maryland U., P.O. Box 523-56, College Park, MD 20742-3285, USA jjd@glue.umd.edu mreiser@glue.umd.edu
Maryland U., 15014 Saddle Creek Drive, Burtonsville, MD 20866, USA lawson@eng.umd.edu
Maryland U., Bldg. #223, College Park, MD 20851, USA bhogan@plasma.umd.edu
Maryland U., Code 6840, Naval Research Laboratory, 4555 Overlook Avenue, SW, Washington, DC 20375, USA sjcooke@glue.umd.edu
Maryland U., IPR, Energy Research Bldg., College Park, MD 20742-3511, USA ramiak@ipr.umd.edu
MAX-lab, Box 118, S-22100 Lund, Sweden greg.leblanc@maxlab.lu.se
MDS Co., 1955 Mountain Boulevard, Suite 101, Oakland, CA 94611, USA mdsfer@aol.com
MDS Corp (Retired), 751 Haverford Avenue, Pacific Palisades, CA 90272, USA amboss@ucla.edu
Mega Industries, 1281 Roosevelt Trail, Raymond, Maine 04071, USA
MEPHI (Moscow Eng.-Phys. Inst., Techn. U.),115409, kaschirskoe schosse 31 bogdan@uni.mephi.ru a.a.glazkov: p_dim@newmail.ru didenko@ras.phys.msu.su koljaskin@uni.mephi.ru masunov@dinus.mephi.ru shis@uni.mephi.ru sobenin@depni.npi.msu.su
METACERAM, 21 Rue Georges Lebigot, F-94800 Villejuif, France
MI Dept., Beam Division, FNAL, MS 323, P.O. Box 500, Batavia, IL 60510, USA cbhat@fnal.gov
Michigan State U., East Lansing, MI 48824-1321, USA york@nscl.msu.edu
Michigan State U., NSCL, 155 Cyclotron Lab, East Lansing, MI 48824, USA berz@pilot.msu.edu blosser@nscl.msu.edu gelbke@nscl.msu.edu grimm@nscl.msu.edu makino@nscl.msu.edu marti@nscl.msu.edu xwu@nscl.msu.edu
Michigan State U., NSCL, East Lansing, MI 48910, USA schubert@nscl.msu.edu

Microwave Technologies Inc., 10386B Democracy Lane, Fairfax, VA 22030, USA jvelazco@ece.gmu.edu
Milan, Lasa-Via Flli Cervi 201, I-20090 Segrate, MI, Italy giovanni.bellomo@mi.infn.it demartinis@mvlasa.mi.infn.it
Mission Research Corp., 1720 Randolph S.E., Albuquerque, NM 87106, USA drwelch@mrcabq.com tph@lanl.gov
Mission Research Corp., 8560 Cinderbed Road, Suite 700, P.O. Box 8560, Newington, VA 22122-8560, USA
MIT Bates, P.O. Box 846, Middleton, MA 01949-2846, USA averill@bates.mit.edu fwang@bates.mit.edu kjacobs@mit.edu sarkar@bates.mit.edu
MIT Lincoln Lab, MS C-130, 244 Wood Street, Lexington, MA 02420-9108, USA twichell@ll.mit.edu
MIT Plasma Science and Fusion Center, MIT NW16-174, 167 Albany Street, Cambridge, MA 02139, USA kek@psfc.mit.edu pakter@psfc.mit.edu temkin@psfc.mit.edu yoel@mit.edu
Mitsubishi Electric Corp., 1-1, Tsukaguchi-Honmachi, 8-Chome, Amagasaki, Hyogo 661, Japan nakagawa@ele.crl.melco.co.jp
MJB Consulting, 119 Executive Way, #304, Desoto, TX 75115, USA clg@onramp.net penny@onramp.net
MRTI - Moscow Radio Technical Inst., Warshavskoe Shosse 132, RU-113519 Moscow, Russia b.i.bondarev: lidos@aha.ru murin@eleon.msk.su pir@mrti.msk.su pusn@mastak.sitek.ru
MPI fur Kernphysik, Heidelberg, Postfach 10 39 80, D-69029 Heidelberg, Germany vonhahn@minnie.mpi-hd.mpg.de
NAL, 30 Wino Cynthia Court, Warrenville, IL 60555, USA jfitz@fnal.gov
Nantista, C.D. SLAC, MS 26, P.O. Box 4349, Stanford, CA 94309, USA nantista@slac.stanford.edu
NIKHEF, Kruislaan 409, NL-1098 SJ Amsterdam, The Netherlands bert@nikhefk.nikhef.nl guy@nikhef.nl
NIRS, Chiba, 9-1, Anagawa 4-chome, Inage-ku, Chiba, 263, Japan kanazawa@nirs.go.jp kumada@nirs.go.jp
NIST, National Institute of Standards & Technology, Gaithersburg, MD 20899, USA louis.costrell@nist.gov
NNC, Booths Hall, Chelford Road, Knutsford, Chesire, UK, WA16 8QZ
Noell KRC Energie- und Umwelttechnik GmbH, Dept. RNM, Alfred Nobel Str. 20, D-97080 Wuerzburg, Germany eysselein.wu@noell-de
Northeast Proton Therapy Center, 30 Fruit Street, Boston, MA 02114, USA flanz@hadron.MGH.harvard.edu
NRL, 4555 Overlook Avenue, SW, Washington, DC 20375, USA danly@nrl.navy.mil levush@mmace.nrl.navy.mil moore@ppdu.nrl.navy.mil ting@ppd.nrl.navy.mil
NTG Neue Technologien GmbH & Co. KG, Im Steinigen Graben 12-14, D-63571 Gelnhausen-Hailer, Germany
Omega-P, Inc., 205 S. Whiting Street, #307, Alexandria, VA 22304, USA aganguly@earthlink.net nezhev@clark.net slava@clark.net
Omega-P, Inc., P.O. Box 208124, WNSL, 272 Whitney Avenue, New Haven, CT 06520-8124, USA tzhang@cuplvx.ap.columbia.edu
ORNL, P.O. Box 2008, Oak Ridge, TN 37831-6368, USA altongd@ornl.gov bailey@oriba2.phy.ornl.gov devanwr@ornl.gov galambosjd@ornl.gov gxb@ornl.gov jeon@iucf.indiana.edu jzh@ornl.gov moskosw@ornl.gov olsendk@ornl.gov whealtonj@ornl.gov

Oster Magnetics, 202 Bering Drive, San Jose, CA 95131, USA
Oxford Instruments Inc., 600 Milik Street, Carteret, NJ 07008, USA
Pearson Electronics, Inc., 1860 Embarcadero Road, Palo Alto, CA 94303, USA
Philips, 1033 Kings Highway, Saugerties, NY 12477, USA
Physical Review E/BNL, 1 Research Road, Ridge, NY 11961, USA
Physical Review Letters, 1 Research Road, Ridge, NY 11961, USA
Physical Science Div., Office of Naval Research, Code-331, Arlington, VA 22217, USA robersc@onr.navy.mil
Physics Dept., BNL, 901-A, Upton, NY 11973, USA gallardo@bnl.gov
Physics Dept., U. Colorado, P.O. Box 390, Boulder, CO 80301, USA sveta@jove.colorado.edu
Physics Dept., U. Maryland, College Park, MD 20742-3511, USA rlg@quark.umd.edu
Physics Dept., U. Michigan, Ann Arbor, MI 48109-1120, USA anferov@umich.edu
Physics Dept., U. of Washington, Box 351560, Seattle, WA 98195-1560, USA williams@phys.washington.edu
Physics Dept., UC Berkeley, MS 71-259, Berkeley, CA 94720, USA shadwick@physics.berkeley.edu
Physics Dept., UCLA, 405 Hilgard Avenue, Los Angeles, CA 90025, USA dcline@physics.ucla.edu
Physics Dept., Yale U., WNSL, New Haven, CT 06520, USA beamlab@riviera.physics.yale.edu
Physics Division, ANL, 9700 S. Cass Avenue, Argonne, IL 60439, USA prakash@anlphy.phy.anl.gov
Physikalisches Institut der Universitat, Bonn U., ELSA, Nussallee 12, D-53115 Bonn, NRW, Germany keil@elsar1.physik.uni-bonn.de
Plasma Fusion Center, MIT, NW16-176, Cambridge, MA 02139, USA chenc@psfc.mit.edu
Pohang Acc. Lab, POSTECH, San 31, Hyoja-dong, Nam-ku, Pohang, Kyungbuk 790-784, S. Korea cdp@postech.ac.kr isko@vision.postech.ac.kr jchoi@postech.ac.kr jsoh@postech.ac.kr huang@postech.ac.kr kwonm@vision.postech.ac.kr namkung@postech.ac.kr nsh@vision.postech.ac.kr skw@postech.ac.kr smc@anyon.postech.ac.kr
Positive Light Inc., 103 Cooper Court, Los Gatos, CA 95030, USA afry@poslight.com
Prudence Software Ltd., 95/6 Hanahalim Street, P.O. Box 887,Ma'ale Adumim 98310, Israel fomel@isi.co.il
PSI, Paul Scherrer Institut, CH-5232 Villigen PSI, Switzerland guenter.bauer@psi.ch hunt@psi.ch michael.boege@psi.ch rezzonico@psi.ch werner.joho@psi.ch
Pulsar Physics, De Bongerd 23, NL-3762 XA Soest, The Netherlands gpt@pulsar.nl
Pulse Sciences, Inc, 600 McCormick Street, San Leandro, CA 94577, USA vbailey@titan.com
QM Technologies Inc, 3701 Hawkins Street NE, Albuquerque, NM 87109, USA pgilad@stl.sandia.gov
RAL, CLRC, Chilton, Didcot, Oxon., UK, OX11 OQX a.letchford@rl.ac.uk dean.adams@rl.ac.uk j.p.duke@rl.ac.uk m.glover@rl.ac.uk m.perkins@rl.ac.uk
Research Centre Rossendorf, Forschungezentrum Rossendorf, Abt. FWN, Postfach 510 119, D-01314 Dresden, Germany
RHIC Project Bldg. 817, BNL, P.O. Box 5000, Upton, NY 11973-5000, USA rudy@bnl.gov
RIKEN, 2-1 Hirosawa, Wako, Saitama 351-01, Japan kamigait@ringps.riken.go.jp nsakamoto@rikvax.riken.go.jp yano@rikvax.riken.go.jp
RIKEN, Cyclotron Lab, 2-1 Hirosawa, Wako, Saitama 351-01, Japan fujishima@rikaxp.riken.go.jp nakagawa@rikaxp.riken.go.jp ohkawa@rikaxp.riken.go.jp takanaka@insac7.tanashi.kek.jp tominaka@postman.riken.go.jp

RIKEN, Hirosawa 2-1, Wako, Saitama 351-01, Japan jwkim@rikvax.riken.go.jp
Rua Gil Eanes 45 apto. 101, BR-04601-040, Sao Paulo, Sao Paulo, Brazil kassablm@mandic.com.br
Rutgers U. - Newark Campus, 101 Warren Street, 211 Smith Hall, Newark, NJ, USA hburke@andromeda.rutgers.edu
Saes Getters SPA, Via Lainate 77, I-20020 Lainate, Milan, Italy
SAES Getters/USA, 1122 East Cheyenne Mountain Boulevard, Colorado Springs, CO 80906, USA
SAIC, 4161 Campus Point Court, San Diego, CA 92121, USA phillip.e.young@cpmx.saic.com
SAIC, 5000 Hopyand Road, Suite 350, Pleasanton, CA 94588, USA richard briggs@saic.cpgm.com
SAIC, 861 Raintree Lane, DeSoto, TX 75115, USA delbert7@aol.com
SAIC, P.O. Box 500, Batavia, IL 60471, USA ding@fnal.gov
SAIC/LANL, 133 Aspen Drive, Los Alamos, NM 87544, USA prichard@lanl.gov
Saint-Petersburg State U., Ulyanovskaya str. 1, RU-198904 St. Petersburg, Russia dmitri@ovs.apmath.spb.su serge@asn.apmath.spb.su
SAL, Saskatoon, 107 North Road, Saskatoon, SK, Canada, S7N 5C6 les@skatter.usask.ca
Sam Houston State U., 1902 Avenue J, 2020 Farrington Bldg., Huntsville, TX 77341, USA phy crn@shsu.edu
Science Applications Intl. Corp., SAIC, Burlington, MA 01803, USA petillo@apo.saic.com
Scientific Solutions, PO Box 500207, San Diego, CA 92150, USA ssolutions@compuserve.com
Sektion Physik der LMU Munchen, Am Coulombwall 1, D-85748 Garching, Bayeru, Germany
Siemens Medical Systems, 4040 Nelson Avenue, Concord, CA 94520, USA gkonrad@smsocs.com kbertsche@smsocs.com rsachtsc@smsocs.com
Sigmaphi, PIBS, Rue Louis de Broglie, CP 47, F-56038 Vannes CEDEX, France
Sincrotrone Trieste, SS 14 km 163.5 - Basovizza, I-34012 Trieste, TS, Italy galimberti@elettra.trieste.it iazzourene@elettra.trieste.it dauria@elettra.trieste.it
SLAC, Stanford, CA 94309 (or 94025), USA achan@slac.stanford.edu aev@slac.stanford.edu afisher@slac.stanford.edu boris@slac.stanford.edu caryo@slac.stanford.edu chao@ssrl.slac.stanford.edu chlada@leland.stanford.edu cho@slac.stanford.edu clay@slac.stanford.edu corbett@ssrl.slac.stanford.edu cornacchia@slac.stanford.edu ed daly.bfactory@mail.slac.stanford.edu decker@slac.stanford.edu delamare@slac.stanford.edu dim@slac.stanford.edu dtp@unixhub.slac.stanford.edu ecolby@fnal.gov eddie@slac.stanford.edu emma@slac.stanford.edu fant@slac.stanford.edu fieguth@slac.stanford.edu galoew@slac.stanford.edu gough@slac.stanford.edu greg@slc.slac.stanford.edu ina.reichel@cern.ch irwin@slac.stanford.edu jdfox@slac.stanford.edu jmp@slac.stanford.edu ron johnson@slac.stanford.edu jwh@slc.slac.stanford.edu jywap@slac.stanford.edu hanna@slac.stanford.edu hds@slac.stanford.edu hogan@slac.stanford.edu kurita@slac.stanford.edu lahey@slac.stanford.edu lavine@slac.stanford.edu lizh@slac.stanford.edu mark@slac.stanford.edu matallen@slac.stanford.edu matt@slac.stanford.edu minty@slac.stanford.edu nordby@slac.stanford.edu pappas@slac.stanford.edu pkr@slac.stanford.edu plc@slac.stanford.edu pwilson@slac.stanford.edu raimondi@slac.stanford.edu rfkap@slac.stanford.edu rhm@slac.stanford.edu rlc@slac.stanford.edu roger@slac.stanford.edu rol@slac.stanford.edu rruth@slac.stanford.edu saa@slac.stanford.edu sebek@slac.stanford.edu shyam@slac.stanford.edu smeyer@slac.stanford.edu star@slac.stanford.edu sullivan@slac.stanford.edu theo@slac.stanford.edu uli@slac.stanford.edu wbhap@slac.stanford.edu

whittum@slac.stanford.edu winick@slac.stanford.edu yan@slac.stanford.edu
SLAC, SSRL, 2575 Sand Hill Road, Menlo Park, CA 94025, USA hernandez@ssrl.slac.stanford.edu limborg@ssrl.slac.stanford.edu safranek@ssrl.slac.stanford.edu tatchyn@slac.stanford.edu
SNL, MS - 1193, P.O. Box 5800, Albuquerque, NM 87185- 1193, USA mgmazar@sandia.gov
SNL, MS 1190, P.O. Box 5800, Org. 9500, Albuquerque, NM 87185-1190, USA dlcook@sandia.gov
Southern California, 1325 Valley View Road, #204, Glendale, CA 91202, USA lee@plasma1.usc.edu
Southern California, Los Angeles, CA 90089-0484, USA katsoule@usc.edu
SPring-8 BL Group, RIKEN, Kamigori, Ako-gun, Hyogo, 678-12, Japan ttanabe@postman.riken.go.jp
SRRC, Taiwan, No. 1 R&D Road, VI, Hsinchu Science-Based Industrial Park, Hsinchu, 30077, Taiwan ako@alpha1.srrc.gov.tw kuo@bd02.srrc.gov.tw luo@alph01.srrc.gov.tw mhwang@bd01.srrc.gov.tw msyeh@alpha1.srrc.gov.tw pichou@bd09.srrc.gov.tw sah@alpha1.srrc.gov.tw
STI Optronics, Inc., 2755 Northup Way, Bellevue, WA 98004-1495, USA kem@stioptronics.com wkimura@stioptronics.com
Sumitomo Heavy Industries, Ltd., 2-1-1 Yato-cho, Tanashi, Tokyo 188, Japan hori@shi.co.jp tsutsui@kekvax.kek.jp
Svedberg Lab, Uppsala, Box 533, S-75121 Uppsala, Sweden ziemann@tsl.uu.se
Svetlana Electron Devices, Inc., 3000 Alpine Road, Portola Valley, CA 94028, USA
SVF Inc., P.O. Box 70, Rock Falls, IL 61071, USA myeoward@essex1.com
Techno-Sciences, 10001 Derekwood Lane, Suite 204, Lanham, MD 20740, USA cka@plasma.umd.edu
Techsource, Inc., 301 North Guadeloupe Street, Suite 204, Santa Fe, NM 87501, USA pgrand@ibm.net
Tesla Engineering Ltd., Water Lane, Storrington, West Sussex, UK, RH20 3EA begg@tesla.co.uk
TH Darmstadt, Darmstadt U. of Tech., Fachbereich 18, TEMF, Schlossgartenstr. 8, D-64289 Darmstadt, Germany kstein@temf.th-darmstadt.de schill@temf.th-darmstadt.de
Thomson Components & Tubes Corp., 40 G Commerce Way, Totowa, NJ 07511, USA hoffmantct@aol.com
Thomson Tubes Electroniques, B.P. 84, F-74200 Thonon, France
Titan Beta, 4878 Doloves Drive, Pleasanton, CA 94566, USA edighoffer@value.net
Titan Beta, 6780 Sierra Court, Dublin, CA 94507, USA kwhitham@titan.com
TJNAF, 12000 Jefferson Avenue, Newport News, VA 23606, USA akers@jlab.org andrew@jlab.org augustine@jlab.org biallas@jlab.org bickley@jlab.org bisognano@jlab.org bogacz@jlab.org bowling@cebaf.gov chao@jlab.org clbohn@cebaf.gov delayen@cebaf.gov denard@jlab.org douglas@cebaf.gov dxwang@cebaf.gov felman@jlab.org jordan@jlab.org hardy@jlab.org harwood@jlab.org hovater@jlab.org karen@cebaf.gov karn@jlab.org kazimi@cebaf.gov kehne@jlab.org kneisil@jlab.org krafft@jlab.org lacy@jlab.org lauze@jlab.org letta@jlab.org lir@jlab.org lebedev@jlab.org mahoney@jlab.org martine@jlab.org neil@jlab.org nelson@jlab.org phillips@jlab.org piot@jlab.org preble@jlab.org reece@jlab.org rode@cebaf.gov suhring@jlab.org tang@jlab.org tiefen@jlab.org watson@jlab.org wiseman@jlab.org yunn@jlab.org
Tokyo, INS, Midori-cho 3-2-1, Tanashi, Tokyo 188, Japan niki@tanashi.kek.jp shigeaki.arai@kek.jp tanabe@tanashi.kek.jp

Tokyo, ISSP, Midori-cho 3-2-1, Tanashi-shi, Tokyo 188, Japan takaki@issp.u-tokyo.ac.jp
Toshiba Co., 22-4, Suehiro-cho, Tsurumi-ku, Yokohama, 230, Japan yamag@densog.keihin.toshiba.co.jp
Triton Electron Technology Division, P.O. Box 100, Easton, PA 18044-0100, USA kdaniels@tritonetd.com
TRIUMF, 21-928 Bearwood Lane, Victoria, BC, Canada, V8Y 3G8 fraser@vanisle.net
TRIUMF, 3725 West 35th Avenue, Vancouver, BC, Canada, V6N 2N6 otter@triumf.ca
TRIUMF, 4004 Wesbrook Mall, Vancouver, BC, Canada, V6T 2A3 antho@triumf.ca barnes@triumf.ca blaker@triumf.ca bricault@triumf.ca budzko@triumf.ca cojocaru@triumf.ca dutto@triumf.ca dyachkov@triumf.ca ewb@triumf.ca fong@triumf.ca fwj@triumf.ca gelbart@triumf.ca ghm@triumf.ca gsclark@triumf.ca joski@triumf.ca hjtran@triumf.ca kaltchev@triumf.ca keerthi@triumf.ca kost@triumf.ca krab@triumf.ca lachinov@triumf.ca lax@triumf.ca levy@triumf.ca mikem@triumf.ca milton@triumf.ca mitra@triumf.ca mouat@triumf.ca poirier@triumf.ca rawnsley@triumf.ca schmor@triumf.ca shane@triumf.ca tkuo@triumf.ca trlr@triumf.ca uzat@triumf.ca yshapiro@triumf.ca wait@triumf.ca
TRIUMF, 5280 Prince Albert Street, Vancouver, BC, Canada, V5W 3C8 wendyho@unixg.ubc.ca
TRIUMF, ATG, 1650 Waterloo Street, Vancouver, BC, Canada, V6R 3G1 shervin@unixg.ubc.ca
Truman State U., Barnett Hall 161, Kirksville, MO 63501, USA ottinger@truman.edu
TSC, 116 West 6th Street, Suite 200, Bloomington, IN 47404-3927, USA aqualls@bluemarble.net
TTE, 18 Avenue du Marichal Juin, F-92366 Meudon La Foret CEDEX, France
TU-Darmstadt, Fachbereich 18, Fachgebiet Theorie Elektromagnetischer Felder, Schlossgartenstrasse 8, D-64289 Darmstadt, Germany weiland@temf.th-darmstadt.de
U. Central Florida, Orlando, FL 32708, USA elias@lorien.creol.ucf.edu
U. Colorado, Boulder, CO 80301, USA gary@colorado.edu
U. di Salerno / Canon Fellow, DIP Scienze Fisiche E.R. Caianiello, I-84081 Baronissi, Salerno, Italy petracca@vaxsa.csied.unisa.it
U. Michigan, 1006 IST Bldg., Ann Arbor, MI 48109-2099, USA dpu@umich.edu
UBC & TRIUMF, 4004 Wesbrook Mall, Vancouver, BC, Canada, V6T 2A3 craddock@triumf.ca
UC Berkeley, MS 71-259, One Cyclotron Road, LBL, Berkeley, CA 94720, USA wenhao@beams.lbl.gov
UC Davis/ LLNL - ILSA, LLNL, L - 794, P.O. Box 808, Livermore, CA 94602, USA fredh@gregor.llnl.gov
UC Santa Barbara, 4375 Via Glorieta, Santa Barbara, CA 93110-2113, USA
UCLA, 1-130P, Knudson Hall, Los Angeles, CA 90254, USA mori@physics.ucla.edu
UCLA, 2004 Pier Avenue, Santa Monica, CA 90405, USA joshi@ee.ucla.edu
UCLA, 405 Hilgard Avenue, Knudsen Hall 1-130, Los Angeles, CA 90095-1547, USA hemker@physics.ucla.edu pellegrini@physics.ucla.edu
UCLA, 56-125B Engineering IV Bldg., Los Angeles, CA 90025, USA cclayton@ucla.edu
UCLA, 846 Riley Drive, Albany, NY 94706, USA terebilo@ssrl.slac.stanford.edu
UCLA, ANL, HEP Div. 362, 9700 S. Cass Avenue, Argonne, IL 60439, USA barov@vesta.physics.ucla.edu
UCLA, B. 820/ATF, Brookhaven National Lab, Upton, NY 11973, USA phe@sun2.bnl.gov
Varian Ion Implant Systems, MS GL17, 35 Dory Road, Gloucester, MA 01930-2297, USA tony.renau@iis.varian.com
Vista Control Systems, Inc., 176 Central Park Square, Los Alamos, NM 87544-3012, USA clout@vista-control.com klein@vista-control.com
Washington U. Medical Center, PO Box 356043, 1959 NE Pacific Street, Seattle, WA 98195,

USA dave@radonc.washington.edu
Wisconsin at Madison U., SRC, 3731 Schneider Drive,Stoughton, WI 53589-3097, USA bosch@src.wisc.edu mike@src.wisc.edu walter@src.wisc.edu
Wisconsin U., 1500 Engineering Drive, Room 915, Madison, WI 53706, USA larbales@engr.wisc.edu
Y.Y. Labs, Inc., P.O. Box 597, Fremont, CA 94537-0597, USA yanyin@triumf.ca
Yale U., 202008 Yale Station, New Haven, CT 06520, USA jay@mirage.physics.yale.edu
Yerevan Physics Inst., Alikhanian Brothers St. 2, AM-375036 Yerevan, Armenia gayane@jerewan1.yerphi.am

Н.В.Лазарев

Краткий справочник по ускорительным установкам, некоторым специальным терминам и адресам ускорительных центров.

Подписано к печати 8.06.00 Формат 60x90 I/I6
Усл.-печ.л.3,5. Уч.-изд.л.2,6. Тираж I5I экз. Заказ I9.
Индекс 3649

Отпечатано в ИТЭФ, II7259,Москва, Б.Черемушкинская, 25