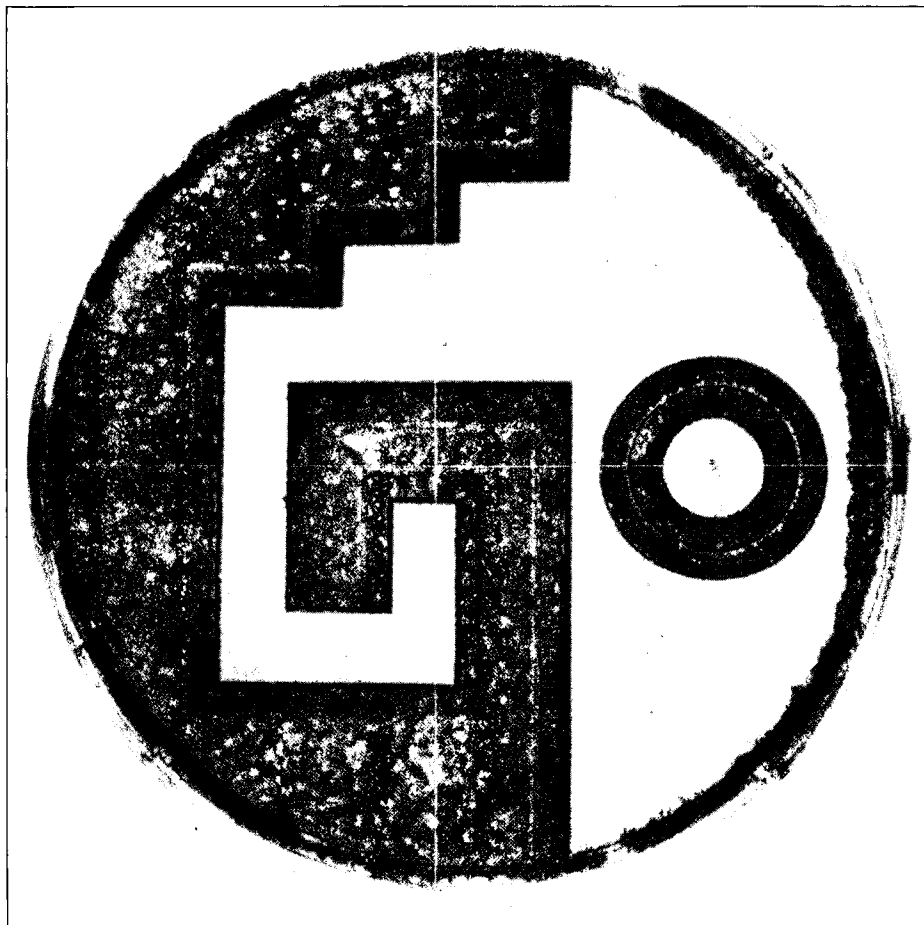


The 'ASTEC' symbol adopted by the community pushing for increased use of artificial intelligence techniques in particle physics.



Several industrial concerns, notably France-Telecom and France's National Centre for Telecommunications, contributed presentations and exhibits. A Numeris link allowed applications work.

A major outcome was the setting up of working groups (under the acronym ASTEC) covering four major themes:

- 1 - to establish and maintain world contacts between groups working on all subjects and to help integrate small units in larger projects;
- 2 - to organize relations with industry and other research areas through common projects;
- 3 - to contribute to the education in new techniques;
- 4 - to develop ideas for software

standardization and interface protocols between different applications.

LISTSERV servers are installed at CERNVM (ASTEC at CERNVM) for information exchange between these groups and to reach out to the high energy and nuclear physics communities at large. A 'White Book' summarizing the results of this work will be published after the next workshop in the series, to be held in Germany in fall 1993.

The proceedings of the 1992 meeting will be published by World Scientific. Held under the auspices of the European Physical Society, CNET (the French centre for telecommunications studies), the French Atomic Energy Commission, the Ministry of

Research and Technology, the Ministry of Foreign Affairs, and LAPP (Annecy), more than 250 participants from 18 countries took part.

From D. Perret-Gallix

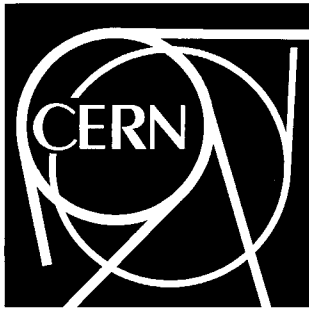
KEK Deuterons

At the end of January, the 12 GeV Proton Synchrotron (PS) at the Japanese KEK Laboratory successfully accelerated deuterons to 11.2 GeV (5.6 GeV/nucleon), the limiting energy for deuterons with this ring. Beam intensity in this test exceeded 3×10^{11} particles per pulse.

With PS protons and with electrons and positrons for the TRISTAN collider, the advent of deuterons adds another important option to the KEK beam menu.

Since its completion in 1976, the KEK PS has been continuously improved, supplying proton beams for a variety of experiments. When many KEK high energy physics users were attracted to the TRISTAN project in the mid-80s, the PS experimental program underwent a transition and nowadays covers a wide field of research, including particle, hadron, nuclear and atomic physics as well as nuclear chemistry. Hence a recent request for a high energy deuteron beam.

The KEK PS chain consists of a 750 keV Cockcroft-Walton preaccelerator, a 40 MeV Alvarez linac and a 500 MeV booster synchrotron feeding the 12 GeV main ring. Extra beam from the booster is used for neutron scattering and muon science as well as for cancer therapy.



Germany at CERN



Under the auspices of the Federal Ministry for Research and Technology
(Building 60)

12.05 -14.05 1992

Dräger

Drägerwerk AG

Postfach 1339
D-2400 Lübeck 1
Federal Republic of Germany
Telephone: FRG - (451) 882-0
Telefax: FRG - (451) 882-2080
Telex: 26807-0 dwl d

Contact person at the stand and
in the enterprise:

Mr. Hellwig

Dräger (Schweiz) AG

Letzigraben 134 A
CH-8047 Zürich
Telephone: 01/4915400

Mr. Hadorn

Main production lines:

Breathing Protection
Compressed Gas Technology
Filter Technology
Gas Detection
Medical Technology
Diving Technology

Exhibited products:

Gas detection tubes and sampling devices.
Electronic gas measuring devices. Escape mask,
Filters, Self rescuers Compressed Air Breathing
Apparatus.



ELTEC Elektronik GmbH

Galileo-Galilei-Straße 11
D-6500 Mainz 42
Federal Republic of Germany
Telephone: (0 61 31) 9 18-0
Telefax: (0 61 31) 9 18 1 99

Main production lines:

The company's product line covers CPU boards,
memory modules, mass storage controllers,
industrial I/O boards and local area networking
products as well as high-resolution computer
graphics and image processing tools. ELTEC offers
a broad range of software production in conjunction
with their proprietary VME hardware building blocks.
The production of all ELTEC products is carried out
in accordance with ISO 9000 standards to ensure
the utmost in reliability.

EUROCOM 16

MC68(EC)030 (25 MHz) high speed multifunctional
CPU with optional FPU, 4 or 8 MB DRAM, 128 KB
SRAM, high speed SCSI, Ethernet/CheaperNet,
VGA-Graphics, 4 serial and 2 parallel ports and
LEB connector for IPIN daughterboard.

IC40

State-of-the-art image processing subsystem with
on board 68040 CPU, 4,5 MByte video memory for
storage of image, program or data. Frame grabber
with 4 camera inputs and scan converter. Graphics
interface with resolutions of up to 1280 x 1024
pixels and 256 simultaneous colors via CLUT.
Serial and parallel I/O. Two VIBus video data ports
for pipeline image processing



F.u.G. Elektronik GmbH

Florianstraße 2
D-8200 Rosenheim
Telephone: (0 80 31) 8 10 93
Telefax: (0 80 31) 8 10 99
Telex: 5 25 712

Contact persons at the stand:

Mr. Fritz, Mr. Giebichenstein
Mr. Führling

Contact persons in the enterprise:

Mr. Führling, Mr. Elsasser

Production lines:

Low voltage power supplies up to 10000 A
High voltage power supplies up to 150 kV
High power units up to 100 kW
Capacitor charging power supplies
Bipolar power supplies
Linear power supplies
Power supplies for super conducting coils
Power supplies for discharging lamps
Computer interfaces IEEE488 - R5232
EURO-cassettes
19"-models
Customer specific versions

Products exhibited:

Low and high-voltage power supplies for research
and development.

**more than
600 standard
power supplies**

90 types ex stock

GOSSEN

GOSSEN GmbH

Meß- und Regeltechnik
Postfach 1780
D-8520 Erlangen
Telephone: (09131) 827-1

Swiss representation:

ULRICH MATTER AG



Bremgarterstraße 62
CH-5610 Wohlen

Telephone: 057 22 72 55
Fax: 057 22 72 87

Personnel at our stand:

A. Liem (Gossen)
J.P. Baumgartner (Ulrich Matter AG)

Sales Manager of Gossen:

M. Hellpoldt

Production line:

- Measuring instruments for switchboards and panels
- alphanumeric text indicators
- portable measuring and test instruments
- multichannel temperature regulators
- stabilized power supplies for laboratories and industrial applications
- measuring transducers for electrical and process signals

Products exhibited:

- Novelties as:
- programmable digital and bargraph panel meters
 - self tuning single- and multichannel temperature regulators
 - modular multichannel laboratory power supplies with IEEE- and serial interface
 - power supplies for 19"-rack mounting
 - measuring transducers for mounting on DIN rail

Additional products:

- calibrators for measurement and simulation of electrical-signals, thermocouples, RTD-resistances and 2-wire transmitters
- portable electronic low pressure and flow-indicator
- air quality sensor for combustion aerosols (e.g. Diesel-, tabac smoke immissions)
- unit for telemeasuring and control via serial fibreoptic network

HEINZINGER WALD AG Stromversorgungen

HEINZINGER WALD AG

Jonastraße
CH-8636 Wald
Telephone: 055 95 61 51
Fax: 055 95 51 59

Representative in Switzerland for:

HEINZINGER electronic GmbH	D-8200 Rosenheim
Spitzenberger & Spies GmbH	D-8374 Viechtach
Powertronic GmbH	D-8086 Moorenweis
Ch. Beha GmbH	D-7804 Glottertal

Contact person at the booth

Mr. Marco Felber

Sales program:

HEINZINGER electronic GmbH

Laboratory Power Supplies up to 350VDC
Double stabilised power supplies linear controlled with stability 10^{-5}
Thyristor controlled power supplies
DC-Cassette power supplies
Laboratory switchmode power supplies up to 30kV
High-voltage power supplies, switchmode up to 500 kVDC
Thyristor controlled high voltage power supplies
Capacitor charging power supplies
Bipolar power supplies for low voltage
Bipolar power supplies for high voltage
Power supplies for superconductive coils
Power supplies devices for Xenon discharging lamps and for mercury vapour discharging lamps
Electronic loads (Current sinks)
DC High-voltage meter
High voltage cables
High voltage connectors
RS 232 Interface/IEEE 488 Interface 12-, 14-, 16-Bit resolution

Spitzenberger & Spies GmbH

AC Power amplifiers, 0 - 270Volt from 15Hz up to 4.5kHz
AC Power amplifiers from 1.5kHz up to 200kHz
AC current amplifiers from 15Hz up to 1.5kHz
Line simulation single phase and three phases with IEEE 488 Interface
2-quadrant DC amplifiers for voltage and current
4-quadrant DC amplifier up to 100kHz
Programmable wave form generator up to 8 phases with IEEE 488 Interface

Powertronic GmbH

Laboratory power supplies with single-, double-, triple- and four outputs up to 1kW
System power supplies with IEEE 488 or RS 232 Interface
Programmable multi-channel electronic load
DC/AC static inverter

Ch. Beha GmbH

Standard electronic loads from 100W up to 1kW with IEEE 488 interface



LEYBOLD AG Hanau

Wilhelm-Rohn-Straße 25
D-6450 Hanau 1
Telephone: 06181/34-0
Telefax: 06181/34-1690
Telex: 415 206-0 lhh d

LEYBOLD AG Köln

Bonner Straße 498
D-5000 Köln 51
Telephone: 0221/347-0
Telefax: 0221/347-1250
Telefax: 888 481-0 lh d

Contact person at the exhibition:

Mr. Fischer, LEYBOLD S.A. Lausanne

Affiliated companies in Switzerland:

LEYBOLD S.A.

Rue de Bassenges 13
CH-1024 Ecublens/Lausanne
Telephone: 021/691 8414
Telefax: 021/691 6273

LEYBOLD AG

Oerlikoner Straße 88
CH-8057 Zürich
Telephone: 01/311 5757
Telefax: 01/312 5083
Telex: 823212

Production line:

- Vacuum technology:
- rough vacuum pumps
 - high vacuum pumps
 - ultra-high vacuum pumps
 - vacuum gauges and controllers
 - leak detectors
 - residual gas analyzers/mass spectrometer

Vacuum coating systems for:

- optics
- glass
- electronics/semiconductors
- data storage media
- display
- super conductors
- webs and shaped parts

Products exhibited:

Vacuum-Components



Linde Process Engineering and Contracting Division

Dr. Carl von Linde Straße 6-14
D-8023 Höllriegelskreuth

Please contact:

Dr. M. Wanner
Manager Sales (AKA) and Processes and
Commissioning (AKV), Nuclear and Cryogenics
Plants
Telephone: (089) 7445-2038
Telefax: (089) 793 8648
Telex: 528327-0 li d

Our Programme in Cryogenics:

He-Refrigeration

Liquefiers/Refrigerator
Storage/Distribution
Purifiers
Special components
Instrumentation

H₂-Refrigeration

Liquefiers
Storage/Distribution
Fuel systems
Special components
Safety analysis

Space Cryogenics

He-II-cooling systems
Ground Support Equipment
Special components



Programmers:

EPROM/EEPROM
Single Chip Processors
PAL/PLD
Gang programmers



Oscilloscopes
Laboratory Test and Measurement Equipment



Universal Experimental Systems for digital and
linear Circuits



Transient Recorders



PC-boards for Test and Measurement Software
package PowerLab



Hybrid Recorders
Line recorders



Function Generators
Power Supplies Unit
Frequency Counters



Representative in Switzerland:

LOGOTRON AG

CH-8807 Freienbach

Telephone: 055/47 33 21

Telefax: 055/48 12 75

47 Rue de Lausanne
CH-1028 Préverenges

Telephone: 021/802 40 33

Telefax: 021/802 40 61

Contact person at the stand:

Erich Wallasch



Messer Griesheim GmbH

Homburger Straße 12
D-4000 Düsseldorf 30

Swiss Affiliate:

Schweißtechnik AG

Langwiesenstraße 12
CH-8108 Dällikon/Zürich

Contact person at the stand :

Mr. Bernd Vogel

Production line:

Special gases:

rare and high purity gases, gas mixtures,
gas supply systems

Equipment for cryogenic gases:

superinsulated vessels and transfer lines

Products exhibited:

LHe-Container HELIOS with Safety head,
Digital level gauge, Superinsulated manifold,
Cylinder valves, Information panels



Balzers Hochvakuum AG

Stampfenbachstraße 48
CH-8006 Zürich

Telephone: 01 363 3266

Telefax: 01 362 4623

Contact persons:

Daniel Pilet (Balzers, Zürich)
Karl Abbel (Pfeiffer, Asslar)

Arthur Pfeiffer Vakuumtechnik Wetzlar GmbH

Emmeliusstraße 33

Postfach 12 80

D-W - 6334 Asslar

Telephone: 06441 802-0

Telefax: 06441 802-500

Production line:

Components and component parts for the
generation, measurement and control of high and
ultrahigh vacuum.

Products exhibited:

Turbomolecular- and molecular pumps, vacuum
units for measurement and control, leak detectors.

Electronics for High Energy and Industry

Dr. Bernd Struck
Bäckerbarg 6
D-2000 Tangstedt/Hamburg
 Telephone: (0) 4109 55-0
 Telefax: (0) 4109 5533
 Telex: 2 180 715 tegs d

Contact persons at the exhibition:

Dr. Bernd Struck, Tino Häupke, Ludwig Christians

Production program:

- FASTBUS mini crate
- Cern host interface and processor system
- Snoop FASTBUS diagnosis and slave module
- Multichannel flash-analog-digital converter
- ASPC on line porosity measuring system
- VXI crate and VXI modules

Products exhibited:

- VME
- VXI
- FASTBUS
- CAM



VACUUMSCHMELZE GmbH

Grüner Weg 37
D-6450 Hanau 1
 Telephone: (0049) 6181/38-0
 Telefax: (0049) 6181/38-2645
 Telex: 4 184 863

Contact person at the stand

Mr. Reinhard Dietrich

Contact person in VAC

Mr. Reinhard Both
 Tel. (0049) 6181/38-2289

Mr. Reinhard Dietrich
 Tel. (0049) 6181/38-02634

Agency

Matthées AG

Postfach
Peter-Merian-Straße 22a
CH-4002 Basel

Telephone: (061) 2712077

Telefax: (061) 2718458

Telex: 962 770

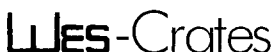
Production line:

Inductive components
 Soft magnetic cores and parts
 Magnetic shielding
 Magnetically shielded rooms
 Soft magnetic semi-finished products
 Amorphous metals
 Sub-assemblies and magnet systems
 High grade permanent magnets

High field superconductors
 Mineral insulated electrical conductors
 Thermostat metals
 Expansion and glass/ceramic-to-metal sealing alloys
 Age hardenable spring materials
 Magnetic sensors

Samples shown at CERN:

Samples of superconductors for some different projects



Wes-Crates GmbH

Pattburger Bogen 33
D-2398 Harrislee
 Telephone: (0461) 77 41 77
 Telefax: (0461) 77 41 41

Contact person at the stand

Jörgen L. Kristensen,
 Franz von Niederhäusern, HiTech Systems SA

Contact person in the enterprise

Jörgen L. Kristensen

Production lines:

Powered Crates

- | | |
|----------------|--|
| CAMAC-Crates | - CERN Spec. 099a
Output 500 W
linear regulated |
| CAMAC-Crates | - CERN Spec. 336
Output 750 W
switch mode regulated |
| FASTBUS-Crates | - CERN Spec. F 6852
Output up to 3.300 W
low noise, 3-phase input |
| VMEbus-Crates | - CERN Spec. V-422
+ 5V/100 A, ± 12 V/2 A |
| VMEbus-Crates | - CERN Spec. V-430
+ 5V/100 A, - 5,2 V/100 A
- 2V/ 50 A, ± 12 V/ 2 A
± 15V/ 2 A |

All crates tested and approved by CERN

- | | |
|-----------------|--|
| Customer-Crates | - Customer design,
Wes-Crates quality |
|-----------------|--|

Products exhibited :

Powered Crates

- | | |
|----------------|--|
| CAMAC-Crates | - CERN Spec. 099a
Output 500 W
linear regulated |
| CAMAC-Crates | - CERN Spec. 336
Output 750 W
switch mode regulated |
| FASTBUS-Crates | - CERN Spec. F 6852
Output up to 3.300 W
low noise, 3-phase input |
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+ 5 V/100 A, ± 12 V/2 A |
| VMEbus-Crates | - CERN Spec. V-430
+ 5V/100 A, - 5,2 V/100 A
- 2V/ 50 A, ± 12 V/ 2 A
± 15V/ 2 A |

All crates tested and approved by CERN

- | | |
|-----------------|--|
| Customer-Crates | - Customer design,
Wes-Crates quality |
|-----------------|--|



Plein & Baus GmbH

Müllersbaum 20
D-W-5093 Burscheid-Hilgen
 Telephone: 02174/678-0
 Telefax: 02174/678-555

Contact persons at the booth:

Urs Vogt
 Manfred Plein Tel. 004177/249630

Contact person in the enterprise:

Dipl.-Ing. Manfred Plein

Local Representative:

Elcotron S.A.

1, Rue de la Morèche
CH-1260 Nyon
 Telephone: 004122/615352
 Telefax: 004122/615351

Production line:

- | | | |
|----------------|------------------------|------------|
| VME-Crates | linear power supplies | 500W |
| VME-VXI-Crates | switched powered | 1250/2000W |
| CAMAC-Crates | linear/switch powered | 500/1400W |
| NIM-Crates | linear power supplies | 300/500W |
| Fastbus-Crates | switched powered up to | 4kW |
| Special | power supplies | |

Products exhibited:

- | | |
|-------|---|
| 1000W | VME-Crate V430 with intelligent monitoring modular power supply, CAMAC-Crate with intelligent monitoring and CAENET-Serial-Link for PC remote control |
| 1400W | CAMAC switching power supply |
| 3850W | Fastbus power supply |
| 3000W | modular 7-fold watercooled special-power supply (Desy spec.) adjustable by IEEE-Bus |

A vacuum capacitor being installed at the 12 GeV proton synchrotron at the Japanese KEK Laboratory to widen the accelerating radiofrequency range. Together with other modifications, this resulted in successful acceleration of deuterons to 11.2 GeV.



To supply deuteron beams, several modifications had to be made in each PS section, the largest being for the radiofrequency systems. As acceleration in the linac takes place in every other r.f. cycle, the resulting deuteron velocity is just half that of the protons. Consequently the r.f frequency range in the booster and main ring had to be increased by 33 and 50 per cent respectively, achieved by attaching a vacuum capacitor to each accelerating gap and increasing the ferrite bias current for each cavity. To accommodate the increased bias current, power supplies were upgraded.

The successful deuteron test shows that the KEK PS can accelerate ions of charge-to-mass ratio $1/2$, expanding experimental possibilities. Currently kaon decay experiments receive highest PS priority. For the future of the machine, several ideas have been aired, including a heavy ion collider of energies up to 7 GeV/nucleon, and a phi-factory.

Honouring Edoardo Amaldi in his hometown

As reported briefly last month, on 25 January Italian physicists gathered in Piacenza, accepting an invitation from the local authorities to honour the memory of distinguished physicist and CERN founding father Edoardo Amaldi who died on 5 December 1989. Attended by Ugo Amaldi and other members of the family, the event ended in Carpaneto, the village where Edoardo Amaldi was born in 1908, with the dedication of the local school

and the unveiling of a bronze bust.

The meeting was attended by many Italian scientists and representatives of local and national authorities, together with high school students and members of the local community.

Nicola Cabibbo, giving a keynote speech 'Edoardo Amaldi, scientist and European citizen', retraced the many-faceted aspects of Edoardo Amaldi's life, stressing the variety and far-reaching results of his research, from early investigations on

molecular and atomic physics, through fundamental work in Enrico Fermi's group on nuclear physics using neutron probes, subsequent nuclear studies with electrostatic accelerators, cosmic ray research, and experiments hunting for magnetic monopoles, to his activity in later years in developing gravitational-wave antennas.

These contributions to physics would be sufficient to ensure Edoardo Amaldi a place in physics