

People and things

Laboratory correspondents

Argonne National Laboratory, USA
M. Derrick

Brookhaven National Laboratory, USA
A. Stevens

CEBAF Laboratory, USA
S. Corneliussen

CERN, Geneva
G. Fraser

Cornell University, USA
D. G. Cassel

DESY Laboratory, Fed. Rep. of Germany
P. Waloschek

Fermi National Accelerator Laboratory, USA
M. Bodnarczuk

GSI Darmstadt, Fed. Rep. of Germany
G. Siegert

INFN, Italy
A. Pascolini

IHEP, Beijing, China
Qi Nading

JINR Dubna
B. Starchenko

KEK National Laboratory, Japan
S. Iwata

Lawrence Berkeley Laboratory, USA
B. Feinberg

Los Alamos National Laboratory, USA
O. B. van Dyck

NIKHEF Laboratory, Netherlands
F. Ern 

Novosibirsk Institute, USSR
V. Balakin

Orsay Laboratory, France
Anne-Marie Lutz

PSI Laboratory, Switzerland
J. F. Crawford

Rutherford Appleton Laboratory, UK
Louise Hall

Saclay Laboratory, France
Elisabeth Locci

IHEP, Serpukhov, USSR
Yu. Ryabov

Stanford Linear Accelerator Center, USA
W. Kirk

Superconducting Super Collider, USA
N. V. Baggett

TRIUMF Laboratory, Canada
M. K. Craddock

On people

Among the recipients of this year's UK Institute of Physics Awards are Sir Rudolf Peierls, who receives the Paul Dirac Prize for his major contributions to many and varied areas of particle physics, and Dennis Sciama, who receives the Guthrie Prize for his contributions to astrophysics.

Mel Schwartz at Brookhaven

Mel Schwartz, who shared the 1988 Nobel Physics Prize with Leon Lederman and Jack Steinberger, becomes Associated Director for High Energy and Nuclear Physics at Brookhaven, replacing Larry Trueman, who returns to theory research. The 1962 experiment which showed that neutrinos come in several distinct kinds and ultimately earned the Nobel was carried out at Brookhaven.

Mel Schwartz becomes Associate Director at Brookhaven.



Shadows of Creation

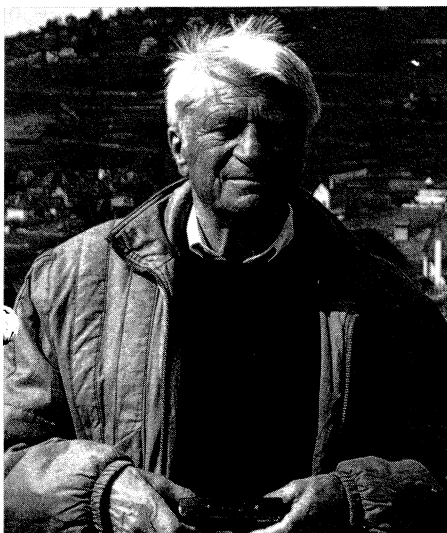
Published by W.H. Freeman is the book 'Shadows of Creation' by Michael Riordan and David Schramm, with a foreword by Stephen Hawking. Subtitled 'Dark Matter and the Structure of the Universe', the book looks at the need for dark matter and its major role in cosmology, and the search for it. Formerly Science Information Officer at the Stanford Linear Accelerator Center and currently assisting the President of the Universities' Research Association in Washington, Riordan is author of 'The Hunting of the Quark', which won the 1988 American Institute of Physics Science Writing Award. Louis Block Professor in Physical Sciences at Chicago, Schramm is co-author with Leon Lederman of 'From Quarks to the Cosmos'. Both Riordan and Schramm have been major contributors to the CERN Courier.

Arkadii Benediktovich Migdal 1911-1991

Leading Soviet theoretician Academician Arkadii Benediktovich Migdal died on 9 February. With wide interests ranging over nuclear and many-body physics, he solved a number of crucial problems and opened new physics frontiers. Quick to see the potential interplay between advances in different areas of physics, his characteristic interdisciplinary approach led to new insights, and his ingenious use of qualitative methods was highly successful.

After initial studies in Leningrad, he moved in 1940 to Moscow's Institute of Physical Problems, headed by Lev Landau, for a docto-

Arkadii Benediktovich Migdal 1911-1991.



rate investigation of processes accompanying nuclear reactions. In 1945 he transferred to the Institute for Atomic Energy, where he made important contributions to early reactor design, and in the early 1950s turned his attention to the problems of radiation in controlled thermonuclear fusion.

During this time he continued to follow quantum and nuclear physics. His pioneer applications of dispersion theory to nuclear reactions led to new understanding of final state interactions (the Migdal-Watson Effect). In the late 1950s he turned to the implications of quantum field theory for the many-body problem and for nuclear physics, invoking a particularly effective quasi-particle approach.

Moving back to Moscow in the early 1970s, he turned his attention to the behaviour of particle systems in strong external fields, using non-perturbative techniques. This showed that nuclei are on the verge of producing pion condensates, and hinted at the possible existence of superdense nuclei and other extreme nuclear states, with interesting implications for astrophysics.

A gifted teacher, he lectured for 35 years at Moscow's Engineering Physics Institute, and was a prolific producer of influential monographs. He was awarded the Order of Lenin and several other Soviet distinctions.

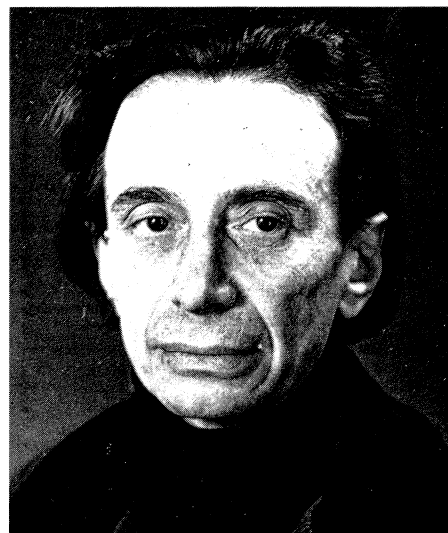
Aside from science, he was a talented sculptor and jeweller as well as an inveterate sportsman – mountain climber, skier, skater and diver. He was the first Chairman of the Presidium of the Soviet Federation of Underwater Sports, holder of Underwater Sportsman's Card No. 1. He produced three well-known underwater films and was an appreciated TV popularizer of science.

In addition to his stature as a scientist, his sociability, wit and charm won him many friends throughout the world.

Igor Kobzarev 1932-1991

Igor Kobzarev, who died unexpectedly in Moscow on 20 January, was remarkable for being both an outstanding physicist and a real philosopher, concerned with the deepest problems of mind and knowledge, culture and history. In addition to well-known results on the physics of kaons, on cosmological implications of spontaneous symmetry breaking, on general relativity and on hadron structure, his philosophical and historical work was also influential, including a book, in English, with Yu.I. Manin – 'Elementary Particles. Mathematics, Physics and Philosophy'. His charm and erudition attracted young and old alike, and his talents were highly appreciated by many, including I. Pomeranchuk, I. Tamm, Ya. Zeldovich and A. Sakharov. Despite this high esteem of his colleagues, he gained little formal recognition.

Igor Kobzarev 1932-1991.



1992 Accelerator Conference

In 1992 the XVth International Conference on High Energy Accelerators will be held from 20-24 July at the Congress Centrum, Hamburg, Germany. Further information from the Conference secretariat at DESY, Notkestr. 85, D-2000 Hamburg, Germany; phone (49) 40 8998-2636, telex 215124 desyd, fax 40 8969-7305, e-mail HEAC92 at DHHDESY3.BITNET

School report

The 100 or so places for the CERN Accelerator School's 'Radiofrequency Engineering for Particle Accelerators' course in Oxford from 3-10 April were sold out well in advance. The next course, 'Advanced Accelerator Physics', is to be held from 16-27 September at Noordwijkerhout in the Netherlands. Further information from Mrs. S. von Wartburg, CERN Accelerator School, CERN, 1211 Geneva 23, Switzerland.

Another recent success was the Joint US-CERN School on Intensity

DETECTOR TECHNICIAN

CEBAF is a DOE sponsored laboratory operated by the Southeastern Universities Research Association (SURA) to study strongly interacting matter with electromagnetic probes. The Experimental End Station C has an immediate opening for a detector technician. Under supervision of staff scientists, the successful candidate will participate in the design, construction, testing, and integration of various detector components. A B.S. Degree in Physical Science or Engineering or five years equivalent, relevant experience is required. Preference will be given to those with previous experience in the development and/or construction of detectors such as wire chambers, scintillator hodoscopes, gas Cerenkov, or lead-glass counters. Experience with CAMAC, FASTBUS, or NIM is a plus. Salary depends on the level of appointment and is commensurate with experience. Newport News is located in southeastern Virginia, a region of mild climate with quick access to the Chesapeake Bay, the Atlantic Ocean, Colonial Williamsburg, and Virginia Beach. For further information, contact Dr. Roger Carlini or Dr. David Mack (804) 249-7235. Applicants should submit a resume specifying position number #PR7203 to: **Employment Manager, CEBAF, 12000 Jefferson Avenue, Newport News, VA 23606.**

CEBAF

The Continuous Electron Beam Accelerator Facility

CEBAF is an Equal Opportunity Employer

ASSOCIATE RESEARCH SCIENTIST POSITIONS AT YALE UNIVERSITY

Applications are invited for two Associate Research Scientist positions in Particle Physics at Yale University:

1. Precision measurement of the anomalous g-value of the muon at Brookhaven National laboratory (1/2 time) and detector R&D on preradiators for SSC (1/2 time).
2. The new experiment at CERN of the Spin Muon Collaboration to measure the spin dependent structure functions of the proton and neutron through deep inelastic polarized μ -p and μ -d scattering.

Appointments are for one year, renewable, and are to be made at the earliest possible date. Interested candidates should send a curriculum vita and publication list and arrange to have three recommendation letters sent to either:

Professor Vernon W. Hughes
or

Professor Priscilla Cushman
Department of Physics
Yale University
P.O. Box 6666

New Haven, Connecticut 06511

Yale is an affirmative action/equal opportunity employer.

NUCLEAR EXPERIMENTALIST DEPARTMENT OF PHYSICS UNIVERSITY OF CALIFORNIA AT DAVIS

The University of California at Davis invites applications for a tenure-track Assistant Professor position in experimental nuclear physics to complement a staff of three experimentalists and two theoreticians presently in the department. There is a particular interest in applicants with experience in the field of relativistic nuclear collisions. The candidate must have an excellent research record, potential for leadership in the field of nuclear physics and considerable teaching ability. Start-up funds will be made available. Review of applications will start April 15, 1991 and continue until the position is filled. The appointment will start July 1, 1992. Applications, including resume, three references, phone, E-mail and Fax addresses if available, should be sent to **Douglas W. McCollm Acting Chair, Department of Physics, University of California Davis, CA 95616-8677.**

Currently, the experimental program includes neutron beam studies at Davis and Los Alamos, heavy ion experiments at Lawrence Berkeley Laboratory (LBL), and the study of relativistic nuclear collisions at the Bevalac (LBL) using the Heavy Ion Superconducting Spectrometer (HISS). A large volume TPC called EOS is being constructed to go into the HISS magnet, which will be used beginning in 1991-92 for studies in nuclear matter equations of state. A letter of intent and detector development proposal collaboration for RHIC, the Relativistic Heavy Ion Collider, has been formed with UC Davis, LBL and a number of other institutions.

The college of Letters and Science at Davis is committed to building a more diverse faculty and student body as it responds to the changing population and educational needs of California and the nation. As a consequence, we are especially interested in attracting persons from groups currently underrepresented on the campus. Our commitment demands that, irrespective of age and/or sexual preference, we will pay special attention to applications from women, persons of color and persons with disabilities.



Notre Institut de physique nucléaire met au concours un poste de professeur ordinaire

de physique nucléaire et corpusculaire

Le ou la titulaire de ce poste aura la charge d'enseignements au niveau du second cycle des études universitaires (3ème et 4ème année des études). Il pourra être sollicité pour contribuer aux enseignements de physique de premier cycle; *entrée en fonction*: 1er septembre 1992.

Le ou la titulaire devra conduire des recherches dans le cadre de participations de l'Institut à des programmes auprès des centres de recherche nationaux ou internationaux (CERN, PSI, HERA, etc).

Renseignements complémentaires auprès du directeur de l'Institut de physique nucléaire, prof. C. Joseph, 1015 Lausanne, tél. 021/692 23 62.

Les candidatures accompagnées d'un curriculum vitae et d'une liste de publications sont à adresser avant le **21 mai 1991** à M. le Professeur J.-C. Bünzli, Doyen de la Faculté des Sciences, Collège propédeutique, CH - 1015 Lausanne.

Soucieuse de promouvoir l'accès des femmes à la carrière académique, l'Université encourage les candidatures féminines.

Limitations, held on Hilton Head Island, South Carolina, last November, at the invitation of the CEBAF Laboratory.

No 17 keV neutrino

(see page 9)

A new result from a Caltech group looking at the beta decay of sulphur-35 finds no evidence for a 17 keV neutrino. In their findings, the group point out that experiments giving negative results used magnetic spectrometers, while 17 keV neutrino claims derive from semiconductor detectors.



▲ A good turnout at the Joint US-CERN Accelerator School on Intensity Limitations held last November on Hilton Head Island, South Carolina, at the invitation of the CEBAF Laboratory

▼ Ugo Amaldi, spokesman of the Delphi experiment at CERN's LEP electron-positron collider, gave a talk at the recent 69th session of the Scientific Council of the Joint Institute for Nuclear Research, Dubna, near Moscow.



CERN 'Yellow' reports 1990 / 1991

The following reports have been issued in the official CERN Reports series, since the last list in CERN Courier in November 1990:

CERN 90-08

CERN, Genève

Kuiper, B [ed]

Proceedings, Europhysics conference on control systems for experimental physics, Villars-sur-Ollon, Switzerland, 28 Sep – 2 Oct 1987

CERN, 12 Oct 1990. – 592 p

CERN 90-09

Telegdi, V L

Mind over matter ; The intellectual content of experimental physics

CERN, 2 Nov 1990. – 20 p

CERN 90-10 v.1; ECFA 90/133 v.1

CERN, Genève

Jarlskog, G; [eds]

Proceedings, v.1, Large Hadron Collider Workshop, Aachen, 4–9 Oct 1990

CERN, 3 Dec 1990. – 634 p

CERN 90-10 v.2; ECFA 90/133 v.2

CERN, Genève

Jarlskog, G; [eds]

Proceedings, v.2, Large Hadron Collider Workshop, Aachen, 4–9 Oct 1990

CERN, 3 Dec 1990. – 1306 p

CERN 90-10 v.3; ECFA 90/133 v.3

CERN, Genève

Jarlskog, G; [ed]

Proceedings, v.3, Large Hadron Collider Workshop, Aachen, 4–9 Oct 1990

CERN, 3 Dec 1990. – 853 p

CERN 91-01

CERN, Genève

Proceedings, CERN School of Physics, Lefkada, Greece, 8 Sep–1 Oct 1988

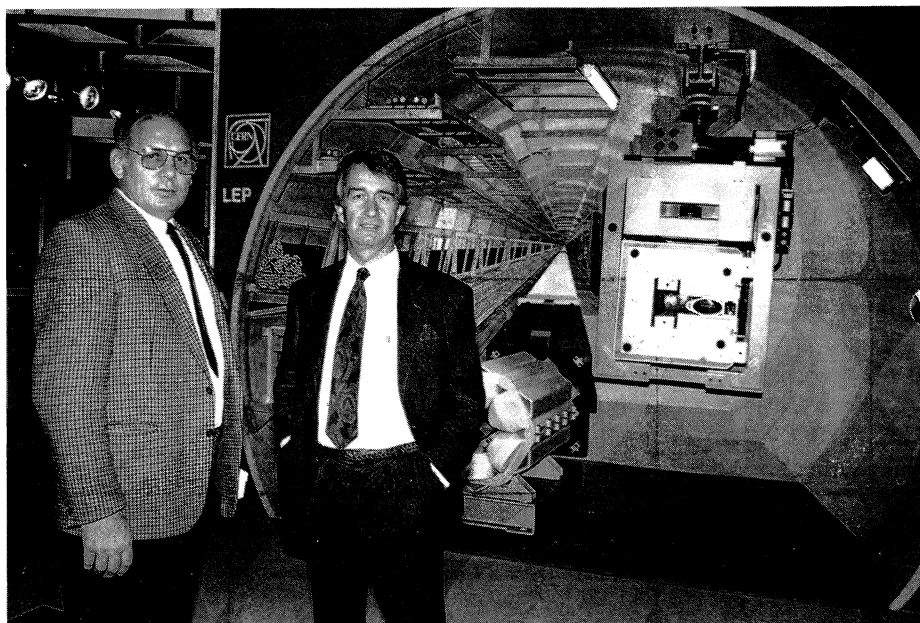
CERN, 10 Jan 1991. – 384 p

Copies may be obtained, while stocks last, by writing to:

*Scientific Information Service, CERN,
CH-1211 GENEVA 23, Switzerland,*

or by e-mail to:

ANTON@CERNVM.CERN.CH



John Bell Symposium

A Symposium on Quantum Physics, in memory of John Stewart Bell who died on 1 October 1990, will be held at CERN on 2-3 May. The scientific programme includes talks by A. Aspect, H. Rauch, A.J. Leggett, K. Gottfried, A. Shimony, G.C. Ghirardi, J. Leinaas and R. Jackiw. Further information from Jeanne Rostant, Theory Division, CERN, 1211 Geneva 23, Switzerland, phone (+41) 22 767 4222, fax (+41) 22 782 3914, bitnet rostant at cernvm.cern.ch

The 'Intertech Bodensee' fair held recently in Dornbirn, Austria, aimed to promote high technology in the Bodensee (Lake Constance) area at the common frontier of Austria, Germany and Switzerland. CERN was guest of honour at the expo, and was presented by Ernest Kaufmann (left) of PS Division, seen here in front of a mock-up of CERN's LEP tunnel with exhibition chairman Klaus Ulmer. CERN's work in high technology was much admired by visitors to the expo.

(Photo Heinz Lanz)

CENTRE DE PHYSIQUE DES PARTICULES DE MARSEILLE

— IN2P3/CNRS – UNIVERSITÉ AIX MARSEILLE II —

In the course of an expansion plan the Center of Particle Physics of Marseille is expecting to recruit at a senior level, corresponding to a full professor position. The Laboratory is currently developing an LHC-SSC physics programme.

At the present time we are involved in LEP, CP LEAR, neutrino oscillation experiments and detector R & D. In manpower the Laboratory plans to expand from 65 to around 100 within 2 or 3 years, will start constructing a new building this year.

Further information can be obtained from :

J.J. Aubert

Centre de Physique des Particules de Marseille

Faculté des Sciences Luminy

Case 907

163 avenue de Luminy

F – 13288 Marseille Cedex 09

Tél. 91 41 83 07

Superconducting Super Collider Laboratory

The SSC Laboratory, a major research and development center, will support 2,000 staff members; the SSC Laboratory provides extraordinary career opportunities in frontier science and technology.

Career and term positions are available at all levels.

Accelerator

- RF Power
- Vacuum Systems
- Cryogenics
- Design
- Instrumentation and Controls

Research

- Detector Development
- Experimental Facilities
- Physics Research

Electrical Engineers

- Power Systems
- Magnet
- RF
- Analog/Digital hardware experience
- BSEE, MSEE

Magnet Development

- Test SC Magnets
- Magnet Design
- Instrumentation and Controls

Visiting Scientist

- Positions Available in all divisions

Mechanical Engineers

- Cryogenics
- Production
- Process control
- BSME, MSME

The following professionals are particularly sought at this time.

Experimental High Energy Physicists

Participate in research and development for the SSC detector components, design of the related experimental facilities to support of the SSC experimental program, and ongoing HEP research.

Qualifications: Ph.D. in experimental particle physics. Experience with large detector systems preferred.

Computational Physicist/Engineer

Perform magnetic field computations in support of the SSC magnet design and construction program.

Qualifications: An advanced degree in Physics, Electrical or Mechanical engineering; experience with the commonly available computer codes for magnetic field calculations. Experience with FORTRAN (preferably in a scientific computing environment) and with UNIX and VMS.

Collider Injector Physicists and Engineers

Take part in the accelerator design, and specification and implementation of the engineering systems.

Qualifications: Degree in Physics or Engineering; equivalent experience with modern computational methods; significant experience in accelerator construction and operation desirable; ability to work within a team and to interact with and communicate with other technical groups.

Magnet Test Physicist

Participate in the SSC superconducting magnet test program at FNAL, BNL, and SSCL.

Qualifications: Ph.D. in experimental physics (particle physics preferred). Experience with hardware and software; ability to plan and carry out testing programs.



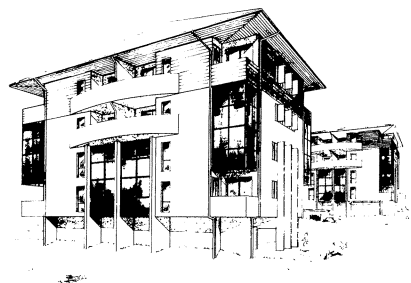
Send letter indicating position desired, resume and three references to:

SSC Laboratory

MS-2050/CC
2550 Beckleymeade Ave., Suite 125
Dallas, TX 75237

An Equal Opportunity/Affirmative Action Employer

Investissez dans le Pays Vert... LE PANORAMIQUE



32 APPARTEMENTS DU T1 AU T5 EN ACCESSION À LA PROPRIÉTÉ :

Situés sur le plateau d'Arlod dans un cadre boisé, au-dessus de Bellegarde (01), ces 2 petits immeubles de 16 logements chacun disposent d'une situation géographique exceptionnelle.

Leur conception et leur qualité de finition assurent au résident un mode de vie unique.

Cette copropriété de grand standing comporte des appartements spacieux, aux surfaces modulables, et avec garages.

DEVENEZ PROPRIÉTAIRE À CÔTÉ DE LA SUISSE, ET PAYEZ MOINS D'IMPÔTS

- A 30 km de Genève, ce programme immobilier a une réelle valeur d'investissement. L'embranchement autoroutier et la gare TGV de Bellegarde le justifie.
- De plus, en achetant votre appartement au Panoramique, vous avez la possibilité de réduire vos impôts* sur 2 ans jusqu'à
30 000 F pour un célibataire
60 000 F pour un couple.
- En plus, vous bénéficiez d'une réduction de 25% des revenus fonciers pendant 10 ans.

(Livraison 1er trimestre 1992)
* loi Méhaignerie

COMMERCIALISATION :

Pour tous renseignements:
Myriam TABOURIN
SP DEVELOPPEMENT
Tél. (0033) 74 34 69 41
74 35 08 16

GRANIT

Publicité dans le COURRIER CERN

Format A4

Publication mensuelle

Les annonces paraissent simultanément dans chacune des deux éditions anglaise et française. Les insertions dans la deuxième langue sont publiées sans supplément.

Espace (page)	Surface utile (mm) largeur x hauteur	Prix par insertion (en francs suisses)			
		1 insertion	3 insertions	5 insertions	10 insertions
1/1	185 x 265	1980	1900	1830	1730
1/2	185 x 130	1170	1100	1040	960
1/4	90 x 265	690	630	590	550
	90 x 130				

Ces prix ne comprennent pas les emplacements spéciaux.

Supplément:

— pour une couleur 1500 Fr. s.

— pages de couverture:

Couv. 2 et 3 (1 couleur) 2000 Fr. s.

Couv. 4 (1 couleur) 2500 Fr. s.

Date de publication 1^{er} du mois

Délai de réception des

films positifs et textes

1^{er} du mois qui précède

Les frais de fabrication des films et de traduction des annonces sont facturés à part.

60 ou 54 suisse (150 anglaise et française)

Les annulations parvenues après le 1^{er} du mois précédent ne sont pas prises en considération.

Trame offset

Ces tarifs sont valables pour l'année 1991.

Renseignements pour l'Europe:

Micheline FALCIOLA / CERN COURIER - CERN

CH-1211 Genève 23 Suisse

Téléphone: 022/767 41 03

Téléfax 022/782 19 06

Télex 419 000 CER CH

Renseignements pour le reste du monde:
veuillez lire en page III.

Low- and high-Voltage Power Supplies

fug

Leading
in precision
and
quality



- 6,5V up to 150 000V
- 0,3mA up to 4000 A
- 7W up to 100 000W

Ask for details!

AIP

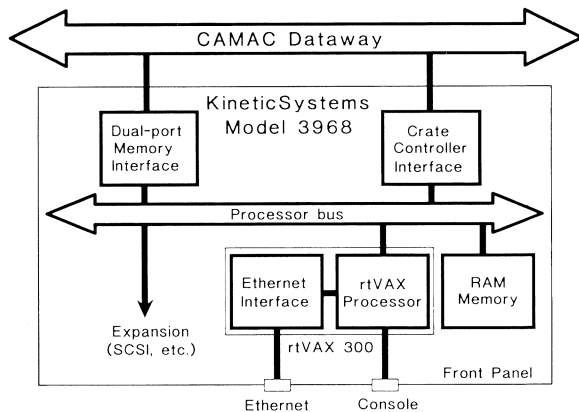
AIP Wild AG, Ringstr. 5, 8603 Schwerzenbach

Tel. 01/825 01 01

Add a powerful in-crate MicroVAX to your CAMAC system!

Your CAMAC data acquisition and control system can now include the power of Digital's rtVAX 300 processor! KineticSystems' new **Model 3968 Vantage 300** places the incredible MicroVAX architecture on a CAMAC module.

Functioning as an intelligent front-end processor, this new controller can be used in any CAMAC crate to perform scanning, closed loop control, monitoring, calculating, analysis, data conversion, and a host of other realtime activities. So call today!



Features...

- Embeds rtVAX 300 in a CAMAC module
- Distributes I/O over Ethernet
- Functions as a front-end processor
- Interfaces to over 150 KSC I/O modules

Specifications...

- 2.7 VUP, 20 MHz rtVAX 300 Processor
- Floating point coprocessor
- Ethernet coprocessor
- 4 Mbytes on-board memory
- ROM boot/diagnostics
- External SCSI port (optional)
- Console terminal port
- CAMAC Interface
- VAXELN target software license
- Dual-ported memory interface
- DECwindows software interface
- Network communications software
- CAMAC software support library (optional)

Kinetic Systems International S.A.

3 chemin Tavernay • 1218 Geneva, Switzerland
[41] (22) 798 44 45 • FAX [41] (22) 798 05 25

WATERTIGHT

under high pressure



Series 03



- Screwthread connector coupling system
- Watertight coupling is achieved by the compression of an O-ring guaranteeing the use under very high pressure (max. 60 bars)
- Connectors available as coaxial (50 Ω) or multipole version (2, 3 or 4 contacts). Max. AWG: 30 (stranded), 28 (solid)
- For use in limited space, maximum O.D.: 11.8 mm

LEMO P.O. Box 194 CH-1024 Ecublens Tel: 021/691.16.16 Fax: 021/691.16.26

***We Go
to Great
Lengths...***



BICRON

Bicron Corporation

12345 Kinsman Road
Newbury, Ohio 44065-9677
Telephone: (216) 564-2251
Telefax: (216) 564-8047
Telex: 980474 BICRON NWBY

European Office

Markstraat 27A, P.O. Box 271
2410 AG Bodegraven, The Netherlands
Telephone: 1726-14243
Telefax: 1726-14316
Telex: 39772 BICIN NL

Nippon Bicron

Room No. 805 1-8, 1-Chome
Shinyokohama, Kohoku-Ku
Yokohama 222 Japan
Telephone: 045 (474) 5786
Telefax: 045 (474) 5787

***...Producing
Your Plastic
Scintillating Fibers.***

- Blue scintillating fibers
- Green scintillating fibers
- Rad-hard fibers
- Ribbons and arrays
- Large cross-sections
- Custom formulations

Our tradition of advancing scintillation technology assures fiber properties which let you make the measurements you need.

Contact us today for our latest technical and pricing information.