

People and things

upcoming large-scale structure surveys such as the Sloan Digital Sky Survey would be required before we can say if the Universe is a spicy mix of many particles, or if too many theorists have spoiled the primordial soup.

Even after long, hard days in the working groups there was still a little energy available for rest and recreation. The volleyball prowess of the cosmologists was reconfirmed as they easily took care of the gravitationalists to capture the "Universe Cup".

While even from the top of Aspen Mountain the next millennium was slightly over the horizon, the Colorado mountains did provide a most appropriate setting for this visionary summer study. The Organizing Committee was chaired by Roberto Peccei (UCLA). Fermilab provided the usual excellent logistical support, including a Secretariat (under Cynthia Sazama) and a well-equipped computer centre.

By David Ayres (Argonne) and Edward W. Kolb (Fermilab and the University of Chicago)

On people

Maurice Jacob, distinguished theorist, one-time leader of CERN's Theory Division and President of the European and French Physical Societies, and now responsible for CERN's relations with Member States, becomes a member of the French Légion d'Honneur.

Neville Smith, previously with AT&T Bell Laboratories, has been appointed first scientific programme head of the Advanced Light Source at the Lawrence Berkeley Laboratory.

Tom Roser becomes Head of the Accelerator Division in the Alternating Gradient Synchrotron Department at Brookhaven, succeeding Bill Teng, now on sabbatical.

Feynman on film

Watch out next year for the Hollywood film 'Infinity' directed by actor

Matthew Broderick and based on the life of Richard Feynman.

CEBAF beams

After delivering its first beams earlier this year (September, page 42), the Continuous Electron Beam Accelerator Facility (CEBAF) superconducting accelerator in Newport News, Virginia, has attained 1.46 GeV, recirculating the beam in two passes. The goal is 4 GeV or higher in five passes. Preparations for higher passes alternate with detector commissioning.

Sergei M. Polikanov 1926-94

Sergei M. Polikanov died on September 2 at the age of 67. He was a member of the scientific staff of the GSI Darmstadt heavy ion Laboratory.

Born in Moscow in 1926, Polikanov studied physics with prominent teachers like L. D. Landau and I. E. Tamm and worked with G. N. Flerov



On 7 October CERN's Associate Director for Future Accelerators Lyn Evans (left) explains LHC preparations at CERN to Portuguese Minister Luis Valente de Oliveira (right) and Secretary of State for Science and Technology Manuel F. Thomaz.

Sergei M. Polikanov 1926-94



on the synthesis of transuranic elements. In these experiments, carried out at the Joint Institute for Nuclear Research (JINR), Dubna, element 103 (Nobelium) was first synthesized. In 1962 he discovered a spontaneous fission activity of 14 ms in uranium-238 reactions with heavy ions. This initially confusing phenomenon was soon recognized to be the spontaneous fission of an excited nuclear state of americium-242 and subsequently observed to be a phenomenon that occurred in many other transuranics. Few accomplishments in nuclear physics in recent years have had such a wide impact. The discovery soon received appropriate recognition: the Lenin Prize in 1967; election to corresponding membership in the Soviet Academy of Sciences in 1974; and in 1977 the Tom Bonner Prize of the American Physical Society.

In the early 70s Polikanov was the first to propose using muons to probe nuclear fission and nuclear dynamics. This early work in Dubna soon brought him into contact with CERN which offered the best possibilities for experiments with muons. His desire to depart with his family for a prolonged research abroad and his subsequent affiliation with Sakharov's Helsinki Group led to a

complete break with the Soviet establishment. In 1978 Polikanov and his family were expelled from the Soviet Union, and he formally returned all his Soviet prizes and honours. After working at the Niels Bohr Institute in Copenhagen from 1978 - 1980 and at CERN from 1980 - 1982, in 1982 he received a permanent position as a staff scientist at GSI, Darmstadt. He was appointed Honorary Professor at Heidelberg and in 1988 was awarded an honorary doctorate by the University of Uppsala in Sweden.

We have all learned much from Sergei Polikanov. With his death we have lost a man of great integrity, an outstanding physicist, and a highly regarded colleague.

From P. Armbruster and H.J. Specht

Tanguy Altherr 1963-94

This summer the promising French theorist Tanguy Altherr lost his life in a climbing accident in his home Brittany. After completing his thesis at Annecy, he went on to do research at Helsinki and in the French CNRS before coming to CERN as a Fellow. An acknowledged specialist in the theory of finite temperature fields, he was a prolific collaborator and the author of 31 papers, his age when he died.

Ilya M. Kapchinsky

On 5 July, Ilya M. Kapchinsky, well known for his work in oscillation theory, radio engineering, particle beam physics and accelerator technology, who died in 1993 (September 1993, page 33) would have been 75. A meeting at Moscow's Institute for Theoretical and Experi-

mental Physics (ITEP) commemorated the event.

After graduating from Moscow, he worked in radio and radar. From 1958, he headed ITEP's Linac Laboratory (later Division), directing teams which built linacs both at ITEP and at IHEP, Protvino. Characteristic of his work was a deep understanding of technical problems. Both these linacs went on to surpass their design values and be reliable for many years. Later came new high current ion machines.

After fresh results on the behaviour of intense beams of charged particles, in 1968, with V.V. Vladimirov and V.A. Teplov, he discovered the space-uniform quadrupole focusing effect, leading to a new method of ion beam acceleration (now best known as the radiofrequency quadrupole technique), now used all over the world. He also proposed a two-frequency proton linac idea.

His achievements, ingenuity and mastery of the field brought him several awards, in the US and Germany as well as in his home country. The continual and widespread application of his ideas serve as a fitting memorial to his work.

Meetings

The 3rd International Workshop on B-Physics at Hadron Machines - Beauty '95 - will be held at Oxford University, U.K. from 10-14 July, 1995. Further information from BEAUTY95@PHYSICS.OXFORD.AC.UK

The URL of the World Wide Web Home Page will be: <http://www-pnp.physics.ox.ac.uk/beauty95.html>

The 2nd International Workshop (Beauty '94) was held at Mont-St.-Michel, Normandy from 25-29 April. Peter Dornan of London's Imperial

Advertisements in COURRIER CERN

Format A4

Monthly publication

All advertisements are published in both English and French editions. Second language versions accepted without extra charge.

Space (page)	Actual size (mm) width by height	Cost per insertion (Swiss Francs)			
		1 insertion	3 insertions	5 insertions	10 insertions
¹ / ₁	185 x 265	2150	2040	1950	1840
¹ / ₂	185 x 130	1280	1200	1100	1020
¹ / ₄	90 x 130	750	680	630	590

These prices include no entitlement to special placing.

Supplement for:

– one additional colour 1500 SwF
– 1/2 page 800 SwF

– Covers:

Covers 2 and 3 (one colour) 2000 SwF

Cover 4 (one colour) 2500 SwF

Publication date 1st of month of cover date

Closing date for positive films and copy 1st of month preceding cover date

The cost of making films and of translation for advertisements are charged in addition.

Screen offset 60 l/cm (150 English)
Advertisements cancelled after 1st of month preceding cover date will be invoiced.

These rates are effective for the year 1995.

Inquiries for Europe:

Micheline FALCIOLA / CERN COURIER – CERN

CH - 1211 Genève 23 Suisse

Telephone: 022/767 41 03

Telefax 022/782 19 06

Inquiries for the rest of the world:

please see page III.

Max-Planck-Institut für Physik

(Werner-Heisenberg-Institut)

München, Germany

We invite applications from recent PhD graduates for a postdoctoral position in

Experimental High Energy Physics

The initial appointment is made for two years with the possibility of renewal for up to a total period of five years. The position is available now.

Our group has been engaged in the design and construction of the H1-detector and is actively participating in the data taking at the HERA e-p collider as well as in the upgrade program of the H1-detector.

We expect that the person appointed will actively participate in the exploitation of the physics potential of the H1-detector. Since we are presently constructing a level-2 neural network trigger for the H1-detector, the possibility of working in addition in this more hardware-oriented field is also offered. The location of work will be mainly at Munich, with regular trips to DESY, Hamburg.

For full consideration, applications must be received by January 31, 1995. Candidates should submit a curriculum vitae and arrange for three letters of recommendation to be sent to:

Prof. G. Buschhorn

Max-Planck-Institut für Physik

(Werner-Heisenberg-Institut)

Föhringer Ring 6

D - 80805 München

Germany

(e-mail: gwb@dmumpiwh.mppmu.mpg.de)

NFR Naturvetenskapliga forskningsrådet
Swedish Natural Science Research Council

invites applications for

RESEARCH POSITIONS in

Experimental astroparticle physics

Theoretical nuclear physics, esp. hadron physics

The Council's intention in creating these posts is to contribute to the recruitment of researchers and to breathe new life into research itself. The programme is, therefore, aimed primarily at the young researcher. These positions will be at an appropriate research group within Sweden. Tenure will be for 3 years as from October 1, 1995 and may be prolonged for another three years.

The salary range will correspond to that of an associate professor (SEK 255 000-350 000 per year). Applications should reach the Swedish Natural Science Research Council, Box 7142, S-103 87 Stockholm, Sweden, by March 15, 1995.

A curriculum vitae including a list of publications, a short research plan and, at most, 10 reprints of scientific papers should be appended in four copies to the application which should also be in quadruplicate.

Further information can be obtained from Ms Natalie Lunin at the Secretariat of NFR, phone no +46 8 454 42 32, fax no +46 8 454 42 50.



UNIVERSITE DE GENEVE

**La Faculté des Sciences ouvre
une inscription pour un poste
de Professeur ordinaire en**

PHYSIQUE THEORIQUE DES INTERACTIONS ELEMENTAIRES

Charge: Il s'agit d'un poste à charge complète, comprenant 6 heures de cours par semaine. Recherches dans le domaine de la physique théorique des interactions élémentaires.

Nous cherchons des candidats maîtrisant un éventail étendu de sujets théoriques modernes en relation avec les interactions élémentaires et ayant fait des contributions significatives dans ces domaines.

Titre exigé: doctorat ou titre jugé équivalent.

Entrée en fonction: 1er octobre 1995, ou à convenir.

Les dossiers de candidature comportant le curriculum vitae et la liste des publications devront être adressés, avant le 31 janvier 1995, au Doyen de la Faculté des Sciences, 30 quai Ernest-Ansermet, CH - 1211 Genève 4 (Suisse), où peuvent être obtenus des renseignements complémentaires sur le Cahier des charges et les conditions.

NB Désirant associer tant les femmes que les hommes à l'enseignement et à la recherche, l'Université souhaite recevoir davantage de candidatures féminines.

College was the summary speaker. The Proceedings appeared in Nuclear Instruments & Methods A 315 (15 November, 1994).

The 15th International Conference on Physics in Collision will be held from June 8-10, 1995 at the Marian Miesowicz Centre of High Energy Physics in Cracow, Poland. The conference is intended to provide an overview of the current status of high energy physics. Further information can be obtained from PHYSCOLL95, Institute of Nuclear Physics, ul. Kawory 26A, 30-055 Krakow, Poland, E-mail: PHYSCOLL@VSK01.IFJ.EDU.PL, Tel: (4812) 33 33 66, Fax: (4812) 33 38 84.

LTD6 - the Sixth International Workshop on Low Temperature Detectors - will take place from 28 August to 1 September at Beatenberg, near Interlaken, Switzerland. Further information from LTD6@LHEP.UNIBE.CH

The 1995 Low dimensional quantum

field theory meeting will be held at Centro Stefano Franscini, Monte Verita', Ascona, from 10-15 September 1995, sponsored by the European Science Foundation, ETH Zurich and Swiss National Science Foundation. Directors: K. Osterwalder (ETH, Zurich) and V. Rittenberg (Univ. of Bonn). Information: Secretariat CSF, ETH Zentrum, HGG24.1, CH-8092 Zurich, Phone : +41-1 632 25 00, Fax : +41-1 262 56 22.

NuPECC, the Nuclear Physics European Collaboration Committee, is the nuclear physics analogue of ECFA, the European Committee for Future Accelerators, which covers particle physics. Here NuPECC Chairman Peter Kienzle (left) considers a moot point with former Chairman Claude Detraz, now head of IN2P3 in France.

European Physical Society in support of the LHC

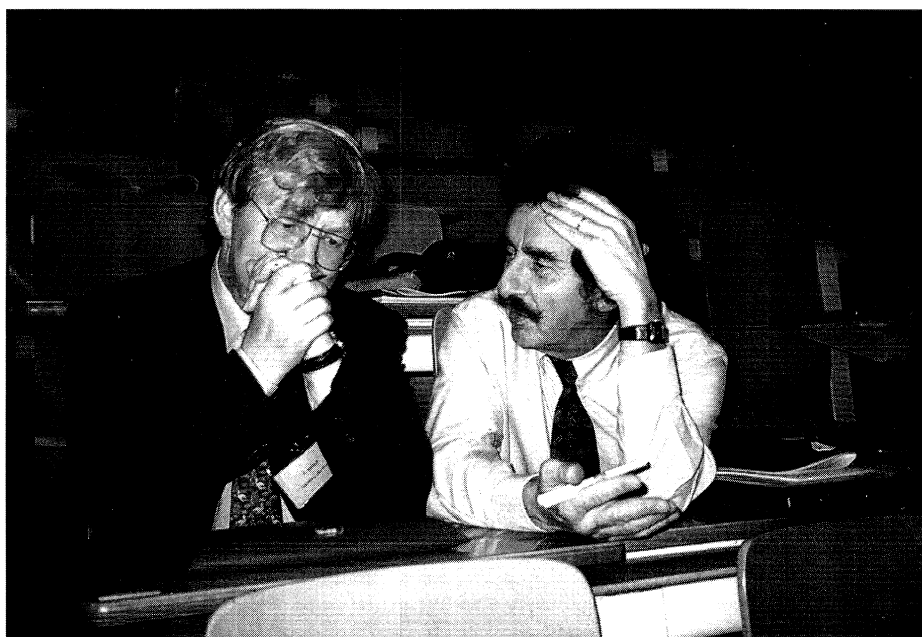
On 1 November, the European Physical Society (EPS) issued the following statement:

In the past 40 years, CERN, the European Laboratory for Particle Physics Research, has succeeded in bringing Europe to a position of leadership in the study of fundamental interactions. This is testified by the important number of CERN users coming from outside Europe, and in particular from the United States. At the same time, the number of users from the Member States has more than doubled over the past 20 years.

The next logical tool towards decisive progress in the field is the LHC. This is a 27 kilometre circumference superconducting proton collider which is foreseen to be installed in the same tunnel as the existing LEP machine. LHC would be the world frontier of high energy physics; with a 14 TeV collision energy it will be in a unique position to provide answers to new fundamental questions raised by the present great successes of particle physics and cosmology.

The European Physical Society strongly supports this essential project for Europe which will further the excellence of research on the ultimate constituents of matter and maintain the momentum of CERN and Europe in this area. Worried by recent delays, the EPS urges the CERN Member State governments to quickly take a positive decision to approve the LHC.

(signed) G. Jarlskog, Chairman of EPS High Energy Physics Division, and N. Kroo, EPS President.



TENURE TRACK FACULTY POSITION

Experimental or Theoretical Particle Physics

The Department of Physics plans to make a tenure track appointment at the rank of Assistant Professor, with a starting date of July 1, 1995.

We seek candidates with a Ph.D. in Physics, proven or potential excellence in both research and teaching whose interests lie in Experimental or Theoretical Particle Physics. Salary will be commensurate with qualifications and experience.

Applications, including a curriculum vitae and three letters of reference should be sent to Professor D. York, Chair, Department of Physics, University of Toronto, Toronto, Ontario, Canada, M5S 1A7. The deadline for the receipt of applications and letters of recommendation is Tuesday, February 28, 1995.

The University of Toronto is committed to employment equity and encourages applications from qualified women and men, members of visible minorities, aboriginal persons, and persons with disabilities.



University of Geneva

The Department of Physics of
Condensed Matter announces
an opening, beginning October
1st, 1995, for a position of

FULL PROFESSOR or ASSOCIATE PROFESSOR

in CONDENSED MATTER PHYSICS

Teaching in French of introductory physics and condensed matter physics; Research activity in the physics of metals or superconductors including studies at the mesoscopic and atomic scale.

The applicant should have a PhD in physics - or an equivalent degree - and experience in physics teaching and in leading a research group in condensed matter physics.

Letters of application, including a curriculum vitae and a list of publications, should be addressed before February 28, 1995 to: Décanat de la Faculté des Sciences, 30, quai Ernest-Ansermet, CH - 1211 Genève 4, Switzerland, where additional information may be obtained.

NB: Qualified women are encouraged to apply.

POSTDOCTORAL RESEARCH IN EXPERIMENTAL HIGH ENERGY PHYSICS DEPARTMENT OF PHYSICS UNIVERSITY OF CALIFORNIA, RIVERSIDE

The Department of Physics invites applications for Postdoctoral Research positions in experimental high energy physics. The appointed individual is expected to participate in the on-going research projects of the group, which include the e^+e^- experiment OPAL at LEP and the CMS experiment at LHC. Candidates, who are recent recipients of the Ph.D. degree, should submit a résumé and arrange for three letters of recommendation to be sent to professor Benjamin C. Shen, Department of Physics, University of California, Riverside, CA 92521. The University of California is an Equal Opportunity, Affirmative Action Employer.

Associate Scientist

Fermi National Accelerator Laboratory, located 40 miles west of downtown Chicago, is the most advanced high-energy physics research facility in the world. An exceptional opportunity is available with our sophisticated KTeV project for an individual to participate in major detector system construction/commissioning, pursue data collection and analyze particular physics processes through publication, assist in studies of CP violation and measure rare processes in Kaon decay.

Qualified candidates will have a Ph.D. in experimental high-energy physics and at least 3 years post-doctoral research experience with proven field expertise in construction of large wire chambers for transition radiation detection, hardware system integration and data collection/analysis for publication. Solid communication and coordination skills and the ability to initiate and handle hardware/software projects is essential.

We provide our employees with opportunities for personal and professional growth, competitive salaries and an attractive benefits package. Please forward CV and three letters of recommendation to: **James L. Thompson, Employment Manager, Fermi National Laboratory Accelerator, P.O. Box 500, Batavia, IL, USA 60510-0500.** Equal Opportunity Employer M/F/D/V.



Fermilab

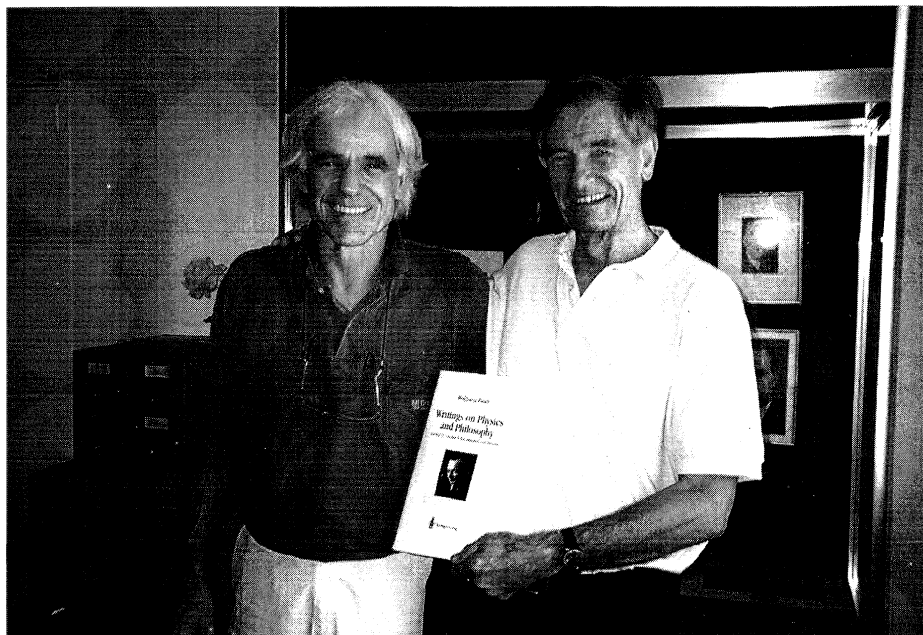
Karl Von Meyenn, left, who has long been assisting with the editing of Wolfgang Pauli's scientific correspondence, has joined the Pauli Committee at CERN as a full member. He is seen here with fellow committee member Charles Enz of Geneva, who was Pauli's last assistant, and who is holding a copy of Pauli's 'Writings on Physics and Philosophy', published under the auspices of the Committee.

(Photo Maurice Jacob)

Half a century of phase stability

This summer an International symposium at the Joint Institute of Nuclear Research, Dubna, and Moscow's Lebedev Physical Institute marked the 50th anniversary of the discovery of the principle of phase stability, made in the former Soviet Union by Vladimir Iosiphovich Veksler and independently by Edwin McMillan in the USA. This technique, known as the synchrocyclotron in the West and the synchrophasotron in the former Soviet Union, compensated for the increase in mass due to relativity which had restricted the classic cyclotron design.

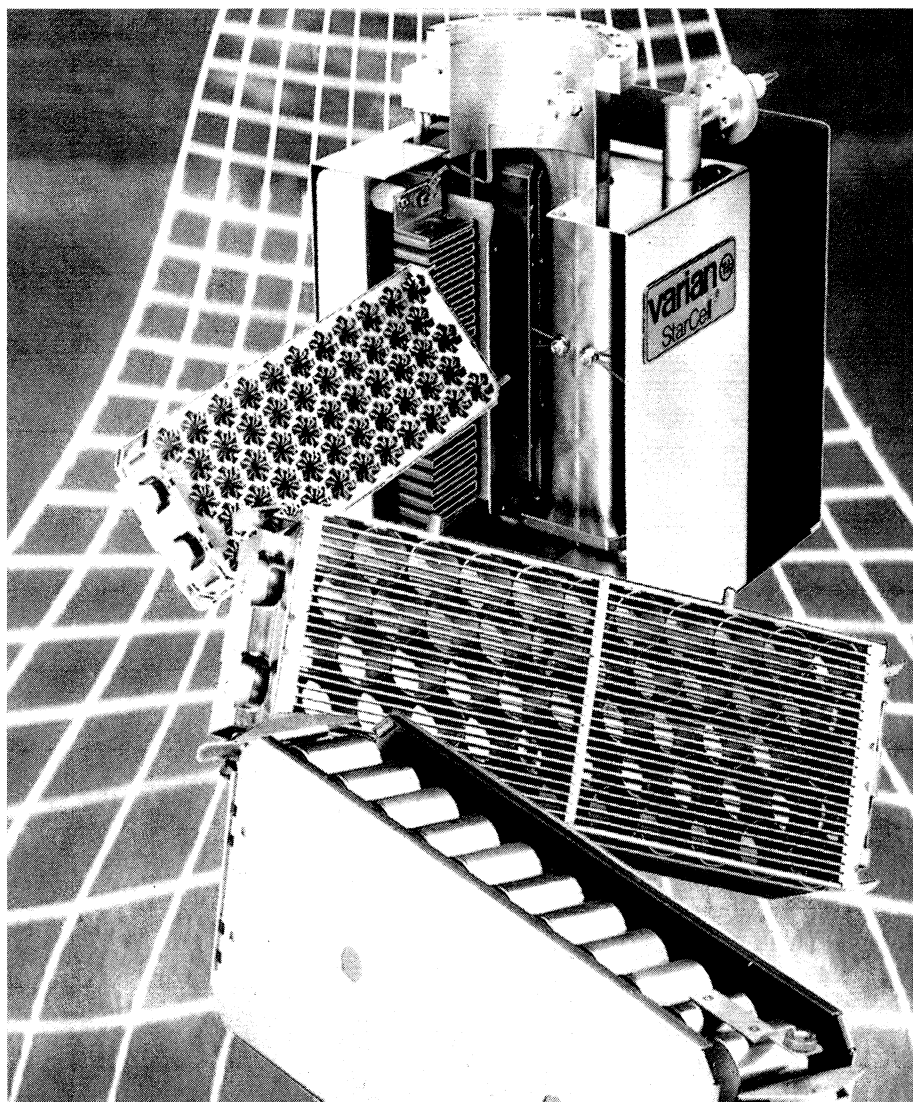
As well as a full programme of talks, the symposium included also the visits to Dubna's recently commissioned superconducting Nuclotron (July/August 1993, page 9) accelerating a range of nuclei up to 6 GeV per nucleon, to the first Soviet synchrotron, S-3 at the Lebedev Institute which has been operating for 30 MeV electrons since 1948, and to Veksler's grave at Novodevitchy Cemetery.



This summer an International symposium at the Joint Institute of Nuclear Research, Dubna, and Moscow's Lebedev Physical Institute marked the 50th anniversary of the discovery of the principle of phase stability, made in the former Soviet Union by Vladimir Iosiphovich Veksler and independently by Edwin McMillan in the USA. Among those at the event were (first row, left to right) I.N. Semenushkin (Dubna), V.I. Kotov (Serpukhov), Ju. M. Ado (Serpukhov), K.P. Mysnikov (Serpukhov), A.N. Gorbunov (Lebedev Institute, Moscow), G.I. Batzkech (MRTI, Moscow) and A.M. Baldin (Dubna, Conference Chairman).



You Do Have a Choice



VacIon Plus pumps can be customized for any application, with a choice of interchangeable pumping elements and controllers designed to meet specific ion pumping needs.

With VacIon Plus Pumps

VacIon Plus ion pumps are available with Diode, Noble Diode, Triode, and StarCell pumping elements, each optimized to pump specific gases. You can choose the pumping element that meets the requirements of your specific application.

VacIon Plus pumps satisfy even the most rigorous UHV requirements, and are the most compact ion

pumps in each speed range. VacIon Plus controllers include the MultiVac, which can power and monitor any two ion pumps simultaneously and independently, and the MiniVac, designed to cost-effectively power any ion pump. Whatever your ion pumping needs, VacIon Plus pumps and controllers offer the complete solution.

For more information please contact:

Varian SpA (European HQ)

Tel: (39) 11 - 9979 - 111

Fax: (39) 11 - 9979 - 350

Varian S.A. (France)

Tel: (1) 69 86 38 38

Fax: (1) 69 28 23 08

Varian GmbH (Germany)

Tel: (040) 6696033+34

Fax: (040) 6682282

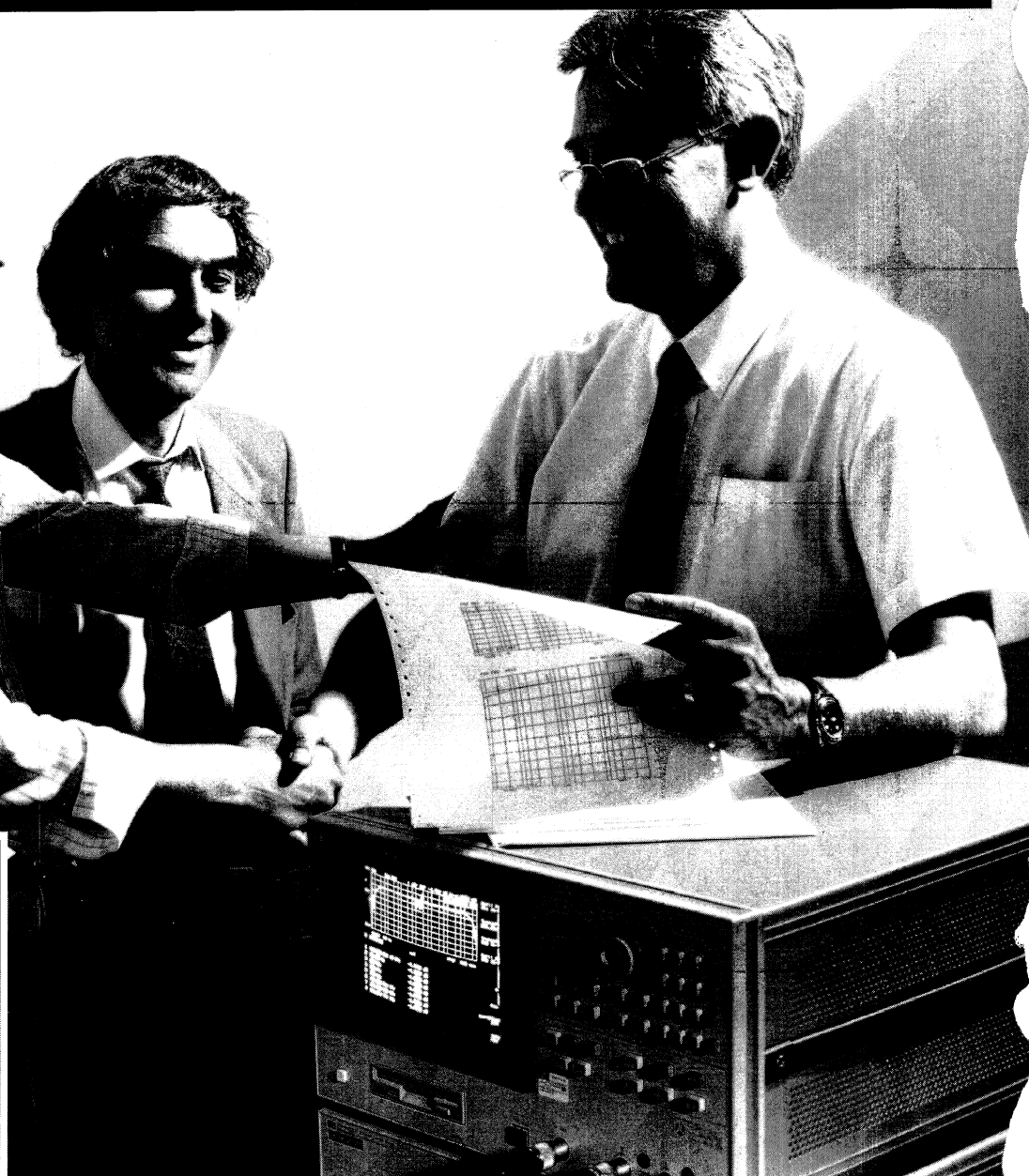
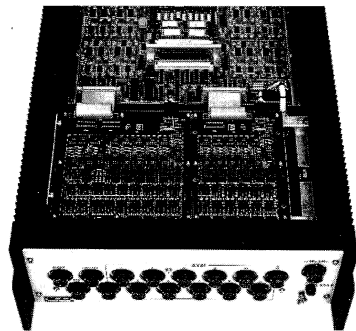
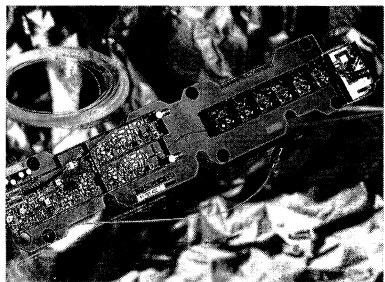
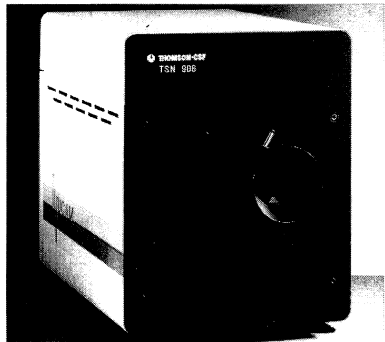
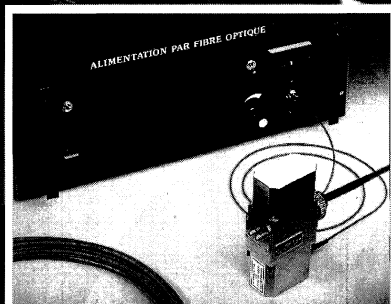
Varian Ltd (UK)

Tel: (0932) 243 741

Fax: (0932) 228 769

GC • GC/MS • GC/MS/MS • HPLC • AAS • ICP-AES • ICP-MS • UV-Vis-NIR • NMR • LIMS • Sample Preparation • Vacuum Products

varian



Accelerating your success

Continuously defining the leading edge of performance, THOMSON-CSF has provided physicists with breakthroughs in electronic and optronic technologies for over 30 years--with particular emphasis on immunity to strong environment.

THOMSON-CSF is the leader in the measurement of ultra-fast phenomena, in single-shot or repetitive modes, with pico-second performance setting the pace.

This exclusive expertise, joined by proven industrial acumen, makes THOMSON-CSF the right partner for physicists seeking to accelerate the success of the most innovative projects.

To go further faster, contact THOMSON-CSF today.

 **THOMSON-CSF**

DIVISION RGS - DEPARTEMENT DEN