

Comme annoncé au Bulletin hebdomadaire 9/88, le vendredi 13 mai 1988 sera jour férié en remplacement du 1^{er} mai, qui cette année tombe un dimanche.

Division du Personnel
Tél. 3238-4474

SEMINARS SEMINAIRES

Monday 2 May

SPECIAL PS ACCELERATOR SEMINAR

at 11.00 hrs – Auditorium

Introduction to accelerators

A prelude to CERN accelerator school courses

by E. J. N. WILSON / CERN-PS

This 9 week course, under the auspices of PS Seminars, is intended for anyone with a technical or scientific background who would like to become familiar with the principles of accelerator design. The level of the course is chosen with the intention of preparing those with no specialist knowledge of accelerator theory for the CERN Accelerator School in September, but it will also be of interest to a much wider audience from all the technical Divisions. The first two talks (2 May at 11.00 hrs and 11 May at 14.00 hrs) will be by way of mathematical introduction for those whose matrix algebra and solution of differential equations may need refreshing. Starting on 16 May there will be a series of seven talks on all aspects of circular machines which will cover in a simple way the principles of focussing, betatron motion, dispersion, chromaticity, radio frequency systems and phase stability and beam instabilities. The special features of electron machines will be emphasized in preparation for LEP. All sessions will be held in the Main Auditorium (Bldg 500). There will be tutorial sessions on Fridays following the Monday courses.*

* Please note change of date and time!

Monday 2 May

EP SEMINAR

at 16.30 hrs – Auditorium

Spectroscopy and annihilation of the $p\bar{p}$ atom at LEAR

by Ugo GASTALDI / CERN-EP

An overview is given of the physics output of the LEAR experiments that have worked on the spectroscopy and atomic cascade of protonium (PS171-ASTERIX, PS174, PS175) and on $p\bar{p}$ annihilations at rest, that occur from levels of the $p\bar{p}$ atom (PS170-APPLE, PS171-ASTERIX, PS182, PS183). Emphasis is put on results that could not have been obtained without LEAR and that offer new and unique physics tools for the spectroscopy of light non-exotic and exotic mesons and for nucleon-antinucleon nuclear physics. Topics include :

As announced in Weekly Bulletin 9/88, Friday 13 May 1988 will be an official holiday in compensation for 1st May, which falls on a Sunday this year.

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formation of the $p\bar{p}$ atom, effects of strong interactions on S and P atomic levels of protonium, dependence of the yields of atomic transitions of protonium on the target density, observation of dependence of the branching ratios of exclusive annihilation channels from the target density and from the selection of initial atomic states of protonium, concept and experimental observation of Angular Momentum Polarization (AMP), use of AMP to identify broad states (glueballs? hybrids?) produced in $p\bar{p}$ annihilations at rest.

Tuesday 3 May

SPS EXPERIMENTS COMMITTEE

Open session

at 09.00 hrs – Auditorium

1. Status of experiment proposals for UNK (V. Obraztsov and L. Montanet).
2. Status report on WA80 (Study of relativistic nucleus-nucleus collisions; H.H. Gutbrod).
3. Status report on WA85 (Study of high energy nucleus-nucleus interactions with Omega equipped with a multiparticle high p_T detector; E. Quercigh).
4. Status report on NA35 (Study of relativistic nucleus-nucleus collisions; R. Stock).

Closed session

at 14.00 hrs – Conference Room 6th floor, Administration Building (to be continued on Wednesday 4 May at 09.00 hrs).

Tuesday 3 & Wednesday 4 May

PRESENTATIONS

at 09.00 hrs – bldg 32, 1-A24

Please note unusual time and place!

New graphics workstations from Tektronix

by R. STÄMPFLI / Tektronix

Tuesday 3 May :

Exhibition	09.00 to 12.00 hrs and 13.30 to 16.30 hrs
Talk	14.00 to 14.45 hrs

Wednesday 4 May :

Exhibition	09.00 to 12.00 hrs
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Tuesday 3 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Charm hadro-production in proton-proton interactions at $\sqrt{s} = 27$ GeV

by M.I. JOSA / Ciemat, Madrid

Final results on charm decay and production properties as observed in the LEBC-EHS Experiment (NA27) will be presented.

* Tea and coffee will be provided at 16.00 hrs.

Wednesday 4 May

PS SEMINAR

at 11.00 hrs – PS Auditorium
bldg 6, 2-024

New ideas and evolution of accelerator timings

by G. BARIBAUD / CERN-PS

Wednesday 4 May

LUNCHTIME VIDEOS

at 13.00 hrs – Auditorium

The pleasure of finding things out

by Richard FEYNMAN / BBC Horizon

A light-hearted 1981 interview with Feynman (50 min.)

Wednesday 4 May

THEORETICAL SEMINAR

at 14.00 hrs – Theoretical Conference Room

The concept of measurement and paradoxes of quantum mechanics

by J. RAYSKI / University of Krakow

The concept of measurements in quantum theory is analysed and the paradoxes (Schrödinger cat, E.P.R., etc.) are resolved in a spirit of reconciliation between Einstein's realistic and Bohr's positivistic attitudes.

Wednesday 4 May

LEP SEMINAR

at 14.30 hrs – LEP Auditorium

The LEP-BI Equipment Database at CERN

by X. ANDRIOPOULOS / CERN-LEP

The database aims at facilitating the definition, installation and maintenance of the electronic equipment required for beam instrumentation. The database model comprises a variety of objects such as chassis, modules, channels, sockets, plugs, cables, etc. as well as configuration of these to describe more complex objects, e.g. a time delay system or threshold counter. An object-oriented man-machine interface has been constructed as a semantic network of desktop forms, pulldown menus and popup windows. The system has been implemented as a large C program on top of the Oracle RDBMS. The implementation exhibits a multilayered software architecture and is based upon the concept of abstract data types. Provision has been made to run the program

in a distributed fashion via remote procedure calls. A complete and improved form of referential integrity has also been provided.

Wednesday 4 May

LEAR DISCUSSION MEETING

at 14.30 hrs – PS Auditorium
bldg 6, 2-024

Mesons and multi-quark spectroscopy

by N. ISGUR / CERN-TH

Wednesday 4 May

PRESENTATION

at 15.00 hrs – DD Auditorium
bldg 31, 3-005

The S-1 Mini Supercomputer

by R. HARVEY & M. FUNG / Supertek
Computers, Inc., California, USA

The S-1 is a highly cost effective mini-supercomputer manufactured by Supertek, Inc. It provides 40MFLOPS peak performance, excutes the CRAY XMP/416 instruction set, and is able to run optimized Cray compatible codes. The system can be used stand-alone or as a software development front-end station to high performance Cray supercomputers. The attractively priced S-1 features compact packaging, fan cooling, low power consumption and high transportability. A general description of the S-1 will be presented.

Jeudi 5 mai

PRESENTATION TECHNIQUE

de 09.00 à 16.00 h – Parking PTT, près du bât. 63

Télemécanique (F), représenté par Télemécanique AG (CH), propose en démonstration sa gamme d'appareils électriques basse tension. – Appareillage de coupure d'installation : contacteurs modulaires 16 à 63 A avec ou sans commutateur jour/nuit, disjoncteurs-moteurs, retardeurs, télérupteurs, programmeurs électroniques – appareillage de contrôle et de puissance industriel : contacteurs, contacteurs-disjoncteurs intégrés intégral, auxiliaires de commande et de signalisation, détecteurs de proximité, détecteurs photo-électroniques, interrupteurs de position (fin de course), pressostats et vacuostats, etc. – régulateurs de vitesse Altivar pour moteurs asynchrones a cage – automates programmables.

Langues : allemand, français

Renseignements : M. Diraison / FI / 4584

Thursday 5 May

PRESENTATION

from 09.00 to 12.00 hrs – DD Auditorium

INTEL Semiconductor AG seminar. The goal of this presentation is to introduce the new PC-Platform concept of INTEL. First a short introduction of INTELs System Group will be given. A general overview of the OEM Platform and its implication for the end user will

then follow. The next section will then describe in some detail the new products announced by INTEL at the end of April : 386 AT Compatible Motherboard, High Performance integrated Systems based on the 386 Motherboard, upgrade of existing PCs like the IBM AT/03 to 386 compatible Technology. An outlook including the Hardware and Software compatibility Issues and Support from Intel will close the formal part of the presentation. We will have the 25 MHz workstation available with Software for a demonstration of UNIX and DOS under UNIX.

Language : English

Renseignements : M. Diraison / FI / 4584

Thursday 5 May

CERN COLLOQUIUM

at 16.30 hrs – Auditorium*

The cosmic background anisotropies

by F. MELCHIORRI / Università di Roma

The Cosmic Background Radiation provides an unobstructed view of the universe since the beginning. The radiation itself is coming from a the so-called Last Scattering Surface, which is located at redshift 1000 or about one million years after the Big Bang : however the lack of causal connection among regions separated by more than 1 degree in the sky allow us to explore the structure of the universe immediately after the Planck era, i.e. 10^{-43} sec after the Big Bang. In conclusion we have a picture of the matter in a very special condition, with a density of about 10^{90} gr.cm $^{-3}$, a temperature of about 10^{30} K and an energy of 10^{18} GeV. We discuss the properties of this matter on the basis of the recent results on CBR spectrum and anisotropies.

* Tea and coffee will be provided at 16.00 hrs.

Friday 6 May

TECHNICAL PRESENTATION

from 09.30 to 12.30 hrs – LEP Auditorium
bldg 30, 7th floor

The Touchstone family of RF and microwave CAE products

by Dr HARTMANN & G. SCHMIDT / Tactron GmbH, Munich

EEsof Inc. offers a complete system of programs for computer-aided design of RF- and microwave circuits from the network synthesis to the final mask layout and the measurement of the produced circuit. The basic program is 'Touchstone', a linear simulator with built-in optimizer. It contains many models for microstrip and stripline elements, as well as S-parameter data for the most commercial bipolar and GaAs-FET devices. 'Libra' is an extended 'Touchstone' version with the capability to analyse nonlinear circuits under steady-state conditions (e.g. mixers). Time-domain analysis is possible with 'mw-Spice', an extension of Berkeley Spice with specific RF components. 'E-syn' is a synthesis program for lumped-element or distributed filters. 'MICAD/MICmask' transfers the designed circuit to an elaborated layout. All these programs are stand-alone, but they share their files in a common data format. They run on a variety of workstations from the IBM/AT over SUN/Apollo up to the VAX 8600.

Friday 6 May

PRESENTATION

10.00 to 12.00 hrs and at 14.00 hrs
DD Auditorium , bldg 31, 3-005

VMEbus modules from Microsys GmbH

by J.-P. MURA / Microsys GmbH &
B. WEIL / Microprocess

Microsys will present their present and future VMEbus products, in both single and double height formats. These include 16 and 32-bit CPU modules based on the Motorola 68000 family of microprocessors, up to the MC68030, as well as graphics controllers and other functions. In the afternoon from 14.00 hrs, there will be an exhibition and demonstration of some of their latest VMEbus products, both hardware and software.

Monday 9 May

EF SEMINAR

at 11.00 hrs – EF Conference Room
bldg 13, 2-005

Cryogenic detectors

by David CALDWELL / University of California, Santa Barbara & Tapio NIINIKOSKI / CERN-EP

Particle detectors operating at very low temperatures in principle can be sensitive to very small energy deposits and have unprecedented energy resolution. These characteristics should make accessible previously impossible measurements in many areas, including X-ray astronomy, coherent scattering of neutrinos, double beta decay, dark matter searches, and high resolution vertex detection with potentially high tolerance against radiation damage. We shall describe the principles and methods of the thermal calorimetric detectors and the superconducting tunnel junction devices. The present results and future expectations are reviewed, and some of the currently open problems are exposed. The R&D programme of the new EP-PSI (former SIN) collaboration will be discussed. Detection devices based on large-scale coherence and frequency-domain response are also briefly mentioned.

Monday 9 May

EP SEMINAR

at 16.30 hrs – Auditorium

Magnetic monopole searches with superconducting and non-superconducting induced current detectors

by J.R. INCANDELA / CERN – Formerly of the University of Chicago

After the 1982 magnetic monopole candidate reported by Cabrera, the Chicago - Fermilab - Michigan (CFM) collaboration began the development of a superconducting induction detector greater than two orders of magnitude larger than the Stanford detector. By mid-1984 this detector had seen no monopole candidates in more than 200 times the exposure in which

the Stanford candidate had been reported. The speaker will discuss this experiment and subsequent research his group has done in the interest of extending the induced current technique to still larger areas at reasonable costs. A first version of a non-superconducting transient response induction detector has now been operated at liquid nitrogen temperature and yielded a detectable signal for a single Dirac charge monopole. Implications of high T_c superconductors for future generations of induction detectors will also be briefly discussed.

Tuesday 10 May

MEETING ON FASTBUS DEVELOPMENTS

at 09.00 hrs – Theory Conference Room

1. *Interfacing between FASTBUS and the DTR and RMH systems*
by J. Traxler / HEPHY, Vienna
2. *Aflash TDC trigger system for the outer detector of DELPHI*
by J.F. Genat / LPNHE/IN2P3, Paris
3. *Computer based production test facilities for the ALEPH TPD system*
by B. Löfstedt / CERN
4. *The DELPHI contiguity processor*
by G. Darbo / INFN, Genova
5. *A.O.B.*

Tuesday 10 May

SEMINAR IN THE FRAME OF LAA

at 11.00 hrs – EF Conference Room
bldg. 13, 2-005

The ASP : a cost-effective parallel microcomputer

by R.M. LEA / Aspex Microsystem Ltd,
Brunel University, Uxbridge, England

Wednesday 11 May / Mercredi 11 mai

PRESENTATION

at 10.00 hrs – DD Auditorium (31, 3-005)

Translation by computer (Systran) and terminological data bank (Eurodicautom)

*Traduction par ordinateur (Systran)
et Banque de données terminologiques (Eurodicautom)*

by/par Ian PIGOTT / CEC/CCE

Wednesday 11 May

LEP SEMINAR

at 14.30 hrs – LEP Auditorium
bldg 30, 7th floor

The pumping mechanism of the NEG pump for LEP

by C. BENVENUTI / CERN-LEP

SYMPOSIUM ON THE UNITY AND INTERNATIONALISM

OF THE SCIENCES AND THE HUMANITIES

CERN, Main Auditorium, 9th – 10th May, 1988

Sponsored by

CERN SCIENCE AND SOCIETY SEMINAR

and

ISTITUTO ITALIANO PER GLI STUDI FILOSOFICI

Les orateurs traiteront, du point de vue de leur discipline, le sujet central du Symposium, *l'unité profonde de la recherche de la connaissance* et ses conséquences: les dimensions internationales que cette unité confère à toute entreprise intellectuelle, et les relations de compréhension et de coopération à l'échelle mondiale qu'elle aide à créer.

The speakers will address from the viewpoint of their discipline the central theme of the Symposium, *the basic unity of the quest for knowledge*, and its consequences: the international dimensions which it gives to all intellectual endeavour, the worldwide relationships of understanding and co-operation which it helps create.

Les discours seront traduits simultanément en français.

L'exposition '*Federico Cesi et la fondation de l'Académie des Lincei (en 1603)*', organisée par l'Accademia Nazionale dei Lincei et l'Istituto Italiano per gli Studi Filosofici, sera inaugurée à la fin du premier jour. L'exposition restera ouverte jusqu'au 22 mai 1988.

Monday, 9th, 14.15h

(Chairman: Edoardo Amaldi, Vice-President of the Accademia Nazionale dei Lincei)

- **Giovanni Pugliese Carratelli**, Director of the Istituto Italiano per gli Studi Filosofici, Naples
"Introduction"
- **Robert R. Wilson**, Director Emeritus of FERMILAB, Chicago
"Humanness of Physics and Unity with the Humanities"
- **Léon Van Hove**, Former Director-General of CERN
"From Cosmology to Particle Physics, or The Unity of Physical Laws from Largest to Smallest Scales"
- **Giuseppe Montalenti**, Former President of the Accademia Nazionale dei Lincei
"Federico Cesi and the Academy of the Lincei"

18.00h: Opening of the Exhibition, in Co-operation with the CERN Staff Association
(1st Floor, Main Building, CERN)

The talks will be translated simultaneously into English.

The exhibition '*Federico Cesi and the Foundation of the Academy of the Lincei (in 1603)*', organized by the Accademia Nazionale dei Lincei and the Istituto Italiano per gli Studi Filosofici, will be inaugurated at the end of the first afternoon. The exhibition will remain open till 22 May 1988.

Tuesday, 10th, 14.15h

(Chairman: Olivier Reverdin, Former President of the Fonds national Suisse de la Recherche Scientifique (FNSRS))

- **Remo Bodei**, University of Pisa
"L'unité de la raison dans la multiplicité des cultures. Le débat philosophique contemporain"
- **René Thom**, Fields Medal, Institut des Hautes Etudes Scientifiques, Bures-sur-Yvette
"Sciences Dures et Sciences Molles: la Place des Modèles"
- **Girolamo Cotroneo**, University of Messina
"Philosophie et Sciences Humaines – Un rapport difficile"
- **Manfred Eigen**, Nobel Laureate, Director at the Max Planck Institute for Biophysical Chemistry, Göttingen
"The Physical Basis of Biology"
- **Ugo Amaldi**, CERN
"Concluding remarks"

ENTREE LIBRE – FREE ENTRANCE

Organizing Committee: *U. Amaldi, G. Marotta, S. Ricci, L. Van Hove*

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Mardi 3 mai

LES SCIENCES AUJOURD'HUI

à 20.00 h précises – Amphithéâtre
(jusqu'à environ 22.00 h)
par R. CARRERAS

Rafel Carreras, responsable du programme d'Enseignement général au CERN, commentera et expliquera un

choix d'articles parus récemment dans des revues scientifiques, et qui couvrent l'ensemble des sciences physiques et biologiques ainsi que certains aspects des relations science-société. Une attention particulière est portée au langage et aux notions utilisés afin que les explications et les commentaires soient accessibles aux personnes n'ayant pas de formation scientifique.

Entrée libre

(Please note that the lecture will be given in FRENCH)

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