

COMITE DES PENSIONS

Lors de sa 37e réunion, tenue le 21 mai 1987, le Comité des Pensions a procédé à l'examen de la lettre circulaire et de la brochure qui expliquent les modalités d'application des nouveaux Statuts de la Caisse et qui seront adressées à ses membres au début du mois de juin. Quant aux Statuts eux-mêmes, ils seront disponibles dans les secrétariats de division à la fin juin.

Il a été décidé en outre que chaque membre de la Caisse recevrait une lettre individuelle avec les données le concernant de manière à lui permettre de faire son choix entre les différentes options qui lui seront offertes en matière de validation de ses années de service pour la quatrième étape. L'envoi de cette lettre est prévu dans le courant du mois d'août.

Le Comité a ensuite entendu un rapport du groupe de travail chargé de l'examen du modèle informatique de

simulation de la Caisse. La discussion des points soulevés par le groupe se poursuivra lors d'une prochaine réunion. A cet égard, M. Lemne, observateur du Conseil, a suggéré que soit entreprise une étude des revenus réalisables en francs suisses.

Le Comité a décidé la prolongation du versement d'une prestation bénévole pour une durée limitée.

L'Administration de la Caisse a annoncé avec regrets le décès de deux bénéficiaires, MM. Marc Lahaye et Albert Grandclément.

Durant l'absence de M. B. Szeless, membre représentant l'Association du Personnel au sein du Comité, sa fonction de membre titulaire sera assumée par son suppléant M. M. Doran qui sera lui-même remplacé dans sa fonction de membre suppléant par M. M. Borghini.

The English version will be published next week.

SEMINARS SEMINAIRES

Monday 1 June

EF SEMINAR

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

Experimental setup of NA35 and results from the first oxygen run

by Rainer RENFORDT / University of Frankfurt and CERN-EP

NA35 was designed as a survey experiment to search for the quark gluon plasma. Several components of the experiment are described in detail : adaptation of the film-cameras to the experiment and shielding of the magnetic field, the streamer chamber and the on-line supervision system. The present status of the data analysis will be discussed, focussing on the measurement of the streamer chamber photographs on the CERN ERASME facility.

Monday 1 June

TIS SEMINAR

at 14.30 hrs – Education Service
bldg. 593, room 11

To err is human...

by R. DAVIES

...and it is essential to remember this when attempting to design safety into any human endeavour. Although the technology may vary, human nature is much the same anywhere, so that an analysis of accidents in other fields may help us in our own. A variety of case histories from chemical, nuclear and other industries will be presented with this end in view.

The speaker, a visitor in EF Division, has a wide experience of the hazards and also accidents in many industries, having been for several years a member of a UK research organization which provided consultancy service on the scientific and technological aspects of insurance risks.

Monday 1 June

PROTON SYNCHROTRON AND SYNCHRO-CYCLOTRON COMMITTEE

Open session

at 14.30 hrs – Council Chamber

1. *Addendum 2 to PS177 – Study of the fission decay of the heavy hypernuclei produced in antiproton annihilation (Amsterdam NIKHEF - Darmstadt GSI - Grenoble CEN - Orsay CSNSM - Penn. State - Saclay CEN DPhN - Uppsala - Warsaw; PSCC/87-19/P15 Add.2; M. Rey-Campagnolle).*

Closed session (part 1)

Monday 1 June at about 15.00 hrs, in the 6th floor Conference Room

Closed session (part 2, joined with the SPSC)

Tuesday 2 June at 09.00 hrs, in the 6th floor Conference Room.

Tuesday 2 Juin

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Search for new heavy quarks in the UA1 experiment

by Jean-Pierre REVOL / MIT

The entire data sample from the UA1 experiment has been used to search for evidence of new heavy quarks (t and b') via their semi-leptonic decays. Events with an electron or muon and one or more jets as well as di-lepton events have been analysed.

* Tea and coffee will be provided at 16.00 hrs.

Wednesday 3 June

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

The quantum membrane

by C.N. POPE / CERN

The quantum theory of extended objects has been much studied recently, predominantly in the context of strings. In this talk, some preliminary attempts to quantize membrane and supermembrane theories will be discussed, highlighting the similarities to, and differences from, string theories. Results on the calculation of the vacuum energy will be described, together with the issue of the spectrum of states. Some of the consequences will be explored, including a brief discussion of thermodynamic aspects.

Wednesday 3 June

LEP SEMINAR

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

Modern methods in engineering design

by F. BERTINELLI / CERN-LEP

The requirement for a more economical and efficient design is increasing, both in industrial and research environments. Modern, sophisticated tools are available to help the engineer in his task. The talk presents the importance of the Finite Element Method in connection with Computer Aided Design, laboratory tests and measurements and modern manufacturing materials and techniques. A broad outline of the theory is given, followed by examples from structural and thermal fields in mechanical engineering design at CERN.

Wednesday 3 June

CAS ACCELERATOR SEMINAR

at 14.30 hrs – Council Chamber

An efficient power source for large linear colliders

by R. RUTH / SLAC

Recently there has been much interest in the use of induction accelerator technology for producing high power for large linear colliders. In this talk the concept of a relativistic klystron is discussed. The aim is to achieve a device which would produce about 10 GW of RF power at about 11.4 GHz with a pulse length of about 50 nsec. This talk focuses on the physics issues related to space charge effects, gain, and efficient bunching for efficient power extraction. SLAC is presently pursuing a collaboration experiment with LLNL which should produce about 1 GW of RF power sometime late this year. The status of this effort will be briefly discussed.

Wednesday 3 June

COMPUTER SEMINAR

at 16.00 hrs – Auditorium*

New developments in microelectronics technology and VLSI computer aided design

by W. FICHTNER / Institute for Integrated
Systems, ETHZ

During the last several years, we have witnessed a continuing drive towards higher complexity for VLSI circuits. This ongoing trend has been achieved by

considerable improvements in device technology that have allowed a shrink of active feature sizes from several microns in 1980 to less than one micron today. VLSI chips have become an important part in the design of many large electronic systems. The growing complexity of VLSI chips creates a need for improved design methodologies and more powerful CAD environments. The material presented in this talk reviews the latest developments and current trends in the field of silicon microelectronics technology. In addition, an overview of current methodologies for the design of VLSI chips will be given.

WOLFGANG FICHTNER is Professor and Head of the Institute for Integrated Systems at the ETH in Zurich. His MS and PhD degrees were both from the Vienna Technical University, where he also was Assistant Professor from 1975 to 1979 in the Department of Physical Electronics. From 1979 to 1982 he was a Staff Member at AT&T Bell Labs (Murray Hill), working on scaling limits for MOSFETs, process and device simulation, VLSI technology development and optimization, and CAD software development. From 1982 to 1985, he was Supervisor of the VLSI Device Analysis and Simulation Group at Murray Hill. His research interests are : CAD for VLSI design and device optimization; Numerical Process and Device Simulation for VLSI; Physics and Technology of VLSI Devices and Processes; Submicron Device Physics; Design Automation; Applications of Artificial Intelligence to VLSI Design (Expert Systems).

* Coffee and tea will be served at 15.30 hrs.

Tuesday 9 June

EP SEMINAR

Please note unusual day!

at 16.30 hrs – Auditorium

Present and future physics with the tau lepton

by Pat BURCHAT / Santa Cruz Inst.
for Particle Physics, UC Santa Cruz

The production and decay of the tau lepton provides a rich testing ground for the theory of the electroweak interaction. Since it is massive enough to decay into hadrons, the tau provides a clean laboratory for studying the charged hadronic weak current. Because of its short lifetime and its two-body decay into a pion and a neutrino, it is feasible to measure the polarization of the tau. Recent studies of tau decays will be reviewed with an emphasis on the hadronic decays and the issue of accounting for all of the exclusive decay modes. Possible future experiments which depend on tau polarization measurements, including tests of the standard model at the Z^0 and a test of Bell's inequality, will be discussed.

Wednesday 10 June

SPECIAL COMPUTER SEMINAR

SPECIAL ALL-DAY COURSE

Council Chamber

Brush up your FORTRAN

by Michael METCALF / DD-CERN

In the next two years, a very large amount of new Fortran code will be written for the LEP and other experiments. It is, therefore, perhaps an appropriate time to give a refresher course on Fortran techniques, especially to those who have still not made the transition from Fortran 66, or for younger physicists who come from a background of other languages. To this end, an afternoon course dealing with:

'Fortran Optimization'

will be organized on Wednesday 10 June at 14.00 hrs in the Council Chamber.

These lectures, by Michael Metcalf, will cover:

- (i) hardware considerations (IBM and VAX);
- (ii) compiler techniques;
- (iii) profiling;
- (iv) detailed coding advice;
- (v) specific advice for IBM and VAX;

and will last about three hours.

For those wishing to be reminded of the main features of Fortran 77, there will be a morning session entitled:

'Introduction to Fortran 77'

given in the same room on the same day from 11.00 to 12.30 hrs.

An introduction to coding practices on the Cray X/MP will be given the following week, at 16.00 hrs on 17 June in the DD Auditorium, in the DD Seminar series.

Wednesday 10 June

PS SEMINAR

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

Plasma dynamics of a new high power switch and application to plasma accelerators

by M. GUNDERSEN / Department of Electrical Engineering, University of Southern California

Mercredi 10 Juin

SEMINAIRE LEP

à 14.30 h – Amphithéâtre LEP
bât. 30, 7e étage

Mesures magnétiques des aciers pour les aimants LEP – Appareillages et résultats

par J. BILLAN / CERN-LEP

Thursday 11 June

TIS SEMINAR

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

**Health effects of low-dose ionising radiation
Recent advances and their implications**

by A.H. SULLIVAN / CERN-TIS

Thursday 11 June

CERN COLLOQUIUM

at 16.30 hrs – Auditorium

High temperature superconductivity

by A. MULLER / IBM Zurich Research Laboratory

TRAINING AND EDUCATION ENSEIGNEMENT

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3 and 4 June

11.00 hrs to 12.00 hrs – Auditorium

5 June*

10.45 hrs to 11.45 hrs – Auditorium

Please note unusual time!

Hot topics in spectroscopy

by F.E. CLOSE / Rutherford and Appleton Laboratory

* On Friday 5 June, at 13.00 hrs, in the Auditorium, F.E. CLOSE will give a talk on 'The cosmic onion'.

11 and 12 June

11.00 hrs to 12.00 hrs – Auditorium

**Interaction of electrons with materials
and fields**

by K. POTTER / CERN-TIS

These lectures, intended for applied physicists and engineers, aim to provide an introduction to the interactions of electron and photons with matter and electromagnetic fields. The physics topics covered will include :

- ionization loss
- bremsstrahlung
- electromagnetic showers
- synchrotron radiation
- interactions of synchrotron radiation photons with matter

and will be treated from a practical point of view in the environment of LEP and its injectors.

Mardi 2 juin

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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