

CERN Pompiers: Telethon-tastic!

CERN Pompiers will be cycling from CERN to Paris via Montreux as part of Telethon 94 on 1, 2 and 3 December. Messrs Camus, Fayet, Flachet, Grangier, Ployer and Larour will start their journey from building 33 – watch this space for further details.

Les pompiers du CERN: Téléthron-tastique!

Dans le cadre du téléthon 1994, les pompiers du CERN pédaleront du CERN à Paris en passant par Montreux les 1^{er}, 2 et 3 décembre. Messieurs Camus, Fayet, Flachet, Grangier, Ployer et Larour débiteront leur voyage au bâtiment 33 – d'autres détails suivront.

COMMUNICATIONS OFFICIELLES

Les membres du personnel sont censés avoir pris connaissance des communications officielles ci-après.

La reproduction même partielle de ces informations par des personnes ou des institutions externes à l'Organisation exige l'approbation préalable de la Direction du CERN.

PERMIS DE CONDUIRE

Nous demandons à tous les membres du personnel résidant en France, **titulaires d'un permis de conduire suisse**, de bien vouloir prendre contact avec le Service des Relations avec les Pays-hôtes (téléphone 5152).

SEMINARS SEMINAIRES

Monday 21 November

TECHNICAL PRESENTATION

10.00–16.00 hrs – bldg 17/1-007

New Gauss/Tesla meters

by F. W. BELL (USA) and Isatel Electronic AG (CH)

F. W. Bell is a leading manufacturer of gaussmeters and current measuring instruments. There are many different models of Bell-Gaussmeters in use at CERN. The new Model 20 NMR has been especially designed for high magnetic fields, as this is the case at CERN.

Information: M. Diraison / FI-A / 4585

OFFICIAL NEWS

Members of the personnel shall be deemed to have taken note of the news under this heading.

Reproduction of all or part of this information by persons or institutions external to the Organization requires the prior approval of the CERN management.

DRIVING LICENCE

All members of the personnel living in France and **holding a Swiss driving licence** are kindly requested to contact the Relations with the Host States service (ext. 5152).

Monday 21 November

CAS ACCELERATOR SEMINAR

The Tenth Lecture in the John Adams' Memorial Lecture Series

at 14.30 hrs – Auditorium*

Electron spin polarisation at HERA : recent results & future plans

by Reinhard BRINKMANN / DESY

The spin rotator pair was installed in the HERA electron ring during the 1993/1994 winter shutdown. On 4th May 1994 the machine was well tuned for high transverse polarisation (about 65%) and the rotator switched on for the first time. A longitudinal polarisation level of 55% was obtained without further optimisation, thus proving for the first time that longitudinal spin polarisation in a high energy storage ring is indeed possible.

This lecture reviews the present status of the work done on spin polarisation at the HERA electron ring. The theoretical and experimental concepts applied for achieving high degrees of transverse and longitudinal polarisation are described. The experience with polarisation during e/p luminosity operation is summarised and the prospects for future experimentation at HERA with a longitudinal polarised electron beam are discussed.

* Tea and coffee will be served after the lecture (~16.00 hrs) in the Salle des Pas Perdus

Tuesday 22 November

PRESENTATION

at 10.00 hrs – CN Auditorium
bldg 31/3-005

HP-UX 10.0 Presentation

by Olivier MARTINET / H.P., Geneva consultant
organisation

Why 10.0 ?

New Functionalities (LVM II, MC/ServiceGuard, JFS, MC/Lock Manager...)

New Upgrade Process (SD-UX from 9.X → 10.0, Upgrade Tools (snoop, analyze)

Enhanced Functionalities (Securities, NFS 4.2, DCE, PRM, System V.4 File System Layout)

Standards (COSE, XPG4, NFS Diskless, Posix 1003.1c, Posix 1003.4, PEX)

Information : S. Cannon / CN / 5036

Tuesday 22 November

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Exciting LEAR physics LEAPs in 1994

by E. KLEMP, University of Bonn, Germany

Several experiments using low-energy antiproton beams at LEAR and at Fermilab have published new exciting physics results. Crystal Barrel finds hints of a glueball at 1500 MeV. CP-LEAR is testing time reversal invariance at the level predicted from CP violation. The antiproton mass has been measured with unprecedented precision by the TRAP experiment. Interesting results have also been obtained in the search for light gauge bosons, the validity of the OZI rule in antiproton-proton annihilation, and the dynamical role of constituent quarks in low-energy hadronic processes. The study of metastable antiprotonic atoms and a possible way to producing antihydrogen round off the wide range of physics being studied at LEAR. The talk will cover results presented at the conference on Low-Energy-Antiproton Physics [LEAP-94] held at Bled (Slovenia) in September 1994.

* Tea & coffee will be served at 16.00 hrs.

Wednesday 23 November

PS SEMINAR

at 11.00 hrs – PS Auditorium

AUSTRON – A Pulsed Neutron Spallation Source for the Central European Region

by P. BRYANT (on behalf of the AUSTRON Study Group)

The AUSTRON is a research centre based on a pulsed neutron spallation source combined with a light-ion cancer therapy facility. There is also the intention to insert a transmission target into one of the spallation target beam lines for a muon physics facility and to include a low-intensity extraction line that could be used for detector development. The results of a feasibility study made in CERN for the accelerator complex are presented. The proposed accelerator installation uses a H-Alvarez linac of 130 MeV followed by a rapid cycling proton synchrotron of 1.6 GeV delivering an average beam power of 410 kW shared between two spallation targets. Some general indications are also given for the other facilities and the centre as a whole.

Wednesday 23 November

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Exact and approximate Yukawa unification

by Uri SARID / Stanford University

I will discuss aspects of unifying the Yukawa sector of the minimal supersymmetric standard model, as well as other issues relating to having the top-bottom mass hierarchy originate from a hierarchy of vacuum expectation values rather than of Yukawa couplings. Top mass predictions, large radiative corrections, radiative electroweak symmetry breaking and some experimental signatures will be presented. Issues of interest to GUT and string model building (soft scalar masses, gaugino masses and the μ term) will be addressed.

Thursday 24 November

INSTITUTION OF ELECTRICAL ENGINEERS LECTURE

at 16.30 hrs – Council Chamber

Artful aids in command of prosperity

by Allen T. JOHNS / Head of School of Electronic & Electrical Engineering, University of Bath

In this enigmatically entitled lecture, Prof. Johns will show how prosperity is linked to the electricity supply and provide, in a non specialist way information on :

- the application of advanced digital parallel processing technology for real time control simulation and protection;
- developments in fibre optic communications for data management;
- artificial intelligence applications in network management;
- GPS satellite system developments and their future role in monitoring.

The lecture is aimed at an audience of computer, communications electronics and system specialists, and will be at a non-specialist level.

Organized by the IEE Swiss Centre. All Welcome!

Friday 25 November

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

On scale setting in QCD and the momentum flow in Feynman diagrams

by Matthias NEUBERT / CERN-TH

We present a formalism that allows us to evaluate one-loop diagrams in QCD with a running coupling constant, corresponding to an all-order resummation of certain terms in the perturbative series. This method provides a description of the momentum flow through a virtual gluon line. It can be viewed as a generalization of the scale-setting prescription of Brodsky, Lepage and Mackenzie to all orders in perturbation theory. In particular, the approach can be used to investigate why in some cases the 'typical' momenta in a loop diagram are different from the 'natural' scale of the process. Moreover, it offers an intuitive understanding of the appearance of infrared renormalons and their qualitative connection to the rate of convergence of a perturbative series. Several applications to one- and two-scale problems, among them heavy quark systems, $R_{e^+e^-}$ and r_ν are discussed in detail.

Friday 25 November

ISOLDE SEMINAR

at 16.00 hrs – TH Conference Room

The doubly closed shell nucleus ^{132}Sn : collectivity and p-h states

by B. FOGELBERG / The Neutron Research Laboratory, Studsvik, Uppsala University

The structure of the DCSN ^{132}Sn has been studied in a series of experiments at the OSIRIS mass separator. More than about 20% of the predicted bound states were observed. Most of these could be identified in terms of specific p-h configurations. The collective nature of the first 3-level was confirmed by the observation of an enhanced E3 transition to the ground state. This is the first time that detailed structure information has become available in any other heavy DCSN than ^{208}Pb . A comparison between the Sn and Pb regions show strong similarities in some respects and remarkable differences regarding some collective properties.

Monday 28 November

PRESENTATION

09.30 to 12.00 & 13.30 to 16.30 hrs – CN Auditorium
bldg 31/3-005

IDL Interactive Data Language

by Jürgen Schwarz, Project manager, Creaso GmbH.

Scientists, analysts and researchers can visualise scientific or technical data using IDL (Interactive Data Language) — the single, integrated environment for data analysis and visualisation. Optimised for today's workstations, MAC's and PC's, IDL lets you perform interactive analysis on virtually all types of scientific and engineering data. IDL also includes device independent Motif, OpenLook and Microsoft Windows widgets for fully portable end-user applications. IDL is of special interest to people who have large amounts of data to reduce, analyse and understand, using today's most popular visualisation technique. The afternoon session will be devoted to a Workshop using workstations and PCs with data supplied by users. If you have any data that you would like to see on this application you are invited bring it along with you.

Organiser : S. Cannon / CN / 5036

Monday 28 November

AT SEMINAR

at 15.30 hrs – AT Auditorium
bldg 30, 7th floor

Radiation effects on insulators for superconducting fusion magnets

by Harald WEBER / Atomic Institute of the Austrian Universities

Topics :

- Mechanical properties of insulators
- Influence of type of radiation
- Calculation of deposited energy
- Influence of irradiation temperature
- First results on metal-insulator interfaces

Monday 28 November

PPE SEMINAR

at 16.30 hrs – Auditorium

Tau physics with the OPAL detector

by Achim STAHL / Bonn University

An overview of results in tau physics achieved with the OPAL detector will be given. Topics from electroweak physics, QCD and physics beyond the standard model will be included.

Tuesday 29 & Wednesday 30 November

LARGE HADRON COLLIDER COMMITTEE

Tuesday 29 November

at 09.00 hrs – Auditorium

Open Session

Workshop on further physics topics

Provisional agenda:

09.00–09.30 Diffractive scattering at the LHC in the light of HERA results (G. Ingelman)

09.40–10.10 Hard diffraction and possibilities with LHC-B (P. Schlein)

10.20–10.50 Total cross-section, elastic scattering and diffraction dissociation at the LHC (G. Matthiae)

11.00–11.30 *Coffee*

11.30–12.00 Open issues in heavy ion collisions at the LHC (H. Satz)

12.10–12.40 Dimuons, $\gamma\gamma$ collisions and large cross-section processes with ALICE (K. Eggert)

Open session (continued)

Tuesday 29 November

at 14.15 hrs – Auditorium

14.15–14.45 Spin physics with the LHC (J. Soffer)

14.55–15.25 Experiments with polarized jet target (to be arranged)

15.35–16.00 *Coffee*

16.00–16.20 Neutrino beams from the LHC (A. Morsch)

16.30–17.15 Neutrino physics at the LHC (J. Panman)

17.30–17.55 Search for unstable neutrino-like heavy objects at the LHC (F. Vanucci)

Open session (continued)

Wednesday 30 November

at 09.00 hrs – Auditorium

09.00–09.30 Very high precision tests of the electroweak theory (P. Fisher)

09.40–10.10 Possible multiple W/Z/H production at the LHC (A. Ringwald)

10.20–10.50 *Coffee*

10.50–11.20 Search for monopoles at the LHC (G. Giacomelli)

11.30–12.00 Ideas for unconventional experiments at the LHC (J. D. Bjorken)

Tuesday 29 November

PRESENTATION

at 10.00 hrs – CN Auditorium
bldg 31/3-005

VMEbus and IndustryPack Products

by Actis Computers / Ecrin Automatismes

Information : S. Cannon / CN / 5036

Wednesday 30 November

PS SEMINAR

at 11.00 hrs – PS Auditorium

High gradient particle acceleration using a beat wave in a plasma

by D. BERNARD & Ph. MINE / Ecole Polytechnique de Palaiseau

Wednesday 30 November

TECHNICAL PRESENTATION

at 14.30 hrs – bldg 32/2-B16

Test Equipment for ATM (Asynchronous Transfer Mode) links

by Tekelec, Themis Computer Division Grenoble / Paris

Information : M. Diraison / FI-A / 4585

F. Szoncsó / PPE / 6592 - 2227

Friday 2 December

FIFTY-SIXTH PLENARY ECFA MEETING

at 10.00 hrs – Council Chamber

- 10.00
1. Approval of the Draft Minutes of the Fifty-fifth Plenary ECFA Meeting
 2. Approval of the Draft Agenda
 3. Chairman's Report
 4. Status of LHC:
 - Machine (L.R. Evans)
 - Experiments (L. Foà)
 - Decision Process and Non-Member States (C.H. Llewellyn Smith)

13.00 Lunch

- 14.30
5. Fixed-Target Programme at HERA (B.H. Wiik)
 6. Report on HEPCCC (G.E. Kalmus)
 7. ICFA Matters (G. Flügge)
 8. Any Other Business
- 17.00 End of meeting

Friday 2 December

ISOLDE SEMINAR

at 14.00 hrs – PE Conference Room
bldg 5/1-001

Experiments near the doubly-magic nucleus ^{100}Sn

by K. RYKACZEWSKI / University of Warsaw

FOR INFORMATION

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Wednesday 23 November

SEMINAR ON PARTICLE PHYSICS

at 17.00 hrs – Auditoire Stuckelberg

Search for antimatter in the primary cosmic radiation

by Andrea G. VACCHI / INFN, Trieste

I will report on a recent experimental effort to search for antimatter in the primary cosmic radiation. A magnetic spectrometer with highly refined particle identification was flown at an altitude of 37 km. The observations which will be reported were made with the New Mexico State University Balloon Borne Facility during the balloon flight activity of 1993-94. The experiments will be discussed together with the first results from the analysis.

EDUCATION SERVICES EDUCATIFS

ENSEIGNEMENT GÉNÉRAL Tél. 5811

Jeudi 24 novembre

à 13.00 h – Amphithéâtre

Science pour tous

par Rafel CARRERAS

INFORMATIONS GENERALES GENERAL INFORMATION

LE GUIDE INTERNATIONAL DE GENÈVE SUR LE «WORLD-WIDE WEB»

Le premier guide d'une ville suisse sur le 'World-Wide Web' est maintenant disponible. Tapez

<http://www.eunet.ch/GenevaGuide>

L'information est mise à jour chaque jour.