

SEMINARS SEMINAIRES

Monday 20 February

EP SEMINAR

at 17.00 hrs – Auditorium

Searches for GUT monopoles at a flux below the Parker limit

by P.B. PRICE / CERN and University of California at Berkeley

The existence of a permanent microgauss Galactic magnetic field implies that the flux of GUT monopoles is probably less than $10^{-15} \text{ cm}^{-2}\text{sr}^{-1}\text{s}^{-1}$. Thus detectors need to be sensitive to a flux below this 'Parker limit' as well as to velocities $\beta \lesssim 10^{-3}$. We discuss results of searches sensitive to one of the following scenarios :

- Monopoles reach the earth bare but capture nuclei before reaching the detectors, or
- Monopoles reach the earth bound to protons which they picked up in the early universe, or
- Monopoles induce nucleon decay and so spend most of their time not bound to nuclei.

Tuesday 21 February

TECHNICAL PRESENTATION

from 09.30 hrs to 16.00 hrs

Building 17, 1st floor, Room 007

GOTELE AG (CH) is presenting its electronic instrumentation programme : transient recorder from Thorn EMI Datatech (GB), power supplies (IEEE) from Thorn EMI Technology (D), sweep system modular design from Knott (D), generator for Telecommunication from Giga (F), wattmeter/reflectometer, SWR test set, spectrum analyzer from Oritel (F), time code generator/reader from Austron (USA), modular ATE measuring system from CDS (USA), microwave counter, multimeter, pulse generator from Systron Donner (USA).

Langages : English, German.

Information : M. Diraison / FI / 4585.

Tuesday 21 February

PRESENTATION

at 14.00 hrs – DD Amphitheatre
(Bldg. 31, 3rd fl.)

Floating Point Systems' Array Processors

by M. PLISKINE

In 1969, FLOATING POINT SYSTEMS (Portland, OREGON, USA) introduced their 'ARRAY PROCESSORS' which, connected to a mini or megamini computer, multiply the speed of computation by a factor between 6 and 20 (for a 32-bits computer). The price of such a system, being similar to the one of a megamini, and the power generally 10 times higher, a

large number of these systems have been installed (more than 4500 across the world), and many Scientific Research Centers, Universities, Military and Industrial plants, use them. They can be connected to IBM, DEC, Norsk Data, Hewlett-Packard, Apollo systems.

Wednesday 22 February

THEORETICAL SEMINAR

at 14.00 hrs – Theory Conference Room

The Chiral Anomaly and the Atiyah-Singer Index : Supersymmetric Quantum Mechanical Derivation

by P. WINDEY / CERN

We present an elementary derivation of the Atiyah-Singer formula for the index of the Dirac operator. It relates the number of solutions with zero eigenvalue of this operator to topological quantities useful in physics. In particular, this index is the space-time integral of the trace of the chiral anomaly. We calculate the full chiral anomaly using the supersymmetric path integral for a spinning particle moving through space-time.

Wednesday 22 February

DD SEMINAR

at 16.00 hrs – DD Amphitheatre
(Bldg. 31, 3rd fl.)

Introduction to GKS at CERN

by J.C. MICHENER

The Graphics Kernel System, GKS, is an international standard for subroutine packages for graphics programming. GKS has been selected for installation at CERN with the intention that future graphics applications will be written using it, thereby gaining the portability that standardization provides. The talk will introduce GKS, while emphasizing its features that support interactive graphics. The support planned for GKS at CERN will be discussed.

Jeudi 23 février

PRESENTATION TECHNIQUE

de 09.00 hrs à 11.30 hrs – Bât. 13, Salle 2-005

TS S.A. Techniques et Sécurité (CH) propose une séance d'information sur le thème : détection incendie nouvelle génération, détection des gaz, contrôle d'accès.

Matériel : détection incendie – centrale de signalisation Eltek (N), détecteur incendie Apollo (GB), bloc d'adressage Eltek (N); détection gaz Oldham (F); système de sécurité et contrôle d'accès – centrale de sécurité Hörmann (D), détecteur de sécurité Hörmann (D), détecteur de sécurité Elkron (I), système de contrôle d'accès Schlage (USA).

Langue : français.

Renseignements : M. Diraison / FI / 4585.

Thursday 23 February

ISOLDE SEMINAR

at 10.30 hrs – SC Conf. Room (Bldg. 26, 1-025)

Tests for pions in low energy nuclear physics

by T.E.O. ERICSON / CERN

The purpose is to examine the direct experimental evidence for pions in nuclei. The OPE potential is briefly derived as a classical dipole-dipole interaction with strong analogy to the hyperfine interaction. It is demonstrated how both the deuteron asymptotic D-state and its quadrupole moment follow accurately from OPEP with little model dependence, in excellent agreement with experiments. This imposes important constraints on quark bag descriptions of the nucleon-nucleon force.

Monday 27 February

EP SEMINAR

at 17.00 hrs - Auditorium

Production of high transverse momentum baryons and mesons in deep inelastic hadronic interactions at the ISR

by T. LOHSE / Univ. of Dortmund

Tuesday 28 February

CERN COLLOQUIUM

at 16.30 hrs - Auditorium

Galileo Galilei and Experimental Science

by Prof. Franco LEVI / Dept. of Physics
Univ. di Perugia, Italy

Wednesday 29 February

PS SEMINAR

at 11.00 hrs - PS Auditorium (Bldg.6)

Accelerators in Japan and China

by K.H. REICH

Thursday 1 March

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

The end of a myth :

High transverse momentum physics

by A. ZICHICHI/CERN

CERN-ECFA Workshop on Feasibility of Hadron Colliders in the LEP Tunnel

Lausanne, 21-24 March

CERN 26-27 March

The purpose of the Workshop is to study the feasibility of hadron colliders which it might be possible to place next to LEP at some time in the future. These studies are being made in preparation for an international seminar on the long-range prospects for

high energy physics in the world which will take place in Japan in May and is organized by ICFA.

In preparation for the Workshop some study groups on experimental topics are being formed. Anyone wishing to contribute is invited to contact one of the convenors :

Jets

P. Jenni / CERN

Electron/Photon

Ph. Bloch / Saclay

Muon

W. Bartel / DESY

Tracking Chambers

A. Wagner / Heidelberg, DESY

Vertex Detection

G. Bellini / CERN, Milan

Triggering

J. Garvey / Birmingham (RAL)

Data Acquisition & Software

D. Linglin / LAPP

Forward Physics

G. Matthiae / Rome

Studies on theoretical topics and on machine design and superconducting magnet technology are also under way; anyone interested in these may contact M. Jacob or G. Brianti.

Because of space limitations, participation in the Lausanne Workshop will be by invitation. Summary talks will be given at CERN on 26 and 27 March, when all interested will be welcome.

For further information, please contact a member of the Organizing Committee : G. Brianti, W. Hoo-gland, M. Jacob, C. Joseph, J. Mulvey, C. Rubbia, J. Sacton, or the Secretary : Christine Petit-Jean-Genaz (tel. 3275).

TRAINING AND

EDUCATION

ENSEIGNEMENT

ENSEIGNEMENT GÉNÉRAL Tél. 2844

Jeudi 23 février

de 13.00 h à 13.30 h – Amphithéâtre

Science pour tous

par R. CARRERAS

Il n'y aura pas de séance "Science pour Tous" le jeudi 1er mars.

ACADEMIC TRAINING Tel. 2844

20, 21, 22, 23 and 24 February

at 11.00 hrs – Auditorium

Parton-parton scattering in hadronic collisions

by R. SOSNOWSKI / Warsaw Nuclear
Research Institute, and CERN (Five lectures)