

SEMINARS SEMINAIRES

Lundi 10 mars

PRESENTATION TECHNIQUE

à 14.00 hrs – Amphithéâtre DD
bât. 31, salle 3-005

GECI, Groupe d'études & conseil en ingénierie (F) propose un exposé sur les trois thèmes suivants : 1) Activités de GECI en délégation d'experts auprès de ses clients, dans des domaines de haute technologie : nucléaire, mécanique, électronique, etc.; 2) Activités de GECI dans le domaine des calculs : a - scientifiques, b - de structures (statiques, dynamiques, linéaires, non linéaires), c - de transfert de chaleur; 3) Description des diverses possibilités d'analyse offertes par le programme MSC/NASTRAN, créé à l'origine pour les besoins de la NASA et actuellement mondialement utilisé dans les secteurs de la recherche et de l'industrie.

Langues : anglais ou français selon auditoire.

Renseignements : M. Diraison / FI / 4585.

Tuesday 11 March

LEP EXPERIMENTS COMMITTEE

Open session

at 09.00 hrs – Auditorium

- 09.00-09.10 *Statement by I. Butterworth*
09.10-09.40 *Status of LEP by E. Picasso*
09.40-10.10 *Report on MEDDLE by P. Zanella*

Status of LEP Experiments

- 10.10-10.40 *L3*
10.40-11.00 *Coffee Break*
11.00-11.30 *ALEPH*
11.30-12.00 *DELPHI*
12.00-12.30 *OPAL*

Closed session

at 14.00 hrs, 6th Floor Conference Room,
Administration Building

Tuesday 11 March

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Results from the CDHS beam dump experiment

by P. DEBU / Saclay

In 1982, the last in a series of proton beam-dump experiments was performed at CERN, with three detectors taking data concurrently. Results on the prompt neutrino fluxes as obtained with the CDHS neutrino detector will be reported.

* Tea and coffee at 16.00 hrs.

Wednesday 12 March

PS SEMINAR

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

High intensity and space charge effects in linacs

by P. LAPOSTOLLE

A variety of effects occur when increasing the intensity of the beam accelerated in a linac. Some depend on the average intensity : only a small fractional beam loss on the machine walls may, when the intensity is high, cause not only heating, but, and this is of more concern, a risk of contamination. Other effects depend on the peak intensity, namely RF cavity beam loading and space charge phenomena.

Wednesday 12 March

THEORETICAL SEMINAR

at 14.00 hrs – Theory Conference Room

QCD as a dual superconductor

by F. ZACHARIASEN / Caltech

An effective action describing long-range QCD is derived which predicts that QCD has many of the properties of a dual superconductor. In particular, it predicts the existence of $Z(N)$ flux tubes, and therefore confinement. The specific field configurations are confirmed by lattice calculation of the effective action, including the existence of glueballs, the interaction energy between flux tubes and between glueballs, and the static quark potential.

Mercredi 12 mars

REUNION OUVERTE DU LEP

à 14.30 hrs – Amphithéâtre du LEP
7e étage du bâtiment 30

1. *Annonces.*
2. *Vidéo 'Avancement des travaux du génie civil'.*
3. *Sécurité des chantiers d'installation du LEP, par G. Bachy.*

L'ouverture des chantiers d'installation du LEP a nécessité la création d'un Collège interentreprise d'hygiène et de sécurité, ainsi que la mise en place de différentes structures et procédures indispensables pour minimiser les risques engendrés par les installations.

Thursday 13 March

CAS ACCELERATOR SEMINAR

at 14.30 hrs – Council Chamber

Possible use of ferroelectrics as a new source of strong electric fields

by K. ZIOUTAS / Aristotle University of Thessaloniki

Very intense internal electric fields (10^8 - 10^9 V/cm) are expected to exist for short time periods inside ferroelectric crystals. The possible ways to utilize them and their perspectives in acceleration and particle physics will be presented.

Thursday 13 March

CERN COLLOQUIUM

at 16.30 hrs – Auditorium*

On the collision and propagation of gravitational waves

by S. CHANDRASEKHAR / University of Chicago

It is now known, following the work of Penrose and Hawking in the sixties, that singularities in space-time are generic to general relativity. Examples are the phenomenon of gravitational collapse and the initial singularity of the universe. In gravitational collapse, under a very wide range of circumstances the evolution of a massive star must lead to the formation of black holes and the singularities associated with the solutions of Schwarzschild and Kerr. Similarly the state of the universe when primordial helium was synthesized must have assured extrapolation backward to a singularity, so long as certain mild restrictions are assumed. Recent studies show that similar singularities may arise when gravitational waves collide and scatter. Examples will be described, both for pure gravitational waves and for gravitational waves coupled with electromagnetic fields and fluids. A particularly interesting example is gravitational wave collisions coupled with a fluid in which the energy density is equal to the pressure and the velocity of sound equals the velocity of light. In this case, the fluid, whose streamlines follow time-like trajectories, is transformed into massless particles describing null trajectories, the transformation taking place across the collision fronts. The variety and range of phenomena predicted by general relativity in these contexts may have bearing for astrophysics.

* Tea and coffee at 16.00 hrs.

Monday 17 March

PRESENTATION

at 09.00 hrs – Theory Conference Room

Nokia Master multichannel analyzer system in particle detection

by M. MUTIKAINEN / Nokia Ltd.

The Nokia Group is the biggest publically traded industrial enterprise in Finland. About half of the turnover comes from exports and foreign subsidiaries. The control and instrumentation department of Nokia Electronics has developed a new generation of multichannel analyzers. The Nokia Master system consists of intelligent u-master data acquisition units, of auxiliary units for signal processing and of the software for IBM PC compatible computers. Both traditional operating modes of MCA:s, pulse height analysis and multichannel scaling are supported by the Nokia Master system. The data acquisition units are controlled by an Intel 80186 microprocessor and they are provided with 16 k of data acquisition memory.

Language : English

Information : M. Ellila / EP / 4696 / bldg 1, 1-024.

Monday 17 March

EP SEMINAR

at 16.30 hrs – Auditorium

First results from experiment UA6 on neutral-pion and eta production in antiproton-proton interactions at 24.3 GeV

by François GAILLE / Université de Lausanne

First results obtained by experiment UA-6 using their internal hydrogen gas jet target during the 1984 SPS collider operation will be discussed. Transverse momentum distributions of neutral pions and eta mesons up to 5 GeV/c transverse momentum and correlation results will be presented. Expectations for the $\bar{p}p$ / pp comparison of direct photons and electron pairs using the 1985 antiproton-proton data sample and the forthcoming pp data will be outlined.

Tuesday 18 March

EP SEMINAR

at 16.30 hrs – Auditorium

PLEASE NOTE UNUSUAL DAY

Recent results on D-mesons from SPEAR

by Dan COFFMAN / Caltech

Tuesday 18 March

SPS EXPERIMENTS COMMITTEE

Open Session

Tuesday 18 March

at 09.00 hrs - Auditorium

1. Introductory Remarks by R. Klapisch.
2. Status Report on WA80 (Study of Relativistic Nucleus-Nucleus Collisions Induced by O^{16} Projectiles; Darmstadt GSI-Lawrence Berkeley Lab. - Lund - Marburg -Münster - Oak Ridge - Warsaw Collaboration; H.H. Gutbrod).
3. Status Report on NA35 (Study of Relativistic Nucleus-Nucleus Collisions; Athens - Bari - CERN - Cracow - Darmstadt GSI - Frankfurt - Freiburg - Heidelberg - Lawrence Berkeley Lab. - Marburg - Texas A & M - Warsaw - Zagreb Collaboration; R. Stock).
4. Status Report on NA36 (production of Strange Baryons and Antibaryons with Relativistic Light Ion Collisions; Bergen - Birmingham - Brookhaven - Carnegie Mellon - CERN - Chandigarh - City College New York - Lawrence Berkeley Lab. - Strasbourg - Vienna Collaboration; W. Geist).
5. Status Report on NA34/2 (Study of High Energy Densities over Extended Nuclear Volumes via Nucleus-Nucleus Collisions; Brookhaven - CERN - Heidelberg - Los Alamos - Lund - Montreal McGill - Montreal Univ. - Moscow Lebedev Ins. - Moscow Eng. Phys. Inst. - Novosibirsk - Pittsburgh - Saclay - Stockholm - Tel Aviv Collaboration; H.J. Specht)
6. Status Report on NA38 (Study of High-Energy Nucleus-Nucleus Interactions with the Enlarged NA10 Dimuon Spectrometer; Bergen - CERN - Cler-

mont-Ferrand - Lisbon - Lyon - Neuchâtel - Orsay - Palaiseau Ecole Polyt. - Strasbourg - Valencia Collaboration; L. Kluberg).

7. The Lepton Asymmetry Analyser (LAA; Bologna - CERN - Frascati - Lecce Collaboration; A. Zichichi; SPSC 86-3/P 200/Add.1).
8. A Search for Quarks Produced in Heavy-Ion Interactions (Irvine - LBL - San Francisco State Collaboration; G. Shaw; SPSC 85-76/P 220).
9. Electromagnetic Dissociation of Target Nuclei by O^{16} and S^{32} Projectiles (Iowa State, J.C. Hill; SPSC 86-4/P 222).
10. Search for Nuclei in Heavy Ion Collisions at Ultra-relativistic Energies (Orsay - Saclay - Strasbourg Collaboration; C. Ngô; SPSC 86-7/P 223).
11. Measurement of the Phase Difference of CP Violating Parameters in Neutral Kaon Decays into Two Pions (CERN - Edinburgh - Mainz - Orsay - Pisa - Siegen Collaboration; H. Wahl; SPSC 86-6/P 174/Add.2).

Closed Session

Tuesday 18 March at 15.00 hrs ,
Conference Room 6th Floor (Administration Building) - (to be continued on Wednesday 19 March, at 09.00 hrs).

Mercredi 19 mars

SEMINAIRE LEP

à 14.00 hrs - Amphithéâtre du LEP
7e étage du bâtiment 30

Préfabriques destinées aux puits du LEP

par C. ARNAUD / CERN-LEP

Thursday 20 March

OLIVETTI USER FORUM

at 14.00 hrs - DD Amphitheatre
bldg 31, 3rd floor

This forum will have, as its special topic, the role of the PC in the manipulation of images. It will include the following short presentation :

1. Connection of the M24 PC with the BARCO (P. SEREX / CPI).
2. Image Capture in the M24 PC and character recognition with a scanning device (D. CERUTTI / CPI).
3. Output of screen images using polaroid (D. COROD / Olivetti).

There will be discussion on schematics and electronic design in CAD, the ACADO documentation software as well as some new Olivetti announcements.

TRAINING AND EDUCATION ENSEIGNEMENT

ENSEIGNEMENT GENERAL

Tél. 2844

Jeudi 13 mars

de 13.00 h à 13.30 h - Amphithéâtre

Science pour tous

par R. CARRERAS

ACADEMIC TRAINING

Tel. 2844-3364

March 10, 11, 12, 13

14.00 to 15.00 hrs - Auditorium

PLEASE NOTE UNUSUAL TIME

Signal processing for radiation detectors

by V. RADEKA / Brookhaven National Laboratory

A series of 4 lectures.

March 19, 20, 21

11.00 to 12.00 hrs - Auditorium

Software development tools

by G. KELLNER / CERN

This series of lectures will give an overview of tools that can be useful during software development to produce better code and documentation and during the operation phase to ease the problems associated with maintenance. Software development methodologies, configuration management, tools for coding (static analyzer, portability checker, language sensitive editor, debugger), testing and documentation will be discussed and practical examples will be shown.

L'APPRENTISSAGE AU CERN (Fiche d'information 1986)

- L'apprentissage au CERN est régi par les lois, règlements et contrats en vigueur dans le canton de Genève. En cas de réussite à l'examen de fin d'apprentissage, les apprentis obtiennent le Certificat Fédéral de Capacité suisse (CFC) qui, pour la France, équivaut au CAP.