

SEMINARS SEMINAIRES

Tuesday 20 May

EP SEMINAR

at 11.00 hrs – Auditorium
**PLEASE NOTE UNUSUAL DAY,
AND TIME!**

**Highlights of the Fermilab antimatter physics
workshop**

by H. POTH / Karlsruhe and CERN-EP

Mid-April a workshop was held at Fermilab on anti-matter physics at low energy. The main goal of this meeting was to discuss the perspectives of low energy anti-proton physics in general and in particular for Fermilab, where a LEAR type machine could be attached to the antiproton source. A summary of the physics case is given including also a possible machine scenario.

Tuesday 20 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

**Recent results from the FREJUS underground
experiment on proton decay and Cygnus X3**

by R. BARLOUTAUD / Saclay

The status of the Frejus underground experiment will be described. Results obtained from contained events in 600 ton-years, and for muons in the direction of Cygnus X3 in a two year observation time, will be presented.

* Tea and coffee will be provided at 16.00 hrs.

Wednesday 21 May

PS SEMINAR

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

Physics of laser material processing

by Dr. R. NOLL / Fraunhofer-Institut für
Lasertechnik, Aachen (D)

The knowledge of the physical elements involved in the laser material interaction is necessary to utilize the advantages of laser processing. In laser welding, a laser induced plasma in front of the target surface is generated if the laser radiation exceeds a critical intensity. This plasma efficiently transfers the incident optical energy to the workpiece. The absorption is no longer constant, but is a function of the laser intensity. Optical feedback from the target changes the system parameters of the laser tool and influences the processing results. Laser tooling has to be matched to special applications, controlling the laser target interaction phenomena.

Wednesday 21 May

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Quasi-crystals

by Denis GRATIAS / CECM, Paris

The discovery of a long-range ordered metallic phase with icosahedral symmetry has opened a new field of research in solid state physics: the quasi-periodic structures. After a brief recall of the definition of quasi-periodicity, we will discuss some remarkable geometric properties of two-dimensional quasi-periodic arrays with non-crystallographic symmetries. Applications to actual 3-D structures observed in the Al-Mn system will be discussed. Finally, some general arguments will be given concerning a possible definition of crystals including this new class of ordered solid phases.

Mercredi 21 mai

SEMINAIRE LEP

à 14.30 h – Amphithéâtre LEP
dernier étage du bâtiment 30

Pompes ioniques pour le LEP

par J.M. LAURENT / CERN-LEP

Des pompes ioniques seront nécessaires pour le système à vide du LEP en complément du pompage getter. Après un bref rappel de la conception du système à vide, le fonctionnement et l'utilisation des pompes ioniques seront présentés ainsi que les considérations économiques qui ont guidé leur choix.

Wednesday 21 May

DD SEMINAR

at 16.00 hrs – DD Auditorium
bldg 31, 3-005

Some aspects of automated reasoning

by Dr. B. HUMPERT / Institut de Physique
nucléaire, University of Lausanne, and Artificial
Intelligence Group, Hasler Research
Laboratories, Bern

An introduction to the first-order predicate logic and its resolution techniques which allow for mathematical theorem proving and, more generally, for automated (or computer) reasoning, is given. Automated reasoning is used in a number of fields such as logic circuit design, logic circuit validation, real-time systems control, program debugging and verification, question answering, expert systems and so on. Some applications of automated reasoning are introduced, using simple examples.

Jeudi 22 mai

FORUM MacINTOSH

de 09.00 à 12.00 h
bât. 593, R-011

ATTENTION, CHANGEMENT DE LIEU

- 4-dimensions...
- brève présentation de A.C.U.
- présentation de nouveaux périphériques pour MacIntosh : disk interne Rodime SCSI, disk externe AST SCSI, scanner pour graphisme et texte.

Table ronde entre les utilisateurs CERN et les représentants de Support Apple Europe (soft et hard). Nouvelles Apple-Talk et SCSI.

L'après-midi, possibilité de discussion plus ponctuelles entre les différents groupes de développement au CERN et les représentants de Apple.

Renseignements : F. SALDANA / Tél. 6256,
bip 13-7030

Jeudi 22 mai

PRESENTATION TECHNIQUE

de 10.00 à 12.00 h et de 14.00 à 16.00 h
bât. 17, 1-007

3 M (Suisse) SA propose en démonstration ses nouveautés en bureautique :

Reprographie-télécopie : 3M 6040 ADF, copieur haute productivité avec recto-verso automatique (J), 3M 537, copieur couleur (J), 3M EMT 9140, télécopieur GR III (F), 3M EMT 9175, télécopieur GR III(J).

Microfilm : 3M 630, lecteur-reproducteur sur papier normal de dessins techniques à partir de microfilm (USA).

Audio-visuel : 3M ETM 7500, imprimante graphique sur transparents (USA), 3M 7403, titreuse à mémoire (D).

Supports de données : 3M disquettes, datacartridge (I).

Langues : anglais, français

Renseignements : M. Diraison / FI /4585

Monday 26 May

EF SEMINAR

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

Electronic CAD in the research divisions

by B. HECK / CERN

Electronic systems and circuits are becoming more and more complex, and good tools are needed. For several years industry has been offering Computer Aided Design (CAD) systems which help to make the design and construction easier, cheaper and more efficient. The situation of development groups in research divisions with respect to CAD will be described, including what has already been achieved and what the goals are for the near future. The main emphasis will be given to a system for developing printed circuit boards for Fastbus.

Monday 26 May

EP SEMINAR

at 16.30 hrs – Auditorium

Direct photon production at the CERN proton-antiproton collider

by P. HANSEN / Niels Bohr Institute, Copenhagen

Using the UA2 detector we have measured the inclusive cross-section for production of large transverse momentum direct photons in proton-antiproton collisions at $\sqrt{S} = 546$ GeV and 630 GeV. The results are in good agreement with QCD predictions.

Tuesday 27 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Analysis of gluon scattering and gluon fragmentation in high transverse momentum interactions at the ISR

by T. LOHSE / CERN

Gluon scattering processes are studied in hadronic high transverse momentum events using data obtained with the Split-Field Magnet detector at the CERN ISR. The experimental setup allowed to scan a wide range of proton energies and scattering angles. It is shown that by selecting positive pions as trigger particles, the parton composition of the recoil jet can be effectively controlled by variations of trigger angle and transverse momentum. Over the kinematical region studied, the recoil jet originates predominantly from scattered gluons. The dynamics of the scattering processes as well as gluon fragmentation properties will be discussed.

* Tea and coffee will be provided at 16.00 hrs.

Thursday 29 May

CERN COLLOQUIUM

at 16.30 hrs – Auditorium*

The Giotto Mission and Halley's Comet

by Reimar LÜST / European Space Agency, Paris

Throughout history, comets have been puzzling mankind and creating fear in the hearts of those who see them. In 1705, the English astronomer, Edmund Halley, was the first to predict the return for the year 1758 of a comet which since then bears his name. Space techniques, such as the creation of artificial comets, have enabled Man in recent decades to learn more about comets and the processes occurring in their vicinity. Even more exciting is to go directly to a comet and to study it and its surroundings at close quarters. ESA's Giotto space probe, launched last July by Ariane, successfully passed Comet Halley's nucleus within 540 km on 14 March 1986 after an eight-month voyage through space, and provided scientists with a host of new data which are still under evaluation.

* Tea and coffee will be provided at 16.00 hrs.

TRAINING AND

EDUCATION

ENSEIGNEMENT

ENSEIGNEMENT GENERAL

Tél. 2844

Jeudi 22 mai

de 13.00 h à 13.30 h – Amphithéâtre

Science pour tous

par R. CARRERAS