

PREVENTION DES VOLS

Pour répondre aux souhaits maintes fois exprimés par les membres du personnel que soient prises sur le domaine des dispositions de prévention des vols et de sauvegarde des biens de l'Organisation ainsi que des biens privés, la Direction du CERN a demandé aux administrations spécialisées des Etats-Hôtes leur assistance dans ce domaine. Depuis le 1er septembre 1991, nous disposons de l'aide d'un professionnel de la prévention et des enquêtes.

Il est rappelé qu'il est vivement déconseillé de laisser des effets personnels sans surveillance. Par ailleurs les bureaux et installations pouvant présenter un risque de disparition de matériel doivent être fermés en l'absence du personnel responsable.

Lorsqu'un problème du type mentionné ci-dessus vient à se présenter, vous devez comme d'habitude vous adresser au Service de l'Enregistrement (Bâtiment 55, 1er étage) placé sous la responsabilité directe de Mme Y. Agnosini (tel. 6611). Votre demande fera alors l'objet d'un examen attentif et si nécessaire sera traitée en collaboration avec notre spécialiste.

Nous comptons sur la coopération de l'ensemble du personnel pour limiter les disparitions et vols de vos biens personnels et de ceux de l'Organisation.

H. F. Hoffmann

RAPPEL

VEHICULES IMMATRICULES EN FRANCE EN SERIE CONSULAIRE ET DIPLOMATIQUE

Les membres du personnel du CERN résidant en France et ayant droit à un véhicule immatriculé en série consulaire ou diplomatique sont informés que leurs conjoints titulaires de cartes de légitimation françaises AT, FI ou 'Assimilé à un membre de Mission diplomatique' peuvent conduire ce véhicule. Cette facilité ne s'applique pas aux enfants ni à d'autres personnes.

Il est rappelé par ailleurs qu'il n'est pas obligatoire d'équiper ce véhicule de phares jaunes.

Relations avec les Pays-hôtes
Tél. 5152

SEMINARS SEMINAIRES

Monday 21 October

AC SEMINAR

at 11.00 hrs – AT Auditorium
bldg 30, 7th floor

Channeling experiments at the SPS: results and applications

by K. ELSENER / CERN-PPE

THEFT PREVENTION

In response to frequent calls from staff for measures to be taken on the site to prevent thefts and protect the Organization's property and individual belongings on the site, the CERN Management has turned for assistance to specialized bodies from the Host States. Since 1st September this year, we have the help of a professional prevention and investigation officer.

Once again, you are strongly urged not to leave personal effects unattended. In addition, all offices and other places where there is a risk of equipment being lost or stolen must be kept locked whenever those in charge of them leave the area.

Should such a problem of the type mentioned above occur, as in the past you should report to the head of the Registration Office, Mrs Y. Agnosini, (Bldg. 55, First Floor, Tel. 6611). There your problem will be carefully examined and if necessary dealt with in collaboration with the investigation officer.

We count on the cooperation of all staff to cut down losses and theft of personal belongings and CERN-property.

H.F. Hoffmann

REMINDER

DRIVING OF VEHICLES REGISTERED IN FRANCE WITH CONSULAR AND DIPLOMATIC LICENCE PLATES

Members of CERN personnel residing in France and having the right to a vehicle with consular or diplomatic plates are informed that it may be driven by their spouses provided they hold French identity documents of the AT, FI or 'Assimilé à un membre de Mission diplomatique' type. This privilege does not apply to their children or to other people.

It should also be noted that such vehicles are not required to have yellow headlights.

Relations with Host States
Tel. 5152

In a single crystal strong internal fields act coherently on particles impinging in directions close to its planes or axes of symmetry. This leads to a very pronounced steering of particles: the channeling effect. Discovered years ago at low energies, this effect persists up to the highest beam energies available to date. Recent investigations at the SPS include the high efficiency bending of 450 GeV protons by means of a bent silicon crystal of 5 cm length, or the strongly enhanced

bremsstrahlung from 70 to 280 GeV electrons channeling through diamond, silicon and germanium crystals. A selection of results is presented, and some of the technical difficulties in these experiments are discussed. Possible applications of channeling at very high energies are outlined.

Monday 21 October

PPE SEMINAR

at 16.30 hrs – Auditorium

'Spaghetti Calorimeter' : performance and capabilities

by Riccardo DE SALVO / CERN

The commercial availability of new scintillating optical fibers allows the design and construction of a new breed of high performance calorimeter. Thanks to rapidly evolving R&D efforts, the 'spaghettis' are proven to be one of the leading candidates for calorimetry at LHC and elsewhere.

Tuesday 22 October

PRESENTATION

10.00-12.00 hrs – CN Auditorium

bldg 31/3-005

CAPS : Computer Aided Product Selection

by the Cahners Technical Information Service

CAPS provides fast and easy access to information on more than 625,000 components from over 520 manufacturers worldwide.

CAPS offers in-depth data on:

- alternate sources
- pin for pin replacements
- upgrades and downgrades
- military and DESC part numbers
- QPL sources
- estimated price ranges
- a.s.o.

Programme

10.00 Introduction

Cahners Technical Information Service, Newton USA
by Warren DICKSON (Vice President International)
Computer Controls AG, Zurich Switzerland
by Karl UNTERSANDER

10.15 CAPS features

by Warren DICKSON

11.30 Network and Protocol support

speaker to be announced

11.45 Questions and answers

Language: English

Organizer : Pierre Baehler / CN

Tuesday 22 October*

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium

bldg 31/3-005

Managing program binaries in a heterogeneous UNIX Network

by Paul Anderson / University of Edinburgh

This talk presents some of the techniques adopted in the Computer Science Department at the University of Edinburgh for providing a consistent user environment across a large network of heterogeneous workstations. These include system management techniques that allow non-privileged users to maintain and install network-wide application packages, as well as software and techniques for automatically distributing and replicating program binaries across the network.

Organizers : N. Cremel and P. Defert, CN

* Please note unusual day.

Tuesday 22 October

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Antiparticles and the equivalence principle

by Richard HUGHES / University of California / Los Alamos

Einstein's equivalence principle, which forms the basis for general relativity and other metric theories of gravity, requires that the gravitational accelerations of all objects in the same gravitational field be equal. This aspect of equivalence has been tested with remarkable precision (a few parts in ten billion) for various different materials, but has not yet been directly tested with antiparticles such as the positron or antiproton, largely because of the technical difficulties of performing an experiment. However, the progress in trapping, storage and cooling of antiprotons to very low energies at LEAR, and the developments in spectroscopic measurements on trapped particles now allow an experimental test of equivalence with antiprotons or antihydrogen to be seriously contemplated. The three celebrated arguments developed by Morrison, Schiff and Good concerning antiparticles and the equivalence principle will be reviewed. These arguments show that tests of the equivalence principle can be inferred from the results of high precision mass measurements on elementary particles. For instance, a test of equivalence for the antiproton with a precision of 5 parts in ten thousand can be inferred from the recent results of the proton-antiproton mass-comparison experiment (PS-196). Analogous limits can be deduced for the positron from the spectroscopy of trapped positrons and positronium. The improvements in these limits that could be obtained with experiments on antihydrogen will be discussed. Finally, the gravitational implications of a recent test of CPT symmetry in the neutral kaon system (NA31) will be considered.

* Tea and coffee will be provided at 16.00 hrs.

Wednesday 23 October

PS SEMINAR

at 11.00 hrs – PS Auditorium

bldg 6/2-024

ECR ion source using slow wave structures

by R. BASKARAN / CERN-PS

In ECR ion sources, initially an ECR plasma is produced and the ions are extracted electrostatically. The ECR plasma is produced by matching the cyclotron frequency of an electron in an externally applied d.c. magnetic field to microwave frequency. Various configurations have been used for launching the microwaves to the resonant region. In this context, slow wave structures (SWS), such as the helical coil and slotted line antenna (SLA) have been found to play a very effective role for high density plasma production. In this talk, the details of microwave coupling to SWS, the plasma characterisation results and the preliminary results of ion beam extractions are discussed.

Wednesday 23 October

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

On topological systems as string theories

by Eliezer RABINOVICI / CERN and Hebrew University, Jerusalem

Topological field theories offer a new realization of general coordinate invariance. They differ from usual gravity; observables in such theories depend only upon topological properties. We discuss in an elementary fashion an exact solution to a very simple topological system. We use the results to address key questions in string theory.

Wednesday 23 October

CERN COMPUTER COLLOQUIUM

at 16.30 hrs – Auditorium*

Quasirandom points: How to do better than Monte Carlo

by Harald NIEDERREITER / Austrian Academy of Sciences

Quasi-Monte Carlo (QMC) methods can be viewed as deterministic versions of Monte Carlo (MC) methods and are based on the use of quasirandom points. QMC methods offer two advantages over MC methods: determinism and increased accuracy. QMC methods for multivariate integration have recently come into the limelight because of widely publicized work on the average-case complexity of multivariate integration and because of the spectacular progress in the area of lattice rules. In both cases, we are dealing with surprisingly efficient methods for which the error bounds are well below the MC bounds. We will review these developments, as well as related work on the construction of high-quality quasirandom points and on the theory of (t, m, s) -nets and (t, s) -sequences, which are point sets and sequences with strong uniformity properties. We will also touch upon other applications of quasirandom points to difficult numerical problems.

Prof. Niederreiter is director of the Institute for Information Processing of the Austrian Academy of Sciences in Vienna, and is well known for his extensive research in mathematics and computing. In addition to being professor of mathematics in Austria, he has also held positions at the University of Illinois, UCLA, and the Princeton Institute for Advanced Study. He has written four books including the forthcoming 'Random Number Generation and Quasi-Monte Carlo Methods.'

*Coffee and tea will be served at 16.00 hrs.

Jeudi 24 octobre

PRESENTATION

à 14.00 h – Amphithéâtre AT

bât. 30, 7e étage

APPLE COMPUTER Suisse (Industrade AG) présentera le nouveautés de cette année: NoteBooks, stations avec CPU 68040, nouvelles générations d'imprimantes laser, scanner et nouveau Classic.

Pour informations: F. Saldana/ECP/7156 ou F. Ovett/AS/8138

Friday 25 October

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Jet topology and new jet counting algorithms

by S. CATANI / CERN

A QCD theoretical analysis of jet cross sections is presented. We discuss in detail the JADE (invariant mass-type), Geneva and $k_{\perp}$ algorithms for multijet cross sections in e^+e^- annihilation, with emphasis on hadronization effects and large perturbative corrections at small values of the jet resolution parameter y_{cut} . For the $k_{\perp}$ algorithm we present results of calculations which include resummation of leading and next-to-leading logarithms of y_{cut} to all orders in QCD perturbation theory.

Monday 28 October

PREPARATORY LHC MEETING

at 09.30 hrs – Auditorium

This is a preliminary information meeting open to all interested physicists involved in the LHC experimental programme; its aim is to prepare for the general LHC meeting in Evian from 5 to 8 March 1992. These are the first steps towards establishing an experimental programme at the LHC. Details of the Evian meeting will be available at a later date.

09.30	C. Rubbia	The LHC Experimental Strategy
10.30	G. Brianti	Status of LHC Machine
11.00	Coffee break	

11.30	K. Potter	Experimental Programme and Machine Performance
12.00	L. Leistam	Experimental Areas
12.45	Lunch	
14.00	G. Petrucci	Detector Magnet Studies
14.30	E. Iarocci	Detector R&D Projects
15.30	Tea	
16.00	M. Ferran	Computer Aided Detector Design
16.20	P. Sharp/or F. Bourgeois	The Microelectronics User Group
16.40	G. Flügge	Guidelines for the CERN-ECFA meeting 'Towards the LHC Experimental Programme'

Tuesday 29 October

DETECTOR R & D COMMITTEE

Open session

at 09.00 hrs – Auditorium

1. RD-1 Status Report: 'Scintillating fibre calorimetry at the LHC' (Cagliari Univ./INFN-CERN-Clermont Ferrand-Lisbon LIP-Marseille CPPM-Naples Univ./INFN-Orsay LAL-Palaisau Ecole Polytechnique-Paris VI and VII-Pavia Univ./INFN-Rio de Janeiro-UC San Diego-Weizmann Inst.; J.M. Gaillard).
2. Proposal: 'To continue studies on lead/scintillating fibres calorimetry(LFC)' (Bologna Univ./INFN-CERN/LAA-Haut Commissariat à la Recherche, Ain Oussara, Algerie-IHEP, Beijing-Inst. for Physical Problems, Moscow-Inst. of Atomic Physics, Bucarest-Frascati-Napoli-Torino Univ./INFN-Cornell-World Lab. Fellowships, Lausanne; DRDC 91-43/P32; A. Contino).
3. RD-6 Status Report: 'Integrated high-rate transition radiation detector and tracking chamber for the LHC' (Brookhaven Nat. Lab.-CERN-Dubna JINR-Lund-Moscow Eng. Phys. Inst.-Moscow Lebedev Phys. Inst.; B. Dolgoshein).
4. Proposal: 'Optoelectronic analogue signal transfer for LHC detectors' (Birmingham-CERN-Ecole Polytechnique Fédérale de Lausanne-Marconi Defence Systems, GEC Marconi Ltd., Stanmore-Imperial College London-Lund-Oxford-RAL; DRDC 91-41/P31; G. Stefanini).
5. Proposal: 'Applications of the scalable coherent interface to data acquisition at LHC' (CERN-Oslo-La Sapienza & INFN, Roma-Inst. of Nuclear Research, Moscow-Dolphin Server Technology A.S., Oslo-Digital Equipment Corp.-Creative Electronic Systems, Geneva-Radstone Technology plc, Towcester; DRDC 91-45/P33; H. Müller).

Closed session

Tuesday 29 October (following the Open session)
and Wednesday 30 October
at 09.00 hrs – 6th floor Conference Room, Admin.
Building.

Mardi 29 octobre

PRESENTATION

à 14.00 h – Amphithéâtre CN
bât. 31/3-005

PCAD

Compagnie: AURIS

PCAD version 5, les nouveautés - Présentation AURIS

PCAD et le réseau Ethernet - Présentation CERN

Responsable: Daniel Péron/CN

Organisateur: Attila Koppanyi/CN/4933/
attila@cernvm

Tuesday 29 October

CERN PARTICLE PHYSICS SEMINAR

at 16.30hrs – Auditorium*

Summary of the Finland Workshop on electron-positron linear colliders

by R. SETTLES / MPI Munich

The conclusions of the 'Workshop on physics and experiments with linear colliders', 9-14 September in Saariselka, Finland are presented. The physics potential of 500 GeV e^+e^- annihilations are reviewed; the main points center on the standard model:

- study of its known parts [QCD, $SU(2) \times U(1)$],
- measurement of [top] and search for [Higgs] its missing links,
- a precision test of what is beyond [minimal supersymmetry].

An overview of technological possibilities and developments for the machine is given; one design could be realized in a decade.

* Tea and coffee will be provided at 16.00 hrs

Wednesday 30 October

3RD MEETING OF THE ECFA WORKING GROUP ON BEAUTY PHYSICS AT HADRON MACHINES AND LEP

at 09.00 hrs – AT Auditorium
bldg 30, 7th floor

09.00 Introduction

Report from Theory subgroup

09.10 Introduction

A. Pich, 5 min

09.20 Measuring CP-violation with B_s decays

R. Aleksan, 20 min

09.45 CP-violation with B-flavoured decays

I. Dunietz, 20 min

10.10 Machine problems

L. Camilleri, 15 min

10.30 Coffee

R&D projects for LHC

- 10.50 Recent results from P238
15 min
- 11.10 P28: Microvertex trigger
15 min
- 11.30 P29: Beam extraction with channeling
G. Carbone, 15 min
- 11.50 P30: Optical impact parameter trigger
J. Derre, 15 min
- 12.10 The WA92 microvertex and trigger system: recent
results
R. Hurst, 30 min
- 12.45 Lunch
- 14.00 B-physics at LHC in collider mode
45 min
- 14.50 B-physics at LHC in FT. mode
45 min
- 15.40 Coffee

- 16.00 Perspectives for B-physics at LEP
G. Mikenberg, 40 min
- 16.50 Discussion
- 17.30 End of meeting

Wednesday 30 October

The Theoretical Seminar will be replaced by a
DISCUSSION MEETING

14.00 - 17.00 h – Auditorium

**Particle physics and life sciences: is a marriage
conceivable?**

Contact person: S. Fubini/TH/2416

TRAINING AND EDUCATION ENSEIGNEMENT

ACADEMIC TRAINING

Tel: 2844-3674

Lectures series for Postgraduate students

21, 23, 25, 29 & 30 October

10.30-12.00 hrs – Auditorium

Electro-weak Interactions

by R. KLEISS / CERN-TH

ENSEIGNEMENT GENERAL

Tél. 5811 ou 2844 (le matin)

Jeudi 24 octobre

de 13.00 à 13.30 h – Amphithéâtre

Science pour tous

par Rafel CARRERAS



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Séminaire Technique

Mise à jour de PCAD 4.5 à PCAD 5.0

Une journée dans la semaine du 11 au 15 novembre

Ce séminaire est destiné aux utilisateurs de PCAD qui
désirent se familiariser avec les nouvelles possibilités
offertes par la version 5.0. Il traitera notamment des
points suivants:

- Gestion de mémoire jusqu'à 16 M
- Sauvetage automatique de fichiers
- Menu personnalisé
- Nom de 'net' automatique (alimentation)
- Changement dutype de 'pin' en fonction du 'net'
- Effacement de 'wires'
- Interrogation de 'padstack'
- Push-Pop dans PCCARDS
- Nouveaux utilitaires.

Une contribution financière de CHF 200,- sera de-
mandée aux divisions.

Les personnes qui désirent s'inscrire à ce séminaire sont
priées d'utiliser le formulaire de demande de formation
disponible auprès des Secrétariats de division et de
l'Enseignement Technique.