

SEMINARS

SEMINAIRES

Monday 17 May

ISOLDE EXPERIMENTS COMMITTEE

Open session

at 14.00 hrs – Council Chamber

1. Introductory remarks by the Chairman.
2. Proposal: Study of the ν correlation in Fermi beta decay; a probe for scalar weak interactions (Univ. of Washington-GSI Darmstadt-Univ. of Aarhus-Lawrence Berkeley Laboratory-ETH Zürich); ISC 93-18-P50; E. Adelberger.
3. Letter of Intent: Accurate mass measurement of halo nuclei (CSNSM/IN2P3-Orsay-Aarhus-Bucharest-CERN-Göteborg-Mainz-Montreal-IPN/IN2P3 Orsay); ISC 93-8/I 5; M. de Saint Simon.
4. Proposal: Decay of hot nuclei at low spins produced by antiproton-annihilation in heavy nuclei; SPSLC 93-8/P274, PS203 (U. Jahnke). Referred to the ISC by the Chairman of the SPSLC.
5. Progress Report (H. Ravn).
6. Coordinator's report (O. Tengblad).

Closed session

Monday 17 May after the Open Session 6th Floor, Main Building, continuing on Tuesday 18 May from 10.00 hrs.

Tuesday 18 May

OPEN MEETING OF THE ISOLDE COLLABORATION

at 14.00 hrs – PS Auditorium*
bldg 6/2-024

Open discussion

Introduction

by G. WALTER

Progress on the problem of the shock waves in molten metal targets

by J. LETTRY

Yields and delays at the Booster ISOLDE

by P. DRUMM

New target materials and ionization of beryllium

by J. BARKER

Schedule and Status of the separator facility

by O. TENGBLAD

Orientations for future developments in target/ion sources techniques

by H. RAVN

Possible applications of an RF mass spectrometer at ISOLDE

by M. de Saint Simon

Please note that this open meeting of the collaboration takes place the day following the meeting of the ISOLDE Scientific Experiments Committee, on Monday 17 May.

* Please note change of place

Tuesday 18 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Rare b decay studies with CLEO: $b \rightarrow s\gamma$ and $b \rightarrow u\ell\nu$

by E. THORNDIKE / University of Rochester

The exclusive radiative penguin decay $B^ \rightarrow K^*(892)\gamma$ has been observed. An improved upper limit on the inclusive process $b \rightarrow s\gamma$ has been obtained. Implications of these results for charged Higgs and anomalous $W^+W^-\gamma$ couplings will be discussed. A result for V_{ub} using lepton endpoint analysis for $b \rightarrow u\ell\nu$ will be presented, and a new approach to $b \rightarrow u\ell\nu$ involving "neutrino detection" will be described.*

* Tea & coffee will be served at 16.00 hrs.

Wednesday 19 May

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

String theory modifies quantum mechanics

by John ELLIS / CERN

Nick Mavromatos, Dimitri Nanopoulos and I show that, in string theory, transitions between initial- and final-state density matrices for light observable particles involve non-Hamiltonian terms $\delta\mathcal{H}$ in their time evolution, and are described asymptotically by a $\$$ matrix that is not factorizable as a product of field-theoretical S and $S^\dagger$ matrices. We exhibit non-trivial contributions to $\delta\mathcal{H}$ and the $\$$ matrix associated with monopole-antimonopole valley configurations on the world-sheet, that correspond to black hole creation and annihilation, and instantons that represent back-reaction via quantum jumps between black holes of different mass. These cause the density matrix to become mixed, suppressing off-diagonal terms. Such modifications of quantum mechanics could show up in the neutral kaon system, and violate CPT.

Monday 24 May

PPE SEMINAR

at 16.30 hrs – Auditorium

Present Status of the Polarized Electron Run of SLC; SLD Results from '92 on $A_{1\tau}$ and R_b

by Rafe H. SCHINDLER / SLAC

The present status of the '93 SLC run is presented, including performance of the polarized electron source and spin transport. Plans for the '94 run are discussed, including SLC luminosity and polarization improvements. Measurement of $A_{1\tau}$ in '92 and preliminary measurements of R_b using the silicon CCD-vertex chamber are presented.

Tuesday 25 May

PRESENTATION

at 16.00 hrs – CN Auditorium
bldg 31/3-005

Vectors, Clusters and MPPs from CONVEX

Convex Computer's recently announced Scalable Parallel Processor

by F. BAETKE / Director of European Marketing,
Convex

The talk will present the CONVEX strategy for providing support for vector, cluster and parallel computing with the existing Convex C Series of supercomputers, the Meta Series which includes integrated clusters of Hewlett Packard workstations, and the recently announced Scalable Parallel Processing (SPP) System, which uses the fastest PA-RISC processors.

Tuesday 25 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

ALEPH results on a new high precision measurement of the Z hadronic cross-section

by John RANDER / DAPNIA-SPP, CE Saclay,
France

Measurements of the Z hadronic cross-section at LEP are limited by the precision of the luminosity determination. SICAL, a new silicon-tungsten calorimeter installed in ALEPH in September 1992, has an experimental luminosity precision of better than 0.2 %. First results from the new detector permit a more precise determination of the number of light neutrino species.

* Tea & coffee will be served at 16.00 hrs.

Wednesday 26 May

DETECTOR R&D COMMITTEE

Open session

at 09.00 hrs – Council Chamber

1. RD-11 Status Report: Embedded architectures for second-level triggering [EAST] (NIKHEF–Inst. for Atomic Physics & Polytechnic Inst. Bucharest–Central Res. Inst. for Physics Budapest –CERN–NBI Copenhagen–RAL–LHSE, JINR Dubna–Inst. für Angewandte und Tech. Informatik Jena–Inst. of Nucl. Phys. Krakow–LIP Lisbon–Royal Holloway & Bedford New College London–Manchester–Inst. of Computer Science V Mannheim–Ecole Polytechnique Palaiseau–Acad. of Sciences Prague–Utrecht–Weizmann Inst. Rehovot–IHEP Zeuthen; DRDC 93-12; R.K. Bock).
2. RD-12 Status Report: Readout system test benches (CERN–HEP SEFT Helsinki–Tampere Univ. of Technology–LAPP Annecy–Padova–Pavia–Ecole Polytechnique; DRDC 93-22; S. Cittolin).
3. RD-13 Status Report: A scalable data taking system at a test beam for LHC (CERN–IN2P3 Marseille–Pavia–STEN, C.E. Saclay; DRDC 93-25; L. Mapelli).

4. RD-16 Status Report: A digital front-end and readout microsystem for calorimetry at LHC (CERN–Linköping–Manne Siegbahn Inst. of Phys. Stockholm–Ec. Poly. Milan–Pavia–LPNHE Univ. Paris VI–VII–Stockholm Univ.–SiCon AB, Linköping–ABB Hafo AB, Järfälla–Swedish MicroSystems AB, Linköping; DRDC 93-21; B. Lofstedt).
5. RD-24 Status Report: Application of the scalable coherent interface to data acquisition at LHC (CERN–Lecce–Oslo–Rome–IHEP Protvino–DEC Joint Project at CERN–Dolphin SCI Technology A.S., Oslo–Creative Electronic Systems, Geneva–Apple Computer Inc., Cupertino; DRDC 93-20; A. Bogaerts).
6. RD-25 Status Report: Continuing studies on lead/scintillating fibres calorimetry (LFC) (Haute Comm. Recher. Ain Oussura, Algeria–Beijing HEP Inst.–Bologna–CERN/LAA–Cornell–Frascati Nat. Lab.–Pisa–Torino–World Laboratory; DRDC 93-26; A. Contin).

Closed session

following the Open Session continuing on
Thursday 27 May at 09.00 hrs – 6th floor
Conference Room, Administration building

Mercredi 26 mai

PRESENTATION TECHNIQUE

09.00 - 16.30 h – bât. 24/1-016

Séminaire automation industrielle

par BACHOFEN SA (CH)

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|---------------|---|
| 09.00 – 09.30 | Généralité Bachofen SA , exposé 30 min. – ses produits et ses services |
| 09.45 – 11.30 | Entraînement, exposé 3×30 min. – hydraulique – pneumatique – électrique |
| 14.00 – 14.45 | Electricité, exposé 20 min. – connecteurs – relais – détecteurs proximité et exposé 25 min. – régulateurs AC/ID |
| 15.00 – 15.45 | Instrumentation, exposé 3×15 min. – capteurs température – capteurs pression – capteurs débit |
| 16.00 – 16.30 | Régulation, exposé 2×15 min. – de pression – de débit (air, eau, gaz, vapeur) |

Langue : français.

Renseignements : M. Diraison / FI-A / 4585

Wednesday 26 May

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Properties of the long-range forces in QCD : results of a non-perturbative lattice investigation

by Edwin LAERMANN / Universitaet Bielefeld

Strong confining forces between quarks are discussed. Topics include the confining potential, spin-dependent forces and gluon as well as quark distributions inside the flux tube between heavy quarks. The numerical results which will be presented are obtained from a lattice investigation in full QCD.

Thursday 27 May

CERN COLLOQUIUM

at 16.30 hrs – Auditorium*

The CERN study of an electron-positron Linear Collider

by Wolfgang SCHNELL / CERN-SL

Electron-positron colliders above 200 GeV have to be linear machines, to avoid synchrotron radiation. The impossibility of particle storage in such a collider makes it difficult to achieve adequate luminosity. Stimulated by great physics interest several studies worldwide, pursuing different technological approaches, are in progress. The CERN study — known under the heading of CLIC for CERN linear collider — aims at a 2 TeV (center of mass) collider in the long term but concentrates, now, on a 500 GeV first stage for which the 30 GHz two-beam system developed by us appears to be very suitable. This study will be put in perspective by comparison with others. Results, including experimental tests, will then be reported including the main linacs (accelerating structure, wake-field stabilization, submicron beam position measurements, automatic alignment, dark-current simulation), the drive beam (beam dynamics, generation, acceleration, power transfer to the main linac) and the final focus system.

* Tea & coffee will be served at 16.00 hrs.

Vendredi 28 mai

PRESENTATION TECHNIQUE

09.00 to 12.00 hrs – Amphithéâtre CN
bât. 31/3-005

Acquisition et traitement numérique de données sur PC, matériel et logiciel

par BURR-BROWN SA (CH)

Série PCI- 20'000, matériel d'acquisition de données sur bus XT et AT (ISA). Série PCI-20'200, matériel de traitement numérique (DSP) sur bus XT et AT (ISA). Série PCI-20'500, matériel d'acquisition de données sur bus AT (ISA) et EISA. Série PCI-700, matériel d'acquisition sur NuBus (Mac II). Drivers pour DOS, Windows et LabVIEW 2. DIA/DAGO: logiciel d'acquisition et de traitement avec présentation graphique. Labtech Notebook pour DOS et Windows. Quinn-Curtis: science & engineering tools + real time graphics.

Langue: anglais

Renseignements: M. Diraison / FI-A / 4585

Friday 28 May

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

QCD phenomenology with massive gluons

by J.H. FIELD / Geneva University

In conventional QCD phenomenology, the infra-red mass singularities are controlled by the Lambda parameter. In an on-shell renormalisation scheme this regularisation is shown

to be equivalent to the introduction into the theory of massive quarks and a massive gluon. Two analyses sensitive to the gluon mass are presented. The first, based on QCD radiative corrections, uses the results of several experiments with a wide range of scales : $M\tau \rightarrow Mz$. The second, more direct, uses the recent results of the ARGUS and CRYSTAL BALL collaborations on Upsilon(1S) radiative decays. A consistent value of about 1.2 GeV for the gluon mass is given by the two independent analyses. The resolution, by gluon mass corrections, of the longstanding problem of the determination of alphas from decay branching ratios of the J/ψ and Upsilon(1S) is also presented.

Tuesday 1 June

SPS AND LEAR EXPERIMENTS COMMITTEE

Open session

at 09.00 hrs to be continued at 14.00 hrs – Auditorium

1. Proposal P274 - Decay of hot nuclei at low spins produced by antiproton-annihilation in heavy nuclei (HMI, Berlin - TU, München - GANIL - Warsaw Univ. - CERN; SPSLC 93-8 / P274) : D. Hilschler.
2. Status report on NA44 - A focussing spectrometer for one and two particles : H. Bøggild.
3. Status report on NA43/2 - Investigations of the coherent hard photon yields from (50-300) GeV/c electrons/positrons in the strong crystalline fields of diamond, Si and Ge crystals : E. Uggerhøj.
4. Status report on PS194/3 - Measurement of stopping power and single ionisation cross-sections for antiprotons at low energies : E. Uggerhøj.
5. Status report on CPLEAR - Tests of CP violation with $\bar{K}^0$ and K^0 at LEAR : P. Pavlopoulos.
6. Status report on SMC - Measurement of the spin-dependent structure functions of the neutron and proton : V. Hughes.

Closed session

on Tuesday 1 June at 15.00 hrs to be continued on Wednesday 2 June – 6th floor Conference Room, Administration building (bldg 60)

Friday 4 June

PLENARY ECFA MEETING

at 09.30 hrs – Council Chamber

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| 09.30 | 1. Approval of the Draft Minutes of the Fifty-second Plenary ECFA Meeting |
| | 2. Approval of the Draft Agenda |
| | 3. Chairman's Report |
| 10.30 | Coffee |
| 11.00 | 4. LHC – Progress Report (G. Brianti) |
| | 5. LHC Experimental Programme (W. Hoogland) |
| 12.30 | Lunch |
| 14.00 | 6. SSC – Status and Experimental Programme |