

SEMINARS

SEMINAIRES

Monday 28 June

PPE SEMINAR

at 16.30 hrs – Auditorium

Precision measurement of $\Gamma(b\bar{b})/\Gamma(\text{had})$ from ALEPH

by Elizabeth MANNELLI / INFN Pisa (ALEPH Collaboration)

Results from the ALEPH experiment for the branching fraction of $Z \rightarrow b\bar{b}$ relative to all hadronic decays of the Z are presented. These results exploit leptons, event shape variables and large impact parameter charged tracks as signatures of beauty.

Tuesday 29 June

LEP EXPERIMENTS COMMITTEE

at 09.00 hrs – Auditorium

Open session

09.00–09.25 Report on LEP operation (S. Myers)

09.25–09.40 Report from SLC (M. Breidenbach)

Status Reports on the Experiments

09.40–10.00 L3

10.00–10.20 OPAL

10.20–10.40 DELPHI

10.40–11.00 ALEPH

11.00–11.30 Coffee break

11.30–12.00 Proposal for a new vertex detector for ALEPH

12.00–12.30 Proposal for the DELPHI very forward tracker

12.30–13.00 Proposal for a synchrotron radiation test mask in DELPHI (G. von Holtey)

Closed session

at 14.00 hrs – 6th Floor Conference Room,
Administration building

Tuesday 29 June

PRESENTATION

at 10.00 hrs – CN Auditorium

bldg 31/3-005

Next Generation PowerPC and MC68060

by Motorola Inc.

PowerPC:

– The alliance Apple, IBM, and Motorola

– Architecture, register model, and internal structure

– Development tools and software products

– PowerPC in embedded-control applications

– Evolution of the family for high-performance applications

– Status on current chip designs

MC68060:

– The MC68060 as compatible CISC solution for high performance within the 68k family

– Technical overview of the MC68060

– Support and tools

– Status on the development of the MC68060

The presentation will be given in English, questions in French are welcome.

Tuesday 29 June

TECHNICAL PRESENTATION

at 14.00 hrs – CN Auditorium

bldg 31/3-005

Demonstration of an application of control using a Macintosh running LabVIEW involving a VME and a CAMAC crate interconnected via VICbus

by M. WEYMAN & J.R. DUNAND / Creative Electronic Systems

Automatic procedures for data acquisition and instrument control of high energy physics experiments can lead to a difficult task and a significant waste of time and energy for the engineer. LabVIEW is a user-friendly high-level programming tool that allows you to control a remote experiment (up to 100 meters) from a Macintosh through VICbus (ISO/IEC 26.11458). CES provides a library of I/O and utility VIs that communicate to CAMAC and VME crates through the VICbus. The configuration involves the use of CES MAC7212 (Nubus to Macintosh), VIC8250 (VME to VICbus) and VCC2117 (CAMAC to VICbus) interfaces. Some demo applications involving a hardware test bench containing a VME crate, a CAMAC crate and a Macintosh containing a MAC7212 interconnected via VICbus will be presented.

Wednesday 30 June

PS SEMINAR

at 14.30 hrs* – PS Auditorium

bldg 6/2-024

Ion low energy accumulator ring for LHC

by Pierre LEFEVRE / CERN-PS

To reach the required luminosity for Pb-Pb collisions in the LHC, the Pb ions have to be accumulated and cooled at lower energy. The scheme using existing LEAR or a LEAR-like ring will be presented. The case of lighter ions with higher luminosities will also be considered.

* Please note new time !

Wednesday 30 June

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Non-commutative differential geometry and the standard model of electroweak interactions

by Florian SCHECK / CERN & University of Mainz

The general framework of Connes' non-commutative geometry (NCG) provides novel possibilities of extending Yang-Mills theories: spontaneous symmetry breaking becomes an intrinsic, geometric feature of the theory, the Higgs field is part of the gauge sector, the fermionic sector of the standard model is constrained in just the right way. I review the present state of this approach and compare the NCG standard model version of Connes and Lott to the alternative version developed by the Marseille-Mainz group.

Wednesday 30 June

COMPUTING SEMINAR

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

The impact of information technology in the 1990's

by David NORRIS / New Delivery Technology
Manager, Coopers & Lybrand, London

All enterprises, whether commercial, government or scientific research, are facing ever greater pressure to be more efficient and maximise use of limited resources. One of the great promises of Information Technology has been to significantly improve efficiency – but popular perception is that this promise has been oversold – resulting in high costs and limited benefits. The rate of change in the IT industry is accelerating and we are at the start of an explosion comparable to the advances in the aviation industry during World War II. The changes are in all areas of hardware (smaller, faster, cheaper...), software (object orientation,...) and communications (LAN's, ...). The new, vibrant industry leaders, such as Bill Gates, are again claiming that technology is poised to be one of the great 'all-purpose enablers'. In the past users expected leading vendors, such as IBM, to guide organisations through the minefield of emerging technologies. Today the user community needs to more self sufficient. The talk will review the challenges of the next decade and pointers will be provided to the likely winners and losers, and whether the enabling technology can truly be exploited.

Friday 2 July

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Inclusive decays of heavy flavours : the theory of pre-asymptotic effects

by M. SHIFMAN / University of Minnesota

A systematic expansion in $1/m_Q$ (m_Q is the heavy quark mass) allows one to calculate pre-asymptotic effects in the inclusive decays of heavy flavours in QCD, without invoking models. The approach suggested combines and generalizes the ideas used in QCD sum rules, deep inelastic scattering, etc. As an example, we consider the lepton spectrum in semileptonic decays. The end-point domain presents special interest, both theoretically and experimentally. We compare our predictions with those of popular models.

Monday 5 July

AS SEMINAR

at 10.00 hrs (English)
at 14.00 hrs and 16.00 hrs (French)
CN Auditorium, bldg 31/3-005

BHT – Budget Holder's Toolkit – Version 3

by The BHT Development Team / CERN-AS

The Budget Holder's Toolkit is an important part of the AIS project. BHT Version 2 is already widely used throughout CERN for the follow up and tracking of expenditure throughout the organization. Version 3 has been developed based upon continual feedback from our user community and more importantly the recent introduction of the destination code for enhanced expenditure analysis.

This interactive demonstration will cover :

- Requirements for Version 3
- Reasons for the Destination (alias activity code / CGRB)
- Enhanced GUI Look and Feel (Graphics toolbars & outlining)
- Extended Functionality (e.g. support for Industrial Contracts)
- Version 3 expert mode

This talk is intended for registered users of BHT only.

The presentation will be given three times. Once in English at 10.00 hrs and in French at 14.00 hrs and 16.00 hrs

Note : A more comprehensive course concerning the interpretation of financial data using BHT is under development in conjunction with Finance Division & Technical Training services.

Monday 5 July

PPE SEMINAR

at 16.30 hrs – Auditorium

Status report from E791 and prospects for physics with a D-meson beam

by Michael D. SOKOLOFF / University of Cincinnati

Fermilab experiment E791 recorded over 20 billion πN interactions in the last fixed-target running period. We have reconstructed more than 10% of the data, and project a total reconstructed charm sample on the order of 200,000. We expect to measure charm production characteristics, semileptonic and hadronic decays with the world's best precision. We are also studying $D^0 - \bar{D}^0$ mixing and searching for flavor changing neutral currents. I will show some preliminary signals related to these analyses. I will also discuss the physics prospects for a future experiment where we can collect a significantly larger charm sample and in which we can also measure the inelastic cross-sections of D-mesons incident on nuclear interaction targets 0.6 cm – 1.6 cm beyond the production target. It should be possible to reconstruct a thousand such signal events with good signal-to-background. By varying the separation of the D production and interaction targets, one can extract various differential and particular cross-sections. By varying the material of the interaction target, one can measure the A-dependence as well.