

# SEMINARS SEMINAIRES

## Monday 4 September

### 3<sup>RD</sup> CERNVM MIGRATION USER MEETING

at 14.00 hrs – CN Auditorium, bldg 31/3-005

#### Electronic Mail Services and User Training

by Miguel MARQUINA / CERN

This is the third of the series of User Meetings devoted to the Migration of the User Community off the CERNVM mainframe. This time we will concentrate on two topics which deserve special attention from the user point of view.

The first topic, an introduction to the new Electronic Mail Services being offered by CN Division, will cover two services. The first, based on a new mail client-server architecture which follows the latest Internet specifications, is being targeted primarily at the UNIX community. This will be followed by a presentation of the MS Mail solution for the NICE community, and its potential evolution to MS Exchange in the next year. Since these presentations will inevitably be somewhat technical, we foresee a larger meeting on mail systems aimed at the general VM community at a later stage.

The second topic of the meeting will be a presentation of our current plans concerning user training for the alternative services offered as replacement to CERNVM.

The Agenda of the Meeting follows :

14.00 Introduction – Chris Jones

14.10 New Electronic Mail Services in UNIX – Dietrich Wiegandt

14.25 The MS Mail solution for the NICE Community – David Foster

14.35 Plans on User Training – Jan Hendrik Peters and Alan Silverman

15.00 Questions and User Feedback

15.30 Tentative End of Meeting

Further details about the meeting may be found in WWW under <http://consult.cern.ch/umtf/presentations>

## Monday 4 September

### PPE SEMINAR

at 16.30 hrs – Auditorium

#### Electroweak Measurements from D0

by Marcel DEMARTEAU / Fermilab

The cross sections for  $W \rightarrow \ell \bar{\nu}$  and  $Z \rightarrow \ell^+ \ell^-$  ( $\ell = e, \mu$ ) production in ppbar collisions at  $\sqrt{s} = 1.8$  TeV will be presented together with the width of the W-boson, derived from the ratio of these measurements. Direct measurements of the trilinear couplings (WW $\gamma$  and WWZ) of the electroweak gauge bosons are derived from the study of diboson production such as W $\gamma$ , W $^+W^-$  and WZ. These measurements test the non-abelian self-couplings of the W, Z and photon, one of the most direct consequences of the SU(2) $_L$   $\otimes$  U(1) $_Y$  gauge symmetry. Based on ppbar  $\rightarrow \ell \bar{\nu} \gamma + X$  ( $\ell = e, \mu$ ) events, ppbar  $\rightarrow W^+W^- \rightarrow \ell \ell' \nu \bar{\nu}$  ( $\ell = e, \mu$ ) and ppbar  $\rightarrow e \nu + \text{jets}$ , limits on anomalous WWZ and WW $\gamma$  couplings are derived. Also limits on ZZ $\gamma$  and Z $\gamma\gamma$  couplings are presented. A study of the extraction of  $\alpha_s$  from the measurement of W + jet production is briefly discussed.

## Tuesday 5 September

### LHCC REVIEW BOARDS (LCRB, LDRB, LERB)

#### Open session

at 09.00 hrs – Council Chamber

09.00 – 09.30 RD11 Status Report : Embedded architectures for second-level triggering [EAST] (NIKHEF-H Amsterdam–Inst. of Atomic Physics and Polytecnic Inst. Bucharest–Central Research Inst. for Physics Budapest–CERN–NBI Copenhagen–RAL–LHSE JINR Dubna–Inst. für Informatik Jena–Inst. of Nucl. Physics Krakow–Royal Holloway & Bedford New College London–Univ. College London–Manchester Univ.–Dept. of Computer Science V Mannheim–Inst. of Computer and Information Science Prague–Weizmann Inst. of Science Rehovot–Federal University Rio de Janeiro–Utrecht Univ.–Inst. of High Energy Physics Zeuthen; LHCC 95-45/LCRB Status Report/RD11; R.K. Bock).

09.30 – 10.00 RD13 Status Report: A scalable data taking system at a test beam for LHC (CERN–CPP Marseille–Budker Institute, Novosibirsk–Oxford–Pavia; LHCC 95-47/LCRB Status Report/RD13; L. Mapelli).

10.00 – 10.30 RD24 Status Report: Application of the scalable coherent interface to data acquisition at LHC (CERN–Dept. of Physics, Univ. of Oslo–LBL Berkeley–INFN La Sapienza Rome–INFN Lecce–IHEP Protvino–Univ. Valencia–Polytechnical Univ. of Valencia–RAL–Univ. Manchester–CIEMAT Madrid–Dolphin Inter-connect–Solutions A.S. Oslo–Digital Equipment Corporation, Joint Project at CERN–Apple Computer Inc. Cupertino–Thomson–TCS Semiconducteurs Specifiques Orsay; LHCC 95-42/LCRB Status Report/RD24; H. Müller).

10.30 – 11.00 RD34 Status Report: Construction and Performance of an Iron-Scintillator Hadron Calorimeter with Longitudinal Tile Configuration (Argonne National Laboratory–Institut de Fisica d'Altes Energies, Univ. Autònoma de Barcelona–Univ. of Chicago–IAP Bucharest–LPC Clermont-Ferrand–CERN–JINR Dubna–Univ. of Illinois–LIP & Univ. Lisbon–Michigan State Univ.–Pisa Univ. and INFN–Charles Univ. & Academy of Science Prague–IHEP Protvino–COPPE/EE/UFRJ Rio de Janeiro–Stockholm Univ.–IFIC Valencia–Univ. of Texas Arlington–Yerevan Physics Institute LHCC 95-44/LDRB Status Report/RD34; M. Nessi).

11.00 – 11.30 RD42 Status Report: Development of diamond tracking detectors for high luminosity experiments at the LHC (MPI Heidelberg–LEPSI, CRN Strasbourg–Rutgers Univ. Piscataway–CPPM Marseille–Inst. für Hoch-energiephysik, Akademie d. Wissenschaften Vienna–Ohio State–Bristol–Los Alamos Nat. Lab.–CERN–Sandia National Lab. Livermore–Lawrence Livermore Nat. Lab.–Pavia–Univ. of Toronto; LHCC 95-43/LDRB Status Report/RD42; H. Kagan).

11.30 – 12.00 Proposal : High Energy physics processing using commodity components [HEP PC] (U. A. Barcelona–CERN–JINR Dubna–Florida State–Faculté des Sciences de Luminy–U.C. Santa Cruz–Univ. Washington; LHCC 95-46/P61/LCRB; M. Delfino).

## Tuesday 5 September

### CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium\*

#### **Evidence for neutrinos oscillations from muon decay at rest**

by H. WHITE / Los Alamos

An experiment has been conducted at Los Alamos to search for  $\bar{\nu}_\mu$  from positive muon decay at rest. A high intensity low energy pion source has been used to provide a source of neutrinos from  $\pi^+$  decay at rest.  $\pi^-$  are largely absorbed in this source in high Z material. The Liquid Scintillator Neutrino detector LSND has been used to search for  $\bar{\nu}_\mu$  from this source and an excess of events over that expected from conventional physics has been observed. This observation and the interpretation will be discussed.

\* Tea & coffee will be served at 16.00 hrs.

## Wednesday 6 September

### THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

#### **Some recent discoveries with the Hubble space telescope**

by John BAHCALL / Institute for Advanced Study, Princeton

This talk is based upon a series of images of different astronomical systems obtained with the repaired Hubble Space Telescope. It will be a smorgasborg of recent discoveries, including studies of : planets in our solar system, the oldest stars in the Galaxy, black holes in the centres of other galaxies, the evolution of galaxies to larger redshifts, gravitation lensing of quasars, and the host systems of quasars. The purpose of the talk is to acquaint the audience with some of the recent discoveries and to exemplify the power of the Hubble Space Telescope.

## Friday 8 September

### MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

#### **New results from Mueller's dipole formulation of small-x physics**

by G.P. SALAM / Cavendish Laboratory, Cambridge Univ.

In high-energy collisions of heavy quarkonia (or correspondingly, at very small  $x$  in deep inelastic scattering), exchange of the BFKL pomeron leads to a rapid growth of the cross-section, which violates unitarity. Mueller's dipole formulation of small- $x$  physics allows the calculation of unitarity corrections due to multiple pomeron exchange. These multi-pomeron contributions depend strongly on fluctuations of the quarkonium wave functions, which will be shown to be large. Results will be presented which take into account these fluctuations and they indicate that unitarity corrections set in gradually and only at very high energies.

## Monday 11 September

### PPE SEMINAR

at 16.30 hrs – Auditorium

#### **Measurements of electron capture and stripping cross sections for high energy heavy ions and their implications**

by Yudong HE / UC Berkeley/LBNL

The unique charge resolution attainable with BP-1 glass detectors allowed us to make measurements of cross sections

for electron capture and stripping of ultrarelativistic heavy ions at both BNL AGS and CERN SPS. These measurements permit a unique test for atomic collision theories at the ultrarelativistic regime. They are also of great practical interest to RHIC and LHC as the beam lifetime due to the beam loss will be intrinsically limited by capture processes and in particular by the electron capture from pair production. Recent nonperturbative calculations predicting higher cross sections are in disagreement with our data. The cross section for stripping is comparable with the prediction of Anholt and Becker's formula for Coulomb and transverse ionization. Our results imply that the electron capture from pair production will be the main mechanism for the beam loss at the future heavy ion colliders such as RHIC and LHC. Beam lifetimes seem to be long enough to be manageable.

## Tuesday 12 September

### SPS AND LEAR EXPERIMENTS COMMITTEE

#### Open session

at 09.00 hrs – Auditorium

1. Report on the COGNE-VIII meeting: B. D'Almagne.
2. Investigation of fast neutron production by 100 to 250 GeV muon interactions on thin targets (Norman Bridge Laboratory, Pasadena - Stanford University - CERN - Hahn-Meitner-Institut Berlin - University of Neuchatel; SPSLC 95-52 / M563 and SPSLC 95-62 / P293): N. Mascarenhas.

#### Closed session

after the Open Session, 6<sup>th</sup> floor Conference Room, Main Building

## Tuesday 12 September

### TECHNICAL PRESENTATION

at 09.30 hrs – CN Auditorium, bldg 31/3-005

#### **Digital Technical Briefing, "Debugging and Optimizing Alpha Programs"**

by S. CARNEY, C.W. HOBBS, J.-P. THIBONNIER

- 09.30 UNIX general meeting.
- 10.00 DECladebug Window Debugger for Digital UNIX. Jean-Pierre Thibonnier will present a live demonstration of the new debugger on Fortran and C programs.
- 10.45 Optimizing Programs on Alpha Platforms. CW Hobbs will examine the work on a number of physics programs and show how performance gains of 20% to 100% have been realized.
- 11.30 OpenVMS general meeting.

Organiser : S. Cannon / CN / 5036

## Tuesday 12 September

### CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium\*

#### **Review of recent results in B physics from Lepton-Photon Conference 1995 / Beijing**

by M. NEUBERT / CERN

A selection of B physics results from the 17<sup>th</sup> Lepton-Photon Symposium LP95 in Beijing is presented from a theorist's point of view. New and updated experimental measurements are summarized and interpreted in the context of the Standard Model and the Heavy Quark Expansion. The topics covered include : determinations of the elements  $V_{cb}$  and  $V_{ub}$  of the