

SEMINARS SEMINAIRES

Pour de plus amples informations, prière de consulter
For full information on these seminars, please see
<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

IT TRAINING PROGRAMME IN AUGUST

Our Training Programme continues in August 1997 with a series of UNIX-related topics.

In order to continue to schedule tutorials on the subjects you want, we have prepared a short questionnaire which we would like you to fill in and return to us. You will find a pointer to this questionnaire in our Training Web Page at URL:

<http://wwwinfo.cern.ch/support/training>

Please help us by answering this questionnaire, or send your suggestions to the following address:
IT-Training.Service@cern.ch

Miguel Marquina, Raul Ramos-Pollan
User Support - IT Division

Tentative Schedule

Fri, Aug 1 Basic Unix Commands / Unix File System

Tue, Aug 5 Basic Unix Commands / Jobs & Processes

Fri, Aug 8 Maintaining Fortran and C Code with Make

Tue, Aug 12 Managing your Source Files and Software Releases with CVS

Tue, Aug 19 Introduction to Java

Fri, Aug 22 Introduction to Perl 5

Tue, Aug 26 Introduction to Emacs

Please check the weekly schedule in every bulletin for more information

Monday 4 August

COSMOLOGY MEETING

at 14.00 hrs – TH Conference Room

Issues on leptogenesis

by Esteban ROULET / Valencia, Spain

I will present the scenarios in which the baryon asymmetry of the Universe is obtained by reprocessing, via the electroweak anomaly, a leptonic asymmetry produced in the decay of heavy singlet neutrinos. In particular, I will discuss issues related to the computation of the CP violation involved, the effects of mixing in the unstable neutrinos, the generalisation to supersymmetric models and some finite temperature effects.

Monday 4 August

PPE SEMINAR

at 16.30 hrs – Auditorium*

Future experiments at the BNL-AGS

by Milind VAMAN DIWAN / Brookhaven National Laboratory

I will discuss results from the current round of kaon experiments at BNL. Then I will talk about future possibilities to measure $K \rightarrow \pi \nu$ anti- ν in both charged and neutral mode, $\mu \rightarrow e$ conversion, and other kaon measurements using new capabilities of the accelerator.

*Tea & coffee will be served at 16.00 hrs.

Tuesday 5 August

IT TRAINING TUTORIAL

14.00-16.00 hrs – IT Auditorium, bld. 31/3-004

Basic Unix Commands / Jobs & Processes

by Miguel MARQUINA / CERN-IT

This lecture about basic Unix commands will focus on command execution in foreground, background and in batch. You will learn how to list and control all processes started by you. A basic introduction to the LoadLeveler batch system will be given which is being used on the public service CERNSP.

This is a repeat of the course given in 1995 and 1996.

Wednesday 6 August

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Detection of Relic Gravitational Radiation from String Cosmology

by Ramy BRUSTEIN / Ben Gurion University, Beer Sheva

Recent work has shown how the early Universe might behave, if superstring theories are a correct description of nature. One of the robust predictions of this "string cosmology" is that our present-day Universe would contain a stochastic background of gravitational radiation that might have large enough amplitude to be observable by ground-based gravity-wave detectors, which operate at frequencies above 10Hz. I explain how to use gravitational wave antennae to discover such a stochastic background and what we may hope to learn from such a discovery.

Friday 8 August

IT TRAINING TUTORIAL

14.00-16.00 hrs – IT Auditorium, bld. 31/3-004

Maintaining FORTRAN and C Code with Make

by Miguel MARQUINA / CERN-IT

Code maintainability is one of the important aspects to be considered in software development. There are special tools for this purpose currently being used by the CERN Program Library Office such as CVS, but there are also some others like the UNIX **make** utility which would allow to perform simple yet powerful operations to ensure that the libraries and programs you use are consistent with each other. This tutorial will show how to handle FORTRAN and C programs, force their compilation after given libraries have been modified, or how to compile only the pieces of code which have been changed.

Basic UNIX knowledge and understanding of a programming environment (such as the typical of a Physics Collaboration) is required; the tutorial is targeted to scientists who need to interact and use the software environment set by the corresponding Librarians.

Friday 8 August

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Cp violation: unitarity and the weak phase(s)

by Paolo CHRISTILLIN / Università di Pisa

The K matrix formalism is used to provide an alternative description of the K-Kbar phenomenology, by treating decay channels and mass matrix terms on the same footing. Such a phase independent formulation can be used to discriminate among various alternatives. It is shown that CP violation can be neither of superweak nor of electromagnetic origin but can come only from milliweak interactions. The phase of η is predicted to be $\tan^{-1} [2(m_L - m_S)/\Gamma]$. This sets upper limits of $O(10^{-5})$ on possible CPT violation effects, which can contribute to the relative mass difference only to $O(10^{-19})$, so that no test will come from F1 factories working at a 10^{-4} precision level. The formalism is extended to the B-Bbar system. The phases of the CP violation parameters η are not connected here to Δm and $\Delta\Gamma$, determined by the bulk of the non-CP-eigenstate decay channels.

Tuesday 12 August

IT TRAINING TUTORIAL

14.00-16.00 hrs – IT Auditorium, bld. 31/3-004

Managing your Source Files and Software Releases with CVS

by Raul RAMOS POLLAN / CERN-IT

CVS provides the functions necessary to manage software releases and to control concurrent editing among multiple software developers. It automates the storing, retrieval, logging, identification and revisions of complete sets of files. Directories and files can be combined together to form a

software release and you can maintain the complete hierarchy of software releases that makes up the evolution of a project.

This tutorial will give a first introduction into the basic concepts of using CVS for you needs from an individual and a workgroup point of view. No previous knowledge is required but some insight into software or document development processes would be desirable.

Thursday 14 August

SL SEMINAR

at 16.00 hrs – SL Auditorium, Prevessin, bldg. 864

Energy Loss of Proton and Lead Beams in the CERN SPS

by Albert HOFMANN / CERN

The energy loss of an unbunched beam circulating in the CERN SPS was measured by observing the central frequency change of a longitudinal Schottky signal as a function of time. The dominant processes which determine the energy loss are synchrotron radiation, parasitic mode loss due to the longitudinal impedance and ionization in the rest gas.

The protons in a Pb nucleus radiate coherently and therefore the synchrotron radiation loss is proportional to Z^2 . The parasitic mode loss and the ionization also have this dependence and significant differences between protons and Pb ions are therefore expected.

The experiment and the results are described and compared with the expectations. Possible consequences for high energy ion accelerators are discussed.

** Coffee and tea will be served at 15.30 in front of the auditorium*