

Tuesday 14 September

SPS AND PS EXPERIMENTS COMMITTEE

Open Session

at 09.00 hrs – Auditorium, bldg 500

1. Status report from WA95 : P. Zucchelli. 30min
2. Status report from WA96 : L. Camilleri. 30 min
3. Search for $\nu_\mu \rightarrow \nu_e$ oscillation at the CERN PS (SPSC 99-26/P311): P. Loverre. 30 min
4. ICANOE (Imaging and CALorimetric Neutrino Oscillation Experiment) – A proposal for a CERN-GS long baseline and atmospheric neutrino oscillation experiment (INFN/AE-99-17, CERN/SPSC 99-25/P314): C. Rubbia, G. Barbarino, A. Rubbia. 60 min
5. OPERA (Progress Report) – A long baseline ν_τ appearance experiment in the CNGS beam from CERN to Gran Sasso (CERN/SPSC 99-20/M635, LNGS-LOI 19/99): A. Ereditato. 30min

Closed Session

at 14.00 hrs and Wednesday 15 September at 09.00 hrs, 6th floor Conference room, Main Building, bldg 60

Tuesday 14 September

IT INFORMATICS TUTORIAL

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

The Java Series: Java RMI and Corba

by Raul RAMOS POLLAN / CERN-IT

Java RMI and CORBA are two similar mechanisms through which programmers can use objects running on remote machines as if they were running locally. They constitute one cornerstone on distributed OO computing.

CORBA is the industry standard available for a variety of languages and platforms. Java RMI is Sun's implementation of the same ideas but restricted to Java applications. This tutorial will show the main ideas behind both of them and will illustrate them with significative examples. We will be creating objects of different applications running on different machines, and we will be invoking methods on the foreign application. It will also show the differences between Java RMI and CORBA and how they are converging.

The tutorial is open to everyone. Attendants are required to have basic knowledge of OO programming and Java.

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

Organisers: M.Marquina and R.Ramos /IT-User Support

Tuesday 14 September

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium, bldg 500*

Highlights of the Stanford LP99 Symposium

by Eusebio SANCHEZ-ALVARO / CERN-EP

The latest results in high energy physics presented at LP99 will be reviewed. Among the topics that will be covered are

heavy quark physics, neutrino physics, precision electroweak measurements and searches for new phenomena.

Organiser : Jasper KIRKBY / EP Division

* Tea & coffee will be served at 16.00 hrs.

Wednesday 15 September

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

Creation of matter after inflation

by Andrei LINDE / Stanford University and CERN

According to inflationary theory, all matter in the universe was created in the process of reheating after inflation. Recently it was realized that reheating is a nonperturbative effect which often involves creation of particles in the process of parametric resonance. This process, which is called "preheating," is especially efficient if the created particles are bosons, but nonperturbative production of fermions is also possible. We will describe the mechanism of instant preheating which may lead to production of particles with masses up to the Planck mass 10^{19} GeV. We will also discuss the theory of nonthermal phase transitions induced by preheating, and the problem of overproduction of gravitinos and other dangerous relics.

Thursday 16 September

THURSDAY SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

The entropy of the QCD plasma

by E. IANCU / CERN

Asymptotic freedom suggests, and lattice calculations confirm, that at sufficiently high temperature or density, QCD should behave as a plasma of weakly interacting quarks and gluons. It thus appears as a surprise that the straightforward perturbative expansion of the pressure is very poorly convergent, and does not seem to be of any quantitative use for all temperatures of interest. I argue that such a poor convergence is to be related to large collective effects, which should not be expanded in powers of α . I present a self-consistent calculation in terms of fully dressed propagators which provides a simple expression for the entropy in terms of the elementary excitations. This offers an accurate description of lattice data for purely gluonic QCD, down to temperatures of about $2T_c$. By extending this to finite chemical potential, there where lattice calculations are not available, I make predictions for the QCD equation of state at large density.

Friday 17 September

IT INFORMATICS TUTORIAL

10.00-12.00 hrs – IT Auditorium, bldg 31/3-004

An Introduction to Internet Publishing with Microsoft Office

by Alberto PACE / CERN-IT

This tutorial will introduce the tools provided by Microsoft

Office to publish rapidly and effortlessly many different types of documents.

Special attention will be given to publishing Word and PowerPoint documents as well as Access databases. A few advanced examples will be finally provided on such topics as designing a simple, but complete web site, enhancing the published information with multimedia contents.

No previous knowledge of WWW or of programming languages is required. A basic knowledge of Word or Powerpoint would be a convenient starting point.

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

Organisers: M.Marquina and R.Ramos /IT-User Support

Friday 17 September

SL CONTROLS SEMINAR

at 11.00 hrs – SL Auditorium, bldg 864, 1st fl., Prévessin

Use of Industrial Components in SL/BT Equipment Controls

by Etienne CARLIER

The control system of all SPS target stations, beam absorbers and other aperture limiting devices is presently being refurbished, using solely standard industrial hardware and software components. SIEMENS Simatic S7-300 programmable logic controllers serve as equipment controllers. They are connected through Profibus to a WinNT front-end running the SIEMENS WinCC SCADA package which acts as local controller and gateway for remote access. A variant configuration, where the PLCs are directly linked to Ethernet, has been used for controlling the SPS Q measurement kickers.

These and some other SL/BT projects will be reviewed where fully off-the-shelf components have been successfully integrated into the SL accelerator controls infrastructure. The arguments leading to the various technical choices will be laid down including a report of the experience gained. Finally, the presentation will address the perspectives and current ideas for using industrial components in controlling SL/BT equipment during the LHC era.

Friday 17 September

SPECIAL COLLOQUIUM

at 16.30 hrs – Auditorium, bldg 500*

Bringing the Web to America

by Paul F. KUNZ / SLAC

On 12 December 1991, P. Kunz installed the first Web server outside of Europe at the Stanford Linear Accelerator Center. Today, if you do not have access to the Web you are considered disadvantaged. Before it made sense for Tim Berners-Lee to invent the Web at CERN, there had to be a number of ingredients in place. P. Kunz will present a history of how these ingredients developed and the role the academic research community had in forming them. In particular he will highlight the role that big science, such as high energy physics, played in giving us the Web we have today.

About the speaker :

Dr Kunz received his PhD from Princeton University in 1968 and first came to CERN that year to do an experiment at the PS as a member of the Saclay group. He then went on to Michigan State in 1971 and worked on one of the first experiments at Fermilab. He joined SLAC in 1974 where he has been ever since.

In late '70s, Dr Kunz invented the 168/E emulators and the concept of event processing via processor farms. In collaboration with

CERN engineers, his processors were used as part of the "express lane" for the UA1 experiment. Dr. Kunz has been a frequent visitor to CERN lately because of the popularity of his "C++ for Particle Physicists" course which he is now giving at CERN for the 13th time since March of 1996. Overall, he has given the course 50 times throughout the world to over 1700 students.

Organiser : J. Gillies / AS Division

* Tea & coffee will be served at 16.00 hrs.

Monday 20 September

ORACLE DEVELOPERS TECHNICAL SESSION

14.00-16.00 hrs * – IT Auditorium, bldg 31/3-004

QUEST Software Products

– Overview Quest's current product palette.

– SQLAB Expert presentation.

PL/SQL Application tuning: why is response time poor? It will point the exact SQL commands using most of the system's resources, show the best alternatives, and create appropriate SQL itself.

– SQLLAB Expert interface to SQL IMPACT.

– SQL IMPACT presentation.

Year 2000 impact analysis with automatic creation of E-R diagrams. For a change in a table, IMPACT will tell which programs/procedures are affected, and vice-versa. Also Year 2000 "detect and correct" functionality to debug millennium problems.

– Questions

Information: <http://wwwlh01.cern.ch/odf/techs/techs4.html>

Organiser: Pedro Martel/EST-ISS

* Please note the unusual hours

Monday 20 September

PLENARY MEETING OF THE EUROPEAN MUON STUDY GROUP

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

0. Introduction by the Chair – Yves D'éclais

1. Current thinking on muon storage rings and colliders – Alain Blondel

2. Neutrino factory and muon collider in the US – Harold Kirk (Brookhaven)

3. Progress reports:

a. R&D at CERN on muon machines – Helmut Haseroth *et al*

b. R&D at RAL on muon machines – Rob Edgecock

c. Neutrino beams and experiments – JJ Gomez-Cadenas

d. Radiation issues for nufact – Friedrich Dydak

4. Future activities:

a. Presentation of Muon Collider Working Group – Patrick Janot

b. Presentation of Working group on Physics opportunities with intense muon and neutrino beams – John Ellis

5. AOB: Suggestions welcome

Tuesday 21 September

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium, bldg 500*

ANTARES : an undersea neutrino telescope

by John CARRN/ CPP Marseille

The ANTARES collaboration is building a neutrino telescope at a depth of 2400m in the Mediterranean Sea offshore from

Toulon in France. Since 1996 the collaboration has performed R&D and site measurements to develop the technology necessary to build a telescope based on Cherenkov light detection in a marine environment. This first stage is now successfully completed and the results will be presented. Work is now starting on the construction of a detector of effective area 0.1 square kilometres to be deployed in the sea in 2002-2003. A detector of this size can search for sources of high energy neutrinos such as the galactic centre, active galactic nuclei and gamma ray bursts. Relic neutralinos captured in the earth, sun and the galactic centre would give distinctive signals of neutrinos in the detector. The same detector is also suitable to measure atmospheric neutrino oscillations in the range of mixing parameters indicated by the SuperKamiokande experiment.

Organiser : Jasper KIRKBY / EP Division

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

Thursday 23 September

SCIENCE AND SOCIETY

at 16.30 hrs – Auditorium, bldg 500*

The communication of scientific knowledge in society. The role of the media

by Winfried GOEPFERT / Freie Universitaet Berlin,
Center of Science Journalism

Why should the media report on science — and how? Increasingly scientific influence is regarded as risky or even dangerous, for example nuclear power or genetic engineering. Societies have to decide on such issues and therefore people have to be informed about these kinds of science. And where science itself is under scrutiny, media have to provide arguments and room or time for discussion.

In that view the job of science journalism is not only to translate scientific speech into everyday language — as science journalism is often regarded. Science journalism also has to consider the context the man in the street is interested in.

These are two different goals science reporting has to address. And it is necessary to distinguish between the two levels of serving readers interests. Science journalists should orient themselves on journalistic rules, not scientific needs. And scientists should know that journalists are not the translators of scientists. The arising conflicts between scientists and Journalists will be discussed.

Organiser : James Gillies/ AS Division

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

Friday 24 September

IT INFORMATICS TUTORIAL

10.00-12.00 hrs - IT Auditorium, bldg 31/3-004

An Introduction to FrontPage

by Alberto PACE / CERN-IT

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

Organisers: M.Marquina and R.Ramos /IT-User Support