

SEMINARS SEMINAIRES

Monday 15 March

COSMOLOGY MEETING

at 14.00 hrs – TH Conference Room, bldg 4

New development in the search for the topology of the universe

by J.P. UZAN / University of Geneva

Recently, there have been many advances in the development of methods to detect or constrain the topology of the universe (i.e. of its spatial sections). These methods are using either the cosmic microwave background (2D-methods) or catalogs of cosmic sources (3D-methods). I will present both and focus on the 3D-method. I will explain why the standard crystallographic method fails to detect the topology of locally hyperbolic universes and explain how one can generalise it. I will finish by a discussion on the actual bounds on the size of the universe.

Monday 15 March

CERN EP SEMINAR

at 16.30 hrs – Auditorium, bldg 500*

Searching for new physics at the Fermilab Tevatron

by John WOMERSLEY / Fermi National Accelerator Laboratory

The Tevatron collider at Fermilab is the world's highest energy particle accelerator, colliding protons and antiprotons at a combined energy of 2 TeV. The accelerator will resume running in spring 2000 for "Run II" which will provide a data sample twenty times larger than that so far accumulated. This will be a real opportunity to observe physics beyond the Standard Model. I will describe how we are upgrading the D0 detector for Run II, outline some of our results on searches for supersymmetry, and how these will be extended in the next run. I will also describe prospects for observing Standard Model and supersymmetric Higgs particles at the Tevatron.

Organiser : Fabiola Gianotti / EP Division

* Tea & coffee will be served at 16.00 hrs.

Tuesday 16 March

SEMINAR IN HONOUR OF PROF. C. RUBBIA ON THE OCCASION OF HIS 65TH BIRTHDAY

at 14.30 hrs – Auditorium, bldg 500*

Programme

Welcome by G. Charpak

Kaon Physics and CP Violation

by V. Fitch (University of Princeton)

Neutrino Physics

by K. Winter (CERN)

Vector Bosons and Standard Model (theory)

by G. 't Hooft (University of Utrecht)

Vector Boson Discovery (experiments)

by A. Astbury (TRIUMF)

A Nuclear Physicist looks at Accelerator Transmutation Technologies

by A. Kerman (MIT)

Vous pouvez aussi consulter

For information on these seminars, please see

<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

Address by C. Rubbia

Closing remarks by L. Maiani, Director-General of CERN.

* A reception, offered by Prof. L. Maiani, Restaurant No. 1, will follow.

Organisers: G. Charpak, G. Goggi, K. Hübner

Closed-circuit television transmission of the seminar will be available in the LHC Auditorium (bldg 30), the PS Auditorium (bldg 6) and the SL Auditorium (Prévessin, bldg 864).

Wednesday 17 March

PS SEMINAR

at 11.00 hrs – PS Auditorium, bldg 6/2-024

Developments in high intensity linacs

by A. PISENT / INFN Laboratori Nazionali di Legnaro, Padova, Italy

High intensity proton Linacs with beam power up to 100 MW are under study in various laboratories, mainly as drivers of subcritical reactor for nuclear wastes transmutation or for energy production using the Energy Amplifier scheme. Applications to fundamental physics cover a broad spectrum: production of radioactive ion beams, increased beam brightness in LHC, neutrino factories and muon colliders. INFN is studying a proton linac (1 GeV 30 mA CW) based on superconducting 352 MHz elliptical cavities above 100 MeV. Design choices, prototyping program and some open problems will be discussed.

Organiser: B. Autin/PS

Wednesday 17 March

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

Scale influence on high-energy behaviour

by V.A. PETROV / IHEP, Protvino

Experimental data on energy dependence of various characteristics such as, for instance, charged particle multiplicities in deeply inelastic scattering and in e^+e^- events initiated by heavy (c,b) quarks, or total and exclusive cross-sections of virtual photon (Z,W) absorption by nucleons, reveal strong dependence of their behaviour with energy dependent on the value of a scale (virtuality, heavy quark mass, high Pt etc). I will present some attempts to understand the origin and give possible description of these phenomena in the framework of QCD.

Thursday 18 March

THURSDAY SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

The O(3) non-linear sigma model in 2-D – testing the conventional wisdom

by P. WEISZ / MPI, Munich

The presently only known way to define and study

quantitatively and systematically the low energy properties of QCD is by using the lattice regularization. However, since taking the continuum limit is notoriously difficult (rigorous results on the nature of the limit are unavailable), in practical computations it is unavoidable to invoke various working hypotheses. The validity of the “conventional wisdom” on the physics of a perturbatively asymptotically free model such as QCD is more easily studied in the non-linear $O(3)$ sigma-model in 2 dimensions. For this theory another non-perturbative approach to constructing the model, the so-called form factor bootstrap (FFB), is known. A review will be given on the comparison of various computations using the FFB and the lattice regularization. In particular I will present a new result concerning the FFB calculation of the renormalized coupling g_R defined through the connected 4-point function at zero external momentum, with an estimated error less than that of any previously used method. This result will be compared to the continuum extrapolation of high precision data for g_R in the lattice theory.

Thursday 18 March

SL SEMINAR

at 16.00 hrs* – SL Auditorium, bldg 864

An Overview of the work of SL Division for the LHC

by Karl-Heinz KISSLER/ CERN

The SL division is heavily involved in the LHC project. In addition to studying the accelerator physics issues related to the LHC, the division is responsible for the design and construction of the SPS/LHC beam transfer lines as well as many subsystems of the LHC main ring, such as injection, extraction and dumping systems, radiofrequency systems, resistive magnets, power converters, instrumentation for beam observation and the controls infrastructure. An overview of these systems is presented, together with the status of the work.

Information:

<http://www.cern.ch/CERN/Divisions/SL/news/news.html>

Organiser: Werner Herr / SL Division

* Tea and coffee will be served at 15:30 in front of the Auditorium

Friday 19 March

LHCC ELECTRONICS BOARD

Open Session

at 09.00 hrs – TH Amphithéâtre, bldg 4*

- 09.00 RD49 Collaboration 2nd Status Report: Study of the Radiation Tolerance of ICs for LHC (P. Jarron)
- 09.30 Proposal: A project framework to coordinate the selection, evaluation and procurement of Commercial-Off-The-Shelf (COTS) components for use in the radiation environments of the LHC (M. Letheren)

* Please note unusual place!

Friday 19 March

IT INFORMATICS TUTORIAL

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

Linux kernel programming and debugging

by Jes SORENSEN / IT Division

The usage of Linux is growing rapidly, however the support model is very different from that of commercial operating systems. Linux offers the possibility, for advanced or optimal users, to get actively involved in the development and debugging of the operating system, both for adding support for new features and/or resolving specific problems.

This tutorial will look at how the kernel is structured and provide general guidelines for kernel programming. The tutorial will, amongst other things, cover:

- Resource management (memory, interrupts, device shared memory)
- Portability across architectures
- SMP handling
- General performance aspects
- Debugging

It is expected that attendees are reasonably familiar with Linux and/or UNIX and operating system design as well as experienced C programmers.

Friday 19 March

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room, bldg 4

Associated production of gauginos and gluinos at hadron colliders in next-to-leading order SUSY QCD

by M. KLASSEN / Argonne National Laboratory

We report a next-to-leading order (NLO) calculation of the production of gaugino-like charginos and neutralinos in association with gluinos at hadron colliders, including the strong corrections from colored particles and sparticles. We provide predictions of inclusive cross sections at the Fermilab Tevatron and CERN LHC. The NLO contributions increase the sizes of the cross sections at the Tevatron by 10 to 25% and by 20 to 60% at the LHC.

Tuesday 23 March

IT INFORMATICS TUTORIAL

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

The Java Series:

GUI Building with the Swing Package

by Raul RAMOS-POLLAN / IT Division

Wednesday 24 March

LEP EXPERIMENTS COMMITTEE

Open session

at 09.00 hrs – Auditorium, bldg 500

LEP machine report

- 09.00–09.30 Summary of the 1999 Chamonix Workshop (Roger Bailey)

LEP2 physics jamboree

- 09.30–10.10 DELPHI (Niels Kjaer)
- 10.10–10.40 Coffee break
- 10.40–11.20 L3 (Gerjan Bobbink)
- 11.20–12.00 OPAL (Douglas Glenzinski)
- 12.00–12.40 ALEPH (Fabiola Gianotti)

LEP2 workshop report

- 12.40–13.00 Summary of the LEP2 Monte Carlo Workshop (Roberto Pittau)

Closed session

Wednesday 24 March, at 14.30 hrs
6th floor Conference Room

Wednesday 24 March

SCIENCE, TECHNOLOGY & INDUSTRY SEMINAR

at 11.00 hrs – Conference Room bldg 13/2-005

Flat panel displays from leds to new emissive technologies

by Robert MEYER / CEA-DTA-LETI

Flat panels represent some 50% of the display market, with their share increasing at a rate of more than 10% per year. They are one of the main industrial challenges for the future. LCDs are well introduced into the computer market, first with the 10-inch portable "laptop", and more recently with the 12 to 15-inch "desktop" models.

Emergent emissive technologies as Plasmas (PDP), Field Emission (FED) and Organic Electroluminescent Displays (OLED) are now under development and will begin to compete with the LCD and CRT in the near future.

Thursday 25 March

LARGE HADRON COLLIDER COMMITTEE

Open Session

at 09.00 hrs – Auditorium, bldg 500

- 09.00–09.40 TOTEM Proposal: Total Cross Section, Elastic Scattering and Diffraction Dissociation at the LHC
- 09.40–10.20 MOEDAL Letter of Intent: A search for highly ionizing particles and slow exotic decays at the LHC
- 10.20–10.45 *Coffee break*
- 10.45–12.00 ATLAS Technical Co-ordination TDR
- 12.00–12.45 ALICE Photon Spectrometer TDR
- 12.45–13.15 ALICE Zero-Degree Calorimeters TDR

Jeudi 25 mars

PRÉSENTATION TECHNIQUE

10.00–17.00 hrs – Camion de démonstration/
Parking bât. 904, Site de Préessin

Innovations et des solutions Siemens dans le domaine des automatismes

par C. HERBERT / SIEMENS S.A.S. (FR)

La Maison SIEMENS vous donne rendez-vous sur son Road Show Automatisation pour découvrir l'ensemble des innovations et des solutions Siemens dans le domaine des automatismes, et vous propose un concentré de technologie avec:

- les micro-automates LOGO ! et SIMATIC S7-200
- les solutions basées sur PROFIBUS DP, ET 200X et ET 200 S
- les produits raccordés sur AS-interface et PROFIBUS PA
- les nouvelles solutions Fast Ethernet, Internet/Intranet
- leurs solutions de communication Homme-Machine, notamment le nouveau superviseur ProTool/Pro
- leurs solutions PC Based Control
- appareillages communiquant sur AS-i
- détecteurs BERO et départ-moteurs SIRIUS
- nouveau variateur MICROMASTER ECO (1,1 à 90 kW)
- En avant première découvrez le nouveau concept sous Windows CE, le MP 270

Langue : français

Information : S.Shearer/SPL-PS/76360

Thursday 25 March

SL SEMINAR

at 14.15 hrs* – SL Auditorium, bldg 864

Oral Contributions to the Particle Accelerator Conference 1999

by Participants at PAC 1999

The oral contributions of the SL and LHC divisions to the Particle Accelerator Conference in New York 1999 will be presented to the benefit of those who cannot attend the conference.

This includes contributed as well as invited papers.

Information:

<http://www.cern.ch/CERN/Divisions/SL/news/news.html>

Organiser: Werner Herr / SL Division

* Please note unusual time!

Thursday* 25 March

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium, bldg 500**

First result from KTeV on ϵ'/ϵ

by Bruce WINSTEIN / University of Chicago

Based upon an analysis of about 20% of data already collected, KTeV – a new experiment for the study of kaon decays at Fermilab – has just reported a result on ϵ'/ϵ . The result, which agrees with that from NA31, establishes direct CP violation – a difference in the decay rates of the neutral kaon and its anti-particle to two pions – at nearly 7 standard deviations. The seminar will describe the method, the performance of the beam and detector, the extraction of the result, checks of its validity, and the important systematic issues.

Organiser : Jasper KIRKBY / EP Division

* Please note unusual day.

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

Friday 26 March

IT INFORMATICS TUTORIAL

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

Using metadata in WWW authoring

by Dariusz KOGUT / IT Division

Metadata are specific HTML tags not visible when one browses documents on the Web but very useful when search engines rank these documents for later retrieval. In fact, the metadata collected from HTML pages becomes the basis for the internal indexes on which search engines find documents matching a certain user query. Using good quality metadata in your Web pages contributes to the correct classification of their content in search engines, making them findable for your target audience.

This tutorial will:

- guide you through the Dublin Core Metadata Element Set
- provide some CERN specific examples
- present the CERN Metadata Insertion Tool.