

SEMINARS SEMINAIRES

Vous pouvez aussi consulter
For information on these seminars, please see
<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

Monday 26 April

CERN HEAVY ION FORUM

at 09.15-17.30 hrs – Conference Room, bldg 40/S2-A01

Charm production in heavy ion collisions

1. Intermediate mass dimuons as a probe of open charm production in heavy ion collisions at the SPS : Enrico Scomparin
2. Open charm production in hadronic interactions: Michelangelo Mangano
3. Nuclear effects in the gluon distribution function at SPS energies: Carlos Salgado
4. Experimental considerations on the measurement of D meson production in heavy ion collisions at the SPS: Karel Safarik
5. Single-track resolution and pointing accuracy of the CERES silicon-drift vertex telescope: Jan Rak
6. Study of open charm production in heavy ion collisions via the measurement of muon pairs with identified vertex: Luca Casagrande
7. Some comments on the reconstruction with a pixel telescope of the hadronic decay of D mesons produced in HI collisions: Nicola Carrer
8. Study of open charm production at the SPS upgrading the NA49 large acceptance and high resolution hadron spectrometer: Gunter Roland

Organisers: Yiota Foka & Carlos Lourenço
http://home.cern.ch/a/falicedoc/www/chic/hif_26-apr-99.html

Monday 26 April

COSMOLOGY WORKSHOP

at 14.00 hrs – TH Conference Room, bldg 4

Falsifying Inflation

by Pedro G. FERREIRA / CERN-TH

The past few years have seen a remarkable burst in activity in the theory and observation of the cosmic microwave background. One of the beliefs is that we may be able to measure properties of fundamental physics (such as the mass of the neutrino, the value of the cosmological constant, the potential of high energy scalar fields) using high resolution maps of the CMB. A key assumption for this rationale is that the universe underwent a period of inflation, an as yet completely untested hypothesis. In this talk I will present three ways in which one can (almost) falsify inflation using the CMB: the presence of global anisotropy, the absence of secondary peaks in the angular power spectrum and deviations from gaussianity in the statistics of the CMB. We present current experimental evidence for each of these tests and describe the (very near) future prospects with two balloon borne experiments, MAXIMA and BOOMERANG.

Tuesday 27 April

TECHNICAL PRESENTATION

at 10.00 hrs – IT Auditorium, bldg 31/3-004-5

Macromedia Presents Dreamweaver

by Martin RIEFENSTAHL / Technical Sales Manager, Macromedia Northern Europe

Martin Riefenstahl is the Technical Sales Manager for Macromedia Northern Europe. He will show Dreamweaver together with another Macromedia tool Fireworks - the solution to create web-sites and graphics in a minimum of time. The goal of the presentation is to demonstrate the following:

- a. Perfect adjustable HTML-Code.
- b. Tight integration with Homesite (Win) / BBedit (Mac) within the normal full-version.
- c. Preservation of existing HTML-code.
- d. Easy creation of DHTML.
- e. Deluxe site-management.
- f. Working with tracing-layers.
- g. Optimisation of html-code.
- h. Find and replace across a whole web-site.
- i. The usage of libraries.
- j. The ease of using Fireworks.
- k. The perfect workflow with Fireworks.

Short explanation of Fireworks: normally when creating web-graphics like GIFs and JPEGs professionals need approx. 4 to 7 different tools - with Fireworks everything can be done within one work-around.

This is time and money-saving and saves graphics people from frustrating weekends.

Organiser : S. Cannon / IT / 75036

Tuesday 27 April

DUALITY WORKSHOP

at 14.00 hrs – TH Conference Room, bldg 4

String Networks, U-duality and Worldvolume Theories

by Alok KUMAR / CERN-TH

In this talk we discuss the application of U-duality symmetries to obtain BPS states of string theories which correspond to string networks. In particular we show how string networks preserving 1/8 or lower supersymmetries can be obtained in this framework. We also discuss the possible applications of these results in compactified worldvolume theories of branes.

Tuesday 27 April

IT INFORMATICS TUTORIAL

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

Introduction to DreamWeaver 2

by Peter JURCSO / CERN-IT

DreamWeaver 2 is a tool for writing web pages and

managing web sites. It has been selected and recommended for Windows 95/98/NT and for Power Macintosh (G3, iMac) systems for use by HTML authors with medium to large web sites.

This product generates standard HTML pages, which can be published on any web server without any additional extensions.

In this tutorial amongst others we will show:

- The easy editing, including form creation
- The usage of templates
- The easy site upload to the server
- Safe locking of open for edit pages on sites with multiple authors.

This software relieves the site managers from tasks like link consistency check and site-wide replacement.

In this tutorial Macromedia DREAMWEAVER2 will be presented with many examples to help using effectively this product.

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

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

Tuesday 27 April

LIBRARY SCIENCE TALK

at 15.30 hrs – Conference room, bldg. 40/SS-C01

Communicating Science in the Next Generation: New Implications for the Evolving Digital Library and the Library Without Walls at Los Alamos

by Richard E. LUCE / LWW Project Leader and Research Library Director

Libraries and digital library efforts have played a key role in facilitating the communication of scientific research. Today networked computers have introduced a level of complexity because they allow types of transactions we didn't dare dream of before. Are customer expectations and current technologies converging? As our digital environments evolve almost faster than we can absorb, we must understand where scientific communication is moving in order to anticipate how our roles today will change. The Library Without Walls at Los Alamos National Laboratory will be used as an example of integrating leading digital library technology today with a view of what is on our horizon.

Richard E. LUCE – Background

Rick Luce is the Research Library Director at Los Alamos National Laboratory and the Project Leader of the Library Without Walls. He received a 1996 Distinguished Performance Award from Los Alamos for his contributions supporting science and technology through the transformation of the Research Library. Mr. Luce was also appointed Project Leader for LANL's digital library effort, Library Without Walls. Today, the Library Without Walls project is known internationally as one of the most pioneering and successful digital library implementations to date.

<http://lib-www.lanl.gov/lww/welcome.html>

Tuesday 27 April

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium, bldg 500*

The highest energy cosmic rays

by Masahiro TESHIMA / Institute for Cosmic Ray Research, University of Tokyo

Extension of the cosmic ray energy spectrum beyond the Greisen Zatsepin Kuzmin cutoff, 10^{20} eV, was found by the

AGASA (Akeno Giant Air Shower Array) experiment in Japan. The origin of the cosmic rays above 10^{20} eV is unknown. It is difficult to explain them with the standard acceleration mechanism in astronomical objects and their subsequent propagation in space. I will review the experimental results from AGASA and Fly's Eye/HiRes, and then discuss the acceleration of the cosmic rays in astronomical objects, and the possible top-down models. Finally, I will review the future projects for the highest energy cosmic rays.

Organiser : Jasper Kirkby / EP Division

* Tea & coffee will be served at 16.00 hrs.

Wednesday 28 April

PS SEMINAR

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

WinAGILE, Windows Alternating Gradient Interactive Lattice dEsign: The Program, Philosophy, Techniques and Implications

by P.J. BRYANT / CERN-PS

WinAGILE is an interactive program for synchrotron and beam transfer line lattice design with a full Windows environment. The program is largely intuitive in its operation and is particularly directed towards practical problems in small rings. Among the specialist topics included are space charge, multiple scattering and eddy currents. The philosophy behind the program and its potential will be discussed. Some mention will be made of the techniques residing behind the calculations when they deviate somewhat from the conventional mould. Demonstrations based on current PhD work and design work in the PS Division will be used to illustrate the program.

Organiser: B. Autin / CERN-PS

Wednesday 28 April

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

A new cure of unitarity from the QCD forest

by Harry LAM / McGill University

At sufficiently high energies, the growth of total cross sections is consistent with a power-law, and is often fitted as such. However, power-law growth ultimately violates the Froissart (unitarity) bound, thus requiring corrections. Moreover, in spite of the power law fits to the data, there are phenomenological indications that such corrections are already taking place. To calculate the correct energy dependence from QCD and incorporate unitarity, we therefore need a theory that can take us beyond the leading-order computation. This turns out to be a very difficult task if approached in the usual way, so something different is needed. In this talk, we will describe a new method to approach such calculations. The method is based on a newly discovered coherent structure of QCD, which can guide us through the undergrowth of complicated QCD diagrams, to find just the right medicine to cure unitarity.

Thursday 29 April

5TH ORACLE DEVELOPERS FORUM

at 09.30 hrs – IT Auditorium, bldg 31/3-004

Agenda:

09.30–10.30 Isabel Fernandez Gonzalez, Olivier Martin (AS/DB) PIE (Persons, Institutes and Experiments) is a project to enhance the follow-up of CERN users and provide administrative tools to the experiments to help them manage their collaborations in the CERN corporate databases.

A few databases (Experiments' private databases, Grey Book database, Library institute database) have been merged into Oracle*HR.

Several web enabled tools have been provided, including :

- a pure JAVA data entry interface (2-tiers architecture)
- a data analysis tool (PIE-HRT) using JAVA servlets
- a public site for physicists (the Grey Book on the web, HTML).

The presentation will focus on the architecture and the JAVA data entry interface.

11.00–11.30 IT/ASD Y2K related issues

11.30 General discussion period - IT/ASD

Information: <http://www.lhc01.cern.ch/odf/odf5.html>

Organiser: Pedro Martel/EST-ISS

Thursday 29 April

SL SEMINAR

at 16.00 hrs* – SL Auditorium, bldg 864

Critical Issues in Large Hadron Colliders

by Eberhard KEIL / CERN

Parameters are presented of the following hadron colliders (i) Tevatron Run II at 2 TeV centre-of-mass energy, (ii) LHC at 14 TeV, and (iii) very large hadron colliders beyond LHC at 100 TeV. These parameters are used for a discussion of common critical issues, in particular luminosity, stability of the two beams, and engineering. Achieving the design luminosity is related to the beam-beam collisions at the collision points, the crossing angle and parasitic collisions in the neighbourhood of the collision points, the bunch spacing and number of events in a single collision, and to obtaining and preserving the phase space density required from the injectors. The stability of the two beams is related to collective effects, driven by wake fields, and to the dynamic aperture. They depend on the surroundings of the beams, i.e. the properties of the vacuum chamber and the quality of the magnetic components, the focusing, feedback systems, etc. For hadron colliders beyond the LHC, the goal of engineering is a significant reduction of the component costs. Approaches towards achieving this goal are presented.

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 30 April

IT INFORMATICS TUTORIAL

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

An Introduction to Configuration Management

by Arash KHODABANDEH / CERN-IT

Configuration Management (CM) is the cornerstone of any software development activity – for one man projects as well as large international LHC collaborations.

This presentation explains the preliminary objectives to be achieved and the respective activities to be performed in order to put in place a CM solution. At the same time, it introduces the CM concepts and terminology used today.

The tutorial will last about 1 hour.

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

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

Friday 30 April

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room, bldg 4

Heavy quarkonium and non-relativistic effective field theories

by Antonio PINEDA / CERN-TH

Non-relativistic bound states have, at least, three well-separated scales: the mass, the relative momentum and the bound-state energy. This allows the introduction of a hierarchy of effective field theories when sequentially integrating out each of these scales. After integrating out the mass scale QCD becomes a non-relativistic theory (NRQCD). Integration of the relative momentum scale leads to a so far elusive effective field theory called potential NRQCD (pNRQCD). I present some original results for the above-mentioned effective theories, with special emphasis on pNRQCD. Finally I also briefly discuss the situation where the three above-mentioned scales are much larger than Λ_{QCD} .

Monday 3 May

ISOLDE EXPERIMENTS COMMITTEE

Open session

at 14.00 hrs – Council Chamber, bldg 503

1. Introductory remarks by the Chairman.
2. Progress report by the ISOLDE Technical Group Leader.
3. ISOLDE Coordinator's report.
4. High-resolution spectroscopy of Sr and Y nuclei near $N = Z$ line;
CERN/ISC 99-12/P110; M. Oinonen.
5. Interface magnetism investigated with radioactive atoms; CERN/ISC 99-2/P106;
H.H. Bertschat.
6. Beta-decay studies of dripline isotopes of Be;
CERN/ISC 99-16/P99 add.1;
U.C. Bergmann.
7. Investigations of nuclei close to the neutron dripline:
Ne and Na and ^8He ;
CERN/ISC 99-11/P109; K. Wilhelmsen Rolander.

8. Spectroscopy of $^{100,102}\text{Pd}$ by means of electron conversion and γ - γ correlation measurements; CERN/ISC 99-15/P112; P. Sona.
9. Search for new physics in beta-neutrino correlations using trapped ions and retardation spectrometer; CERN/ISC 99-13/P111; D. Beck.
10. Progress report and beam time request to the ISC (IS364): Beta-decay study of $n\bar{h}\omega$ excitations in neutron-rich (fp) nuclei: Test of the empirical nuclear interaction; CERN/ISC 99-14/P92 add.1; G. Walter.

Closed Session

after the Open Session, 6th floor Conference room, Main Building

Monday 3 May

CERN HEAVY ION FORUM

at 14.00 hrs – Conference Room, bldg 160/1-009

Selected Topics in p-p, p-A and A-A interactions

by Hans Gerhard FISCHER / CERN

The second lecture will concentrate on longitudinal momentum phenomena always using identified secondaries over a large fraction of phase space. The concepts of limiting fragmentation, partonic recombination, stopping and strangeness enhancement will be confronted with data, again with emphasis on the more elementary p-p and p-A collisions.

Organisers: Yiota Foka and Ulrich Heinz
<http://home.cern.ch/a/alicedoc/www/chic/>

Tuesday 4 May*

COMPUTING SEMINAR

at 14.00 hrs – Salle DIRAC, bldg 40/SS-D01*

Distributed Object-Oriented Programming using the ADAPTIVE Communication Environment

by Johannes GUTLEBER / Vienna University of Technology

1. Topic

The ADAPTIVE Communication Environment (ACE) is a C++ toolkit for object oriented network programming that has been developed at the Washington University of St. Louis, MI, USA by Douglas C. Schmidt. Since the early days, it addresses high performance environments, such as medical imaging, avionics and telecommunication applications. ACE incorporates an operating system abstraction layer that facilitates porting of applications to different platforms (several UNIX flavours, WindowsNT, LynxOS and VxWorks to name but a few). On top of this layer design patterns that are common to network aware applications have been implemented. ACE contains also a real-time CORBA implementation named TAO. More information on ACE is available through the web <http://www.cs.wustl.edu/~schmidt/ACE.html>

2. Scope

The goal of this tutorial is to present the building blocks of the ACE toolkit. Some patterns are highlighted, namely the streams facility, the reactor, the service configurator, and the active object. Simple examples are presented in order to illustrate the application of object oriented programming in distributed systems. The upper level frameworks, such as

TAO will only be mentioned shortly by outlining their capabilities and application areas.

3. Duration

Two Hours (break included)

4. Background Knowledge

Attendees should have a basic knowledge of object oriented programming. As the toolkit aims at hiding complicated low level information from the application programmer, it is not required to have detailed knowledge about network protocols or operating system details.

Information : <http://consult.cern.ch/seminars>

Organiser : Robert Jones / EP

* Please Note Unusual Day, Time, Duration, And Place

Tuesday 4 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium, bldg 500*

Measurement of $\sin 2\beta$ and future prospects at CDF

by Franco BEDESCHI / INFN, Sezione di Pisa

A new measurement of $\sin 2\beta$ by the CDF collaboration is presented. This analysis is based on a sample of $400\text{ B}^0 \rightarrow \psi\text{ K}_s^0$ events and uses 3 different flavour tagging methods. This result improves the error on $\sin 2\beta$ by more than a factor 2 relative to the previously-published CDF measurement. The future b physics reach of the CDF experiment is also discussed.

Organiser : Jasper Kirkby / EP Division

* Tea & coffee will be served at 16.00 hrs.

Wednesday 5 May

COMPUTING SEMINAR

at 16.00 hrs – IT Auditorium, bldg 31/3-005

TSIA: The Third Advance in Application Support

by Burkhard BUROW

After compilers and operating systems, TSIA is the third advance in application support. A compiler supports a high level application definition in terms of a programming language. An operating system supports a high level interface to the resources used by an application execution. A TSIA provides an application with an implicitly parallel, distributed, heterogeneous, adaptive, dynamic, real-time, interactive, reliable, secure or other execution. A TSIA thus supports a high level application execution. A TSIA also supports the application definition. This run-time support is complementary to the compile-time support of a compiler. For example, this allows a language similar to Fortran or C to deliver features promised by functional computing. While many TSIA exist, they previously have not been recognized as such and have served only a small variety of applications. Existing TSIA and other projects demonstrate that TSIA are feasible for most applications.

This talk outlines TSIA, with emphasis on its motivation and feasibility.

Further information on TSIA is available at <http://www.tsia.org>.

Previous computing projects by Burkhard Burrow:

Since 1990, cfortran.h is a popular system for combining C/C++ and Fortran routines.

Since 1992, Funnel is the parallel/reliable/... batch system for the Monte Carlo event production of the ZEUS experiment at DESY in Hamburg, Germany. Funnel currently uses the otherwise-idle cycles of about 500 workstations spread across 15 institutes around the world. Since 1995, Funnel also is the basis of FUL3, the MC production system for the L3 experiment at CERN.

Information : <http://consult.cern.ch/seminars>

Organise : G.Folger / IT

Friday 7 May

IT INFORMATICS TUTORIAL

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

Introduction to CGI Scripting

by Kiran PATEL / CERN-IT

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

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

Friday 7 May

CERN HEAVY ION FORUM

at 14.00 hrs – Conference Room, bldg 160/1-009

Hadronic probes show QGP in

158 A GeV pb+pb interactions

by Johann RAFELSKI / University of Arizona, Tucson

An analysis of (strange) hadron abundances and mt-spectra observed in 200 A GeV S-W/Pb and 158 Pb-Pb GeV interactions has been completed within the statistical Fermi model. It is necessary in such analysis to allow chemical non-equilibrium of strange and non-strange quark yields. The key results we obtained are in remarkable agreement with the properties of a deconfined QGP source hadronizing without chemical re-equilibration, and expanding just with the sound velocity of quark matter.

The universality of the physical properties at chemical freeze-out for S- and Pb-induced reactions points to a common, presumably deconfined QGP-type primordial source of hadronic particles.

Work performed in collaboration with Jean LETESSIER of University Paris 7.

Supported by the U.S. Department of Energy grant DE-FG03-95ER40937.

Organisers: Yiota Foka & Ulrich Heinz

Informations: <http://home.cern.ch/a/alicedoc/www/chic/>

POUR INFORMATION / FOR INFORMATION

LAPP – Laboratoire d'Annecy de physique des Particules

F – 74941 Annecy-le-Vieux

Informations : Pascal Perrodo, tél. 04 50 09 16 00

Vendredi 23 avril

à 14.00 h – Amphithéâtre du LAPP

Les expériences du LHC face à la recherche de la supersymétrie

par Suzanne GASCON-SHOTKIN / IPN, Lyon

Le collisionneur p-p LHC prendra la relève, dès l'an 2005, du LEP (CERN) et du TeVatron (Fermilab). L'énergie dans le centre de masse accessible (14 TeV) augmentera d'un ordre de grandeur l'énergie disponible pour la production de nouvelles particules, ce qui favorisera la détection de nouveaux phénomènes qui seraient à leur origine, tels la supersymétrie. Les modèles supersymétriques, en proposant une gamme de particules nouvelles comportant des masses inférieures à 1 TeV, répondent de façon satisfaisante à un problème fondamental du modèle standard qui est la divergence de la théorie au-delà du premier ordre quant aux corrections radiatives à la masse du boson de Higgs. Cet exposé résumera l'étendue de possibilités de découverte de particules supersymétriques par les expériences CMS et ATLAS au LHC, en rappelant la partie de celle-ci encore accessible au LEP et au TeVatron, et en illustrant la qualité variée des signatures éventuellement détectables.

UNIVERSITY OF GENEVA

Particle Physics Department

24, quai Ernest-Ansermet

1211 Geneva 4

Tel. 022 702 6273

Fax 022 781 2192

Wednesday 28 April

SEMINAR ON PARTICLE PHYSICS

à 17.00 hrs - Stückelberg Auditorium

Physics goals and technological challenges of the ATLAS pixel detector

by Leonardo ROSSI / INFN and Physics Department - Genoa - Italy

Detection of secondary vertices emerging from high-energy particle collisions gives access to a rich phenomenology crucial for the test of the Standard Model and its most common extensions.

ATLAS, one of the two general-purpose experiments in construction for LHC, will precisely measure vertices with a 150 million channels silicon pixel detector.

The construction of this device will begin in 2000 after several years of intense R&D devoted to the solution of many challenging technological problems.

I will discuss the ATLAS pixel detector, both the motivations and the status, and I will give a couple of examples of its foreseeable use in physics measurements.