

FRAIS D'ÉTUDES

La Division du Personnel tient à attirer l'attention des membres du personnel sur le paragraphe 4 de la Circulaire administrative no 12 (L'allocation pour frais d'études), et précise que les frais afférents aux "classes de neige, de ski, aux cours de vacances, d'été, etc.", y compris les semaines d'études, vertes ou autres, ne seront en aucun cas remboursés par l'Organisation.

Division du Personnel
Tél. 72862 / 74484

SEMINARS SEMINAIRES

Monday 19 April

DETECTOR SEMINAR

at 11.00 hrs – Conference room, bldg 13/2-005

Assembly, Alignment and Magnetic Measurements of KLOE at DAFNE

by S. DELL'AGNELLO / INFN-LNF, Research Division
KLOE studies Kaon physics at DAFNE, the Frascati PHI factory. KLOE is a solenoidal general purpose experiment with the complexity of LEP detectors, although with a smaller number of sub-elements. This seminar will focus on novel ideas and technical solutions successfully adopted in the mechanical construction of the very large drift chamber, in the survey/alignment work performed for the experiment assembly (including its installation in DAFNE) and in the magnetic measurements. These comprise the field mapping, extended to the poles (photomultiplier region), and the direct measurement of the position of the KLOE solenoid magnetic axis, critical for the performance of DAFNE

Organiser: Rui Ribeiro /EP Division
<http://www.cern.ch/CERN/Divisions/EP/Seminars/Welcome.html>

Tuesday 20 April

IT INFORMATICS TUTORIAL

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

The Java Series: I/O, Object Serialization and Persistence

by Raul RAMOS POLLAN / CERN-IT

The tutorial will describe the building blocks behind the processes of getting information into your program and sending it out again through the use of the stream classes in the standard java.io package. Streams are a useful way to handle information flowing in and out of your program in an homogeneous way (to read/write the file system, memory locations, through network connections, etc.). They also provide the basis to implement lightweight object persistence: objects can be easily sent and received through streams, with which we can store and retrieve objects from files, from the network, etc.
The tutorial will focus on the main mechanisms behind the usage of stream, with significative examples of each aspect.

SCHOOL FEES

Personnel Division would like to draw the attention of staff members to paragraph 4 of Administrative Circular No 12 (Education Grant) and to clarify that costs relating to "winter sports classes, holiday and summer courses, etc.", including study weeks or field trips, will under no circumstances be reimbursed by the Organization.

Personnel Division
Tel. 72862 / 74484

Vous pouvez aussi consulter

For information on these seminars, please see

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

It is a must for those wanting to follow the next tutorial of the Java Series on Network Programming.

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

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

Wednesday 21 April

CERN HEAVY ION FORUM

at 10.00 hrs – Conference Room 13/2-005

Elliptic flow at the CERN-SPS and kinetic freeze-out at AGS

by Josef SOLLFRANK / University of Regensburg

The talk will have two distinct parts. In the first part I will present results on our hydrodynamical studies of elliptic flow in Pb+Pb 158 AGeV collisions. We study the time evolution of the azimuthal asymmetry and compare the final state with measurements of the second Fourier coefficient by NA49. In addition we study the transverse momentum spectra as function of the impact parameter and compare with WA98 and CERES results.

In the second part I will show results on our analysis of single particle spectra in Au+Au collisions at the AGS. We tested different parametrizations of the freeze-out hypersurface and got always a relative low freeze-out temperature of about 90 MeV contrary to other analyses.

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

Wednesday 21 April

PS SEMINAR

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

An explanation for gravity

by W. SCHNELL / CERN

A model of universe can be based on a Newtonian-Galilean system. Its inhabitants formed of waves experience relativity and quantum mechanics. The essential features of the model introduced in 1997 will be reminded and recent developments in general relativity and gravitation will be presented. As a significant test of the theory, it will be shown that the Newtonian gravitational constant can be derived from first principles within a precision less than one per cent.

Organiser: B. Autin/PS

Wednesday 21 April

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

Quark and Lepton Flavors: Why and How Do They Mix?

by Harald FRITZSCH / Munich Universität

It is shown that a simple structure of the quark and lepton mass terms leads to a pattern for flavor mixing and CP violation in agreement with observation. Both the violation of CP symmetry as well as the mixing of neutrinos is expected to be maximal.

Wednesday 21 April

SEMINAR FOR CERN GUIDES

at 16.00 h – Conference room building 33, ground floor reception hall

Surely you are cooking, Mr. Feynmann!

Strategies for the Presentation of Science on TV

by Massimiano BUCCHI / Ph.D Social Sciences, University of Trento, Italy

This seminar is OPEN to all interested people.

The most important science show of Italian television, Superquark, has been running for some years now a short section on "Science in the Kitchen". In this section, as the title says, the viewer is invited to learn about the chemical and physical secrets taking place in a kitchen.

The ideology of 'science in public' lying behind this section is interesting for a number of reasons.

It does not offer, as much 'public science' tries to do, 'the wonderful', 'the miraculous' or in general, something quite beyond the everyday experience, leaving the TV spectators with their mouth wide open. Rather, it inserts science into one of the fields that to the people's experience most clearly embed everyday life: the kitchen. Thus, science colonizes an area that is generally recognized as the privileged territory of common sense. It shows how 'easy' science is, how relevant it is even to the simplest and most trivial routines, how fun it can be.

Scientific knowledge is not presented in antithesis to common sense, it does not seek to subvert it as it has become typical of public presentations of science especially since the huge public impact of this century's revolution in physics. Science is here placed alongside common sense, ready to take it by the hand and 'upgrade' it by enlightening the theoretical significance of unconsciously adopted practices.

Apparently only a curious and funny aspect, the metaphor of cookery as science is revealing of a significant, although often neglected, ideology of the relationship between science and common science. Furthermore, when read in parallel with the complementary metaphor of science as cookery, extensively used in scientific debates to criticize the opponents' theories and results, the metaphor adds another important angle to our understanding of the strong connections existing between public communication of science and core scientific practice.

Organiser: Paola Catapano/AS

Thursday 22 April

LHC PROJECT SEMINAR

at 14.15 hrs – SL Auditorium*, bldg 864, Prévessin

Doses and dose rates at Point 2 due to ALICE and LHC operation

by Stefan ROESLER / CERN-EST

Effects of the ALICE-experiment on the radiation environment in adjacent parts of the LHC machine and outside the shielding at Point 2 have been studied. These included verification of the shielding efficiency provided by the installations and the civil engineering. Results of expected dose rates from induced radioactivity and doses around the low-beta insertions during operation will be presented.

**Please note the unusual place!*

Thursday 22 April

ISOLDE SEMINAR

at 16.00 hrs – TH Conference Room, bldg 4

Mass Measurements around the N=20 and N=28 shell closures for neutron-rich nuclei

by Frederic SARAZIN / Ganil, Caen

One of the present fundamental questions for nuclear structure is whether the magic numbers are universal or whether they change in certain regions far from stability or even disappear altogether. An example of such magic breaking is given by the N=20 neutron rich nuclei where a collapse of the standard N=20 shell closure has been observed. Recently, there has been an increase of interest in the N=28 isotones far from stability, motivated by the possible existence of anomalies in the shell closures. An experimental observable that may give a first answer to this question is the binding energy which can be deduced from nuclear masses. We have performed at GANIL a mass measurement experiment with the SPEG spectrometer by using a direct time of flight technique. Our goal was to investigate the N=20 and N=28 neutron shell closures for nuclei from Z=6 to Z=20. The production of these neutron-rich nuclei has been obtained by the fragmentation of a ^{48}Ca primary beam at 60 A.MeV on a Ta target located in the SISSI device. 20 masses have been measured with at least a better precision than in the previous measurements. A vanishing of the N=28 shell closure is observed with the new S_{2n} values. A new isomeric state in ^{43}S found in the same experiment confirms this vanishing for sulfur isotopes.

Thursday 22 April

CERN COLLOQUIUM

at 16.30 hrs – Auditorium, bldg 500*

Superconducting RF cavities : Film or Bulk

by Pierre DARRIULAT / CERN-EP

The successful operation of LEP2 has demonstrated the feasibility of using on a large scale copper accelerating cavities coated with a thin superconducting niobium film. Yet other existing or planned installations, such as CEBAF and TESLA, rely instead on the bulk niobium technology. The reason is a wide spread belief that the film technology would suffer from fundamental limitations preventing high

gradients to be reached. Evidence will be presented that such a belief is unjustified and that the film technology allows for as good a performance as the bulk technology. Moreover it has many additional advantages. The emphasis will be on illustrating the various physics mechanisms contributing to the generation of RF losses in superconducting cavities. These include the effects of trapped magnetic flux, of hydride precipitates, of noble gas inclusions, of surface oxidation and of the nature of the substrate.

Organiser : Luigi Di Lella / EP Division
** Tea & coffee will be served at 16.00 hrs.*

Friday 23 April

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room, bldg 4

Looking for the charged Higgs boson in top quark decay and beyond

by D.P. ROY / Tata Institute, Mumbai

After a brief introduction to the charged Higgs boson and its major decay modes at the MSSM, I shall discuss the results of charged Higgs search in top quark decay with the present Tevatron data. The prospects of extending the search over a wider region of parameter space at Tevatron upgrade and LHC will be discussed. Finally I shall discuss the prospect of carrying on the charged Higgs search beyond the top quark mass at LHC.

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/alicedoc/www/chic/hif_26-apr-99.html

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

Integrating the Digital Library Puzzle: The Library Without Walls at Los Alamos

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

Our vision is to create a network of knowledge systems that facilitate scientific communication and collaboration.

General Project Goals:

- Enhance scientific research productivity through enabling digital library technologies, which integrate user applications and digital content. Systems and products will be measured by their ability to facilitate new forms of collaboration among our users.
- Partner with our customers to enhance the access and usability of information, which contributes to our mutual success.
- Shift from customer/supplier relationships to partnerships with our key providers. We have successfully formed partnerships with primary journal publishers, secondary electronic database producers, and software companies.

Rick Luce, Library Without Walls Project Leader
<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 / PS Division

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 / PS Division

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

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

An Introduction to Configuration Management

by Gabriele PAWLITZEK, Arash KHODABANDEH
CERN-IT

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

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

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.

EDUCATION SERVICES EDUCATIFS



Information sur les cours, dates et places disponibles sur WWW:
Information about the courses, dates and places available on WWW :
<http://www.cern.ch/Training/>

ENSEIGNEMENT ACADEMIQUE ACADEMIC TRAINING

F. Benz Secretariat ☎ 73127
francoise.benz@cern.ch

ACADEMIC TRAINING LECTURE SERIES

19, 20, 21, 22, 23 April

from 11.00 to 12.00 hrs – Auditorium, bldg 500

Deterministic Chaos

by J.-P. ECKMANN / Geneva University

In these lectures, I will give an overview of the mathematical and physical aspects of deterministic chaotic systems. Starting from simple examples, I plan to cover some crucial notions of the theory such as : Hyperbolicity, shadowing, and ergodic properties.

ACADEMIC TRAINING LECTURE SERIES

26, 27, 28, 29 & 30 April

from 11.00 to 12.00 hrs – Auditorium, bldg 500

Muon Colliders

Muon Colliders – Prospective Physics (J. Ellis)

Muon storage rings can address fundamental issues in neutrino physics, enable precision Higgs physics, and advance the high-energy frontier in lepton-antilepton collisions. In this lecture, the principal physics goals of this three-step scenario will be outlined, with particular emphasis on neutrino and Higgs factories.

Muon Colliders (D. Neuffer)

In these lectures the concept of a high-energy high-luminosity $\mu^+\mu^-$ collider is developed. A $\mu^+\mu^-$ collider would provide heavy lepton collisions, with unique capabilities in the exploration of Higgs bosons at 100-180 GeV energies, and it could be extended to multi-TeV energies. A $\mu^+\mu^-$ collider requires a high-intensity proton source for π -production, a high-acceptance decay channel to collect μ 's from π -decay, a μ -cooling system, a rapid acceleration system, and a high-luminosity collider ring for the collisions of short, intense $\mu^+\mu^-$ bunches. Critical problems exist in each of the collider concept components, and in the interaction-region detectors needed to analyze the collisions. These problems and the search for solutions within the current $\mu^+\mu^-$ collider research program are described

Experimental Facilities With Muon Storage Rings (A. Blondel)

This lecture will summarize the experiments that one can imagine to perform around muon storage rings.

- neutrino experiments (DIS and oscillations)
- muon experiments (rare decays)
- Precision measurements at muon colliders, Higgs factory
- High energy frontier