

# 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>

## Tuesday 15 April

### TECHNICAL PRESENTATION

#### ORACLE DEVELOPERS FORUM

at 09.00 hrs - IT Auditorium, bldg 31/3-004-5

Oracle Web Application Server (Web Server 3.0)

by Pierre LEON / Oracle Corp.

Oracle is on the threshold of releasing the latest version of its Web Server product which is a very different beast from its predecessors. The audience will be able to take a look under the covers of the Web Application Server (as it is now called) and see what makes it work, looking at the various cartridges that are supplied (such as Java, ODBC, Perl etc.) and the new range of services that are supported (for instance Transactions).

The speaker will also explain how distributed cartridges can be created and how they work and then show how the Web Application Server fits into Oracle's Network Computing Architecture and the world of distributed objects. He will explain why Oracle has moved so strongly into the distributed objects arena and what it means for their customers or anybody building powerful transactional systems to be deployed in an Internet/Intranet environment.

Java has gained a lot of attention in the last 18 months and the speaker will also talk about Oracle's massive commitment to Java and what it can mean for you.

Information: P. Martel I'EST/74372

Organiser : S. Cannon / IT / 75036

## Wednesday 16 April

### THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room

**QCD** atoms in external fields

by D. KHARZEEV / Bielefeld University

Heavy quarkonia - the hydrogen atoms of QCD - are the most "simple" hadrons, since their dynamics is essentially perturbative. Because of this, the description of quarkonium properties is an important testing ground of QCD. I will review the recent progress in describing the structure of quarkonia (the rôle of higher Fock states, the gluon structure function, ...) and their production and decays in the framework of the operator product expansion, which in this case can be cast in the form of the multipole expansion familiar from atom physics. This approach allows us to confirm and extend the earlier suggestion that quarkonia can be used as useful and effective probes of external colour fields. I will therefore put a special emphasis on using quarkonium as a probe of dense QCD matter produced in relativistic heavy ion collisions. I will discuss the possible interpretations of the "NA50 anomaly" in J/psi production observed recently at CERN SPS and the future directions for theoretical and experimental studies.

## Wednesday 16 April

### CERN HEAVY ION COLLOQUIUM

at 16.30 hrs - Council Chamber

Why do we expect **LHC** to be such a good instrument for **QCD** plasma formation?

by Keijo KAJANTIE / CERN-TH

Can we compute whether and with what characteristics QCD plasma will be produced in head-on Pb+Pb collisions at some 2.5 TeV + 2.5 TeV total energy per nucléon? Something we for sure can reliably compute is inclusive production of gluons and quarks with pt in the region above 100 GeV. Let us now extend this computation to as small values of pt as one dares to go with perturbation theory, say, to 2 GeV.

Then one enters the small-x domain (x about 2/2500) where HERA results imply greatly enhanced parton densities. These convert to thousands of produced gluons per unit rapidity, energy densities of almost 1000 GeV/fnv\*, temperatures of the order of 1 GeV. Nobody can say how nuclear or nonperturbative effects will modify these numbers, but there certainly is all the reason to be optimistic.

Organisers: Y. Foka and C. Lonrenco

## Jeudi 17 avril

### PRÉSENTATION TECHNIQUE

09.00-17.00 h - bât. 54/2-035

VMETOOLS et applications

par P. SÉVIGNÉ / SYSTOLIC

Pionnier du HOT SWAP sur bus VME et, plus récemment sur PCI, Systolic offre une gamme de produits VMETOOLS, pour faciliter test et intégration, augmenter la fiabilité et améliorer la maintenance des équipements informatiques industriels et scientifiques.

La société distribue aussi une gamme de cartes VME hautes performances pour acquisition et restitution du signal analogique. Les produits offrent des conversions jusqu'à 16-18 bits, 16-32 voies synchrones ou 8 voies asynchrones, fréquence de d'échantillonnage de 100 Khz à 2 Mhz et rapport signal sur bruit typique autour de 90 dB.

Langues: français, anglais

Information : L. Abel /FI-A / 79561

## Thursday 17 April

### LHC TECHNICAL SEMINAR

at 16.00 hrs - LHC Auditorium, bldg. 30 (7th fl.)

pp physics at the **LHC** and the **CMS** experiment

by T.S. VIRDEE / CERN-PPE

The seminar will cover the following topics :

- the fundamental physics arguments for the LHC;

- the potential for discoveries at different integrated luminosities;
- the challenges faced by the detectors;
- description of the CMS experiment with an emphasis on how the challenges will be met;
- how to select events and to extract signals for a few physics channels;
- the schedule for the construction and installation of the CMS experiment.

#### Thursday 17 April

##### CERN COLLOQUIUM

at 16.30 hrs - Auditoriums-

Elementary Particles : The first hundred years

by Don PERKINS / Dept of Nuclear and Astrophysics,  
Oxford University

To mark the centenary of the discovery of that first elementary particle, the electron, some remarks and recollections from the early days of high energy physics, including the impact of early experiments and ideas on today's research. Much of our progress in this field has been carefully anticipated and planned, but a surprising number of successes were the result of incredibly lucky breaks, where headway was made despite - or even because of - incorrect experimental results, crossed wires or simply asking the wrong question at the right time.

We can be sure therefore that the next century - or perhaps even what remains of this one - will have unexpected surprises in store.

*\* Tea and coffee will be served at 16.00 hrs.*

#### Friday 18 April

##### MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs - TH Conference Room

Minijets as a perturbative probe of colour charge

by David SUMMERS / CERN

In the past the concept of the flow of QCD colour has helped us to understand various experimental effect such as the "drag" effect and rapidity gap events. In this talk I explain how in the future understanding of QCD colour flows provides a strong experimental tool for identifying new physics. I explain how minijets provide a perturbative, and hence predictable, probe of QCD colour flows; and discuss how measurements at current colliders can help us better understand minijets, and aid us in understanding how to apply minijets as a probe of QCD colour flows at future colliders.

#### Wednesday 23 April

##### COMPUTING SEMINAR

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

**Highlights from CHEP '97**

by John APOSTOLAKIS & Ignacio REGUERO /  
CERN-IT

The speakers will review the presentations given at this year's Computing in High Energy Physics (CHEP '97) conference, both from a general point of view and in their specific areas of interest.

Organiser : G.Folger / IT

#### Wednesday 23 April

##### ISOLDE SEMINAR

at 16.00 hrs - TH Conference room

Study of radioactive fission products migration in high level waste storage materials by means of ion implantation

by N. MONCOFFRE / I.P.N. & Univ. Claude Bernard,  
Lyon

High level nuclear wastes (long live fission products, actinides, activation products) issued from commercial and research nuclear power reactors represent a crucial problem for environment safety. At the moment, these wastes are stored at the surface either directly (open cycle) or after reprocessing (closed cycle). In the future geological storage will be performed. Depending on the type of disposal, two materials are used as migration barriers: zircaloy cladding tubes or glasses. In order to predict a radio nuclide release from these waste forms, migration studies are needed. Ion implantation is a good way to introduce well known concentration of radio nuclides and provides a good tool to simulate diffusion phenomena. We will focus this talk on the fission product migration in two cases which are i) the study of glass lixiviation phenomena related to specific chemical properties of isotopes in an isobaric chain and (ii) the study of fission product diffusion (typically iodine) in zircaloy at very low concentration as a function of defect density.

*\* Please note change of date!*

#### Thursday 24 April

##### ESONE MEETING

at 09.00 hrs - bldg 160/1-009

Optical Links and Buses

ESONE, the committee for European Studies On Norms for Electronics, is holding a half day meeting on optical links and buses.

This is first a series of informative presentations and discussions, which will allow users to compare and update themselves on developments in optical bus and link technologies.

All those with an interest in optical data transmission are invited to take part.

##### Provisional Programme

###### 1. Siemens Fibre Optics Product Overview

by Peter NEUMANN / Product Manager

- Introduction to Fibre Optics,
- Information on products and projects.

###### 2. Parallel Optical Link (PAROLI)

by Kurt ARETZ / Project Manager

There are many applications for parallel optical links ii computer bus connections, and the bundling of independent serial data channels, etc. PAROLI modules (transmitter and receiver) are driven with a 3.3 V power supply and use LVDS technology. Maximum data throughput is 15 Gbit/s using 12 optical fibres.

###### 3. Discussion

For more information, please refer to the ESONE Web page (<http://www.cern.ch/ESONE/ESONE.html>).

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**Wednesday 16 April****SEMINAR ON PARTICLE PHYSICS**

at 17.00 hrs - Auditoire Stuckelberg

**Observation of Events at Very High  $Q^2$  in ep-collisions at HERA**

by Christoph GRAB / ETH Zurich

In measurements of electron-proton scattering at HERA, the two experiments studied events in the unexplored highest region of squared 4-momentum transfer  $Q^2$  up to 35000 GeV<sup>2</sup>. The measurements are compared with the expectation of the standard deep-inelastic model of lepton-nucleon scattering (DIS). For very high  $Q^2 > 15000$  GeV<sup>2</sup>, the number of both neutral current and charged current candidate events observed exceeds the expectations by the theoretical predictions. This observed difference is mostly due to events at large masses  $M = \sqrt{s}$  in which the positron is backscattered at large  $y = Q^2/M^2$ .

## 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/>

MANAGEMENT & COMMUNICATION  
MANAGEMENT & COMMUNICATION

Madeleine Pincott ES 73674  
madeleine.pincott@cern.ch

Il reste quelques places disponibles dans le séminaire suivant :

**Négociation**  
27, 28 mai 1997

Si vous êtes intéressés à y participer, veuillez nous contacter rapidement.

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[francoise.benz@cern.ch](mailto:francoise.benz@cern.ch)  
Andrée Fontbonne 72844  
[andree.fontbonne@cern.ch](mailto:andree.fontbonne@cern.ch)

**ANGLAIS-FRANÇAIS**

Les inscriptions à ces cours sont ouvertes dès maintenant pour **le troisième trimestre, du 14 avril au 27 juin 1997**.

Les formulaires d'inscription sont à votre disposition au Secrétariat des Cours de Langues (bât. 54/E-001), au Bureau des Utilisateurs (bât. 61/R-020), à votre secrétariat de division.

Ces cours s'adressent à toute personne travaillant au CERN ainsi qu'aux conjoints.

Pour toute information, veuillez contacter Mme Benz ou Mme Fontbonne au 73127 (après-midi seulement), Mr Liptow au 72957.

**ENGLISH - FRENCH**

Registration for language courses in **the third term, from 14 April to 27 June 1997**.

Application forms are available at the Language Courses Secretariat (bldg 54/E-001), at the Users' Office (bldg 61/R-020), at your Divisional Secretariat.

These courses are open to all persons working on the Cern site, and to their spouses.

For all information, please contact Mrs. Benz or Mrs. Fontbonne, tel. 73127 (afternoons only), Mr. Liptow, tel. 72957.

**SEMINAIRE DE PREPARATION A LA RETRAITE**

Suite au succès des séminaires pilotes de 1993 et 1995, nous vous informons dès maintenant qu'un séminaire de préparation à la retraite aura lieu durant la première quinzaine du mois de juin. Les dates seront publiées avant fin avril.

Tous les membres du personnel titulaire âgés de 57 ans et plus recevront en temps utile une lettre nominative les invitant à y participer (les conjoints sont les bienvenus). Le personnel âgé de moins de 57 ans pourra assister à ce séminaire suivant les places disponibles. La participation se fera par inscription.

De plus amples détails sur cette procédure vous seront donnés ultérieurement.

M. Pincott d> 73674  
Services Educatifs

**SEMINAR IN PREPARATION FOR RETIREMENT**

This is advance notice that following the successful seminars in 1993 and 1995, a further seminar on preparation for retirement will take place in the first half of June. The dates will be published before the end of April.

All staff aged 57 and above will receive in due course a personal invitation to attend (accompanied by their spouse if they wish), and younger staff may attend subject to space limitations.

Attendance is by enrolment, and fuller details of the procedure will follow.

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