

SEMINARS

SEMINAIRES

Monday 23 November

PPE SEMINAR

at 16.30 hrs – Auditorium

Charmonium spectroscopy in $p\bar{p}$ annihilations : experimental results from FNAL E760

by Diego BETTONI / University of Ferrara

Experiment E760 at the Fermilab antiproton accumulator studies the spectroscopy of charmonium through resonant formation in $p\bar{p}$ annihilations. We will present the experimental results from E760, in particular concerning the masses, partial and total widths and branching ratios of the $c\bar{c}$ states, as well as the first observation of the singlet P state (h_c).

Tuesday 24 November

PRESENTATION

at 10.00 hrs – CN Auditorium
bldg 31/3-005

Phigure

by J.-B. CAZEAUX / G5G (Graphisme 5e Génération),
Mérignac, France

Phigure is a high-level 2D/3D graphic library, developed using Phigs, for the construction, visualisation and animation of both simple and complex graphic objects. It greatly simplifies software development for engineers who want to create scientific applications with robust functions as axes, 2D and 3D isosurfaces, curves, histograms, pie charts, clipping plane in 3D data, etc. The package will be demonstrated on a SGI workstation. The presentation will be in French, but questions/answers may be in both English and French.

Information : C. Vandoni / CN

Tuesday 24 November

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Early physics from ZEUS at the high energy e-p collider HERA

by John MARTIN / University of Toronto

We have entered a new era of e-p physics with the startup of the HERA collider at DESY, which began providing luminosity for experiments in June. The performance of HERA and the ZEUS detector will be described. Early physics results from the data collected by ZEUS will be presented, both in deep inelastic scattering, where a new regime at low x and moderate Q^2 is being probed, and in photoproduction at a centre of mass energy of 200 GeV, where evidence for hard scattering is clearly seen.

* Tea and coffee will be served at 16.00 hrs.

Wednesday 25 November

PRESENTATION

at 10.00 hrs – CN Auditorium
bldg 31/3-005

ORACLE7, a Technical Overview

by John RADCLIFFE / Oracle UK

On June 1992 Oracle Corporation announced ORACLE7, "The Co-operative Server Database". This talk will provide a technical overview of its new features and the potential benefits to end users, application developers and database administrators.

Note : ORACLE7 - Developer's Release now available at CERN

Information: S. Santiago / CN

Wednesday 25 November

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Non-perturbative questions in the electroweak sector of the Standard Model

by I. MONTVAY / DESY

The effects of strong Yukawa couplings on the Higgs sector are investigated by means of numerical simulations in the limit of vanishing $SU(3)_{\text{colour}} \otimes U(1)_{\text{hypercharge}}$ gauge couplings. First exploratory results on the upper and lower bounds for the Higgs boson mass as a function of a heavy fermion mass are reported. The anomalous fermion number non-conservation is also investigated, and questions concerning the realization of the anomaly on the lattice are discussed.

Wednesday 25 November

PS SEMINAR

at 14.30 hrs* – PS Auditorium
bldg 6/2-024

Plasma lenses for particle accelerators

by R. KOWALEWICZ / University of Erlangen-Nürnberg

For special applications in particle accelerators, lenses with high magnetic field gradients are required. Here plasma lenses offer the advantage that they focus a beam in both planes. In addition, there is nearly no particle absorption. Successful plasma lens experiments at CERN and at GSI-Darmstadt will be reported and the possible new applications discussed.

*Please note unusual time!

Wednesday 25 November

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium
bldg. 31/3-005

Towards an "Intelligent" Software for the Computer-Aided Design

by Konrad SZAFNICKI / Ecole des Mines de Saint-Etienne

The Computer-Aided Design (CAD) requires both performant tools for computation and a significant amount of human experience. Whilst the first is well implementable under the "classical" procedural form, the latter requires an adapted approach, since its characteristics are quite puzzling: uncertain, incomplete, evolutive... On the other hand however, human experience is a "gold mine" of knowledge about (among others...) CAD. In process control for instance, a significant number of industrial control applications have been achieved "empirically", often using the trial and error strategy. They are often nearly optimal though. Therefore it is of great interest to implement this human "intelligence" so as to be able to take advantage of it for industrial as well as teaching purposes. The goal of this talk is to present some recent achievements and perspectives in this domain. The main points of a didactic tool for the CAD are presented. The "fuzzy" and uncertain aspects of the knowledge representation are outlined. A few vital characteristics of an ergonomic user interface are discussed and illustrated on a fully autonomous expert system for industrial process identification (SEXl: System EXpert pour l'Identification des procédés industriels), used in the CAD of Control Systems.

Thursday 26 November

TECHNICAL PRESENTATION

09.00 – 12.00 hrs – bldg 54/2-035

Microcomputers Systems Components, MSC Vertriebs GmbH (D), representing Hybrid Memory Products Ltd (GB) will talk about:

- SRAMs, DRAMs, EPROMs, EEPROMs, PUMAs, etc.
- Volatile Prod. – SRAM and DRAM developments
- Nonvolatile Prod. – EPROM, EEPROM, FLASH devel.
- Plastic/Ceramic Packages – devel. in thru-hole + SMD Prod. Approvals (BS 9000, MIL STD 883C, CECC, etc.).

General applications: high density, complex memory applications

Information: M. Diraison / FI / 4585

Thursday 26 November

PRESENTATION

09.00-11.00 & 14.00-16.00 hrs – CN Auditorium
bldg 31/3-005

State of the Art in PC Graphics

by Ted BRADLEY / Managing Director
Global Data presently supplies CERN with TAXAN and PROSTAR monitors for use on PC's MAC's and other workstations, high performance graphics cards, and general PC hardware. The following topics will be covered:

- An overview of the needs of the computer workplace
- Managing the computer industry's accelerating technologies in the business environment
- Matching monitors and graphics boards in the PC
- Presentation of new TAXAN, PROSTAR and ATI products, as well as VESA Local Bus 486 /66 PC's and beyond

- PC hardware upgrade possibilities
 - News from COMDEX FALL, Las Vegas, 16 - 20 November
- There will also be opportunities to try out the hardware presented on Friday 27 November in the CN Conference Room No 2, bldg 600

For more information, contact R.B. Flockhart on 7562

Thursday 26 November

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Study of high mass photon pairs in $\ell^+ \ell^- \gamma \gamma$ events by Samuel C.C. TING / MIT-CERN

From the analysis of the reactions $e^+ e^- \rightarrow \ell^+ \ell^- + (n \gamma s)$ ($\ell = e, \mu, \tau$) we observe four events, one $e^+ e^- \gamma \gamma$ and three $\mu^+ \mu^- \gamma \gamma$, with the invariant mass of the photon pairs close to $60 \text{ GeV}/c^2$. These events were selected from a data sample collected in the L3 detector corresponding to 950,000 produced Z^0 's. The detailed distribution of these events and their possible origin will be presented.

* Tea and coffee will be served at 16.00 hrs.

Friday 27 November*

COMPUTING SEMINAR

at 11.00 hrs* – CN Auditorium
bldg 31/3-005

The PARFORM : a high performance platform for parallel computing in a distributed workstation environment

by Clemens H. CAP / University of Zurich

The typical workstation in a LAN is idle during long periods of time. Using the concept of a "hypercomputer", this unused distributed computing power can be put at the disposal of the user. This dynamic, heterogeneous environment calls for a platform taking care of transparency, parallelism, load balancing and other issues. We describe such a system which, by optimized design and dynamic load distribution, proves to be faster than many related approaches. Performance measurements and an analytic model for the scalability are presented for an explicit finite difference PDE solver.

* Please note unusual date & time!

Friday 27 November

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Next-to-leading order calculations in jet physics

David KOSOWER / CERN

Detailed calculations of perturbative QCD and QCD-associated processes (such as electroweak vector boson production) in hadron collider experiments are important to obtaining an understanding of backgrounds to new physics at these colliders, the present Tevatron and the future LHC and SSC. I will focus on an array of techniques that translate the core of a next-to-leading order calculation – the virtual

corrections – into predictions for experiments, and will include some discussion of results from programs for W+0,1 jet(s) and two-jet production developed in collaboration with W. Giele (Fermilab) and N. Glover (Durham).

Lundi 30 novembre

PRESENTATION

de 09.45 à 12.15 h et de 13.45 à 18.00 h
Amphithéâtre CN, bât. 31/3-005

EXEMPLAR Logic Synthesis System

par Thierry KLEIN / BacStreet Technologies, Paris

Présentation du système de synthèse logique EXEMPLAR disponible au CERN sur les SUN's du cluster CAE, destiné aux concepteurs de FPGAs, de PLDs complexes et d'ASICs. C'est un outil d'utilisation facile qui accepte en entrée des langages tels que VHDL, PALASM, ABEL, LOG/IC, CUPL, MINC, ACTEL, XILINX, EDIF. Le système synthétise les descriptions logiques (génériques ou dépendantes d'une technologie donnée) et les optimise en fonction de la technologie cible choisie par l'utilisateur (FPGA, ASIC). Exemple: ACTEL, ALTERA MAX, XILINX 2,3,4K.

Il permet entre autres :

- Le changement de technologie d'un circuit PLD vers FPGA, FPGA vers FPGA, FPGA vers ASIC, etc.
- La réutilisation de façon extrêmement simple des designs existants pour les faire migrer vers une technologie différente
- La conception structurée à partir du langage VHDL
- La comparaison et l'analyse rapide des performances de différentes technologies.

Information : P. Baehler, S. Brobeckner /CN

Monday 30 November

ISOLDE EXPERIMENTS COMMITTEE

Open session

at 14.00 hrs – Council Chamber

1. *Introductory Remarks by the Chairman.*
2. *Proposal : Nuclear structure effects in the exotic decay of ^{225}Ac via ^{14}C emission (Milano, Ist. di Fisica Generale Applicata dell' Università and INFN, and Dipartimento di Fisica dell' Università di Milano – Orsay, Inst. de Physique Nucléaire – Nice, Lab. de Radiochimie de l' Université – CERN); ISC 92–33/P33; R. Bonetti.*
3. *Proposal: Precise study of fine structure in ^{14}C emission from ^{223}Ra (Orsay – CERN Collaboration); ISC 92–39/P39; E. Hourani.*
4. *Proposal : Combined electrical, optical and nuclear investigations of impurities and defects in II–VI semiconductors (CERN – Berlin – Erlangen – Lisbon Collaboration); ISC 92–35/P35; N. Achziger.*
5. *Proposal: Tests of hadronic probes of GT strength (Lawrence Berkeley Laboratory – Isolde – Univ. of Washington, Seattle collaboration); ISC 92–36/P36; E.G. Adelberger.*

6. *Proposal: Study of an isospin–forbidden $0^+ \rightarrow 0^+$ transition in ^{38}K (CERN – Berkeley Collaboration); ISC 92–37/P37; E.G. Adelberger.*
7. *Proposal: ^{135}Cs and ^{137}Cs samples for s–process studies (Kernforschungszentrum Karlsruhe – Univ. of Notre Dame – Los Alamos National Laboratory – CERN); ISC 92–38/P38; F. Käppeler.*

Closed session

Monday 30 November after the Open Session, 6th Floor Conference Room, Main Building, continuing on Tuesday 1 December from 10.00 hrs.

Tuesday 1 December

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

New results from the H1 Experiment at Hera

by Joël FELTESSE / DAPNIA, C.E. Saclay

Wednesday 2 December

SL SEMINAR

at 11.00 hrs – Auditorium

The effect of tidal forces on the LEP energy

by A. HOFMANN & M. PLACIDI / CERN-SL

Wednesday 2 December & Thursday 3 December

WORKSHOP ON ARTIFICIAL INTELLIGENCE AND RELATED TOPICS

Wednesday 2 December

14.00–18.00 hrs – AT Auditorium, bldg 30, 7th floor

Short talks on applications of expert systems, logic programming and related techniques at CERN

Thursday 3 December

09.45–17.00 hrs – Council Chamber

Technical presentations by vendors

In parallel there will be an exhibition of knowledge engineering tools from 9.00 to 17.00 hrs in the “Salle des pas perdus”

Wednesday 2 December

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium bldg. 31 / 3-005

Experience with programming user-friendly applications with Tk/Tcl

by F. RYBKOWSKI & Ph. DEFERT / CERN–CN

Jeudi 3 décembre

PRESENTATION TECHNIQUE

de 09.00 à 12.00 h – Amphithéâtre AT
bât. 30/7e étage

Exposé / exposition de Applitec SA (CH) : transmission de données par fibres optiques

Renseignements : M. Diraison / FI / 4585

Friday 4 December

PLENARY ECFA MEETING

at 09.30 hrs – Council Chamber

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| 09.30 | 1. Approval of the Draft Minutes of the Fifty-first Plenary ECFA Meeting |
| | 2. Approval of the Draft Agenda |
| | 3. Chairman's Report |
| 10.00 | 4. Status of the HERA Machine and Polarization Studies (G. Voss) |
| 10.30 | 5. Experimental Programme of HERA (A. Wagner) |
| | Coffee |
| 11.45 | 6. Report on HEPCCC (J. Sacton) |
| | Lunch |
| 14.00 | 7. Experimental Programme of DAPHNE (E. Iarocci) |
| 14.45 | 8. Report on LHCC (J.J. Aubert) |
| 15.30 | 9. Report on e^+e^- Collider Workshop (G. Coignet) |
| | 10. Any Other Business |
| 16.30 | End of meeting |

EDUCATION SERVICES EDUCATIFS

ENSEIGNEMENT GENERAL

Tél. 5811

Jeudi 26 novembre

à 13.00 h – Amphithéâtre
Science pour tous
par Rafel CARRERAS

POUR INFORMATION

Université de Genève

Département de Physique Nucléaire et
Corpusculaire

Ecole de Physique
24, quai Ernest-Ansermet
1211 Genève 4
Tél. 7026273 ou 7026369

Monday 30 November

SÉMINAIRE DE PHYSIQUE CORPUSCULAIRE

at 16.15 hrs – Auditoire Stueckelberg

The NOMAD Neutrino Oscillation Experiment at CERN

par L. L. CAMILLERI / CERN

The NOMAD neutrino oscillation experiment is looking for neutrino oscillations through the appearance of τ neutrinos in a μ_ν beam. The τ_ν are looked for via their charged current interactions. The resulting τ^- is identified through kinematic cuts. It is hoped to improve the present limit on $\mu_\nu - \tau_\nu$ oscillations by one order of magnitude to $\sin^2(2\theta) < 3 \times 10^{-4}$ for $\Delta m^2 > 100 \text{ eV}^2$.



ENSEIGNEMENT TECHNIQUE TECHNICAL TRAINING

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ERRATUM

Le séminaire technique
Présentation et mise en page de documents
aura lieu le

Jeudi 3 décembre

et non jeudi 4 décembre comme indiqué par erreur
dans l'édition précédente.