

SEMINARS SEMINAIRES

Monday 14 November

PPE SEMINAR

at 16:30 – Auditorium

A new limit on the tau neutrino mass from the ALEPH experiment

by Fabio CERUTTI, INFN Frascati

A new limit on the tau neutrino mass has been obtained from $\tau \rightarrow 5\pi(\pi^0)\nu_\tau$ decays selected over the 65 pb^{-1} of data collected during the 1991, '92 and '93 LEP runs. A significant improvement with respect to past determinations is achieved by means of a technique which fully exploits the kinematic information of the hadronic system.

Wednesday 16 November

THEORETICAL SEMINAR

at 14:00 – TH Conference Room

Simulating the electroweak phase transition

by Istvan MONTVAY, CERN & DESY

Numerical Monte Carlo simulations of the electroweak phase transition in the SU(2) Higgs model are reviewed. For increasing Higgs boson masses, below 50 GeV, the phase transition turns out to be of first order with a rapidly decreasing strength. This first-order phase transition of "tunable strength" also has a considerable methodological interest. In this respect, the importance of observing metastability on large enough lattices is emphasized. The latent heat can be determined by exploiting its relation to the "lines of constant physics", which define the continuum limit of lattice regularization. Interfaces between the symmetric and Higgs-phases are studied, and the interface tension is extracted by two different methods. The correlation lengths are determined in both metastable phases on the two sides of the phase transition. They are important for the understanding of the baryon number asymmetry and baryon number dissipation.

Thursday 17 November

TECHNICAL PRESENTATION

9:00-12:00 – CN Auditorium, bldg 31/3-005

The PCI (Peripheral Component Interconnect) Local Bus

by P. Farthouat (ECP), J. Gipser (Motorola, TBC),
T. Truong (Bull, France), A. van Praag (ECP)

The PCI Local Bus is a high performance 32-bit or 64-bit bus with multiplexed address and data lines. It is intended for use as an interconnect mechanism between highly integrated peripheral controller components, peripheral add-in boards, and processor/memory systems.

PCI is becoming the interconnect of choice for peripherals in computer systems. Many major companies are incorporating PCI as a crucial element of their computer architectures.

The speakers at this presentation will give an introduction to PCI, discuss design issues, and look into applications at/for CERN.

Information: L. Pregernig, CN (lfp@cernvm, or ext. 2666)

Thursday 17 November

CERN ASTROPHYSICS SEMINAR

at 16:30 – Auditorium*

Galaxy clusters and cosmology

by S. WHITE, Max-Planck Institute, Munich

Galaxy clusters are the largest coherent objects in the Universe. It has been known since 1933 that their dynamical properties require either a modification of the theory of gravity, or the presence of a dominant component of unseen material of unknown nature. Clusters still provide the best laboratories for studying the amount and distribution of this dark matter relative to the material which can be observed directly — the galaxies themselves and the hot, X-ray-emitting gas which lies between them. Imaging and spectroscopy of clusters by satellite-borne X-ray telescopes has greatly improved our knowledge of the structure and composition of this intergalactic medium. The results permit a number of new approaches to some fundamental cosmological questions, but current indications from the data are contradictory. The observed irregularity of real clusters seems to imply recent formation epochs which would require a universe with approximately the critical density. On the other hand, the large baryon fraction observed in clusters seems inconsistent with the standard interpretation of light element abundances in terms of Big Bang nucleosynthesis unless the mean density of the Universe is about 20% of the critical value.

*Tea & coffee will be served at 16.00 hrs.

Friday 18 November

TECHNICAL PRESENTATION

at 10:00 – CN Amphitheatre, bldg 31/3-005

OS-9/OS-9000: latest and future software products

by Peter Dibble, Research Scientist, Microware Systems Corporation (USA).

This talk will review Microware's recent releases and discuss plans for the near and remote future. Recent releases include support for the PowerPC, new releases of Ultra C and FasTrak, and DAVID. DAVID, Digital Audio/Video Interactive Decoder, would seem irrelevant to CERN. It is not. The near future holds a maintenance release of OS-9, a major update of PCF, FasTrak support for emulators, and a gradual merging of OS-9 and OS-9000 where convergence is appropriate. There will probably be at least one more processor port for OS-9 in the near future and a performance release along the same lines as the OS-9 3.0 release.

Organiser : S. Cannon / CN / 5036

Friday 18 November

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14:00 – TH Conference Room

Quarkonium production

by Dmitri KHARZEEV, CERN

In QCD thermodynamics, quarkonia can be used as a probe for deconfinement, provided their interaction in dense confined matter can be distinguished from that in a quark-gluon plasma. I will report the results (obtained in collaboration with Helmut Satz and Larry McLerran), showing that a slow j/ψ or $Upsilon$ cannot be absorbed (i.e., broken up into a $D\bar{D}$ or $B\bar{B}$) in hadronic matter of the volume and density which can be obtained in nuclear collisions. On the other hand, we find that quarkonia can be broken in deconfined matter, which contains much harder gluons. The results on the interaction of

fully-formed physical quarkonia in the confined medium of a heavy nucleus can be tested in the experiment with a nuclear beam incident on a hydrogen target, which becomes feasible with the advent of the Pb-beam at the CERN-SP

Friday 18 November

PRESENTATION

at 14:00 – CN Auditorium, bldg 31/3-005

LynxOS on PowerPC and other Lynx developments

by Mark Overgaard, Lynx Real-Time Systems Inc., Los Gatos, California

CANCELLED

Monday 21 November

CAS ACCELERATOR SEMINAR

at 14:30 – Main Auditorium

The Tenth Lecture in the John Adams' Memorial Lecture Series

Electron spin polarisation at HERA recent results and future plans

by Reinhard Brinkmann, DESY

The spin rotator pair was installed in the HERA electron ring during the 1993/1994 winter shutdown. On 4th May 1994 the machine was well tuned for high transverse polarisation (about 65%) and the rotator switched on for the first time. A longitudinal polarisation level of 55% was obtained without further optimisation, thus proving for the first time that longitudinal spin polarisation in a high energy storage ring is indeed possible.

This lecture reviews the present status of the work done on spin polarisation at the HERA electron ring. The theoretical and experimental concepts applied for achieving high degrees of transverse and longitudinal polarisation are described. The experience with polarisation during e/p luminosity operation is summarised and the prospects for future experimentation at HERA with a longitudinal polarised electron beam are discussed.

*Tea and coffee will be served after the lecture (~16.00h) in the Salle des Pas Perdus

Monday 21 November

TECHNICAL PRESENTATION

10:00 - 16:00 – bldg 17/1-007

New Gauss/Tesla meters

by F. W. Bell (USA) and Isatel Electronic AG (CH)

Information: M. Diraison / FI-A / 4585

Tuesday 22 November

TECHNICAL PRESENTATION

at 10:00 – CN Amphitheatre, bldg 31/3-005

HP-UX 10.0 presentation

by Olivier Martinet H.P., Geneva consultant organisation.

Tuesday 22 November

CERN PARTICLE PHYSICS SEMINAR

at 16:30 – Auditorium

Exciting LEAR physics LEAPs in 1994

by E. KLEMPPT, University of Bonn, Germany

Wednesday 23 November

PS SEMINAR

at 11:00 – PS Auditorium, bldg 6

AUSTRON - A pulsed neutron spallation source for the central European region reported

by P. Bryant (on behalf of the AUSTRON Study Group)

Thursday 24 November

INSTITUTION OF ELECTRICAL ENGINEERS LECTURE

at 16:30 – Council Chamber

Artful aids in command of prosperity

by Prof. Allen T. Johns, Head of School of Electronic and Electrical Engineering University of Bath

Friday 25 November

ISOLDE SEMINAR

at 16:00 – TH Conference Room

The Doubly Closed Shell Nucleus ^{132}n : Collectivity and p-h states

by B. Fogelberg, The Neutron Research Laboratory, Studsvik, Uppsala University

EDUCATION SERVICES EDUCATIFS

ENSEIGNEMENT GÉNÉRAL

Tél. 5811

Jeudi 17 novembre

à 13.00 h – Amphithéâtre

Science pour tous

par Rafel CARRERAS