

SEMINARS SEMINAIRES

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

Monday 7 April

PPE SEMINAR

at 16.30 hrs - Auditorium*

A measurement of $|V_{cs}|$ using
B⁰-bar -> D⁺*1⁺ D⁰-bar decays

by Elisabetta BARBERIO / CERN-PPE

We report on a measurement of the Cabibbo-Kobayashi-Maskawa matrix element $|V_{cs}|$, from approximately 4.2 million hadronic Z⁰ decays recorded with the OPAL detector. The differential decay width of B⁰-bar -> D⁺*1⁺ X⁻-bar is measured as a function of the kinematical variable $\cos\theta$, which is a measure of the recoil of the D⁺* meson in the B⁰-bar rest frame. The product of the matrix element $|V_{cs}|$ and the normalization of the decay form factor at the point of zero recoil of the D⁺*, $F(\cos\theta = 1)$, is determined from a fit to the differential decay width distribution. Using a quadratic parametrization of $F(\cos\theta)$, we measure $F(1) |V_{cs}|$. Using Heavy Quark Effective Theory calculations for the decay form factor at zero recoil of the D⁺* meson in the B⁰-bar rest frame, we derive $|V_{cs}|$ and the slope of the form factor at zero recoil.

* Tea & coffee will be served at 16.00 hrs.

Mardi 8 Avril

PRESENTATION TECHNIQUE

à 09.00 h - Amphithéâtre IT, bât. 31/3-004-5

Logiciels CAO, PCAD 12 (Accel Technologies) & Routeur Specctra(CCT)

par G. SCHNELL / CONNEXE S.A. avec la participation de N. BOUDOT / Accel Technologies.

Le matin, de 09.00 à 12.00 h : présentation-démonstration
L'après-midi, de 14.00 à 17.00 h; atelier(s). Si vous avez un problème particulier, merci de nous faire parvenir, dès le matin, un bref descriptif de la question et, le cas échéant, une disquette. Nous vous répondrons dans le cadre de l'atelier.

Programme:

- 09.00-10.15 présentation des idées fortes du logiciel: intégration des utilitaires dans les éditeurs - création des différents masques par simple configuration - bibliothèques.
- 10.15-10.30 Pause.
- 10.30-12.00 le logiciel en situation - exemple concret.
- 12.00-14.00 Pause.
- 14.00-17.00 session ouverte (avec pause à 15.15 h). Réponses à vos interrogations. Exemple de transfert de bibliothèque PCAD8 - PCAD12.

Information : C. Eck/IT/74260

Organiser : S. Cannon /IT/75036

Mercredi 9 avril

PRÉSENTATION TECHNIQUE

09.00-17.00 hrs - Bus de démonstration, Parking bât. 252

Instruments de mesures dimensionnelles

par D. KÜNDIG/ TESA Brown&Sharpe SA Renens

Exposition et démonstration d'un assortiment de produits et nouveautés dans la technique de mesure dimensionnelle et de déplacement.

Exemples : Mesure de pièces simples ou complexes de dimensions pouvant aller jusqu'à plusieurs mètres - Capteurs de petits déplacements avec une précision de quelques centièmes du μ m - Systèmes d'acquisition, de traitement ou d'impression des valeurs mesurées.

Langues: français, anglais, allemand

Information : L. Abel / SPL / 79561

Wednesday 9 April

PS SEMINAR

at 11.00 hrs - PS Auditorium

Filtering High Order Modes

by Vittorio VACCARO / University of Napoli

High order modes (HOM) are a severe limitation for machines such as linear colliders or B-factories. In a choked mode cavity, the HOM excited by particle bunches can conceptually leave the cavity without affecting the following bunches. The theoretical analysis of such a device will be presented together with experimental results obtained with a coaxial probe.

Organiser : B. Autin/PS

Thursday 10 April

SL SEMINAR

at 16.00 hrs - SL Auditorium, Prévessin, bldg 864

Microwave instability in the SPS: causes and cures

by Elena SHAPOSHNIKOVA / CERN

The single bunch intensity of the proton beam in the SPS is limited by the longitudinal microwave instability. This instability, first observed in the SPS in 1977, is not harmful for present operation due to the relatively low (10^{11}) bunch intensity. However the LHC beam will have 10^{11} particles per bunch and the threshold of this instability becomes one of the critical factors. The main sources of impedance causing this instability have been found from measurements of the spectrum of unstable single bunches.

Sufficiently long bunches injected at 26 GeV with RF off allow the detailed structure of the SPS longitudinal impedance to be observed over a wide frequency range (100 MHz - 4 GHz). Dominant peaks have been identified with various elements in the ring - some previously unrecognised as important sources. Ways of reducing these impedances together with other possible cures for the instability are under study.

* Coffee and tea will be served at 15.30 hrs in front of the auditorium

Friday 11 April

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs - TH Conference Room

Z' search at lepton and hadron colliders

by Arnd LEIKE / LMU Munich

71 constraints, which could be obtained at lepton and hadron colliders, are reviewed. Special attention is paid to the derivation of simple scaling laws, which make the dependence of Z' exclusion limits and possible Z' measurements on the cm. energy, the integrated luminosity, systematic errors, radiative corrections and model parameters transparent. The predictions of the scaling laws are confronted with existing experimental and theoretical 71 analyses. This talk includes a discussion of the papers hep-ph/9607306, hep-ph/9612410 and hep-ph/9603263.

Friday 11 April

LHC TECHNICAL SEMINAR

at 14.15 hrs - LHC Auditorium, bldg 30 (7th fl.)

Real-Time Control Systems at the JET Fusion Project

by Quentin KING / CODAS, JET Joint Undertaking

For the LHC, real-time control of variables including betatron tunes and chromaticity will be required, and work on prototyping LHC control systems has already been started. At another large instrument for research, the Joint European Torus (JET), real-time control of the power supplied to the plasma was implemented recently. JET has used a variety of real-time control systems since it began operations in 1983, however, until 1994 all three plasma heating systems relied on pre-programmed waveforms. This limited the reproducibility of plasma conditions and made exploration of effects near stability limits difficult and time consuming. Then in 1994 the real-time power control (RTPC) project was started and now the power supplied to the plasma can be controlled in response to over one hundred diagnostic signals. In this multi-media presentation, the systems will be examined to see how they collaborate to provide the physicists with an homogeneous environment within which to design complex experiments.

* Please note unusual day and time.

Wednesday 16 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.

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.)

Physics at the LHC with the CMS experiment

by Jim VIRDEE / CERN-PPE

Thursday 17 April

CERN COLLOQUIUM

at 16.30 hrs - Auditorium⁴⁰⁰

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.

FINLAND AT CERN'97
21 - 25 April 1997

Monday 21 April

Meetings with the Technical and Commercial Personnel of CERN

Tuesday 22 April

Morning reserved for meetings

14.00 CERN-lecture: "Purchasing procedures"

15.00 CERN - General Information

15.30 Visit on CERN Sites

17.00 Cocktails

Wednesday 23 April

11.00 Opening Ceremony

Ambassadors Olli Mennander (Bern) and Ambassador of Finland to Switzerland

Björn Ekblom (Geneva), Permanent Representative of Finland to CERN

Director-General C.H. Llewellyn Smith (CERN)

Representative(s) of Finnish Industry

11.30 Scientific Seminar

Academy Professor Teuvo Kohonen (Helsinki University of Technology)

15.00 Technology Seminar

15.00 Future of Communications

15.15 Improving Project Management Skills and Tools, Joint Effort between Industry and CERN,