

SEMINARS SEMINAIRES

Monday 19 March

EF SEMINAR

at 11.00 hrs – EF Conference Room
bldg 13, 2-005

The Microstrip Gas Avalanche Chamber : a new detector for the next hadron coliders

by Ronaldo BELLAZZINI / INFN &
University of Pisa

The Microstrip Gas Chamber has been recently proposed as an alternative detector to solve the severe problem of tracking at the high luminosity of the next generation of hadron colliders. This new detector aims to reproduce the structure and the intensity of the electric field of the standard MWPC, but on a geometrical scale reduced by at least a factor ten. This has been made possible by using a microelectronics technology (photolithography and thin film disposition) to define the field shaping electrodes with the precision of 0.1 micron. The performances of the detector have been studied in detail in a test-beam. Results on rate capability, position resolution and two-track resolution will be presented.

Monday 19 March

EP SEMINAR

at 16.30 hrs – Auditorium

Antiprotons in a Penning trap, a new mass measurement

by Luis A. OROZCO / Harvard University

Antiprotons from LEAR are slowed and cooled to cryogenic energies for their confinement in a Penning trap. The trap provides a prime environment for precision mass comparisons. The recent measurement of the inertial mass of the antiproton by experiment PS 196 using non-destructive techniques in the Penning trap will be presented.

Tuesday 20 March

CERN COLLOQUIUM

at 16.30 hrs – Auditorium*

Crimes and misdemeanours

by A. DE RÚJULA / CERN

Based on a talk with a similar title, a summary address at the 1990 Moriond Meeting on 'New and exotic phenomena'. On the 'exotic' front, I shall report on the status of the 'fifth force' (graciously defunct) and on weirder things, all the way to the controversy on whether or not spinning a top (one way, not the other!) may make it lighter. On the

'new' side, I shall discuss, among others, the prospects for detecting Jupiters or brown dwarfs as constituents of the dark halo of our galaxy, and 'lunatic spectroscopy' : the use of the Moon's shadow in studies of cosmic rays.

* Tea & coffee will be served at 16.00 hrs.

Mercredi 21 mars

PRESENTATION TECHNIQUE

de 09.00 à 17.00 h – bât. 17, 1-007

Gould Elektronik AG (CH, F, UK, USA) présente son programme d'instruments de mesure et systèmes d'enregistrement avec ses nouveautés, entre autres : DSO 1624, osc. à mém. num. à entrées différ. flot. 4 canaux, avec mini plotter intégré – DSO 2608, osc. à mém. num. 8 canaux isolés! – série DSO 4080, osc. num. 2 ou 4 canaux, 2 bases de temps, 800 mégaéchantillons/seconde – Datagraf, syst. d'acqu. port. complet, prêt à l'emploi, visualisation en temps réel – enregistreurs graphiques avec nouv. poss. de présent., visualisation, mémorisation et trait. des signaux, mémoires tampon, entrées numériques, etc. jusqu'à 8, 24, 40 canaux ou plus – analyseurs logiques, l'accent sera mis sur les possibilités du CLAS 4000, analyseur haut de gamme pour multi-processeurs, RISC, CISC et Large BUS.

Langues : allemand, anglais, français

Renseignements : M. Diraison / FI / 4585

Wednesday 21 March

PS SEMINAR

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

The Heidelberg heavy ion Test Storage Ring (TSR) and laser cooling

by E. JAESCHKE – TSR (40 min) & D. HABS
– Laser cooling in TSR (40 min) / MPI for
Nuclear Physics, Heidelberg, West Germany

The Heidelberg Heavy Ion Cooler Ring TSR is a small (circumference 55 m) storage ring specially designed for phase space cooling of heavy ions up to approximately mass 130 (iodine). TSR is injected by the Heidelberg MP-Tandem postaccelerator combination delivering beams with typical energy of 10 MeV/u. Refined injection and stacking techniques – multiturn injection combined with RF stacking and electron cooling – permit accumulation of several 10^{10} particles even from low intensity primary beams. Cooling these high intensity stacks by laser or electron cooling leads to interesting new collective phenomena. Laser cooling of relativistic (5% v/c) ion beams has been observed for the first time at TSR. The longitudinal temperature of $^9\text{Be}^+$ and metastable $^7\text{Li}^+$ beams was reduced by more than a factor of 1000. The Schottky noise spectra reach the instrumental resolution and only upper limits below 100 mK could be deduced. For such temperatures,

crystalline beams are expected. The influence of the ion beam dynamics on the effective cooling force and the minimum temperature will be discussed in this talk. These cooled beams are used for experiments in fundamental physics – like tests of relativity – and studies of large scale quantum interference. The TSR is also a testing ground for the FILTEX polarization method for stored beams, foreseen for LEAR.

Wednesday 21 March

TECHNICAL PRESENTATION

14.00 to 17.00 hrs – EF Conference Room
bldg 13, 2-005

Messer Griesheim (D) and their Swiss representative SAG (Schweissstechnik AG) specialized in cryogenics and pressure regulators will introduce their product line :

- *low temperature technology (superinsulated vessels)*
- *gas supply units (pressure regulators for various gas purities)*
- *gas purification systems (OXISORB, HYDRO-SORB)*

This presentation will take place in the course of a symposium with subjects referring to the objects exhibited.

Language : English

Information : M. Diraison / FI / 4585

Wednesday 21 March

PRESENTATION

at 14.00 hrs – CN Auditorium
bldg 31, 3-005

Helical Scan Technology : EXABYTE

by Harry HINZ / Director and co-founder of
Exabyte Corp

An overview of Helical Scan Technology adapted to digital data recording will be given. There will be a technical presentation of the EXB 8200 and EXB 8500 products as well as a discussion on future developments.

Wednesday 21 March*

CN SEMINAR

at 14.30 hrs – LEP Auditorium
bldg 30, 7th floor

RISC System/6000 Hardware Architecture

by Phil D. HESTER / IBM, Austin, Texas

Phil Hester will give a 90 minute technology presentation on Risc System/6000 including :

- *POWER architecture*
- *High-speed I/O*
- *Performance*
- *Competitive analysis from Specmarks etc.*
- *Discussion of other RISC implementations*
- *Future potential for Risc System/6000*

At the end there will be 30 minutes of Questions & Answers and discussion.

Phil Hester is Director of the Engineering Center for the Advanced Workstation Division in Austin, Texas. He is responsible for hardware development of IBM RISC products. Previously, he was responsible for architecture and performance of the IBM RISC Products. He was also involved in the architecture, design, and implementation of the RT PC RISC microprocessor and memory management unit. He has numerous patents and technical publications on RISC processors. He is also a member of the IBM academy of Technology. While at IBM, he received an MS degree in Engineering from the University of Texas in 1981. He is a member of Tau Beta Pi and Eta Kappa Nu.

** Please note unusual time and place!*

Jeudi 22 mars

PRESENTATION TECHNIQUE

de 10.00 à 12.00 h, répété de 14.00 à 16.00 h
Amphithéâtre LEP, bât. 30, 7e étage

Digital Design (F), spécialisé dans l'ingénierie en imagerie numérique, propose la présentation de : VINIX-SUN (F), console d'acquisition, de visualisation et de traitement d'images numériques – VISIONIX (F), système d'acquisition et de traitement destiné à la vision industrielle – TX (F), console fonctionnant sur réseau Ethernet dans l'environnement X window – EPOCH (USA), système d'archivage sur DON avec juke box, connexion réseau Ethernet.

Langue : français

Renseignements : M. Diraison / FI / 4585

Friday 23 March

MEETING ON

PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Jet inclusive production to order α_s^3

by J.-Ph. GUILLET / CERN

Previous calculations of order α_s^3 corrections to inclusive jet production in hadron collisions are extended to finite size jet cones and successfully compared with UA2 and CDF experimental data.

Monday 26 March

EF SEMINAR

at 11.00 hrs – EF Conference Room
bldg 13, 2-005

The Microprocessor of the Year 2000 – VLSI technology and architectures in the LHC era

by Alessandro MARCHIORO / CERN

The evolution of VLSI technology and of the architectures of commercial processors will be examined. Based on current trends, projection for the next decade technology will be made. Sub-micron processes will push integration levels to multi-million transistor devices. Such technologies present a totally

new set of problems both to technologists and chip designers and profoundly influence choices of future architectures. Optimal systems can be designed only if all aspects of integration, interconnection and packaging are taken into account. The utilization of the new integration technologies for the design of the next generation of processors will be discussed together with the implications for the design of special devices for HEP.

Tuesday 27 March

SPS EXPERIMENTS COMMITTEE

Open session

at 09.00 hrs – Auditorium

1. *Status report on NA36 (Production of strange baryons and antibaryons in relativistic ion collisions; C.R. Gruhn)*
2. *Report on tests of an active scintillating fibre target (WA84 collaboration; G. Martellotti)*
3. *Measurements of pair production and electron capture from the continuum in heavy particle collisions (Aarhus Univ.- Lawrence Berkeley Lab. - Oak Ridge National Lab. - Stockholm Manne Siegbahn Institute collaboration; SPSC 90-3/P 247 Add.1; C.R. Vane)*
4. *Proposal for a precise measurement of the real part of the elastic-scattering amplitude at the Sp $\bar{p}$ S (Ecole polytechnique Palaiseau - Genoa - Roma - Valencia collaboration; SPSC 90-9/P 250; M. Haguenauer)*
5. *Measurement of beauty particle lifetimes and hadroproduction cross-section (WA82 and WA84 collaboration; SPSC 90-10/P 251; L. Rossi).*

Closed session

at 14.00 hrs – Room B (1st floor)

Administration Building

(to be continued Wednesday 28 March

at 09.00 hrs, same place)

Tuesday 27 March

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

The Virgo Project : a wideband antenna for gravitational wave detection

by A. GIAZOTTO / University of Pisa

Mercredi 28 mars

PRESENTATION

de 9.30 à 11.30 h – Amphithéâtre CN

bât. 31/3-005

Du 3D aux plans de fabrication : démonstration en temps réel sur une VS 3200 relayée via un Barco Graphics Data 1001

Wednesday 28 March

COMPUTER SEMINAR

at 16.00 hrs – Auditorium

'REASON'

(The NeXT Generation of Physics Analysis Software)

by Paul F. KUNZ / Stanford Linear Accelerator Center

Friday 30 March

CN SEMINAR

at 10.00 hrs – CN Auditorium

bldg 31/3-005

A tutorial on object oriented programming

by Paul F. KUNZ / SLAC

Friday 30 March

TECHNICAL PRESENTATION

14.00 to 16.00 hrs – bldg 17, 1-007

Burr Brown Seminar : Data acquisition and Digital Signal Processing on PC/AT

by Charles HAMILTON / Applications Engineer of Intelligent Instrumentation Inc. (USA), an affiliate of Burr-Brown Corp.

Language : English

Information : M. Diraison / FI / 4585

Vendredi 30 mars

PRESENTATION TECHNIQUE

de 09.30 à 12.00 h – Amphithéâtre LEP

bât. 30, 7e étage

Britte SA (B) & Britte France conjointement avec Matra Salbris (F) présenteront leur capacité de prestations en mécanique de précision et micro-électromécanique

Langue : français

Renseignements : M. Diraison / FI / 4585