

SEMINARS SEMINAIRES

Monday 29 November

ISOLDE SEMINAR

at 11.00 hrs – Conference Room B
bldg 61

Nuclear astrophysics with secondary (radioactive) beams

by Moshe GAI / Yale University, New Haven

Central problems in nuclear astrophysics will be discussed with proposed solutions using secondary (radioactive beams). These problems include the transition to the hot CNO cycle, helium burning and the $^{12}\text{C}(\alpha, \gamma)^{16}\text{O}$ reactions at low energies, and the cross section for $^7\text{Be}(p, \gamma)^8\text{B}$ reaction and the ^8B solar neutrino flux. Some of the above problems are two decades old and it will be demonstrated that radioactive beams indeed allow for progress on these problems. The studies with radioactive beams investigate the time reverse processes that occur in stars, as for example in the case of the beta-delayed alpha-particle emission of ^{16}N , or the Coulomb Dissociation of ^8B . The study of the time reverse process allows for enhanced sensitivity for the sought for small reaction cross sections. Data collected at Yale University, Michigan State University, Riken and Louvain-La-Neuve in collaboration with a number of institutes, as well as data collected by others will be reviewed.

Monday 29 November

DETECTOR SEMINAR

at 11.00 hrs – ECP Conference Room
bldg 13/2-005

First operation of a 25 cm², 36k-pixel array of silicon micropattern detectors

by Erik HEIJNE / CERN-ECP

A collaboration of RD19 and Omega WA97 has designed and tested a hybrid, bump-bonded array of 2 planes of silicon micropattern ("smart pixel") detectors as a first step in the development towards a pixel detector for colliders. The array covers 25 cm² and consists of 2 × 36288 elements with binary output. This detector can register a high multiplicity event within 200 ns. The total number of transistors in the associated electronics chips is close to three million. The noise of this circuit is less than 170 electrons rms which allows the use of thinner detectors. The pixel dimensions at present are 75 microns by 500 microns and a precision of 20-25 microns has been measured. Various improvements will be discussed.

Tuesday 30 November

PRESENTATION

09.00 to 11.00 hrs – IBM Genève*
Conference room I-14
48, Avenue Giuseppe-Motta

Multimedia & podium software

by F. T. HOFSTETTER / Director of Instructional
Technology Centre, University of Delaware

This presentation will use multimedia to demonstrate how the new technology has altered forever the way people receive, understand, reassemble and transmit information. It will be shown how PODIUM software can be used to capture instantly any image, sound or motion sequence from any video or audio source and link the recording to any presentation item. The operating system is IBM's new OS/2 Presentation Manager Version 2.0 environment.

- * Please note that exceptionally this demonstration will take place at the IBM premises in Geneva, and NOT at CERN

Wednesday 1 December

PRESENTATION

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

LynxOS Developments

by Mark OVERGAARD / Vice-President of
Engineering Lynx Real-Time Systems Inc.,
Los Gatos, California

LynxOS, a real time POSIX compatible operating system which runs on a variety of hardware platforms, has been used in CERN's accelerator control systems for about two years. The speaker will describe recent developments in LynxOS and related software from Lynx, including recent releases and new or upcoming facilities. Lynx's plans to support the just adopted POSIX.4 standard will be addressed.

Information : Julian Blake/CN-CE/4893/
blake@dxcern

Thursday 2 December

PRESENTATION

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

M-Module – Mezzanine Bus

by MUMM, MEN, Perimos, Philips and Themis

A recent trend in the electronics industry is to increase the modularity of electronic equipment for bus systems (e.g; VMEbus, PC/AT bus, Nubus, VXIbus). The concept is to use intelligent or simple base boards which provide generic functions (e.g.; compute engine, bus interface) for application-specific mezzanine (daughter) boards connected to them. The communication between base and mezzanine boards is defined by mezzanine-bus specifications. This presentation will focus on the M-Module mezzanine-bus specification and on product demonstrations. M-Module is supported by a number of European manufacturers. The basic specifications have been extended to define M-Modules with:-

- (i) An address-bus width of up to 24 bits.
- (ii) A maximum data-bus width of 32 bits.
- (iii) Trigger signals for measurement.
- (iv) Inter-module ports to connect digital signal processors (DSPs).

Under development are specifications for M-Modules with master capabilities and low-level drivers for real-time operating systems.

at 14.00 hrs – CN conference room 3
bldg 513/1-011

Interfacing applications to M-Module

by MUMM and MEN

Technical details for designers on interfacing specific applications to M-Module

Thursday 2 & Friday 3 December

PRESENTATION

Thursday 2 December – at 14.00 hrs

Friday 3 December – at 10.00 hrs

bldg 104/R-B09

Under pressure / Vacuum leak sealing, In-Situ Machining, Trevitest (Safety Valve Testing), Bolt tensioning

by Furmanite International Ltd

Information : Mats Wilhelmsson / ST.CV/4190/
Wilhelmm@CERNVM

Thursday 2 December

SL SEMINAR

at 14.15 hrs – SL Auditorium, Préveessin
bldg 864, 1st floor

Tidal interactions and deformations at the Earth's surface

by P. MELCHIOR / Observatoire Royal
de Belgique, Brussels

Tidal deformations of an elastico-viscous planet have been theoretically investigated at the end of the last century by Lord Kelvin and Sir George Darwin while they were only at the limit of the detection by the first tiltmeters (horizontal pendulums). There was not much progress until the International Geophysical year (1957) when the first computers became available as well as horizontal pendulums, gravimeters and extensometers of high sensitivity. During the period 1960–1980 big computers allowed to numerically integrate the equations of deformations for complicate earth models with liquid core, to develop the luni-solar attraction potential to some 2000 terms, to develop sophisticated methods of data analysis. In the same time the calibration of the instruments was improved and a great number of observing stations were installed in the different continents. In 1979 it became possible to calculate the ocean-continent tidal interactions and deformations due to the attraction and loading of oceanic tides on the basis of correct corange-cotidal maps. New improvements are made since 1980 notably by the use of superconducting gravimeters.

Friday 3 December

EUROPEAN COMMITTEE FOR FUTURE ACCELERATORS

at 09.00 hrs – Council Chamber

09.00 1. *Approval of the Draft Minutes of the
Fifty-third Plenary ECFA Meeting*

2. *Approval of the Draft Agenda*

3. *Chairman's Report*

4. *LEP Progress Report
(C. Wyss)*

10.30 *Coffee*

5. *The LHC Project – Status Report on :*

– *the Machine
(G. Brianti)*

– *the Detectors
(W. Hoogland)*

– *LHC Strategy
(C.H. Llewellyn Smith)*

– *ECFA Resolution*

13.00 *Lunch*

14.00 6. *Report on the US HEP Programme
(S. Wojcicki)*

7. *Report on the Japanese HEP Programme
(H. Sugawara)*

8. *Report on Recent HERA Results and the
Future Programme
(A. Wagner)*

9. *CERN Computing Strategy
(D.O. Williams)*

10. *Any Other Business*

17.00 *End of meeting*

Friday 3 December

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Simulating supergravity at hadron colliders and supercolliders

by Howie BAER / Florida State University

I will discuss the latest status of the ISAJET/ISASUSY program for detailed simulation of sparticle production and decay at hadron colliders. Sufficient flexibility has been built into the program to allow simulation of most spectra generated by minimal supergravity models. Examples and collider signatures will also be discussed.

Wednesday 8 December

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium

bldg 31/3-005

CLIO : accessing VM data from a Unix workstation

by George APOSTOLOPOULOS /CERN-CN