

SEMINARS

SEMINAIRES

Pour de plus amples informations, prière de consulter
For full information on these seminars, please see
<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

Monday 3 March

ESONE WORKSHOP

at 09.00 hrs – bldg 160/1-009

PC Technology in Real-Time and Controls

ESONE, the committee for European Studies On Norms for Electronics, is holding a one day workshop on the application of personal computer technology to real-time and controls.

The aim of the workshop is to inform the ESONE community on the use of PC based equipment and software in physics research applications. The topics include: reliability, robustness, long-term stability, real-time operation, connectivity and integrity of operation.

A number of invited speakers will present and discuss their experiences and plans. All those interested in the possible benefits of using PC-based equipment and software in research are encouraged to participate.

For more information, including the provisional programme, and to register (free of charge), please refer to the ESONE Web page <http://www.cern.ch/ESONE/ESONE.html>

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Monday 3 March

COSMOLOGY MEETING

at 11.00 hrs – TH Conference Room

Cosmology and the string dilaton

by Thibault DAMOUR / IHES

Tuesday 4 March

TECHNICAL PRESENTATION

at 10.00 hrs – IT Auditorium, bldg 31/3-004-5

Mezzanines: IP Modules, PMCs, and Carriers

by Chris THOMPSON / Director of Sales and Marketing, GreenSpring Computers

GreenSpring Computers is the originator of a popular mezzanine I/O standard, the IP Logic Interface Specification, recently approved by ANSI as standard ANSI/VITA 4-1995 and endorsed by the CERN and ESONE VMEbus Steering Committee (VSC) and by VIPA (VMEbus International Physics Association). The speaker who is Director of Sales and Marketing for GreenSpring Computers will present the use of mezzanines in system-level design, giving examples of current applications in telecommunications, discrete manufacturing equipment design, and simulation. Next, Future product directions for Compact PCI I/O, Windows NT drivers, VxWorks drivers, PMC modules, as well as future support for VME64 extensions will be discussed. New strategic partnerships which result in wider use of mezzanine architecture's will be presented as part of an overall introduction of the newest IP modules and carriers. Finally, an overview of the product design and manufacturing cycle at GreenSpring Computers will be presented to provide an understanding of board level

product manufacturing in the Silicon Valley.

Additional information is available on the Web: about GreenSpring Computers at: <http://www.greenspring.com> and about mezzanines at: <http://wwwinfo.cern.ch/ce/ms/mezzanines>

Organiser : S. Cannon / IT / 75036

Tuesday 4 March

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs* – Auditorium**

Study of Neutral Current DIS events at very high x and Q² with the ZEUS detector at HERA

by Ulrich KATZ / Université de Bonn

Using 20.1 pb⁻¹ of e⁺p data collected with the ZEUS detector at HERA, we have studied deep-inelastic scattering e⁺p → e⁺x for Q² > 5000 GeV². Two events are observed for Q² > 35000 GeV², where 0.145 ± 0.013 events are expected (Poisson probability 0.0096). Four events are observed for x > 0.55 and y > 0.25, where 0.91 ± 0.08 events are expected (Poisson probability 0.014). The selected five events at high x and high Q² are particularly interesting because they occur in an unexplored kinematic region.

Observation of Events at Very High Q² in ep Collisions at HERA with the H1 detector

by Yves SIROIS / Ecole Polytechnique, Palaiseau, CNRS-IN2P3

Recent H1 Measurements of ep scattering with Q² up to 35000 GeV² are compared with the expectation of the standard deep-inelastic model of lepton-nucleon scattering (DIS). For Q² > 15000 GeV², N_{obs} = 12 neutral current candidate events are observed where the expectation is N_{DIS} = 4.71 ± 0.76 events. In the same Q² range, N_{obs} = 4 charged current candidates are observed where the expectation is N_{dis} = 1.77 ± 0.87 events. The probability P (N ≥ N_{obs}) that the DIS model signal N fluctuates to N ≥ N_{obs} in a random set of experiments is 6 × 10⁻³ for neutral current and 0.14 for charged current. The difference in the observed and expected number of Neutral Current events is mostly due to events at large masses M = √xs in which the positron is backscattered at large y = Q²/M². In a mass window of 25 GeV width with a central value of 200 GeV and for y > 0.4, 7 events are observed where 0.95 ± 0.18 events are expected. For this and other choices of mass windows and y thresholds, the probability to observe an excess as large as the measured one anywhere in the mass range investigated is of order 1%.

* Tea & coffee will be served at 16.00 hrs.

** Please note that a TV retransmission is foreseen in the IT Auditorium.

Wednesday 5 March

ECP SEMINAR

at 10.00 hrs (2 hours) — PS auditorium, bldg 6/2-024

Boundary scan ('JTAG') test

by E. BOUSKELA / A. Vervin Teradyne S.A.
and C. GARCIA-FRIAS and J. BUYTAERT / CERN/
ECP-ESS

Teradyne will give an introduction to the boundary scan technique for interconnect testing, and an overview of their 'VICTORY' toolset.

C. Garcia-Frias will show the complete development chain from the Cadence design tool 'Concept', through the VICTORY tools until the final fault diagnosis, with a live demonstration on the NA48 TZSA project. A summary of ongoing projects at CERN using boundary scan, a description of the facility offered at ESS for developing these tests and guidelines to designers will be given by J. Buytaert.

Organiser: J. Buytaert

Wednesday 5 March

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

The electroweak phase transition: precision results

by K. RUMMUKAINEN / Bielefeld University

During the last few years, the basic thermodynamic properties of the finite T electroweak phase transition in the MSM and different extensions of it have been 'solved' by a combination of analytical and non-perturbative numerical methods. The emerging picture of the transition is remarkably accurate and consistent: the transition is of first order up to m_H ; the transition temperature, latent heat and interface tension are known, as well as the properties of the broken and symmetric phases. These results rule out the MSM electroweak baryogenesis and suggest suitable extensions of the standard model.

Thursday 6 March

P-CAD USER MEETING

at 10.00 hrs – IT Auditorium, bldg 31-3-005

This meeting will be devoted to presenting and discussing planned changes of P-CAD support at CERN. Given the importance of this topic all P-CAD users are urged to be present.

Contact: C. Eck / IT / 74260

Thursday 6 March

LHC TECHNICAL SEMINAR

at 16.00 hrs – LHC Auditorium, bldg 30 (7th fl.)

Beam cleaning and cleaning insertions for the LHC

by Bernard JEANNERET / CERN-SL

The LHC is an accelerator to collide high intensity proton beams. For the required strength of the magnetic field superconducting magnets will be used in most parts of the machine. Because of the high energy stored in the beams a very efficient collimation system to avoid magnet quenches is required.

In this seminar basic parameters associated with beam losses and magnet quench levels will be discussed. The design principles for a proton collimation system will be introduced.

Current schemes for the collimation sections IR3 and IR7 and the layout of the optics in these sections will be described.

Friday 7 March

CERN HEAVY ION COLLOQUIUM

at 14.00 hrs – ECP Conf. Room, bldg 13/2-005

Chiral symmetry

by Juerg GASSER / Universitaet Bern

Chiral symmetry allows one to make precise predictions at low energies. The predictions are most conveniently worked out in the framework of the (nonlinear) sigma model. I intend to provide an elementary introduction to these concepts.

Organisers: R. Brockmann, Y. Foka and C. Lourenco

Friday 7 March

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Two-loop anomalous dimension of the chromo-magnetic moment of a heavy quark

by Matthias NEUBERT / CERN

Using the reparametrization invariance and the virial theorem, we calculate the two-loop anomalous dimension of the chromo-magnetic operator in the heavy-quark effective theory (HQET). After performing infra-red subtractions, all two-loop integrals are of propagator type and are evaluated by a recurrence relation for tensor integrals. Our calculation completes the renormalization of the HQET Lagrangian at order $1/m$, and to next-to-leading order in α_s .

Friday 7 March

AC SEMINAR

at 14.15 hrs – LHC Auditorium, bldg 30

Information meeting on the Library Users Services

by C. PETTENATI / CERN, AS-SI

The Library Users Services includes the new Graphical Users Interface to the catalogue, the Inter Library Loan service, the access to external databases like INSPEC.

The methods to find the available literature related to a keyword or a combination of keywords (for example, 'superconducting magnets') will be discussed.

The seminar will give a complete presentation of the Library web pages. A special topic will be the distribution of CERN documents including the new electronic submissions for preprints, open series and theses.

Monday 10 March

LHCC COMPUTING BOARD

Open session

at 11.30 hrs – Council Chamber

RD45 – Status Report of the RD45 Project (LHCC97-6/LCB/RD45)

– Object Databases and their Impact on Storage-Related Aspects of HEP Computing (LHCC97-7/LCB/RD45)

– Object Database Features and HEP Data Management (LHCC97-8/LCB/RD45; J. Shiers)

Closed Session

at 14.00 hrs – 6th floor Conference Room
(Main Building, bldg 60)

Monday 10 March

PPE SEMINAR

at 16.30 hrs – Auditorium*

Jet physics with D0

by Daniel ELVIRA / State University of New York,
Stony Brook

The D0 detector at the Fermilab Tevatron Collider is an excellent instrument for jet measurements, due to its hermeticity, uniformity, segmentation and linearity. I will present the D0 most recent results on the inclusive jet cross section and dijet angular distributions. These measurements are a direct test of QCD and attracted attention last year when the CDF collaboration announced an excess of events at high E_T , which seemed to contradict QCD predictions.

**Tea & coffee will be served at 16.00 hrs.*

Tuesday 11 March

LHCC ELECTRONICS BOARD

Open Session

at 10.00 hrs – Council Chamber

10.00 RD 29 Status Report: DMILL, A mixed analog-digital radiation hard technology for high energy physics electronics (CEA DSM DAPNIA Saclay–CEA DTA LETI Grenoble–CEA Centre d'Etudes de Bruyères le Châtel–Thomson TCS–IN2P3 CPPM Marseille; LHCC 97-15/LEB Status Report RD29; M. Dentan).

10.40 Quality Systems for the LHC experiments (S. Quinton).

Closed Session

after the Open session, 6th floor Conference Room
(Main Building, bldg 60)

Tuesday 11 March

TECHNICAL PRESENTATION

at 10.00 hrs – IT Auditorium, bldg 31/3-004-5

High-performance Network-attached Multiprotocol-Fileserver

by Andreas KÖNIG / Area Sales Manager,
Network Appliance GmbH

Web address: <http://www.netapp.com>

Organiser : S. Cannon / IT / 75036

Tuesday 11 to Saturday 15 March

WORKSHOP

The Strange Structure of the Nucleon

From Tuesday 11 March, 14.00-18.00 hrs to
Saturday 15 March, 09.00-13.00 hrs
Council Chamber

wednesday 12 March

PS SEMINAR

at 11.00 hrs – PS auditorium, bldg 6/2-024

A Non Local Wave Model for Particles and Fields

by Wolfgang SCHNELL / CERN

Organiser: B. Autin/PS

Thursday 13 March

SL SEMINAR

at 16.00 hrs – SL Auditorium, Prévessin, bldg. 864

How can we establish the best possible orbit at LEP ?

by Frank TECKER / RWTH Aachen & CERN

Thursday 13 March

EXHIBITION

09.30–16.30 hrs – Administration Building (bldg 60, 1st floor)

Real-Time Computer Show Europe at CERN

Thirty-one companies will present real-time-computing/ embedded-system products at this exhibition at CERN. The event is **organized by Active Exhibitions Europe**.

The following companies announced their participation:

BVM	Omni Ray
Digital Equipment	Pentland Systems
Dr. Bernd Struck	PerformanceTechnologies
Ecrin Automatismes	Philips IAS
Eltec Elektronik	Revue Polytechnique
Encore Computer	Tecsi
Eonic Systems	Themis Computer
Gespac	Transtech
INCAA	Trenew Electronic
IRTS	Venturcom Europe
LeCroy	Vero Electronics
Lynx Real-Time Systems	Visicom
Megatel Computer	Vsystems
Men Mikroelektronik	Wind River systems
Microware	Ziatech
MSP Friedli	

Please note that the seminar program shown on the Active Exhibitions mailings has been cancelled.

Information: L. Pregernig / IT, email
(Ludwig.Pregernig@cern.ch) or 72666

Friday 14 March

PRESENTATION

10.00–12.00 hrs – IT Auditorium, bldg. 31/3-005

Extending Windows/NT for Embedded and Real-Time Applications

by Mike ROGOSIN / Venturcom Europe

Information: L. Pregernig / IT (ludwig.pregernig@cern.ch, or ext. 72666)

General Organizer: S. Cannon / IT