



Le Dr Dick Wakelin (à droite), directeur de la société Lancashire Fittings Limited, présente les produits de sa société au Directeur général et à l'ambassadeur de Grande-Bretagne en Suisse, Mr Christopher Hulse, pendant la récente exposition de la Grande-Bretagne au CERN.

Dr Dick Wakelin (right), Chairman of Lancashire Fittings Limited, explains his company's products to the Director General and British Ambassador to Switzerland, H.E. Mr Christopher Hulse, during the recent "Britain at CERN" exhibition.

SEMINARS SEMINAIRES

Vous pouvez aussi consulter

For information on these seminars, please see

<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

Monday 2 November

DETECTOR SEMINAR

at 11.00 hrs – Conference room, bldg 13/2-005

Cryogenic operation of Si detectors: the Lazarus effect

by V. PALMIERI /University of Bern

We have seen that silicon detectors that are completely dead after being exposed to very high radiation doses, "resuscitate" and work perfectly again if operated at temperatures below 100 K. In this seminar we will present the first results obtained in test beam runs done by RD39 in collaboration with LHCb, COMPASS, DELPHI and NA50.

Information: <http://www.cern.ch/CERN/Divisions/EP/Seminars/Welcome.html>

Organiser: Rui Ribeiro /EP Division

Monday 2 November

at 14.00 hrs – LHC Auditorium, Bldg 30/7th floor

Open Session

LHC Machine Advisory Committee

14:00	S. Tazzari	Introductory remarks
14:05	L. Evans	Current status of LHC project
15:15	J.-P. Koutchouk	Status of optics Version 6
15:55	Tea	
16:10	K.-H. Schindl	Status of the injector chain: PS complex and ion source
16:40	P. Collier	Status of the injector chain: SPS
17:05	C. Wyss	Status of magnets
17:30		End of session

Please note that times may change.

Tuesday 3 November

at 9.00 hrs – Main Auditorium, bldg 500

Joint Meeting of the CERN-SPS/PS and Gran Sasso Scientific Committees

Open Session

AGENDA FOR THE 40TH MEETING

1. Update on the Neutrino Beam to Gran Sasso (K. Elsener) 30 min.
2. The K2K Project (K. Nakamura) 30 min.
3. The FNAL-LBL Project (L. Camilleri) 30 min.
4. Monte Carlo Methods and Analysis Tools (P. Lipari) 40 min.
5. Possible LBL Neutrino Experiments at Gran Sasso: Summary of Proposals and Ideas (L. Di Lella) 60 min.

Tuesday 3 November

IT TRAINING TUTORIAL

10.00-12.00 hrs - IT Auditorium, bldg 31/3-004

Séminaire Netscape et MSMail pour les personnels de support informatique

by Mail SUPPORT Team / CERN-IT

Please note that this seminar is targeted to Computer Support people in the division and experiments, NOT to end users! It will be given in French. The abstract follows.

L'équipe Mail Support du CERN souhaite inviter toute personne faisant du support dans les divisions ou les expériences concernant les programmes Netscape Mail et Microsoft Mail.

Le déploiement réussi de Netscape Mail au CERN étant en progression constante, il est apparu nécessaire de redonner une mise à jour des informations sur ce produit.

Nous ferons une démonstration de certaines fonctionnalités avancées, des pièges à éviter, des questions courantes. L'objectif est de donner au personnel de support des informations précises pour qu'ils puissent aider au mieux leurs utilisateurs.

Nous reverrons également ensemble la situation concernant Microsoft Mail et que faire lorsque des utilisateurs demandent à passer à Netscape Mail.

Information: <http://wwwinfo.cern.ch/support/training>

Organisers: M.Marquina and R.Ramos /IT-User Support

Wednesday 4 November

THEORETICAL SEMINAR

at 11.00 hrs – TH Conference Room, bldg 4

Glueball calculations in large-N gauge theory

by Simon DALLEY / CERN - TH

A previously neglected method of non-perturbatively solving quantum field theory is resurrected. It involves computing the light-cone Hamiltonian on a coarse transverse lattice along a scaling trajectory. After recalling why a successful method of light-cone quantisation may be important for future progress in particle physics, it is applied to calculate the spectrum and light-cone wavefunctions of glueballs in large-N gauge theory. This is done in both three and four space-time dimensions, and makes use of an exact Eguchi-Kawai reduction to two space-time dimensions. (Note: neither supergravity nor M-theory are invoked; a (small) computer is used; the results enjoy error bars.) If time allows, results on the spectrum of Polyakov loops, interquark potential, and asymptotic density of glueball

states will be discussed, and compared with simple bosonic string models.

Thursday 5 November

LHCC ELECTRONICS BOARD

at 09.30 hrs – Council Chamber, bldg 503

Open Session

- 09.30 RD12 Status Report: Timing, Trigger and Control Systems for LHC Detectors (Bruce Taylor)
- 10.00 RD29 Final Status Report: DMILL, A Mixed Analog-Digital Radiation Hard Technology for High Energy Physics Electronics (Martin Dentan)
- 10.30 RD48 Status Report: ROSE Collaboration, R&D On Silicon for future Experiments (Francois Lemeilleur)

Thursday 5 November

TAPE USER MEETING

at 10.30 hrs – IT Auditorium, bldg 31-3-004

Agenda:

- Current status of HPSS (data storage software)
- Testing of new equipment
- Computer services available during the Christmas shutdown
- Long-term strategy for data storage at CERN.
- AOB.

Organiser: R.Minchin/IT

Thursday 5 November

THURSDAY SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

Coherent exclusive exponentiation CEEX: the case of the resonant e^+e^- collision

by S. JADACH / CERN - TH

I shall present a new, potentially very fruitful extension of the now ten-year-old technique of the exclusive exponentiation within the Monte Carlo event generators. It is also related to the Yennie-Frautschi-Suura works on exponentiation, however it goes in a new direction: the entire formulation of the exponentiation is now done in terms of the spin amplitudes, instead of squared spin-summed amplitudes. The advantages of the new method are numerous: the QED interferences, like for example the initial-final state interferences are handled easily and consistently, the non-IR virtual corrections are generally simpler, the exact and efficient control of the spin polarization effects is now available for all particles, the powerful spinor techniques for calculating exact multiple bremsstrahlung spin amplitudes becomes the inherent part of the exponentiation technique. In the example of the resonant e^+e^- annihilation, thanks to the Monte Carlo technique the full scale quantum mechanical coherence effects between the initial and final state photon emission are implemented. We are able, for the final state with n photons, to sum up coherently over all partitions of photons among initial and final state. With the Monte Carlo technique the coherent sum is done without any approximations — hard photons are included smoothly into the game, contrary to other methods based on coherent states, semi-classical approximation, soft-photon approximations etc. The MC event generators based on the new techniques are of interest for LEP2, CLIC, TESLA, NLC and μ -colliders. The sample numerical results from new KK event generators for $e^+e^- \rightarrow f\bar{f}$ will be presented.

Thursday 5 November

LHC PROJECT SEMINAR

at 14.15 hrs – LHC Auditorium, bldg 30/7th floor

LHC Beam Instrumentation

by Claude BOVET / SL Division

A review will be given of the beam instrumentation foreseen in the transfer lines and in the two LHC rings. In the circular machine the beam position monitor system will have most of its pick-ups located inside the quadrupole cryostats. A new signal treatment using a wide band normaliser, allowing bunch by bunch observation (40 MHz) is under development. The low level of radiation in the arcs will allow 240 computer hubs to be located under the dipoles which will reduce the cost of cables for the distributed systems (BPM and BLM). New systems are foreseen to measure tune and chromaticity during beam ramping. Matching at injection into the SPS and the LHC will be done with semi-transparent screens and various systems are prepared to follow vertical and horizontal emittances during the whole life of the beams which is one of the major issue to keep the beam density and therefore optimize luminosity.

Thursday 5 November

CERN COLLOQUIUM

at 16.30 hrs – Auditorium, bldg 500*

Neutrino Mass and an anomaly in the tritium beta-spectrum. Possible signs of a dense neutrino cloud in the Solar System

by Vladimir M. LOBASHEV / Institute of Nuclear Research of the Russian Academy of Science, Troitsk, Russia

Studying the shape of the tritium spectrum near the end point provides information about the properties of low energy neutrinos including their rest mass. The facility constructed at the Institute for Nuclear Research of the Russian Academy of Sciences, operating in Troitsk since 1994, consists of an electrostatic integral spectrometer with adiabatic magnetic collimation, matched to a windowless gaseous tritium source.

This apparatus, named the "Troitsk nu-mass" has measured the tritium beta-spectrum to within a few eV of the end point. This gave the lowest upper limit on the electron antineutrino mass $m_{\bar{\nu}_e} < 2.5 \text{ eV}/c^2$, but revealed a strange narrow bump 5-15 eV below the end-point with branching ratio of about 10^{-10} of the total decay rate.

Latest measurements reveal that the position of the bump varies periodically within 5-15 eV of the end-point with a period 0.504 ± 0.003 year.

Such periodicity gives rise to the speculation that this phenomenon might originate from some object within the Solar System, which could be a dense cloud of degenerate neutrinos with Fermi energy of about 5 eV. The capture of such a neutrino produces a monochromatic electron line in the beta spectrum of tritium.

Further study requires the construction of more sensitive devices, and possible new facilities are discussed.

Organiser : Luigi Di Lella / CERN-EP

* Tea & coffee will be served at 16.00 hrs.

Friday 6 November

CERN HEAVY ION FORUM

at 14.00-16.00 hrs – Conference Room, bldg 160/1-009

1. Beyond Monotony in Heavy Ion Physics: Signatures of the QCD Tricritical Point

by Krishna RAJAGOPAL / MIT, Cambridge Mass

2. Event-by-event analysis of Pb+Pb collisions at the SPS

by Gunter ROLAND / IKF, Frankfurt

Presentation 1

Several approaches to QCD with two massless quarks at finite temperature and baryon chemical potential suggest the existence of a tricritical point in the phase diagram. In QCD with quark masses as in nature, there is then a critical point at the end of a first order line. I describe several ways to look for the analogues of critical opalescence, that is to look for the unique physics characterizing freeze-out near the critical point. I will show that as a control parameter like the collision energy is varied, the fluctuations of appropriate event-by-event observables should have minima or maxima. Experimental detection of these non-monotonic signatures is possible using present detectors at the CERN SPS, and would teach us much about the QCD phase diagram.

Presentation 2

We will show new results from the NA49 collaboration on the event-by-event analysis of Pb+Pb collisions. In particular the connection between global observables like e.g. fluctuations in the average transverse momentum per event and small scale correlations will be discussed. We will also present first results on the impact parameter dependence of event-by-event fluctuations.

Information <http://wwwinfo.cern.ch/a/alicedoc/www/chic/>

Organisers: Y. Foka and C. Lourenço

Thursday, 12 November

CERN HEAVY ION FORUM

at 14.00 hrs – Conference Room, bldg 160/1-009

Charmonium suppression in heavy ion collisions by prompt gluons

by Boris KOPELIOVICH / MPI

Organisers: Yiota Foka and Carlos Lourenco

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ACADEMIC TRAINING

LECTURE SERIES FOR POSTGRADUATE STUDENTS

2, 3, 4, 5 & 6 November

from 10.00 to 12.00 hrs – Auditorium, bldg. 500 (2, 4, 5, 6 November), Council Chamber, bldg 503 (3 November)

Introduction to Quantum Field Theory

by E. VERLINDE / CERN-TH

In these lectures the basic concepts of quantum field theory are introduced. Topics that will be discussed are :

- The quantization of fields
- Scattering amplitudes and cross sections
- Feynman diagrams
- Lagrangian field theory
- Quantum electrodynamics
- Gauge invariance and renormalization

9, 10, 11, 12 & 13 November

from 11.00 to 12.00 hrs – Auditorium, bldg 500

Introduction to the standard model HEP

by W. HOLLIK, Univ. Karlsruhe, D

**INFORMATIONS
GENERALES
GENERAL INFORMATION**

RESTAURANT NO. 3 - BATIMENT 866 (PREVESSIN)

FERMETURE MERCREDI 11 NOVEMBRE 1998

Des travaux d'entretien nécessiteront la fermeture du restaurant no. 3 toute la journée du mercredi 11 novembre 1998.

Le bar restera ouvert cependant, afin que le service des boissons, sandwiches, snacks etc. puisse être maintenu.

Les cafétérias décentralisées (bât. 864, 865 et 892) fonctionneront également comme d'habitude.

Le restaurant reprendra ses activités selon l'horaire habituel dès jeudi 12 novembre 1998.

Comité de Surveillance des Restaurants
Tél. 77551

RESTAURANT NO. 3 - BUILDING 866 (PREVESSIN)

CLOSURE ON WEDNESDAY, NOVEMBER 11, 1998

Restaurant No. 3 will be closed for maintenance throughout the day on Wednesday, November 11, 1998.

The bar will remain open however so that drinks, sandwiches and snacks remain available.

The decentralised cafeterias (bldgs 864, 865 and 892) will also continue to operate as usual.

The restaurant will resume normal service on Thursday, November 12, 1998.

Restaurant Supervisory Committee
Tel. 77551