

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 5 May

ECP PRESENTATIONS AT CHEP '97 - SESSION 3

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

ECP personnel who gave talks at CHEP '97 will repeat their presentations for the benefit of those people who were unable to attend the conference. A list of the talks to be presented can be found in the ECP Web pages.

Monday 5 May*

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs - TH Conference Room

Heavy quark-antiquark bound states and
perturbation theory

Relativistic corrections and Coulomb resummations

by Andre HOANG / University of California (La Jolla)

In the framework of the Bodwin-Braaten-Lepage factorization formalism, heavy quarkonium productions and decay rates are described by a sum of terms, each of which factors into a short-distance coefficient and a long-distance matrix element. It is widely believed that perturbative methods are unreliable for the calculation of the long-distance matrix elements mainly due to infra-red divergences either in the leading order expressions or in higher-order corrections. In this talk it is demonstrated for a number of quantities involving S-wave heavy $Q\bar{Q}$ states that infra-red divergences of the sort mentioned above are cancelled if contributions from Feynman diagrams are properly resummed to all orders (in the number of loops). It is therefore in principle possible to determine long-distance matrix elements in the framework of perturbation theory. The instruments to carry out these resummations are the common Schrödinger equation and naive time-independent perturbation theory. Arising UV divergences are treated using the concept of effective field theories. We demonstrate our method for the QED vacuum polarization function and the Abelian $O(\alpha_s^2)$ corrections to $\sigma(e^+e^- \rightarrow Q\bar{Q})$ for energies around the $Q\bar{Q}$ threshold. As a result (short-distance and long-distance) $O(\alpha_s^2)$ corrections to the leptonic width of heavy $Q\bar{Q}$ S-wave vector mesons are obtained.

* Please note unusual day!

Monday 5 May

SPECIAL LHC TECHNICAL SEMINAR

at 15.30 hrs - LHC Auditorium, bldg 30 (7th fl.)

The LHC Project Oral Presentations

at the PAC'97 Vancouver

Some of the LHC Project contributions which have been accepted for oral presentation at the coming Particle Accelerator Conference, Vancouver, will be presented in this special seminar. A more detailed programme will be available from the LHC Project Web pages.

Seminar co-ordinator: R. Schmidt / LHC

Mardi 6 mai

LIBRARY SCIENCE TALKS 1997

à 10.00 h - Salle de conférence TH

Bibliothèques virtuelles, bibliothèques numériques

par Corrado PETTENATI / CERN

Tuesday 6 May*

SL SEMINAR

at 15.00 hrs* - SL Auditorium, Preveessin, bldg 864

SL Oral Contributions to the

Particle Accelerator Conference 1997

by SL Participants at PAC 1997

The oral contributions of the SL division to the Particle Accelerator Conference in Vancouver 1997 will be presented to the benefit of those who cannot attend the conference. This includes contributed as well as invited papers.

* Please note unusual date and time!

Wednesday 7 May

THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room

Neutrino masses and mixing from
supersymmetric inflation

by G. LAZARIDES / CERN &
University of Thessaloniki

A left-right symmetric extension of the minimal supersymmetric standard model is considered such that inflation, baryogenesis (through primordial leptogenesis) and neutrino oscillations are closely linked. By invoking a familiar ansatz for the neutrino Dirac masses and mixing of the two heaviest families, the MSW resolution of the solar neutrino puzzle as well as the gravitino constraint on the reheat temperature and the low deuterium bounds on the baryon asymmetry of the Universe, we obtain stringent restrictions on neutrino masses and mixing. In particular, we find that $1 \text{ eV} < m_\nu < 9 \text{ eV}$. The predicted range for the mixing angle θ will be partially (totally) tested by the CHORUS/NOMAD experiment (future short and long baseline experiments at CERN). A possible negative result of CHORUS/NOMAD would reduce the upper bound on m_ν to about 4.2 eV. Constraints on the CP-violating phase are also derived. The atmospheric neutrino anomaly is not tolerated in our scheme.

Wednesday 7 May

CERN HEAVY ION COLLOQUIUM

at 14.30 hrs - ECP Conference Room, bldg13/2-005

Transverse momentum spectra in
nucleus-nucleus collisions

by Andrei LEONIDOV

The calculation of transverse momentum spectra in nuclear collisions in hydrodynamic and droplet model approaches is compared.

A discussion of whether the data show transverse collective flow is given.

Organisers: Y. Foka and C. Lourenço

Monday 12 May

ISOLDE EXPERIMENTS COMMITTEE

at 14.00 hrs - Council Chamber

Open session

1. Introductory remarks by the Chairman.
2. Progress report by the ISOLDE Technical Group Leader.
3. ISOLDE Coordinator's report.
4. Diffusion in intrinsic and highly doped III-V Semiconductors; ISC 97-12/P89; H. Mehrer.
5. Use of radioactive ion beams for bio-medical research; ISC 97-14/P90; G.J. Beyer.
6. Surface and Interface studies with radioactive ions (IS318); ISC 97-15/P29 Add.2; H.H. Bertschat.
7. Measurement of Be7 cross sections with an implanted radioactive target and implications for the solar neutrino puzzle; ISC 97-17/P91; M. Hass.

Closed session

after the Open Session, 6th Floor Conference Room, Main Building.

Monday 12 May

PPE SEMINAR

at 16.30 hrs - Auditorium*

Hyperon and Antihyperon production in Pb-Pb collisions at 158 AGeV/c

by Ivan KRALIK / CERN-PPE

A series of experiments at the CERN OMEGA Spectrometer (WA85, WA94, WA97) have studied the production of strange particles (K , A , S^- , Q^- and their antiparticles) in both nucleus-nucleus and proton-nucleus reactions. Strange (anti-)baryon enhancement at central rapidity have been reported by WA85 and WA94 in S-W and S-S with respect to p-A reactions. Recently WA97 has presented a study of S and Q produced in Pb-Pb and in p-Pb collisions at 160 AGeV/c. The first results suggest a significant enhancement of Q over S production when going from p-Pb to Pb-Pb. This contribution aims to summarize the results obtained by now and to present the latest results from the analysis of the Pb-Pb data.

* Tea & coffee will be served at 16.00 hrs.

Wednesday 14 May

THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room

Solitons in the MSSM

by Alexander KUSENKO / CERN

All supersymmetric generalizations of the Standard Model allow for stable non-topological solitons of the Q-ball type which may have non-zero baryon and lepton numbers, as

well as the electric charge. There is no classical lower bound on the charge of such solitons; and those with a small charge can be entirely stable. These solitons can be produced in the early Universe, can affect the nucleosynthesis, and can lead to a variety of other cosmological consequences.

Friday 16 May

WORKSHOP ON ELECTRONIC PUBLISHING IN PHYSICS

at 09.15 hrs - IT Auditorium, bldg 31/3-005

The CERN Scientific Information Policy Board is organizing a workshop on trends in electronic publishing to discuss the current status and the potential of this new area for meeting the needs of accessing scientific documentation in Physics. The Board invites a group of professionals working in electronic publishing (users and producers) to attend this workshop. It will be of great interest to listen to people, from both Europe and America, who are studying, developing and distributing electronic publications in Physics.

Draft programme

Chairman Gabriele Veneziano

09.15 G. Veneziano. Introduction: purpose of the meeting

09.30 Frank Laloe (European Physical Society)

10.00 Martin Blume (American Physical Society)

10.30 Arie Jongejan (Elsevier Publishing)

11.00 Coffee break

11.30 Alan Singleton (IOP Publishing)

12.00 Douglas LaFrenier (AIP Publishing)

12.30 Lunch

14.15 Urda Beiglboeck (Springer-Verlag Publishing)

14.45 Daniele Amati and Marco Fabbrichesi (SISSA - Trieste)

15.15 Andy Cohen (Boston University)

15.30 Coffee break

15.45 Round table with all speakers: Mick Draper (Moderator)

17.00 Summary of the day: Ken Peach

The workshop is open to all CERN staff, and those linked to Scientific Information-related tasks are sure to find them of particular interest. This flier is also distributed to some external libraries interested in the topic to invite their librarians to attend. Speakers and external guests should be at the Reception of CERN building 33 at 08:50 to be guided to the conference room.

You can register to attend by contacting Ms. Anita Olofsson by telephone (022) 767.24.31 or electronic mail: Anita.01ofsson@cern.ch.

Friday 16 May

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs - TH Conference Room

Real-time evolution of non-Abelian gauge fields on a lattice

by Berndt MUELLER / Duke University

The non-perturbative evolution of non-Abelian gauge fields is relevant for transport phenomena of interest in cosmology and nuclear physics. The classical dynamics of non-Abelian gauge fields on a spatial lattice is characterized by rapid "thermalization" due to chaotic motion. Effects of hard thermal loops can be incorporated by coupling the classical gauge field to a thermal bath of coloured particles. Results obtained with the pure gauge field (Lyapunov exponents, KS-entropy) will be surveyed, and first results with hard thermal loops will be presented in the seminar.

Tuesday 20 May

LHCC ELECTRONICS BOARD

Open session

at 10.00 hrs - Council Chamber

10.00 RD 12 Status Report: Timing, Trigger and Control Systems for LHC Detectors (Honeywell, Aldermaston-Birmingham-CERN-Darmstadt GSI-Espoo Vantaa Inst, of Technology-Paris VI and VII-RAL-Lemo, Ecublens and Worthing-Valencia Polytechnical Univ.; LHCC 97-29/LEB Status Report RD12; B. Taylor).

10.30 RD 23 Status Report: Optoelectronic analogue signal transfer for LHC detectors (Birmingham-CERN-Ecole Poly tech. Fed. Lausanne-Imperial College-Oxford-Perugia-RAL-Siegen; LHCC 97-30/LEB Status Report RD23; F. Vasey).

Closed session

at 11.15 hrs - Salle B Conf. Room (Main Building, bldg 60), continued on Wednesday 21 May.

Jeudi 22 mai

PRÉSENTATION TECHNIQUE

à 09.30 h - Salle de Conférence ECP, bât. 13/2-005

OrCAD Design Desktop for Windows

by Scott GUSTAFF, OrCAD International Sales Manager
John SHOTSKY, OrCAD Product Marketing Manager
Hannes ZÜST, Logmatic AG 5443 Niederrohrdorf

Integrates Schematic, Board Layout, FPGA Design, Translators to and from PCAD, Mentor, Cadence and a Component Information System, developed specifically for networked engineering groups.

Program:

The morning from 9 to 12 a.m. will be used for presentation of OrCAD's open and flexible design structure, demonstration of available tools, future developments. The afternoon from 2 to 5 p.m. is reserved for practical question/answer sessions. If you have particular questions/problems to be attended, please send your files to hp@logmatic.ch

Agenda:

09.00-12.00 Présentation OrCAD - gamme complet pour les conceptions intégrales: saisie de schéma, Layout de circuits imprimés, développement FPGA, traduction de fichiers PCAD, Mentor, Cadence, ainsi que le système pour gérer les composants, destiné en particulier aux groupes d'ingénieurs en réseau. Développements futurs.

14.00-17.00 Session ouverte, questions et réponses, exemples concrets.

Transmettez vos fichiers et questions à hp@logmatic.ch

Information : Logmatic AG 056/485 9191 on az@logmatic.ch

Organisation : Serge Reynaud / 73177 ou reynaud@cern.ch

EDUCATION SERVICES EDUCATIFS



Information sur les cours, dates et places disponibles sur WWW:

Information about the courses, dates and places available on WWW :
<http://www.cern.ch/Training/>

Beryllium Seminar

Thursday 22 May from 9 a.m. to 5 p.m.

Auditorium LHC, bldg 30, 7th floor

This one day seminar will cover major aspects of Beryllium from extraction to manufacturing and handling:

Morning session :

Chairman: Charles Nuttall / CERN - TIS

9.00 Introduction and review of programme (15')

9.15 Beryllium history, mining and extraction (30')

9.45 Basic Metallurgy and properties (45')

- Coffee break -

10.45 Mills products: grades, hot pressing, isopressing, rolling, extrusion (45')

11.30 Environmental, Health and Safety Aspects (30')

- Lunch Break -

Afternoon session :

Chairman: Raymond Veness / CERN - LHC

14.00 Parts Fabrication: machining, postmachining treatments, forming, joining, coating, plating (60')

15.00 Applications: fission/fusion, structural, instruments, windows (45')

- Tea break -

16.00 Other Beryllium Products: Beryllia, electronic grades, AlBeMet, alloys (45')

16.45 Concluding remarks (15')

The seminar will be given by specialists from Brush-Wellman (U.K. and USA): Christopher DORN, Head of Electrofusion Division Window and Detector Manufacturing (B-W/USA), Ronald GAMBIE, Head of European Development (B-W/U.K.), Dr. James MARDER, Head of Beryllium Technology (B-W/USA), William TAYLOR, Director of Environmental, Health and Safety in Europe (B-W/U.K.)

The speakers will be available for discussing particular problems on Wednesday 21 May and possibly also on Friday 23 May morning.

The attendance of this seminar is free of charge and no prior enrolment is required.

For further information please contact:

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Raymond Veness / LHC / 73009 / raymond.veness@cern.ch