

SEMINARS

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Lundi 5 Avril

EF SEMINAR

11h00/12h00 – Salle de Conférence EF
(Bâtiment 13, 2/005)

Les nouvelles chambres à bulles
par A. Hervé

Depuis une dizaine d'années les nouvelles chambres à bulles sont qualifiées de 'petites', 'à cyclage rapide', 'hybrides', 'à haute résolution', 'holographiques' ... Les dernières réalisations seront passées en revue et on essaiera de mettre en évidence pourquoi elles ont été construites et ce qui les distingue des chambres à bulles 'classiques'.

EP SEMINAR

at 17.00 hrs – Auditorium
Channelling radiation in the GeV-region
by S.P. Moller / CERN-EP

When positrons and electrons are incident on a single crystal with a small angle to a crystal axis or plane, they become channelled and electromagnetic radiation will be emitted. The properties of the Channelling Radiation will be derived in a simple classical description, and will be compared to the well-known Coherent Bremsstrahlung. Results from WA64 will be presented.

Wednesday 7 April

PS SEMINAR

at 11.00 hrs - PS Auditorium
(Building 6)
Antiproton physics at LEAR : an elementary introduction
by U. Gastaldi / Mainz Univ.

This talk will outline in an elementary way the physics problems of fundamental character that can be tackled at LEAR and the experimental features – disclosed by the coming into operation of the CERN low energy anti-proton facility – that are qualitatively new, and will give a brief overview of the experimental programme in preparation for 1983. The talk will be given in French.

THEORETICAL SEMINAR

at 14.00 hrs – Theory Conference Room
Grand unification with large supersymmetry breaking
by John Ellis / CERN

A discussion is given of models with spontaneous supersymmetry breaking of the O'Raifeartaigh type, where there is no extra $U(1)$ gauge group and gaugino, squark, slepton, Higgs and shiggs masses are determined by radiative corrections. It seems possible to construct

grand unified models of this type where the hierarchy $m_W = O(10^{-17})$ of the Planck mass emerges naturally, even if the primordial supersymmetry breaking scale is $O(\text{Planck mass})$. Remarks will be made about low energy phenomenology and about cosmology in broken supersymmetric theories.

EP SEMINAR*

at 17.00 hrs – Auditorium
Nuclear magnetic resonance imaging in medicine
by L. Kaufman / UC San Francisco

The talk will cover the basic physics and instrumentation of NMR imaging, results in animals, correlations with physiologic parameters, and imaging in humans using a superconducting magnet at 3.5 kGauss.

* Please note special day

Wednesday 14 April

THEORETICAL SEMINAR

at 14.00 hrs - Theory Conference Room
Developments in Kaluza-Klein theories
by M. Duff / CERN

I discuss the rules for counting physical states in higher dimensional Kaluza-Klein theories with particular reference to eleven-dimensional supergravity. The possibility of obtaining an $SU(3) \times SU(2) \times U(1)$ gauge theory is also considered.

Thursday 15 April

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium *
Measurement of the electron asymmetry in the beta decay of polarized sigma minus hyperons
by R. Winston / Enrico Fermi Inst., Chicago

We have measured the asymmetry parameter of the electron with respect to the spin of the negative sigma hyperon in the beta decay of the sigma. Polarized sigmas were produced in negative kaon-proton reactions at the neutral Y^ (1520) resonance. Particle momenta were measured in a magnetic spectrometer where multi-wire proportional chambers and wire chambers detected trajectories and a large acceptance segmented gas Cherenkov-scintillation counter array identified electrons. A maximum likelihood analysis based on 193 events yields the electron asymmetry of 0.35 ± 0.29 . Our result favours a positive value for g_1/f_1 which is opposite to the Cabibbo favoured sign. The experiment brings the world average electron asymmetry parameter to 0.25 ± 0.19 , more than five standard deviations from the Cabibbo favoured negative result.*

* Tea and coffee at 16.00 hrs.

Monday 19 April

ISOLDE SEMINAR

at 10.30 hrs – SC Conference Room
(Building 26/1-025)

Exploration of neutron-rich exotic Na and K isotopes at the PS

by M. Langevin / I.P.N., Orsay

ISR SEMINAR

at 14.30 hrs – ISR Auditorium
(Top floor of Building 30)

Molecular and cluster beams from nozzle sources : principles and applications

by U. Valbusa / Genoa

Wednesday 21 April

ISR COMMITTEE

I – OPEN SESSION

at 09.30 hrs – Council Chamber

1. Status report from Experiment R 608.

II – CLOSED SESSION

at 11.00 hrs – Sixth Floor Conference Room
(Administration Building)

TRAINING AND ***EDUCATION*** ***ENSEIGNEMENT***

ENSEIGNEMENT GENERAL (Tél.2844)

Les séances 'Science pour Tous', par R. Carreras n'auront pas lieu au 3ème Trimestre (avril à juin 1982).

ACADEMIC TRAINING (Tel. 2844)

3rd Term Programme

April 19, 20, 21, 22, 23

11.00 hrs/12.00 hrs – Auditorium

The action of ionizing radiation on biological systems

by A. Kellerer / Univ. of Würzburg

12, 19, 26 mai et 2 juin

11h00/12h00 – Amphithéâtre

La motivation physique de quelques expériences au CERN. Présentation pour ingénieurs et physiciens appliqués

par J.P. Lagnaux / FNRS, Bruxelles

June 7, 8, 9, 10, 11

11.00 hrs/12.00 hrs – Auditorium

Dynamics of non-linear fluctuating systems

by H. Haken / Univ. of Stuttgart

June 21, 23, 25

11.00 hrs/12.00 hrs – Auditorium

p $\bar{p}$ physics from AA to Z⁰

by C. Rubbia / CERN

The abstract of the lectures (together with any change of dates, time or place) will be published in the CERN Bulletin and on noticeboards about two weeks before each series of lectures.