

SEMINARS SEMINAIRES

Monday 28 June

BEBC USERS' GROUP MEETING

at 13.45 hrs - Council Chamber *
(* Note change of date)

1. Summary of Last Meeting
2. Status Reports : SPS, BEBC, EMI/IPF, BEAMS
3. Election of New Chairman
4. Report on Holographic Tests in BEBC
5. Report on Tests of Solid Neon and Argon Calorimeter
6. Status Report on Experiment WA 24 (Wideband ν and $\bar{\nu}$ in TST)
7. Other Business
8. Next Meeting.

Lundi 28 Juin

PRESENTATION TECHNIQUE

14h00/16h00 - Parking, Bât. 867

La maison Berthet (F), représentant Dorma (D), propose en exposition : ferme-portes électromagnétiques déclenchant la fermeture des portes dès la détection de fumée, autres ferme-portes spécialisés.

Langue : Français.

Renseignements : M. Diraison / FI / 4585.

ISR SEMINAR

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

Simulation of the Beam-Beam Effect
for LEP

by S. Myers / ISR

The effect of the beam-beam interaction ('strong-strong') in LEP has been simulated by tracking many super-particles per beam, for many turns, through the accelerating system, the accelerator lattice and the beam-beam interaction. The motion of each superparticle was treated in six-dimensional phase space and the effects of quantum excitation and radiation damping were included. The simulation technique will be described and a compendium of results obtained from the simulation will be presented.

EP SEMINAR

at 17.00 hrs - Auditorium

A Study of High Transverse Energy Hadron-Hadron Interactions at the CERN SPS using a Large Acceptance Calorimeter

by P. Seyboth / MPI Munich

Hadron-hadron interactions were selected which had a high transverse energy in the full or in restricted azimuthal regions of a large calorimeter, covering the central rapidity region. With the 240 cell segmentation of the calorimeter jet-like properties of the events were studied. The experimental results disagree with both the extrapolation of a low $p_{\perp}$ cluster model and the QCD-4-jet model.

Tuesday 29 June

SPS EXPERIMENTS COMMITTEE

at 09.00 hrs - Auditorium

OPEN SESSION

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1. Communication on the Workshops on SPS Fixed Target Physics.
2. Status Report on NA11 (Measurement of Charmed Particle Production in Hadronic Reactions; P. Weilhammer).
3. Status Report on UA1 (A 4π Solid Angle Detector for the SPS Used as a Proton-Antiproton Collider at a Centre of Mass Energy of 540 GeV; C. Rubbia) and A Proposed Upgrade of the Large Angle Muon Detection in UA1 (UA1-Collaboration; SPSC/82-51/P92 Add. 2).
4. Status Report on UA2 (Study of Antiproton-Proton Interactions at 540 GeV c.m. Energy; P. Bloch) and Request to Install a Ring Image Cherenkov Counter.

PS SEMINAR

at 11.00 hrs - PS Auditorium (Bldg. 6)

Antiproton Physics at LEAR : New possibilities
by K. Kilian

LEAR appears as a relatively small appendix to the $\bar{p}$ programme at CERN. However, it opens up in an optimal way new and exciting physics possibilities with $\bar{p}$ beams between 0 and 2 GeV/c. Examples will be given.

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs - Auditorium *

IBEC Experiments to Determine the Electron Neutrino Mass

by B. Jonson / CERN-EP and the ISOLDE Collaboration

A year ago, De Rújula proposed m_{ν_e} from internal bremsstrahlung in electron-capture beta decay (IBEC). We will discuss the early results obtained at ISOLDE, University of Aarhus and Risø. The existence of the predicted resonant enhancement has been demonstrated for the isotope ^{193}Pt and

the key parameters for ^{163}Ho , believed to be the best case, are now known. Both experiments lead independently to an upper limit on m_{ν_e} of 1 keV; we shall discuss the prospects of reaching a precision comparable with that of the m_{ν_e} experiments.

* Note : Tea and coffee at 16.00 hrs.

Wednesday 30 June

ISOLDE SEMINAR

at 10.30 hrs - SC Conference Room
(Bldg. 26/1-25)

Trapping and Cooling of Externally
Generated Ions

by H.A. Schuessler / Texas A & M Univ.

The use of various trapping devices for catching ions in flight and storing them for extended periods of time (practically indefinitely) has been investigated numerically. The results show that storage is possible for both continuous and pulsed ion injection. The occurrence of characteristic side bands in the spectrum of stored ions has been observed and is being used to cool the ions to eliminate any Doppler effects.

PS SEMINAR

at 11.00 hrs - PS Auditorium (Bldg.6)

Bureautique in PS

by R. Cailliau

Electronic information processing has recently become cheap enough to be applied to a host of jobs in the office. The word processor is the most conspicuous item today, but it is only a stepping stone between the typewriter and a document handling system. Examples of the latter are emerging now, providing better and more services, with word processing as only one of these. The talk will try to show that future systems will be based on small and cheap but very powerful general purpose computers, as such configurations are the only ones to have the flexibility required to adapt to the user's environment.

THEORETICAL SEMINAR

at 14.00 hrs - Theory Conference Room

Cosmological Implications of Strings

by T.W.B. Kibble / Blackett Lab. Imperial
College, London

The topological structures that can form at phase transitions in the early history of the Universe include domain walls, strings and monopoles. Domain walls and monopoles are both for different reasons problematic, but strings may be a bonus, since they can perhaps provide an explanation for galaxy formation, as first suggested by Zel'dovich and in a modified form by Vilenkin. I shall briefly review the circumstances in which strings arise, and then discuss the subsequent evolution of a system of strings. In particular, I shall

concentrate on the expected lifetime of closed loops, which is of critical importance in deciding between the scenarios of Zel'dovich and Vilenkin.

SCIENCE AND SOCIETY/SCIENCE ET SOCIETE

I/ The impact of science on society is important today and may lead to irreversible and dramatic consequences tomorrow. Not all that can be done should be done, but all that can be known should be known - in particular about the consequences of research and its applications. These questions should be approached scientifically, by information and analysis; it is quite natural for an active scientist to apply his professional skill and knowledge to these aims.

A new series of lectures

SCIENCE AND SOCIETY

SCIENCE ET SOCIETE

is being launched. This series aims at providing technical and scientific facts and data as well as methods and results of analysis; it will provide the raw material from which anyone may draw his personal conclusions.

We hope to be able to invite scientists who have spent enough time and work on these questions to be considered as experts. However, even if they present only data and analysis, a personal bias (which data, which method of analysis ?) is unavoidable; often, the speaker will state an opinion. Therefore, whilst this series is part of the official CERN activities, nothing of the content of these lectures or in the ensuing discussions may be interpreted as official CERN statements, but only as the opinion of the speaker or of his partners in discussion.

R. Hagedorn
R. Klapisch
J. Steinberger

SCIENCE AND SOCIETY / SCIENCE ET SOCIETE

at 20.30 hrs - Auditorium

Science and the Arms Race

by T.W.B. Kibble / Blackett Lab. Imperial
College, London

The dangers of the arms race are widely appreciated. Why then does it continue unabated ? How far in particular can scientists - or science itself - be held responsible ? Such questions are not merely academic. If we are to have any chance of reversing the arms race and avoiding the final catastrophe, we must first understand the driving forces that keep it going. I shall argue that these are not to be found primarily in questions of deterrence or strategic balance. Nuclear weapons do not in fact serve any rational military purpose - a view shared by an increasing number of military leaders. The main driving forces are political and socio-economic. The arms race is sustained by a series of myths. Science and scientists have played an important role in some of these. For just that reason, we are also in a position to play an important role in stopping the arms race. The first essential is to understand as clearly as possible its causes.

Jeudi 1er Juillet

PRESENTATION TECHNIQUE

09h30/11h30 - Salle Théorie (Bât.4, 3e étage)

Industrade SA (CH), représentant Hybrid Systems Corp. (USA) et Hybrid Systems Sorep SA (F), propose une conférence : convertisseurs A/D et D/A en technologies hybride et monolithique, DACs de haute résolution jusqu'à 18 bits, ADCs avec interface intégré pour microprocesseurs et jusqu'à 16 bits, produits complémentaires avec les fonctions multiplicateurs analogiques/diviseurs, référence de tension, multiplexeurs, sample and hold, etc.

Langue : Anglais

Renseignements : M. Diraison / FI / 4585.

Thursday 1st July

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs - Auditorium *

Universality, Scaling and the Transition to Turbulence

by M. Nauenberg / Univ. of California, Santa Cruz

During the past years fundamental progress has been made in understanding the onset of turbulence in fluids and other dynamical systems. Recent experiments indicate the occurrence of several different pathways towards chaos, and the application of scaling techniques give universal parameters in good agreement with observations (period doubling case). Important new concepts have emerged (strange attractor) which have had widespread applications. This lecture will give an introduction to the new ideas in this field and a brief review of recent developments.

* Note : Tea and coffee at 16.00 hrs.

Vendredi 2 Juillet

PRESENTATION TECHNIQUE

08h30/11h30 - Meyrin, Centre sportif communal, Place du Parc, Avenue Louis Rendu

Endress and Hauser AG (CH) propose en exposition : mesure et détection de niveau, mesure de débit liquide et solide, mesure d'humidité, mesure et régulation pour le traitement des eaux et la protection de l'environnement, enregistreurs.

Langue : Français.

Renseignements : M. Diraison / FI / 4585.

PRESENTATION TECHNIQUE

09h00/12h00 - Parking, Bât. 867

Sofanec (F), représentant Cogetherm (F), propose en exposition : système de réchauffage par fluide pour ciments conducteurs, panneaux chauffants,

tubes pré-isolés - système de réchauffage électrique par câbles chauffants à dissipation constante, câbles chauffants à gaine métallique, panneaux et plaques chauffants - instrumentation, boîtiers calorifuges, tubes pré-isolés chauffants.

Langue : Français.

Renseignements : M. Diraison / FI / 4585.

Monday 5 July

EP SEMINAR

at 17.00 hrs - Auditorium

Shower Detection with a High Density Projection Chamber

by O. Ullaland / CERN

Wednesday 7 July

LEP PROJECT COMMITTEE

Open Session

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at 14.30 hrs - ISR Auditorium

The Electron-Positron Accumulator EPA at PS

by J.P. Delahaye

Thursday 8 July

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs - Auditorium

Measurement of Leptonic Reactions with the Mark-J Detector at PETRA

by A. Böhm / DESY, Hamburg

TRAINING AND EDUCATION ENSEIGNEMENT

ACADEMIC TRAINING (Tel. 2844)

July 6, 7 and 9

11.00hrs/12.00 hrs - Auditorium

Non-perturbative phenomena in QCD vacuum, hadrons and quark-gluon plasma

by E.V. Shuryak / Novosibirsk

The lectures are intended to review recent progress in non-perturbative QCD for the unspecialized audience, mainly experimentalists. The main object to be discussed, the QCD vacuum, is a rather complicated medium. We may study it either by infinitesimal probes producing microscopic excitations (= hadrons), or by the finite excitations (say, heating some volume to given temperature T). In the latter case some qualitative changes (phase transitions) should take place. We discuss to what extent