

seminars

EP SEMINARS

Monday, May 10
11.00
Large Conference Room
(Lab.13 - 2.005)

"Hyperon Experiments in a Neutral Beam at CERN"

by F. Dydak / University of Heidelberg

Abstract : A series of hyperon experiments have been carried out at the CERN PS using a magnetic spectrometer supplemented with a lead glass hodoscope for gamma ray detection. Measurements made included the Σ^0 lifetime determined via the Primakoff effect, the Λ and Ξ^0 lifetimes, the first observation of the weak radiative decay channels $\Xi^0 \rightarrow \Lambda \gamma$ and $\Xi^0 \rightarrow \Sigma^0 \gamma$, the $\bar{\Lambda}$ total cross section from 4-14 GeV/c, and the branching ratio and photon spectrum for the decay $K_S^0 \rightarrow \pi \pi \gamma$.

Monday, May 17
11.00
Large Conference Room
(Lab.13 - 2.005)

"Inclusive Resonance Production in Hadron Collisions. Are there Any Directly Produced Pions ?"

by P.K. Malhotra

Abstract : Resonance production appears to be the dominant source of pions. Salient features of the production of ρ^0 , f , ω , η , etc., in $\pi^+ p$ interactions and $K^*(890)$, $K^*(1420)$ in $K^- p$ interactions, at PS energies, will be described. A remarkable universality in the transverse momentum distribution for all the mesons is indicated by the data. The relative yields of the mesons will be compared with the recent predictions of a Quark Model. A self consistent picture for the production of ρ^0 in $\pi^+ p$ and pp interactions and that of K^{*0} in $K^- p$ interactions, in terms of two components, namely the fragmentation and the central production, seems to provide a good description of all the available data.

CERN NUCLEAR PHYSICS SEMINARS

Monday, May 10
11.00
Theory Conference Room

"Proposed search for parity violating neutral weak currents in quasielastic e-d scattering"

by E.W. Otten / Joh. Gutenberg University, Mainz

Abstract : Qualitative arguments show that the asymmetry in the scattering of longitudinally polarized electrons from nucleons provides a sharp and comparably sensitive test of a parity violating interaction in weak neutral currents. A calculation in the frame of the Weinberg-Salam model by Reya and Schilcher yields an asymmetry of 10^{-5} for e-p and 10^{-4} for e-n scattering at 300 MeV electron energy, when choosing the only open parameter $\sin^2 \theta_w = 1/3$. An intense source of polarized electrons can be obtained from the photoeffect in GaAs. A proposal to search for the predicted asymmetries at the 300 MeV Linac at Mainz will be discussed.

Monday, May 17
11.00
Theory Conference Room

"QED, Vacuum Polarization and Recent Results from the SIN Crystal Spectrometer"

by W. Sapp / SIN, Villigen

Abstract : A brief review will be given of tests of quantum electrodynamics with emphasis on recent remeasurements of vacuum polarization effects in muonic atoms, all from the experimentalist's point of view. This will be followed by a description of the SIN bent crystal spectrometer facility and a discussion of the latest results of muonic X-ray measurements with this instrument.

CERN COLLOQUIA

Tuesday, May 11
16.00
Auditorium

"The Atmospheric Ozone Layer"

by U. von Zahn / Physikalisches Inst. der Universität Bonn

Abstract : Sources, transport and sinks of atmospheric ozone, as well as its natural variability are described. The importance of ozone for the terrestrial biosphere is briefly illustrated. Anthropogenic influences on the ozone layer through nuclear weapons explosions, airplane exhausts, nitrogen fertilizers and chlorinated hydrocarbons are discussed.

Thursday, May 13
16.00
Auditorium

"The expansion rate of the universe"

by G. Tamman / University of Basel and European Southern Observatory

Abstract : In 1929, E. Hubble concluded from the observed recession velocities of galaxies that the universe is expanding. Measurements of distances and redshifts of galaxies allow the determination of the Hubble constant, which expresses the present expansion rate. The Hubble constant gives an important clue as to when the expansion began. Yet the actual time since the creation event, the Friedmann time, requires still knowledge of the universe. Present views favour a nearly empty universe with so little deceleration that the expansion will continue forever.

Tuesday, May 18
16.00
Auditorium

"The Immune System Viewed as a Network"

by G.W. Hoffmann / Basel Institute for Immunology

Abstract : Much current research in immunology is focussed on trying to understand the homeostatic mechanisms of stimulation and suppression that specifically regulate immune responses. It has been postulated by Jerne (Scientific American, July, 1973) that regulation involves the fact that antibodies can also act as antigens. Thus the production of specific antibodies in response to a foreign substance could in turn stimulate the production of "anti-antibodies" which would have specific feedback effects on the initial antibody-producing cells. A simple "plus-minus" network model has recently been devised, that possesses many of the experimentally observed regulatory properties. The model can be simulated using a set of non-linear differential equations. Such simulation indicates the existence of multiple stable states, oscillations, and various types of switching between states following antigenic stimulation.

ELECTRONICS EXPERIMENTS
COMMITTEE

Monday, May 17
14.30
Auditorium

Open Session

1. A Status Report on Experiment S140 - Measurement of the reaction $K^- p \rightarrow \Lambda(\text{forward}) + \text{neutral meson}$ by CERN-Munich-Cracow Collaboration ; CERN/EEC-76/21.
2. A Proposal for the study of properties of exotic light nuclei produced at the PS by CSNM-CNRS (Orsay) Collaboration; CERN/EEC-76/13.
3. A Proposal for the measurement of the polarization parameter in p-n elastic and charge exchange scattering at 24 GeV/c by CERN-LAPP (Annecy)-Oxford Collaboration; CERN/EEC-76/17.

Tuesday, May 18
09.00
EP Conference Room

Closed Session

CERN PARTICLE PHYSICS
SEMINAR

Thursday, May 20
16.00
Auditorium

"A Study of 30 000 K_L Decays and the Low Energy $\pi - \pi$ Interaction"

by L. Rosselet / Université de Genève

PRESENTATIONS TECHNIQUES TECHNICAL PRESENTATIONS

Jeudi 13 mai
09.30 - 12.00 & 14.00 - 17.00
Salle de conférence EF
(Bât. 13 - 2e étage - 2-005)

Langues : anglais, français

Conférence sur le Contrôleur autonome de châssis "camac" à microprocesseur incorporé JCAM 10. Fabricant : SAIP-SCHLUMBERGER (F). Thème : Présentation du JCAM 10 (processeur, organisation mémoire, interruptions) - programmation (mnémoniques INTEL, programmation CAMAC) - logiciel - extension système - différentes organisations possibles. Démonstration en fin de matinée et après-midi.

Renseignements :
M. Diraison / FI / 4585

Monday, May 17
09.00 - 16.30
SPS Site
(next to the Assembly Hall)

Languages :
English, French, German

As a result of the high level of interest shown in their products at last year's exhibition in Lab.I, the firm KNÜRR AG, 8152 Glattburg, will this year be at SPS site to show MECHANICS FOR ELECTRONICS which amongst other items includes : 19" cabinets and racks, laboratory benches; 19" fan plug-in, instrument cases; plug-in chassis NIM and CAMAC; desk top and floor standing consoles, laboratory trolleys; TV monitors carriers.

Information :
H. Bersinger / SPS / 5195

enseignement

ENSEIGNEMENT GENERAL

Jeudi 13 mai
13.00 - 13.30
Amphithéâtre

Science pour Tous, par R. Carreras

Programme (pour détails, voir affiches) :

1. En bref

- a. Vu, lu et entendu.
- b. Accélérateurs à ions lourds à travers le monde.
- c. Outils chez les insectes sociaux.

2. Question

On imagine que tout ce qui se trouve dans l'univers disparaisse à l'exception d'une essoreuse à linge, étanche et en fonctionnement. Son tambour rotatif peut-il encore chasser l'eau par la force centrifuge alors que, faute de repères, dire qu'il tourne ou non n'a plus de signification ?

3. Thème principal

"La force de gravité change-t-elle avec le temps ?"