

APPRENTISSAGE

Comme chaque année, le CERN engagera 2 ou 3 apprentis dans chacun des métiers suivants :

- "Employé de laboratoire en physique" (durée: 3 ans)
- "Mécanicien-Electronicien" (durée: 4 ans)

Début de l'apprentissage : lundi 22 août 1977

Date limite de réception des candidatures :
25 mars 1977

L'apprentissage s'effectue selon la législation genevoise et permet l'obtention du certificat fédéral de capacité.

Conditions minima : - résider en Suisse ou en zone frontalière
- avoir accompli la scolarité obligatoire (15 ans révolus)

Les personnes ayant des enfants intéressés par l'un ou l'autre de ces métiers sont priées de se mettre en rapport le plus tôt possible avec le Service de l'Enseignement (tél. 2844-2460), afin d'obtenir tous les renseignements nécessaires ainsi que la formule de candidature.

M. Viader (2844)

SEMINARS SEMINAIRES

MONDAY 7 MARCH

EP SEMINAR

at 11.00 hrs - EF Conference Room
(Lab.13-2-005)

"Non-Diffractive Production of Spin-Parity 1^+ ($\rho\pi$) Enhancement in the Reaction $K^-p \rightarrow \Sigma^- \pi^+ \pi^+ \pi^-$ at 4.15 GeV/c"

by P. Gavillet / CERN

Abstract : A ($\rho\pi$) enhancement is seen in the (3π) mass spectrum of the reaction $K^-p \rightarrow \Sigma^- \pi^+ \pi^+ \pi^-$ when events with a small (K^- , Σ^-) momentum transfer are selected. The mass and width of the observed peak are reminiscent of the $A_1(1100)$. A partial wave analysis of the (3π) system shows that this enhancement is entirely represented by a $J^P = 1^+$ wave. The cross-section for this $A_1(1100)$ enhancement is about $3\mu\text{b}$, in agreement with upper limits set by other non-diffractive production processes.

SPECIAL TH SEMINAR

at 14.00 hrs - Theory Conference Room

"Session on neutrino physics"

by F. Reines / Grenoble (Antineutrinos at reactors - a status report)

L. Sulak / Harvard (Search for neutrino oscillations; Acoustic detection and neutrinos beyond 10 TeV)

PROTON SYNCHROTRON COMMITTEE

at 14.30 hrs - Auditorium

Open Session

1. Introductory remarks by Prof. L. Van Hove
2. A proposal for a High Precision Measurement of π^-p Total Cross Section by CERN-Collège de France-Ecole Polytechnique Paris collaboration (CERN/PSC-77/11/P4; PSC-77/12/S4) presented by E. Barrelet.
3. A proposal for an experiment on Proton Radiography at the Proton Synchrotron by CERN-Saclay collaboration (CERN/PSC-77/9/P3; PSC-77/10/S3).
4. A proposal to measure Total Elastic and Topological pd Cross Sections in the Mass Range 1900-1965 MeV using the 2mBC by CERN-Frascati-Padova-Rome-Trieste collaboration (CERN/PSC-77/13/P5; PSC-77/14/S5) presented by M. Cresti.
5. A proposal to study d-d Interactions at 14 GeV/c by means of 300 000 Pictures in the 2mBC by Centre de Recherches Nucléaires de Strasbourg (CERN/PSC-77/4/P2; PSC-77/5/S2) presented by P. Juillot.

CERN NUCLEAR PHYSICS SEMINAR

at 16.00 hrs - Theory Conference Room

"Pion Interaction with Nuclei Studied by Charged Particle - Gamma Ray Coincidence Experiments"

by J. Julien / Saclay

TUESDAY 8 MARCH

PROTON SYNCHROTRON COMMITTEE

at 9.00 hrs - EP Conference Room

Closed Session

CERN COLLOQUIUM

at 16.30 hrs - Auditorium

"The Evolution of the Bioenergetic Processes"

by E. Broda / Inst. für Physikalische Chemie der Universität Wien

Abstract : The bioenergetic processes have to provide energy so that organisms can do chemical, mechanical, osmotic, electric and photic work. Biophysical research has shown that in spite of this multiplicity of tasks the basic mechanisms are surprisingly simple. The organisms work as "chemodynamical" engines, using principles unknown to man-made technology. These will be explained. Moreover, comparative biochemistry has shown that the fundamental processes to obtain energy in useful form (fermentation, photosynthesis, respiration) show close similarities and must be assumed to have evolved one from the other. Hence, the bioenergetic processes all have a common origin; they are "monophyletic". Their evolution essentially came to a conclusion long before single cells united to form multicellular organisms, with division of labour. Energy production remained decentralised within plants and animals. An absolute time scale of evolution will be given.

WEDNESDAY 9 MARCH

ESO ASTROPHYSICS SEMINAR

at 11.30 hrs - DD Conference Room
(Bldg.31 - 3rd floor)

"The Evolution of Active Galaxies :
Theory and Observation"

by P. Biermann / Bonn

THEORETICAL SEMINAR

at 14.00 hrs - Theory Conference Room

"Are the quark charges measurable below
the colour threshold"

by M. Chanowitz / CERN-LBL

Abstract : Below the colour threshold the integral charge quark model of Han and Nambu is virtually indistinguishable from the familiar fractional charge model. For instance, the well-known successes of the fractional charge quark-parton model may also be interpreted in the context of the Han-Nambu model. Certain two-photon amplitudes may be exceptions to this rule. In this connection I will discuss the radiative decays of η and η' and the inelastic Compton process, $\gamma N \rightarrow \gamma X$.

SPS SEMINAR

at 16.30 hrs - SPS Auditorium

"SPS Cycles, Intensity and Extraction
Spills"

by Y. Baconnier and B. de Raad / CERN-SPS

This talk is especially intended to inform the experimenters who use the SPS beam, about the present status of the characteristics of the SPS beam.

Some guesses concerning the expected SPS performance in the near and more distant future will be presented.

THURSDAY 10 MARCH

CERN COLLOQUIUM

at 16.30 hrs - Auditorium

"A World Made of Plutonium ?"

by E. Broda / Inst. für Physikalische
Chemie der Universität Wien

Abstract : Public doubts about nuclear energy are generally directed at the problems of routine emissions of radionuclides, of catastrophic accidents, and of terminal waste disposal. Curiously, the most important problem is not being given sufficient attention : The use of plutonium from civilian reactors for weapons production.

According to current ideas about a nuclear future, 5000 tons (order of magnitude) of plutonium are to be made annually by the year 2000, and about 10 000 tons will all the time be in circulation (transport, reprocessing, reproduction of fuel elements, etc). It is a misconception that plutonium from power reactors is un-

suitable as a nuclear explosive. 5000 tons are enough for several hundred thousands (!) of bombs, Nagasaki type. By the year 2000 maybe 40-50 countries will have home-made plutonium. Plutonium production and proliferation are the most serious problems in a nuclear world.

PRESENTATIONS TECHNIQUES

de 09h00 à 12h00 et de 14h00 à 16h00

Salle de conférence "Magasins" - Bât.73 -
2-027

La Maison Quartz AG (CH) expose une gamme d'instruments et appareils pour mesure et contrôle de température (-200° C à + 1200° C) : thermomètres - régulateurs, appareils et détecteurs de température.

Langues : allemand, anglais, français, italien

Renseignements :

M. Diraison / FI / 4585

de 09h00 à 12h00 et de 13h30 à 17h00

Bât. 513 - R-043

La Maison Kontron (CH) propose la démonstration des appareils : imprimante électrostatique, 2400 LPM, Houston (USA) en unité de sortie d'ordinateur - terminaux de visualisation Applied Digital Data (USA) : 520/580 compatible TTY, 920/980 avec buffer page, 980 avec semigraphique, 980A pour folling synchr./asynchr. IBM (le modèle 980 sera présenté) - terminal Silent KSR 743 de Texas Instruments (USA) avec microprocesseur.

Langues : allemand, anglais, français

Renseignements :

M. Diraison / FI / 4585

FRIDAY 11 MARCH

PS SEMINAR

at 10.30 hrs - PS Large Conference Room
(Bldg 6, 2-004)

"Longitudinal instability experiments and
the longitudinal active damping system for
the booster"

by F. Pedersen

Abstract : Theory, performance and implementation of the longitudinal damping system is presented. Measurements of stability diagrams (RF-knockout) and growth rates for the most dangerous instability modes have permitted to identify the cause of the instabilities : the combined effect of space charge and coupling to the beam surroundings.