

SEMINARS SEMINAIRES

MONDAY 18 JUNE

SPECIAL DP SEMINAR

at 16.00 hours - DD Conference Room
(Building 31 - 3rd floor)

"Progress in Pattern Recognition in the last
10 Years"

by Prof. S. WATANABE / Hawaii University

*Abstract: Prof. Watanabe has been in the fore-
front of pattern recognition for many years. In
this seminar he will present methods and ideas in
the pattern recognition field that have led to
advances and improvements in methods and a deeper
understanding of the problems involved.*

EP SEMINAR

at 17.00 hrs - Auditorium

"Charm search in hadronic experiments"

by M. BORATAV / CERN & Université Curie, Paris

*Abstract: The seminar is a review of past and future
outstanding hadronic experiments looking for naked-
charmed particles. After a brief survey of theoret-
ical predictions about hadroproduction cross sec-
tions and decay lifetimes[^] we present a summary of
our present knowledge about charmed particles and the
results of the few successful hadronic experiments.
Then the future of hadronic charm search is out-
lined through a few experiments in preparation.
Special emphasis is put on a CERN project of direct
observation of the decay of charmed particles in a
hybrid spectrometer. Preliminary results are pre-
sented on the performances of the high resolution
bubble chamber LEBC (NA 13 experiment).*

TUESDAY 19 JUNE

CERN PARTICLE PHYSICS SEMINAR

at 16.00 hrs - Auditorium*)

"Structures revealed in p-p and p-n scattering
experiments with polarized beams and dibaryon
resonances"

by A. YOKOSAWA / Argonne National Laboratory

*Abstract: A striking energy dependence has been
observed in the difference between the p-p total
cross sections for parallel and antiparallel lon-
gitudinal spin states, $A_{\text{of}} - a^{\circ t}(X) - o_{\text{Tot}}(X)$.
The structure appears around $P_{\text{iofo}} = 1.5 \text{ GeV}/c$ where
 $A_{\text{of}} - -16.7 \text{ mb}$ and is seen in $o_{\text{Tot}}(\%)$ rather than
 $o_{\text{Tot}}(\text{f})$. In addition, we have observed a promi-
nent energy dependence for $C^{\wedge}$, the spin correla-
tion parameter for elastic pp scattering with beam
and target both longitudinally polarized. From the
dispersion analysis of a forward p-p scattering
amplitude using the data on Aa, Grein and Kroll
have shown that the Argand plot of the amplitude
has a clear resonancelike behavior around proton
incident momentum of $1.5 \text{ GeV}/c$. Various analyses
showed a partial wave, 3F_1 , consistent with having
a resonant behavior. This resonant state would*

*have the quantum number $J^P = 3^-$, mass $\wedge 2260 \text{ MeV}$,
width $\wedge 200 \text{ MeV}$ and elasticity 20-30%. This exotic
state may be described by the MIT bag model. We
also speculate several more diproton resonances
and a dibaryon resonance in $I = 0$ state in the mass
region 2100 to 2800 MeV.*

*) Those attending this seminar are cordially
invited to Salle des Pas Perdus (just outside
the Council Chamber) at 15.30 hours to meet the
speaker and for informal discussions. Tea and
coffee will be provided.

WEDNESDAY 20 JUNE

SPECIAL SEMINAR

at 14.00 hrs - EP Conference Room
Lab- 13, 2nd floor

"Diode Laser Optical Recording System"

by W. Hoekstra/Philips Data Systems,
Netherlands

*Abstract : Philips Data Systems recently intro-
duced the world's first diode laser optical re-
cording system. Using similar techniques to those
developed for VLP (Video Long Play), it allows
high-density recording and retrieval of data on
an ultra-compact system that employs a pregrooved,
double-sided 12" disk. The high information
capacity of 10^9 bits, which is equivalent to
about 60 reels of 1600 bpi tape, represents a ten
times improvement in capacity over the most ad-
vanced magnetic disk pack systems currently avail-
able. The system features a direct read after write
facility plus fast, random access. Any address can
be reached in a mean time of 250 ms, thereby
providing virtually instant access to 5×10^9
bits (the capacity of one side).*

THEORETICAL SEMINAR

at 14.00 hrs. - Theory Conference Room

"Weak mixings and flavour conservation
in neutral Higgs couplings"

by R. Gatto / Institut de Physique, Geneve

*Abstract: Some general theorems are given which
show that the determination of weak mixing angles
is related to violation of flavour conservation
in neutral Higgs couplings.*

DD SEMINAR

at 16.00 hours - DD Conference Room
(Building 31 - 3rd floor)

"Vertical Migration of Software for Performance
Improvement in Layered systems"

by A. van DAM / Brown University

*Abstract: With the ever-falling cost of hardware,
it is common practice to "migrate" program modules
from one program level to another, and to implement
much used portions in firmware. The presentation
will describe ways of recognising the cost-effective-
ness of such migration and discuss automated and
semi-automated techniques for accomplishing such
migration.*

WEDNESDAY 20 JUNE

CERN PARTICLE PHYSICS SEMINAR

at 16.00 hrs - Auditorium*)

"Scaling in various physical phenomena;
varying from animals to quarks"

by G. West / Los Alamos

Abstract: The classical method of dimensional analysis will be reviewed and clarified by examining various examples covering a wide range of physical phenomena. These will include metabolic rates of the avian egg, rowing and crew-size rivers and watersheds. The role played by conservation laws and "fundamental constants" in deriving scaling laws will be emphasized. The application of these ideas to deep inelastic experiments and their relationships to quarks and the renormalization groups will be demonstrated.

(*) Note: Those attending this seminar are cordially invited to the Salle des Pas Perdus (just outside the Council Chamber) at 15.30 hrs to meet the speaker and for informal discussions. Tea and coffee will be provided.

THURSDAY 21 JUNE

ESQ ASTROPHYSICS SEMINAR

at 14.00 hrs - DD Conference Room
(Building 31, third floor)

"Morphological kinematical and dynamical
studies of a spiral galaxy: M33"

by J. Boulesteix / Marseille

Abstract: A general study of the spiral galaxy M33 is presented with discussion about the instrumental approach and observational problems.*

CERN PARTICLE PHYSICS SEMINAR

at 16.00 hrs - Auditorium *)

"Quasi two-body decay amplitudes of Υ s
from $K\text{-}p \rightarrow 3$ particle final states between
1700 and 2200 MeV of CM. energy."

by B. Franek / Rutherford Laboratory

Abstract: Data for $K^0\text{-}p$, K^+p , K^0n and Λ^0p final states from K^+p interactions at 11 CM. energies between 1775 and 1957 MeV are presented. New values for the masses and widths of the K^ (890), $\Lambda(1520)$ and $\Lambda(1385)$ have been determined and their comparison with theoretical predictions by a QCD based model is made. Differential cross sections and the spin-density matrix elements have been extracted for the contributing Quasi two-body processes and an energy dependent partial-wave analysis of the K^*N , $\Lambda(1520)$ and $\Lambda(1385)$ channels have been carried out yielding values for a number of resonant amplitudes of Υ s. These are compared with the predictions of SU(3) and SU(6), 8 $\otimes$ (3) symmetries.*

NOTE: Those attending this seminar are cordially invited to the Salle des Pas Perdus (just outside the Council Chamber) at 15.30 hrs to meet the speaker and for informal discussions. Tea and coffee will be provided.

MONDAY 25 JUNE

THEORETICAL SEMINAR

at 14.00 hrs - Theory Conference Room

"New ideas on space-time and gravitation"

by A.A. Logunov/ Institute for High Energy
Physics, Serpukhov

EP SEMINAR

at 17.00 hrs - Auditorium

"Fresh results from ICE"

by P. Miller Petersen / CERN

POUR INFORMATION / FOR INFORMATION

VENDREDI 22 JUIN

SEMINAIRE DU LAPP

à 10h30 - Amphithéâtre du LAPP

Laboratoire d'Annecy-le-Vieux de Physique des
Particules, Chemin de Bellevue, Annecy-le-Vieux
(Haute-Savoie), France

"Développements optiques récents pour
compteurs Tchérenkov à focalisation"

par M. BENOT / CERN

RESUME : Un nouveau système de focalisation permet la détection de particules provenant d'une interaction dans une large gamme de valeurs de y . Des résultats de tests effectués au SPS seront présentés.

Renseignements complémentaires auprès de
H. Pessard / CERN-EP, tel. 6526, ou Laboratoire
d'Annecy-le-Vieux, tél. (023) 23.32.45, int. 327.

LUNDI 25 JUIN

SEMINAIRE DU LAPP

à 10h30 - Amphithéâtre du LAPP

Laboratoire d'Annecy-le-Vieux de Physique des
Particules, Chemin de Bellevue, Annecy-le-Vieux
(Haute-Savoie), France

"Une méthode de comparaison avec l'expérience
des prédictions de QCD pour les violations de
scaling sans utilisation des moments"

par L. BÂULIEU / E.N.S., Paris

RESUME : On montre comment calculer directement les produits de corrélation des fonctions de probabilité P_{ij} apparaissant dans les équations d'Altarelli-Parisi avec les fonctions de structure mesurées expérimentalement sans avoir à calculer leurs moments. Comme application, nous calculons la densité de gluons $g(x,Q)$ dans le proton pour $Q^2 = 9 \text{ GeV}^2$ et la violation de scaling de la différence $\alpha_s - F^A$.

Renseignements complémentaires auprès de
H. Pessard / CERN-EP, tél. 6526, ou Laboratoire
d'Annecy-le-Vieux, tél. (023) 23.32.45, int. 327.