

SEMINARS

SEMINAIRES

TUESDAY 11 AUGUST

CERN COLLOQUIUM

at 16.30 hrs - Auditorium *)

"Hall Resistance Measurements on Two-Dimensional Systems - A New Method for High-Accuracy Determination of the Fine-Structure Constant"

by K. von Klitzing / Physik-Department, Technische Universität München

Abstract : Measurements of the Hall voltage of a two-dimensional electron gas realized with a silicon metal-oxide-semiconductor field-effect transistor show that the Hall resistance at gate voltages, where all non-localized states of a Landau level are filled, is equal to h/e^2i (h = Planck constant, e = elementary charge, i = number of filled Landau levels). Since the accuracy of the fine-structure constant α is limited by the accuracy of h/e^2 , the quantized Hall resistance offers a new method for the determination of α . Within the experimental accuracy of better than 10^{-5} identical results are obtained at different laboratories in Germany, USA and Japan. From our high-precision measurements we get $\alpha^{-1} = 137.03592 \pm 0.00018$ (April 1981).

*) Note : Those attending this seminar are cordially invited to the Salle des Pas Perdus (just outside the Council Chamber) at 16.00 hrs to meet the speaker and for informal discussions. Tea and coffee will be provided.

WEDNESDAY 12 AUGUST

THEORETICAL SEMINAR

at 14.00 hrs - Theory Conference Room

"The Vacuum Alignment in Dynamically Broken Gauge Theories"

by V. Baluni / I.A.S., Princeton

Abstract : The vacuum alignment in strongly interacting gauge theories is investigated, when global symmetries of fermions are broken dynamically and, simultaneously, via 'weak' gauge boson interactions. A simple condition for the vacuum stability is derived, which is amenable to perturbative treatment. Applications to various technicolour schemes are presented. In particular the mass spectrum of pseudo-Goldstone bosons is calculated.

THURSDAY 13 AUGUST

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs - Auditorium *)

"Experimental Indication of Phase Transition in Hadronic Matter"

by Laszlo Gutay / Purdue Univ.

Abstract : Proton-nucleus collisions have been studied, using the warm gas jet at the Internal

Target Area at Fermi National Accelerator Laboratory. Using a long path, double time-of-flight measurement employing micro-channel plates combined with gas dE/dx and silicon E detector, we measured the mass yields and their energy distributions in high energy p-Ne, p-Ar, p-Kr and p-Xe interactions. The slope of the high energy portion of the fragment kinetic energy spectrum can be described by $\exp(-\beta E)$. The isotopic yield curves go like $\exp(\alpha Q_{gg})$. The parameters α and β are in general agreement for light targets, but differ greatly for heavy nuclei. The isobaric yields obey a power law. These results are discussed within the context of hadronic phase transitions.

*) Note : Those attending this seminar are cordially invited to the Salle des Pas Perdus (just outside the Council Chamber) at 16.00 hrs to meet the speaker and for informal discussions. Tea and coffee will be provided.

MONDAY 17 AUGUST

ISR SEMINAR

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

"Status of the Tevatron"

by L. Lederman / Fermilab

TUESDAY 18 AUGUST

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs - Auditorium

"Glueballs, Hermaphrodites and QCD Problems in Baryon Spectroscopy"

by F.E. Close / Rutherford Lab.

THURSDAY 20 AUGUST

INFORMAL DISCUSSION

at 14.00 hrs - Auditorium

"The Latest News from the TPC"

by M. Ronan / LBL Berkeley

CERN COLLOQUIUM

at 16.30 hrs - Auditorium

"Asteroids and Dinosaurs"

by L. Alvarez / LBL Berkeley