

2. There have been additions and amendments to the tables of occupational illnesses (Annex 2 of Administrative Circular N° 14);
3. The expression 'Health and Safety Division' is replaced by 'Technical Inspection and Safety Commission';
4. The expression 'Finance Division' is replaced by 'Finance Department';
5. The expression 'Personnel Division' is replaced by 'Personnel Department'.

Sheets updating Administrative Circular N° 14 will be distributed shortly.

2. Des tableaux de maladies professionnelles (Annexe 2 de la Circulaire administrative n° 14) ont été ajoutés ou modifiés;
3. L'expression 'Division Hygiène et Sécurité' est remplacée par l'expression 'Commission d'Inspection Technique et de Sécurité';
4. L'expression 'Division des Finances' est remplacée par l'expression 'Département des Finances';
5. L'expression 'Division du Personnel' est remplacée par l'expression 'Département du Personnel'.

Des feuilles de mise à jour de la Circulaire administrative n° 14 seront publiées sous peu.

SEMINARS SEMINAIRES

Tuesday 28 June

CERN COLLOQUIUM

at 16.30 hrs - Auditorium*

**The role of weak interactions in
stellar collapse and supernovae explosions**

by W. HILLEBRANDT / MPI, Garching

Stars more massive than about 8 solar masses are thought to end their life in supernovae explosions leaving behind neutron stars (or black holes) and producing most of the heavy elements (and in particular all neutron rich isotopes) observed in nature. This belief is based upon observational facts and theoretical models, which both will be discussed. It will be demonstrated, however, that these models rely on weak interaction rates, such as electron captures on heavy nuclei, neutrino production and scattering, and on β -decay rates of very neutron rich nuclei, which, in many cases, are not sufficiently well known.

*) Tea and coffee will be provided at 16.00 hrs.

Wednesday 29 June

PS SEMINAR

at 11.00 hrs - PS Auditorium (Bldg. 6)

**A procedure for the design of
space charge space limited high intensity
synchrotrons**

by K.H. REICH / CERN

The procedure is presented as a commented (looped) flow chart. Items dealt with include the determination of the machine radius, RF parameters, beam emittances and energy spread required for stability, length and number of straight sections, a lattice yielding appropriate working in the $QH-Q_v$ diagram and transition energy, vacuum pressure and keeping control of beam loss.

Wednesday 29 June

THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room

Lattice QCD and special purpose computers

by Norman H. CHRIST / Columbia University

The computational challenge presented by Monte Carlo simulation of lattice QCD will be discussed and a special purpose computer presently being designed and built at Columbia will be described. This device is a parallel processor which will contain 256 processing elements interconnected in a two-dimensional grid and running in lock step. The entire array will be quite flexibly programmable and capable of 4×10^9 22-bit floating-point operations per second.

Wednesday 29 June

SPECIAL SEMINAR

at 16.30 hrs - Auditorium*

**Energy loss of slowly moving magnetic
monopoles in matter**

by Sidney D. DRELL / SLAC

We calculate the cross-section for the excitation (as opposed to the ionization) of simple atoms by the passage of a slow monopole. Including the effects of the monopole magnetic field on the atomic levels, we obtain an energy loss per unit density much larger than previous studies, in the interesting velocity range $\beta = 10^{-4}$ to 10^{-3} . We discuss the possibility of using helium with a quenching additive as a monopole detector. The helium excitation is efficiently transferred to the additive in the form of ionization.

*) Tea and coffee will be provided at 16.00 hrs.

Thursday 30 June

PRESENTATION

at 11.00 hrs - DD Amphitheatre
(Bldg. 31, third floor)

**The PLATO-Stand-alone authoring system :
a new approach to training**

by M. BLANC / Control Data (Suisse)

PLATO is a well known computer based education system used for the development and training of personnel

in various industries such as aeronautics, automobile, electronics and energy. In September 1982, Control Data announced PCD (Programmerless Courseware Development) which allows an author to create courses in standalone mode without a previous knowledge of programming. PCD consists of a set of editors (pedagogical models) addressing various training areas (tutorials, simulation, etc.).

Thursday 30 June

CERN COLLOQUIUM

at 16.30 hrs - Auditorium

Coherence and chaos in nonlinear dynamical systems

by F.T. ARECCHI / Istituto Nazionale di Ottica and University of Florence

Coherent pattern formation, or morphogenesis, is peculiar of nonequilibrium systems, where, for suitable excitations at the boundary, the symmetry of the equilibrium state is broken. This is the analog of a phase transition in an equilibrium system. Morphogenesis is easily measurable for e.m. fields (laser) by the method of photon statistics. Increasing the excitation at the boundary, many independent patterns can coexist, giving rise to a complex structure (chaos or turbulence). A recently discovered mechanism, that is, hopping among many attractors in multistable systems, is shown to introduce long time tails in the correlation functions and hence low frequency spectral divergences, which were absent in the standard formulation of nonequilibrium statistical mechanics. Implications are shown in several areas of physics.

*) Tea and coffee will be provided at 16.00 hrs.

Monday 4 July

EP SEMINAR

at 17.00 hrs – Auditorium

New effects in 'low p_T ' physics in the ISR energy range

by M. SZCZEKOWSKI / CERN-EP

Recent results from the Split Field Magnet detector at the CERN ISR will be presented :

1. *Studies of transverse momentum spectra at low p_T show that the effect of the increase of an average p_T with the multiplicity of charged particles, reported recently at the CERN proton-antiproton collider is observed also at lower energies in proton-proton and proton-antiproton collisions.*
2. *There are non-trivial variations of the average p_T from event to event in proton-proton and alpha-alpha interactions.*

Tuesday 5 July

PRESENTATION

at 16.00 hrs – DD Amphitheatre
(Bldg. 31, 3rd floor)

CYBERNET Applications

by W. PANNEN / Control Data (Suisse)

Tuesday 5 July

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

Large transverse momentum jets at the collider in the UA2 Experiment

by P. JENNI / CERN-EP

Wednesday 6 July

CAS ACCELERATOR SEMINAR

at 14.30 hrs – Auditorium

Test of the Superconducting CERN Acceleration Cavity at PETRA

by H. LENGELER / CERN-EF

POUR INFORMATION / FOR INFORMATION

Vendredi 1 juillet

SÉMINAIRE DU LAPP

à 10.30 h – Amphithéâtre du LAPP

Supra-conductivité, détecteur à micro-billes

par L. GONZALEZ-MESTRES et
D. PERRET-GALLIX

Laboratoire d'Annecy-le-Vieux de
Physique des Particules
Chemin de Bellevue - B.P. 909
F – 74019 ANNECY-LE-VIEUX

TRAINING AND EDUCATION ENSEIGNEMENT

ENSEIGNEMENT GÉNÉRAL Tél. 2844

Jeudi 30 juin

de 13.00 h à 13.30 h – Amphithéâtre

Science pour tous

par R. CARRERAS

*Cet exposé est le dernier du 3^e trimestre 1982/1983.
Le prochain exposé aura lieu en octobre 1983.*