

COMMISSION EXECUTIVE DU CERN

A sa quarante-quatrième réunion, le 9 novembre 1978, la Commission exécutive a d'abord entendu les rapports des Directeurs généraux sur les résultats des réunions, au mois d'octobre, du Comité des Directives scientifiques, du Comité des Finances et du Comité du Conseil. Elle a ensuite approuvé le projet de construction d'un Hall d'expositions.

La Commission a entendu un rapport sur les possibilités d'injection d'anti-protons dans les ISR, de même qu'un compte rendu de la réunion en octobre du Groupe de travail du Comité des Finances sur la Révision RESCO.

En ce qui concerne le budget de 1979, la Commission exécutive a approuvé une proposition de "réduction marginale" de 4 à 5% du budget d'exploitation, de manière à conserver à la réserve DG un montant raisonnable. Elle a également approuvé les quotas divisionnaires des étudiants d'été pour 1979, et elle a convenu de poursuivre l'année prochaine les emplois d'été pour les enfants des membres du personnel, sous réserve de modifications dans la procédure de sélection.

La Commission a convenu de tenir en 1979 un certain nombre de réunions supplémentaires, à consacrer à la discussion de sujets d'actualité d'une importance ou d'un intérêt particuliers.

Enfin, la Commission a pris note de la nomination de E. Fischer de la Division ISR, à la tête des Services Enseignement et Formation, Division du Personnel.

BULLETIN DE SECURITE N° 70

Nous attirons votre attention sur la publication du Bulletin de Sécurité N° 70 concernant les dangers présentés par les thermostats Vigitherm.

Groupe Activités Divisionnaires
Division HS

CERN EXECUTIVE BOARD

At its forty-fourth meeting on 9 November 1978, the Executive Board first heard reports from the Directors-General on the outcome of the October meetings of the Scientific Policy Committee, Finance Committee and Committee of Council. It then approved the capital project 'Hall d'Exposition'.

The Board heard a report on the possibilities of injecting antiprotons into the ISR and also a report on the October meeting of the FC Working Group on RESCO.

Concerning the 1979 budget, the Executive Board approved a proposal to make a 'shadow cut' of 4 to 5% in the money for operations in order to achieve a reasonable figure for the DG reserve. It also approved the Summer Student divisional quotas for 1979 and agreed to continue the scheme for the summer employment of children of members of the personnel for another year, subject to changes in the selection procedure.

The Board agreed to hold a number of extra meetings in 1979 to be devoted to the discussion of specific topics of current interest and importance.

Lastly, it noted that E. Fischer of ISR Division had been appointed Head of the Education and Training Services in Personnel Division.

SAFETY BULLETIN N° 70

Your attention is drawn to the publication of Safety Bulletin N° 70, dealing with the dangers associated with Vigitherm thermostats

Divisional Activities Group
HS Division

SEMINARS SEMINAIRES

MONDAY 4 DECEMBER

ISR SEMINAR

at 14.30 hrs - ISR Auditorium
(top floor of building 30)
"Report on ISR physics in 1978"
by H.G. Fischer/ISR coordinator

TUESDAY 5 DECEMBER

PRESENTATION TECHNIQUE

09h00 - 16h30 - Salle 1-007, bât. 17
F-6 plan CERN

OTTET MACHINES APPAREILS (CH) présente :
1. Outillage et matériel hydraulique à haute pression RARIPRESS (I) : verins simple et

double effet (jusqu'à 250 t) à tige pleine ou creuse, avec écrou de sécurité, extra-plats, tireurs ainsi que leurs accessoires (brides-têtes, extracteurs, etc.) - pompes à haute pression (jusqu'à 700 bars) à main, oléopneumatiques, à moteurs électriques ou thermiques - vannes et matériel de contrôle et de branchement (jusqu'à 700 bars) tuyaux, raccords, vannes, manomètres, etc.

2. Eléments de serrage rapide SERMAX (F) : pinces pour la soudure, serre-joints, sauterelles à serrage vertical, horizontal... appareils en tirant pour fermeture de moules ou de cuves, sauterelles pneumatiques.
3. Machines à scier SERM (F) : scies alternatives à guidage par flasques et avance hydraulique réglable (pour petit atelier).

Langues : allemand, français
Renseignements : M. Diraison/FI/4585

CORROSION DANS LES CIRCUITS DE REFROIDISSEMENT
D'AIMANTS

à 15h00 - Salle du Conseil

Exposé ayant pour but de faire le point sur les investigations menées à ce jour dans le cadre du programme du travail sur la corrosion, établi conjointement par la Division PS et le Groupe des Ateliers Centraux de la Division SB.

F. Perdieu * abordera les sujets suivants :

- quelques rappels théoriques
- moyens d'investigation utilisés
- corrosion associée aux courants de fuite
- corrosion "électrochimique"
- influence du choix des matériaux
- influence de la qualité de l'eau
- entretien et stockage des aimants.

* Attaché scientifique aux Ateliers Centraux de la Division SB, assistant au Laboratoire d'électrochimie, Katholieke Universiteit, Leuven, Belgique.

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs - Auditorium *

"Where do quarks come from ?"

by G.F. Chew/CERN

Abstract : It will be argued that scientific perception of reality in Cartesian terms makes quark structure for particles inevitable. There are two 'basic quarks' out of which topological representations of both hadrons and weakly-interacting particles are built. Hadron quarks (which, according to unitarity, cannot be representations of particles) are built from at least 3 basic quarks and have corresponding internal quantum numbers that include four primary flavors and 3 'topological colors'. There is probably an infinite number of secondary flavors with successively higher thresholds, a guess for the multiplicity of the next flavor group being 32. Attention will be given to the possibility that in as yet unexplored parts of the hadron spectrum, such as the baryonium sector, topological quark structure will make different predictions from naive quark models.

(*) 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 6 DECEMBER

THEORETICAL SEMINAR

at 14.00 hrs - TH Conference Room

"Baryon number generation in grand unified models"

by John Ellis/CERN

Abstract : After a brief review of grand unified models of elementary particle interactions, it is shown how they might have been important at early epochs of the Big Bang, and have generated the present non-zero (but small) baryon number of the universe. After an initial non-equilibrium phase, there was probably a period during which baryon number violating forces were in thermal equilibrium. At the end of this period, CP and baryon number violating forces might have generated the observed small baryon to entropy ratio of $0(10^{-9})$.

DD SEMINAR

at 16.00 hrs - DD Conference Room
Bldg 31, 3rd floor

"FLOP - a FORTRAN editor"

by H. Grote/CERN

Abstract : FLOP is an editor which recognizes FORTRAN syntax. It has been developed in order to be able to change variable names without risks, or to look for such names in statements of a given type (DATA, or assignment, etc.) and in certain routines only. It allows classification of all statements of a program, and to extract an alphabetic namelist. In this way, it is very helpful when programs have to be transported to other machines, or to be changed by people other than the author. Both the existing CDC version, and the new machine-independent version will be presented. Some details on the implementation of the latter (PASCAL, MORTRAN) will be given.

CERN ENERGY SEMINAR - Technical level

at 16.30 hrs - TH Conference Room

"The physics of energy conversions and energy use"

by K.-E. Eriksson/Institute of Theoretical Physics, University of Gothenburg

Abstract : The value of energy is closely tied to its quality. In fact energy in itself is not valuable but rather negentropy or exergy (= mechanical work available from a system). Negentropy and exergy are also present in valuable materials and the two concepts are closely tied to the concept of information capacity, and hence also to physical structure. Exergy (or negentropy) is thus a general resource concept. Exergy is not a conserved quantity but is constantly consumed. Energy systems of different societies are conveniently described in terms of exergy flows. A few examples are shown and possibilities of large efficiency improvements are pointed out. Sweden in the year 2020 is discussed as an example. An abundant resource is low-grade heat. An old / new technical science, named tepidology by Harnes Alfvén (from latin, tepidus = luke-warm), deals with the conversion and storage of low-grade heat.

THURSDAY 7 DECEMBER

CERN COLLOQUIUM

at 16.30 hrs - Auditorium *

"Synergetics, nonequilibrium phase transitions and selforganization"

by H. Haken/Institut für Th. Physik der Universität Stuttgart

Abstract : Synergetics deals with the profound analogies, recently discovered, between the selforganized behaviour of seemingly quite different systems in physics, chemistry, sociology, and other fields. It examines the cooperation of many subsystems such as atoms, molecules, cells, animals or humans, and shows that such cooperation may produce spatial, temporal or functional structures. In addition, synergetics demonstrates that the spontaneous formation out of chaos of many

subsystems is often strongly reminiscent of phase transitions. In the talk, explicit examples from various fields and discussion of the basic general concepts will be given.

(*) Note : Those attending this colloquium 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.

VENDREDI 8 DECEMBRE

=====

POUR INFORMATION / FOR INFORMATION

=====

SEMINAIRE DU LAPP

à 10h30 - Amphithéâtre du LAPP

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

"Formation of T and T' mesons at DORIS"

par K. Schubert/Heidelberg

Abstract : Three experimental groups, DASP2, PLUTO and the NaI-Lead-Glass group have obtained results on the formation of T (9.46) and T' (10.01) mesons in the reactions $e^+e^- \rightarrow \text{hadrons}$ and $e^+e^- \rightarrow \mu^+\mu^-$ using the upgraded storage ring DORIS at DESY. A search for $T \rightarrow 3 \text{ gluons}$ and $T \rightarrow \gamma + 2 \text{ gluons}$ is in progress.

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

FRIDAY 8 DECEMBER

CERN COMPUTER SEMINAR

at 11.00 hrs - Council Chamber

"Computer technology with Josephson junctions"

by Dr. P. Wolf/IBM Zurich Research Laboratory

Abstract : Josephson junctions are interesting devices for digital circuits because they have very short switching times and extremely low power consumption. In the talk, first the properties of Josephson junctions will be explained, then computer circuits discussed with emphasis on digital memories.

ESO ASTROPHYSICS SEMINAR

at 14.00 hrs - DD Conference Room
Bldg 31 - 3rd floor

"Further evidence for non-velocity redshifts in some galaxies and quasars"

by H. Arp/Hale Observatories

TRAINING AND EDUCATION ENSEIGNEMENT

4, 5, 6, 7 & 8 DECEMBRE

ACADEMIC TRAINING

à 11h00 - Amphithéâtre

"Techniques et expérimentations à très basse température (au-dessous de 1°K)

par G. Schumacher/CNRS, Grenoble

Résumé :

- Échelles de température - rappel sur les cryostats à ^4He et à ^3He
- réfrigérateurs à dilution d' ^3He dans l' ^4He - principes généraux, détails expérimentaux
- désaimantation adiabatique de sels paramagnétiques
- désaimantation nucléaire
- effet Pomeranchuk
- thermométrie

JEUDI 7 DECEMBRE

ENSEIGNEMENT GENERAL

13h00 - 13h30 - Amphithéâtre

"Science pour tous"

par R. Carreras/CERN

DECEMBER 14, 15, 18 & 19

ACADEMIC TRAINING

at 11.00 hrs - Auditorium

"Parity violation experiments in atomic physics"

by V.L. Telegdi/ETH Zürich & CERN

For abstract, see next week's Bulletin and notices

INFORMATIONS GENERALES GENERAL INFORMATION

ON RECHERCHE

trois colis en provenance de la maison "PHILIPS S.A." - Zürich qui contiennent 50 photomultiplicateurs type RTC PM 1910. Les colis ont été livrés le mois de mars dernier à l'adresse HALL 168.

La personne qui les détient est priée de prendre contact avec M. Herbert, tél. 6543.