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OFFICIAL NEWS

Members of the personnel shall be deemed to have taken note of the news under this heading.

Reproduction of all or part of this information by persons or institutions external to the Organization requires the prior approval of the CERN management.

CONGES DE FIN D'ANNEE

Comme annoncé au Bulletin hebdomadaire no. 38/88, le laboratoire sera fermé du samedi 24 décembre 1988 au dimanche 1er janvier 1989 inclus. Conformément à l'article R II 4.41 du Règlement du Personnel, les jours de compensation sont fixés comme suit :

- 26 et 27 décembre pour les samedi 24 et dimanche 25 décembre
- 29 et 30 décembre pour les samedi 31 décembre et dimanche 1er janvier.

Le premier jour ouvrable de la nouvelle année sera le lundi 2 janvier 1989.

De plus amples informations peuvent être obtenues auprès des Secrétariats de Division, notamment en ce qui concerne les conditions applicables aux membres du personnel désignés pour travailler pendant cette période.

Division du Personnel
Tél. 3238

CHRISTMAS AND NEW YEAR HOLIDAYS

As announced in Weekly Bulletin no. 38/88, the Laboratory will be closed from Saturday 24 December 1988 to Sunday 1st January 1989 inclusive. In accordance with Article R II 4.41 of the Staff Regulations, the days of compensation are specified as follows :

- 26 and 27 December for Saturday 24 and Sunday 25 December
- 29 and 30 December for Saturday 31 December and Sunday 1st January.

The first working day in the New Year will be Monday 2 January 1989.

Further information is available from Divisional Secretariats, who can explain the conditions that will apply to members of the personnel who are required to work during this period.

Personnel Division
Tel. 3238

SEMINARS SEMINAIRES

Lundi 5 décembre

PRESENTATION TECHNIQUE

de 09.30 à 12.00 h & de 14.00 à 16.00 h
bât. 6, 2-002

Klaus Schaefer & Co. (CH) présente : la gamme des instruments Granville Phillips (USA) pour le vide et l'ultra-vide, les éléments pour ultra-vide de Ceramseal (USA), les débitmètres et jauges à vide de Teledyne Hastings-Raydist (USA), les pompes cryogéniques de CVI (USA), les ponts de résistance de RVE (SF), les pompes turbomoléculaires de Sargent-Welch.

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

Monday 5 December

EF SEMINAR

at 11.00 hrs - EF Conference Room
bldg 13, 2-005

**The story of the quark model
told 'à la manière de' Columbo***

by Charles PEYROU / CERN-EF

The quark model in its elementary form (without the mathematics of QCD) is concrete and easy to understand. However, it was arrived at by a rather devious and abstract way called SU_3 . In this talk we will start from the elementary quark model as it stands now, deduce the SU_3 -like features which will then remain concrete and show how their experimental

discoveries lead some Columbos (Gell-Mann, Dalitz, etc.) to the model. The role of the strange quark, in spite of the fact that it is not a constituent of the proton will be stressed. It will be shown how the deep inelastic scattering experiments and the discovery of the J/ψ gave to the model its final convincing proofs.

* The title will be explained especially for the non-TV fans at the beginning of the talk.

Language : French or English (to be decided at the Seminar depending on audience)

Monday 5 December

NOBEL CELEBRATION

at 15.30 hrs – Auditorium

- 15.30 Welcome
by H. Schopper
- 15.40 Melvin Schwartz
- 16.15 Jack Steinberger
- 16.50 Leon Lederman

Refreshments will be served after the meeting in the Salle des Pas perdus.

Tuesday 6 December

MEETING ON FASTBUS DEVELOPMENTS

at 09.00 hrs – Theory Conference Room

1. *The FASTBUS data acquisition system of WA 89*
H. Dobbeling / MPI, Heidelberg
2. *ADC and TDC developments for NA 31*
G. Laverrière / CERN
3. *The ALEPH trigger system*
P. Hanke / Univ. of Heidelberg & M. Saich / Univ. of London
4. *Review of recent FASTBUS developments in the US*
H. Verweij / CERN
5. *Various*

Tuesday 6 December / Mardi 6 décembre

PRESENTATION – OLIVETTI

at 14.00 hrs – Council Chamber / Salle de Conseil

1. *Olivetti at CERN / MIS*
Olivetti au CERN / MIS
F. Oveti
2. *Present and future products*
Proche futur et positionnement produits
J. Boissonard
3. *Use of WORM laser disk technology with PCs*
L'utilisation du PC pour le stockage d'informations avec des disques laser WORM
M. Brunel
4. *Xenix – Unix evolution*
Xenix – Unix l'évolution
J.-F. Collot

5. Practical demonstration of new products

Présentation pratique avec les nouveaux produits

Tuesday 6 December

TIS SEMINAR

at 14.30 hrs – PE Auditorium (Techn. Training)
bldg 593, Room 11

Finite-element analysis at CERN

by Maurizio BONA / Mechanical Engineering Group, TIS

Finite-element programs can nowadays be used to analyse various kinds of problem : structural, thermal, electrical, magnetic, etc. A certain number of applications to CERN equipment will be presented, namely :

- *structural stress and strain analysis of the 'twin-aperture prototype' superconducting dipole for the LHC*
- *composite materials*
- *thermo-elastic transient analysis of a rotating target for electron-positron conversion (stress wave propagation)*
- *magnetic field calculations of the 10 Tesla superconducting dipole for the LHC.*

Advantages/disadvantages of finite-element versus other types of analysis will be discussed and reference will be made to other unusual applications of finite-element packages.

Wednesday 7 December

CAS ACCELERATOR SEMINAR

at 14.30 hrs – LEP Auditorium
bldg 30, 7th floor

Use of quantum electrodynamics to calculate radiative effects in electron storage rings

by L. HAND / Cornell University, USA
(on leave at DESY, Hamburg)

In a seminal paper, Bell and Leinaas have introduced the use of quantum mechanical Heisenberg operators for the orbital variables and vacuum expectation values for bilinear products of electromagnetic field operators as a tool for calculating radiative effects on the orbit and the spin in electron storage rings. We will review these techniques, which give a more systematic method than treating radiation as the emission of 'little bullets'. This is at the cost of introducing some formalism not usually employed in accelerator theory as overhead. We will give some examples for the calculation of energy spread, beam size and polarization. The usual results are obtained, but in a different way. The advantages and disadvantages of this technique and its relation to the normal approach will be discussed.

Wednesday 7 December

LEAR DISCUSSION MEETING

at 16.00 hrs – PS Auditorium
bldg 6, 2-024

NEW TITLE!

Recoilless hyperons produced in $\bar{p}$ annihilation at rest

by M. REY-CAMPAGNOLLE / CSNSM
Orsay, C. GUARALDO / INFN Frascati,
K. KILIAN / KFA Jülich

Wednesday 7 December

EP SEMINAR

at 16.30 hrs – Auditorium

Measurement of the strong coupling constant α_s from a study of W bosons produced in association with jets

by K. JAKOBS / CERN

The UA2 experiment has identified a total sample of 251 $W \rightarrow e\nu$ events. Among this sample 221 events are found without jets and 29 with one jet. The yield of one-jet events relative to that of zero-jet events provides a measurement of the strong coupling constant : $\alpha_s(M_W^2) = 0.13 \pm 0.03$ (stat) ± 0.03 (syst₁) ± 0.02 (syst₂), where syst₁ represents the experimental systematic error and syst₂ is an estimate of the theoretical uncertainty.

* Please note unusual day!

Thursday 8 December

PRIAM VMEbus USERS' MEETING

from 10.00 to 12.00 hrs – DD Auditorium

An informal meeting open to all those at CERN interested in the applications of VMEbus to high-energy physics.

10.00 Introduction

10.10 'VMEbus in research' – a report on the recent ESONE conference
Bob Dobinson / EP

10.40 VMEbus crates
Bruno Righini / EP Pool

11.00 VMEbus interface chips – the realities of their availability
Brian Martin / DD

11.20 'VXIbus' – a solution to VMEbus in front-end applications ?
Chris Parkman / DD

11.45 Software presentation – the latest situation
Chris Eck / DD, PRIAM Project Leader

Information : C. Parkman / DD / 3963 /
PMN@CERNVM

Friday 9 December

44th PLENARY ECFA MEETING

at 09.00 hrs – Council Chamber

1. Approval of the Draft Minutes of the 43rd Plenary ECFA Meeting
2. Approval of the Draft Agenda
3. Chairman's Report
4. Review of the US Programme
F.E. Low, Chairman HEPAP
5. Status of the HERA Project
V. Soergel
6. Status Report SppS Programme
L. di Lella
7. LEP Progress Report
E. Picasso
8. Research Development for TeV Linear Collider
W. Schnell
9. ECFA Study Week on Instrumentation for High-luminosity Collider
G. Jarlskog
10. ECFA Survey of Activity and Resources in HEP in Europe
R. Turnbull
11. Any Other Business

Friday 9 December

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 11.00 hrs – TH Conference room

Search for light bosons via the Mössbauer effect

A. DE RUJULA / CERN

We consider the possible existence of neutral bosons feebly coupled to nuclear matter, and of mass smaller than a few tens of keVs. To search for them, we discuss the possibility of shielding a relatively large Mössbauer source against its conventional activity, and looking for new types of penetrating monochromatic radiation that would resonantly excite the same Mössbauer transition in an outside detector. This type of experiment could improve the upper limits on the coupling of axions to hadrons well beyond their present laboratory values, to compete with all astrophysical constraints on axions is harder. In the search for other hypothetical particles, such as gauge bosons coupled to the baryon current, and in a mass range eight orders of magnitude upwards of $m \sim 2 \times 10^{-4}$ eV, our proposed technique has no known terrestrial or celestial competitor.

Monday 12 December

EP SEMINAR

at 14.00 hrs – Auditorium*

Can we improve the ν_τ mass limit ?

by J. J. GOMEZ-CADENAS / Santa Cruz IPP
& IFIC Valencia

During the last few years the issue of the neutrino mass has become one of the most interesting topics in particle physics. While the upper limit on the electron and muon neutrino masses is remarkably low, the tau neutrino upper limit is much higher, $m_\nu < 35 \text{ MeV}$. It has been recently proposed the idea of building a high luminosity tau-charm factory which could deliver 10^7 tau pairs per year, at a c.m. energy close to the tau pair production threshold with excellent detector resolution. In this talk we discuss the limits that can be achieved on an experiment running in such a factory. We show that from the study of the 'quasi beta' decay, $\tau \rightarrow e\nu\nu$, it is not possible to improve substantially the current limit. However, the study of the decay $\tau \rightarrow 5\pi + \nu$ may allow a limit of the order of 1 MeV.

* Please note unusual time!

Monday 12 December

SCIENCE AND SOCIETY

at 16.30 hrs – Auditorium*

Steps to technical and social innovation

by Robert JUNGK / Technical University, Berlin

* Tea & coffee will be served at 16.00 hrs.

Thursday 15 December

ISOLDE COMMITTEE

Open session

at 14.00 hrs – PS Conference Room
bldg 6, 2-024

1. *Introductory remarks*
B. Jonson

2. *ISOLDE operation in 1988/89*
G. Weyer
3. *Report on target tests*
H. Ravn
4. *Performance of ECR source*
M. Hofer
5. *Astrophysics needs for radioactive ion beams*
C. Rolfs
6. *ISOLDE Postaccelerator Project*
H. Haas
7. *Proposal : Study of the neon and carbon neutron drip line nuclei*
Aarhus-CERN-Gothenburg-Madrid collaboration; IP-55; K. Riisager
8. *Proposal : Investigation of the ^{97}Cd and ^{99}In decay*
Berlin-Warsaw-Manchester-Gothenburg collaboration; IP-57; H. Grawe
9. *Proposal : Quadrupole moments of radioactive gold isotopes*
CERN-Mainz-Oslo collaboration; IP-54; G. Passler
10. *Status report and proposal : Microscopical studies of structural and electronic properties of semiconductors*
Konstanz-Erlangen collaboration; IP-56; M. Deicher
11. *Status report and request for beamtime IS01-22 : ISOL technique for nuclear medicine*
CERN-Dresden collaboration; H. Ravn
12. *Any other business*

Closed Session

Friday 16 December
at 08.30 hrs – DG Conference Room
Main Building, 6th floor

TRAINING AND EDUCATION ENSEIGNEMENT

ENSEIGNEMENT GENERAL Tél. 2844-5811

Jeudi 8 décembre

de 13.00 h à 13.30 h – Auditorium
Science pour tous
par R. CARRERAS

Mardi 6 décembre

LES SCIENCES AUJOURD'HUI
à 20.00 h précises – Amphithéâtre
(jusqu'à environ 22.00 h)
par R. CARRERAS

Rafel Carreras, responsable du programme d'Enseignement général au CERN, commentera et expliquera un choix d'articles parus récemment dans des revues scientifiques, et qui couvrent l'ensemble des sciences physiques et biologiques ainsi que certains aspects des relations science-société. Une attention particulière est portée au langage et aux notions utilisés afin que les explications et les commentaires soient accessibles aux personnes n'ayant pas de formation scientifique.

Entrée libre

(Please note that the lecture will be given in FRENCH)

Service des Relations Publiques
Tél. 2722