

SERVICE RESTREINT DES RESTAURANTS LE WEEK-END DE L'ASCENSION

Le jeudi 31 mai 1984 (Ascension) les restaurants et cafétérias du CERN seront fermés, à l'exception d'un service restreint au Restaurant n° 2 (Tortella - Bâtiment 504) de 07h30 à 20h00 (restauration chaude de 11h30 à 14h00 et de 18h00 à 19h30).

Pour des raisons techniques le Restaurant n° 1 (Coop - Bâtiment 501) ainsi que le bar, seront **fermés le vendredi 1^{er} juin 1984**. Les Restaurants nos 2 et 3, le kiosque et les cafétérias de divisions fonctionneront normalement.

Réouverture du Restaurant n° 1 le **samedi 2 juin 1984 à 08h00**.

Service de Liaison des Restaurants
Tél : 3189/3962

SEMINARS SEMINAIRES

Lundi 21 mai

PRESENTATION TECHNIQUE

de 09.00 h à 12.00 h et de 13.30 h à 17.00 h
Genève, Esplanade des Vernets

BRUEL & KJAER (DK) propose en exposition-démonstration une gamme étendue d'instruments de mesure pour l'acoustique et les vibrations.

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

Lundi 21 mai

SEMINAIRE EF

à 11.00 h - Salle de Conf. EF, bât. 13, 2-005

Du BGO au LEP. Pourquoi?

par P. LECOQ / CERN-EF

Après avoir brièvement rappelé les raisons motivant la construction d'un important calorimètre en BGO pour l'expérience L3, dont une description détaillée sera présentée, différents problèmes relatifs à l'utilisation en physique des hautes énergies de ce matériau relativement nouveau et encore mal connu seront discutés en profondeur, tels que la nécessité d'une régulation thermique, les problèmes de résistance aux radiations, l'importance d'une excellente calibration, les difficultés et les espoirs d'organiser une production de masse et à bas prix.

Monday 21 May

TECHNICAL PRESENTATION

at 14.30 hrs - bldg. 6, 2-024

VARIAN S.p.A. (I) introduces the new Star Cell ion pumps : they are equipped with a new revolutionary pumping element which combines the performances of the diode and triode type elements, together with the following advantages : long element life - high pumping stability for noble gases - low leakage current - new HV feed-

LIMITED RESTAURANT SERVICE AT ASCENSION WEEK-END

On Thursday 31 May 1984 (Ascension Day), the CERN restaurants and cafeterias will be closed, except for a limited service at Restaurant No. 2 (Tortella - Building 504) from 07.30 to 20.00 hrs, with hot meals available from 11.30 to 14.00 hrs and from 18.00 to 19.30 hrs.

For technical reasons, Restaurant No 1 (Co-op - Building 501), together with the bar, will be **closed on Friday 1 June 1984**. Restaurants Nos. 2 and 3, the kiosk and the cafeterias in Divisions will operate normally.

Services will begin again in Restaurant No. 1 on **Saturday 2 June 1984 at 08.00 hrs.**

Restaurant Liaison Service
Tel : 3189/3962

through and connector - increased ratio pumping speed/pump volume - low stray magnetic field. The new Star Cell TM pumps are available in the 30 l/s, 45 l/s and 60 l/s versions. Furthermore, a new design power unit and measurement unit are available : they allow direct pressure reading, they are equipped with 3 independent set points, external HV interlock, pump status display, and remote computer operation capability.

Languages : English, French
Information : M. Diraison / FI/4585

Monday 21 May

EP SEMINAR

at 17.00 hrs - Auditorium

First results on Charm from NA 27

by R. BRUN / CERN-EP

In 1982 the European Hybrid Spectrometer (EHS) equipped with the high resolution bubble chamber LEBE was exposed to a 360 GeV/c π^- beam. In 127 out of 265000 interactions in hydrogen decays of charmed particles were observed. Their lifetimes, cross-sections and branching ratios are given and some especially interesting events are discussed in detail.

Tuesday 22 May

CERN COLLOQUIUM

at 16.30 hrs - Auditorium*

The supercritical electric field

by W. GREINER / Frankfurt University

The structure of the vacuum has become of general importance in modern physics. In this context the vacuum of quantum electrodynamics plays a special role because it changes drastically in strong external electric fields and these changes can be followed in a controllable way in the laboratory. It is reviewed how in supercritical electric fields the electron-positron vacuum, i.e. the ground state of QED is changing from a neutral to a charged vacuum. The theoretical concepts, developed during the last 15 years, can be tested in collisions of very heavy ions, like U-U, U+Cm, etc. The important theoretical

and experimental stages are described; in particular it is shown that the vacuum decay has recently been experimentally verified : Sharp line structures in the positron spectra with pronounced threshold effects are the signals of this fundamental phase transition. Furthermore, the observed γ -ray and δ -electron spectra, the non-appearance of a massive line structure in undercritical systems like Pb+Pb, and the quantitative understanding of the innershell ionization phenomena in giant quasimolecules (their agreement with theoretical predictions) give confidence into this interpretation. At the same time the positron line structures indicate the existence of rather long-living giant nuclear systems with $Z = 180-190$. It is shown that most likely giant nuclear molecules have been formed whose structure can eventually be investigated spectroscopically by the positrons from the vacuum : the positron spectrum should not only show the vacuum decay line, but also Raman and perhaps Stokes-satellites revealing the nuclear collective modes of the giant system formed.

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

Mercredi 23 mai

PRESENTATION TECHNIQUE

de 09.30 h à 11.00 h – bât. 13, 2-005

GESPA SA (CH) et THOMSON EFCIS (F-Grenoble) proposent deux exposés et une présentation de matériel sur le thème 'le Bus G-64, un nouveau standard industriel'. Son utilisation, avec les microprocesseurs Motorola 6809 et 68000, Intel 8085 et 8088, Zilog Z 80, NS 16032, Digital J 11 et Texas Instruments 9995, sera présentée dans le cadre du LEP.

Langues : anglais ou français selon auditoire
Renseignements : M. Diraison / FI/4585

Wednesday 23 May

THEORETICAL SEMINAR

at 14.00 hrs – TH Conf. room

The Witten index in supersymmetric gauge theories

by F. PALUMBO / CERN

Difficulties in the evaluation of the Witten index in gauge theories are pointed out. Such difficulties are due to ambiguities in the identification of all the zero energy states and to the fact that some of these states belong to a continuous spectrum.

Wednesday 23 May

CAS ACCELERATOR SEMINAR

at 14.30 hrs – LEP Auditorium
(Top floor of building 30)

The DESY beam orbit processor project

by P. LEU / DESY

At DESY a dedicated system of parallel processors for beam orbit simulations of the HERA proton ring has been set up. The system is designed to run the numerical tracking program as fast as an IBM 3081 at an investment cost much lower than for an equivalent system with emulators.

Wednesday 23 May

DD SEMINAR

at 16.00 hrs – DD Amphitheatre
(bldg. 31, third floor)

Inside the DESY Computer Centre

by O. HELL

A brief introduction to the configuration, including software tools will be given. The usage of tapes and permanent data sets will be described : all tapes are owned by the computer centre, a two level hierarchy is used to manage the access. Several problems with tape data sets will be discussed.

Jeudi 24 mai

PRESENTATION TECHNIQUE

de 10.00 h à 16.00 h – bât. 17, 1-007

BBC (Brown Boveri) GOERZ METRAWATT (CH/D) propose en exposition : appareils de mesure analogiques et numériques, scope-multimètre numérique, appareils de contrôle, enregistreurs et traceurs de courbes (de laboratoire et à encastrer), régulateurs électroniques – systèmes de régulation GTR 8000 avec microprocesseurs, convertisseurs de mesures – nouveau multiconvertisseur avec microprocesseurs

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

Thursday 24 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Indications for neutrino oscillations in the Bugey reactor experiment

by Y. DECLAIS / Centre de physique des particules, Marseille

The energy spectrum of electron anti-neutrinos has been measured at two distances (13.6 and 18.3 meters) from the core of a power reactor at Bugey (France). About 63 000 antineutrino events have been recorded using the inverse beta-decay detection reaction. The compatibility of the results with a solution in a two neutrino oscillation analysis will be discussed.

* Tea and coffee will be provided at 16.00 hrs.

Vendredi 25 mai

PRESENTATION TECHNIQUE

de 09.00 h à 16.00 h – bus parking PTT, bât. 63

ROHDE & SCHWARZ (D), représenté par ROSCHI TELECOMMUNICATION AG BERN (CH), propose en exposition-démonstration : banc de mesure pour analyse logique LAS, avec PUD3 et bus CEI – banc de mesure automatique, pour mesures de champ HF et VHF, automatique pour radio-téléphone, pour l'analyse de la modulation, automatique pour BF – contrôleur de composants HF – mesure automatique de tensions – analyseur automatique de paramètres – banc de wobulation pour éléments HF – banc de mesure HF automatique, alimentation – place de mesure avec générateur de signaux.

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

Monday 28 May

SEMINAR

11.00 hrs – EF Conf. Room, bldg. 13, 2-005

Results from Aleph TPC-90

W. WITZELING / CERN-EF

is a test setup to study systematic effects in a
ection chamber and to test prototype sectors for
h TPC. The apparatus will be described and
ults obtained so far will be presented.

Monday 28 May

SEMINAR

17.00 hrs – Auditorium

Observation of scaling violation in the
hadronic production of high mass dimuons

K. FREUDENREICH / CERN-EP

of 160 000 dimuon events with mass greater than
 $\sqrt{s}/c^2$ has been recorded in the NA10 spectrom-
eter. Dimuons were produced by a π^- beam of $\langle p \rangle$
1.6 GeV/c incident on a tungsten target. This large
sample made it possible to extend the study of the
dependence of masses well above the mass of the upsilon.
The experiment agrees with previous experiments
in the mass region, in the high mass region a depart-
ure from QCD parton model expectations is observed.
The data is parametrized in a so called K-function.

Monday 29 May

EXPERIMENTS COMMITTEE

Session

09.00 hrs – Auditorium

of particle production and nuclear fragmenta-
tion in collisions of O^{16} -beams with emulsion nuclei
at 200 A GeV (Berkeley-Jaipur-Jammu-Lund-
Stockholm (Natl. Res. Council and Univ.)-Seattle colla-
boration; I. Otterlund; SPSC 84-27/P 198).

sal to improve the performance of the UA2
detector (UA2 collaboration; P. Darriulat; SPSC
84-27/P 93 Add.3*).

periment to measure neutrino-electron scatter-
ing with a large water Cerenkov detector (Ecole poly-
technique-Munich-Saclay collaboration; Ph. Bloch;
SPSC 84-31/P 199*).

pton asymmetry analyser : a proposal (CERN-
Frascati collaboration; A. Zichichi; SPSC
84-31/P 200*).

h for fractionally charged nuclei in high-energy
nucleon-uranium collisions (Berkeley-CERN collabo-
ration; B. Price; SPSC 84-38/P 201*).

of hadron production in nucleus-nucleus colli-
sions at the CERN SPS (Philadelphia-CERN-GSI
Frankfurt-Lund-Warsaw-Riverside/CA-Serpukhov
collaboration; M. Faessler; SPSC 84-40/P 202*).

Session

14.00 hrs – Conf. room 6th fl., Admin. bldg.
to be continued on Wednesday 30 May at 09.00
hrs.

SPSC 84-27/P 93/Add. 3, P 199, P 200, P 201, P 202, I 155 and M 376
will be circulated in due course.

by CERN

5.84

Tuesday 29 May

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

Electron-proton physics at future colliders

by Guido ALTARELLI/Rome University and
CERN

Wednesday 30 May

PRESENTATION

Organised by the DELPHI DAS Group

at 14.00 hrs (in French) and

at 16.00 hrs (in English)

bldg. 593, room 11

The Apple MACINTOSH and
LISA II Personal Computers

by Jan VYBIRAL / Software Support Engineer,
Industrie AG Zurich

Wednesday 30 May

SCIENCE AND SOCIETY SEMINAR

SEMINAR IN HONOUR OF

A. SACHAROV'S 63rd BIRTHDAY

at 16.30 hrs – Auditorium

Encounters of planet earth with quark-matter

by S.L. GLASHOW / Harvard University

and

A singular man

by A. DE RÙJULA / CERN

TRAINING AND

EDUCATION

ENSEIGNEMENT

ENSEIGNEMENT GÉNÉRAL

Tél. 2844

Jeudi 24 mai

de 13.00 h à 13.30 h – Amphithéâtre

Science pour tous

par R. CARRERAS

ACADEMIC TRAINING

Tél. 2844

Jeudi 24 mai

de 10.30 h à 12.30 h – Amphi. n° 11, bât. 593

Réglages échantillonnés.

Traitement dans l'espace d'état.

par H. BUHLER / EPF, Lausanne

Leçon 4