

### 3. Fonds d'entraide -

#### Rapport 1994 & budget prévisionnel 1995

Le Comité a pris note de ce rapport et approuvé le budget prévisionnel du Fonds d'entraide pour 1995 (l'accord de l'Association du personnel a été communiqué par écrit).

### 4. Circulaire administrative n° 10 -

#### Le dossier personnel administratif et la protection des données à caractère personnel

Le Comité a approuvé les amendements proposés pour cette circulaire (l'accord de l'Association du personnel a été communiqué par écrit).

### 5. Programme de travail du CCP pour 1995

Le Comité a discuté d'un calendrier provisoire des réunions du CCP pour le second semestre de 1995.

**La prochaine réunion ordinaire du CCP doit se tenir, comme prévu, le mardi 13 juin 1995.**

### 3. Mutual Aid Fund -

#### 1994 Report & 1995 provisional budget

The Committee took note of this report and agreed the provisional budget of the Mutual Aid Fund for 1995 (Staff Association agreement was communicated in writing).

### 4. Administrative Circular no. 10 -

#### The personal administrative file and the protection of personal data

The Committee agreed the proposed amendments to this circular (Staff Association agreement communicated in writing).

### 5. Work Programme of the SCC for 1995

The Committee discussed a tentative schedule of meetings of the SCC for the second half of 1995.

**The next ordinary meeting of the SCC is scheduled to take place, as previously planned, on Tuesday 13 June 1995.**

## SEMINARS SEMINAIRES

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### Monday 12 June

#### TECHNICAL SEMINAR

at 11.00 hrs - ECP Conference Room, bldg 13/2-005

#### **The Macrame Project : Realisation of a 1000 node High Speed Packet Switching Network** by Brian MARTIN / CERN-ECP

Macrame is an EU funded project. The industrial partners are developing or exploiting the serial transmission and switch fabric described in IEEE proposal P1355. CERN's principal activity within the project is to exploit existing silicon to construct, measure and exploit a large packet switching network. The aim is to demonstrate the scalability of the technology, to provide a calibration benchmark for the various simulation models and to explore the properties of different topologies and traffic profiles. The project aims to deliver a 1K node switch in early 1996. This seminar will cover an overview of the technology, the design of the switch fabric, the future program of work and some of the current and foreseeable applications.

### Monday 12 June

#### PPE SEMINAR

at 16.30 hrs - Auditorium

#### **Heavy Quark Fragmentation and Excited Beauty** by Oliver PODOBRIN / University of Karlsruhe

New DELPHI results on beauty physics are presented. Special attention is given to the inclusive reconstruction method (the "rapidity algorithm"), which is the basis of the physics results presented in this talk. The program comprises an unfolding measurement of the b-fragmentation function with unprecedented statistical precision, based on a sample of 250K inclusively reconstructed B-hadrons. The excited mesons  $B^*$ ,  $B^{**}$ ,  $B_s^{**}$  and the baryonic states  $\Sigma_b$  and  $\Sigma_b^*$  have been observed and their production and decay properties analysed in detail. In this course, extensive use has been made of DELPHI's

particle identification capabilities. The impact of these results on our present understanding of heavy quark fragmentation will be discussed.

### Tuesday 13 June

#### TECHNICAL PRESENTATION

at 10.00 hrs - CN Auditorium, bldg 31/3-005

#### **Rational Rose, Booch, OMT and the Unified Method** by Nasser KETTANI & Bernard MONNOYE / Rational

Rational Rose is a graphical software-engineering tool that supports object-oriented analysis, design and implementation. In the actual version (2.5) Rose support the Booch Method and will support the Unified (Booch+OMT) Method at the end of the year (Rose version 3.5). SoDA automates the production of software documentation and allows extraction of data from multiple information sources (Unix, Frame, Apex, Rational Rose) to create a single document.

The agenda of the presentation will be :

- The Booch method
- Comparison with OMT method
- Taking the best from both methods
- The Unified Method (Booch+OMT)
- Demo of Rational Rose
- Demo of SoDA

An open door session will be held in the afternoon. Check with us for place and time at the end of the presentation.

*Organiser : S. Cannon / CN / 5036*

### Tuesday 13 June\*

#### COMPUTING COLLOQUIUM

at 16.00 hrs - Council Chamber\*

#### **How the Enigma Cipher Machine was solved** by R.F. CHURCHHOUSE

The Enigma is the best-known of all the wartime cipher machines. More than 30,000 were in use by the German Armed Forces. The number of different Enigmas is so enormous (about 10 to the power 80 in its original version) that, even with today's most powerful computers solving it would seem to be impossible yet, because of a weak operating procedure

and a mathematical “Achilles Heel” the original machine was solved by three young Polish mathematicians in a few months by hand. The lecture will reveal the “Achilles Heel” and show how this led to the solution.

Bob Churchhouse studied Mathematics at Manchester and did his PhD at Cambridge in the Theory of Numbers. His career has involved computing from the start (1952) and has included posts in the Royal Naval Scientific Service and, as Head of Programming, at the Atlas laboratory. He moved to Cardiff University as Professor of Computing Mathematics in 1971 and retires from that post recently.

*\* Please note the unusual place and date.*

**Wednesday 14 June**

**PS SEMINAR**

at 11.00 hrs – PS Auditorium

**CRYSTAL : A Storage Ring for Ion Beam Crystallization**

by Luigi TECCHIO / University of Torino, Italy

Crystalline structure is the ultimate state of cooled beams. A dedicated machine is under study at the LNL Legnaro Laboratory to prove the feasibility of crystalline beams using very effective electron and laser cooling. The storage ring has a circumference of 70 meters and a maximum magnetic rigidity of 4 Tm. Each of the eight superperiods is made of dipole magnets, quadrupole doublets and a 3.4 meter insertion. The design criteria and the very concept of crystalline beam will be discussed.

**Wednesday 14 June**

**THEORETICAL SEMINAR**

at 14.00 hrs – TH Conference Room

**Infra-red renormalons and power corrections in e<sup>+</sup>e<sup>-</sup> annihilation into hadronic jets**

by Paolo NASON / CERN

I discuss power corrections induced by infra-red renormalons in hadronic jet production in e<sup>+</sup>e<sup>-</sup> annihilation. I present the results of the calculation, performed in collaboration with M. Seymour, of the leading infra-red renormalon contribution to jet quantities in the limit of a large number of light flavours. We find that in this limit some shape variables have corrections behaving like 1/Q, and others like 1/Q<sup>2</sup>. Our results also contradict some recently proposed conjectures, according to which the effect of infra-red renormalons factorizes in jet quantities. We argue that, in the full theory, corrections of order 1/Q may always arise at subleading level, and will in general have the form  $\alpha_s^n/Q$ , and it may be possible to classify shape variables according to the value of n. I discuss the possible implications of our results on the determination of  $\alpha_s$  from jet quantities.

**Thursday 15 & Friday 16 June**

**TIMETABLE FOR THE SECOND GENERAL MEETING OF LEP2 WORKSHOP**

at 09.00 hrs – Auditorium

**Thursday 15 June**

|             |                                |                                         |
|-------------|--------------------------------|-----------------------------------------|
| 09.00-09.45 | Prospects for the LEP2 project | C. Wyss                                 |
| 09.50-10.50 | Physics-Machine interface      | S. Myers<br>M. Placidi<br>G. von Holtey |

*Break*

|             |    |              |
|-------------|----|--------------|
| 11.20-12.10 | WW | A. Denner    |
| 12.15-13.05 | WW | (Ev. gener.) |

*Lunch*

|             |        |
|-------------|--------|
| 14.00-14.50 | W mass |
| 14.55-15.40 | WWV    |

*Break*

|             |       |
|-------------|-------|
| 16.15-17.45 | Higgs |
|-------------|-------|

**Friday 16 June**

|             |                                |                |
|-------------|--------------------------------|----------------|
| 09.00-09.40 | New particles                  |                |
| 09.45-10.15 | Discovery physics (Ev. gener.) |                |
| 10.20-10.45 | Z'                             | C. Verzegnassi |

*Break*

|             |                    |                           |
|-------------|--------------------|---------------------------|
| 11.15-11.55 | Standard processes |                           |
| 12.00-12.30 | QCD                |                           |
| 12.35-13.05 | QCD (Ev. gener.)   | H. Hamacher<br>I. Knowles |

*Lunch*

|             |                             |            |
|-------------|-----------------------------|------------|
| 14.00-14.30 | $\gamma\gamma$              |            |
| 14.35-15.05 | $\gamma\gamma$ (Ev. gener.) | M. Seymour |
| 15.10-15.40 | Bhabha (Ev. gener.)         |            |

*Break*

|             |                                                            |              |
|-------------|------------------------------------------------------------|--------------|
| 16.15-17.15 | Report on physic motivations for an energy upgrade of LEP2 | G. Altarelli |
|-------------|------------------------------------------------------------|--------------|

**Thursday 15 June**

**TECHNICAL PRESENTATION**

at 10.00 hrs – CN Auditorium, bldg 31/3-005

**Rambus Technology presentation**

by Jeff MITCHELL / Manager European business development

A presentation will be made describing Rambus Technology, a revolutionary chip-to-chip interconnect which allows data transfers of 500 MBytes/sec from commodity ASIC and DRAM devices. Applications and uses of the technology will be described along with product status and availability. A demonstration will be given of a Rambus based PC graphics system with 1000 MB/s of bandwidth from a single PCI interface card.

Organiser : S. Cannon / CN / 5036

**Thursday 15 June**

**DETECTOR SEMINAR**

at 11.00 hrs – ECP Conference Room, bldg 13/2-005

**Studies of oxides for microelectronics in an ionizing radiation environment**

by Nelson SAKS / Naval Research Laboratory, Washington

The main cause for degradation of silicon CMOS circuits under irradiation is the introduction of charged defects in the oxides and at oxide-silicon interfaces. In this talk, we will give a general introduction to current research on the development of radiation-hardened oxides and structures. Recent results on the development of hardened oxides grown in N<sub>2</sub>O rather than O<sub>2</sub> will be presented. In these N<sub>2</sub>O oxides, the incorporation of nitrogen in the oxide is a key feature in reducing the rate of defect creation. We are also currently heavily involved in the

development of a relatively new technique for characterizing interface traps called charge pumping. This technique, and its application to studying radiation-induced (and other) defects, will be discussed in some detail.

**Lundi 19 juin**

**PRESENTATION TECHNIQUE**

10h00 16h00 – parking près bât. 904, site de Prévessin

**Kemppi Road Show: le soudage et ses applications**

par Techniques de soudage, Hulftegger S.A. (F/CH/SF)

Kemppi vous propose:

- des démonstrations, soudage ARCELECTRODES, semi auto MIG/MAG, le soudage MIG PULSE, acier inox, aluminium SANS PROJECTION, soudage MIG longue distance, soudage TIG, acier, inox, aluminium
- un logiciel pour maîtriser vos coûts de soudage
- un problème de soudage? N'hésitez pas, apportez les éléments, nous traiterons cette difficulté

*Langues : allemand, anglais, finnois, français*

*Renseignements : M. Diraison / FI-A / 4585*

**Monday 19 June**

**TECHNICAL SEMINAR**

at 11.00 hrs – ECP Conference Room, bldg 13/2-005

**Leakless Cooling System**

by Michel BOSTEELS / CERN-MT

From the beginning of the electronic era, the heat released per unit volume has continuously increased. This talk presents a well proven liquid cooling system, running without any risk of leaks, specially designed for electronic racks and detectors. This system is already used in many CERN experiments.

**Thursday 22 June**

**CERN ASTROPHYSICS SEMINAR**

at 16.30 hrs - Auditorium

**X-ray and gamma-ray radiation from active galactic nuclei and the cosmic background**

by Andrzej ZDZIARSKI / N. Copernicus Astronomical Center, Warsaw, Poland

**FOR INFORMATION / POUR INFORMATION**

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**Wednesday 21 June**

**SEMINAR ON PARTICLE PHYSICS**

at 17.00 hrs – Stückelberg Auditorium

**Phenomenology of quarkonia production hadronic collisions**

by M. MANGANO / CERN

We present some recent developments in the theory of Quarkonium production in high energy hadronic collisions. Recent experimental data have seriously challenged the standard theory, and promoted the subject to one of the outstanding open questions in QCD. We shall review the available data and show how these have driven the theoretical understanding. While the most recent theoretical advances have partly accommodated the initial discrepancies, several interesting points remain to be understood.

**EDUCATION  
SERVICES  
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**ENSEIGNEMENT GÉNÉRAL**

Tél. 5811

**Jeudi 15 juin**

à 13.00 h – Amphithéâtre

**Science pour tous**

par Rafel CARRERAS