

# COMMUNICATIONS OFFICIELLES

# OFFICIAL NEWS

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## CARTES FRANÇAISES DU PROTOCOLE

Les fonctionnaires supérieurs possédant des cartes FRANÇAISES du PROTOCOLE (cartes bleues) arrivant à échéance le 31.12.1998 sont priés de bien vouloir retourner ces cartes ainsi que celles des membres de leur famille à l'adresse suivante pour prolongation :

Bureau des cartes, Bât 33/1-025

Au cas où les trois emplacements de validation (au dos de la carte) seraient complets, veuillez joindre deux photos format passeport pour l'établissement d'une nouvelle carte.

Pour les enfants de 18 ans et plus dont la carte arrive à échéance le 31.12.1998, une attestation de prise en charge doit être jointe à la carte.

Division du Personnel  
Tél. 74683

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

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## FRENCH PROTOCOL CARDS

Senior officials, holders of FRENCH PROTOCOL cards (blue cards) due to expire on 31.12.1998, are requested to return these cards and those of family members for extension to :

Bureau des cartes, Bât 33/1-025

Should the three spaces for authentication on the back of the card be full, please enclose two passport photographs for a new card.

In the case of children aged 18 and over whose cards are due to expire on 31.12.1998, an attestation of dependency should be returned with the card.

Personnel Division  
Tel. 74683

## SEMINARS SEMINAIRES

### Monday 23 November

#### COSMOLOGY MEETING

at 14.00 hrs – TH Conference Room, bldg 4

**Baryogenesis in low quantum gravity scale models**

by Sacha DAVIDSON / CERN-TH

### Mardi 24 novembre

#### PRESENTATION TECHNIQUE

à 10.00 hrs – Amphithéâtre IT, bât 31/3-004-5

**Connectique optique et électrique**

par R. HABEKOTHE, P. LARGEOIS, S. MAFFLI /  
MOLEX.

A l'occasion de cette visite, la société MOLEX présentera une partie de ses produits concernant la connectique optique et électrique, ainsi que ses nouveautés.

Le nouveau connecteur optique SFF (Small Form Factor) Tranceiver optique boîtier SCD et SFF. Fond de panier optique etc...

*Langue: Français, anglais.*

*Information : P. Donnat/EP Tél. 78061 et R.A. McLaren/EP  
Tél. 74907*

*Organiser : S. Cannon / IT / 75036*

### **Vous pouvez aussi consulter**

*For information on these seminars, please see*

<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

### Tuesday 24 November

#### COMPUTER COLLOQUIUM

at 10.00 hrs – Council Chamber, bldg 503

**The rationale behind free software**

by Erik TROAN / Red Hat Software

Over the past 15 years, the free software model has developed many commercial-quality programs which have gained a high level of acceptance in both public and private institutions worldwide (such as emacs, gcc, perl, Linux, and apache). While the development and maintenance of these programs seems to violate the ancient rule "There ain't no such thing as a free lunch", there are actually strong economic and technical advantages for the free software model. While the specifics of these models are still under debate, their outlines are fairly clear. This talk will attempt to explain why free software products show stability, why new free software products will continue to be developed, and an economic model which will allow the use of free software products to be expanded in institutions used to the advantages of traditional proprietary software.

About the speaker: Erik Troan is a Chief Developer at Red Hat Software. Erik graduated from NC State with BS degrees in Computer Science and Computer Engineering. Erik has been involved with Linux since 1992 and is the primary author of the RPM packaging tool as well as many other

Linux applications. He is also co-author of the book Linux Application Development.

## Tuesday 24 November

### CERN HEAVY ION FORUM

at 16.00 hrs – Conference Room 40-SS-D01

#### Status of flow in heavy ion collisions at the SPS

Theory topics:

Jean-Yves Ollitrault (Saclay) 40 min

NA49 results :

Thomas Wienold (Heidelberg Univ.) 30 min

WA98 results :

Hubertus Schlaheck (Muenster Univ.) 30 min

NA45 results :

Johannes Wessels (Heidelberg Univ.) 30 min

NA50 results :

Pierre Saturnini (Clermont-Ferrand Univ.) 30 min

Discussion and other short contributions 20 min

The theoretical talk will review the observations of collective flow in nuclear collisions from non relativistic to ultrarelativistic energies, with emphasis on recent results. Their physical interpretation and the information they may give on the properties of nuclear matter will be discussed. The current status of experimental results will then be reviewed with emphasis on SPS.

Organisers: Yiota Foka and Carlos Lourenço

info: <http://home.cern.ch/a/alicedoc/www/chic/>

## Wednesday 25 November

### THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

#### Soft terms in models with an anomalous U(1)

by Beatriz DE CARLOS / CERN - TH

The interplay between gaugino condensation and an anomalous Fayet-Iliopoulos term in string theories is not trivial and has important consequences concerning the size and type of the soft SUSY breaking terms. In this seminar we examine this issue, generalizing previous work to the supergravity context. This allows us, in particular, to properly implement the cancellation of the cosmological constant, which is crucial for a correct treatment of the soft breaking terms. We obtain that the D-term contribution to the soft masses is expected to be larger than the F-term one. Moreover gaugino masses must be much smaller than scalar masses. We illustrate these results with explicit examples. All this has relevant phenomenological consequences, amending previous results in the literature.

## Thursday 26 November

### THURSDAY SEMINAR

at 14.00 hrs – TH Conference Room, bldg 4

#### A non-perturbative approach to real-time thermal field theory

by Bastian BERGERHOFF / T.U. Munich

I discuss the formulation and application of nonperturbative renormalization-group equations in the Schwinger-Keldysh approach to thermal field theory. I present recent results on the critical behaviour of scalar theories and discuss applications to models with fermions.

## Thursday 26 November

### LHC PROJECT SEMINAR

at 14.15 hrs – LHC Auditorium, bldg 30/7th floor

#### A collimation experiment at 120 GeV in the SPS ring

by Nuria CATALAN LASHERAS / SL Division and Univ. of Zaragoza

The LHC will be the first proton collider which cannot be operated at its nominal current without collimating the beams. The efficiency of the collimation system must be high to prevent the quenching of the superconducting magnet induced by proton losses. A collimation experiment was made at the SPS in order to measure the efficiency of a two-stage collimation system. The results of the experiment will be reported and compared to a simulation program. Extrapolations to LHC will be discussed.

## Friday 27 November

### MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room, bldg 4

#### Steps towards NNLO QCD calculations: collinear factorization at $O(\alpha_s^2)$

by M. GRAZZINI / ETH, Zurich

The present knowledge of the infra-red behaviour of QCD amplitudes necessary to perform NNLO calculations is briefly reviewed. We then consider in detail the singular limit of tree-level QCD amplitudes when the momenta of three partons become simultaneously parallel. We discuss the universal factorization formula which controls the singularities of multiparton matrix elements in this limit and we present the explicit expressions for the corresponding splitting functions including spin correlations.

## Monday 30 November

### DETECTOR SEMINAR

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

#### Limits on Drift Chamber Resolution

by M. ALEKSA / CERN-EP

The ATLAS muon system is designed to measure 1 TeV/c muon momentum with an accuracy of 10%. To achieve this goal the single Monitored Drift Tubes (MDT) resolution has to be better than 80 micron. We describe a detailed study of all the factors limiting the resolution of the MDTs in the ATLAS environment. The dependence of the resolution on the gas gain, gas pressure, threshold level and on the noise level as well as the impact of a high radiation background will be discussed. Measurements and simulations for different drift gases will be presented. This understanding has resulted in front end electronics, which achieves a space resolution of 50 micron.

Information: <http://www.cern.ch/CERN/Divisions/EP/Seminars/Welcome.html>

Organiser: Rui Ribeiro / EP Division

## Monday 30 November

### ISOLDE EXPERIMENTS COMMITTEE

at 14.00 hrs – Council Chamber, bldg 503

#### Provisional Agenda for the twenty-fifth meeting

#### OPEN SESSION:

1. Introductory remarks by the Chairman
2. Progress report by the ISOLDE Technical Group Leader

3. ISOLDE Coordinator's report
4. Studies of the Beta Decay of Kr and Sr nuclei on and near the  $N=Z$  line with a Total Absorption Gamma Ray Spectrometer; ISC/98-20/ P103; Ph. Dessagne
5. Semiconductor Spectroscopy with short lived Isotopes; ISC 98-22/P104; M. Deicher
6. Investigations of neutron-rich nuclei at the dripline through their analogue states: The cases of  $^{10}\text{Li}$ - $^{10}\text{Be}$  ( $T=2$ ) and  $^{17}\text{C}$ - $^{17}\text{N}$  ( $T=5/2$ ); ISC 98-23/P105; B. Jonson
7. Self-Diffusion of Carbon and Nitrogen in the Amorphous Ceramics  $\text{Si}_{26}\text{C}_{41}\text{N}_{33}$  and related Materials; ISC 98-19 /P102; S. Matics

CLOSED SESSION: Monday, 30 November, after the Open Session, 6th Floor, Conference Room, Main Building.

## Monday 30 November

### CERN EP SEMINAR

at 16.30 hrs – Auditorium, bldg 500\*

**Study of exclusive electroproduction of  $\rho^0$  mesons at low  $Q^2$  using the ZEUS Beam Pipe Calorimeter at HERA**

by Teresa MONTEIRO / CERN, EP Division.

Results on the study of the reaction  $ep \rightarrow ep^0 p$  ( $\rho^0 \rightarrow \pi^+ \pi^-$ ) in the previously unexplored transition region of non-perturbative to perturbative QCD, for photon virtuality  $Q^2$  between 0.25 and 0.85  $\text{GeV}^2$ , are presented. The measurements cover the range in photon-proton center of mass energy ( $W$ ) between 20 and 90  $\text{GeV}$  and  $|t| < 0.6 \text{ GeV}^2$  (where  $t$  is the squared four-momentum transferred at the proton vertex), and were possible due to the installation, in 1995, of an electromagnetic calorimeter covering positron scattering angles between 17 and 35 mrad in the ZEUS detector, at the HERA collider.

The  $\pi^+ \pi^-$  invariant mass distribution in the  $\rho^0$  region has been investigated. The differential cross section of the process and its dependence on  $W$  have been studied. Measurements of the spin density matrix elements and of the ratio of longitudinal to transverse cross section have been performed. The  $\rho^0$  production cross section has been determined as a function of  $W$  and  $Q^2$ .

Organiser : Fabiola Gianotti / EP Division

\* Tea & coffee will be served at 16.00 hrs.

## Mardi 1 décembre

### PRESENTATION TECHNIQUE

à 14.00 hrs – Auditorium SL, bât. 864, 1er étage

**Open Industrial Communication Concept**

par H. HUYNH, S. CHILENS / APPLICOM;  
F. BOREL, H. MOLLIN / HD Technology

Langue : Français

Information : D. Brahy / LHC, R. Brun / SL

## Tuesday 1 December

### CERN HEAVY ION FORUM

at 14.00 hrs – Conference Room 582-R-008

**Event-by-Event Physics in Heavy Ion Collisions**

by Thomas TRAINOR / University of Washington, Seattle

Organisers: Yiota Foka and Carlos Lourenço

Info: <http://home.cern.ch/a/alicedoc/www/chic/>

## Wednesday 2 December\*

### CERN COLLOQUIUM

at 16.30 hrs – Auditorium, bldg 500\*\*

**The Tree of Life : The Origin of Universal Scaling Laws in Biology from Cells to Whales**

by Geoffrey B. WEST / Theoretical Division, Los Alamos National Laboratory

Organiser : Luigi Di Lella / EP Division

\* Please note unusual day

\*\* Tea & coffee will be served at 16.00 hrs

## Thursday 3 December

### LHC PROJECT SEMINAR

at 14.15 hrs – LHC Auditorium, bldg 30/7th floor

**Risk analysis of the LHC cryogenic system**

by Maciej CHOROWSKI and Germana RIDDONE / LHC Division

## Thursday 3 December

### CAS ACCELERATOR SEMINAR

at 14.15 hrs – Main Auditorium, bldg 500

**The Fourteenth Lecture in the John Adams' Memorial Lecture Series**

**DAΦNE SETS SAIL**

by Caterina BISCARI / LNF-INFN, Frascati

\*Tea and coffee will be served after the lecture (~16.00 hrs) in the Salle des Pas Perdus

## Thursday 3 December

### TECHNICAL SEMINAR

at 15.00 hrs – Council Chamber, bldg 503

**Turbo Chillers with Water as Refrigerant**

by P. ALBRING / ILK Dresden

Organiser: Steffen Grohmann / ST Division

## Friday 4 December

### ECFA MEETING

at 09.30 hrs – Council Chamber, bldg 503

- |       |                                                                              |
|-------|------------------------------------------------------------------------------|
| 09.30 | 1. Adoption of the Draft Agenda                                              |
|       | 2. Approval of the Draft Minutes of the Sixty-third Plenary ECFA Meeting     |
| 09.45 | 3. Chairman's Report                                                         |
| 10.30 | 4. Election of the ECFA Chairman for 1999-2001<br><i>Coffee</i>              |
| 11.15 | 5. Report from the ICFA Task Force on Networking (D. Williams)               |
| 12.15 | 6. Publication Policy of Large Collaborations (G. Mikenberg)<br><i>Lunch</i> |
| 14.00 | 7. Update on Muon Collider Prospective Study (A. Blondel)<br><i>Coffee</i>   |
| 15.45 | 8. CLIC Progress (J.-P. Delahaye)                                            |
| 16.45 | 9. Any Other Business                                                        |
| 17.00 | End of meeting.                                                              |

**Friday 4 December**

**SL CONTROLS SEMINAR**

at 11.00 hrs – SL Amphithéâtre, bldg 864, 1st floor

**The SPS-2001 Software Project.**

The SPS-2001 team: Pierre CHARRUE, Bernard DENIS,  
Michel JONKER, Marc VANDEN EYNDEN.

**Tuesday 8 December**

**PS SEMINAR**

at 11.00 hrs – PS Auditorium, bldg 6 2-024

**The Equation of Motion of an Electron**

by Andrew M. SESSLER, LBNL

*Organiser: B. Autin/PS*

**Tuesday 8 December**

**CERN PARTICLE PHYSICS SEMINAR**

at 16.30 hrs – Auditorium, bldg 500\*

**Long Baseline neutrino oscillation program in the  
United States.**

by Stanley WOJCICKI / Stanford University

*Organiser: Jasper Kirkby / EP Division*

*\* Tea & coffee will be served at 16.00 hrs.*

**FOR INFORMATION / POUR INFORMATION**

**UNIVERSITY OF GENEVA**

Particle Physics Department

24, quai Ernest-Ansermet

1211 Geneva 4

Tel. 022 702 6273

Fax 022 781 2192

**Wednesday 25 November**

**SEMINAR ON PARTICLE PHYSICS**

at 17.00 hrs – Auditoire Stückelberg

**Neutral Hyperon Decays with the KTeV Experiment  
at Fermilab**

by Dr Nickolas SOLOMEY / University of Chicago

The neutral beam of the KTeV experiment has a large amount of hyperons such as lambda and cascade particles which are being studied. A brief summary of the KTeV experiment will be presented along with its many physics goals.

Followed by a detailed description of the hyperon program. Analysis of the semi-leptonic decays of the neutral cascade hyperon will be presented: branching ratios of these never before seen decays along with how we are using these decays to search for possible physics beyond the standard model.

**LAPP – Laboratoire d'Annecy de physique des Particules  
F74941 – Annecy-le-Vieux**

Informations : Pascal Perrodo, tél. 04 50 09 16 00

**Vendredi 27 novembre**

à 14.00 hrs – LAPP Auditorium

**La Physique du lepton tau**

Jean-Claude BRIENT (LPNHE, Palaiseau)

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<http://www.cern.ch/Training/>

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francoise.benz@cern.ch

**ACADEMIC TRAINING**

**LECTURE SERIES FOR POSTGRADUATE STUDENTS**

**23, 24, 25, 26, 27 November**

from 11.00 to 12.00 hrs – Auditorium, bldg 500

**Introduction to QCD**

by S. CATANI / CERN-TH

The lectures introduce to some basic aspects and concepts of perturbative QCD : running coupling and asymptotic freedom, the parton model, infrared divergences and the factorization theorem, parton densities and parton evolution, colour coherence. Applications to  $e^+e^-$  annihilation, deep inelastic lepton-nucleon scattering and hadron-hadron collisions are discussed.