

- **Recours contre le prélèvement de crise de 1997**

Le Président a informé le Comité que le Directeur général avait répondu à la lettre de l'Association du personnel sur ce sujet, datée du 3 juin.

- **Elections au Comité exécutif de l'Association du personnel**

Le Président de l'Association du personnel a rendu compte des résultats de ces élections.

Une réunion extraordinaire du CCP se tiendra le 23 juillet 1997.

CONSEIL D'ADMINISTRATION DE LA CAISSE DE PENSIONS

RAPPORT ANNUEL 1996 DE LA CAISSE DE PENSIONS

Le rapport annuel 1996 de la Caisse de pensions, qui a été approuvé par le Conseil lors de sa session du 20 juin 1997, est disponible dans les secrétariats de division.

Les bénéficiaires de pensions qui désirent obtenir ce document sont priés de s'adresser à l'Administration de la Caisse (tél. 767 44 21), bât. 5, 1-030.

SEMINARS SEMINAIRES

Monday 7 July

MEETING ON PARTICLE PHYSICS

at 14.00 hrs – TH Conference Room

Cp violation and mixing

by Boris KAYSER / National Science Foundation

Neutral K mixing and neutral B mixing play crucial roles in our exploration of CP violation. These mixings cause an oscillation with time of various decay probabilities. We (hopefully) resolve recent controversy over the predicted frequency of this oscillation. We then turn to the discrete ambiguities which will be encountered when B experiments attempt to determine the CP-violating phase angles of the Standard Model. First, we identify the quantities which must be measured to resolve these ambiguities. Then, we explain how $B^0 \rightarrow \psi + K \rightarrow \psi + \pi \nu$, a process in which K mixing follows on the heels of B mixing, can determine one of these needed quantities. Finally, we discuss how CP experiments in the B system can seek evidence of physics beyond the Standard Model. Some combinations of measurements could reveal such non-standard physics, while other combinations would davenishly hide it.

The Chairman of the Staff Association reported on the results of these elections.

An extraordinary meeting of the SCC is to be held on 23 July 1997.

GOVERNING BOARD OF THE PENSION FUND

1996 ANNUAL REPORT OF THE PENSION FUND

The 1996 Annual Report of the Pension Fund, which was approved by Council at its session of 20 June 1997, is available from Divisional secretariats.

Pension beneficiaries who wish to obtain this document should contact the Administration of the Fund (tel. 767 44 21), bldg 5, 1-030.

Pour de plus amples informations, prière de consulter
For full information on these seminars, please see
<http://wwwas.cern.ch/Bulletin/Seminars/current.html>

Monday 7 July

PPE SEMINAR

at 16.30 hrs – Auditorium*

Search for Leptoquarks at D0

by Greg LANDSBERG / FNAL

D0 has performed an optimized search for the first generation scalar leptoquarks (LQ) decaying into electrons and quarks with 100% branching ratio ($\beta = 1$), suggested as one of the possible explanations of the excess of high Q^2 events recently observed in ep collisions at HERA. Based on the entire Tevatron Run I eejj data (123 pb^{-1}) we set the 95% Confidence Level lower limit of 225 GeV on the mass of scalar $\beta = 1$ first generation LQ. This is the single most sensitive search for the first generation LQ; it rules out an interpretation of HERA data with the LQ's in a broad variety of models. A search for $\beta = 1/2$ first generation LQ in the evjj channel, as well as searches for the second and third generation LQ's, are also discussed.

*Tea & coffee will be served at 16.00 hrs.

Tuesday 8 July

IT TRAINING TUTORIAL

14.00-16.00 hrs – IT Auditorium, bld. 31/3-004

Introduction to Excel 97

by James PURVIS / CERN-AS

This tutorial is intended as a brief overview of one of the Microsoft Office components, Excel. It covers the following:

- A brief overview of Excel
- What's new & different about Excel97
- From worksheets to graphics and charts
- Working with lists and analyzing data with Pivot Tables
- Taking your data to the Web
- An Introduction to Application development using Visual Basic from Applications

Tuesday 8 July

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

A Physicist's View of Prion Brain Diseases - Mad Cows and CJD

by Douglas R.O. MORRISON / CERN

The research of Carleton Gajdusek on a stone-age tribe in Papua New Guinea, who suffered from a mysterious disease, kuru, spread by cannibalism, is described and short extracts from his films will be shown. Some deaths from kuru are still occurring after 45 years. This disease is believed to be caused by an entirely new mechanism, not a virus or bacteria, but by a small molecule known as a prion that occurs naturally in many living forms. The Prion Only hypothesis of Stan Prusiner is discussed critically.

It has been calculated that 900,000 cows in Britain had the Mad Cow disease, BSE, but most were slaughtered before symptoms were recognised. This epidemic started with 10 cases in the first year, and finally 160,000 were officially classified as having BSE; it is now slowly dying out. The human epidemic, caused by a new version of Creutzfeldt-Jakob Disease, nvCJD, affects mainly young people, has just begun with 10 cases in the first year. The average incubation time may be about 14 years then death follows in one year, so the peak in the human epidemic in Britain is expected in about 2005. The situation in other European countries and in North America is reviewed.

Among subjects discussed are species barrier, public health, Alzheimer's, molecular genetics, and blood.

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

Wednesday 9 July

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Matrix String Theory

by R. DIJKGRAAF / Amsterdam University

Recent developments suggest a non-perturbative definition of string theory using matrix coordinates. This formulation not only reproduces the usual perturbative properties, but also naturally includes solitons and sheds light on the quantum states of black holes and the appearance of space-time as an effective phenomenon.

Thursday 10 July

LARGE HADRON COLLIDER COMMITTEE

Open Session

at 09.00 hrs – Council Chamber

- 09.00–09.10 Status of the LHC project (C. Llewellyn Smith)
- 09.10–09.45 Status of the LHC machine (L. Evans)
- 09.45–10.55 CMS hadron calorimeter Technical Design Report (D. Green)
- 10.55–11.25 COFFEE BREAK
- 11.25–11.55 Status report from RD8: GaAs detectors (K. Smith)
- 11.55–12.25 Status report from RD46: Liquid scintillator capillaries (G. Martellotti)
- 12.25–12.55 Status report from RD48: Radiation hardening of Si detectors (S. Watts)

** Please note unusual place*

Thursday 10 July

CERN HEAVY ION COLLOQUIUM

at 14.30 hrs – Conference Room, bld. 160/1-009

Equilibration and Collective Dynamics in Heavy Ion Collisions

by Josef SOLLFRANK / Bielefeld

Two important aspects of heavy ion physics are discussed. To begin with the statistical or thermal models are very useful in the understanding of multi-particle production in general and in the special case of strangeness. The statistical analysis of various collision systems tells about the degree of chemical equilibration in the final state. Especially strange particle ratios give important implications on the reaction dynamics. Secondly, the hydrodynamical model for heavy ion collisions is reviewed. The experimental transverse hadron spectra show indications of radial flow. However, they are not able to constrain the equation of state. Single hadron spectra together with the electromagnetic emission might resolve the ambiguity between the initial conditions, i.e. the pre-equilibrium dynamics, and the equation of state.

Information <http://wwwinfo.cern.ch/a/alicedoc/www/chic/>
Organisers: Y. Foka and C. Lourenço

Vendredi 11 juillet

IT TRAINING TUTORIAL

10.00-12.00 h – Amphithéâtre IT, bât 31/3-004

Introduction à PowerPoint (en français)

par A. PACE / CERN-IT

Vous préparez des présentations mais vous n'utilisez pas powerpoint ou vous voulez savoir comment bien l'utiliser ? Venez voir une démonstration de Powerpoint pour savoir comment préparer rapidement des présentations efficaces. Cette présentation ne demande aucune connaissance préalable ni du PC ni de Windows ni de Powerpoint et montrera comment préparer une présentation, ou trouver des clipart, comment transformer votre présentation en HTML.

The presentation will be given in French. Questions in English will be answered in English.

Friday 11 July

MEETING ON PARTICLE PHYSICS

at 14.00 hrs – TH Conference Room

Sneutrino Mixing Phenomena

by Howard E. HABER / University of California,
Santa Cruz

In any model with non-zero Majorana neutrino masses, the sneutrino and antisneutrino of the supersymmetric extended theory mix. In this talk, I describe the conditions under which sneutrino-antisneutrino mixing is experimentally observable. These phenomena are illustrated in an extension of the Minimal Supersymmetric Standard Model that incorporates the see-saw mechanism to generate non-zero sneutrino masses. The mass-splitting of the sneutrino mass eigenstates and sneutrino oscillation phenomena are considered.

Tuesday 15 July

IT TRAINING TUTORIAL

14.00-16.00 hrs – IT Auditorium, bld. 31/3-004

Handling your mail with PINE

by Alessandro MIOTTO / CERN-IT

This tutorial will give you an introduction of how to handle your mail with the recommended mail agent "pine". Topics treated are how to read messages and store them in one of several folders, how to write messages, use aliases for mail addresses, and how to receive and send non-text material by mail in the MIME attachment format.

"pine" is also available on PCs, and it may provide a valid solution for those PC users who urgently require to have access to their mail from outside CERN. The tutorial will highlight the platform-independence of this tool.

Wednesday 16 to Friday 18 July

RD45 WORKSHOP

Entire workshop takes place in bld.160/1-009

- 09.00 Replication (DRO) Tests
- 09.30 DRO contd.
- 10.00 FTO (Partitions)
- 10.30 Schema Evolution
- 11.00 Meta Data
- 11.30 Aziza tests
- 12.00 CMS: calibration DB
- 14.00 V5 Beta test - first results
- 14.30 Java binding - first results
- 15.00 Named schema, type # tests
- 15.30 Pers./Trans. Ref tests
- 16.00 Enhancement Requests
- 16.30 Objy/HPSS news
- 17.00 HPSS@CERN: update

Thursday 17 July

- 09.00 TRW
- 09.30 ATLAS
- 10.00 CMS: analysis chain prototype
- 10.30 CMS: clustering strategies
- 11.00 ALICE
- 11.30 BaBar
- 12.00 STAR/Phenix
- 14.00 CDF
- 14.30 AMS

- 15.00 TagDB
- 15.30 GEANT-4 Alpha release
- 16.00 Caltech
- 16.30 COMPASS requirements
- 17.00 NA45
- 17.30 NA48

Friday 18 July

- 09.00 CLHEPDB
- 09.30 HepODBMS.h
- 10.00 HepODBMS.h - CMS input
- 10.30 cont.
- 11.00 Requirements for Milestone 1
- 11.30 M1 requirements: ATLAS, CMS etc.
- 14.00 RD45 status: progress on
- 14.30 Recommendations & milestones
- 17.00 Workshop Summary

Wednesday 16 July

CERN HEAVY ION COLLOQUIUM

at 14.30 hrs – Conference Room, bld. 40/S2-A01

Shadowing in pion intensity interferometry

by Tetsuo MATSUI

Strong pion source, such as a quark-gluon plasma droplet, temporarily formed in the course of ultrarelativistic heavy ion collision becomes also a strong pion absorber, and thus may cast its shadow on the path of an outgoing pion emitted from its surface. I will discuss how such effect may be seen in pion intensity interferometry.

Information <http://wwwinfo.cern.ch/a/alicedoc/www/chic/>
Organisers: Y. Foka and C. Lourenço

Thursday 17 July

CERN COLLOQUIUM

at 16.30 hrs – Auditorium*

Superfluidity in Helium 3

by R.C. RICHARDSON / Cornell University, USA
D.D. OSHEROFF / Stanford University, USA
D.M. LEE / Cornell University, USA
1996 Nobel Laureates

16.30–17.00 hrs

The Discovery of Superfluid ^3He

by Robert C. RICHARDSON

Superfluid ^3He was found through an accident. The transition was discovered in some pioneering cryogenic experiments and was originally mis-identified as the state of nuclear magnetic order in solid ^3He . Subsequent NMR experiments, including an early version of MRI, revealed that liquid ^3He undergoes a surprising pairing transition. The superfluid state is similar to superconducting state in metals but with an odd value of the pair angular momentum. The cryogenic techniques and early experiments will be described.

17.00–17.30 hrs

Superfluidity in ^3He : The Discovery Through the Eyes of a Graduate Student

by Doug D. OSHEROFF

The speaker will recount the activities during a seven month period in which, as a graduate student, he participated in

the discovery of three superfluid phases of liquid ${}^3\text{He}$. At the time, this discovery was the 'holy grail' of low temperature physics, yet, even after the final experiment, the three researchers were reluctant to identify these as BCS states, so unusual were the properties of the ordered states which they had observed.

17.30–18.00 hrs

Significance of Superfluid Helium 3 Research to Other Branches of Science

by David M. LEE

The superfluid phases of liquid helium 3 are important examples of non s-wave BCS pairing. The order parameters of these more complex pairing states possess internal degrees of freedom which lead to collective mode and soliton phenomena in addition to ordinary superfluid behavior. The relation of superfluid helium 3 to other systems in which non s-wave pairing plays a role will be discussed. Examples include high temperature superconductivity, heavy Fermion superconductivity and the interiors of neutron stars. The possible role of superfluid helium 3 as a model system for the early universe will be discussed briefly.

** Tea and coffee will be served at 16.00 hrs.*

Friday 18 July

COMPUTING COLLOQUIUM

at 14.00 hrs – Auditorium

Using the ACE Framework and Design Patterns to Develop Object-Oriented Communication Software

by Douglas C. SCHMIDT / Washington University

Developing extensible communication software that effectively utilizes concurrency on multi-processor platforms is hard. This talk explains how the ACE network programming toolkit can be used to simplify the development of concurrent and distributed object-oriented communication software. A novel aspect of ACE is its use of design patterns to integrate advanced OS mechanisms (such as multi-threading), flexible higher-level distributed object computing middleware (such as DCOM and CORBA), and efficient low-level network programming mechanisms (such as sockets).

This talk describes the software architecture and key components in ACE. In addition, it illustrates a number of strategic design patterns that are essential to develop complex communication software systems. Relevant technical papers are available as:

<http://www.cs.wustl.edu/~schmidt/TAPOS-95.ps.gz>

<http://www.cs.wustl.edu/~schmidt/COOTS-96.ps.gz>

<http://www.cs.wustl.edu/~schmidt/HPL.ps.gz>

Douglas C. Schmidt is a faculty member at Washington University. He has successfully applied patterns-based software techniques in large-scale projects involving telecommunications switch management, network management for mobile communications systems, and electronic medical imaging systems on high-speed ATM networks. Douglas C. Schmidt has published widely in IEEE, ACM, USENIX, and IFIP technical journals and conferences. He is the chief architect and implementor of the ACE network programming toolkit, which is a widely used C++ framework for developing object-oriented communication software.

POUR INFORMATION / FOR INFORMATION

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Wednesday 9 July

PARTICLE PHYSICS SEMINAR

at 17.00 hrs – Stückelberg Auditorium

The Little Bang: Recreating the Early Universe in high energy heavy-ion collisions

by Ulrich HEINZ / University of Regensburg

I will give a general overview of the physics in the various stages of a relativistic heavy ion collision and of our search for the Quark-Gluon Plasma. I then summarize our present experimental knowledge about thermalization and chemical equilibration in such collisions. I will close with a discussion of two-particle

Bose-Einstein correlations and a new estimate for the initial energy density reached in Pb+Pb collisions at the CERN SPS.

SUMMER STUDENT LECTURES

<u>DATE</u>	<u>TIME</u>	<u>LECTURER</u>	<u>TITLE</u>
<i>Wed. 9 July</i>	09.15	C. Llewellyn Smith	An Introduction to CERN and to Particle Physics (1/3)
	10.15	C. Llewellyn Smith	An Introduction to CERN and to Particle Physics (2/3)
	11.15	C. Llewellyn Smith	An Introduction to CERN and to Particle Physics (3/3)
<i>Thu. 10 July</i>	09.15	H.J. Hilke	Big Experiment (1/1)
	10.15	E. Lillestøl	Basic Concepts in Particle Physics(1/4)
	11.15	R. Kleiss	Fundamental Concepts of Particle Physics (1/6)
<i>Fri. 11 July</i>	09.15	H.J. Hilke	Particle Detectors (1/5)
	10.15	H.J. Hilke	Particle Detectors (2/5)
	11.15	R. Kleiss	Fundamental Concepts of Particle Physics (2/6)
Next week			
<i>Mon. 14 July</i>	09.15	E. Lillestøl	Basic Concepts in Particle Physics (2/4)*
	10.15	R. Kleiss	Fundamental Concepts of Particle Physics (3/6)
	11.15	—————	Discussion Session
<i>Tue. 15 July</i>	09.15	H.J. Hilke	Particle Detectors (3/5)
	10.15	E. Lillestøl	Basic Concepts in Particle Physics (3/4)*
	11.15	R. Kleiss	Fundamental Concepts of Particle Physics (4/6)
<i>Wed. 16 July</i>	09.15	H.J. Hilke	Particle Detectors (4/5)
	10.15	E. Lillestøl	Basic Concepts in Particle Physics (4/4)*
	11.15	R. Kleiss	Fundamental Concepts of Particle Physics (5/6)
<i>Thu. 17 July</i>	09.15	H.J. Hilke	Particle Detectors (5/5)
	10.15	M. Meddahi	Accelerators (1/7)
	11.15	R. Kleiss	Fundamental Concepts of Particle Physics (6/6)
<i>Fri. 18 July</i>	09.15	M. Peskin	(SM-BSM) "Helicity as a Skeleton Key to Particle Physics" (1/11)
	10.15	—————	Discussion Session
	11.15	—————	Discussion Session

* For non-physics students

These lectures are prepared for Summer Students but they are open to everyone at CERN. Many of these lectures treat topics at a general level, and are therefore a good opportunity to brush up on subjects outside the scope of your daily work.

All lectures are given in English and held in the Auditorium. The complete programme (Word file) is available on:
WWW: <http://www.cern.ch/CERN/Divisions/PE/HRS/Lectures>

Personnel Division