

SEMINARS

SEMINAIRES

Monday 17 June

AC SEMINAR

at 11.00 hrs – AT Auditorium
bldg 30, 7th floor

Helium cryogenics in kilowatt range for LEP200

by Dietrich GÜSEWELL / CERN-AT

The status of the cryogenics for the superconducting cavities of LEP is presented, requiring the production and distribution of about 60 kW cooling power at liquid helium temperature. This is nearly 10 times more than all the helium cooling power available now at CERN. The cooling system of the cavities has been finalized and all major orders are placed in industry. The talk will review the problems and benefits of kilowatt power helium cryogenics, show the work done already in industry and explain the problems of integrating four huge cryoplants into the LEP tunnel system with a machine running most part of the year.

Monday 17 June

PS/HI LECTURE SERIES

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

Plasma physics concepts : 2-fluid model and electrodynamics

by Heinrich HORA / CERN-PS

Monday 17 June

CENTER FOR QUANTUM PHILOSOPHY OF GENEVA (CQPG)

ON CONTROLLABLE AND UNCONTROLLABLE CAUSALITY

at 12.00 hrs – bldg 33, room 009 (Reception building)

Can Einstein's description of physical reality be considered complete?

by Antoine SUAREZ / CQPG

The talk is intended to continue the philosophical discussion raised by the John Bell Symposium at CERN 2-3.5.1991. Video sequences of a talk given by John Bell to the CQPG, 22.1.1990 will be shown.

The three following statements seem to be indisputable:

- a) *strict correlations demand to be explained by some kind of causal connection ('correlations cry out for explanation')*
- b) *the EPR correlations cannot be caused by the source (nature violates the Bell inequalities and, as expected, the predicted GHZ correlations)*
- c) *the correlated events in an EPR experiment cannot be considered as being the one the cause of the other (the*

negative result of the Michelson-Morley experiment excludes superluminal transmission between two spacetime regions).

From a), b) and c) together follows that the EPR correlations are the effect of an unobservable and uncontrollable cause. Therefore, we have to accept two kinds of causality: 'controllable' and 'uncontrollable' causality. Lorentz invariance is a characteristic of controllable causal connections. Is there in physics a limitation in principle on action (uncontrollability), analogous to the limitation in principle on knowledge (undecidability) resulting from Goedel's theorem in mathematics?

Monday 17 June

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Custom-designed model of the 17 keV neutrino

by Ernest MA / University of California, Riverside

A simple model is constructed which satisfies all the laboratory, astrophysical and cosmological constraints discussed recently by Caldwell and Langacker for the possible existence of a 17 keV neutrino. It is mainly ν_τ , with $\bar{\nu}_\mu$ as its pseudo-Dirac partner, whereas ν_e is mainly a light pseudo-Dirac neutrino with an inert partner. The decay lifetime of the 17 keV neutrino is estimated to be 10 s or longer.

Monday 17 June

PPE SEMINAR

at 16.30 hrs – Auditorium

Review of the latest results from the MACRO experiment

by Caterina BLOISE / Frascati National Labs

MACRO (Monopoles, Astrophysics, Cosmic Ray Observatory) is a large area experiment operating at the Gran Sasso Laboratory. Data taking began in March 1989 with an equipped area of about $800 \text{ m}^2/\text{sr}$ ($\sim 1/12$ of full MACRO acceptance). Until now we have collected $\sim 3 \times 10^6$ muons, and for slow monopoles ($1.6 \times 10^{-4} < \beta_M < 2.6 \times 10^{-3}$) the total exposure is $464000 \text{ m}^2 \cdot \text{sr} \cdot \text{day}$. The status of the experiment will be reviewed together with some preliminary results concerning :

- *slow monopole search*
- *detection of muons coming from neutrino interactions*
- *cosmic rays : flux measurement and study of the multi-muon events*
- *coincidences between MACRO and EAS-TOP, the extensive air shower array installed on top of the Gran Sasso.*

Tuesday 18 June

PRESENTATION

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

VMEbus solutions for industrial automation

by Norbert HAUSER / PEP Modular Computers GmbH

PEP will present a number of new and existing products, both hardware and software:

- *The 'Intelligent Universal Controller' (IUC) concept, based on the Motorola MC68302 processor, where single-height VMEbus modules, running OS-9, are connected by a multi-drop field-bus to similar, but stand-alone controllers.*
- *Software products:*
For OS-9 - ISaGRAF (PLC language), Windows, TCP/IP and RAMNET Real-time kernels and operating systems - VRTX Velocity, VxWorks and LynxOS.
- *The new VM40, MC68040-based, single-height VMEbus module.*

Organizer : Chris Parkman / CN

Tuesday 18 June

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

Charged particle pair production associated with a lepton pair in Z decays : indication of an excess in the tau channel

by Lorenzo FOA / University of Pisa

In a sample of 200,000 Z decays, events with two leptons and an additional pair of charged particles are studied. The 35 events found show a possible excess in the tau channel compared with the expectation from electroweak processes. The features of the events are consistent with radiation of virtual photons.

* Tea & coffee will be provided at 16.00 hrs.

Wednesday 19 June

PS SEMINAR

at 10.30 hrs – PS Auditorium
bldg 6/2-024

The ion physics programme at CERN : current issues

This seminar is part of the ongoing series of seminars dealing with the different aspects of the PS complex, as a supplier of all types of particles at CERN. The following speakers will elucidate the current and near future plans for the ion programme, performance and present operational issues.

- *Experiments with heavy ions : H. Gutbrod*
- *Aspects of the PS complex : runs 1990/1991 : C. Hill, P. Têtu, H. Schönauer, S. Hancock*
- *Lead Ion Accelerating Facility : H. Haseroth*

* Please note unusual time

Wednesday 19 June

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Can q-deformed groups be used as models of broken symmetries?

by G. DOMOKOS / CERN and Department of Physics, Johns Hopkins University

I describe an elementary method of constructing deformed groups. I also discuss the question whether deformed groups can play the role of internal symmetries in Nature.

Wednesday 19 June

COMPUTING SEMINAR

at 14.30 hrs* – CN Auditorium
bldg 31/3-005

High definition TeleVision

by Peter OGGEL / Joint Project (DEC)

High Definition TeleVision (HDTV) technology will have a significant impact not only on the TV industry but also several other markets; like on the future of computer architecture and the application of computers. This talk will give an insight on HDTV explaining the main differences from normal TV systems, the different technologies and the digital signal processing used in the European systems.

A video about HDTV will be shown during the presentation.

Organizer : N. Cremel / CN

* Please note unusual time.

Thursday 20 June

PRESENTATION

09.00 to 16.30 hrs – Council Chamber

The HOOD method and the IPSYS HOOD/C++ tool

HOOD : Hierarchical Object Oriented Design

by Tony ELLIOTT / IPSYS

Outline : HOOD method

– *IPSYS HOOD C++ toolset presentation*

– *IPSYS HOOD C++ toolset demo (large screen projection)*

– *Q/A session*

More detailed information will be available later. If you want to know more

about HOOD, log onto CERNVM and type 'FIND HOOD'.

Organizer : Paolo Palazzi / ECP/PT/7359/
Palazzi@VXCERN

Jeudi 20 juin*

PRESENTATION AUTOCAD

de 09.00 à 17.00 h – Amphithéâtre PS
bât. 6/2-024

matin : présentation technique

après-midi : démonstration et discussion ouverte
par J.-C. ZOLLIGER / Autodesk, Bâle, J. TAMMIK

/ Autodesk, Europe, J.-M. STREHL & G. KESSI /
Fides Informatique, Lausanne

Autodesk présente :

- Autocad 11 – nouveautés
- AME Advanced Modeling Extensions
- Autocad sous Window
- Autocad sous réseau

Renseignements : R.B. Flockart / 7562 ou D. Péron / 5163

* Prière de noter le jour et le lieu inhabituels

Thursday 20 June

PS/HI LECTURE SERIES

at 16.00 hrs – TCL Conf. Room
bldg 17/1-007

Plasma physics concepts : dielectric response and inhomogeneities

by Heinrich HORA / CERN-PS

Monday 24 June

PPE SEMINAR

at 16.30 hrs – Auditorium

A study of Bose-Einstein correlations with the ALEPH detector

by S. HAYWOOD / CERN-PPE

Bose-Einstein correlations between identical bosons reveal information on the nature of the source of these particles in high energy collisions. Using 80,000 hadronic decays of the Z in the ALEPH Detector, we have compared our observations with various models. In the rest-frame of pion pairs, we observe a source which is consistent with being spherical and of a radius of approximately 0.65 fm. However, we find that there are significant systematic uncertainties, and these will be discussed.

Tuesday 25 June

DETECTOR R & D COMMITTEE

Open session

at 09.00 hrs – Auditorium

1. *Introductory remarks.*
2. *Proposal P28: 'R & D for collider beauty physics at the LHC' (UCLA-CERN-Inst. of Nuclear Physics, Cracow-MPI Heidelberg-Lausanne-Massachusetts-Nevis Lab., Columbia-IHEP Serpukhov-Yale-Rudjer Boskovic Inst., Zagreb; DRDC 91-18/P28; P. Schlein).*
3. *RD-3 Status Report: 'Hadronic and electromagnetic liquid argon LHC prototype calorimeter with pointing geometry' (LAPP, Annecy-BNL-CERN-DPhPeCEN Saclay-Univ. and INFN Milano-LAL, Orsay-Manne Siegbahn Inst., Stockholm; DRDC 91-21/P5 Add. 1; D. Fournier).*

Closed session

Tuesday 25 June (following the Open session)

and Wednesday 26 June
starting at 09.00 hrs in the 6th floor Conference Room, Admin. Building.

Tuesday 25 June

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

The SLAC B-factory project

by Jonathan DORFAN / SLAC

Wednesday 26 June

PS SEMINAR

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

ECR ion plasma accelerator : the project status

by R. GELLER & K. GOLOVANIVSKY / Centre d'Etudes Nucléaires, Grenoble, France

Wednesday 26 June

PRESENTATION

at 14.00 hrs – CN Auditorium
bldg 31/3-005

Oracle toolkit – a new GUI standard

by Ash MUNSHI / Oracle Corporation, US,
Director of Application Builder Development

Mercredi 26 juin

PRESENTATION TECHNIQUE

à 14.00h – bât. 17/1-007

Data acquisition & DSP

par Chris TIEFENTHAER / TRW LSI Munich

Séminaire proposé par Stolz SA (CH), représentant TRW LSI Products Inc. (USA/D) :

Langue: français

Renseignements: M. Diraison / FI / 4585

Wednesday 26 June

CERN COMPUTING COLLOQUIUM

at 16.30 hrs – Auditorium

How to protect your freedom to write software

by Richard STALLMAN / MIT

Jeudi 27 juin

PRESENTATION TECHNIQUE

de 10.00 à 16.00 h – bât.73/2-027

Tektronix(USA/CH) présente ses nouveautés en oscilloscopes, analyseur de spectres et réflectomètre optique.

Langues: allemand, anglais, français.

Renseignements : M. Diraison / FI / 4585