

SEMINARS SEMINAIRES

Monday 12 November

EF SEMINAR

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

Quarkonia

by G. CONFORTO / CERN and
INFN Florence

The basic physics of systems consisting of a quark and its antiquark produced in e^+e^- collisions will be reviewed in terms accessible to the non-experts. The latest results on the zeta (8300) will be also presented.

Monday 12 November

PRESENTATION

at 14.00 hrs – DD Auditorium
(bldg. 31, 3rd fl.)

68000-based personal technical computers from Hewlett-Packard

by The HP200 Series European Support Team

The HP200 series technical workstations are based on the 68000 processor and can be used with the BASIC system, UCSD-PASCAL or UNIX. All models feature built-in HP-IB, detachable keyboards and monochrome graphics whilst the top of the range is also available with colour graphics and bit-mapped displays. A variety of standard interfaces, memory cards and a DMA controller can be added in any mix in the expansion slots available on each model. The HP200 UCSD-PASCAL offers an effective menu-driven program development environment with a full screen editor, a 68000 assembler, extremely fast and efficient PASCAL AND FORTRAN 77 compilers and various other utilities. Many software application packages for CAD, accounting, data base management, etc. are also available. About 65,000 HP200 systems have already been sold worldwide and CERN presently uses about 20 such systems in various applications. The DD-OC group is using one for software development around the PILS interactive language and will demonstrate an HP200 system running PILS and CERN standard CAMAC and FASTBUS libraries.

Monday 12 November

EP SEMINAR

at 17.00 hrs – Auditorium

QCD effects and non-perturbative effects in deep inelastic neutrino and antineutrino charged current interactions

by Teresa BOLOGNESE / DPHPE, Saclay

Recent results from the CERN WA25 Antineutrino Deuterium Experiment are presented. The deuterium target allows determination of the quark and anti-quark structure functions of the proton and neutron separately. Their Q^2 evolution is interpreted in terms of QCD.

Transverse momentum balance of produced hadrons allows separation of the effects of primordial quark transverse momentum in the nucleon and those of soft gluon emission. A three-jet structure, observed for events with $W^2 > 50 \text{ GeV}^2$ and with a high transverse momentum track may be interpreted in terms of hard gluon bremsstrahlung.

Tuesday 13 November

PROTON SYNCHROTRON AND SYNCHRO-CYCLOTRON COMMITTEE

Open session

at 09.00 hrs – Council Chamber
(continuing at 14.00 hrs)

1. Information from the Chairman.
2. Status report on expt. IS80 (Study of nuclear moments and mean square charge radii by collinear fast-beam laser spectroscopy; Göteborg-Mainz-ISOLDE collaboration; PSCC/84-47/M203; R. Neugart).
3. Proposal : Larmor precession measurement of the nuclear g-factor of radium isotopes in fast beams (Lyon-Mainz-Orsay-ISOLDE Collaboration; PSCC/84-48/P76; 84-49/S76; J.L. Vialle).
4. Proposal : Laser spectroscopy at $Z=50$ (Mainz-ISOLDE collaboration; PSCC/84-50/P77; 84-51/S77; G. Huber).
5. Proposal : Multipion detection in collinear laser spectroscopy of ISOLDE beams (Troitzk-Mainz-ISOLDE collaboration; PSCC/84-37/I68; 84-52/P78; 84-53/S78; E.W. Otten).
6. Proposal : Nuclear orientation of radon isotopes (Princeton-Kingston-Göteborg-ISOLDE collaboration; PSCC/84-54/P79; 84-55/S79; F. Calaprice).
7. Addendum to proposal P64 : Measurements of the ratio between the double- and single-ionization cross sections of helium by antiproton impact (Aarhus-CERN-Stockholm; PSCC/84-46/P64 Add. 2; E. Uggerhøj).
8. Status reports on LEAR experiments :
PS 173 : Measurement of antiproton-proton cross-sections at low antiproton momenta (Heidelberg MPI-Heidelberg Univ.; T. Walcher).
PS 174 : Precision survey of X-rays from antiproton-proton(antiproton-deuteron) atoms (Amsterdam NIKHEF-Birmingham-RAL-Williamsburg; J.D. Davies).
PS 179 : Study of the interaction of low-energy antiprotons with nuclei using a streamer chamber (Dubna J.I.N.R.-Frascati-Padova-Pavia-Torino; G. Piragino).
9. Reports from PS and SC Co-ordinators.

Closed session

at 16.00 hrs – 6th floor Conference Room
(continuing at 09.00 hrs on Wednesday 14 November).

Tuesday 13 November

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

What can we learn from the EMC effect ?

by C.H. LLEWELLYN SMITH / Oxford University

For $x \geq 0.3$, quark distributions are controlled by distances of 1 fm. or less and the EMC effect may be attributed to nucleons 'swelling' in the nucleus. The form of the effect may cast light on whether or not nucleons move relativistically in the nucleon. At small x , where distances of many fermis are involved, the effect can be attributed to pion correlations long predicted by nuclear physicists.

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

Wednesday 14 November

THEORETICAL SEMINAR

at 14.00 hrs – TH Conf. Room

Galaxy formation and decaying neutrinos

by G. GELMINI / CERN

Unstable neutrinos could be relevant in galaxy formation only if the dominant decay mode is non-conventional. The only suitable mode proposed so far consists in the decay of a heavy neutrino into a lighter one and a Nambu-Goldstone boson (associated with the spontaneous violation of Lepton number). The general features of galaxy formation, as triggered by massive neutrinos decaying through this mode, are presented.

Mercredi 14 novembre

REUNION OUVERTE DU LEP

à 14.30 h – Auditorium du LEP
(dernier étage du bât. 30)

1. *Annonces et réponses aux questions.*
2. **Le système de séparation des faisceaux dans le LEP**
par K.H. KISSLER

Dans le LEP les faisceaux e^+ et e^- doivent être séparés à l'injection et pendant l'accumulation et l'accélération afin d'obtenir la luminosité maximum à l'énergie nominale. Cette séparation se fera à l'aide d'un système de déflecteurs électrostatiques. Les considérations principales qui ont déterminé la conception des déflecteurs et de leurs circuits haute tension seront discutées et les solutions retenues seront décrites.

Wednesday 14 November

DD SEMINAR

at 16.00 hrs – DD Auditorium
(bldg. 31, 3rd fl.)

Internetworking at University College London

by Stephen KILLE, University College London

The department of Computer Science at University College London (UCL) has been involved with networking over a number of years. UCL is connected to

several Wide Area Networks, including PSS (the public Packet Switched Service provided by British TELECOM), JANET (the UK Joint Academic Network) and the DARPA Internet (which includes the ARPANET). This talk will describe the flexible interconnection architecture developed at UCL to allow interworking between these networks. This architecture is based on the use of local networks (currently Cambridge Rings) in conjunction with network front-ends. The advantages of this architecture will be illustrated in the context of the complex mail relaying services provided by UCL.

Thursday 15 November

TIS SEMINAR

at 14.00 hrs – LEP Auditorium
(bldg. 30, 7th fl.)

FLUKA82 hadron cascade package

by P. AARNIO, Mrs. IONESCU-FARCA,
G. STEVENSON

Monday 19 November

EF SEMINAR

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

Report on the IEEE 1984 Nuclear Science Symposium

by F. BOURGEOIS / CERN

This seminar will summarize the symposium with emphasis on front end electronics and FASTBUS related papers.

Monday 19 November

EP SEMINAR

at 17.00 hrs – Auditorium

Large transverse momentum direct photon and neutral pion production in collisions of negative and positive pions and protons on protons at the SPS at 300 GeV/c

by W. HECK / University of Freiburg

With the results of the 1983 data taking period of the NA 24 experiment it is possible to compare the production of high transverse momentum neutral pions from protons with charged pions and protons as projectiles. For transverse momenta up to 5 GeV/c the neutral pion production rate is the same for incident negative and positive pions, whereas the ratio of cross-sections for positive pions on protons to protons on protons rises with transverse momentum. High transverse momentum photons could be well distinguished from neutral pions. It was found that the photon/neutral pion ratio increases with transverse momentum for all three projectiles. The relative contribution of the dominant production mechanisms for high transverse momentum photons is not the same for incoming negative and positive pions. In spite of this no striking difference between negative pion/proton and positive pion/proton collisions has been observed. Differences in the charged particle correlation between neutral pion and photon production were found.

Tuesday 20 November

CERN COLLOQUIUM

at 16.30 hrs – Auditorium

The JET Project : results and problems of first year of operation

by H.O. WÜSTER / Director, JET Joint Undertaking

Thursday 22 November

PRESENTATION

at 10.00 hrs – DD Amphitheatre
(bldg. 31, 3rd fl.)

GIGADISC, The Optical Digital Data Disc of Alcatel-Thomson

by Jean LEDIEU / Product Planning Manager, Alcatel-Thomson

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12, 13, 14 and 15 November

11.00 hrs to 12.00 hrs – Auditorium

Critical phenomena

by E. BREZIN / CEN, Saclay

Lectures 1 to 4

19 and 20 November

11.00 hrs to 12.00 hrs – Auditorium

A new branch of research : astronomy of the most energetic gamma rays

by G. COCCONI / CERN

The discovery, last year, of the first point-source of γ -rays with energy up to 10^{16} eV, generating in the atmosphere Extensive Air Showers (EAS) reaching sea-level, has started a novel kind of Astronomy. The lectures will deal with the properties of the sources, the characteristics of the 'EAS telescopes', and with the conjectures about how neutron stars in binary systems could become such efficient accelerators.

21, 22 et 23 novembre

de 11.00 h à 12.00 h – bât. 593, salle n°11

Mécanique des roches et stabilité des cavités souterraines (in French)

par G. LOMBARDI / Conseil des Ecoles polytechniques fédérales

1. – *Introduction par H. LAPORTE / CERN*

– *Stabilité des grandes cavités souterraines.*

2. – *Problèmes particuliers de mécanique des roches.*

3. – *Procédés 'physiques' utilisés dans les travaux souterrains et techniques de diagnostic.*

Les exposés évoqueront notamment les problèmes posés par les ouvrages souterrains construits ou en cours de construction au CERN (SPS, Projet proton-antiproton, LEP, etc.).

12 to 14 December

INFORMATICS TUTORIAL 1984-3

ANNOUNCEMENT

9 to 12 hrs and 14 to 17 hrs

C for programmers

by Dietrich WIEGANDT / CERN, Data Handling division

Presentation

Until a few years ago, the programming language C was known to a limited group of people – the UNIX wizards – because UNIX is written in C. Now that UNIX has become so popular, especially in the microcomputer world, C suddenly got much more attention as a general purpose programming language. C compilers and the associated runtime libraries are available for a wide spectrum of machines, ranging from microprocessors to IBM and CDC mainframes.

This tutorial attempts to present the language systematically, yet informally. Participants are expected to have some experience in high level language programming.

Topics

1. *Basic elements of the language.*

2. *Structured data types, pointers and functions.*

3. *The C programming environment.*

Course profile

Lectures will be given in the morning sessions, and the afternoons will be devoted to hands-on experience using terminals connected to the PRIAM UNIX Vax. A basic working knowledge of UNIX and of one of its editors is recommended.

Material

Participants will receive a copy of 'A book on C' by A. Kelley and I. Pohl, copy of the transparencies used for the lectures, and material for the exercises.

Registration

The attendance will be limited to 32. For more information and to register, contact Mrs. Monique Antal, DD Division, phone 2396.