

SEMINARS SEMINAIRES

14-15 February

ISOLDE EXPERIMENTS COMMITTEE

Please note that the ISC Meeting scheduled for 14-15 February has been cancelled.

The next meeting will take place on 16-17 May.

Monday 14 February

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Renormalization group in different fields of physics – Part II

by D.V. SHIRKOV / JINR, Dubna

Monday 14 February

PPE SEMINAR

at 16.30 hrs – Auditorium

One prong τ decays into kaons

by Luca PASSALACQUA / Ecole Polytechnique (ALEPH collaboration)

The experimental knowledge of the τ lepton decays into kaons is still rather poor. Using a sample of nearly 75000 τ decays collected in 1991 and 1992 by the ALEPH detector, a detailed investigation of the one-prong strange sector is presented. Branching ratios of known decay modes have been measured with a precision matching the world average. In addition several new modes have been detected and their branching ratios measured for the first time. The analysis makes use of the ALEPH TPC dE/dx π -K separation and of a complementary K^0 tagging.

Tuesday 15 February

AC SEMINAR

10.30-12.00 hrs – AT Auditorium

bldg 30, 7th floor

Software engineering at the European Space Agency (ESA)

by Carlo MAZZA / Head of ESA Computer and Network Operations Dept., ESOC, Darmstadt

- Background for establishment of ESA SW Standards
- Decision steps
- Characteristics of the Standards
- Characteristics of ESA Software
- ESA Software Policy
- Contractual Policy
- Future activities on standardisation
- Re-use of software

It will be followed by a round table discussion at 14.30 hrs in building 112, room R-022. The discussion will be limited to 20 participants. Those who like to take part in the discussion are kindly requested to enrol with Mrs. E. Delucinge (tel. 4323, E-mail: delucinge@CERNVM.CERN.CH).

Information: A. Daneels / 2581 /

ATCASE@CERNVM.CERN.CH

Wednesday 16 February

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

Dimensional reduction of high-temperature QCD

by Thomas REISZ / CERN

Renormalizable four-dimensional field theories reduce at high temperature to effective fields models in one less dimension. The way in which this reduction is realized is reviewed. The effective three-dimensional model both for gauge theories and QCD has been used for a quantitative determination of screening masses of the quark-gluon plasma. The effective theory exhibits a complicated phase structure. The physical states obtained by the reduction process from four-dimensional SU(2) Yang-Mills theory are shown to belong to the confined phase.

Wednesday 16 February

CERN COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium

bldg 31/3-005

Towards industrial solutions for control systems in experiments

by W. VON RUDEN / CERN-ECP

Slow Control Systems for experiments have up to now been developed in-house, using from industry at most building blocks for the hardware (G64, VME) and operating systems (Flex, OS-9, VMS, MAC). All application software was written by the users. Industrial solutions had the reputation to be either inadequate or too expensive. There are examples proving the contrary:

- teams in the AT division have used industrial solutions successfully for several years.
- the Control System of the upgraded neutrino beamline uses an industrial solution at the supervisory level combined with distributed object-oriented hardware access.

The presentation will briefly introduce the problem, present the solution adopted for the neutrino beamline, and introduce the strategy of the newly created Control Systems Group (ECP-CO) to migrate towards industrial solutions for experiments.

Wolfgang von Ruden is a staff member in ECP division. At CERN since 1975, he has been working mostly on data acquisition systems. After participating in the g-2 and CDHS collaborations, he led the Aleph on-line team from 1982 till the begin of 1990. While on leave of absence in 1991-92, he was a co-founder and president of IBEX Computing, a software company in France. In June 1992, he took responsibility for the control system of the neutrino beamline. In January 1994 he has been appointed group leader of the Control Systems Group in ECP.

Organizer: J.-P. Porte / ECP

Jeudi 17 février

SEMINAIRE DE BASE MT

à 09.00 h – bât. 112/R-018

Composants et fonctions principales des accélérateurs

Extraction / dumps

par G. SCHRÖDER / CERN-SL

Friday 18 February

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

Spin polarization in antiproton-proton annihilations at rest
by Ugo GASTALDI / INFN-LNL Legnaro

The initial states of $p\bar{p}$ annihilations at rest are six different types of levels of the $p\bar{p}$ atom: S-wave $J^{PC} 0^{++}$ spin singlet and 1^{--} triplet, P-wave 1^{+-} singlet and $0^{++}, 1^{++}, 2^{++}$ triplets. The knowledge of the distribution of initial states of annihilation is necessary for a precise determination of the value of the proton e.m.f.f at the threshold of the timelike region, for quantitative studies of $p\bar{p}$ annihilation dynamics, and for the spectroscopy of light mesons and exotics. The ensemble of LEAR data presently available permits us to demonstrate that each of the six fractions $F_{J^{PC}}$ of the six J^{PC} sources of $p\bar{p}$ annihilations at rest vary with the density of the H_2 target where anti-protons are brought to rest, and that the ratios between annihilations from spin singlet and triplet states are not statistical separately in S- and P-waves. $p\bar{p}$ annihilations at rest provide spontaneously spin polarization because, by varying the H_2 target density, it is possible to change the ratio between annihilation fractions, e.g., between S-wave singlet and triplet annihilations. The hypothesis of statistical spin distribution separately in S- and P-waves has been used so far to derive (density-independent) branching ratios BR of annihilations from well-defined J^{PC} initial states and S- and P-wave fractions of annihilations. Since this hypothesis is wrong, the values derived so far have to be corrected. In order to exploit spin polarization, it is necessary to determine the intensities of the six J^{PC} annihilation sources at the densities of the targets used for the experiments. Available data are not sufficient for this purpose. Annihilation frequencies of exclusive channels need to be measured at four target densities to perform this task.

Monday 21 February

TECHNICAL PRESENTATION

10.00-17.00 hrs – Demo Bus, car park, bldg 867, Prévessin site

14.00-16.00 hrs – Lecture, auditorium, bldg 864, 1st floor

Industrial Control Systems and Engineering Practices
for users of the control systems, maintenance people and people responsible of new projects and upgrades
by Valmet Automation Inc. & IVO International Ltd (SF)

Valmet Automation Inc. is an automation systems manufacturer. Products cover a complete range of industrial hardware and software from low-level controls and logic functions to high-level process optimization and management functions.

IVO International Ltd. has been designing and installing automation systems at its own power plants over 60 years and, for 20 years, supplying systems to power and energy industry clients worldwide. With 1300 engineers IVO International is today the leading engineering office in the energy sector in Finland.

Welcome to see and hear the presentations about industrial solutions (over 1000 processes automated worldwide):

- industrial automation engineering practices
- easy to learn and use human interface, special features: user assistance tools for disturbance handling
- reduced maintenance costs through guaranteed up-time and powerful diagnostics features
- efficient development new applications using automated tools to generate code from Autocad-drawings to the VME-boards (both user interface and controls)

Full equipped bus with full-scale systems available gives the possibility to hands-on presentations.

Language : English

Information : M. Diraison / FI-A / 4585

Tuesday 22 February

TECHNICAL PRESENTATION

10.00-17.00 hrs – Demo Bus, car park, bldg 63, Meyrin site

14.00-16.00 hrs – Lecture, Auditorium, bldg 500, 1st floor

Industrial Control Systems and Engineering Practices
for users of the control systems, maintenance people and people responsible of new projects and upgrades
by Valmet Automation Inc. & IVO International Ltd (SF)

See details under Monday 21 February

Language : English

Information : M. Diraison / FI-A / 4585

Tuesday 22 February

CERN COLLOQUIUM

at 16.30 hrs – Auditorium

Time travel ?

by R. JACKIW / MIT

Wednesday 23 February

CERN COMPUTING COLLOQUIUM

at 09.30 hrs – Auditorium

The QCD Teraflops Project

by Claudio REBBI / Boston University

Jeudi 24 février

SEMINAIRE MT

à 09.00 h – Amphithéâtre AT

bât. 30, 7^e étage

Composants et fonctions principales des accélérateurs

Septum magnets

par R. KEIZER

Thursday 24 February

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

Precision electroweak physics at the SLD/SLC with a polarized e^- beam : measurement of A_{LR}

by P.C. ROWSON / Columbia University, New York

Friday 25 February

TECHNICAL PRESENTATION

09.00-12.00 hrs in English

14.00-16.30 h en français

bldg 73/2-027

Talk about the 3rd International Symposium on Fluid Sealing

Exposé au sujet du 3e Colloque International sur l'Étanchéité

by W. L. Gore & Associates GmbH (D)

Language : English in the morning, français l'après-midi

Information : M. Diraison / FI-A / 4585

Tuesday 15 March

WORKSHOP ON VMEBUS EXTENSIONS FOR PHYSICS

09.00-17.15 hrs – AT Auditorium
bldg 30, 7th floor

Purpose : Since its inception in 1981, VMEbus has found widespread use as a modular computer system in data acquisition and control applications in all branches of research. In recent years there has been an increasing tendency to extend its use into the "front-end" where the practical requirements on the standard tend to be different. Several implementations, large and small, have been made or are planned using in-house extensions to VMEbus to cover these requirements.

The need to extend the standard has been felt in other areas of application as well. Consequently, the ANSI Open Technology Standards Group, the "guardian" of the standard, has established the "VME64 Extensions Committee". This committee is examining the requirements and available options for extra power supplies, larger board formats, supplementary connectors, new protocols, additional serial buses and so on.

The sponsors of this workshop (ESONE - European Studies on Norms for Electronics, UGMS - the CERN User Group on Microprocessor Support, and VSC - the CERN VMEbus Steering Committee) therefore invite associated research institutes and companies to take part in a one-day event to be held at CERN (Geneva, Switzerland) on the future of VMEbus in physics applications. The aim of this workshop is to formulate the requirements of VMEbus users in the physics community in order to provide input to the standards bodies and to decide whether a further course of action towards the

definition of specific "profiles" for VMEbus in this domain would be appropriate.

For program and registration information: C. Pailley/ECP (2656, claudette.pailley@cern.ch) For all other questions: C. Parkman/ECP (3963, pmn@cernvm) or L. Pregernig/CN (2666, lfp@cernvm)

POUR / FOR INFORMATION

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Mercredi 16 février

SEMINAIRE DE PHYSIQUE CORPUSCULAIRE

à 17.00 h – Auditoire Stückelberg

Physique au LEP avec des faisceaux polarisés

par Alain BLONDEL/Ecole polytechnique de Palaiseau

La polarisation des faisceaux est un outil de physique précieux au LEP car elle permet d'améliorer la précision des mesures qui testent le Modèle Standard. La détermination de l'énergie des faisceaux par dépolarisation résonante est essentielle pour la mesure de la masse et la largeur du Z et dans le futur, de la masse du W. La polarisation longitudinale permettrait de mesurer les effets de violation de parité dans les couplages du Z, avec une méthodologie très sûre.

EDUCATION SERVICES EDUCATIFS

ENSEIGNEMENT GÉNÉRAL

Tél. 5811

Jeudi 17 février

à 13.00 h – Amphithéâtre
Science pour tous
par Rafel CARRERAS

ACADEMIC TRAINING

Tel. 3127

LECTURE SERIES

14, 15, 16, 17 & 18 February

11.00 to 12.00 hrs – Auditorium

Particle Astrophysics

by M. SPIRO / CERN-PPE

These lectures will present subjects which are at the interface between particle physics, astrophysics and cosmology. Topics to be discussed include high energy cosmic rays, neutrino astrophysics and dark matter.

21, 22, 23, 24 & 25 February

11.00 to 12.00 hrs – Auditorium

The next generation of linear colliders

by R.B. PALMER / SLAC, USA

The lectures will give a general introduction to the physics and technologies of linear e^+e^- colliders. An attempt will be made to compare the merits of the different technologies of currently proposed Colliders with centre of mass energies in the 0.5-1.0 TeV range. Problems and technologies for multi TeV Colliders will be discussed and the relative advantages of proton-proton, $\gamma\gamma$ and $\mu^+\mu^-$ colliders will be compared.

1. Focus, disruption and beamstrahlung
2. Production and damping
3. Acceleration
4. RF power production
5. Emittance preservation
6. Costs, comparisons and conclusions