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VEHICULES CERN

Une révision du 'Règlement relatif aux conditions d'utilisation des véhicules appartenant au CERN ou loués par lui' (Réf. AG-OF/RH/3500, juillet 1991) vient d'être mis en vigueur.

Tout utilisateur de ces véhicules peut en obtenir un exemplaire auprès du Secrétariat de sa Division.

Le Directeur d'Appui technique

OFFICIAL NEWS

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

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CERN VEHICLES

A revised version of the 'Rules governing the use of vehicles belonging to or hired by CERN' (Ref. AG-OF/RH/3500, July 1991) has just come into force.

Users of such vehicles may obtain a copy from the secretariats of their Divisions.

Director for Technical Support

SEMINARS SEMINAIRES

Monday 30 March*

COMPUTING SEMINAR

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

Recent Advances in Signal Processing Algorithms and Hardware

by Prof. Yrjö NEUVO / Signal Processing
Laboratory, Tampere University of Technology,
Finland

The emphasis of this talk is on the use of nonlinear, median related operations in signal and image processing. It is shown that these operations have quite attractive properties for many applications and satisfy optimality criteria in a very similar manner as linear filters do. Several extensions of the median concept are introduced like vector median for multivariable data (color images and image sequences) and matched median for signal detection. The other part of the talk describes certain low level image processing architectures based on reconfigurable cellular arrays and statistic dataflow graphs.

Several operations of such a graph can be mapped over a reconfigurable array, together with the interconnections, as if it were an ASIC gate array. Almost gate level optimization and minimum communication distances between the nodes of the graph ensure fast processing.

Information : Nikolay Tchamov / ECP
(tchamovn@slcjp01.cern.ch)

* Please note unusual day & time

Monday 30 March

SEMINAR

Organized by the Center of Quantum Philosophy of
Geneva (CQPG)*

at 12.00 hrs – TH Conference Room**

Stochastic Schrodinger Equations and Quantum non Locality

by Nicolas GISIN / University of Geneva

Quantum mechanics is just enough non-local to violate the Bell inequalities, but just not enough non-local to be compatible with relativity. Quantum non-locality may thus be considered as a malignant tumor not yet fully active. If one aims at curing quantum mechanics from its dualism (dividing the world into macro-micro, or classical-quantum, or apparatus-object), one has to be careful not to awake the tumor. We shall present this dilemma and show that stochastic modifications of the Schrodinger equation have promising features.

* **Center of Quantum Philosophy of Geneva (CQPG)** aims to promote the discussion on the philosophical and scientific challenges raised by the interpretation of the quantum theory and of the information theory, and particularly by the principles of **nonlocality, indeterminism and undecidability**. The CQPG addresses itself to people who think that quantum theory is not only a practical summary of mathematical recipes, but that it is now an integral part of knowledge and culture.

** Please note change of place

Monday 30 March

AC SEMINAR

at 16.00 hrs* – AT Auditorium
bldg 30 / 7th fl.

Status of the RHIC Project

by Satoshi OZAKI / RHIC Project Head, BNL,
Brookhaven

RHIC, the Relativistic Heavy Ion Collider at the Brookhaven National Laboratory, will store and collide heavy ions of various species up to gold at the top energy of 100 GeV/u. The present status of the collider construction and detector planning will be presented.

* Please, note change of time

Monday 30 March*

COMPUTER FORUM

at 16.00 hrs – CN Auditorium
bldg 31 / 3-005

Patchy 92

by Julius ZOLL / CERN-ECP

The plans and status of the re-write of Patchy will be briefly presented. A number of options are open and need to be discussed before final decisions are taken. It is hoped that an audience representative of the user community will attend, enabling clear conclusions to be reached.

* Please note unusual day

Monday 30 March

PPE SEMINAR

at 16.30 hrs – Auditorium

A simple powerful description of meson and baryon flavour formation in e^+e^- annihilations

by S.-B. CHUN / University of California, Los Angeles

Using the relativistic string model for hadronization, we find that the two simple principles of hadronic phase space and the 'Wilson Area Law' (a combination of principles from which the Lund Symmetric Fragmentation Function can be derived) describe a broad range of e^+e^- annihilation data without the need for the many quark-level parameters such as s/u , vector/All, qq/q , $(su/ud)/(s/u)$, $1/3(qq)_1/(qq)_0$, etc. that are commonly used. This phase space approach inherently provides a 'semi-absolute' baryon-to-meson normalization structure. The model emphasizes intermediate meson ('popcorn') production between baryon and antibaryon, which closely resembles deep inelastic scattering by crossing symmetry. Approximate 'most local' transverse momentum compensation on the hadron level is introduced. With only ~ 4 significant parameters and ~ 2 significant 'choices', we find quite good agreement with a wide range of data at 10 GeV, 29 GeV and 91 GeV for meson and baryon multiplicities, longitudinal and transverse distributions including the B meson spectrum, event 'topological' distributions, and baryon-(anti)baryon correlations.

Tuesday 31 March

SPS AND LEAR EXPERIMENTS COMMITTEE

Open session

at 09.00 hrs, to be continued at 14.00 hrs – Auditorium

1. *CP violation in hyperon decays: The case $\bar{p}p \rightarrow \bar{\Lambda}\Lambda \rightarrow \bar{p}\pi^+p\pi^-$ (CP-Hyperon Study Group: CERN – Freiburg Univ. – IMEP Österreichische Akademie der Wissenschaften, Vienna – Univ. of Illinois, Urbana-Champaign – Boston Univ. – IKP Forschungszentrum Jülich; SPSLC 92-19 / M 491): N. Hamann.*
2. *Measurement of the $\bar{p}p \rightarrow \bar{n}n$ charge-exchange differential cross-section (INFN and Univ., Cagliari – DPNC, Univ. Geneva – DAPNIA and LNS, CEN Saclay – INFN and Univ., Trieste – INFN and Univ., Turin; SPSLC 92-17 / P 269): F. Bradamante.*
3. *Study of the isospin breaking in the light quark sea from Drell-Yan process (LPC, Univ. Clermont-Ferrand and CNRS-IN2P3 – CERN – LIP, Lisbon – IPN, Univ. Paris-Sud and CNRS-IN2P3, Orsay – LPNHE, Ecole Polytechnique and CNRS-IN2P3, Palaiseau – CRN, CNRS-IN2P3 and Univ. Louis Pasteur, Strasbourg – INFN and Univ., Turin – IPN, Univ. Lyon and CNRS-IN2P3, Villeurbanne; SPSLC 92-15 / P 267): L. Kluberg.*
4. *Proposal for a strangelet and particle search in PB-PB collisions (NEWMASS collaboration: Bern Univ. – CERN – LAPP, CNRS-IN2P3, Annecy-le-Vieux – Helsinki Univ. – Stockholm Univ.; SPSLC 92-16 / P 268): K. Pretzl.*
5. *Status report from WA93: H.H. Gutbrod.*

Closed session

on Tuesday 31 March at 15.00 hrs to be continued on Wednesday 1 April at 09.00 hrs – 6th floor Conference Room

Mercredi 1 avril

FORUM CATIA ENGINEERING

de 09.00 à 12.00 h – Amphithéâtre CN
bât. 31 / 3-005

IBM Suisse, la SCIB, Société de Conception et fabrication assistées par ordinateurs pour l'Industrie et le Bâtiment, et Dassault Systèmes ont le plaisir de vous inviter à un Forum CATIA destiné aux utilisateurs CAO/IAO dans le domaine de l'Ingénierie et de la Gestion des Bâtiments. A cette occasion, la SCIB vous fera une démonstration des principales fonctionnalités de la plate-forme CATIA dans le domaine de l'Ingénierie (pipage, structures, schématique 2D, 3D, etc.) ainsi qu'un progiciel développé pour la Gestion des Bâtiments. Puis, Dassault Systèmes vous présentera les tendances et perspectives de la plate-forme CATIA Engineering.

Ce Forum aura lieu suivant l'agenda suivant :

09.00–09.05	Introduction par M. Boeche / IBM
09.05–09.30	Fonctionnalités CATIA par M. Etienne / SCIB
09.30–10.30	Demos CATIA : Ingénierie par M. Etienne / SCIB & Gestion des Bâtiments
10.30–10.45	Pause
10.45–11.45	CATIA Engineering par M. Japy / Dassault Systèmes Tendances et Perspectives
11.45–12.00	Conclusions par M. Boeche / IBM

Renseignements : Guy Anastaze / IBM Suisse /
791'55'04/52'65 / GAN@CHVM1.VNET.IBM.COM

Wednesday 1 April

SL SEMINAR

at 11.00 hrs – SL Auditorium, Prévessin
bldg. 864, 1st floor

Polarization studies at TRISTAN

by K. Nakajima / KEK, Ibaraki-Ken, Japan

The main goal of the polarization study at TRISTAN is to reveal the radiative polarization and to find methods to raise the polarization close to the ideal level. In addition to the existing single photon Compton polarimeter, a new polarimeter is developed as a multi photon system with the capability for a very fast high precision measurement. The status and plans of the study on electron beam polarization are described.

Wednesday 1 April

THEORETICAL SEMINAR

at 14.00 hrs – TH Conference Room

The hadron to quark-gluon transition : dynamical confinement above T_c

by Gerry BROWN / Stony Brook

Schematic models predict a phase transition from the hot hadron gas to quark/gluon plasma at a temperature of ~ 150 MeV. However, if masses decrease sufficiently rapidly with increasing temperature, the hadron pressure is always greater

than that of the quark/gluon plasma. This precludes the phase transition. Lattice gauge results are consistent with this. Since gluons are not decondensed, quarks and antiquarks are still bound together by 'strings' above $T_c = T_{\chi SR}$, the chiral restoration temperature, and form quarkonia. Lattice gauge calculations bear this out.

Wednesday 1 April

COMPUTING SEMINAR

at 16.00 hrs – CN Auditorium
bldg. 31 / 3-005

Experience with Motif and Graphical User Interface Builders in the RD13 Data Acquisition project

by Bob JONES / CERN-ECP/DS

As part of the RD13 project, we have evaluated several graphical user interface toolkits and have adopted Motif. The talk presents the issues involved and our findings when choosing a graphical user interface toolkit and graphical user interface builder tools. Some of the problem areas for Motif and the limitations of the current interface builders are revealed.

Thursday 2 April

DETECTOR R&D COMMITTEE

at 09.00 hrs – Auditorium

Open session

1. RD-8 Status Report: 'Development of GaAs detectors for physics at the LHC' (Bologna Univ./INFN-CERN-Florence Univ./INFN-Glasgow-Lancaster-RAL-Sheffield-Modina; DRDC 92-12; K.M. Smith).
2. RD-9 Status Report: 'A demonstrator analog signal processing circuit in a radiation hard SOI-CMOS technology' (CERN; DRDC 92-15; E.H.M. Heijne).
3. RD-11 Status Report: 'Embedded architectures for second-level triggering (EAST)' (Amsterdam NIKHEF H-Bucharest Atomic Phys. & Polytech. Int.-Budapest Res. Inst.-CERN-Cracow Inst. of Nucl. Phys.-Dubna LHSE, JINR-Royal Holloway & Bedford N.C. London-Inst. of Computer Science V, Mannheim and Interdisciplinary Center for Scientific Computing, Heidelberg-Ecole Polytechnique, Palaiseau-Inst. of Computer and Information Science and Inst. of Physics, Prague-Weizmann Inst. of Science, Rehovot-Utrecht-Zeuthen IHEP; DRDC 92-11; R.K. Bock).
4. RD-12 Status Report: 'Readout system test benches' (CERN-Res. Inst. for HEP, SEFT Helsinki-Tampere Univ. of Technology-LAPP Annecy-Padova Univ./INFN-Pavia Univ./INFN; DRDC 92-10; S. Cittolin).
5. RD-13 Status Report: 'A scalable data taking system at a test beam for LHC' (CERN-CEA Saclay-Frascati Nat. Lab. INFN-Marseille IN2P3-Pavia Univ./INFN-Rome Univ./INFN; DRDC 92-13; L. Mapelli).

6. *Proposal: Development of a large area advanced fast rich detector for particle identification at the large hadron collider operated with heavy ions (Bari Univ./INFN-CERN-L.I.P. Coimbra-Giessen-Technical Univ. Munich-Padova-Weizmann Inst. Rehovot-R. Boskovic Inst. Zagreb; DRDC 92-3/P35; 92-16/P35 Add. 1; F. Piuz)*
7. *Proposal: First-level trigger systems for LHC experiments (Birmingham-CERN-Heidelberg-MPI Munich-Queen Mary and Westfield College London-Rutherford Appleton Lab.-Royal Holloway and Bedford New College London-Univ. & INFN-La Sapienza Rome-Stockholm; DRDC 92-17/P37; N. Ellis).*
8. *Proposal: Development of a high-efficiency gaseous detector for the localization of photons from scintillators and new generation of Cherenkov counters (CERN-Lausanne-Ecole Polytechnique Palaiseau-Warsaw; DRDC 92-20/P38; G. Charpak).*

Closed session

Thursday 2 April after the Open Session,
continuing on Friday 3 April at 09.00 hrs – 6th floor
Conference Room, Administration Building

Thursday 2 April

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium*

**A design concept for a giant air shower array :
The study of cosmic rays with energies $\geq 10^{19}$ eV**

by James CRONIN / University of Chicago and
Universite de Paris VI et VII

A review of what is known about the highest energy cosmic rays will be given. I will describe how they interact with the galactic and extra galactic magnetic field and the cosmic background radiation (CBR). Cosmic rays have been observed with energies up to 10^{20} eV. This is 16 joules, the energy of a hard hit tennis ball in a microscopic particle. The flux of cosmic rays with energies $\geq 10^{19}$ eV is low ($\sim 1/\text{km}^2/\text{ster}/\text{yr}$) so that a detector with a surface area of 5000 km^2 is required to observe them with good statistics. The galactic magnetic field serves as a crude magnetic spectrometer, and the amount of absorption on the CBR helps to determine the distance the cosmic rays have travelled. Modern technical developments of solar power, the GPS and GLONAS satellite system, and micro wave communications make the consideration of such a large array thinkable.

* Tea & coffee will be served at 16.00 hrs

Friday 3 April

MEETING ON PARTICLE PHYSICS PHENOMENOLOGY

at 14.00 hrs – TH Conference Room

**Electroweak precision tests at LEP and
supersymmetry**

by F. CARAVAGLIOS / Pisa

Precision measurements at LEP I could give indirect evidence for supersymmetry. Some gaugino-higgsinos that stay in a small range of masses near above the threshold of production might lower (mainly through a Z-wave function renormalization) all the z-widths without affecting the asymmetries. This could explain a difference between the value of the top mass given by the asymmetries (the true value) and the smaller one given by the widths. This would best show up in a low value of the parameter epsilon-3.

Monday 6 April

AS SEMINAR

at 14.30 hrs – Council Chamber

The LaTeX 3 project

by Chris ROWLEY / Open University, UK & Frank
MITTELBACH / Electronic Data Systems,
Russelsheim, Germany

This talk will give a brief sketch of the LaTeX 3 Project: its history, its present state and its future. It will describe the structure of the new system and outline some of the interesting problems which need to be solved in order to implement it. We shall also be interested to hear what you would like to see in a new LaTeX, and how this would enhance your present or proposed uses of the system.

Language : English

Monday 6 April

PPE SEMINAR

at 16.30 hrs – Auditorium

**Search for a scalar and pseudoscalar particles in a
proton-iron beam dump experiment**

by J. BRUNNER / Inst. for High Energy Physics,
Zeuthen, Germany

A search has been performed for isolated electromagnetic showers and isolated muon pairs in a proton-iron beam dump experiment carried out at the 70 GeV proton accelerator of the IHEP Serpukhov (Russia). No positive signal was observed. The experimental results are compared with expectations for electron, photon and muon pair production by decays and Bethe-Heitler processes of (pseudo)scalar particles. Limits are derived on the mass of these particles in the frame of the Standard Model and its minimal supersymmetric extension. The Higgs particle of the Standard Model is excluded for masses below 80 MeV. For (pseudo)scalar particles of the minimal supersymmetric extension of the Standard Model certain values of their masses and couplings could be excluded.

Mardi 7 avril

PRESENTATION TECHNIQUE

09.00-12.00 h & 13.00-16.00 h – bus parking PTT,
bât. 63

Knurr AG (D/CH) présente son programme de vente et de

fabrication : tout ce qui permet d'intégrer de l'électronique.

Langues : allemand, français

Renseignements : M. Diraison / FI / 4585

Tuesday 7 April

DETECTOR SEMINAR

at 11.00 hrs – ECP Conference Room
bldg 13 / 2-005

**Microstrip gas chambers with two-dimensional
and pixel read-out**

by Ronaldo BELLAZZINI / INFN & University of
Pisa

Tuesday 7 April

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium

**Evidence for the strange B^0_s meson production at
LEP (DELPHI)**

by P. ROUDEAU / LAL-ORSAY

Wednesday 8 April

TECHNICAL PRESENTATION

09.00-12.00 hrs – CN Auditorium
bldg 31 / 3-005

UPS Seminar by Gutor Electronique SA (CH)

Language : English + French when needed

Information : M. Diraison / FI / 4585

TRAINING AND EDUCATION ENSEIGNEMENT

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Science pour tous

par Rafel CARRERAS

Les conférences de ce trimestre sont terminées.

Reprise le 30 avril.

Wednesday 8 April

SL SEMINAR

at 11.00 hrs – SL Auditorium
bldg. 864, 1st floor, Prévessin

**CHANNELING – a new way of bending high-
energy beams**

by S. P. MOELLER / Aarhus University

Wednesday 8 April

CERN COMPUTER COLLOQUIUM

at 16.30 hrs – Auditorium

Crystal-Ball Gazing

by Jim GETTYS / Digital Equipment Corp.,
Cambridge, Mass.

Thursday 9 April

PRESENTATION

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

ALPHA, Digital's new RISC CPU architecture

by Peter THAYER / Alpha Product Management,
Reading, UK & Michael Brown / HEP consultant,
Digital Geneva

ACADEMIC TRAINING

Tel. 2844

30, 31 March , 1 & 2 April

30 March : 11.00 hrs – Auditorium

31 March : 11.30 – Council Chamber

1 April : 11.00 hrs – Auditorium

2 April : 11.00 hrs – Council Chamber

Phenomenology with lattice QCD

by G. MARTINELLI / University, Roma