

seminars

CERN PARTICLE PHYSICS SEMINAR

Tuesday, May 16
16.30
Auditorium

"Small angle scattering of high energy photons in the Coulomb-field of nuclei"
H.D. Schulz / DESY

Abstract: The elastic small angle scattering of high energy photons on heavy nuclei is highly dominated by the Delbrück-process, the forward amplitude of which is related to the total electromagnetic pair production cross-section by the optical theorem. The process is of 6th order of the electromagnetic coupling and the cross-section has been calculated only recently by conventional perturbation theory. At DESY the differential cross-section for Delbrück-scattering has been measured for photon energies between 1 and 7 GeV and scattering angles of 1 to 3 mrad. The results show an unexpectedly large effect of higher order corrections.

In addition to the elastic process a strong signal of inelastic photon scattering has been observed which can be attributed to the splitting of a photon into two photons by interaction with the Coulomb-field of the target nuclei. First results on the photon splitting process will be given.

Thursday, May 25
16.30
Auditorium

"The magnetic moment of the Ξ^- -hyperon"
R.L. Cool / Rockefeller University-CERN

CERN COMPUTER SEMINAR

Friday, May 19
14.30
Auditorium

"Computer aided circuit analysis and design"
F.F. Kuo / US Office of Naval Research, London.

Abstract: In the past five years, computer aided design of electronic circuits has been an extremely active field. Circuit analysis programs such as ECAP, CIRCUS, SCEPTRE and CIRPAC have become widely used. In this lecture we shall concentrate on the mathematical techniques which form the basis of these programs. Also discussed are techniques for stored model descriptions of semiconductor devices. Examples from ECAP II and SCEPTRE will be given.

CERN COLLOQUIUM

Tuesday, May 23
16.30
Auditorium

"The dynamics of age structures in research institutes"
K. Fränz / AEG-Telefunken, Ulm

Abstract: The mean age M of the personnel varies per year by Δ_M .

$$\Delta_M = 1 - n_a(A - E) + n_+(M - E)$$

E and A are respectively the mean ages of the newcomers and of those who leave. n_a and n_+ are fluctuation and growth rates. After a discussion of the correlation between age and creativity in science and technology some recommendations for acceptable age distributions, fluctuation and growth rates in industrial research are given.

PRESENTATION TECHNIQUE

Lundi, 15 mai
14.00 à 17.00
Salle Conf. TC, Bât. 13,
2ème étage
(Anglais)

La maison SIEMENS (D), représentée par Siemens-Albis (CH), propose deux conférences de 50 min chacune sur les thèmes.

1. Process control computer family Siemens System 300. The new models 320 and 306, and their application for integrated control systems by M. Offer, Siemens Erlangen.
2. The new real-time operating systems for 320 and 306 - by M. R. Zumpe, Siemens Erlangen.

Mardi, 16 mai
9.00 à 16.30
Salle Conf. TC-L, Bât.17,
1ère étage
(Français)

La maison OSL (F) expose son programme de mécanique modulaire au standard CAMAC et NIM ainsi que des baies électroniques.

Mercredi, 17 mai
9.30 à 12.30
Salle Conf. TC, Bât. 13,
2ème étage
(Anglais)

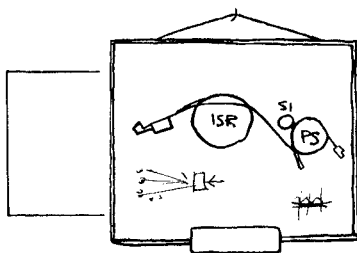
La maison MOTOROLA (USA), représentée par Motorola (CH), propose deux conférences sur les thèmes:

- D. Pieranunzi:
- a) brief discussion of the various MECL;
 - b) specific discussion on MECL 10'000 general features;
 - c) functions available;
 - d) functions in planning;
 - e) second sources;
 - f) pricing;
 - g) new MECL families in planning.

F. Uebe: Technical evaluation

- a) basic circuit design;
- b) interconnection techniques;
- c) termination techniques.

Renseignements: M. Diraison/4585



enseignement

ACADEMIC TRAINING

Monday, May 15
Tuesday, May 16
Wednesday, May 17
11.00
Auditorium

HIGH-ENERGY PHYSICS

"Neutron Stars"

by W. Kundt

Abstract:

1. Pulsar phenomenology: distance, (Faraday) rotation measure; pulse shape and intensity, (multiple) periodicities, (deterministic and stochastic) slowdown, spectra, polarization, phase relations; classification.
2. (Magnetic) neutron star structure: mass, size and shape; atmosphere, crust, liquid zones, core; superfluidity and superconductivity, moments of inertia; elastic, viscous, thermal and magnetic properties.
3. Pulsar radiation models: unipolar induction, electrodynamics of magnetosphere and wave zone, coherent (maser, antenna) and incoherent (synchrotron, thermal, inverse Compton) radiation mechanisms, acceleration of (charged) particles.