

face significant difficulties from bulk radiation damage which requires perpetual refrigeration at sub-zero temperatures or ever-increasing voltages for proper operation. Charge collection times are also somewhat longer than LHC bunch intervals.

A proposed method will be described for making detectors with 3D electrodes which penetrate through most or all of the silicon bulk. Collection distances and calculated collection times are reduced by about one order of magnitude. Depletion voltages, rather than rising to hundreds of volts as damage sets in, remain below 10 V. Current progress and some open questions will be discussed.

EDUCATION SERVICES EDUCATIFS



Information sur les cours, dates et places disponibles sur WWW:
Information about the courses, dates and places available on WWW :
<http://www.cern.ch/Training/>

Tuesday 15 October

TECHNICAL SEMINAR

at 10.00 hrs - PS Conference Room, bldg 6/2-024
Fieldbuses - an introduction to the
technology and how to use it
by Franz Rudolf BUNGER / Chairman Swiss National
Committee TC65 of IEC and CENELEC

Wednesday 16 October

SEMINAR FOR CERN GUIDES

organized by CERN Visits Service - Groupe DSU/CP
at 16.00 hours - Auditorium
The Bubble Chamber and its Contribution to
Particle Physics
by Gert HARIGEL / CERN

Jeudi 10 octobre

ENSEIGNEMENT GENERAL

à 13.00 h - Amphithéâtre

Science pour tous

par Rafel Carreras

Reprise des séances

*Veillez prendre note qu'il n'y aura pas de séance
le jeudi 24 octobre.*

FORMATION EN LANGUES LANGUAGE TRAINING

Françoise Benz « 73127
Andrée Fontbonne ® 72844

DO YOU NEED ENGLISH?

English courses at CERN start on
Monday 14 October 1996.

COMMENT AMELIORER VOTRE ANGLAIS?

Les cours d'anglais au CERN commencent
le 14 octobre 1996.

Veillez contacter: Françoise Benz au 73127, ou
Ulrich Liptow au 72597
avant le 7 octobre 1996.

COMMENT AMELIORER VOTRE FRANÇAIS?

Les cours de français au CERN commencent
le 14 octobre 1996.

DO YOU NEED FRENCH?

French classes at CERN start on
Monday 14 October 1996.

Please contact: Françoise Benz on 73127, or
Andrée Fontbonne on 72844
;
before Friday 7 October 1996.

ENSEIGNEMENT ACADEMIC
ACADEMIC TRAINING

F. Benz Secretariat « 73127

LECTURE SERIES FOR
POSTGRADUATE STUDENTS

7,8,9,10 & 11 October

11.00-12.00 hrs - Auditorium

Quantum Field Theory

by L. ALVAREZ-GAUMÉ / CERN-TH

Quantum Field Theory provides the most fundamental language known to express the fundamental laws of Nature. It is the consequence of trying to describe physical phenomena within the conceptual framework of Quantum Mechanics and Special Relativity. The aim of these lectures will be to present a number of concepts and methods in the subject which many of us find difficult to understand. They may include (depending on time) : the need to introduce quantum fields, the realization of symmetries, the renormalization group, non-perturbative phenomena, infrared divergences and jets, etc.

Some familiarity with the rudiments of Feynman diagrams and relativistic quantum mechanics will be appreciated.

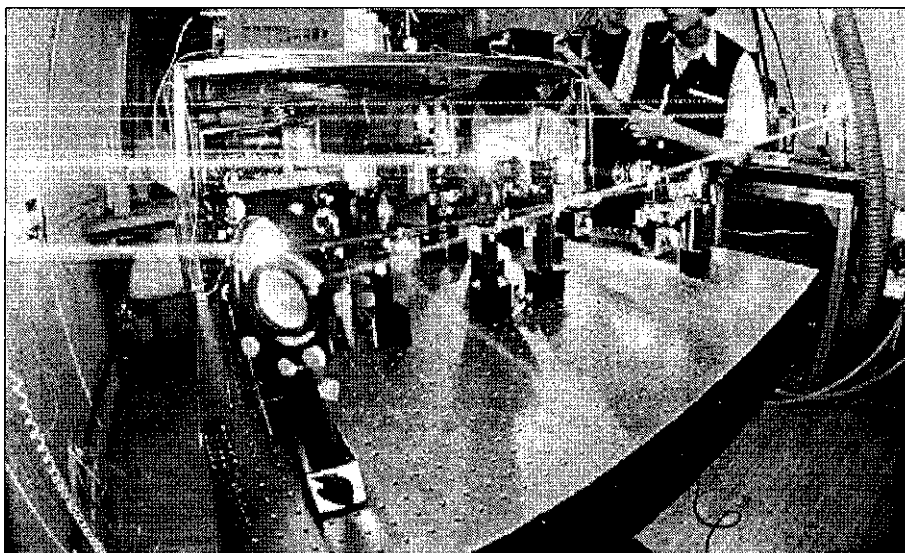
ENSEIGNEMENT TECHNIQUE
TECHNICAL TRAINING

Monique Duval ^74460
monique_duval@macmail

Technical seminar

LASER TECHNIQUES
DEVELOPMENT AND APPLICATION

8 October at 09.00 hrs - SL Auditorium, bldg 864 1-D02



- | | |
|--|--|
| 09.00 Introduction K. Geissler | 14.30 Interferometric Laser Techniques Applied to Measurements of Small Displacements
M. A. Vaz, University of Oporto, Faculty of Engineering, Oporto, Portugal |
| 09.15 Current Aspects of Laser-Matter Interactions
C. Fotakis and N. Vainos, FO.R.T.H, Institute of Electronic Structure and Laser (I.E.S.L.), Heraklion, Crete, Greece | 15.15 Laser Spectroscopy of Antiprotonic Helium
J. Eades, CERN, PPE Division |
| 10.00 Particle acceleration with Lasers
E.J.N. Wilson, CERN, AC Division | 16.15 The Use of Laser Techniques in the Alignment of Detector Elements
F. Klumb, CERN, PPE Division |
| 11.00 High charge-state heavy ion generation with a CO ₂ laser
A.J. Tambini, CERN, PS Division | 17.00 Laser for Machining and Welding at CERN
F. Bertinelli, CERN, EST Division |
| 11.20 Picosecond electron bunch generation from laser driven photocathodes
H. Braun, CERN, PS Division | 17.45 Concluding remarks
M.J. Price, CERN-PPE Division |
| 11.40 Semi-conductor Lasers for Optical Signal Transfer in LHC detectors
F. Vasey, CERN, ECP Division | |

This seminar is free of charge and no prior enrolment is required.

Additional shuttle buses between the Main Building (bldg. 500 Meyrin) and building 964 (Prévessin) will be provided in the morning from 08.30 on, during lunch time and evening.

Madeleine Pincott madeleine.pincott@cem.ch Q 3674 temps partiel / part time

Nathalie Dumeaux nathalie.dumeaux@cern.ch @ 8144 temps partiel / part time

Situation : 1.10.1996

Dates	Séminaires / <i>Seminars</i>	Lang.	Durée <i>Duration</i>	Disponibilité <i>Availability</i>
9,10,11 octobre	Préparez-vous à animer et à gérer une équipe / <i>Preparation for running and managing a team</i>	B	3 jours/days	complet
16,17 October & 18 November	<i>Making presentations</i>	E	3 days	8 places
23, 24 octobre	Animer ou participer à une réunion de travail	F	2 jours	6 places
24, 25 octobre	Les outils de communication dans une équipe	F	2 jours	complet
31 October & 1 November	<i>Communicating effectively, part 2</i>	E	2 days	full
13,14 novembre	Information sur les services administratifs et logistiques du CERN / <i>Information on CERN administrative and support services</i>	B	2 jours/days	12 places
13,14 novembre	Appréciation des performances	F	2 jours	7 places
19, 20 novembre	Négociation	F	2 jours	complet
21, 22 novembre	Communiquer efficacement, le partie	F	2 jours	complet
26, 27 November	<i>Chairing or participating in meetings</i>	E	2 days	6 places
26, 27 novembre	Outils pratiques de management/Pracffca/ <i>management tools - Module 1</i>	B	2 jours/day	12 places
28, 29 November	<i>Communicating effectively in your team</i>	E	2 days	4 places
3, 4 December	<i>Performance Appraisal (MOAS)</i>	E	2 days	full
4, 5 décembre & 4 janvier	Techniques d'exposé et de présentation	F	2 jours	2 places
10,11,12 décembre	Agir sur les processus relationnels	F	2 jours	11 places
16,17 décembre	Communiquer efficacement, 2e partie	F	2 jours	complet
	17,18 décembre Outils pratiques de management/Prartica/ <i>management tools - Module 2</i>	B	2 jours/days	12 places
16,17 January	<i>Improving your writing skills</i>	E	2 days	5 places
16,17 janvier	Techniques de communication écrite	F	2 jours	8 places
21, 22 janvier	Outils pratiques de management/Pracfr'ctf/ <i>management tools - Module 1</i>	B	2 jours/day	12 places
22, 23, 24 January	<i>Interacting with people</i>	E	2 days	12 places
28,29 January	<i>Effective, rapid reading</i>	E	2 days	10 places
29, 30 January	<i>Performance Appraisal (MOAS)</i>	E	2 days	6 places
4,5 February	<i>Negotiating skills</i>	E	2 days	12 places
4, 5 février	Outils pratiques de management/Prach'ca/ <i>management tools - Module 2</i>	B	2 jours/days	12 places

Si vous désirez vous inscrire pour un de ces séminaires prenez contact avec votre responsable hiérarchique et votre DTO.

If you would like to enrol in one of the following seminars, please contact your supervisor and your DTO.