

SEMINARS SEMINAIRES

MONDAY 2 August

EP SEMINAR

at 17.00 hrs – Auditorium

Photodiode Readout of Bismuth Germanate Crystals

by Donald E. Groom / Univ. of Utah, USA

Photodiodes have 'cathode sensitivity' of 80% or so at the longer visible wavelengths, extreme stability, and immunity to magnetic fields. As such, they are obvious candidates for bismuth germanate readout for new detectors at colliding beam machines. Since they have no gain, practical problems center on the noise limitation of a charge-sensitive preamplifier with a photodiode attached. In the case of 'off-the-shelf' photodiodes, we found that noise was about 2.5 times greater than with an equivalent capacitor attached to the preamplifier. The problem was traced to extra internal series resistance, which was eliminated. We now obtain $\sigma = 325$ keV at room temperature.

Tuesday 3 August

CERN PARTICLE PHYSICS SEMINAR

at 16.30 hrs – Auditorium *

Looking for Slow-Moving Massive Monopoles in a Utah Gold Mine

by Donald E. Groom / Univ. of Utah, USA

In late March a small part (3.2m²sr) of a cosmic ray detector in the Mayflower Mine was 'borrowed' to search for slow-moving weakly-ionizing particles. Twelve coincident pairs of plastic scintillators were arranged in three layers separated by concrete absorber. The threshold is now about 0.12 $I_{\min}$, where it should detect $g = e/2\alpha$ monopoles with velocities between $1.4 \times 10^{-4}c$ and $3 \times 10^{-2}c$. No candidate events have been seen during three months of operation.

* Tea and coffee at 16.00 hours.

Thursday 5 August

SPECIAL EF SEMINAR

at 11.00 hrs – EF Conference Room
(Building 13-2-005)

Performance of the TPC at PEP

by G. Lynch / LBL

An informal account will be presented on the results obtained during the first five months of operation at PEP.

Thursday 5 August

CERN COLLOQUIUM

at 16.30 hours – Auditorium *

Facing the Nuclear Threat : Arms and Arms Control

by Sidney D. Drell / SLAC

More than twelve years have gone by since the U.S. and the Soviet Union initiated the process of formal strategic arms negotiations designed to limit the buildup of nuclear arms and to reduce the threat of nuclear war. These negotiations have been both difficult and valuable, but overall, the record of accomplishments of the past twelve years is disappointing. During this period, and despite intense negotiations, the nuclear forces of both the United States and the Soviet Union have continued to improve in quality and to increase in numbers. As a result of advances in weapons technology we are now entering an even more dangerous era in which confidence in mutual deterrence is eroding.

I will describe general principles based on the technical realities of nuclear weapons that should guide our decisions concerning arms and arms control, and discuss approaches toward major and balanced reductions in the numbers of nuclear warheads deployed on both the long-range strategic and the intermediate-range (European theatre) systems.

* Tea and coffee at 16.00 hours.

Monday 9 August

EP SEMINAR

at 17.00 hrs – Auditorium

The Structure of Events with Large Transverse Energy in a Hadron Calorimeter at $\sqrt{s} = 63$ GeV

by R.H. Schindler / CERN

TRAINING AND EDUCATION ENSEIGNEMENT

SUMMER STUDENT LECTURES

This week

Monday 2 August

8.30 -

10.00 D. Jacobs - Electronic detectors and nuclear instrumentation (8)

11.15 V.F. Weisskopf - Particles and symmetries (5)

Tuesday 3 August

8.30 D. Jacobs - Electronic detectors and nuclear instrumentation (9)

10.00 D. Treille - Proton lifetime

11.15 V.F. Weisskopf - Particles and symmetries (6)