



detector seminar

SPEAKER: Eraldo Oliveri (Sezione di Pisa (IT))

TITLE: **Micro Pattern Gas Detectors**

DATE: Fri 14/11/2014 11:00

PLACE: Salle Bohr

ABSTRACT

Micro-Pattern Gas Detectors (MPGDs) are flexible and widespread devices with promising performances for the next generation High Energy Physics experiments, as well as for many other applications as medical, imaging, dosimetry and neutrons detection. Very good position resolution, high rate capability and radiation tolerance, low material budget, cost-effective large instrumented surfaces and low energy threshold are the key features of MPGDs. Different technologies and materials are entering into this field, providing new possibilities for future detectors.

The first part of the seminar will treat motivations and ideas behind the development of micro-pattern gas detectors.

We will go through the R&D path in between the first MPGD and the ones currently used or foreseen for future upgrades or experiments. This path will be used to emphasize performances and issues, intrinsically related to micro pattern or gaseous detectors in general, and the way they have been used and achieved (performances) or faced (issues). Already in operation MPGDs and future solutions will be used as examples during the talk. An overview of a collaborative and large MPGD community (RD51) will conclude the talk, underlining the value of sharing common tasks and tools for boosting future perspectives of micro-pattern gaseous detectors.