



detector seminar

SPEAKER: SAULI, F. (TERA Foundation (IT))
TITLE: **GEM Detectors - 20 years of Developments and Applications**

DATE: Fri 21/10/2016 11:00
PLACE: 40-S2-A01 - Salle Anderson

ABSTRACT

Introduced in 1996, the Gas Electron Multiplier (GEM) is used or planned for use in many High-Energy-Physics detector systems, exploiting its high rate and resolution performances. After a brief introduction on the early developments, the major operating characteristics of the device will be described, giving examples of use in particle physics experiments. Several GEM properties, such as the gain shifts due to charging up, the reduction in positive ions backflow and the appearance of discharges are still under investigation, and will be discussed. Numerous applications have been found in other fields: astrophysics, medicine, materials analysis and others. The study of the gas scintillation under avalanche conditions led to the development of methods for optical recording of radiation, potentially simpler to implement for consumer-oriented imaging applications.