



Triple GEM Detectors for the Upgrade of the CMS experiment



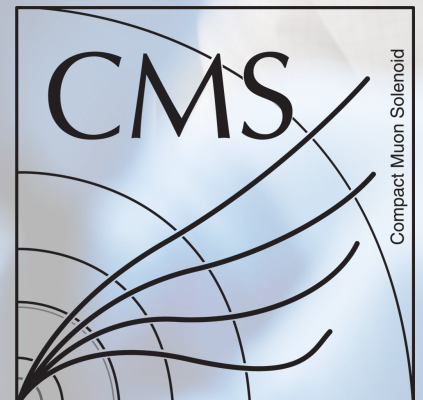
Istituto Nazionale di Fisica Nucleare

Seminar

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Friday September 13th

Aula Multimediale - 11:00



Abstract:

The discovery of the Higgs boson by the ATLAS and CMS collaborations in 2012 has been the start of a major work program of the Large Hadron Collider (LHC) to measure this particle's properties with the highest possible precision for testing the validity of the Standard Model and to search for further new physics at the energy frontier. Top priority has been given to the exploitation of the full potential of the LHC, including the high-luminosity upgrade of the machine and detectors with a view to collecting ten times more data than in the initial design, by around 2030. To enable CMS to continue high quality data-taking several upgrades are currently ongoing. Among the upgrades, the installation of new muon stations based on Gas Electron Multiplier (GEM) technology is one of CMS main priorities during LS2.

In this seminar the different steps of the CMS GEM Upgrade will be presented, explaining the GEM technology together with an overview of almost 10 years of R&D necessary to fulfil the CMS requirements.