



SPEAKER: Luca Latronico (INFN Sezione di Pisa (INFN))

TITLE: **Science from the first 10 months of observations from the Fermi Large Area Telescope**

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PLACE: Main Auditorium **

ABSTRACT

The Fermi observatory is an international, multi-agency satellite mission that was launched by NASA in June 2008 and has since then been exploring the high energy gamma-ray sky from 20 MeV to more than 300 GeV. This largely unexplored region of the electro-magnetic spectrum is home to emissions from the most energetic and mysterious objects in the cosmos, like black holes, active galactic nuclei, rapidly spinning neutron stars, supernovae remnants and gamma-ray bursters. Leveraging on the high instrument resolution and acceptance, and on an outstanding operation efficiency, the mission team has been able to record a remarkable variety of novel observations, spanning from astronomy to particle astrophysics with exciting implications on fundamental physics. At the same time the collaboration is preparing to deliver photon data and analysis tools to the public starting from the second year of operations, along with improved knowledge of the instrument performance. In this talk I will review some of the most interesting results obtained by Fermi in the field of gamma-ray astrophysics, and discuss the Fermi measurement of the primary cosmic ray electron spectrum between 20 GeV and 1 TeV.