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Towards revolutionary observations in MeV Gamma-ray astronomy [MeV and below]

Thursday 31 August 2023 11:30 (30 minutes)

The MeV band, a relatively unexplored region of the electromagnetic spectrum, holds great potential for unraveling fundamental astrophysical phenomena. It offers valuable insights into diverse areas such as the Galactic production of elements, the magnetic field configurations surrounding black holes and neutron stars, the mergers of neutron stars, and energy releases associated with hadronic accelerators. Excitingly, NASA's Compton and Spectrometer Imager (COSI) is poised to embark on a comprehensive study of the entire sky, finally shedding light on this fundamental energy range.

In this presentation, we will delve into COSI's primary science capabilities, focusing on multi-messenger and time-domain astronomy. By exploiting the unique observational strengths of COSI, we can anticipate a wealth of discoveries and breakthroughs that will significantly benefit the wider scientific community. Join us as we explore the untapped potential of the MeV band and uncover the cosmic secrets that COSI holds in store.

Presenter: Dr AJELLO, Marco (Clemson University)

Session Classification: Plenary session

Track Classification: High-energy astrophysics and cosmic rays