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Type: **Invited talk in a parallel session**

Status and future prospects of MeV astronomy

Thursday, 11 July 2024 15:00 (30 minutes)

Observation of cosmic gamma-rays in the MeV range have long been considered both promising and challenging. The challenges directly result from the physics of the photon-matter interaction at these energies, being dominated by incoherent Compton scattering, forming a global minimum in photon-matter cross-section without an option of building focusing optics. The non transparency of the atmosphere to these photons requires telescopes to be placed into space where charged particles produce abundant detector background. Despite all these odds, pioneering work of Compton GRO and the still ongoing INTEGRAL has proven some of the promises but also the challenges. This talk will outline a selection of what we have reached, where we are headed in the near future with, e.g., NASA's COSI small satellite mission, and some dreams being pursued for the future.

Presenter: Prof. OBERLACK, Uwe (University of Mainz)

Session Classification: Future innovations in gamma-ray astronomy