Contribution ID: **74** Type: **Oral presentation**

Extending Fermi-LAT discoveries: Compton-Pair Production Space Telescope (ComPair) for MeV Gamma-ray Astronomy

Thursday, 29 October 2015 18:10 (15 minutes)

The gamma-ray energy range from a few hundred keV to a few hundred MeV has remained largely unexplored, mainly due to the challenging nature of the measurements, since the pioneering but limited observations by COMPTEL on the Compton Gamma-Ray Observatory (1991-2000). This energy regime encompasses the transition between thermal and nonthermal processes, and accurate measurements are critical for answering a broad range of astrophysical questions. We are developing a concept for a discovery mission, ComPair (Compton-Pair Production Space Telescope), to investigate energies from 200 keV to > 500 MeV with high energy and angular resolution and with sensitivity approaching a factor of 100 better than COMPTEL. This instrument will be capable of detecting both Compton-scattering events at lower energy and pair-production events at higher energy. ComPair will build on the heritage of successful space missions including Fermi, AGILE, AMS and PAMELA, and will use well-developed space-qualified detector technologies including Si-strip and CdZnTe-strip detectors, heavy inorganic scintillators, and plastic scintillators.

Primary author: Dr PERKINS, Jeremy (NASA/GSFC)

Presenter: Dr PERKINS, Jeremy (NASA/GSFC)

Session Classification: Gamma-Ray Astrophysics

Track Classification: Gamma-ray Astrophysics