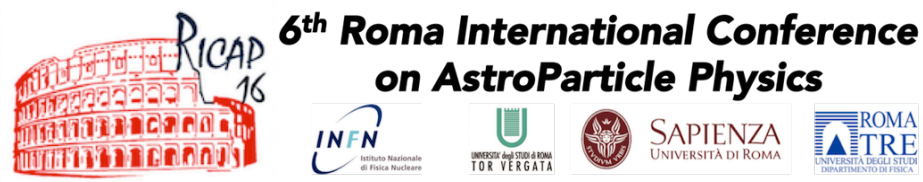

Contribution ID: **183** Type: **not specified**

e-ASTROGAM A Future space based gamma-ray observatory in a new energy window

Wednesday, 22 June 2016 14:30 (25 minutes)

e-ASTROGAM is a gamma-ray observatory to be proposed as the M5 Medium-size mission of the European Space Agency. It is dedicated to the observation of the Universe with unprecedented sensitivity in the energy range 0.3-100 MeV, extending up to GeV energies, together with a groundbreaking polarization capability. e-ASTROGAM will operate as an open astronomical observatory, with a core science focused on (1) the activity from extreme particle accelerators, including gamma-ray bursts, jet astrophysics of active galactic nuclei and the link to new astronomies (gravitational waves, neutrinos, ultra-high energy cosmic rays), (2) the high-energy mysteries of the Galactic center and inner Galaxy, including the activity of the supermassive black hole, the Fermi Bubbles, the origin of the Galactic positrons, and the search for dark matter signatures in a new energy window; (3) nucleosynthesis and chemical evolution, including the life cycle of elements produced by supernovae in the Milky Way and the Local Group of galaxies. e-ASTROGAM will be ideal for the study of high-energy sources in general, including pulsars and pulsar wind nebulae, accreting neutron stars and black holes, novae, supernova remnants, magnetars, and it will also provide important contributions to solar and terrestrial physics. The e-ASTROGAM payload consists of a single instrument for the simultaneous detection of Compton and pair-producing gamma-ray events. It is based on a very high technology readiness level for all subsystems and includes many innovative features for the main detectors and associated electronics.

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Session Classification: g-rays