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All-Sky Medium Energy Gamma-ray Observatory (AMEGO) - A discovery mission for the MeV gamma-ray band

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The MeV domain is one of the most underexplored windows on the Universe. From astrophysical jets and extreme physics of compact objects to a large population of unidentified objects, fundamental astrophysics questions can be addressed by a mission that opens a window into the MeV range. AMEGO is a wide-field gamma-ray telescope with sensitivity from ~200 keV to >10 GeV. AMEGO provides three new capabilities in MeV astrophysics: sensitive continuum spectral studies, polarization measurements, and nuclear line spectroscopy. AMEGO will consist of four hardware subsystems: a double-sided silicon strip tracker with analog readout, a segmented CZT calorimeter, a segmented CSI calorimeter and a plastic scintillator anticoincidence detector, and will operate primarily in an all-sky survey mode. In this presentation we will describe the AMEGO mission concept and scientific performance.

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