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The All-sky Medium Energy Gamma-ray Observatory (AMEGO)

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The All-sky Medium Energy Gamma-ray Observatory (AMEGO) is an Astrophysics Probe mission concept designed to explore the MeV sky. It has a unique capability to cover with high sensitivity both the Compton and pair conversion regimes from ~ 200 keV to >10 GeV. To date the MeV regime remains a poorly explored window on the Universe, and promises a rich return similar to what Fermi-LAT achieved in the GeV band.

The AMEGO instrument features an anti-coincidence detector, a double-sided Silicon microstrip tracker with analog readout, a segmented CZT calorimeter optimized for the Compton regime, and a segmented CsI calorimeter optimized for the pair regime. This design choice provides substantial performance improvements relative to the predecessors in both energy bands, namely CGRO-COMPTEL and Fermi-LAT. In particular, the detector is tailored to the challenging task of imaging Compton events with unprecedented resolution.

On behalf of the AMEGO Team (<https://asd.gsfc.nasa.gov/amego/team.html>).

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