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Development of the Prototype All-sky Medium Energy Gamma-ray Observatory (AMEGO) REGINA CAPUTO, NASA Goddard Space Flight Center, ALEKSEY BOLOTNIKOV, Brookhaven National Laboratory, NICHOLAS CANNADY, NASA Goddard Space Flight Center/University of Maryland Baltimore County, SEAN GRIFFIN, NASA Goddard Space Flight Center/University of Maryland College Park, J. ERIC GROVE, Naval Research Laboratory, ELIZABETH HAYS, CAROLYN KIERANS, JULIE MCENERY, JOHN MITCHELL, ALEXANDER MOISEEV, NASA Goddard Space Flight Center, MICHELA NEGRO, NASA Goddard Space Flight Center/University of Maryland Baltimore County, LUCAS PARKER, Los Alamos National Laboratory, JEREMY PERKINS, NASA Goddard Space Flight Center, MAKOTO SASAKI, NASA Goddard Space Flight Center/University of Maryland College Park, PETER SHAWHAN, University of Maryland College Park, JACOB SMITH, NASA Goddard Space Flight Center/University of Maryland Baltimore County, DAVID THOMPSON, NASA Goddard Space Flight Center, RICHARD WOOLF, ERIC WULF, Naval Research Laboratory, AMEGO PROTOTYPE TEAM — The electromagnetic spectrum from a few hundred keV to >100 MeV remains one of the most under-explored. Recent breakthroughs in multimessenger astrophysics have revealed that it is paramount in the study of sources that have unique signatures in the gamma-ray regime. The All-sky Medium Energy Gamma-ray Observatory (AMEGO) is a mission concept targeting multimessenger science in this energy range. The AMEGO instrument comprises four subsystems: a tracker, a low-energy calorimeter, a high-energy calorimeter, and a plastic scintillator anticoincidence detector. I will discuss the development of the AMEGO prototype instrument, with the ultimate goal of a balloon flight in 2021. This prototype will validate the overall instrument design under flight-like conditions and demonstrate the ability to take data in the presence of high background. In this contribution, I will discuss the current status of the prototype and preliminary results.

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