Abstract Submitted
for the APR15 Meeting of
The American Physical Society

Detection of Extended Emission from Fornax A and Measurement of the Extragalactic Background Light JEFFREY MAGILL, WILLIAM MCCONVILLE, University of Maryland, College Park, MARKOS GEORGANOPOULOS, University of Maryland, Baltimore County, EILEEN MEYER, Space Telescope Science Institute, JEREMY PERKINS, Goddard Space Flight Center - NASA, LUKASZ STAWARZ, Japan Aerospace Exploration Agency, FERMI-LAT COLLABORATION — Prior to the launch of Fermi in 2008, the radio galaxy Fornax A was identified as one of the few extragalactic objects that might be detected as spatially extended above 100 MeV. However, even though it was detected with high confidence in the first 2 years of the mission, it was not determined to be an extended source. Recently, the Fermi-LAT collaboration developed a new event-level analysis called Pass 8 which yields a larger acceptance, a better angular and energy resolution, as well as smaller systematic uncertainties. The improvements provided with Pass 8 combined with a longer exposure means that the spatial extension of Fornax A is significantly detected, making it only the second extragalactic gamma-ray source so far to show extent. Details of this measurement will be presented along with modeling of the emission above 100 MeV.

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Date submitted: 09 Jan 2015 Electronic form version 1.4