Abstract Submitted
for the APR20 Meeting of
The American Physical Society

Measuring the Cosmic Star Formation Rate with Absorption of Gamma rays from Blazars JUSTIN FINKE, United States Naval Research Laboratory, MARCO AJELLO, Clemson University, ALBERTO DOMINGUEZ, Universidad Complutense de Madrid, DIETER HARTMANN, Clemson University, ABHISHEK DESAI, University of Wisconsin-Madison, LEA MARCOTULLI, Clemson University, VAIDEHI PALIYA, DESY Zeuthen — Gamma-rays from blazars interact with extragalactic background light (EBL) photons, and are absorbed. This allows one to use gamma-ray absorption to constrain the EBL, which depends strongly on the cosmic star formation rate. We combine results of gamma-ray absorption measurements from the Fermi Telescope with luminosity density measurements from galaxy surveys to provide a very tight constraint on the cosmic star formation rate and other cosmologically interesting parameters.

Justin Finke
United States Naval Research Laboratory

Date submitted: 09 Jan 2020 Electronic form version 1.4