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A Measurement of the Spatial Distribution of TeV Gamma Ray Emission from the Galactic Plane with Milagro PETRA HUENTEMEYER, Los Alamos National Laboratory, MILAGRO COLLABORATION — Diffuse γ -ray emission produced by the interaction of cosmic ray particles with matter and radiation in the Galaxy can be used to probe the origin of cosmic rays. With its large field of view and long observation time, the Milagro Gamma Ray Observatory is an ideal instrument for surveying large regions of the Northern Hemisphere sky and for detecting diffuse γ -ray emission at high energies. The Milagro experiment has previously observed eight sources or source candidates in a Galactic plane survey. We determine the spatial distribution of the 15 TeV diffuse gamma ray emission by subtracting the flux contribution of these Milagro sources from the total γ -ray flux measured in the Galactic plane. The resulting fluxes and emission profiles are compared to the predictions of the GALPROP model.

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