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Survey of the Galactic Plane at 12 TeV with Milagro GARY WALKER, Los Alamos National Laboratory, MILAGRO COLLABORATION — The Milagro Gamma-Ray Observatory is a water Cherenkov detector that operates continuously, detecting extensive air showers from the overhead sky. The large field of view and long observation time of Milagro is ideal for surveying large regions of the Northern Hemisphere sky and for detecting gamma rays at the highest energies. The emission from the entire inner Galaxy as visible from the Northern Hemisphere – Galactic latitude $|b| < 5^\circ$ and Galactic longitude $l \in [30^\circ, 100^\circ]$ – is detected at a median energy of 12 TeV with a significance of > 7 standard deviations above the isotropic background. The flux of this region exceeds that predicted from cosmic ray interactions with matter and radiation. However, discrete sources will contribute to this flux and 6 locations within this inner Galaxy region are more than 4.5 standard deviations above the isotropic background. Given the size of the inner Galaxy selected and the search method, fewer than one location is expected above 4.5 standard deviations by chance, if the background is isotropic. The flux of the inner Galaxy and of these 6 excess locations will be reported.

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