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Study of the diffuse gamma ray emission from the Galactic plane with ARGO-YBJ

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The data recorded by ARGO-YBJ in more than 5 years have been analyzed to determine the diffuse gamma ray emission from the Galactic plane. The spatial distribution of the diffuse gamma rays and their energy spectra at Galactic longitudes $25^\circ < l < 100^\circ$ and Galactic latitudes $|b| < 5^\circ$ have been studied. The regions with $40^\circ < l < 100^\circ$ and $65^\circ < l < 85^\circ$ have been focused, where Milagro observed an excess with respect to the predictions of current models. The energy range investigated covers from ~ 350 GeV to ~ 2 TeV, connecting the region explored by Fermi-LAT with the multi-TeV

energies studied by Milagro. Great care has been taken in masking the TeV point sources observed by ARGO-YBJ and other experiments. Our results are consistent with the predictions of the Fermi model and do not show any excess as observed by Milagro.

Collaboration

ARGO-YBJ

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