

TeV Gamma anisotropy connection with UHECR map: solving the link by ultrarelativistic radioactive nuclei decay in flight?

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The TeV gamma anisotropy in ARGO, MILAGRO and ICECUBE is one of the novel surprising discoveries of the decade. The TeVs or hundred TeV nucleons or nuclei cannot trace far their original sources because of the severe smearing by galactic fields. Gamma sources (AGN) cannot shine much far because IR-TeV photo opacity and their image might be a point source and not wide spread sky area. Galactic UHECR nuclei may keep a trace of their origination, but they may suffer narrow or wide bending either if light or heavy nuclei. However they cannot eject much gamma in flight by photo-dissociation, because of their local (galactic) distances travel. Nevertheless UHECR radioactive nuclei, bent and smeared, may shine their hundred keV decaying photons because of the UHECR Lorentz boost in an observable (and observed?) in TeV gamma sky. Therefore TeV anisotropy may correlate with UHECR map, as we did note, connecting both maps to nearby galactic sources.

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