



Contribution ID: 11

Type: **not specified**

Radioactive UHECR painting TeVs Gamma Anisotropy and first PeV observed neutrinos

Thursday 6 December 2012 17:50 (25 minutes)

UHECR (Ultra High Energy Cosmic Rays) were expected to be protons, whose spectra suffer of photopion opacity on cosmic CMB, the so called GZK cut off; AUGER did claimed on 2007 that such events were along the expected Super-Galactic plane with GZK cut off. However the same AUGER composition was favoring nuclei (and not nucleon); the recent absence of narrow angle clustering of UHECR as expected by protons, the missing of events along nearest Cluster Virgo, the wide spread angles of UHECR along Cen A, the more diffused events are in disagreement with first proton-UHECR-Super Galactic AUGER understanding. We claimed on 2008 a light nuclei role for Cen A crowded area. On the other side the ICECUBE absence of TeVs neutrino clustering or anisotropy, its spectra steepening is favoring mostly a ruling atmospheric neutrino noise up to tens TeV. However recent two PeV neutrino event cannot easily coexist or being extrapolate with such atmospheric ruling scenario, nor with GZK cut off (either nucleon or nuclei) secondaries expected spectra. We suggested and we reconfirm that an radioactive light and heavy UHECR component, while decaying in flight, may paint in the sky (by gamma, electrons and neutrinos) their trajectories and bending, connecting UHECR with TeV gamma anisotropy in ARGO-ICECUBE, as well offering a very realistic source of first observed PeV neutrinos.

Summary

UHECR maybe connected to UHE gamma anisotropy and
first neutrino astronomy
See.

1. arXiv:1209.6090
Radioactive UHECR Astronomy: Correlating gamma anisotropy and neutrino PeV events
2. arXiv:1208.2471
UHECR bending, clustering and decaying feeding gamma anisotropy
D. Fargion, D. D'Armiento, P. Paggi
3. arXiv:1207.0254
TeV gamma-UHECR anisotropy by decaying nuclei in flight: first neutrino traces?
Daniele Fargion
4. arXiv:1201.0157
TeV sky versus AUGER one: are UHECR also
radioactive, heavy galactic nuclei?
Daniele Fargion
Nuclear Inst. and Methods in Physics Research,
A (2012), pp. 174-179
5. arXiv:1112.6388
Apart Cen A are UHECR mostly
heavy radioactive and galactic nuclei?
Daniele Fargion

Author: Prof. FARGION, Daniele (Rome University 1 Sapienza and INFN)

Presenter: Prof. FARGION, Daniele (Rome University 1 Sapienza and INFN)

Session Classification: P15 –NEUTRINOS