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Lightest Nuclei UHECR from nearby galactic and nearest AGN sources

Tuesday 11 October 2016 17:45 (20 minutes)

The absence of UHECR clustering toward largest cluster of galaxy, Virgo, the presence of a smeared hot spot toward Cen A and M82, the presence of rarest nearest size multiplet along our galactic plane, all stand in favor of a very light UHECR composition. Their propagation from 20 Mpc Virgo is forbidden by photo-nuclear dissociation opacity, while it is allowed from few nearby AGN around 2-4 Mpc. Their smeared bending angle is consistent with the lightest nuclei of a few charges.
The very recent composition test by AUGER and TA by air showering models converged to light and Lightest nuclei that we did suggest several times since early 2008. Rare clustering multiplet at twenty EeV around Cen A and Magellanic Cloud, somehow hidden into the other UHECR noises, are also suggesting this interpretation.

Presentation type

oral

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