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UHECR light nuclei and upward Tau airshower

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At tens EeV UHECR in AUGER show a composition linked to nuclei. At same energy UHECR showers in Hires seem to point to nucleon (or light nuclei). We found that lightest nuclei as He UHECR may solve at once both experiment composition signals as well as the spread around Cen-A of more than a dozen of events and the absence of Virgo cluster traces. The consequences maybe a diluted and unobservable GZK neutrino signal at EeV and an ineteresting signal at a tenth of WB flux of PeV neutrinos. Such a signals maybe observed by nearby upward tau airshowers seen in fluorescence telescopes in AUGER and TA.

Summary

Ultra High Cosmic Rays (UHECR) should be tracing their sources, making a new astronomy. Their events counting are finally growing, by Auger experiment, into cosmic sky. Their map should follow the mass distribution in a narrow cosmic volume (the GZK cut off region, correlated with Super Galactic Plane (SPG) or Local Group) if they were protons, as most expected. Indeed at first UHECR did seem to follow the GZK cut off and to correlate with SGP, (even if a few of us disagreed). Recently the last 69 UHECR did not longer follow the SGP map, opening the way to very different correlations , and extreme bending connection; we reconfirm here our Lightest Nuclei interpretation while showing here the last event over different radio,X,Gamma and tens TeV CR maps. The Virgo Cluster absence, the persistence of UHECR clustering along Cen A, the first triplet along Vela seem to confirm light nuclei UHECR understanding, implying a very narrow Universe view, even partially of galactic origin. UHECR fragments might follow (at half, fourth of the energy) the same UHECR map with a tail or a crown clustering around main UHECR group. Also secondary gamma and UHE neutrino might trace partially those maps. Tau neutrinos at EeV or PeVs may play a role in correlating UHECR map and disentangling nucleon from nuclei nature, possibly in Auger Fluorescence Telescopes, by night horizontal up-going tau airshowers.

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