



Contribution ID: 22

Type: talk

Are UHECR and multiplet also galactic?

Wednesday, February 15, 2012 2:40 PM (20 minutes)

Since last decades UHECR models teach us that at EeV energy UHECR are mostly of extragalactic origin. Moreover earliest (2007) AUGER at 55 EeV energy events were suggesting an UHECR GZK cut off and arrival map correlated with super-galactic plane, SGP, inside the expected GZK volume traced by protons. However the same AUGER composition imprint favoured nuclei (heavy or light) and not nucleons. Finally last (2010) UHECR map fade any SGP correlation while earliest Cen A (nearest AGN source) correlation reinforced and survived. Since early 2008 we interpret the signals as lightest He-like UHECR, that cannot fly more than few Mpc explaining Virgo absence and smeared Cen A unique traces. We foresaw (and now we observe) multiplets (at 20 EeV) by He fragments overlapping Cen A. We noted also a Vela triplet, eventual multiplet along Cen A; unexpected multiplet rose also along Magellanic stream. Therefore we ask the key question of present article: beyond Cen A may our galaxy and local group hide important sources, contrary to extra-galactic (GZK) UHECR models?

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

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

Session Classification: Source models and theory challenges of UHECRs