Contribution ID: **32** Type: **talk**

Constraints on inductive acceleration of UHECRs in astrophysical sources.

Wednesday, February 15, 2012 2:00 PM (20 minutes)

I discuss possible sites of acceleration of UHECRs by regular electromagnetic fields in astrophysical sources. A plausible mechanism of acceleration works in the vicinity of supermassive black holes in active galactic nuclei. It is motivated by relatively high density of UHECR sources as suggested by both statistics of clustering and the shape of the GZK cutoff. However, I demonstrate that the model is strongly constrained by FERMI-LAT observations of the secondary gamma-ray background. I also briefly discuss potential Galactic sources where this mechanism might be at work.

Primary author: TROITSKY, Sergey (Russian Academy of Sciences (RU))

Co-authors: Ms PTITSYNA, Ksenia (Moscow State University); Dr KALASHEV, Oleg (INR RAS)

Presenter: TROITSKY, Sergey (Russian Academy of Sciences (RU))

Session Classification: Source models and theory challanges of UHECRs