



Contribution ID: 41

Type: **not specified**

Propagating Ultra-High Energy Cosmic Rays in the Universe with CRPropa

Wednesday 25 September 2013 14:20 (20 minutes)

The origin, chemical composition, and mechanisms of acceleration of the ultra-high energy cosmic rays (UHE-CRs) are not yet well understood. Aiming for a better interpretation of the available experimental data, these data have to be confronted with theoretical models. In this sense, the development of numerical tools to propagate UHECRs is essential to constrain astrophysical parameters. CRPropa 3 is a software package to simulate the propagation of UHE nuclei through the large scale structure of the universe. It accounts for all relevant interactions with the photon backgrounds, as well as deflections due to galactic and extragalactic magnetic fields.

Primary author: Mr ALVES BATISTA, Rafael (II. Institute for Theoretical Physics, University of Hamburg)

Presenter: Mr ALVES BATISTA, Rafael (II. Institute for Theoretical Physics, University of Hamburg)

Session Classification: Parallel Session 1 + 2: Particle Phenomenology and Cosmology & Astroparticle Physics

Track Classification: Cosmology & Astroparticle Physics