



Contribution ID: 96

Type: **not specified**

Measurement of the Cosmic Ray energy spectrum with ARGO-YBJ

Friday, 23 May 2014 09:50 (25 minutes)

The ARGO-YBJ detector, located at high altitude in the Cosmic Ray Observatory of Yangbajing in Tibet (4300 m asl, about 600 g/cm² of atmospheric depth) provides the opportunity to study, with unprecedented resolution, the cosmic ray physics in the primary energy region between 10¹² and 10¹⁶ eV.

The preliminary results of the measurement of all-particle and light-component (i.e. protons and helium) energy spectra between approximately 5 TeV and 5 PeV will be reported and discussed.

The study of such energy region is particularly interesting because not only it allows a better understanding of the so called knee of the energy spectrum and of its origin, but also provides a powerful cross-check among very different experimental techniques. The comparison between direct measurements by balloons/satellites and the results by surface detectors, implying the knowledge of shower development in the atmosphere, also allows to test the hadronic interaction models currently used for understanding particle and cosmic ray physics up the highest energies.

Primary author: DI SCIASCIO, Giuseppe (ROMA2)

Presenter: DI SCIASCIO, Giuseppe (ROMA2)

Session Classification: Cosmic Rays