ICRC2015

ICRC
The Astroparticle Physics Conference
34th International Cosmic Ray Conference
July 30 - August 6, 2015
The Hague, The Netherlands

Contribution ID: **218** Type: **Oral contribution**

Combined fit of spectrum and composition data as measured by the Pierre Auger Observatory

Monday, 3 August 2015 14:00 (15 minutes)

We present a combined fit of both flux and composition of ultra-high energy cosmic rays as measured by the Pierre Auger Observatory. The fit has been performed for energies above 5×10^{18} eV, the region of the all-particle spectrum above the so-called "ankle" feature. A simple astrophysical model has been adopted, consisting of identical sources, injecting nuclei with a rigidity dependent mechanism and uniformly distributed in a comoving volume. The solutions that have been found suggest a source model characterized by relatively low maximum injection energies and hard spectral indices. The impact of different sources of systematic uncertainties in the above result is discussed.

Collaboration

Pierre Auger

Registration number following "ICRC2015-I/"

237

Primary author: Mr DI MATTEO, Armando (INFN and University of L'Aquila)

Presenter: Mr DI MATTEO, Armando (INFN and University of L'Aquila)

Session Classification: Parallel CR13 EX EAS

Track Classification: CR-EX