



Contribution ID: 1053

Type: Poster

A method of measuring parameters of an extensive air shower at Yakutsk EAS array

Saturday, August 6, 2016 6:00 PM (2 hours)

Proposed a new method for measuring the cherenkov light from the extensive air shower (EAS) of cosmic rays (CR), which allows to determine not only the primary particle energy and angle of arrival, but also the parameters of the shower in the atmosphere - the maximum depth and "age".

For measurements Cherenkov light produced by EAS is proposed to use a ground network of wide-angle telescopes which are separated from each other by a distance 100-300 m depending on the total number of telescopes operating in the coincidence signals, acting autonomously, or includes a detector of the charged components, radio waves, etc. as part of EAS. In a results such array could developed, energy measurement and CR angle of arrival data on the depth of the maximum and the associated mass of the primary particle generating by EAS. This is particularly important in the study of galactic cosmic ray in $E > 10^{14}$ eV, where currently there are no direct measurements of the maximum depth of the EAS.

Primary author: TIMOFEEV, Lev (SHICRA SB RAS)

Co-author: IVANOV, Anatoly (Shafer Institute for Cosmophysical Research & Aeronomy)

Presenter: TIMOFEEV, Lev (SHICRA SB RAS)

Session Classification: Poster Session

Track Classification: Astro-particle Physics and Cosmology