Contribution ID: **40** Type: **not specified**

The Tunka-133 EAS Cherenkov light array: status, all particle energy spectrum and future plans.

Friday, May 27, 2011 12:30 PM (20 minutes)

The new EAS Cherenkov light array Tunka-133 with ~1 km2 geometric area has been installed in the Tunka Valley (50 km from the Lake Baikal) in 2009. We describe the array construction, the DAQ and methods of the array calibration. The method of energy reconstruction, providing high energy resolution, and the absolute energy calibration are discussed. The all particle energy spectrum, based on the data of the first winter season 2009/2010, is presented. The spectrum is compared with that obtained by the Tunka-25 array as well as the results of other experiments, a possible interpretation is discussed. Plans for future upgrade are presented: deployment of remote clusters, installation of a radio antennas, muon detectors and low energy optical stations.

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Session Classification: Ultra High Energy Cosmic Rays