

The wide-aperture gamma-ray telescope TAIGA-HiSCORE in the Tunka Valley: design, composition and commissioning.

The new TAIGA-HiSCORE non-imaging Cherenkov array aims to detect air showers induced by gamma rays above 30 TeV and to study cosmic ray above 100 TeV. TAIGA-HiSCORE represents an array of wide field of view (0.6 sr) integrating air Cherenkov detector stations, placed of 100 m from each other. They cover an area of initially ~ 0.25 km² (array prototype) to ~ 5 km² at the final phase of the experiment. Each station includes 4 neighbored PMTs with 20 or 25 cm diameter, equipped with light guides shaped as Winstone cone. We describe the design, specifications of the read-out, DAQ and control and monitoring systems of the array. The present 28 detector stations of the TAIGA-HiSCORE engineering setup are in operation since September 2015. Preliminary results of data taking are presented.

Author: Mr GRESS, Oleg (API ISU)

Presenter: Mr GRESS, Oleg (API ISU)

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