

Overview of the Tunka-Rex experiment

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Tunka-Rex is a sparse antenna array, detecting radio emission from cosmic-ray air showers. It works in the frequency band of 30 to 80 MHz and consists of 63 stations, equipped with SALLA antennas. Tunka-Rex operates jointly with other detectors of the TAIGA (Tunka Advanced Instrument for cosmic ray physics and Gamma Astronomy) facility, the scintillator array Tunka-Grande and the air-Cherenkov array Tunka-133, receiving the trigger from them. The threshold of Tunka-Rex is higher than for Tunka-Rex and Tunka-Grande and is about 100 PeV. By applying new methods of reconstruction, firstly, the shower maximum resolution was improved to 25-35 g/cm², secondly, the energy resolution was increased to 10%. In this work, we present an overview of the experiment and discuss the latest results of Tunka-Rex.

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