

Latest results of the Tunka Radio Extension

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The Tunka Radio Extension (Tunka-Rex) is an antenna array consisting of 44 antennas at the location of the TAIGA facility (Tunka Advanced Instrument for cosmic ray physics and Gamma Astronomy) in Eastern Siberia, nearby Lake Baikal. Tunka-Rex is triggered by the air-Cherenkov array Tunka-133 during moonless winter nights and by the scintillator array Tunka-Grande during daytime. Tunka-Rex measures the radio emission from the same air-showers as Tunka-133 and Tunka-Grande, but with a higher threshold of about 100 PeV. During the first stages of its operation, Tunka-Rex has proven, that sparse radio arrays can measure air-showers with an energy resolution of better than 15% and the depth of the shower maximum with a resolution of better than 40 g/cm². To improve and interpret our measurements as well as to study systematic uncertainties due to interaction models, we perform radio simulations with CORSIKA and CoREAS. In this overview we present the setup of Tunka-Rex, discuss the achieved results and prospects of mass composition study with radio arrays.