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TAIGA the Tunka Advanced Instrument for cosmic ray physics and Gamma Astronomy — present status and perspectives.

The TAIGA collaboration

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ABSTRACT: TAIGA stands for “Tunka Advanced Instrument for cosmic ray physics and Gamma Astronomy” and is a project to build a complex, hybrid detector system for ground-based gamma-ray astronomy from a few TeV to several PeV, and for cosmic ray studies from 100 TeV to 1 EeV. TAIGA will search for “PeVatrons” (ultra-high energy gamma-ray sources) and measure the composition and spectrum of cosmic rays in the knee region (100 TeV–10 PeV) with good energy resolution and high statistics. TAIGA will include Tunka-HiSCORE — an array of wide-angle air Cherenkov stations, an array of Imaging Atmospheric Cherenkov Telescopes, an array of particle detectors, both on the surface and underground and the TUNKA-133 air Cherenkov array.

KEYWORDS: Large detector systems for particle and astroparticle physics; Gamma telescopes