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High-frequency antenna cluster at the Tien Shan High-Mountain Scientific Station

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Antenna clusters located in the Tien Shan High Mountaine Scientific Station (TSHMSS) are designed for radio detection of Extensive Air Showers (EAS) of cosmic rays. The cluster consists of 4 radio antennas, which each of them consists of mutually perpendicular arcs distributed over an area of 1700 m2. The analog part of the measuring path consists of a SALLA type antenna. These high-frequency antennas of the "SALLA" type were used in the Tunka-REX experiment, operating in the frequency range of 30-80 MHz.

The antenna cluster works in conjunction with other installations to register SHAL. The cluster registers radio signals emitted by showers with energy above 10^{15}-10^{16} eV. The purpose of the cluster is to investigate the possibilities of radio detection of the EAS, at an altitude of 3440 m above sea level, to determine the energy and elemental composition of primary cosmic rays.

Preliminary experimental data were obtained from the antenna cluster located at the Tien Shan high-Mountain Scientific Station. The experimental data were compared with the data obtained as a result of modeling in the CORSIKA package.

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