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Mass composition of primary cosmic rays by the latest TAIGA-HiSCORE data

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This report presents the latest findings on the mass composition of primary cosmic rays based on data from the TAIGA-HiSCORE array, which operated in its full configuration with four clusters. The TAIGA-HiSCORE stations were reoriented towards the zenith, and new calibration procedures were introduced to improve the detector array's performance. The study of extensive air showers (EAS) in the energy range of 1 to 100 PeV, using the depth of the shower maximum, shows good agreement with results from the LHAASO experiment, particularly near the “knee” of the cosmic ray energy spectrum. An increase in the mean logarithmic mass in the 3-30 PeV energy range was also observed and examined.

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