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Analysis of the angular distribution of terrestrial cosmic-ray nuclei based on EXPACS Code

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Cosmic rays are highly energetic particles emitted from different galactic and extragalactic sources. These primary particles propagate through interstellar space until they reach the Earth's atmosphere. The number of particles detected on the surface of Earth is not the same depending on the direction viewed in the sky, it varies with the zenith angle. In this work, we calculate the angular distribution of cosmic rays nuclei taking into account the influence of certain environmental factors such as the altitude and Earth's magnetic field. The results were obtained using the most recent version of the EXPACS code and the latest experimental data.

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