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Search for dipole asymmetry of UHECR by the TUS space detector.

Abstract content

A space detector has an advantage of observing during a year the arrival directions of ultra-high-energy (UHE) cosmic-ray (CR) particles from the whole sky. We study the prospects of detecting global asymmetries predicted by two distinct scenarios of the origin of UHECR: the Galactic dipole asymmetry expected in the superheavy dark-matter scenario and asymmetries expected if sources of UHE protons follow the distribution of visible matter in the Universe. The first space-based detector of UHECR particles, TUS, will be able to test the predicted asymmetries.

If this papers is presented for a collaboration, please specify the collaboration

Summary

Reference

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