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Cosmic ray anisotropy study by means of muon bundles

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In this work, muon bundles detected at the ground level are used as a tool for high energy cosmic ray anisotropy search. Due to their penetrating ability, muons with a good accuracy retain the direction of a primary particle. Long-term muon bundle registration from 2012 to 2019 was performed with the coordinate-tracking detector DECOR, which is a part of the Unique Scientific Facility "Experimental complex NEVOD" (Moscow, Russia). About 10 million events with primary energies more than 1 PeV were recorded. We describe a method which compensates the influence of the meteorological conditions on the intensity of muon bundles at the Earth surface. Results of the search of the dipole anisotropy of cosmic rays with energy more than 1 PeV are presented, and their comparison with those of other facilities is also given.

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