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Ultra-High-Energy Cosmic-Ray Hotspot Observed with the Telescope Array Surface Detectors

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The Telescope Array Experiment has observed a cluster of ultrahigh energy cosmic rays, $E > 57$ EeV, called the Hotspot. This was reported in (Abbasi et al., ApJ, 790, L21 (2014)), and was centered in Ursa Major. Using the first five years of data collected by the TA surface detector, the chance probability of this hotspot in an isotropic cosmic-ray sky was calculated to be 3.4σ . In this work, we update this result using the latest data collected by the TA surface detector. We also discuss possible origins of the hotspot

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Collaboration

Telescope Array

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