

## ANISOTROPY OF COSMIC-RAY ARRIVAL DIRECTION AT $10^{18}$ EV OBSERVED BY AGASA

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The anisotropy of cosmic-ray arrival direction at  $10^{18}$ eV was studied using 15 years data of AGASA and its prototype detector. The significant excesses near the galactic center and the spiral-in direction, and the deficit in the anti-galactic were found (Hayashida et al. 1999). There are two possible interpretations of these anisotropies, one is a cosmic ray flow from the galactic center to outer galaxy and the other is a neutral particles from sources near the galactic center and the spiral-in directions. In this paper, we will discuss the nature of these anisotropies by examining AGASA data with several hypothetical tests.

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