

## Search for the large-scale cosmic-ray anisotropies using the TA and TALE surface detector arrays

Origins of ultra-high-energy cosmic rays (UHECRs) are still largely unknown. In particular, the “2nd knee” around  $10^{17}$  eV could be related to a transition of origins from the galactic to extra-galactic sources. In this scenario, One would expect the large-scale anisotropies of UHECRs to change over the 2nd knee region. We search for large-scale anisotropies using data taken from surface detector (SD) arrays of the Telescope Array experiment (TA), the largest cosmic-ray detector in the northern hemisphere, and from its low energy extension, the Telescope Array Low energy Extension experiment (TALE). In this contribution, we will report on preliminary results in the search for the large-scale cosmic-ray anisotropies with 11-years TA SD and 2-years TALE SD data.

**Primary authors:** KIMURA, Yusuke (Osaka Metropolitan University); FUJII, Toshihiro (Osaka Metropolitan University); Prof. OGIO, Shoichi (ICRR, the University of Tokyo); Prof. TSUNESADA, Yoshiki

**Presenter:** FUJII, Toshihiro (Osaka Metropolitan University)