

Abstract Submitted  
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**The mass composition of ultra-high energy cosmic rays measured by the Telescope Array experiment**<sup>1</sup> TOSHIHIRO FUJII, Kavli Institute for Cosmological Physics, University of Chicago, TELESCOPE ARRAY COLLABORATION — Measurements of the mass composition and its energy dependence are necessary to understand sources and propagations of cosmic rays and to exclude several theoretical models. A longitudinal development of an extensive air shower reaches its maximum at a depth,  $X_{\max}$ , that depends on the species of the primary cosmic ray. Using a technique based on  $X_{\max}$ , we report the mass composition of ultra-high energy cosmic rays from analyses of data observed by fluorescence detectors of the Telescope Array experiment. We summarize results analyzed by three different types of reconstruction procedures which are stereo, monocular and hybrid mode.

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Toshihiro Fujii  
Kavli Institute for Cosmological Physics, University of Chicago

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