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Summary of UHECR composition measurements by the Telescope Array Experiment

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We study the chemical composition of ultrahigh energy cosmic rays primarily using the Xmax technique. The reconstruction techniques use events either seen by two of the TA fluorescence detectors (stereo mode), or by one fluorescence detector, and one fluorescence detector and the TA surface detector (hybrid mode). Each technique has its own acceptance imprinted on the data. We compare the resulting Xmax distributions to those of shower Monte Carlo simulations, by generating events and analyzing them with exactly the same programs as the data. For energies greater than 10^{18} eV, the results in all cases appear to be an unchanging light composition. In this talk, a summary of all TA Xmax data will be presented.

Collaboration

Telescope Array

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