

Cherenkov pulse shape measurements of primary composition

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Abstract. The primary cosmic ray spectrum lies relatively unexplored in the energy range 10 – 100 TeV. Satellite experiments suffer from poor statistics in probing high energies, and ground-based particle arrays are limited by their operating thresholds from getting down to the lower energy events. An atmospheric Cherenkov telescope can maintain a sufficiently large collecting area at these energies and is

able to probe higher energies through large zenith angle observations. Structure in the leading edge of the Cherenkov time profile (of hadron induced cascades) is investigated as a possible discriminator of cosmic ray species. Experimental results are presented.