

PRIMARY MASS COMPOSITION ABOVE 10^{17} eV FROM OPTICAL DATA

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Optical pulses are detected in association with UHE cosmic ray showers recorded by the GU miniarray detector, which is sensitive for primary energy 10^{17} - 10^{18} eV. It is well known that the characteristics of these associated optical pulses are correlated with the longitudinal shower development and hence the mass composition of the primary particle. Pulse rise-time, height, FWHM are measured for individual optical pulses using Digital Storage Oscilloscope. The experimental data are simulated using Monte Carlo Method for different composition models. Both scattered Cerenkov photons and possible contribution from fluorescent light are incorporated in the MC algorithm. Preliminary experimental data and comparison with simulation results are presented in this paper.