Cosmic Ray Energy Spectrum Above 10^{17}eV Observed From Gauhati University Mini Array Data

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The Gauhati University Mini Array consisting of eight plastic scintillator of carpet area $2m^2$ each viewed by fast PMT's (Thorn EMI 9807B) has been operated since September 1996. The Array detects Giant Extensive Air Showers by the method of time spread measurement of secondary particles produced by the UHE Cosmic Rays in the atmosphere. All the eight detectors are connected to a data acquisition system capable of recording arrival time spread of secondary particles upto 2.5μS. We have reanalyzed the data recorded by the array through April 1999.The paper presents the derived energy spectrum above primary energy $E=10^{17}$eV. The best fitted differential energy spectrum observed by the Array is $j(E)=10^{25.38}HE^{-3.04".06}$ m^{-2} sr^{-1} s^{-1} eV^{-1}.