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## Measurement of the UHECR spectrum above $10^{19}$ eV at the Pierre Auger Observatory using showers with zenith angles greater than 60 degrees

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### Abstract content

We report on the cosmic ray spectrum obtained using the inclined events detected with the Pierre Auger Observatory. Showers with zenith angles between  $60^\circ$  and  $80^\circ$  recorded in the period between January 1st, 2004 and December 31st, 2006 are analysed. Showers are first reconstructed in arrival direction and then fitted to density maps of the muon numbers obtained from  $10^{19}$ eV simulated proton showers for different arrival directions, to obtain the core position and an overall normalisation factor  $N_{19}$  which is used as an energy estimator. The parameter  $N_{19}$  is shown to be correlated with the shower energy measured with the fluorescence technique for a sub-sample of good quality hybrid showers. The correlation obtained between  $N_{19}$  and energy is used to measure the energy of all the showers.

### If this papers is presented for a collaboration, please specify the collaboration

The Pierre Auger Collaboration

### Summary

### Reference

Proceedings of the 30th International Cosmic Ray Conference; Rogelio Caballero, Juan Carlos D'Olivo, Gustavo Medina-Tanco, Lukas Nellen, Federico A. Sánchez, José F. Valdés-Galicia (eds.); Universidad Nacional Autónoma de México, Mexico City, Mexico, 2008; Vol. 4 (HE part 1), pages 339-342

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