

## CONSTRAINTS ON THE UHE PHOTON FLUXES FROM INCLINED SHOWERS DETECTED IN HAVERAH PARK

M. Ave (1,2), J.A. Hinton (1), R.A. Vázquez (2), A.A. Watson (1) and **E. Zas** (2)

(1) Department of Physics and Astronomy, University of Leeds, Leeds LS2 9JT, UK, (2) Departamento de Física de Partículas, Universidad de Santiago de Compostela, E-15706 Santiago, Spain..

Using data from inclined events ( $60^\circ < \theta < 80^\circ$ ) recorded by the Haverah Park shower detector, we show that above  $10^{19}$  eV less than 41% of the primary cosmic rays can be photons at the 95% confidence level. Above  $4 \times 10^{19}$  eV less than 65% of the cosmic rays can be photonic at the same confidence level. These limits place important constraints on some models of the origin of ultra high energy cosmic rays. Details of two new events above  $10^{20}$  eV are reported.