



This evidence from the FAST satellite offers proof of parallel electric fields. (a) The D.C. electric field perpendicular to the magnetic field and nearly along to the velocity of the satellite is compared to the (b) up-going ion energy flux. In the lower panel, the inferred parallel potential from the observed electric field (a) is superimposed. The remarkable agreement is strong evidence that parallel electric fields accelerate auroral particles. [From Ergun et al., GRL, 1998]