# Cross-Scale Auroral Energy Transport

CHRIS C. CHASTON[1], REIMEI TEAM[2] FAST TEAM[3]
[1]*Space Sciences Laboratory*
[2]ISAS
[3]NASA

The kinking, curling and folding curtains of light known as the aurora are the beautiful consequence of Earthward electron acceleration along the geomagnetic field. While recent satellite measurements have improved understanding of the processes driving electrons Earthward to power emission of auroral light, there has been little advance in understanding the enigmatic motion of the forms that make aurora watching so compelling. We show movies and results from analyses of recent high resolution satellite imagery, particle and fields measurements that reveal the action of cross-scale coupling and plasma instabilities through the auroral acceleration region. Through the use of a 3-D reduced MHD simulation we show how these processes may form some of the characteristic features observed in aurorae at small scales.