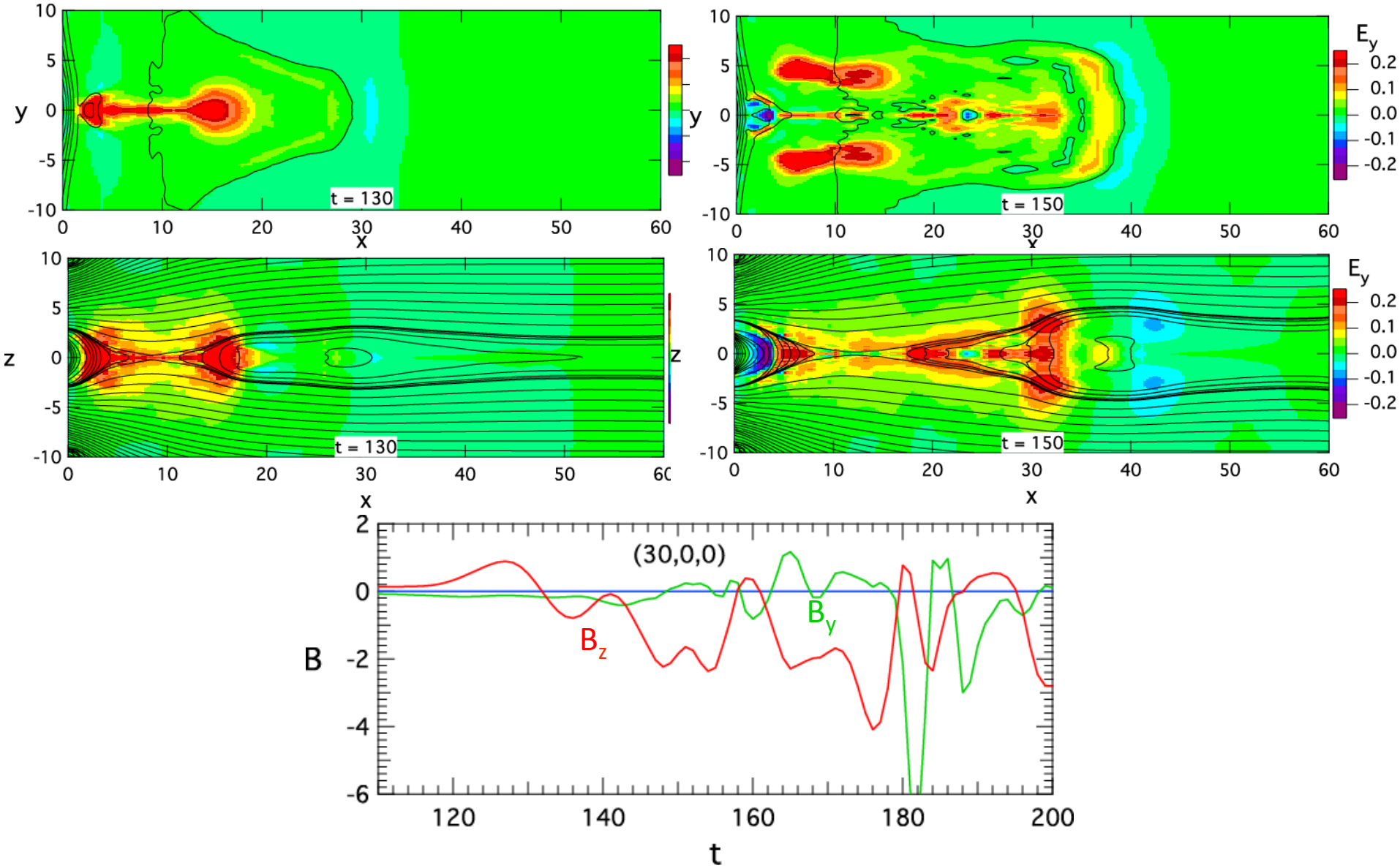
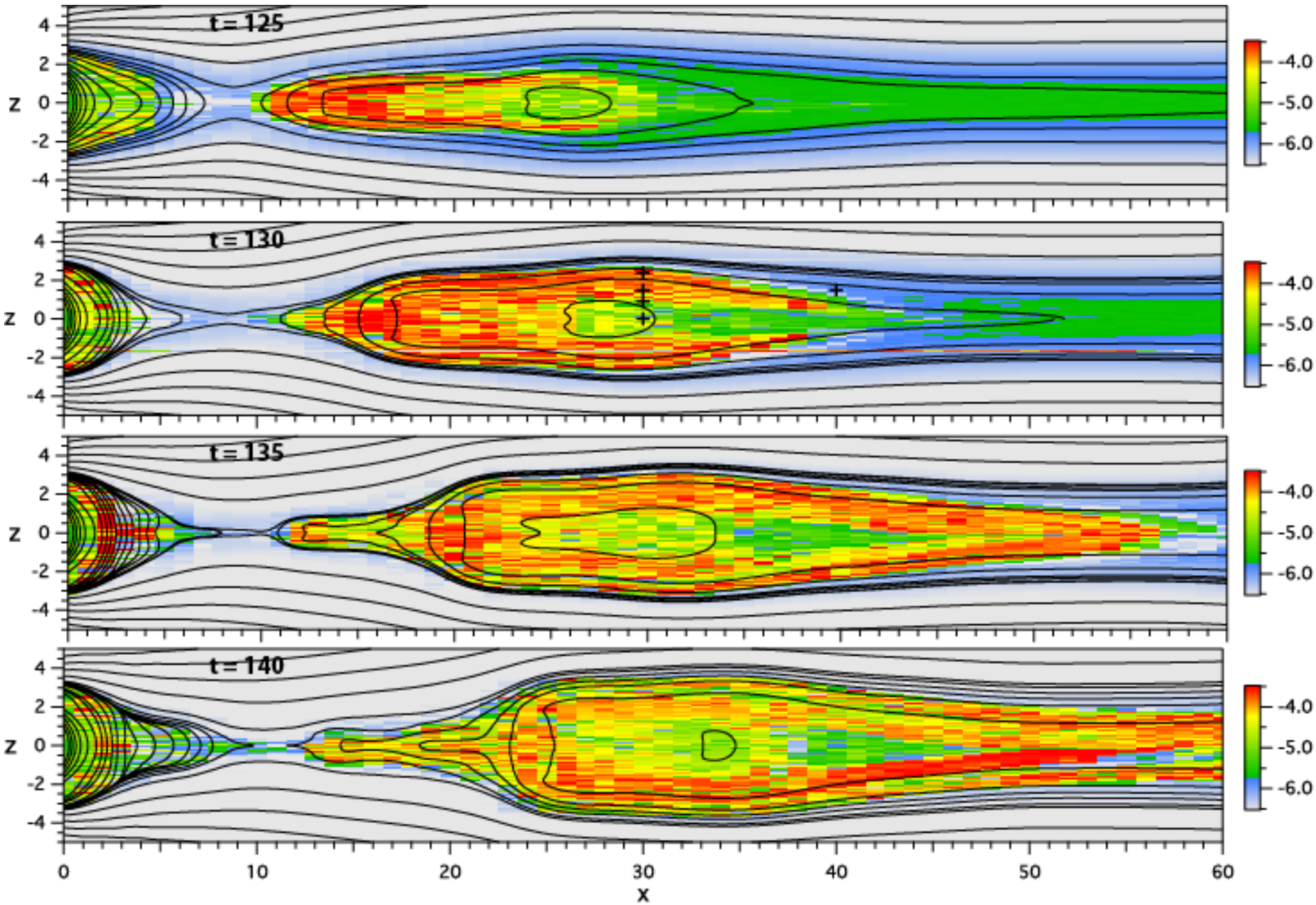
Energetic ion signatures in the far tail (MHD+test ions)

MHD simulation, "anti-dipolarization front": $E_y(x,y)$ & $E_y(x,z)$

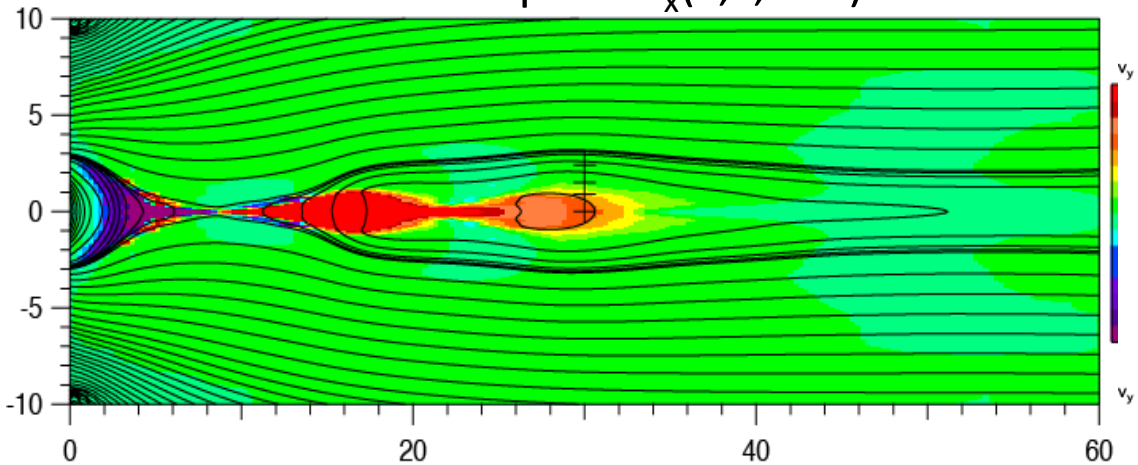


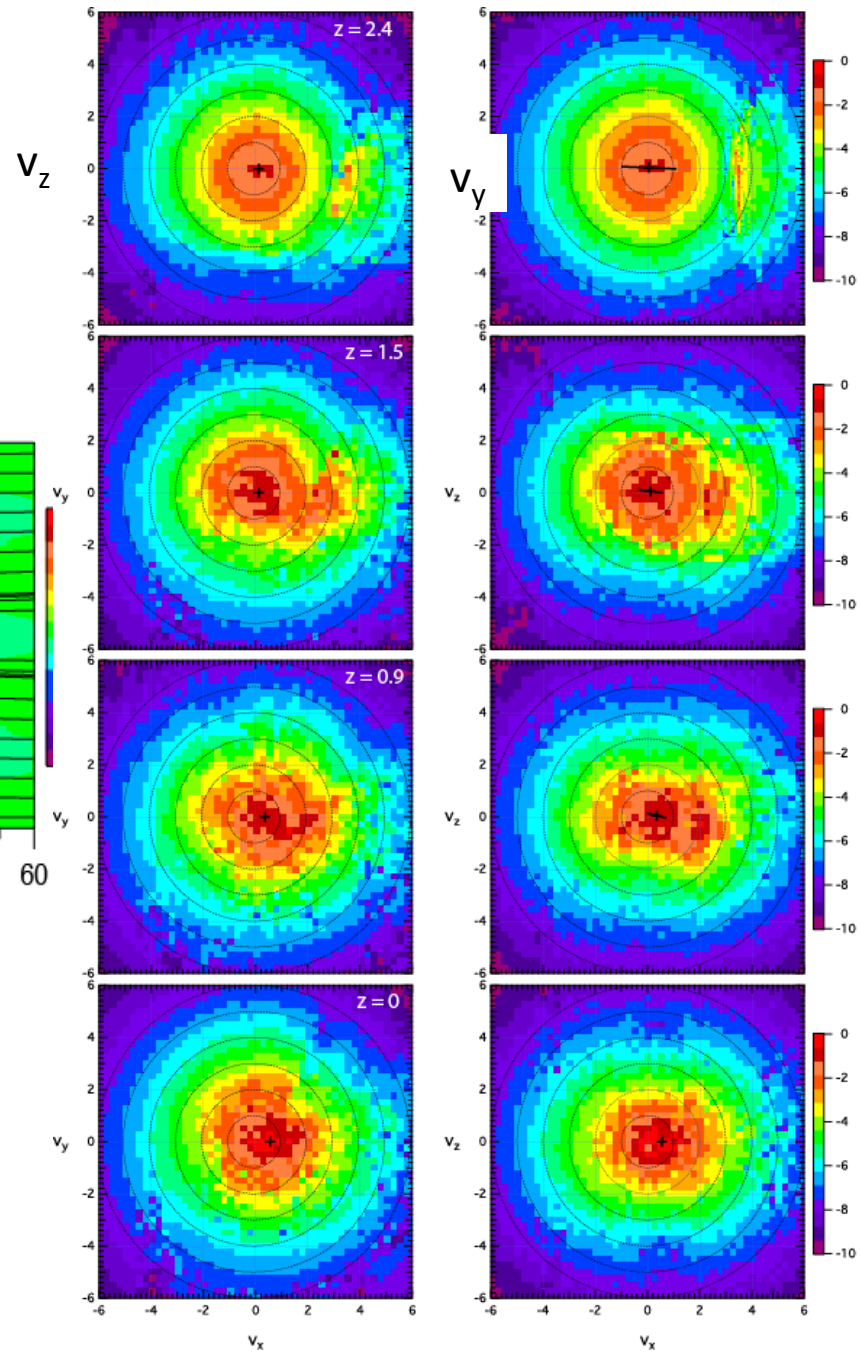
tailward diff. energy fluxes, protons 83.5 keV



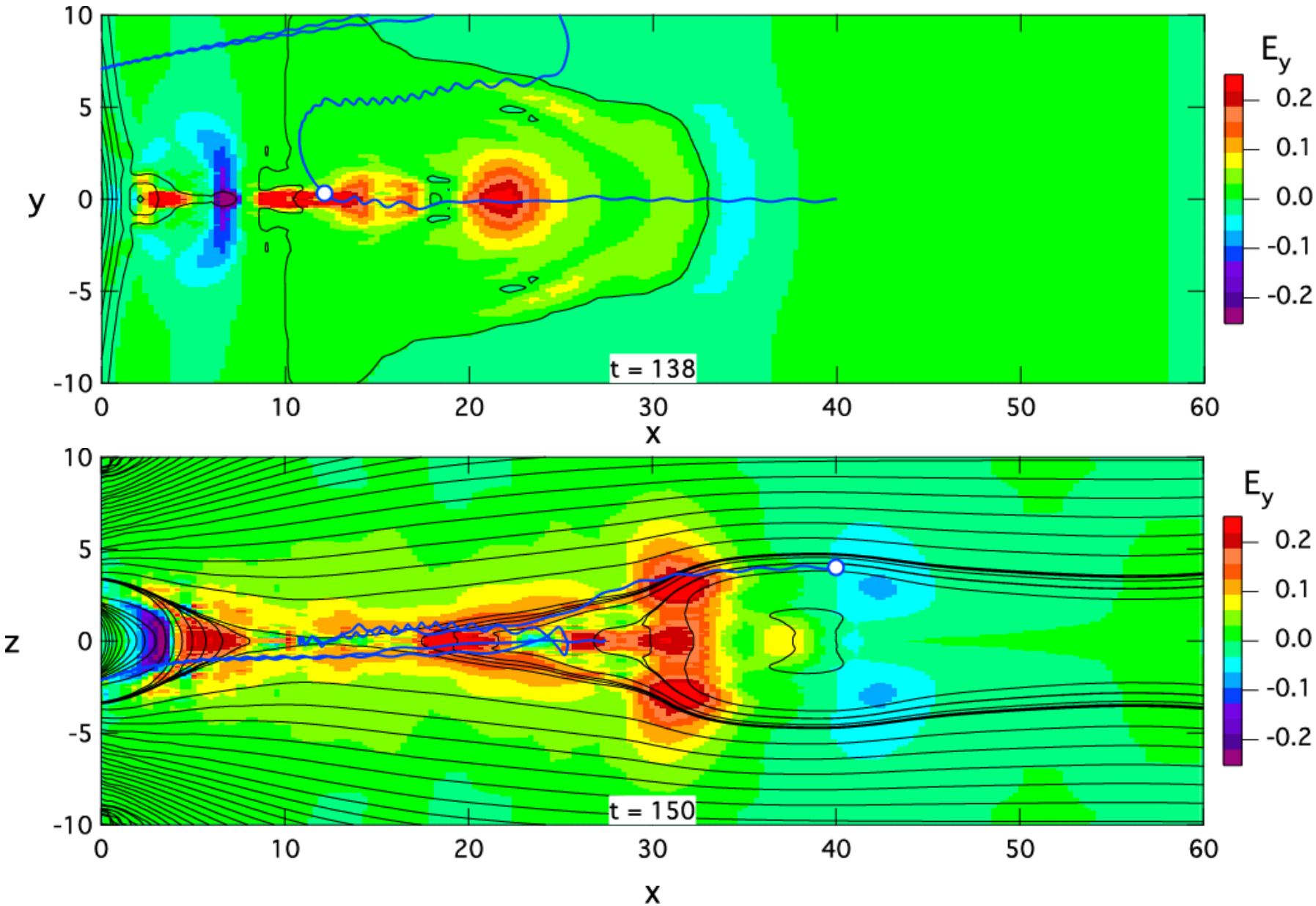
Proton velocity distributions F(v), x=30 (~ 50 R_E)

MHD flow speed $v_x(x,z;130)$

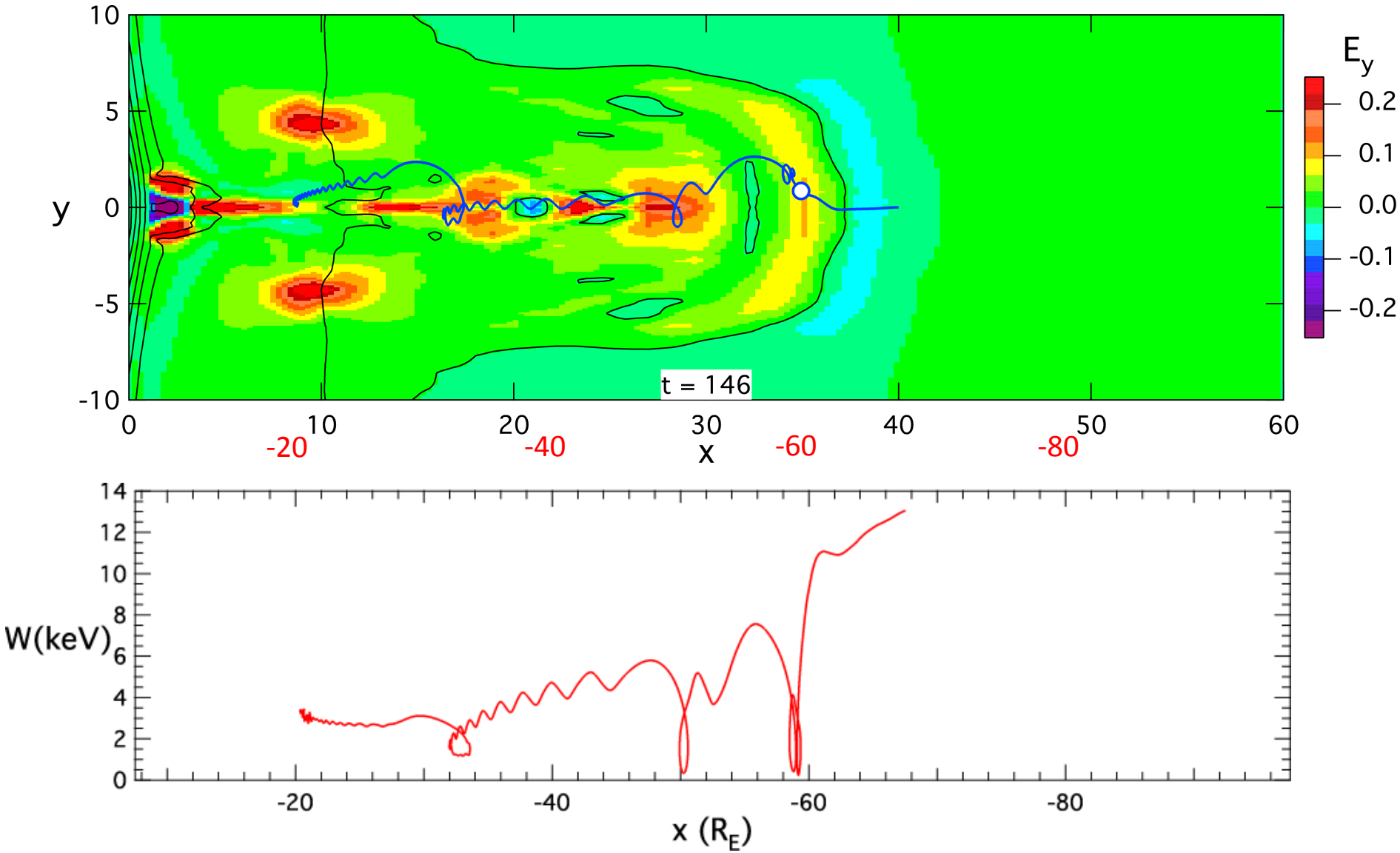
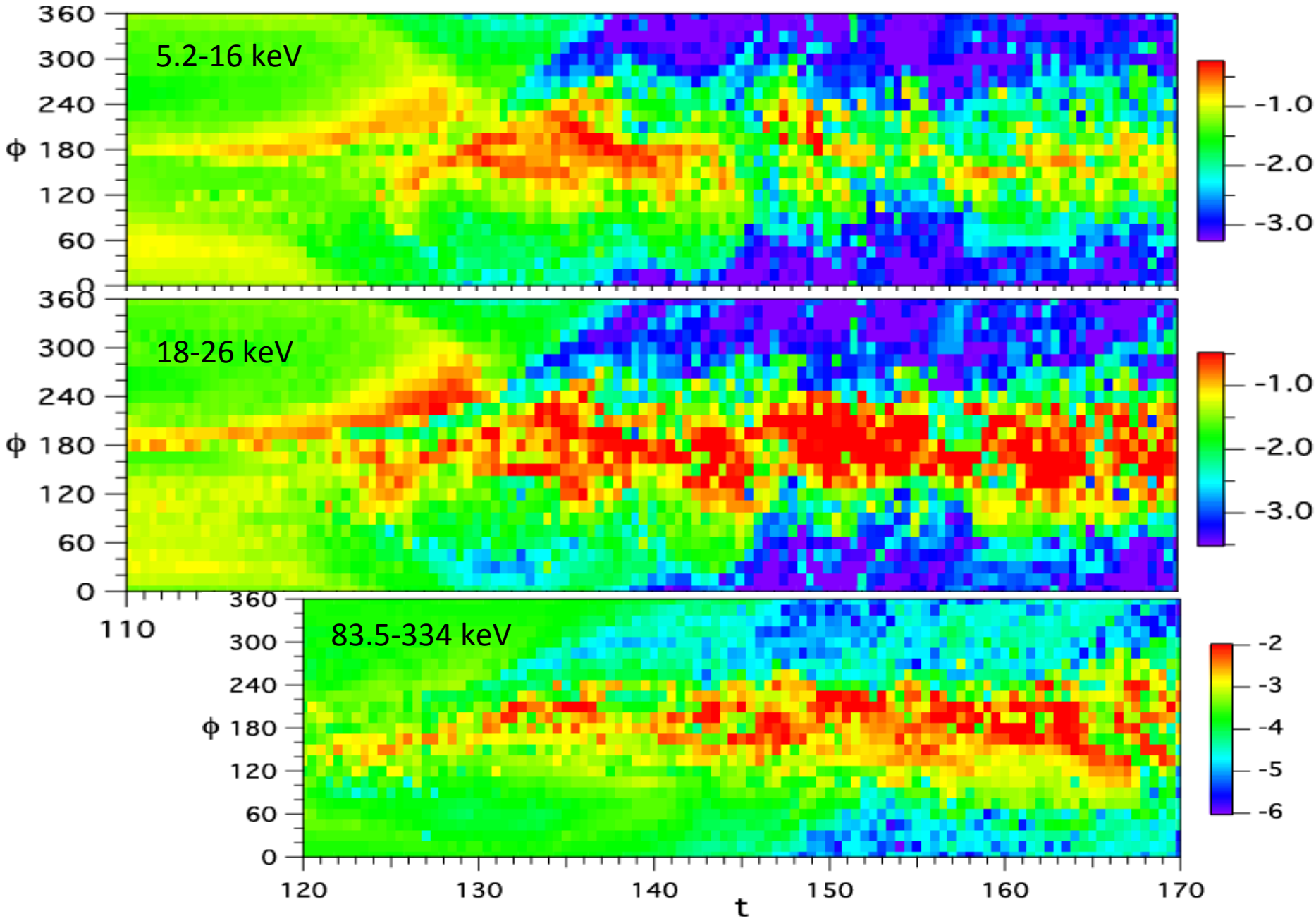




Typical beam orbit



Typical CPS orbit



Azimuthal-time spectrograms of diff. energy fluxes (30,0,0)