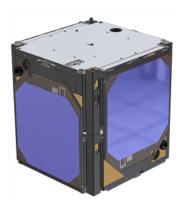
Statistical Properties of Electron Curtain Precipitation Estimated with AeroCube-6

Mykhaylo (Mike) Shumko

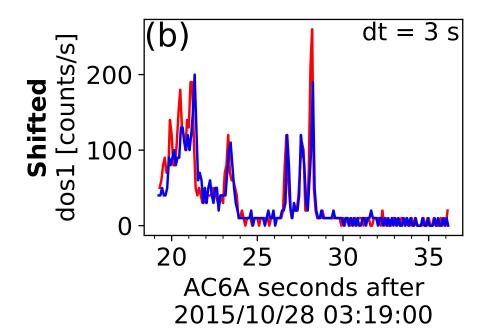
Motivation:

Blake and O'Brien 2016 discovered a latitudinally narrow and stationary form of precipitation with an unknown structure and origin. Nothing is known about the curtain impact on the atmosphere and the magnetosphere.



Combined 1U

Separating into two 0.5U spacecraft

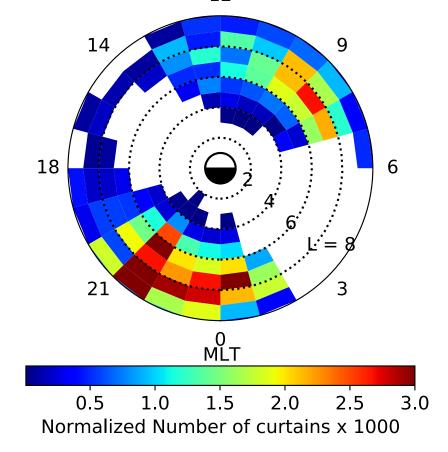


90% of curtains are narrower than 20 km in latitude

Width Distribution of > 35 keV curtains 0.07 0.06 Probability density 0.0 4 0.0 3 0.02 0.01 0.00 -10 30 40 50 20 In-track size [km]

Curtains are observed predominately pre-midnight MLT and at high L shell

(b) Normalized AC6 curtain distribution



Surprisingly, we found curtains that continuously precipitated into the atmosphere. Could curtains be related to the aurora?

More details at: https://doi.org/10.1029/2020JA028462

Questions?

