

# LYRA/EPT Perturbations Project

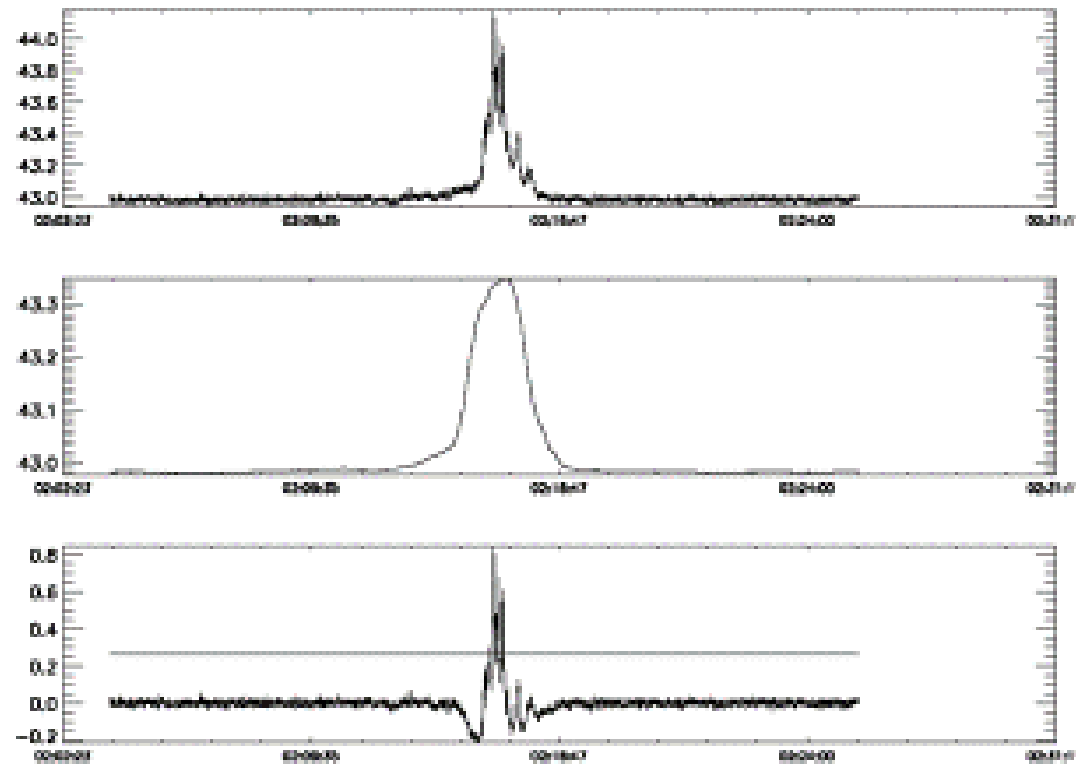
Thanassis Katsiyannis

Marie Dominique

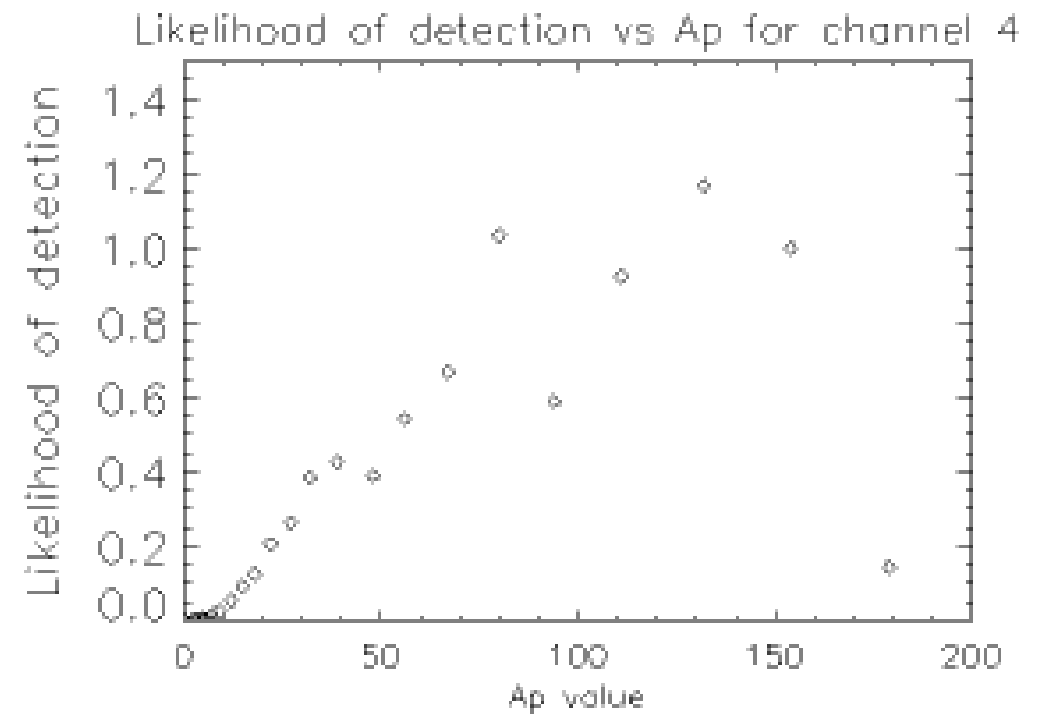
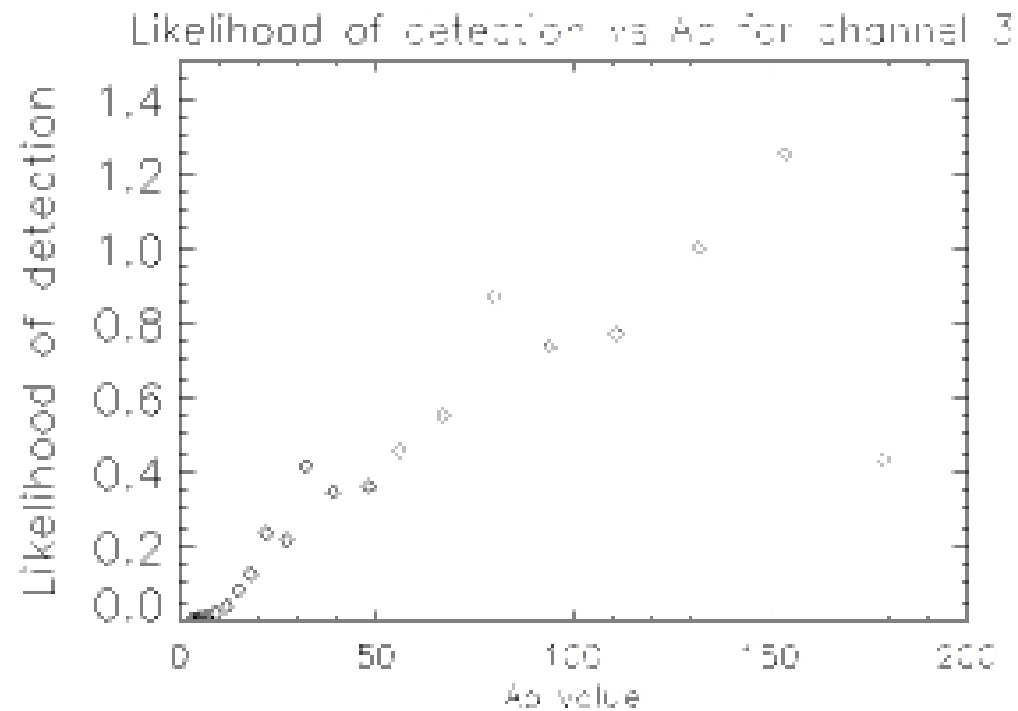
Viviane Pierrard

et al.

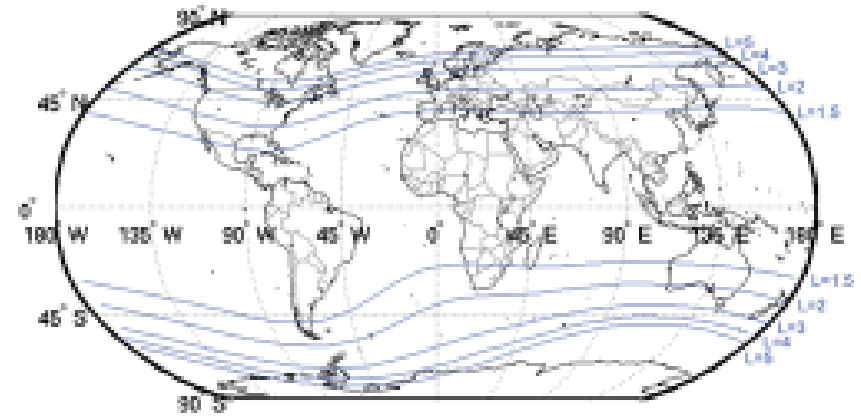
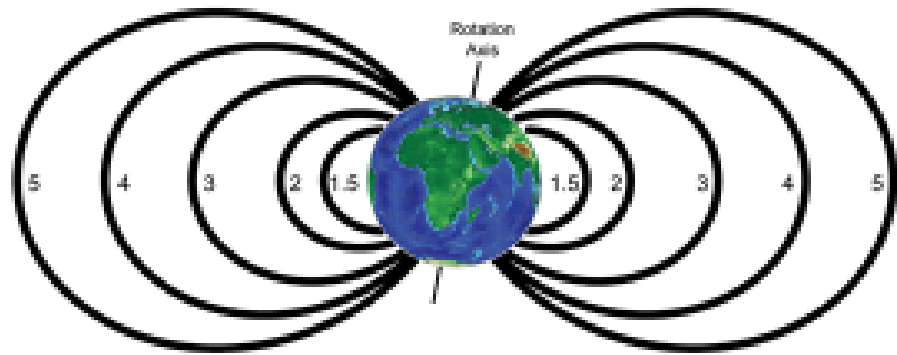
# Detection Algorithm



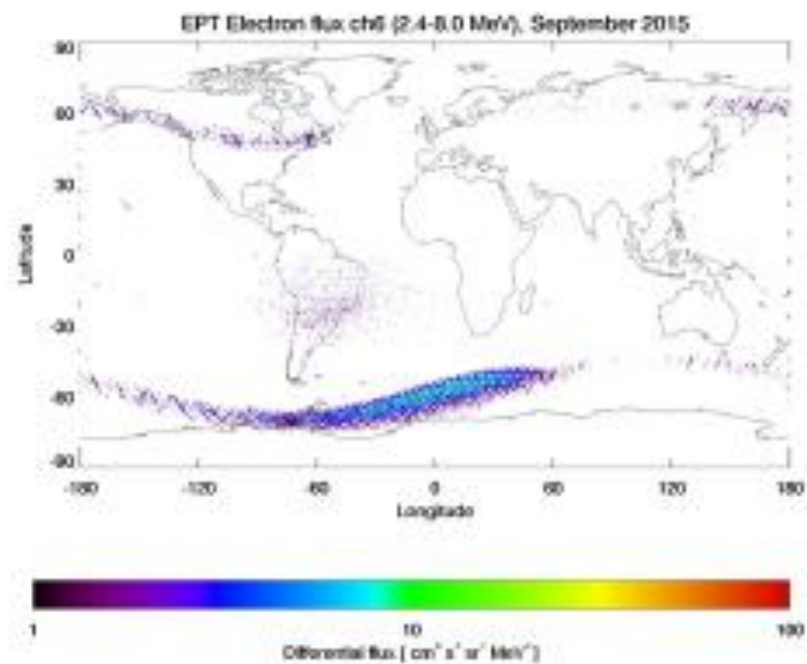
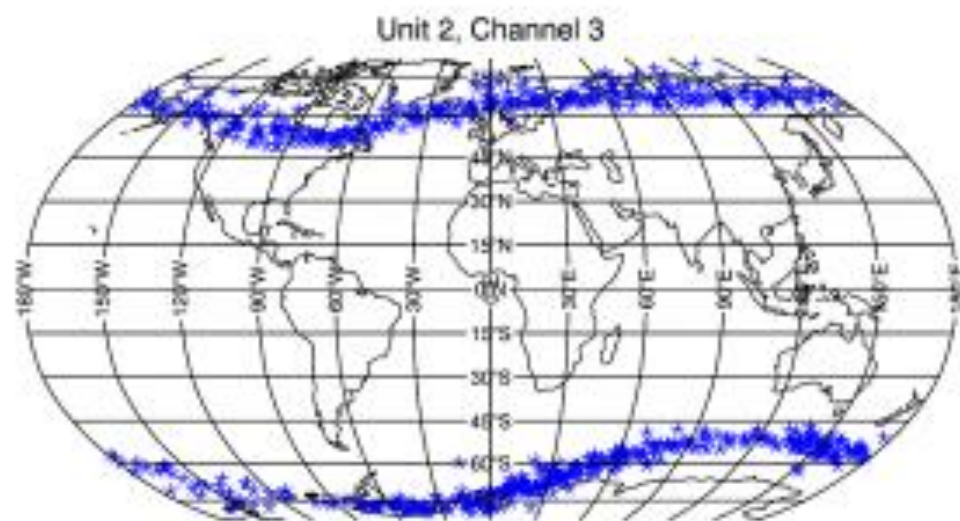
# Likelihood of detection VS Geomagnetic disturbance



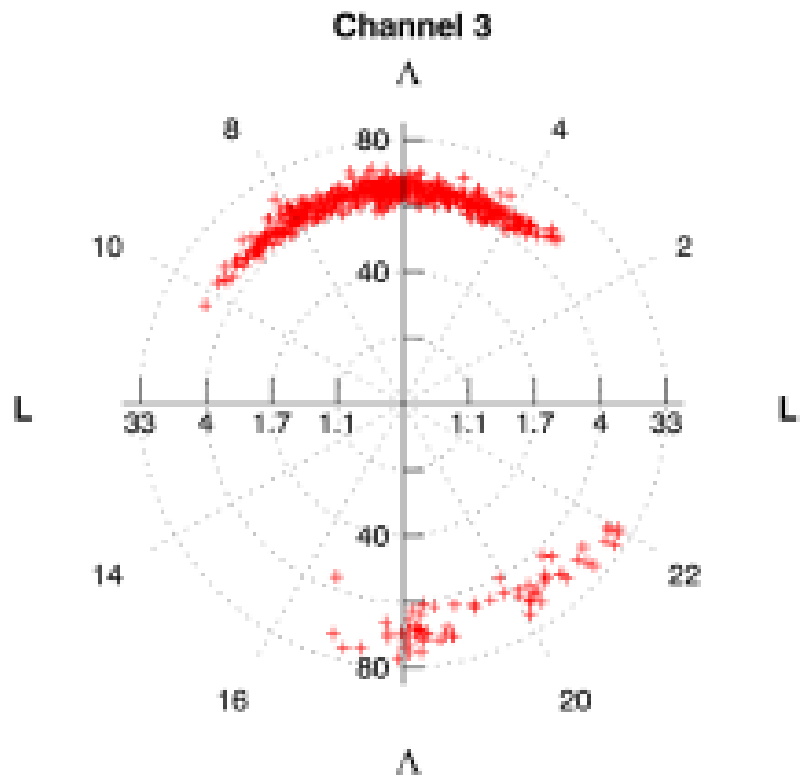
# McIlwain L-Shells



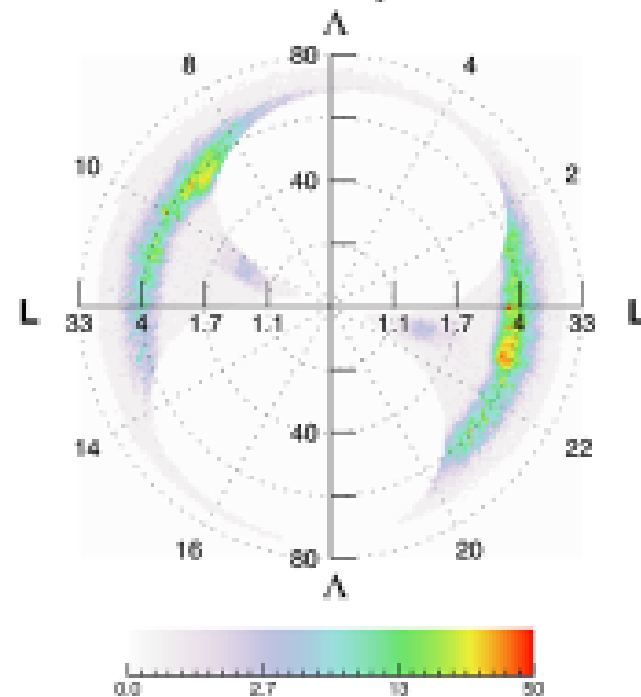
# Detection Maps for LYRA and EPT



# Differences between LYRA and EPT detections



**EPT channel 6 (2.4-8 MeV) May '13 - Dec '15**  
Max electron differential flux [ $\text{cm}^{-2} \text{s}^{-1} \text{sr}^{-1} \text{MeV}^{-1}$ ]



# Open questions

- Why LYRA and EPT data are similar in geographic coordinates but so different in MLT- $\Lambda$  space?
- Why the ap index effects the likelihood of a detection but not the electron fluxes?
- Are the detected e- due to wave-particle interaction or microbursts?