

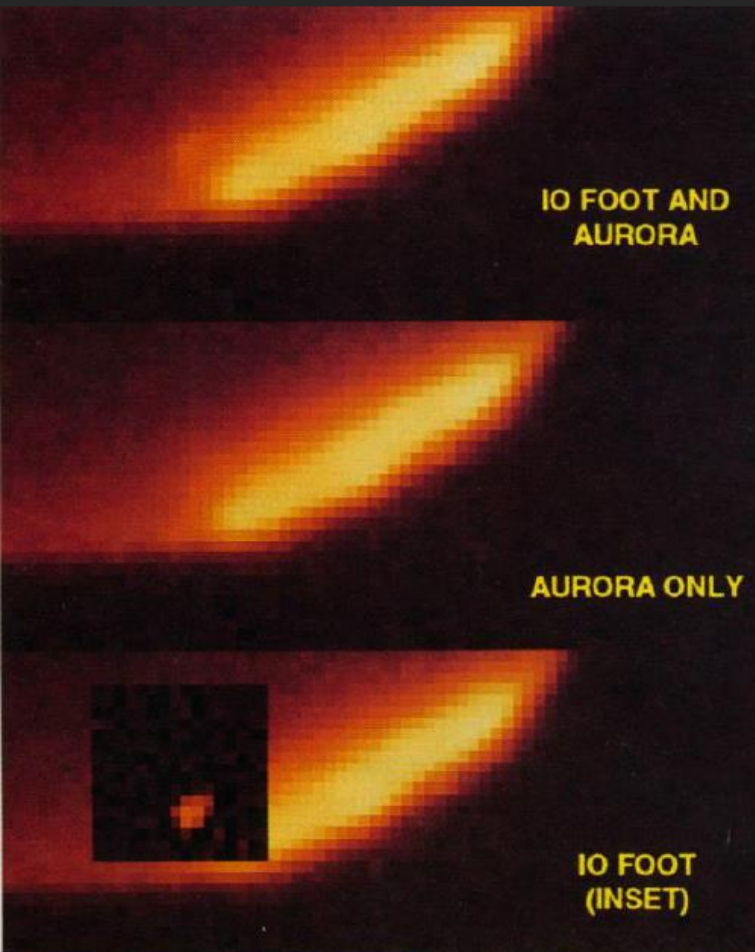
Generation and Similarity of the Jovian Satellite Footprints



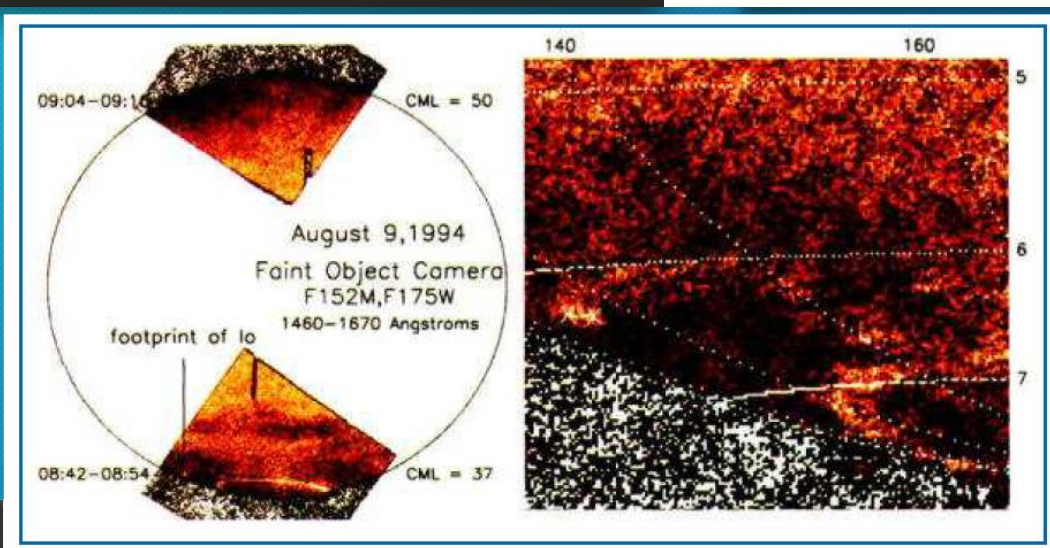
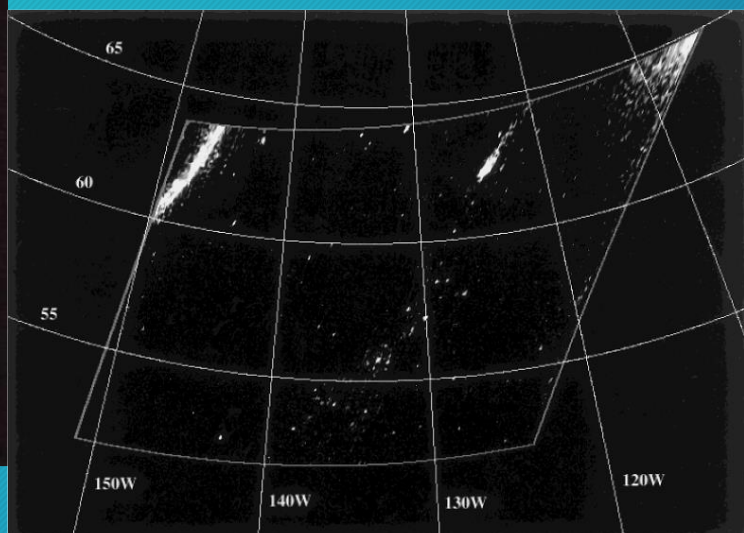
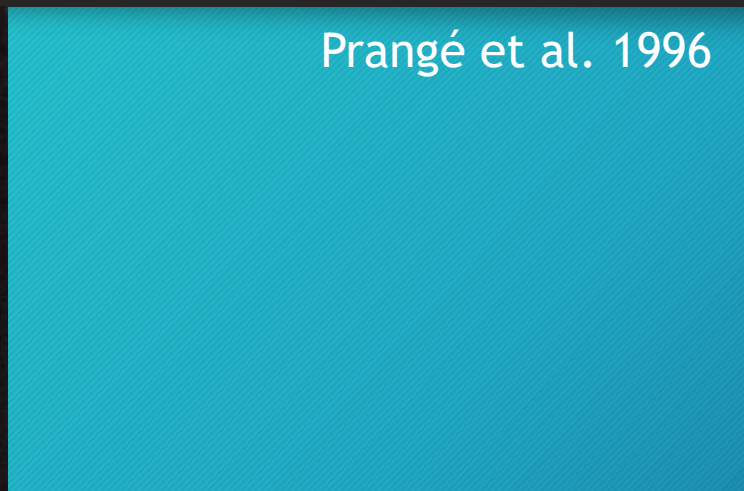
Bertrand Bonfond (STAR Institute)

J. Saur, D. Grodent, S. V. Badman, D. Bisikalo,
V. Shematovich, J.-C. Gérard, and A. Radioti

First direct observations of the Io footprint

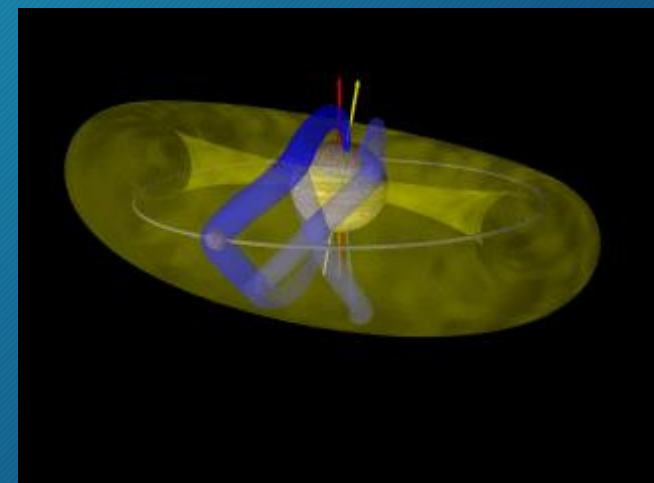
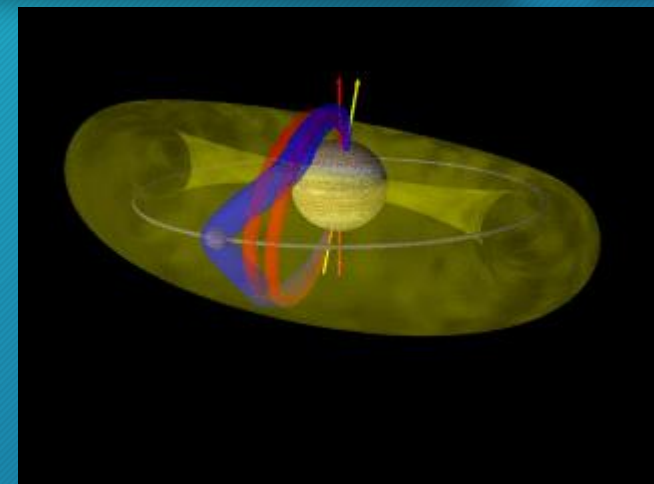
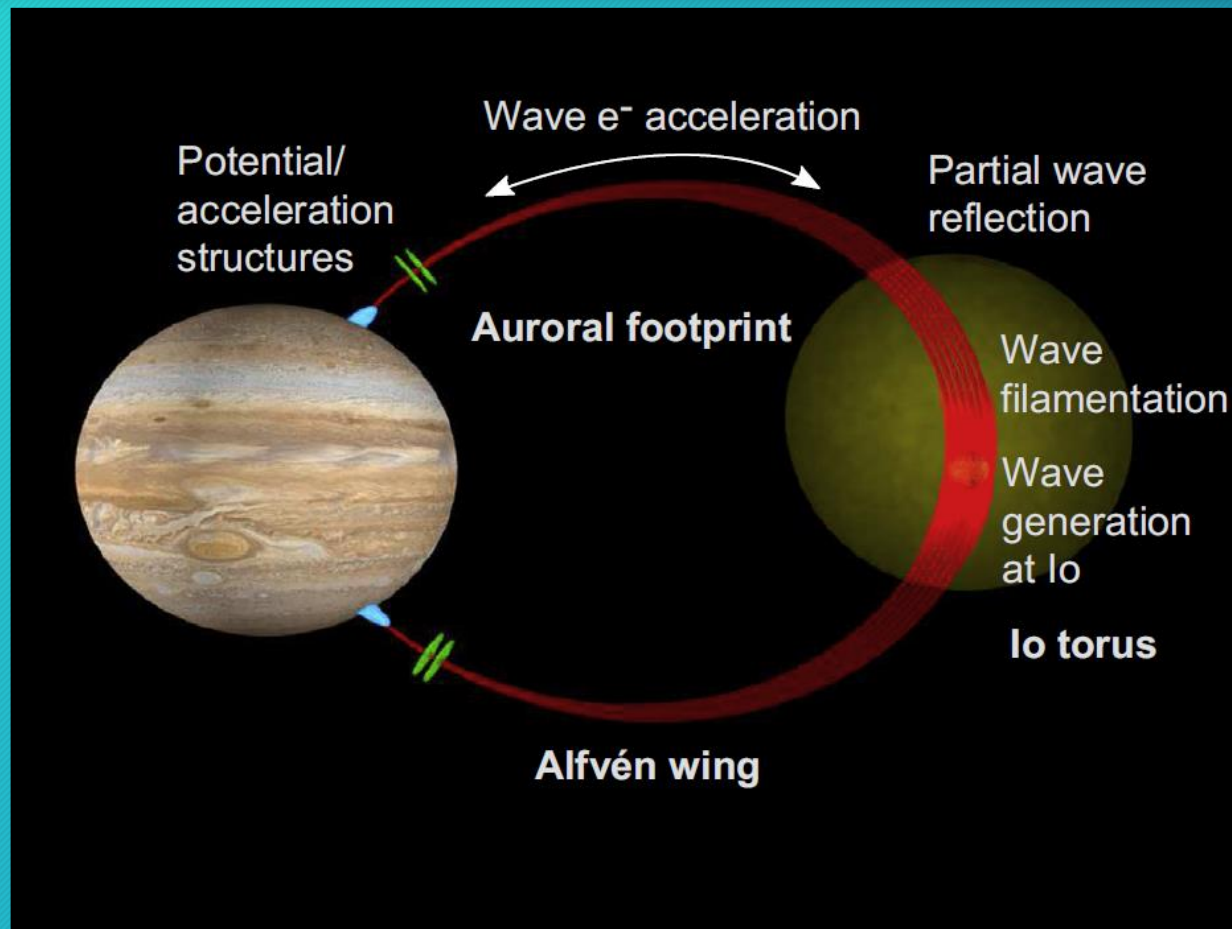


Connerney et al. 1993

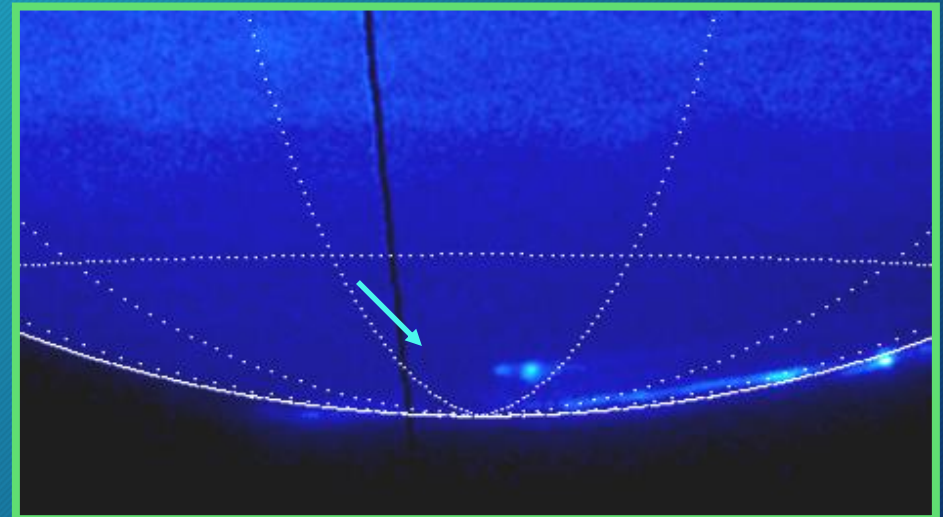
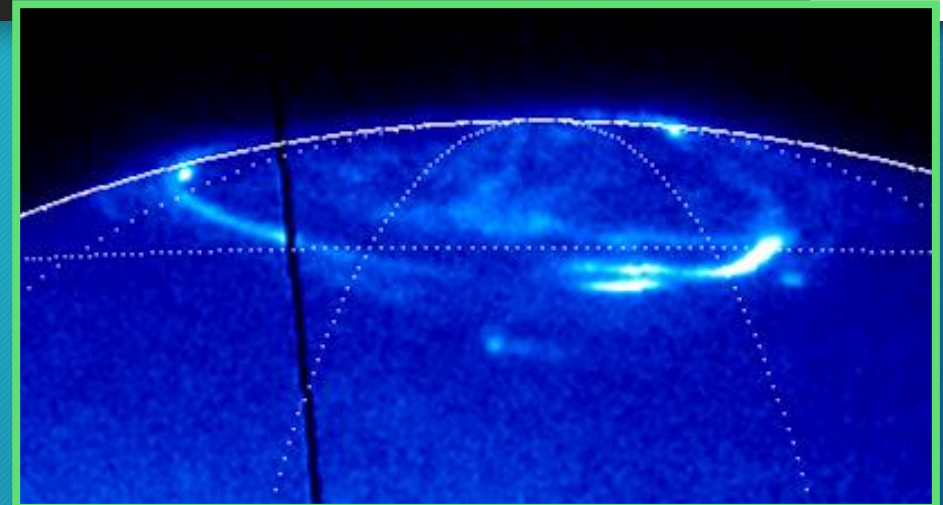
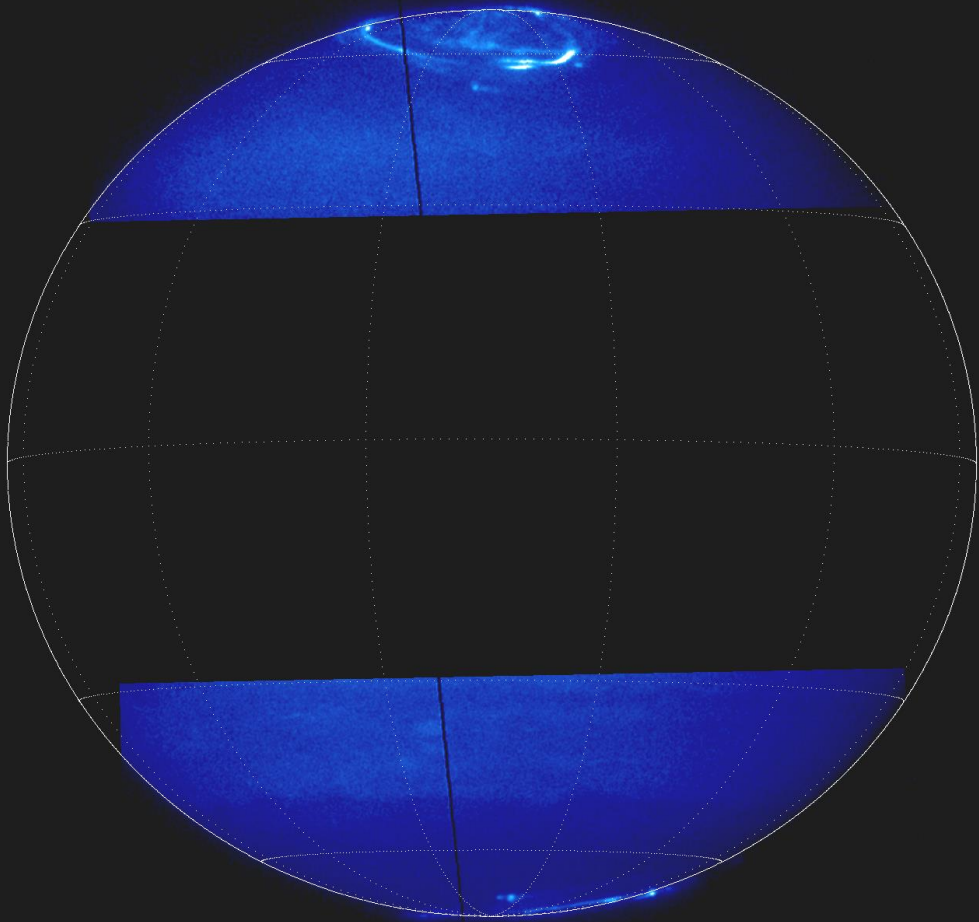


Ingersoll et al. 1998

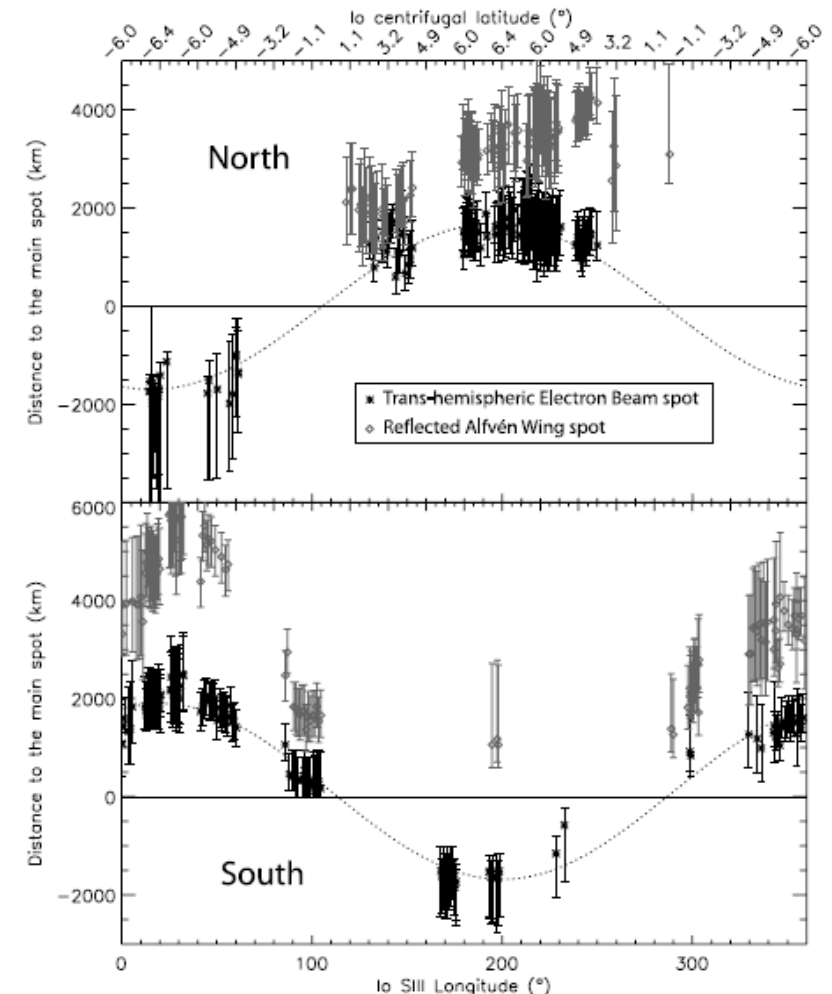
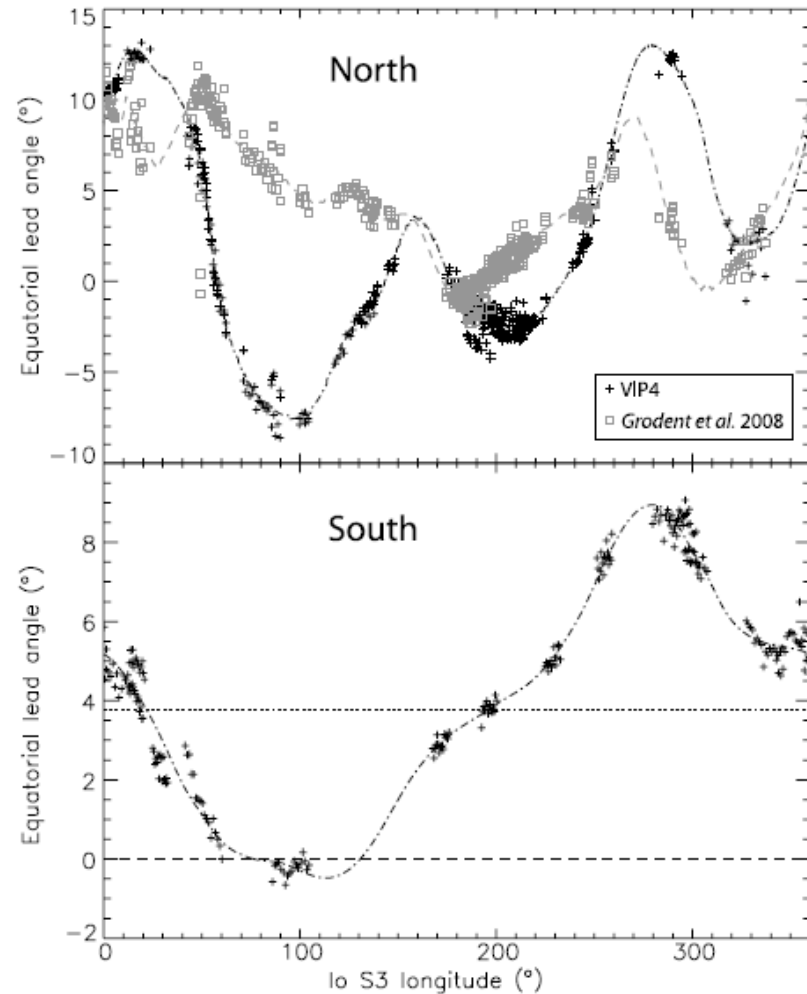
A long chain of events



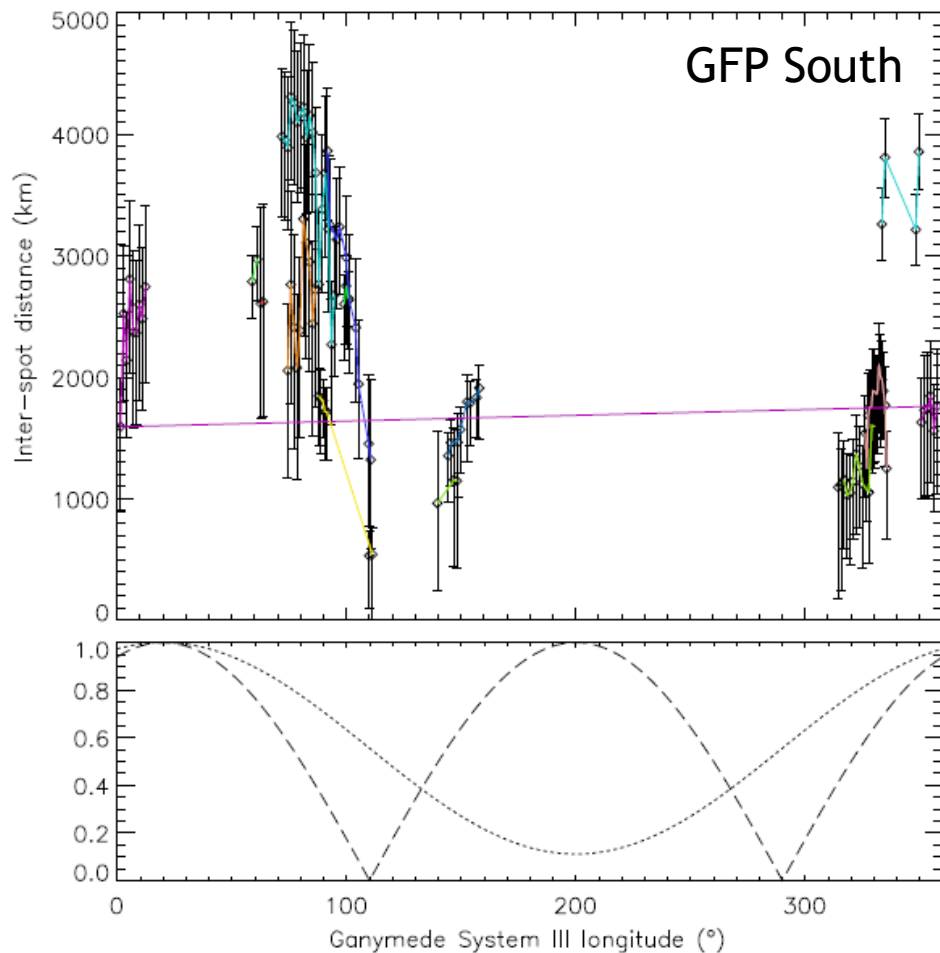
A complex morphology



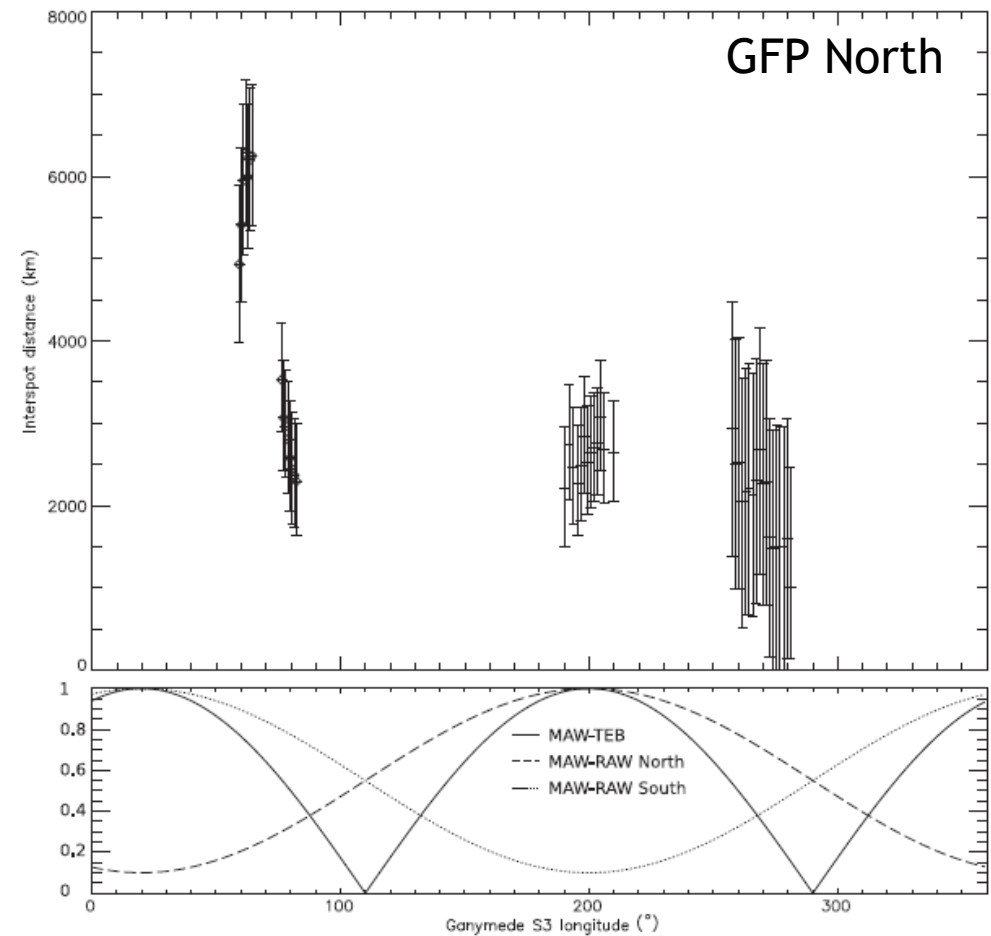
Relative motion of the spots



Relative motion of the spots

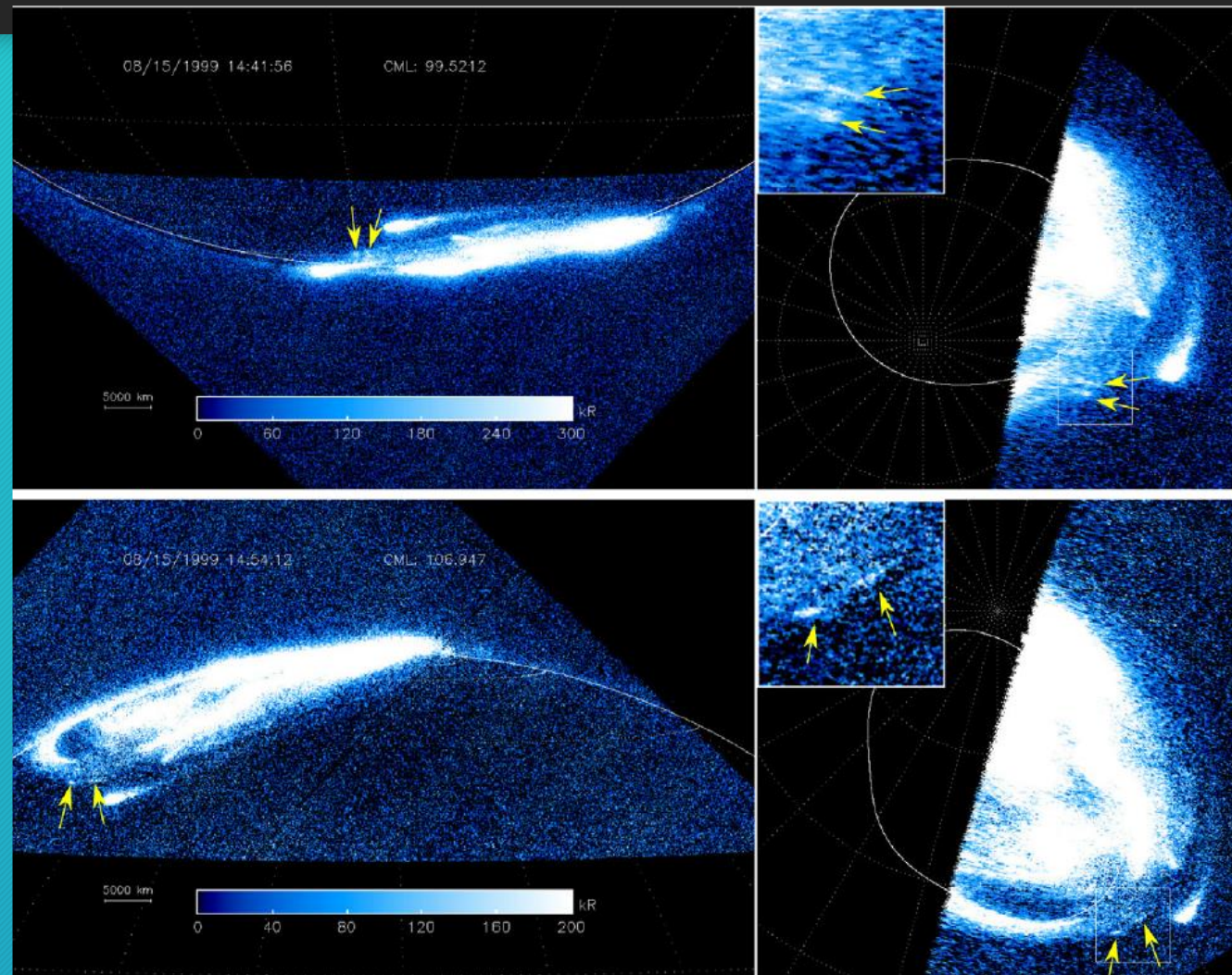


Bonfond et al. 2013

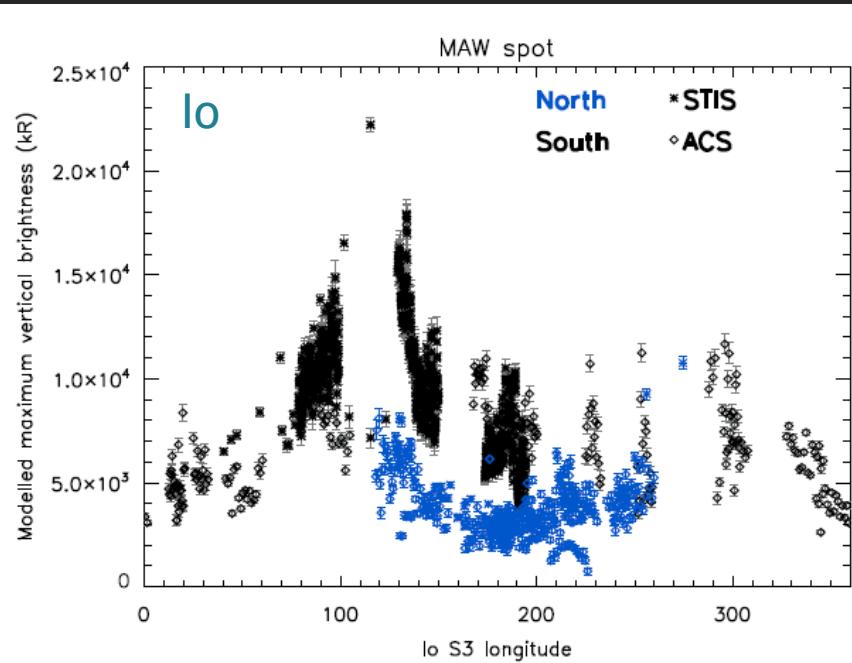


Bonfond et al. 2017a

Relative motion of the spots

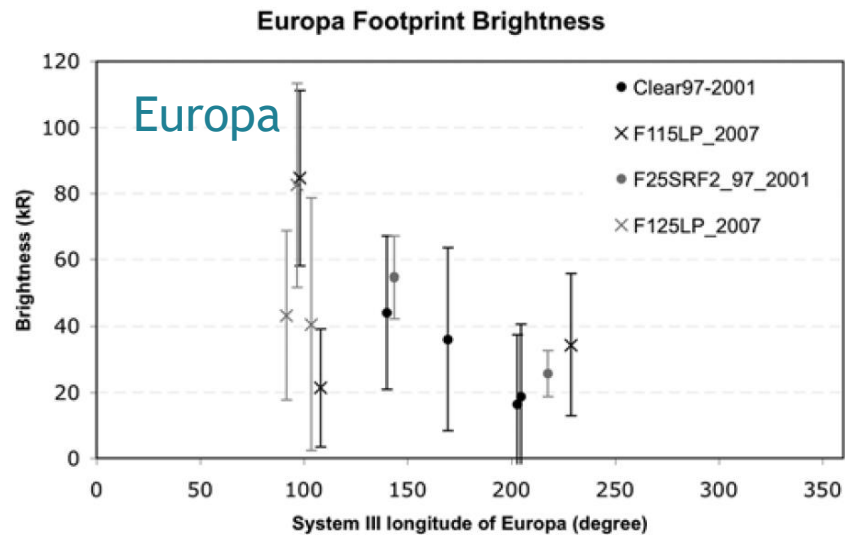


Brightness variations: System III

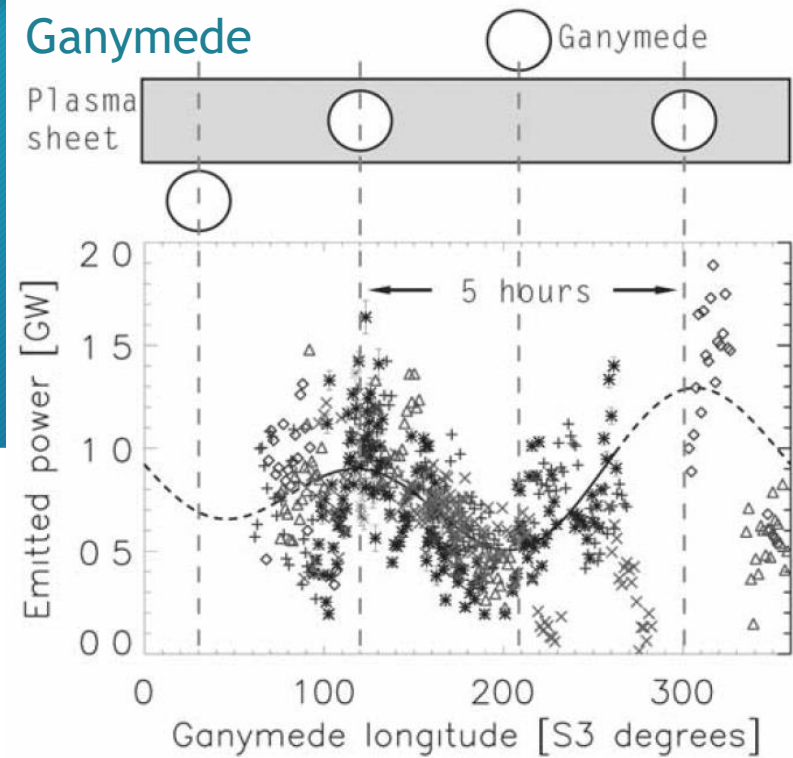


Bonfond et al. 2013

Wannawichian et al. 2010

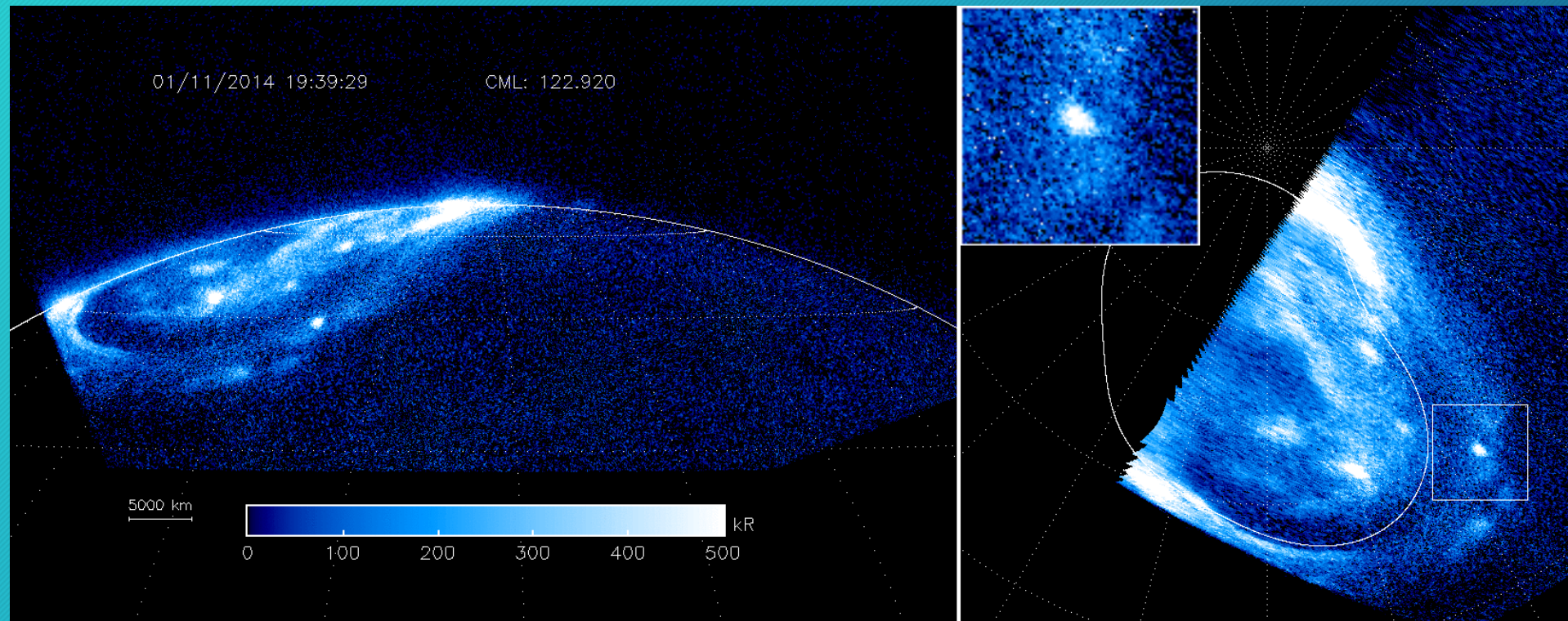


Ganymede



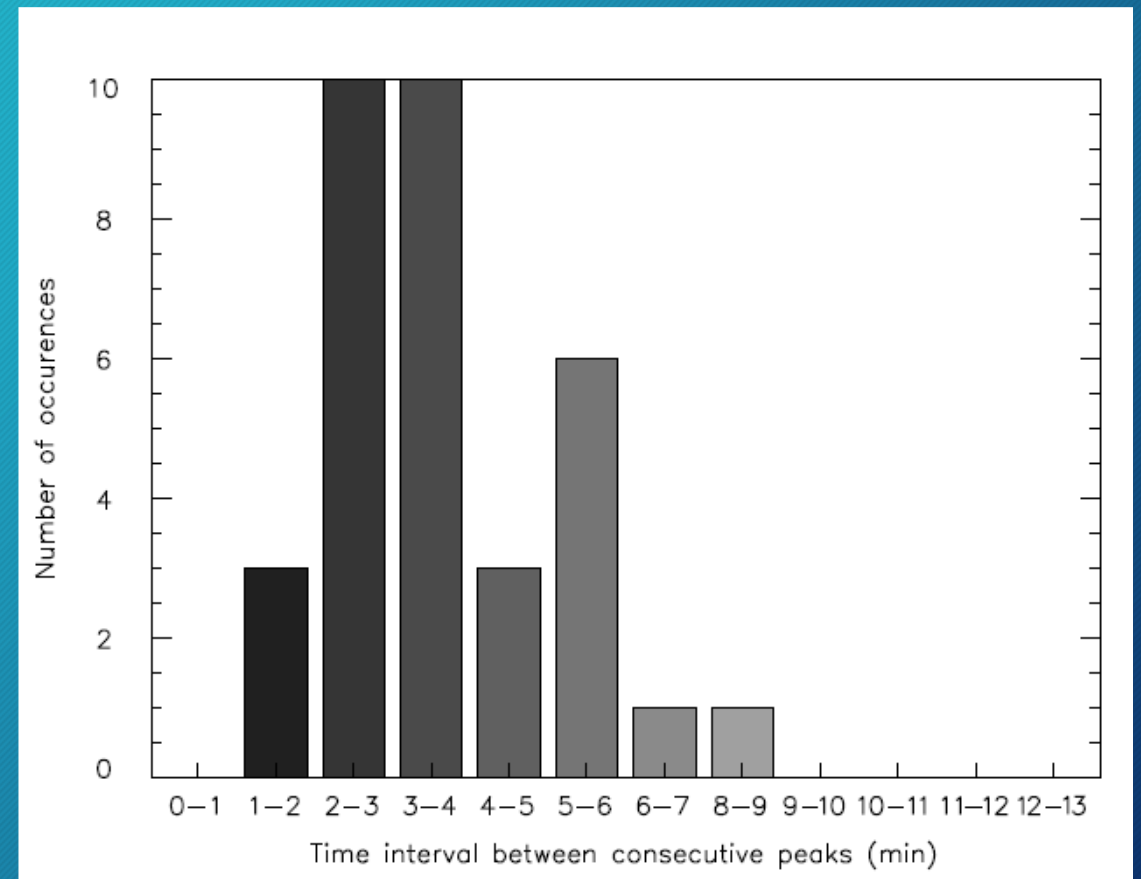
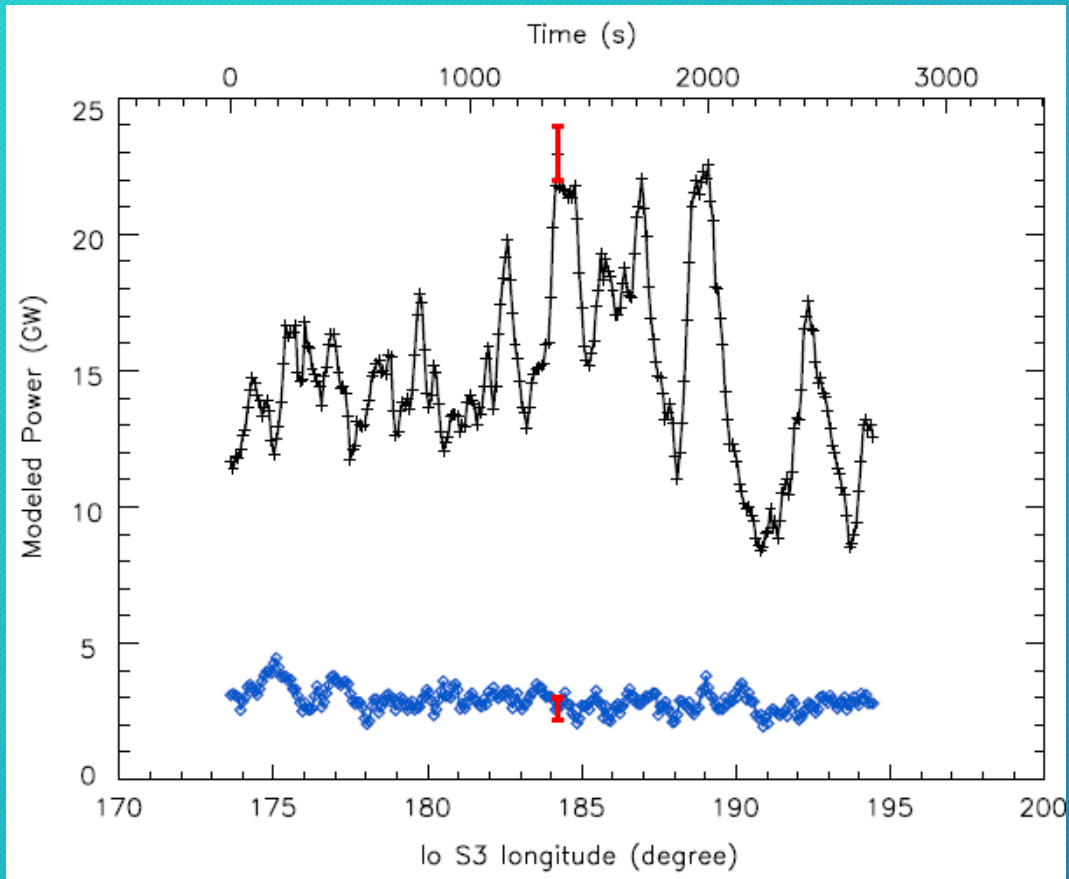
Grodent et al. 2009

Brightness variations: Injections

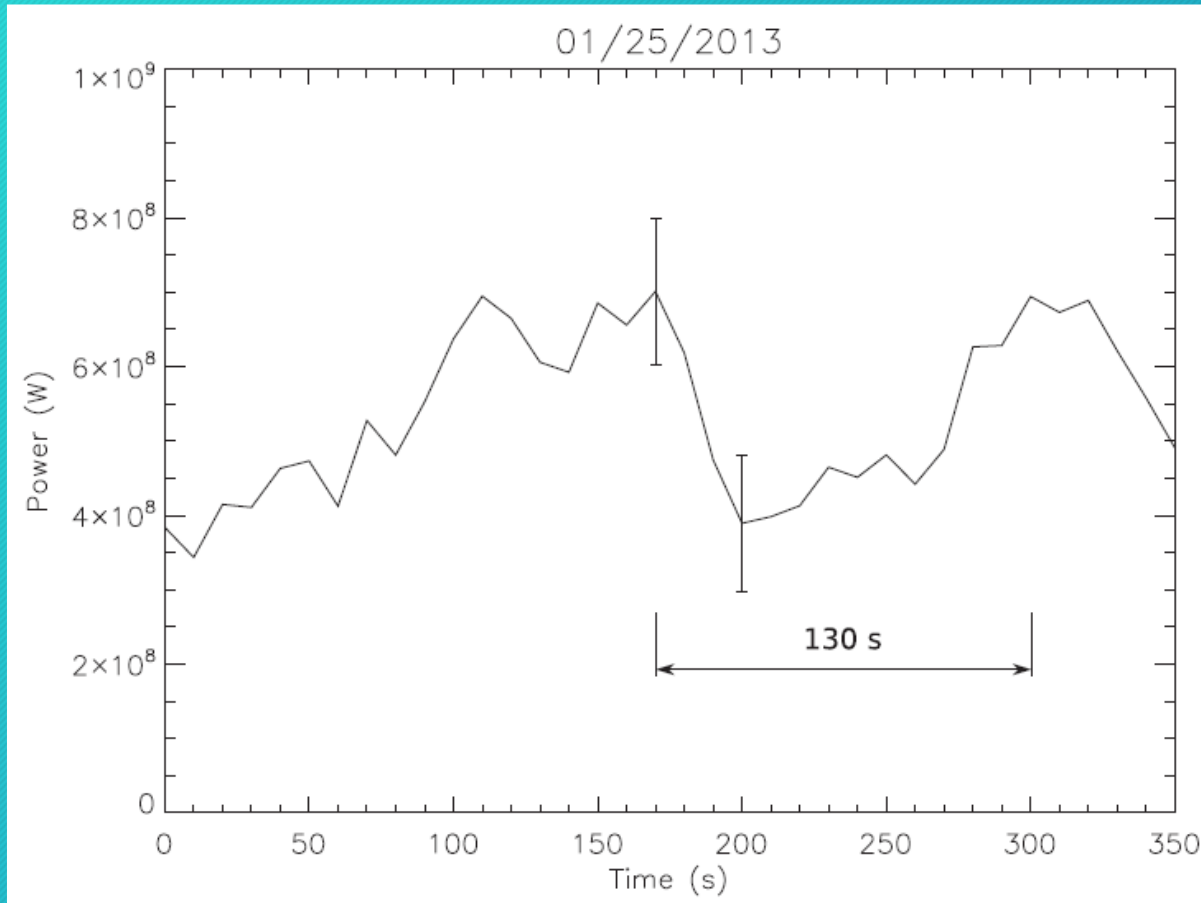


Bonfond et al. 2017

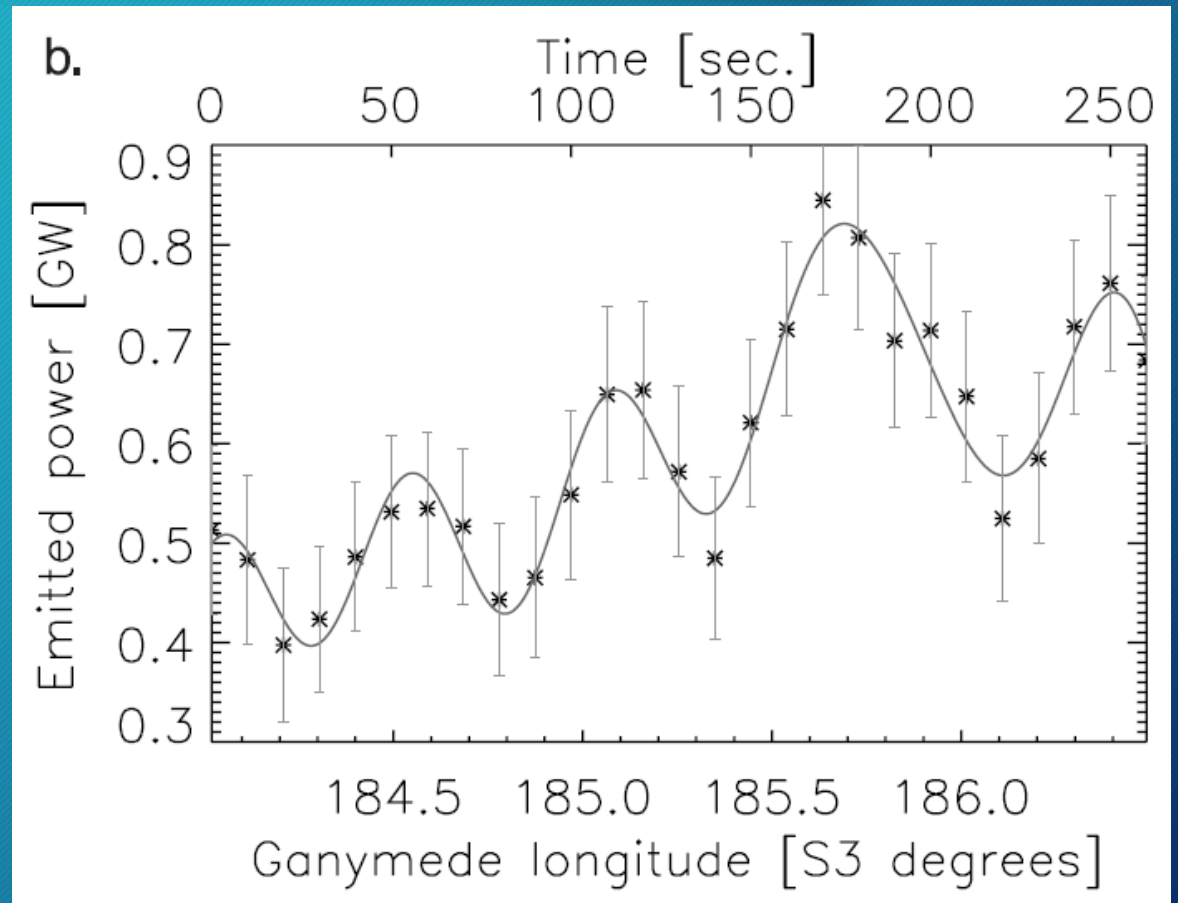
Brightness variations: minutes



Brightness variations: minutes

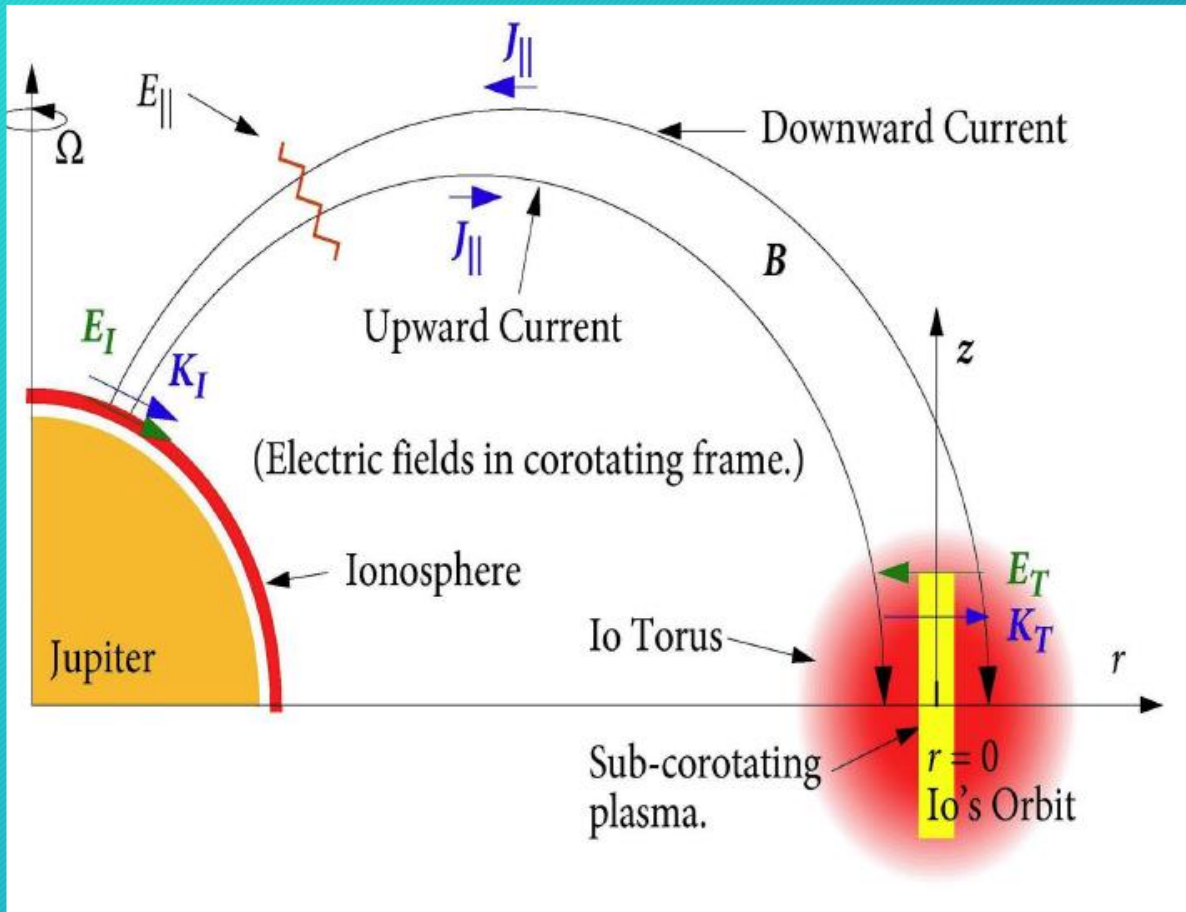


Bonfond et al. 2017

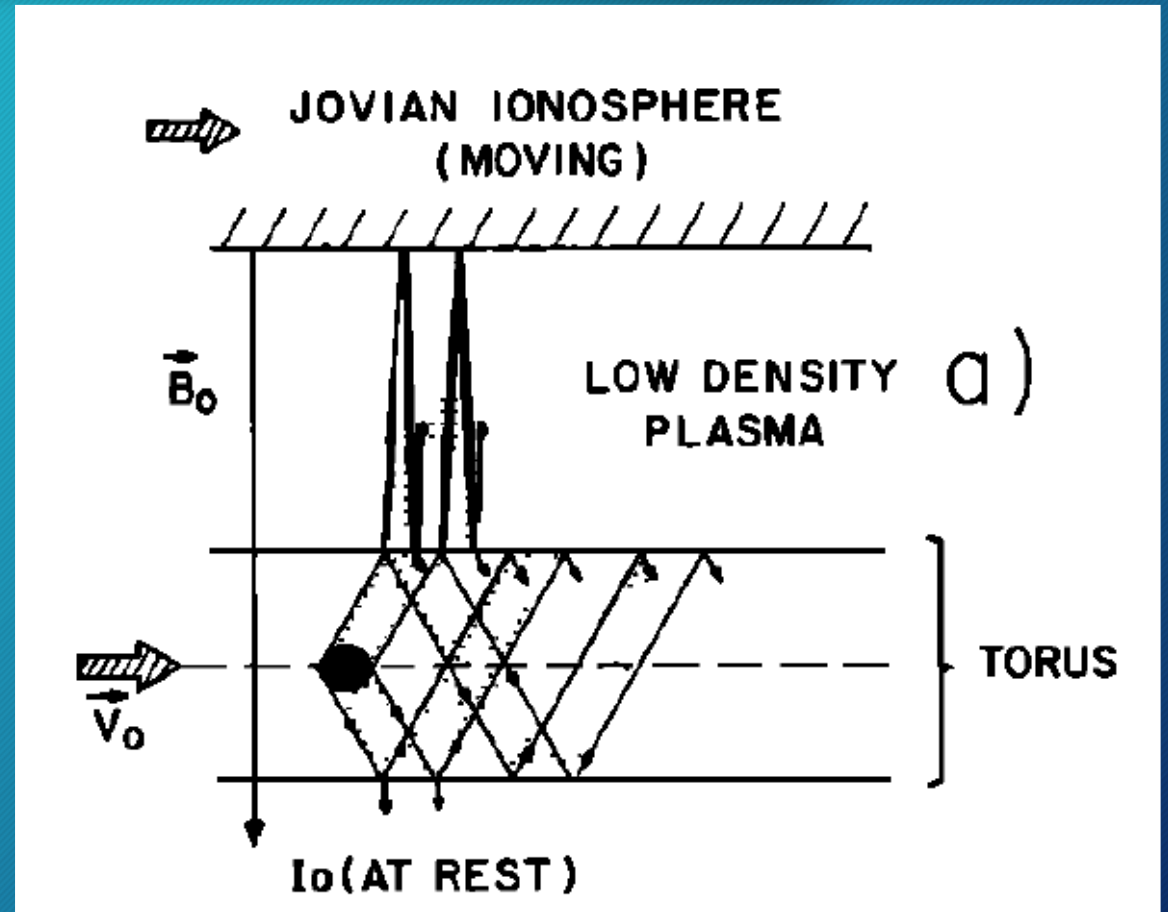


Grodent et al. 2009

Footprint tails: theories

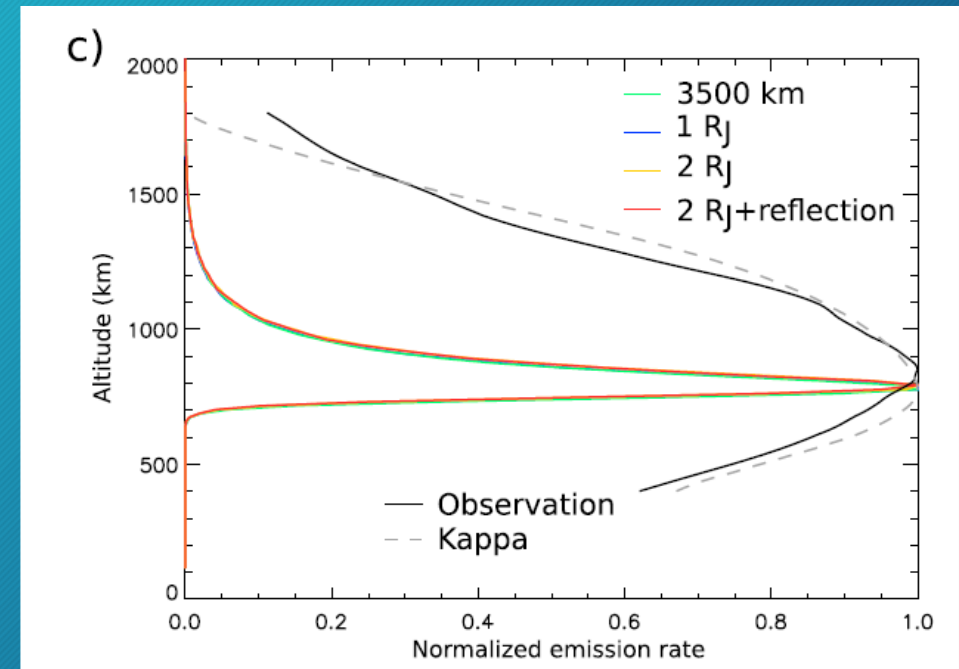
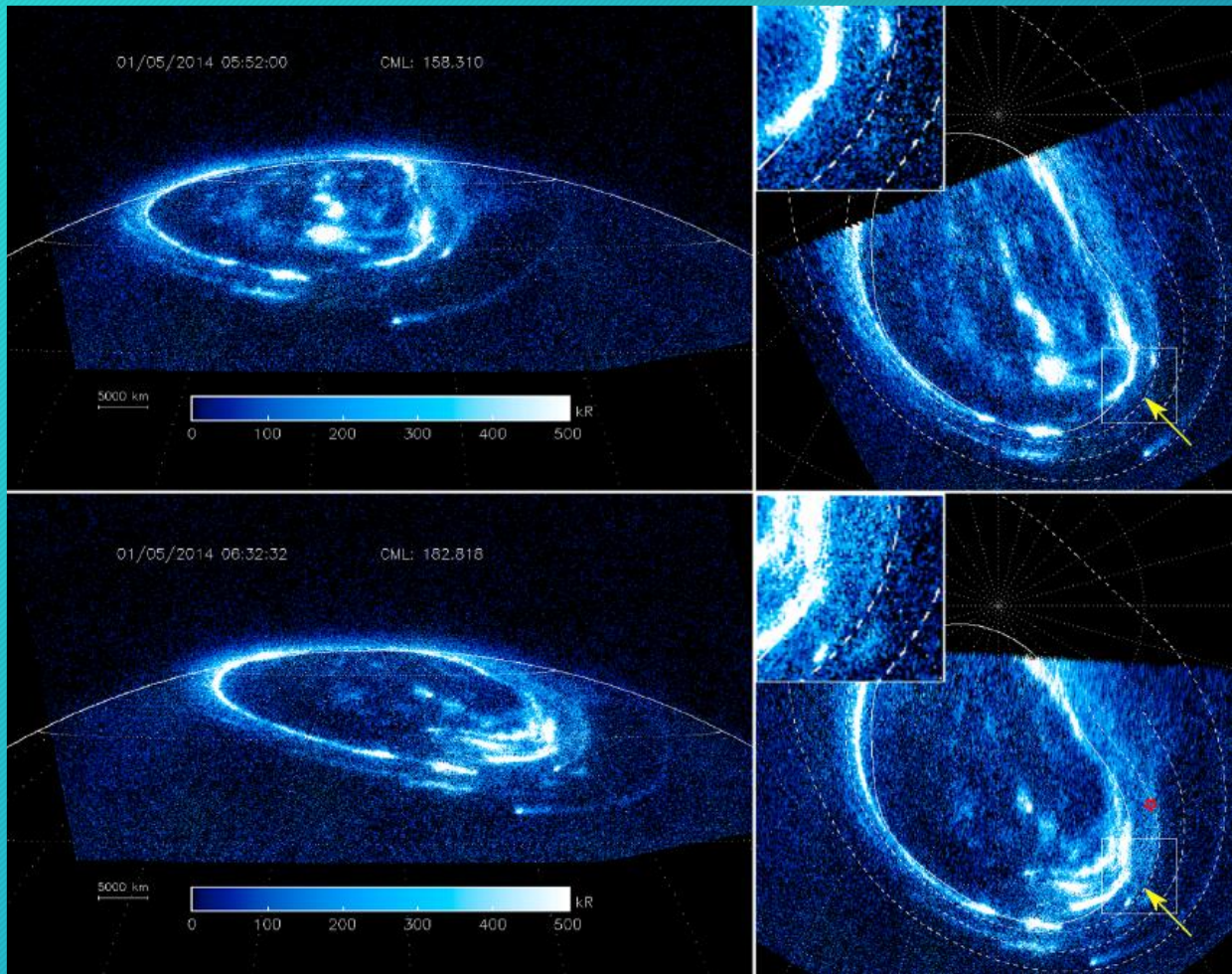


Ergun et al., 2009



Neubauer, 1980

Footprint tails: observations

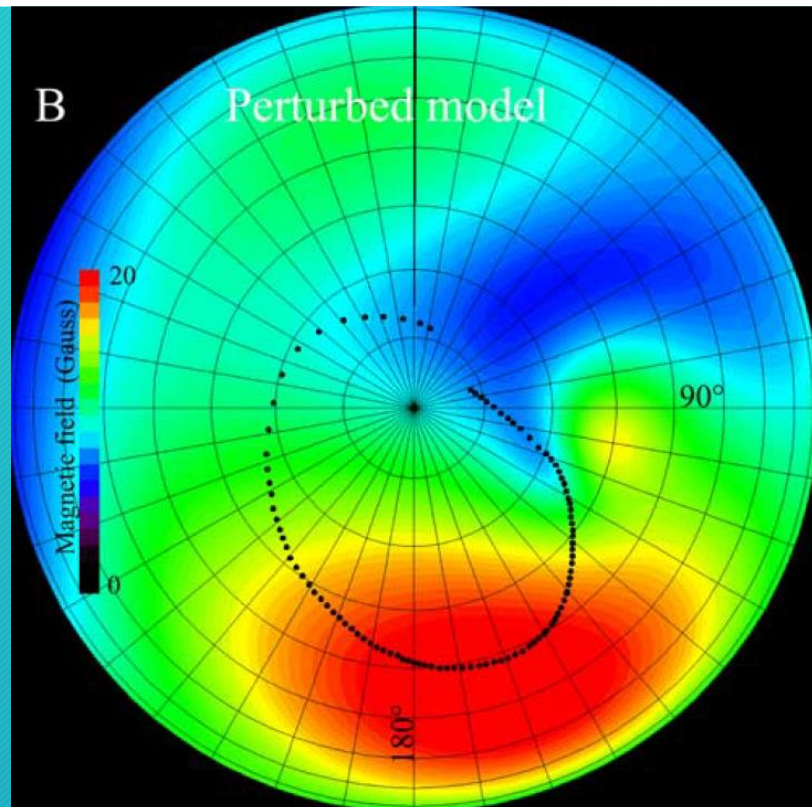


Bonfond et al. 2017b

Confirmation of the Grodent anomaly

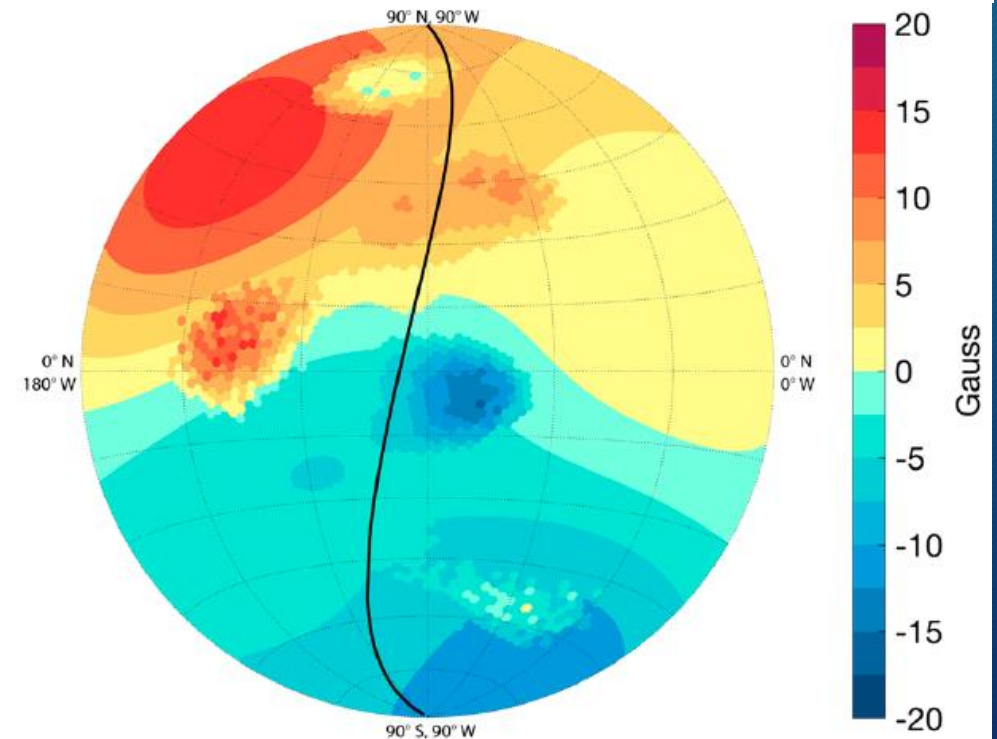
Auroral evidence of a localized magnetic anomaly in Jupiter's northern hemisphere

Denis Grodent,¹ Bertrand Bonfond,¹ Jean-Claude Gérard,¹ Aikaterini Radioti,¹ Jacques Gustin,¹ John T. Clarke,² Jonathan Nichols,² and John E. P. Connerney³



The analysis of initial Juno magnetometer data using a sparse magnetic field representation

Kimberly M. Moore^{1,2} , Jeremy Bloxham¹ , John E. P. Connerney^{3,4} , John L. Jørgensen⁵ , and José M. G. Merayo⁵



Conclusions

- The footprints of Io, Europa and Ganymede are all made of several spots and a tail.
- The footprints of Io, Europa and Ganymede display the same kind of brightness variations.
- The IFP tail appears to be created by the same process as the main spot.