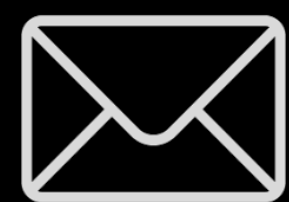


Possible observations of Transient Luminous Events on Jupiter with Juno UVS



Rohini Giles and the Juno UVS Team
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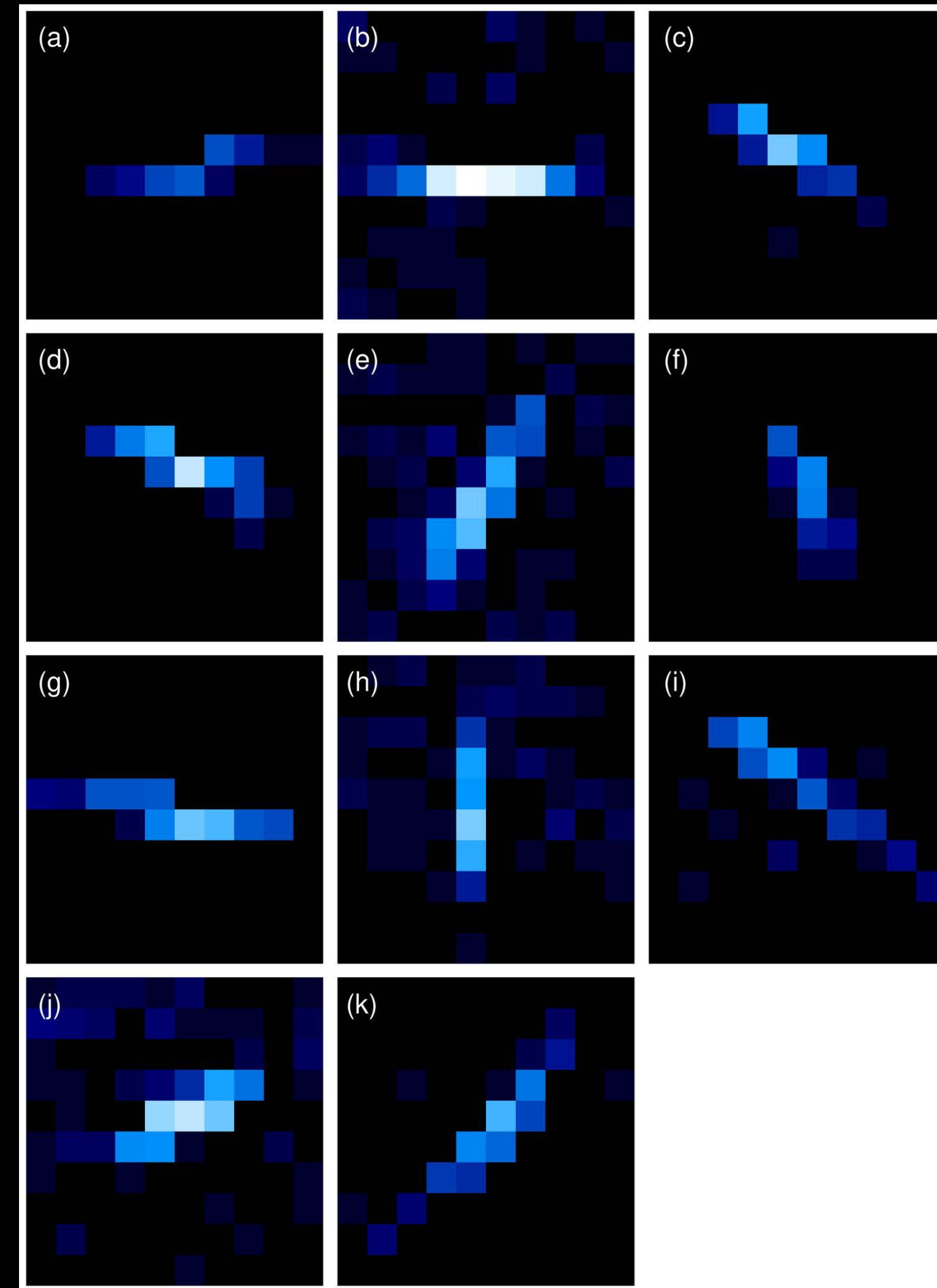
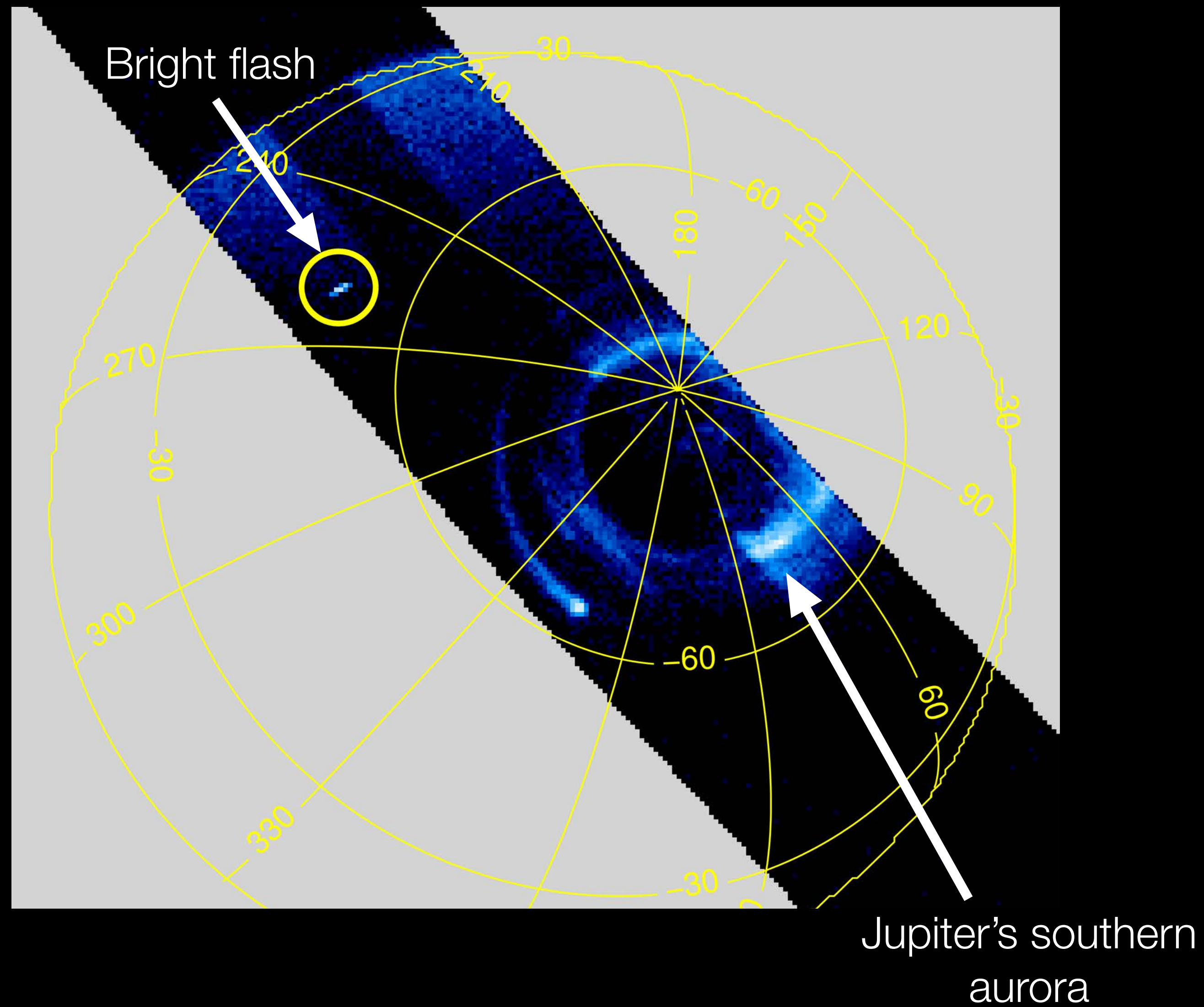


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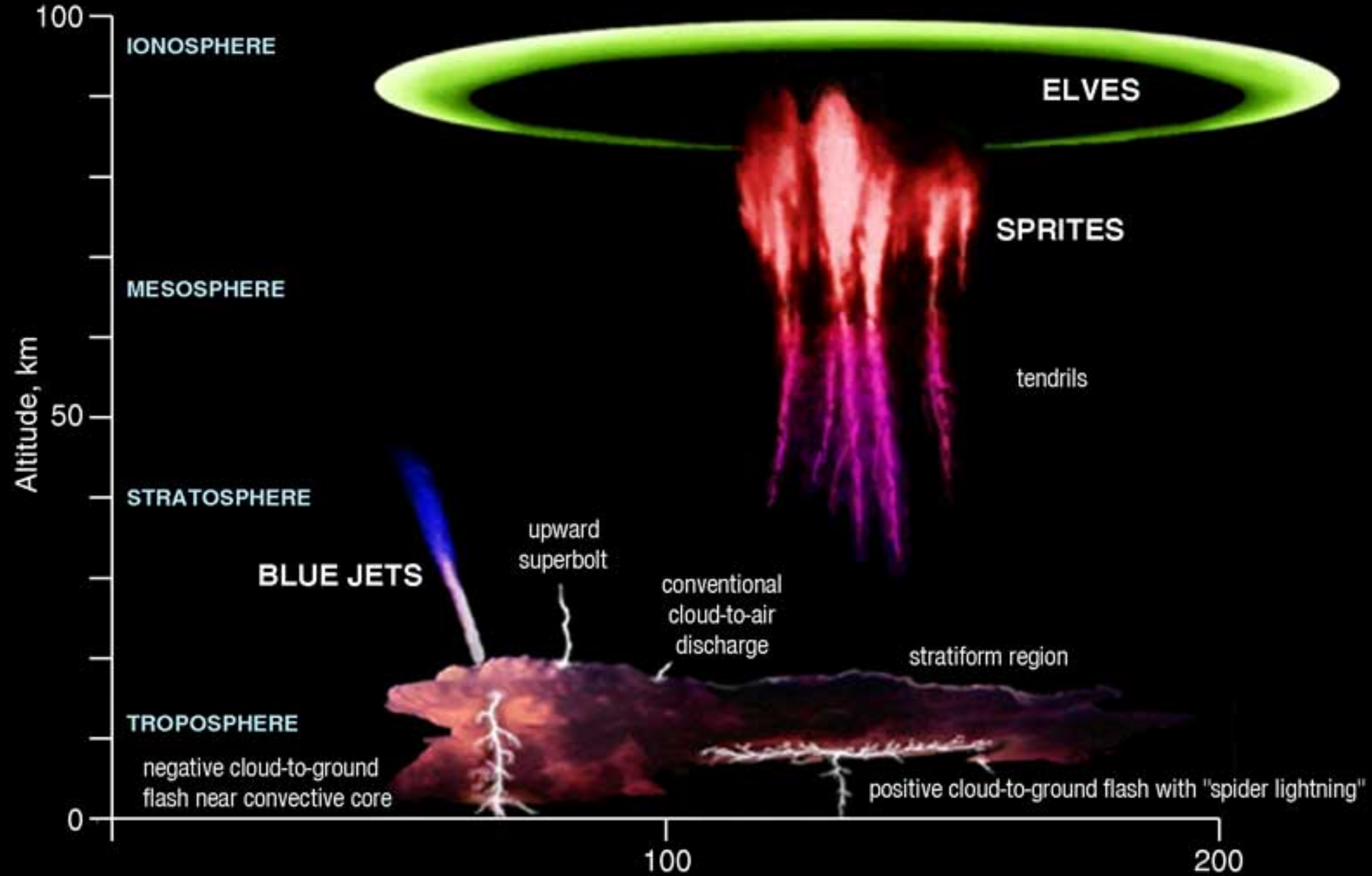
Lightning on Jupiter



Juno UVS Observations



Transient Luminous Events (TLEs)



Adapted from Carlos Miralles (AeroVironment) and Tom Nelson (FMA)

Transient Luminous Events (TLEs)



Image Credit: ISS/JSC/NASA

TLEs in Jupiter's atmosphere



- Very short-lived (sub millisecond to a few milliseconds)
- Dominated by hydrogen emission
- Located high up in the atmosphere (altitude of 250-300 km)
- Occurs in conjunction with lightning

Summary



- 11 transient bright flashes were observed with the UVS instrument on the Juno mission to Jupiter
- These bright flashes are consistent with Transient Luminous Events (TLEs) in Jupiter's upper atmosphere
- TLEs have previously only been observed on Earth

Giles et al., (2020). "Possible Transient Luminous Events observed in Jupiter's Upper Atmosphere". JGR: Planets.



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