

Conclusions

- Long-term variations (45 days) with System III longitude are small ($\sim 5\%$) with lots of scatter.
- Larger variations ($\sim 15\%$) exist on shorter timescales
- Longitudinal variations in a 50-hr sliding window (boxcar) are fit nicely by a sine wave at System III period
 - Fit \rightarrow amplitude, phase, and constant offset
- Phase increases almost linearly with time
- Phase increase/time \rightarrow difference between plasma rotation period and Jupiter rotation period
- Torus plasma subcorotates by 1.4% or 1 km/s
 - Plasma rotation period of 10.066 hours
 - Halfway between System III and System IV