Cassini ISS
Visible aurora on Saturn.

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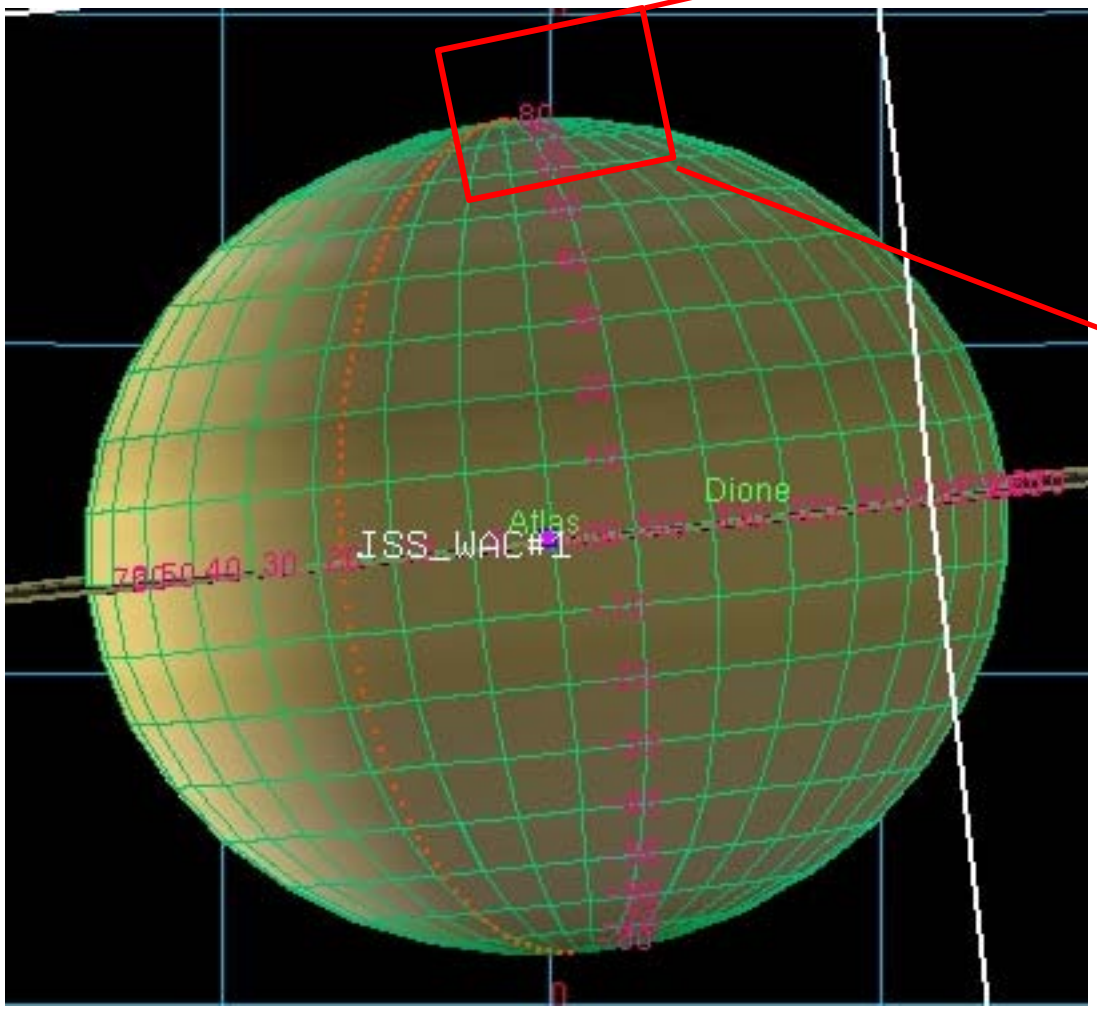
CHARM telecon, January 26,2010

October 2009 ISS observation



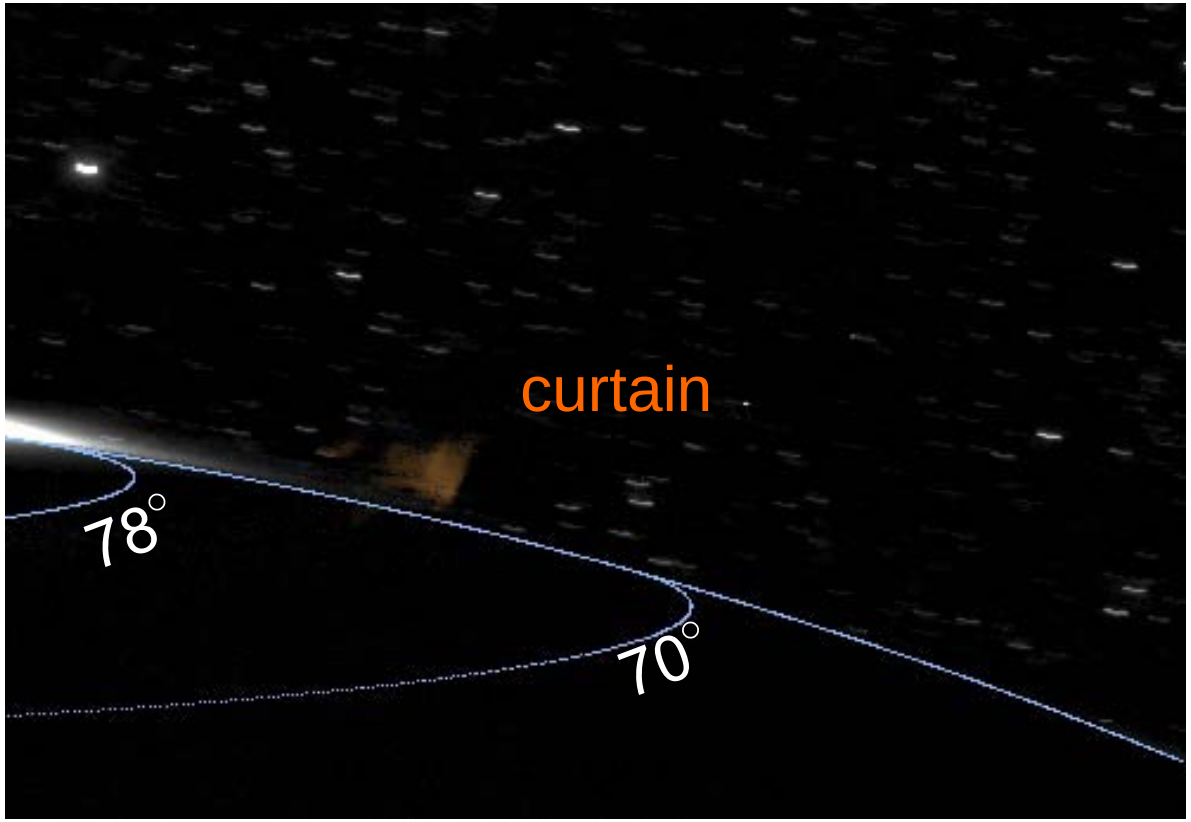
- 472 frames
- 81 hour
- 2 - 3 minute exposures
- Broadband visible wavelengths, no color information
- Orange aurora is a false color

October 2009 movie (472 frames, 81 hours)

Timing

- Length of and order of 10 minutes for bright features like "Snake"
- "Snake"-like features appear just twice in 81 hours.
- Curtains reappear on consecutive Saturn days

Heights and location



- Image scale is 32 km (20 miles) per pixel
- Curtain height is 1,200 kilometers (746 miles) above the planet's limb.
- Latitude of aurora is about 74° and changes with time by several degrees.

Color

- Not measured in this movie
- Cassini images from 2006 show emission from hydrogen – aurora is probably multicolored as on Earth.
- On Earth colors may be red, green, blue, purple, orange, produced by nitrogen, oxygen and other gases.

Future ISS observations

- More movies.
- Movies in color
- Better time resolution of the future movies
- We cross fingers for the bright aurora during our planned observations