

JunoCam at PJ35: What the pictures show:

Part I. Overview of non-polar regions

John Rogers (BAA) (2021 August 29)

The sub-spacecraft track at PJ35 (2021 July 21) was similar to those at PJ33 and PJ34, so the images showed largely overlapping longitudes. Juno crossed the equator at L1=107, L2=141, L3=316.

As with PJ34, this is just a brief summary of the images, excluding the polar regions apart from a preliminary note on the northern circumpolar cyclones.

Ganymede was imaged at medium range on the inbound leg (e.g. [Figure 1](#), by Kevin Gill). Although the images were nowhere near as close as those at PJ34, they do show major tectonic features on the surface.

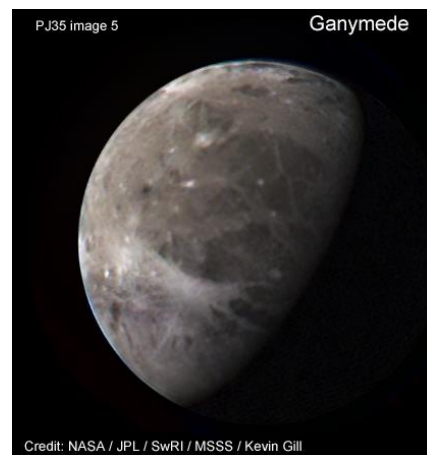


Figure 1

North polar region: Images of the north pole show that the new configuration of the circumpolar cyclones (CPCs), first seen at PJ32, has been stable since PJ33. [Figure 2](#) compares images taken at these last three perijoves. CPC-7 is still displaced away from the pole and there are still small cyclones adjacent to the cluster of numbered CPCs, so the images show an almost-straight row of four cyclones instead of an octagonal pattern. Future perijoves should extend the longitude coverage to show if the rest of the pattern has changed.

The northern domains are being recorded at ever-higher resolution, as the latitude of perijove is increasing at 0.8° per orbit, and at PJ35 it was at 29°N (planetocentric), over the NTZ. [Figure 3\(L\)](#) shows a turbulent sector of NNTB, with various types of haze or cloud bands crossing over each other, presumably at different altitudes. [Figure 3\(R\)](#) shows the NTZ, with the highest resolution yet, detecting widespread, very subtle mesoscale waves for the first time, and very bright, well-resolved popup clouds.

Global maps: [Figure 4](#) is a ground-based map of the planet around the time of PJ35, and [Figure 5](#) is our JunoCam map.

S. Temperate domain: There were again excellent views of oval BA and White Spot 6 (WS6), which are now adjacent again (see [Figure 6](#), map by Björn Jónsson, shown at half scale). Much detail is seen in the disturbed sector preceding these ovals, although Clyde's spot was just beyond the limb at this flyby. This map also shows the white oblong in the SSTB between AWOs A4 and A5, which developed earlier this year.*

*This was a small FFR at PJ29, then a dull grey-brown oval at PJ31 & PJ32 (Feb.21) during solar conjunction. Amateur images from March 14 to April 9 showed it very light, slightly reddish, and by May it was fully white.

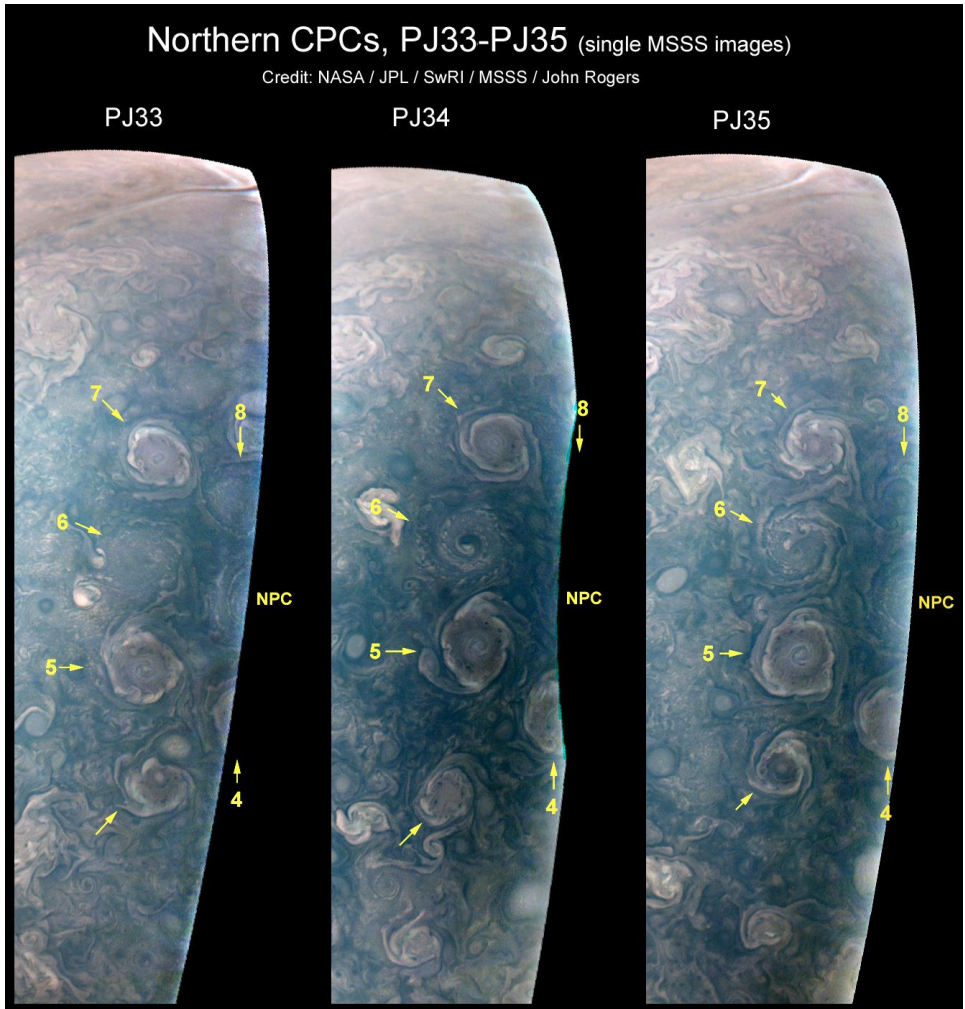


Figure 2

Details of NNTB-FFR & NTZ PJ32 images 57 (L) & 58 (R) (Overlap at *****) Credit: NASA / JPL / SwRI / MSSS / Gerald Eichstädt / John Rogers

- Arcuate white bands (& one reddish), suggesting expanding waves
- Linear dark bands
- Large popup clouds (a few examples)
- Subtle mesoscale waves (there are many more between marks)

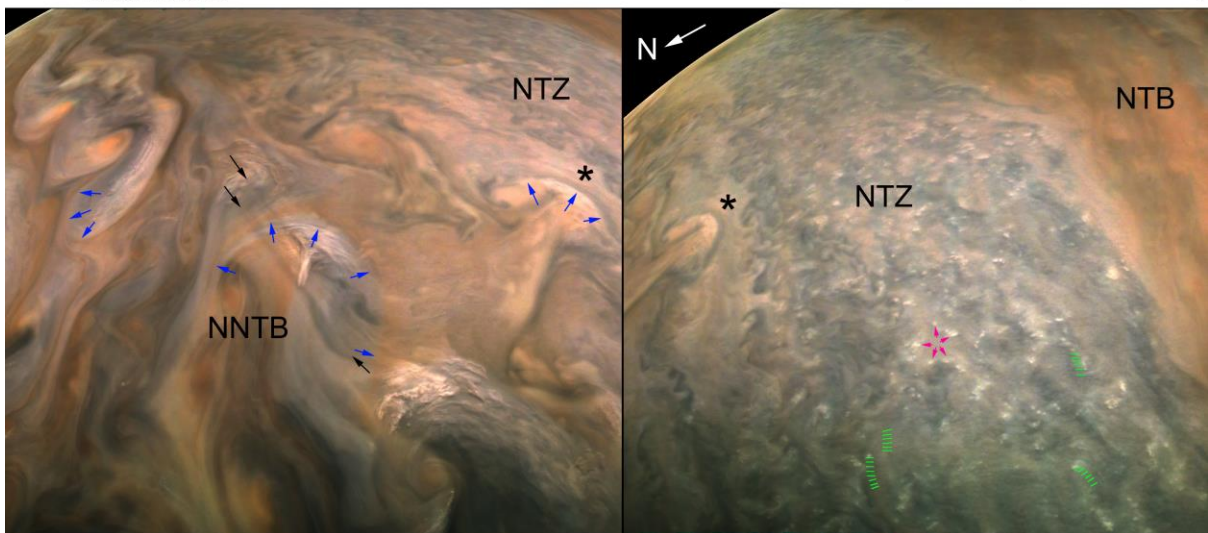


Figure 3

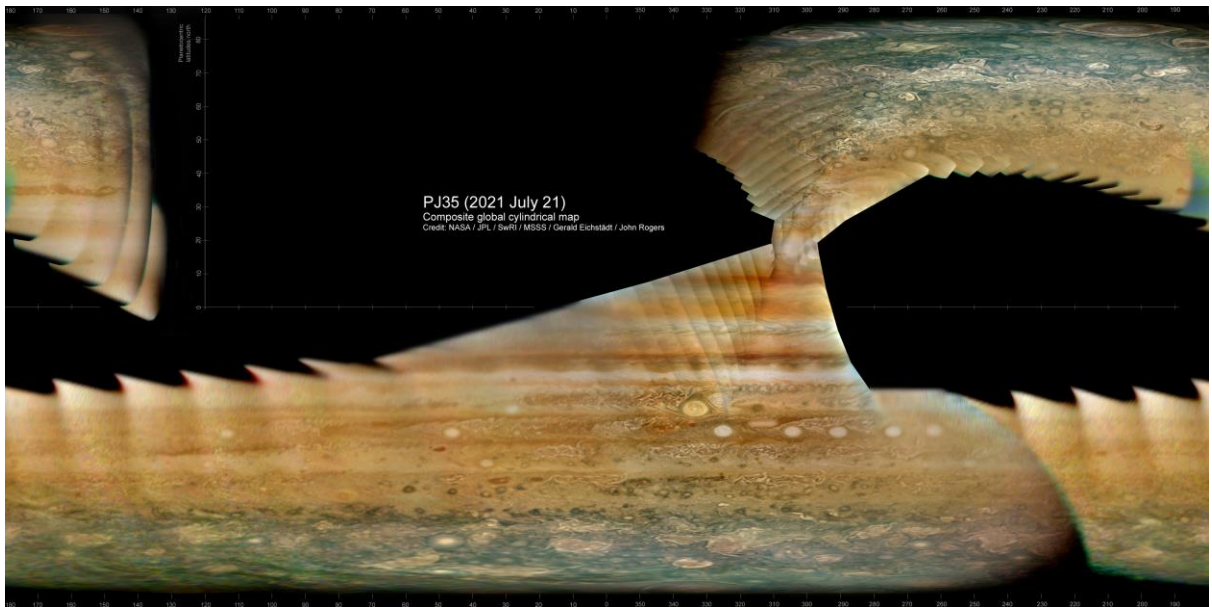
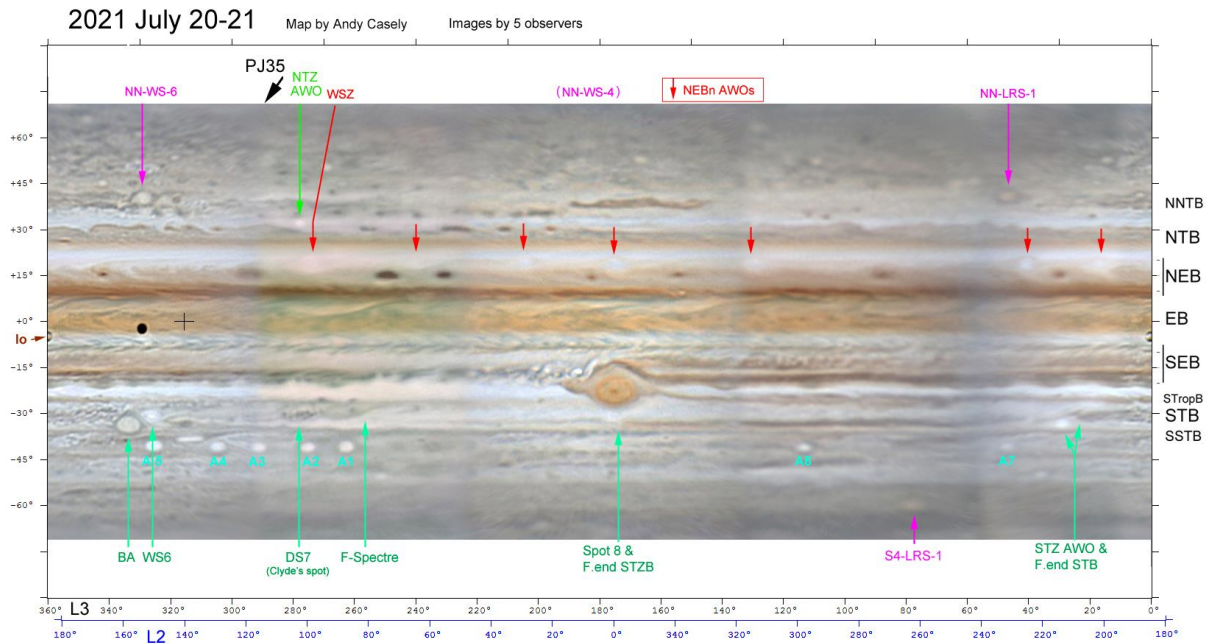


Figure 5

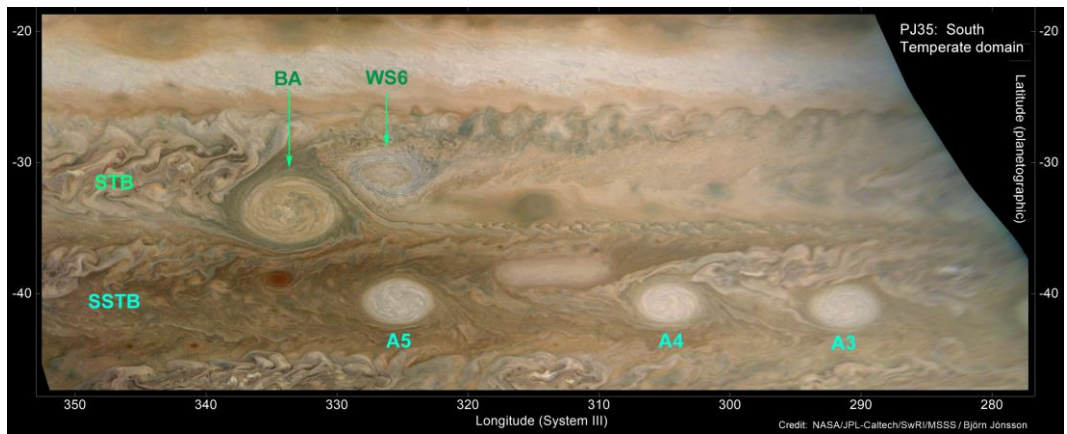


Figure 6