

## ***Jupiter in 2013/14: BAA/JUPOS report no.8 (2014 April 12)***

### **New cyclonic ovals in SSTB**

--John Rogers (BAA) & Michel Jacquesson (JUPOS team).

Recent images are showing some interesting changes in the SSTB: more cyclonic light ovals may be developing there, between the long-lived anticyclonic white ovals (AWOs).

For several months observers have been watching the ‘Mickey Mouse spots’, which comprise a new, bright white cyclonic oval between AWOs A3 and A4 (see our Reports no.4 & 6, and [Figure 1 \(map from Report no.6\)](#)). Recently observers have noticed the cyclonic oval flattening, and it may be lengthening, as persistent cyclonic white oblongs do.

The second feature is between AWOs A7a and A8 (see [Figure 2 – set of images](#)). It started as a dark brown ‘barge’ in October, which became very dark, but has recently shrunk rapidly within a pale reddish outline, and in lo-res images it has already disappeared, leaving a light reddish oval behind. Meanwhile a third feature developed between AWOs A0 and A1: a more complex, poorly resolved cyclonic area, which also seems to be becoming light reddish now. Possibly one or both of these will develop into cyclonic white ovals.

A JUPOS chart of this sector is in [Figure 3](#). The AWOs seem to play ping-pong with the cyclonic formations! It may be significant that in each case, the cyclonic oval developed as the AWOs were converging rapidly. In the case of A3-A4 (the ‘Mickey Mouse spots’), they have continued to converge and are now only 15 deg. apart, even though the bright cyclonic oval is not shrinking; indeed it is probably already expanding, and will continue to do so, so the AWOs flanking it will move apart. In the case of A7a-A8 and A0-A1, the AWOs began to move apart at about the time that the cyclonic cell appeared, and may have been pushed apart by it. Indeed A0 and A1 had approached to only 11 deg., so the new cyclonic oval may have prevented an imminent merger.

The ‘Mickey Mouse spots’ have just passed the GRS (L2 = 210), and the cyclonic oval between A7a-A8 is predicted to be at the following longitudes:

L2 = 42 (April 12), 37 (April 18), 31 (April 24), 26 (April 30).

The previous history of these ovals, and of similar phenomena, is given in our recently posted long-term account of the S2 domain, at: <http://www.britastro.org/jupiter/sstemp2014.htm>.

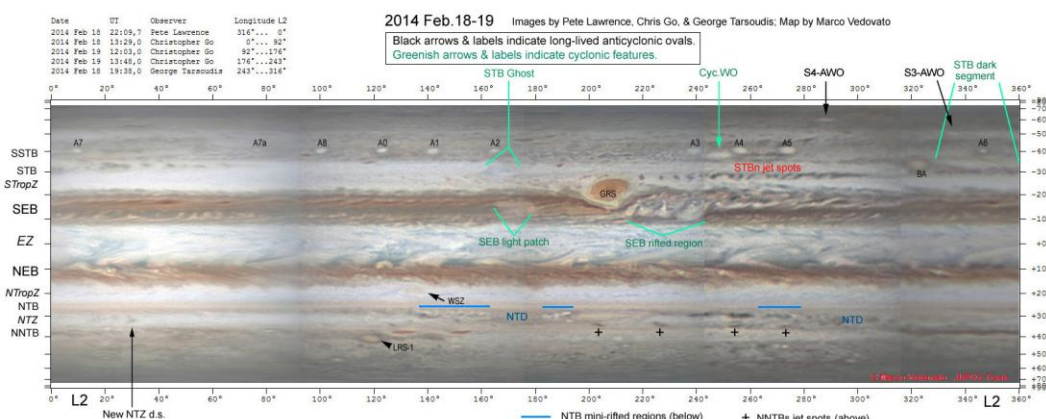


Figure 1. [Map from Report no.6. Full-size image in separate file.]

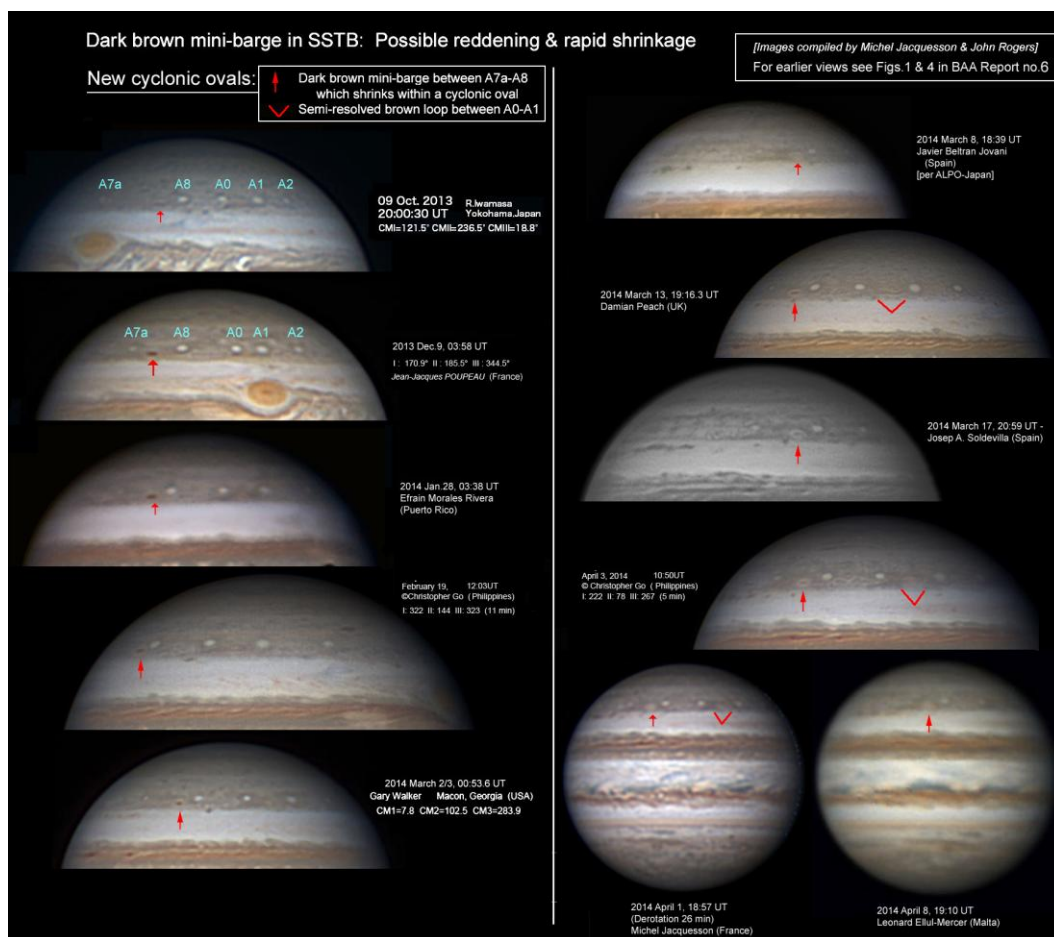


Figure 2. *[Full-size image in separate file.]*

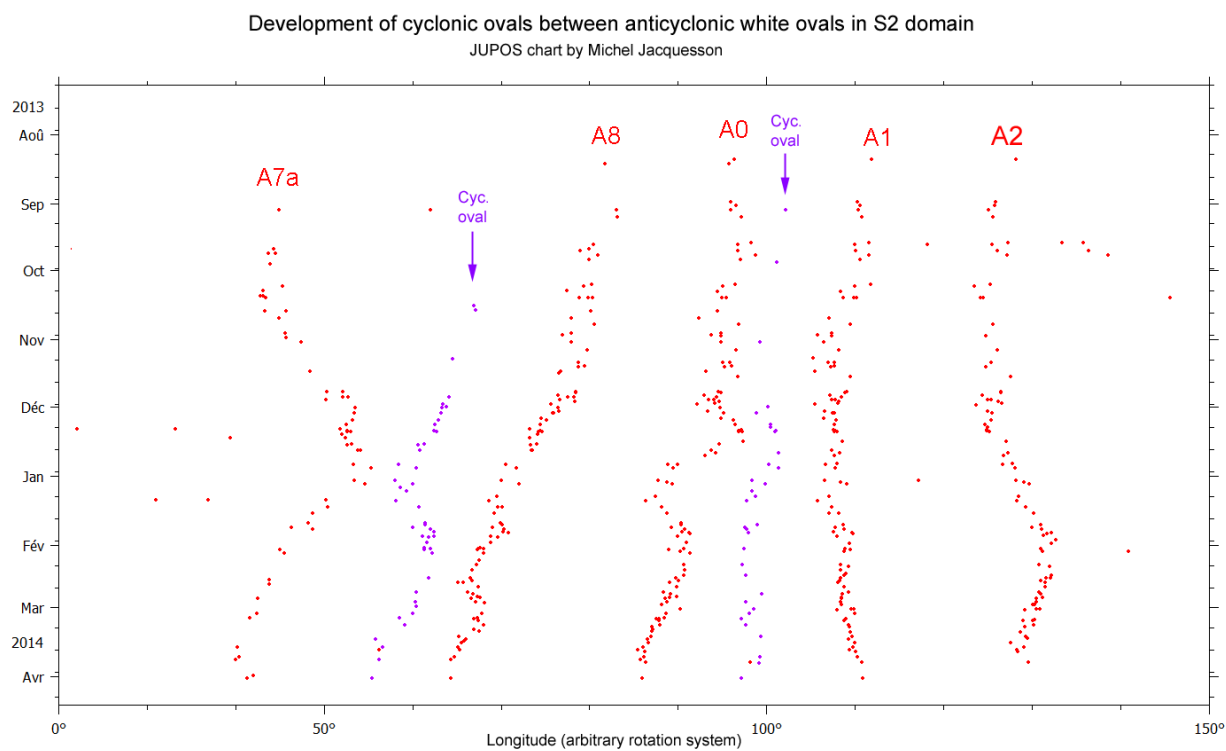


Figure 3.