

Jupiter in 2012/13: Interim report no.9 (2013 Jan.):

Interim report on Jupiter, 2012 Aug.-Dec.

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including results from the JUPOS team

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Figure legends with reduced-size images *(see attached ZIP file for full-size images)*

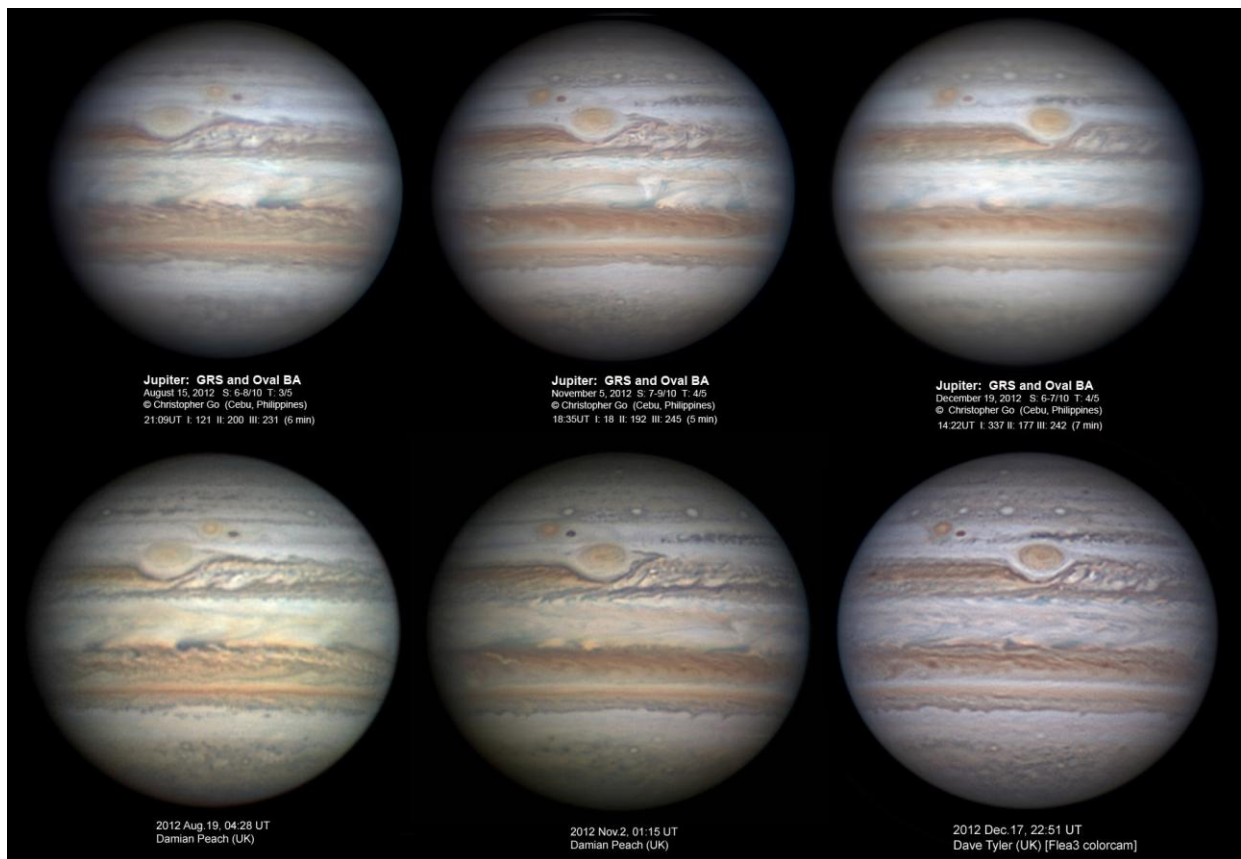


Fig.1. Large-scale changes from Aug.to Dec. Two triplets of images: (top) all by Chris Go, (bottom) by Damian Peach and Dave Tyler. In these images which appear to have reasonably consistent colour balancing, one can see progressive changes over the months. The GRS and oval BA both become darker and redder. So does much of the NEB, as the turbulence of the Revival has subsided, at least in regions which are not affected by new rifts; but its northern edge is grey and becoming lighter. Also the NTropZ, formerly veiled in ochre shading, has become lighter and is now white. In contrast the NTB(S), dark and strongly orange in August after the Revival, is gradually fading.

Jupiter, 2012 Nov. 18-19

Map by Marco Vecovato, annotation by M.V. & J.H.R.

Date	UT	Observer	Longitude (2)
2012 Nov 18	00:33,5	Dave Tyler	0° ... 78°
2012 Nov 18	01:50,7	Dave Tyler	78° ... 138°
2012 Nov 18	23:58,9	Damian Peach	138° ... 210°
2012 Nov 18	05:30,0	Efrain M Rivera	210° ... 270°
2012 Nov 19	23:08,1	Alfredo Vidal	270° ... 0°

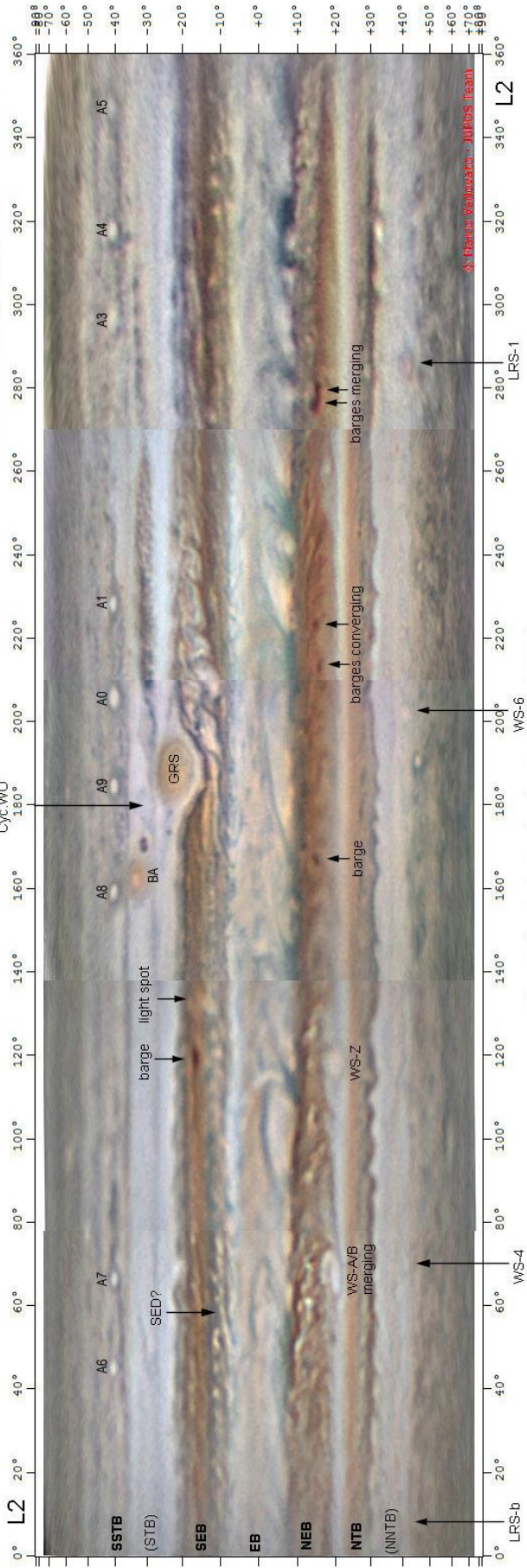


Fig.2. Map from images on 2012 Nov.18-19, labelled.

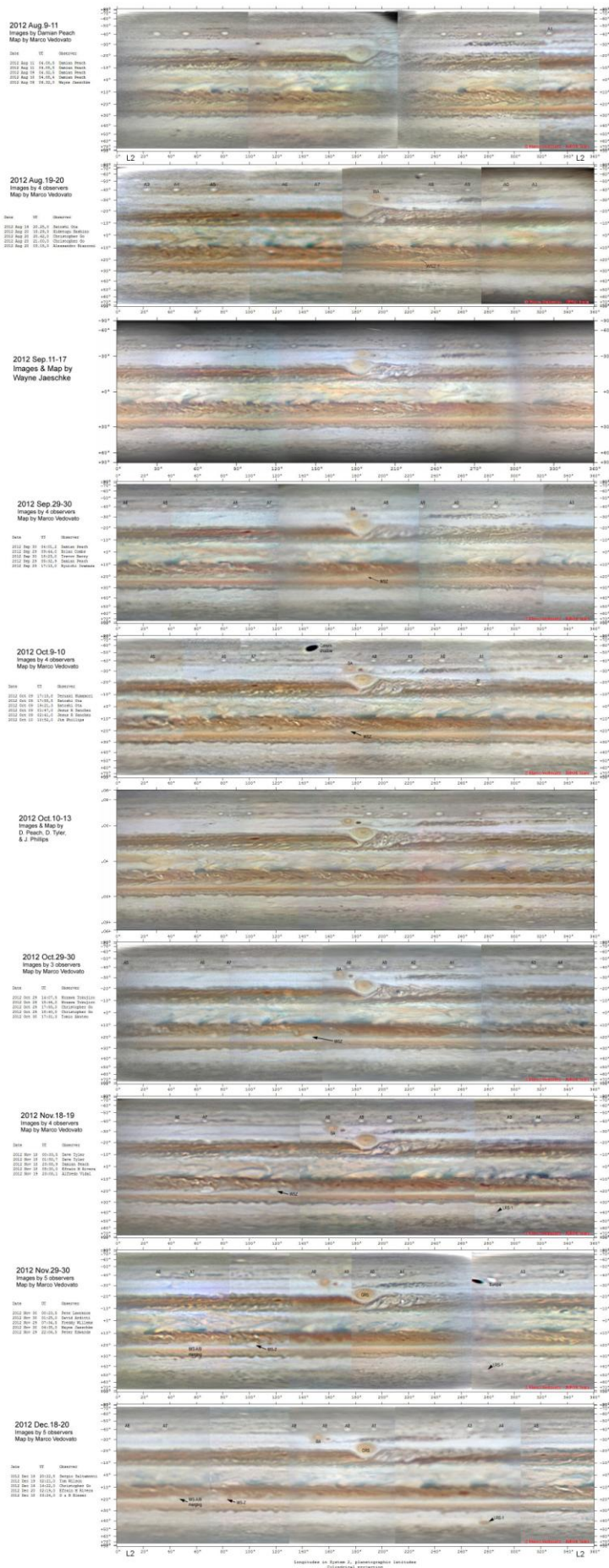


Fig.3. Some of the best maps from 2012 Aug. to Dec., produced by Marco Vedovato or by the observers themselves, aligned in System II longitude.

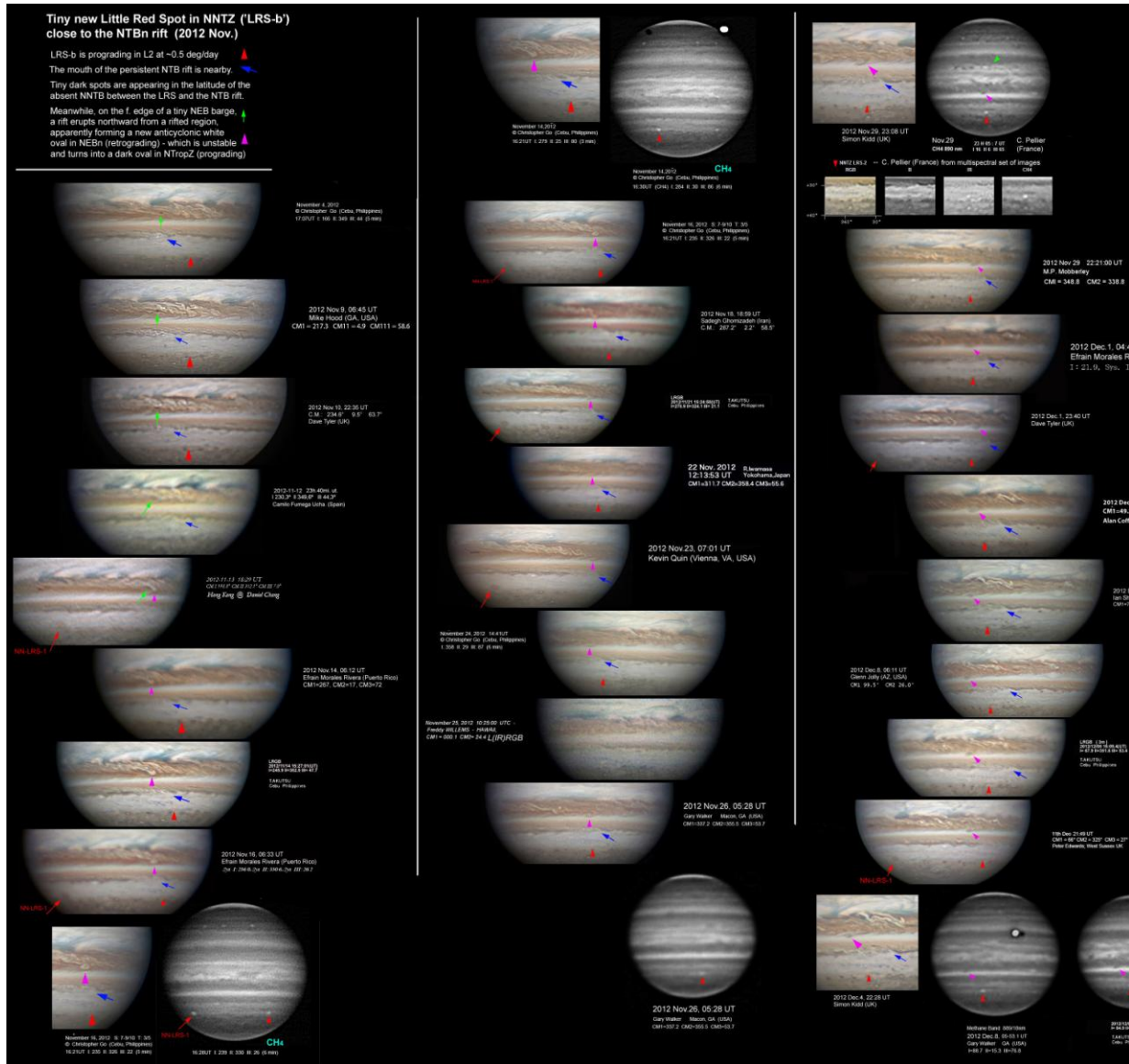


Fig.4. Set of images including LRS-b, the NTB rift, and a new NEBN spot forming. At top and bottom, some v-hi-res views and some methane-band images. (Also see Fig.12.)

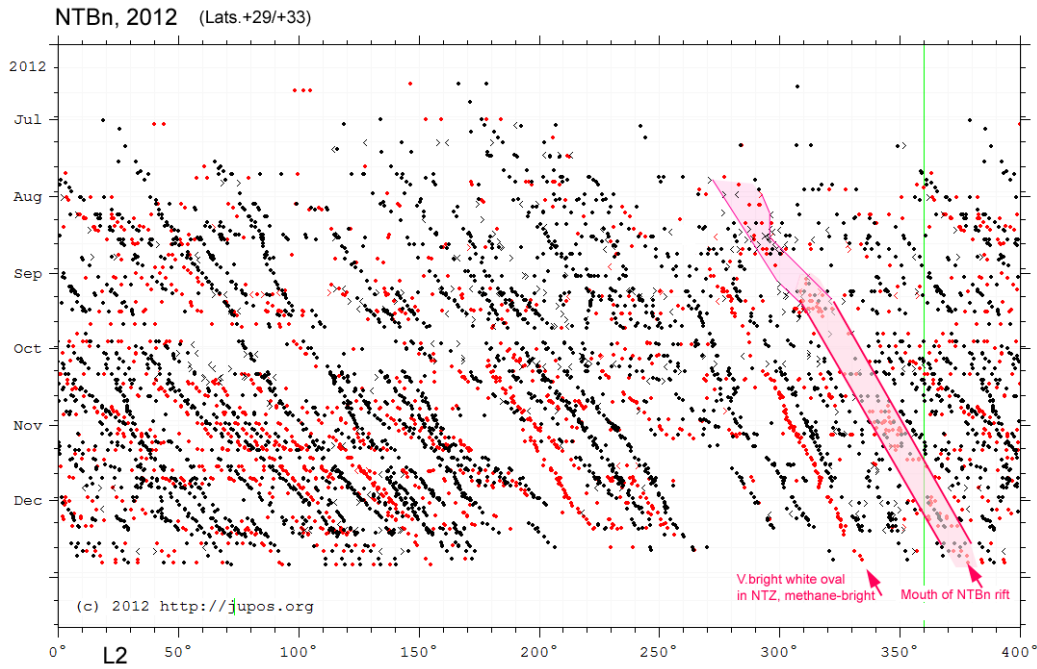


Fig.5. JUPOS chart of the NTBn. In all JUPOS charts, black points are dark spots, red points are bright spots.

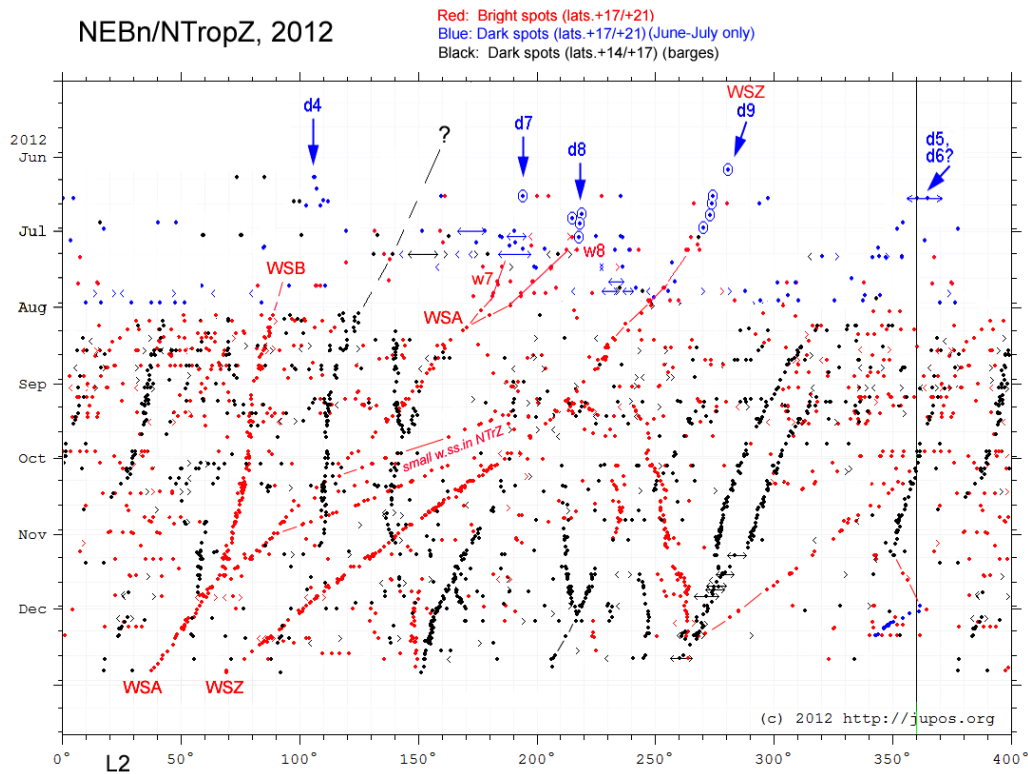


Fig.6. JUPOS chart of the NEBn/NTropZ. As previously reported [ref.1], at least some of the dark spots in the NTropZ in June (blue points, d4 to d9) turned into AWOs (red points), which have undergone successive mergers to form white spot A (now DL2 = -22 deg/mth) as well as the long-lived white spot Z (DL2 = -42 in Oct-Nov., and DL2 = -38 in Nov-Dec.). Many very small barges have also developed (black points), with DL2 ranging from ~0 to -15 deg/mth, but several have undergone mergers or been disrupted by rifts, leaving only about 4 now.

Mid-NEB rifts, 2012 Aug-Dec. (Lats. +10/+14 deg.)
 Labels indicate the new rifts lettered as in previous interim report

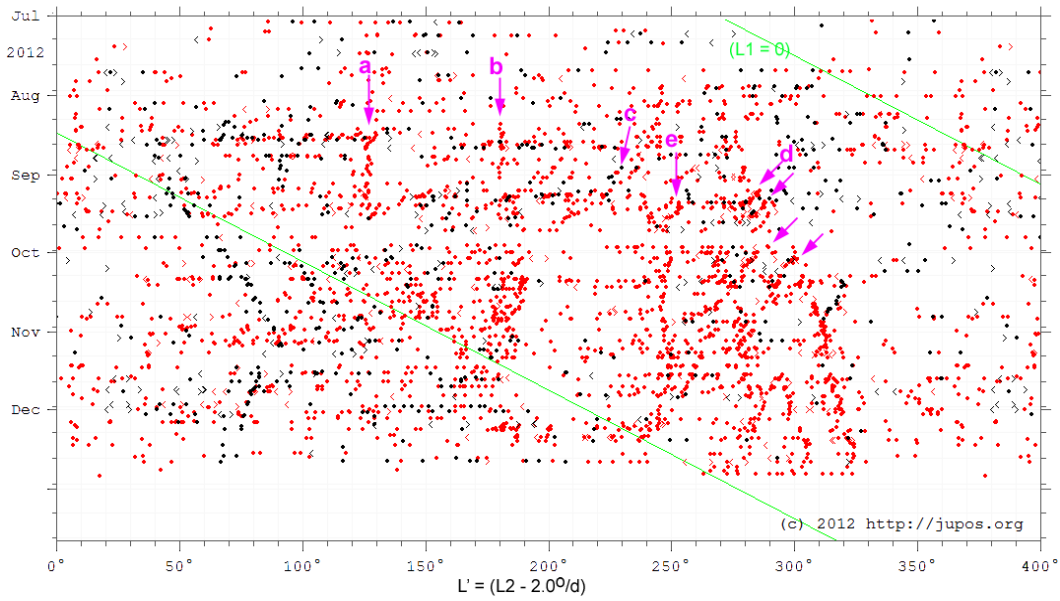


Fig.7. JUPOS chart of the mid-NEB rifts.

NEBs, 2012 (lats.+6/+9 deg.)

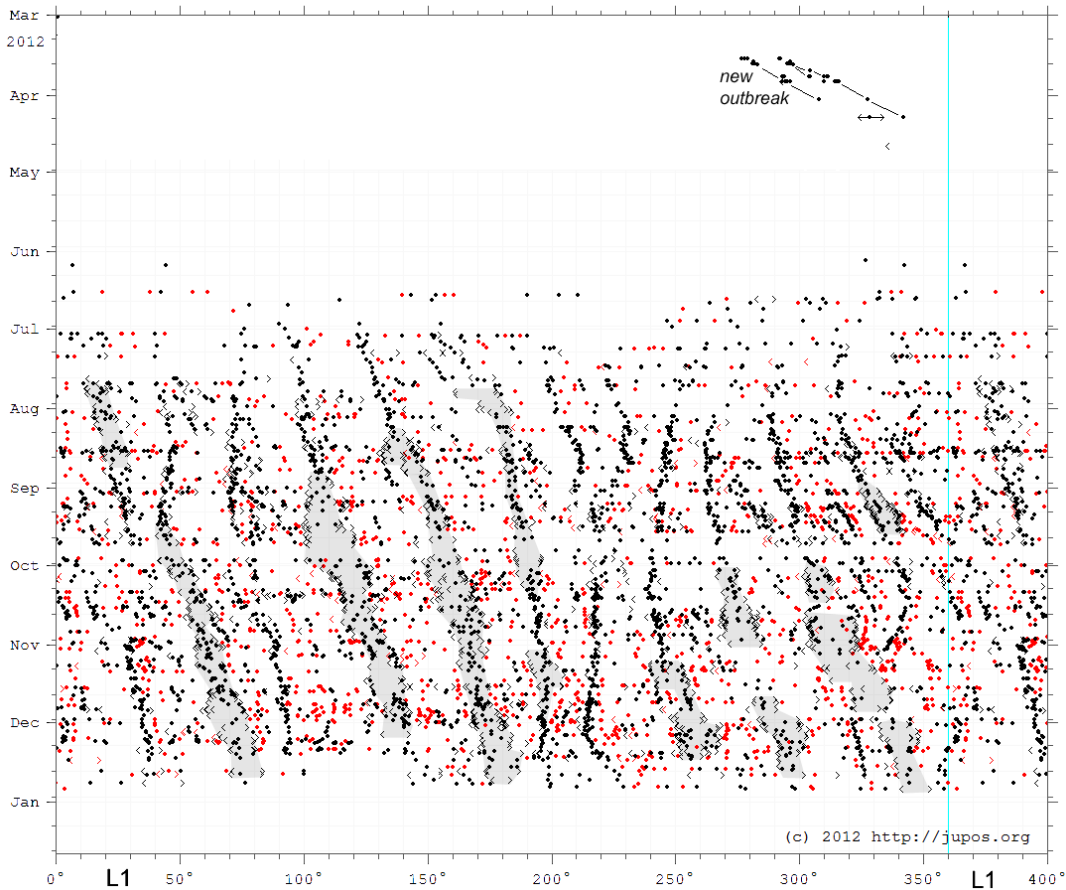
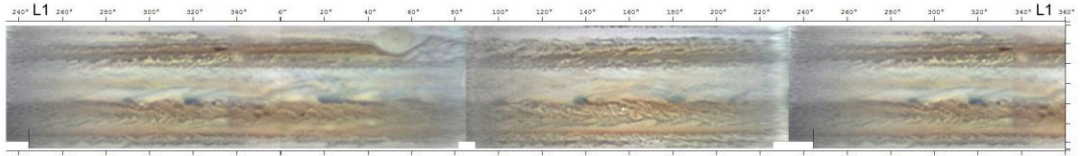


Fig.8. JUPOS chart of the NEBs edge, showing the large dark ‘projections’ (black points and grey shaded areas; < > indicate p. and f. ends of dark features). The present array is fairly stable and normal, in contrast to the very dark retrograding spots which initiated the NEB Revival in 2012 March.

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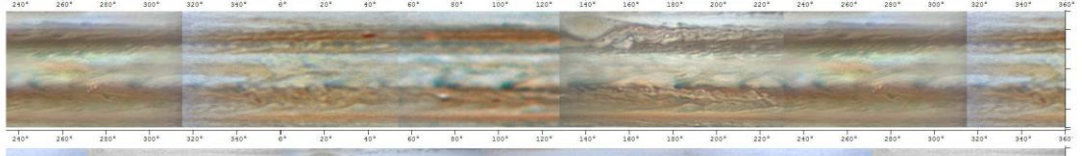
2012 Aug 9-11

Aug 09 04:32,5 Damian Peach
Aug 10 04:35,4 Damian Peach
Aug 11 04:05,5 Damian Peach



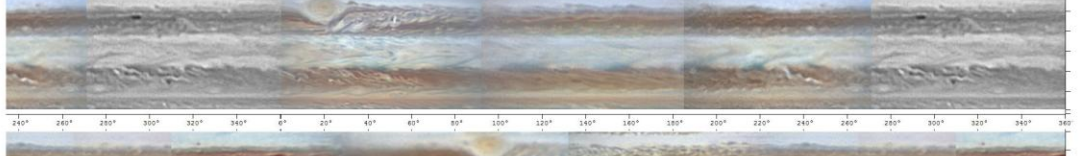
2012 Aug 19-20

Aug 19 20:25,0 Satoru Oka
Aug 20 19:28,0 Rikuzo Maruno
Aug 20 20:42,0 Christopher Go
Aug 20 21:02,0 Christopher Go
Aug 20 03:15,0 Alessandro Bianconi



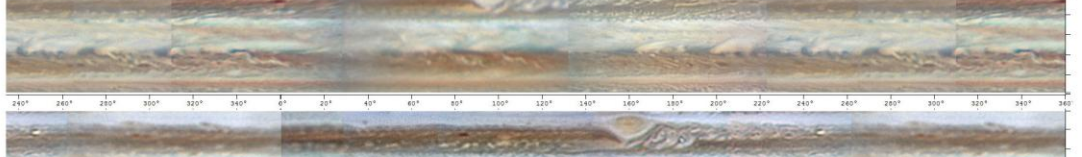
2012 Sep 19-21

Sep 20 20:52,0 Christopher Go
Sep 20 18:52,0 Ryoichi Tsunoda
Sep 19 19:32,4 Gary Walker
Sep 21 04:09,0 Shiroe Decima Jovani



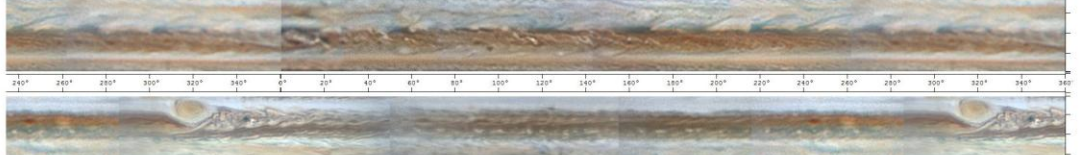
2012 Sep 29-30

Sep 30 18:23,0 Trevor Berry
Sep 29 09:32,0 Damian Peach
Sep 30 17:12,0 Ryoichi Tsunoda
Sep 30 04:01,0 Damian Peach
Sep 29 09:44,0 Brian Conner



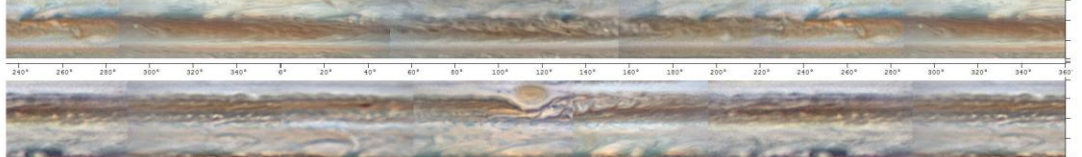
2012 Oct 9-10

Oct 09 17:13,0 Teraki Yamamoto
Oct 09 17:55,0 Satoru Oka
Oct 09 18:22,0 Satoru Oka
Oct 09 01:47,0 Owen R Saunders
Oct 09 02:41,0 Owen R Saunders
Oct 10 10:52,0 Jim Phillips



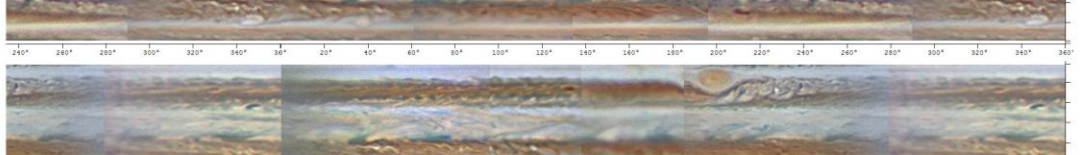
2012 Oct 29-30

Oct 30 17:51,0 Tomo Aikawa
Oct 29 14:57,5 Hiromi Takahiro
Oct 29 18:44,0 Hiromi Takahiro
Oct 29 17:58,0 Christopher Go
Oct 29 18:46,0 Christopher Go



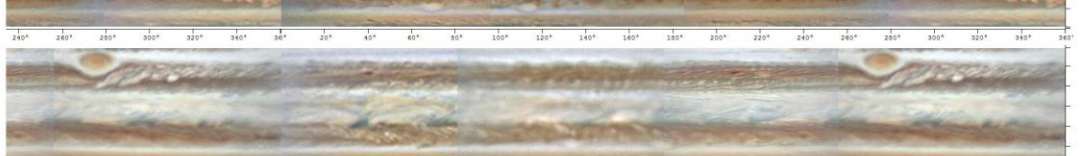
2012 Nov 18-19

Nov 18 01:50,7 Dave Tyler
Nov 18 23:59,9 Damian Peach
Nov 18 05:05,0 Efraim W Rivera
Nov 19 23:05,1 Alfredo Ysidro
Nov 18 02:18,0 Dave Tyler



2012 Nov 29-30

Nov 30 00:22,5 Pete Lawrence
Nov 30 01:29,0 David Baskett
Nov 29 07:34,5 Freddy Millieu
Nov 30 04:29,0 Wayne Sawada
Nov 29 22:06,5 Peter Edwards



2012 Dec 9-10

Dec 09 00:52,4 Christophe Pillier
Dec 09 12:43,0 Tadeaki Hirotsuki
Dec 09 14:49,0 Christopher Go
Dec 10 03:04,0 Efraim W Rivera

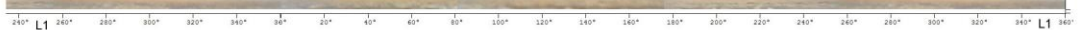


Fig.9. Some of the best maps of the equatorial region from 2012 Aug. to Dec., produced by Marco Vedovato, aligned in System I longitude. On these maps one can trace the large dark NEBs 'projections', the orange EB, and the subtle pattern of streaks in the EZ. However, little can be seen of the putative new SED until Nov.

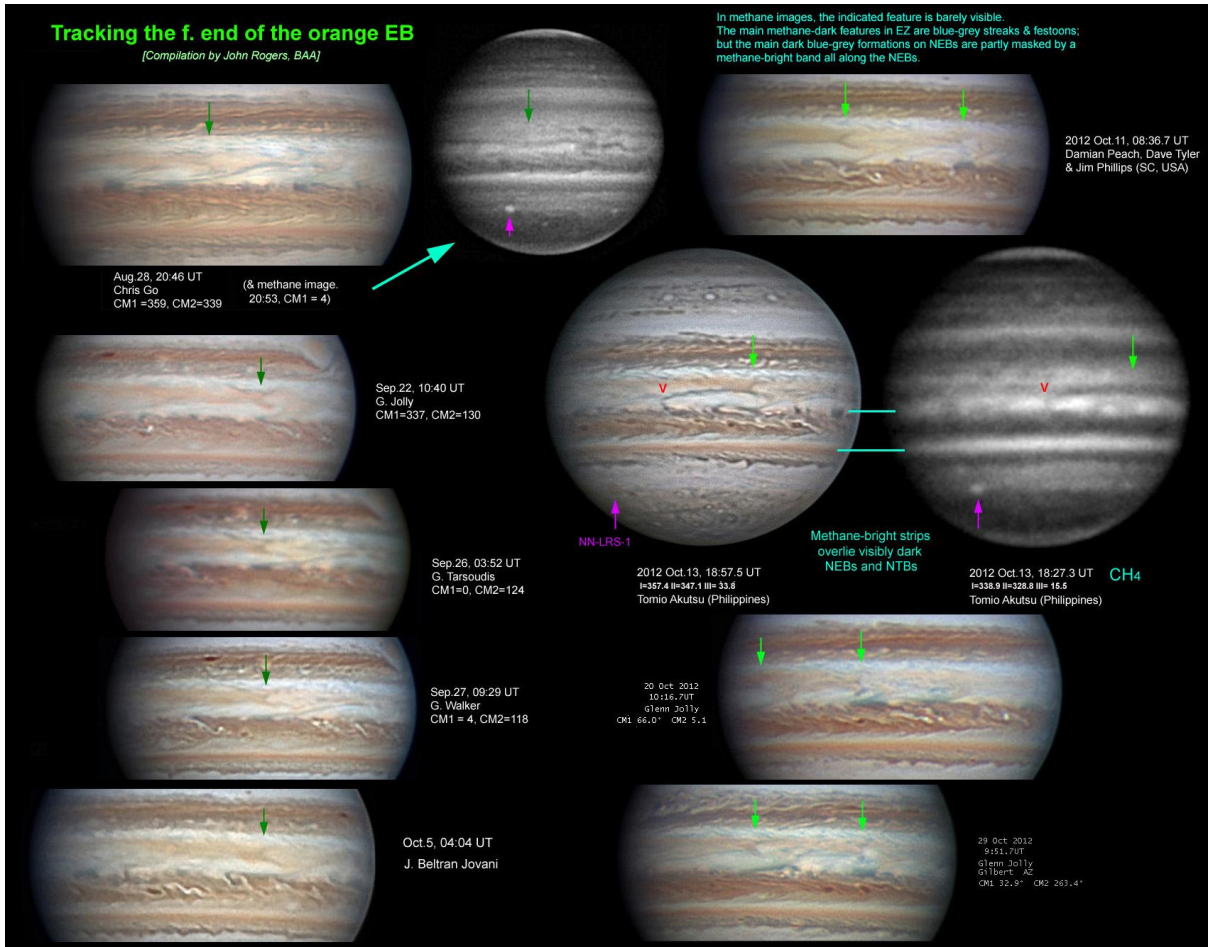


Fig.10. The f. end of the orange EB (green arrow): selected hi-res and methane images.

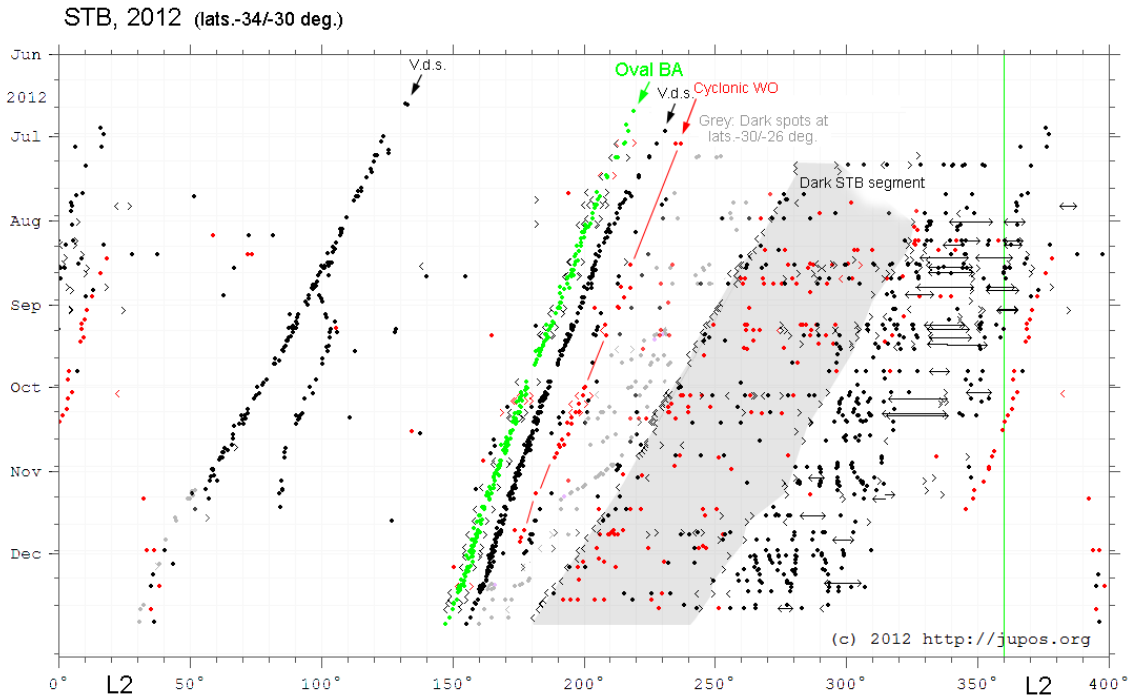


Fig.11. JUPOS chart of the S. Temperate region. Oval BA is marked in green.

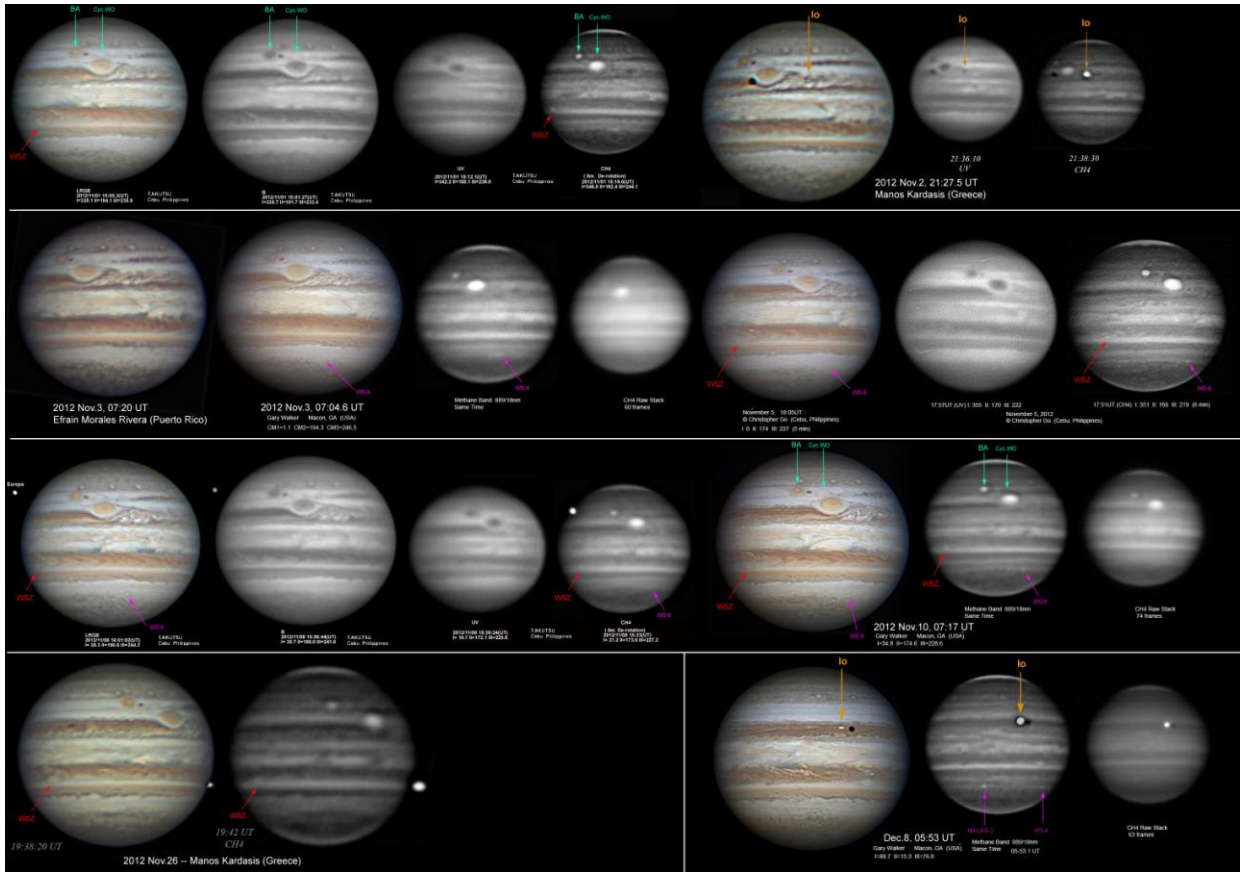


Fig.12. Multispectral sets showing the GRS side of the planet in 2012 Nov-Dec, including RGB, blue or UV, and methane-band (0.89 μm) images. (At lower right, a set from the opposite side of the planet.) In some cases the unprocessed stacked methane image is also shown; note that the processing tends to produce artefacts such as dark bands adjacent to the methane-bright GRS and oval BA, and to enhance details which may have little real contrast. Methane-bright anticyclonic ovals in the S.Temp., N.Trop., & N.N.Temp. regions are marked, as well as the methane-dark cyclonic oval in the S.Temp. region. Convective plumes in the SEB f. the GRS are methane-bright on Nov.8 only. There are still methane-bright strips overlying the NEBs and NTBs. The NTropZ is still shaded in UV images but not in blue images. The EB is dark in both blue and UV, and in methane.

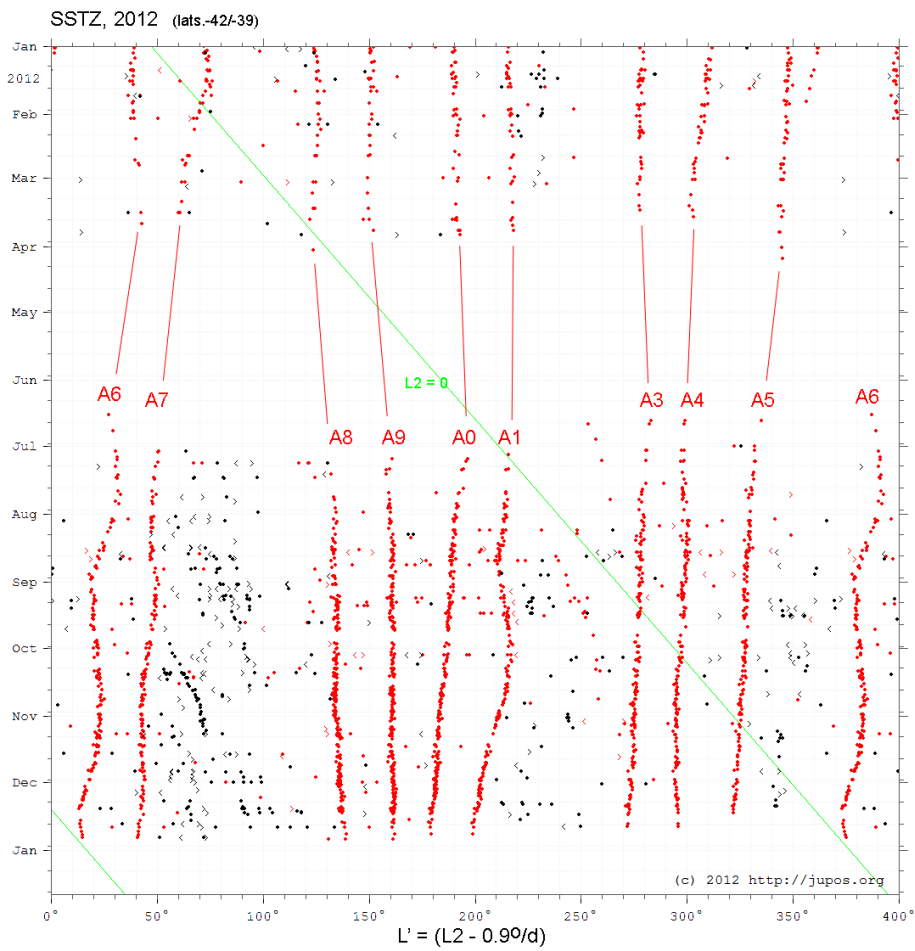


Fig.13. JUPOS chart of the S. Temperate region, showing the 9 AWOs. (There have been no substantial cyclonic features to track in this apparition.)