JUPOS: continuing study of Jupiter based on amateur observations

John Rogers &
the JUPOS team

<jrogers11@btinternet.com>
<h.j.mettig@t-online.de>

Europlanet Workshop, Nice, 2016 May

The JUPOS team -- Schwarzwald, 2011

JUPOS:

A project of a small group of amateurs in Europe:

--to provide and use the software suite WinJUPOS;
--to obtain precise positions of jovian cloud features;
--to analyse them in drift charts; and
--to study their movements and evolution.

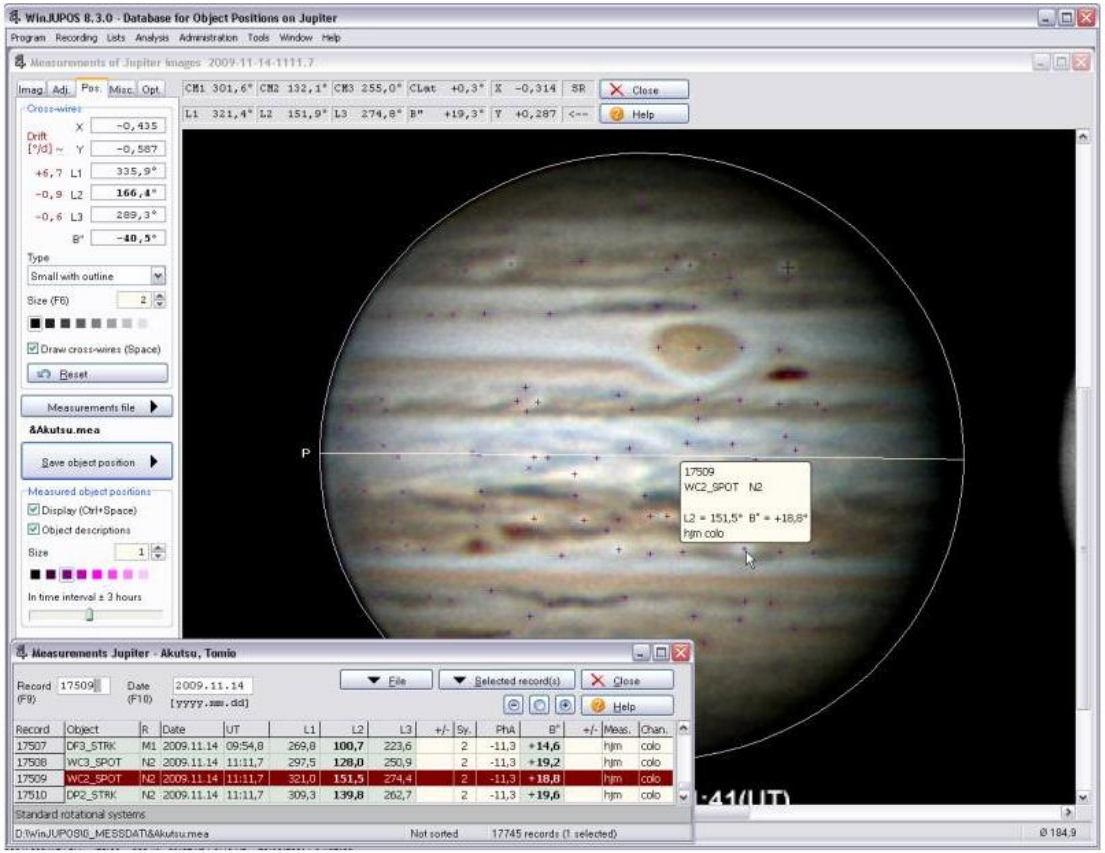
http://jupos.org ⟶
http://jupos.privat.t-online.de/index.htm

JUPOS - Database for Object Positions on Jupiter

Last update: 2016 March 18 - **Whats's new?**

About JUPOS

The atmosphere of the giant planet Jupiter presents cloud systems even to the Earth-bound observer equipped with a smaller telescope. These clouds show a dynamic pattern of movements which largely depends on planetographic latitude, that is for example, on whether they are situated near Jupiter's equator or near one of its poles. The aim of JUPOS is to collect precise positions of jovian cloud features, to analyse them in drift charts, and to examine if and how their movements change in time. JUPOS is an amateur-astronomical project.



Overview

Home / About JUPOS

Project history

People

List of Observers

List of Measurers

Contributors' gallery

Great Red Spot

GRS longitude (Sy. 2)

Important to know

Image requirements
dss. auf Deutsch

Tips for Observers

Tips for Measurers

Downloads

Project documentation

WinJUPOS software

Positional data files

Drift charts & movies

Recent drift charts

Older drift charts

Animations

and finally...

Meetings

Publications

Links

Contact

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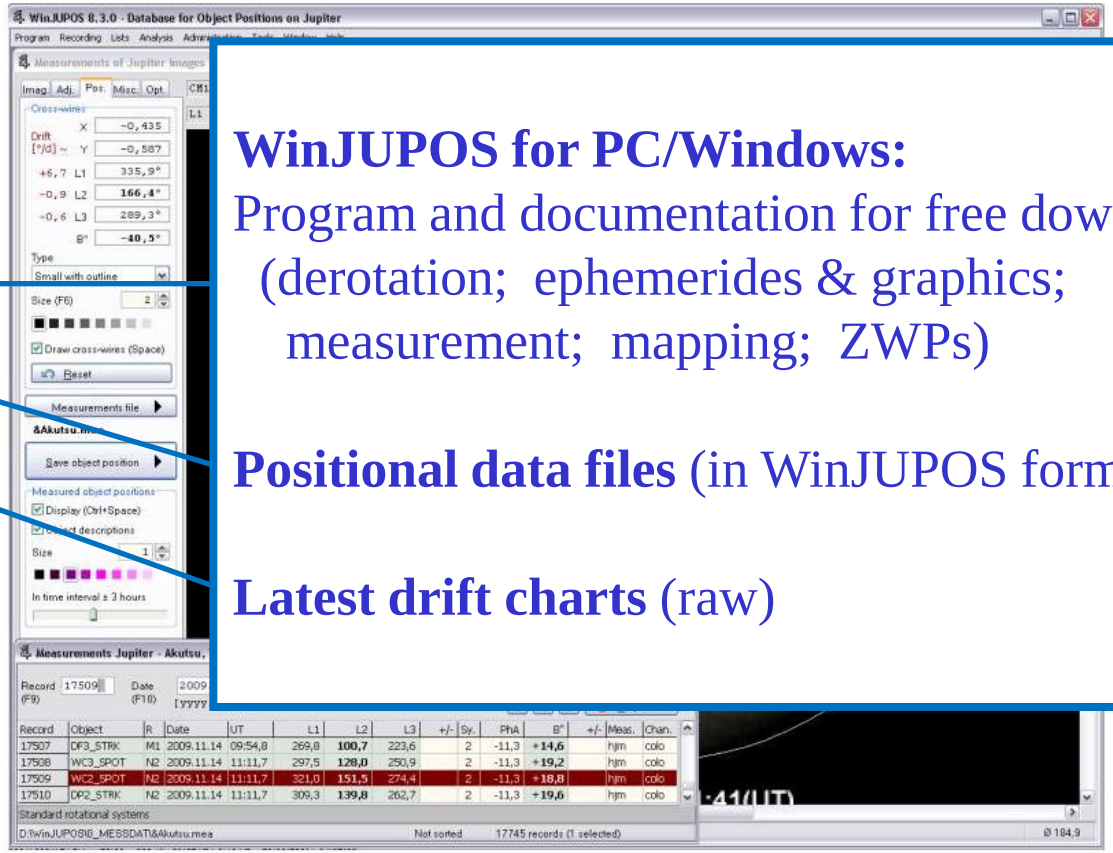


WinJUPOS for PC/Windows:
Program and documentation for free download
(derotation; ephemerides & graphics;
measurement; mapping; ZWPs)

Positional data files (in WinJUPOS format)

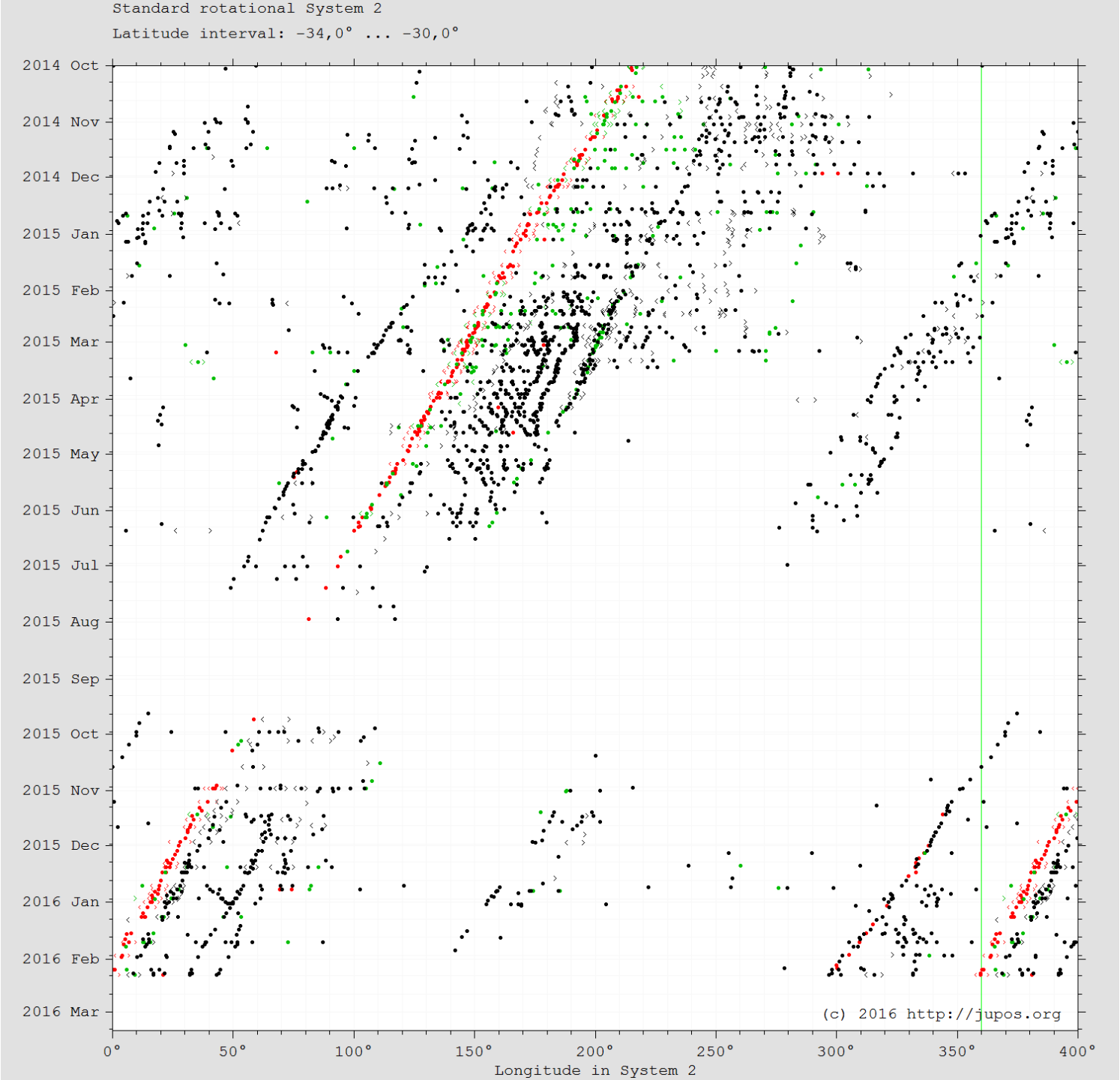
Latest drift charts (raw)

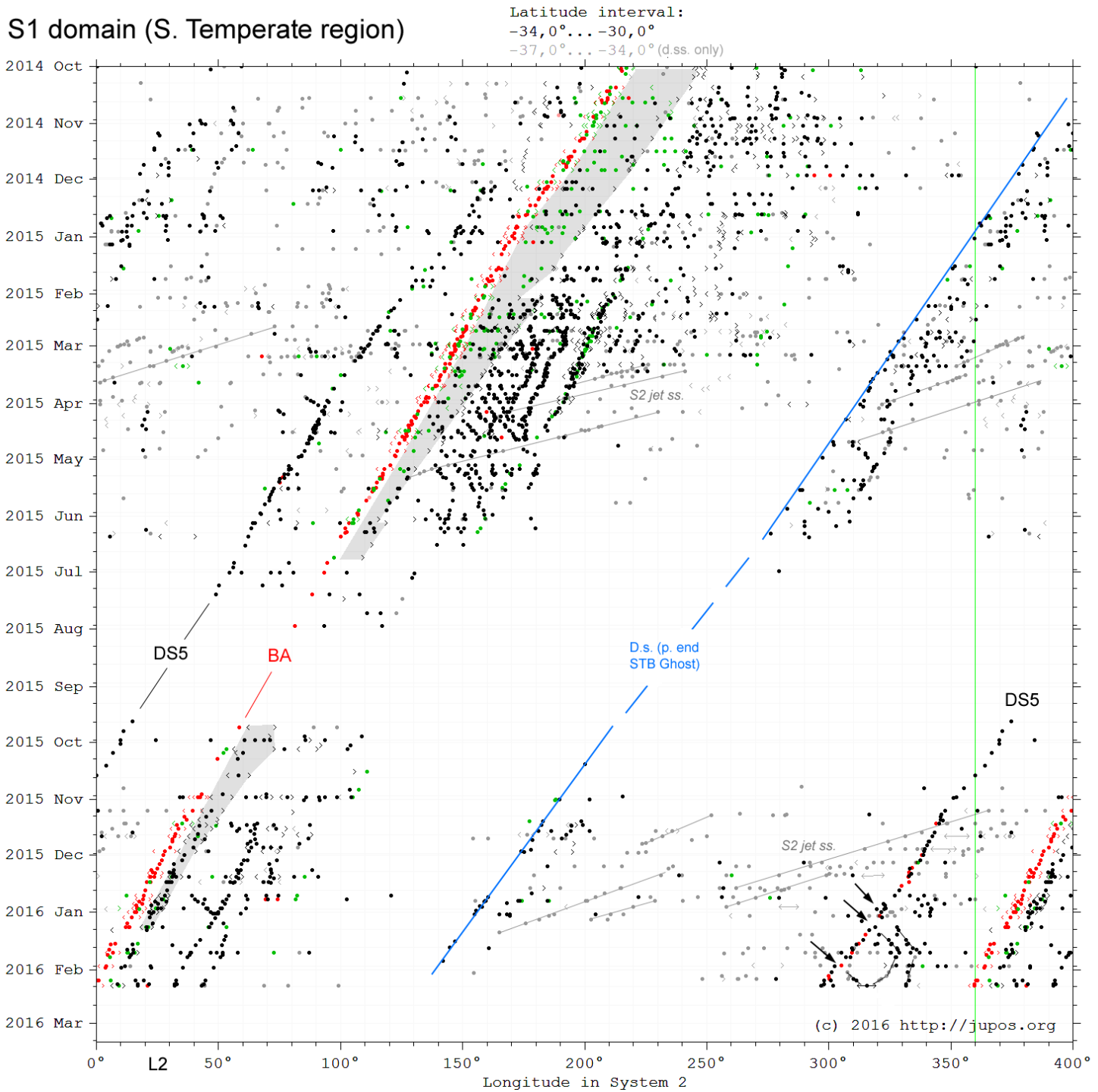
Dissemination of results:

1. **Monthly release of charts on JUPOS web site**
   (raw; typically covering 17 months)

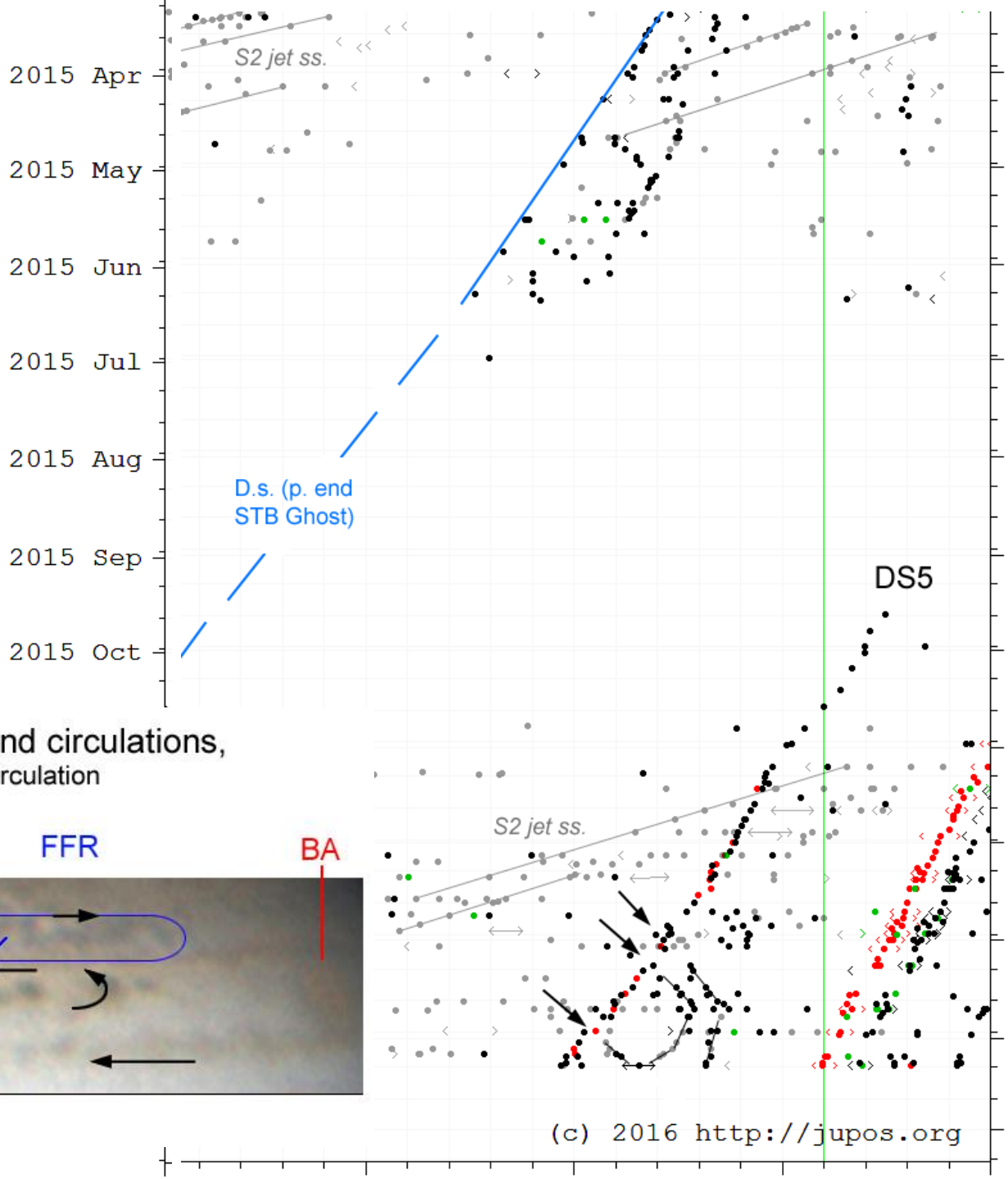
2. **Reports on BAA Jupiter Section web pages:**
   http://www.britastro.org/jupiter/ (up to 2015)
   https://www.britastro.org/section_front/15 (2015 onwards)

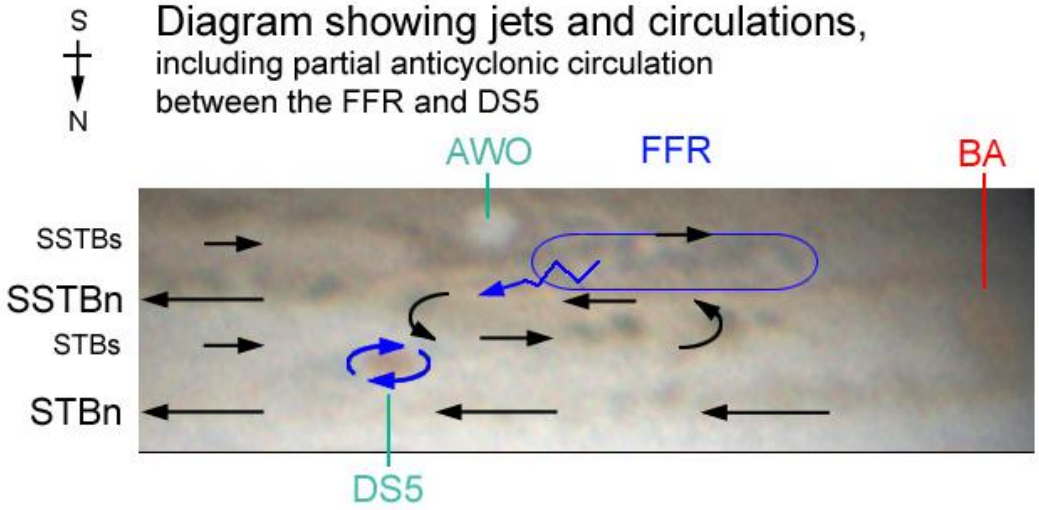
3. **Collaborations.**


Standard rotational System 2
Latitude interval: -34,0° ... -30,0°
2014 Oct
2014 Nov
2014 Dec
2015 Jan
2015 Feb
2015 Mar
2015 Apr
2015 May
2015 Jun
2015 Jul
2015 Aug
2015 Sep
2015 Oct
2015 Nov
2015 Dec
2016 Jan
2016 Feb
2016 Mar
0°
50°
100°
150°
200°
250°
300°
350°
400°
Longitude in System 2
(c) 2016 http://jupos.org


S1 domain (S. Temperate region)
Latitude interval:
-34,0°...-30,0°
-37,0°...-34,0° (d.ss. only)
2014 Oct
2014 Nov
2014 Dec
2015 Jan
2015 Feb
2015 Mar
2015 Apr
2015 May
2015 Jun
2015 Jul
2015 Aug
2015 Sep
2015 Oct
2015 Nov
2015 Dec
2016 Jan
2016 Feb
2016 Mar
S2 jet ss.
DS5
BA
D.s. (p. end
STB Ghost)
DS5
S2 jet ss.
(c) 2016 http://jupos.org
0°
L2
50°
100°
150°
200°
250°
300°
350°
400°
Longitude in System 2

Enlargement showing recirculation of small dark spots between SSTBn and STZ at STB Ghost & STB Spectre (DS5)





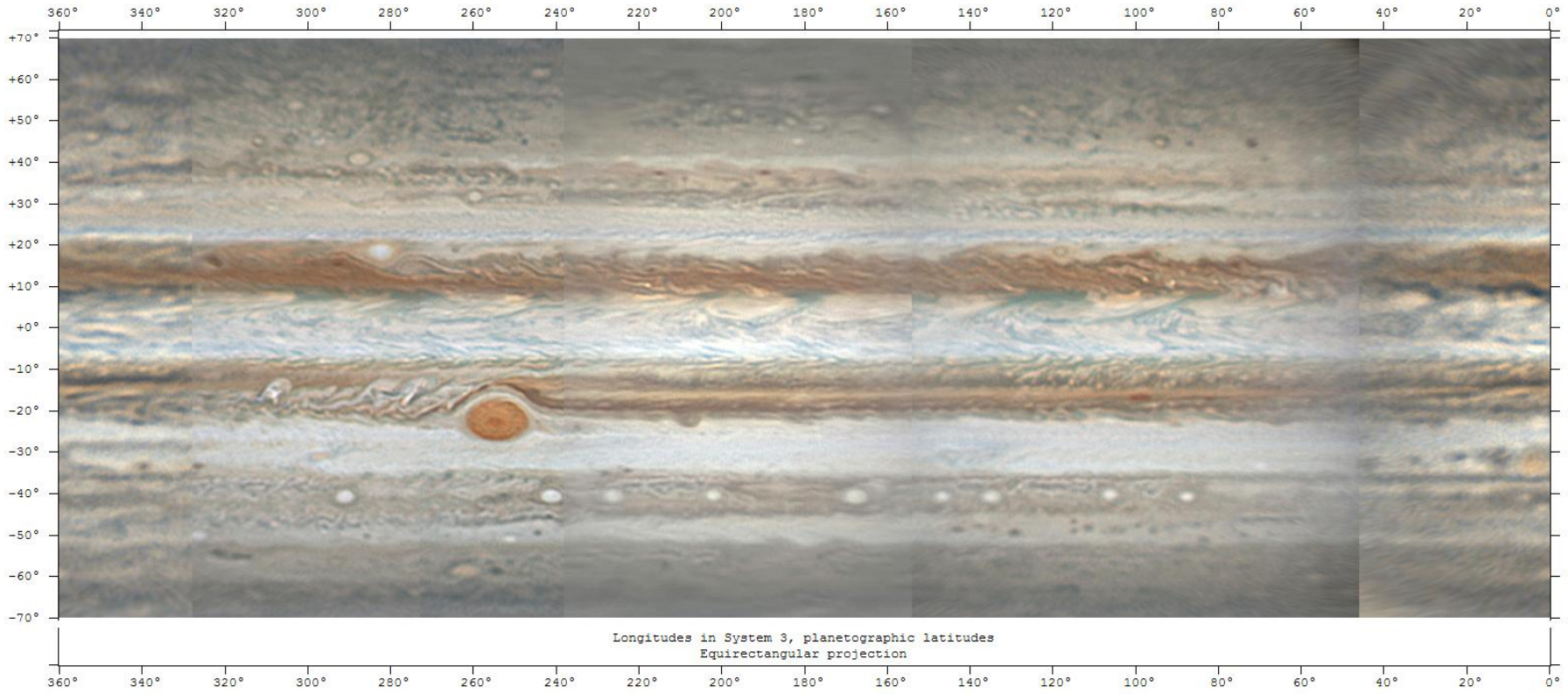
JUPOS during JUNO:

1. Software to enable observers to make map projections of their images (already provided by Grischa Hahn).

2. The on-going JUPOS project: up-to-date monitoring & reporting of atmospheric features.

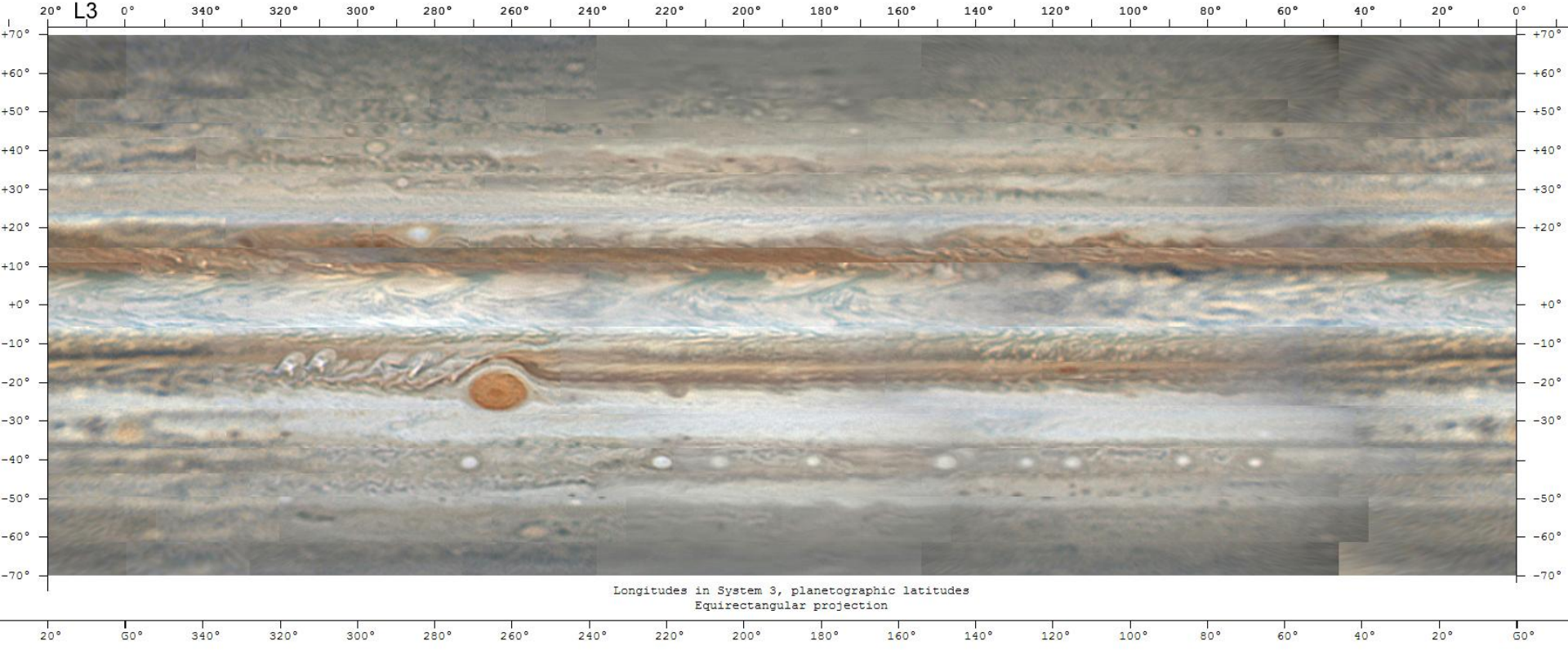
3. Rolling maps forward to predict locations of features:

2016 March 4-5 Images by C. Go, T. Olivetti & A. Pace; map by M. Vedovato

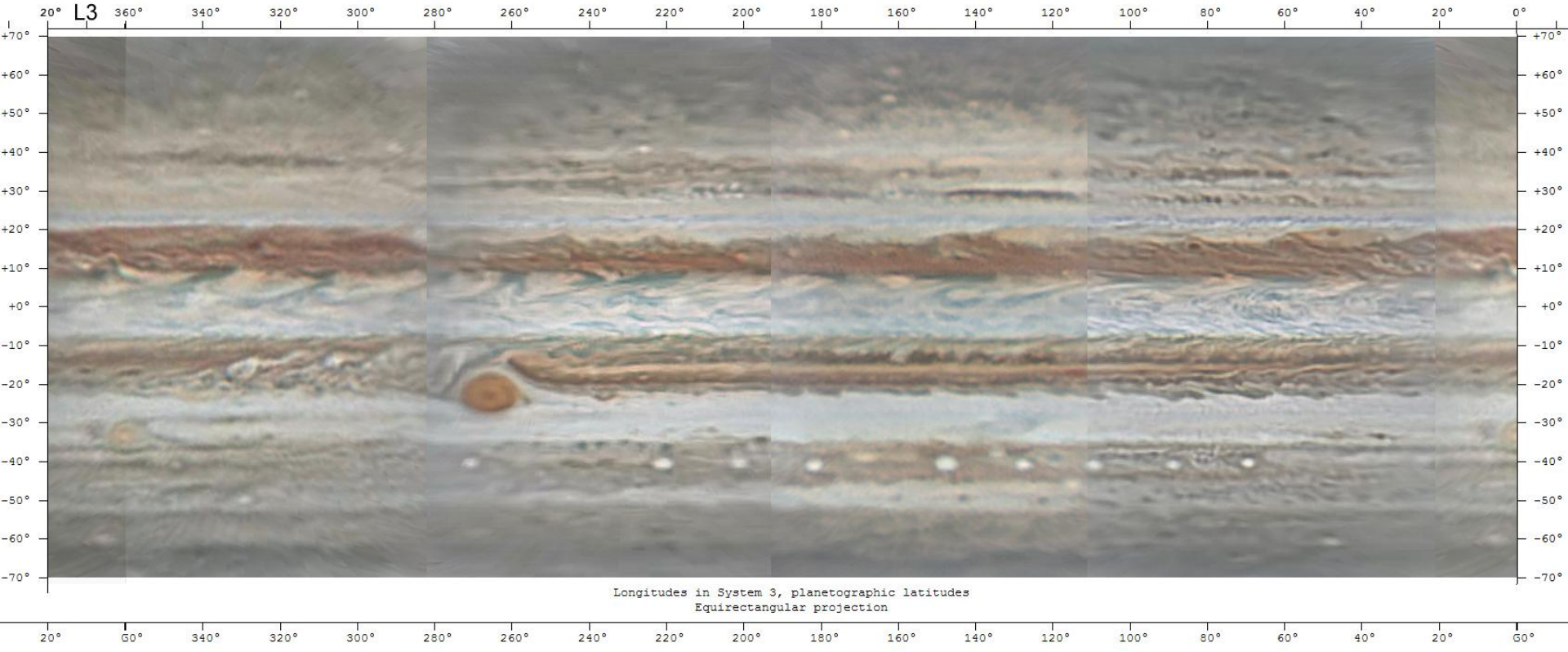


2016 March 4-5: Images by T. Olivetti, C. Go, & A. Pace; Map by M. Vedovato (JUPOS team)

Rolled forward 30 days to forecast 2016 April 3, by John Rogers. using latest drift rates for domains and major ovals



2016 April 3-5 Images by S. Poshyachinda, C. Zannelli & A. Maniero; Map by M. Vedovato (JUPOS team)



The future:

“We are looking for an additional measurer who is able and willing to join the JUPOS team.

He/she would be responsible for analyzing images made by several observers, using WinJUPOS on a regular basis.

The desired profile is:
* knowledge of Jupiter
* enough free time
* knowledge of WinJUPOS
* ability to speak English
* willingness to join us at our meetings
* willingness to be tutored at the beginning.”

More specific information about the task is given under ‘Tips for Measurers’ on the JUPOS website: http://jupos.org .

THE END