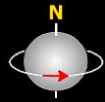


Credit: Christopher Go



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GRS-Bay Rift

C. Go 17:08.0

<RGB>

**2020 GRS-Bay Rift (Chimney) activities
and GRS 3-month oscillation**

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<CH4>

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One of the authors, Kuniaki Horikawa, at the RAS-Juno Europlanet Meeting 2018 (London), he pointed out the following under the title of "On the Periodic Rifting in GRS Bay". [Link-Ref. 1\)](#)

----In the 3-month oscillation of GRS----

- The GRS-Bay Rift (Chimney) opens when the GRS longitude changes from decreasing to increasing (entering the retrograde period).
- The GRS-Bay Rift (Chimney) closes when the GRS longitude changes from increasing to decreasing (entering the prograde period).

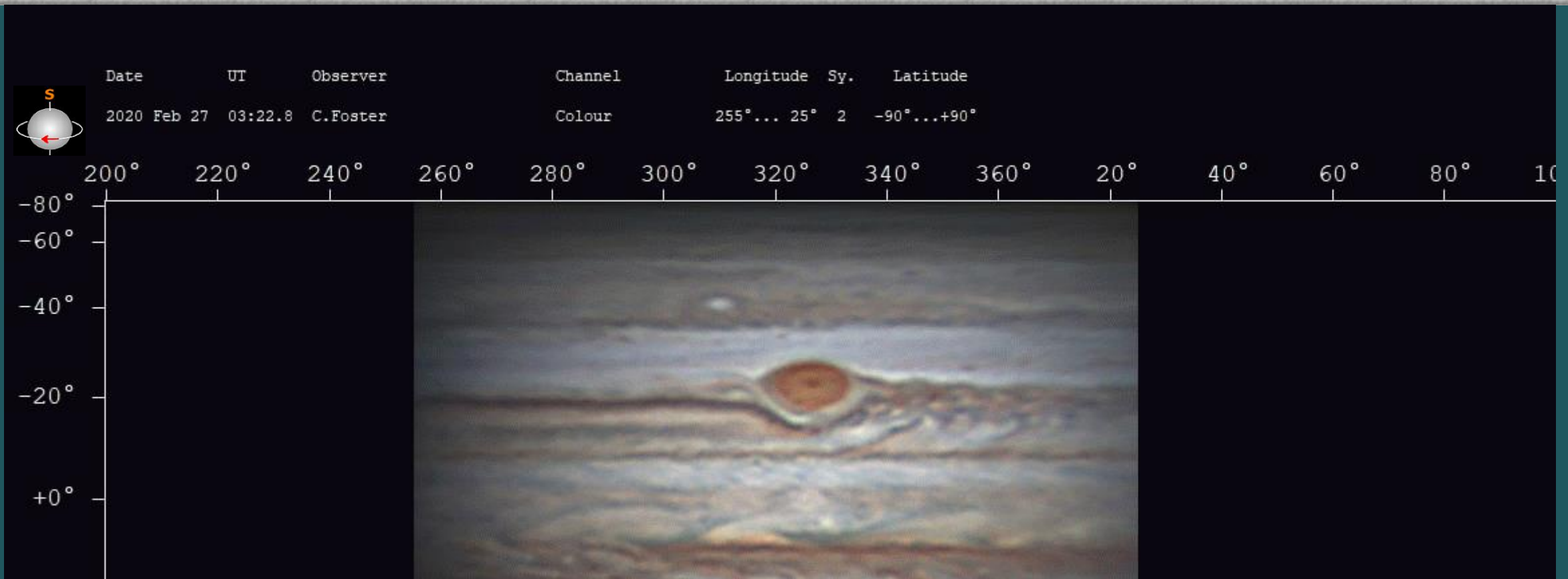
2020 GRS-Bay Rift opening and closing date.

No.	open		close
1)	2020 Mar 05	~	2020 Apr 18
2)	2020 Jun 07	~	2020 Jul 28
3)	2020 Aug 25	~	2020 Oct 20
4)	2020 Dec 05?	~	

- Maps and animation creation.
 - Measured longitude of GRS-Bay Rift and GRS.
- ↓
- Verified the relationship between the opening and closing of GRS-Bay Rift and the 3-month oscillation of GRS.

2. GRS-Bay Rift activities in 2020 (Feb 27-May 03 Animation) [Link-animation](#)

3

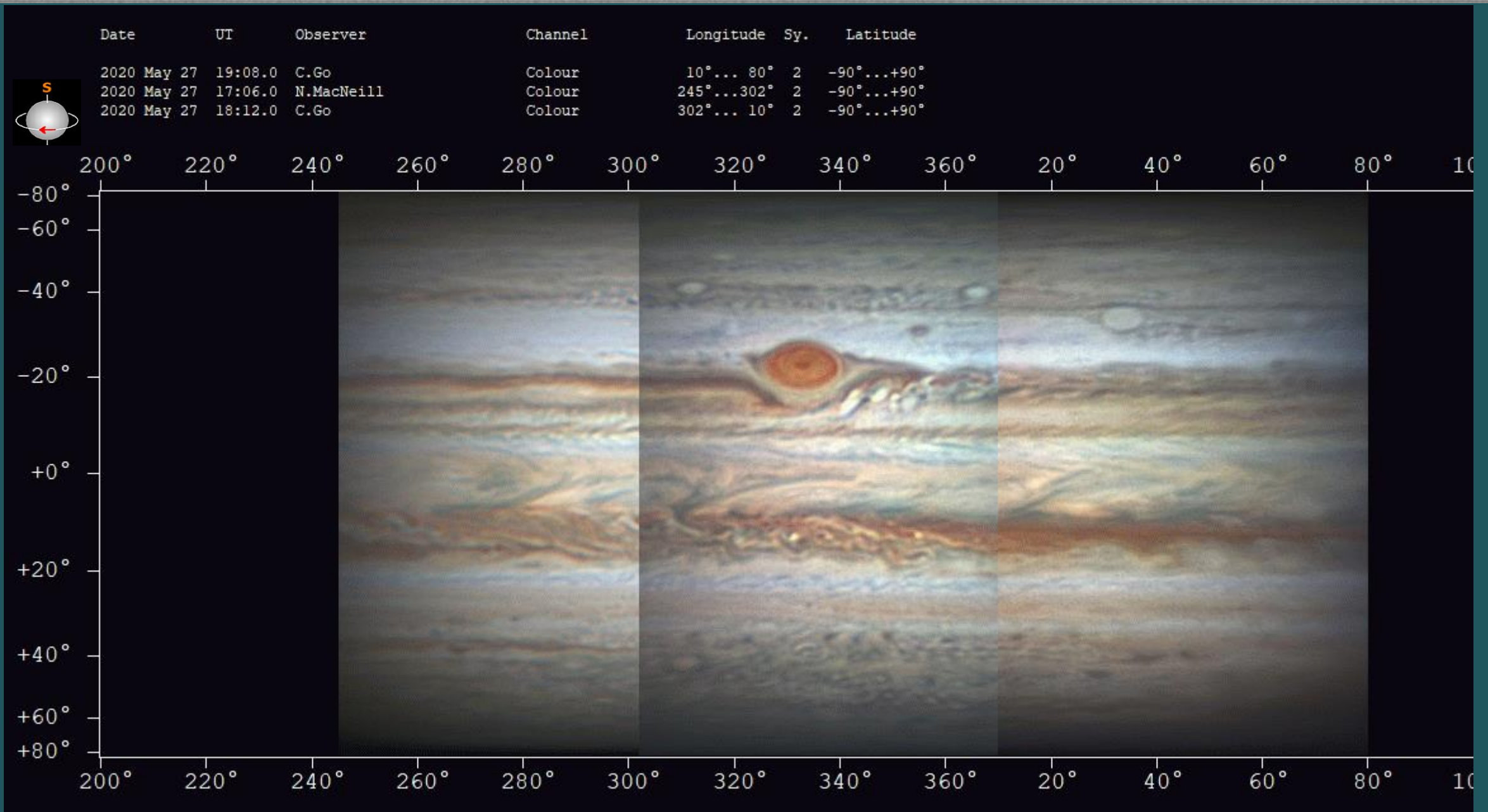


<Notes>

- GRS-Bay Rift opens.
 - ➡ Rift moves to the preceding side (east: left). At the same time, white clouds flow out from Rift.
 - ➡ Rift moves to the following side (west: right).
- When the GRS-Bay Rift closes, the SEBs (dark areas) on the preceding side will spread to the following side.

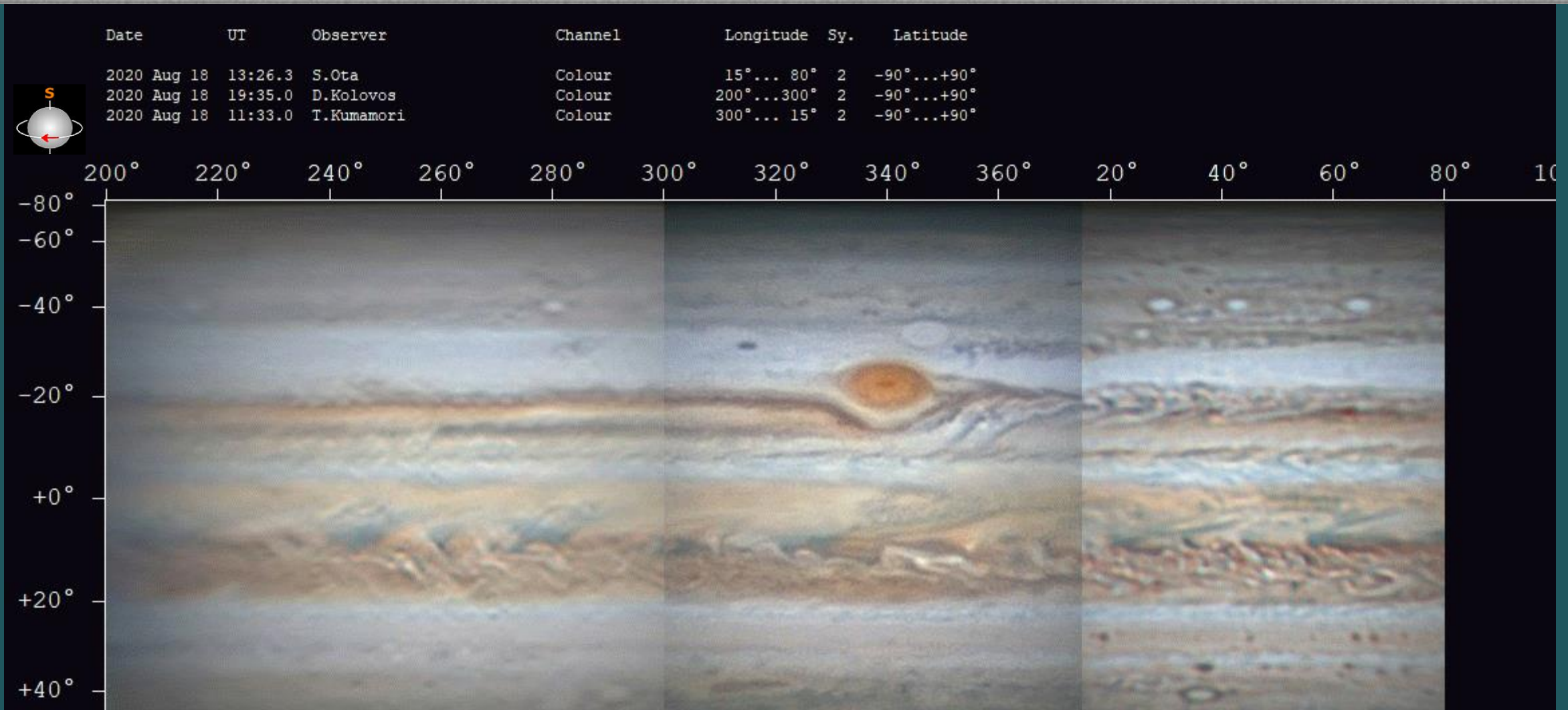
2. GRS-Bay Rift activities in 2020 (May 27-Aug 01 Animation) [Link-animation](#)

4



2. GRS-Bay Rift activities in 2020 (Aug 18-Nov 05 Animation) [Link-animation](#)

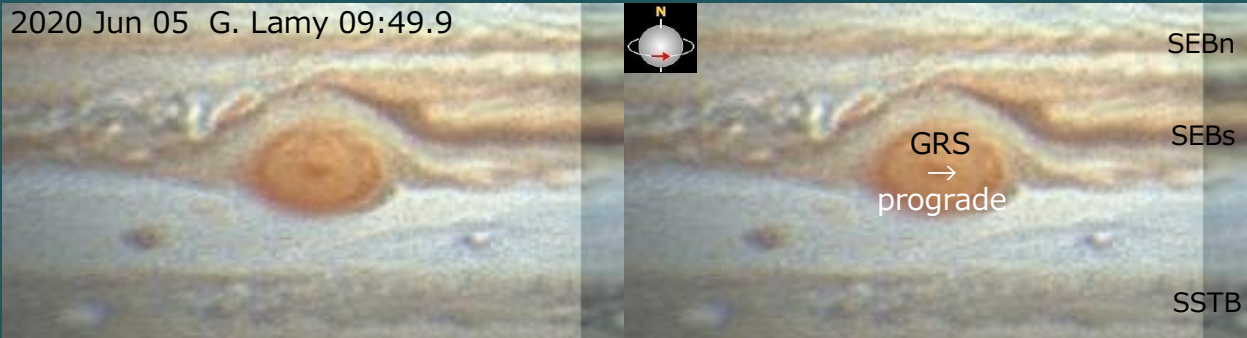
5



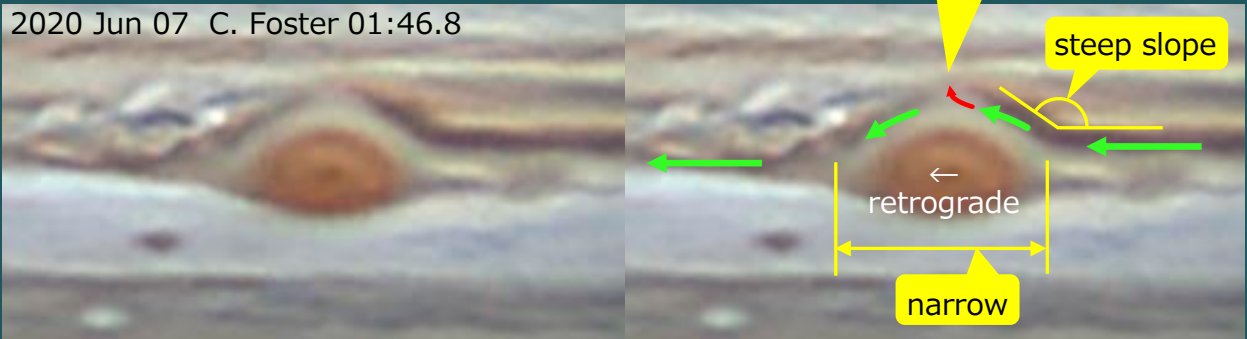
<Note>

- The appearance of white clouds flowing out from the open GRS-Bay Rift is remarkable.

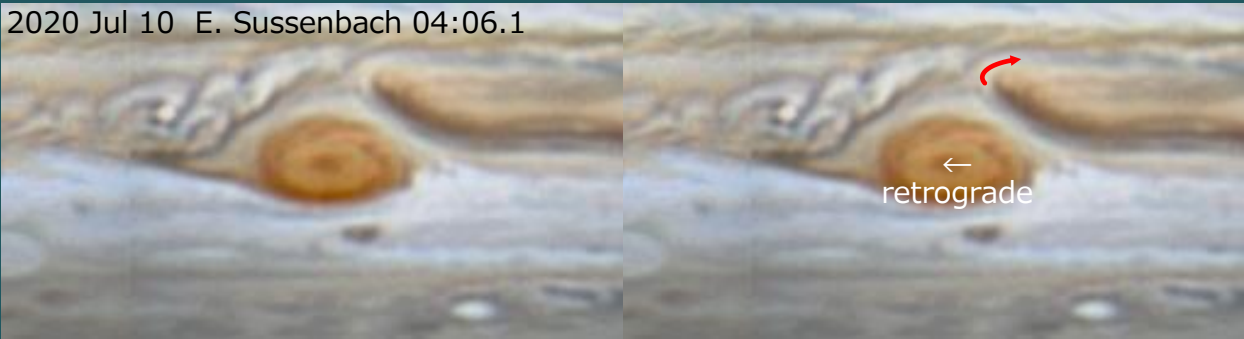
2. GRS-Bay Rift activities in 2020 (Jun 05-Jul 28 Maps) [Link-maps Ref. 3\)](#)



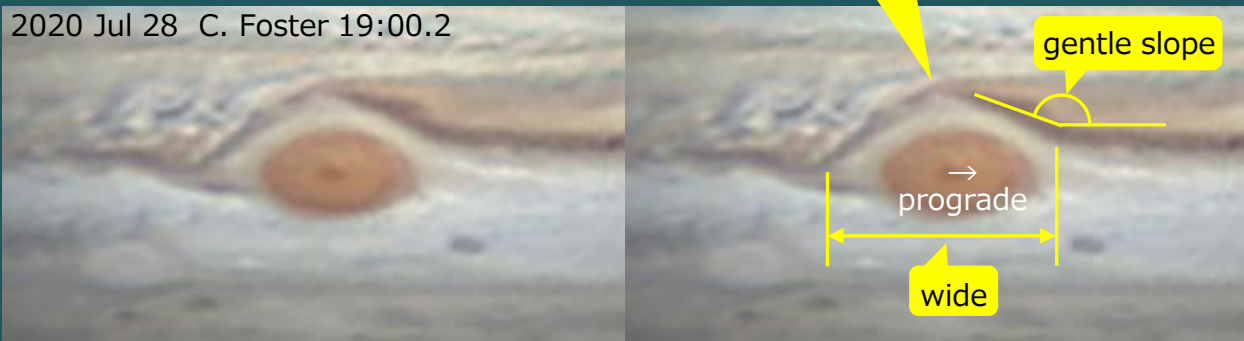
GRS-Bay Rift (Chimney) opens.



White cloud flows out.



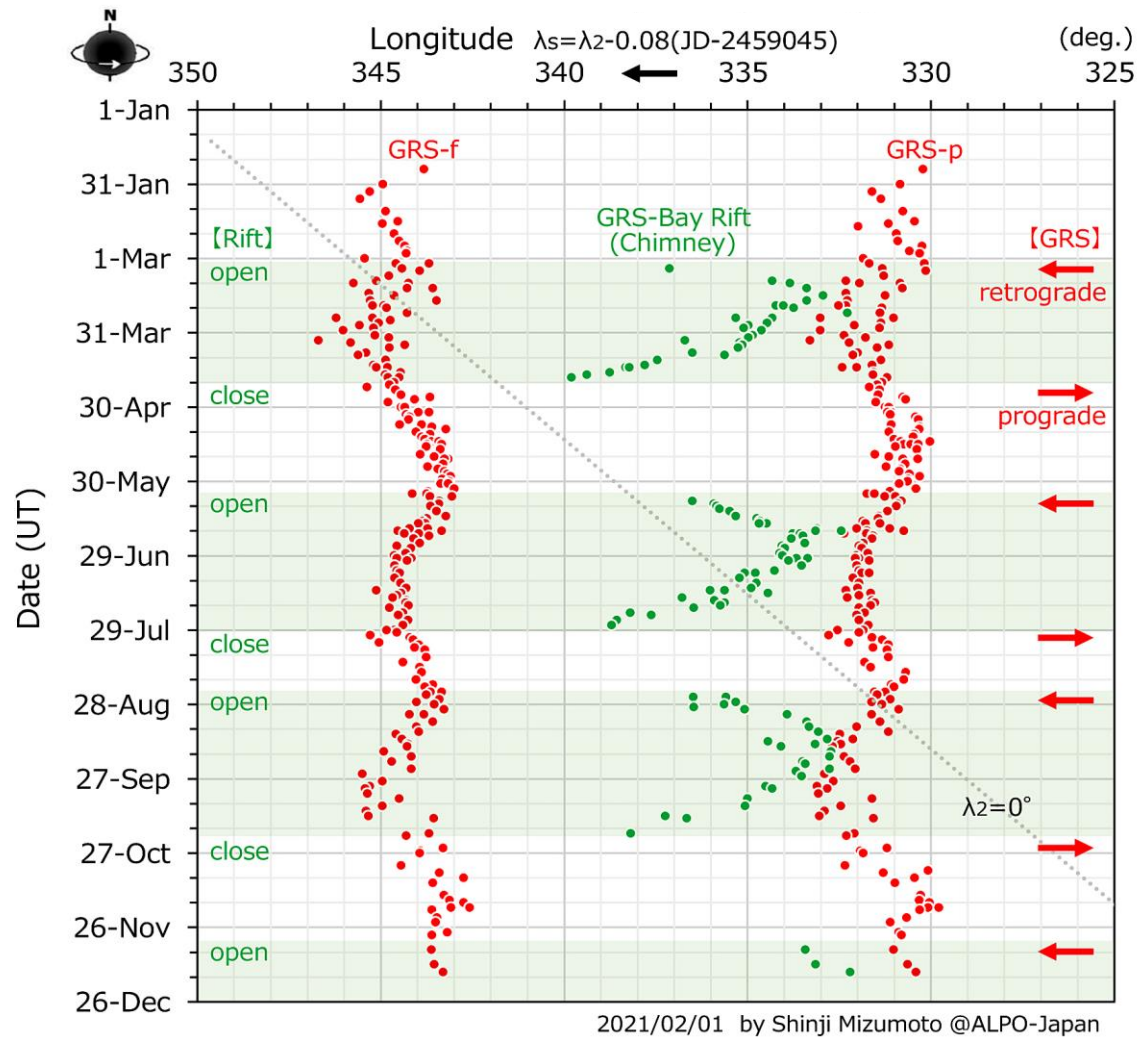
GRS-Bay Rift closes.



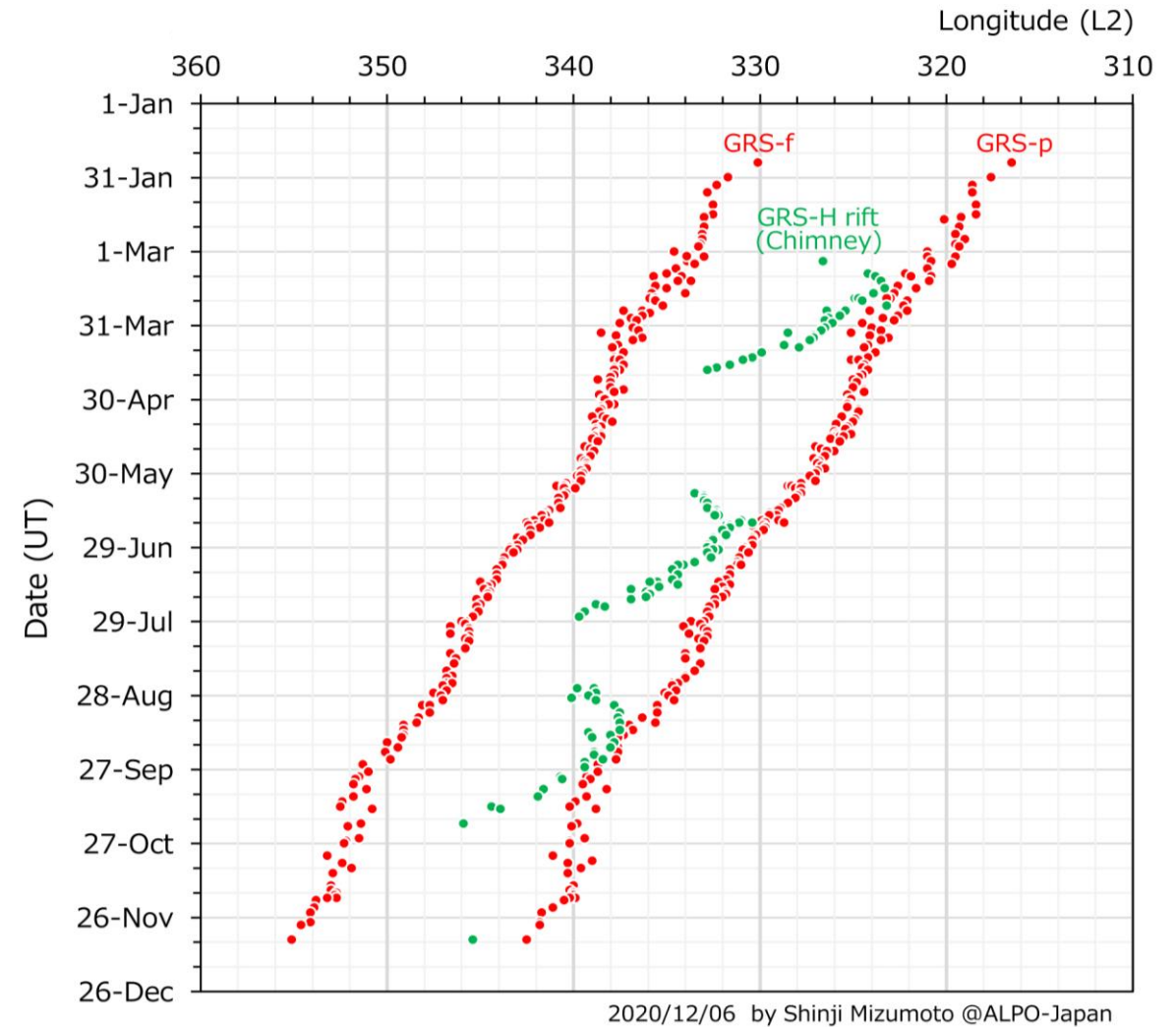
3. GRS-Bay Rift & GRS Drift Chart

7

<Special longitude - Drift Chart>



<L2 - Drift Chart>



- The opening and closing of GRS-Bay Rift is linked to the 3-month oscillation of GRS.

Relationship between Rift-related phenomena

GRS-Bay Rift (Chimney)	GRS 3-month Oscillation	GRS-Bay Length	GRS-Bay SEBs Slope
open	retrograde period	narrow, cramped	steep
close	prograde period	wide, spacious	gentle

As Kuniaki Horikawa pointed out

----- In the 3-month oscillation of GRS- -----

- The GRS-Bay Rift (Chimney) opens when the GRS longitude changes from decreasing to increasing (entering the retrograde period).
- The GRS-Bay Rift (Chimney) closes when the GRS longitude changes from increasing to decreasing (entering the prograde period).

verified the above.

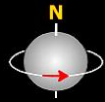
Acknowledgments

- I would like to thank the many observers for providing the observation data.

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Credit: Christopher Go



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GRS-Bay Rift

C. Go 17:08.0

<RGB>

Thank you for your attention.

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<CH4>

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