



# Galloway Forest Astronomical Society

## Newsletter #40, December 2020

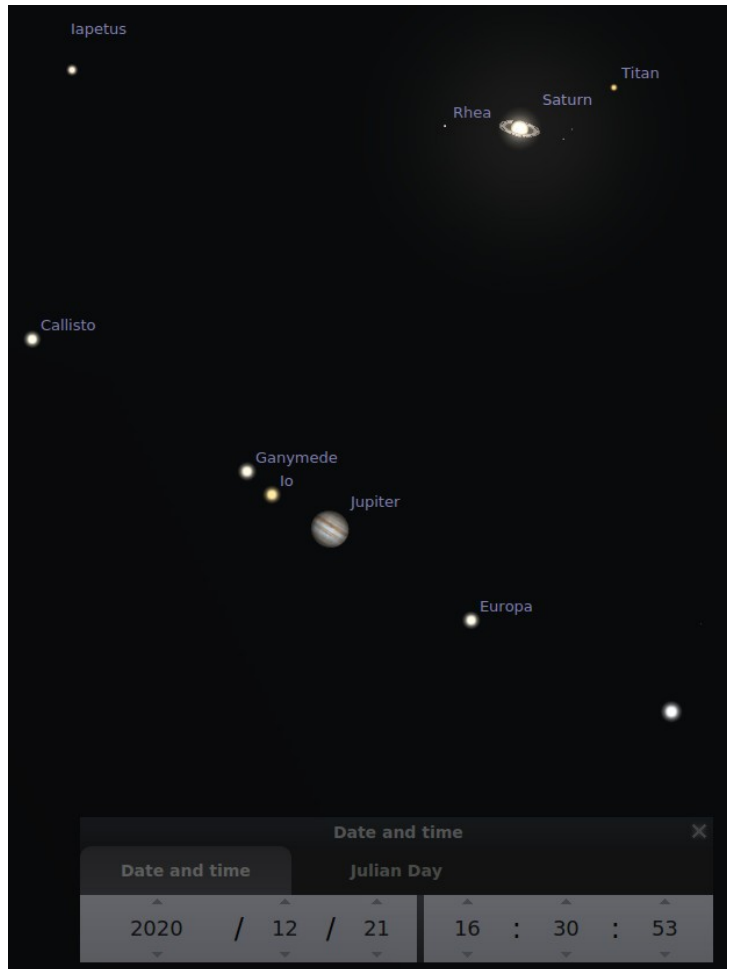
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### Good News....

OSCR, the Office of the Scottish Charities Registrar, are happy with us. They have accepted our annual report up to August 31, 2020, without any reservations, so we remain a “registered charity in good standing”. Well done the GFAS members and trustees!

**The closest Great Conjunction in nearly 400 years** will happen on the 21st of December at around 6:30 pm, when Jupiter and Saturn will seem to join together. They will appear to the naked eye as a single bright star just after sunset at around 4:30 pm.

This Stellarium screenshot shows the Saturn system approaching the Jupiter system, low in the SW sky, just after sunset on the 21<sup>st</sup>, as they might appear in a low-power telescope. We can't show you any directly observed images because the last time this happened was in 1623AD and cameras weren't yet invented. The first telescopes were around in 1608, though, and Galileo used one to view the four biggest moons of Jupiter in 1610. So, whoever manages to get a good clear image of this event will be able to claim a world all-time first-ever picture. Now there's a challenge ...



**Best wishes** to all our readers for this tough winter holiday time. Stay safe and healthy everyone!

### ... and bad news ..

The actual time of the conjunction isn't until 6:40PM on the 21<sup>st</sup>, by which time Jupiter will have set. So the observation window is between sunset at 3:52PM (Newton Stewart) and Jupiter vanishing below the horizon before 6:00 PM. So even if skies are clear for the winter solstice, Jupiter and Saturn will be very near the horizon and atmospheric turbulence will make observing very difficult. Also, the moon will be higher than both of them in the southern sky and quite bright (a half-moon in its first quarter phase) and that won't help either.

### Other events in December

On page 2 you'll find the calendar of astronomical events for December 2020.

### GFAS Membership BuyOneGetOneFree!

At the November AGM, because of Covid-19, we decided to offer members a two-years-for-the-price-of-one subscription, so if you join now you will stay a member until October 2022! Email [members@gf-astro.org](mailto:members@gf-astro.org) for an application form or download one from the GFAS website [www.gf-astro.org](http://www.gf-astro.org). Subs are unchanged - £25.00 family, £15.00 adult, £0.00 (free) Junior or FTE

## Galloway Forest Astronomical Society

Registered Scottish Charity SC035033.

Chairman: Antony Berretti;

Secretary: Doug Snell, 5 Elm Grove, Newton Stewart, DG8 6JT

W: [www.gf-astro.org](http://www.gf-astro.org) E: [members@gf-astro.org](mailto:members@gf-astro.org)

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# Bags of Help

Supported by Kilgallioch Community Fund  
with funding from ScottishPower Renewables' Kilgallioch Wind Farm





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### December 2020 observing Calendar

Here is the calendar of night-sky events, taken from the **In-The-Sky.org** website. This website is an excellent resource and well worth visiting.

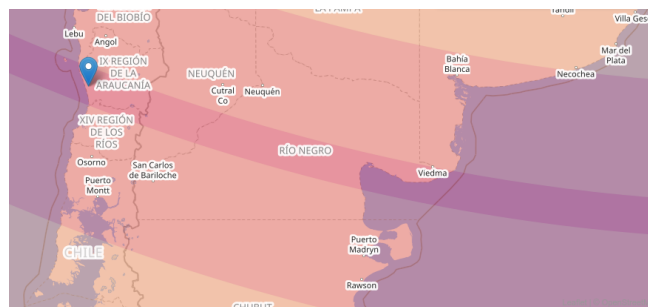
The observing location shown here is Northwich, near Manchester, but it is possible to reset that to Ayr or Dumfries to get more accurate details. Here is what the website says about the conjunction on the 21<sup>st</sup>:

“From Ayr, the pair will become visible around 16:18 GMT as the sky fades, 10° above your south-western horizon. They will then sink towards the horizon, setting 2 hours and 34 minutes after the Sun at 18:20. Jupiter will be at mag -2.0, and Saturn at mag 0.5, both in the constellation Capricornus. They will be close enough to fit in the field of view of a telescope.”

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5 December φ-Cassiopeid meteor shower 2020
6	7 Asteroid 16 Psyche at opposition	8 Moon at Last Quarter Monocerotid meteor shower 2020	9	10	11 σ-Hydrid meteor shower 2020	12 Lunar occultation of Venus
13	14 Geminid meteor shower 2020 Total solar eclipse NGC 1981 is well placed	15 Comae Berenicid meteor shower 2020	16 141P/Machholz at perihelion	17	18	19 December Leonis Minorid meteor shower 2020
20	21 December solstice Great conjunction of Jupiter and Saturn Moon at First Quarter	22 Ursid meteor shower 2020	23 Conjunction of the Moon and Mars Close approach of the Moon and Mars	24	25	26
27	28 NGC 2232 is well placed	29 NGC 2244 is well placed	30 Full Moon	31		

**Total eclipse of the Sun, December 14<sup>th</sup>?** - Not for us, sadly. This one will be visible in South America, crossing Chile and Argentina. This image, clipped from [www.timeanddate.com](http://www.timeanddate.com), shows the path of totality crossing from Isla Mocha in Chile to just south of Viedma in Argentina.

**NGC 2232 and NGC 2244, Dec 28 and Dec 29:** NGC 2232 is an open star cluster in Monoceros. NGC 2244 is another open cluster in the Rosette Nebula, also in Monoceros.



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