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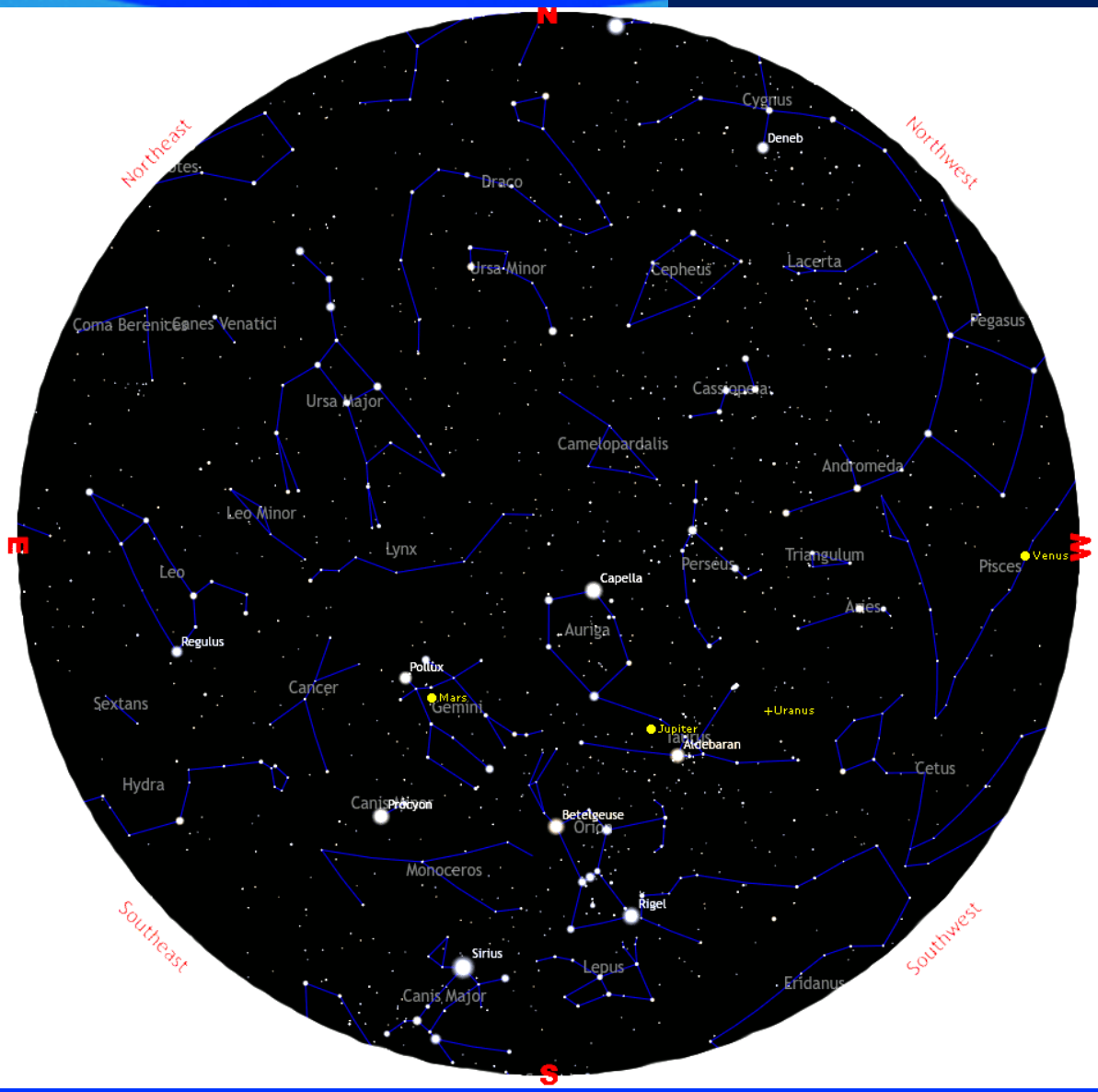
What's on Feb/Mar 2025

by Tony Cook



Night Sky: Late Feb @ 8PM GMT

Mercury sets – 17:20-19:40UT
Venus sets 21:15-20:40UT
Mars sets: 06:50-05:10UT
Jupiter sets 03:30-01:50UT
Saturn sets 19:10-18:00UT
Uranus sets 01:50-00:00UT
Neptune sets 19:40-17:30UT

Useful
http://britastro.org/computing/applets_ecliptic.html

This chart has come from:
http://astronomynow.com/uk-sky-chart/

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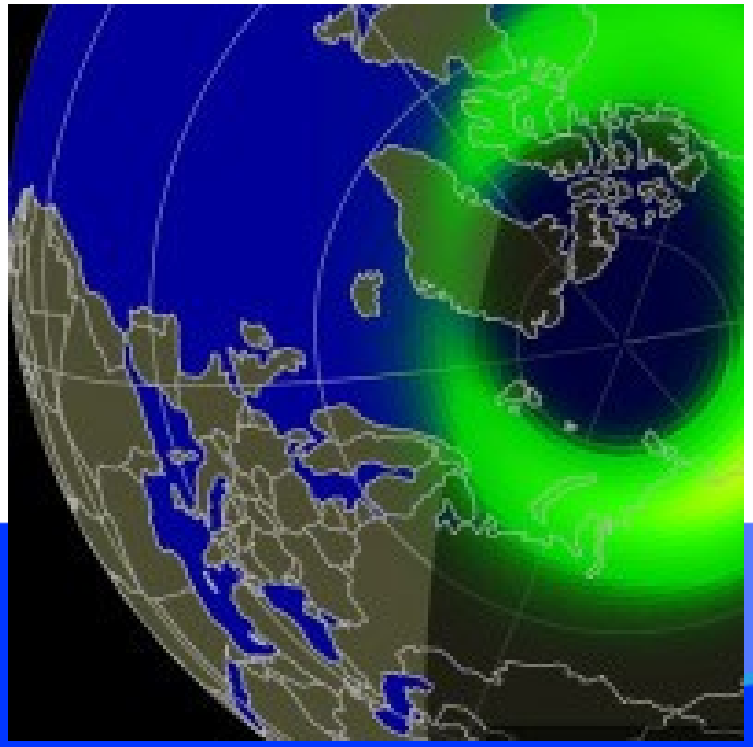
Aurora / Satellites

Aurora: Keep on watching the spaceweather.com web site – if you see green & especially red) approaching Scotland – go outside and look north!
See: http://spaceweather.com



Satellites: Keep a check on the Heavens Above website (Times are in GMT):
This tells you when exactly the ISS or other bright space orbiting objects will be passing overhead
http://www.heavens-above.com/

Date	Brightness (mag)	Start			Highest point		
		Time	Alt.	Az.	Time	Alt.	Az.
13 Feb	-0.5	06:27:02	10°	SSE	06:28:04	11°	SE
15 Feb	-1.4	06:24:47	10°	SSW	06:27:25	22°	SSE
16 Feb	-1.0	05:37:03	10°	S	05:39:06	15°	SE
17 Feb	-0.8	04:50:11	10°	SSE	04:50:48	10°	SE
17 Feb	-2.5	06:23:41	10°	SW	06:26:49	38°	SSE

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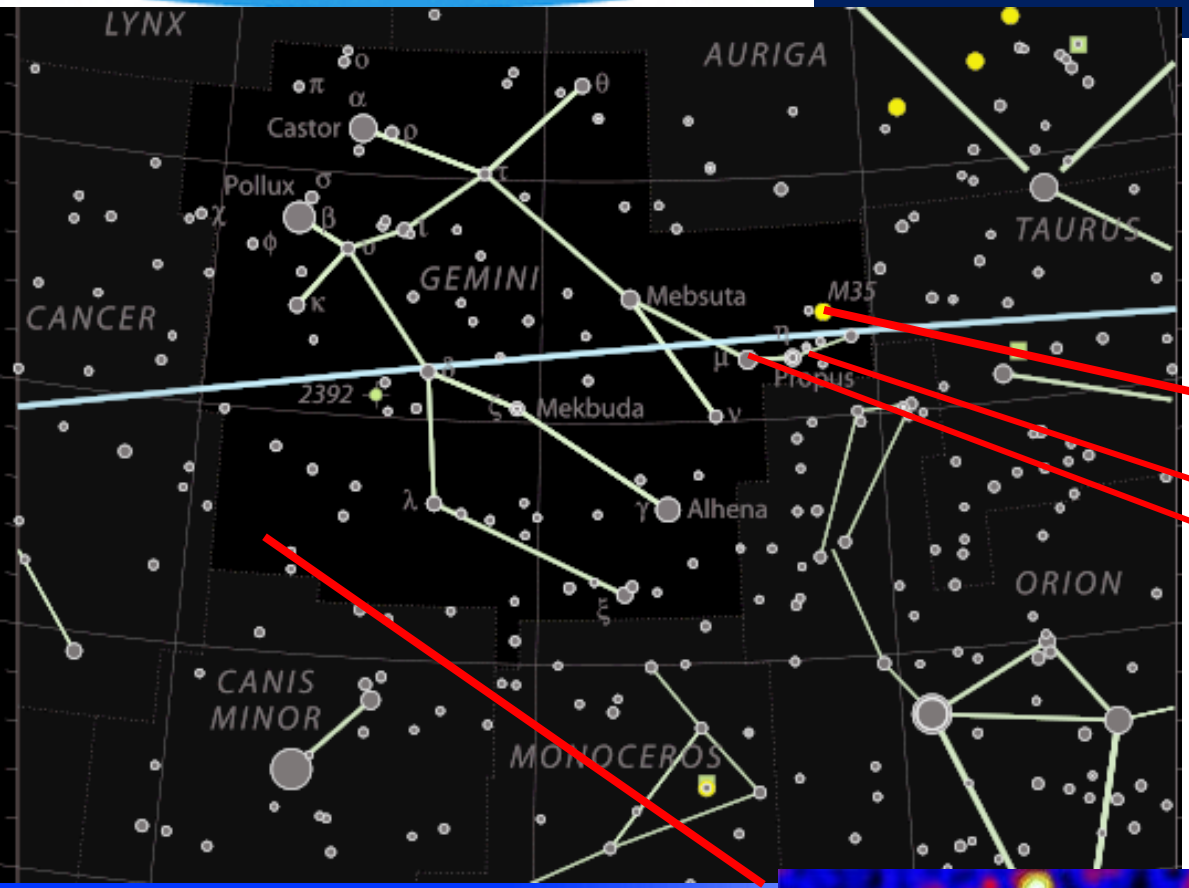
Constellation of the Month: Gemini



IAU and Sky & Telescope magazine (Roger Sinnott & Rick Fienberg)

M35 Open Cluster

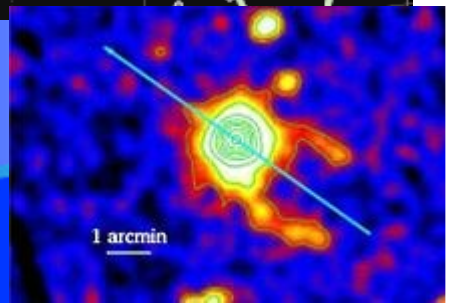
Credit: 2MASS/NASA.

Eta Geminrum Cepheid variable

Mu Geminorum M3 red giant

Castor (alpha Gem) - binary star – 5” separation - but 4 other stars too

Pollux (beta Gem) – orange star only 43ly away - may or, may not have, a exoplanet (magnetic field effects maybe faking it)



Geminga - Gamma ray source

Credit: Patrizia Caraveo (INAF/IASF), Milan

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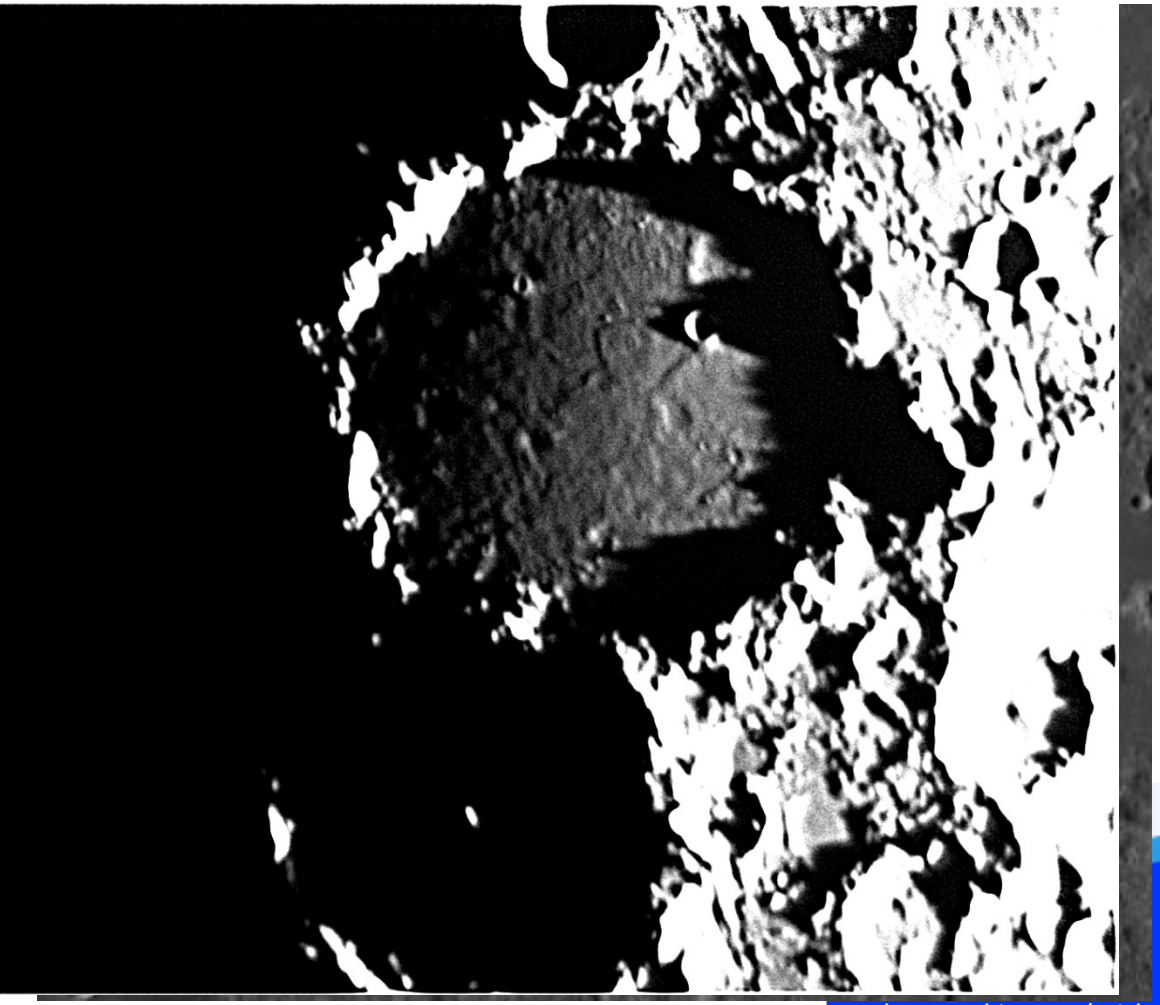
Going Greek on the Moon



Tony took this view of **Ptolemaeus** crater on 2025 Feb 05 UT 19:02

Most of the time the crater floor looks bland and featureless but shortly after sunrise, or before sunset, the shallow illumination angle highlights a lot of low lying relief on the floor

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Background image (with little shadow) from NASA LROC & Foreground image by Tony

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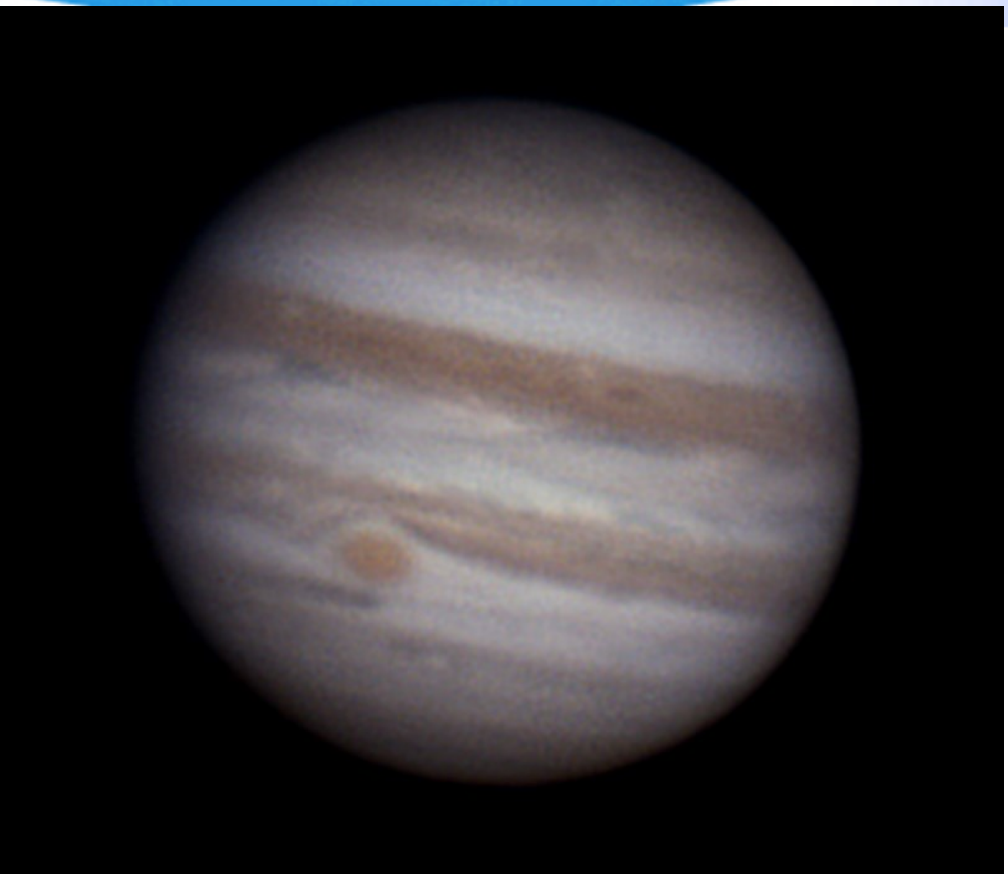
Bob's Latest Videos of the Planets



Jupiter & its Red Spot on 2025 Jan 15

Mars & Syrtis Major on 2025 Jan 15

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Sasha Sees Rings Around the Sun

Taken on 2025 Jan 29th from Newtown - The lopsided inner halo (in one image) is probably lens flare on the camera optics

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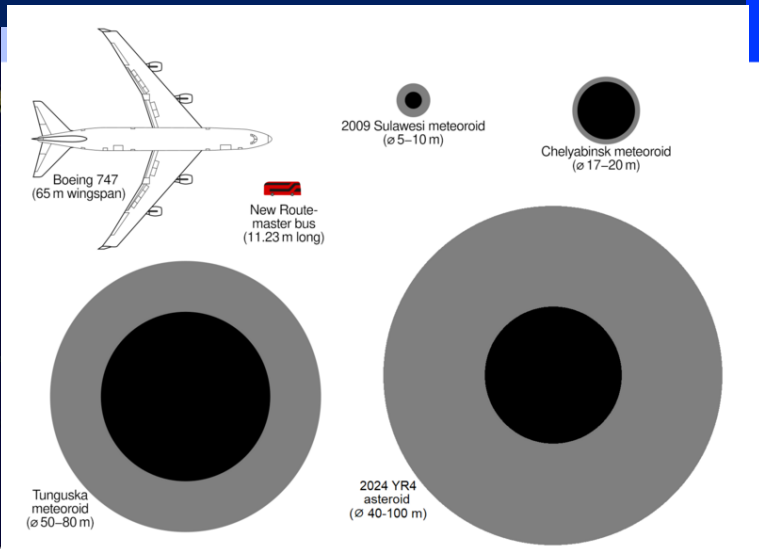
2032 Dec 22 & 2024YR$_4$

https://skyandtelescope.org/astronomy-news/newly-discovered-asteroid-has-slight-chance-of-earth-impact-in-2032/



https://en.wikipedia.org/wiki/File:2024_YR4_size_comparison.png

- You have probably read about an asteroid that may hit Earth in 2032
- But the chances are fortunately small at only a 1 in 45
- The chances of an impact may become even more improbable as we get new data or discover old images of the asteroid in archives from the past
- Depending upon its size, mass and composition & in the unlikely event of it hitting us, it could be as bad as the 1908 Tunguska event in Siberia
- If an impact were to occur it would most likely be near the equator
- Currently big errors e.g. closest approach time uncertain to 16 hours
- Basically, don’t worry as space is big, real big

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Wolf-Rayet Star Carbon Dust Ripples

(Image credit: NASA/ESA/CSA/STScI/Emma Lieb and Jennifer Homan (University of Denver/Ryan Lau (NSF NOIRLab).)

- The Webb telescope has revealed astrophysics in motion
- This is a binary star system, one star is a hot O type giant and the other a hot windy end of life turbulent Wolf-Rayet star (WR 140 star system)
- The binary star system stars are in elliptical orbits, coming close together every 8 years when star material shedding takes place and shells of dust given off
- The images are taken 14 months apart
- We can see 17 shells in total and travelling at 1600 miles per sec

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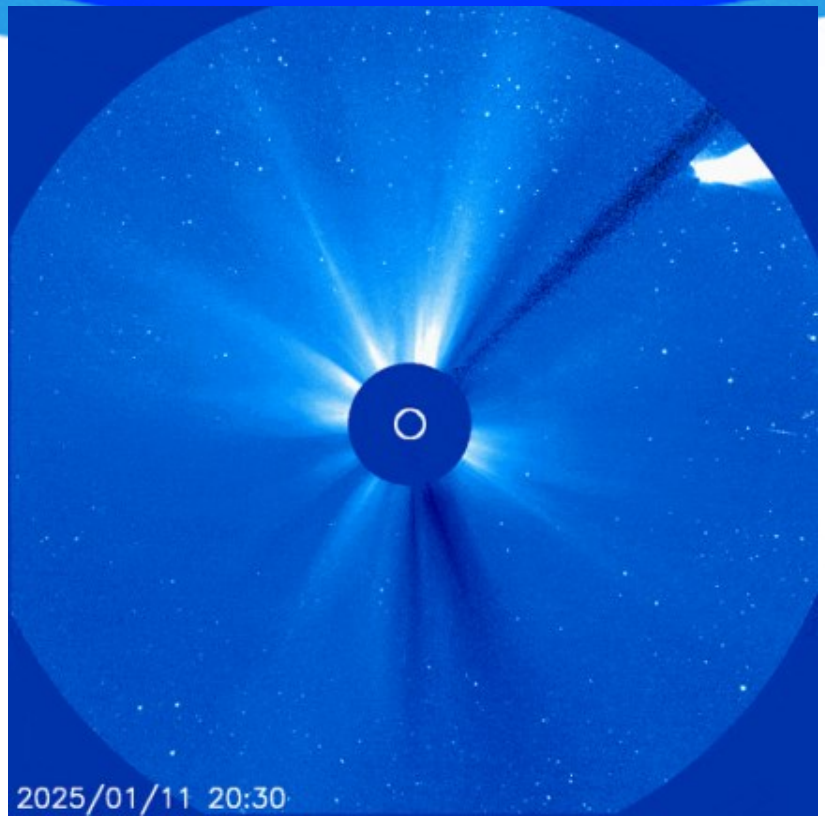
Comet Atlas (C/2024 G3) Been and Gone



(Image credit: SOHO spacecraft

- This comet was claimed to be a daylight comet
- But it was so low down from the UK that it wasn't very easily seen in daylight, being so close to the Sun
- Tony had go at blotting the Sun out with the shadow of a building but no luck imaging it in day time
- Nice views have been obtained though from the southern hemisphere and the ISS

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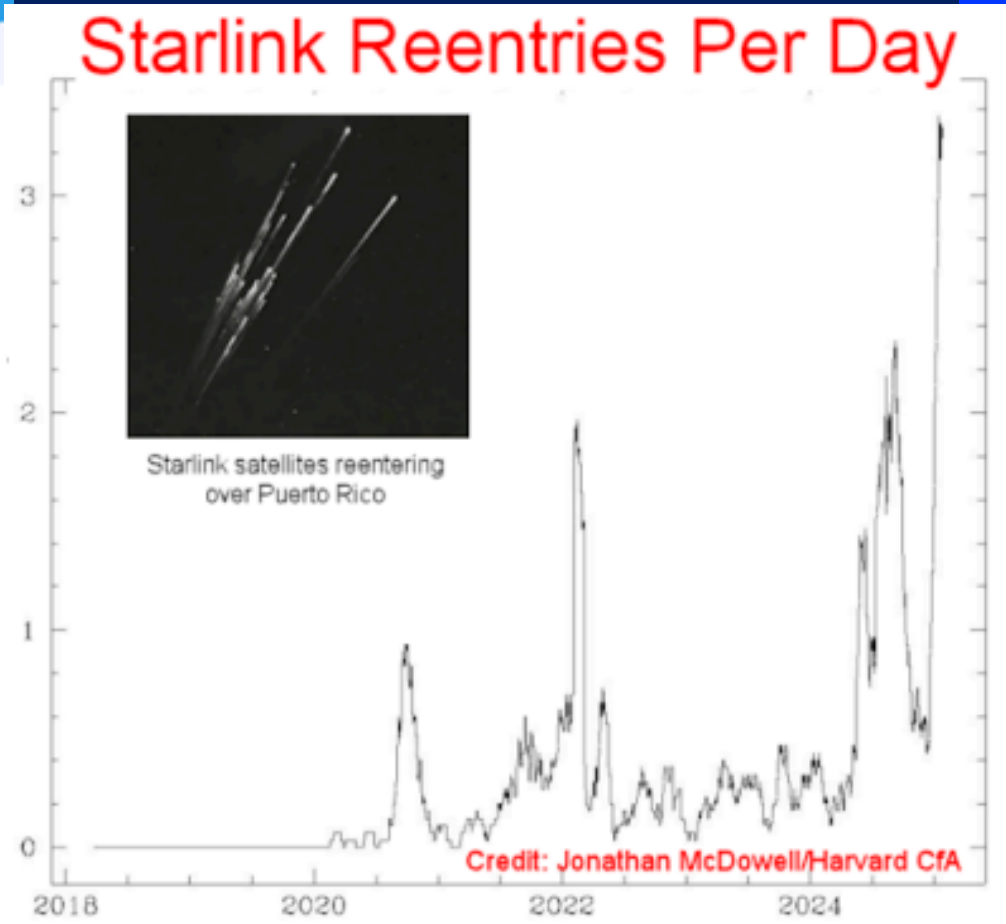
Its Raining Satellites

- As Elon Musk launches more and more Starlink satellites, some have reached the end of their shelf life and are programmed to auto-self destruct by deorbiting – maybe as many as **4-5 per day!**
- So, we might start to see more and more shooting stars
- But some scientists are worried that this will add aluminium powder to the upper atmosphere indeed analysis has shown that 10% of dust up there is made of spacecraft metals
- This may damage the Ozone layer



From spaceweather.com on 6th Feb 2025

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Items Coming Up in Nov/Dec

Sun 9th Feb 09:35-11:40 PBS America - Armstrong
Sun 9th Feb 20:00 Mars very close to Moon and grazing occultation in Scotland
Tue 25th Feb 21:00 Mercury 1.7deg N of Saturn
Fri 14th Feb approx. 21:00 6th Mag 89 Leonis occulted by Moon
Mon 17th Feb 16:22 542 Susana may occult an 8th mag star as seen from Europe
Thu 27th Feb 01:17 Intuitive Machines IM-2 Moon probe to be launched
Thu 27th Feb PUNCH and SPHERE-x launch
Thu 27th Feb Progress resupply for ISS launch
?? Feb ?? Starship mission launch by Space X
Sun 2nd Mar approx. 15:02 4th Mag epsilon Psc occulted by Moon
Wed 5th Mar approx. 11:57 & 12:52 3rd mag eta Tau occulted by Moon and reappears
Wed 5th Mar approx. 12:33 & 13:31 3rd mag 27 Tau occulted by Moon and reappears
Sat 8th Mar next NAS meeting
Sat 8th Mar Mercury greatest elongation from Sun in evening sky
Sat 8th Mar approx. 21:35 6th mag 47 Gem occulted by Moon
Fri 14th Mar Total Lunar Eclipse 06:36-07:31 UT