



Orpington Astronomical Society

# Observing Officer's report for June 2025



# Sky chart

1/6/2025

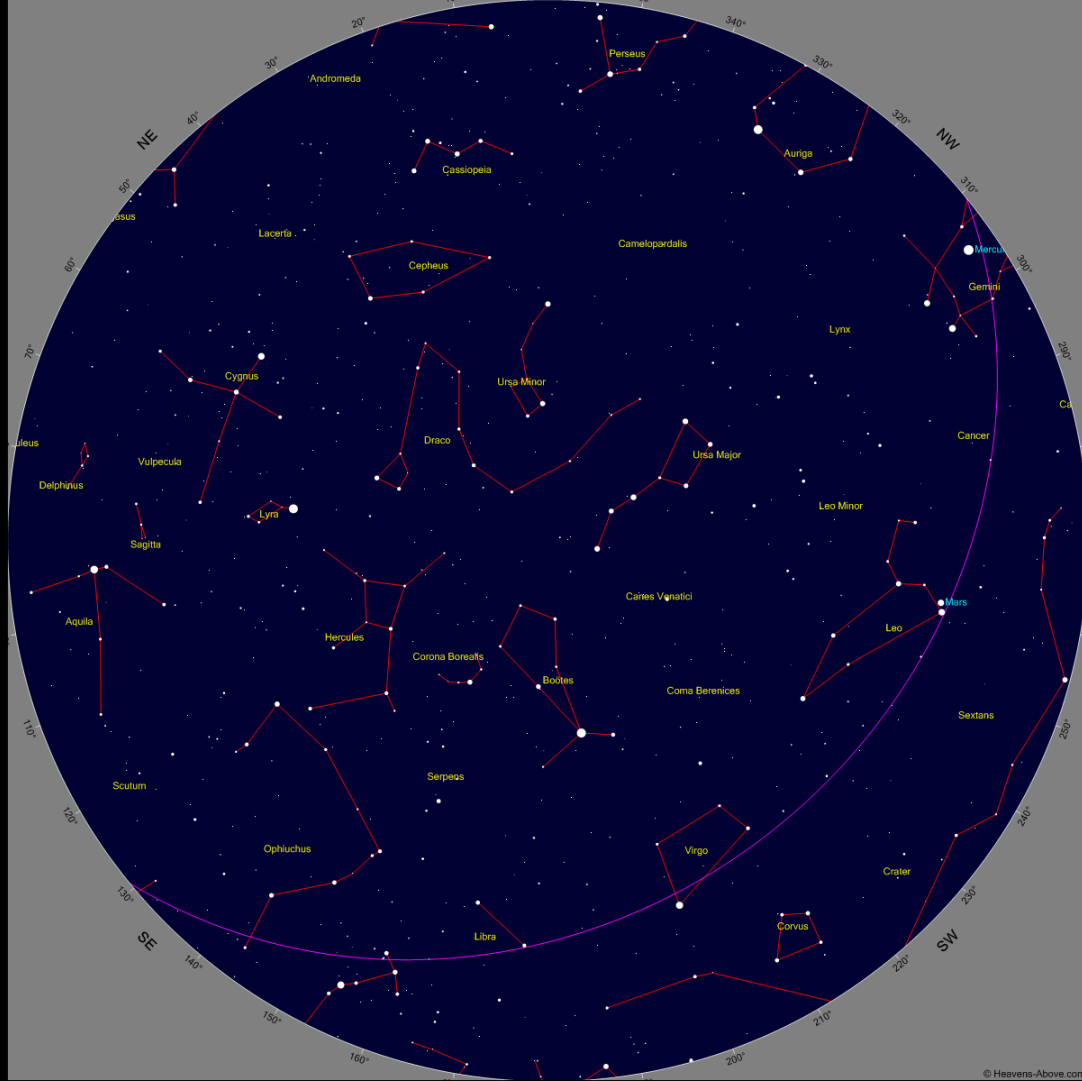
23:00

15/6/2025

22:00

28/6/2025

21:00



Source

<https://heavens-above.com/>

# Phases of the Moon

1<sup>st</sup> quarter



3<sup>rd</sup> June  
04:40

Full Moon



11<sup>th</sup> June  
08:43

3<sup>rd</sup> quarter



18<sup>th</sup> June  
20:19

New Moon



25<sup>th</sup> June  
11:31

Source

<https://www.timeanddate.com/>

# Sun phenomena in June

Summer solstice 21st June 03:42

Date	Twilight starts *)	Rise	Set	Twilight ends *)	Day length
1 <sup>st</sup>	-	4:48	21:08	-	16:18
15 <sup>th</sup>	-	4:42	21:17	-	16:35
28 <sup>th</sup>	-	4:46	21:19	-	16:34

\*) Astronomical twilight

Source [www.timeanddate.com](http://www.timeanddate.com)

# Planets in June

M - Morning sky, before sunrise, E - evening sky, after sunset

Mercury - slightly difficult to see (E)

Venus - good visibility (M)

Mars - average visibility (E) @1.2-1.4 mag

Jupiter - extremely difficult to see (E)

Saturn - average visibility (M) later great

Uranus - extremely difficult to see

Neptune - very difficult to see

## Selected events:

1 June 03 h Venus greatest western elongation (-4.3mag, @4:30  
11° alt)



8 June 20 h Mercury-Jupiter conjunction

24 June 15 h Jupiter-Sun conjunction

29 June Mars and Moon in close proximity

30 June Saturn and Uranus in close proximity (less than 1° apart)

# June Boötids meteor shower

Period: 22 June–2 July

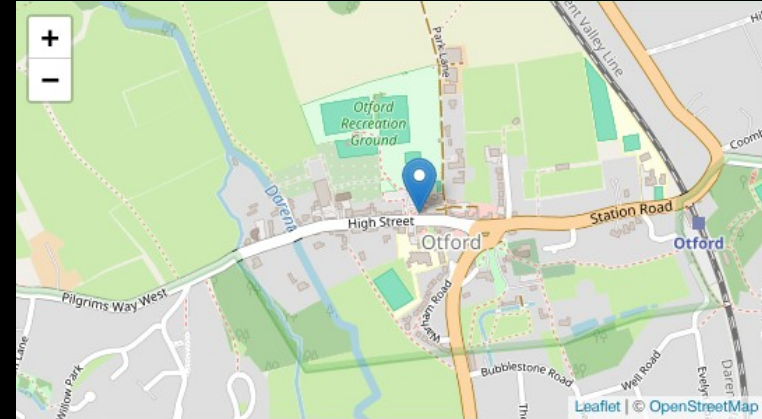
Peak: 27 June

Zenithal hourly rate: 1-2, Variable

Velocity: 18 km/s

Parent: Comet Pons-Winnecke

Comet Pons-Winnecke is a short-period comet which orbits the Sun about every 6.3 years.



**The next Observing evening will be at the  
OVMH on Thursday 19<sup>th</sup> June at 7:30pm.**



# At the observing evening we will be observing:

- the Sun

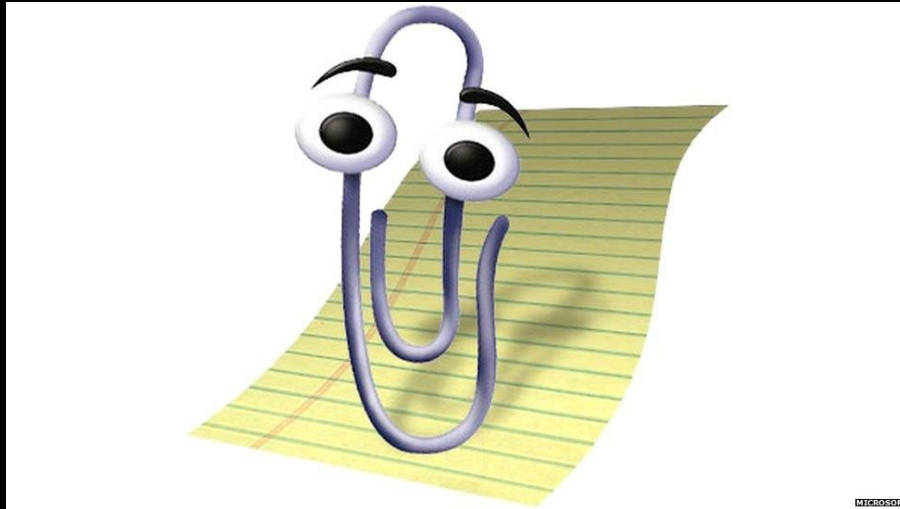
Sunset 21:19

Astronomical twilight:

Moon 15 days old rising 01:19 the following day



# Aah, where was I?





the 25<sup>th</sup> May  
– The Towel Day

Towel Day is celebrated every year on 25 May as a tribute to the author Douglas Adams. On this day, fans openly carry a towel with them, as described in Adams' *The Hitchhiker's Guide to the Galaxy*.

... and when talking about towels, obviously there is nothing better than a towel carrying The Answer to the Ultimate Question of Life, The Universe, and Everything



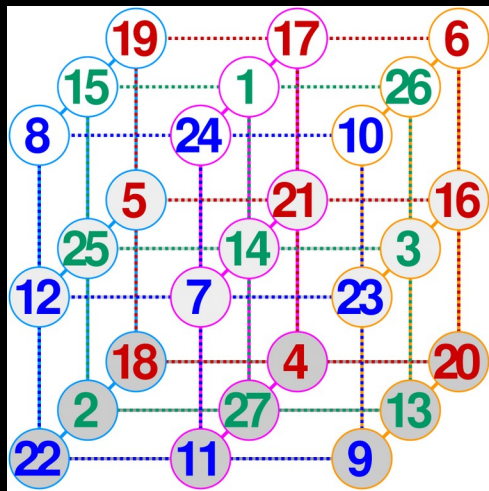
# Why 42 Really Is The Ultimate Answer?

- it's the number of partitions of 10 – that is, the number of ways you can write 10 as a sum of positive integers
- 10 can be written as  $2^1 + 2^3$ , while 42 can be written as  $2^1 + 2^3 + 2^5$
- in binary, “10” is written as 1010, while “42” becomes 101010
- it's the first number equal to the sum of its own nonprime proper divisors ( $1+6+14+21=42$ )
- but it can be also made through the multiplication of its prime proper divisors



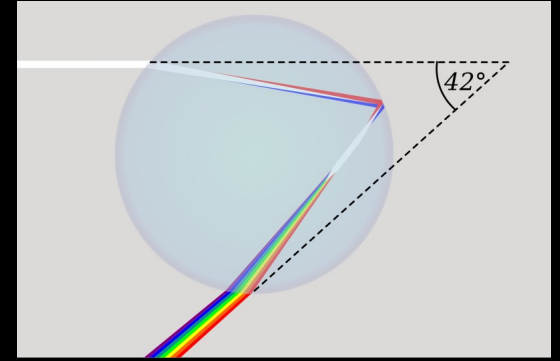
# Why 42 Really Is The Ultimate Answer?

- it's the number of triangulations of a heptagon
- it's the **magic constant** of the smallest non-trivial magic cube, a  $3 \times 3 \times 3$  cube with entries of 1 through 27, where every row, column, corridor, and diagonal passing through the center sums to forty-two.



# Why 42 Really Is The Ultimate Answer?

- it's the precise offset in degrees from a light source that produces a rainbow



- light requires  $10^{-42}$  seconds to cross the diameter of a proton
- 42 is the number with which God creates the Universe in Kabbalistic tradition (in Judaism)
- the world's first modern book was Gutenberg's 42-line bible



It's not all that beautiful

- In Japanese culture, the number 42 is considered unlucky because the numerals when pronounced separately - shi ni (four two) sound like the word "dying",
- in the FIFA World Cup 42 is the number of all possible outcomes of each group stage, counting up all wins, losses, and draws,
- when it comes to human lives, 42 has a much less fun claim to fame: it's pretty much the worst age to be

According to *Longitudinal Evidence for a Midlife Nadir in Human Well-being: Results from Four Data Sets*

“happiness, it turns out, tracks with age in a U-shape: it’s highest at the beginning and the end” and 42 is the average age when the nadir happens.

<https://onlinelibrary.wiley.com/doi/full/10.1111/eoj.12256>

42 is also the average age of a midlife crisis.

According to data from Spotify, 42 is when people’s music taste drastically changes, but by about 45, they go back to listening to painfully-outdated golden oldies once again.

Most importantly in astronomy:

Considering that the Sun will last roughly 10–12 billion years from the moment the nuclear fusion first ignited in its core until the red giant phase begins and planet Earth is (likely) completely destroyed...

... and that it takes approximately 250 mln years to orbit the Milky Way...

how many galactic years will the Sun (and Earth) experience?

**42**

(justifiable estimates typically range from about 40 to 45)

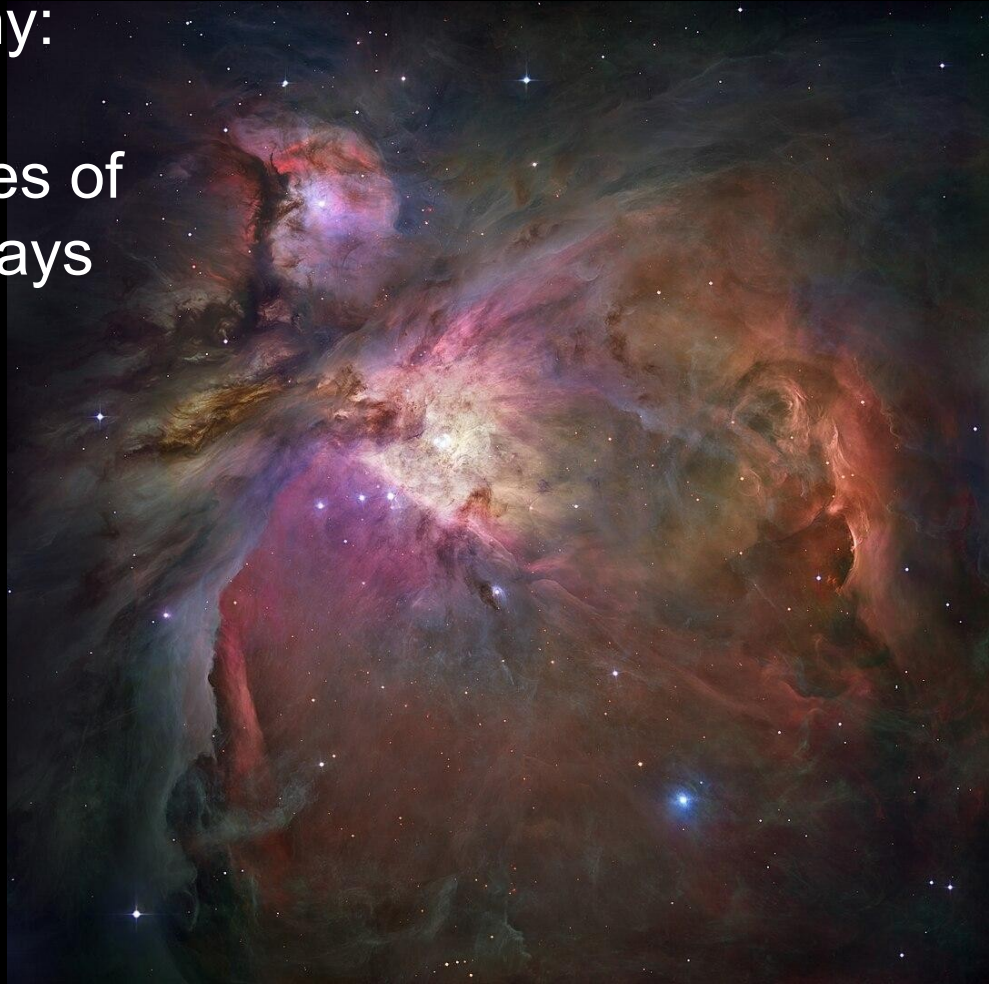
<https://bigthink.com/starts-with-a-bang/42-answer-fundamental-questions/>

Most importantly in astronomy:

The most up-to-date estimates of the Hubble Constant these days vary between 66 and 76 but average at 67.6 km/s/Mpc or

42 miles/s/Mpc

Orion Nebula M42



Thank you

