

# What's Up, Doc? †

## July 2025

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This document tells you what objects are visible this next month for many of the Astronomical League Clubs. If you are working on an advanced club, then I assume that you are tracking where your objects are all the time. I have concentrated on the common and starter level clubs. This information is based on 9 PM **Mountain** Daylight Time for **Boise, Idaho**.

### Naked-Eye Clubs

**Meteors** – any night, any time, anywhere, the darker the sky the better.

<u>Shower</u>	<u>Duration</u>	<u>Maximum</u>	<u>Type</u>
Lyrids	4/14 to 4/30	4/23 0100 UTC	CLASS 1
Eta Aquarids	4/15 to 5/27	5/6	CLASS 1
Pi Puppids	4/16 to 4/30	4/24 0600 UTC	Class 3
Delta Pavonids	3/11 to 4/16	3/31	Class 4
April Epsilon Delphinids	3/31 to 4/20	4/9	Class 4
Alpha Virginids	4/6 to 5/1	4/18	Class 4
Kappa Serpentids	4/11 to 4/22	4/16	Class 4
h-Virginids	4/24 to 5/4	5/1	Class 4

Key to Meteor Classes:

- Class 1 – Major Meteor Showers
- Class 2 – Minor Meteor Showers
- Class 3 – Variable Meteor Showers
- Class 4 – Weak Meteor Showers

**Constellations, Northern Skies** – any night, any time, anywhere, the darker the sky the better.

Last Chance this cycle: Cassiopeia, Andromeda, Triangulum, Aries, Caelum.

Transit Ursa Major, Lynx, Leo Minor, Cancer, Leo, Hydra, Sextans, Pyxis, Antlia, Vela.

New arrivals: Bootes, Virgo, Corvus.

### Binocular Clubs

**Binocular Messier** – Monthly highlights include:

Easy – 3, 34, 35, 36, 37, 38, 41, 42, 44, 45, 46, 47, 48, 50, 67, 93, 103.

Medium – 40, 49, 53, 63, 64, 78, 79, 81, 82, 94.

Hard – 1, 51, 65, 66, 68, 97, 101, 104, 106.

Big Binoculars – 58, 59, 60, 61, 84, 85, 86, 87, 88, 89, 90, 95, 96, 99, 100, 102, 105, 108, 109.

**Deep Sky Binocular** – Monthly highlights include (by Astronomical League numbers):

3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42.

### Other Clubs

#### Messier

In addition to those listed under Binocular Messier, check out: 43, 76, 91, 98.

#### Caldwell

1, 2, 3, 5, 6, 7, 8, 10, 13, 14, 21, 23, 24, 25, 26, 29, 31, 32, 35, 36, 38, 39, 40, 41, 45, 46, 48, 49, 50, 51, 52, 53, 54, 58, 59, 60, 61, 64, 71, 74, 79.

**Double Star** (by Astronomical League numbers):

5, 8, 11, 14, 16, 17, 18, 20, 23, 25, 27, 28, 29, 32, 34, 35, 39, 40, 42, 43, 45, 51, 52, 53, 54, 55, 56, 57, 59, 61, 65, 67, 68, 69, 70, 71, 73, 74, 75, 76, 78, 79, 80, 81, 82, 83, 85, 92, 95, 98, 99, 100.

## Other Clubs (of the Solar System)

**Planetary** – These are the tasks that can be done this month:

Sunset is **2125** mid-month. The Sun is in **Taurus**. Any clear day is a good time to see sunspots. Venus, Saturn, Uranus, Neptune, and Pluto will not be visible during the evening hours.

**Moon:**

The Maria requirement can be done any time the moon is visible. Look after 7/2, before 7/17 or after 7/31 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 7/1, 7/2, 7/30, and 7/31.

The Scarps requirement is best done on 7/3.

Occultations occur all the time, the bright ones can be found on the internet. Objects disappear on the East side of the moon.

Venus, Ceres, Jupiter, Saturn, Uranus, and Neptune are not available in the evening sky mid-month.

Mercury is in Cancer and sets at 2208 mid-month.

Mars is in Leo and sets at 2342 mid-month.

Pluto is in Capricornus and rises at 2207 mid-month.

Asteroids – Course Plotting and Measuring Movement requirements can be done at any time on any asteroid. See above to identify the bright ones this month.

## Lunar

Key timings are indicated below:

New, 7/24      4 days, 7/28      7 days, 7/2 & 7/31      10 days, 7/5      14 days, 7/9

Old moon in new moons arms – before 1311 on 7/27. ~10 % illuminated. (72 hr > New)

New moon in old moons arms – after 1311 on 7/21, ~10 % illuminated. (72 hr < New)

Waxing Crescent – before 1311 on 7/26, ~4 % illuminated. (48 hr > New)

Waning Crescent – after 1311 on 7/22, ~4 % illuminated. (48 hr < New)

## Major Events in June:

- 7/3 – Mercury at Greatest Elongation – East
- 7/3 – Earth at Aphelion
- 7/4 – Neptune begins retrograde motion
- 7/5 – Lunar Apogee
- 7/13 – Saturn begins retrograde motion
- 7/18 – Mercury begins retrograde motion
- 7/26 – Venus at highest morning altitude
- 7/30 – Southern Delta Aquarids Meteor Shower
- 7/30 – Alpha Capricornids Meteor Shower
- 7/31 – Mercury at Inferior Conjunction

Although these Observing Programs are detailed in the “**What’s Up Doc?**” handout, you can get information on many of their objects of the other AL Observing Programs by using the “**What’s Up Tonight, Doc?**” spreadsheet. To get your copy, talk to the Doc, Aaron Clevenson, by sending an email to [aaron@clevenson.org](mailto:aaron@clevenson.org).

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