

# What's Up, Doc? †

## July 2024 (Central Daylight Time)

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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 one of the more advanced clubs, 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 **Central Time** at about **30° North Latitude (Houston, TX)**.

### 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>
<b>Southern Delta Aquarids</b>	<b>7/14 to 8/18</b>	<b>7/28 &amp; 7/29</b>	<b>Moderate</b>
Alpha Lyrids	7/9 to 7/20	7/14 & 7/15	minor
July Phoenicids	7/9 to 7/17	7/14 & 7/15	minor
Alpha Pisces Asutralids	7/16 to 8/13	7/30 & 7/31	minor
Sigma Capricornids	6/18 to 7/30	7/10 to 7/20	minor
Tau Capricornids	6/2? to 7/29	7/12 & 7/13	minor
Omicron Draconids	7/6 to 7/28	7/17 & 7/18	minor

**Constellation Hunter, Northern Skies (and some Southern Skies)** – any night, any time, anywhere, the darker the sky the better.

Last Chance this cycle: Ursa Major, Leo Minor, Leo, Crater, Corvus.

Transit: Ursa Minor, Draco, Hercules, Corona Borealis, Serpens, Ophiuchus, Libra, Scorpion, Lupus, Norma.

New arrivals: Cepheus, Lacerta, Cygnus, Vulpecula, Sagitta, Delphinus, Equuleus, Aquila, Scutum, Sagittarius, Corona Australis.

**Earth Orbiting Satellites** – Most requirements can be seen naked-eye. Information about all satellite passes required for this certification can be found on the website: [www.heavens-above.com](http://www.heavens-above.com). Be sure to provide accurate latitude and longitude for your observing site.

### Binocular Clubs

**Binocular Messier** – Monthly highlights include:

Easy – 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 16, 17, 18, 22, 23, 24, 25, 27, 29, 39, 52, 92.

Medium – 14, 19, 28, 40, 49, 53, 62, 63, 64, 80, 81, 82, 83, 94.

Hard – 9, 26, 51, 54, 56, 65, 66, 68, 71, 97, 101, 104, 106.

Big Binoculars – 58, 59, 60, 61, 69, 70, 84, 85, 86, 87, 88, 89, 90, 95, 96, 99, 100, 102, 105, 107, 108, 109.

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

5, 38, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59.

### Other Clubs

#### Messier

In addition to those listed under Binocular Messier, check out: 21, 57, 91, 98.

#### Caldwell

1, 2, 3, 4, 6, 7, 9, 11, 12, 15, 16, 19, 20, 21, 26, 27, 29, 32, 33, 34, 35, 36, 37, 38, 40, 42, 45, 47, 52, 57, 60, 61, 66, 69, 75, 76, 77.

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

1, 4, 9, 10, 11, 12, 13, 14, 15, 17, 18, 20, 22, 25, 26, 29, 31, 35, 36, 37, 38, 39, 40, 41, 43, 44, 45, 46, 48, 50, 51, 52, 54, 56, 57, 58, 59, 62, 64, 66, 67, 68, 69, 70, 71, 74, 84, 86, 87, 91, 92, 93, 94, 96, 97, 100.

## Other Clubs (of the Solar System)

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

Sun – Any clear day is a good time to get those sunspots.

Sunset is at 2023 at mid-month.

Moon:

The Maria requirement can be done any time the moon is visible. Look before 7/28 or after 7/12 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 7/11 or 7/12.

The Scarps requirement is best done on 7/13.

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

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

Mercury is in Cancer and sets at 2139 mid-month.

Venus is in Gemini and sets at 2054 mid-month.

Ceres is in Sagittarius and is up all evening mid-month.

Pluto is in Capricornus and rises at 2151 mid-month.

Asteroids – Course Plotting and Measuring Movement requirements can be done at any time on any asteroid.

## Lunar

Key timings are indicated below (times are **Central Time**):

New, 7/5      4 days, 7/9      7 days, 7/12      10 days, 7/15      14 days, 7/19

Old moon in new moons arms – before 1757 on 7/2. ~10 % illuminated. (72 hr > New)

New moon in old moons arms – after 1757 on 7/14, ~10 % illuminated. (72 hr < New)

Waxing Crescent – before 1757 on 7/7, ~4 % illuminated. (48 hr > New)

Waning Crescent – after 1757 on 7/3, ~4 % illuminated. (48 hr < New)

## Major Astronomical Events this Month:

- 7/4 – Earth at Aphelion
- 7/9 – Venus at Perihelion
- 7/12 – Moon at Apogee
- 7/12 – Moon at Descending Node
- 7/22 – Mercury at Greatest Elongation East
- 7/23 – Moon at Perigee
- 7/25 – Moon at Ascending Node
- 7/27 – Mercury at Aphelion
- 7/30 – Southern Delta Aquarids Meteor Shower
- 7/31 – Alpha Capricornids Meteor Shower

\* - Although these Observing Programs are not detailed in this “**What’s Up Doc?**” handout, you can get information on many of their objects by using the “**What’s Up Tonight, Doc?**” spreadsheet (version 4.1). To get your copy, talk to the Doc, Aaron Clevenson, by sending an email to [aaron@clevenson.org](mailto:aaron@clevenson.org). It is also available on the club website.

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