

# What's Up, Doc? †

## December 2023

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This document tells you what objects are visible this next month for many of the Astronomical League Observing Programs. If you are working on one of the more advanced observing programs, then I assume that you are also probably tracking where your objects are all the time. I concentrate on the more common and starter level programs. This information is based on 9 PM **Eastern** Time.

### Naked-Eye Observing Programs

**Meteors** – any night, any time, anywhere, the darker the sky the better. The major meteor showers are shown in **BOLD** (times are local time in Houston, TX):

<u>Shower</u>	<u>Duration</u>	<u>Maximum</u>	<u>Type</u>
<b>Geminids</b>	<b>12/7 to 12/17</b>	<b>12/13</b>	<b>Major</b>
<b>Ursids</b>	<b>12/17 to 12/26</b>	<b>12/22</b>	<b>Moderate</b>
Coma Berenicids	12/12 to 1/23	12/20	Minor
Sigma Hydrids	12/3 to 12/15	12/11	Minor
Monocerotids	11/27 to 12/17	12/8	Minor
Dec Phoenicids	11/28 to 12/9	12/6	Minor
Puppids/Velids	12/1 to 12/15	12/6	Minor

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

Last Chance this cycle: Hercules, Scutum, Aquila, Microscopium.

Transit: Cepheus, Cassiopeia, Andromeda, Pegasus, Pisces, Aquarius, Cetus, Phoenix, Sculptor.

New arrivals: Auriga, Taurus, Orion, Eridanus, Fornax, Phoenix.

### Binocular Observing Programs

**Binocular Messier** – Monthly highlights include:

Easy – 2, 15, 27, 29, 31, 34, 35, 36, 37, 38, 39, 42, 45, 50, 52, 103.

Medium – 30, 33, 78, 79, 81, 82.

Hard – 1, 32, 56, 71.

Big Binoculars – 72, 77, 110.

**Deep Sky Binocular** – Monthly highlights include:

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 47, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60.

### Other Observing Programs

#### Messier

In addition to those listed under Binocular Messier, check out: 43, 57, 74, 76.

#### Caldwell

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 27, 28, 30, 31, 33, 34, 37, 39, 41, 42, 43, 44, 46, 47, 49, 50, 51, 55, 56, 57, 62, 63, 65, 67, 70, 72.

#### Double Star

2, 3, 5, 6, 7, 8, 10, 13, 16, 19, 21, 23, 24, 27, 28, 30, 31, 33, 34, 36, 38, 42, 44, 46, 47, 48, 49, 50, 53, 55, 56, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 88, 89, 90, 95.

## Other Observing Programs (continued)

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

Mercury, Venus, Mars, and Ceres are not visible in the evening sky.

Sun – Any clear day is a good time to get those sunspots. Sunset is 1649 ET at mid-month.

Moon: The Maria requirement can be done any time the moon is visible. Look after 12/19 and before 12/5 for the best views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 12/18 and 12/19.

The Scarps requirement is best done on 12/20.

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

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.

Jupiter is in Aries and is up all evening mid-month.

Saturn is in Aquarius and sets at 2206 mid-month.

Uranus is in Aries and is up all evening mid-month.

Neptune is in Pisces and is up all evening mid-month.

Pluto, the Dwarf Planet, is in Sagittarius and sets at 1915 mid-month.

## Lunar

New Moon – 12/23 at 0723 ET

Key timings are indicated below:

4 days, 12/16                      7 days, 12/19                      10 days, 12/22                      14 days, 12/26

Old moon in new moons arms – before 0723 ET on 12/15, 10 % illuminated. (72 hr > New)

New moon in old moons arms – after 0723 ET on 12/9, 10 % illuminated. (72 hr < New)

Waxing Crescent – before 0723 ET on 12/14, 3 % illuminated. (40 hr > New)

Waning Crescent – after 0723 ET on 12/10, 3 % illuminated. (48 hr < New)

## Other Astronomical Events this month:

12/2 – Phoenicids Meteor Shower

12/4 – Mercury at Greatest Elongation

12/6 – Neptune Stationary

12/7 – Puppis-Velids Meteor Shower

12/8 – Mercury Dichotomy

12/9 – Sigma Hybrids Meteor Shower

12/9 – Monocerotids Meteor Shower

12/12 – Mercury Stationary

12/14 – Geminids Meteor Shower

12/16 – Coma Berenicids Meteor Shower

12/17 – Neptune at Eastern Quadrature

12/22 – Ursids Meteor Shower

12/31 – Jupiter Stationary

\* - Although these clubs 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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