

# What's Up, Doc? †

## September 2024

Dr. Aaron B. Clevenson, Observatory Director, Insuperity Observatory

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 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. All times are US Eastern Time in Washington DC.

### Naked-Eye Clubs

#### Meteors

<u>Showers</u>	<u>Duration</u>	<u>Maximum</u>	<u>Type</u>
Gamma Aquarids	9/1 to 9/14	9/7 & 9/8	Minor
Alpha Triangulids	9/5 to 9/15	9/11 & 9/12	Minor
Alpha Aurigids	8/25 to 9/6	9/1 & 9/2	Minor
Eta Draconids	8/28 to 9/23	9/12 & 9/13	Minor
Gamma Piscids	8/26 to 10/22	9/23 & 9/24	Minor
Southern Piscids	8/12 to 10/7	9/11 to 9/20	Minor

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

Last Chance this cycle: Draco, Canes Venatici, Bootes, Serpens, Libra, Scorpius, Telescopium.

Transit: Cygnus, Lyra, Sagitta, Vulpecula, Delphinus, Aquila, Scutum, Sagittarius.

New arrivals: Andromeda, Pisces, Pegasus, Aquarius, Microscopium, Piscis Austrinus.

### Binocular Clubs

**Binocular Messier** – Monthly highlights include:

Easy – 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 18, 22, 23, 24, 25, 27, 29, 31, 39, 52, 55, 92, 103.

Medium – 14, 19, 28, 30, 33, 40, 62, 63, 80, 81, 82, 94.

Hard – 9, 26, 32, 51, 54, 56, 71, 75, 101, 106.

Big Binoculars – 69, 70, 72, 102, 107, 109, 110.

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

1, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 17, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60.

### Other Clubs

#### Messier

In addition to those listed under Binocular Messier, check out: 21, 57, 73, 76, 108.

#### Caldwell

1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 27, 28, 29, 30, 33, 34, 37, 42, 43, 44, 47, 55, 57, 63, 68, 69, 76, 78.

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

1, 4, 7, 9, 10, 12, 13, 14, 15, 18, 21, 22, 26, 29, 31, 35, 36, 37, 38, 39, 41, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 54, 56, 57, 58, 60, 61, 62, 63, 64, 66, 67, 68, 69, 70, 71, 72, 84, 86, 87, 88, 89, 90, 91, 93, 94, 96, 97.

## 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. The Sun is in Leo.

Sunset mid-month is at 1915.

Moon:

The Maria requirement can be done any time the moon is visible. Look before 9/24 and after 9/9 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 9/8 and 9/9.

The Scarps requirement is best done on 9/10.

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

Mercury, Mars, and Jupiter are not available in the evening sky mid-month.

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

Venus is in Leo and sets at 2047 mid-month.

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

Saturn is in Aquarius and rises at 2039 mid-month.

Uranus is in taurus and rises at 2334 mid-month.

Neptune is in Pisces and rises at 2104 mid-month.

Pluto is in Capricornus and is up all evening mid-month.

## Lunar (times are shown for Central US Time)

Key timings are indicated below:

New, 9/2            4 days, 9/6            7 days, 9/9            10 days, 9/12            14 days, 9/16

Old moon in new moon's arms – before 2155 on 9/5, ~10 % illuminated. (72 hr > New)

New moon in old moon's arms – after 2249 on 9/28, ~10 % illuminated. (72 hr < New)

Waxing Crescent – before 2155 on 9/4, ~4 % illuminated. (40 hr > New)

Waning Crescent – after 2249 on 9/29, ~4 % illuminated. (48 hr < New)

## Major Astronomical Events:

- 9/4 – Mercury at Greatest Elongation – East
- 9/4 – Moon as Ascending Node
- 9/5 – Moon at Apogee
- 9/7 – Saturn at Opposition
- 9/9 – Mercury at Perihelion
- 9/12 – Lunar Apogee
- 9/17 – Saturn – Moon Conjunction (0.3')
- 9/17 – Partial Lunar Eclipse
- 9/18 – Moon at Perigee
- 9/18 – Moon at Ascending Node
- 9/20 – Neptune at Opposition
- 9/22 – Autumnal Equinox
- 9/30 – Mercury at Superior Conjunction

\* - 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.

† - “What’s Up Doc?” is used with permission from Warner Bros. Entertainment Inc.

© 2024 Aaron B. Clevenson. All international rights reserved. This work may be copied and distributed as is, without modification, free of charge for educational purposes only.

Insperty Observatory, 2505 S. Houston Avenue, Humble, TX: [www.humbleisd.net/observatory](http://www.humbleisd.net/observatory)