

What's Up, Doc? †

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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. This concentrates on the more common and starter level Observing 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. Major showers are in **BOLD**:

<u>Shower</u>	<u>Duration</u>	<u>Maximum</u>	<u>Type</u>
Quadrantids	1/1 to 1/10	1/3	Major
Zeta Aurigids	12/11 to 1/21	12/31 & 1/1	Minor
January Bootids	1/9 to 1/18	1/16 to 1/18	Minor
Alpha Centaurids	1/28 to 2/21	2/8	Minor
Delta Cancri	12/14 to 2/14	1/17	Minor
Canids	1/13 to 1/30	1/24 & 1/25	Minor
Eta Carinids	1/14 to 1/27	1/21 & 1/22	Minor
Eta Craterids	1/11 to 1/22	1/16 & 1/17	Minor
January Draconids	1/10 to 1/24	1/13 to 1/16	Minor
Rho Geminids	12/28 to 1/28	1/8 & 1/9	Minor
Alpha Hydrids	1/15 to 1/30	1/20 & 1/21	Minor
Alpha Leonids	1/13 to 2/13	1/24 to 1/31	Minor
Gamma Velids	1/1 to 1/17	1/5 to 1/8	Minor

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

Last Chance: Cygnus, Lyra, Vulpecula, Sagitta, Delphinus, Equuleus, Aquarius, Piscis Austrinus.

Transit: Camelopardalis, Perseus, Aries, Taurus, Eridanus, Fornax.

New Arrivals: Lynx, Ursa Major, Leo Minor, Cancer, Canis Minor, Monoceros, Canis Major, Columba.

Binocular Observing Programs

Binocular Messier – Monthly highlights include:

Easy – 31, 34, 35, 36, 37, 38, 39, 41, 42, 44, 45, 46, 47, 48, 50, 52, 67, 103

Medium – 33, 78, 79, 81, 82

Hard – 1, 32, 97

Big Binoculars – 77, 108, 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, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 55, 56, 57, 58, 59, 60

Other Observing Programs

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

Caldwell

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 20, 22, 23, 24, 25, 28, 30, 31, 33, 39, 41, 43, 44, 46, 49, 50, 51, 54, 56, 58, 62, 64, 65, 67, 70, 73

Double Star

2, 3, 5, 6, 8, 16, 19, 21, 23, 24, 27, 28, 30, 32, 33, 34, 40, 42, 46, 47, 49, 50, 53, 55, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 85, 89, 95, 99

Solar System and Lunar Observing Programs

Solar System – These are the tasks that can be done this month: (all times are Eastern Time)

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

Sunset is 1647 by mid-month.

Moon:

The Maria requirement can be done any time the moon is visible. Look after 1/6 and before 1/22 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 1/5 or 1/6.

The Scarps requirement is best done on 1/7.

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

Mercury, and Venus are not visible in the evening skies.

Mars is in Sagittarius and set at 1704 mid-month.

Jupiter is in Gemini and rises at 1853 mid-month.

Saturn is in Aquarius and is up all evening mid-month.

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

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

Pluto is in Capricornus and sets at 1927 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 (all times are Eastern Time)

Key timings are indicated below: (New Moon, 1/29 at 1500)

4 days, 1/3 7 days, 1/6 10 days, 1/9 14 days, 1/13

Old moon in new moons arms – before 1227 on 1/2, 10 % illuminated. (72 hr > New)

New moon in old moons arms – after 1500 on 1/26, 10 % illuminated. (72 hr < New)

Waxing Crescent – before 1227 on 1/1 and 1500 on 1/31, 4 % illuminated. (40 hr > New)

Waning Crescent – after 1500 on 1/27, 4 % illuminated. (48 hr < New)

Astronomical Events

- 1/3 – Quadrantids Meteor Shower
- 1/4 - Lunar Occultation of Saturn
- 1/5 – Lunar Occultation of Neptune
- 1/7 – Lunar Perigee
- 1/10 – Venus at Greatest Elongation East
- 1/11 – Venus at Dichotomy
- 1/13 – Moon and Mars Conjunction (13°)
- 1/13 – Moon occults Mars
- 1/15 – Mars at Opposition
- 1/20 – Lunar Apogee
- 1/21 – Pluto at solar Conjunction
- 1/30 – Uranus returns to Prograde Motion
- 1/31 – Lunar Occultation of Saturn

* - Although some 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. It is also available through the AL website.

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