

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 Pacific 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 Pacific Time)

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

Sunset is 1645 by mid-month.

Moon:

The Maria requirement can be done any time the moon is visible. Look after 1/18 and before 1/4 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 1/17 or 1/18.

The Scarps requirement is best done on 1/19.

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

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

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

Saturn is in Aquarius and sets at 2124 mid-month.

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

Neptune is in Pisces and sets at 2327 mid-month.

Pluto is in Sagittarius and sets at 1815 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 Pacific Time)

Key timings are indicated below: (New Moon, 1/11 at 0358)

4 days, 1/15 7 days, 1/18 10 days, 1/21 14 days, 1/25

Old moon in new moons arms – before 0358 on 1/14, 10 % illuminated. (72 hr > New)

New moon in old moons arms – after 0358 on 1/8, 10 % illuminated. (72 hr < New)

Waxing Crescent – before 0358 on 1/13, 4 % illuminated. (40 hr > New)

Waning Crescent – after 0358 on 1/9, 4 % illuminated. (48 hr < New)

Astronomical Events

- 1/1 – Lunar Apogee
- 1/2 – Earth at Perihelion
- 1/4 – Quadrantids Meteor Shower
- 1/7 – Mercury at Dichotomy
- 1/12 – Mercury at Greatest Western Elongation
- 1/13 – Lunar Perigee
- 1/17 – Moon & Ceres Conjunction (9')
- 1/18 – Gamma Ursae Minoris Meteor Shower
- 1/20 – Pluto at Conjunction
- 1/27 – Mercury & Mars Conjunction (14')
- 1/29 – Lunar Perigee

* - 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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