

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 Cancriids | 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.

Sunrise is 0753 by mid-month. Sunset is 1645 by mid-month.

Moon:

The Maria requirement can be done any time the moon is visible. Look after 1/28 and before 1/14 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 1/27 or 1/28.

The Scarps requirement is best done on 1/29.

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

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

Venus is in Capricornus and sets at 1823 mid-month.

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

Jupiter is in Pisces and sets at 2241 mid-month.

Saturn is in Capricornus and sets at 1907 mid-month.

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

Neptune is in Aquarius and sets at 2146 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, 1/21 at 0653)

4 days, 1/25 7 days, 1/28 10 days, 1/2 & 1/31 14 days, 1/6

Old moon in new moons arms – before 0653 on 1/24, 10 % illuminated. (72 hr > New)

New moon in old moons arms – after 0653 on 1/18, 10 % illuminated. (72 hr < New)

Waxing Crescent – before 0653 on 1/23, 4 % illuminated. (40 hr > New)

Waning Crescent – after 0653 on 1/19, 4 % illuminated. (48 hr < New)

Astronomical Events

- 1/1 – Venus/Pluto Conjunction (52')
- 1/3 – Mars/Moon Conjunction (32')
- 1/4 – Earth at Perihelion
- 1/7 – Mercury at Inferior Conjunction
- 1/8 – Lunar Apogee
- 1/10 – Kappa Cancriids Meteor Shower
- 1/12 – Mars is Stationary
- 1/18 – Mercury is Stationary
- 1/18 – Gamma Ursae Minorids Meteor Shower
- 1/18 – Pluto at Conjunction
- 1/21 – Lunar Perigee
- 1/22 – Venus/Saturn Conjunction (6')
- 1/22 – Uranus is Stationary
- 1/24 – Mercury at Dichotomy
- 1/29 – Mercury at Greatest Western Elongation
- 1/31 – Moon/Mars Conjunction (6')

* - 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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