

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 Clubs. If you are working on an 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 **Mountain** Daylight Time for **Boise, Idaho**.

Naked-Eye Clubs

Meteors – any night, any time, anywhere, the darker the sky the better.

<u>Shower</u>	<u>Duration</u>	<u>Maximum</u>	<u>Type</u>
Lyrids	4/14 to 4/30	4/23 0100 UTC	CLASS 1
Eta Aquarids	4/15 to 5/27	5/6	CLASS 1
Pi Puppids	4/16 to 4/30	4/24 0600 UTC	Class 3
Delta Pavonids	3/11 to 4/16	3/31	Class 4
April Epsilon Delphinids	3/31 to 4/20	4/9	Class 4
Alpha Virginids	4/6 to 5/1	4/18	Class 4
Kappa Serpentids	4/11 to 4/22	4/16	Class 4
h-Virginids	4/24 to 5/4	5/1	Class 4

Key to Meteor Classes:

- Class 1 – Major Meteor Showers
- Class 2 – Minor Meteor Showers
- Class 3 – Variable Meteor Showers
- Class 4 – Weak Meteor Showers

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

Last Chance this cycle: Cassiopeia, Andromeda, Traingulum, Aries, Caelum.

Transit Ursa Major, Lynx, Leo Minor, Cancer, Leo, Hydra, Sextans, Pyxis, Antlia, Vela.

New arrivals: Bootes, Virgo, Corvus.

Binocular Clubs

Binocular Messier – Monthly highlights include:

Easy – 3, 34, 35, 36, 37, 38, 41, 42, 44, 45, 46, 47, 48, 50, 67, 93, 103.

Medium – 40, 49, 53, 63, 64, 78, 79, 81, 82, 94.

Hard – 1, 51, 65, 66, 68, 97, 101, 104, 106.

Big Binoculars – 58, 59, 60, 61, 84, 85, 86, 87, 88, 89, 90, 95, 96, 99, 100, 102, 105, 108, 109.

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

3, 4, 5, 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, 39, 40, 41, 42.

Other Clubs

Messier

In addition to those listed under Binocular Messier, check out: 43, 76, 91, 98.

Caldwell

1, 2, 3, 5, 6, 7, 8, 10, 13, 14, 21, 23, 24, 25, 26, 29, 31, 32, 35, 36, 38, 39, 40, 41, 45, 46, 48, 49, 50, 51, 52, 53, 54, 58, 59, 60, 61, 64, 71, 74, 79.

Double Star (by Astronomical League numbers):

5, 8, 11, 14, 16, 17, 18, 20, 23, 25, 27, 28, 29, 32, 34, 35, 39, 40, 42, 43, 45, 51, 52, 53, 54, 55, 56, 57, 59, 61, 65, 67, 68, 69, 70, 71, 73, 74, 75, 76, 78, 79, 80, 81, 82, 83, 85, 92, 95, 98, 99, 100.

Other Clubs (of the Solar System)

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

The Sun is in Pisces and sets at **2029** mid-month.

Mercury, Venus, Ceres, Saturn, Neptune, and Pluto will not be visible during the evening hours.

They are all too close to the sun or morning stars.

Sun – Any clear day is a good time to get those sunspots. But things have been rather sparse.

Moon:

The Maria requirement can be done any time the moon is visible. Look before 4/20 and after 4/5 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 4/4 and 4/5.

The Scarps requirement is best done on 4/6.

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.

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

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

Uranus is in Taurus and sets at **2254** mid-month.

Lunar

Key timings are indicated below:

New, 4/27 4 days, 4/2 7 days, 4/5 10 days, 4/8 14 days, 4/12

Old moon in new moon's arms – before **0458** on 4/1 or before **1331** on 4/30, ~10 % illuminated. (72 hr > New)

New moon in old moon's arms – after **1331** on 4/24, ~10 % illuminated. (72 hr < New)

Waxing Crescent – before **1331** on 4/29, ~4 % illuminated. (40 hr > New)

Waning Crescent – after **1331** on 4/25, ~4 % illuminated. (48 hr < New)

Major Events in April:

- 4-7 Mercury returns to Prograde Motion
- 4-13 Lunar Apogee
- 4-13 Venus returns to Prograde Motion
- 4-14 Eris at Conjunction
- 4-16 Mercury - & Neptune Conjunction (41')
- 4-20 Mercury at highest morning altitude
- 4-21 Mercury at Greatest Elongation West
- 4-21 Mars at Eastern Quadrature
- 4-22 Lyrids Meteor Shower
- 4-22 Haumea at Opposition
- 4-23 Pi Puppis Meteor Shower
- 4-24 Venus at Brightest Morning Brightness
- 4-27 Lunar Perigee

Although these Observing Programs are detailed in the “**What’s Up Doc?**” handout, you can get information on many of their objects of the other AL Observing Programs by using the “**What’s Up Tonight, Doc?**” spreadsheet. To get your copy, talk to the Doc, Aaron Clevenson, by sending an email to aaron@clevenson.org.

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