

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 one of the more advanced club, then I assume that you are also probably tracking where your objects are all the time. I concentrate on the more common and starter level clubs.

Naked-Eye Clubs

Meteors – any night, any time, anywhere, the darker the sky the better. The major meteor showers are shown in **BOLD** (times are local time in Houston, TX):

<u>Shower</u>	<u>Duration</u>	<u>Maximum</u>	<u>Type</u>
Geminids	12/7 to 12/17	12/13	Major
Ursids	12/17 to 12/26	12/22	Moderate
Coma Berenicids	12/12 to 1/23	12/20	Minor
Sigma Hydrids	12/3 to 12/15	12/11	Minor
Monocerotids	11/27 to 12/17	12/8	Minor
Dec Phoenicids	11/28 to 12/9	12/6	Minor
Puppids/Velids	12/1 to 12/15	12/6	Minor

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

Last Chance this cycle: Hercules, Scutum, Aquila, Microscopium.

Transit: Cepheus, Cassiopeia, Andromeda, Pegasus, Pisces, Aquarius, Cetus, Phoenix, Sculptor.

New arrivals: Auriga, Taurus, Orion, Eridanus, Fornax, Phoenix.

Binocular Clubs

Binocular Messier – Monthly highlights include:

Easy – 2, 15, 27, 29, 31, 34, 35, 36, 37, 38, 39, 42, 45, 50, 52, 103.

Medium – 30, 33, 78, 79, 81, 82.

Hard – 1, 32, 56, 71.

Big Binoculars – 72, 77, 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, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 47, 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: 43, 57, 74, 76.

Caldwell

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 24, 25, 27, 28, 30, 31, 33, 34, 37, 39, 41, 42, 43, 44, 46, 47, 49, 50, 51, 55, 56, 57, 62, 63, 65, 67, 70, 72.

Double Star

2, 3, 5, 6, 7, 8, 10, 13, 16, 19, 21, 23, 24, 27, 28, 30, 31, 33, 34, 36, 38, 42, 44, 46, 47, 48, 49, 50, 53, 55, 56, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 88, 89, 90, 95.

Other Clubs (continued)

Comets – down to magnitude 12:

C/2009 P1 – Garradd (6.3), C/2010 G2 – Hill (11.0), 78P / Gehrels (11.9).

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

Mercury, Mars, Ceres and Saturn are not visible in the evening sky.

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

Moon: The Maria requirement can be done any time the moon is visible. Look after 12/2 and before 12/17 for the best views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 12/1, 12/2, 12/30, and 12/31.

The Scarps requirement is best done on 12/3.

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.

Venus is in Sagittarius and sets at 19:38 mid-month.

Jupiter is in Pisces and sets at 03:07 by mid-month.

Uranus is in Pisces and sets at 00:50 by mid-month.

Neptune is in Aquarius and sets at 22:22 by mid-month.

Pluto is in Sagittarius and sets at 18:31 by mid-month.

Lunar

New Moon – 12/24 @ 12:06.

Key timings are indicated below:

4 days, 12/28 7 days, 12/2 & 12/31 10 days, 12/5 14 days, 12/9

Old moon in new moons arms – before 12:06 on 12/27, 10 % illuminated. (72 hr > New)

New moon in old moons arms – after 12:06 on 12/21, 10 % illuminated. (72 hr < New)

Waxing Crescent – before 04:06 on 12/26, 3 % illuminated. (40 hr > New)

Waning Crescent – after 12:06 on 12/21, 3 % illuminated. (48 hr < New)

Special Events

12/10 05:33:32 – Start of Partial Lunar Eclipse (sets before it ends).

12/22 21:00 – Mercury at Greatest Western Elongation (22 degrees).

12/27 21:52 – Double Shadow Transit on Jupiter.

Clubs Not Covered

* ARP Peculiar Galaxies	* Earth Orbiting Satellites	Sky Puppies	Master Observer
Constellation Hunter – South	* Universe Sampler	* Herschel 400	* Herschel II
* Galaxy Groups & Clusters	* Planetary Nebulae	Lunar II	* Open Clusters
* Southern Skies Binocular	* Globular Clusters	Urban	Sunspotters
* Southern Skies Telescope			

* - 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 3.4.1). To get your copy, send an email to aaron@clevenson.org

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