

# What's Up, Doc? †

## August, 2017

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This document presents those objects are visible this next month for many Astronomical League Observing Programs. If you are working on a more advanced program, I assume you are tracking where your objects are all the time. It concentrates on the common and starter level programs. This is based on 9 PM CDT.

### The Great American Solar Eclipse

Totality passes through the middle of the United States, from Oregon to South Carolina on August 21, 2017 – mid-day. A great place to start your web-search: <https://eclipse.gsfc.nasa.gov/eclipse.html>

### 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>
<b>Perseids</b>	<b>7/23 to 8/22</b>	<b>8/13 @ 0:00 midnight</b>	<b>MAJOR</b>
Northern Iota Aquarids	8/11 to 9/10	8/25 & 8/26	Moderate
Southern Iota Aquarids	7/1 to 9/18	8/6 & 8/7	Moderate
Alpha Capricornids	7/15 to 9/11	8/1 & 8/2	Moderate
Northern Delta Aquarids	7/16 to 9/10	8/13 to 8/14	Moderate
Kappa Cygnids	7/26 to 9/1	8/18	Moderate
August Eridanids	8/2 to 8/27	8/11 & 8/12	minor
Upsilon Pegasids	7/25 to 8/19	8/8 & 8/9	minor
Alpha Ursa Majorids	8/9 to 8/30	8/13 & 8/14	minor
Gamma Leonids	8/14 to 9/12	8/25 & 8/26	daylight

**Constellation Hunter, Northern Skies (and some Southern Skies)** – any night, any time, anywhere, the darker the sky the better.

Last Chance this cycle: Ursa Major, Leo Minor, Coma Berenices, Virgo.

Transit: Ursa Minor, Draco, Hercules, Corona Borealis, Serpens, Ophiuchus, Scorprius.

New arrivals: Lacerta, Cygnus, Pegasus, Capricornus, Sagittarius.

### Binocular Clubs

**Binocular Messier** – Monthly highlights include:

Easy – 2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17, 18, 22, 23, 24, 25, 27, 29, 39, 52, 55, 92, 103.

Medium – 14, 19, 28, 40, 49, 53, 62, 63, 64, 80, 81, 82, 83, 94.

Hard – 9, 26, 51, 54, 56, 71, 75, 97, 101, 104, 106.

Big Binoculars – 58, 59, 60, 61, 69, 70, 72, 84, 85, 86, 87, 88, 89, 90, 99, 100, 102, 107, 108, 109.

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

1, 3, 4, 5, 42, 43, 44, 45, 46, 47, 48, 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: 21, 57, 73, 91, 98.

#### Caldwell

1, 2, 3, 4, 6, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 26, 27, 29, 30, 32, 33, 34, 35, 36, 37, 38, 42, 45, 47, 52, 55, 57, 66, 68, 69, 75, 76, 78, 81, 82.

**Double Star** (by Astronomical League numbers):

1, 4, 7, 9, 10, 12, 13, 14, 15, 17, 18, 22, 26, 29, 31, 35, 36, 37, 38, 39, 41, 43, 44, 45, 46, 47, 48, 50, 51, 52, 54, 56, 57, 58, 60, 62, 63, 64, 66, 67, 68, 69, 70, 71, 72, 74, 84, 86, 87, 88, 90, 91, 93, 94, 96, 97.

## Other Clubs (of the Solar System)

**Solar System** – These are the tasks that can be done this month:

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

Sunset is 2000 mid-month.

Venus and Mars are too close to the Sun or is a morning object.

Moon:

The Maria requirement can be done any time the moon is visible. Look before 8/14 and after 8/28 for the fullest views.

The Highlands requirement can be done at the same time.

The Crater Ages requirement is best done on 8/27 or 8/28.

The Scarps requirement is best done on 8/129.

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.

Mercury is in Sextans and sets at 2040 mid-month.

Ceres is in Aquarius and rises at 2049 mid-month.

Jupiter is in Virgo and sets 2246 mid-month.

Saturn is in Ophiuchus and is up all evening mid-month. All requirements can be done when Saturn is visible: markings, moons, etc.

Uranus is in Pisces and rises at 2305 mid-month.

Neptune is in Aquarius and rises at 2100 mid-month.

Pluto is in Sagittarius and is up all evening mid-month.

### Lunar

Key timings are indicated below:

New, 8/21                      4 days, 8/25                      7 days, 8/28                      10 days, 8/2 & 9/31                      14 days, 8/6

Old moon in new moons arms – before 1331 on 8/24, ~10 % illuminated. (72 hr > New)

New moon in old moons arms – after 1331 on 8/18, ~10 % illuminated. (72 hr < New)

Waxing Crescent – before 0531 on 8/23, ~4 % illuminated. (40 hr > New)

Waning Crescent – after 1331 on 8/19, ~4 % illuminated. (48 hr < New)

### The Astronomical League Observing Programs:

Analemma	ARP Peculiar Galaxies	Asterisms	Asteroids
Binocular Double Star	Binocular Messier	Caldwell	Carbon Star
Comets	Constellation Hunter – North	Constellation Hunter – South	Dark Nebulae
Dark Sky Advocate	Deep Sky Binocular	Double Star	Earth Orbiting Satellite
Flat Galaxy	Galaxy Groups & Clusters	Galileo	Globular Clusters
Herschel 400	Herschel II	Local Galaxy Group & Neighborhood	
Lunar	Lunar II	Master Observer	Messier
Meteor	NEO	Open Clusters	Outreach
Planetary Nebulae	Planetary Transit	Solar System Observers	Sky Puppy
Southern Skies Binocular	Southern Skies Telescope	Sunspotters	Stellar Evolution
Universe Sampler	Urban	Variable Star	Planetary Transit

\* - 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 4.1). To get your copy, talk to the Doc, Aaron Clevenson, by sending an email to [aaron@clevenson.org](mailto:aaron@clevenson.org). It is also available on the club website.

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