





# TARGET LIST - MAY 2014

How many objects and events can you observe this month? Check each of the boxes  provided next to the objects and events you observe!

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
			
FIRST QUARTER MAY	FULL MOON MAY	LAST QUARTER MAY	NEW MOON MAY
7	14	21	28
03:15 UT	19:16 UT	12:59 UT	18:40 UT

**YOUR LOCAL TIME ZONE:** \_\_\_\_\_ (ex: EST = UT -5)

It is important to distinguish your local time from the astronomical standard of **Universal Time (UT)**. Universal Time is the standard by which all observers agree to measure an astronomical event. It is also known as Greenwich Meantime (GMT) or Universal Time Coordinated (UTC). Use a time zone chart (<http://www.worldtimezone.com/>) to find your local time zone and record how many hours + or - from UT 0 (GMT). Use your local time to add to or subtract from the UT times listed to get your local time for an event. **Do not forget to account for time changes due to local observance of Daylight Savings Time. (ex: Eastern Standard Time (EST) = UT-5 becomes Eastern Daylight Time (EDT) = UT-4)**

## ASTRONOMICAL EVENTS

**Moon At Apogee** (farthest from Earth) on May 6 at 10h UT.

**Moon At Perigee** (closest to Earth) on May 18 at 12h UT.

## CONSTELLATIONS

The following constellations appear at or near the **zenith meridian** (the line running directly north/south in the sky) at 22:00 (10:00pm) **local time** on the first night of the month.

### North Celestial Hemisphere

These constellations appear at or north of the **celestial equator**.

- Canes Venatici
- Coma Berenices
- Leo
- Leo Minor
- Ursa Major

### South Celestial Hemisphere

These constellations appear at or south of the **celestial equator**.

- |                                    |                                  |
|------------------------------------|----------------------------------|
| <input type="checkbox"/> Antlia    | <input type="checkbox"/> Crux    |
| <input type="checkbox"/> Chamaleon | <input type="checkbox"/> Hydra   |
| <input type="checkbox"/> Carina    | <input type="checkbox"/> Musca   |
| <input type="checkbox"/> Centaurus | <input type="checkbox"/> Sextans |
| <input type="checkbox"/> Corvus    | <input type="checkbox"/> Vela    |
| <input type="checkbox"/> Crater    |                                  |

## THE CLASSICAL PLANETS

- Mercury** - Greatest elongation evening sky on May 25. (23°)
- Venus** - Visible just before sunrise.
- Mars** - Transits late evening in Virgo.
- Jupiter** - Setting in the evening sky in Gemini.
- Saturn** - At opposition on May 10 in Libra.
- Neptune** - Visible just before sunrise in Aquarius.

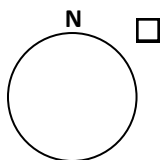
## DWARF PLANETS

- Ceres** - Transits late evening in Virgo.
- Pluto** - Rises early morning hours in Sagittarius, magnitude 14.

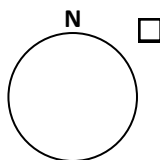
# TARGET LIST - MAY 2014

## LUNAR PHASES

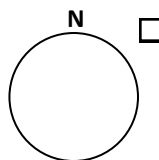
Observe and record lunar phases. Sketch the degree of observed phase by shading in the circles provided. Orient the north lunar limb to top. Record the date and time of observation in UT.



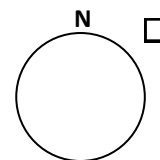
WAXING  
CRESCENT  
VISIBLE  
MAY  
1-6



WAXING  
GIBBOUS  
VISIBLE  
MAY  
8-13



WANING  
GIBBOUS  
VISIBLE  
MAY  
15-20



WANING  
CRESCENT  
VISIBLE  
MAY  
22-27

## COMETS

- C/2012 X1 (LINEAR) Mag 8 in Aquila.
- C/2012 K1 (PANSTARRS) Mag 10 in Corona Borealis.
- C/2014 E2 (Jacques) Mag 10 in Antlia.

Visit <http://cometchasing.skyhound.com/> for finder charts and more information on these and other visible comets.

## ASTEROIDS

- 4 Vesta** - Transits Late evening in Virgo. Mag 6.
- 2 Pallas** - Late evening sky in Leo. Mag 9.

## MESSIER OBJECTS VISIBLE IN THE EVENING SKY

### CANES VENATICI

- M94 Galaxy
- M106 Galaxy

### COMA BERENICES

- M53 Globular Cluster
- M64 Black Eye Galaxy
- M85 Galaxy
- M88 Galaxy
- M91 Galaxy
- M98 Galaxy
- M99 Virgo Cluster Pinwheel
- M100 Galaxy

### VIRGO

- M49 Galaxy
- M58 Galaxy
- M59 Galaxy
- M60 Galaxy
- M61 Galaxy
- M84 Galaxy
- M86 Galaxy
- M87 Virgo A
- M89 Galaxy
- M90 Galaxy
- M104 Sombrero Galaxy

### HYDRA

- M68 Globular Cluster

### URSA MAJOR

- M40 Winnecke 4
- M81 Bode's Galaxy
- M82 Cigar Galaxy
- M97 Owl Nebula
- M108 Galaxy
- M109 Galaxy

### LEO

- M65 Galaxy
- M66 Galaxy
- M95 Galaxy
- M96 Galaxy
- M105 Galaxy

### ADD YOUR OWN TARGET

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

## ETA AQUARIID METEOR SHOWER (MAY 5-6) AND SATELLITES

Record any meteors or satellites you observe. (ex:  $\uparrow\uparrow\uparrow$ ) If there are multiple observers be sure that each observer keeps record of only the meteors and satellites they observe and not what other observers report. Record date and observation start/stop time in UT.

METEORS

SATELLITES

Visit <http://www.amsmeteors.org/meteor-showers/meteor-shower-calendar/> for more information on meteor showers.