



CENTRAL NY WEATHER

Night sky-gazing in Upstate NY: What to look for in July

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The Milky Way is visible in this 2013 photo shot in California. *(Don Bartletti | Los Angeles Times)*

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By Damian Allis

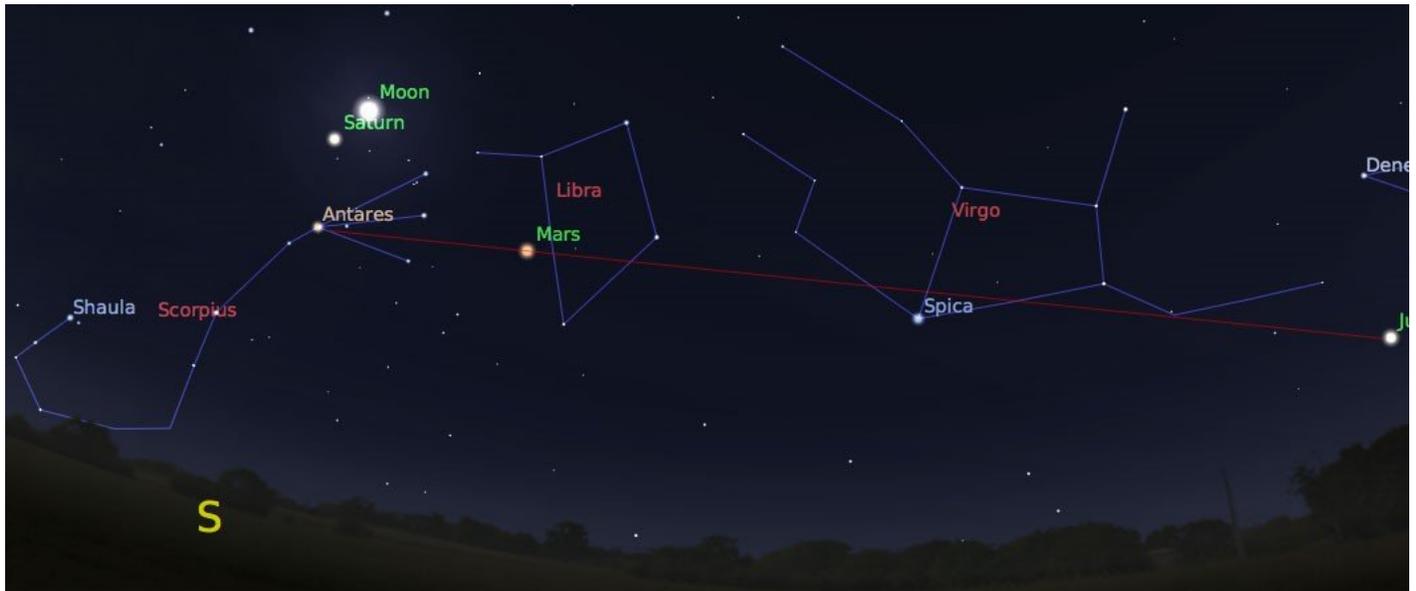
Syracuse, N.Y. --

Upstate New York has had a rare recent run of excellent clear nights. Those taking the extra hour past sunset the nighttime sky have not been disappointed, with the three bright planets Jupiter, Mars, and Saturn making good binoculars and small telescopes. With the summer solstice just past us, amateur astronomers are now a minute-or-so of dark sky each evening.

July is also the month when the band of our Milky Way galaxy returns in all of its cloud band-like glory to subu skies during reasonable observing hours (that is, before midnight for most of us).

Items and events listed below assume you're outside and observing between 9 p.m. and midnight throughout New York state. The longer you're outside and away from indoor or bright lights, the better your dark adaptior to use your smartphone, find a red light app or piece of red acetate, else set your brightness as low as possibl

Your First Steps Outside:



The view looking southwest at 10 p.m. on July 15. (Special to Syracuse.com)

If you walk outside after 9 p.m., you'll not be able to miss Jupiter beaming bright to the west/southwest (which is bright enough to be visible from indoors through a south-facing window). Through the first-half of July you'll be able to find the bright star Regulus in Leo the Lion to Jupiter's right, then Leo's tail star Denebola above Jupiter. Working left from Jupiter, the next bright object is the star Spica in Virgo, followed by the very bright and red-orange Mars now sitting in Libra the Scales. To the left of Mars, you next land on Antares, a red-orange supergiant that is the heart of Scorpius. Finally, directly above Antares lies the planet Saturn.

Mars, Jupiter, and Saturn are three of the five "superior planets" in our solar system, which means they are or Earth's orbit with respect to the.

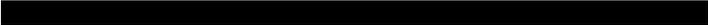
ISS And Other Bright Fly-Overs:

Satellite fly-bys are commonplace, with several bright passes per hour, yet a thrill to new observers of all ages overs compare in brightness or interest to the International Space Station. The fly-overs of the football-sized massive solar panel arrays can be predicted to within several seconds, with these fly-overs taking several min The Top-10 brightest July fly-overs for Upstate NY (in terms of pre-midnight timing and peak brightness) are I the station's orbit, we won't see pre-midnight fly-overs until later this month. Simply go out a few minutes bef orient yourself, and look for what will first seem like a distant plane.

Approximate Date	Approximate Start Time	Star Direction	Approximate End Time	End Direction
<u>Tue, 26</u>	21:30	S/SW	21:36	E/NE
<u>Tue, 26</u>	23:06	W	23:12	NE
<u>Wed, 27</u>	23:50	W/NW	23:56	NE
<u>Thu, 28</u>	22:57	W	23:03	NE
<u>Fri, 29</u>	22:04	W	22:10	NE
<u>Fri, 29</u>	23:41	NW	23:46	NE
<u>Sat, 30</u>	21:10	W/SW	21:17	NE
<u>Sat, 30</u>	22:48	W/NW	22:53	NE
<u>Sun, 31</u>	21:55	W/NW	22:00	NE
<u>Sun, 31</u>	23:32	NW	23:36	N/NE

Moon:

ADVERTISING



New: July 5

First quarter: July 12

Full : July 19

Third quarter: July 26

The moon's increasing brightness as full moon approaches washes out fainter stars and celestial objects - this is not ideal for observing, but excellent for new observers, as only the brightest stars (those that mark the major constellations) remain visible for your easy identification. If you've never tried it, the moon is a wonderful binocular object.

Planets:

Jupiter: The king of the planets lies to the west/southwest, biting at the hind feet of the constellation Leo the brightest object in the nighttime sky after the Moon right now and appears early after sunset. It's also the object which began its Jupiter survey on July 4th.

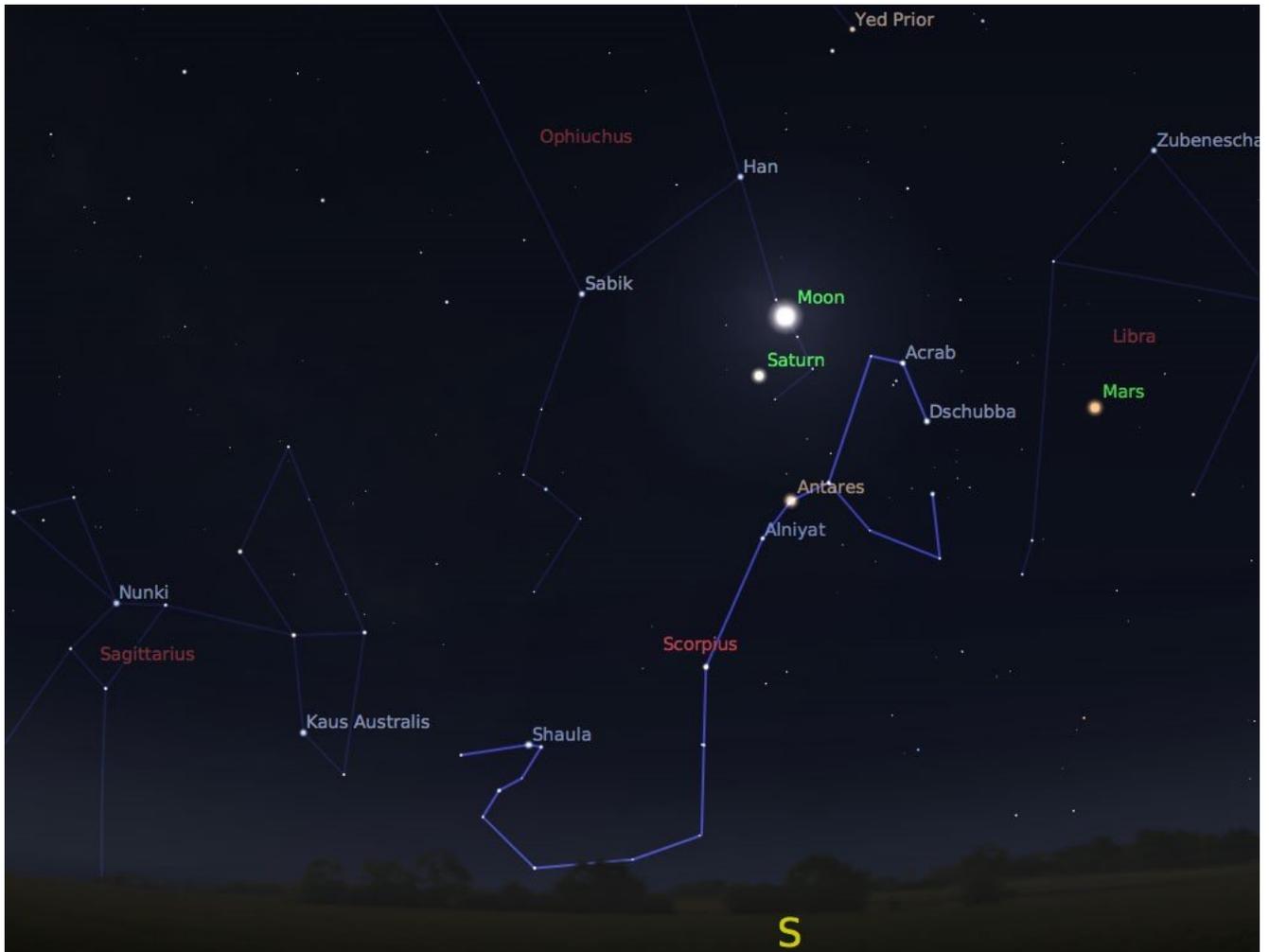
Through good binoculars, Jupiter is a bright disc circled by its four Galilean Moons (Io, Europa, Ganymede, and Callisto) and continues the tradition begun by Galileo himself by observing these moons and, over the course of an hour or more, their positions change even at low magnification.

Mars: We made our closest approach to the bright red-orange Mars in late May and it continues to be prominent in the southeast/south sky, balanced between the scales of the constellation Libra. Jupiter and Saturn, being much further away, move very little against the backdrop of stars. Mars, on the other hand, will reduce its distance to the bright stars from July 1st to 31st. On Aug. 23/24, Mars will delight observers and astrophotographers as it passes between Jupiter and Saturn.

Saturn: Off to the east of Mars lies Saturn. While currently in the constellation Ophiuchus, you might more easily find it for a bright pair of stars - one of them will be the red-orange star Antares in the constellation Scorpius and another other bright "star" above it. These two will be a pair for as long as we can see them this year. In good binoculars Saturn's rings appear as a small oval. With big binoculars or a small telescope, you should be able to distinguish between the rings, and maybe even see the dark Cassini Division within the rings.

Learn A Constellation: Saturn And Antares Take The Sting Out Of Finding Scorpius

If you're brand new to observing, your quickest route to picking out the constellations is to start bright - work the most easily seen stars down to the dimmer ones, playing celestial connect-the-dots until the mythological themselves. Saturn and Scorpius' heart star, Antares, provide a bright pair to your south that will help mark the constellation. The Rey's Diagram for Scorpius is shown below, with shortened claws pointing west and its curved tail dipping down and curling back up again to the east. If you can make this shape out, consider yourself yet another in a long line of observers starting with (at least) the Babylonians, have seen this scorpion in the sky for (at least) 5,000 years.



The constellation Scorpius (Special to Syracuse.com)

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