



[Astronomy Club of Asheville](#)

February 2018 Sky Events

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February 2018 Sky Events – the Planets

- ★ With evening skies bereft of bright planets for nearly three months, **Venus** gradually emerges from its recent *superior conjunction* with the Sun to shine as the *Evening Star* in February.
- ★ Despite glowing at magnitude -3.9, spotting the bright planet may be challenging. Lost in twilight's glow until mid-month, Venus remains close to the Sun and observation will require an unobstructed view low to the western horizon, no more than 30 to 45 minutes after sunset. Venus won't truly dazzle until March.
- ★ **Mercury** is quickly moving toward its own *superior solar conjunction* on February 17th and is therefore lost in the Sun's glare this month.



February 2018 Sky Events – the Planets

- ★ Faint 6th magnitude **Uranus**, found in the constellation Pisces, is still visible in the southwest as evening twilight ends.
- ★ Observers will enjoy at least two hours of good telescopic views in February before the distant gas giant begins to descend too low to the horizon for crisp views in the eyepiece.
- ★ **Neptune** is moving toward its early March *solar conjunction* (on the other side of the Sun as seen from Earth) and is therefore beginning to be devoured by evening twilight.
- ★ Those with telescopic ambitions should strive to observe the planet in the first few days of February before Neptune concedes its favorable position in the sky.



February 2018 Sky Events – Uranus and Neptune



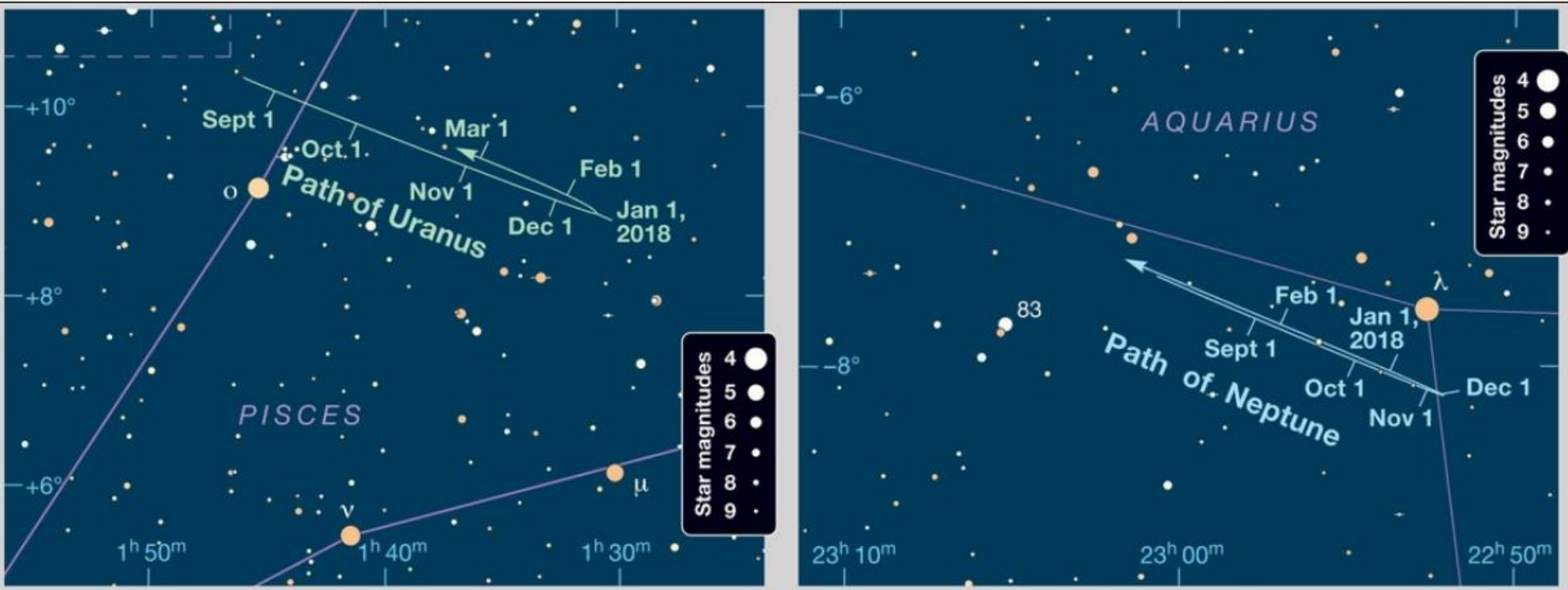
Charts courtesy of Sky & Telescope

The motion of the two ice giants, Uranus and Neptune, as they slowly move through Pisces and Aquarius, respectively, in 2018.



February 2018 Sky Events – Uranus and Neptune

Uranus and Neptune remain viable telescopic objects in February. Use the below charts to find their small, distant blue disks in a telescope this month.



Charts courtesy of
Sky & Telescope





February 2018 Sky Events – the Planets

- ★ **Jupiter** rises in the E-SE after 2:00 a.m. as February begins. The largest planet in the solar system benefits greatly as the month progresses, and by the end of February Jupiter can be seen rising shortly after midnight.
- ★ Find the “yearly star” situated in the constellation Libra, glowing at magnitude -2.1.
- ★ **Mars**’ rapid easterly motion prevents the Red Planet from gaining time on the Sun throughout the month; Mars appears only 30 minutes earlier by the end of February.
- ★ Catch Mars by 4:30 each morning as it moves through the dense galactic Milky Way regions located in Scorpius and Ophiuchus.
- ★ **Saturn** is found in the SE, rising well after Jupiter and Mars. The ringed planet won’t be high enough for crisp telescopic views until after 5:00 a.m., and seen lingering through the teapot of Sagittarius.



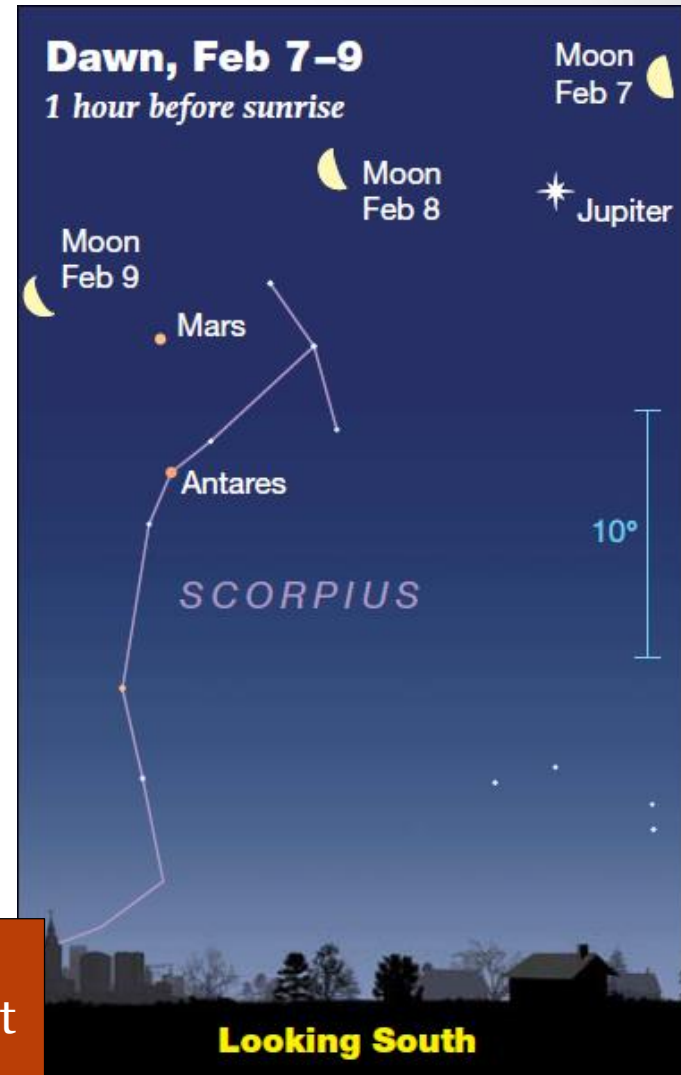
February 2018 Sky Events – the Planets

The Waning Gibbous Moon Joins Jupiter, Mars and the star Antares

On the mornings of **Wednesday, February 7th through Friday, February 9th**, about 6:30 a.m., look south to view a pleasing quartet of objects: the waning gibbous **Moon**, bright **Jupiter**, the planet **Mars** and the bright star **Antares**, the “heart” of the Scorpion in the constellation Scorpion.

Separated by less than 6° , Mars and Antares are particularly interesting, for the star name *Antares* (a Greek word) literally means the “**rival of Mars**” due to its similar reddish color! The path of the ecliptic periodically aligns Mars near its rival, allowing us to compare these two competing celestial objects!

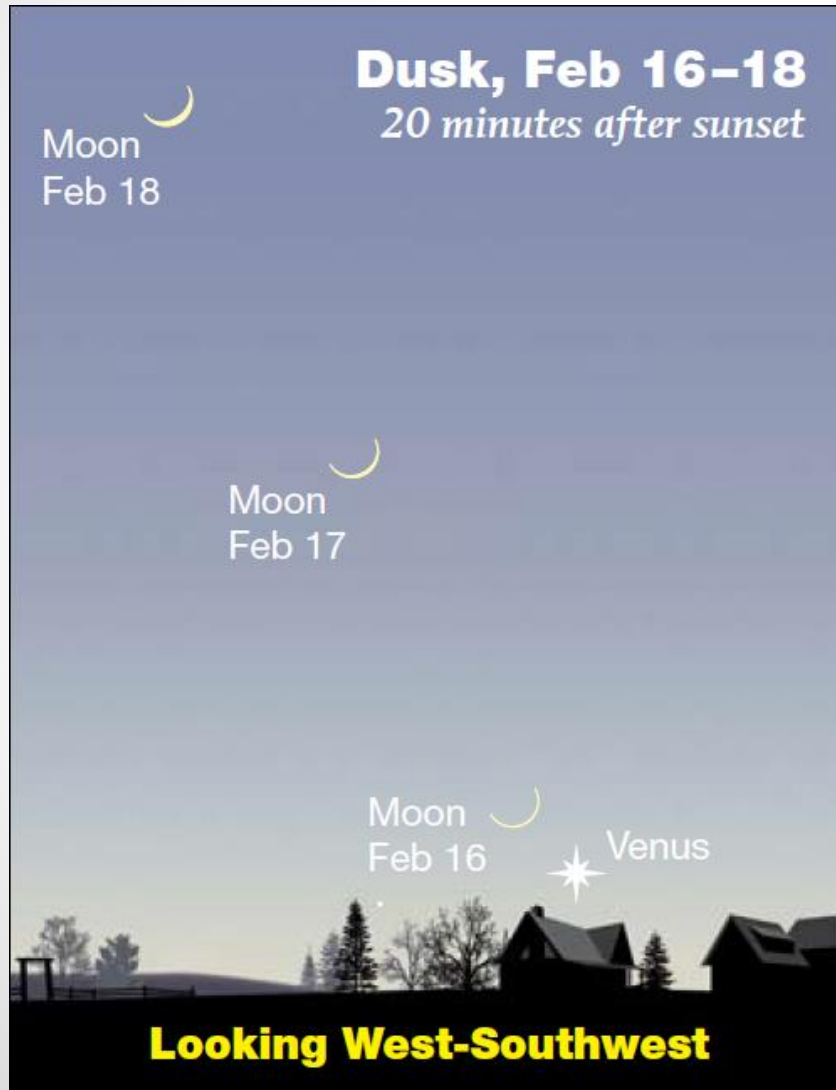
Compare the colors of Mars and Antares – which seems redder or deeper orange? Is the red supergiant star Antares a worthy rival?





February 2018 Sky Events – the Planets

A Crescent Moon Pairs With Venus



On the evenings of **Friday through Sunday, February 16-18**, a thin crescent **Moon** heralds the return of **Venus** to the evening sky.

Looking very low to the W-SW horizon, **about 6:30 p.m.**, try your luck spotting these two objects in dusk's twilight. With a narrow window to accomplish this task before the pair set, binoculars will greatly improve your chances of success.



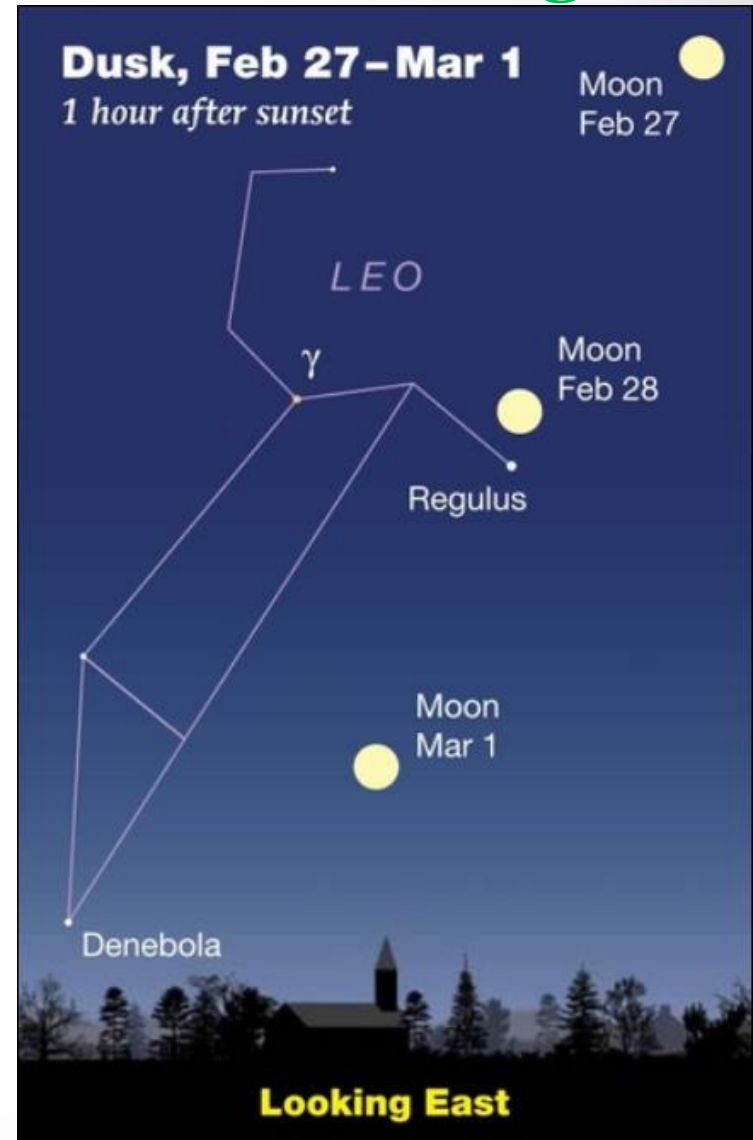
February 2018 Sky Events – the Planets

Conjunction of the Near Full Moon with Regulus

Late on the evening of **Wednesday, February 28th** and into the early hours of **Thursday March 1st**, a waxing gibbous **Moon** will make a close approach to the bright star **Regulus** in the constellation Leo.

Those who live in northern North America (Maine, Nova Scotia and other parts of Canada) will witness a *lunar occultation* of Regulus – with the Moon passing in front of the star.

From Asheville skies, however, the pair will be separated by less than $\frac{1}{4}$ of a degree, forming a *very close conjunction*, which occurs about **1:00 a.m.** on the morning of March 1st.





February 2018 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
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Mercury	1.4 AU _s	Capricornus & Aquarius	4.9	-1.2	Reaches <i>superior conjunction</i> on the 17 th ; lost in the Sun's glare.
Venus	1.7 AU _s	Capricornus & Aquarius	9.9	-3.9	Reappears in evening skies late this month.
Mars	1.5 AU _s	Scorpius & Ophiuchus	6.1	+1.0	Found in the E-SE about four hours before sunrise.



February 2018 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
Jupiter	5.3 AU _s	Libra	37.4	-2.1	Rises in the east by midnight at month's end.
Saturn	10.6 AU _s	Sagittarius	15.6	+0.6	Found in the SE in pre-dawn hours.
Uranus	20.4 AU _s	Pisces	3.5	+5.9	Seen in the west, observe it early after dusk this month.






February 2018 Planet Highlights

<u>Planet</u>	Avg. Distance from Earth	Constellation(s)	Avg. Diameter in arc seconds	Avg. Magnitude	Comments
Neptune	30.9 AU _s	Aquarius	2.2	+8.0	Heading towards <i>conjunction</i> with the Sun (other side of the Sun as seen from Earth) on Mar. 4 th .



The Moon – February 2018

	Last Quarter	7 th	10:54 a.m.
	New Moon	15 th	4:05 p.m.
	First Quarter**	23 rd	3:09 a.m.

**** No full Moon phase this month**

Unless otherwise indicated, all times are EST



February 2018 Highlight

The Zodiacal Light

- ★ The first two weeks of February 2018 are ideal to find the elusive “zodiacal light” in the early evening sky.
- ★ But what is zodiacal light?
- ★ Zodiacal light is the sunlight reflected from numerous dust grains located along the plane of the solar system → the ecliptic or “zodiac”.
- ★ These dust grains are left over from the formation of the solar system (a type of cosmic dust), and their supply is continuously fed by particles from comets and asteroid collisions.
- ★ The ecliptic is nearly vertical to the horizon this month, providing good viewing opportunities.



February 2018 Highlight

The Zodiacal Light

- ★ Look for the Zodiacal Light **low in the west** (with an unobstructed view) beginning about 80 minutes after sunset. The viewing window closes about 2 hours after sunset.
- ★ Pick a **very dark location** far from artificial lights and **without moonlight**.
- ★ This spring's zodiacal light will form a **cone of pale light** that points up from the western horizon, along the ecliptic (zodiac), toward and through the planet Mars.
- ★ **The best evenings without moonlight this month to see the zodiacal light will be from February 2th– 16th.**
- ★ In the fall, when it is visible in the eastern morning sky, it is often called the “**false dawn**”.





Astronomy Club of Asheville

February 2018 Highlight

The Zodiacal Light



Zodiacal Light and the Milky Way



End