

The Wilderness Above
Aileen O'Donoghue
St. Lawrence University & Adirondack Public Observatory

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As Jupiter sinks into the west at sunset, a smaller, nearer solar system neighbor rises in the east: Mars. This red planet has been rising bright in the evening sky as Earth has been catching up to it on the great cosmic racetrack. On March 3, we passed between Mars and the sun, placing Mars at opposition when it rose as the sun set and was highest in the sky at midnight. Tonight it will rise more than two hours before the sun sets at 7:15 pm and be nearly 25° (the width of two and a half fists held at arm's length) above the eastern horizon as the sky darkens. Through the spring, it will climb higher in the sunset sky to May 12 when it will be at its highest and due south as the sun slips behind the western horizon at 8:20 pm.

Meanwhile, Saturn is also rising and brightening in the eastern evening sky. Tonight it will rise at 9:20 pm, two hours before Venus sets in the west. If you have low horizons, you'll have the opportunity to view three planets and visualize the plane of the solar system arcing across the sky. Saturn will be the brightest object low on the eastern horizon, but only a few degrees northeast (left) of the bright luminary of Virgo, Spica (SPIKE-uh). Both Earth and Mars are catching up to Saturn so just as we watched Jupiter move across the sky to meet Venus through the winter, we'll be able to watch Saturn move across the sky toward Mars through the spring and summer.

As Earth passes planets, they appear to move backward, westward, with respect to the stars. Both Mars and Saturn are in this retrograde motion as can be seen in the diagram showing their positions tonight and their motions through August 16. Mars will end its retrograde motion on April 15 when it will seem to pause on the line between Regulus (REGG-you-luss) and Chertan (CHUR-tun). Then it will move rapidly eastward away from Leo. On that same day, Saturn will be at opposition, rising as the sun sets and visible all night long. It will also be closest to us at a distance of 810 million miles and shine about twice as bright as nearby Spica. A view through binoculars will show both objects in the same field of view, though it will take a telescope (with a magnification around 100 for a decent view) to see Saturn's rings. Still in retrograde motion, Saturn will close to about five degrees from Spica by June 26 when it will stop and begin moving eastward again. Mars will move between this pair in August as shown in the inset. Through binoculars, red-orange Mars and gold Saturn will provide a beautiful contrast with bluish-white Spica.

Between now and August, the stars will continue their one-degree-per-day westward march. Though the diagram shows the motion of the planets relative to the stars, even Mars' motion is not fast enough to counter the motion of the entire sky, so it, too, will