# Two pairs of planets perform in the August twilight 

August 17 2016, by Alan Macrobert

## Dusk, Aug 23 <br> 45 minutes after sunset

- Saturn


Antares
SCORPIUS

## Looking South-Southwest

Courtesy Sky \& Telescope

Saturn, Mars, and Antares line up almost vertically on the evening of August 23 and 24, 2016. Have a look! Credit: Sky \& Telescope

Step outside as the stars come out, look southwest, and you'll see an eyecatching pattern. For the next few days (August 17-22, 2016), bright orange Mars shines to the right of Saturn and the reddish star Antares. The three form a tall triangle that changes every night.

Mars is moving leftward on its way toward passing between the other two. Next Tuesday and Wednesday August 23 and 24, the triangle will shrink right down to a nearly vertical line of three shining points.

After that, Mars will continue leftward and the triangle will widen again, now pointing in the opposite direction.

Not that the three have anything to do with each other. Mars is the nearest, 7 light-minutes from Earth ( 79 million miles). Saturn is almost a dozen times farther away at 82 light-minutes ( 914 million miles). Antares, the lowest of the three in the sky, is about 550 light-years in the background, or 3.3 quadrillion miles into deep space.

Fainter stars of the constellation Scorpius glimmer in the area too.

Notice that, being a star, Antares is the only one of the bright three that twinkles. That's not the star's own doing; twinkling is caused by the slight heat waves that are always rippling through in Earth's atmosphere, mostly within just a few miles of your eyes. Planets appear larger from our viewpoint, so the separate twinklings of each point on a planet's face generally average out to a steady glow.

## Venus and Jupiter Too!

Meanwhile, the two very brightest planets - Venus and Jupiter - are going through antics of their own. They're way down low, due west after sunset. Look for them close to the horizon, somewhat left of where the Sun went down, 20 or 30 minutes after sunset. If you have a very low view and clear air, you'll see that Venus and Jupiter are drawing closer together every evening. Venus is the lower one. If the air is hazy, binoculars will help.

By August 24th, Venus and Jupiter will appear separated by just two finger-widths at arm's length. On the 26th they'll be less than one finger apart. Then on August 27th, they'll have such a close conjunction that you may need binoculars to see that they're two objects, not one!

Again, looks are deceiving. The two planets merely happen to be along our same line of sight. Venus on August 27th is 13 light minutes from Earth ( 144 million miles), while Jupiter is four times farther: 53 lightminutes away, or 592 million miles.

## Provided by Sky \& Telescope

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