

NOVAC

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Get ready for Mars!

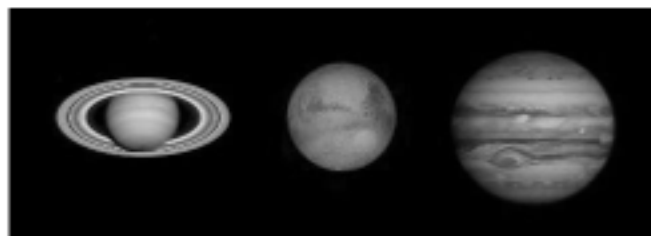
by Mike Mills

Every 26 months, Earth catches up to and passes Mars on its faster inside orbit around the sun. At these opposition events, Mars is close enough for observers on Earth to see a great deal of detail on the martian disk. The next Mars opposition will occur on August 28, and it will bring Earth and Mars closer than they have been for about 70,000 years. Modest amateur telescopes will provide a great view as Mars reaches its maximum apparent diameter in August. But don't wait until August to start watching—significant surface detail will be visible well before and after closest approach.

A perihelic opposition

Even though Earth and Mars are at opposition every 26 months, not every opposition provides such a great view of the red planet. We are fortunate this year because Earth will catch up to Mars just as Mars reaches perihelion (closest approach to the Sun), while Earth will only be about 2-1/2 months past aphelion

This figure compares the apparent sizes of Mars, Jupiter and Saturn. The Mars image is a simulation of how it will appear from Earth on August 28, while the Jupiter and Saturn images show how those planets looked on May 1.



(farthest excursion from the Sun). At closest approach the two planets will be separated by only about 34.4 million miles. At this close distance, the Martian disk will subtend 25.1 arcseconds. To get a sense of how big this is, compare the simulated image of Mars on August 28 in the picture above with the simulated images of Jupiter and Saturn on May 1. Mars will look bigger than the globe of Saturn and nearly as large as Jupiter!

Unfortunately, the ecliptic will be relatively low in the night sky in August. From our latitude, Mars will reach a maximum altitude of only 35.5 degrees at opposition. But this is still much better than its last appearance in June 2001, when it only rose 24.7 degrees above the horizon.

August 28 will not be the only good opportunity to observe Mars. It already

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MESSAGE FROM THE PRESIDENT

Try lunar observing

When the moon hits your eye like a big pizza pie you need a filter. There may be one or two people in the club that can navigate around the moon. The rest of us are lost, even us moon certificate types. We don't spend enough time on the moon to learn it. This is true even though one half of every month the sky is dominated by the big eye.



NOVAC President Ed Karch

Instead of crying about the fact that the only clear nights have moon glow, try some lunar observing. Can't get oriented? In binoculars what you see is what you get. In reflectors the moon is upside down. In scopes with an odd number of reflections it is left/right switched and upside down. *Sky and Telescope* prints maps appropriate for each type.

For a great piece of freeware called Virtual Moon try www.astrosurf.com/avl/UK_index.html. With this software you can print your own maps of the portion of the moon you need to navigate. Patrick Chevalley, of "Cartes du Ciel" fame, has reworked this gem so you can get the view you see in your scope. It has cross-references to all the major moon atlases, including Antonin Rukl's. Spend an evening or two with this program when cloudy skies prevent any observing and you will begin to navigate Luna. Most people are surprised at how much fun it is to cruise the moon, and fun is what observing is supposed to be. —Ed. ★