ASTRONOMY

Mars Still Bright in April Sky

The seldom seen Mercury will be visible at the end of April low in the west at twilight, while Mars remains prominent in the southwest—By James Stokley

➤ ALTHOUGH MARS is rapidly receding from earth after it came nearest in early February—and is decreasing in brightness—it is still prominent in the evening skies of April.

It is in the constellation of Cancer, the crab, high in the southwest, as shown on the accompanying maps. These show the skies as they look about 10 p.m., your own kind of standard time, at the beginning of the month; an hour earlier at the middle and two hours earlier at the end.

On April 1 the brightness of Mars, as rated on the astronomer's magnitude scale, is 0.2, or about one-third as bright as it was when closest. Its distance on the first is 89,600,000 miles. By April 30 it recedes to 113,300,000 miles. Then its magnitude is 0.8, or about five-eighths as bright as on April 1.

Mars Between Two Stars

Mars is a planet—a body like the earth, revolving around the sun. It stands, at the middle of the month, about halfway between two bright stars. These are distant suns. To the right is first magnitude Pollux, in Gemini, the twins. Alongside (shown on the northern sky map) is the other twin, represented by the star Castor. This, however, is fainter—of the second magnitude.

To the left of Mars is Leo, the lion. This contains a smaller group called the sickle, from its resemblance to that agricultural tool. At the bottom of the handle, which points downward, is first magnitude Regulus.

Continuing from Leo farther to the left and downward, you come to Virgo, the virgin. Here lies Spica, another bright star. Above, and more to the left, is Bootes, the herdsman, with Arcturus. This star is more than twice as bright as Spica.

Low in the west is Orion, the warrior, now disappearing from view after shining so brilliantly high in the south on winter evenings. Towever, Betelgeuse is still visible. To the left is the "dog star" Sirius, in Canis Major, the great dog. And higher, near Gemini, shines Procyon, in Canis Minor, the little dog.

To the right of Orion (shown on the northern map) is Taurus, the bull, with Aldebaran. This bright star is considerably dimmed because it is so low in the sky. Higher and farther to the right stands Auriga, the charioteer. Capella is the bright star in this group.

Although it is not shown on the maps, you will have the best opportunity of the year to see the planet Mercury at the end of April. Only occasionally does it get into a position where you can see it low in the west at twilight. This occurs on April 25. For a few days about then it will be visible after sunset, but it will be gone by the time the sky is completely dark. Jupiter now is too nearly in line with the sun to be seen easily. Venus rises about an hour ahead of the sun and you can see it low in the east at dawn. You can also see Saturn, which is considerably fainter, but rises about an hour ahead of Venus.

Stars Clearer Outside Cities

Ordinarily these maps show only stars and planets brighter than about the fourth magnitude—which can be seen near a big city. But if you get out into the country on a clear night—far from the city's glare and haze—you see many others. The sixth magnitude, which is about a sixth as bright as fourth magnitude, is generally considered the faintest that the average human eye can see under the best conditions.

The planet Uranus is now relatively close, and a little brighter than sixth magnitude, so it is just barely visible in a very clear and dark sky. Its position is shown on our southern sky map, by an X in Leo, about half way between Regulus and a fourth-magnitude star to the left, known as rho Leonis. If you cannot find it with the naked eye, try a pair of binoculars, which should provide enough optical aid. Even a pair of opera glasses would help. These will show a number of fainter stars, but Uranus is the brightest object between rho and Regulus. It looks somewhat greenish, and has a steadier glow than the twinkling stars.

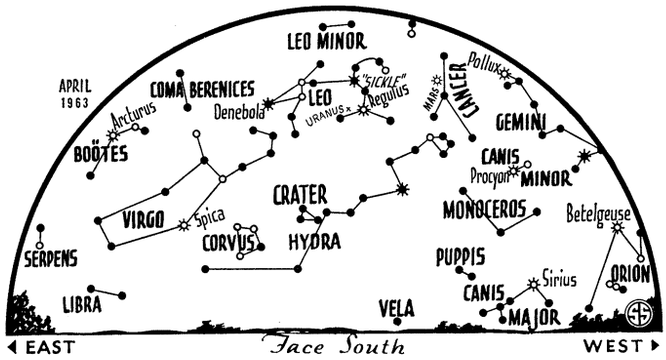
Uranus is the next planet out from the sun beyond Saturn. Its distance from the sun is 1,783 million miles; Saturn's is 886 million and earth's 93 million. It takes 84 years to orbit once around the sun, compared to 29.5 for Saturn.

The diameter of Uranus is 29,200 miles, considerably smaller than Saturn with 75,100, or Jupiter, the largest, with 88,700 miles. But it is many times bigger than earth's 7,927 miles.

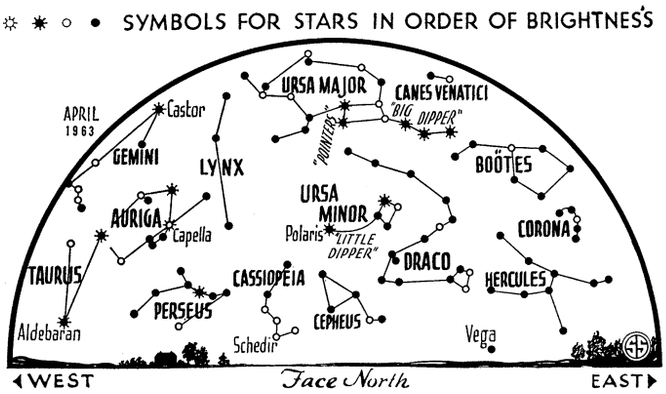
Planets Seen by Naked Eye

The planets Mercury, Venus, Mars, Jupiter and Saturn are all visible easily to the naked eye, and were known from the earliest times. Uranus was the first to be discovered with the aid of the telescope. It was found on March 13, 1781, by William Herschel—a German-born musician who settled in Bath, England, and became a famous astronomer.

With a telescope seven feet long that he had built himself and which was set up in the garden of his home, Herschel was making a systematic survey of the skies. He noticed what he recorded in his journal as a "curious either nebulous star or per-



☼ ✷ ○ • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS



haps a comet." It never occurred to him that it might be a planet. But, as he and other astronomers continued to observe it and calculated its orbit they finally realized that it really was a new major member of the solar system.

Then came the question of a name for the planet. Herschel wished to honor the king, George III, who had given him a pension. So he proposed "Georgium Sidus," or "George's star." This name was used for a time in England, but continental astronomers had other ideas. Some wanted to name it "Herschel." But they finally accepted the suggestion of J. E. Bode, a German astronomer, that it be called Uranus. This was the name, according to mythology, of Saturn's father, so it fitted in with the other planets.

When the movements of Uranus through the sky had been determined, the astronomers figured backwards, to see where it had been previously. This showed that a number of observers had actually seen it before 1781, but had thought it to be a star. Thus, several astronomers could have won the fame that came to Herschel, if they had only checked their observations more carefully.

Celestial Time Table for April

APRIL	EST	
2	Midnight	Moon passes Mars
8	7:57 p.m.	Full moon
9	10:00 p.m.	Moon farthest, distance 252,500 miles
16	9:53 p.m.	Moon in last quarter
18	6:00 p.m.	Moon passes Saturn
21	4:00 a.m.	Moon passes Venus
23	2:00 p.m.	Moon nearest, distance 221,800 miles
	3:29 p.m.	New moon
24	10:00 p.m.	Moon passes Mercury
25	9:00 p.m.	Mercury farthest east of sun
28	Noon	Venus passes Jupiter
30	10:08 a.m.	Moon in first quarter
	9:00 p.m.	Moon passes Mars

Subtract one hour for CST, two hours for MST, and three hours for PST.

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Bright Comet Now Visible After Sunset

➤ ONE OF THE brightest comets in several years can be seen very low in the western sky just after sunset.

However, the chances of spotting Comet Ikeya when the western horizon is clear are decreasing because it is not only fading in brightness but drawing closer to the sun.

The comet was discovered by Kaoru Ikeya, a Japanese amateur astronomer, for whom the comet is named.

In May, when Comet Ikeya will again be far enough from the sun to be visible, it will have faded to ninth magnitude and can then be spotted only with powerful binoculars or a telescope. The comet's brightness and path through the heavens were calculated at Harvard College Observatory in Cambridge, Mass.

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Although ciguatera *poisoning* resulting from eating the flesh of certain fishes is now a well-established fact, the source and nature of the toxin are still unknown.