Sight of Mercury Opens New Year

Astronomy

By James Stokley

THE planet Mercury, least often seen of all the members of the Solar System that come at all within the limits of naked-eye visibility, is the first planetary decoration of the 1930 sky. Traveling around an orbit so close to the sun, it is usually lost in his brilliant glare. But once in each of its revolutions, its motion carries it to the east of the sun, and it can be seen above the western horizon for perhaps an hour or so after sunset. Once in 116 days it comes to this position — what astronomers call the "greatest eastern elongation" — and then it may be visible for a few evenings in the western twilight.

Such an occasion comes this month, on January 6. For a few days before or after (better before, because then the moon is less bright) that date, look in the western sky as it darkens after sunset. A little to the south of due west, not far above the horizon, you may be rewarded by seeing a brilliant point of light, if your eyes are keen enough and the weather is clear. This is the planet Mercury. On the sixth it will be of the minus .3 magnitude, which means that it will be brighter than any nearby star.

On the average only 36,000,000 miles from the sun, as compared with our earth's 93,000,000 miles, Mercury is a burned-out world. Mt. Wilson Observatory astronomers have found that the side towards the sun gets as hot as 350 degrees Centigrade (680 degrees Fahrenheit), hot enough to melt lead, while the side away from the sun becomes very cold. It is not quite certain how long the planet takes to turn on its axis, but there is good evidence for supposing that it is 88 days, the same time that it takes to revolve around the sun. Hence, its day may be the same length as its year, and, like the moon and the earth, it may always keep the same side towards the sun. As far as astronomers can tell, it has practically no atmosphere, so Mercury is not a very inviting planet.

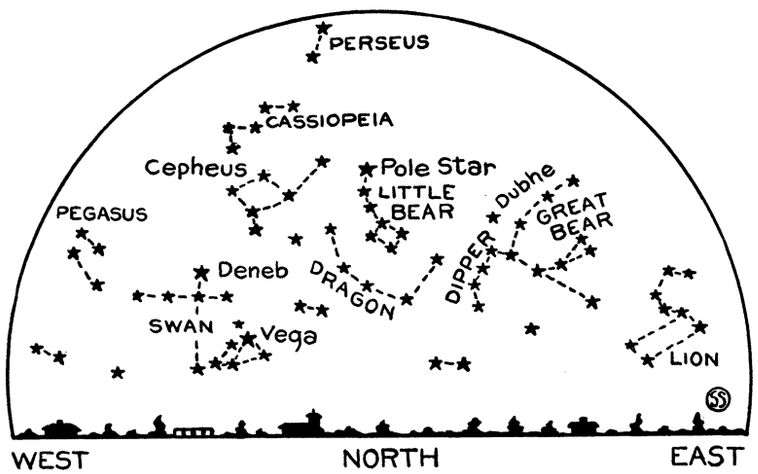
The other planetary occupant of the January evening sky that can be seen with the naked eye is Jupiter. All through the month it is high in the southern sky, above and to the right of Aldebaran, the eye of Taurus, the bull. It is of the minus 2.2 magnitude, far brighter than any star or other planet.

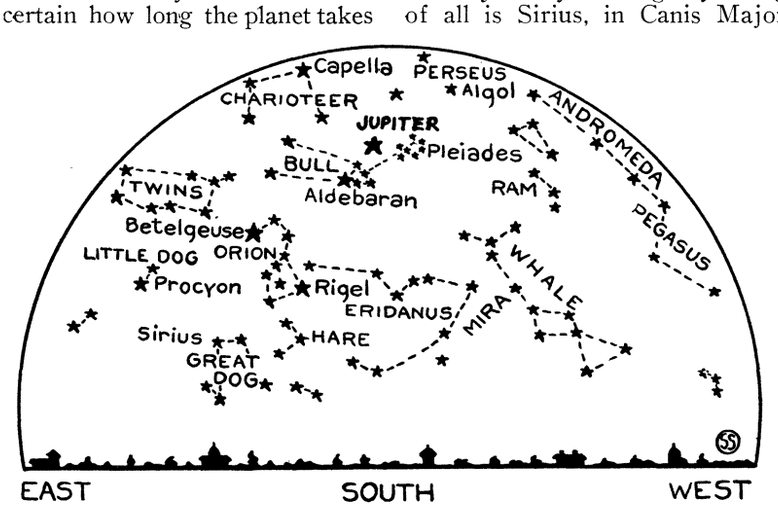
Nine first magnitude stars join Jupiter and Mercury to lend brilliance to the January evening sky. Brightest of all is Sirius, in Canis Major, the great dog. This, the most brilliant of all the stars but the sun, can be seen in the southeast; it is also the nearest of all the naked-eye stars visible from the United States. It is only 52,600,000,000,000 miles away, or, as the astronomer puts it, 8.6 light years. Though light travels so fast that a beam would go from New York to San Francisco in a seventy-fifth of a second, we see Sirius tonight by light that started on its long journey in May, 1922.

Higher and farther west this month is Orion, the heavenly warrior, supposed to be raising a club with which to smite the bull, Taurus. Orion has two first magnitude stars—Betelgeuse, the upper one, and Rigel, the lower.

In Taurus is Aldebaran, already mentioned. Also of interest in this constellation are two smaller groups of stars, or loose clusters. One, the Hyades, is close to Aldebaran, while the other, the Pleiades, is just west of Jupiter. Most people see six stars in this group, though it is said that as many as 16 can be seen under the best conditions by a keen eye. A pair of binoculars, or even of opera glasses, will reveal many ordinarily invisible.

East of Orion in Canis Minor, the little dog, is Procyon, another first magnitude star. To the north of Orion and Taurus, almost overhead, is Capella, in Auriga, the charioteer. Low in the northwest is Deneb, in Cygnus, the swan, which is just disappearing for the season. Pollux, the brighter of the two twins, is high in the eastern sky, while Regulus, at the end of the handle of the Sickle, in Leo, the lion, is below.





Hold these maps in front of you and face north or south. The upper or lower one will then show the stars of the January evening sky.

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