

ASTRONOMY

See Planets Early or Late

To spot planets visible during February, you will have to scan skies both early and late. Total solar eclipse scheduled for Feb. 25. Partial moon eclipse occurs Feb. 10.

By JAMES STOKLEY

► TO SEE any planets in the February evening sky, one will have to look either early or late.

Jupiter, which has been so brilliant during recent months, is still with us but sets about 10:00 p.m. at the beginning of February. It is in the constellation of Pisces, which is seen in the southwest around 7:30, and because Jupiter is so bright one can locate it easily.

Saturn, the next planet to appear, is in the constellation of Virgo, the virgin, and rises around 10:30 at the beginning of February. It is considerably fainter than Jupiter, though still ranking with the first-magnitude stars.

Still later, about midnight, Mars appears in Libra, the scales, shining slightly more brilliantly than Saturn. Finally Venus, now a morning star, rises in Sagittarius, the archer, about two hours ahead of the sun.

Since the accompanying maps depict the sky as of 10:00 p.m., your own kind of standard time, at the first of February; an hour earlier at the middle of the month and two hours earlier at the end, none of these planets are shown upon it. But they do show the stars, still at mid-winter brilliance.

Sirius Is Brightest

Brightest of these is Sirius, the dog star, in Canis Major, the great dog, which is seen directly south. In the part of the sky above Sirius there are more stars of the first magnitude than in any other area of comparable extent.

Above and to the right of Sirius we see Orion, the great warrior, in which there are two of these brilliant orbs. One is Betelgeuse and the other is Rigel.

Between these two are three stars in a row that form the warrior's belt. Though not of the first magnitude, they are a characteristic feature of this constellation. Continuing past Orion, still higher and farther right, we arrive at Taurus, the bull, with bright Aldebaran.

Going upwards from Taurus brings us to Auriga, the charioteer, in which Capella shines. Below this, towards the southeast, are Gemini, the twins, of which the star Pollux is also of the first magnitude. And below Gemini, towards Canis Major, is Canis Minor, the lesser dog, with Procyon.

Another first-magnitude star is visible to the east, in the figure of Leo, the lion. This constellation contains a sub-group, called

the sickle, and Regulus is at the end of the handle of this implement.

February brings the year's first two eclipses, and the only eclipse this year that is visible in the United States. This is a slight partial eclipse of the moon, on Sunday evening, Feb. 10. It will be over by the time the moon is visible in the western part of the nation, but it will be easily seen in the central and eastern states.

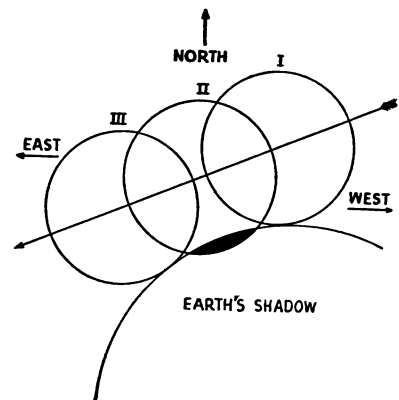
The second is a total eclipse of the sun, on Feb. 25, which will not be seen at all in the Americas. The path along which the total eclipse may be observed crosses Africa, including the troubled Anglo-Egyptian Sudan, Arabia, Iran and Siberia.

Astronomers Observe Eclipse

Despite the political unrest in these areas, it seems that a number of astronomers will be located along this line, to make the numerous observations of the sun that are possible only when its brilliant disk is temporarily hidden by the moon. Over a much larger area, including all of Europe and most of Asia and Africa, a partial eclipse will be observed.

Since the earth and moon are both solid and opaque bodies, they cast shadows behind them where the sun's rays cannot reach, and these shadows cause eclipses. Where the moon's shadow, which tapers to a narrow region not more than a hundred miles or so in diameter, touches the earth, there is a total solar eclipse, like that on Feb. 25.

Because the sun is so much bigger than the earth, our planet's shadow likewise tapers to a point. But since the earth is larger than the moon, our's is so big that the moon can enter into it completely, producing a total lunar eclipse.

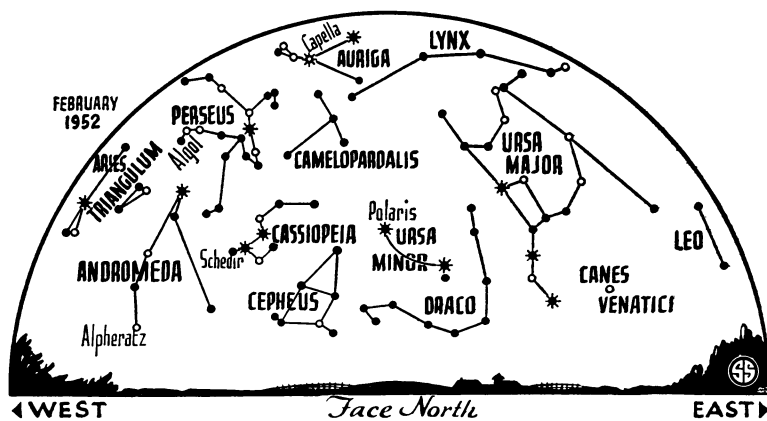


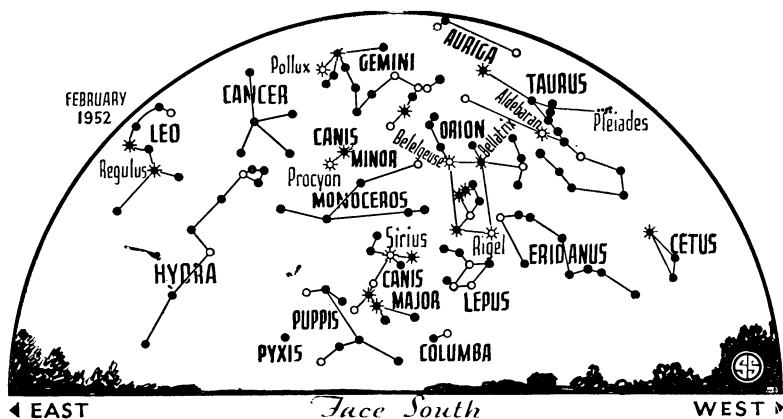
On the evening of the tenth, however, this does not occur, but one edge of the moon's disk is shaded. At its height only about 8% of the lunar diameter will be obscured.

The accompanying diagram shows the three principal stages of this eclipse, with the small circles representing the moon. The beginning is at I, with the lunar disk just making its first contact with the edge of the earth's shadow. This will occur at 7:03 p.m. EST. (Subtract one hour for Central, two for Mountain and three for Pacific Standard Time.)

At II it is the middle of the eclipse, when the largest part of the moon is in shadow. This comes at 7:39 p.m., EST. The ending is shown at III, when the moon has just left the shadow. This comes at 8:15 p.m.

Those who are fortunate enough to be in a part of the country where the middle of the eclipse is visible—and to have clear weather—will easily see the curved edge of the terrestrial shadow on the moon's surface. This will not be completely dark. Even when there is a total lunar eclipse, the moon does not completely disappear.





☉ * ○ • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

The atmosphere which surrounds the earth acts as a prism, bending some of the sun's rays into the shadow. But as these rays pass through the layer of air, much of their blue light is scattered, which gives the daytime sky its usual color. With blue removed, the remainder is predominantly red, and so the eclipsed portion of the moon has a distinctly ruddy hue.

Celestial Time Table for February

Feb.	EST	
2	3:01 p.m.	Moon at first quarter
8	4:00 a.m.	Moon farthest, distance 252,300 miles
9	1:53 a.m.	Algol (variable star in Perseus) at minimum

10	7:28 a.m.	Full moon and partial lunar eclipse
11	10:42 p.m.	Algol at minimum
14	7:36 p.m.	Algol at minimum
15	8:58 a.m.	Moon passes Saturn
17	10:00 a.m.	Moon passes Mars
18	4:24 p.m.	Algol at minimum
18	1:01 p.m.	Moon in last quarter
22	9:39 p.m.	Moon passes Venus
23	5:00 p.m.	Moon nearest, distance 223,800 miles
25	4:16 a.m.	New moon; solar eclipse in Africa, Europe and Asia
28	2:40 a.m.	Moon passes Jupiter

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

Science News Letter, January 26, 1952

MEDICINE

Pain in the Neck Causes

➤ YOU CAN get a pain in the neck—a real pain—from at least 43 different things. A list to help other doctors has been compiled by Drs. James E. Watson, Jr., and Sylvester W. Thorn of Houston, Tex.

It starts with "sore throat," includes spine injury and tumors and ends with heart disease.

(Not listed by the Houston doctors are such common causes as mothers-in-law, cranky bosses, tardy secretaries, neighbors'

children, income taxes and a few others that can be diagnosed without a doctor's aid.)

The official list is given doctors in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (Jan. 5).

One of the medical causes of pain in the neck attacks children only. It is Bezold's abscess on the membrane covering the temporal bone at the side and base of the skull.

A pain in the neck and swelling that may come at the sight, smell or thought of food or during a meal, sometimes making it impossible to finish the meal, is caused by an obstruction of a passage from a salivary gland.

The pain of a "crick in the neck," acute wry neck, acute pain or inflammation of a neck muscle, usually starts suddenly on awakening after sleep or follows exposure to inclement weather. It is usually accompanied by some of the symptoms of a cold, affects the back neck muscles and is made worse by jarring or sudden movement of the neck. The patient holds the neck rigid in the position of least pain and the affected muscles may be tender and taut.

R. P. CARGILLE

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Science News Letter, January 26, 1952

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