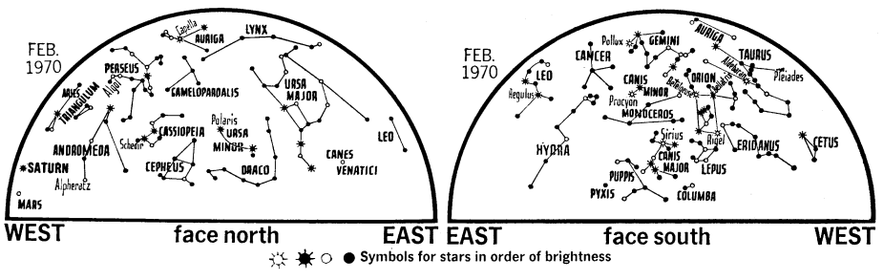

Winter Stars and Planets

by James Stokley

Although it has faded greatly from its brillance of last summer as it approached the earth, Mars continues to be visible during February. Saturn and two other naked-eye planets also appear between sunset and midnight this month, but not all at the same time.

In addition, there is the usual wintertime display of bright stars in the southern sky, as shown on the accompanying maps. These indicate the appearance of the heavens on Feb. 1 at about 10 p.m., local standard time. They will look about the same at 9 p.m. on the 15th and at 8 p.m. as the month ends.

Saturn is shown low in the west, on the map of the northern half of the sky. It is in the constellation of Aries. Earlier in the evening than the times for which the maps are drawn, it will be higher and farther south, making it more conspicuous.

Mars is below Saturn, but fainter and harder to see. Because they are so low both planets are dimmed by atmospheric absorption of their light. Mars, like Saturn, will also be more easily visible earlier in the evening.

Venus returns to the evening sky this month. At the end of February, if you look to the west soon after sunset and before the sky is very dark, you may get a glimpse of this planet. It will be close to the horizon and very bright. On the 28th, Venus will set about 40 minutes after sunset, from latitude 40 degrees north.

During the year Venus will brighten considerably and become more prominent as it climbs in the southwestern evening sky.

At about 11 p.m., as Saturn sets in the west, Jupiter will rise in the east. Although only about a seventh as bright as Venus, it is still a very brilliant object. Among the stars. only Sirius can challenge it in brightness. Sirius shines in the south this month, in Canis Major. Actually Jupiter is slightly brighter, but when you first see it in the east it too will be dimmed by atmospheric absorption.

Higher than Sirius, and farther right, is Orion. Here stand two bright stars, classified by astronomers as first magnitude. Betelgeuse is above and Rigel below. Actually Rigel is about four times as bright as Betelgeuse, but it is much farther away so they look about the same. Rigel is about 33,000 times as luminous as the sun.

About as high as Betelgeuse, and toward the left, is Procyon in Canis Minor. And above that constellation is Gemini, with Pollux as the brightest star. And high in the southwest, on a line from Sirius through Orion, is Taurus with Aldebaran. Above this group you'll see Auriga with first magnitude Capella.

Toward the east is Leo. Regulus is the brightest star in this group.

Below Canis Major and to the left the southern map shows a group of seven stars marked Puppis. This is part of Argo Navis, the ship that, according to mythology, carried Jason and the Argonauts on their quest for the golden fleece. Puppis is the poop or stern. The single star to the left is all we can easily see, from most of the United States of Pyxis, another part of Argo.

Still lower, and not visible at all from 40 degrees north latitude, is Carina, which contains Canopus, second-brightest star of the nighttime sky. (Sirius is brightest.) At 37 degrees north latitude Canopus just reaches the southern horizon. If you're farther south, as in the southern tier of states, you may be able to see Canopus this month, very low.

The month brings us the year's first eclipse on the night of Feb. 20-21. It is a partial eclipse of the moon—but just barely.

At about 1:00 a.m., EST, on Feb. 21 (one hour earlier for CST, two for MST and three for PST) the moon starts to enter the penumbra. At first the shading will be so slight that you will see very little change in the moon's appearance. At 3:02 a.m., EST, it reaches the edge of the umbra and leaves it 56 minutes later. During this time the edge of the moon will be noticeably darkened.

The greatest eclipse will come at 3:30 a.m. About a 20th of the moon's diameter will then be in the umbra. This eclipse will be visible over all of North America as well as most of the Pacific Ocean and parts of Asia. □

CELESTIAL TIMETABLE

Feb.	EST	
5	3:00 pm	Mercury farthest west of sun. (For a few days around this date Mercury may be visible with difficulty very low in east just before sunrise.)
	midnight	Algol (variable star in Perseus) at minimum brightness
6	2:13 am	New moon
	6:00 pm	Moon nearest, distance 221,800 miles
8	8:50 pm	Algol at minimum
9	10:00 pm	Moon passes north of Mars
11	1:00 pm	Moon passes north of Saturn
	5:40 pm	Algol at minimum
12	11:10 pm	Moon in first quarter
18	5:00 pm	Moon farthest, distance 252,400 miles
20	9:00 pm	Moon passes north of Regulus
21	3:19 am	Full moon; partial eclipse
26	1:50 am	Algol at minimum
	11:00 am	Moon passes south of Jupiter
28	10:40 pm	Algol at minimum