

Venus and Saturn prominent

by James Stokley

With Venus steadily brightening as it draws away from the sun, it has become the most conspicuous object in the evening sky except for the moon. It is visible in the west after sunset—well before any other star or planet.

The two maps show the sky as it appears about 10 p.m., local standard time, at the first of January. It will look about the same at 9 p.m. on the 15th and at 8 p.m. on the 31st. During the first half of the month Venus will set before these times but its position on the 31st is indicated on the map. Then it is in the constellation of Aquarius, whose stars are too faint to be depicted.

A little higher, in Pisces, is Saturn, about an 80th as bright as Venus. It does, however, equal a star of the first magnitude.

In the south we find the brilliant constellations that make the winter evening sky so glorious. One is Orion, with two first magnitude stars, Betelgeuse and Rigel. Between them are three fainter stars that form the warrior's belt.

A little lower, to the left, is the great dog, Canis Major, with Sirius, brightest star visible in the nighttime sky. But even this is only about an eighth as bright as Venus.

Farther left and higher stands Procyon, in Canis Minor. Still higher comes Gemini, with first magnitude Pollux and second magnitude Castor.

To the right of Orion shines reddish Aldebaran in Taurus. Nearly overhead (shown on the northern sky map) is Auriga; Capella is its brightest star.

Low in the northwest part of Cygnus

remains above the horizon. This includes the star Deneb. Its low altitude, and the consequent absorption of its light by the earth's atmosphere, makes it look considerably fainter than it appeared last summer. Then it was overhead in the evening. Similarly dimmed

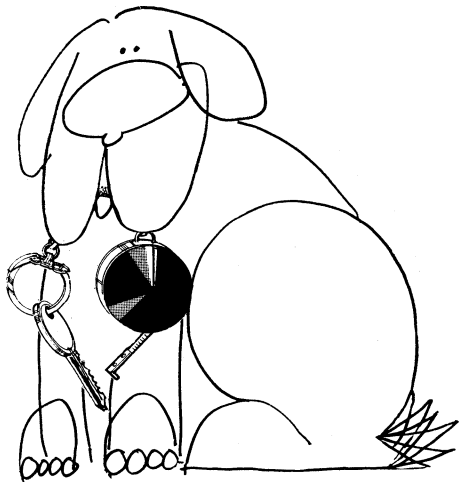
CELESTIAL TIMETABLE

Jan.	EST	
1	10:00 a.m.	Moon farthest, distance 252,500 miles
3		Earth nearest sun, distance 91.4 million miles
	1:28 p.m.	Full moon
10	7:00 a.m.	Moon passes south of Jupiter
11	9:01 a.m.	Moon in last quarter
12	1:00 a.m.	Algol (variable star in Perseus) at minimum brightness
	5:00 p.m.	Moon passes south of Mars
13	10:00 a.m.	Mercury farthest east of sun
14	9:50 p.m.	Algol at minimum
16	7:00 p.m.	Moon nearest, distance 223,200 miles
17	6:40 p.m.	Algol at minimum
	11:59 p.m.	New moon
21	11:00 a.m.	Moon passes south of Venus
24	1:00 a.m.	Moon passes north of Saturn
25	3:24 a.m.	Moon in first quarter
26	5:00 p.m.	Venus farthest east of sun
28	10:00 p.m.	Moon farthest, distance 252,000 miles
29	4:00 a.m.	Mercury between earth and sun



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is Regulus, in the east in Leo, but not as much.

Of the familiar northern constellations, Ursa Major (of which the Big Dipper is part) is in the northeast. Cassiopeia is in the northwest. Her brightest stars form a letter M. Directly north is Ursa Minor, of which Polaris, the North Star, is part.

A third planet will appear in the western evening sky about Jan. 13 but it will be rather difficult to find. This is Mercury, to the east of the sun. For a few days it will remain above the southwestern horizon for a short time after sunset.

At midnight in the east will be another very bright planet. This is Jupiter, in Virgo. Mars, considerably fainter, will appear about 2:00 a.m., in Libra.

On Jan. 3 the earth will be 91.4 million miles from the sun, closest for 1969. After that the distance will increase until July 5 when it will be 94,510,000 miles away.

Looking at the year ahead:

Venus is increasing in prominence. On Jan. 26, farthest east of the sun, it will set the longest time after sunset. After that it will move toward the sun, and will set a shorter time after sunset. But sunset itself will be later each evening. Thus, by the clock, Venus will set later and later until early March.

On March 3 it will be at greatest brilliance—about half again as bright as now. For a few weeks around April 8, when it will be nearly in front of the sun, it will not be visible. By early May, however, having passed to the west of the sun, it will rise and shine in the east before sunrise.

After reaching greatest brilliance again on May 14, it will swing far out beyond the sun and by December will be lost in its glare.

Jupiter moves through the sky more slowly. Rising now toward midnight, each succeeding month will bring it into view about two hours earlier. On March 21 it will be opposite the sun, rising at sunset and setting at sunrise. By early summer it will set during the evening. On Oct. 9 it passes behind the sun.

Saturn, now visible in the evening, will be gone by April 18, when it moves behind the sun. Then it, too, will become a morning star. On June 11 it will pass very close to Venus.

In early spring Mars will be visible in the evening and will remain so for the rest of the year. It will brighten until early June, when it comes closest to the earth—less than 45 million miles away. Then it will be about a sixth as bright as Venus is now. By year's end it will have faded to less than a fifteenth of its June brightness.

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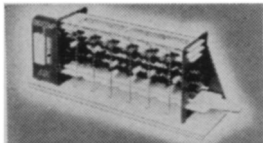
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