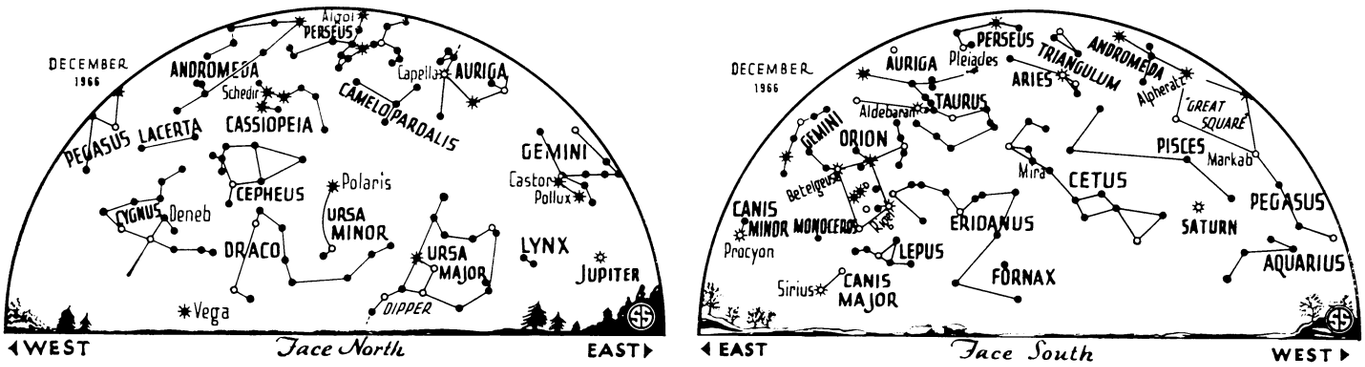

✲ ✸ ○ ● SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

Two Planets Now Visible

Jupiter and Saturn Shine December Evenings

by James Stokley

Two planets visible during December evenings add their brilliance to the bright stars on view. Jupiter, largest of the planets, rises about three hours after sunset at the beginning of the month and is then low in the eastern sky. Toward the right is Sirius, brightest of all the night stars.

The other evening planet, considerably fainter than Jupiter, is Saturn. It is in the southwest, near Pisces.

The other bright stars that make the skies of a winter evening so glorious are on the accompanying maps, which show the skies as they look about 10:00 p.m., local standard time, on Dec. 1. The sky pattern is the same on the 15th at 9:00 p.m., and at the month's end at 8:00 p.m.

Above Jupiter is the constellation of Gemini, the twins, with the stars Castor and Pollux. To their right is Orion, the warrior, containing the two bright stars named Betelgeuse and Rigel. Between them is a row of three stars marking Orion's belt.

Below Orion stands Canis Major, the greater dog, of which Sirius is part. The lesser dog, Canis Minor, is toward the left and a little higher. In it is the star called Procyon. Above Orion is Taurus, the bull, with brilliant and ruddy Aldebaran. Next to Taurus, toward the left, is the star Capella, part of Auriga, the charioteer.

Close to the northwestern horizon is Vega, part of Lyra, the lyre. At the times for which the maps are drawn, this star is not nearly so bright as it was a few months ago, when it was high in the evening sky.

Cygnus, the swan, above and to the left of Vega, contains the star Deneb, which is similarly dimmed. In the northeast is Ursa Major, the great bear, also near the horizon. Here is the Big Dipper, now too near the horizon to be fully observed.

To the left in Ursa Minor is Polaris, the pole star. Farther left are four constellations that contain no first magnitude stars but are important star configurations. Draco, the dragon, is between Vega and Ursa Minor. Above is Cepheus, representing an ancient king of Ethiopia, and still higher is his queen, Cassiopeia. To her left is Andromeda, her daughter. According to the old myth, Andromeda was chained to a rock to be devoured by a sea monster but she was rescued by Perseus, now at the zenith.

The famous variable star called Algol, which is really two bodies orbiting around each other, is in Perseus. As one star, much darker than the other, partially hides the brighter, at intervals of about 2 days and 21 hours, the variable becomes considerably dimmer than normal.

As for the other naked eye planets, Venus has now passed the sun. It has thus become an evening star, seen low in the west just after sunset but still so close to the sun that it is hard to locate. Mars rises a little after midnight, in the constellation of Virgo, the virgin. It will remain visible, about the same brightness as Saturn but distinctly red, the rest of the night. Mercury will be farthest west of the sun on Dec. 4. For a few days about then, it should be visible low in the southeast as dawn is breaking.

Observatory visitors looking at Saturn this month, particularly on the night of Dec. 17, will not see this planet's remarkable rings, even through a good-sized telescope. The rings will be edge-on as viewed from earth, and are too narrow to be visible.

Celestial Timetable for December

DEC.	EST	
2	5:00 a.m.	Moon north of Jupiter
4	noon	Mercury farthest west of sun
5	1:23 a.m.	Moon in last quarter
6	8:00 a.m.	Moon north of Mars
7	1:00 p.m.	Moon nearest; distance 229,200 miles
11	10:14 p.m.	New moon
17	1:40 a.m.	Algol (variable star in Perseus) at minimum brightness
19	7:00 a.m.	Moon south of Saturn
	4:41 p.m.	Moon in first quarter
	7:00 p.m.	Moon farthest, distance 251,200 miles
	10:30 p.m.	Algol at minimum
22	2:29 a.m.	Sun farthest south; winter begins in Northern Hemisphere
27	12:44 p.m.	Full moon
29	9:00 a.m.	Moon north of Jupiter