

Once again, on February evenings, we have three bright planets overhead joining the brilliant stars of winter. Venus, which appears in the west soon after sunset and sets nearly four hours later, is brightest. It exceeds Sirius, the brightest star, by about 15 times. Venus was farthest east of the sun on Jan. 24 and is now approaching it. Paradoxically, however, it is still setting each evening about the same length of time after sunset, at least in the early part of February.

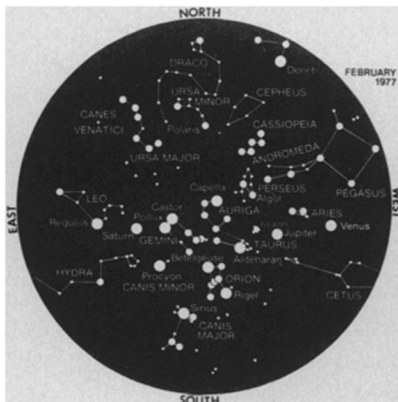
The reason is that the planets all move close to the ecliptic, which is the apparent path of the sun around the sky as the earth moves in its orbit. This imaginary line extends across our southern sky high in early summer and low near the beginning of winter. At sunset, in February, in the northern hemisphere, the angle that it makes with the western horizon is getting larger each evening. This increase in the steepness of its path makes Venus set later, thus compensating for the earlier setting caused by its approach to the sun.

It will set latest on Feb. 15 and after that will rapidly approach the sun, passing just south of it on April 6, when it will set at sunset. Later in the spring it will become a "morning star," visible low in the east at dawn.

Venus reaches maximum brightness Feb. 28. In January, through a telescope, it would have appeared as a semicircle, like the moon at first quarter. Now, considerably nearer earth than the sun, most of the sunlit hemisphere is turned from us. Thus it is in a crescent phase and on the 28th will be like the moon five days after it is new. It would be getting fainter

FEBRUARY STARS

BY JAMES STOKLEY



To use star map hold over head with directions oriented as indicated.

Feb. 2	5:00 am EST	Saturn opposite sun
3	6:50 pm	Algol at minimum
	10:56 pm	Full Moon
	11:00 pm	Moon south of Saturn
10	11:00 pm	Moon nearest
	11:07 pm	Moon in last quarter
17	10:37 pm	New Moon
20	11:50 pm	Algol at minimum
21	noon	Moon south of Venus
24	5:00 pm	Moon south of Jupiter
	10:00 pm	Moon farthest
25	9:50 pm	Moon in first quarter
28	9:00 pm	Venus at greatest brilliancy

if it remained at about the same distance as the moon does.

But Venus is approaching earth and on Feb. 28 is about 23 million miles closer than on Jan. 24. This brightens it by more than the amount lost as it changed to the crescent phase.

Second brightest planet is Jupiter, which is about a ninth the brilliance of Venus. It is well up in the west in Taurus, below Aldebaran, the bright reddish star in that group.

Saturn, our third brightest planet, is in Cancer, directly opposite the sun on Feb. 2, so it rises at sunset and sets at sunrise. About a sixth as bright as Jupiter, it is in the east during the evening.

The brightest February evening star is Sirius, in the south in Canis Major. To its right and higher you'll see Orion, with its two first-magnitude stars. Betelgeuse is above and Rigel below, while between is the row of three fainter stars forming Orion's belt. And farther to the right look for Taurus, where Jupiter now stands.

Canis Minor, with Procyon, is above Sirius and a little to the left. Gemini is overhead, with Pollux as its brightest star. To the northwest of this figure is Auriga, with Capella. In the east, below Saturn, stands Leo, with Regulus. This, and a group of five fainter stars to the north, form a hook-shaped configuration called the sickle. Regulus is at the end of the handle. To the northeast, look for the Big Dipper, its handle pointing downwards, which is part of Ursa Major. Cassiopeia, shaped like a W on its right side, is in the northwest. And directly north is Ursa Minor, with the pole star, Polaris. □

● "Ten Who Dared," a series produced by the BBC in association with Time-Life Films and aired on consecutive Thursday nights until March 17, reenacts history's 10 most dramatic explorations. Upcoming programs include: Feb. 3: Alexander von Humboldt's exploration of Venezuela; Feb. 10: Jedediah Smith, first white trapper to cross America; Feb. 17: Wills and Burke's overland crossing of Australia; Feb. 24: Henry Morton Stanley's epic Congo River Journey; March 3: Charles Doughty, an Englishman disguised as an Arab tries to reach Mecca.

● Feb. 2 (PBS) NOVA—"The Sunspot Mystery" shows that the sun, long thought to be constant and regular, has a record of misbehavior. Sunspots come and go in 11-year cycles. This program examines the premise that sometimes the sun has lost its spots for decades at a time (SN: 3/6/76, p. 154). Astronomer Jack Eddy doesn't see it as coincidence that at these times the earth has grown cold. He has pored through old books and astronomical records for near-certain proof that the sun was without spots in the 17th century, the time of the Little Ice Age on earth.

● Feb. 9 (PBS) NOVA—"The Plastic

MEDIA

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Prison" is about David. In most respects he is normal. He has never been sick a day in his life—but a common cold might kill him. He suffers from Severe Combined Immune Deficiency, which means he has no resistance to any disease or infection, and he has lived his entire five years in a large, sterile plastic bubble. David's predicament raises some basic health care questions, one being: Should a child be raised this way?

● Feb. 15 (PBS)—"The New Indians" is about a prophecy made five generations ago by Black Elk, the great Sioux holy man. He predicted that five generations after his death the strength and pride of the American Indian would be reborn. National Geographic cameras journey through the United States and Canada to

test Black Elk's prophecy.

● Feb. 16 (PBS) NOVA—"Hunters of the Seal" (R)

● Feb. 23 (PBS) NOVA—"Incident at Brown's Ferry" is about that day in 1975 when a fire broke out in the nuclear reactor plant in that Alabama town. It was the worst nuclear reactor accident that the United States has yet seen but the fire was contained and no radiation escaped. "Incident" takes a look at the question, "How close did we come to nuclear catastrophe?" It also examines the even larger question of reactor safety in America's nuclear energy program.

● March 2 (PBS) NOVA—"Bye Bye Blackbird" is an assessment of the blackbird dilemma in the United States. Every year Americans face an invasion—perhaps surpassing the best dramatic traditions of a Hitchcock movie—when an estimated 500 million blackbirds swarm the skies and fields. The birds pose an ever-increasing threat to society by damaging crops and by spreading disease. The program considers the reasons for blackbirds' massing behavior, discusses how crops can be protected and raises serious questions about our moral attitudes toward wildlife.