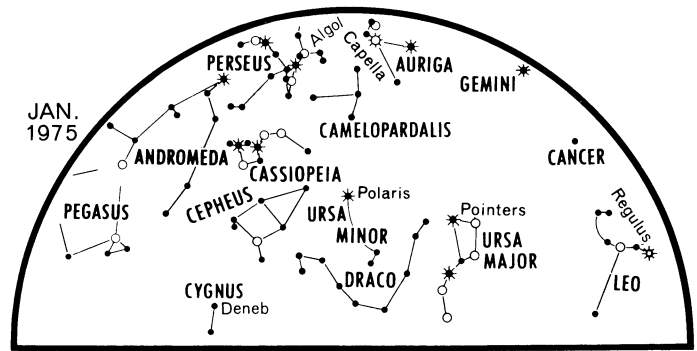
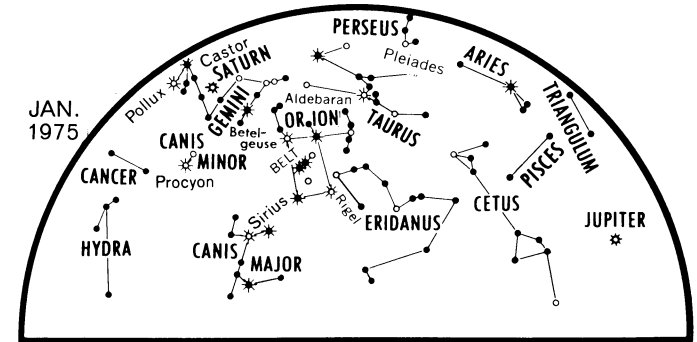


# Stars of January



WEST face north EAST



EAST face south WEST

☀ ☼ ○ ● Symbols for stars in order of brightness

CELESTIAL TIME TABLE			
Jan.	2	8:00 a.m. EST	Earth at perihelion
	3	4:00 p.m.	Quadrantid meteors
	4	2:04 p.m.	Moon at perigee (distance 357,-
	6	1:00 a.m.	Uranus passes north of Moon
	9	6:00 p.m.	Mars passes south of Moon
	12	5:20 a.m.	New Moon
	13	6:00 p.m.	Mercury passes south of Moon
		9:00 p.m.	Venus passes south of Moon
	15	4:00 p.m.	Moon at apogee (distance 406,-
			130 kilometers)
	17	1:00 a.m.	Jupiter passes south of Moon
	20	10:14 a.m.	Moon in first quarter
	23	3:00 p.m.	Mercury farthest east of sun
	25	10:00 p.m.	Saturn passes north of Moon
	27	10:09 a.m.	Full Moon
	28	4:00 a.m.	Moon at perigee (distance 357,-
			600 kilometers)

By James Stokley

In addition to Jupiter and Saturn, prominent in the January evening sky, you'll also see brilliant Venus, low in the west in the early evening. About the 23rd, you may get a glimpse of seldom-seen Mercury, innermost of the planets.

Both Mercury and Venus revolve around the sun in orbits smaller than earth's. Mercury's mean distance from the sun is 36 million miles; that of Venus is 67.2 million and that of earth 92.9. Thus,

neither of these planets can ever be seen from earth in the opposite direction from the sun. They swing back and forth from the eastern side of the sun, when they are visible in the evening after sunset, to the western side. Then they are morning "stars," appearing in the east at dawn.

Venus passed behind the sun last Nov. 6 and now shines brilliantly low in the southwest at dusk. During winter and spring it will continue to move easterly from the sun, becoming most brilliant on July 22. On Aug. 27 it will vanish from sight as it passes between earth and

sun, but soon after that it will reappear in the east at dawn.

Mercury's passage behind the sun occurred Dec. 19 and on Jan. 23 it will be farthest east of that body. Then it will move sunward again. After Feb. 8 it will be low in the east at dawn, and very difficult to locate. Thus, your best chance of seeing this elusive planet about which so much has recently been learned, will be for a few days around the 23rd.

The maps are prepared for 10 p.m., local standard time on the first and 8 p.m. on the 31st. □

## New Products

**Alloy identification kit** offers a simple, inexpensive way of distinguishing between two stainless steels, SS 316 and SS 304, based on an unambiguous color spot test for molybdenum (present in SS 316 but not in SS 304).

*Koslow Scientific Co.*  
Circle No. 171 on Reader Service Card

**Portable water quality monitor** measures *in situ* conductivity, salinity, temperature and depth, dissolved oxygen, pH and turbidity. Powered by "D" cell batteries, the unit weighs only two pounds in water.

*Instro Co.*  
Circle No. 100 on Reader Service Card

**Dual purpose mantle** includes a heating element that will accept both filter funnels and flasks. Rheostat-equipped, it is available in 50-to-2000 ml., 500-to-6000 ml. and 2000-to-12000 ml. capacities.

*Markson Science, Inc.*  
Circle No. 98 on Reader Service Card

**Color coded stethoscopes**, enabling each department of a hospital or laboratory to identify its own equipment, is part of an instrument selection that includes a stethoscope-sphygmomanometer combination for home use by hypertensives and cardiac patients.

*Labtron*  
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**Student spectroscopy laboratory**, including low-cost NMR, ESR, NQR and microwave instruments for undergraduate teaching, is the subject of a new brochure, which also describes the specially developed teaching curriculum that accompanies the instruments.

*International Pamcorp*  
Circle No. 173 on Reader Service Card

**The Art of Thread Design** is a guidebook on the creation of complex geometric patterns by routing thread around arrays of fixed pins. Prepared by a thread-design kit manufacturer, the 44-page book includes three templates that can be used to create actual artworks.

*Open Door Enterprises, Inc.*  
Circle No. 174 on Reader Service Card

**Time booklet** explains the relationships between time, clocks, earth's rotation, sunlight angles, time zones, effects of latitude and longitude, and simple star finding and North finding. It includes a cutout 24-hour dial/latitude angle-sunlight computer and cutout dials that may be applied to conventional clocks. Several digital clocks are also available.

*Star Tracker Systems*  
Circle No. 170 on Reader Service Card

**Digital spectrophotometer** provides a constant 2-nm bandpass throughout its 200-to-1000-nm wavelength range. It provides readings in transmittance, linear absorbance to 2A and concentration, with over- and under-range indication. A "factor set" button electronically provides instantaneous retrieval of the absorbance-to-concentration multiplier, as well as the setting of a known conversion factor.

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*Products are selected and listed as an editorial service. The claims are the manufacturers'. For further information circle the appropriate number on the postpaid, self-addressed Reader Service Card in the center of this issue.*

December 21 & 28, 1974

397