

Venus prominent on May evenings

by James Stokley

Venus, still shining in the western evening sky, will reach greatest brilliance on May 11. However, it is rapidly drawing nearer to the sun's direction. On May 1 it sets more than three and a half hours after sunset, but on May 30 this will be reduced to about an hour and a half. On June 17 it will pass between sun and earth, soon afterward to reappear in the morning sky before sunrise.

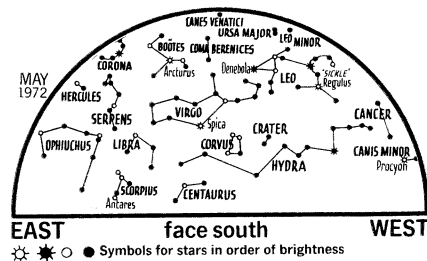
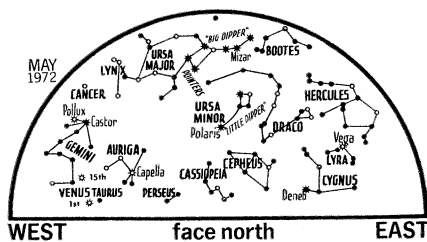
Mars also is in the evening sky, near Venus, but it is difficult to locate, since it's about 1/250th as bright. This is primarily because of the difference in distance. At midmonth Venus will be about 40 million miles from earth; Mars will be 215 million miles away. On May 15 the crescent moon will pass between Venus and Mars.

Jupiter, brighter than any other planet except Venus, or any star, will rise in the east about 1 a.m. (DST) at the beginning of May. By the month's end it will appear about two hours earlier.

The accompanying maps show the appearance of the sky about 11 p.m., local daylight saving time, on May 1 and an hour earlier on the 15th. It would look about the same at 9 p.m. on the 31st but the sky will then be so bright that stars and planets won't be visible.

Vega, in the northeast in Lyra, is the brightest star of the May evening. It's about a fiftieth as bright as Venus.

High in the southern sky is Coma



Berenices. Coma is the location of the north pole of the Milky Way, or galaxy, whose center line, the galactic equator is 90 degrees from it in all directions.

The Milky Way, most easily visible on autumn evenings, is a mass of faint stars that cannot be distinguished separately with the naked eye. It represents the edge of the disk-shaped system of about 100 billion stars (the galaxy) of which the sun is one. There is also a considerable amount of dark matter, which hides objects beyond. But in the direction of Coma, stars are more sparse and dark material is absent. Thus we can see out into distant space, where there are millions of other galaxies.

Just as stars group themselves together into galaxies so do the galaxies assemble into clusters. Our own galaxy belongs to such a group, which includes

about 25 members. One of them, in the constellation Andromeda, is faintly visible to the naked eye on autumn evenings. Its distance is more than 2 million light-years.

One of the richest neighboring clusters of galaxies, located in the direction of Coma and Virgo, has been studied extensively by astronomers. None of these is visible to the naked eye but they can be observed with telescopes of even moderate size.

A hundred are brighter than 13th magnitude, which is about 600 times fainter than the faintest naked-eye stars. Astronomers estimate the center of the cluster to be about 36 million light-years distant. Going to the 15th magnitude (about 6.3 times fainter than 13th) their number is doubled, but many of these may not belong to the cluster. They may be galaxies that are to be farther out in the same direction. □

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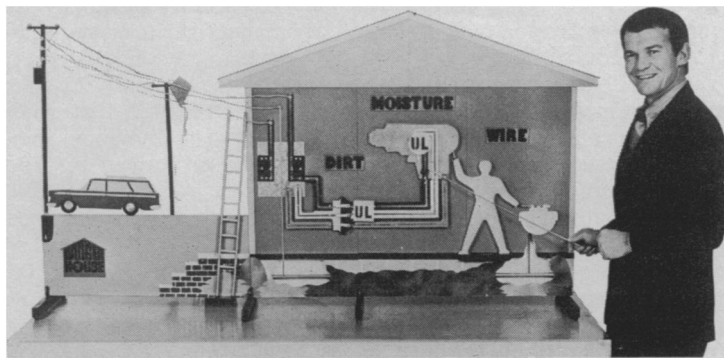
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CELESTIAL TIMETABLE

May	EDT	
3	8:00 am	Moon passes south of Jupiter
6	8:26 am	Moon in last quarter
11	7:00 am	Venus at greatest brilliancy
12	1:00 pm	Moon nearest, distance 222,100 miles
13	12:08 am	New moon
15	4:00 pm	Moon passes south of Venus and north of Mars
17	2:00 am	Venus passes north of Mars
19	9:16 pm	Moon in first quarter
25	11:00 am	Moon farthest, distance 252,300 miles
28	12:28 am	Full moon
30	11:00 am	Moon passes south of Jupiter
31	4:00 am	Saturn behind sun