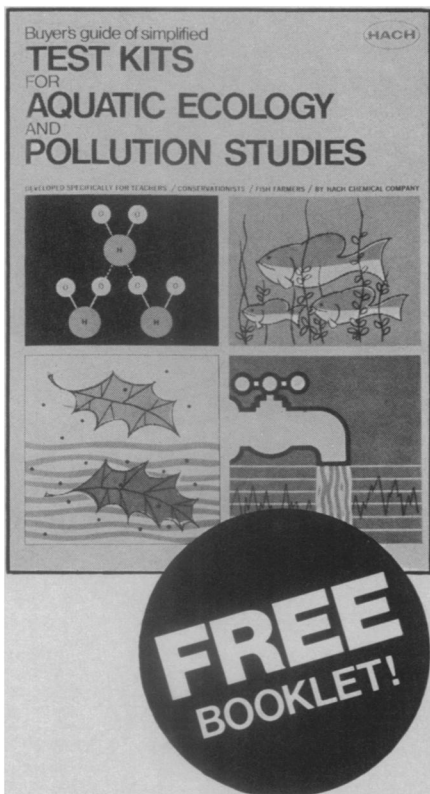


# Simplified water pollution tests



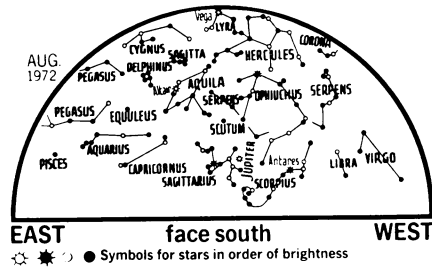
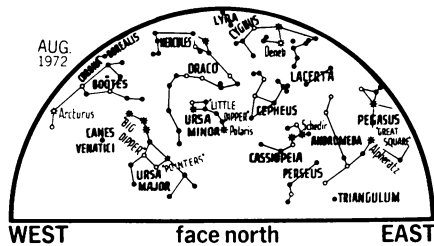
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## Jupiter shines in August sky

by James Stokley

Jupiter, in the constellation of Sagittarius, is the only planet visible in the evening sky during August. It rises before sunset and can be seen shining brightly in the south as dusk falls. Saturn rises about midnight and Venus follows about three hours before sunrise. And, for a few days around Aug. 25, when it is farthest west of the sun, Mercury will be visible low in the east at dusk.

August has only five first-magnitude stars above the horizon compared to the evening sky of March when ten stars of that brightness could be seen.

Anyone watching the nighttime sky will occasionally see a "shooting star." A star-like point of light suddenly appears, rapidly moves across the sky, then vanishes. Sometimes there may be a trail, which lasts for seconds, or even minutes.

Actually these are not stars. They are meteors—small pieces of solid matter from space. With a velocity up to about 50 miles per second, they encounter resistance from the earth's atmosphere and friction heats them to incandescence, at about 60 miles above the ground.

Not all the light comes from the meteor itself; some comes from the

luminous cloud of vaporized matter around it. A bright meteor may last until it reaches an altitude of about 30 miles while those that are fainter may disappear at some 50 miles. Very rarely one may survive until it reaches the ground. Then it is called a meteorite.

On any dark, clear night, if you watch the sky very carefully, you may see five to ten meteors in an hour, on the average. At certain times of the year the earth passes through one of a number of streams of meteors. Then an observer may see an average of one per minute. This is called a meteor shower.

The most generally reliable shower comes every August, but often the meteors are hidden by the glare of the moon, especially when it is full. This year conditions are very favorable as the moon will be new on Aug. 9. On the night of Aug. 11, when the display will be at its height, the moon, a narrow crescent, will set about an hour after the sun, and will be out of the way for the rest of the night.

Ordinary meteors may move across the sky in any direction but those of a shower seem to radiate from one point. Those of mid-August come out of the constellation Perseus, partly visible in the evening low in the northeast. Consequently, this is called the Perseid meteor shower.

Actually, the Perseids move around the sun in a huge elliptical orbit, which is the same as that of a comet last seen in 1862. The meteors are the remains of the comet. Every August, as the earth passes through the stream, many of them enter the atmosphere in parallel paths. The effect of perspective makes them seem to converge in the distance, like the parallel tracks of a railroad. That's why they seem to radiate from one part of the sky.

Your best chance of seeing the Perseid meteors will be in the early morning hours of Aug. 12, when Perseus is high in the northeast.

The accompanying maps depict the sky as it looks about 11 p.m. local daylight saving time on Aug. 1, an hour earlier at midmonth and two hours earlier as the month closes. □

### CELESTIAL TIMETABLE

Aug. EDT	
2 4:02 am	Moon in last quarter
3 11:00 am	Moon nearest, distance 229,500 miles
4 8:00 pm	Moon passes north of Saturn
5 4:00 pm	Moon passes north of Venus
7 4:00 pm	Mercury behind sun
9 1:26 am	New moon
12 early am	Perseid meteor shower at height
16 11:00 am	Moon farthest, distance 251,200 miles
9:09 pm	Moon at first quarter
18 3:00 am	Moon passes north of Antares
19 6:00 pm	Moon passes south of Jupiter
24 2:22 pm	Full moon
25 11:00 am	Mercury farthest west of sun
26 10:00 pm	Venus farthest west of sun
28 4:00 pm	Moon nearest, distance 228,500 miles
31 8:48 am	Moon in last quarter

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