



\* \* o • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

yellow, green, blue and violet, above. But because the sun presents the appearance of a disc, the red from one part is mixed with the green from another, and the spectrum is not a very pure one.

At the last moment, before sunset, however, when only a thin sliver of the upper part of the disc is still visible, this does not occur, and the spectrum becomes purer.

All this happens in the distance, beyond the horizon. The red, orange and yellow rays are bent downwards so much that they do not get beyond the horizon, to your eyes.

The blue and the violet rays, which would be on top, are absorbed by the great thickness of atmosphere through which they have to pass, so they do not reach you at all. Thus green is the last you see, and that causes the sun to show a green flash, just before it disappears from view.

The same thing may happen as the sun is rising, and the first bit to appear may show this green color. But the effect is not a common one; conditions have to be just right for it to appear. That is probably why, according to an old Scottish legend, the person who has seen it would never be deceived in love, for it was supposed to

give that person the magical power to look clearly into one's own heart and into the hearts of others!

**Celestial Time Table for July**

| July | EST        |   |
|------|------------|---|
| 1    | 1:04 a.m.  | Full moon.  |
| 5    | 3:00 p.m.  | Earth in aphelion (farthest from sun for year)—distance 94,449,000 miles. |
| 8    | 6:00 p.m.  | Moon in apogee (farthest from earth for month)—distance 251,100 miles.    |
|      | 7:21 p.m.  | Moon in last quarter.   |
| 9    | 10:00 a.m. | Moon passes Mars.   |
| 14   | 1:21 a.m.  | Moon passes Venus.  |
| 16   | 1:33 p.m.  | New moon.   |
| 21   | 6:00 a.m.  | Moon in perigee (nearest for month) — distance 229,100 miles.             |
| 22   | 10:43 p.m. | Moon passes Jupiter.  |
| 26   | 4:00 p.m.  | Mercury farthest east of sun.   |
|      | 10:23 p.m. | Moon passes Saturn.   |
| 29   | early a.m. | Meteors visible radiating from constellation Aquarius.                    |
| 30   | 11:47 a.m. | Full moon.  |

Subtract one hour for CST, two hours for MST, and three for PST.

Science News Letter, June 21, 1958

**ENGINEERING**

**Noise of Heavy Trucks Reduced by Research**

➤ UNDESIRABLE NOISES made by heavy truck tires and exhausts soon may be almost eliminated.

New tire tread designs already have reduced much of the noise associated with heavy trucks, and even better designs may be expected soon from research laboratories, T. A. Roberston and J. H. Cox, Firestone Tire and Rubber Company, reported to the Society of Automotive Engineers meeting in Atlantic City, N. J.

Tires without tread produce the least noise, but they are not practical, the engineers said. Some of the new designs feature zig-zag treads, parallel grooves or uneven tread spacing.

Sound recording machines and specially developed instruments for measuring sound are playing the major laboratory roles in reducing exhaust noise, Dean G. Thomas, director of research, Nelson Muffler Corporation, reported.

Exhaust systems that are almost noiseless, but still efficient in large truck operation, will result from current research.

**Glass Engine Parts**

➤ MAJOR WORKING parts of engines and even automobile brake shoes can be made of glass, the engineers learned.

Pyroceraam, the trademark for a series of glass-ceramics announced a year ago by Corning Glass Works, Corning, N. Y., was described as lighter, stronger and more heat-resistant than most metals.

Drs. W. W. Shaver and S. D. Stookey of Corning's Atomic Energy Department suggested the new glass-ceramics for use as piston heads, high-temperature bearings, brake shoes and structural parts of hypersonic aircraft.

Science News Letter, June 21, 1958



**BULGE IN THE SEA**—New world maps based on gravity research at Ohio State University show many irregularities in the earth's surface. Dr. Weikko A. Heiskanen, supervisor of the Air Force-sponsored project, indicates a "bulge" which the study has revealed at the western end of the Mediterranean Sea.

**BOTANY**

**Waxy White Flowers Form Belt on Tree Bark**

➤ BROAD, elaborately woven belts of waxy white flowers that circle the trunks of trees are just one of the plant curiosities of Barro Colorado Island in the Panama Canal Zone.

The tiny blossoms, it would take more than five lying side by side to cover an inch, are parasites found only living under the bark of living trees. They break through to the surface when they flower.

Other strange plants include one that is unique to the Island. *Aphiomeris panamensis* has no chlorophyll and has been found only three times in a half century.

There are also more than 70 species of slime molds on the Island, fungus-like growths that behave like plants and like animals at various stages in their life cycles.

Barro Colorado Island is used by the Smithsonian Institution as a jungle life preserve where native plants and animals can be studied.

Science News Letter, June 21, 1958

