



### FIRST DOUBLE STAR

*Mizar, in the handle of the "Great Dipper", is the first star found to be double. Giovanni Battista Riccioli noticed this in 1650. Since that time it has been discovered that out of every 100 stars, about six are double.*

trovery with the Church, is commemorated with but a small crater, while others, whose names today are practically forgotten in any other connection, are recalled by some of the greatest lunar features.

### Mizar Doubly Double

An American astronomer, the late Prof. Edward Charles Pickering, famous director for many years of the Harvard College Observatory, made the next great contribution to knowledge of Mizar. This was in 1889, when he studied spectrum photographs of this interesting star. These showed that the brighter of the two components is itself double, but so close are the members of the pair that no telescope will show them to the eye as two separate bodies. Only with the aid of the spectroscope are they revealed, and thus it is called a "spectroscopic binary."

Turning now to the other constellations, we pass to the left of Leo, and there can be seen Virgo, the virgin, with the brilliant Spica as her brightest star. Above Virgo is Boötes, the herdsman, with the first magnitude Arcturus, which shines high in the south. Arcturus is one of the brightest stars seen from the latitude of most of the United States. It is exceeded only by Sirius, the dog star, while it is tied for second place by two other stars of practically the same brightness. These are Capella and Vega. The former is in the constellation of Auriga, the charioteer, which was conspicuous a few months ago, but is now almost hidden behind the northwestern horizon. If the sky is clear in that direction, Capella can be seen, very low. Vega, however, is high in the east, bluish in color. Arcturus, being

rather reddish, is hard to compare with Vega without scientific apparatus. But for a really red star, look to the southeast. Near the horizon in that direction is Scorpius, the scorpion, with Antares to mark it. In fact, the name Antares means "the rival of Mars," an allusion to its ruddy color and to the similar hue of that planet, which is not in the evening sky at present.

Two other brilliant stars are seen in the east. Just below Vega is a row of stars now almost parallel to the horizon. At their left end is a bright star called Deneb. This group is Cygnus, the swan, sometimes called the "Northern Cross." Deneb marks the tail of the bird, and the row of stars his long outstretched neck. The arms of the cross

are his wings. A little lower to the right, almost due east, is another bright star, Altair, marking Aquila, the eagle.

### Shortest Nights, Longest Days

Though in one respect June is a good month to see the stars, because of the frequent warm evenings, it also brings the shortest nights, and, conversely, the longest days. On June 21 comes the longest day of the year. This is the summer solstice, when the sun reaches its farthest north position in its annual trip among the stars. Then it is directly over the earth's tropic of Cancer. It is at this position at 10:23 a. m., eastern standard time, and by convention, this marks the beginning of summer. On this day the sun rises, over middle latitudes in the United States, or 40 degrees, at 4:31 a. m., local standard time, and sets at 7:32 p. m., local standard time. This means that there are just about 15 hours of sunlight. Morning and evening twilight extend the day still longer, so at this time of year the astronomer's working time is reduced to the union schedule of eight hours!

If you want to take advantage of the moon's light on these June evenings, you may do so from about the eighth to the twentieth. The moon is new on the fourth. On the eleventh it is at first quarter, which means that it is directly south at sunset, and visible until midnight. Full moon comes on the eighteenth. Then it is above the horizon the entire night. On the twenty-fifth it is at last quarter and rises at midnight.

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### CHEMISTRY

## Standard Sponge Cake Is Measuring Unit For Others

**S**PONGE CAKE has been turned into a yard stick.

Though this transformation has not been made literally, a standard cake by which other cakes are to be measured through comparison was described before the meeting of the American Association of Cereal Chemists.

The formula and method for making this standard test cake were given by Washington Platt and Philip D. Kratz of the Borden Research Laboratories at Syracuse, N. Y. When the cakes are baked, Mr. Platt and Mr. Kratz said,

there remains the problem of recording their characteristics and of expressing them quantitatively.

They told how to measure the specific gravity of the batter, and the volume, softness and toughness of the finished cake. Methods were also given for recording shape, grain and color and for scoring the flavor. Tests on keeping quality were also described. As a result of these determinations it is now possible to accurately describe a cake in terms of its properties, the chemists pointed out.

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