

ASTRONOMY

# Vega Now Brightest Star

One of a trio of stars, it makes up a triangle with Arcturus and Deneb. They are glowing globes of gas, shining by their own light.

By JAMES STOKLEY

► **BRIGHTEST** star to be seen on the evenings of July is Vega, in Lyra, the lyre, which is in the eastern sky as indicated on the accompanying maps. These show the appearance of the heavens about 11 o'clock, daylight saving time, at the beginning of the month, and an hour earlier around the 15th. Vega is one of a trio of stars which make an easily located triangle. The others are Arcturus, in Bootes, the bear driver, lower and farther south; and Deneb, in Cygnus the swan, which is about as high and farther north.

Each of these stars is a glowing globe of gas, like our sun, shining with its own light. But three planets, shining by reflected sunlight, can also be seen these evenings. Only two appear on the maps, as one sets a little earlier. This is Saturn, in the constellation of Leo, the lion, of which only the hind quarters are shown. In the part below the northwestern horizon visible until perhaps 10 o'clock at the beginning of the month, is the bright star Regulus, and Saturn is near it.

## Jupiter Brightest Planet

Jupiter is the brightest planet, and is seen in Ophiuchus, the serpent-bearer, in the southern sky. This figure is not one of the 12 constellations of the zodiac, through which the planets are commonly said to move. Considerably fainter is Mars, low in the west, in Virgo.

There are three other stars of the first magnitude, in addition to those already mentioned. One is Spica, in Virgo, the virgin. Another is Antares, in Scorpius, the scorpion, near Jupiter. The third is Altair in Aquila, the eagle, toward the southeast.

Late in the night other planets appear. Venus, so brilliant as an evening star during the winter and spring, has now shifted to the other side of the sun, becoming a morning star, visible in the east before sunrise. At the middle of July, it comes up about two hours ahead of the sun. On July 16, Mercury is farth-

est west of the sun, and around that date can be seen, below Venus, low in the eastern sky in the glow of dawn.

Although the earth revolves around the sun once every year, it seems as if the sun travels around us once in that period. As our planet stands in different directions from the sun, we see it in different directions—against an ever-changing background of more distant stars. Thus it traces out among the constellations an imaginary line called the ecliptic, which is actually the projection in the sky of the plane in which the earth moves.

## Along Ecliptic Plane

Since the planets move in approximately the same plane, their motion, too, is nearly along the ecliptic. Of the planets visible to the naked eye, Venus can get as far away from it as 9 degrees, which is about 18 times the apparent diameter of the full moon; Mars about 7 degrees; Mercury 6 degrees; Saturn 3 degrees and Jupiter 2 degrees. Thus, a belt across the sky, 18 degrees wide, with the ecliptic marking its middle, forms the region in which the sun, moon and planets always appear. This is called the zodiac, or path of the animals, since most of the constellations in it are named after animals.

Ordinarily it is said that there are 12 constellations of the zodiac, namely,

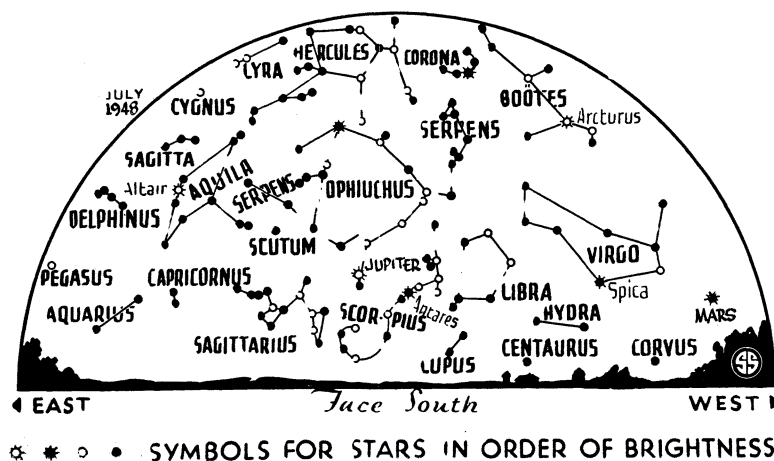
Aries, the ram; Taurus, the bull; Gemini, the twins; Cancer, the crab; Leo, the lion; Virgo, the virgin; Libra, the scales; Scorpius, the scorpion; Sagittarius, the archer; Capricornus, the sea goat; Aquarius, the water carrier and Pisces, the fishes.

However, as noted above, Jupiter during July is in the constellation of Ophiuchus, not officially a part of the zodiac even though it contains more of the ecliptic than does Scorpius. While they do not include any part of the ecliptic, the constellations of Orion, the warrior, Cetus, the whale and Auriga, the charioteer, also extend into parts of the zodiac. Thus, it is possible to see planets in any one of these groups.

All this helps make ridiculous the beliefs of superstitious persons that the planets and their positions in the sky have some mysterious effect on our lives, particularly the way they were arranged at the time of birth. Ophiuchus, Orion, Cetus and Auriga are not recognized, even though the planets can be in these as much as in any of the official 12.

## Signs of Zodiac

Moreover, even the chosen dozen are not recognized, for what is considered is not the actual constellation. For such purposes, the zodiac is divided into 12 equal parts, called signs. Their names are the same as the formal zodiacal constellations, but they do not correspond to them. The sign of Aries, for example, is in the constellation of Pisces. There was a time, several thousand years ago, when the signs and constellations approxi-



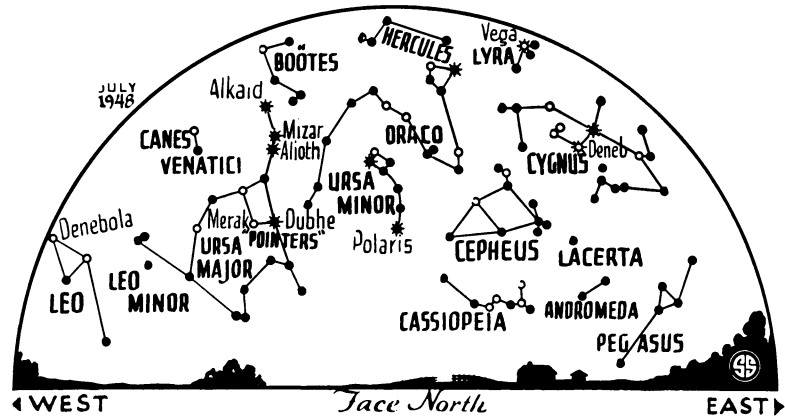
# Do You Know?

During the past two centuries more than 100 kinds of *birds* have become extinct.

Using a *disinfectant* on handkerchiefs has been suggested as one step toward stopping the spread of the common cold.

Dipping the roots of sweet-potato plants in *charcoal*, when transplanting into soil that has been treated with 2,4-D to kill weeds, seems successful in protecting the crop from injury.

Salt-containing *crude petroleum* is cleared of this impurity by a process which involves passing a heated mixture of the crude and water through a bed of fiber glass; when the water is separated out it carries the salt with it.



mately corresponded. Now, owing to a movement in the heavens called "precession" they have shifted and are getting farther apart all the time. Such superstitions, it seems, false at best, do not need to keep up to date!

manders, Dr. Fowler and Mr. Feind found that the toxic effect of streptomycin on the vestibular system of the inner ear can be modified by desensitizing the animals before giving a toxic dose.

*Science News Letter, June 26, 1948*

### Time Table for July

July	EDST	
4	1:00 p. m.	Earth farthest from sun, distance 94,456,000 miles.
5	12:07 p. m.	Moon passes Venus
	2:27 p. m.	Moon passes Mercury
6	5:09 p. m.	New moon
8	10:00 a. m.	Moon nearest, distance 224,500 miles
9	1:39 a. m.	Moon passes Saturn
11	11:51 a. m.	Moon passes Mars
13	7:30 a. m.	Moon in first quarter
16	4:00 a. m.	Mercury farthest west of sun
17	9:11 p. m.	Moon passes Jupiter
20	10:31 p. m.	Full moon
23	11:00 p. m.	Moon farthest, distance 252,200 miles
28	early a. m.	Meteor shower visible, radiating from constellation of Aquarius. (The bright moon will interfere considerably)
29	2:11 a. m.	Moon in last quarter
31	4:00 a. m.	Venus at greatest brilliancy.

Subtract one hour for CDST, two hours for MDST, and three for PDST.

*Science News Letter, June 26, 1948*

### MEDICINE

## Way to Lessen Ear Damage From Streptomycin Found

➤ INNER ear damage that sometimes is caused by streptomycin treatment might be prevented by desensitization, two Columbia University ear researchers reported at the meeting of the National Tuberculosis Association in New York. They are Dr. Edmund P. Fowler, Jr., and Carl R. Feind.

Since tuberculosis patients getting streptomycin treatment must take the drug for weeks or months, the dizziness and other symptoms from its toxic effects on the inner ear may be troublesome. Some patients are extremely susceptible, others very resistant to this effect of the drug. In rare cases the hearing mechanism is also affected, but this is often reversible.

In experiments with cats and sala-

### MEDICINE

## New Drug for Epilepsy Shows Promise in Trials

➤ A NEW DRUG for epilepsy which has already proved itself in extensive clinical trials was announced by Dr. M. A. Spielman of Abbott Research Laboratories, North Chicago, Ill., at the first national medicinal chemistry symposium of the American Chemical Society in Ann Arbor, Mich.

The new drug is called Phenurone. It is a synthetic compound made from phenobarbital. Phenobarbital, one of the modern sleeping medicines, has itself been used to treat epilepsy.

Trials of the drug on patients were conducted by Dr. Frederick Gibbs of the University of Illinois College of Medicine, Chicago. He reported to Dr. Spielman that Phenurone showed considerable promise and can be widely applied to all three common types of epilepsy—petit mal, grand mal and psychomotor epilepsy.

*Science News Letter, June 26, 1948*

### AERONAUTICS

## 15 Turbo-Prop Engines Being Developed by British

➤ FIFTEEN types of British gas-turbine-propeller engines for airplanes are either in actual use or in various stages of development, it is revealed by the Society of British Aircraft Constructors, Ltd. This type of engine, known as the turbo-prop, is a gas turbine which drives conventional propellers.

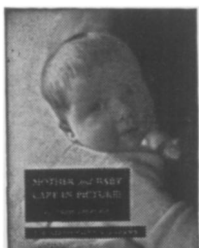
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