ASTRONOMY

# **Jupiter Now Prominent**

Brightest object in the sky, this planet is easy to locate low in the east on September evenings. Deneb-Vega-Altair form large triangle high overhead.

#### By JAMES STOKLEY

➤ FOR THE first time in several months, the planet Jupiter now appears on the accompanying maps, which shows the evening skies at about 10 o'clock, your own kind of standard time, on Sept. 1 and an hour earlier at the middle of the month. (Add one hour if you are on daylight time.)

With magnitude of minus 2.5, thereby exceeding in brilliance any star or other planet now visible, it is easy to locate, in the constellation of Pisces, the fishes.

Directly above Pisces a quadrilateral of stars forms the "great square" in Pegasus, the winged horse. The northernmost star in the square, that is, the one to the left, for it is resting on one corner, is actually not in Pegasus, but in the neighboring group of Andromeda.

Above Pegasus one comes to Cygnus, the swan, with a first-magnitude star called Deneb, which stands close to the zenith. It is at the top of the "northern cross," the rest of which extends toward the southwest. To the west of the cross, in Lyra, the lyre, is Vega, brightest star visible these evenings. Toward the south, we find Altair, in Aquila, the eagle. Deneb—Vega—Altair: these make a large triangle of stars, now high overhead, which is easy to locate.

#### Star Near Horizon

In addition, there are three other stars of the first magnitude visible these evenings, though all are near the horizon—so low that their light is considerably dimmed, on account of the greater thickness of the absorbing atmosphere through which it has to pass. In the northwest there is Arcturus, in Bootes, the bear-driver, which was high in the south at the beginning of summer. Capella, in Auriga, the charioteer, is seen in the northeast, the first harbinger of the bright stars that ornament the winter evening sky.

The third of these is Fomalhaut, in Piscis Austrinus, the southern fish, which is low in the south. Only in late summer and autumn does this southerly group come into view for us in the evening.

In addition to Jupiter, the planet Mercury makes a brief appearance in September, though just before sunrise rather than in the evening. On Sept. 16 it will be farthest west of the sun, and then will be seen at dawn, low in the east, near

the star Regulus, in Leo. the lion. Venus so conspicuous in our western evening sky until a month ago, is in line with the sun on Sept. 3 and invisible. However, by the end of September it will have moved far enough to the west that it will also be visible low in the east before sunrise. It will be very bright, of magnitude minus 4.2, so it will be easy to locate, and may even be followed into the sky after sunrise.

In September Mars is in the constellations of Cancer, the crab, and Leo, the lion. It rises a few hours ahead of the sun but is relatively faint, of the second magnitude, and will not be prominent. Saturn will be in the western evening sky at the beginning of September, though not easily visible, and on the 29th will be directly beyond the sun.

#### **Origin of Drawings**

A perennial puzzle among those who are beginning to study the stars is how anyone ever saw any resemblance between the stars of the constellation of Aquila, for example, and an eagle; or between those of Aquarius, which is shown on our maps in the southeast, and a man with a jar from which a stream of water is flowing. Yet, on the old star maps, this is the way these were pictured, while other groups had equally far-fetched interpretations.

Actually these figures go back to a famous artist and engraver of the early 16th century, Albrecht Durer of Nuremberg. Of course, they have been modified in the passing years since his time, and some new constellations have been added, but the essential appearance of such groups as Orion, the Great Bear, Pegasus, Cassiopeia and others is still much as Durer drew them.

Long before the birth of Christ, the Egyptians, and the Chinese as well, made outlines of the constellations. Probably the names of many of the groups we use originated in Mesopotamia. In Greece, Homer and Hesiod mentioned many of these. There grew up a mythology connected with the stars, though it is not known just how they did picture the figures around the stars.

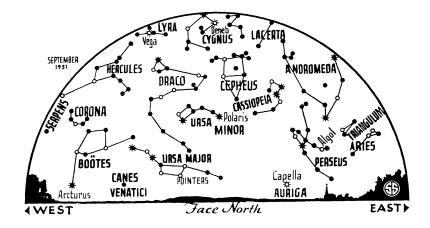
About 127 B.C., a Greek astronomer, Hipparchus, catalogued the principal stars. His successor, Claudius Ptolemy of Alexandria, Egypt, published these in 136 A.D. in his great work, which is known as the Almagest from its Arabic translation through which it first became known to European science. He listed 48 principal constellations.

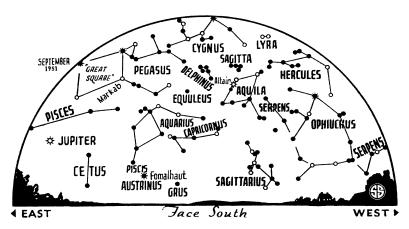
#### Published in 1515

It was in 1515 that Durer published two star maps, one for the northern hemisphere of the sky and the other for the southern, in the form of wood cuts. A mathematician of Nuremberg, named Heinfogel, laid out the stars, according to Ptolemy's list, but Durer's genius was responsible for the figures around them.

In 1603 Johann Bayer, of Augsburg, published a famous set of star maps, called the Uranometria, in which he introduced the practice, still followed, of designating stars by a Greek letter, in order of brightness within the constellation, followed by the Latin name (in the genitive case) of the group. Thus Deneb, as the brightest star in Cygnus, is alpha Cygni. For the figures, Bayer closely followed Durer, as did later astronomers who also published star maps. Thus, the Durer figures became classic, and it is fortunate that they originated with so able an artist.

However, there have been many attempts to introduce other figures around the stars. St. Bede, the English theologian, who died in 735 and is generally known as "The Venerable Bede," was dissatisfied with





★ ★ ○ • SYMBOLS FOR STARS IN ORDER OF BRIGHTNESS

Christians using the old pagan names, and proposed that the 12 constellations of the zodiac, through which move the sun and planets, should be named after the apostles.

This was actually done by Julius Schiller, of Augsburg, a friend of Bayer's, who published his own Christian star maps in 1627. Aries the ram, for example, became St. Peter, since it is considered as the first of the zodiacal constellations. Lyra was turned into the manger, Cygnus into the cross, and Cassiopeia into Mary Magdalene.

A different sort of reform was attempted later in the 17th century by Erhardt Weigel, of the University of Jena, who wanted to make the constellations represent the coats of arms of the various royal families of Europe.

The latest such attempt came about a decade ago when an English journalist, A. P. Herbert, who was member of Parliament for Oxford University, but was better known as a contributor to Punch, seriously proposed a new set of constellations. One of his ideas was that the stars in Aquila, and the nearby group of Delphinus, the dolphin, should be called the Music Makers, and individual stars in it named after Bach, Mozart and other great musicians. Draco, the dragon, in the northern sky, he wanted to call the Tyrants, and name the stars Hitler, Attila, etc. Needless to say, this idea was soon forgotten and the old names are

still with us, as they probably will be for a long time to come.

#### Celestial Time Table for September

Celeand		e lane loi sebieilinei
Sept.	EST	
ī 7:49	a. m.	Now moon, with annular eclipse of sun visible in North Carolina and Virginia and partial eclipse visible over eastern U. S.
3 10:00	a. m.	Venus between earth and
8 1:16	p. m.	Moon in first quarter
	a. m.	Algol (variable star in Per-
		seus) at minimum brightness
11 3:00	p. m.	Moon nearest, distance 228,-
12 11:11	n m	Algol at minimum
	a. m.	Full moon
	p. m.	Algol at minimum
	a. m.	Mercury farthest west of
10 11.00	a. 111.	sun-visible for a few days
		as morning star
	p. m.	Moon passes Jupiter
18 4:48	p. m.	Algol at minimum
22 11:13		Moon in last quarter
23 3:38	p. m.	Sun over equator, autumnal
		equinox which marks begin- ning of autumn in northern hemisphere
4:00	p. m.	Moon farthest, distance 251,- 200 miles
27 3:32	p. m.	Moon passes Mars
11:40		Moon passes Venus
30 8:57	p. m.	New moon
Subtract	one h	nour for CST, two hours for

MST, and three for PST.

Science News Letter, August 25, 1951

**GENETICS** 

## **Blood Group Inheritance**

A TENTH human character has been added to the nine others for which the manner of inheritance is known. The new character of known inheritance is a blood group named Kidd, or Jka, after the baby in which it was first identified last year in Boston, Mass. Of the other nine, seven are also blood groups. The others are ability to taste phenyl thiocarbamide, a chemical intensely bitter to some persons and taste-

less to others, and the secretion of the ABO antigens in saliva.

The way in which the new blood group is inherited is reported (NATURE, Aug. 4) by an international research team of scientists. Two members of the group are at the Medical Research Council, Blood Group Research Unit, Lister Institute, London. They are Drs. R. R. Race and Ruth Sanger. The Americans are at the Blood Grouping

Laboratory, Children's Medical Center, Boston, Mass. They are: Drs. Fred H. Allen, Jr., Louis K. Diamond and Bevely Niedziela.

The Kidd group is dominant, they found; two parents having it may have children who lack it, but two parents negative to it cannot have a baby who is positive.

The new blood group antigen is present in the red blood cells of 77% of Americans and the same proportion in England.

Science News Letter, August 25, 1951

PHYSIOLOGY

## If You Look at Eclipse Take Care of Your Eyes

➤ IF YOU LOOK at the solar eclipse Saturday morning, Sept. 1 (See SNL, July 28), be sure to protect your eyes. Even though the sun will rise partially eclipsed for many in the central and eastern states, observers should look at this heavenly show through several layers of overexposed photographic film or a piece of glass densely smoked by candle flame.

Each solar eclipse takes its tragic toll of vision. The delicate interior membranes of the eye cannot withstand even the partially eclipsed glare of the sun without special protection, reports the Better Vision Institute.

Sunglasses, and even welder's goggles, afford inadequate protection. Ninety-nine percent of the sport glasses that people buy transmit over 80% of the light and are totally inadequate for looking at the sun, reports the Joint Committee on Industrial Ophthalmology of the American Medical Association and the American Academy of Ophthalmology and Otolaryngology.

People sometimes try to protect their eyes while looking at an eclipse by peeping through their fingers or through a pinhole in a card. Such methods are usually inadequate if the glare is bright.

Science News Letter, August 25, 1951

INVENTION

### Better Concentrated Coffee With Steam Treatment

➤ BETTER COFFEE of the concentrated type is promised by Lee Nutting, Berkeley, Calif., by a process to retain full flavor on which he was awarded patent 2,562,206. Rights are assigned to Hills Bros. Coffee, Inc., San Francisco. In his method the ground roasted coffee is treated with steam to remove the volatile constituents. These are collected from the steam and returned to the beverage brewed from the coffee after the brew has been greatly reduced in volume by an evaporation method. The mixture is then completely dried to give the final product.

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