ASTRONOMY

Planets Still Bright

By the Fifth of March, However, Elusive Mercury Will Disappear in Sun's Light; Spring Is Coming

By JAMES STOKLEY

THE unusual display of the planets which is seen in the western evening sky at the end of February will still be visible on the first few evenings of March.

Soon after sunset, Mercury is seen near the horizon. Higher, and brighter, is Jupiter. Above him, brightest of all, is Venus. Then comes Saturn, which is fainter, and then Mars, the faintest of the five. Thus, all of the planets which are ever visible to the unaided eye are seen at once (*See SNL, Feb. 17 for map.*)

However, even at the first of March, Mercury will be approaching the sun. By about the fifth of the month it will set so soon after sunset that we cannot see it. About March 12, however, the crescent moon will be among the four that remain, making a most striking spectacle.

Jupiter and Saturn, as well as Mercury, go down too soon after the sun to be shown on the accompanying maps, which give the sky's appearance later in the evening: at 10:00 p.m. on March 1, 9:00 p.m. on the 15th and 8:00 p.m. on the 31st. Mars and Venus, however, are shown in the constellation of Aries, the ram.

The planets are like the earth, part of the solar system of bodies revolving around the sun. The stars are distant suns, each a glowing globe of gaseous matter, and arranged into the familiar constellations. To the southwest is the bright group of figures which make the evening skies of winter and early spring so brilliant. Orion, the great warrior, may be identified by the row of three stars forming the belt. To his right, high in the west, is Taurus, the bull, with ruddy Aldebaran to mark the eye. To the left of Orion, and lower, in the southwest, is Sirius, the dog star, part of Canis Major, the great dog. Sirius is the most brilliant star to be seen at night. It is really not very bright, however, but appears so because it is quite close.

Above Canis Major is Canis Minor, the lesser dog, with Procyon. Almost overhead is the figure of Gemini, the twins, with Castor and Pollux. The latter, to the south, is the brighter. High in the northwest is Auriga, the charioteer, with brilliant Capella.

To the southeast is Leo, the lion, in which is found a smaller group called the sickle. Regulus, the bright star at the end of the handle of the sickle, forms the lion's shoulder. Around to the northeast is the ever-familiar great dipper, part of Ursa Major, the great bear. Cassiopeia, the queen on her throne, is in the northwest, and between this and the dipper is the pole star, which itself is in the little dipper, or the little bear, Ursa Minor.

The earth has many motions. Not only does it turn on its axis and give us alternation of light and darkness from which we get the period called the day, but it also revolves around the sun, and this motion times for us the year. Since the stars, though bodies like the sun, are so much farther away, we see the sun at different times of year against a different background of stars. That is, we would see it if the stars near the sun were visible, as they are, indeed, at the time of a total eclipse of the sun.

Because the axis of the earth is not at right angles to the plane in which it travels about the sun, at one time the north pole, and the greater part of the northern hemisphere, is tilted toward the sun. Then, in the northern hemisphere, the sun is high, and we have summer. When, six months later, the south pole is tilted toward the sun, it is summer in the southern hemisphere and winter in the northern hemisphere.

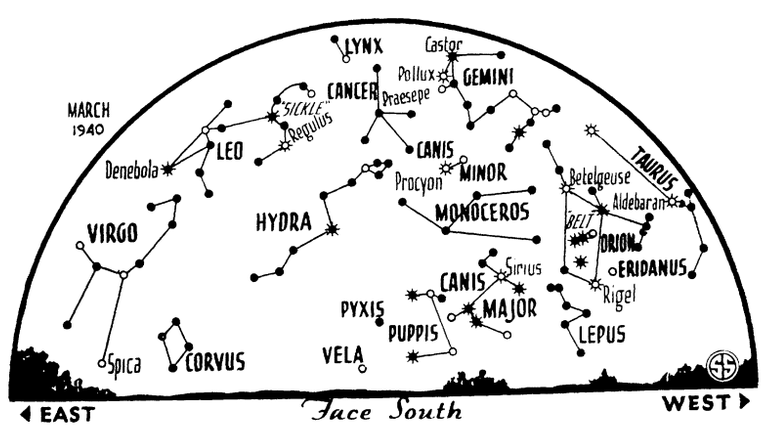
Halfway between these positions, each pole is the same distance from the sun, which is then directly over the equator. Since, at these occasions, day and night are approximately equal, we call these the equinoxes.

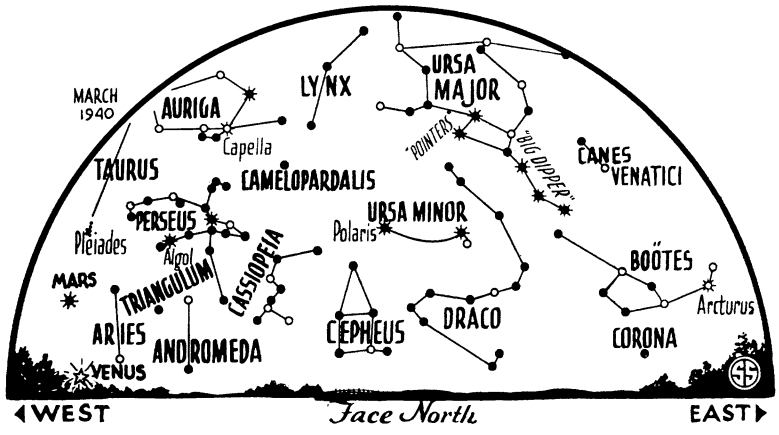
The vernal equinox is the one that occurs in March, which, in the northern hemisphere, marks the beginning of spring. It used to mark the beginning of the year also. In England, before the Gregorian calendar was adopted in 1758, this was the case, and the same year number was used in January and February as they had used in the previous December. Thus, we celebrated the 200th anniversary of George Washington's birth in 1932, but at the time he was born, his neighbors and family would have told you the year was 1731.

Since the time of the vernal equinox marks the reawakening of nature after it has been sleeping during the winter, early man regarded it as most important. Among the Saxons, this time of year was dedicated to Ostara, the goddess of spring. Our word Easter is simply a corruption of her name.

The Jewish Passover also was originally a springtime festival. Their calendar was, as it is now, a lunar one, and they celebrated it during the month of Nisan, the first of their ecclesiastical year. This, like all their months, begins with a new moon; in this instance it is the one on or soon after the vernal equinox. Passover comes on the 14th of Nisan, that is, on the first full moon after the vernal equinox.

Because Christ celebrated Passover





just before the Crucifixion, the Christian Easter has always had a close connection with Passover. In the year 325 A.D. the Council of Nicaea met, and set the rules still used to determine Easter. Before that time there had been some controversy as to whether Easter should be celebrated at the same time as Passover, or on a Sunday, and the latter side won.

As the vernal equinox then came on March 21, it was decided that Easter should be the Sunday following the first full moon on or after March 21. Thus, the earliest that Easter can possibly occur is March 22, which happened last in 1818. Then the moon was full on March 21, which was a Saturday, so the next day was Easter Sunday. In 1845, 1856 and 1913, it came on March 23.

This year the sun actually crosses the equator on March 20 at 1:24 p.m., eastern standard time. That marks the official beginning of spring, but the ecclesiastical equinox comes, as always, on the 21st, which is Thursday. The moon is full on Saturday, the 23rd, so Easter Sunday is March 24, an unusually early date. Not again this century will it come so early, though in 1951 it will fall on the 25th of March.

Perhaps, by then, there will be a fixed Easter. With so many things depending on Easter, the shifting back and forth is very confusing, and it has been suggested that a fixed time, say the second Sunday in April, be set to celebrate it. There seems to be no essential religious objection, for the date of Christmas once wandered about until it was fixed a long time ago on December 25. In England, as a matter of fact, a law was passed by Parliament more than a decade ago fixing Easter, though it does not take effect until other nations have agreed to do likewise. We hope that, before many years have passed, it will be possible to get sufficient agreement between the nations of the world that such a decision may be made.

Celestial Time Table for March

Friday, March 1, 9:22 p.m., Algol at minimum. **Monday, March 4,** 6:11 p.m., Algol at minimum. **Friday, March 8,** 9:00 a.m., Venus passes Saturn; 9:23 p.m., New moon; 12:00 p.m., Moon farthest: 252,600 miles away. **Monday, March 11,** 3:25 a.m., Moon passes Jupiter. **Tuesday, March 12,** 9:01 a.m., Moon passes Saturn; 5:47 p.m., Moon passes Venus. **Wednesday, March 13,** 6:41 p.m., Moon passes Mars; 10:06 p.m., Moon passes Uranus. **Thursday, March 14,** 4:00 p.m., Neptune nearest; 2,716,000,000 miles away. **Saturday, March 16,** 1:00 p.m., Mars passes Uranus; 10:25 p.m., Moon at first quarter. **Tuesday, March 19,** 2:17 a.m., Algol at minimum. **Wednesday, March 20,** 1:24 p.m., Sun crosses equator; spring commences. **Thursday, March 21,** 1:07 a.m., Algol at minimum. **Saturday, March 23,** 5:00 a.m., Moon nearest; 221,900 miles away; 1:33 p.m., Full moon. **Sunday, March 24,** 7:56 p.m., Algol at minimum. **Tuesday, March 26,** 9:00 a.m., Venus passes Uranus. **Saturday, March 30,** 11:20 a.m., Moon in last quarter.

Eastern Standard Time throughout.

Science News Letter, February 24, 1940

MEDICINE

Hail Reopening of Popular Medical Exhibits

THE REOPENING on May 11 of the popular medical and public health exhibits of the N. Y. World's Fair, announced by Dr. Louis I. Dublin, acting chairman of the American Museum of Health, is being hailed by lay people and medical and health authorities.

The exhibit last year "gave to several million people from the United States, Canada and elsewhere valuable, life-saving knowledge," Surgeon General Thomas Parran, U. S. Public Health Service, declared in a letter to Dr. Dublin.

The federal health service cooperated with the American Museum of Health in a visitor reaction study which showed that visitors to the medical and health exhibits gained from them vitally useful knowledge of health and medical matters.

New exhibits, to be announced later, will be added to the Carrel-Lindbergh "heart," the Transparent Man and other dramatic exhibits which last year vied in popularity with such industrial features as the General Motors Futurama and the American Telephone and Telegraph Company's Voder. The medical and public health exhibits last year drew a record-breaking attendance of 7,500,000 visitors, approximately one out of every three World's Fair visitors, and more by 2,000,000 than the total attendance of any previous public exhibit of medicine and public health anywhere in the world.

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The world's smallest known flowering plant is watermeal, about one thirty-second of an inch in diameter.

A Chinese cast-iron stove more than 1,700 years old, exhibited at the Field Museum, has a chimney and five cooking holes on top.