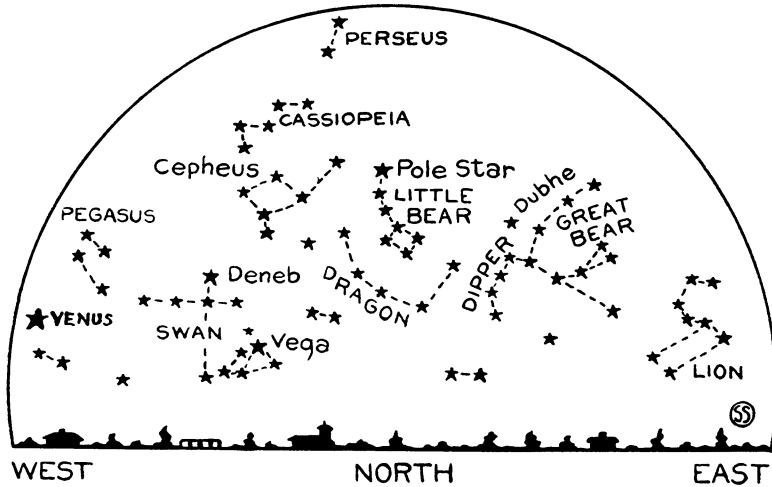


Eclipse Feature of Astronomical Year

Astronomy



By JAMES STOKLEY

This month marks the inauguration of a year with several important celestial events, chief of which is the best total eclipse of the sun in recent years. Part of the year will see the planet Venus at unusual brilliance. An annular eclipse of no great scientific value, but interesting as a spectacle, will occur. The Leonid meteors next November, should become a little more numerous than they have been in past years. Several comets will return to the neighborhood of the earth, while other new ones, that have never before been seen, will undoubtedly come into view.

The sun eclipse occurs on May 9. As the moon's shadow sweeps across the earth, it will cut a swath over parts of Sumatra, the Malay Peninsula, French Indo-China and the Philippine Islands. As a total eclipse affords astronomers their only opportunity of seeing the corona, the outer layer of the sun, and of making certain other observations, they will travel from all parts of the world to see it. In addition it will be of interest as a spectacle—perhaps the most magnificent that the eye of man can behold. Anyone whose business takes him to this part of the earth should surely arrange to see it.

Many astronomers at this early date have made plans to see this eclipse. It is the most favorable in a number of years and the first that has afforded really good chances of being successful since 1926. In that year, on January 14, there was a total eclipse visible in the same part of the world. Malaysia has been unusually favored with eclipses in recent years, because one was also

seen in Sumatra on May 18, 1901. The one of 1926 started in Africa, passed north of Madagascar, across the Indian Ocean, Sumatra, Borneo and Mindanao.

In the eclipse next May the shadow of the moon first touches the earth south of Madagascar, then it crosses the Indian Ocean to northern Sumatra, the Malay Peninsula, the southern tip of French Indo-China, and a number of the Philippine Islands, including Lawan, Panay, Negros, Cebu and Leyte.

It is impossible for an eclipse at any one place to last for more than 7 minutes and 40 seconds. Usually it is much less. While this year's eclipse is not as favorable as that of 1901, which lasted six minutes, it is much better than the one of 1927 in England, or the one of 1925 in New England. The coming eclipse will last about five minutes in Sumatra and nearly four minutes in

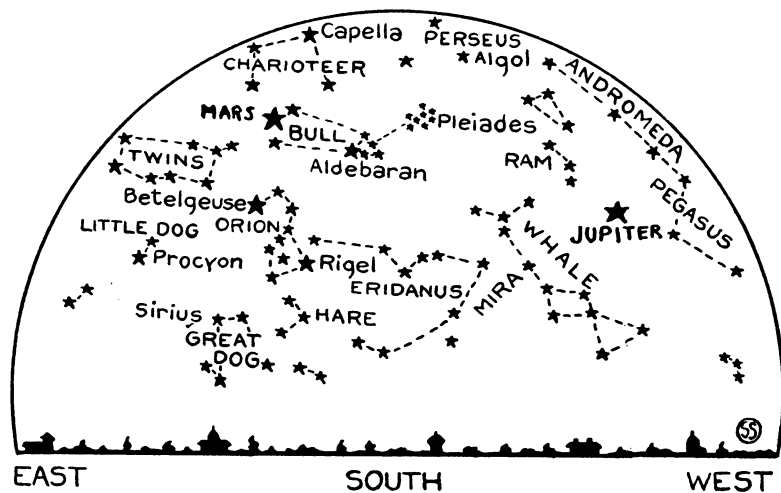
the Philippines.

Although the weather outlook is not perfect, there is more than an even chance of clear skies. The astronomer can predict the exact time of an eclipse years in advance but the weather is more fickle than the heavenly bodies. The specialist must take his chances with the clouds on the same basis as the ordinary layman. When he travels half way around the world to observe an eclipse, however, he chooses the place with the best record of clear weather.

In order to provide astronomers intending to visit the Philippines with meteorological information, Rev. Miguel Selga, S.J., head of the Weather Bureau in the Islands, has made a special study of conditions along the path of the eclipse. This shows that conditions are fairly good at Iloilo, on the Island of Panay. The conditions seem somewhat better at Cebu, but the town is farther from the center of the path, and the eclipse is briefer.

After this year there is not an eclipse in the Philippines until 1955. Although over seven minutes in duration, it occurs on June 20, during the rainy season, when there is little clear weather.

The eclipse this May will not be visible at all in the continental United States. Americans must be content with some of the less striking, but none the less interesting, astronomical happenings. During February and March, Venus will be high in the western evening sky, and will be brighter than it has been for many years. It will be (*Turn to next page*)



THESE MAPS show the sky as it appears these January evenings. Just hold them in front of you as you face north or south, and the upper or lower will represent the stars you see on a clear night.

January Star Story—Continued

half way from the horizon to the zenith at sunset, and will be conspicuous throughout the evenings. In fact, it will be bright enough to cast a shadow of its own on a dark night, for the only regular heavenly inhabitants that exceed it in brightness, when it is at its brightest, are the sun and moon.

The year's second eclipse will occur on November 1, visible from Africa. This eclipse will be "annular", not total. The entire edge of the sun will be visible as a luminous ring around the dark moon. Interesting as it will be to watch, such an eclipse lacks the spectacular features of a total eclipse, such as the appearance of the corona, and is of little scientific value.

This should be a good year for meteors, especially next November. On the nights of the 14th and 15th the earth enters the swarm of Leonids, so called because when we see them they seem to emerge from the constellation of Leo. At intervals of 33 years these meteors become especially numerous. The last maximum occurred in 1899 and 1900, so that we are within a few years of the next. This November should bring a better display than we have had for several years.

Another meteor shower that the year will bring forth will be the Perseids, on August 11 and 12. The Andromedes come on November 20 and 23, but are not as numerous as the Perseids.

Comets also should be coming along. The year 1928 was rather disappointing in this respect. Nine comet discoveries were credited to 1927, and the two years previous were also quite fruitful in this respect. During 1928, only three were found, and two of these dated from the beginning of the year. One was found by a German, Reinmuth, the second by a Frenchman, Giacobini, and the third by a South African, Forbes. Three times during the year comets were reported, but all of these were later discovered to be due to errors. One such report proved to be really a photographic defect on a plate, while another was an asteroid, or tiny planet.

Metcalf's comet, found in 1906 by the late Rev. Joel Metcalf, a New England Unitarian minister who was also an accomplished astronomer, is expected back in 1929. So is Daniel's comet, found in 1909. Two comets that had been expected in 1928,

Holmes' and Encke's, had not yet been found in November, and probably were lost. Metcalf's comet has not been seen again since the year of its discovery, and neither has Daniel's, so they cannot be counted on. But there is always the possibility that a really bright comet may turn up unexpectedly, like the first one in 1910. Not since then has the earth seen a really first-rate comet.

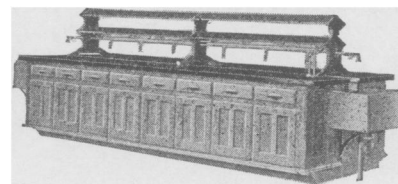
The maps show the principal stars in the sky in January. Sirius is the brightest of them all. In the south is the familiar group of Orion, with the three stars forming the warrior's belt. Below the belt is Rigel, and above is the reddish Betelgeuse. Procyon, in Canis Minor, the little Dog, is not far from Sirius. Capella, in Auriga, the Charioteer, is nearly overhead. In the southern sky, in Taurus, the Bull, is red Aldebaran, Eastward, in the sickle of Leo, is Regulus.

Mars, the red planet, is also in the constellation of Taurus. It need not be confused with Aldebaran, however, for the planet is considerably the brighter of the two, and its light is more steady than that of the twinkling star. Jupiter is shining brilliantly in the southeast. Lower down in the same quarter of the sky is Venus, not so bright as Jupiter just now; although she will soon surpass him.

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