

ASTRONOMY

Meteor Shower

If you wish to sit up late on August 11, you will be rewarded by seeing the Perseids at their maximum. Sky holds bright stars, but planets are close to sun.

By JAMES STOKLEY

► ALTHOUGH there are four planets in the August evening sky, they are all so near the sun that they will be hard to see, and none are in a position to be indicated on the accompanying maps, as these show the appearance of the heavens at 11:00 p.m. about Aug. 1 and an hour earlier in the middle of the month.

Venus is the brightest of these planets. On June 26 it passed behind the sun, from west to east, so now it remains in the western sky for a while after the sun has gone down, but it still does not set late enough to be seen easily. However, if you watch the low western sky, as twilight falls, you may be rewarded with a sight of this planet, especially at the end of August.

On the evening of Aug. 19, the narrow crescent of the moon, a little more than a day old, passes Venus, and may help one to find the planet. In another month or two, Venus will have moved far enough east of the sun to be seen readily, and during the autumn it will be the bright evening "star."

Mercury reaches "greatest eastern elongation," when it is farthest east of the sun, on Aug. 10, but it also is well to the south of the sun, and hence this will not be a good time to see it, for even at sunset it will only be about 9 degrees above the horizon, which is a tenth of the distance from horizon to zenith. Jupiter is also nearby, and Venus passes it on Aug. 13. However, the former planet is considerably the fainter, and will hardly be visible.

Mars Is Faint

Higher in the sky, where the moon passes it on the 20th, about 24 hours after it goes by Venus, is Mars, but its brilliance is down to the second magnitude, so it also will be hard to see. Therefore, if you want to see a planet without too much difficulty, you had better stay up late and look to the east a couple of hours before sunrise. Appearing some four hours before the sun is the planet Saturn, the one with the rings. Of the first magnitude, it will be easy to locate.

During the coming months Saturn will rise earlier and earlier, and by November will be visible all night.

But though the planets put on a poor show this month, the stars are with us, as always. In the southwest there is the scorpion, Scorpius, with the bright and ruddy Antares. Directly overhead, as shown on the maps, is Vega, in Lyra, the lyre. To the southeast of Vega is another first magnitude star, Altair, in Aquila, the eagle; and to the southwest is Deneb, in Cygnus, the swan. The fifth, and only remaining, first magnitude star that the maps show is Arcturus, in Bootes, the bear driver, directly west and about a third of the way from the horizon to the zenith.

This August, as every August, there comes the return of the Perseid shower of meteors, or "falling stars." On any clear dark night, if you watch the sky for a time, you can see a few such meteors, perhaps an average of one or two an hour.

More After Midnight

There are always more after midnight. The reason is that we are then on the forward side of the earth and meet these objects head on, while during evening hours they have to catch up to us.

Most meteors are pretty small things, about as big as the head of a pin, or smaller. Entering the earth's atmosphere there is enough friction, even with the rarefied gases 50 miles or more above the surface, to burn them up, and they

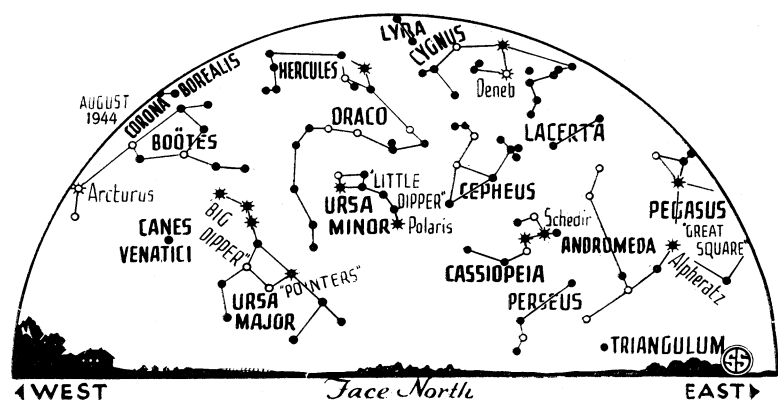
disappear in a flash of light. Many millions come into the atmosphere daily, and only rarely is there one large enough to survive the encounter with the air, and to reach the ground. Then it is called a meteorite.

In addition to the stray meteors, which are scattered around the solar system, and which the earth is continually picking up, there are several recognized streams of them, each the remains of a comet. As the earth crosses these streams, the number of meteors seen becomes more numerous. Since the meteors of such a stream are moving in parallel paths, the tracks that they make in the sky seem to converge in the distance, like the parallel tracks of a railroad.

Come From Perseus

The constellation toward which these paths seem to point gives the shower its name, and since for the August meteors this is Perseus, these are called the Perseid meteors. Some are seen on nights from about Aug. 9 to 12, but that of Aug. 11 will be about the maximum of the swarm. Some may be seen in the evening, but as mentioned before, they will be more numerous in the early morning hours, when they may appear at the rate of one or two a minute. The moon is at last quarter around this time in August, when it rises about midnight, so its light will interfere to some extent with the meteors, not nearly as much, however, as if it were in the full phase.

Astronomers who make a specialty of studying meteors are always glad to have volunteer help in counting the members of one of these showers. The simplest of such counts is to record the



number visible during half-hourly periods—say from midnight to 12:30, 12:30 to 1:00, and so on. Such records may be sent to Dr. Charles P. Olivier, director of the Flower Observatory of the University of Pennsylvania, which is located at Upper Darby, Pa. He is president of the American Meteor Society and depends largely on amateur observations for his data.

Celestial Time Table for August

Aug.	EWT	
4	8:39 a.m.	Full moon.
5	6:00 p.m.	Moon nearest distance 223,-700 miles.
10	10:00 a.m.	Mercury farthest east of sun.
	10:52 p.m.	Moon in last quarter.
11		Perseid meteors.
13	9:00 a.m.	Venus passes Jupiter.
14	4:03 p.m.	Moon passes Saturn.
18	4:25 p.m.	New moon.
19	9:42 a.m.	Moon passes Jupiter.
	11:03 p.m.	Moon passes Venus.
20	2:43 p.m.	Moon passes Mercury.
21	12:27 a.m.	Moon passes Mars.
	2:00 a.m.	Moon farthest, distance 252,-500 miles.
26	7:39 p.m.	Moon in first quarter.
31	2:00 a.m.	Jupiter behind sun.

Subtract one hour for CWT, two hours for MWT, and three for PWT.

Science News Letter, July 29, 1944

MEDICINE

Wounded Are Transferred Just Out of Jap Range

See Front Cover

► MODERN METHODS of transferring the wounded insure prompt and efficient attention with minimum amount of discomfort. No longer is it necessary for a wounded man to be transferred in a small, tossing boat.

The casualties of Saipan, shown in the official U. S. Navy photograph on the cover of this SCIENCE NEWS LETTER, are transferred from the destroyer in the background to a larger ship. One wounded man is riding halfway across in his stretcher, while another is being secured to the breeches buoy on the deck of the destroyer.

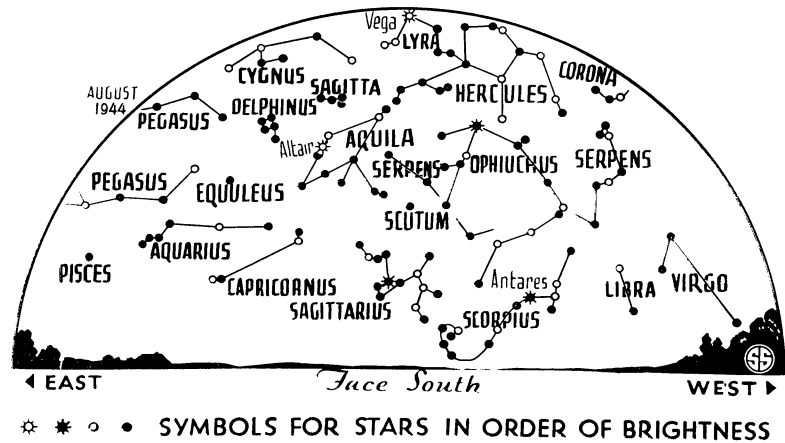
Science News Letter, July 29, 1944

CHEMISTRY

Dr. Cope to Receive American Chemical Award

► AMERICA'S foremost young chemist of the year is Dr. Arthur C. Cope, 35, associate professor of chemistry in Columbia University. He will be presented in September the \$1,000 American Chemical Society award in pure chemistry. His researches on vinyl and allyl chemical types have been of value in the fields of plastics and drugs.

Science News Letter, July 29, 1944



ECONOMICS

Wartime Food Needs Met

Civilian supply involves distribution, conservation, and education as well as production. Nutritional adequacy is the goal.

► HOW CIVILIAN wartime food needs are being met by the government was outlined at the Minneapolis meeting of the American Association of Cereal Chemists by R. C. Sherwood of the U. S. War Food Administration. The problem of feeding the civilian population with nutritional adequacy, he said, involves distribution, conservation, and education, as well as production.

To assure proper feeding of civilians in all parts of the country it was necessary, he stated, to determine how much of the many foods eaten is required and how much is available, to promote production when shortages are imminent, and to help direct distribution in the most equitable manner whether the supply is short or in surplus. In addition, the special needs of special groups, he explained, must receive attention. These include industrial war-workers, isolated groups, infants, invalids, hospitalized patients, pregnant and nursing women, and aged persons.

"Providing adequate food for industrial war workers to promote health and maximum efficiency," Mr. Sherwood declared, "is a specially important phase of civilian feeding. However, it is not the sole responsibility of Government; industrial management must recognize its responsibility for the nutrition of its employees. The speaker continued, "When food rationing began it was soon discovered that special treatment was needed for heavy workers in isolated lo-

cations, for example, loggers and miners, who are frequently far removed from the source of many unrationed foods."

Equitable distribution of food, he explained, is not synonymous with uniform distribution: "Many of our foods have never been uniformly distributed. Consumption habits vary. Per capita averages of national consumption are very useful figures, but they rarely serve as distribution guides."

Equitable distribution assures that each individual gets his fair share of the nutrients in the Nation's food supply, he added.

Essentiality of usage is the guiding influence, Mr. Sherwood continued: "It has long been the policy of WFA to distribute scarce commodities, insofar as practicable, in the most advantageous manner to encourage consumption of relatively abundant foods."

The present and probable supply of food for the American civilian population, after military needs are taken care of, was reviewed by the speaker.

"Estimates of current food supplies," he said, "show that we can be a fairly well-fed nation, with only minor changes in eating habits, none of which need impair nutrition. The danger of crop failures is always present."

Science News Letter, July 29, 1944

One-third of the area of the United States is better suited for the growing of trees for lumber and new wood derivatives than for other crops.