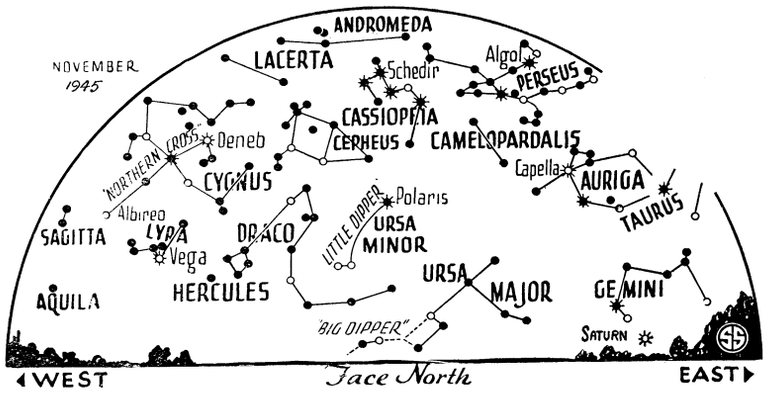

when the opposition occurs at this position, that is the separation of the planets. The opposition next January will occur when they are in parts of their orbits that are very far apart.

On the evening of Nov. 23, when the moon rises, people in the western part of the country will see Mars just above it. But in the east, people watching the moon rise, will not see Mars at all. For there, at that time, Mars will be hidden, or occulted, behind the moon. In Europe it will be possible to see Mars before its immersion, or covering, by the moon, but even in the eastern part of the United States this occurs before moonrise. At Washington the planet will reappear from the moon's limb at 9:29 p.m., E.S.T. Throughout the east the reappearance will be at a time not very different from this. In western Massachusetts, for example, the reappearance, or emersion, will occur at 9:32 p.m. Farther west, of course, the planet will be uncovered before the moon rises at all, so people there will only be able to see the moon and planet unusually close together.

Meteor Showers

November brings one of the most famous of meteor showers, the one in which the "shooting stars" seem to radiate from the constellation of Leo. This shower is therefore called that of the Leonids. About the night of Nov. 15, the earth will pass through this swarm of cosmic dust, which moves in a vast orbit around the sun, and on that night there will be more meteors visible than ordinarily. However, conditions will not be especially favorable, because the moon will be nearly full and shining brightly most of the night. Consequently its glare will hide many of the Leonids. With any meteor shower, more can be seen after midnight than before, because then we are on the forward side of the earth and meet them coming, while during the evening those that appear must catch up to us. So if you are watching for meteors on the night of the 15th, you will have to stay up late to see them at their most numerous.

Celestial Time Table for November

NOV.	EST	
2	7:19 a. m.	Moon passes Jupiter
	2:51 p. m.	Moon passes Venus
3	10:44 p. m.	Algol (variable star in Perseus) at minimum
4	11:00 a. m.	Moon farthest, distance 252,700 miles
	6:11 p. m.	New moon
6	7:32 p. m.	Algol at minimum
12	6:34 p. m.	Moon in first quarter
15	Early a. m.	Leonid meteors
17	3:00 p. m.	Mercury farthest east of sun
18	9:00 p. m.	Moon nearest, distance 221,900 miles
19	10:13 a. m.	Full moon
21	3:37 a. m.	Algol at minimum
23	8:06 a. m.	Moon passes Saturn
	10:20 p. m.	Moon passes Mars
24	12:26 a. m.	Algol at minimum
26	8:28 a. m.	Moon in last quarter
	9:15 p. m.	Algol at minimum
29	6:04 p. m.	Algol at minimum
30	12:25 a. m.	Moon passes Jupiter

Subtract one hour for CST, two hours for MST, and three for PST.

Science News Letter, October 27, 1945

ORDNANCE

Japs Got Greater Tonnage Of Incendiary Bombs

➤ THE JAPS were on the receiving end of a greater weight of air-borne American incendiary bombs than the Germans, although the actual number of such bombs dropped on the Japs was less than the number unleashed in the sky over Germany. This is because a new type of bomb, known to soldiers as the "goop," came into action relatively late in the war. This bomb is much heavier than those used previously, and also much more destructive.

The "goop" is a pyrogel bomb, containing napalm, or thickened oil, as an ingredient. Over 88,000 tons of various napalm type bombs were dropped in the Pacific area, while about 42,000 tons were used in the European area. These are figures just released by the Chemical Warfare Service.

Approximately 50,000,000 Chemical Warfare Service incendiary bombs were dropped from the air in the late war. Of this number, more than 28,000,000 fell on Axis targets in the European and Mediterranean theaters, and more than 19,000,000 on Japanese installations. The fire tonnage in the Pacific area was 122,000, against 120,000 tons in Europe.

The most used individual bomb in number and tonnage was the M50 four-pound magnesium firestick, dropped in clusters. More than 37,000,000, or 92,000 tons, of these were unleashed on all theaters.

Science News Letter, October 27, 1945

GENERAL SCIENCE

Competition Announced for Five $1500 Scholarships

➤ FIVE $1500 science scholarships at the University of Rochester, open to students in nearly 3,000 high schools and preparatory schools, are announced by the University and by the Bausch and Lomb Optical Company, sponsors of the scholarships. This is the third year of the competition.

The scholarships will be awarded next spring, after a competition among students who have become eligible through the winning of honorary award medals offered by Bausch and Lomb. Winners are brought here for final tests and interviews, and are entertained for two days with all expenses paid.

Science News Letter, October 27, 1945

Of the 7,306,000 *troops* shipped overseas in the past four years, 4,687,850 departed from East Coast ports, 2,451,000 from the West Coast, and 167,000 from Gulf Coast ports.