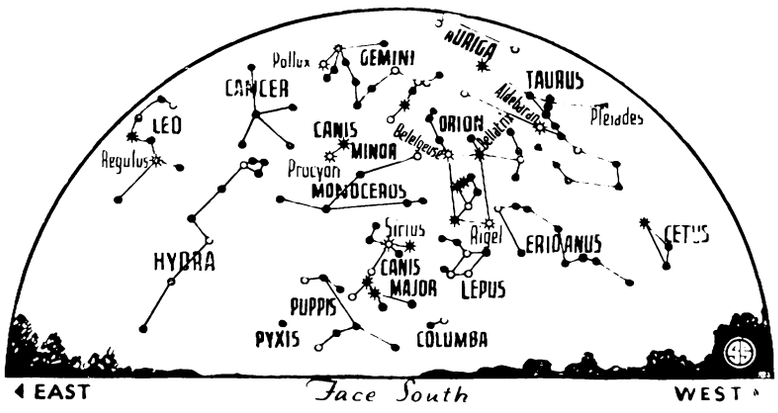

ward, is the great dipper, part of Ursa Major, the great bear. The two uppermost stars are the pointers, indicating the direction of the Pole Star, itself at the end of the handle of the Little Dipper, and part of the little bear, Ursa Minor. In the northwest is the figure of Cassiopeia, shaped like a W lying on one side, and above is Perseus.

Four Planets Visible

All the objects mentioned above can be found on the accompanying maps, which show the appearance of the skies at 10:00 p. m., February 1; 9:00 p. m. on the 15th, and 8:00 p. m. on the 28th.

There is also indicated, low in the west, the planet Saturn, which is yellowish in color, and brighter than most of the stars. Saturn sets about four hours after the sun, while a second planet, Jupiter, can be seen just after sunset. It disappears about an hour after the sun. Mercury is not visible at all this month, but Mars, in the constellation of Scorpio, and of the first magnitude, rises toward the southeast about an hour after midnight. Its steady red glow makes it easily recognizable. Venus, in Sagittarius, the archer, comes up about two and a half hours before the sun, and is of magnitude minus 4, far brighter than any other star or planet.

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Celestial Time Table

Date	*Time (E.S.T.)*	*Event*
Fri. 3	1:33 a. m.	Algol at minimum brightness.
	7:00 p. m.	Moon nearest earth, distance 221,600 miles.
Sat. 4	2:55 a. m.	Full moon.
Sun. 5	10:23 p. m.	Algol at minimum.
Fri. 10	11:12 p. m.	Moon at last quarter.
Sat. 11	4:01 p. m.	Algol at minimum.
Sun. 12	7:30 a. m.	Moon passes Mars, less than four lunar diameters to the north.
Tue. 14	9:47 p. m.	Moon passes Venus, about three lunar diameters to the north.
Thu. 16	9:00 p. m.	Moon farthest from earth, distance 252,600 miles.
Sat. 18	9:00 p. m.	Mercury in line with sun.
Sun. 19	3:28 a. m.	New moon.
Mon. 20	7:25 a. m.	Moon passes Jupiter, about eleven lunar diameters to the north.
Thu. 23	12:43 a. m.	Moon passes Saturn, about nine lunar diameters to the north.
Sun. 26	12:08 a. m.	Algol at minimum.
	10:26 p. m.	Moon at first quarter.
Tue. 28	8:57 p. m.	Algol at minimum.

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● Earth Trembles

Information collected by Science Service from seismological observatories and relayed to the U. S. Coast nd Geodetic Survey and the Jesuit Seismological Association resulted in the location of the following preliminary epicenter:

Friday, January 20, 5:40.3 p. m., E.S.T.

Off Pacific coast of Central America. Latitude 13 degrees north, longitude 90 degrees west, approximately.

For stations cooperating with Science Service in reporting earthquakes recorded on their seismographs see SNL May 21, 1938.

PHYSICS

High-Speed Electrons Create Strange Glow

HIGH-SPEED "bullets" from the "atom gun" at the University of Notre Dame are being used to study a strange bluish-white light which is found in liquids when they are bombarded with swift-traveling electrons.

This strange light, known as Cerenkov radiation after the Russian scientist, P. A. Cerenkov, who discovered it in 1934, is produced when the electrons are traveling through a liquid with a speed greater than the speed of light in that liquid.

The original discovery was made with beta-ray electrons given off by radium. These electrons come off with all sorts of speeds. While they were useful in creating the faint blue-white light in a liquid they could not be used for a quantitative study of the phenomenon.

Controlled Electrons

Prof. George B. Collins and Victor G. Reiling of Notre Dame, therefore, took up the light's study, using electrons whose speed and energy were definitely controllable. Electrons having energies of 2,000,000 electron-volts from Notre Dame's electrostatic generator were used.

These swift electrons were shot into a vessel containing a liquid and a small sheet of mica or cellophane. The light produced was caught and analyzed by a spectograph placed at right angles. Alcohol, benzene and water were the three liquids used.

It was found that the radiation was continuous and extended from the long-wave sensitivity of the spectrum plate into the region of the ultraviolet where absorption occurs in the particular liquid used.

The intensity of the Cerenkov rays was found to be greater in the shorter wave lengths than are rays produced by a tungsten lamp in the same region.

The theory of the origin of the rays had previously been worked out by the Soviet scientists I. Frank and Ig. Tamm from Cerenkov's original work. This theory was confirmed by the Notre Dame work.

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● Adventures in Science

Science Service's radio program presenting news and interpretations of science with noted scientists as guest speakers. Over the nation-wide network of the Columbia Broadcasting System, Thursdays, 7:15 p. m. EST. Listen in!