



parent and we now call them gaseous nebulae.

This did not, however, explain the source of energy which keeps such a nebula glowing, but now it is believed that the process is the same as that which takes place in a fluorescent light. In one of these lamps an electrical discharge passing through mercury vapor causes it to give off some blue light, and a great deal of ultraviolet radiation, which is similar to light, but consists of waves too short to affect the eye. The tube is lined with a fluorescent material called a phosphor. When ultraviolet rays hit atoms in the phosphor some of the electrons are knocked out of their usual orbit in which they revolve about the atomic nucleus. Soon, however, they fall back into place and when they do they give off visible light. Most of the gaseous nebulae have very hot stars at their center which are giving off much ultraviolet, and these rays similarly knock electrons out of the atoms of the nebulae. Falling back, they give off light, some of

which eventually reaches us.

Time Table for February

Feb.	EST	
1	9:00 p. m.	Moon farthest, distance 252,000 miles
2	1:00 p. m.	Mercury between earth and sun
6	3:05 a. m.	Moon in first quarter
10	2:00 a. m.	Mercury passes Venus
13	4:08 a. m.	Full moon
	5:01 p. m.	Moon passes Saturn
14	5:00 a. m.	Moon nearest, distance 222,800 miles
19	7:43 p. m.	Moon in last quarter
21	1:00 p. m.	Sun and Saturn in opposite parts of sky
23	5:54 p. m.	Moon passes Jupiter
25	2:21 a. m.	Moon passes Mercury
26	10:02 a. m.	Moon passes Venus
27	3:55 p. m.	New moon
	9:42 p. m.	Moon passes Mars
	Midnight	Mercury farthest west of sun

Subtract one hour for CT, two hours for MT, and three for PT.

Science News Letter, January 22, 1949

Louis, Mo., Charlotte, N. C., Detroit and Lansing, Mich., Yakima, Wash., Great Falls, Mont., Columbus, Ohio, and St. Paul, Minn. Arrangements have already been completed for opening of centers at Portland, Ore., Boise, Ida., Philadelphia, Pa., Nashville, Tenn., and Louisville, Ky.

More than 110,000 pints of blood have been collected and the program has served more than 700 hospitals and 33 clinics. The Red Cross makes no charge for the blood or its derivatives available through the program. Physicians and hospitals, however, may charge for administration of the blood and for any other services undertaken to safeguard the patient.

"The program has been increasingly successful in meeting calls for blood," Basil O'Connor, president of the American Red Cross, said. "This has been due not only to the generosity of the American people but to the cooperation of physicians, hospitals, and health departments. But the program has still a long way to go before it reaches truly national proportions."

Science News Letter, January 22, 1949

CHEMISTRY

Dr. Lewis Honored by Institute of Chemists

➤ DR. WARREN K. LEWIS, emeritus professor of chemical engineering at the Massachusetts Institute of Technology, will be awarded the 1949 gold medal of the American Institute of Chemists at the Institute's annual meeting in Chicago in May.

Dr. Lewis, who is noted for research in petroleum and leather chemistry, will be honored for his administrative ability, leadership and outstanding success as a teacher.

Science News Letter, January 22, 1949

MEDICINE

New Uses of Blood Ahead

➤ ON Jan. 12 the National Blood Program of the American Red Cross went into its second year of operation.

As the benefits of the first year of this activity are recounted, prospects of further disease-fighting uses of blood appear in medical research reports. For the future there is the possibility of using fractions of blood against scarlet fever, mumps, and jaundice as some blood fractions are now being used to check measles.

Most important use for blood remains the saving of lives of persons who have lost large amounts through injury or disease. But during the war, while the Red Cross was collecting blood for this use by the armed forces, a method of dividing blood into various fractions, each of them potentially useful, was discovered. Aim of the National Blood Program now is to collect, process and distribute enough blood

and blood fractions to supply all the blood needs of the nation in peace as well as in war or other national disaster.

Blood for this program is being collected, processed and distributed through a series of regional centers. To date 18 of these centers have been opened, in addition to a state-wide mobile unit service in Massachusetts. Some centers have only gone into operation within the past month. Longest in operation is the one in Rochester, N. Y., which opened just a year ago, on Jan. 12, 1948.

By the end of the present fiscal year, June 30, 1949, more than 30 centers are expected to be in operation. Those now in operation for one or more months, in addition to Rochester, are: Wichita, Kans., Tucson, Ariz., Stockton, San Jose and Los Angeles, Calif., Atlanta, Ga., Washington, D. C., Omaha, Nebr., Springfield and St.

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