

end of the month it is 3 minutes 35 seconds late. On June 14, however, it crosses the meridian just at noon by clocks set to local time.

This, however, is not the whole story, for our clocks are not set to local mean time. Years ago they were, but that meant that whenever you moved east or west you had different kinds of time, and had to change your watch by some odd number of minutes. To obviate this, which was especially troublesome to the railroads, standard time was introduced, and the entire eastern part of the country, for example, used eastern standard time, which is the local mean time for places which have longitude 75° West, of which Philadelphia is an example. Along the 75th meridian, therefore, local mean time and standard time were the same. The same was true along the 90th meridian, the center of the Central time zone, along the 105th meridian, from which Mountain time was taken, and in the Pacific Time zone, along the 120th meridian. Therefore, along these meridians on June 14, you can tell standard time by looking at the sundial, and if you add an hour to that, you will have your local kind of War Time.

Celestial Time Table for June

June	EWT	
6	2:58 p. m.	Full moon.
11	8:00 p. m.	Moon nearest; distance 229,400 miles.
13	11:56 a. m.	Moon in last quarter.
20	1:00 p. m.	New moon.
21	9:03 a. m.	Summer solstice, summer commences.
24	1:24 p. m.	Moon passes Mars.
	10:11 p. m.	Moon passes Jupiter.
26	8:00 p. m.	Moon farthest; distance 251,300 miles.
28	1:27 p. m.	Moon in first quarter.

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

Science News Letter, May 27, 1944

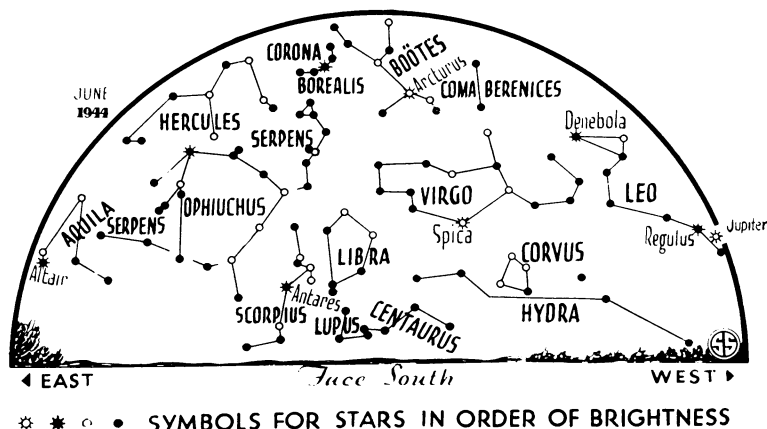
PHYSIOLOGY

New Explanation Given For Pain in Aviators' Bends

► A NEW explanation of the cause of pain in aviators' bends was presented by Dr. Joseph P. Webb and associates of the University of Cincinnati College of Medicine at the Atlantic City, N. J., meeting of the American Society for Clinical Investigation.

These scientists differ from the widely held view that the painful bends feature of decompression sickness which attacks high altitude flyers is due to stoppage of circulation by nitrogen bubbles forming in the blood vessels.

The bubbles, the Cincinnati scientists believe, are formed in the tissues about the joints, not in the joint space and not within the blood vessels.



Applying pressure to a painful area, for example, inflating a blood-pressure cuff around the knee, relieves the pain even when pressures great enough to obliterate the blood flow are used, they found. If stopping the circulation were causing the pain, this would be expected to make it worse.

The specific pattern of bends pain may be reproduced exactly in most cases by reexposing the person within a short interval, up to six hours, to the high altitude condition that brought on the trouble. This indicates, the scientists point out, that the circulation has not removed

the bubble. If the bubble causing the pain had been within the blood vessels it would have been either redissolved or carried off.

The skin and nervous system features of decompression sickness, apart from the painful bends, are due to spasm of the blood vessels rather than stoppage.

Associated with Dr. Webb in these studies were Dr. Joseph P. Webb, Dr. G. L. Engel, Dr. John Romano, Dr. H. W. Ryder, Dr. Charles D. Stevens, Dr. M. A. Blankenhorn and Dr. Eugene B. Ferris, Jr.

Science News Letter, May 27, 1944

"Gamow has done it again!"

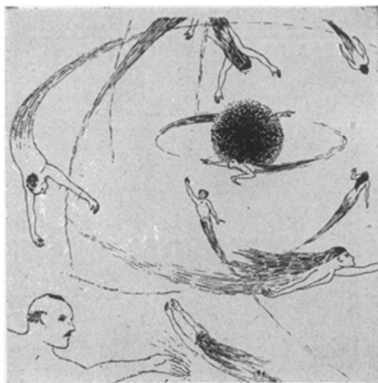
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