



are known, and they offer a wide variety of periods. For example, there is one such system in the constellation of the eagle, known as sigma Aquilae, in which the eclipse occurs every 1 day 23 hours. Auriga is rather well provided with them. Just below Capella, as shown on the maps (below the initial letter A), is the star beta Aurigae, which is eclipsed every 3 days 23 hours. In this case, the faint star barely comes in front of the bright one, and the change is only a tenth of a magnitude, from 2.1 to 2.2, not easily apparent to the naked eye.

In the same constellation, not far away from Capella, are also located the two with the longest known periods. One is zeta Aurigae, which drops from 4.9 to 5.6, a difference in brightness of more than twice, every 2 years and 8 months. A short distance north of this

star is epsilon Aurigae, in which the eclipse occurs every 27 years! Here the drop is from 3.3 to 4.1, nearly the same ratio as for its neighbor.

Celestial Time Table for November

Nov.	EWT	
1	11:20 p.m.	Algol at minimum
4	8:08 p.m.	Algol at minimum
	8:20 p.m.	Moon passes Saturn
7	2:28 p.m.	Moon in last quarter
10	1:31 p.m.	Moon passes Jupiter
	11:00 p.m.	Moon farthest; distance 251,900 miles
14	2:00 p.m.	Mars in line with sun
15	6:29 p.m.	New moon
16	early a.m.	Meteors of Leonid shower visible in east
18	9:40 p.m.	Moon passes Venus
19	4:13 a.m.	Algol at minimum
22	1:02 a.m.	Algol at minimum
23	3:53 a.m.	Moon in first quarter
24	9:51 p.m.	Algol at minimum
26	midnight	Moon nearest, distance 227,100 miles
27	6:40 p.m.	Algol at minimum
29	8:52 p.m.	Full moon

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

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PSYCHOLOGY

Air Medicine Triumphs

► THE PSYCHOLOGICAL testing program of the U. S. Army Air Forces has contributed directly to the number of bombs which hit in target areas of the U. S. Army Air Forces in Western Europe during this past year, Maj. Gen. David N. W. Grant, Air Surgeon, AAF, declared at the meeting of the Inter-State Post-graduate Medical Association of North America, held in Chicago.

A 90% reduction in the anoxia (oxygen lack) accident rate has been achieved in the Eighth Air Force during the past year as a result of the altitude training program of the AAF, Gen. Grant reported. The anoxia accident rate among Eighth Air Force heavy bomber crews has been reduced from 116 per 100,000 man-missions to 11.

These are two of five wartime achieve-

ments of aviation medicine. The other three Gen. Grant listed are: the flight surgeon's care of the flyer; the convalescent training program, and air evacuation of casualties.

The Army Air Forces have evacuated 426,000 sick and wounded men since September, 1942, Gen. Grant reported. Of these slightly over half, 53%, were U. S. Army ground forces, 30% were British and other allies, 6% were Navy and Marines and only 9% were AAF personnel.

The death rate in flight among these men, some of whom were in a critical condition, was only seven per 100,000 patient-trips.

Through the convalescent training program of the AAF, about 80% of combat casualties have been returned to

duty. Since the program was started in November, 1942, 40,000,000 man-hours of physical and educational activities have been given in Army Air Force Hospitals.

The battery of 20 psychological tests given each aviation cadet candidate have not only proved valuable for selecting candidates and classifying them for training as bombardiers, navigators and pilots but for predicting success in combat, Gen. Grant reported. Men subsequently rated by squadron commanders as most successful in combat are those who rated on the upper end of the test scale. Those with the least acceptable scores tend to be the ones most frequently missing in action.

Selection of men for lead bombardier, which is the key job in a bombing mission, is now made on the basis of the psychological aptitude and proficiency tests which are given all bombardiers in the U. S. Army Air Forces in Western Europe.

The total cost of the psychological testing program is less than \$5 per candidate, but the saving in time, money and lives, Gen. Grant said, cannot be estimated.

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AGRICULTURE

Apple Juice Concentrate Keeps Fresh Cider Taste

► THE NATURAL taste of fresh cider will be available throughout the year in a new apple juice developed by the U. S. Department of Agriculture. The new product is a full-flavored apple juice concentrate which can be reconstituted, by the mere addition of water, to an apple juice which tastes and smells just like fresh apple cider.

It is made by heating fresh apple juice rapidly enough to avoid modifying its natural flavor, vaporizing the volatile flavoring constituents, and then collecting them as an essence from a single fractionating column. The juice from which the flavoring constituents have been stripped is concentrated by evaporation and the flavoring essence added to the concentrated juice. This gives a full-flavored, self-preserving apple juice concentrate.

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Dehydrated butter made in Australia for Allied troops in the tropics is approximately 15% lighter than ordinary butter but remains hard except in extreme climatic temperatures.