

program, there will be four eclipses: two of the sun, two of the moon. First comes a total solar eclipse, visible along a belt crossing southern Europe and Russia, on Feb. 15. Over all of Europe, northern Africa and most of Asia, there will be a partial eclipse. Then will come a partial eclipse of the moon on March 2, partly visible, at least, over most of North America.

The second eclipse of the sun will come Aug. 11. This will be annular. That is, the moon will not completely hide the sun, but will leave visible a ring of the solar surface, around the dark lunar disc. This occurs even where the eclipse is at a maximum, in the South Atlantic, near Antarctica. The second lunar eclipse, also partial, will come on Aug. 26 and will be visible generally from North and South America.

When the moon passes in front of a star or planet, it is called an "occultation" rather than an eclipse. Several times Mercury is thus occulted and on one of these occasions, on March 14, it will be visible, with some difficulty, from North America. There will be a number of occultations of Aldebaran, in Taurus, and Regulus, in Leo. Several of these will be visible from this part of the world.

Mercury will be visible, low in the western evening sky, about June 1. Venus will continue to shine brightly in the west until the end of March; from the end of April through the rest of the year it will appear

in the eastern sky in the morning. Mars, so bright at the start of the year, will continue to be visible, but will become considerably fainter in the following months. Jupiter, during the spring, will be in the morning sky, but by fall it will be prominent in the evening. Saturn will follow a nearly similar program.

### Celestial Time Table for January

Jan.	EST.	
1	Noon	Moon passes Mars
	6:06 p.m.	Full moon
2		Earth nearest sun, distance 91,337,000 miles
3	8:00 a.m.	Moon farthest, distance 252,500 miles
5	1:00 p.m.	Jupiter behind sun
	6:00 p.m.	Mercury behind sun
9	10:03 p.m.	Moon in last quarter
11	1:00 a.m.	Saturn behind sun
15	1:57 a.m.	Algol (variable star in Perseus) at minimum brightness
16	4:30 p.m.	New moon
	6:00 p.m.	Moon nearest, distance 221,600 miles
17	10:46 p.m.	Algol at minimum
19	Midnight	Moon passes Venus
20	7:35 p.m.	Algol at minimum
23	11:14 a.m.	Moon in first quarter
	4:24 p.m.	Algol at minimum
28	2:00 a.m.	Moon passes Mars
29	2:00 a.m.	Venus farthest east of sun
30	8:00 a.m.	Moon farthest, distance 252,500 miles
31	1:47 p.m.	Full moon

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

• Science News Letter, 78:426 December 24, 1960

### PHYSIOLOGY

## Man Can Adjust to Cold

► DEATH IS NOT a necessary result of very low body temperature. It is probable that man can adjust to cold as well as to heat.

Steven M. Horvath of The Lankenau Hospital, Philadelphia, told the American Society of Mechanical Engineers in New York that "shivering hairless man can get along pretty well in extreme cold."

Mr. Horvath said recovery from body temperatures as low as nine degrees centigrade, or 48 degrees Fahrenheit, have been recorded. Some animal experiments indicate that under certain conditions body temperatures can be lowered to zero degrees centigrade, or 32 degrees Fahrenheit, or even slightly lower with complete recovery

even though the heart has not been functioning for some minutes.

He said there is no such thing as a constant body temperature, since variations up to 10 degrees are found in the human body. The temperature that scientists are interested in controlling primarily is that of such deep central areas as in the heart, lungs and brain.

Arctic and Antarctic explorers have often suggested development of an acclimation process, he said, and there is some evidence that "certain local mechanisms" do improve with continued cold exposure. But it has not been easy to separate the influence of the use of clothing and other protective devices from the physiological factors.

• Science News Letter, 78:427 December 24, 1960

### PHYSIOLOGY

## Teen-Agers Are Heavier

► TODAY'S UNITED STATES teen-agers are taller and heavier than those of earlier generations, statisticians of the Metropolitan Life Insurance Company in New York have found.

They compared height-weight information for teen-agers applying for insurance between 1935 and 1953 with that from those insured between 1885 and 1900. Average height of boys 15 to 16 years old is 1.8 inches greater than in the earlier time. For boys at ages 17 to 19, the gain was 1.6 inches.

For girls, the corresponding increases in average height were six-tenths and four-tenths of an inch in the respective age groups.

The greater height and weight of the present generation of teen-agers reflects primarily better nutrition, advances in medicine and public health, and generally higher standards of living.

To some extent, however, the growth trends are due to the attainment of physical maturity at a somewhat younger age, on the average, than in earlier generations.

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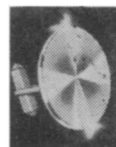
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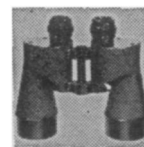
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