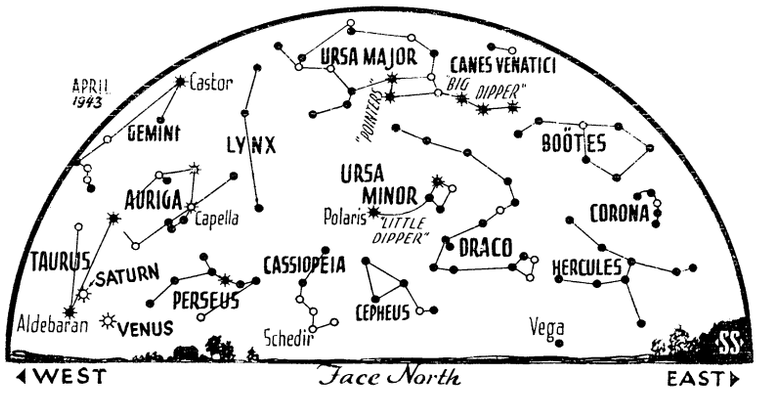


line with the sun. Even on the ninth, most of the sunlit half of the moon will be turned away from us, and we will only see a narrow sliver that forms the crescent. Aldebaran will be occulted by the dark edge of the moon, though it may not be entirely dark. Often when the moon is a crescent, it is possible to see faintly its complete circle. This is sometimes called "the old moon in the new moon's arms." The bright crescent is illuminated directly by sunlight. The dark part is lighted by earth-shine. This is light from the sun that is reflected by the earth, and then reflected by the moon back to us again. To a person on the moon, the earth would undergo phases like those which the moon has for us. When we see a new moon, they would see a full earth, and it would be about 40 times as bright as we see the full moon.

Thus, the moon's dark edge will hide the star, and it will vanish instantaneously, because there is no atmosphere around the moon to cause a gradual diminution of its light. And out in the midwest, where the end of the occultation will be visible, the reappearance, from behind the sunlit edge, will be equally sudden. Such occultations, not only of bright stars, which are rather rare, but of fainter ones, which occur almost nightly, are regularly watched by astronomers. They can be timed very accurately, and permit them to check accurately their predictions of the moon's motion.

### Celestial Time Table for April

| April | EWT | |
|---|---|---|
| 4 | 5:53 p.m. | New moon. |
| 7 | 6:54 a.m. | Moon passes Venus. |
| 8 | 8:36 p.m. | Moon passes Saturn. |
| 9 | 10:56 p.m. | Occultation of Aldebaran (not visible in far west). |
| 12 | 1:28 a.m. | Moon passes Jupiter. |
| | 11:04 a.m. | Moon in first quarter. |
| | 6:00 p.m. | Moon farthest, distance 251,100 miles. |
| 20 | 7:11 a.m. | Full moon*. |
| 21 | early a.m. | Meteors of Lyrid shower visible. |
| 24 | midnight | Venus passes Saturn. |
| 25 | noon | Moon nearest, distance 229,500 miles. |
| 27 | 3:51 a.m. | Moon in last quarter. |
| 29 | 12:33 p.m. | Moon passes Mars. |
| 30 | 5:00 a.m. | Mercury farthest east of sun, visible in western evening sky for a few days around this date. |

*The full moon on April 20 is the Paschal full moon, that is, the first after the vernal equinox, which occurred on March 21. Easter is thus on the following Sunday.

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

*Science News Letter, March 27, 1943*

PLANT PATHOLOGY

## Plant Disease Fighters Recommend Seed Treating

➤ MORE INTENSIVE warfare on a little-noticed sector of the home front—defense of fields and gardens against plant diseases—was called for by the War Committee of the American Phytopathological Society. The committee offered a ten-point schedule of recommendations, stressing especially the need for treating seed before planting, to prevent the development of fungi that kill vast numbers of seedlings before they can even get fairly started.

Of particular interest to Victory Gardeners is the suggestion that they disinfect their own seed, to make the present limited supplies go farther. It was also recommended that seed growers and dealers give their seed this protective treatment before packaging, or at least print treatment directions on each package for the guidance of the Victory Gardener.

*Science News Letter, March 27, 1943*

ENGINEERING

# Planes Cast on Plastic

➤ A NEW plastic to make dies, jigs and forming blocks that will speed up plane production has been developed in the Columbia University chemical engineering laboratories, Prof. James M. Church announced to the Columbia Scholastic Press Association.

The tough ethyl cellulose plastic, produced in cooperation with plastic makers and plane manufacturers, replaces strategic materials. It can be melted and cast into shapes without the use of pressure somewhat the same as metal, but at much lower temperatures and with more exactness of mold dimensions, Prof. Church asserted.

It weighs only a fifth as much as steel yet has a high impact strength, hardness and durability that makes it practical to be cast into forms upon which metal plane parts are fabricated.

The new plastic, known as Thermo-Cast, opens up the possibility that the plane of tomorrow can be stamped out in very large sections on plastic forms and with the use of plastic punches, Prof. Church stated, much the same as the auto body has been made all in one piece.

Mass production of warplanes by using methods of the automotive industry has encountered some difficulties.

"Not only were some of the older methods for metal fabrication inadequate for aircraft production," Prof. Church declared, "but the metal used in the tools for forming these metal parts was found to be critically needed for other war uses and also inefficient for the production methods of the aircraft industry."

Metal is not only conserved by using the new plastic, but many man-hours are saved because machining and grinding operations have been eliminated.

*Science News Letter, March 27, 1943*

## ● RADIO

***Saturday, April 3, 1:30 p.m., EWT***

**"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.**

**Dr. Edwin G. Boring, professor of psychology at Harvard University, will discuss "Psychology for the Fighting Man."**

***Monday, March 29, 9:15 a.m., EWT; 2:30 p.m., CWT; 9:30 a.m., MWT; and 1:30 p.m., PWT***

**Science at Work, School of the Air of the Americas over the Columbia Broadcasting System, presented in cooperation with the National Education Association, Science Service and Science Clubs of America.**

**"Freedom from Fears" will be the subject of the program.**