

and heads inland, due east, and then a little southeast. The shadow leaves the earth from a spot in Tanganyika at 10:25 a.m., EST, but there it will be at sunset. Over a much larger area than this narrow path, including all of Africa, much of the South Atlantic and most of South America, there will be a partial eclipse, with the dark disk of the moon hiding more of the sun the nearer one is to the path of totality.

Long Eclipse

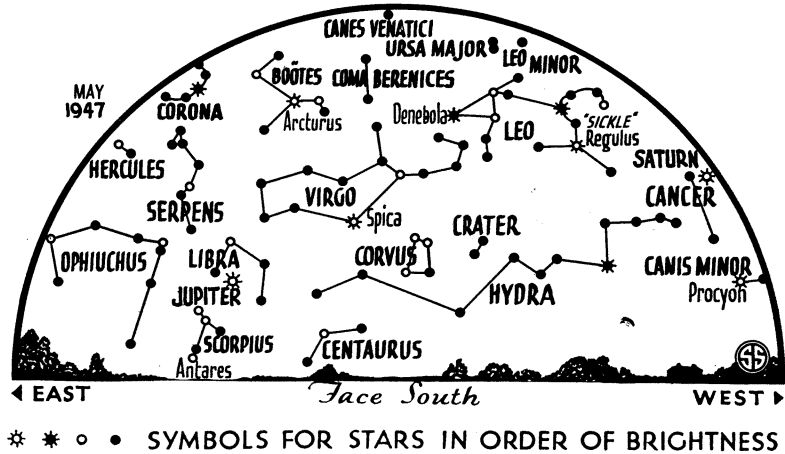
One of the most attractive features of this eclipse, to astronomers, is its relatively long duration. While the sun can be totally eclipsed for as long as 7½ minutes, it is rarely that one lasts more than a couple of minutes. In the middle of the Atlantic Ocean this eclipse will last for 5 minutes 14 seconds, but as it is hard to make entirely satisfactory observations from a ship this will not be of so much value. In Liberia, however, the duration will be but a few seconds less than five minutes. Along the coast of Brazil it will last about four minutes which is still quite good.

Many expeditions of astronomers have gone from observatories in the United States, Canada and various European countries to favored locations in Brazil and Africa. Photographs will be made with cameras large and small. Some will be made through spectroscopes, to analyze the light of the eclipse. Thus we will gain added knowledge of the sun, particularly of its mysterious corona, the outermost layer. Until a few years ago it was visible only at eclipse time, but there are new techniques by which the brightest parts may be observed at other times. Still, however, to see it in its entirety an eclipse is needed and that is one of the main reasons that makes astronomers travel thousands of miles, gambling with possible cloudy weather, to be there when the moon hides the sun.

Celestial Time Table for May

May	EST	
4	11:53 p.m.	Full moon
5	7:09 p.m.	Moon passes close to Jupiter
10	2:00 a.m.	Moon farthest, distance 251,600 miles
13	3:08 a.m.	Moon in last quarter
14	3:00 a.m.	Jupiter opposite sun and nearest, distance 407,300,000 miles
17	7:00 a.m.	Venus passes Mars
18	3:46 a.m.	Moon passes Mars
	4:30 a.m.	Moon passes Venus
20	8:44 a.m.	New moon; total eclipse of sun visible in South America and Africa
22	2:00 a.m.	Moon nearest, distance 224,600 miles
24	5:38 p.m.	Moon passes Saturn
26	11:35 p.m.	Moon in first quarter

Subtract one hour for CST, two hours for MST, and three for PST.
Science News Letter, April 26, 1947



MINING

Demonstration of Mine Explosions Are Made

➤ THE DEMONSTRATION of coal-mine explosions and preventive measures, being given in Bruceton, Pa., by the U. S. Bureau of Mines on Saturday, April 26, is part of an educational program of the government office discontinued during the war but revived a year ago.

The recent Centralia disaster, and the following explosion with several fatalities at Exeter in Pennsylvania, are evidences of the need of such a program. In an industry where explosive gases and organic dusts collect in the air in underground chambers, and in which explosives are necessarily used to loosen seams of coal, every worker concerned, from boss to helper boy, needs instruction in the danger and how they are best lessened.

While this demonstration is open to the public, the program is primarily for mine supervisory officials, foremen and operators. It is being given at the Bureau's experimental mine, with man-made explosions of methane gas and of coal dust. Methods of extinguishing fires, and the testing of safe and unsafe explosives for blasting purposes, will be demonstrated.

For the coal-dust explosion, 700 pounds of the finely pulverized material will be spread in the mine entrance and ignited by a stick of dynamite. Dynamite is not an explosive that may be used in coal mining under the government's safety code, but it is still used in some mines.

The Bureau has tested many explosives used in mining and has designated some that will not cause dust explosions when used. These are designated as "permissible explosives."

The demonstration will show how permissible explosives will not ignite a cloud of dust, as well as the danger of using a nonpermissible.

The Bureau's experimental mine is reported to be the only one of its kind in the world. It was opened in 1911, and the principal work undertaken in connection with it has been the development of ways to prevent gas and dust explosions. Rock-dusting, coating the walls and ceilings of coal mines with pulverized limestone, or other noncombustible material, is one of its great achievements.

Science News Letter, April 26, 1947

CHEMISTRY

Rubberlike Compound Can Be Used as Insulation

➤ A SYNTHETIC rubberlike insulating compound invented by a German, Willi Mertens of Berlin, is the subject of patent 2,418,978, vested in the Attorney General. It is a mixture of polyisobutylene, styrene and paradivinylbenzole, heated until it has become soft and rubbery.

Science News Letter, April 26, 1947

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WYOMING

Yes, even THIS summer you may fish in its mountain streams, ride horseback through its hills and canyons, find Indian relics and marine fossils in a region of great historical and geologic interest.

The Patons welcome a limited number of guests at their ranch in the Big Horn country. They offer plenty of ranch grown food, comfortable cabins and gentle horses. May they tell you more? Write:

Paton Ranch, Shell, Wyoming

