

## ASTRONOMY

# Moon To Blot Out Sun

**Total eclipse will streak across Japan, Pacific and Alaska on February 4, ending the day before it begins. War will prevent scientific observation.**

► THE MOON will blot out the sun on Thursday, Feb. 4, along what might be a bomber's route between Alaska and Japan. But it is a safe bet that this will be the one total solar eclipse of the century that no very serious astronomical expedition will be observing.

For one thing, most of the choice points in the band of temporary total darkness are at sea where there is no stable base for telescopes. The main difficulty is that there is a war on, and men are too busy blotting each other out to bother about the interference of the moon with the sun's light.

Astronomers in normal times might be tempted to take a run up to Anchorage, Alaska, where the totality lasts 48 seconds shortly before sunset that day. They might be interested in re-checking upon the Einstein gravitational effect that bends starlight passing by the sun. Or they might photograph the corona, the sun's halo. Just now many astronomers are busy with ballistics, navigation, making military telescopic cameras or other such important war jobs.

Soldiers, sailors and airmen will pause a few minutes in their fighting and work to see the glory of a total eclipse, the clouds and fog of the Alaskan winter permitting.

The moon's shadow will touch earth in Manchuria at sunrise on Feb. 5. The eclipse will end a day before it begins, by the calendar, because it crosses the international date line in its sweep across the Pacific. After crossing the Sea of Japan, passing across the Japanese island of Hokkaido, it travels swiftly across the ocean. After running south of the Andreanoff Islands, the shadow will go just south of Dutch Harbor, darken part of Kodiak Island and cross Alaska on its way to leave the earth in the northern part of the Canadian Yukon at sunset.

It is unfortunate that the Japs are so "civilized" that they will see no symbolism in an eclipse obscuring the rising sun.

The sun will be seen partially eclipsed throughout Alaska, along the west coast regions of Canada and the United States.

As the Chaldean astronomers first discovered, eclipses recur at intervals of 6,585  $\frac{1}{3}$  days, known as a saros. This figures back to Jan. 24, 1925, when a total sun's eclipse was seen by astronomers and public alike under good conditions in New York, southern New England, as well as farther west.

As consolation for missing the Feb. 4 eclipse, astronomers will have to look forward to the next eclipse to come within possible reach. On July 9, 1945, there will be a total solar eclipse beginning near Boise, Idaho, traveling northeastward through Montana, Saskatchewan, Manitoba, across Hudson's Bay to Greenland and on into Europe and Asia. Perhaps astronomers can conduct Victory expeditions to observe this astronomical event, transported by bombers that will be through with carrying out other missions.

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## VETERINARY MEDICINE

## New Vaccine Developed To Protect from Distemper

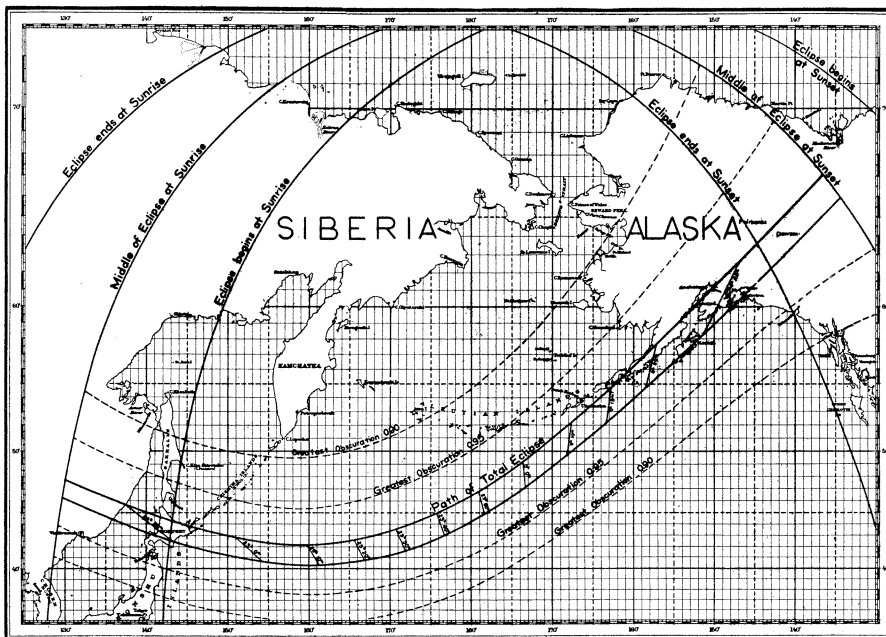
► DOG OWNERS can now have their pets protected against distemper by a new vaccine, adding another form of treatment to the immunization methods used against this widespread disease. The vaccine is prepared by passing live distemper virus through 50 to 60 ferrets by a method developed by Dr. R. G. Green, University of Minnesota bacteriologist. This deprives the virus of its disease-causing power. But a single injection is claimed to give a dog lifetime protection against distemper.

Often called the "scourge of dogdom," this flu-like disease is highly contagious, often fatal, and occurs in every section of the country in all seasons. Because it is so difficult to treat, veterinarians recommend immunization of puppies as the best protection.

Animals eight to ten weeks old can be given early immunity by only one injection of the new vaccine, compared to three or four injections required in previous methods of distemper control, according to Dr. Charles E. Fanslau, director of the veterinary division of Winthrop Chemical Company, distributors of the product for Fromm Laboratories.

Two other methods of immunizing dogs have been used successfully in recent years.

In one method, vaccine injections are followed by injections of living virus. Dogs, instead of ferrets, are used to produce the vaccine in this procedure, and



**TOTAL ECLIPSE**—This map shows the pathway through which the total eclipse will be visible on February 4, as prepared by the U. S. Naval Observatory for the Hydrographic Office.