



SHOOTING STARS EXPECTED

The part of the sky where the meteors of Oct. 9 or 10 can best be seen. Locate these stars and determine the faintest of them that you can see. Figures indicate the magnitudes of star brightness. R indicates the region of the sky from which the meteors appear to come.

## ASTRONOMY

## Astronomers Expect Shower Of Meteors on October 9-10

ASTRONOMERS are hoping for an extraordinary display of shooting stars or meteors on Oct. 9 or 10, although they are trying not to raise anticipation too much by making definite predictions.

Just six years ago, Oct. 9, 1933, there was visible in Europe for a few hours the strongest meteor shower of this century. It was one of those heavenly performances that one is lucky to see once in a lifetime. Astronomers figured out that the earth had passed through the region of space occupied 80 days previously by the faint, short-period comet Giacobini-Zinner. The meteors were produced by bits of debris tagging along in the same orbit as the comet.

Since the period of this comet is 6.6 years, it is again due back in the vicinity of the earth. This year the earth precedes the comet to the point where their paths cross by 136 days. In 1940 the earth follows the comet by 229 days. In either case there is a chance that there will be a recurrence of the Giacobinid meteor shower.

Dr. Fletcher Watson of Harvard Observatory finds that the earth reaches a

favorable position for a shower on Oct. 9 or 10, if the comet has not varied too much from its previous path, which it may have done. He suggests that observers over the whole earth be alert during those evenings so that any display of meteors can be properly recorded for science.

Any careful, observant person can make useful records. Here is how to go about it. Get out in the country where street and house light will not blind you for the majority of the meteors will be faint. Record the magnitude or identity of the faintest star you can see. If the transparency of the sky changes appreciably during the observations, record the changes.

Watch some definite region of the sky, such as the polar region or the zenith, directly overhead. Count the number of meteors seen during intervals of five minutes. At least once each hour, over intervals of not less than five minutes, count the number of meteors of each magnitude. Determine as closely as possible the position and size of the area from which the meteors seem to come. If low-power binoculars are available

make observations of the number of meteors of various magnitudes seen through them. Send in a full record of your observations to the SCIENCE NEWS LETTER, Washington, D. C., for transmission to astronomers who will study them.

An extraordinary display of the Giacobinid meteors may occur in 1946 because then the earth and the comet are expected to be only 8 days apart in reaching the same position. But astronomy has not yet lived down the failure of a much-heralded Leonid shower in 1899, which just didn't happen. For that reason, while hopeful, astronomers are not being dogmatic about the chances of seeing the Giacobinid shooting star shower, either this year, next or in 1946.

*Science News Letter, September 30, 1939*

## MEDICINE

## Thin Films "Guinea Pigs" In Study of Immunity

INVISIBLE FILMS, some a single molecule thin, are being used as "guinea pigs" in one of the latest attacks upon disease secrets conducted at the Rockefeller Institute for Medical Research by Dr. A. Rothen and Dr. K. Landsteiner, Nobelist in medicine for his discovery of the blood groups fundamental to blood transfusions.

Using the method of making thin films practiced by another Nobel prize winner, Dr. Irving Langmuir, the Rockefeller scientists are using one-molecule-thin layers of egg white or albumen and similar layers of blood serum to learn more about immunity to disease.

Such molecular films can be formed on the surface of water and then transferred to plates. One film can be laid on another to determine reactions between them. Similar films of different substances produce layers that make glass almost invisible by suppressing reflections.

Immunity to germ diseases depends, scientists believe, on the development in the blood of substances called antibodies which are produced when antigens from invading germs get into the body. The antibodies are usually specific, appearing in response to the antigens of specific germs, one kind mobilizing to fight diphtheria germs, another kind to fight pneumonia germs, and so on.

This specificity of antigens and antibodies depends on chemical architecture, it is suggested by these Rockefeller studies with single molecule layers. (*Science*, July 21)

*Science News Letter, September 30, 1939*