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CORONA SEEN AT ECLIPSE INDICATES SUN ACTIVE

The various expeditions of astronomers from the United States to Sumatra to observe the total solar eclipse of Jan. 14 were generally successful.

In a special cable to Science Service, Dr. John A. Miller, leader of the Swarthmore College Eclipse Expedition located at Benkoelen, Sumatra, reported:

"We observed the eclipse of the sun this afternoon through a sky thinly clouded. We believe, however, that our plates are not seriously affected, except possibly those made with the Einstein camera to test the deflection of star light near the sun. The corona was of the type usually associated with maximum sun spot activity and some very large prominences were visible."

Capt. F. B. Littell, in charge of the party from the U. S. Naval Observatory, sent word that the sky was partly clear at Tebbinge-Tinggi, where the naval astronomers were located. Dr. Harlan T. Stetson, of Harvard University reported to the Harvard Observatory that his observations were made through thin clouds but were partially successful. The Harvard party, including also Dr. W. W. Coblentz, of the U. S. Bureau of Standards, was located on the west coast of Sumatra, not far from the Swarthmore College expedition, at Benkoelen. Months of study of the observations and photographs made will be necessary before definite results of the expeditions can be announced, however.

The regular round shape of the sun's corona as observed at this eclipse is, according to Dr. Louis A. Bauer, director, department of terrestrial magnetism, Carnegie Institution of Washington, what was to be expected because of the great number of spots that have appeared recently on the face of the sun. Between eclipses the shape of the corona can not be determined because the filmy pearly radiance halving the sun can be seen from earth only during the time of total eclipse.

The number of spots visible on the sun at any one time varies in a period of about eleven years and the minimum of the present cycle occurred in 1922. However, the great activity of the sun in the last few months, as shown by the number of spots indicates, according to Dr. Bauer, that the maximum will occur either this year or next, an unusually short time having elapsed between minimum and maximum. One very large spot which moved across the face of the sun and disappeared at the end of December with the solar rotation would have been on the edge if it had survived. This might well have caused the large prominences or red flames of hydrogen reported by Dr. Miller, Dr. Bauer said.