

EYES OF WORLD ARE CENTERED ON BAKER

Scientists Ready to Take Photographs and Study Eclipse of Sun Today.

ACTIONS ARE REHEARSED

Astronomers Practice Carefully Every Detail of Programme Which Is to Be Carried Out in 113 Seconds of Totality.

BAKER, Or., June 7.—(Special)—The eyes of the astronomical world will be on Baker tomorrow on the occasion of the total solar eclipse.

This will not be because Baker has a monopoly of the points of vantage from which the eclipse can be seen, but because of the scientific interest in the phenomenon.

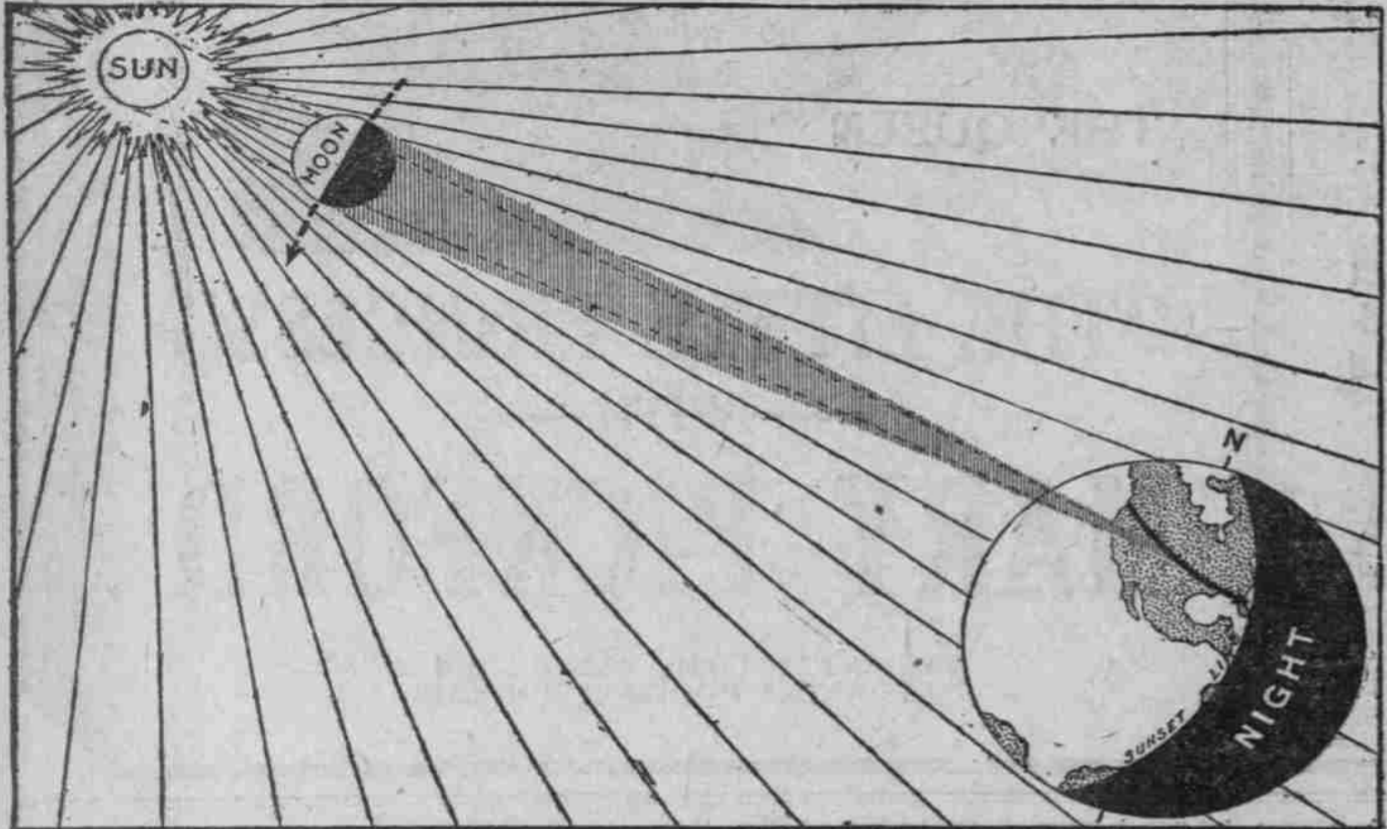


Diagram of the Eclipse, Showing Shadow Cone as the Moon Passes Between Sun and Earth. Drawn by Professor J. W. Daniels, of Hill Military Academy.

which it may be observed but because the United States Government's official representatives, the party from the naval observatory at Washington, D. C., have located their station here and the result of their study is expected to play an important part in solving several problems, brought near to completion by observations made on former occasions, but lacking in some few details, which it is hoped the studies tomorrow may clear up for all time.

The Government party is here by virtue of a special act of Congress which appropriated \$1000 for the undertaking by the naval observatory.

Hammond Heads Expedition.
The party is headed by J. C. Hammond, with W. M. Conrad and C. C. Wylie as his assistants, and includes Dr. George H. Peters, Professors S. A. Mitchell and L. G. Hoxton, of the University of Virginia, Dr. E. W. Merrill, of the Bureau of Standards.

Co-operating with them are the representatives of several other institutions, guests of the Government on the occasion.

Study of the solar atmospheric conditions and composition will be the principal object of the official Government representatives. This study will be carried on during the less than two minutes totality by means of spectroscopic and photographic work.

Dr. Merrill will make an attempt to extend knowledge of the flash spectrum to greater wave lengths by photographing with plates sensitized with dicyanin.

One of the novel features that will be introduced at this eclipse is the use of moving picture cameras. It is hoped that some of the films will bring to light phenomena hitherto unobserved.

Women to Assist.
For the first time, too, women will assist in the observations. Drs. Harriet Bigelow and Mary Murray Hopkins, of Smith College, being here for the event.

In addition to the work undertaken by the Government party and the Bureau of Standards, an noted, Edward D. Adams and Kempton Adams, of New York, will make a special study of coronal lights and Dr. Howard Russell Butler, of Princeton, N. J., will study the colors of the corona by a special system of shorthand listing, devised by himself and designed to enumerate the several hundred tints and shades of the wonderfully colored corona.

Another detail of interest is the fact that Dr. Peters, while he has traveled to all parts of the world to study eclipses, has never made a visual observation and expects to enjoy that experience on the present occasion.

Townley Station in Hills.
Professor S. D. Townley, of Leland Stanford University, has set up a telescope at a distance from the Government station, having located in the foothills just east of town, where, in addition to study of the corona, he will make a special study of the moon shadows, more readily accomplished from eminence, rather than in the valley. He will be assisted by Mrs. Townley.

If the day is clear the scientists state that nothing can prevent their work meeting with unqualified success and if cloudy weather prevails their five weeks of preparation, which included the building of a station of permanent character, with all instruments mounted on concrete bases, will go for naught. The local Weather Bureau predicts showers and partly cloudy weather and the outlook is none too bright for clear sky during the eclipse.

In the matter of preparation nothing has been left undone making for the success of the undertaking. The past week has been almost entirely devoted by the scientists in rehearsing their programme for the brief period of study, which will be carried on strictly in accordance with a schedule prepared in advance.

Sailor to Call Seconds.
A lusty-lunged sailor from the Bremerton naval station party, who has been assisting in establishing the station, will call the seconds of totality as indicated by the beats of the chronometers, the accuracy of which has been thoroughly established, so that the time-keeping instruments beat in unison with the Government clock at the naval observatory, which fixes the time of the Nation, to a degree of exactness within 1-100 of a second, as

ECLIPSE TO SETTLE MANY ASTRONOMICAL DISPUTES

Thousand Theories May Be Proved or Repudiated by Observation Taken by Scientists Who Will Study Phenomenon.

A GREAT astral pencil, whose point is 50 miles in diameter, is to draw a jet black line across the United States from Aberdeen, Wash., to Orlando, Fla., this afternoon.

While the marking is being made chickens are expected to go to roost and birds to nest. Streetcars may run with their headlights aglare, and there will be a sudden strain on all lighting utilities. The great cosmic titan who will hold the pencil and mark the line will "get even" with Washington for stealing an hour of sunlight on that day, for he will take 47 minutes of that sunlight back again.

The point of that pencil, black as ebony, will represent an eclipse of the sun. The point will begin with the moon, and will drop in an exact cone to the earth, where it will delete a considerable portion of the Pacific Ocean and the states of Washington, Oregon, Utah, Colorado, Kansas, Arkansas, Mississippi, Alabama, Georgia and Florida, in about the same manner that a military censor deletes an objectionable line from a war correspondent dispatch. The stock of the pencil will be represented by a nebulous space of infinity,

also attract interest. Scientists at the University of California and elsewhere say that the light around the sun moves in regular waves like wireless air waves, instead of being a steady, even substance, as around the earth. The eclipse may explain this difference.

Corona to Be Studied.

The coronal spectrum of the sun, according to Professor E. P. Lewis, department of physics, University of California, is made up of unknown elements. Professor Lewis is to study this coronal spectrum through a large quartz spectrograph as a member of the Lick Observatory party at Goldendale, Wash. The spectrograph, in the event of clear weather, is expected to reveal many new and startling facts concerning this corona and accompanying spectrum.

The war has had some effect on the plans for observing the phenomena, many of the scientists who observe such things now being engaged on preliminary study of the great German eclipse, which is due "somewhere in France" at an unnamed date. Stations have been established, how-

ever, by the Lick Observatory at Goldendale, the United States Naval Observatory at Baker, Or., the Yerkes and Mount Wilson observatories at Green River, Wyo., the Alleghany, Chamberlain and Yerkes observatories at Denver, the Drake University Observatory at Matheson, Colo., the Sprout Observatory at Eads, and the Smithsonian Astrophysical Observatory at a point in Kansas.

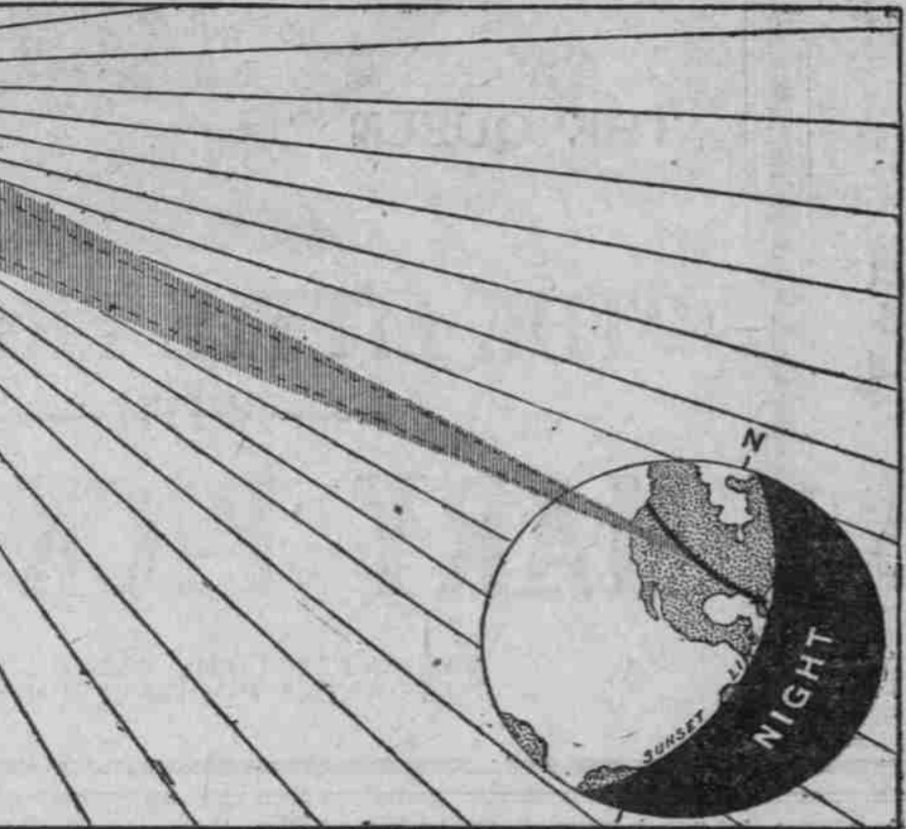


Diagram of the Eclipse, Showing Shadow Cone as the Moon Passes Between Sun and Earth. Drawn by Professor J. W. Daniels, of Hill Military Academy.

millions of miles long, between the sun and the moon.

Many to View Eclipse.
Many an astronomical Christopher Columbus will be out "along the line" to discover a new world or two. The mythical planet Vulcan, said to hover near the sun, may possibly be given a positive identity. The great solar force that makes Mercury shake with an astral ague as it spins around its orbit may be proved or repudiated, chief of them being the theory of relativity, first suggested by Einstein, a German physicist.

The nubbin of this theory is that the light from stars beyond the sun is bent by the sun's gravity before it reaches the earth in about the same manner that a streetcar rail is bent around a slight curve. The eclipse is expected to prove whether such sun gravity can bend light or not.

The eclipse is expected also to throw some light on the composition of the sun's spectrum, which, during the period of totality, glows with a greenish hue. What makes it green is the question the scientists are going to try to answer. Points of similarity and dissimilarity between the atmospheres of the sun and the earth are to be given close attention also.

The polarized light of the sun will be determined by exchange of time signals by wire between Baker and Washington. This will leave no opening for a slip in checking the time of the first contact, when the moon first darkens the surface of the sun and the succeeding stages of the passing of the eclipse.

As each second is called by the sailor every member of the party will perform some particular task carefully rehearsed to make certain of no mistake. In all about 50 photographs will be made during the 113 seconds of totality and the revelations of the photographic plates when developed will or will not answer the problems which the astronomers hope to solve.

HAWAIIAN AGENCIES CLOSED
Railroad Order Affecting Traffic Offices in Effect.

Abolishment of foreign agencies, as the traffic offices situated far from the lines of the companies were called, extended to some far corners of the earth, as well as to cities in the continental United States.

Yesterday Frank E. Egan, the steamship agent for the Pacific Steamship Company and the McCormick line, received a letter from A. B. C. Denniston, now of Honolulu, formerly general passenger department representative of the Great Northern at Seattle and

an old-time Portland passenger agent. Mr. Denniston writes that the island agencies of all of the railroads have been closed.

H. E. Vernon, formerly Santa Fe agent at Portland, is now with Davies & Co., shipping agents at Honolulu.

GIRLS PLAN NIGHT FROLIC
Soldiers Will Be Honor Guests at Multnomah Hotel Dance.

One of the delightful affairs for the soldiers planned for tonight, to be the first of a series, is the party to be given at the Multnomah Hotel by the girls employed throughout the city in the department stores and offices, who are working to aid the fund for the relief of the refugees in devastated France and Belgium. All proceeds of the evening will go to this fund. Dancing will start at 9 o'clock.

The chairman in charge of the affair is Mrs. Thomas W. Saul, wife of Captain Saul, now serving in France. Among the patronesses of the evening are Mesdames Farrell, Platt, Curry, Whitehouse and Skene.

Rev. H. F. Geldon to Be Speaker.
Rev. Harry F. Geldon, of Clatskanie, Or., will be the speaker at the Men's Resort Sunday night at 8 o'clock. Miss Pearl Shaffer will be soloist. There will also be special music by the orchestra. S. N. Steele will lead the

singing. Last Wednesday night Dr. Joshua Stanfield, of the First M. E. Church, was the speaker, and spoke to a record summer audience. Miss Chapman and Pearl Stanfield were the soloists.

READY FOR ACTION AT THE ECLIPSE STATION OF UNITED STATES NAVAL OBSERVATORY, BAKER, OR.



PHOTOGRAPH SHOWS THE MORE IMPORTANT INSTRUMENTS TO BE USED IN THE STUDY OF THE ECLIPSE TODAY.

Members of the party, from left to right, are: Dr. Mary Murray Hopkins, Smith College, Northampton, Mass.; Dr. S. A. Mitchell, director Leander McCormick Observatory, University of Virginia; G. H. Gehring, naval station, Bremerton; Dr. P. W. Merrill, Bureau of Standards, Washington, D. C.; Dr. Harriet Bigelow, Smith College; Dr. L. G. Hoxton, University of Virginia; J. C. Hammond, in charge of naval observatory party; Dr. George H. Peters and C. C. Wylie, of the observatory; H. H. Horrick, C. Krummel and P. Welsh, Bremerton; W. M. Conrad, naval observatory, and Howard Russell Butler, Princeton, N. J.

COLUMBIA

Swept by Arctic Breezes

BEGINNING TODAY



Wallace Reid and Ann Little in "Believe Me, Xantippe"—A \$40,000 bet—a \$100 forgery—a million dollar's worth of girl. Like "Xylophone" it sounds different than it looks—and like "Xmas," it's something to look forward to! Try and pronounce it.

It Was a Scream on the Stage—It's a Riot in the Picture
And Billy Parsons, the Hairless Comedian, in a Love Song in Two Spasms.

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