SCIENTISTS PHOTOGRAPH SOLAR **ECLIPSE FROM REMOTE POINT TO MAKE TEST OF EINSTEIN THEORY**

By W. B. CAMPGELL

Director of Lick Observatory, University of California, and head of Crocker Expedition to Australia to record total eclipse of the sun.

San Francisco, Dec. 11.-The observ ing station selected for the total solar eclipse of September 21 was Wollal, a combined post and telegraph office on the northwest coast of Australia a mile and a half inland from the "Ninety Mile Beach." The inhabitants of the Wollal region, say 300 square miles in area, consisted of six white men, several scores of Aborigines (blacks) and some tens of thousands of sheep.

The tides on the Ninety Mile Beach have a range of 26 feet and Wollal was ment steamer towed the schooner to the transport plans made by the Ausannounced, two years ago, to be hope-lessly inaccesible. On that account the expedition from the Greenwich observatory went to Christmas island, a thousand miles west-northwest of Wollal.

had fallen at Wollal only twice and shallow water near shore, and 40 or 50 packings weigh 600 pounds. The week then in minute quantities; the eclipsed blacks carried the packages from the ly steamer due to leave Freemantle sun would be high in the sky; and the duration of totality would be longer than at any other possible observing station-five minutes and 19 seconds, an unusually long eclipse.

Last year I suggested to Father Pe got, a well known astronomer in Sydney, that it would be fine if the government of Australia should detail a naval vessel to transport the California expedition from Freemantle, on the southwest coast of Australia, to Wollal and return. Pegot presented the case to the government and the decision was favorable.

The government went much further to maintain the camp and to assist sheltering the instruments. "en the Crocker expedition reach

dney on August 5 it was met by enant Commander Quick, who harged with the duty of personal nducting the astronomers all the to Wollal and return and of admin-



Even a little

helps to free you from that cold and eases the coughing. See directions on bottle for relieving congestion, soothing inflamed, scratchy throats. Banish that cold. Now - don't risk your health through sheer neglectask your druggist for

DR.KINGS NEW DISCOVERY -a syrup for coughs & colds istering the living arrangements at

ers running in eight days to Broome, about 200 miles northeast of Wollal. Broome, a village of 2,000 Chinese, is the center of the world's most noted injured some of them pictorially, but New Zealand, and Lord Fester, of Auspearl fisheries. At Broome-there were not in their scientific qualities, ave expeditions by this tin , from Cal-England; from Perth, Australia, and measure of several of the socalled Ein-

Wollal, where it anchored three miles tralian navy started the expedition from shore on the morning of August north from Freemantle six days earlie We went ashere at once to select the exact spot for the observing stapromising, however, that I was most tion. The naval contingent brought the pack the plates up finally at Broome anxious to send an expedition to that 70 tons of equipment by means of a for shipment home with the instrusmall lifeboat from the schooner to

Nothing was lost or broken. The work of preparing the instruments for the eclipse was very heavy, instead via Tahiti, due to arrive early lasting from sunrise to dark, with in December. many extensions into the night for se very dry and the nights cool. Every ne of the 26 days from August 30 to September 24 was beautifully clear, during the period of total eclipse to Notwithstanding the millions of the record the faint stars surrounding the most insistent and insolent flies ever eclipsed sun. The one partially measure in that it volunteered free railway and encountered, and no provision for ured plate showed \$2 such stars. The sleeping car transportation from Syd-keeping them out of the kitchen, dining same number of plates were exposed ney to Freemantle and return, the tent and living tents, there were no with the instruments to the same camp equipment and the services of 10 cases of illness. The locality was nat-officers and men of the Australian navy urally healthy in the extreme. The soil May and June from the Island of resembled that in the bed of an ancient Tahiti. A comparison of the two series

> and dark room problems.
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> Eclipse day, the 21st, was the finest day of all the 27 days the astronomers the eclipse partles in Central and Eastern Australia. The only other eclipse station, that of the Greenwich astrononers on Christmas island, had a cloudd sky and got no photographs; they at Wollal with a camera

its own crop of difficulties in the living

hotographic

which even moderate breezes carried in-

f the schooner was in progress, after the making of the two series. he eclipse, a genuine wind storm showd what the dust and waves could do. A delay of two and a half days ensued. performed perfectly in the After the wind died down the schooner Dr. Moore . It is believed that studies was run in shore on the high tide near- of the photographs, based upon ac ly as far as it could. When the tide curate measures, will add to existing went out the schooner was high and knowledge concerning the chemistry dry on the beach, the loaded donkey and physics of the corona. wagons drove alongside and the remain- The governments, the educational in-

ing three-quarters of the freight was stitutions and the people of New Zeaput on board in three hours. A small land and Australia were tremendously warship towed the schooner back to interested in the California expedition Broome, where the expeditions await- in its eclipse plans and in astronomy ed the southbound steamer-not the in general. Formal receptions with ad-Charon, which, true to tradition, car- dresses of welcome were tendered by ried its passengers only in one direct he mayors of all the cities through

The four available days and nights Wollal.

At the eleventh hour the navy's ment of the plates in an improvised of the states, etc. plans were changed. At Freemantle dark room and to the beginnings of the the astronomers and their many tons accurate measurements of two of them. Prime Minister Hughes, Senator Pearce of instruments were placed on board Before any measures could be completthe Charon, one of the regular steam- ed, however, it was necessary to pack up and continue the journey. A hur-ricd examination of the negatives show-his cabinet and the entire legislature ed them to be of great excellence in of Western Australia in Perth. Gov-

fornia, from Toronto, from Cambridge, had provided time in Australia for the rector Campbell and his associates. from India-the transfer to an \$0-ton stein plates, and the deduction of tality and generosity set up by the govschooner was made. A small govern- preliminary results, but the changes in and landed it again at Freemantle 15 days later than anticipated.

There was nothing to be done but ments. The glass plates and their ents to dry land. Donkey wagons- two days after the shipment arrived 27 donkeys to one wagon-transported there failed to run, and in consequence them over the sand ridges to camp, the instruments and plates did no reach Sydney in time to sail home with the astronomers. They are shipped

The four powerful Einstein camera djustments and tests of the apparatus, for the eclipse used plates 17 inches The days were hot, but the air was square and a quarter of an inch thick, of plate glass, weighing seven pounds each. There were 12 of these exposed with the heavy work of mouiting and lake, and the impalpable dust raised of photographs of the same star group should show whether the sun influence displaced the star images of September ere at Wolfal; and so it was also for 21 in the manner and extent specified by Einstein. This comparison will re quire several months of measurement and calculation.

The sun's corona was photographed had been on the island since early focal lengths, on plates 14x17 inches in size. The negatives are excellent Six officers and men of the navy as recording the details of the corona sisted the eight members of the Lick structure with great clearness. The bservatory expedition. All of the Cali- Lick observatory lent a duplicate camornia instruments worked perfectly era to the Adelaide university and oband the program went through as plan- servatory for use in Central Australia. ned. The observatoins were entirely The Adelaide negatives are likewise splendid. Copies of them will be sent Efforts to develop the photographs to the Lick observatory, and it is hoped at this station were made on two nights, that a comparison of the Wellal and but given up because of clouds of dust Adelaide photographs will tell us something about the changes and motions ccurring in the coronal structure in While the reloading of the equipment the 35 minutes which elapsed between

The five spectographs devoted to the photography of the coronal spectrum curate measures, will add to existing

which it passed, by the universities in four capital cities, by the Royal socie

Formal luncheons were given by and the cabinet of the commonwealth government in the parliament house Japanese and Malays and 400 whites, nearly all cases; the dust at Wollal had ernors. General. Admiral. Jellicoc, of dales by tralia, and the governors of three Aus Director Campbell's original plans tralian states arranged to receive Di- tral group in the South Pacific, about The standards of interest, hosp ernments and the people of Australia

> where on any similar occasion. **EXPORTS ARE IN**

have probably never been equalled else-

Tokio. Dec. 11-Japan's foreign trade yen and imports 105,606,000 yen, show- Stokes have just returned to Honolulu. ing an excess of exports over imports finance office. Compared with the trade of the corresponding period last en in the exports and a decrease of 24.564,000 yen in the imports. The increase of the export of slk contributuring star photographs needed in the designed and constructed especially ed to this condition. The excess of exports trade over import amounting to more than fifty-five million yen is a

> Every pint of brandy a steady drink r takes shortens his life by 11 hours, and the average drink he consumes curtails his earthly sojourn by 25 minutes, according to statistics c piled by scientists of Denmark.

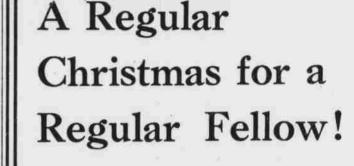
But Women Not Too Anxious to Wed Men and Be Their Slaves

Honolulu, T. H. Dec.,11-Overwhelmig numerical superiority of females does not necessarily mean that the men are chased up hills and down the females who outnumber them. There is the Island of Rapa, for instance in the Auswhich some writer of frenz'ed fiction, in an endeavor to outnumber O'Brien the women are true in only one respect change. The coal cost \$15. redoubtable Fredrick himself, wove glit tering narratives that made all previous tales o fthe South Seas evaporate into thin air by comyarison.

Now comes the real truth about Rapa rom the lips of J.F. G. Stokes, backed EXCESS OF IMPORTS up by Mrs. Stokes, who went with her susband on a two year expodition to the Austral group in the interests of the turing October amounted to 267,087,000 Bishop Museum of Honolulu, where Dr. yen of which exports were 161,481,000 Stokes is ethnologist. Mr. and Mrs.

Rapa is a land of laziness and ease by 55,875,000 yen, according to the for the men- says Dr. Stokes. The male population is for the most part, too lazy to live, and so there are four year it shows an increase of 50,324,000 women to every man. Does the beautcous Rapa flapper get out her hatchet when she wants a beau and go after him with several others of her age, strength and inclinations? She does

The women of Rapa are not at all anxious to marry the men of their own race says Dr. Stokes, as once they are married, they become little more than slaves. They have no hold or control over their husbands, who, despite the fact that each has only one official wife, never forget that each of them has three other possible candidates for



standard prevails in Rapa, too, for if feed the men, but not three times, or the official wife attempts the same prive even once a day. It is the custom on

ileges that her husband does she is liable festive occasions for the women to play-

to a severe "beating up," to say the fully put food into the mouths of the

the women, Dr. Stokes says that the with him one lamb. He sold the lamb

stories that have been circulated of for sufficient money to pay for a ton

the actual feeding of the Rapa men by of coal and received 1.25

earth for men.

The people of Rapa -and this prob-

ably means the women especially-are

exceedingly hospitable to white men.

As a result of the recently published

articles about the island and the ideal

conditions there several white "beach

combers" have taken up headquarters

on Rapa, much to the delight of the

native women. Needless to remark

Rapa is likely to become the South Pa-

Although all the agriculture work

and preparation of the food is done by

cific beachcombers new paradise.

men. The aforementioned frenzied fic-

tionist was on the island on one of

these occasions no doubt and sent the

news around the world that he had

discovered an exclusive heaven-on

SELLS LAMB FOR PRICE

OF WHOLE TON OF COAL

Nevada, Ohio, Dec. 11.-James Beam

came to town with a commission to

buy a ton of hard coal. He brought

That Husband or Dad or Brother of Yours-He Deserves It.

Maybe He Doesn't Seem to Take Much Interest in Christmas for His Own Sake-But Don't Let Him Fool You Into Thinking There Aren't Some Things He Wants.

You Can Get a Mighty Good Idea What They Are If You Turn to "Gifts For Him" in the "Christmas Gift Suggestions" Columns in Today's Classified Section.



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Even the baking perfection that results from the use of Royal Baking Powder is no

It is simply the result of absolute purity entering the food—and emerging again. Royal is made from Cream of

It Contains No Alum Leaves No Bitter Taste

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Tartar derived from grapes.

















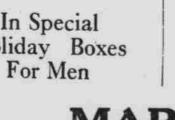
Immense variety, sure quality, style distinction, better-than-elsewhere values—these are some of the reasons for making this big store your store. We emphasize the fact that it's pleasurable for women to shop here—you wives and mothers, sisters and sweethearts.

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