

The observations made bear out the theory that these bands are due to inequalities in our atmosphere rather than to anything connected with the sun and moon.

Dr. Campbell reports that the eclipse was the most favorable he ever attended. Dr. Trumpler and he, operating the Einstein camera, carried out the schedule as arranged.

Dr. Adams, operating a 40-ft. camera, assisted by his wife, carried out the full programme. Dr. Moore, assisted by Professor Ross and Mrs. Campbell, secured spectrographic observations as hoped.

The programmes of the Canadian, Indian and English parties were successful. The corona, which was most awe-inspiring, was sketched by Lieutenant-Commander Quick, R.A.N.

Mr. Starpe and Mr. Brandon Cremer secured a great film from the first to the fourth contact. They attempted to photograph the shadow bands, but the result is doubtful. Everyone was pleased to be able to complete the detailed programme.

The party will leave Wallal on Monday and develop the films at Broome.

Melbourne, September 21. The Commonwealth Meteorologist received a telegram to-night from Dr. Campbell, in command of the Wallal expedition, which read:—"Sky and earth conditions perfect. Scientific programme went through as planned."

"CONDITIONS PERFECT."

Wallal, September 21. The eclipse was possibly slightly darker than the average, but the lamps were never needed in the open. The contrast with the previous sunlight was very noticeable during the first minute of totality, but afterwards, as one got used to the conditions, the light seemed quite fair. The recovery to normal sunlight after the totality was rapid.

Interviewed after the eclipse, Dr. Campbell, of the Lick Observatory (leader of the expedition), stated that the conditions of the sky and air were perfect. In guiding the telescope of his cameras, the image of the stars remained tranquil, as at night, a condition which he had not anticipated. He was highly satisfied with the performance of the instruments and the work of his observers. He intended developing a few plates at Wallal as a test, but the main photographic work would not be done until the party arrived at Broome, where ice could be obtained to cool the chemicals used, and where the dust problem would not be so serious.

OBSERVERS SATISFIED.

Wallal, September 21. Professor Chant, of the Canadian party, expressed himself as thoroughly satisfied with the work accomplished.

Mr. Evershed, of India, desired to express his indebtedness to the Australian Government and Lieutenant-Commander Quick for the facilities he had obtained for his work.

Mr. Hargrave, of the English expedition, was also well satisfied with the eclipse work, although owing to a slight mischance the self-recording magnetic apparatus failed to register.

The Western Australian party have obtained a number of photographs of the corona, and at their camp at the Wallal Downs station had the same fine observing conditions as at the main camp. The natives were rather afraid of the eclipse, and kept out of sight till daylight returned to normal. They have amassed some astronomical knowledge of eclipses during the past few weeks, but do not feel too certain about it. The 40-ft. camera is always regarded with a certain awe, and is passed at a safe distance. After the eclipse was over the natives appeared satisfied with the efforts of the astronomers to clear up the sun again.

COMPLETE SUCCESS

NEWS FROM CORDILLO DOWNS.

"We received the following wireless message last night from the Government Astronomer (Mr. G. F. Dodwell) and Professor Kerr Grant, at Cordillo Downs:—

The total eclipse was observed in ideal weather. The sky was clear with a light breeze. The complete programme was carried out with entire success. Four photographs to test the Einstein deflection were taken by Mr. Dodwell, Professor Kerr Grant, Mr. Murray, and others assisting; fourteen photographs of the inner corona, by Messrs. Appleby and Kindler; a 40-ft. coronagraph, by the Lick Observatory; and many photographs of partial phases and the outer corona by Messrs. Woolnough, Adamson, Ives, and their assistants; and spectrographs of the chromosphere and corona for the Carnegie Institution.

The programme of magnetic observation was carried out by Mr. Kennedy. The shadow bands were observed by Messrs. Johnston and Polkinghorne, and the rate of motion determined. The corona was sketched by Mr. MacGillivray. Large prominences were noted at the third contact. Messrs. Thrum and Bwen noted a complete cessation of wireless signals during the totality. The time was called by

Mr. Tom Barr Smith. Local residents and visitors from Broken Hill and Queensland assisted. The spectacle was one of entrancing beauty, and thrilled all observers.

The following wireless message was received at the Adelaide Observatory last evening from Mr. G. F. Dodwell, at Cordillo Downs:—"Success complete. Reached Adelaide Wednesday or Thursday."

Dr. Campbell telegraphed from Wallal:—"Conditions perfect. Programme carried through as planned. Hope your expedition fared equally well."

IN THE OTHER STATES.

NEW SOUTH WALES.

Sydney, September 21.

The eclipse was observed under perfect weather conditions in Sydney, and great public interest was manifested in the phenomena, an uninterrupted view of which was provided in a sky practically cloudless. By 3 o'clock practically all vantage points at street corners and at top of buildings and in windows were taken up. Ladies left shops and their bargains, and office boys and messengers set out on most mysterious errands. The moon kept her appointment to the second, when a slight dint began to develop in the sun's circle nearest to Sydney. This gradually developed until the sun assumed a crescent shape, resting, as it were, on its back, while red and black bands could be discerned and the huge bulk of the moon hanging in the heavens, seen for the first and last time by many thousands, as a black circular mass. At 4 p.m. Martin-place was crowded, and the career of the heavenly bodies was watched with the closest interest. Although the shadow of the moon had a twilight effect, there seemed also a reddish tint in it, which gave the harbor foreshores a weird shade.

The eclipse was never total in the heavens over Sydney, but very nearly so. Provincial centres were equally happy in having splendid weather, and there was great excitement at those places favored with totality. There were 80 seconds of totality at Ulmarra, on the Clarence River, where the fowls went to roost, but had to stir about again almost immediately.

The residents of Ulmarra were privileged to view that "flickering, changing coronet of pearl," called the corona. A girdle of light appeared round the edge of the sun, and the stars shone out brilliantly, combining to make the scene irresistibly impressive. Thousands watched the eclipse from all elevated points in the neighborhood of Tweed Heads, no fewer than 1,700 visitors coming from Brisbane alone. At eight minutes past 4 stars were visible, also the bands round the sun.

At Murlimbiby the obscuration lasted 2 min. 40 sec., and Mercury, Venus, and Saturn, and the constellation of the Southern Cross flashed out with marvellous clearness. The corona here was specially fine, and an exquisite picture was presented when the rays of the sun caught the cross of the church at Brunswick Head in a noose of light. The spectacle at Casino was also remarkable.

The Government Meteorologist (Mr. Mares) stated that at 3 p.m. the shade temperature was 63 deg., and the relative humidity 40 per cent. At 3.24 the figures were 61.9 deg. and 42 per cent. The sun's temperature at 3 p.m. was 110, at 4.24 p.m. it had fallen to 61. There was no alteration in the barometric pressure. Mr. Rayney (Government Astronomer) stated that the first contact took place at 3 hours 6 min. 55 sec., or 10 sec. earlier than had been calculated, and that Venus and Jupiter were both visible.

Mr. J. J. Rouse (managing director of the Kodak Company) sold 10,000 eclipse slides, and gave the net profits (£250) to St. Margaret's Hospital. He had also instructed all inter-State branches to donate the proceeds of their sales to charities.

Although it will be some weeks before it is possible to discover the result of the investigation into the Einstein theory, because of the necessary comparison of notes by the whole of the observatory parties in Australia, Professor Cooke expects to be in a position to make a preliminary statement within a week.

VICTORIA.

Melbourne, September 21.

The people who stopped in the streets to-day and craned their necks skyward were rewarded by only a partial view of the eclipse of the sun. The sky was cloudy and the luminary was not always visible.

QUEENSLAND.

Brisbane, September 21.

Three special trains conveyed excursionists to Tweed Heads to view the eclipse.

The decision of the Government to close the public offices at 3 o'clock this afternoon met with popular favor. The school children in the southern division were also free from 3 o'clock.

The weather at all points of vantage in Queensland could not have been improved upon for viewing the eclipse, the sky being devoid of clouds from the Tweed to far north of the State. The same conditions

are reported at Charters Towers. Three parts of the sun's face became obliterated, but the winds did not make weird noises, and fowls behaved as though eclipses were daily occurrences.

On the other hand, a message from Warwick, on the Darling Downs, says, "As soon as the moon advanced the light became grey, and everything looked weird. Finally, before the light went out waves of darkness swept over the earth. The birds in the parks flew to roost in the pepper trees, and the stars were distinctly visible."

A message from Stanthorpe states that a fairly strong breeze was blowing when the contact started, but died away about ten minutes to 4, and from that on till about the totality, when there was a little rush of wind. By 4 o'clock the depths of the shadows on the roads became intensified, although daylight and the brightness of the sun seemed unaltered. Five minutes later twilight was noticeable, the temperature dropping. A peculiar greyish look came over all the near landscape, and the distant hills became hazy. At twelve minutes past 4 a beautiful purple color suddenly spread over the landscape. The shadow bands were observable in a moment, and then with a rush all was in dulness except round the horizon, where a golden light was visible, immediately after the totality the purple ligate which preceded it, and a strong wind were again observed. By 4.20 it was bright sunshine, and the shadow conditions were similar to those seen just before the totality.

At Marlay during the totality the magnificent corona was visible, but no hydrogen flames were seen.

WESTERN AUSTRALIA.

Perth, September 21.

Great interest was shown in the solar eclipse in Perth to-day. A six-tenths of the sun's disc, the greatest phase visible here, was observed at 1.29 p.m. The eclipse began at 12.14 p.m., and ended at 2.40, and many people with smoked glasses stood in the streets and viewed the sight in a cloudless sky.

TASMANIA.

Zeehan (Tasmania), September 21.

An exceptionally fine view of the eclipse of the sun was obtainable in Zeehan. The spectacle was one of grandeur. It was at its best between 4 and 5 o'clock. There was a splendid variation of color, presumably reflected from the corona.

Register 26.9.22.

WOMAN'S PART.

WORK OF THE NATIONAL COUNCIL.

A YEAR'S ACTIVITIES.

In the Banqueting Room, Town Hall, Adelaide, on Monday evening, the annual meeting of the National Council of Women of South Australia took place. The President (Lady Hackett-Mouldeu) took the chair. There was a good attendance of members.

President's Report.

The President said in the course of her report on the work of the year—Six new associations have become affiliated to the Council in the past year, bringing the total number to 35, with 50 associate members. The following is a resume of the principal questions dealt with during the 12 months.

League of Nations.—The following motion was passed—"That this council urges the Federal Government to appoint the full number of three delegates to which Australia is entitled, at the 1922 meeting of the League of Nations' Assembly, and that in view of the provision of the covenant that all positions are open to women equally with men, and of the vital interest to women of the matters with which the Assembly has control, we further urge that one of the three Australian delegates shall be a woman." On the recommendation of the New South Wales Council the council supported the appointment of Lady Aberdeen to represent women on the League of Nations, particularly on the standing committee of health and traffic in women, thereby strengthening the English committee. On the recommendation of the N.O.W. of Queensland, New South Wales, and Victoria, the South Australian Council supported the nomination of Lady Novar as the Australian woman representative to the next Assembly. At the present meeting of the Assembly, Mrs. Dale, of New South Wales, is a delegate. We are glad to note that a woman is included in the list.

Sugar Control.—Regarding the sugar control it was resolved—"That this council protests against the continuance of the sugar control by the Federal Government." In the interests of the householder it was pointed out that sugar being a primary essential commodity, the cost of living is materially increased, while the home-made jam industry must decline owing to the prohibitive price of sugar and the disadvantageous position of the housewife compared with the jam manufacturer owing to the preferential rate to the latter. Slight relief has been promised, but a substantial decrease in price should be granted.

Marriage of Illegitimates.—The council resolved—"That in the case of either party contracting marriage, being illegitimate, the name of the parent of adoption shall be legally accepted on the marriage certificate in lieu of that of the real parent." That is a matter which will have our full consideration next year.

Divorce Cases.—It was decided that an appeal should be made to the Chief Justice that the law dealing with this subject should be administered in its entirety, and that the delegates representing each society on the council should sign the petition. We are glad to note that in the recent unsavoury case much was deleted from the press reports.

from the appointment of a woman. Since then Professor Wallace has been appointed, and it was agreed that we should approach the Prime Minister and urge the appointment of a woman if any future vacancy should occur. A reply was received from the Prime Minister that the question of the inclusion of women in the Commonwealth Censorship Board had recently received consideration, but it was decided that requests for the appointment of a woman to the board could not be complied with. We were disappointed that a woman was not given this appointment, but we realize that much can be done regarding the cinema question by women, and I think we might do well to work on the lines suggested by the N.C.W. of New South Wales.

Endowment of Motherhood.—A most interesting debate took place on this matter between the L.W. Educational Association and the Women's Non-party Association, both sides speaking eloquently and forcibly. At a later meeting a resolution was carried, with one dissentient—"That this council is not in favour of the principle of motherhood endowment."

Maternity Bonus.—It was decided—"That this council strongly urges that before any action is taken by the Federal Government with regard to the maternity bonus, the opinion of representative bodies of women be sought, as the matter so vitally affects women, and suggests that the N.O.W. of each State should be the medium of communication for all such representative bodies of women, whether affiliated with such council or not." "That the National Council in each State be notified of our action, and be asked to take a similar one." We regret that this suggestion was not acted upon by the Federal Government, but hope that it will be at some future date.

Nationality of Married Women.—It was resolved to accede to the request of the N.O.W. of Great Britain and Ireland to append the council's signature to the memorial presented to the Imperial Parliament and to support the Bill with a view to give married women the same right to choose their nationality as men, and to urge the Federal Government to instruct its representative to the Imperial Conference to recommend the amendment of the British nationality laws on the lines of the Bill.

International Council.—The International Council of Women, with which the South Australian Council is affiliated, and which comprises the National Councils of Women of 35 countries, and having a membership of over thirty million women, held its executive meeting at The Hague last May. Mrs. M. E. Mayfield very ably represented South Australia at these meetings, and did very good work in committee, having been appointed to the Committees of Peace and Arbitration and Press. Resolutions dealing with emigration, education, suffrage, cinema shows, equality of the sexes, and public health were dealt with, and these various recommendations will be considered by our council in the next session.

The report was adopted on the motion of Mr. J. H. Vaughan, seconded by Miss H. Burden.

Household Science.

Professor Brailsford Robertson said he had been asked to speak on the subject of the teaching of household science and economics in universities. He had had rather a close connection with the subject in the universities of California and Toronto. The Home Economics Department in the Californian University was divided into two branches, the first, household art, clothing and shelter—and the second, which was household science, dealt with the subject of food. The latest statistics he had from there were for 1916-17, which showed there were 152 students in the former branch of work, and 92 in the latter. Since then there had been a vast increase in the numbers. In Toronto the department of household science was famous, and every visitor was shown it; the laboratory, in particular, being well worthy the pride of the directors. He had never seen one in any part of the world fitted up in such an elaborate and beautiful manner. The course was a four-year one leading up to the degree of B.A. The distinction between the two curricula was very great. In Toronto the great idea was to obtain elaborate training in technical household operations. The students became first-class chemists, and technique was a great part of the work. Highly trained people were turned out; but in California an effort was made to give a spiritual and historical value to commonplace duties by displaying their place in human history, and the part they had yet to play in human destiny. That was done by application. A student grew up to feel a certain atmosphere, that she was not merely taught to do things, but to regard herself as a moving point in the infinite line of progress. That was the attitude he recommended, and was the standpoint from which all work should be approached. It was not felt to be so necessary to teach girls how to cook—that could be done best in mother's kitchen—there was the other question, why one cooked, and what happened when one did. The technique was not a matter which the university should deal with, the fundamental thing was to weave about the work a culture. There was now in California a student body of over 10,000. There was a course of household art, in the main in the history of that art from the earliest times upwards. It was virtually a course in archeology. Then there was a course in household architecture. One item in household art dealt with costuming, and the changes it had undergone. At the university there was an infirmary, and students were entitled to a free dispensary and medical advice and beds at a minimum charge. The dietetic work to be done for those patients was performed by the students. A diet kitchen was run. Many of the scholars subsequently became great research workers, while others were appointed to the dietetic departments of the big hospitals of the country. The students of household art became professional house decorators, landscape gardeners, and assistants to architects. If the establishment of such university work were suggested for Adelaide he would recommend that the ideal to pursue was that aimed at in the Californian University rather than that at Toronto.