Registered. Jan. 11th 1909

TO WATCH THE SUN.

PROPOSED FEDERAL OBSERVATORY.

STORY OF THE MOVEMENT.

The movement to establish an observatory for solar physical research has received an impetus from the visit to Sydney of Dr. Geoffrey Duffield, D.Sc., B.A., Fellow of the Royal Astronomical Society, and secretary of the committee originally formed in England to further the scheme. Dr. Duffield is on his way to Brisbane to attend the congress of the Australasian Society for the Advancement of Science, where he proposes to read a paper upon astronomy and solar research. He stated on Saturday that he came to Australia on the special mission of establishing a solar physics observatory, and gave the history if the movement in this way, says The Sydney Morning Herald of January 11:—

"I was at Oxford in 1904, when the second congress of the International Union for Co-operation in Solar Research was held," he said, "and I was invited to attend. I was surprised to find that, although there were representatives of observatories from all parts of the world, there were none present from Australia, where it seemed that, on account of the clear skies, the work could be undertaken with very great advantage. I am an Australian—graduated in Adelaide before going to Cambridge and Manchester—and I was anxious that Australia should take part in this work. Consequently, I wrote to Professor Bragg, in Adelaide, asking him the best steps to take to get Australia interested in the subject. He sent the letter to the press, and, on the strength of that, the Adelaide Observatory asked the State Government for a grant to undertake the work. Mr. Price (the Premier) replied that, as the Commonwealth was taking over the Meteorological Department, no grant could be given by the State Government. Then, a little later, at the Paris Congress of the International Union in 1907, I had a opportunity of urging upon the delegates the importance of Australian co-operation. The result was a resolution, proposed by Sir Norman Lockyer, approving of the proposal. A letter was sent by the Chairman of the executive committee of the union, Professor Schuster, through the Colonial Office, to the Prime Minister (Mr. Deakin). That letter had first obtained the approval of the Royal Society. It was accompanied by a memorandum by myself stating the reasons why Australia should take part in this work. They are as follow:—

"In the first place, the Australian climate is uniquely suitable on account of the perpetual sunshine, the clear skies, and because we could take observations in Australia at a time of year when it is impossible satisfactorily to take them in India, America, and the European observatories on account of the rainy season. In fact, it is pathetic to think of the South Kensington Solar Observatory struggling on in the smoke and foggy atmosphere of London, and only able to take observations six months in the year. Another great reason is that there are three stations situated 90 deg. apart, as regard longitude—India, America, and western Europe—and thus the sun can be under observation for only 18 out of 24 hours. A fourth station is required opposite England, to fill the gap which now exists in the way of observations around the earth. If this can be done the sun could be kept under observation for the whole 24 hours, and the scheme of co-operation proposed by the union could be carried completely into effect. As regards latitude, there is no station devoted to solar physics south of the equator. But if one were established in Australia we should then be able to find out if the variations in the solar radiation recorded in the American observatories are due to solar or to terrestrial changes.

"Support for this scheme of a Federal Solar Observatory in the Commonwealth has been received, irrespective of the Royal Society and the International Union, from the Smithsonian Institute at Washington, from the Colonial Office, from the Italian Society of Spectroscopists and from the British Association, which formed the committee to aid in establishing the observatory in this country. The committee consists of Sir David Gill (Chairman), Professors Schuster and Turner, Dr. Lockyer, Mr. Frank McClean, who recently went to Flint Island to observe the eclipse of the sun last year, and myself as secretary. Besides moral support, we have had some practical help. A telescope has been offered from the estate of the late Lord Farnham, who left it for 'the best advancement of astronomy.' Mr. F. McClean has offered £500 towards the purchase of a large spectro heliograph, provided that the additional £1,000 were privately subscribed. A number of subscriptions have been received, making the total £1,000. An influential committee is being formed in Australia, consisting of the members from scientific institutions from all the States. That is the position of the movement at the present time.

"Much has been said," continued Dr. Duffield, "about the connection between sun spots and terrestrial phenomena, and although there must be solar influence upon most terrestrial changes, these have not yet been investigated for a sufficiently long period for us to say definitely what the connection betwen them is. It may be said that India has adopted an optimistic attitude in this matter, and has erected her observatory for solar physics in the belief that it would be of value in famine prediction. This belief is based upon the Indian Famine Commission's report of 1880. I feel that this subject is yet in its infancy, and that its complete investigation at observatories well equipped for the purpose is essential to the elucidation of this problem, in which Australia is particularly and vitally interested. The great theoretical value of this study appeals to me more especially. The recent astonishing investigations of Professor Hale, of Mount Wilson, make us anxious for further investigation regarding the nature of sun spots; and the fact that the sun is typical of one stage in the evolution of the stars makes the study one of absorbing interest."

Dr. Duffield said that the minimum cost of a Commonwealth Observatory in Australia would be £7,000. It would cost £1,000 a year to keep up.

Registered, Jan. 20th 1909

THE RHODES SCHOLARSHIPS.

STATEMENT FOR 1907-8.

From the statement prepared by the trust relative to the operation of the Rhodes Scholarship scheme during 1907-8 the following extracts have been made:—The whole number of scholars in residence at Oxford under the Rhodes bequest during the academic year 1907-8 was 156. Sixty-six were from colonies of the Empire, 11 from Germany, and 79 from the United States of America. In addition to these 11 men whose scholarship term had expired continued to reside in the university for a whole or part of the year; one as an official Fellow, two as lecturers, one as a Senior Demy of Magdalen, and six for further study in various subjects. Before the end of the academic year death, resignation, or temporary suspension of scholarships had reduced the numbers in residence from 156 to 151. At the end of the summer term 54 scholars completed their course at the university, and took their final examinations. At the beginning of the October term, 1908, there was an entry of 78 new scholars, while three other scholars (colonial), who had temporary leave of absence, returned into residence to complete their course. The whole number or scholars in residence for the academic year 1908-9 is therefore 178. These are distributed as follow among the colleges:—Fifteen at Balliol, 14 at Christ Church, 13 each at Exeter and Queen's, 12 at St. John's, 11 each at Hertford, New College, and Worcester, 10 each at Merton and Wadham, 9 at Oriel, 8 each at Lincoln and Pembroke, 7 each at Brasenose, Trinity, and University, 6 at Magdalen, 4 at Jesus, and 2 at Corpus. There are, in addition, 11 ex-scholars in residence for the October term, engaged either in teaching, research, or special study for examination. The total so reached of 189 is the highest point in numbers hitherto attained. The work of the scholars now in residence is distributed as follows over the different courses of study organized in the university:—Literae humaniores, 20; natural science (geology, chemistry, physiology, and physics), 18; jurisprudence, 38; history, 20; mathematics, 4; theology, 9; English literature, 7; Oriental languages, 1; modern languages, 4; honour moderations (classical), 3. In courses more specialized or more advanced than those for the B.A. degree there are reading:—For the B.C.L. degree, 19; B.Sc., 7; B.Litt., 7; medicine, 1; the army, 1; engineering, 1; a diploma in forestry, 3; anthropology, 2; geography, 1; economics, 8; and for extra courses, 4. Mentioned among the Oxford distinctions gained by scholars or ex-scholars during the year is T. Dunbabain, Tasmania, 1906 (Corpus).—University Geographical Scholarship, £60. Outside the university mention is made of the following:—W. A. Barton, New South Wales, 1904 (Magdalen).—Barstow Law Scholarship, Inns of Court, London, £60 for two years. The examination results of the year include:—B.Sc. degree was awarded to H. Sutton, Victoria, 1905 (New College); B.C.L. degree was awarded to P. H. Rogers, New South Wales, 1905 (Worcester), second class. In the final honour schools among the results stated are:—Second Class—Literae humaniores, T. Dunbabin, Tasmania, 1906 (Corpus); natural science (geology), R. A. Farquharson, New Zealand, 1906 (St. John's); natural science (phsics), P. H. Harper, Western Australia, 1905 (Oriel); natural science (chemistry), W. R. Reynell, South Australia, 1906 (Balliol); natural science (physiology), A. S. Roe, Queensland, 1904 (Balliol); jurisprudence, M. L. MacCallum, New South Wales, 1906 (Balliol). Third Class.—Literae humaniores, N. Leslie, Queensland, 1905 (Balliol). Diploma in forestry was obtained by R. L. Robinson, South Australia, 1905 (Magdalen). There were two failures to pass in the B.C.L. examination, and five in the final honour schools (two in natural science, one in theology, and two in literae humaniores). Two scholars failed to obtain the diploma in economics. Two German, three colonial, and four American scholars are included in this list. The Clarendon Press has published a monograph on "The Shakspeare Apocrypha," by Mr. C. F. Tucker-Brooke, West Virginia, 1904 (St. John's). A research monograph by Harvey Sutton, M.D., Victoria, 1905 (New College), is published in The Journal of Pathology and Bacteriology. Subject, "The influence of high temperatures on the human body, especially with regard to heat-stroke." Athletics.—Four scholars (all South African) played in the Rugby football team against Cambridge—one of these, W. W. Hoskin (Trinity), being the captain of the team. Two scholars represented England and one Scotland in international Rugby football matches. In athletic sports five scholars (three American and two colonial); in cricket one (colonial); in lacrosse seven (five colonial and two American); in lawn tennis two (colonial); and in water sports two (colonial) represented Oxford against Cambridge. There will be an election of scholars for 1909 in Canada, Australia, South Africa, New Zealand, Newfoundland, Jamaica, and Bermuda, and five German scholars will be nominated by His Majesty the Emperor of Germany. The qualifying examination will be held, where necessary, in January, 1909, the election of scholars completed by April 1, 1909, and elected scholars come into residence in October, 1909. There will be no election of scholars from the United States for 1909. The examination for the scholarships open for 1910, both for the United States and for the colonies to which they are assigned, will take place in October, 1909, and the election of scholars will be completed in the January following, the elected scholars coming into residence in October, 1910. It is believed that by this earlier examination and election of scholars the regular work of candidates will be least interfered with in their own colleges and universities, and elected scholars will have a better opportunity of directing their studies in preparation for the course at Oxford.