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AUSTRALIA AND SOLAR RESEARCH.

Wonderful are the advances which in recent years have been made in astronomical observation. A chart of the heavens, the result of work carried on at eighteen different centres, to which the Victorian Government Astronomer recently referred, will, when it is completed and all the parts are corrected and fitted together, be, as Mr. Barrachi mentioned, "the most important scientific event of the era from an astronomical point of view." To improved equipment and the uses of photography and the spectroscope are due a large portion of the progress made, although the enquiring spirit which impels men of science in their efforts after wider knowledge, and often prompts persons of means to endow institutions which stimulate original research, is primarily responsible for the encouraging results actually achieved or prospectively assured. It is pleasing to note that in this great task of cataloguing the stars Australia is taking an important part. This is of course necessary if the map of the skies is to be complete and trustworthy. Nor would the people willingly stand aloof from an enterprise of such magnitude and importance. A suggestive article contributed by Dr. W. Geoffrey Duffield, of Manchester University, to the "Empire Review" for August, contains a statement to the effect that the scientific world is looking for the next advance in astronomical physics to Australia, and the writer shows an intimate knowledge of the temper of the people of the Commonwealth when he adds—"It is inevitable that in the near future the national spirit of scientific enterprise will accomplish the erection in Australia of a solar physics observatory, which will both give encouragement to individual research, and by its co-operation with other observatories assume an international importance, and assist materially in the solution of certain great problems connected with the sun." Just what form the "national spirit of scientific enterprise" may next develop it is perhaps not easy to predict, but its existence is undoubted. By its energy it has in no inconsiderable degree contributed to the spread of knowledge.

When Professor Jones recently visited Australia he strongly pleaded for the more liberal utilisation of the universities in the cause of original research. His advice in this connection was timely, although some excellent work has been accomplished in Adelaide and other Australian cities by means of which the field of human knowledge has been expanded. Professor Bragg's valuable contributions relative to radium and radio-activity are notable illustrations of this. The success attained by scholars in several departments of enquiry affords perhaps the best possible stimulus to further efforts. Why should not local astronomers assist in a complete solution of the problem at present engaging a good deal of attention in different countries as to how the earth and the sun are related? At any rate, Dr. Duffield appears to hold the opinion that the establishment of an observatory such as he advocates would be of great value in this connection as well as in a good many other directions. "The study of the sun is important from two points of view," he says. "One is purely scientific, and regards the sun as typical of one stage in the evolution of celestial bodies; and the other

takes account of his unrivalled influence upon the physical and meteorological conditions of the earth." It has long been recognised that in addition to the geographical position of Australia there are local conditions which make it desirable that systematic solar observations should be taken from some suitable place on this continent. Nowhere in the world is the atmosphere clearer and better adapted to the purpose than it is in many parts of this country, and the point of view which we can supply would make the circle of observation complete.

Dr. Duffield contrasts our sunny skies with the foggy and smoky atmosphere of London, and mentions that at South Kensington it is possible to make satisfactory observations during six months only of the year. "The two great centres of solar research at present," he says, "are America and Western Europe. These, with their well-equipped observatories, can keep watch upon the sun for a considerable portion of the twenty-four hours, but there are several hours during which his face is entirely hidden from both. A station in India has recently been erected to assist in the co-operative work, and now an observatory in Australian longitudes is alone wanted to complete the circle of stations round the earth and to ensure that the scheme adopted by the Solar Research Union may be completely carried into effect." Australians are naturally affected by any purely scientific study of the sun just as other people are, but in the present stage of meteorological knowledge they have large practical interests in the question. There is nothing new in Dr. Duffield's reminder that attempts have been made to connect terrestrial phenomena with sun spots. The theory has again and again been put forward that seasons vary with the curious and little understood variation of the sun spots. Even if Dr. Duffield is right in accepting the view that it is probable that the two sets of phenomena "are not causally related, but that both are due to some exterior influence yet to be discovered," Australia would be promoting her own welfare as well as adding to the knowledge of humanity if by co-operation on definite lines with other centres in an organised investigation of all the phases of systematic solar research her men of science could discover the key to the solution of the problem of how the rainfall is determined. Whether there is a correspondence between "variations in barometric pressure, rainfall, the earth's magnetic field" and the diminishing or increasing extent of the sun spots or not, there is no room to doubt that with wider solar knowledge we should approach nearer to the evolution of a complete meteorological science.

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UNIVERSITY LANDS.

The Commissioner of Crown Lands (Hon. L. O'Loughlin) told Mr. Campbell in the House of Assembly on Wednesday that the University had sold all the lands given them for endowment purposes to the Government. The purchase-money had been paid by means of inscribed stock, bearing 3½ per cent. interest. The stock was taken by the University at par. The negotiations had been in progress for a long time. He told Mr. Vaughan that the University had found a difficulty in collecting their rents, and that was why they desired to obtain inscribed stock bearing definite interest. The Government would deal with the lands under existing Acts, either under leasing or right of purchase agreements. He informed Mr. Archibald that if the inscribed stock fell in price the University would bear the loss. "We have the land and the University has the stock," he said. "The University can do what it likes with the stock and we can do what we like with the land." Mr. Vaughan questioned the right of the Government to sell endowment lands, and the Commissioner replied that he could only deal with them under existing Acts. Mr. Vaughan did not consider that was a straightforward answer, but Mr. O'Loughlin said he could give no other. The law must be altered if it was desired that the lands should only be leased. Mr. Butler wanted to know what the area, the value, and the rent of the University lands were, and what was the interest earned by the bonds representing the price they had received from the Government. Mr. O'Loughlin could not say off-hand, and asked for notice. Mr. Vaughan desired to know whether park lands could be dealt with by the Crown in the same way as the University lands without the special consent of Parliament. Mr. O'Loughlin replied that he was only acting as the law provided, and that park lands could not be dealt with except by Bill.

MUSIC TEACHERS' ASSOCIATION.

A meeting of the South Australian Music Teachers' Association was held at the Lyric Club rooms on Saturday evening. Mr. W. R. Pybus was elected chairman of the association, and presided over a good attendance. Mr. H. B. Holder and Mr. William Silver respectively were elected unopposed as members of the council of the association, and representative of the association upon the University faculty of music, vice Mr. C. J. Stevens, resigned. The secretary (Mr. E. E. Mitchell), at the request of the September meeting, from which he was absent owing to illness, withdrew his resignation, and consented to hold office until the close of the year. Several nominations for membership were received. Mr. John M. Dunn then delivered an excellent address on St. Paul's Cathedral, London, and its organists. A number of anthems composed by the various organists of St. Paul's were capitally sung under Mr. Dunn's direction by members of St. Peter's Cathedral choir.