

ASPECTS OF ASTRONOMY.

AT the anniversary meeting of the Royal Astronomical Society on February 11, the gold medal of the society was presented to Prof. Friedrich Küstner, director of the Royal Observatory, Bonn, for his catalogue of stars, his pioneer determination of the aberration constant from motions in the line of sight, and his detection of the variation of latitude. In his address as president of the society, Sir David Gill described the valuable work done by Prof. Küstner in each of these directions. He prefaced his remarks by saying:—

Astronomy in one sense or another appeals to minds of widely different orders. To the mathematician it offers problems of infinite interest; but, as we all know, there have been most distinguished workers in the field of astrodynamics to whom the spectacular glories of the heavens do not appeal—to whom the first sight of an object like Saturn or a great star cluster as viewed through a good telescope brings no thrill, no insatiable desire to see more or to acquire or devise means for so doing. Such men are too apt to regard the art of observing as a mere mechanical operation that is unworthy of their practical study; but they are thus frequently placed in the position of having to employ observations about which they have not the capacity to distinguish between the good and the bad.

There is a larger number of persons who are not wanting in the emotional response to their first telescopic sight of celestial objects; some of these acquire, or are driven to construct, instruments to indulge their awakened curiosity, and not a few of them afterwards do useful work as astronomical observers.

The attributes of the great majority of astronomers lie between these two extremes; but the number of men who possess the true fire and natural capacity for the most refined original research in the field of astrometry is limited. Such men must have an inborn natural mathematical, mechanical, and manipulative aptitude; the critical faculty to discern the possible sources of error to which any class of observations may be liable, with the inventive capacity to devise means for their elimination; and that persistent patience and divine discontent with their own best efforts which alone can lead to the highest and most refined class of work.

NOTES.

THE following telegram from the Paris correspondent of the *Times* appeared in the issue of that journal for February 16:—"Paris, February 15.—According to a communication made yesterday to the Academy of Sciences by M. Lippmann, Mme. Pierre Curie, the widow of M. Pierre Curie, the discoverer of polonium and radium, has at last succeeded in isolating one-tenth of a milligram of polonium. In order to obtain this result, Mme. Curie, working in cooperation with M. Debierne, has had to treat several tons of pitchblende with hot hydrochloric acid. The radio-active properties of polonium turn out to be far greater than those of radium. It decomposes chemically organic bodies with extraordinary rapidity. When it is placed in a vase made of quartz, which is one of the most refractory of substances, it cracks the vessel in a very short time. But a no less distinctive quality of polonium is the comparatively rapid rate at which it disappears. Whereas it takes one thousand years for radium to disappear completely, a particle of polonium loses 50 per cent. of its weight in 140 days. The products of its disintegration are helium and another body, the nature of which has not yet been ascertained, but Mme. Curie and M. Debierne are inclined to believe it to be lead. Its identity, however, will shortly be established, and at the same time science will have had the experimental proof of the transformation of a body which had been believed to be elementary."

NO. 2103, VOL. 82]

We learn from the Paris correspondent of the *Chemist and Druggist* that the administrative council of the Pasteur Institute has decided to establish a laboratory for the study of radio-activity and its therapeutic applications. This laboratory will adjoin the Oceanographic Institute there. The Pasteur Institute will devote to this object 400,000 francs of the Osiris Legacy. The University of Paris will give the land and find the rest of the money. Mme. Curie will be directress of the physical side of the laboratory, and the other section (researches as to practical applications of radio-therapy) will be under the direction of the Pasteur Institute. On a neighbouring site an extensive institute of chemistry is to be erected at the joint cost of the State, the city of Paris, and the Paris University.

A COMMITTEE has been formed with the view of promoting investigations into the nature and etiology of pellagra, a lethal disease which has become a terrible scourge in some countries of southern Europe and in many tropical or sub-tropical regions in other parts of the globe. The generally accepted notion is that the disease is caused by damaged maize; Dr. Sambon has, however, brought forward cogent reasons for regarding this theory as inadequate, and has pointed out that the seasonal prevalence and distribution of pellagra are compatible with its being a protozoal disease, which is spread by the agency of blood-sucking insects, probably sand-flies. It is intended to send Dr. Sambon, accompanied by properly qualified assistants, to a pellagrous region to carry on investigations on the etiology of the disease, and for this purpose it is hoped to raise a fund of 1000*l.*, towards which several subscriptions have been received, including a sum of 150*l.* from the Colonial Office.

ALL English chemists will join with their German colleagues in offering their congratulations to Prof. Julius Wilhelm Brühl on his sixtieth birthday, which he celebrated on Sunday last. Prof. Brühl's contributions to chemical science range over the whole of the subject. His first paper, on the substitution amido- and phosphido-acids, was published in 1875, and from that year, almost up to the present, his work exhibits an almost unequalled activity. During the last thirty-five years no fewer than ninety papers have been published by this extremely energetic chemist, and it is worthy of note that, with few exceptions, they are a record of his own personal work. A paper published in 1881, on the relations of the physical properties of bodies and their chemical constitution, was the first of a long series of contributions on a part of chemistry in which Brühl stands pre-eminent. Those who were privileged to be present at the lecture he delivered in London in 1905 will remember the excellent summary he gave, in faultless English, of his work on molecular refractivity. One paper, in the domain of pure inorganic chemistry, deserves special mention as illustrating the all-round character of his work. In this research, published in 1895, hydrogen dioxide was first prepared in a pure condition, its formula was for the first time established, and its physical properties determined. Prof. Brühl has very many friends in this country; indeed, it is scarcely too much to say that all who have met him, at the British Association and elsewhere, are his friends. He has a great love for this country, and an unprejudiced respect for the achievements of her men of science. All will be glad to know that he is recovering from the severe illness which has crippled his activity for the last two years, and hope that his renewed health will enable him to add still more to our knowledge of the most difficult and perhaps the most interesting problems in chemical science.