

THURSDAY, DECEMBER 8, 1870

## THE ECLIPSE EXPEDITION

BEFORE this reaches the hands of our readers, both sections of the English Government Eclipse Expedition will be on their way, the one to Spain and Algiers, the other to Sicily. The article in our last number will have given a general idea of the work to be done, and we think it will be admitted that seldom has so much work been laid out to be accomplished in a brief two minutes. To choose the right men for so important an investigation in a scientific point of view has been no easy task; but the list may now be looked on with satisfaction as comprising men of known ability, and of tried powers of observation in the various departments of Science concerned. Astronomy, chemistry, spectroscopy, photography, pure physics, are all worthily represented; and from our Paris intelligence this week it will be seen that there is good hope of M. Janssen being able to leave Paris to join in the Expedition.

We can now only wish for both parties that the elements will be propitious for the work they have undertaken. The time during which the observations can be made is so short that the most careful arrangements will be necessary to utilise the observing powers of every member of the party. Each will have his work definitely laid out for him. On the performance of the assigned duty without regard to other phenomena which come within the sphere of another man's work, will much of the success of the Expedition depend.

But scarcely less important than the arrangements at the moment of the eclipse, have been those of the Organising Committee, which had the charge of the preparations for the Expedition. The unfortunate delay which took place in ascertaining the intentions of the Government, threw on this Committee, after that intention was known, an amount of work compressed into the space of a few weeks, which ought to have extended over as many months. It was only in the first week in November that a definite assurance was received that an application for money and ships for the purposes of the expedition would be likely to be successful. The work to be accomplished by the Committee between that time and the first week in December, was such as those experienced in such matters might well shrink from; but, thanks to one or two individuals who had the advance of science at heart before anything else, the work has been done, and, what is more, has been well done. To Prof. Stokes in particular the thanks of the scientific world are due, for the untiring assiduity with which he has laboured to bring the affair to a successful issue.

If there is one cause for regret in the programme of arrangements, it is the absence of any one name among the observers who are going out, who can be said to directly represent the Government. It is a Government expedition, undertaken with the assistance of public money and ships belonging to the nation; and it would have been right and fitting to have seen at the head of it one of the Government astronomers, rather than that all the labour of the organisation and all the credit of the observations, should they be successful, should fall to

the lot of private persons. This expedition will, indeed, form a conclusive argument against those who have held that if Government hold out a helping hand to Science, this will act as a bar to all private enterprise. Had the Government held back altogether from offering their assistance, no English expedition would have been organised; individual astronomers who felt sufficient enthusiasm to give up their time, and spend their money in furthering the ends of Science, would have been compelled to avail themselves of the generous and munificent offers of assistance from the American Government. Need we say in what light this would have been regarded by contemporary science and by future historians? Government having once stepped forward, and assumed its rightful position, a stimulus was thereby given to private enterprise; every individual concerned felt that not only the interests of Science, but the honour of his country was at stake, in doing his part towards ensuring a successful result; and probably never has an expedition been better organised, and started under happier auspices, notwithstanding what has been said to the contrary in one of the daily papers, which has evidently been misled by those who have a purpose to serve in abusing the Committee.

Now that the Government has put its hand to the work, we are bound to say it has done so in no grudging spirit. More has already been done than the promoters of the Expedition were at first given to expect. Not only has the *Urgent* been placed at their disposal, to carry the Spanish and Algerian party from Portsmouth to their destination, but a despatch-boat, the *Psyche*, is told off for the Sicilian expedition. All the foreign Governments concerned appear determined to emulate this good will; the arrangements of that of Spain we have already published. There is reason to hope that the necessary apparatus will pass through every custom-house, duty free, without the slightest impediment. It is hoped that the Sicily party may combine with that sent by the American Government, and may do their work and publish their results in concert.

Our readers need hardly be reminded of the special object which it is hoped will be accomplished by the present expedition: the settling for ever of the vexed questions concerning the luminous appearance visible in total eclipses, known as the Corona, both as to its actual locality and its constitution, which still have to be settled, notwithstanding some hard writing to the contrary. In all these observations the utmost nicety of observation will be required, and some ingenious and novel contrivances will be employed for the determination.

We shall take the earliest opportunity of placing the results before our readers. We have taken means to have a report sent to us by telegraph from every station, and shall hope to be able to summarise them in our issue of the 29th inst. These early reports will be the more valuable, as up to the present time we have no official account of the observations taken in Spain during the total eclipse of 1860. With the exception of Mr. Warren De La Rue's observations, published by himself, no results of that expedition have yet been made known to the public.

We have now only to wish the Eclipse Expedition, and every member of it, a pleasant and prosperous voyage, and a happy return to England with the consciousness of having contributed something to the progress of scientific investigation.

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