

PAPER IX.

THE RECENT TRANSIT OF VENUS.

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It may be of interest to cast a retrospective glance on the late Transit of Venus, recording, as far as is at present known, the results obtained, and also to leave on record the names and stations of the observers and their assistants, as so many of the corps were engaged on the work.

Some eighteen months before the actual transit took place, the Astronomer Royal commenced his selection of observers to represent the English expeditions, and it is no secret that he endeavoured to secure the services of a far larger number of Artillery and Engineer officers than he was finally able to send out. As it was, the vacancies almost at the last minute were filled up by civilians who had had some previous training in astronomy. As will be seen by the annexed table, besides two Artillery officers, (both of the Marine branch) three Engineer officers were engaged in the expeditions, and the photographic assistants, to the number of fifteen, were wholly supplied by the corps. To Chatham the Astronomer Royal also looked for giving the necessary instruction in photography, and at one time in our photographic school we had 18 men training for this special work, besides 5 officers and civilians at the observatory. Fortunately Lieut. R. Darwin, R.E., threw himself into the photographic work, and took a great deal of the manipulative instruction into his hands, aiding most essentially in the matters of photo-heliograph drill, and amending the processes to be employed. At Greenwich a certain amount of hesitation was felt in adopting a dry plate process at first, as all recent eclipse work, and the sun diagrams taken at Kew, and subsequently at the Royal Observatory, had been taken by the wet method. It was only after we had successfully worked out a dry plate process, known as the "albumenbeer" process, that it was finally determined to adopt this method. Its advantages consist in an absolute impossibility for the films to shrink during manipulation (a matter of the highest importance where exact measurements have to be taken), whilst at the same time the plates could be prepared weeks or months in advance; in fact in Egypt, during the transit, we exposed plates which had been prepared at home months before. The dry plate process employed is given in the ap-