COMPARISON OF THE MAGNETIC INSTRUMENTS IN THE OBSERVATORIES OF THE BRITISH ISLES.

THE committee appointed by the British Association for the purpose of comparing the magnetic instruments in the different observatories of the United Kingdom, presented a report to Section A of the Association, at its Liverpool meeting in 1896, showing that the comparison of the Kew standards with the instruments in use at Falmouth, Stonyhurst, and Valentia was carried out, during the summer of 1895, by Professor A. W. Rücker and Mr. W. Watson.

At Greenwich no comparison could be made because the magnetic surroundings of the declination needle in use there made it necessary, in order to be certain of the accuracy of the results, to place the comparing instrument on the same site, but the peculiar form of the Greenwich needle makes it impossible to put another in its place.

The magnetometer and dip circle used in the recent magnetic survey of the United Kingdom were transported from place to place for the purpose of making the comparisons, having been compared with the standard instruments at Kew Observatory in July, before setting out, and again in October upon the completion of the work at the other observatories. The comparisons were made as follows: "Let C_0 and C be the readings of the self-registering instruments at the time when the value of the element was determined by the Kew standard (K) and No. 70, the comparing magnetometer, (S'), respectively. The $K - C_0 = Z_0$ and $S' - C = Z$ are the values of the zero-line of the self-registering instrument according to the two observations. But, if the observation with No. 70 has been made at the same instant as that with the Kew standard, and if the zero-line remained unaltered in the interval which actually occurred between the two experiments, the simultaneous values of the element given by the two instruments would have been K and $S = S + C_0 - C$; therefore, $K - S = K - C_0 - (S' - C) = Z_0 - Z$."

A summary of these results is given in this table, which is to be read from left to right, thus: The declination given by the Kew standard = that given by the Falmouth instrument -0.8 .

	Falmouth	Stonyhurst	Valentia	
	-0.8	$+1.1$	-0.0	Declination
Kew	-1.6	$+2.2$	-1.8	Dip
	-0.00018	-0.00006	$+0.00029$	Horizontal Force (C. G. S. units)
				G. W. LITTLEHALES.

DISTRIBUTION OF MAGNETISM IN SOUTHERN SWEDEN.

CARLHEIM-GYLLENSKÖLD, V.: *Mémoire sur le Magnétisme Terrestre dans la Suède Méridionale*. Kongl. Svenska Vetenskaps-Akademiens Handlingar. Bandet 27, No. 7. Stockholm, 1895, 4°, 93 pp., 5 plates.

IN the important work before us the author has attempted, with the aid of old and new observations, to give for the epoch September 1, 1892, a representation of the actual distribution of the magnetic elements in southern Sweden. It is unfortunate, as the author himself has recognized, that Ångström's numerous observations were not at his command for this purpose. The observation data, which in general were unreduced, had to be corrected first for the daily and the secular variation. As, sad to say, there is no magnetic observatory provided with self-registering instruments in Sweden, use had to be made in the reduction to mean of day of the term observations