

THE SEVERE MAGNETIC STORM OF MARCH 1, 1941

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A SEVERE magnetic storm was recorded by the magnetographs at the Alibag magnetic observatory at 03^h 58^m GMT, on Saturday, the 1st March 1941, with a characteristic "sudden commencement" in all the three elements. H rose instantaneously by 42 gammas and westerly D by 1.4 minutes of arc. There was a simultaneous fall of

occurred in fifteen minutes. 07^h 21^m marked the beginning of a rapid fall which continued till 09^h 27^m. The fall in H during this interval of a little over two hours amounts to 354 gammas. After this a gradual rise in H began with oscillations till 13^h 13^m when once again a fall and that, a very rapid one, commenced. In this case H decreased by

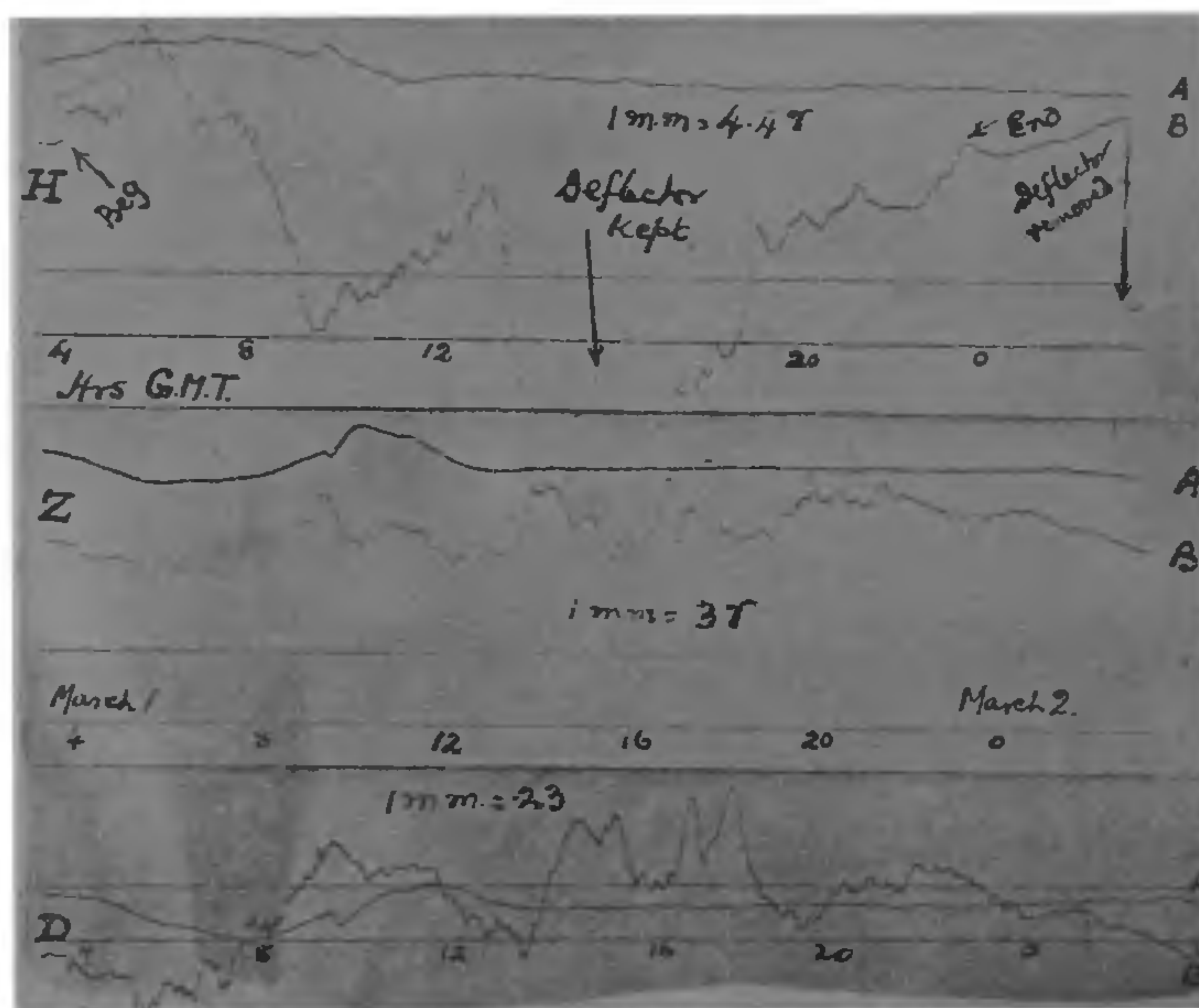


FIG. 1

H, Z and D magnetograms recorded at the Alibag Observatory

A—Records for the day previous to the storm

B—Records for the day of the storm (1st March 1941)

15 gammas in Z. When attention is confined to the H magnetogram it is seen that the force fluctuated with small-period oscillations till 05^h 08^m whereafter it rose rapidly by 132 gammas in thirty minutes reaching its maximum at 05^h 38^m. Then a fall with oscillations followed till 07^h 06^m after which time once again a rapid rise of 91 gammas

334 gammas in 46 minutes and was still falling, when unfortunately the light speck went off the scale at 13^h 59^m, and the H record was lost for about 96 minutes. At 15^h 35^m the light speck was brought within the margin of the photographic paper by a controlling deflector magnet which was strong enough to shift the trace by 276 gammas. The

presence of the deflector, however, could not prevent the loss of record for any appreciable time. Hardly four minutes elapsed, and the speck was once again below the margin of the paper due to a further large decrease in the value of H. This loss of record could not be prevented as there was no provision to keep the deflector magnet at a much nearer distance. Arrangements are now being made to prevent such loss in the future. The speck reappeared on the photograph at 17^h 48^m whereafter the oscillations began to die gradually with the slow rise

in the force. The storm practically ended by 23^h·5 on March 1, but the value of H was still about 265 gammas below its pre-storm value. From the nature of the trend of the trace at minimum time it appears that the H range during this storm has exceeded 785 gammas by a moderately large amount. The D and Z ranges during this storm were 16 minutes and 130 gammas respectively. The magnetograms of this storm together with those for the day previous to the storm have been reproduced in the figure for comparison.

PREVENTION OF GHEE ADULTERATION

AT an informal conference of ghee packers convened by the Agricultural Marketing Adviser to the Government of India and held in Delhi on February 19 under the presidency of Mr. P. M. Kharegat, C.I.E., I.C.S., Vice-Chairman of the Imperial Council of Agricultural Research, the adulteration of ghee with *Vanaspathi* and the rapid rise in the price of ghee due to the abnormal demand for the military department, were discussed.

The following steps, among others, were recommended to check the adulteration of ghee:—

- (i) Extension of the Food Adulteration Laws to the whole of a province or state instead of their scope being limited to certain municipal or town areas.
- (ii) Delegation of power to Marketing Officers to carry out inspection under the Food Adulteration Acts.
- (iii) Sale of *Vanaspathi* in sealed and labelled tins.

The conference also decided that the Federation of Agmark Ghee Packers might consider the desirability of approaching the Supply Department with the proposal that Agmark ghee might be purchased for future army requirements.

It was revealed at the conference that on account of high acidity in ghee during summer months, very large quantities of ghee cannot be marked with the Agmark label, particularly in the United Provinces and Bihar. It was, therefore, agreed that the maximum percentage of acidity of general grade be raised from 2·5 per cent. to 3 per cent. It was further agreed to have the same chemical standards for special and general grades except in regard to acidity.

On the question of sub-packing stations, there was general agreement that authorised packers might be allowed to have sub-packing stations provided satisfactory arrangements could be made for the testing of raw ghee at each of these sub-stations.