551·515·3 : 551·515·4

DUST AND THUNDERSTORM ON 23 MARCH 1954 AT AHMEDABAD

On the afternoon of 23 March 1954 at about 1630 IST, a dust squall with a gust speed of 55 km hr^{-1} commenced blowing at Ahmedabad. The squalls continued for about 45 minutes and then died down. At about 1800 IST, the wind direction suddenly changed from SSE to WNW and a severe dust squall was again experienced. The sky on the SSW was covered with cumulus and cumulonimbus clouds.

During the period of the squall, the dust rose high in the atmosphere and visibility was greatly reduced. Squalls with winds of 50 km hr^{-1} and more continued for about 45 minutes, and the maximum gust of 80 km hr^{-1} which came from southwest was recorded at 1815 IST. *Light* rain followed this squall shortly after and continued for an hour or so. Ahmedabad was apparently on the northern side of the track of the storm which moved from West to East. The lightning flashes occurred on the southern sky and were from West to East. A rise of 4 mm in pressure with a drop of 11° C in the dry bulb temperature and a rise of 52 % in relative humidity were the main features of the thunderstorm.

The records of the anemograph, barograph, dry bulb thermograph and hygrograph obtained at the Physical Research Laboratory, Ahmedabad are reproduced in Fig. 1 (p. 296). The pressure rise associated with the thunderstorm was exceptionally large being nearly 4 mm. The Airport Observatory which is about 3 miles to the northnortheast of the laboratory recorded 0·15 inch of rain. The rain occurred between 1800 and 1900 IST.

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