Letters To The Editor

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SEVERE THUNDERSQUALL AT BANGALORE ON 2 FEBRUARY 1959

A severe thundersquall, very unusual for the winter season, passed over Bangalore city in the evening of 2 February 1959. This squall was recorded at the Central Observatory, Bangalore at 1828 IST with a maximum wind speed in gust of 99 km hr^{-1} from a northerly direction. A squall with maximum gust speed of 42 km hr^{-1} at 1835 IST was also recorded at the H.A.L. Airport, Bangalore. According to the press reports, a part of the programme of the Golden Jubilee celebrations of the Institute of Science, Bangalore in the evening of 2 February 1959, had to be abandoned as a result of this thundersquall. As seen from the records of the Central Observatory, only on two previous occasions in the last 22 years, squalls passed over Bangalore during winter, one on 15 February 1937 and the other on 20 February 1956, with maximum wind speeds of 53 and 48 km hr^{-1} respectively.

According to the weather diary of this observatory, *Cb* clouds which appeared during late afternoon towards northwest, developed fast and covered the entire sky by 1745 IST. Thunder was heard at 1800 IST. During the first phase of the squall, wind speed in gusts of 52 km hr^{-1} was recorded at 1815 IST, when heavy showers had also commenced. During the second phase, the wind speed in gusts had gone higher up to 72 km hr^{-1} at 1820 IST. During the third phase, the highest speed of 99 km hr^{-1} was recorded from the northerly direction at 1828 IST. The speed started decreasing later and by 1840 IST had reached just 12 km hr^{-1}, as before the commencement of the squall. Wind speeds of above 50 km hr^{-1} in gust, prevailed for about 15 minutes.

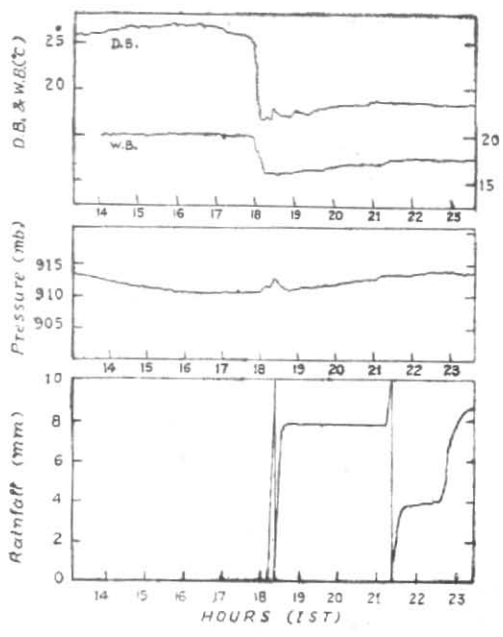

Fig. 1

The surface pressure recorded a rise of 2·0 mb during the passage of the squall with a sharp rise of 1·3 mb between 1825-1830 IST corresponding to the attainment of the maximum speed. The D.B. and W.B. temperatures fell by 9·0 and 4·0°C respectively, the fall having commenced at 1810 IST. The relative humidity rose by 27%. Rainfall of 17·8 mm was recorded between 1812-1840 IST on this day. The relevant portions of the self recording charts of the Central Observatory, Bangalore are reproduced in Figs. 1 and 2.

As seen from the relevant charts of 2 February 1959, there was marked influx of moist air over south Peninsula at the lower levels upto 2·0 km, under the influence of

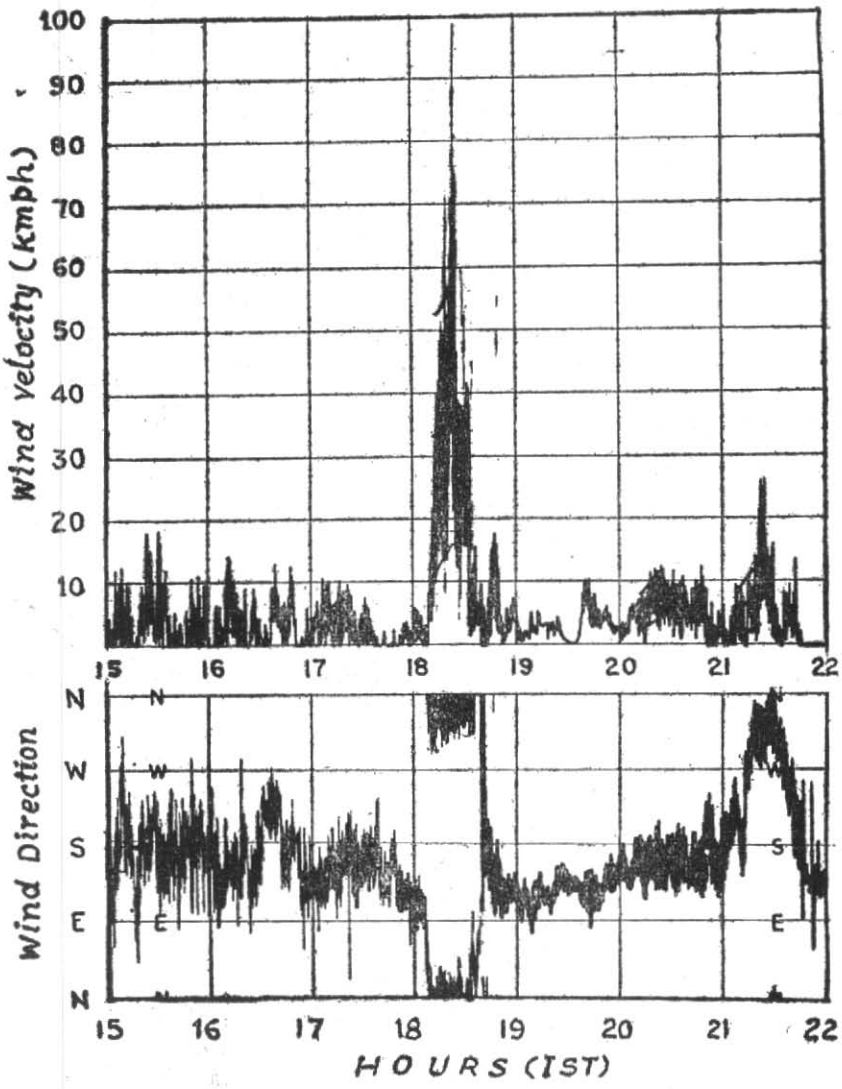

Fig. 2

the anticyclonic circulation over the north Bay of Bengal and a trough in east Arabian Sea off Konkan coast. A wind discontinuity noticed at 0530 IST chart running from Cochin to Chanda through Bangalore at 1·5 km a.s.l. got shifted to the east running from Pamban to Nizamabad by evening (1730 IST) but still passing through Bangalore.

Anticyclonic circulation at 6·0 and 9·0 km over southeast Arabian Sea extended to Kerala on 2nd morning. This shifted eastwards by evening and extended to coastal Madras State, possibly resulting in increased divergence at higher levels over Mysore Plateau.

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