

## EXCEPTIONALLY HEAVY RAINFALL AT BOMBAY ON 22nd SEPT., 1949.

Bombay experienced exceptionally heavy rainfall from the night of 21st September to the night of 22nd September. The rainfall recorded during the 24 hours between 1200 GMT of 21st to 1200 GMT of 22nd was 28·73" and the rainfall total during the 48 hours ending 0300 GMT on 23rd was 31·69". These two figures exceeded all previous records at Colaba during the last 108 years. The previous record was on 10th September 1930.

The hyetograms of Colaba are given in Fig 1. At the peak period the intensity of rainfall was 7" per hour.

The synoptic situation was as follows:—A deep monsoon depression from the Bay of Bengal crossed the east coast of the peninsula just to the north of Masulipatam on the morning of 21st. Its rainfall belt extended from the Circars coast to the South Konkan Coast and monsoon strengthened on the South Konkan as evidenced by 5" of rain at Marmagao and Devgad at 0300 GMT of 21st. The depression moved inland and was centred just to the west of Vijayawada at 1200 GMT of 21st. The active front extended from Vijayawada to Bombay. The upper winds at Poona were mainly westerlies upto 5000 ft. and northeasterlies aloft. Heavy rain accompanied by thunderstorm commenced at Bombay on the night of 21st, and continued almost unabated to 1500 GMT on 22nd. It was throughout accompanied by thunderstorms and wind speed in squalls reached 54 m. p. h. The depression weakened steadily and moved northwestwards till the morning of 23rd and northeastwards later. The western end of the 'front' however remained almost stationery over Poona-Bombay region even till the 25th.

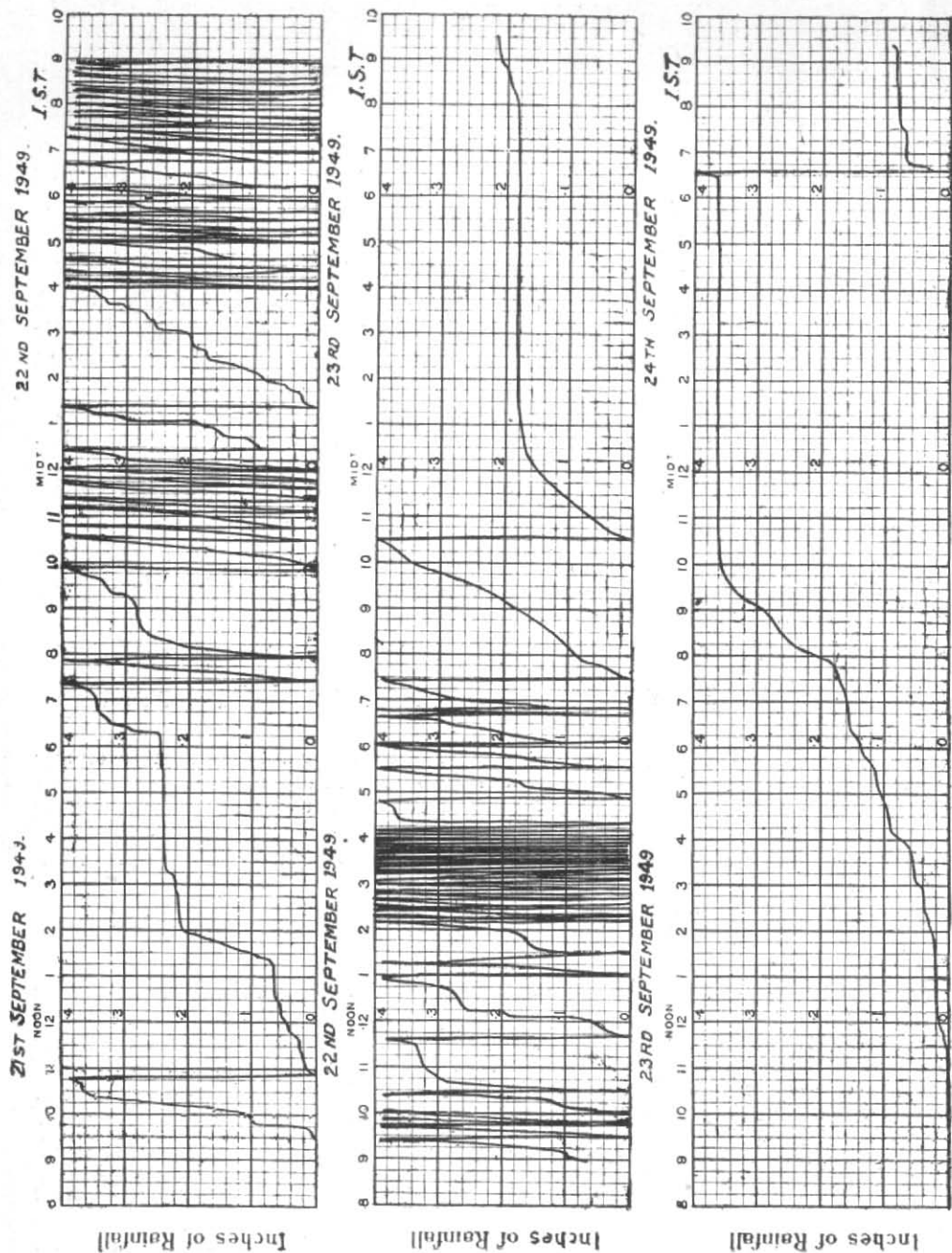


Fig. 1. Hyetograms of Colaba Observatory, Bombay from 21<sup>st</sup> to 24<sup>th</sup> September 1949

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The extent of this heavy rainfall of nearly 30" in 48 hours appears to be confined to about 25 miles round Colaba ; stations between 25 - 50 miles did not record more than 15" during the period.