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Letters to the Editor

551·577·2 : 551·589 "1965-1966"

SYNOPTIC FEATURES DURING THE BREAK MONSOON IN 1965 AND 1966

1. A prolonged break of 12 days in August (*i.e.*, 4th to 15th) and of 10 days in July (*i.e.*, 2nd to 11th) occurred during 1965 and 1966 respectively. An examination of zonal and meridional components of wind was made during the break periods of 1965 and 1966.

During the period of break of August 1965 the rainfall was in excess in south Assam, Sub-Himalayan West Bengal, Rayalaseema, Tamil Nadu, south Interior Mysore and the Arabian Sea Islands and normal in north Assam and north Interior Mysore. It was deficient in Bay Islands, Gangetic West Bengal, Orissa, Jammu & Kashmir, Konkan, Madhya Maharashtra, coastal Andhra Pradesh and Kerala and scanty over the rest of the country outside east Rajasthan where there was no rain. During the period of break of July 1966 the rainfall was excess in Assam, Sub-Himalayan West Bengal, Jammu & Kashmir, Tamil Nadu and Arabian Sea Islands and normal in Bay Islands, Gangetic West Bengal, Bihar Plains, east Uttar Pradesh, Himachal Pradesh, west Rajasthan and Kerala. It was deficient in Orissa, Bihar Plateau, west Uttar Pradesh, the Punjab, east Madhya Pradesh and coastal Mysore and scanty over the rest of the country.

2. Ramamurthy (1969) observed that in the upper troposphere, the strongest easterlies are near Lat. 8°N during the active monsoon periods, whereas during break periods the easterlies are nearly of the same strength over the whole of the south Peninsula. Raman and Ramanathan (1964) examined the relation between rainfall and the activity of upper tropospheric easterlies and concluded that when rainfall along the coast is small and negligible concentration of the easterlies on the next day is significantly absent, on a number of occasions. Ananthakrishnan and Ramakrishnan (1964) in a study of comparison of the upper tropospheric easterlies during active and break monsoon periods noticed that the upper tropospheric easterlies are comparatively stronger during the break periods.

3. An examination of the data of wind and rainfall during the break periods of 1965 and 1966 was made in the light of the observations mentioned in the previous para. Zonal winds at 150 mb level for Trivandrum, Madras, Bombay and Nagpur are snown in Fig. 1. The meridional and and zonal components along Long. 77°E for the break periods are shown in Figs. 2 and 3 respectively. The following conclusions may be drawn :

(*i*) During the break periods easterlies continued to be strong and remained at the same latitude (*i.e.*, between 8° and 13°N) as in strong monsoon periods. During the break

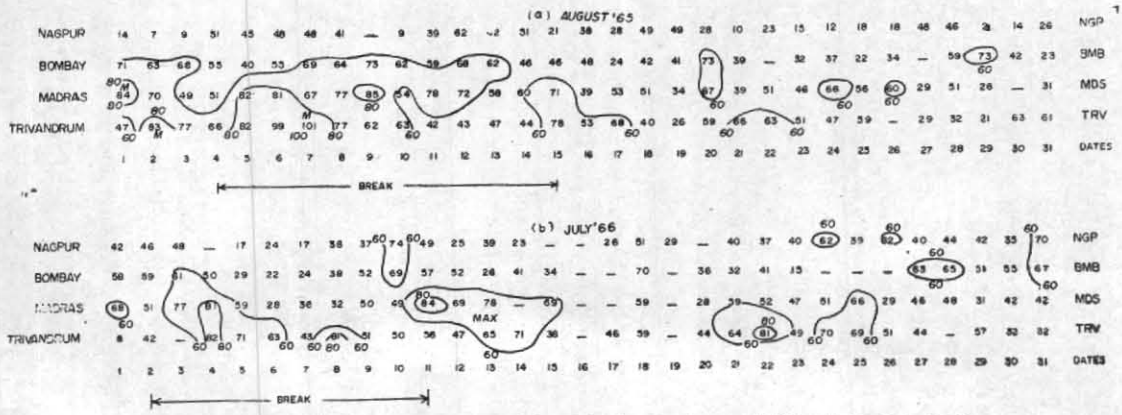
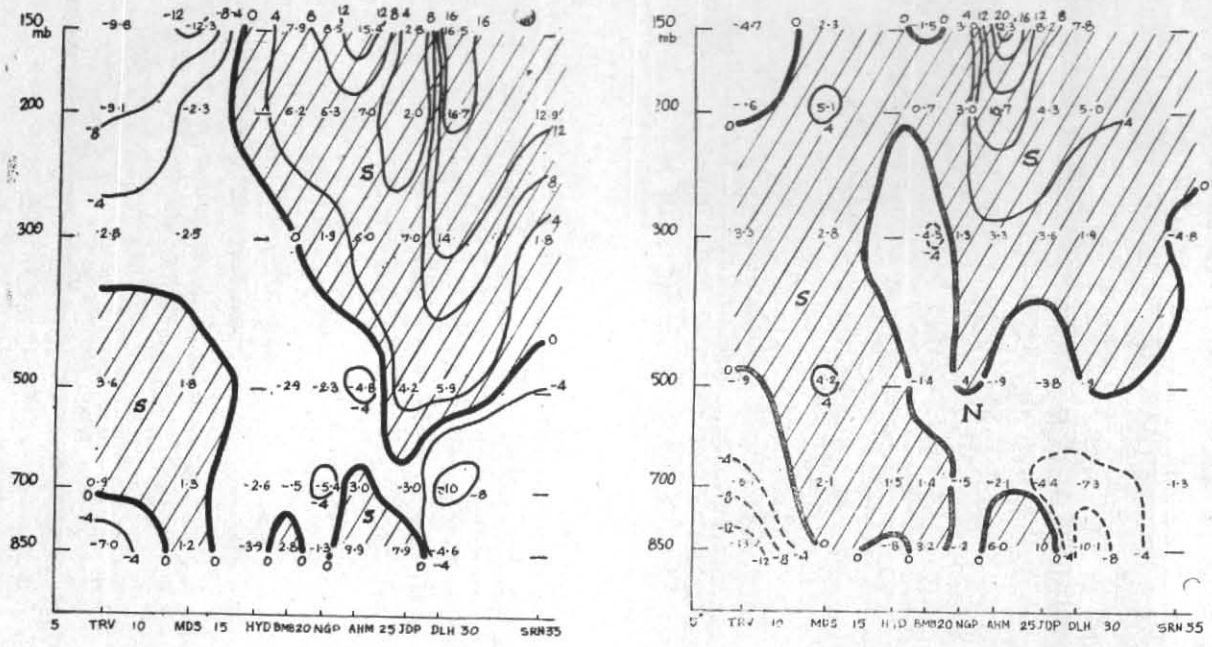


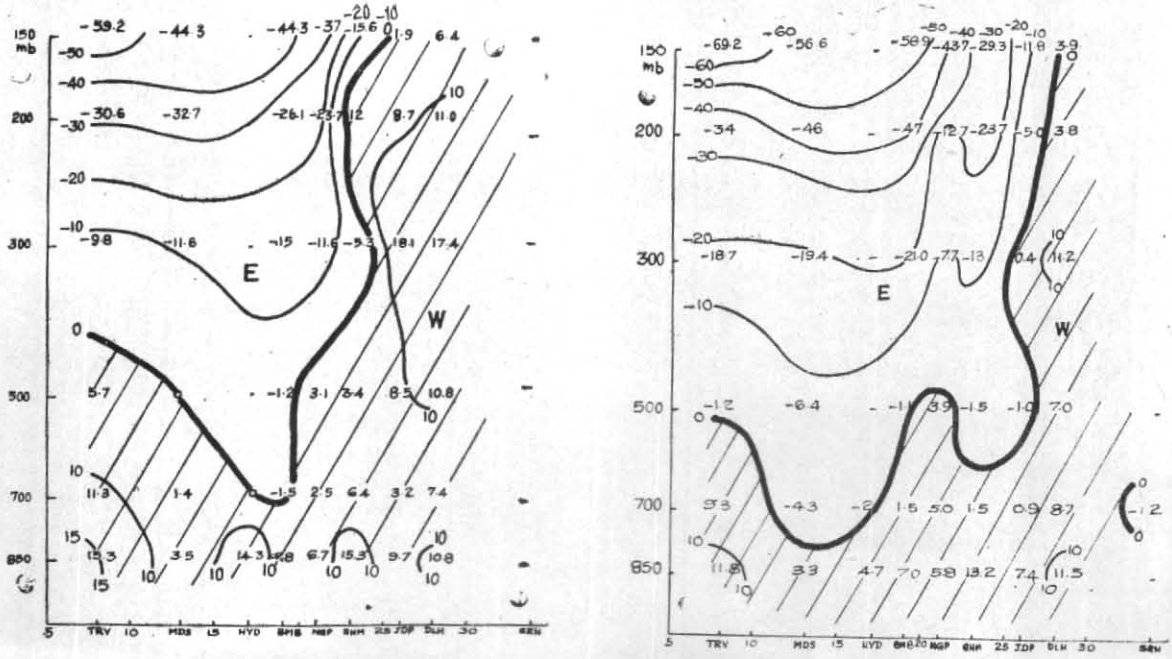
Fig. 1. Zonal easterly wind (kt) at 150-mb level during (a) August 1965 and (b) July 1966



(a) July 1966 (Break period)

(b) August 1965 (Break period)

Fig. 2. Mean meridional components. Southerlies are positive (shaded)



(a) July 1966 (Break period)

(b) August 1965 (Break period)

Fig. 3. Mean zonal components. Westerlies are positive (shaded)

periods the rainfall is low along the coast but much difference is not observed in the strength of the upper tropospheric easterlies. The strength of the easterlies during active monsoon period did not appreciably differ from their strength during the break (Fig. 1).

(*ii*) The meridional circulation during the break period is compared with that of the mean meridional circulation. During the break period the southerlies dominated the middle and upper troposphere north of Lat. 15°N (Fig. 2) by replacing northerlies.

(*iii*) An examination of the zonal components of the winds (Fig. 3) showed that the easterlies descended and penetrated upto 700 mb (depth of westerlies decreased considerably) and the strongest easterlies at 150 mb continued to be observed at normal latitude of their occurrence.

4. The author wishes to express his sincere thanks to Shri T. S. S. Anjaneyulu for his valuable guidance during this study.

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