

REPLY

Para 1 — Normals of upper air temperature over Bombay, Karachi and Jodhpur for the typical monsoon month of July (*vide* Table 1) show that at all levels from surface the air over either Karachi or Jodhpur which is nearer the heat low is warmer than that over Bombay. Therefore, the so called 'reversal level' or 'nose' of continental airmass protruding into the moist maritime airmass postulated by Desai does not exist. His postulate cannot also explain why the 'Gujarat low' is not seen in upper tropospheric levels in the mean charts for strong Arabian Sea monsoon.

Para 2 — Upper air normal charts for standard pressure levels for the month of July do not show any concentration of isotherms in the region where wind discontinuities can be marked. In absence of marked temperature contrasts and in summer monsoon 'an undiluted and qualitative application of air mass concept' has already pointed out by Saha (1970) may lead to many difficulties.

Para 3 — It has been pointed out by me that the 'eastern low' is migratory and that it is nearly the mean effect of the monsoon depressions or monsoon low pressure areas which moved from the Bay of Bengal into the country. It is well known that depressions and low pressure areas serve to strengthen the monsoon. Therefore, it is the strong monsoon which is the result of 'Gujarat low' and the 'eastern low' and not *vice versa*.

Para 4 — No comments.

Para 5 to 8 — In Fig. 12 of paper selected dropsondes were presented over different points

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TABLE 1
Upper air temperature normals for July

Sur- face	Levels (mb)							
	850	700	500	300	200	150	100	
Bombay								
TT	26.9	18.7	11.2	-2.6	-26.3	-47.1	-61.1	-74.2
T _d T _d	24.6	16.3	6.1	-9.8	-38.0			
Jodhpur								
TT	31.7	23.6	14.1	-1.5	-23.7	-43.0	-57.5	-72.2
T _d T _d	22.6	16.9	6.2	-1.9	-35.6			
Karachi								
TT	22.8	15.9	-1.4	-23.8	-45.1			
T _d T _d	18.5	5.4	-6.4					

NOTE 1. At Bombay surface pressure was 1001 mb while that at Jodhpur 974 mb.

2. TT = Dry bulb temp. and T_d T_d = Dew point temp.

in the Arabian Sea in order to bring out how the moisture content as well as the depth of moist air change in the west to east and south to north directions. If the Western Ghats played dominant role in the transformation of the air over the eastern Arabian Sea than at places along a line more or less parallel to the Ghats and out in the sea there would not be any significant difference in the upper air soundings. However, dropsonde data over positions 12°N, 73°E; 18°N, 71°E and 20°N, 70°E show marked differences and spectacular increase in the depth of saturated air northwards thus bringing out the importance of the monsoon perturbations in the Arabian Sea in effecting the vertical transport of moisture. Considering soundings along the same latitude only as desired by Dr. Desai would not have brought out this important feature.

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REFERENCE

1971 *Tellus*, 23, 3, p. 266.