balloon left the cell at its top, i.e., at 330 mb (10 km). Deshpande (1963), has, in one case, also reported temperatures above freezing point at the top of a Cb cell. After the balloon left the cell, it again encountered a steep temperature lapse up to 315 mb. A similar fall in the lapse rate, when the balloon probably has left the cell, was noticed by Barnes (1970). As has been pointed out earlier, the balloon ascended normally above 330 mb. From the characteristic features of the sounding mentioned above, it would appear that the radiosonde balloon entered a thunderstorm cell and was caught up in its updraft at 5-3 km. The updraft velocity is estimated as 8-10 m/sec. The region of updraft in the Cb cell seems to have been extended to 9 km nearing the top layers of the cell. The existence of superadiabatic lapse rates in the first part of the updraft region and the occurrence of considerably high temperature at the top of the cell are also interesting.

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A COMPARATIVE STUDY OF POTENTIAL EVAPOTRANSPIRATION BY DIFFERENT METHODS

Potential evapotranspiration is calculated by Penman (1963), Papadakis (1961), Thornthwaite (1948) and Hamon (1961) methods for a number of stations falling under the climatic categories according to Thornthwaite, Subrahmanyanam, (1956) into per humid, humid, moist sub-humid, dry sub-humid, semi-arid and arid. Table 1 shows the monthly potential evapotranspiration of ten stations.

Considering potential evapotranspiration by Penman as absolute it may be pointed out that none of the formulae are suitable over the entire climatic spectrum. While at the humid end Hamon fails, but at the arid end it works very well. Neither Thornthwaite nor Papadakis can be used for all types of climates at all times of the year.

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