



Publications

TR-16

Meteorological Tables for Determination of Precipitable Water, Temperatures and Pressures Aloft for a Saturated Pseudoadiabatic Atmosphere -- in the Metric System

W. O. Eihle, R. J. Powers, R. A. Clark

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The hydrometeorologist is often confronted with the problem of determination of precipitable water in the atmosphere based on surface dewpoints and the assumption of a saturated atmosphere with a pseudoadiabatic lapse rate.

Tables have been prepared previously in the English system

(Hydrometeorological Section, 1951) o The application of these tables to

meteorological data which is collected in the Metric system requires numerous

unnecessary conversions which can lead to errors. The following tables have been prepared to facilitate these computations in the Metric system.

Because of the computational technique employed, temperatures aloft for selected heights in degrees Celsius were obtained also. These data often prove useful in the computation of snowmelt over mountainous basins where the temperatures range considerably with elevation. Additionally, information on atmospheric pressure in millibars for selected heights was obtained. Thermodynamic considerations in the computational scheme are discussed below.

Texas Water Resources Institute

1500 Research Parkway A110
2260 TAMU
College Station, TX 77843-2260

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Phone: 979.845.1851
Fax: 979.845.0662
Email: twri@tamu.edu



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