



TP/WVP-3000
Temperature and Water
Vapor Profiling Radiometer

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1.0 General Description

1.1 Introduction

The Radiometrics TP/WVP-3000 portable profiling radiometer provides temperature and water vapor profiles from the surface to 10 km in height and low resolution cloud liquid water profiles. The radiometer includes two separate subsystems in the same cabinet that share the same antenna and antenna pointing system. The temperature profiling (TP) subsystem utilizes sky observations at selected frequencies between 51 and 59 GHz. The water vapor profiling (WVP) subsystem receives at selected frequencies between 22 and 30 GHz. Surface meteorological sensors measure air temperature, barometric pressure, and relative humidity. To improve measurement of water vapor and cloud liquid water density profiles, cloud base altitude information is obtained with an infrared thermometer (IRT). The radiometer has been designed for ease of use, accuracy, reliability, portability, and operation on a minimum of power. It is passive and does not emit radiation. The instrument is shown in Figure 1.



Figure 1. Temperature, water vapor, and liquid water profiling radiometer.

The complete Users Manual is available on request from Radiometrics Corporation. Please contact Dr. Randolph Ware for more information (ware@radiometrics.com).