



IN SITU AND SATELLITE MEASUREMENTS OF THE UPPER STRATOSPHERE AND MESOSPHERE

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Unique rocket-borne measurements of temperature and wind of the low, middle, and high latitude upper stratosphere and mesosphere are described. Special scientific campaign measurements, such as CRISTA, DROPPS, MaCWAVE, and others, are used to differentiate long- and short-term characteristics of the atmosphere between 50 and 90 km. Short-term wave activity is described from a minimum number of hourly rocketsonde measurements that exist, while longer-term data series, including satellite measurements, provide a fresh look at atmospheric features. The satellite and in situ rocket data correlate very well. We employ the full complement of radiosonde, rocketsonde, and satellite data to illustrate the usable and useful information about temperature and wind data behavior.