Abstracts

Millimeter Radiometric Sensing of the Lower Atmosphere

D.H. Staelin. "Millimeter Radiometric Sensing of the Lower Atmosphere." 1991 MTT-S International Microwave Symposium Digest 91.1 (1991 Vol. I [MWSYM]): 389-390.

One of the most rewarding results of the mid-century development of high-sensitivity passive microwave spectrometers, of which the Dicke radionneter was a key enabling element, has been the advent of scientific and operational sounding of the lower atmosphere by passive microwave techniques on both local and global scales. Strong microwave spectral features of oxygen and water vapor permtt ground and space-based sensors to determine the altitude profiles of atmospheric temperature and humidity with an accuracy not obtainable by comparable infrared sensors. Clouds and precipitation, as well as numerous stratospheric and mesospheric constituents, can also be measured.

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