

TEMPERATURE DEPENDENCE OF AIR-BROADENED LINE WIDTHS AND SHIFTS OF WATER AT 6 μm

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Air-broadened half-widths and pressure-induced frequency shifts of water vapor were derived from laboratory measurements using the McMath-Pierce Fourier transform spectrometer located at Kitt Peak. The observations were obtained at gas sample temperatures ranging from ~ 241 K to ~ 388 K for rotational transitions in the (000)-(000), (010)-(000), and (020)-(010) bands of water. Width and shift coefficients were determined for ~ 500 lines, and the temperature dependence of these coefficients was determined for most of the transitions measured.^a

^aThe research described in this paper was carried out by the Jet Propulsion Laboratory, California Institute of Technology, Langley Research Center and the College of William and Mary under contract with the National Aeronautics and Space Administration.

Time required: 15 min

Session in which paper is recommended for presentation: 5

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