

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

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