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 $\sim$241 K to $\sim$388 K for rotational transitions in the (000)-(000), (010)-(000), and (020)-(010) bands of water. Width and shift coefficients were determined for $\sim$500 lines, and the temperature dependence of these coefficients was determined for most of the transitions measured.[a]

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