

## LINE MIXING IN SELF- AND FOREIGN-BROADENED WATER VAPOR

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Line mixing has been measured for two pairs of transitions in the  $\nu_2$  band of water. The rotational assignments of the four lines (in terms of the rotational quantum numbers  $J$ ,  $K_a$  and  $K_c$ ) are a) two P branch lines: (1 0 1) $\leftarrow$ (2 1 2) mixing with (2 1 2) $\leftarrow$ (3 0 3) at 1539.061 and 1540.300  $\text{cm}^{-1}$ , respectively; and b) two R branch lines: (3 0 3) $\leftarrow$ (2 1 2) mixing with (2 1 2) $\leftarrow$ (1 0 1) at 1652.400 and 1653.267  $\text{cm}^{-1}$ , respectively. Pressure broadening coefficients of  $\text{H}_2\text{O}$  (halfwidths, pressure shifts and off-diagonal relaxation matrix elements) are reported for seven broadeners (self,  $\text{H}_2$ , He,  $\text{CO}_2$ ,  $\text{N}_2$ ,  $\text{O}_2$  and air) obtained from retrievals performed by multispectrum fitting implemented with line mixing.<sup>a</sup>

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