MICROWAVE SPECTRA OF ISOTOPICALLY SUBSTITUTED FORMS OF OH-OH_2

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New microwave measurements of the radical complex ^{16}OH-$^{18}OH_2$ and ^{18}OH-$^{16}OH_2$, as well as improved measurements for ^{16}OH-$^{16}OH_2$ and ^{18}OH-$^{18}OH_2$ are reported. Observed spectra include hyperfine and super-hyperfine structure in the $|J, P, \epsilon >= |3/2, 1/2, -1 > \leftarrow |1/2, 1/2, +1 >$ R-branch transition and the $|J, P, \epsilon >= |1/2, 1/2, -1 > \leftarrow |1/2, 1/2, +1 >$ Q-branch transition. The results are analyzed using a two-state model which accounts for nuclear motion on both the ^{2}A' and ^{2}A" potential surfaces. The energy difference between these states, determined from the analysis, is found to be relatively consistent between isotopic forms, but small differences outside the estimated uncertainties appear to exist.