THE ROTATIONAL SPECTRA OF OH DOUBLET PI ISOTOPOLOGUES

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Two new sources of THz radiation have enabled in depth studies of the rest frequencies for rarer isotopologues of the hydroxyl radical (OH). These sources operate from 1.4-2.0 THz and 2.47-2.75 THz, and span the fundamental transitions for OH $^2\Pi_{3/2}$ and $^2\Pi_{1/2}$ and its rare oxygen isotopologues. Transitions for OD and several v = 1 states are also accessible. The new measurements add significantly to the wealth of high-resolution measurements for the OH radical. Analyses using combined data sets are underway, with the goal of providing a full isotope-independent Dunham analysis. Measurements include the rare ^{17}OH and ^{17}OD isotopologues, we will present the magnetic and electric quadrupole hyperfine parameters for ^{17}O and compare these to values determined via LMR, EPR and theory.