

ROTATIONAL SPECTROSCOPY OF HD¹⁸O

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The recent detection of HD¹⁸O in Orion KL^b by the *Herschel Space Observatory* provided a strong motivation to revisit the rotational spectrum in order to obtain more accurate calculations of transition frequencies. Rotational transitions were recorded in the 300 – 2700 GHz frequency range. Analysis of the combined microwave and infrared data sets with an Euler series Hamiltonian^c has facilitated determination of a set of precise rotational constants to support precision velocity measurements. The new rotational data also provides a means of evaluating the performance of the MARVEL algorithm used in the recent review of all available HDO data^d.

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^cH. M. Pickett, J. C. Pearson, and C. E. Miller *J. Mol. Spectrosc.* **233** (174), 2005.

^dJ. Tennyson et al. *J. Quant. Spectrosc. Radiat. Transfer* **111**(2160), 2010.