THE FAR-INFRARED SPECTRUM OF DEUTERIUM IODIDE (DI)

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Pure rotational transitions within the ground state of deuterium iodide (DI) have been measured over the range J'' = 2 to 10 by tunable far-infared (TuFIR) spectroscopy. The spectra show large electric-quadrupole splittings arising from the ^{127}I nuclear spin (I = 5/2). A least-squares fit to the measured transitions has resulted in accurate values for the molecular parameters B, D, eQq, D_{eQq} and C_I.