THE FT-MICROWAVE SPECTRUM OF DIMETHYL CARBONATE, $(CH_3O)_2CO$

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The FT-Microwave spectrum of dimethyl carbonate,$(CH_3O)_2CO$, has been obtained with the original Balle-Flygare machine. Initial assignments for this double internal rotor include several ^bR and ^bQ type transitions for the AA state of the molecule. Rotational and quartic centrifugal distortion constants have been determined for this state. Transitions due to isotopic variants of the molecule have also been observed. Searches for AE and EE state lines are currently underway. Additional characterization of the isotopomers of dimethyl carbonate will lead to the determination of its structural parameters. Millimeter and submillimeter direct absorption experiments are also planned to more completely characterize the rotational behavior of this molecule.