ATTEMPTS AT USING IAMCALC TO ANALYZE LOW FREQUENCY ROTATIONAL SPECTRA OF MOLECULES WITH INTERNAL ROTATION AND NUCLEAR SPINS

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Recent progress in the fitting and analyses of simple methyl rotors to simultaneously account for internal rotation and nuclear hyperfine terms will be presented. The analyses have been attempted using Herb Pickett's IAMCALC program which acts as a "front end" for the powerful SPFIT/SPCAT software. Progress has been made by simply appending hyperfine parameters to an IAMCALC-prepared SPFIT input file. This work has been prompted by our recent high resolution spectral measurements in the 1 - 21 GHz region on species such as methanol and methyl nitrite. Data will be presented together with comments on the validity of the fitting approach.