P5366: ULTRAHIGH-RESOLUTION LASER SPECTROSCOPY OF ACETALDEHYDE : TORSION-INVERSION-ROTATION INTERACTION IN THE EXCITED STATE

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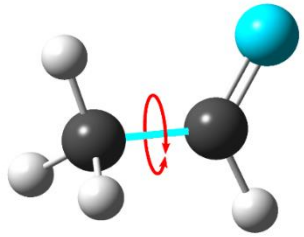
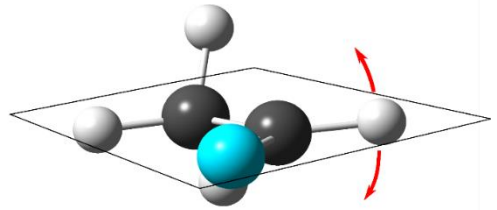
- **In the S_0 state, the methyl torsion is the large amplitude motion. On the other hand, in the S_1 state, the methyl torsion and the aldehyde-hydrogen inversion are the large amplitude motions.**
- **The interaction between all over rotation and the large amplitude motions affects rotational structure.**
- **Sub-Doppler high-resolution spectra were measured by crossing a molecular beam and single mode UV laser.**
- **High-resolution fluorescence excitation spectra were observed for the $14_0^{0+}15_0^2$ band and the $14_0^{0-}15_0^4$ band.**
- **I'm trying to analyze including the torsion-inversion-rotation interaction.**



ν_{15} : methyl torsion



ν_{14} : wagging of aldehyde hydrogen