THE COF_2 HOT BANDS IN THE ν_6 REGION AND THE $2\nu_6$ OVERTONE[a]

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Using results from our analysis of rotational and infrared spectra of $\nu_2,\ \nu_3,\ \nu_5$, and ν_6[b] we have fit the hot bands in the ν_6 region near 774 cm^{-1} originating in ν_2, ν_3, and ν_5 as well as the $2\nu_6$ overtone band. Although the $2\nu_6$ state is perturbed by the nearby and as yet unassigned $\nu_2 + \nu_3$ and $\nu_2 + \nu_5$ states, a set of effective parameters was derived which adequately describes the $2\nu_6$ spectrum as well as the $2\nu_6 - \nu_6$ hot band. These results improve the description of the ν_6 spectrum, particularly in the Q-branch region. The molecular parameters will be presented and examples of spectra will be shown.

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[b]E.A. Cohen, and B.J. Drouin, Abstract TE10, International Symposium on Molecular Spectroscopy, Columbus, OH, 2010.