LASER EXCITATION SPECTROSCOPY OF THE $\tilde{\mathrm{B}}^2A_1 - \tilde{\mathrm{X}}^2A_1$ TRANSITION OF $CaOCH_3$

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The $\tilde{\mathrm{B}} - \tilde{\mathrm{X}}$ transition of $CaOCH_3$ has been observed at Doppler limited resolution and rotationally analysed. The molecule was generated using a laser ablation/molecular beam source in which a solid calcium rod was ablated and a mixture of argon seeded with a few percent of methanol was used as the carrier gas. The rotational analysis of the band is consistent with a linear Ca−O−C geometry in both electronic states and hence C_{3v} symmetry for the $CaOCH_3$ radical. The values of the spin-rotation parameters determined for the excited $\tilde{\mathrm{B}}^2A_1$ state will be discussed.