HIGH RESOLUTION SPECTROSCOPY OF THE $\tilde{B}^2\mathrm{A}_1$ - $\tilde{X}^2\mathrm{A}_1$ TRANSITION OF $CaCH_3$ and $SrCH_3$

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The $\tilde{B}^2\mathrm{A}_1$ - $\tilde{X}^2\mathrm{A}_1$ (0_0^0) bands of $CaCH_3$ and $SrCH_3$ have been observed at high resolution using laser excitation spectroscopy. The molecules were synthesized in a laser ablation/supersonic expansion spectrometer by the reaction of the ablated metal atoms with a 1% mixture of $(CH_3)_4Sn$ seeded in argon. The spectra for each molecule exhibit a symmetric top structure, with low J lines of multiple K components present. A rotational analysis is currently in progress, and a comparison of the spectroscopic and structural parameters for both molecules will be presented.