ROTATIONAL AND HYPERFINE STRUCTURE IN THE $\tilde{B}$ - $\tilde{X}$ TRANSITION OF NIOBIUM METHYLIDYNE, NbCH

D. J. CLOUTHIER, *Department of Chemistry, University of Kentucky, Lexington, KY 40506-0055*; C. T. KINGSTON and A. J. MERER, *Department of Chemistry, University of British Columbia, 2036 Main Mall, Vancouver, B.C. V6T 1Z1, Canada*.

High resolution spectra have been taken for some of the components of the perturbed (0,0) band of the $\tilde{B}^3\Delta_1 - \tilde{X}^3\Delta_1$ system of NbCH near 600 nm. Extensive Nb hyperfine structure (I = 9/2) is found in all the rotational lines, consistent with the ground state electron configuration $(5s\sigma)^1$ $(4d\delta)^1$. Experiments with NbCD are planned, and it is hoped to report the hyperfine constants and the molecular structure at the meeting.