

## VIBRATIONAL STRUCTURE IN THE $B^4\Pi \leftarrow X^4\Sigma^-$ ELECTRONIC TRANSITION OF NbO

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During our studies of niobium methyldyne, NbCH, we were continually faced with the presence of the much stronger and frequently overlapping niobium oxide spectrum. This motivated us to begin a thorough investigation of NbO throughout the visible region in order to document the somewhat irregular nature of the vibrational structure of its electronic spectrum. The  $(n,0)$  bands, where  $n=1, 2, 3$ , of the  $B^4\Pi \leftarrow X^4\Sigma^-$  electronic transition were recorded at high resolution. Two  $(3,1)$  hot band transitions corresponding to the  $B^4\Pi_{-1/2} \leftarrow X^4\Sigma_{3/2}^-$  and  $B^4\Pi_{1/2} \leftarrow X^4\Sigma_{1/2}^-$  sub bands were also studied using high resolution methods. The vibrational dependencies of the rotational and hyperfine structure as well as other interesting aspects of the spectra will be presented.