

## REANALYSIS OF THE NEAR INFRARED ELECTRONIC TRANSITIONS OF NiCl

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Three near infrared electronic transitions of NiCl have been reanalyzed. Hougen's recent (2011) theoretical investigation of low-lying states of metal halides with a  $d^9$  electronic configuration indicated that the signs of the experimental spin-rotation and lambda-doubling signs for the low-lying  $\Omega=1/2$  states of NiCl were not correct. This problem is corrected by assuming an excited state with  $^2\Sigma^-$  symmetry instead of  $^2\Sigma^+$  symmetry. Line positions for the  $[12.3]^2\Sigma^- - X^2\Pi_{3/2}$ ,  $[12.3]^2\Sigma^- - X^2\Pi_{1/2}$ , and  $[12.3]^2\Sigma^- - B^2\Sigma^+$  electronic transitions have been refitted, and the new spin-rotation and lambda-doubling signs agree with the Hougen theory. The results of the analysis will be presented.