HIGH RESOLUTION LASER INDUCED FLUORESCENCE AND ZEEMAN EFFECT IN THE [18.6]1.5-$X^2\Sigma^+$ TRANSITION OF YbOH

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YbOH is candidate for eEDM and similar experiments

Previously analysed $A^2\Pi_{1/2}$-$X^2\Sigma^+$ transition

Is [18.6]1.5 (1200 cm^{-1} above $A^2\Pi_{1/2}$) the $A^2\Pi_{3/2}$ component?

Difference in B values of the 2 states inconsistent with spin-orbit constant of 1200 $cm^{=1}$

Zeeman Effect on $R_{21}(0)$ and $P_{22}(3)$ gives g_e{[18.6]1.5}=1.667

g_e= +2 for $^2\Pi_{3/2}$ (+1 for $^2\Delta_{3/2}$)

[18.6]1.5 is $^2\Pi_{3/2}$ strongly mixed with other Ω = 3/2 state(s)!!

Possibly 67% $^2\Pi_{3/2}$ + 33% $^2\Delta_{3/2}$???