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Simulation of the OH Emission Molecular Spectrum to Determine the Plasma Temperature and the Influence Noise to Signal Ratio on the Temperature Values HOSSEIN NASSAR, OULOUM AOUDE, Lebanese University, FSP SECTION IV KARAK-ZAHLET TEAM — The OH system ($A^2\Sigma^+$ - $X^2\Pi_I$) molecular emission spectrum is frequently observed in plasma sources containing water. We have simulated the spectrum of (0,0) and (1,1) bands of this system from 3064 Å for different rotational and vibrational temperatures. The influence of the noise to signal ratio has been studied, if the noise to signal ratio is about 10% we found an error of 6% at temperature 3000K and 10% at 6000K.

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