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Analysis of Spectral Lines of Ni I and Ni II in the Ultraviolet and Visible Region[1] BRYNNA NEFF, STEVE BROMLEY, JOAN MARLER, Clemson University — A better understanding of the atomic properties of Ni could contribute to our understanding of astrophysical observations especially in the context of solar physics. Laboratory measurements can provide information important for interpreting these spectra and benchmarking theoretical calculations. There is still more work to be done in understanding the electronic structure for low charge states of Nickel. To this end, we perform analysis of UV/VIS spectroscopic data obtained from the Compact Toroidal Hybrid plasma experiment at Auburn University. We also look at relative line intensities by comparing intensities of multiple lines from the same upper energy state. We present spectral lines observed in this experiment for Ni I and Ni II.

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