Highlights of visuals created for Astronomy 121 lab reports. All graphs made using Matplotlib in Python with captions in LaTeX by Dylan Salas

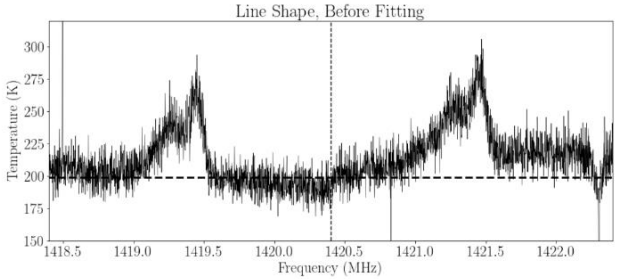

Figure 4: Two images of the 21 cm line shape form as a result of *in-band frequency switching* where we shift the line far enough below the center frequency that it remains visible. Also shown is the approximate fit to the baseline.

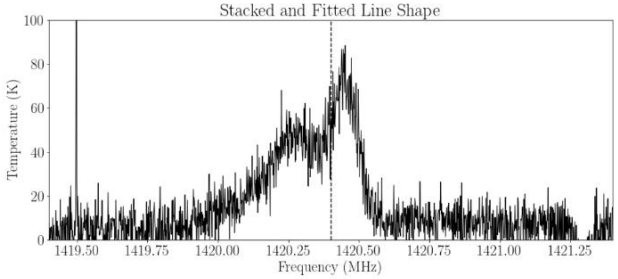

Figure 5: The final calibrated spectrum after stacking and averaging the two images from above and then subtracting the noise temperature.

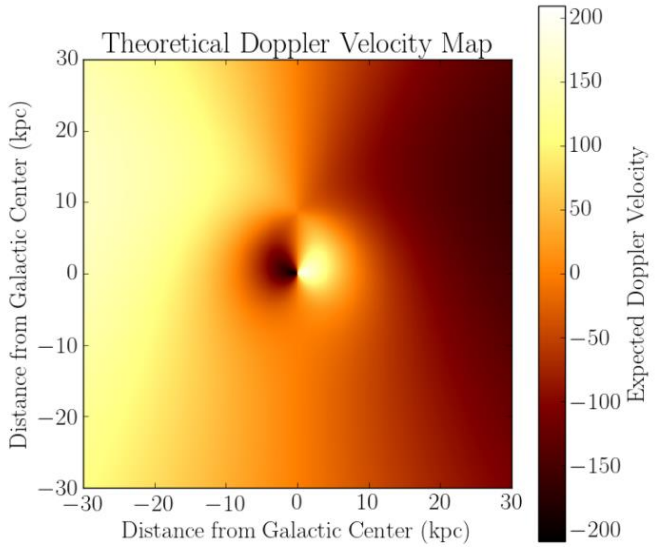

Figure 3: This is a face on view of the Galaxy plotting Doppler velocities relative to the Earth, which is at a position (0, 8.5. As expected, we see a division of the velocities as some are moving away and some are moving toward us as well as high velocities near the center.

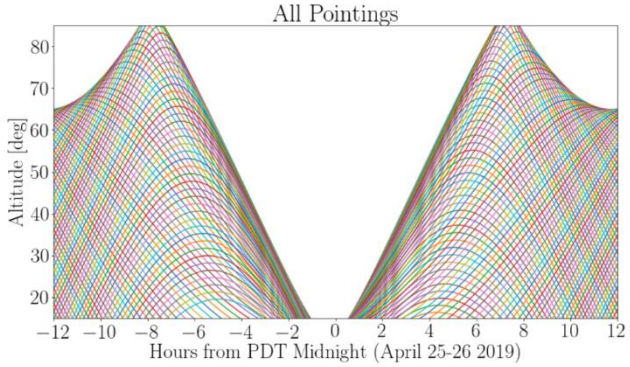

Figure 1: A plot of all the elevations of pointings we set out to make in this survey. y-axis limits correspond to the limits of the telescope. Using plots like this allowed us to schedule observations at the correct times. Made using the `Astropy` package.