ECE Senior Design Weekly Report

Engineer’s Name: Piorence Abar Date: 04.20.17

Team Name: The Globetrotters Lab Section: 4

Week’s Task: calculating our transfer function to be used in our PID controller which will maintain the stability of our entire system. I also began working on our rough draft of our final presentation and poster.

Results: This entire I have spent doing calculations over and over again to compute the parameters we need for our PID controller. It has been very difficult and frustrating because we are doing calculations without having key values needed to solve the system of equations. We are missing important values regarding our magnet, values that we have tried figuring out how exactly to measure but have found no luck in doing so. This is because when we purchased our magnet no specs were given to us about it, most notably the magnetic dipole moment and the flux density, key values needed from the very beginning of our system of equations. However, we used numbers that were from a magnet quite similar to ours but these numbers still were not able to provide us the stability that we needed. With further calculations and more people to cross check the calculations we should have the numbers that we need very soon. Once we have the perfect transfer function this should be enough to maintain stability and keep our globe levitating. This week I also began the rough draft for what our poster will look like as well as the rough draft for our final presentation.