To whom it may concern,

I am writing to apply for the WSRI ATRC internship position. I am currently a Masters of Aerospace Engineering student at West Virginia University (WVU), and expect to graduate by May of 2017. I am extremely interested in obtaining an internship with the ATR Center, as I believe it will be a great opportunity to apply skills I have already learned in my studies, and help me acquire new ones that will be directly applicable to my future work.

My current work as a graduate research assistant at WVU involves developing a method of precise orbit determination for CubeSats that use a power cycled GPS receiver. This has involved developing an extended Kalman filter that models the satellite as a two body problem, and updates with the GPS measurements to estimate the spacecraft’s position and velocity. This method of precise orbit determination will be applied to the CubeSat Simulation to Flight 1 (STF-1) that hosts payloads from WVU, and is awaiting launch later this year. I had the opportunity to work directly with the flight GPS receiver on board STF-1 during my time as an undergraduate researcher at WVU, where I worked on interfacing the receiver with a Raspberry Pi to collect stationary data while power cycling.

During my time at WVU I have also had the opportunity to take leadership roles on various design projects. Currently I am the mechatronics lead for one of WVU’s teams that was selected for NASA’s RASCAL Special Edition Ice Mining Challenge. I have also held leadership positions on teams the participated in NASA MicroG-NExT program, as well as submissions to multiple RASC-AL design forums.

Attached along with this, is my resume which highlights more of my experience. If you have any questions, I am more than happy to answer them.

Thank you very much for your consideration,

Sean Lantto