# EE CprE 491 – May 20 - 49
# CySat Senior Design Team
# Week 17 & 18 Report

*December 14 – December 28*
*Faculty Advisors: Phillip Jones*

## Team Members:

Bryan Friestad — *Team Lead / EPS Lead / OBC Lead*
Ryan Hansen — *SDR Lead*
Chase Kirchner — *Ground Station Lead / CI Testing Lead / UHF Secondary*
Kyle Muehlenthaler — *UHF Lead / Ground Station Secondary*
Talon Stromgren — *GitLab Master / Boost Board Lead / SDR Secondary*
Xiangzhu Yan — *ADCS Lead*

## Past Week(s) Accomplishments

- OBC: None
- ADCS: None
- SDR: During finals week met with Brian Bradford to troubleshoot flight SDR hardware with code developed on raspberry pi. Found the console monitoring the only serial port to be messing with the Python UART communication. Disabled bootup console in boot config. Python script UART communication started working as intended. Currently working though some formatting changes with encoding of UART data. Working on modeling a more complicated OBC python program to replicate mission tasks.
- EPS: Determined that PC-104 rails are not powered by EPS when plugged in via micro-USB [Bryan].
- Ground Station: Got Talon up to speed on some of the ground station application requirements. Started looking into issues establishing port/baud from user input in the GUI.
- UHF: borrowing radio for uhf tests [Kyle]
- Boost Board: None
- Carrier Board: None

## Pending Issues

- Still need EnduroSat's EPS software or the batteries to get EPS to power the PC-104 rails

## Individual Contributions

| Team Member | Contribution | Weekly | Total Hours | Attend Gen. Meeting? |
|---|---|---|---|---|
| Bryan Friestad | Got into lab to run some tests with the EPS. Remotely met with team to elicit plans for winter break progress. | 3 | 76 | NA |
| Ryan Hansen | Working code on flight hardware. Developing standard for UART between SDR and OBC. Updated OBC code for missing mission tasks | 9 | 68 | NA |
| Chase Kirchner | Discussed with Talon ground station specifics to get up to speed. Began working on on port/baud user input issue | 2 | 57 | NA |
| Kyle Muehlenthaler | Working with code for the radio output tests | 5 | 60 | NA |
| Talon Stromgren | NA | 0 | 59 | NA |
| Xiangzhu Yan | Read through the ADCS High-Level Task List | 2 | 59 | NA |

## Plans for Coming Week

- Bryan Friestad: Write some additional functions for the EPS since I cannot yet test I2C. I will write out the remaining read/write function calls listed in the EPS I2C manual. Looking to get hands on software from EnduroSat to control EPS
- Ryan Hansen: Will continue to do formatting and control flow updating. Will not have access to flight hardware until semester starts so will not change too much functional stuff on SDR end until I can test what I have done thus far over break.
- Chase Kirchner: Get Talon further up to speed and continue work implementing ground station functionality. Resolve port/baud user input issue. Make sure Talon has all necessary software
- Kyle Muehlenthaler: Continue progress on sending through kiss system
- Talon Stromgren: Work with Chase implementing more functions for the ground station.
- Xiangzhu Yan: Continue to program the ADCS High-Level Task List.