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| Project Status Report | Overall Status: **On Track** |

# Project Name: Extraterrestrial Robot Explorer and Environmental Logger

November 4, 2016

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| Status Code Legend |  |
| * On Track: Project is on schedule | * High Risk: At risk, with a high risk of going off track |
| * At Risk: Milestones missed but date intact | * Off Track: Date will be missed if action not taken |

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| The project is On Track the week of 10/10/2016 - 10/14/2016, due to the following: | * System modules have been integrated and tested * All major bugs have been eradicated * All that is left is tuning joystick control and building the diode-temperature sensor |
| Issues: | * None |
| Milestones accomplished the week of 10/10/2016 - 10/14/2016: | * Solved three major bugs: * Platform controller program would randomly stop/reset in the middle of operation. The issue was that we were running out of memory -> **Moving some of our main application local variables into global scope fixed the issue.** * Raspberry Pi would suddenly crash proceeding a large influx of joystick event transmissions. **The issue was not in the frequency of communication, but in fact we were forgetting to close our socket file descriptors and communication would halt once we reached the maximum number of files that could be opened. Closing the socket after each use solved the issue.** * Communication from the Linux supervisor to the Raspberry Pi suddenly stop sending (all communications failed). After carefully observing the Raspberry Pi code, we found that the two threads managing communications on RS-232 and Wi-Fi were locking (using a mutex) around **large blocks of code** to synchronize access to a shared character buffer. The code was rearranged so that each thread only locked around a single line of code instead of the large block. This solved the issue. |
| Milestones planned this week, but not achieved with variance: | * Environmental Sensor (THIS IS OKAY, it has low relative priority) |
| Milestones planned for next week: | * Finalize/tune our joystick control * Get environmental logger circuit built and integrate into the robot |
| Areas/questions for discussion: | *Peter: Can you apply a normal distribution function on the Probability and Statistics midterm 1?* |
| Last week’s issues forwarded to this week: | *None* |