

Due: Monday, October 2, 2017, 8:00 AM (submit to BlackBoard, under Assignments)

File Type: Microsoft Word

Team Name: KUbeSat (Team 9)

Team Members and email addresses:

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Contact:

Project Sponsor: Dr. Jerry W. Manweiler

Project Description:

Space weather can have widespread, serious impacts on everyday life on Earth. It can disrupt human safety, including electrical grids, GPS, communications, and the internet. Studying these changes can be beneficial towards improving and safeguarding those systems. Through a NASA sponsored project, our team will combine efforts with several others to launch a cube satellite. This satellite will collect information for a variety of projects, in particular information about energetic particles. The probe will collect both high energy and low energy particle data, both in high resolution. Total energy information and particle species information will also be collected. Data collected from a near Earth orbit accurately portrays the Sun's activity. Our team would like to collect, parse, and prepare this data for analysis. We have partnered with Dr. Jerry Manweiler and Fundamental Technologies. Through his experience in the field, we will make a C# application to perform all the desired operations, and help advance knowledge about energy fields surrounding the Earth.

Project Milestones:

- Detailed hardware to software requirements (October 2017)
- Use case diagram development (October 2017)
- UML diagrams (including class diagrams, state diagrams, communication diagrams, activity diagrams) (November-December 2017)
- Software Implementation (December 2017-March 2018)
- Testing (February 2018-April 2018)
- Delivery (May 2018)

Project Budget:

- C# in a Windows .NET environment (free on campus)
- GIT repository for version control (free)
- Training on C# (free, self taught)

Work Plan:

- Jeff- C# trainer, documentation, implementation
- Patrick- Organizing tasks, communicating, documentation, implementation
- Yue- Documentation, implementation
- Blaine- Organizing tasks, communicating, documentation, implementation
- Jhoel- Documentation, implementation
- Harrison- Documentation, implementation

Github link:

<https://github.com/blaine91787/CubeSat>