**Key Personnel**

Dr. Jason Dykes, Project Manager/Lead Engineer: Dr. Jason Dykes received his undergraduate and graduate education in Electrical Engineering at Stanford University. He joined the Aerospace Simulation Research and Development Branch at NASA in 1992. There, he led a team that pioneered research critical to the launch and maintenance of the International Space Station including the Station to Shuttle Power Transfer System. For this research effort, Dykes will lead the project team to ensure that the experimental methods, operations, and results will meet the specifications and goals of the sponsors. This includes organizing team meetings, direct collaboration with sponsors/suppliers, and financial planning. In addition, he will provide technical knowledge to the team and resolve issues when necessary.

Bryan Luu, Electrical Engineer: Bryan Luu received his undergraduate and graduate education in Electrical Engineering at Oxford University, specializing in the field of Radio-Frequency Engineering. Luu will be responsible for preparing the lab environment to mitigate unintended interference from any source including RF radiation, temperature fluctuations, and EMI power sources in order to maintain the integrity of the experimental results.

Brian McRee, Maintainability Engineer: Brian McRee received his B.S. in Electrical Engineering at Cornell University and his Graduate Degree Systems Engineering at Harvard University. McRee will be responsible for creating and implementing the procedures for consistent setup, operation, and maintenance of hardware, lab test equipment, and microcontroller firmware. In addition, he will complete routine maintenance and equipment troubleshooting. His responsibilities also extend to the safety of the lab test equipment operators and all personnel involved.

Jacob Sanchez, Software Engineer: Jacob Sanchez received his undergraduate and graduate education in Computer Engineering at Massachusetts Institute of Technology. Sanchez will be responsible for the design and implementation of all software involved in the project including those involved in experimental control, data acquisition, and data analysis.

Daniel Lee, Lab Technician Lead: Daniel Lee received his B.S. in Physics from Princeton University. Lee will recruit, orient, select, and train three lab technicians. These lab technicians will be responsible for operating test equipment, carrying out routine tasks, and assisting other members of the research team with any other necessary tasks.

**Management Plan**

Organizational Structure

* All Engineers and Leads will be in charge of their spheres of influence, but will report to the Project Manager/Lead Engineer when necessary.
* All lab technicians will report to the Lab Technician Lead.

Routine Procedures

* Monthly Team Meetings
  + The Project Manager/Lead Engineer will provide a summary of current progress of different areas of the research project for the entire team every month.
  + These meetings will allow current and potential issues to be brought up early and to be discussed between all relevant team members.
* Weekly Situation Report
  + The Weekly Situation Report will be an internal briefing of any and all things worked on or accomplished during a given week. The report will include time spent and progress on individual tasks.
  + The Project Manager/Lead Engineer will be able to use these reports to identify efficiency problems.
  + The reports will provide documentation and feed into the Monthly Team Meeting and the Progress Report.
* Mid-Experiment Progress Report
  + The Progress Report will provide an update of accomplishments and a rough timeline of future plans, halfway through the intended project’s timespan.
  + The research plan may change multiple times in the future, and the Progress Report can update the plan to reflect such changes.
  + The report will mainly be intended for external use by sponsors.

Communication Procedures

* Long distance/Telecommute
  + Under normal circumstances, once the experiments begin, no main team members will be required to leave the site. However, offsite/telecommuting team members can video-call into the Monthly Team Meetings.

Potential Risks and Potential Solutions

* Personnel cannot continue working with the team
  + There will be careful documentation of the experimental methods and procedures required to run the experiment.
  + New lab technicians will be recruited and trained by the Lab Technician Lead.
* Data Errors
  + There will be an analysis of early experimental results to identify unusual behavior.
  + The experiment procedure uses multiple trials, which reduces the chance of error.
* Equipment Breakdown
  + One spare of each test equipment will be kept in stock at all times.
  + Consistent equipment problems can be dealt with by changing equipment brand.