

EE/CprE/SE 491 WEEKLY REPORT 02

9/30/19 – 10/6/19

Group number: sdmay20-11

Project title: Design of a Charge Measurement Device

Client &/Advisor: Jacob Starr/ Long Que

Team Members/Role: Nicholas Wolf – Scribe, Internal Meeting Facilitator – Daniel Frantik, External Meeting Facilitator – Brandon Degelau, Test Engineer – Ben Buettner, Chief Engineer – Keagan Plummer, Report Manager – Colin Ishman

- **Weekly Summary:** For This week, the group split up into two teams. One team was going to research some of additional circuits and find pros and cons of the circuits we found in previous weeks. The other team was responsible for creating a preliminary timeline for our project and documenting the problem and requirements of this project.
- **Past Week Accomplishments:**
 - Created a timeline for the project
 - Set goals and deadlines for the different steps in the project
 - Documented the problem statement and requirements
 - Discussed pros and cons of the capacitor and current sink methods
 - Found a new circuit to compare with the others
 - Uses a capacitor to directly measure the charge
 - Requires an outside power supply
- **Pending Complications:** We asked our advisor if the university had a High Voltage DC Power supply, we could use to test our product when the time comes. He pointed us in the direction of some power electronic professors. They told us to ask the ETG. The ETG told us the university doesn't have any that get to the voltages we need. The said Ames Labs may have one that they may let us use. This means the likely hood of us getting one without the help of Honeywell is dwindling.
- **Individual Contributions:**

<u>Name</u>	<u>Contributions</u>	<u>Hours this Week</u>	<u>Hours Cumulative</u>
Keagan Plummer	Finding High Voltage power supply, Researched charge measurement devices, thought of pros and cons of the circuits we found last week	7	13
Ben Buettner	Created the project timeline and documented project specifications	6	12
Nick Wolf	Created the project timeline and documented project specifications	7	13
Colin Ishman	Created the project timeline and documented project specifications	6	12
Dan Frantik	Researched charge measurement devices, thought of pros and cons of the circuits we found last week	6	12
Brandon Degelau	Researched charge measurement devices, thought of pros and cons of the circuits we found last week	6	12

- **Plans for Upcoming Week:**
 - Continue Research into charge measurement circuits
 - Choose one circuit to being testing at low voltages

- Continue search for a high voltage DC power supply