

sdmay23-29: Building blocks and sub-circuits with magnetic field generators

Week 9 Report

November 10 – November 16

Team MembersAndrew Murphy — *Circuit and Optical Design*William Nichols — *Circuit and Optical Design*Michael Lopez — *Optical Simulation*Steven Huynh — *Circuit and Optical Design*Umair Sarwar — *COMSOL Design***Summary of Progress this Report**

For this week, the team continued mostly individual work. We tried to expand upon our MATLAB simulation by analyzing flux density graphs, simulate a helmholtz coil in COMSOL, and stabilize our MFG circuit current signal.

Pending Issues

For MATLAB, we are not getting a good hysteresis like we expected. For the MFG circuit, the stabilization of the current waveform caused a massive increase in rise time, so more time will have to be spent choosing a final MOSFET.

Plans for Upcoming Reporting Period

This is our final report before the final presentation.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Andrew Murphy	This week, Andrew primarily focused on helping Steven stabilize the current waveform.	10	100
William Nichols	This week, William primarily focused on helping Michael with the MATLAB simulation, and looking into MOSFET criteria.	10	85
Michael Lopez	This week, Michael primarily focused MATLAB code and Simulink modeling.	10	94
Steven Huynh	This week, Steven primarily focused on stabilizing our current waveform for the MFG circuit.	5	85
Umair Sarwar	This week, Umair primarily focused on simulating a Helmholtz Coil in COMSOL.	8	78

Gitlab Activity Summary

Nothing to report.
