Adam Biewer

**Award:** Undergraduate Student Research; $4000.00

**Status:** Freshman, Physics

**Advisor:** Brant Carlson

**Research Topic:** An observation of EM VLF waves emitted by lightning

**Abstract:** The objective of the RockSat-C experiment is to observe very low frequency (VLF) electromagnetic (EM) waves that come from natural lightning discharges as a function of altitude. The experiment will receive and store electric and magnetic field data from antennas as well as data from a magnetometer/compass. We expect to see 60Hz interference, mostly from power lines, as well as various structures corresponding to lightning discharges. This project focused on the digital electronics of this experiment

**Biography:** Adam Biewer is a full-time student attending Carthage College. He is a recipient of the Math and Science Scholarship as part of the class of 2020. He is also working towards a Physics Degree and is the team lead for the Carthage College RockSat-C Team, run through the Colorado Space Grant Consortium. He is currently preparing for the upcoming Wisconsin Space Grant Consortium Undergraduate Research Program that will be continuing his work with the RockSat-C program emphasizing the analysis and interpretation of the data that will be collected.

**Congressional District:** 1

**Congressional Representative:** Paul Ryan