

Honors Research Summary

Solar panels have a large stake in the future of renewable energy. However, there are a few problems that solar panels still have to overcome. One of these problems is the loss of efficiency due to the eventual dirtying of solar panels. There are two popular methods that are being used to clean solar panels automatically. One of the methods is to provide a chemical coating that prevents dust from settling on the panel. The other method uses electric fields to push the dust and other particulates off. I will attempt to show this by reading other research papers and experiments regarding the cleaning methods. I will also look at current and predicted future weather patterns in order to determine which cleaning method will prove the most beneficial. I expect that the electric field cleaning method will be most suitable for Stanislaus County conditions, due to the generally dry climate. If I find that one of these methods would work exceptionally well, then that can serve as a means to perform a physical experiment and eventually implement the cleaning method in Stanislaus County.