

The Naval Research Laboratory (NRL) Arch

The NRL Arch system consists of a wooden set up in an arc shape and has two antennas as one is used for transmitting signals and the other for receiving signals. The microwave energy transmitted from one horn travels to and reflects the target, collected by the receiver horn. The arch was not in a god shape from last year's capstone group, but we improved upon the entire set up for stability, ease of transportation and horn alignment. The main problem was with the alignment of the antennas and the arch itself was wobbling a lot and could not make it easy for transporting into the anechoic chamber. The focus of improving the arch was centered on the base and the main point of joint, where the two semi arcs meet. The set up was ready for testing to be done before the COVID-19 shout down happened. Improvements are made for future material iterations by Tangitek to retest reflection measurements and for future capstone team.



