

## Experiment Explanation:

This experiment consists of a low power radar w/ TPO of no more than 1 Watt with 2 collocated horn antennas that have 17.75dbi max gain. It will sit on a fixture no more than 3 meters above the ground. It will be staring into a mountainside (Mount Superior) in Little Cottonwood Canyon. It will have a near range to target of 1km with a far range not exceeding 2km (3km in the license to be safe).

The objective of our experiment is to show the feasibility of radar in snow pack classification, avalanche forecasting and avalanche detection. With the final intent to mitigate the dangers involved in avalanche prediction as well as most snow sport.

This program of experimentation is the keystone of our research. Viewing snowpack from a distance using this technology is a patented technology, and therefore very novel. Preliminary experiments/simulations have shown promise. Our next step is to perform an actual experiment. This winter we are working in conjunction with Snowbird Ski Resort to bring this to fruition.