

- a. The nature of this research project is to collect data using a synthetic aperture radar (SAR). The SAR system will be mounted on top of an automobile in order to collect data. The automobile will be driven over a distance of several miles with the SAR system activated. The data that is collected by the automobile mounted SAR system will be used to create imagery.
- b. A synthetic aperture radar needs to be moving over long distances at relatively high speeds in order to properly capture data and create imagery. By mounting the system on an automobile, the system will be able to move at fast enough to be able to capture data in order to create imagery.
- c. A SAR system needs to be moving through space at relatively high speeds in order to collect data. The system is being mounted on an automobile in order to satisfy the speed requirements. Since an automobile is being used, the testing area needs to be extended to encompass a several mile driving radius.