EXPLODED VIEW EXPOSES HEAT SHIELD'S PERFORMANCE

An exploded view of the nose cap velocity package and adapter of a flight reentry experiment, devised by scientists at NASA's Langley Research Center, is designed to find out how well a low density charring ablator heat shield material will perform during reentry. The heat shield experiment will be the fourth flight in NASA's supercircular reentry research project and is due to be tested Friday.

Re-Entry Heat Experiment Set From Wallops

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of the material even though the Scout re-entry environment will be different, and, in some important technical respects more severe than the Apollo re-entry environment.

The low-density charring ablator material test will be the fourth flight in NASA's Scout re-entry heating project sponsored by the agency's Office of Advanced Research and Technology.

The Scout flight will attempt to reach a re-entry speed of 19,000 miles per hour. Flight re-entry conditions for the experiment are beyond those presently attainable in laboratory simulation facilities.

Four stages of the Scout launch vehicle, plus a 17-inch spherical rocket attached to the payload as a velocity package, will subject the experiment to very high heating rates. Heating time will be about one and one-half minutes.

Temperature readings and ablation measurements will be gathered by thermocouples in the charring nose cap and by three types of ablation sensors being tried in flight for the first time. The sensors will provide project scientists information about the thickness of the char layer which forms during the process of ablation.