

Television Feasibility Demonstration Project

One research project that harbored potential uses in future space programs as well as the military application was the Television Feasibility Demonstration Project. The Army Ballistic Missile Agency, at the direction of the Chief of Research and Development, proposed a development program to determine the feasibility of using missile-borne television systems for assessing target damage. This proposal, in July 1958, had its origin in the JANUS "B" target damage assessment and surveillance studies. Also, the Continental Army Command had stated a requirement for such a system and the Office of the Chief Signal Officer had indicated interest in the project.

The Office, Chief of Ordnance received approval of the proposed project from the Department of the Army on 12 November 1958. It then assigned overall systems responsibility to the Army Ordnance Missile Command while the Army Ballistic Missile Agency became the project director. The Signal Corps also participated as the responsible agency for the development of the television camera, transmitter, and ground receiver components. And because the Redstone was available for use in the

feasibility demonstration tests, it was chosen for the project since the overall objective was to show that a television unit could be successfully used in a tactical missile to provide a field commander with an instantaneous evaluation of the performance of missiles fired under his direction.

The Chrysler Corporation Missile Division designed and built the television reconnaissance vehicle⁵ as a modification of the Jupiter reentry nose cone. The Radio Corporation of America developed and outfitted the capsules with the television equipment.

Essentially, the technique employed by the system involved ejecting the capsule (holding the television camera and transmitter) from the base of the Redstone body. The blunt-nosed capsule lagged behind the reentry body so that at impact of the payload, the capsule was still at an altitude of approximately 13 kilometers.

Five flight tests proved the feasibility of the system. The first two flight tests used experimental models while the last three were prototype models. The first flight test on 13 November 1959 at Eglin Air Force Base, Florida, used a B-57 aircraft to drop the capsule. Four Redstone missiles, CC-2011, CC-2014, CC-2021, and CC-2022, were used in the other tests. These missiles, all in the Engineering-User test series, were made available for the project in addition to their use as troop training firings at the White Sands Missile Range.

In summation, the project proved to be an unqualified success in demonstrating that a television reconnaissance vehicle could be used in

surveying the impact area of tactical missiles. It also showed once again the reliability and flexibility of the Redstone missile system.⁶



Television Capsule. After ejecting from the Redstone Tactical Body (inset), the capsule lags behind transmitting pictures of the terrain.

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