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A FIRST FOR ALASKA--LIVE TV COVERAGE

For the first time, Alaskans joined the rest of the country to view major live TV coverage--interviews with the Apollo 11 astronauts, launch of the Apollo 11 spacecraft and eventually, the walk on the moon. This innovation for Alaska was made possible by Army satellite communications terminals and an Air Force communications satellite.

Two satellite communications stations, one in Alaska and one in New Jersey, are tied into a military satellite communications network to carry Apollo 11 TV transmissions to Alaska. TV signals travel from the NASA Space Center to the commercial television facilities and are "picked off the air" by the Engineering Test Facility at the Army SATCOM Agency at Fort Monmouth, New Jersey; then through the TACSAT I communications satellite to the SATCOM terminal in Anchorage, Alaska.

The Anchorage satellite communications station, an AN/TSC-54 terminal, was flown from SATCOM to Alaska on 11 July. With the terminal aboard the C-141 aircraft was the SATCOM operating crew: MSG Charles Lockamy, SFC Clyde Lazear, SP5 Hulon Stone, SP5 Billy Cooper, SP5 Elmer Mander, George Borkowski and Marcus Fath of the SATCOM Operations Analysis Directorate.

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The New Jersey station at the SATCOM Agency Test Facility consists of the Lincoln Experimental Terminal (LET-1), with an AN/MSC-46 terminal as backup, both operated by SATCOM personnel.

In normal use, TSC-54 and MSC-46 terminals form the worldwide ground network of the operational Defense Satellite Communications System. Stations of this system located in Alaska include an AN/TSC-54 at Shemya and an AN/MSC-46 at Wildwood. The terminals involved in the Apollo 11 Alaskan TV project (AN/TSC-54, LET-1 and AN/MSC-46) are used by the SATCOM Agency for research and development activities in connection with satellite communications.

TACSAT I, launched from Cape Kennedy in February 1969, is a 1,600 pound synchronous satellite orbiting 22,000 miles above the equator. It was developed for the Air Force Space and Missiles Organization by Hughes Aircraft Company.

The AN/TSC-54 was designed as the quick-reaction terminal for the Defense Satellite Communications System. A complete 23,000 pound terminal--antenna, antenna trailer, operations shelter and power generator--plus its crew can be loaded into a single aircraft and flown to its destination anywhere on earth. The TSC-54 was developed for the SATCOM Agency by Radiation Inc., a subsidiary of Harris-Intertype Corporation.

LET-1 is an experimental terminal designed by the Lincoln Laboratory of the Massachusetts Institute of Technology. Used for engineering studies by the SATCOM Agency, LET-1 with its 15 foot parabolic antenna is the prime terminal at the New Jersey site for the Apollo 11 Alaskan TV project.

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Like the TSC-54, the AN/MSC-46 was specially designed for the Defense Satellite Communications System. A complete AN/MSC-46, transportable by air and by road, consists of a 40 foot diameter parabolic antenna inclosed in a protective radome, operations, cargo and maintenance vans and power generators. The MSC-46 was developed for the SATCOM Agency by the Hughes Aircraft Company.

The SATCOM Agency is the Army Materiel Command Project Management Office for satellite communications with responsibility for development of the ground terminals for military satellite communications systems. In addition to the Alaska TV relay, SATCOM is playing a significant role in providing tactical satellite communications (TACSATCOM) for Apollo 11 recovery. TACSATCOM terminals under Agency technical control are located at Wheeler Air Force Base, Hawaii; the TACSATCOM Joint Service Test Directorate, located at Agency headquarters, provides operational satellite time; the SATCOM Test Operations Center, also at Fort Monmouth, coordinates satellite time, and the Army's TACSATCOM monitoring facilities at SATCOM Field Station No. 1 conducts the power level and technical interface adjustments to insure TACSATCOM network quality. The Army has also been designated "lead service" for the joint operational tests to be conducted during the Apollo 11 mission.

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