

AIR FORCE SATELLITE CONTROL FACILITY (AFSCF) SUPPORT OF THE SPACE TRANSPORTATION SYSTEM (STS) ORBITAL FLIGHT TEST PROGRAM



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The AFSCF is tasked with providing support to NASA for the initial series of STS flights known as Orbital Flight Test (OFT) missions. This support requires modifications to the AFSCF data and voice communication elements at the remote tracking stations and the Satellite Test Center to implement interfaces between the AFSCF and the NASA Goddard Space Flight Center (GSFC), and between the AFSCF and Space Shuttle Orbiter Vehicle itself. Data communications involves the exchange of telemetry, tracking, and command data; while voice interfaces involve air-to-ground as well as ground-based support communications networks. The modified AFSCF configuration provides a base from which expanded Orbiter vehicle and payload support may be developed.

This paper identifies the modifications implemented within the AFSCF to provide STS OFT support and traces the flow of voice and data communications throughout the STS-AFSCF-GSFC network. Potential candidate support configurations to provide expanded Orbiter and payload support are also identified.