

May 26, 1986

TO: Senator Dole  
FROM: Steve Coen  
SUBJECT: Trip to Huntsville - Marshall Space Flight Center

---

### Background

Marshall Space Flight Center is located in Huntsville and celebrated its 25th Anniversary of operation last year. The center has grown from being strictly a rocket propulsion development center into one of NASA's four main facilities.

Morale at the center is at an all-time low. Marshall developed the solid rocket booster that failed Jan. 28 - resulting in the Space Shuttle "Challenger" disaster. A Blue Ribbon Commission, headed by Former Secretary of State William Rogers, will issue its report in June and is expected to point its finger at the Marshall Space Flight Center. The Commission is expected to highlight the management flaws at Marshall, especially the launch decision-making process, and its engineering design work for the Solid Rocket Boosters.

When the Shuttle Challenger exploded, the accident sequence started after two washer-like devices called "O-Rings" failed to seal a joint between segments of the right-hand solid rocket booster, permitting hot gases to shoot out the side. There is evidence that the O-Ring problems first became evident on the second shuttle flight in November 1981, or 23 flights before Challenger. The O-Ring problems were investigated, but after five more successful shuttle flights a waiver was signed allowing the shuttle flights to continue.

Major personnel changes have already taken place at Marshall because of the disaster and NASA engineers have been working on a redesign of the "O-Ring".

### Future for Marshall

Marshall Space Flight Center will be heavily involved in five upcoming space programs:

1. A Manned Space Station
2. An Orbital Maneuvering Vehicle
3. A Replacement Orbiter for the Space Shuttle Challenger
4. Materials Processing in Space.
5. Strategic Defense Initiative

Below is a summary of the programs:

#### A Manned Space Station

The most important new program for Marshall, and for NASA as a whole, is the Space Station. The space station has been slated for a new start in 1987. Marshall will manage approximately one-third of the \$8 billion space program and will have a lion's share of hardware development for the station well into the 1990s. This means long time employment security and growth for Huntsville. The station is scheduled for deployment in the mid 1990s.

#### Orbital Maneuvering Vehicle

The only new start included in the FY '86 NASA budget was the Orbital Maneuvering Vehicle (OMV). Marshall will manage the program.

The OMV is a mini-space tug. It is designed to carry satellites to and from the Space Shuttle to orbits higher than the Shuttle can reach. The OMV will cost around \$350 million, and be operational by early 1990.

#### Replacement Orbiter

Marshall will be very involved in any proposal to replace the Challenger since they are responsible for developing the solid rocket boosters. The big question is whether NASA will fund the project itself or whether a separate appropriation will be designated by Congress. The Senate budget resolution caps, at \$976 million, the amount that can be authorized and appropriated in FY '87 for the rebuilding of the shuttle. NASA estimates that the cost will be \$2.08 - \$3.0 billion, which includes the new orbiter and necessary spares.

There is some concern that since the Space Station project is so costly that some of these funds may be drawn away to pay for a shuttle replacement. Marshall, of course, does not want the Space Station funds tampered with. The Administration is now determining whether or not a separate appropriation from Congress should be requested.

#### Materials Processing in Space

Marshall has the responsibility for managing this program which emphasizes the science and technology of processing materials in a gravity-free environment. The program could result in the development of powerful drugs to fight cancer, diabetes, and other diseases.

### Strategic Defense Initiative

The Strategic Defense Command in Huntsville plays an important role in the Strategic Defense Initiative (SDI). For many years the Army's Ballistic Missile Defense (BMD) program in Huntsville has administered and directed the long-term BMD technology base and provided the foundation for the initial element of a future layered defense system.

### Budget Proposals

The Senate Budget Resolution freezes NASA at the FY '86 level of \$7.33 billion. The President's budget request was for \$7.69 billion. The House subcommittee approved funding at the President's level. At this time, the funding for a replacement shuttle has been left unaddressed.

ATTACHED ARE TALKING POINTS FOR THIS EVENT