

tion and use of expendable launch vehicles (ELVs), these unmanned rockets will not be available in quantity for at least two and a half years. They cannot be used for either man-dependent tests for the Strategic Defense Initiative, or extremely heavy military spacecraft.

Aldridge stated that there are three possible approaches that could be taken. In the first, the DOD would exercise its legal right to "bump" all other payloads and use all three orbiters for military missions. He stated categorically that this option would not be in the national interest.

The second option would be to "off-load" the maximum number of DOD payloads to expendable rockets. This would increase launch costs and delays, since each spacecraft would have to be modified. "The obvious choice is to attempt a more balanced approach," he suggested.

"Based on our preliminary assessment, we can remove a few DOD payloads from the STS [Shuttle] manifest in the future to help NASA maintain a viable civil, foreign, and commercial launch capacity and yet fully meet DOD launch demands," he stated. This will require increasing the number and launch rate of the ELVs now planned, and the "DOD would strongly encourage the procurement of a replacement orbiter now to regain the fleet launch capacity."

## What went wrong?

by Carol White

By the time that this issue goes to press it is more than likely that William Graham will have been replaced as Acting Director of NASA. We can heartily endorse the remarks of James Fletcher in an interview to the *Houston Post*, where he pointed to Graham's manifest incompetence.

It is impossible to say that the Shuttle accident of the Jan. 28 would not have occurred had James Beggs remained in charge, but it is manifestly the case that with Graham in command, a disaster at some point was a foregone conclusion. Unhappily, James Beggs has now resigned from his post. He has had an outstanding record with NASA, as had the agency before this accident.

Clearly it is overdue that Graham is fired from NASA, but that is not the real point. The question is how he came to occupy a position for which he was obviously unfit. It is well known that his appointment was opposed within NASA over a period of more than six months, and that it was finally forced upon the agency against its best judgement, by members of the White House "palace guard."

It was clear that the man lacked the personal and professional qualities necessary to replace Dr. Hans Mark as second-in-command. What makes the handling of the Graham case doubly suspicious is the fact that only 10 days after he assumed his post as second-in-command, James Beggs came under indictment for what are clearly trumped up charges

having to do with his previous employment in the General Dynamics Convair division.

As of this writing, it is clear that there was knowledgeable opposition to carrying through the flight under conditions of unexpected, extreme cold. Regardless of the failure of this information to reach the top of NASA—a serious breach occurred in NASA procedures, which require that all such objections be reported directly to the top—this does not let Graham off the hook.

The fact is that Graham had gone down to Cape Canaveral on the Saturday preceding the planned Sunday launch, only to postpone that flight over objections. His presence was so abrasive, and confidence in his judgement was so minimal, that rumor had it then that he was mainly concerned about interfering with the Superbowl schedule. After leaving on Saturday, to the best of our information, he no longer concerned himself in the decision making over whether or not to fly the shuttle, despite the fact that weather conditions were deteriorating.

If James Beggs (who was always on-site or represented by his deputy at the final review before each Shuttle launch) had remained in command, there is every likelihood that the accident would not have occurred. He would have had the experience and judgment to reject flying in cold-weather conditions for which Shuttle safety had not been thoroughly tested. He would have had the confidence and moral authority to reject any extraneous public-relations considerations. Furthermore he had the confidence of his staff and associates: Questions would have automatically been referred to him for judgment.

It is well known, that Graham has alienated the people at NASA by his general mismanagement of the agency, combined with his abusive conduct toward the staff. It was generally rumored that he had been brought in to clear out the NASA "old boys." An organization such as NASA is like a military unit. It depends upon the high morale of its troops for that edge in performance which up to now has guaranteed its excellent record.

If the tragic accident of Jan. 28 had not occurred, we can be assured that the substitution of Graham for Beggs, could only have more slowly resulted in the erosion of NASA's performance, particularly as he continued to drive out qualified top staff, such as Beggs' assistant Culbertson, whom Graham "relieved of his responsibilities" as general manager in February.

A lot of time is being spent trying to assess the chain of responsibility for the disaster. More to the point would be an investigation of the chain of responsibility, through the White House patronage machine, which forced the placement of William Graham in Hans Mark's job, and then perhaps, was complicit in clearing the way for him to assume James Beggs' responsibilities. Graham bears responsibility in the deaths of the Challenger crew and the destruction of one-fourth of the United States' Shuttle fleet, but the final responsibility lies elsewhere.