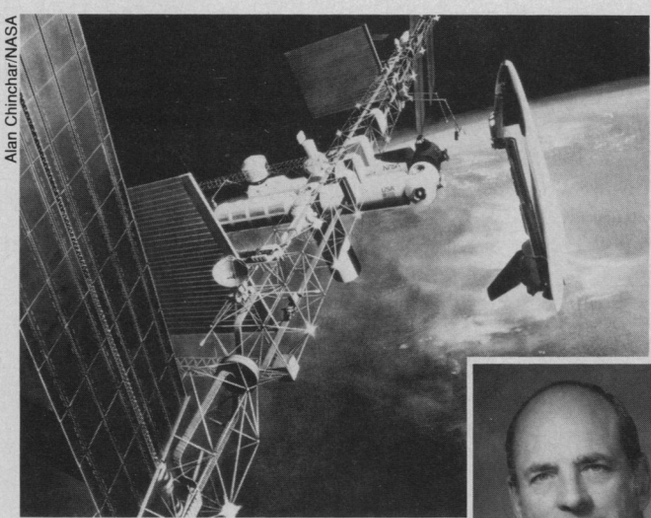
Space Program: Blueprint for Ambiguity?

A national commission's report may lead to major reforms at NASA, but some experts aren't so sure

AS FAR AS MOST OUTSIDE EXPERTS ARE concerned, NASA—routinely described these days as "the troubled space agency"—has been monumentally slow to recognize the danger of reliance on the undependable space shuttle and the inherent problems in its expensive, complicated space station. So when an advisory commission released a report last week that seemed to provide NASA with both a raison d'être and a charter lifted almost wholly from the arguments of its critics, it created an immediate sensation. Vice President Dan Quayle credited panel chairman Norman Augustine with producing a report pointing out the need for "fundamental changes in our civil space program." And among space scientists long frustrated by the agency's emphasis on huge projects, Planetary Society executive director Louis Friedman voiced a typical reaction: "I think they did a terrific job.... That's such a difference from the rhetoric of the last 10 to 15 years."



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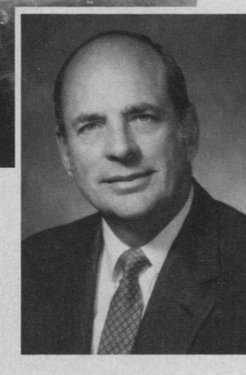

Tough critic. *Martin Marietta CEO Norman Augustine chaired panel that recommended "descoping" the space station and de-emphasizing the space shuttle.*

But lurking in the shadows were some who were far from sure the Augustine commission report really presented a blueprint for reviving NASA. "I am publicly optimistic," says a space policy expert who privately voices a number of concerns about the report. "I read the report, and my heart was quickened. Then I read it again, and I said, [NASA] could get away with very little change. The only thing they're really going to have to do is scale down the station and kick one or two communications satellites off the shuttle. And they could just keep rolling."

The commission's approach certainly seemed designed to set NASA on a new path. The report endorsed the congressionally mandated redesign of the space station, now in its second month, and argued that it should serve mainly as a laboratory in the human life sciences. It recommended that NASA phase out use of the shuttle for missions not requiring a human presence, scrap its plans to build a fifth shuttle orbiter, and use the freed-up resources to design a new heavy-lift launch vehicle that in the long run should reduce the cost of putting payloads in orbit. And it instructed NASA to go slow on human exploration of the moon and Mars—an initiative that had been strongly endorsed by the Bush Administration.

To John Logsdon, director of George Washington University's Space Policy Institute, the report ratifies years of complaints (*Science*, 19 October, p. 364, and 26 October, p. 499) and recommends nothing less than a thorough housecleaning: "It really is a comprehensive and carefully worded, but very biting, critique of the last 20 years of the way the space program has done business." Friedman agrees: "The emperor has no clothes, and finally someone noticed."

In addition to its recommended changes in the space station and shuttle programs, the Augustine panel noted the following:

■ NASA's space science mission is "the fulcrum of the entire civil space effort" and warrants "highest priority for funding." NASA's ongoing "Mission to Planet Earth" should continue to emphasize orbital study of environmental and climate change, while manned missions should make up a "Mission from Planet Earth" with a "very long-term goal" of sending a manned expedition to Mars. Such an effort should be mounted over decades as money for it is available—in effect, a "go-as-you-pay" strategy, in Augustine's words.

■ NASA should restore its "technology base" by re-emphasizing research into propulsion and power systems, which has "languished" for nearly 20 years.

■ To attract a well-trained work force, NASA should seek exemptions to civil service regulations for as much as 10% of the agency work force. If that fails, the agency should selectively convert some of its space centers so they resemble the privately administered Jet Propulsion Laboratory. The centers' missions should be refocused so that they work with "minimum overlap."

If this set of recommendations does show up a naked emperor, his subjects seem unwilling to admit it. NASA officials, for example, don't appear to think the panel has called for much change at all. To associate administrator for space flight William Lenoir, "About 98% of [the Augustine commission's] message says do exactly what you're doing." NASA is already redesigning the station and shifting noncritical payloads off the shuttle wherever possible, Lenoir says—although he adds that NASA could have built the station to its original design if Congress hadn't cut the budget. "It's not that we promised something and couldn't deliver, it's that we didn't get the dollars." Administrator Richard Truly said only that he was "extremely pleased" with the "general tone" of the report, and quickly pointed out that it echoes NASA's own calls for "predictability and stability of [budget] resources."

Such reactions worry skeptics who think NASA may try to pay lip service to the report while doing its best to ignore it. "NASA feels like the religious orders in the Dark Ages, that they're preserving the wisdom," says Albert Wheelon, a former member of the Rogers commission. "A couple of hotshots come along with a nutty idea called the Reformation, and [NASA thinks] they'll come and go.... It's a new direction, but not something they can embrace easily."

Still, since these recommendations carry the imprimatur of the White House, NASA may find them more difficult to ignore than similar suggestions in the past. And the Augustine commission will be watching. It will reconvene in 60 days to assess NASA's progress. ■ DAVID HAMILTON