

**REDESIGNED SPACE STATION
PROGRAM: HEARING; ONE
HUNDRED THIRD CONGRESS,
FIRST SESSION, JULY 1, 1993**

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REDESIGNED SPACE STATION PROGRAM

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Redesigned Space Station Program, S...

HEARING

BEFORE THE

SUBCOMMITTEE ON SCIENCE, TECHNOLOGY,
AND SPACE

OF THE

COMMITTEE ON COMMERCE,
SCIENCE, AND TRANSPORTATION
UNITED STATES SENATE

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

JULY 1, 1993

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REDESIGNED SPACE STATION PROGRAM

THURSDAY, JULY 1, 1993

U.S. SENATE,
SUBCOMMITTEE ON SCIENCE, TECHNOLOGY, AND
SPACE OF THE COMMITTEE ON
COMMERCE, SCIENCE, AND TRANSPORTATION,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:30 p.m. in room SR-253, Russell Senate Office Building, Hon. John D. Rockefeller IV (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Elizabeth Inadomi, staff counsel; and Louis C. Whitsett, minority staff counsel.

OPENING STATEMENT OF SENATOR ROCKEFELLER

Senator ROCKEFELLER. This hearing will come to order. Some of my colleagues will be coming in late today, so we will not be alone here on this incredibly important subject.

Today, the Subcommittee on Science, Technology, and Space begins our review of President Clinton's proposal for continuing the Space Station Program, this time with a redesigned station and a restructured management of the program.

Our hearing comes on the heels of what were frankly 10 very tumultuous days in the House of Representatives where the redesigned space station narrowly survived two critical votes, but did survive. The burden, therefore, of deciding, in a sense, what is going to happen to the space station, what its future is going to be, now falls on the U.S. Senate.

The space station presents a very difficult issue for me. I have always been a strong supporter of the U.S. space program, but in each of the last 2 years I have in fact voted to terminate the Space Station Program. I did so because I believed that when measured against other Federal spending programs and other NASA programs the previous plan for \$30 billion for Space Station Freedom failed to warrant that level of funding.

The program was out of control, in my judgment, with billions of dollars of cost overruns and very little assurance that the science obtained from the orbiting laboratory justified the cost, which was substantial, to the American people.

Last year, when the NASA funding bill was being considered by the Senate, I called for a review of the Space Station Program. This may sound slightly obnoxious as I say it today, but my exact words were, "I believe we should explore cheaper, more efficient, more effective alternatives before we become irrevocably committed to this

project. I am prepared to look at more efficient, more cost-effective alternatives."

That is what I said, and therefore obviously I am very happy that President Clinton directed the NASA organization earlier this year to review the Space Station Program with an eye toward cost savings and increased efficiencies. Failure to do so would have continued to waste billions of very scarce taxpayer dollars.

When I said those words last year about the space station, I did not know that nearly 12 months later I would be chairman of this subcommittee that oversees the program. As I promised, I intend to consider with an open mind—this is, frankly, a conversation I had with the Vice President, Al Gore, who chaired this subcommittee last year and is a very strong proponent of the Space Station Program.

Either during or right after the campaign, I forget which, I sat down with him and I told him that I would wipe the slate clean and start over again. I told him I would consider the Space Station Program entirely anew, not only because I was going to be chairman of this subcommittee and had that responsibility, but also because, clearly, he and President Clinton felt very strongly about that, and that is necessarily, therefore, very important to me.

There are, I think, a significant number of issues that we need to explore, and in great detail, during our session this afternoon. First and foremost is the basic issue of whether and why we need a space station. That will probably be the first question I will direct to Mr. Goldin. That statement may sound biased to some, but it is not. It is not intended to be. It is simply the most basic question you can ask.

Why do we need a space station? It is the kind of question the American people would be asking, and it is the kind of question that would make sense for me to ask. In fact, I think it is the central issue in the debate, something that must be answered in a satisfactory manner before consensus will develop on any particular design for the space station.

Much of the attention focused on why the redesign is better than the previous model, and how NASA intends to improve its internal management of the Space Station Program. While those are certainly important issues, and we will examine them, taken alone, they beg a more critical question. First and foremost, this subcommittee and the U.S. Senate must be given the rationale for building a space station of any size, and that is what we will pursue, among other things, this afternoon.

At a time when we are hearing a constant call, and some of the loudest are from our own colleagues on both sides of the aisle for "spending cuts" as the superior way to reduce the Federal budget deficit, it is our responsibility to have a very solid, intellectual, practical basis on which to ask taxpayers to pay tens of billions of dollars for the Space Station Program. We need to be able to justify it to ourselves so that the taxpayers can have a measure of understanding of this.

I want to know why, for example, the administration and any other space station proponents believe that this is the place to spend that money, the tens of billions of dollars, and not on, for example, other space programs, other science efforts, other aeronauti-

cal pursuits that would come under NASA, and obviously, also, other needs of this country.

So, tasked with providing this rationale is the Administrator of NASA, Dan Goldin, who will be our first witness. Mr. Goldin will attempt to make the case. He and I have met on this, and we will meet again on it. This is an honest exploration of space, so to speak, on my own part. It is earnest, and honest and I am trying to get real answers. It is something that I pursue with happiness and with a good sense about it.

So, he will be talking about that, as well as outlining the changes planned to make the program a better performer.

He is joined by somebody that I care about a very great deal on the first panel, and that is Dr. Charles Vest. The secret is, of course, that he was born in West Virginia, and therefore is a superior human being. [Laughter.]

He was also chairman of the Advisory Committee on the Redesign of the Space Station, and recently completed an independent review for the White House. The White House asked for that. They asked Chuck Vest to head it up. He did that. He did not take positions. He was acting as a scientist, so to speak, to make independent judgment. In his spare time, Chuck Vest is the president of MIT.

Our second panel includes witnesses who will provide other assessments of the need for the space station and whether NASA was successful, in fact, in redesigning the program. For this assessment, the subcommittee will welcome Dr. Louis Friedman, executive director of the Planetary Society, and Dr. Robert Park, executive director of the American Physical Society.

We have a lot of ground to cover today. I welcome our witnesses. I thank each of them for agreeing to appear before the subcommittee. In the case of Dr. Charles Vest that took a lot of rearranging of his schedule, and I appreciate that very much.

Now I would yield to my very good friend, the distinguished Senator from Montana, Senator Burns.

[The prepared statements of Senators Hollings and Rockefeller follow:]

PREPARED STATEMENT OF SENATOR HOLLINGS

The U.S. space program is again teetering on the edge of a precipice, with the ultimate direction to be determined by the fate of the space station. In the end, NASA could have a balanced program, one in which space science, aeronautics, robotics, and environmental monitoring are advanced to the benefit of many people. Or, it could be a one-dimensional program, in which billions of tax dollars are expended in an attempt to further only one program: the space station.

With that situation at hand, we convene today's hearing on the redesign of the space station. This hearing is important, as many members of this committee, as well as the Senate, continue to raise serious questions about the merit of proceeding with this program.

I commend the President for not pretending, as previous administrations have, that the Space Station Freedom could be built and operated successfully as originally envisioned despite the deteriorating fiscal climate. President Clinton deserves credit for understanding that the Space Station Program, which has been a drain on NASA as well as on the Nation's fiscal resources, needed a thorough review.

However, the reality is that more must be done than trim the size of the space station in hopes of achieving modest savings. This redesigned space station still will cost tens of billions of dollars to build and operate. And the hard truth is that the Federal budget deficit continues to skyrocket. Every day, the Federal Government