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Last Updated: 12/16/2024

March 2, 1987

MEMORANDUM FOR THE PRESIDENT

FROM:

ISSUE: How should our commitment to the Space Station be defined in the light of increasing program costs?

Summary and Recommendations.

The recent NASA estimates of sharp cost increases for the Station have raised serious concerns about the feasibility of committing now to the full program recommended by NASA. Decisions are needed now on how the Administration should define its commitment to the program in the light of the new cost estimates.

EXOP staff have met with NASA officials to better understand the basis for the new NASA cost estimates. They also explored possible lower cost approaches for achieving the Station capabilities originally envisioned. As a result of these reviews, we believe that specific management actions are required now to:

- o Establish budget projections for the program that hold as closely as possible to current projections, especially in the near years.
- o Propose specific legislative measures now to assure the stability of these new budget commitments, and,
- o Establish a process for considering in future years those activities which cannot be fully and fairly considered now.

The recommended EXOP staff option would result in funding commitments now totaling about \$9.4 billion for the Station development effort, compared to the new agency estimate of \$14.5 billion (all estimates in 1984 dollars). The commitment to the Station would be reaffirmed, with first benefits expected in the mid-1990's as currently planned. However, consideration of funding for some ground support infrastructure (presently estimated by NASA at \$2.9 billion) would be delayed until such needs can be better defined as the program matures.

The Original Program.

In your 1984 State of the Union Address, you directed NASA to develop a permanently manned Space Station within a decade and invited participation in the program with other nations. The \$8.0 billion Space Station program you approved was envisioned by NASA to establish a permanently manned U.S. presence in space,

and to feature a large, habitable core structure and two smaller unmanned space platforms to base scientific payloads and experiments.

The \$8.0 billion program was expected to satisfy a broad spectrum of needs for scientific research, technology development, and commercial activities. However, the Station was also envisioned to be an evolving facility and a continuing long-term program. Future elements were expected to be proposed, such as the capability to use the Station as a stepping stone for a manned lunar base or a manned mission to Mars.

The \$8.0 billion estimate included \$0.6 billion for definition and \$7.4 billion for development. As the definition funds have now been spent, new NASA estimates should be compared to the \$7.4 billion development portion only.

Increased Agency Cost Estimates.

The recently completed NASA cost estimates for Space Station development priced the agency's preferred configuration at \$14.5 billion in 1984 dollars (about \$21 billion in current year dollars), compared to the original development estimate of \$7.4 billion in 1984 dollars. As reported to you earlier, the cost growth estimated for the Station by NASA reflects differences in the design and assembly of the Station from what was envisioned originally and greatly increased provisions for ground-based supporting infrastructure and funding reserves. Figure 1 provides a constant dollar comparison of the new agency estimate with the original estimate and with the estimates included in your FY 1988 budget.

Since Station construction has not begun, the Station program did not suffer the high cost of being disrupted in mid course by the Challenger accident, as many other NASA programs did. However, the new Station estimates do reflect indirect effects of the accident, primarily:

- o Greater precautions (e.g., parallel development efforts, extra testing and oversight) being taken in the conduct of all agency manned flight programs.
- o The diminished capacity of the Shuttle, both in the number of available flights and the performance of the Shuttle (e.g., lift capacity).

For the original \$7.4 billion development program, NASA envisioned streamlined management and engineering procedures different from those used by the agency for the Apollo program, especially in the scope and extent of design, test and check-out efforts. The Rogers Commission recommended additional measures to assure the safety, quality, and reliability of NASA manned flight programs. The recent Phillips Study made further recommendations to improve overall NASA management. Based on information presented by NASA,

these extra precautions would add about \$0.7 billion in 1984 dollars to the original \$7.4 billion development estimate.

The new NASA estimates reflect a more capable program, and the requirements are better understood, than the original concept. Proposed new features promise to lower the life cycle costs of the Station and improve its utility to prospective users. For example:

- o Higher capacity, new power source technology and user facilities to reduce the cost of maintaining the orbit of the Station and improve the productivity of experiments,
- o A high technology water and oxygen recycling system to reduce the long term operating costs of the Station,
- o A "garage" on the Station to improve its productivity for repairing and servicing satellites and experiments on orbit.

The best understood aspect of the Station is the flight hardware, where most of the planning definition efforts, before and after the program was approved, have focused. The total cost for the flight hardware portion of the program would increase in 1984 dollars by \$1.0 billion, from \$5.8 to \$6.8 billion. The cost increase for these elements reflected in the new agency estimates includes both the new features and all other changes incorporated through the \$0.6 billion, three year planning and definition effort. These elements also represent the smallest portion of the cost increases recommended by NASA. EXOP staff believe that if a commitment is approved to the new NASA approach, this estimate for the hardware elements should constitute a firm cost ceiling on the flight hardware elements. As part of its estimating for the program, the agency should specifically task contractors to explore lower cost approaches.

Beyond these management and hardware changes, the largest increases proposed by NASA above the original estimates (1984\$) would be for:

- o Greatly increased ground-based supporting infrastructure of test and training facilities and support staff (+\$2.9B), and,
- o Additional funding reserves to meet possible further cost growth and contingencies (+\$2.5B).

NASA believes the original \$7.4 billion development estimate focused heavily on flight hardware and greatly under-estimated the need for additional ground-based support staff and equipment. The agency also believes that higher funding reserves would be more consistent with actual agency experience on other programs.

EXOP staff have discussed the information provided by NASA supporting these estimates but are not convinced that the program is sufficiently mature to allow an accurate evaluation now of funding needs for these items. We note, for example, the level of support infrastructure should depend upon the level of operating activity planned for the Station, the approach finally selected for launch, assembly and check-out, and the availability of staff from the Shuttle program once Shuttle recovery is completed. Moreover, Station assembly risk and cost might be reduced if the Station employed the new Heavy Lift Launch Vehicle proposed in the President's FY 1987 and FY 1988 budgets for DOD. Thus, these needs cannot be confidently estimated now.

In addition, it would appear reasonable that with the planned increase in management oversight, the need for funding reserves should be reduced, not increased. Therefore, we believe that no additional amounts for ground support infrastructure or for funding reserves should be included now in a revised funding commitment for the Station until these needs can be more fully developed and assessed in future years as the program matures.

EXOP staff specifically considered options to restrain the total cost of the development program to the original \$7.4 billion estimate. While we believe the agency should specifically be tasked to continue to seek opportunities for major cost savings, the original cost target does not appear feasible based on developments to-date.

Required Changes in the Management of Space Station Funding.

We note that cost volatility was a key issue when the Space Station program was approved and are greatly distressed with the extraordinary cost growth reflected in the new NASA estimates. The sharp cost increase will be cause for much debate in the Congress and concern among our international partners. As a result, we believe strongly that additional management measures are necessary to assure the credibility and stability of the new budget commitments. At the same time, we remain concerned that it is clearly not possible to precisely estimate now the costs for all elements of the Station. Therefore, to address these concerns, we propose three further actions:

- o Initiate immediately an independent examination of Space Station costs by senior outside reviewers.
- o Propose legislation within 30 days requesting a rolling three year Congressional commitment of appropriations and a legislative cost ceiling on the flight hardware elements of the program (\$6.8 billion) to firmly assure necessary fiscal stability and restraint and a stable planning environment.
- o Direct NASA to modify the request for contractor bids to explicitly encourage and consider options for reducing the cost of the Station while maintaining early benefits.

The three year rolling commitment would permit Space Station funding to be projected for five years as with our current budget procedure. However, advance appropriations would be requested for the budget year and the following two years. Each year, the budget process would make adjustments according to the long term needs beginning in the budget year plus two. For example, the FY 1989 budget process, only Space Station adjustments beginning in FY 1991 would be considered. Once new budget projections for the program are established, we believe it is critical to hold to these outlay estimates for the next three years, through FY 1990. This rolling three year commitment, coupled with a legislated ceiling on the total flight hardware costs, would:

- o Indicate to the Congress and the public that the Administration is dealing decisively with this issue, without committing prematurely to funding increases which cannot be prudently assessed now,
- o Propose specific legislative measures to assure sound program management, program stability and fiscal restraint,
- o Preserve the momentum on this presidential initiative and take full advantage of investments made to date, and
- o Provide a stable planning environment and assure international participants that the U.S. will remain a reliable partner.

Under this approach, long term commitments to additional program capabilities would continue to be considered annually. In this process, possible options for further savings offered by the contractors could be considered, along with possible additional needs, such as further justifications of ground support equipment or a possible "lifeboat" to return astronauts from the Station in an emergency.

NASA estimates that this three year outlay constraint would delay the full achievement of program capabilities by at least 6 to 12 months from the NASA preferred schedule. NASA continues to believe that the Space Station program should hold the full capabilities of the Station as nearly as possible to the original schedule. The agency notes that its preferred approach would not require adjustment to the President's budget for FY 1988, although it would require significant outlays increases for subsequent years.

All agree that the commitment to a permanently manned Station with international participation should be reaffirmed now. At issue is the approach to achieving the full planned capabilities of the Station by the mid-1990's versus achieving a significant capability in the time period with additional capabilities to be phased in consistent with need for program stability and fiscal restraint.

Options.

- 1) Pursue the full program as redefined by NASA. No outlay increase for FY 1988, but sharp increases in later years. Supported by NASA.
- 2) Allow a more gradual program that holds to FY 1988 budget projections through FY 1990. Achieve initial capabilities in about the same time period as option #1, with full capabilities phased to stay within the new budget commitments (consider additional ground support beginning in FY1991). Implement the additional management measures recommended by EXOP staff. Supported by OSTP, NSC, and OMB.
- 3) Re-design the program to remain within the original \$7.4 billion development estimate and the current FY 1988 budget projections.

Figure 2 illustrates the outlay impacts of options #1 and #2 in current dollars for the development program. No funding estimates by year can be made for option #3 at this time. These figures do not include the cost of Station operations or experiments, or allowance for any further program additions once the initial development is complete. Figure 3 provides a comparison between options #1 and #2 by program element in 1984 dollars.

Option 1. Pursue the full program as redefined by NASA. No outlay increase for FY 1988, but sharp increases in later years. Supported by NASA.

Pro:

- o Would result in earliest practicable achievement of the full capabilities.
- o Would reaffirm Presidential support for continued U.S. leadership program in space.
- o Would likely be acceptable to prospective foreign partners.

Con:

- o Would require an estimated increase of 19% above FY 1988 budget outlay projections for FY 1989 and 38% for FY 1990, with much larger increases in subsequent years.
- o May encounter serious resistance in the Congress because of the sharp increase and the lack of measures to guard against further budget instability for the program, especially in the light of other possible near term funding needs for NASA (e.g., Shuttle recovery costs, NASA use of expendable launch vehicles).

Option 2. Allow a more gradual program that holds to FY 1988 budget projections through FY 1990. Achieve initial capabilities in about the same time period as option #1, with full capabilities phased to stay within the new budget commitments (consider additional ground support beginning in FY1991). Implement the additional management measures recommended by EXOP staff. Supported by OSTP, NSC, and OMB.

Pros:

- o Would allow the full capabilities originally envisioned to be achieved at nearly the same pace.
- o Would permit early benefit to be achieved in the mid-1990's, with completion of full benefits phased as necessary to assure essential fiscal restraint.
- o Would implement strong management actions to assure program stability and fiscal restraint, but allow NASA to proceed quickly with initial construction.
- o Would allow new capabilities to be considered in an orderly way over the next several years before committing to the sharp build-up in outlays in the early 1990's.
- o Would provide assurance to international participants of U.S. ability and intention to meet its program obligations.

Cons:

- o Could result in some delay in the achievement of full planned program capabilities.
- o May increase the total costs to complete the full complement of originally envisioned capabilities because of the costs of program deferrals.

Option 3. Re-design the program to remain with the original \$7.4 billion development estimate and the current FY 1988 budget projections.

Pros:

- o Would maintain the commitment to a Space Station within the original \$7.4 billion development estimate.

Cons:

- o NASA maintains that this would result in completion of a Station in the mid-1990's that NASA believes would be no better than the current Soviet Station, with no opportunity for future cost-effective growth or international participation.
- o Would not result in a permanently manned capability in space.
- o Would require a program hiatus while NASA attempts to redesign the program to achieve the original cost target.
- o May not result in a viable program. Developments to-date indicate the original cost target may not be feasible.
- o Would offer no participation by our international partners, encouraging them to develop competing capabilities or to work with Soviets.

Figure 1

Growth in Station Development Costs

Outlays - Billions of 1984 Dollars

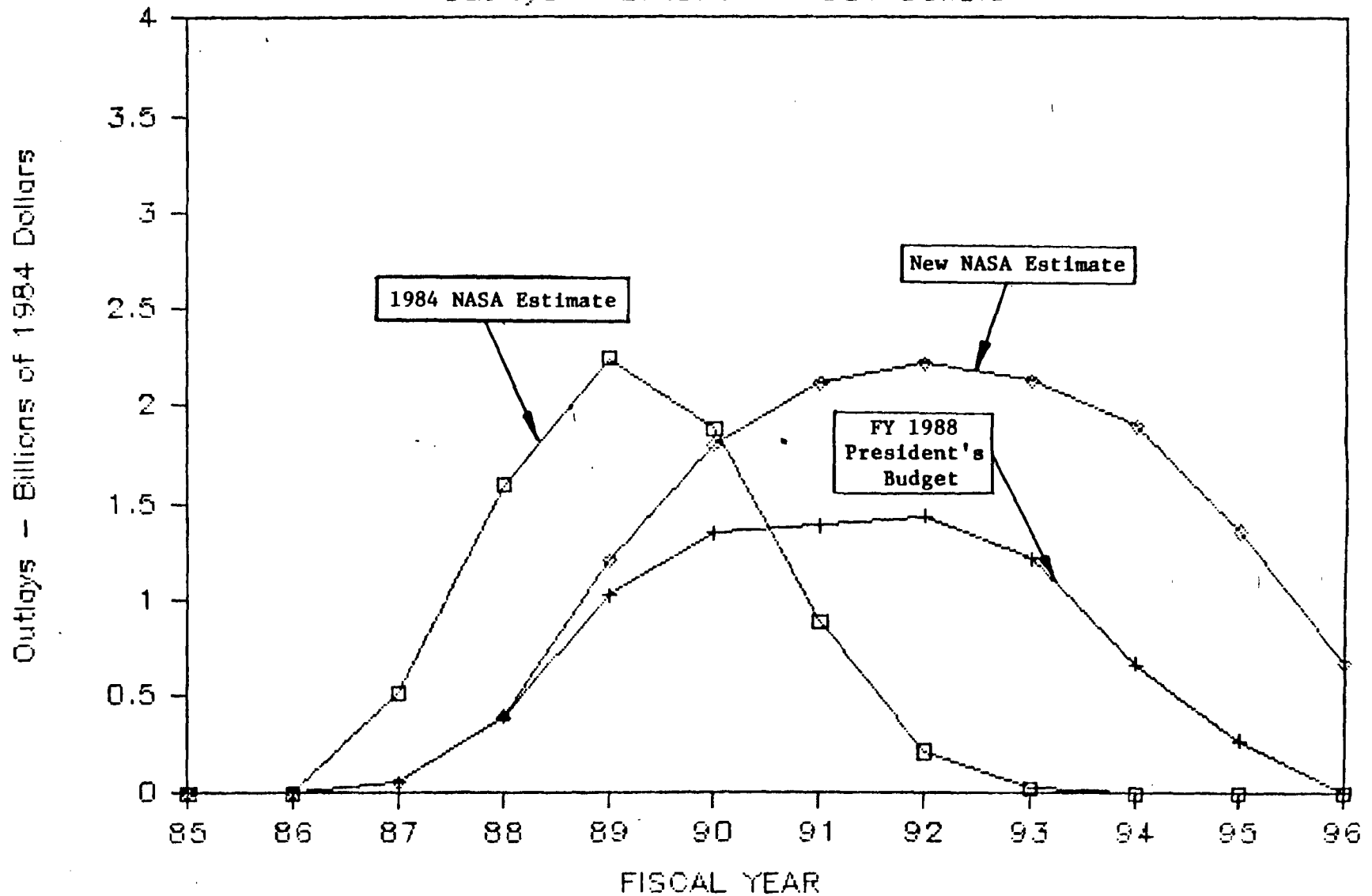


Figure 2

Space Station Development Options

Outlays - Billions of Real Year Dollars

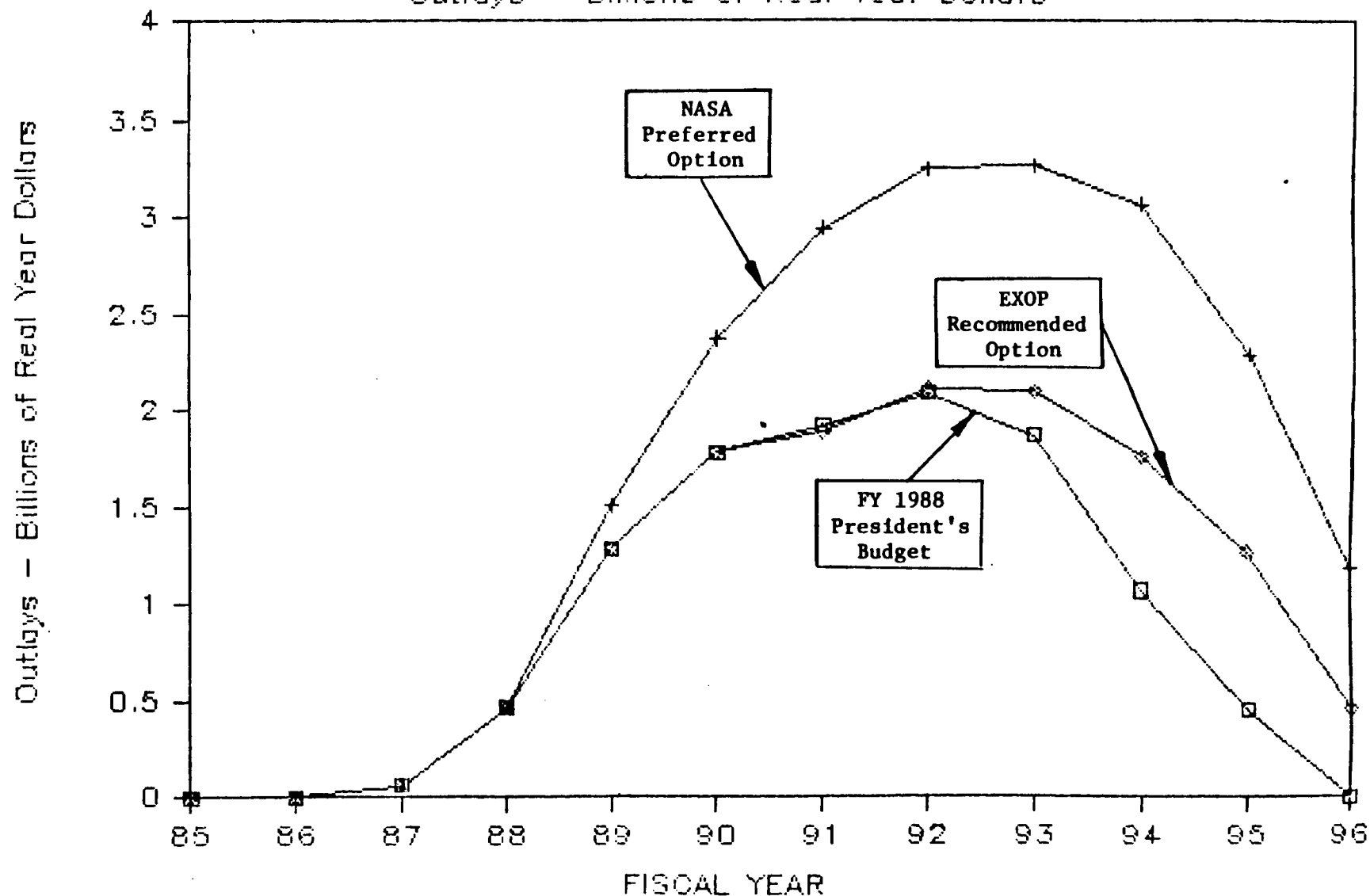


Figure 3.

COMPARISON OF OPTIONS #1 AND #2
FULL COMMITMENT NOW VERSUS GRADUAL APPROACH
(Development Cost in Billions of 1984 Dollars)

	<u>Original Estimate</u>	<u>Change Now</u>	<u>Total</u>
<u>Option #1</u>			
Flight Hardware	5.8	+1.0	6.8
Support Infrastructure	0.3	+3.6	3.9
Reserve	1.3	+2.5	3.8
Total Development	7.4	+7.1	14.5
 <u>Option #2</u>			
Flight Hardware	5.8	+1.0	6.8
Support Infrastructure *	0.3	+0.7	1.0
Reserve **	1.3	+0.3	1.6
Total Development	7.4	+2.0	9.4

* Provides only additional amounts now to address Rogers Commission and Phillips management study recommendations. Additional outyear amounts to addressed beginning in FY 1991.

** Allows for reserve of 20% of approved flight hardware and support infrastructure costs, as originally envisioned.

THE WHITE HOUSE

WASHINGTON

March 10, 1987

MEMORANDUM FOR HOWARD H. BAKER, JR.
JAMES M. CANNON

FROM: NANCY J. RISQUE

SUBJECT: Space Station

Issue:

In his 1984 State of the Union Address, the President called for the construction of a space station to be completed in the early 1990s. NASA now estimates that the space station will cost \$14.5 billion (1984\$) substantially more than the original estimate of \$8 billion. This raises two issues, one short-term, the other longer-term.

1. NASA would like to solicit bids for construction of the station. OMB has put a hold on them pending resolution of the budget question. Congress has also put a hold on the RFPs, pending a statement of the Administration's cost estimate for the station. Can we move forward with these bids?
2. Do we go forward with a space station, what should we expect from it, and how much are we willing to spend for it?

Discussion:

There is probably no one in the Administration who thinks we should cancel the space station. Likewise there is probably no one in the Administration who has a firm idea of what we would like to get out of the space station.

The original decision was a design to cost station: we decided to spend \$8 billion and designed a station that cost \$8 billion. Unfortunately, that original estimate was overtaken by a number of factors, including increased costs for ground-based supporting infrastructure, the need for greater funding reserves, and higher design and assembly costs.

In hindsight, the proper way to approach the station funding question should be to look at it from cost to design approach: determining what we want from the station and estimating its cost.

Almost every agency in the Federal Government is interested in the design question: DoD from national security perspective; State from the perspective of foreign participation; the Departments of Transportation and Commerce, who are interested in commercializing space; and the Department of Treasury, OMB and CEA from a fiscal perspective, as well as an economic policy question; and of course NASA.

Both the Economic Policy Council and the National Security Council have interagency working groups that have presented space issues to the President for decision. The President's science adviser serves on both groups.

Recommendation:

I recommend that:

1. OMB and NASA be pushed to agree on a short-term course of action regarding construction bids. NASA should be permitted to begin to solicit private sector proposals. However, because the private sector expends a great deal of money in developing these proposals, we must take care that these bids not be overturned by later decisions regarding the design of the space station.

This will not be an easy task. NASA believes the minimum cost of the station is now \$11 billion. OMB will argue that the \$3 billion increase must be offset somewhere. The dispute may have to be resolved in the West Wing.

2. I confer with Secretary Baker and Frank Carlucci to place the question of the design and uses of the space station in the appropriate interagency group: the EPC, NSC, or both. The objective would be to present to the President within four or five months a range of options covering both design and cost questions that reflect all the Cabinet agency positions.

THE WHITE HOUSE

WASHINGTON

March 20, 1987

MEMORANDUM FOR HOWARD H. BAKER, JR.
JAMES M. CANNON

FROM: NANCY J. RISQUE 

SUBJECT: Space Station

This is a follow-up to my March 10 memorandum regarding the space station. I understand that OMB, OSTP, NASA, and the NSC are sending a memorandum to the President stating that they have reached agreement on:

1. Permitting NASA to solicit bids for phased construction of the space station; and
2. Establishing an independent technical and cost review of the space station program, reporting to OMB, with full participation by OSTP, NSC, and NASA.

I'd like to reiterate that there are a number of Cabinet agencies that have a major stake in space policy. These include the State, Commerce, and Transportation Departments, as well as the Treasury Department, and CEA. Secretaries Baldrige and Dole have committed a great deal of time and interest to space policy.

It seems to me that space policy should be developed in the same manner as any other kind of policy: through the Cabinet. The question of what we want from the space station should be considered by the Cabinet, through either the NSC or the EPC. Indeed, part of the problem in determining the cost of the station may be that we've never defined what the functions/goals of a Federal space station should be.

I know many of the Cabinet officers would appreciate having the opportunity to discuss these matters with the President before he makes any decisions regarding the future of the space station.

attachments



THE SECRETARY OF THE TREASURY

WASHINGTON

March 17, 1987

Dear Jim:

Thank you for your letter on the role of the private sector in both commercial launch services and economic activities in space. Your effort as Vice Chairman of the Commercial Space Working Group was crucial in helping to develop the commercial space launch policy, and I appreciate your offer to bring to the attention of the Economic Policy Council those issues that may impede its smooth and timely implementation.

I agree that it is appropriate now to develop a policy statement on the Administration's economic goals in space and the scope and nature of the government's role in helping to achieve them. A policy statement in this area, like that on space launch policy, would be useful for business planning and would provide guidance for government agencies. I look forward to receiving the Commercial Space Working Group's report by June 1, 1987, for consideration by the Economic Policy Council. I have asked Eugene McAllister to coordinate with you on the report.

Sincerely,

James A. Baker, III

The Honorable James C. Fletcher
Administrator
National Aeronautics and
Space Administration
Washington, D.C. 20546

cc: Eugene McAllister



THE SECRETARY OF THE TREASURY

WASHINGTON

March 17, 1987

Dear Mac:

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Sincerely,

James A. Baker, III

The Honorable Malcolm Baldrige
Secretary of Commerce
Washington, D.C. 20230

cc: Eugene McAllister

*Copies to Jim Mills - 241
Ken Cribb - 745*

THE WHITE HOUSE

WASHINGTON

March 10, 1987

MEMORANDUM FOR HOWARD H. BAKER, JR.
JAMES M. CANNON

FROM: NANCY J. RISQUE *NJR*
SUBJECT: Space Station

Issue:

In his 1984 State of the Union Address, the President called for the construction of a space station to be completed in the early 1990s. NASA now estimates that the space station will cost \$14.5 billion (1984\$) substantially more than the original estimate of \$8 billion. This raises two issues, one short-term, the other longer-term.

1. NASA would like to solicit bids for construction of the station. OMB has put a hold on them pending resolution of the budget question. Congress has also put a hold on the RFPs, pending a statement of the Administration's cost estimate for the station. Can we move forward with these bids?
2. Do we go forward with a space station, what should we expect from it, and how much are we willing to spend for it?

Discussion:

There is probably no one in the Administration who thinks we should cancel the space station. Likewise there is probably no one in the Administration who has a firm idea of what we would like to get out of the space station.

The original decision was a design to cost station: we decided to spend \$8 billion and designed a station that cost \$8 billion. Unfortunately, that original estimate was overtaken by a number of factors, including increased costs for ground-based supporting infrastructure, the need for greater funding reserves, and higher design and assembly costs.

In hindsight, the proper way to approach the station funding question should be to look at it from cost to design approach: determining what we want from the station and estimating its cost.

INFORMATION

MEMORANDUM FOR THE PRESIDENT

FROM: Frank C. Carlucci
James C. Fletcher
William R. Graham
James C. Miller III

SUBJECT: Space Station New Cost Estimates

SUMMARY

This memorandum is a follow-up to Jim Miller's earlier report to you. In response to your concern over the magnitude of the cost increase in the Space Station program, representatives of the National Security Council (NSC), the Office of Science and Technology Policy (OSTP), and the Office of Management and Budget (OMB) have met with NASA officials to understand the new estimates and to explore lower cost alternatives. This memorandum describes the process we have agreed upon for developing a range of alternatives for your decision in the FY 1989 budget.

DISCUSSION

In 1984, you approved a program to achieve a permanently manned Space Station in the mid-1990's at a cost of \$8 billion. NASA has since spent \$0.6 billion on studies to further define the Space Station. NASA's current estimate is that a Space Station with enhanced capabilities can be achieved at a cost of \$13.0 billion (in 1984 dollars) with permanently manned capability in 1995. In addition, NASA has identified increases of \$1.5 billion to augment program support. These estimates do not include the costs of on-board experiments, transportation for assembly and resupply, operations, and a possible "life boat" for emergency return of crew members.

NASA would like to proceed with the detailed design and construction phase as soon as possible to preserve the momentum of the program, but is currently withholding the request for contractor bids. In addition, FY 1987 Congressional action for NASA prohibits release of funds for this phase until NASA provides the Congress with an acceptable implementation plan and cost estimate (in review at OMB at this time).

Almost every agency in the Federal Government is interested in the design question: DoD from national security perspective; State from the perspective of foreign participation; the Departments of Transportation and Commerce, who are interested in commercializing space; and the Department of Treasury, OMB and CEA from a fiscal perspective, as well as an economic policy question; and of course NASA.

Both the Economic Policy Council and the National Security Council have interagency working groups that have presented space issues to the President for decision. The President's science adviser serves on both groups.

Recommendation:

I recommend that:

1. OMB and NASA be pushed to agree on a short-term course of action regarding construction bids. NASA should be permitted to begin to solicit private sector proposals. However, because the private sector expends a great deal of money in developing these proposals, we must take care that these bids not be overturned by later decisions regarding the design of the space station.

This will not be an easy task. NASA believes the minimum cost of the station is now \$11 billion. OMB will argue that the \$3 billion increase must be offset somewhere. The dispute may have to be resolved in the West Wing.

2. I confer with Secretary Baker and Frank Carlucci to place the question of the design and uses of the space station in the appropriate interagency group: the EPC, NSC, or both. The objective would be to present to the President within four or five months a range of options covering both design and cost questions that reflect all the Cabinet agency positions.

The \$13.0 billion cost estimate would result in outlay increases of over 30 percent above your current budget estimates through 1992 for Space Station development. These increases would require large offsets in funding levels for other Administration priorities and costs could grow further.

The Space Station is an important Administration priority for U.S. technological leadership in space, international cooperation, and national security. We believe that the program should not be terminated. We also believe that the Administration should examine more intensively lower cost alternatives for meeting your objective of achieving a permanently manned Station in the mid-1990's. To accomplish this, we have reached an agreement on the following actions.

1. NASA will seek Congressional approval to request proposals from industry for a phased configuration. NASA believes that the cost of the first phase of this plan (a revised baseline) will be \$10.9 billion (in 1984 dollars), with additional program support costs of \$1.3 billion. Outlays through FY 1990 would be unchanged from your current budget projections. This phase would result in an initial manned capability in 1995, leading to permanently manned operations by early 1996. NASA will also seek industry ideas for lower cost methods of achieving the design configurations, as well as industry estimates for the enhanced (\$13 billion) configuration.
2. We will establish an independent technical and cost review of the Space Station program, reporting to OMB, with full participation by OSTP, NSC and NASA. This review will proceed in parallel with the request for industry proposals and will not delay the program schedule. Working with NASA, the review process will examine a full range of cost alternatives. This review will be completed by September 1, 1987.

We will present the results of these actions to you this fall. NASA will need authority to proceed with the development contracts at that time. Decisions on the total Space Station cost, capability, and annual funding projections will be incorporated in FY 1989 budget. In addition, OMB will recommend specific legislation for a rolling three-year Congressional commitment and a total cost ceiling on the program.

In summary, we believe that these actions will demonstrate your firm commitment to the Space Station, and ensure that the program is implemented in a cost-effective manner consistent with our current fiscal constraints. We will keep Congress informed of the Administration's actions to help ensure support by key Congressional committees.

Please advise if you agree with this approach or wish to pursue another course of action. Meanwhile, we plan to keep you informed on the progress of activities.

THE WHITE HOUSE

WASHINGTON

March 31, 1987

MEMORANDUM FOR WILLIAM L. BALL

FROM: NANCY J. RISQUE 

SUBJECT: Bob Walker Meeting Regarding Space Station

In the future, would you please have your office notify mine of invitations and participation in Presidential meetings of Cabinet and sub-Cabinet personnel.

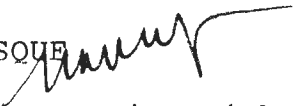
Thank you.

cc: Kenneth Duberstein

THE WHITE HOUSE
WASHINGTON

March 31, 1987

MEMORANDUM FOR KENNETH M. DUBERSTEIN

FROM: NANCY J. RISQUE 
SUBJECT: Space Station Meeting with Bob Walker

Let the record show that despite efforts by this office to resolve existing questions of an appropriate policy forum for future deliberations regarding the space station, it would appear by the attached that decisions have been reached and we have not been so informed.

Attachment

*Guidance
please for
use by
my office.*

THE WHITE HOUSE

WASHINGTON

MEETING WITH CONGRESSMAN BOB WALKER (R-PA)

DATE: March 31, 1987
LOCATION: The Oval Office
TIME: 1:15 p.m. (10 minutes)
FROM: William L. Ball, III *let for*

I. PURPOSE

To accommodate a request from Congressman Bob Walker to meet with you to discuss NASA's Shuttle and Space Station programs.

II. BACKGROUND

Congressman Walker is a 6th term Republican representing Pennsylvania's 16th District. He serves on the House Science and Technology Committee, where, as Ranking Republican on the Space Science and Applications Subcommittee, he has been a key player on the Administration's space initiatives, and a strong supporter of both the Space Station and Shuttle programs. This meeting will fulfill a longstanding commitment to provide Congressman Walker an opportunity to discuss these issues with the President.

On March 18, Congressman Walker was one of seventeen Members who voted to support your position on the highway bill, and renewed his request to meet with you following this vote.

III. PARTICIPANTS

The President

Deputy Chief of Staff Ken Duberstein

National Security Advisor Frank Carlucci

~~OMB Director Jim Miller~~

~~NASA Administrator James Fletcher~~

Congressman Bob Walker

White House Staff

Dr. William Graham
Alan Kranowitz

IV. PRESS PLAN

White House photographer only.

V. SEQUENCE OF EVENTS

Congressman Walker arrives at the White House and is escorted to the Oval Office for a private meeting with the President.

Attachment: Talking Points

Attachment

TALKING POINTS

- Bob, I appreciate your coming down today. I am deeply grateful for your support of my position on the highway bill.
- I appreciate the courageous stand you took in the House against this bill.
- I am keenly aware of your interest in the space program and of your legislative efforts in the House on this critical endeavor.
- I would be interested in your thoughts and suggestions.

[General Discussion]

- Bob, this has been very helpful. Thanks again for coming.

THE WHITE HOUSE

WASHINGTON

July 6, 1987

MEMORANDUM FOR NANCY RISQUE

THROUGH: EUGENE J. McALLISTER *EM*

FROM: SHELLYN McCAFFREY *SM*

SUBJECT: Space Station Report

ISSUE: The National Research Council Committee on Space Station (NRCSS) made its first report of findings and conclusions last week. Their report thus far raises several points that support our efforts to broaden Administration consideration of Space Station (SS) beyond a mere budgetary exercise.

BACKGROUND: Administration debate over NASA cost estimates for SS earlier this year caused OMB et al. to request an independent report by the NRC (1) assessing NASA cost estimates on the proposed SS and (2) examining SS mission requirements and alternative configurations. NRC's interim report presented last Thursday to White House representatives, including Jim Miller, William Graham, and Frank Carlucci responded primarily to the first question. The NRC's findings and conclusions will eventually be released to the public. A second report will be ready September 1. Several findings, thus far, are significant from a policy view:

- o SS may end up costing significantly more than the \$16.0 B (1984 dollars) estimated most recently by NASA.
 - According to NRCSS, when additional equipment costs unique to SS, e.g. flight servicer, orbital maneuvering vehicle, and emergency rescue vehicles, are included the total is closer to \$18 B.
 - Further, NASA reserve estimates of \$3.5 B for potential cost increases may be too low by \$1-1.5 B. This increases the initial estimate to more than \$20 B.
 - Even this total, according to NRCSS, does not include services and support such as launch services, salaries, spares and other operational parts, and construction of SS facilities. Including these costs brings the estimated total costs for developing and deploying SS to more than \$27.5 B.

The NRCSS has not, as yet, addressed the operational costs of SS from Day 1 of the first launch.

- o The potential for problems prior to initial operation of SS is great.
 - NASA launches of the 29 SS "packages" must be regular and continuous. Assuming that SS sections are launched on the Shuttle raises concerns regarding future Shuttle payload demand and capacity and potential SS launch and construction delays due to Shuttle failure. Use of heavy lift ELVs or Shuttle-derived vehicles could mitigate this threat.
 - Because only one set of hardware is being produced, failures in hardware could cause costly or abortive delays.
 - Unlike Shuttle and other NASA programs, there will be no complete on-Earth prototype to guide pre- or post-launch assessment of problems. SS will be assembled, for the first time, in space.
- o Several points stated or inferred by the NRC study are significant:
 - (1) Current estimates for a completed SS are probably conservative at near \$30 B. This does not include operation. SS will absorb NASA's resources for at least the next two to three decades.
 - (2) Launch, construction in space, and management of SS will be a complex task with a high risk factor for NASA.

DISCUSSION: The NRC report in September will respond to: questions raised last Thursday; operational cost estimates for SS; user needs v. SS design; program alternatives; and defense and international factors and requirements.

While much of the NRC fodder for a comprehensive policy discussion of SS has yet to be written, an important policy inference can be drawn thus far:

SS design should be kept as "simple" or lean as possible, i.e. not "representing all things to all people," in order to: (1) keep unforeseen costs and technical problems to a minimum and (2) permit NASA to respond to other potential Presidential goals.

RECOMMENDATION: I will be forwarding to you, per your request, a comprehensive memo suggesting the need for interagency policy consideration of the SS configuration and U.S. space goals.

THE WHITE HOUSE
WASHINGTON

Nancy,

From this am's
news conference

more to you
later or space

Shelly-

news from the NATIONAL RESEARCH COUNCIL

The National Research Council was organized by the National Academy of Sciences in 1916 in order to provide for a broader participation by American scientists and engineers in the work of the Academy. The Academy was chartered by the U.S. Congress in 1863 as a private organization with a responsibility for examining questions of science and technology at the request of the Federal Government. The National Academy of Engineering was organized in 1964 under the original NAS charter. The National Research Council now serves as the agent of both Academies in the conduct of studies and investigations in the public interest.

2101 CONSTITUTION AVENUE, N.W., WASHINGTON, D.C. 20418

Date: September 14, 1987

AREA CODE 202 334-2000

Contact: Rick Borchelt or Gail Porter,
(202) 334-2138

PANEL APPROVES BASIC SPACE STATION DESIGN;
URGES MORE DEPENDABLE SPACE TRANSPORTATION

FOR IMMEDIATE RELEASE

WASHINGTON -- While calling the basic configuration for the first phase of a U.S. manned space station "reasonable" and "a good compromise," a National Research Council committee warned today that sole reliance on the current shuttle to deploy the station is likely to seriously impede U.S. efforts to complete the project.

At a news conference here, the committee said that "[t]he current shuttle's ability to support the deployment, assembly, and operation of the station is marginal." More powerful solid rocket motors for the space shuttle should be developed to ensure successful construction and operation of the first stage of the proposed station, it concluded.

The committee's study* of current U.S. plans for a manned space station by the mid 1990s was prepared for the White House and the National Aeronautics and Space Administration. (NASA).

The group said that new information gathered since completing an interim report in June has "decreased the committee's confidence in NASA's [cost] estimates." It pointed out, for example, that the space station program is still being defined and that major uncertainties exist in cost estimates for the test program and for backup hardware.

(OVER)

*Copies of the committee's report are available from the Committee on Space Station at the letterhead address or by calling 202/334-3278. Reporters may obtain copies from the Office of News and Public Information, also at the letterhead address.

It also raised concerns about the management structure for the program and stressed the need for ensuring access to space for scientific research beyond that provided by the proposed space station.

The space station is "the most ambitious and lengthy task NASA has ever undertaken," according to the committee. Consequently, it "cannot be considered a 'one administration' program nor can it be developed 'on the cheap.'" If development of the space station is to go forward, it wrote, "the Administration and Congress must resolve to make a strong and durable enough commitment so that the success of the Program is not jeopardized by short-sighted yielding to budgetary and schedule pressures." The report says the U.S. should "clarify its long-term goals in space" before committing to a design for the space station's second phase.

President Reagan proposed the space station in 1984. Congress is currently marking up fiscal year 1988 appropriations for the project.

The National Research Council is the principal operating agency for the National Academies of Sciences and Engineering. A Research Council committee was formed last April at the request of the White House Offices of Management and Budget and of Science and Technology Policy, the National Security Council, and NASA to review cost estimates for the space station. The committee was also asked to make a more general assessment of how well the space station would meet scientific, technical, commercial, national security, and other goals and priorities. The committee was not asked to address whether or not the space station should be built.

LAUNCH CAPABILITY

Space station design is "constrained by the shuttle cargo bay dimensions and the shuttle's weight-lifting capacity," the committee wrote, factors that will limit the kinds of equipment the space station can hold and how quickly it can be built. Current NASA plans depend on the shuttle as the only means of space

(MORE)

transportation for building and operating the space station. The committee recommended that the shuttle be equipped with improved solid rocket motors so that it could carry heavier loads.

The possibility of using heavy-lift launch vehicles to deploy parts of the space station's first phase, a move designed to further reduce the number of flights required to loft the station, was studied by the committee. However, it concluded that the heavy-lift vehicles now under consideration would either not be ready in time or would probably not be economical for other uses once the first phase of the space station is deployed. However, the committee recommended that a heavy-lift launch vehicle be developed by the latter half of the 1990s to lift heavier and larger payloads than the shuttle can carry. Such a vehicle would permit more flexibility in space station growth and would be useful for other purposes, as well, the committee wrote.

The committee also strongly recommended that NASA construct a crew emergency rescue vehicle. NASA now has a "safe haven" concept. During an emergency, the astronauts would retreat to a safe section of the space station until a shuttle arrived to return them to Earth. However, as the Challenger accident has shown, the shuttle can be incapacitated for lengthy periods, the committee observed.

SPACE STATION DESIGN

The committee reviewed other design proposals for the space station and concluded that the basic configuration now planned is "a good compromise among the needs of early users of the space station" and would be a "useful, productive facility" even if a second part is never added. The first phase of the space station is, however, too small to support the full range of life sciences research needed to prepare for long-duration manned missions, the committee wrote.

However, planning for a second phase of the space station -- with upper and lower booms to hold scientific equipment, with more electricity, and satellite-servicing facilities -- is premature, the report says. The booms, for example, "may not add much to the station as a platform for science," the committee

(OVER)

said. Further, if the U.S. were to commit to manned planetary exploration in the next century, a dedicated life sciences module big enough to hold a large centrifuge and adequate facilities for animals might be preferred over the current phase two design. The committee urged the administration to identify the nation's longer-range goals in space so that expensive interruptions in the space station program after phase one can be avoided.

SPACE SCIENCE RESEARCH

The committee warned that the space station must not be considered a panacea for space science research. "Many scientific missions in solar system exploration and astronomy cannot be effectively performed in conjunction with the space station," it said. These missions and others may be better performed elsewhere, such as on free-flying spacecraft.

The committee pointed out that an observation platform currently included as part of the space station program and designed to fly in an orbit over the north and south poles "has no intrinsic operational or strong scientific relationship" to the space station. The committee recommended that the polar orbiter and a second, co-orbiting platform be evaluated on their own merits.

"Devastating blows have already been dealt American space science by the postponement of missions after the Challenger disaster," the committee wrote, and fewer shuttle flights and the existing backlog of non-science payloads "will drastically reduce future scientific access to space." To help ease this backlog in the near and medium term, the committee urged that the shuttle orbiters be modified to allow them to remain in orbit longer. It also recommended the use of expendable launch vehicles to carry spacecraft aloft, further reducing the existing space science backlog.

COSTS AND MANAGEMENT

The report echoes the uncertainty expressed in the committee's interim report, completed in June, about NASA cost figures for space station construction and operation. For its original phase one space station design, NASA projected that

(MORE)

research and development alone would cost about \$15 billion (in 1988 dollars). Using NASA cost estimates for various space station components, the committee derived total research and development costs of \$17 billion (in 1988 dollars) in the interim report. But new uncertainties discovered since the June report suggest the actual costs could range from \$17 billion to \$22 billion. Total cost of phase one of the space station project could range from \$25 billion to \$30 billion, the committee said. The committee urged NASA to prepare a new cost estimate in early 1988 after program planning has been refined and stabilized.

"The management challenge presented by the space station program is at least as critical" as technical considerations to the success of the space station, the committee said. The report recommends placing the authority for all space station-related activities in a centralized space station organization. Currently, space station program management is shared by NASA space centers and the Space Station Program Office. The committee further suggested that NASA prepare a plan to respond to management recommendations made in the report and that the Office of Management and Budget review NASA's progress in implementing the plan.

The Research Council's Committee on Space Station was chaired by Robert C. Seamans Jr., senior lecturer in the department of aeronautics and astronautics at the Massachusetts Institute of Technology (MIT), Cambridge. The vice chairman was John McLucas, chairman of the board of Questech Inc., McLean, Va.

Serving with Seamans and McLucas on the panel were W. Bowman Cutter III, Coopers & Lybrand, Washington, D.C.; Earl H. Dowell, J.A. Jones Professor and dean, School of Engineering, Duke University, Durham, N.C.; retired Air Force Brig. Gen. Robert A. Duffy, president (retired), The Charles Stark Draper Lab Inc., Cambridge, Mass.; Herbert Friedman, scientist emeritus, Naval Research Laboratory, Washington, D.C.; Owen K. Garriott, Effort Inc., Houston, Texas (from May 28, 1987, to August 13, 1987); Benjamin Huberman, vice president, Consultants International Group, Washington, D.C.; Eberhardt Rechtin, president and chief executive officer, The Aerospace Corporation, Los Angeles, Calif.; Donald B. Rice, president, the RAND Corporation, Santa Monica, Calif.; Ivan Selin, chairman of the board, American Management Systems, Arlington, Va.; retired Air Force Lt. Gen. Thomas Stafford, Defense Technologies, Oklahoma City, Okla.; and Laurence R. Young, professor of aeronautics and astronautics, and director, Man-Vehicle Laboratory, MIT.

Archie L. Wood of the Research Council staff served as the project study director.

#

OPENING STATEMENT
PRESS CONFERENCE--NATIONAL RESEARCH COUNCIL

September 14, 1987

Robert C. Seamans Jr., chairman, Committee on the Space Station,
and senior lecturer, department of aeronautics and astronautics,
Massachusetts Institute of Technology

Good morning. Our topic this morning is the space station. How well does the current design for the space station match the scientific, technical, commercial, national security, and other goals expected of it? How much will it cost? And how feasible are current plans for deployment and construction?

At the request of the White House Offices of Management and Budget and Science and Technology Policy, the National Security Council, and the National Aeronautics and Space Administration (NASA), our committee examined these questions. We were not asked, however, to address whether the space station should or should not be built.

We focused on the broader strategic and policy aspects of the current space station program. We did not conduct a detailed review of many of the complex technical and engineering challenges posed by the station. Our task nevertheless loomed large relative to the amount of time available to complete it. Over the four-month period during which this report was prepared, the committee met 20 times in seven locations.

The members of our committee include some of the nation's leading experts in space technology, defense, science, management, and cost analysis.

We found the space station program to be surely the most

ambitious and lengthy task NASA has ever undertaken. It will require tens of billions of dollars over a period of several decades and will absorb much of NASA's energy for most of that period.

The sheer difficulty and size of the undertaking demands that it receive consistent and adequate funding if it is to succeed. One of the valuable lessons learned from the Challenger tragedy was that major space programs cannot be developed "on the cheap." Nor can they be subjected to continual budgeting and scheduling pressures without disastrous results. If the nation is to go forward with the space station program, we must do so with our eyes open. The Administration, the Congress, and the American people must be willing to make a strong and durable commitment to the program's success.

In reviewing NASA's plans for the design and construction of the space station, we concluded that the first phase of the program, the so called Revised Baseline Configuration or Block I, provides a good and useful compromise among the needs of the early users of the facility. This first phase of the station, to be completed by the mid 1990s, will be a unique laboratory for materials research and it will provide a giant step forward for the life sciences, permitting man, animals, and plants to be exposed to microgravity for extended periods. We could identify no alternative designs that were as satisfactory as the current basic configuration.

Commitment to an Enhanced Configuration or Block II, however, appears to be premature. We believe the United States should first clarify its long-term goals in space before adopting a specific plan

for the space station's second phase.

In considering the role of the space station for space science, the committee observed that the space station is one place that space science could take place, but certainly not the only, or in many cases, the best place. In some cases free-flying spacecraft, launched by either expendable launch vehicles or the shuttle, will be more useful to space science than instruments on board the space station. So even after the space station is built, science will need other means of access to space as well as those provided by the station.

In addition, the polar orbiting platform now included in the space station program appears to have no intrinsic operational or scientific connection to the space station. It should be considered, as well as the proposed co-orbiting space station platform, on its own merits and not simply because it is funded as part of the space station.

We also thought it important to point out that devastating blows have already been dealt to American space science by the Challenger disaster. Fewer shuttle flights and the current backlog of non-science payloads will drastically reduce future scientific access to space. To begin to deal with these problems, the committee recommended that in the short and medium term the shuttle orbiters be modified to increase the time that they can remain in orbit and that expendable launch vehicles be provided for science missions.

While the members of our committee agreed that Block I was a good starting point for the space station, we are deeply concerned about NASA's ability to build it with the current shuttle fleet. The current shuttle is barely adequate for the limited purpose of deploying the space station. It is clearly inadequate to meet broader national needs in space. Our committee recommends in the strongest terms that the shuttle be upgraded

with improved solid rocket motors that can lift heavier loads and that a new heavy lift launch vehicle be developed by the latter half of the 1990s for launching payloads larger and heavier than those that the shuttle can accomodate.

We also comment in our report that it is dangerous and misleading to assume that there will be no shuttle losses and to fail to plan for such possibilities. Consequently, we recommend that production of the first shuttle orbiter after the Challenger replacement be planned for delivery before space station deployment begins.

In a similar vein, the committee believes that we cannot rely on the shuttle as the only means for rescuing the crew should there be an emergency aboard the space station. Current NASA designs call for a "safe haven" approach that would protect the astronauts until a shuttle could arrive to take them to safety. We suggest that this system be backed up with a separate crew emergency vehicle.

In an interim report completed in June, our committee used NASA cost estimates for various space station components to derive a total program cost of \$17 billion (in 1988 dollars). This compares to a previous NASA cost estimate for research and development of about \$15 billion (in 1988 dollars.) Information gathered by the committee during the second phase of our study has reduced our confidence in NASA's cost estimates. The need for additional backup hardware and improvements in the space station testing program alone could increase costs between 0.2 billion and \$4.7 billion (in 1988 dollars) or up to 30 percent over previous estimates. This could bring total research and development costs to the range of \$17 billion to \$22 billion (in 1988 dollars).

You will notice that I stressed the word could. Some news accounts have already misinterpreted the committee's conclusions on

possible space station cost increases. The committee found that major uncertainties remain in NASA's cost estimates. In the area of the space station testing program and associated hardware, in particular, the basis for NASA's cost estimates are insufficiently defined for the committee to be certain that all necessary components are included. An independent assessment prepared for the committee found that additional testing program costs could range up to \$3.0 billion (in 1988 dollars.) The expected costs for backup flight hardware are also quite uncertain, because an analysis of the proper scope for such a program has not been completed. Thus, according to NASA figures, additional backup flight hardware could cost anywhere from \$0.2 to \$1.7 billion.

We are left with a range of increase in the space station costs between \$0.2 billion and \$4.7 billion. The committee believes that the true cost probably will lie between these two values. The fact that space station plans are of necessity continuing to evolve is also likely to exert upward pressure on costs. Because of these and other uncertainties, we recommend that NASA prepare a new cost estimate in early 1988.

Finally, we concluded that the challenge to management posed by the space station program is at least as critical to program success as the technical considerations. We believe authority for all space station development related activities should be centralized in one space station project organization. Currently, space station program management is shared by NASA space centers and the Space Station Program Office. We hope that NASA, after studying the more detailed suggestions made by the committee, will develop a management plan that addresses these concerns.

Our central conclusions then are these: The space station is a massive and exceedingly difficult undertaking. It must be supported and

funded accordingly. NASA's current phase one configuration for the space station appears on target. Commitment to phase two at this point is premature. The space station is not the best arena for some space science experiments, for example in astronomy and earth observation. Deploying the space station with the current shuttle while not infeasible, will be difficult and risky. Cost estimates for the space station are likely to continue rising. And management of the program needs to be strengthened and centralized.

If the United States intends to pursue an aggressive manned space program, a space station is a necessary component of such an undertaking. The goal is a lofty one. We must match our effort to the task if we are to be successful in achieving it.

At this point my colleagues and I will be happy to take your questions.

Questions:

Q: Would it emergency rescue vehicle pick up costs? (man rated ELV)

A: \$1.5B (issue not fully explored in report)

Q: Is 5h orbital essential?

A: Highly desirable. Current fleet 96% rate of success. (90 flights to go to get to station - so 60% chance will have mishaps before station finished)

Q: How much longer should vehicles orbit?

A: modifications suggested to increase stay time from one to 2 weeks
(over)

Q: Would you need new SDV (shuttle driver) or enhanced EV — how much bigger?

A: No, not for Block 1

Q: Explain problems in mgmt.

A: e.g. Apollo project has a manager (program director)

Q: Does satisfactory = lukewarm support

A: No, it means support.

— NASA has suffered in past for "inadequate budget levels" (!)

— uncertainty: \$3-4B (88 dollars)

— test program (prototype)

— back up ~~hardware~~ hardware.

Cost? many
1. by 30%
NASA
in Mar 88

Q: Will report give ammunition to those who want to stop it?

A: report not meant to be political

— space station (esp early stages)
need quick returns to keep in space
(e.g. station could — if Shuttle incapacitated — could return & crash to Earth in as few as 20 days)

— very difficult program still being defined,
spread over 4 centuries to NASA —
So estimates could vary

THE WHITE HOUSE

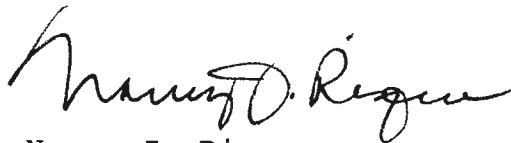
WASHINGTON

December 21, 1987

Dear Mr. Stofan:

Thank you for your letter of December 14, setting the record straight. I'm glad to know of your appreciation for the President's strong support for NASA and the Space Station.

Very best wishes for the holiday season,

A handwritten signature in dark ink, appearing to read "Nancy J. Risque". The signature is fluid and cursive, with a large initial "N" and a long, sweeping underline.

Nancy J. Risque
Assistant to the President
and Cabinet Secretary

Mr. Andrew J. Stofan
Associate Administrator for Space Station
National Aeronautics and Space Administration
Washington, D.C. 20546



National Aeronautics and
Space Administration

Washington, D.C.
20546

December 14, 1987

Reply to Attn of: S

Ms. Nancy J. Risque
Assistant to the President
and Cabinet Secretary
The White House
Washington, D.C. 20500

Dear Ms. Risque:

I am writing at the suggestion of Mr. James Miller, the Director of the Office of Management and Budget, to apologize for any embarrassment my remarks on the Space Station Program that recently appeared in the press may have caused the President. The remarks were clearly taken out of context because I truly believe that President Reagan has been extremely supportive of NASA and of the Space Station in particular. Indeed, it was the President's firm leadership that brought the Space Station Program into being and has sustained it since. The Administration, including the Office of Management and Budget, has been most supportive of NASA's efforts to make the Station a reality. To suggest otherwise is wrong, and I regret the interpretation given my remarks and the implication they may have left.

All of us at NASA are dedicated to having a space program our country can be proud of, and deeply appreciate the President's vision and leadership that is bringing this about.

Sincerely,

Andrew J. Stofan
Associate Administrator
for Space Station

cc:
NASA/Dr. James C. Fletcher
OMB/Mr. James C. Miller



National Aeronautics and
Space Administration

Washington, D.C.
20546

December 14, 1987
11:51:33

Reply to Attn of: S

Mr. James C. Miller
Director
Office of Management and Budget
Washington, D.C. 20503

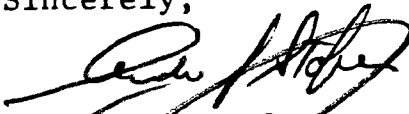
Dear Mr. Miller:

I want to express to you my regret for recent remarks that appeared in the press suggesting that your support and that of the Administration for the Space Station Program is not what it is, namely, solid and strong. I apologize for any embarrassment these remarks may have caused you and the President. The remarks were clearly taken out of context because I truly believe that it has been President Reagan's firm leadership that is responsible for there being a Space Station Program in the first place and for the program's considerable progress to date.

I realize, too, the very difficult, yet essential, task you have of bringing Federal spending under control, and that NASA, as an agency of the Government, simply cannot have whatever it wants whenever it wants it.

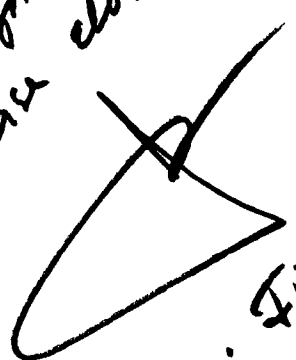
Let me assure you of my appreciation for the support the Office of Management and Budget has given to NASA, and again express regret over the interpretation given my remarks.

Sincerely,


Andrew J. Stofan
Associate Administrator
for Space Station

cc:
NASA/Dr. James C. Fletcher

bc: Nancy Risque
Wayne Army
Bob Dawson

12/14/87
- Accepted.
- Case closed.

c: Jim Fletcher

COPY
from ORM

THE WHITE HOUSE
WASHINGTON

June 9, 1988

293437
1600 01
FG185

noted

MEMORANDUM FOR JOHN TUCK

FROM: KAREN FULLER *K.*

SUBJECT: PHONE CALL FROM NASA ADMINISTRATOR

PY 6/10

Dr. Fletcher called late in the day on Tuesday, June 7 to leave a message for Tommy. I gave the message to Tommy and he asked me to pass it to you so here goes:

Dr. Fletcher wanted to pass along a "heads up" that the White House needs more visibility in the Congress on the space issues than Jim Miller provides. Senate Caucus is meeting Wednesday, June 15 at 4:30 p.m. and Fletcher feels someone other than Miller needs to be present. Miller has lost his credibility and it's important for someone from the President's personal staff to be there -- he's suggesting that it be HHB. He feels this important to save the space station.

Senators who have committed to attend are: Garn, Shelby, Wirth, Kerry, Glenn, and Inouye.

Senators who have tentatively committed to attend are: Mikulski, Byrd, Grassley and Armstrong. (Fletcher feels if they knew HHB was going to attend they would definitely come too.)

The agenda will be to determine the future of the Space Caucus and what kind of budget they need in order to support it.

COPY
from ORM

573486

THE WHITE HOUSE
WASHINGTON

AS

June 16, 1988

Jim

Dear Doctor Fletcher:

I have received your package of information concerning the Space Station and shared it with Senator Baker and General Powell.

Once it has been reviewed at the White House, I will forward the response to you directly.

Sincerely,

Tom

Thomas C. Griscom
Assistant to the President
for Planning and Communications

The Honorable James C. Fletcher
Administrator
National Aeronautics and
Space Administration
Washington, D. C. 20546

Not to be released

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
WASHINGTON, D.C. 20546

THE ADMINISTRATOR

JUN 10 1988

Honorable Thomas Griscom
Assistant to the President
for Communications and Planning
The White House
Washington, DC 20500

Dear Tom:

I just signed and released this package so as to lose no time in getting it to you. But, let me modify one suggestion in the memo as written. In the memo, I suggest that the President announce the name of the space station at the upcoming Toronto Economic Summit. I am now thinking that the preferred scenario would be a Rose Garden ceremony attended by our partner-country ambassadors and those members of Congress critical to space station support.

This will provide a crisper focus on the Station (without Summit distractions) and share the limelight with crucial members of Congress. And, Tom, time is of the essence. The President's space station initiative is in real funding jeopardy.

Thanks for all your help.

Sincerely,

/s/
James C. Fletcher

P.S. You did a super job on the Summit. I saw you on C-span reviewing what took place, and you were, again, right on target.

NASA
National Aeronautics and
Space Administration

Washington, D.C.
20546

Office of the Administrator

JUN 9 1988

The Honorable Howard H. Baker, Jr.
Chief of Staff to the President
The White House
Washington, DC 20500

Dear Senator Baker:

NASA traditionally names its spacecraft at an early stage in their development programs. These names help to shape the public focus on the programs by conjuring up strong images. Voyager II is traveling through our solar system; having visited Jupiter, Saturn and Uranus, it is on its way to Neptune. The Space Shuttle orbiters are named after rugged sailing ships which earned their place in American history.

We are at the point in the Space Station program where it is appropriate for us to give it a name which will help heighten public awareness and public appreciation for the program. I would like to propose that the President himself select the name for the Space Station. We would not have a Space Station were it not for the President's visionary decision in 1984 that this Nation's next logical step in space was the development of a permanently manned Space Station--a place where men and women could live and work in space and could prepare for further manned exploration of the Universe. It is fitting for him to select a name for this centerpiece of his civil space policy, a name which will project the image he most desires.

To assist the President in this process, we have conducted a fairly exhaustive study of possibilities within NASA. Our centers and our contractors, which are located throughout the country, submitted over 700 suggestions for names for the Space Station. A group comprised of a cross-section of NASA people and representatives of our international partners--Europe, Japan and Canada--reviewed this long list, paring it down first to about 90 possibilities and finally to a short list of 3. The criteria used in reviewing the proposals included the requirements that the name must be simple and easily pronounced and that it must be translatable without ambiguous or offensive meanings in the languages of our partners. The final product of this process is the following recommendation: Freedom. I also present two alternatives: Orion and Aurora.

Freedom is my personal preference. The yearning for freedom is a basic human emotion and freedom of the individual is a political value held in common among all of the international partners in the Space Station program. The name Freedom and the concept it embodies are readily understood by people of all nationalities and languages. In another vein, the Space Station will provide freedom from the confines of Earth's gravity, permitting us to advance science and technology and to initiate human exploration of the solar system. And finally, this name is tied to the President's earliest statements on the program. When the President announced his decision to build a Space Station in his January 1984 State of the Union address, he noted that he was inviting our friends and allies to join us so "we can strengthen peace, build prosperity and expand freedom for all who share our goals."

Orion was the great celestial hunter of Greek mythology. The constellation Orion straddles the Equator and is visible to all people on Earth. The name Orion symbolizes the search for knowledge and understanding that we, as modern hunters, will undertake on the Space Station.

Aurora was the Roman Goddess of the dawn. The name Aurora symbolizes the dawning of a new age in space for this Nation. No longer will we be limited to visiting space; with the Space Station, America will be there permanently.

I believe it is desirable that the President select and announce a name as soon as possible. As you well know, the Space Station is encountering extremely serious difficulties on the Hill in gaining adequate FY 1989 funding. The President's selection and announcement of a name for the Space Station proclaims at once his unflagging support for the program and his confidence that the program will survive.

I would like to propose that the upcoming Toronto Economic Summit would provide a most fitting occasion for the President's announcement. At the London Economic Summit in 1984, the President personally invited his fellow heads of government to join the United States in this joint effort. The Space Station was one of six major themes for the United States at this Summit. As the President stated in his Saturday Radio Address from London: "an international space station will stimulate technological development, strengthen our economies and improve the quality of life into the next century." In an event covered by American and foreign press, the Summit participants gathered around a large model of the Space Station. The President described U.S. plans for the

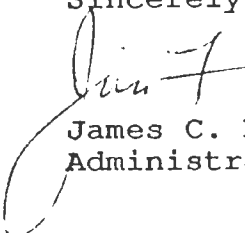
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facility and pointed out many of the uses to which it would be put. In the end, in the London Summit Communique, the others committed to "consider carefully the generous and thoughtful invitation received from the President of the United States." Within a year, all had made decisions to join in the program. The next year, in Bonn, the President reported on the status of the program and, in particular, on the success of the international participation. Today's extensive international contributions to the Station are due in large part to the President's continuous efforts at the Economic Summits.

Since the beginning of the program, we have worked closely with the White House staff--most particularly with the National Security Council staff--on numerous Space Station policy issues, including Economic Summit preparations. If you agree that it would be desirable and appropriate for the President to select and announce a name for the Space Station, we would be delighted to assist you in whatever way we could.

With highest regards,

Sincerely,



James C. Fletcher
Administrator

cc: LtG Colin L. Powell
National Security Council