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## Space

# Doubling of Space Shuttle Funds Could Take Up the Slack in Jobs

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WASHINGTON, Jan. 24—Administration plans, as outlined in the new budget, would commit the nation to spend twice as much on the space shuttle as the \$5.5-billion previously indicated—a total of \$10-billion to \$14-billion that Congressional opponents have contended would be the real cost.

There are political advantages and votes in the 50,000 jobs the project involves—half of them in California—and in the lift it would give to the nation's ailing aerospace industry.

The space planners foresee that, over at least the next four fiscal years, jobs created by the shuttle program will offset the expected losses in jobs that will occur as the Apollo and Skylab programs end. Thus, if President Nixon's plan is approved, private employment under Government space contracts will level out during this period at not much less than its present total of 111,000 jobs.

To offset much of the cost of the shuttle, however, other projects cherished by space enthusiasts and scientists will be canceled or delayed.

The \$5.5-billion investment in developing the space shuttle during the remainder of this decade, already announced by the White House, is to be augmented by as much as \$2-billion in extra funds before the program becomes operational in the 1980's.

### One-Third for Military Flights

During that decade, \$3-billion to \$4-billion more will probably be spent on shuttle operations—one-third of them for military flights—if the current plan is followed.

Annual shuttle spending is to double in the 1973 fiscal year to \$200-million, triple to \$600-million in 1974, and hit \$1-billion in 1975.

But there would be savings. Dr. James C. Fletcher, head of the National Aeronautics and Space Administration, pointed out during a budget briefing that the shuttle would save upward of \$5-billion when it goes into operation over the present-day cost of using rockets and spacecraft for only one mission.

The space shuttle is a vehicle that takes off like a rocket, lands like an airplane and can be reused as many as 100 times.

The \$5.5-billion already announced for the shuttle includes funds for the development, construction and flight testing of two vehicles. Additional funds to be spent during the shuttle program would include:

¶\$1-billion as a contingency fund to go toward unforeseen problems in research, development and testing.

¶\$900-million to pay for the three shuttles the space agency is planning to build in addition to the two initial vehicles.

¶\$300-million for construction of new facilities needed to handle shuttle operations.

¶\$3-billion for flight operations during the 1980's, based on NASA assumptions that an average pace of 40 flights a year might be maintained. This number could very well rise if space operations accelerate.

The costs of keeping the program going, however, are more than just hard cash. They include some of the cherished dreams of space enthusiasts for the near future.

### Tour of the Solar System Dropped

One of the major prospects that has been dropped is the so-called grand tour of the solar system, a pair of unmanned flights originally scheduled to take place by the end of this decade at a cost of \$700-million that were to pass and collect data on the planets Jupiter, Saturn, Uranus, Neptune and Pluto.

In its place NASA has budgeted a relatively modest \$7-million to study sending a vehicle or two to Jupiter and perhaps Saturn.

Owing to the stringent economies forced by the commitment to the shuttle, the launching of two orbiting solar observatories are being delayed, although the budget does include \$6-million for a new type of weather satellite that had not been included in last year's planning.

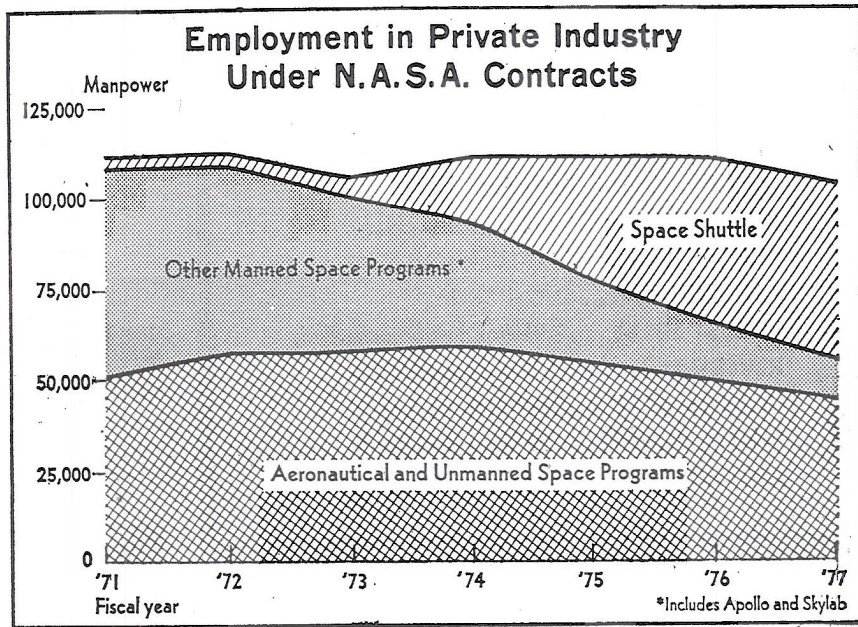
NASA officials also indicated that the heady days of planning the landing of astronauts on Mars are over, although unmanned trips will be continued. While the budget includes funds for the final lunar landings, plus three Skylab flights next year, once optimistic plans calling for construction of a large space station in earth orbit that would carry a dozen astronauts and scientists have been all but scrapped for this decade.

### Space Engine Project Is Dropped

Also to be dropped is the Nerva project, on which \$1.4-billion has been spent, to develop a large nuclear space engine, although research on a smaller one will start. Yet the over-all saving will be \$20 million next year.

Space budgets for the near future are likely to remain at next year's level of \$3.131-billion in actual spending, almost exactly the same as the current fiscal year.

NASA officials pointed out that, aside from space, significant fund increases were being made in aeronautical programs that will rise from \$110-million this year to \$163-million in the fiscal year 1973. The money will be used for the research and development of quieter aircraft engines, and planes that can take off and land either vertically or on very short runways.



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