

I have for many years been urging that we get high energy, space-storable fuels that are operable in space and secondly have been pushing for the nuclear fuel development and may I say on that that the nuclear fuel development under NERVA II is simply an extension of the program of NASA and Atomic Energy in this field. That brings up the question, what do we do, break up the scientific teams and postpone it for 2 to 5 years or do we take advantage of the know-how which may be less expensive by continuing these programs?

Finally, and this is where I disagreed with NASA, I do believe we need the emphasis on the large, first-stage boosters of solid fuels so if I have any criticism of the fuel program, it has been that we aren't pushing that field as well as the nuclear.

That is all.

Dr. MUELLER. I do agree, Mr. Fulton and Mr. Daddario, on the need for and desirability of an increased emphasis on new developments. I do believe, though, when one has a very severe budget restriction in ordering them, I can't help but feel that the priority that was attached by the Bureau of the Budget to the President was a reasonable one.

Fundamentally, if we are going to have any future Manned Space Flight program, we must implement the Apollo Applications of the program this year.

Now I said "any," but I mean "any" in the context of really utilizing the resources we have already placed in this very large program. Clearly there are alternatives available that delay the Manned Space Flight program and shift its emphasis, but it would really lose the capabilities and team that we have developed.

We must go forward with the Apollo Applications program this year in terms of new developments. I do believe the NERVA is an attractive new development. I do believe the space station is something that we inevitably are going to need to develop if we are going to continue in the future in Manned Space Flight.

Continuing with the budget, the spent, orbiting second stage of an Up-rated Saturn I will be converted into a habitable, 10,000 cubic foot orbital workshop. Provided with an airlock, the workshop will provide in 1968 an economical long duration manned shelter for many experimental activities and will be revisited and reused during the course of the program.

The support systems of the basic Apollo command and service modules will be modified for long duration operations.

The lunar module will be modified to serve as a base for manned lunar investigations of up to 2 weeks.

Now that is just in the very early phases of the operation. The Apollo developed lunar mapping and survey system will be used to complete the cartography of the Moon.

The Command Module will be modified to carry up to six men for short duration ferry and resupply missions and will be provided a land landing capability, thereby reducing costs and increasing operating flexibility.

Specialized payloads will be developed for operation in various orbits and on the Moon, including multispectra Earth and weather sensors, biological and biomedical experiments, mobile lunar vehicles, and communications systems.