

station for very prolonged biological studies of man, animal, and other organisms in Earth orbit is recommended. Within the Apollo Applications plans, the first step toward meeting this recommendation is the orbital workshop which can lead to long duration flights up to 2 months and experiments to determine the capability of man to function in this environment for periods up to 1 year. In the advanced manned mission planning effort we have a joint action group consisting of representatives of the NASA program offices who are studying Earth orbital missions of 1 year duration and longer.

The second recommendation of the Committee's report under Manned Space Station was for plans for space stations with test in space of equipment, especially that equipment related to long-term reliability. In the Apollo Applications plans, the orbital workshop will provide a testbed for experimentation in long duration flight subsystems and systems.

The advanced manned missions Earth-orbital studies will extrapolate this information to the longer duration capability which in turn will be tested in followon Apollo Applications missions of up to 1 year duration, recommended by the President's Science Advisory Committee.

Mr. GURNEY. Back to the question I asked about a rescue vehicle, why wouldn't it be possible to have a vehicle with a dual capability, taxi, or shuttle vehicle and a rescue vehicle?

Dr. MUELLER. I am sure that it is possible, Mr. Gurney. There are limitations as to the availability, the ability of vehicles to rendezvous in orbit. There are only a few minutes on several orbits during the day in which one can actually carry out a rendezvous. So we are looking at not only a possibility of a rescue vehicle coming up from the ground but also incorporation of the equivalent of lifeboats with the orbiting vehicle so that you can return from orbit in the event of a failure.

Mr. GURNEY. Well, I know, of course, that you have a limited time to effect a rendezvous, but I can't understand why a vehicle can't have a dual capability. It has to get up, it has to get to the vehicle upstairs. These people have to get back. Why can't you incorporate both capabilities? Why don't you look at both capabilities?

Dr. MUELLER. We are looking at both capabilities, Mr. Gurney, in a single vehicle.

Mr. GURNEY. Let me put it this way: I thought your answer was that you are looking at the air taxi concept in connection with the Apollo Applications program of the long workshop flights, but you were not looking at a rescue capability in connection with the same program. That was something else over here and an entirely different thing. My question is in your Apollo Applications program, you are going to have a vehicle that goes from Earth up to this workshop and back again, isn't that correct?

Dr. MUELLER. Yes, sir.

Mr. GURNEY. Why does it not also include a rescue capability? Why couldn't it?

Dr. MUELLER. Well, let me be sure I can clarify an earlier point. The shelter taxi that I was discussing is a development that has to do with landing on the Moon, a dual landing.