

flight. Our studies to date have shown that the cost of having men in space is inversely proportional to how long they can stay in space. The major increment in cost is involved in getting into orbit and coming back down again. The expendables required to keep the man in orbit are a relatively small fraction of the total weight requirement and thus for most economical manned flight, one finds that the longer one can stay on a single flight, the more cost effective the use of man becomes.

In turn, of course, the ability to do that depends upon the development of the equipment for long duration flight. Our studies thus far have indicated that again the basic Apollo hardware is capable of extensions with minor modifications. Another important thing that we are studying is the reuse of the Apollo hardware. The Apollo spacecraft is a relatively expensive part of the equipment and we are studying the development of a land landing capability which would facilitate the reuse of this relatively expensive element of the total space vehicle.

Finally, the fourth objective is extended lunar exploration and I will spend some time later on that.

We have initiated the development of a piece of experimental apparatus called an airlock. This airlock is being developed by the McDonnell Corp. and parts of it actually are being built at the Marshall Space Flight Center. The airlock is under the supervision of the Manned Spacecraft Center, but the overall integration of the orbital workshop is under the direction of the Marshall Space Flight Center. This is the picture on the left. (MG 66-8987, fig. 5.)



FIGURE 5