

has been learned since mankind first began to watch the stars in the sky.

Learning to meet the scientific and logistic requirements of space station operation will supply the fundamental knowledge required for Earth orbital operations. This is the challenge now. In a sense, this Nation has arrived at the second milestone in its space program.

In fiscal 1968 two tests must be faced: now that the latest designs are beginning to come together as hardware, the effectiveness of this hardware for use in future missions must be appraised; then it must be decided whether to maintain that capability or whether to continue to improve the ability to operate in space. Merely permitting the status quo to continue during fiscal 1968 will amount to a negative decision, and will be as though this Nation had deliberately elected to stop improving its space mission capability. If nothing is done, industry's technological capabilities, in terms of experience, and available technical manpower, will have deteriorated by 20 to 30 percent by the end of fiscal 1968. Because most space directed funding is going into hardware, the developmental technologies are not being utilized at their most effective level.

This developmental technology is a most important facet of the industry's capability; it is the leading edge of our Nation's competence to achieve and maintain a dominant international role in space and planetary exploitation. Among the next steps that must be taken to maintain this capability is the development of self-contained space station packages that can rendezvous in space. Then, a more sophisticated device, still in the "brute force" category, will be needed. An example of this kind of system (fig. 45) is an S-IVB stage completely equipped before it is launched, as opposed to rendezvous and

S-V DRY LAUNCH

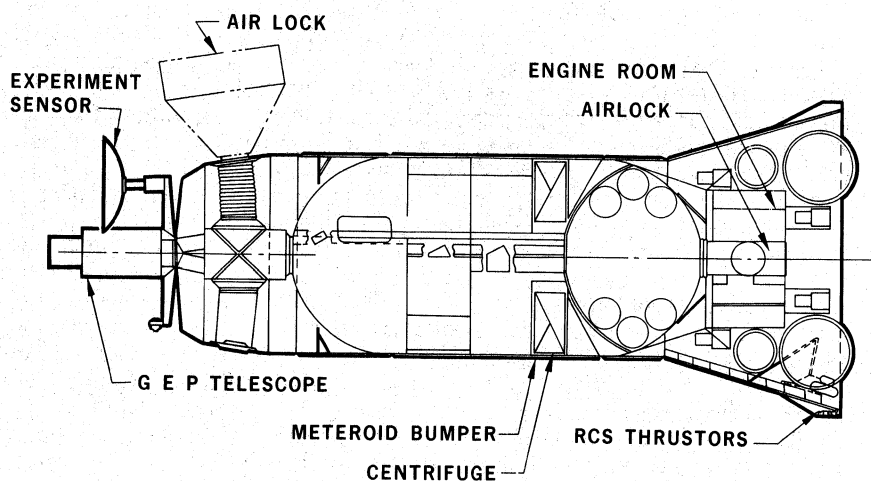


FIGURE 45