

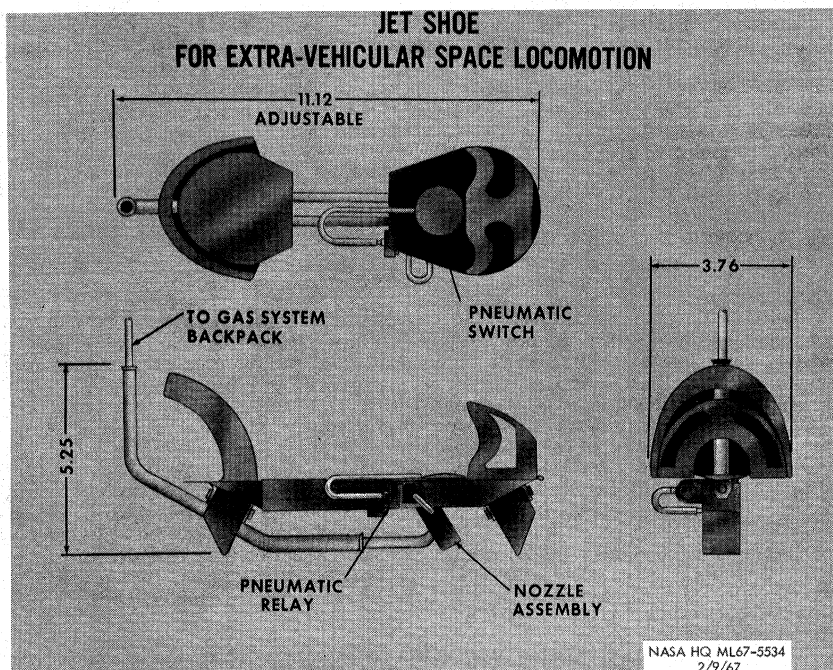


FIGURE 88

The Office of Space Science and Applications Voyager program will require the capability of the Saturn V launch for its planetary missions.

*Follow-on lunar exploration missions*

In addition to the earth orbital effort in Apollo Applications, follow-on lunar exploration missions are intended to extend knowledge of the moon gained from earlier programs, and to provide the basis for manned lunar stations. The missions include month-long lunar orbital missions with mapping survey cameras (fig. 89, ML66-9782) and multi-spectral sensors, and lunar surface explorations lasting two weeks with small surface vehicles, subsurface drills, and the emplacement of automatic scientific stations. Follow-on Apollo Applications lunar mission objectives also include the evaluation of the lunar surface for astronomical experiments.

With increased mission duration and extended area coverage potential of Apollo Applications, it will be possible to obtain definitive answers to a number of fundamental questions pertaining to the origin and history of the moon by means of lunar orbital missions (fig. 90, ML66-8965) and lunar surface exploration (fig. 91, MT6-10,142). Consistent with the basic objective of lunar exploration, various scientists have proposed experiments or investigations in such fields as biology, geology, geochemistry, geophysics, geodesy/cartography, astronomy and particles and fields. These experiments are under consideration for Apollo Applications follow-on missions and are described in the following discussion.

*Biology*

The scientists have recommended that biosciences should be pursued to the maximum in answering the fundamental questions regarding the origin of life and the development of life or life-precursors. To achieve this objective, investigations should be conducted primarily in organic chemistry and microbiology. A