

Dr. MUELLER. If we go forward, I would like to go through some of the experiments that are presently being planned for the orbital workshop. (ML 66-9785, fig. 8.) This is the list that is so far approved and, interestingly enough, we have sufficient experiments now so that we are beginning to have to shift the operation of the experiments from one mission to another. We may carry them up on the first mission, but we have to shift the actual operation or carrying out of the experiments downstream because we are running out of astronaut time even though they will be up a month if all goes well on this first flight.

In the area of engineering, we do have experiments on space suits and here we are particularly interested in learning how to design these suits using them so we can get time and motion studies in the zero g environment since that is an important element in the design of the restraint systems and how they actually work outside the spacecraft as well as inside. In the case of the workshop we can work in a relatively safe atmosphere because we can simulate being outside the spacecraft by increasing the suit pressure three and a half pounds per square inch above the ambient atmosphere. We can take pictures of what the astronauts are doing while using the suits and trying to do certain tasks in an area which is relatively safe and perfectly confined and it should improve our knowledge of extravehicular activities by intravehicular operations.

Mr. FULTON. When you are talking about difficulties of zero gravity,

APOLLO APPLICATIONS ORBITAL WORKSHOP EXPERIMENTS

ENGINEERING

M466 SUITS & LUNAR HARDWARE
M469 ST-124 REMOVAL AND DISASSEMBLY
M479 ZERO-G FLAMMABILITY
M486 ASTRONAUT EVA EQUIPMENT
M487 HABITABILITY/CREW QUARTERS
M488 HIGH PRESSURE GAS EXPULSION
M489 HEAT EXCHANGER SERVICE
M491 SURFACE ADSORBED MATERIALS
M492 TUBE JOINING IN SPACE
M493 ELECTRON BEAM WELDING

DEPARTMENT OF DEFENSE

D018 INTEGRATED MAINTENANCE
D019 SUIT DOWNING AND SLEEP STATION
EVALUATION
D020 ALTERNATE RESTRAINTS EVALUATION
D021 EXPANDABLE AIRLOCK TECHNOLOGY

MEDICAL

M018 VECTORCARDIOGRAM
M050 METABOLIC ACTIVITY
M051 CARDIOVASCULAR FUNCTION
ASSESSMENT
M052 BONE AND MUSCLE CHANGES
M053 HUMAN VESTIBULAR FUNCTION
M054 NEUROLOGICAL STUDY (EEG)
M055 TIME AND MOTION STUDY

TECHNOLOGY

T017 METEOROID IMPACT AND EROSION
T020 JET SHOES
T021 METEOROID VELOCITY
T022 HEAT PIPE

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FIGURE 8