

SKYLAB MEDICAL EXPERIMENTS ALTITUDE TEST
EXPERIMENT M172 DETAILED TEST OBJECTIVE

I. EXPERIMENT/OPERATIONAL SYSTEM

- A. Title - Body Mass Measurement
- B. Principal Coordinating Scientist - E. Michel
- C. Principal Investigator - John W. Ord, Col, Brooks AFB, Texas
Co-Investigator - W. E. Thornton, M.D., MSC, Texas

II. PURPOSE AND BACKGROUND

A. Purpose of Experiment

The purpose of this experiment for SMEAT is to provide body weight measurements to support biomedical experiments.

B. Justification for Experiment

Most U. S. astronauts have lost weight during their space missions. This SMEAT experiment will measure each crewman's weight to see if there is a weight change over the time course due to the 1/3 normal atmosphere. The weight data is needed to support Experiments M071, M073, and M171, as well as for future comparisons with the Skylab Missions.

III. PARTICIPANTS

A. Number of crewman required

All three crewmembers

B. Function of each crewman

Each crewman weighs himself.

IV. FUNCTIONAL OBJECTIVE

FO1 Weigh each crewman daily.

V. TEST CONDITIONS

A. Environmental Requirements - None

B. Crew Constraints

Crewman will weigh themselves every morning shortly after rising, post voiding, and prior to eating.

VI. HARDWARE REQUIREMENTS

A. Identification and Purpose of Hardware

A clinical scale will be used to weigh the crewmen.

B. Identification and Purpose of GSE

None

VII. CHAMBER INTERFACES

A. Stowage Requirements

The clinical scale will be stowed in the head.

B. Special or Unique Interfaces

None

VIII. CREW TRAINING

A. Briefing and Training Sessions Required

One briefing and training session of 1/2 hour's duration is scheduled for T-10 days.

IX. SCHEDULING REQUIREMENTS

Each crewman will weigh himself daily, shortly after rising, post voiding and prior to eating. Post test weighing requirements are TBD.

X. DATA REQUIREMENTS

A. Experiments Measurement List

None

B. Unique Measurements List for SMEAT

Crewmen's weights are recorded daily.

C. Data from other Experiments

None

D. Other Requirements

All weights and data are logged by the crewmen and voice transmitted to the chamber support team.

XI. FDF REQUIREMENTS

The flight data file will provide weighing procedure, the M071-M073 log, and the daily mission timeline.

XII. DEVIATIONS FROM APPROVED SKYLAB EXPERIMENT

A. Clinical Scale replaces BMMD.

B. Daily zero calibrations will not be required.

C. SMEAT data will be body weight - not mass.

D. The SMEAT test will not evaluate the BMMD as required by M172.