Description - This facility comprises an environmental chamber having the following salient provisions:
(a) Ultra high vacuum of $5 \times 10^{-10}$ mm Hg Mercury absolute or better.
(b) Continuous heat dissipation in the test volume from 1.4 kW at approximately 5 K to 10 kW at approximately 80 K.
(c) Cylindrical working volumes ranging from 4 feet in diameter and 6 feet long to 8 feet in diameter and 12 feet long.
(d) Radiant heat flux levels to approximately $2 \frac{1}{2}$ solar constants.
(e) Helium liquefier having a minimum withdrawal rate of 80 liters per hour of liquid helium.

Principle Uses - To study the effects of space environment on the properties of materials or the functional and operational characteristics of mechanical or electronic components and systems such as:
(a) The effects on the properties of materials and components.
(b) The effects of low temperature, brought about by the cold thermal sink of space on the properties of materials and components.
(c) The effects of high temperature, brought about by the proximity of the sun on the properties of materials and components.
(d) The effects of the absence of the atmosphere on the properties of materials and components.

Beneficial Occupancy - July, 1965

Cost

Fiscal Year 1962
G of F $1,480,000 *

Project Number 2328

*Budget Allotment