

# Experiment Development

## JSC LIFE SCIENCES

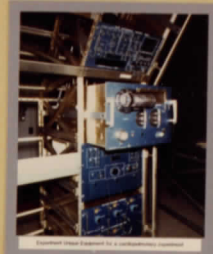
Once human experiments have been selected for flight, the Life Sciences Project Division (LSPD) manages the experiments through all phases of development and inflight operations. Assistance is given to investigators for developing experiment procedures, timelines, training for the crewmembers, human use protocols, data collection requirements, support hardware, and science performance specifications for the hardware.



Experiment Unique Equipment for a satellite experiment



Life Sciences Laboratory Experiment

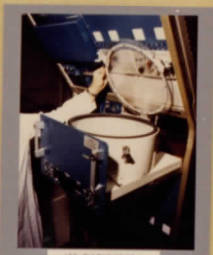


Experiment Unique Equipment for a radioisotope experiment



LSE-3 Working Chair

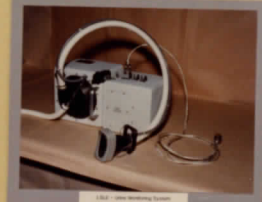
**Flight Equipment**  
An inventory of Life Sciences Laboratory Equipment (LSLE) is maintained by the LSPD which can support several experiments on one mission and can be reflown on several missions. Experiment Unique Equipment (EUE) supports a single experiment on a mission and is tailored to an experiment's particular scientific objectives.



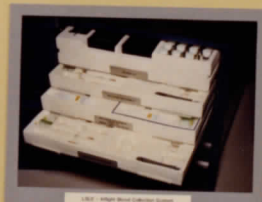
LSE-2 Dark Reaction Chamber



LSE-1 High Performance Workstation



LSE-4 Workstation for a specific experiment



LSE-5 Flight Deck Radioisotope System

**Test and Checkout**  
A series of reviews and tests are scheduled during hardware development to insure that all of the requirements for the hardware are met. These requirements include scientific performance as well as NASA standards relating to materials that are used, human factors, and construction of mechanical, fluid and electrical systems.  
In addition to ground-based testing, the experiment hardware may be tested onboard the KC-135 airplane during parabolic flight to verify performance during zero-g.



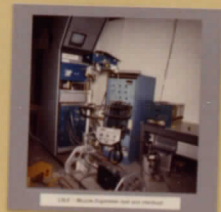
Testing of Experiment Unique Equipment in the KC-135 aircraft



Life Sciences Laboratory Control Room



Review and testing of LSPD hardware development process



LSE-6 Radioisotope Experiment