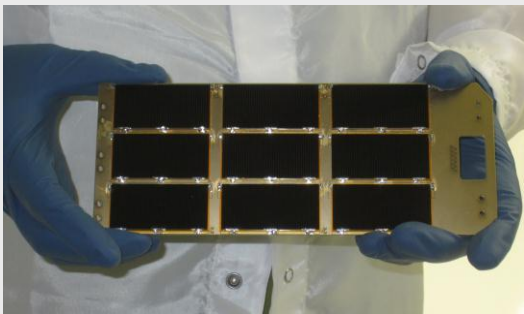




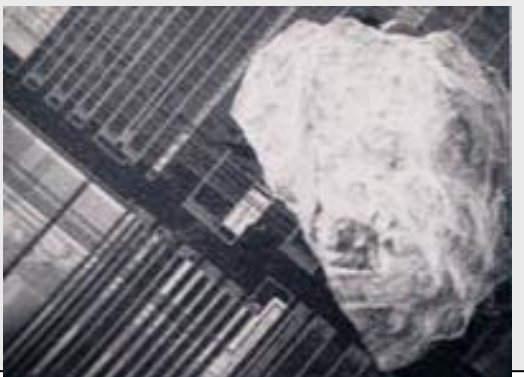
Spacecraft component assembly and integration require extremely sterile conditions.



Microassembly of Spacecraft components in the SSC Clean Room



Solar Panels for the Cosmic X-Ray Background Nanosatellite built in the SSC Clean Room



Spacecraft Development Lab

A class 1,000/10,000 clean room for NanoSatellite Fabrication and Assembly and **MEMS (Microelectromechanical systems) Microfabrication** has been developed at the Morehead State University Space Science Center. The facility will allow fabrication, assembly, and integration of flight-ready components of micro and nanosatellites, and ultimately support fabrication of prototype MEMS/MRAs and to allow fabrication of commercial numbers of these devices.

Spacecraft systems assembled and integrated (to date) in the MSU Clean Room include: 1.) the Cosmic X-Ray Background Nanosatellite—a 2U CubeSat selected by NASA for a flight opportunity in 2012, 2.) TechSat-1—a collaboration between MSU, Radiance Technologies, Honeywell, and Tethers Unltd. To build a high power 3-U CubeSat for the U.S. Space and Missile Defense Command, 3.) UniSat-5—a collaboration with the University of Rome to build a 15 kg microsatellite designed to measure the polarization of gamma ray bursts.

MEMS for Space Applications

NASA and the aerospace industry have a special interest in MEMS technology.. Some of the systems utilizing MEMS devices for space applications in planning our under development at MSU are:

- Microthrusters
- Mass Spectrometers
- Magnetometers
- RF Switches
- Microgyroscopes
- Microsatelllites



The Morehead State University Space Science Center Clean Room. The Clean Room houses components of the Space Systems Development Laboratory