



Naval Center for Space Technology Spacecraft Engineering Division Spacecraft Integration & Test Facility

AT A GLANCE

~138,000 ft² of laboratory, design, assembly, integration & test space located within a single building on the NRL-DC campus providing design, prototyping, assembly, integration, and environmental & space simulation testing.

Processing Facilities

Assembly & integration facilities supporting small to large spacecraft assembly include: general-purpose high bays, electronics assembly laboratories, clean rooms (Class 100 to 100K), thermal control system design & assembly, propulsion system design & fabrication, thermal blanket design & fabrication, precision machining & rapid prototyping, wire harness fabrication, precision measurement & alignment, ground & flight software testbeds, and spacecraft robotic systems proximity operations test beds.

Testing Facilities

Laboratories & chambers simulating the launch & space environments include: EMC/EMI (electromagnetic compatibility & interference), RF antenna performance, thermal vacuum, vibration & acoustics, static loads, modal survey, spin balance, and moment of inertia.

Point of Contact

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NCST Spacecraft Integration & Test Facility - NRL Building A-59

Spacecraft Integration & Test Facility

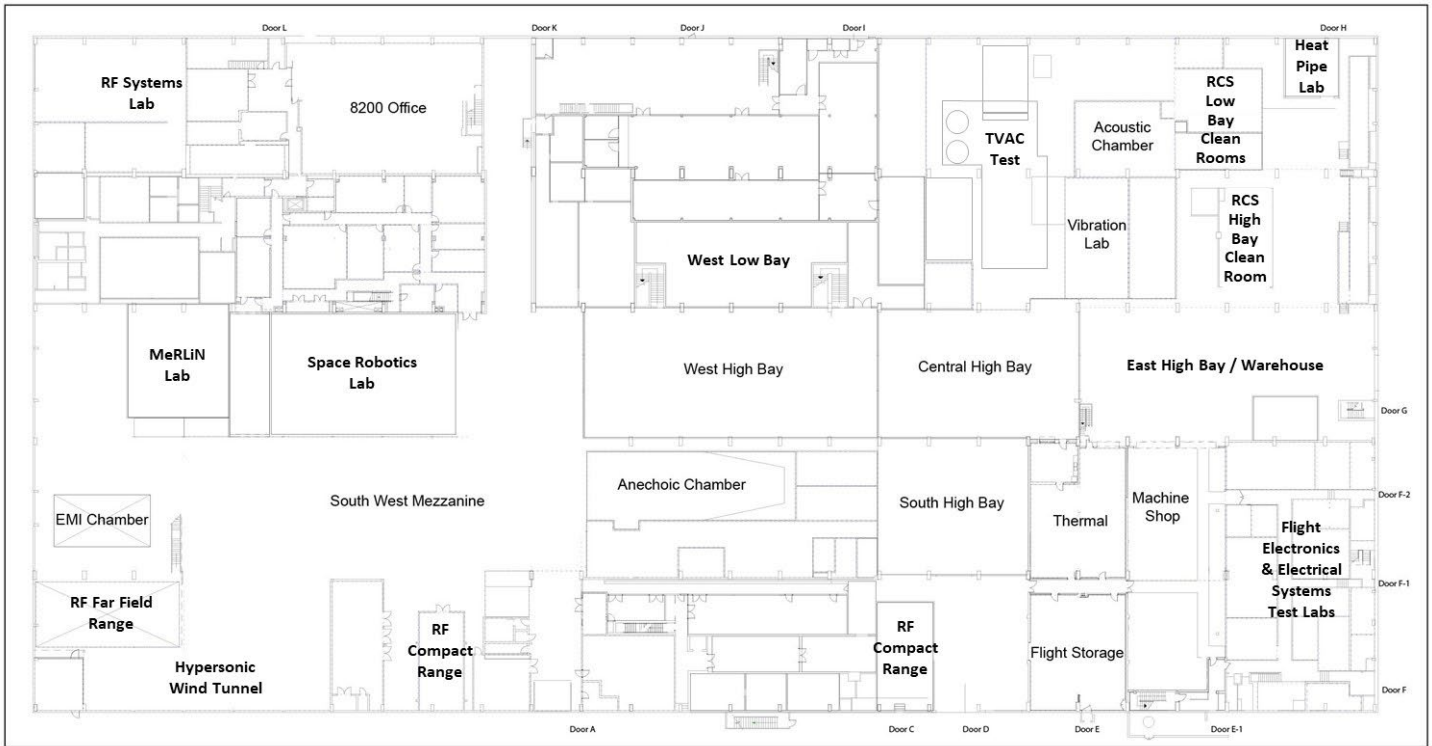
The U.S. Naval Research Laboratory's (NRL) Naval Center for Space Technology (NCST) has complete in-house facilities dedicated to the research, design & development of spaceflight instruments, systems, and spacecraft. Flight hardware development ranges the full-breath of size and complexity; from card & component level items, up to national security space launch (NSSL) class instruments and spacecraft.

Spacecraft Engineering Division

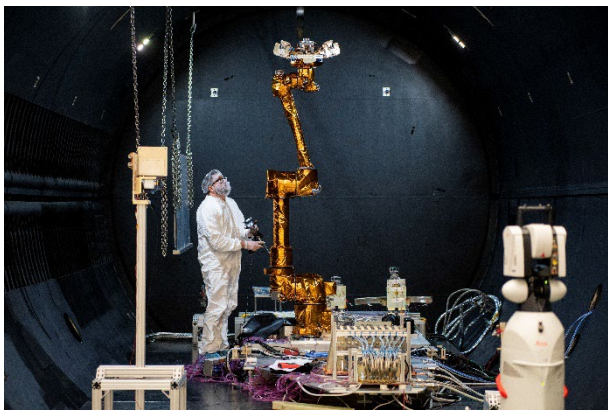
Under the NCST, the Spacecraft Engineering Division (SED) serves as the focal point for the Navy's in-house spacecraft bus capability. Space systems research and development activities range from basic and applied research, to concept and feasibility studies, through launch integration and initial on-orbit operation. Design, assembly, integration, and test activities are performed in conjunction with NCST's Space Systems Development Division (SSDD).

The SED provides the full spectrum of space systems engineering and operations. This includes analysis, design and hardware expertise in structures and mechanisms, electrical and electronic systems, flight, ground and test software development, attitude determination and control systems, propulsion and reaction control systems, thermal control systems, satellite integration and test, launch vehicle and satellite-to-booster-stage integration, and flight operations command, control, communications, network engineering, and management.

The SED functions as the Program Manager for Navy space programs. In this role, systems engineering and technical directions are provided while maintaining an active in-house satellite development capability. The SED performs as a prototype laboratory in this role and ensures that designs are transferable to industry for follow-on builds.



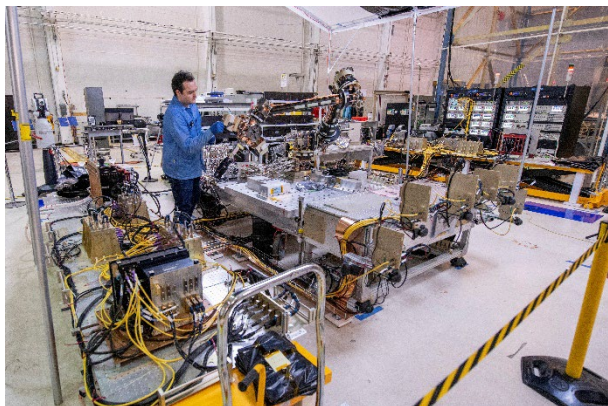
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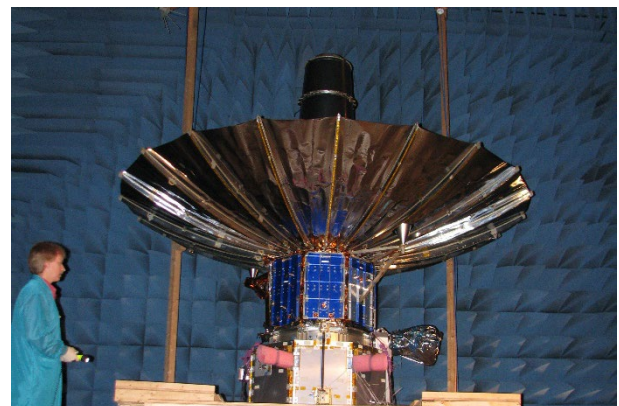
Thermal Vacuum Test



Vibration Test



Systems Integration & Test



RF Anechoic Chamber