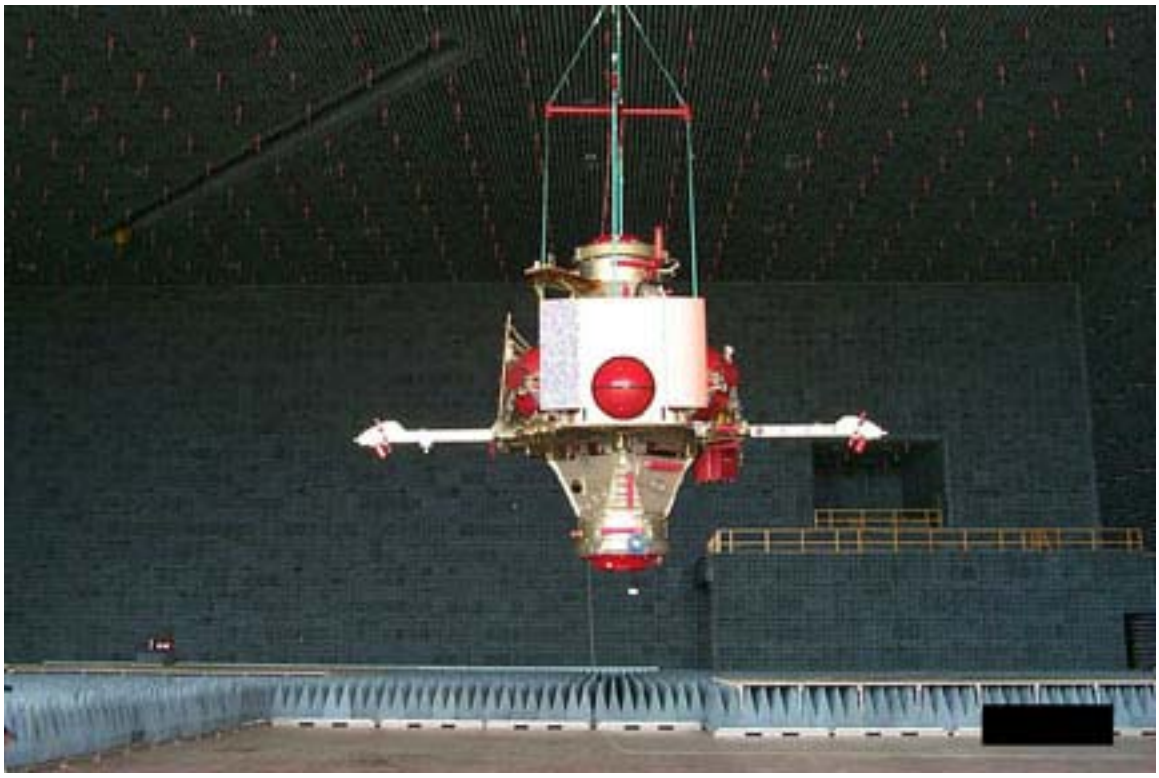
Interim Control Module (ICM)



In 1997, NASA requested that the U.S. Naval Research Laboratory (NRL) study the feasibility of adapting an existing, heritage spaceflight system to provide low-cost, contingency propulsion operations for the International Space Station (ISS)

After determining that the system could be adapted in time to meet NASA's schedule and mission requirements, NRL was granted authority to proceed with the Interim Control Module. From its inception, ICM was a contingency option for attitude control and reboost of the ISS that would allow NASA to preserve the on-orbit construction schedule in case of delays in the launch of other elements.

ICM was to launch on board the Space Shuttle, deploy from the Shuttle's cargo bay, and mate with the ISS at the Russian Control Module. Once on orbit, ICM would provide sufficient fuel for 1 to 3 years of operation.

ICM, based on a satellite dispenser designed and built by NRL, is shown above in its ISS configuration during system level EMI testing. Although significant modifications were required, ICM met all requirements for its ISS mission. The vehicle is 3-axis stabilized and can carry in excess of 11,000 pounds of bi-propellant fuel. The vehicle is qualified to carry an additional 12,000-pound payload and can provide power, ordnance functions, and data handling services to that payload.

As ISS assembly progressed, ICM was released by NASA and is available to perform other missions.

ICM is currently in storage at NRL's Payload Processing Facility in Washington, D.C. The vehicle is capable of launch on either the Space Shuttle or an expendable booster of the EELV class.

For more information, please contact:

Allyn Jacoby
Code 8220
Naval Research Laboratory
Washington, DC 20375-5355
(202) 767-9145
ajacoby@space.nrl.navy.mil