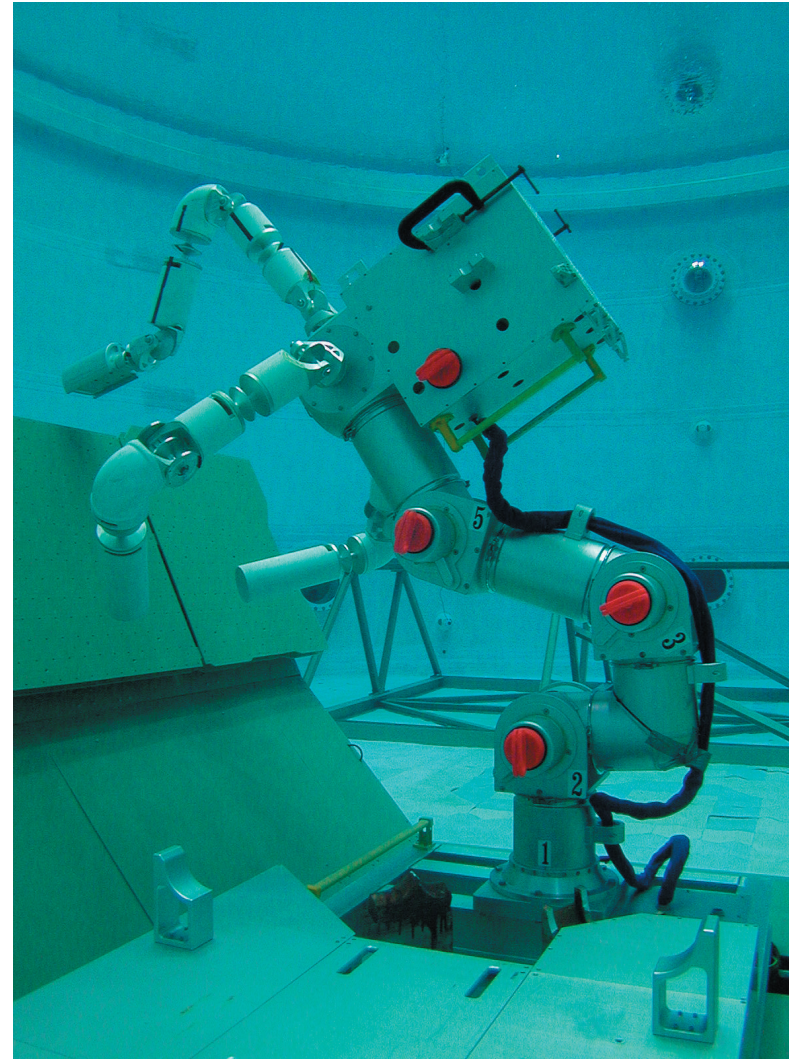
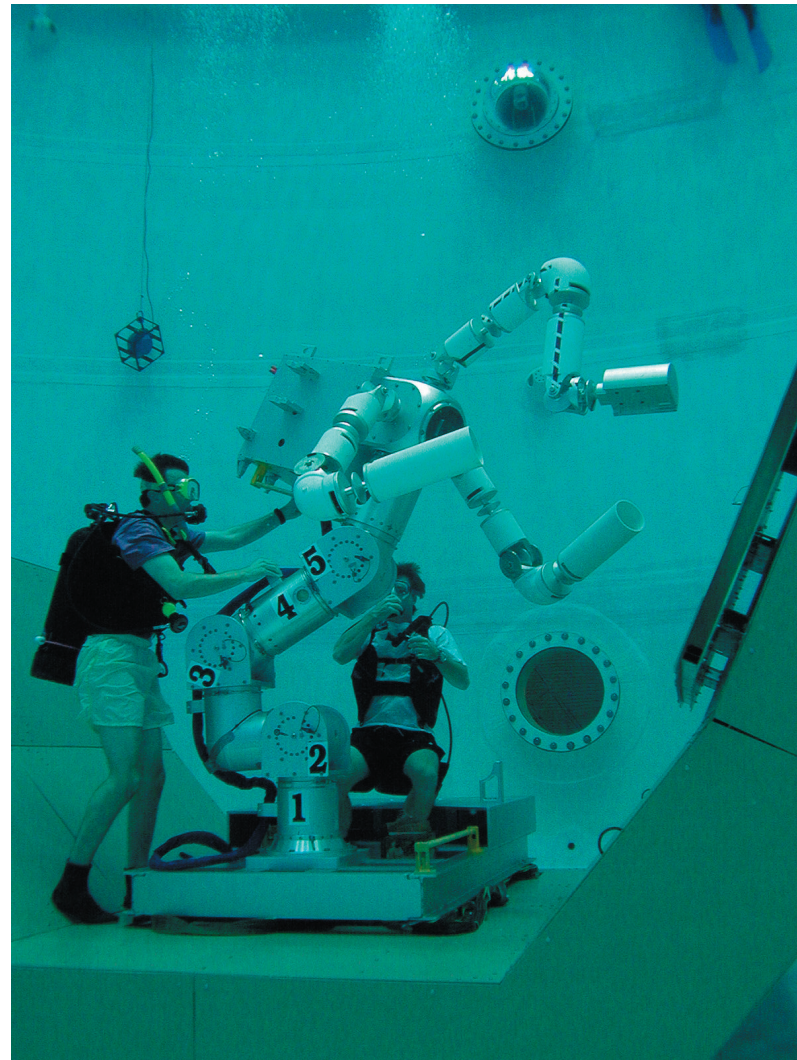
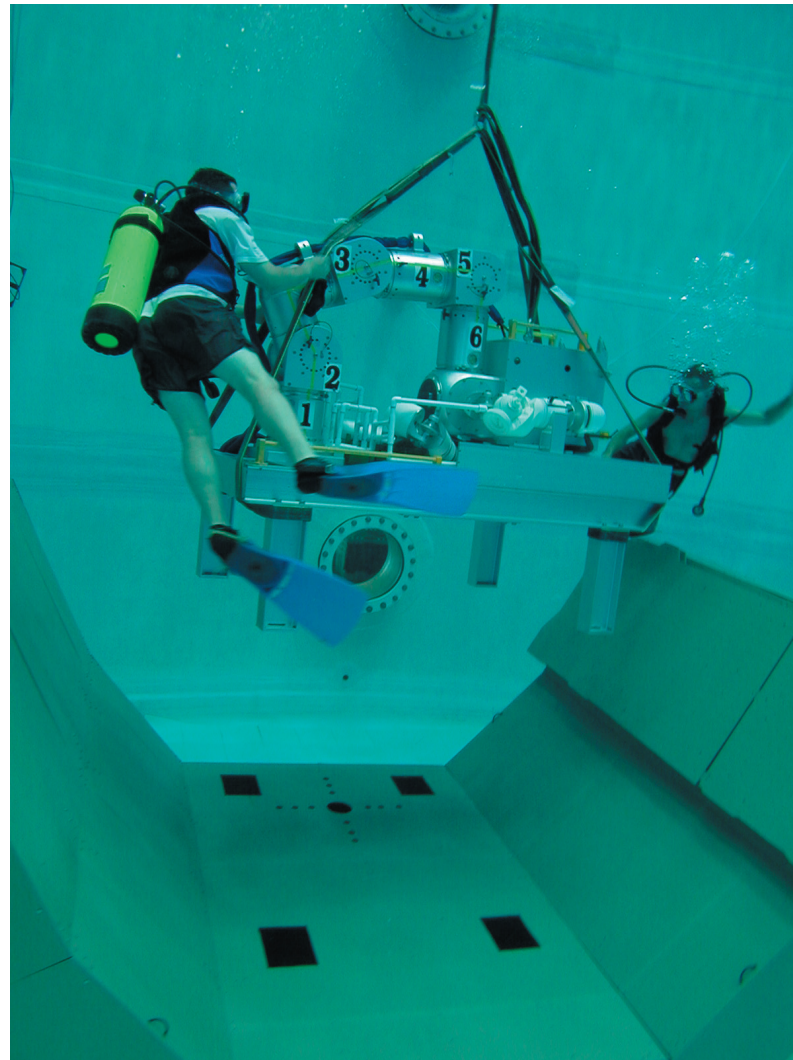
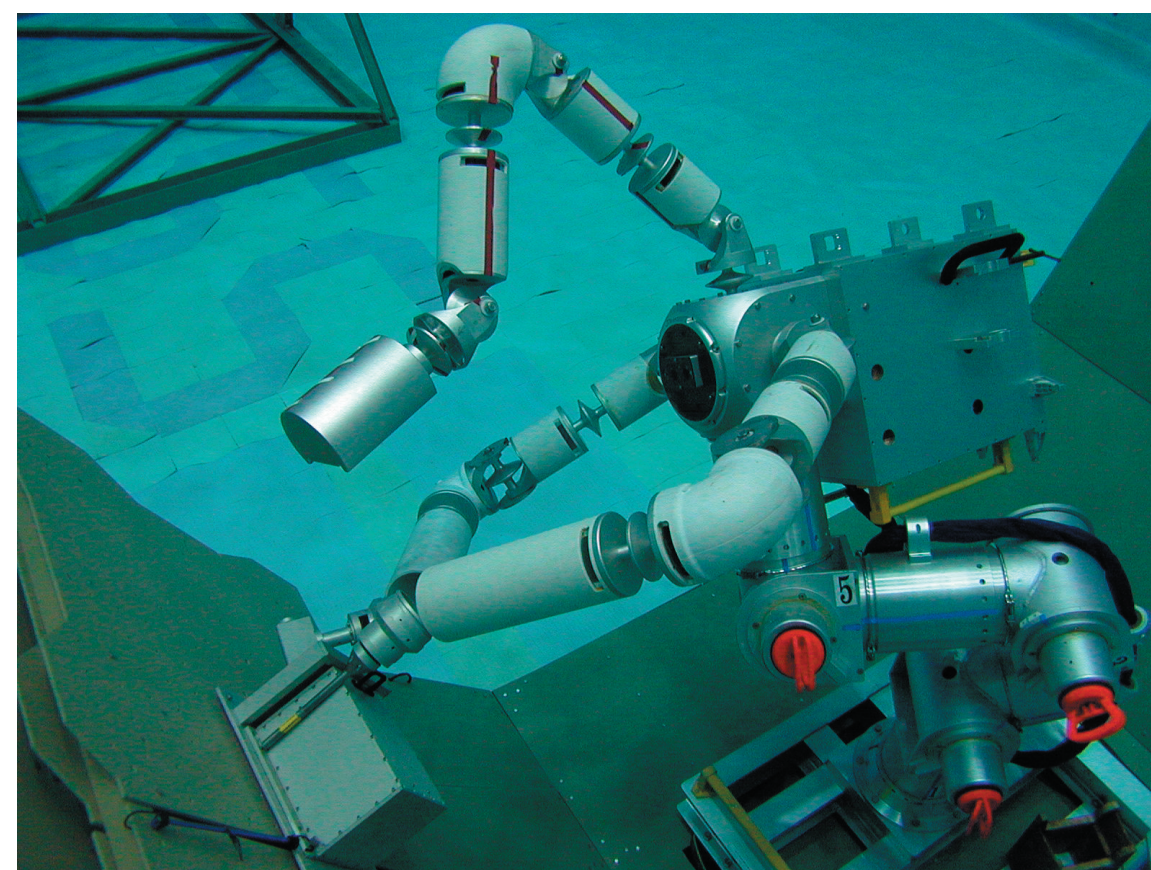
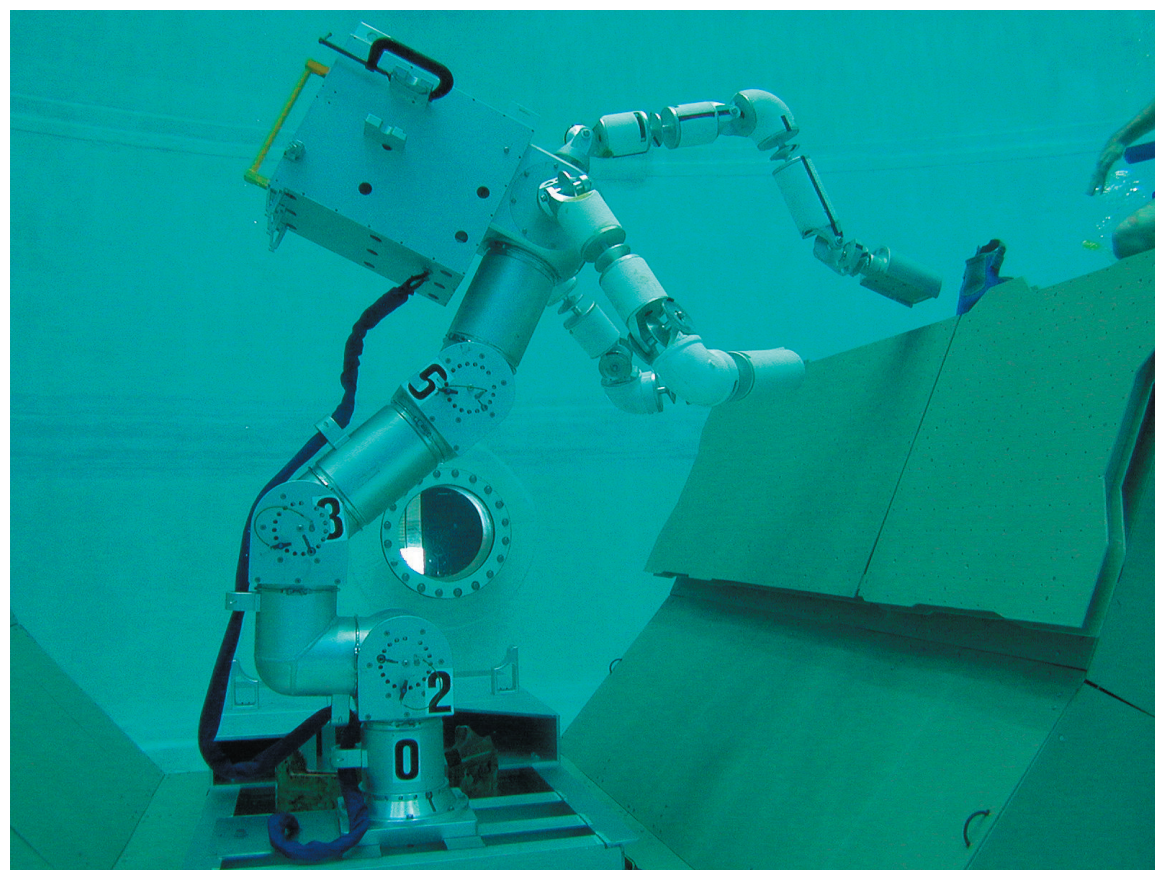


Ranger Neutral Buoyancy Vehicle II



With the completion of the Engineering Development Arm, SSL efforts will now shift to the final assembly and checkout of the Neutral Buoyancy Vehicle II (NBV II). Ranger NBV II is designed to be essentially identical to the Ranger TSX flight unit, and will be used in the underwater environment to provide correlative data for flight operations.

For the past two years, a mockup of Ranger NBV II has been under active test in the University of Maryland Neutral Buoyancy Research Facility. This unit, eventually intended for astronaut training on Ranger TSX, has been invaluable in developing the test procedures for dealing with the mass and size of Ranger NBV II, as well as providing excellent visualizations of NBV II operations.



EVA Training Mockup of RangerTSX

With Ranger NBV II planned for operational testing in the Summer of 2002, the Space Systems Laboratory will enter an period of intensive testing of robotic operations. NBV II will be a generic testbed for advanced telerobotic technologies, including controller algorithms, task applications, and advanced work in human/robotic cooperation. NBV II will be used in cooperation with NASA Goddard Space Flight Center to investigate robotic assembly and servicing of Next Generation Space Telescope. It will also be used by NASA Langley Research Center to test robotic assembly of large space structures.