

## HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)

## Human Space Endeavour - Overview (1)

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CANADA AND THE INTERNATIONAL SPACE STATION PROGRAM: OVERVIEW AND STATUS  
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**Abstract**

Since meeting in Glasgow for the IAC 2008, progress in advancing the assembly of ISS continued as Dextre, Canada's two-armed robot has undergone initial tests and prepared for early operations. The Canadian Space Agency plans spaceflights for two of its astronauts in 2009. Julie Payette should fly on the Space Shuttle Endeavour for the STS-127 mission. In May 2009, Dr. Robert Thirsk will go to ISS as a member of the Expedition 20 and 21 crew, and when he returns in November 2009, he will be the first Canadian to have remained on the International Space Station for an expected six months stay. He will have been part of the crew for the transition to a team of six astronauts living together continuously aboard the Station. During his flight, Bob will have conducted several Canadian experiments including APEX-Cambium, BISE, RaDI-N, and Tomatosphere III, the current Canadian experiments on ISS. In addition, the Microgravity Vibration Isolation System or MVIS will have gone through commissioning and calibration efforts. Canadian scientific participation and collaboration continues as we participate in the International Life Science Research Announcement and the ESA Physical Sciences Research Announcement. The Canadian Astronaut recruitment process has been successful in its mandate to select two new astronauts to join the team which will continue to take advantage of Canadian ISS flight opportunities over the next decade.

Canada's 2009 Economic Action Plan included funding for CSA to begin the initial work needed to conceive the next generation of Canadian space robotics to prepare for on-orbit servicing as well as mobile Moon and Mars exploration robotics missions. This highlights the national interest and the importance of ISS in space exploration. Several science missions such as BISE and others planned for ISS support exploration. On the technology side, the CSA has conducted an on-orbit testing of a Tridar system on STS-128, in preparation for its potential use as an approach and docking system for exploration vehicles.