

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)
Space Stations and Human Spacecraft Utilization (4)

Author: Dr. Nicole Buckley
Canadian Space Agency, Canada, Nicole.buckley@asc-csa.gc.ca

LIFE AND PHYSICAL SCIENCES: DON'T LEAVE EARTH WITHOUT US!

Abstract

Exploration science goals include planetary sciences, astrobiology, and origins of the universe and life. The global exploration strategy encompasses these and more in an ambitious program that will require international efforts to achieve. Obstacles to overcome before interplanetary travel can occur include radiation effects on humans and machines, improved energy use and communications. Significant advances in both science and technology are required before we attempt further human space exploration. It is imperative we develop knowledge and tools to secure human and environmental autonomy in space. The innovative technology will stem from science advances in such diverse fields as nanotechnology, informatics and material science. The Canadian Space Agency has developed a new strategy to harness Canadian science power to meet these needs and then transfer that knowledge and applications to meet our space needs and for terrestrial use. The strategy involves both a science push and user pull with the International Space Station as a essential stepping stone for the exploration strategy.

ISS Exploration strategy international