

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

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INTERNATIONAL UTILIZATION AT THE THRESHOLD OF “ASSEMBLY COMPLETE”—SCIENCE
RETURNS FROM THE INTERNATIONAL SPACE STATION

Abstract

The European Columbus and Japanese Kibo laboratories are now fully operational on the International Space Station (ISS), bringing decades of international planning to fruition. NASA is now completing launch and activation of major research facilities that will be housed in the Destiny U.S. Laboratory, Columbus, and Kibo. These facilities include major physical sciences capabilities for combustion, fluid physics, and materials science, as well as additional multipurpose and supporting infrastructure. Expansion of the laboratory space and expansion to a 6-person crew (planned for May 2009), is already leading to significant increases in research throughput even before assembly is completed. International research on the ISS includes exchanges of results, sharing of facilities, collaboration on experiments, and joint publication and communication of accomplishments. Significant and ongoing increases in research activity on ISS have occurred over the past year. Although research results lag behind on-orbit operations by 2-5 years, the surge of early research activities following Space Shuttle return to flight in 2005 is now producing an accompanying surge in scientific publications. Evidence of scientific productivity from early utilization opportunities combined with the current pace of research activity in orbit are both important parts of the evidence base for evaluating the potential future achievements of a complete and active ISS.