

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)  
How Can We Best Apply Our Experience to Future Human Missions? (2)

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LESSONS LEARNED FROM ISS PROGRAM IN ENGINEERING AND MANAGEMENT

**Abstract**

JAXA has been involved in the International Space Station (ISS) Program since 1985. Japanese contribution to the ISS Program is the Japanese Experiment Module (JEM), “KIBO” and the H-II Transfer Vehicle (HTV). The “KIBO” on-orbit assembly started in March 2008, and successfully completed in July 2009 by three Shuttle flights, and the HTV has flown first three flights with the mission success to transport cargo to ISS following the first flight in September 2009. As the program is very large and complex in nature, we have experienced frequent schedule stretches resulting in the delay of first element launch for 13 years. JAXA experienced lots of challenges in the technical and management fields in the implementation of the program because of the first international and human space program never happened before. The paper reviewed the program and the outcome, and summarized lessons learned from the ISS program. The systems engineering process and the project management difficulty faced are overviewed. The technical management, schedule and cost control strategies are re-evaluated. The paper also proposes recommendations for the international human space program in technical and management aspects, that will give support to the internationally cooperative exploration program in the future.