

## HUMAN SPACEFLIGHT SYMPOSIUM (B3)

Flight & Ground Operations of HSF Systems – Joint Session of the Human Spaceflight and Space Operations Symposia (4-B6.5)

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KIBO FLIGHT CONTROL TEAM STREAMLINING TOWARDS SUSTAINABLE EFFICIENT OPERATIONS BASED ON THE FIVE YEARS ISS OPERATIONS EXPERIENCE

**Abstract**

Since Kibo operations has started from 2008, we have conducted a lot of system tasks and science experiments in Kibo. In March 2013, we marked five years Kibo continuous operations and now JAXA is preparing for enhancing system capability to support increasing utilization in Kibo and acquiring fundamental techniques for future manned space mission. Not only Japanese users but also users from foreign countries are utilizing Kibo more than before such as small satellite deployment from JEM Airlock.

Thus, entering an new era for full swing utilization in ISS/Kibo, in order to maximize sustainable and secure mission success within limited resources, we have investigated reformation of JFCT staffing for Kibo operations. The goal of this reformation is to standardize workload in JFCT and to enlarge capability of each position based on the five-year operation experience.

As the first step, we have started integrating system and payload operations function, such as "JEM Payloads off-console". JEM Payloads is a leader of Kibo payload operations and when JEM Payloads is off-console, J-Flight will complement the function for real time operation. In order to take advantage of JEM Payloads' skills and abilities, they will intensively support payload operations products preparation and coordination with science team at off-line. The final readiness simulation is planned in March, 2014 and official implementation is slated for April, 2014. In addition to the above console staffing change, we are studying the next streamlining steps which includes combining system and payload planning forces, off-loading night shift and merging system and payload operations - rearranging system and payload FCT function.

We also streamline HTV operations in steady phase. HTV FCT console position during steady phase has been reducing its number step by step. Since HTV2, HTV FLIGHT is on call 1 or 2 shifts a day and J-Flight takes care HTV system operation instead. At HTV4 steady phase, all HTV FCT were on call except only one ground controller.

These streamlining changes are challenging but through well considered simulations and step by step dry-run in real-time operations, we now come to consider that the reformed staffing will work to support increasing utilization missions efficiently.