

HUMAN SPACE ENDEAVOURS SYMPOSIUM (B3)
ISS Utilisation (3)

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FURTHER UTILIZATION OF THE ISS RUSSIAN SEGMENT: RESEARCH ACCOMPLISHMENTS
AND PLANS FOR THE NEXT DECADE**Abstract**

Assembly of the United States on-Orbit Segment (USOS) of the International Space Station (ISS), including all International Partners' components, is now completed with all core elements successfully integrated and functionally verified on-orbit. At the same time construction of the ISS Russian Segment (ISS RS) is still under way. The Mini Research Modules (MRM) *Poisk* (MRM2) and *Rassvet* (MRM1) have become integral parts of the ISS in 2009-2010 and process of the ISS RS assembly will be continued providing more and more research capabilities for scientists and engineers, creating a basis for the future research accomplishments. Multipurpose Laboratory Module (MLM), which is targeted for the station in 2013, will be the largest Russian laboratory on ISS. The next step in this process will be Node module and Scientific-Power Modules (SPM) 1 and 2. All of them will provide new capabilities for utilization of existing and next-generation research facilities. A key feature of the ISS RS exploitation process is a consecutive expansion of the exchangeable payloads method, which applies on the segment modules, and directed towards efficient utilization of their research facilities. The method is based on a concept of so called multipurpose workstations. Advanced multipurpose workstations and payloads racks will be used on MLM, SPM1, and SPM2. This paper analyses technical and research accomplishments achieved on the ISS RS modules of different generations, and unveils plans of the segment further utilization for the next decade.