

66th International Astronautical Congress 2015

SPACE SYSTEMS SYMPOSIUM (D1)
Training, Achievements, and Lessons Learned in Space Systems (5)

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TECHDEMOSAT-1 – ‘ONE YEAR ON’ – IN-ORBIT RESULTS, LESSONS LEARNT AND THE
FUTURE

Abstract

On 8th July 2014, TechDemoSat-1 (TDS-1) was launched into orbit. This mission was co-funded by UK government, industry and academia to provide a responsive opportunity to gain flight heritage and in-orbit operational experience for novel UK technology. The payload complement on TDS-1 is comprised of four distinct payload suites – Maritime, Land Observation, Space Environment and Platform Technology. With in-excess of thirty payloads on the spacecraft, there is a challenge to ensure all payloads are adequately exercised to meet their demonstration and exploitation requirements.

This paper will provide the in-orbit results from the first year of operations – providing not only data and performance information from a number of the payloads but also feedback on the experience of operating a multi-stakeholder in-orbit demonstration mission. Additional lessons learnt from the build, launch and operation of a low cost, short schedule demonstration mission will also be provided.

Finally, the paper will discuss potential models for future collaborative in-orbit demonstration activities including the possibility of these missions becoming self-funding.