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Generic Technologies for Small/Micro Platforms (6A)

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IN-ORBIT DEMONSTRATION OF TECHNOLOGIES WITH THE EURO IOD PROGRAM

Abstract

Driven by the need for In-orbit Demonstration (IOD) and verification (IOV) of new and innovative technologies a program has been proposed for regular and affordable opportunities for access to space. This program is based on a bi-lateral initiative between the United Kingdom (UK) and Germany. It is known as “Euro IOD” and shall be implemented as a partnership between Surrey Satellite Technology Ltd. (SSTL) and OHB System AG, and shall continue the success of the recent IOD small satellite missions by both companies. The envisaged program schedule is one mission every two years.

In Germany and the UK, national space agencies and other national funding bodies have recently implemented and financed IOD missions (TET-1 and TDS-1). The German IOD mission TET-1 was launched in 2012 and successfully completed a primary one year mission time in 2013. TET-1 now is used within the FireBird mission for fire detection from space. The TDS-1 satellite from UK was launched in 2014, carrying a suite of experimental payloads from different UK providers, and is currently providing exploitation data to the payload principle investigators.

TET-2 as Germany’s follow-on mission has been studied as a Phase B project, the European Space Agency has defined a Technology Flight Opportunity (TFO) program, and the European Commission has funded four parallel H2020 studies about in-orbit demonstration payloads.

As a result from the TFO program OHB and SSTL propose an IOD/IOV Service that can be used by companies, institutes, universities and space agencies wishing to demonstrate new technologies, services or systems. The IOD/IOV service will provide a regular ‘ticket’ to space, under the terms of a service agreement, and with a common set of technical interfaces to allow maximum program flexibility and interchangeability for IOD customers.