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Author: Dr. Yugo Kimoto
Japan Aerospace Exploration Agency (JAXA), Japan, kimoto.yugo@jaxa.jp

Mr. Kazuhiro Aoyama
Japan Aerospace Exploration Agency (JAXA), Japan, aoyama.kazuhiro@jaxa.jp
Dr. Eiji Miyazaki
Japan Aerospace Exploration Agency (JAXA), Japan, miyazaki.eiji@jaxa.jp
Mr. Shunsuke Imamura
Japan Aerospace Exploration Agency (JAXA), Japan, Imamura.shunsuke@jaxa.jp

ATOMIC OXYGEN MONITOR SYSTEM ONBOARD SUPER LOW ALTITUDE TEST SATELLITE

Abstract

JAXA proposed the brand-new concept of low earth orbit (LEO) satellites, the super low altitude satellite which orbit the altitude under 250 km. A high resolution optical observation and a reduction in emission power of active sensors such as radar are expected in an earth observation from the super low altitude orbit. Super low altitude test satellite (SLATS) has been developed for the first demonstration satellite on this altitude. The Atomic Oxygen Monitor (AMO) is one of the missions of the SLATS. AMO consists of two missions: Materials Degradation Monitor (MDM) and Atomic Oxygen Fluence Sensor (AOFS). MDM will observe degradation of materials which are candidates to use for super low altitude satellites in future. AOFS will obtain an AO environment data in the SLATS orbit. Such results that will be obtained by the AMO will be used for developments of future super low altitude orbit satellites. This final paper will present a summary of the AMO mission status of development.