

IAF MATERIALS AND STRUCTURES SYMPOSIUM (C2)
Space Structures I - Development and Verification (Space Vehicles and Components) (1)

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THERMAL VACUUM AND BALANCE TEST METHOD AND VALIDATION ON OPTICAL
PAYLOAD

Abstract

Thermal vacuum test and balance test is performed on Optical payload developed jointly between MBRSC (Mohammed Bin Rashid Space Center) and Satrec Initiative (SatrecI). This paper addresses the process of the test and validating the thermal math model of the payload. The telescope is subjected to non-operation and operation temperature periodically. Moreover, the paper address considerations that were taken Thermal uncertainty margins used to assist in optimal usage of the test to simulate the mission and thus enhancing the accuracy of the data acquired. Thermal properties and effective emissivity of MLI are measured through the test and presented in the paper.