

53rd IAA SYMPOSIUM ON SAFETY, QUALITY AND KNOWLEDGE MANAGEMENT IN SPACE
ACTIVITIES (D5)

Quality and Safety, always a beginning! (1)

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Instituto Nacional de Pesquisas Espaciais (INPE), Brazil, lucas.reis@lit.inpe.brINNOVATIVE INTEGRATED COMPACT RANGE AND NEAR FIELD ANTENNA MEASUREMENT
CAPABILITY**Abstract**

This article describes the new AIT capabilities in implementation at LIT (Integration and Tests Laboratory) of INPE in Brazil, focusing on a new and innovative installation for RF tests. Its main characteristics are described and the advantages of this solution for future space programs are discussed, as well as the challenges encountered in its development. Since the 1980s, LIT has met the needs of AIT capabilities of various space programs in Brazil and South America. The development of telecommunications, SAR and meteorological satellites are examples of Brazil's future needs in the space area to be met by the current capabilities of LIT. To address this new scenario, LIT began in 2018 the deployment new AIT facilities and test systems, including an innovative RF test facility. The new test facility was planned to house in the same environment: a compact compensated test system, a large vertical near field test system and also self-compatibility tests. This innovative solution aims to save time, costs and reduce risks during testing of telecommunications and SAR satellites, as well as individual antenna.