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THE AFR MISSION – THE FIRST SATELLITE PRODUCED BY AZISTA BST AEROSPACE’S
SATELLITE FACTORY

Abstract

The Azista BST Aerospace First Runner (AFR) mission marks the beginning of satellite serial manufacturing in India. Azista BST Aerospace is a joint venture between Berlin Space Technologies (BST) of Germany and Azista Industries of India. It combines the satellite technology developed by BST with Azista’s experience in low-cost serial production of high-end products.

AFR is based on BST’s LEOS-50 satellite bus, the basis for all heritage missions of BST. It employs the HRVI-6HD 2nd generation Earth observation payload to produce multi-spectral images at 5m GSD panchromatic / 10m multi-spectral, with a 70km swath width from 500km altitude in SSO. While the primary mission objective is to demonstrate the capabilities and operational readiness of the satellite factory, the mission will also deliver operational Earth observation data and will furthermore provide a platform for in-orbit demonstration of technology developments.

A particular challenge to training the local factory team in building and testing the BST technology was imposed by the COVID-19 pandemic. During critical times both Germany and India were severely impacted, making it impossible to plan in-person training by the German team in India. Consequently, a remote-training environment was set up using professional video streaming equipment. The trainer could thus perform training actions in Germany while being filmed from four different angles, which the trainees in India were able to follow simultaneously. In parallel, the trainer could supervise the steps performed by the trainees via the same reverse setup. This experience resulted in several lessons learnt which will also be addressed in the paper.