Paper ID: 74451
interactive

IAF EARTH OBSERVATION SYMPOSIUM (B1)
Late breaking abstracts (LBA)

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MWIR REMOTE SENSING MARKET AND TECHNOLOGIES

Abstract

In recent months Elbit Systems and its partners conducted an applicative market survey pertaining to the potential of MWIR (3-5 micron) remote sensing. The survey included position of novel MWIR sensing and imaging technologies, as well as several optic design concepts trade offs. At first, the session will introduce a series of relevant applications and services, mapped into a characteristics matrix, pointing the required features from the Remote Sensing system for each: supported bandwidth, spectral resolution and multi-spectral channels, spatial resolution, Signal to noise ratio and T sensitivity. Thereafter, the session will cover some of the technology challenges pertaining to the design and implementation of Thermal IR systems in space, including radiometric calibration, energy management for the cooling device, and power optimization for the orbit-day mission life cycle. As a conclusion, a novel, original survey of Thermal IR market will be presented, covering various verticals and applications.