Theoretical study of spatially resolved imaging of satellites in the thermal IR bands with ground telescopes

Ugo Tricoli[1], Cèdre Mercier[1], Eric Coiro[1], Yannick Abautret[1], Jean-François Sauvage[1], Romain Fetick[1], Cyril Petit[2]
[1]DOTA, ONERA, 13330 Salon-de-Provence, France
[2]DOTA, ONERA, Université Paris-Saclay, 92320 Châtillon, France

Contact : ugo.tricoli@onera.fr

Space debris are the major source of insecurity for space activities thus it is crucial to follow and track them [1]. Optical tracking in the visible spectrum suffers the limitation related to the Sun illumination conditions i.e. enough light is required to detect the object. We therefore study the possibilities offered by thermal infrared optical detection in the MWIR and LWIR bands in order to be able to ensure the tracking in the absence of direct solar light [2]. We particularly discuss the effect of the PSF (turbulent and AO corrected) when spatially resolved imaging is considered in the thermal IR bands.

References

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