

INVITED LECTURE

Maximising Ground Sampling Distance on CubeSat Platforms Using Commercially Available Optics

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This presentation focuses on achieving the maximum possible ground sampling distance (GSD) on CubeSat platforms by utilising commercially available (COTS) optical components. It will cover the theoretical influence of optical and sensor parameters on the resulting GSD, along with practical limitations imposed by the size, mass, and environmental conditions of small satellites. Real-world examples from the VZLUSAT-2 and SATurnin-1 missions will illustrate the selection process and adaptation of COTS optics for orbital use. The presentation will highlight the results achieved, the technical challenges encountered, and the key lessons learned — providing valuable insights for the design of future Earth observation CubeSat missions.

