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TOWARDS AN ALL-ORBIT OPTICAL DATA SERVICE PROVISIONING BASED ON
ARIANEGROUP HELIX SYSTEM

Abstract

Optical sensors are now widely used as a cost-effective solution for space objects surveillance and tracking. ArianeGroup HELIX network has been continuously providing optical data to its customers for more than 5 years. However initially focused on high-orbits surveillance, the system is constantly evolving to enhance its cataloguing capabilities.

The on-going expansion of the network already allows the enhancement of the performances in terms of coverage and revisit time. In addition, ArianeGroup keeps working on innovating sensors to improve the quantity and quality of data. In particular, prototype SWIR sensor has been successfully tested to provide daytime data, especially in LEO and operational SWIR station is currently under development. In addition, very wide field sensor has been developed and qualified and is ready to be integrated in the network for all orbit detections.

In this paper, we will describe the latest evolutions of ArianeGroup system and its capacities, the newest sensors development and deployment, as well as the way forward to a comprehensive all-orbits data provisioning system.