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DESIGN AND TEST OF AN OPTICAL DAYLIGHT TRACKING CAPABILITY FOR LEO, MEO, GEO

**Abstract**

CNES is conducting RD activities, funded within the EU SST consortium, in order to develop new sensor technologies or extend the domain of use of current technologies, with the global objective to increase EU SST autonomy and the performance of its operational services. The study concerning the use of telescope networks and lasers has been granted to ArianeGroup following an call for tender.

Within this study, one workpackage objective was to study the current limits of daytime observation capabilities for telescopes, in all orbital regimes.

In order to answer to this question, ArianeGroup has developed a prototype daytime observation capable telescope (HW and SW based on existing GEOTracker elementary bricks) and tested its performances during real observation trials on GEO, MEO and LEO targets.

In this paper we will describe the experimentation that have been performed, the limits that we have observed concerning daytime capability of such telescopes and wayforward for the introduction of this technology in an operational network.