

Use Cases Analysis of Free Space Optical Communication System

Authors : Kassem Saab, Fritzen Bart, Yves-Marie Seveque

Abstract : The deployment of Free Space Optical Communications (FSOC) systems requires the development of robust and reliable Optical Ground Stations (OGS) that can be easily installed and operated. To this end, the Engineering Department of Airbus Defence and Space is actively working on the development of innovative and compact OGS solutions that can be deployed in various environments and provide high-quality connectivity under different atmospheric conditions. This article presents an overview of our recent developments in this field, including an evaluation study of different use cases of the FSOC with respect to different atmospheric conditions. The goal is to provide OGS solutions that are both simple and highly effective, allowing for the deployment of high-speed communication networks in a wide range of scenarios.

Keywords : end to end optical communication, laser propagation, optical ground station, turbulence

Conference Title : ICSOS 2023 : International Conference on Space Optical Systems

Conference Location : Copenhagen, Denmark

Conference Dates : June 15-16, 2023