



Name & Organisation

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Presentation title

PHASMA: Monitoring the Electromagnetic Spectrum from Above

Abstract

The PHASMA mission, developed by the Libre Space Foundation, is a two 3U CubeSat constellation designed for spectrum monitoring and space-based situational awareness. The mission's primary objectives include in-orbit spectrum analysis (UHF, GPS and S-band) to quantify global spectrum utilization, identify interference sources, and detect regulatory violations using on-board DSP and machine learning. Additionally, PHASMA will contribute to space situational awareness by monitoring satellite transmissions for improved orbit determination and rapid satellite identification. The project also serves as a technology validation platform for several Libre Space Foundation open-source systems, including the SatNOGS-COMMS transceiver.

Short bio

Manolis Surligas is the lead telecommunications and flight software architect at Libre Space Foundation. He brings extensive experience in wireless communications, software-defined radios, cognitive radios and dynamic spectrum access. He is mostly involved with implementation of real-world applications utilizing software defined radios. He is responsible for the flight software of the PHASMA mission, as well as the software architecture of the SatNOGS-COMMS transceiver hosted on the PHASMA satellites.