

PHASMA: Monitoring the Electromagnetic Spectrum from Above

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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.

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