

IGOSat Project

Internship Proposal - Spring 2020

Electronic Engineering for the nanosatellite IGOSat

Skills, Keywords : analog and digital electronics, functional tests, instrumentation, qualification, AIT, KiCad.

Desired Level : 4th year, master degree **Duration** : 4 to 6 months **Stipend** : > 500 € / month

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Project Description :

The Laboratory of Excellence (LabEx) UnivEarthS, set up by laboratories AIM (Astrophysique et Interactions Multi-Echelles), APC (AstroParticule et Cosmologie) and IPGP (Institut de Physique du Globe de Paris) from Paris Diderot University, is carrying carrying transverse projects between those 3 laboratories.

Using the strong involvement of those laboratories in numerous space experiments and instrumentation, an educational nanosatellite project has begun in 2013, with the financial and technical support from CNES (Centre National d'Etudes Spatiales) and the Space Campus of Paris Diderot University.

More specifically, the project is to develop a scientific 3U CubeSat, and launch it in 2021. The satellite will carry 2 payloads, one to study the Ionosphere and one to study the radiation belt.

Internship Description :

The purpose of the internship is to continue the design and testing of different PCBs that will be carried in the satellite. The Attitude and Orbit Control System (AOCS), the Electrical Power System (EPS) which includes solar panels, power board and batteries board, the instrument readout and support board as well as different other interfaces boards for both space and ground purposes need to be finalized/realized and tested before going to the next phase of the satellite development.

Knowledge in the in KiCad or any other Electronics design software would be an asset.

Within a team of students, engineers and scientists, the student need to be able to work autonomously as well as part of a team, have a sense of rigor especially in writing presentation, and already a global vision of information transmission.

This internship is a good opportunity to address numerous points of space engineering.

Website: <http://www.igosat.fr>