IGOSat Project

Internship proposal - 2018

Ground Segment Software Programming for IGOSat

Skills, key-words : Python, DataBase Development, HMI Development, Wordpress, Windows

Study level: 4th Year/ Master Degree

Duration : 5 - 6 months

Stipend : 570 € / months

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Internship description :

　　　The Laboratories of Excellence (LabEx) UnivEarthS [1], set up by AIM (Astrophysics, Instrumentation and Modelling [2]), APC (AstroParticle and Cosmology [3]) and IPGP (Institut de Physique du Globe de Paris [4]) of Paris Diderot University [4], allowed the emergence of cross-cutting projects in these three laboratories.
Taking advantage of the strong involvement of these laboratories in numerous experiments and space instruments, a nanosatellite project developed by student was initiated by the LabEx UnivEarthS in October 2012, with the technical and financial support of the CNES (French Space Agency) and the Paris Diderot Space Campus [6]. More specifically, it is a question of developing, by 2019, a 3-unit CubeSat satellite (i.e. with a size of 10x10x30 cm [7]). This satellite, called **IGOSat**, will carry 2 payloads (a dual frequency GPS to study the ionosphere and a scintillator for the study of radiation belts)

The internship will aim to develop the ground software of IGOSat. The objective of the internship is to reuse an existing ground software and adapt it to IGOSat case. This ground segment software made by Observatoire de Paris and named PicTalk is coded in Python. The future intern needs to have a good knowledge of Python programming and database development.

The intern will be in close collaboration with the senior command control software engineer of IGOSat.
Within a team of interns, engineers and scientists, the student need to be able to work autonomously as well as part of a team and have a good communication and interpersonal skills.
This internship is a good opportunity to address numerous points of space engineering.

BibliographY
[1] LabEx UnivEarthS : http://www.univearths.fr
[2] Laboratoire AIM : http://irfu.cea.fr/Sap/
[3] Laboratoire APC : http://www.apc.univ-paris7.fr
[4] Institut de Physique du Globe : http://www.ipgp.fr
[5] Université paris Diderot : http://www.univ-paris-diderot.fr
[6] Campus Spatial Paris Diderot : http://www.campusspatial-paris.fr
[7] CubeSats informations : http://www.cubesat.org
[8] IGOSat Project : http://www.igosat.fr