

INTERNSHIP OFFER – IN ORBIT DATA ANALYSIS OF CUBESATS

1 UNIVERSITY SPACE CENTER OF MONTPELLIER

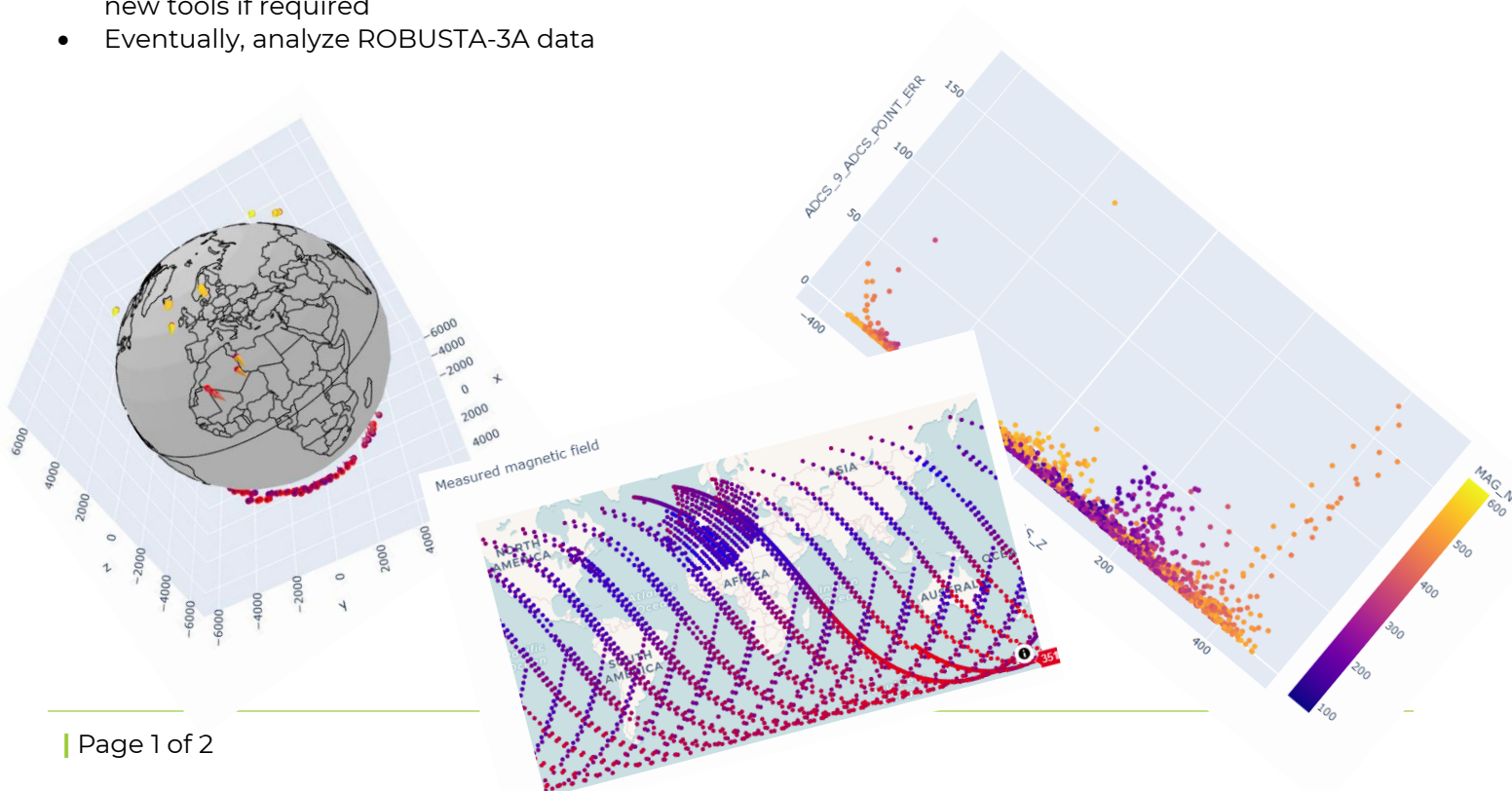
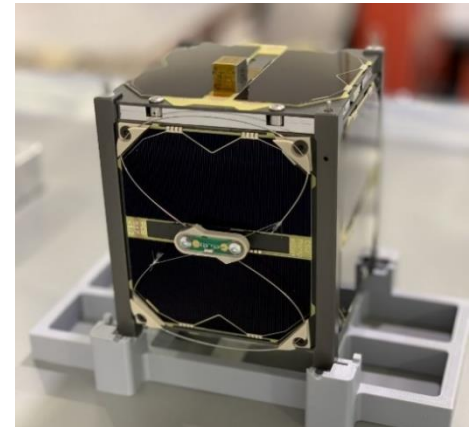
The University Space Center of Montpellier (CSUM) is the French leader in the development and operation of nanosatellites developed by students. It has acquired in-depth competences in the field of design, manufacturing, testing and operation of nanosatellites and their subsystems, as well as in space project management and product assurance in the framework of university space projects. The CSUM has an AIT (Assembly Integration and Test) Facility, a CDF (Concurrent Design Facility) and both UHF and S-band Ground Stations. The CSUM develops its own 1U and 3U CubeSat nanosatellite platforms with the support of the Van Allen Foundation and both the French and the European space agencies.

2 INTERNSHIP DESCRIPTION

Objectives: The CSUM has recently launched four 1U CubeSats as well as ROBUSTA-3A, our first 3U CubeSat. The main objective of this internship is to analyze our In-Orbit data and compare them to tests run before launch. The internship will focus on our 1Us CubeSat currently in orbit.

We may take 2 interns

- Study the performances of CSUM's 1U platform
 - Technical budgets estimation verification (Power budget, Data budget, Thermic model, etc....)
 - Characterization of satellite performances
 - Correlation with ground tests results and numerical models
- Compare with ground tests
- Use existing CSUM's Python toolbox and improve it, or create new tools if required
- Eventually, analyze ROBUSTA-3A data



File name : CSUM-Q-HR-PROP_OffreStage_1U_Data_A_v1.0

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Level: 1st/2nd year of MSc or equivalent

Duration: 4 to 6 months

Skills (it is not mandatory to have all of them):

- Knowledge about CubeSats, orthography, orbit control, attitude control
- Experience in Python
- GIT or similar version control system
- English: being able to have a technical discussion with experts and to write documentation
- Optional: knowledge about data processing (prediction models, multivariable regression models, etc...)
- **Location:** Centre Spatial Universitaire de Montpellier, Campus Saint-Priest, Montpellier, France

Stipend: 4.05 euros/worked hours for duration between 308 and 924 hours, 35 hours/week.

Preferred starting date: February 2025 or the following months

Supervisor, Function at CSUM: Théo Guillerme (Mission Analysis/AOCS engineer) (theo.quillerme@umontpellier.fr)

3 CONTACT

Please upload your application at: <https://csum.umontpellier.fr/en/job-offers-internship/>