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CSUM-M-HR-PROP_Internship Proposal ROB3A EPS battery and solar panels characterization_2021-07-23_v1.0.0.odt
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INTERNSHIP OFFER

ROB3A EPS battery and solar panels characterization

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 the area of 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

Context: For the ROB3A mission, the Electrical Power Subsystem is responsible for energy harvesting, storing and distribution on the satellite.

Description of the tasks: The student will be in charge of measuring the constants for the solar panels and batteries, to help to design the simulation model.

- Create the models
- Create the setup for the measures of the parameters
- Do the measures
- Compare with the measured curves and update the model
- Update the ROB3A power budget

Figure 1: Logo of the ROB3A mission.

Skills/Languages:
- Experience with model-based development (Matlab or Python)

Plus (not required):
- Experience in circuit analysis
- Laboratory equipment (scopes, meters, analyzers).
- Git
- Mission analysis

Level: Licence

Location: CSUM Montpellier – Campus St Priest – Building 6

Preferred starting date: September 2021

Duration: 2 months

Supervisor, Function at CSUM: Sara Vega Martinez

Stipend: 3.90 euros/worked hours if longer than 2 months, 35 hours/week.

3 CONTACT

Please upload your application at: https://csu.edu.umontpellier.fr/en/job-offers-internship/