



A structural and thermal analysis of black box for a re-entry CubeSat

We are looking for two motivated Electromechanics master students.

Project Description

The Aether Student CubeSat team brings together young Belgian engineers who are passionate about space technology. We are designing a CubeSat: a nano-satellite small enough to hold in your hand. In the past decade, the CubeSat standard has enabled countless new innovations in the space industry, and we are determined to uphold this tradition!

Aether is focusing on the area of re-entry: creating the technology that will allow future CubeSats to safely re-enter the atmosphere and land on Earth after carrying out their experiments in orbit. This will allow scientists to analyze samples and get even more results out of their experiments, and all this with the affordability and accessibility that come with the CubeSat platform!

Thesis description

This master's thesis will investigate the design of a black box. This black box will need to be able to survive the extreme temperatures reached during re-entry, but also the possible impact when contacting the earth.

Thesis objective

The goal of this thesis is to design a black box for Aether's re-entry CubeSat that can withstand the extreme conditions during and after re-entry. First a list of requirements needs to be determined. Secondly, a design and suitable material needs to be selected. This selection will occur based on the previously determined requirements and, structural & thermal analysis.

Profile

- Prior knowledge of Thermal dynamics
- Prior knowledge of structural design
- Prior knowledge of material selection
- Interest in space technology

What do you gain?

- A unique engineering experience within an exciting space mission.
- Create added value for your CV and the team.
- A team of students willing to help in any way possible.
- Be part of the team that will revolutionize the CubeSat platform.
- Connection to a wide network of aerospace companies

If you are interested? Please contact us at recruitment@aetherspace.be .
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