Atmospheric Measurements Tower
Part I - Tower Requirements

This project aims at developing practical solutions for the construction and deployment of an atmospheric measurements tower in extreme environments

Laboratory:	**EERL**
Number of students:	**1 (Master)**
Section:	**AR, GC, SIE, GM, MX, PH**
Status:	**Available (Spring 2021)**

Description of the project

The first space settlements will be scientific. As a result, it is critical to develop capabilities in establishing scientific outposts on celestial bodies, which may have similarities with some extreme environments that we have here on earth. One of the key experiments conducted within Asclepios consist in carrying out atmospheric measurements using a tower installed by astronauts. This tower will be the focus of three semester projects: Tower Requirements; Tower Manufacturing; and Data Analysis.

Conducted under the supervision of the Extreme Environment Research Laboratory (EERL), this project will focus on the identification of the key issues related with the installation of atmospheric measurements (e.g. how to manipulate screws with a space suit? How to lift such a tower with a limited crew?). The student will also work on developing practical solutions to address the identified issues, which will be used during the construction and deployment of the tower.

The second and third steps are about the construction of the tower itself and the data analysis respectively. Those will be conducted through other semester projects.

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