Concept of Operations for an Environmental Mission from Cornwall

Code: 21/27

Company: Spaceport Cornwall (Cornwall Council)

Location: Remote / Cornwall Airport Newquay, Cornwall

Company Description:

By 2022, Cornwall will have the United Kingdom's only horizontal launch spaceport; a flexible, low cost, resilient, safe and more sustainable access to space for small satellite payloads into orbit.

Cornwall Council and Virgin Orbit are partnering to deliver the horizontal launch Spaceport at Cornwall Airport Newquay. Cornwall Council are looking at a phased implementation of the Spaceport in which capabilities, facilities and services can be offered to the market from launch systems. Using an existing Airport facility has the advantage over a dedicated launch facility, because it supports low volume, high value, launch activities, where the overheads and running costs are much lower. This provides the right facilities to offer to SMEs, and academia, in order to accelerate their commercial potential.

It is hoped that the Spaceport will be a catalyst to other space sector organisations wanted to be part of the Cornish space cluster and will help develop the skills, ambitions and aspirations of the local population.

Project Description:

Spaceport Cornwall are committed to having net zero carbon emissions by 2030 which is in line with Cornwall Councils 2019 Climate Emergency declaration.

In 2022 Virgin Orbit will launch the first satellites from UK soil from Spaceport Cornwall. This first launch is due to be called 'Tribute' and will showcase some of the amazing work going on within the UK Space sector within business, but also within education and research. Spaceport Cornwall are assessing an ambitious plan to develop a concept of operations for an environmental mission from Cornwall.

The successful applicant will work with Spaceport Cornwall and partners to develop the systems architecture and concept of operations for an environmental monitoring mission. The activity will consider a number of potential payloads and instruments such as ocean colour, remote sensing and radio occultation, and develop the approach for spacecraft operations, data reception and dissemination.

The aims of the project is to:

- Use remote sensing to monitor aspects of the county's environment. This could include a kelp forest, industrial restoration areas and areas for green infrastructure
- Inform local government of the environmental changes observed, as well as suitability of areas for specific environmental projects.
- Link into education and outreach by having data that schools and groups can engage with, learn from and include within their curriculum learning.

This activity will feed into the overall programme definition and subsequent development. Leading into the design, build and launch the first satellite on the 'Tribute' launch.

Applicant Specification:

Spaceport Cornwall are looking for candidates that are enthusiastic, inquisitive, motivated, and self-starting to come and join our team for the summer.

Minimum Requirements:

Ideally a Masters level student who can undertake this piece of work to tie in with the current studies. The candidate must:

- Be older than 18.
- Be a quick learner, curious and creative.
- Be able to work independently and as part of a team.
- Be open to new challenges.
- Have knowledge of environmental impacts, research and developments.

Preferred Additional Requirements:

- Be studying an appropriate qualification or equivalent.

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate. Virtual Induction Event to be held on 21 June, 2021. Ideally to complete before the start of the next academic year. Salary is £1,500 per calendar month gross.

Closing Date for Applications: 5pm Friday 14 May

Applications should be made through the online form attaching a CV, before the closing date. Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer.