Brief Overview

# Proposal

The CanSat will fulfil the primary mission of measuring air temperature and air pressure and transmitting them over a radio link, in fact using RF transmission, over the 434 MHz ranger. It will also contain a number of other sensors, which will also be reported to the base station, including relative humidity, location and acceleration. These, as well as a gyro, will be used for the main part of the secondary mission, that of producing a quadcopter that may open from the size of the CanSat, thus being used to investigate unknown landscapes. For this, both the array of sensors, and a live (likely using FPV 5.8GHz transmission) camera link will be used. The quadcopter will be designed to be able to autonomously move to a set of GPS coordinates, thus possibly being used to return to the launch-site. Finally, we also hope to find the relative agricultural viability of the area, using a predefined algorithm, which could be used on other planets, to find how likely the area could be cultivated for human food.

# Progress Synopsis

Since the summer, we have largely been in the planning stages of the product, producing designs for the electronics and mechanics of the product. However, we are now in the manufacturing stage, as PCBs have been ordered, and 3D printing is well underway. Thus, we are well on the way to producing a working prototype by the end of the year, our original objective. Outreach is also progressing very well, with a couple of sponsors having been got, and a number of events organised. Additionally, we have many sure plans for the rest of year in outreach, which would allow the CanSat to gain even more exposure.