ADCS Subsystem

1. pivotal goals

Interface OBC with ADCS, this goal can be done by implementing the control flow in ADCS High-Level Task List, which includes 3 passive detumble processes, 11 active detumble processes and 2 active overpass/payload/comms control processes.

2. stretch goals

The flowchart for the detumbling procedure in ADCS High-Level Task List is pulled directly from the commissioning manual provided by CubeSpace. The relevant section begins on page 16.

Telecommands (TC) and Telemetry Requests (TLM) are already implemented in adcs_functions.c, those telecommands and Telemetry requests will be helpful to implement the detumbling procedure. All information about TC/TLMs such as offset, length and data type of the necessary parameters are provided in the reference manual, it also demonstrates how to encode the message via I2C.

All TC/TLMs are already tested by connecting the ADCS board to the onboard-computer and running code on OBC to send commands to ADCS and debug.

