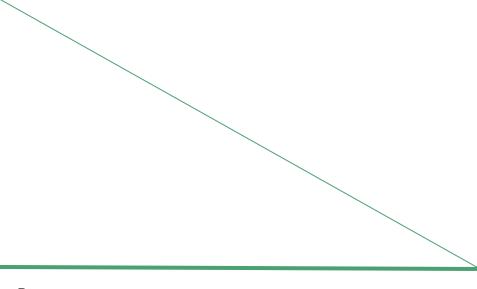
GNC Quad Chart

October 02 2024



External Tools Needed:

Blockers:

 Nadir Pointing - Initial position/orbit knowledge based on SpaceX Transporter 15

Progress:

- Tested and pushed an orbit determination algorithm to infer the satellite's ECI position and velocity based on detected landmark ECI positions, pixel coordinates, and time
- 2. Concluded existing astrodynamics packages don't have the exact set of features we need. Decided to pursue a core C++ sim from scratch and use py-bindings to interface with python code

Plan for the Upcoming Week:

- 1. Complete and verify the core C++ sim
- 2. Complete actuator sizing

Interfaces:

- 1. Mech
 - a. Expected Mass and inertia matrix of the satellite
 - b. Expected misalignment with camera placement
- 2. Vision
 - a. List of camera models in consideration along with their expected errors due to pixel resolution
- 3. Avionics
 - a. Should have RW average & peak power consumption along with magnetorquer sizing by next week

Kanban

