Pre-Release Notes

Version 4.1.0 Pre-Release.3 Hotfix.1 - January 23, 2025

General Information

This is a **hotfix** for **SPOT 4.1.0 Pre-Release.3**. This is a very small fix to try and better handle the angle wrapping problems, as well as a regression fix for the simulated control mixer which adds back the thruster saturation calculation.

Changes

- **Change 1:** In the default LQR and PD controllers, the angular error is corrected to the equation below, which should eliminate when platforms try to complete a full rotation to reach the same attitude.

$$\theta_e = \mod{((\theta_{current} - \theta_{target} + \pi, \ 2\pi) - \pi, \ 2\pi)} \tag{1}$$

- **Change 2:** In the previous pre-release version, the saturation block for the thrusters was removed, but this has been added back in to improve the simulations when compared to experiments.