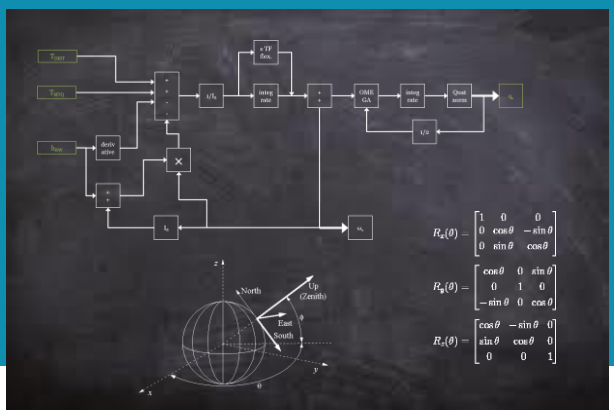
KU LEUVEN

KU Leuven Pointing Analysis

Complete and Detailed Pointing Analysis for CubeSats

The KU Leuven Pointing Analysis service provides a comprehensive and detailed analysis of the pointing performance of a given CubeSat with the KUL ADCS. The pointing analysis document allows to very clearly showcase the performance of a CubeSat and can be used in reviews or meetings with users.



Pointing Analysis Features

- ✓ Comprehensive analysis
- ✓ Highly realistic environment
- ✓ Saves time and money

Simulation environment

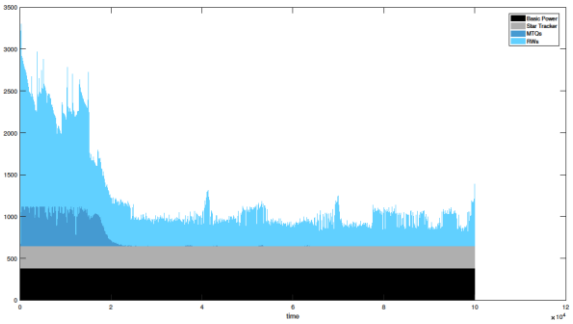
- Spacecraft Dynamics and Kinematics
- Orbit propagation
- Accurate disturbance torques
- Flexible parts can be included (e.g. solar panels)
- Representative sensor and actuator noise (both white and colored noise)

Analysis modes

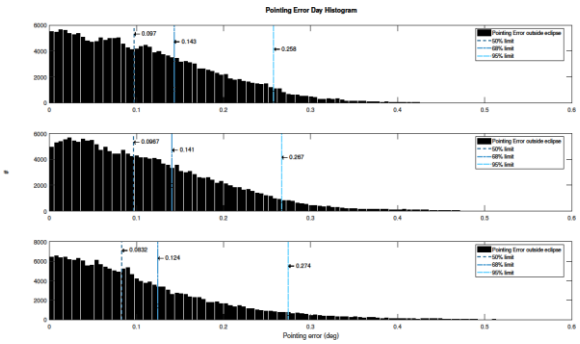
- Detumbling
- Thomson-spin
- Inertial 3-axis pointing
- Zenith, Nadir, Sun, LLA, etc. pointing

Results

- Graphs showing real-time performance over orbits
- Knowledge performance
- Pointing performance
- Power consumption
- Recommendations for the ADCS are given
- Optional: STK attitude files to visualize satellite behaviour
- Optional: Raw data files of the simulations



Power consumption



Pointing error histogram

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