Experiments Performed on the UQP Satellite Testbed

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Isolating Satellite Fine Pointing Equipment

Satellites have rotating wheels: reaction wheel, control moment gyros, momentum wheels

Slight imbalance causes vibrations of fine pointing sensors
Test Equipment
SYSTEM BODE PLOTS

Reference 22, 39
DISTURBANCE CANCELLATION PERFORMANCE
(Five Disturbance Frequencies)

Time History

RMS Error vs. Repetition

Strut Output Improvement
strut #1: $-38.4992$ dB
strut #2: $-30.0419$ dB
strut #3: $-29.8498$ dB
strut #4: $-42.3053$ dB
strut #5: $-35.0282$ dB
strut #6: $-31.1172$ dB

Reference 22, 39