10th Spacecraft Control System Design Contest

Self-introduction

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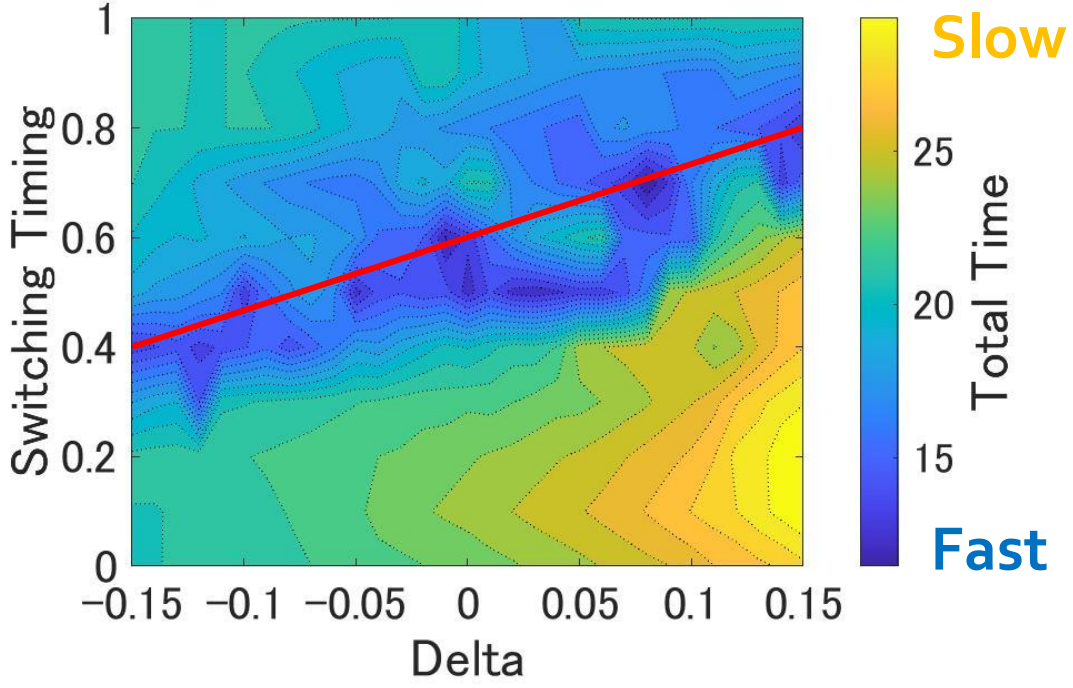
Concept of our control law

- Composed of
  Bang-Bang control and LQR control

1. ψ_{switch} is determined
2. When $\psi < \psi_{switch}$, input is maximum torque
3. When $\psi \geq \psi_{switch}$, input is determined
   by LQR control

How to determine ψ_{switch}

- We assumed that optimal ψ_{switch} would be affected by the slope angle: δ.



$$\psi_{switch} = s \times \psi_{goal}$$

$$s = \frac{4}{3}\delta + 0.6$$

s : Switching Timing