

### 1. Entry

$$\text{State} = \begin{bmatrix} x_t \\ \dot{x}_t \\ x_{target} \end{bmatrix} = \begin{bmatrix} \text{Rocket Pose} \\ \text{Rocket Velocity} \\ \text{Target Pose} \end{bmatrix}$$

### 2. Flip and Attitude Capture

Yaw  
Pitch

$$\text{Action} = [\varphi] = \begin{bmatrix} u \\ \phi \end{bmatrix} = \begin{bmatrix} \text{Intensity} \\ \text{Pitch} \\ \text{Yaw} \end{bmatrix}$$

### 3. Terminal Landing Burn

$$\downarrow g = 1.63 \text{ m/s}^2$$

Ideal Landing Location