

**Final state space variables** The following variables are the output from the differential equation solver. These variables describe the final state space of the insect after 20ms.

Variable	Units	Description
$x_f$	cm	Initial horizontal position
$\dot{x}_f$	cm/s	Final horizontal velocity
$y_f$	cm	Initial vertical position
$\dot{y}_f$	cm/s	Initial vertical velocity
$\theta_f$	rad	Final head-thorax angle
$\dot{\theta}_f$	rad/s	Final head-thorax angular velocity
$\phi_f$	rad	Final abdomen angle
$\dot{\phi}_f$	rad/s	Final abdomen angular velocity