

UPDATE_POSITION($\Delta\varphi$, $\Delta\psi$)

$$(a_x, a_y) = (\sin(\Delta\varphi), \Delta\psi)$$

$$(v_x', v_y') = (v_x, v_y) + (a_x, a_y) \cdot \Delta t$$

$$(x', y') = (x, y) + (v_x', v_y') \cdot \Delta t + \frac{1}{2} \cdot (a_x, a_y) \cdot (\Delta t)^2$$

$$\varphi = \varphi'$$

$$\psi = \psi'$$

$$(v_x, v_y) = (v_x', v_y')$$

$$(x, y) = (x', y')$$

Terminate