

The measurement model is given by:

$$\begin{bmatrix} y1(t) \end{bmatrix} = \begin{bmatrix} 1 & 0 \end{bmatrix} \begin{bmatrix} Level(t) \\ Slope(t) \end{bmatrix} + \epsilon,$$

$$\epsilon \sim N\left(\begin{bmatrix} 0.00 \end{bmatrix}, \begin{bmatrix} ErrorV \end{bmatrix} \right)$$

The dynamic model is given by:

$$Level(t+1) = Level(t) + Deltat \times Slope(t),$$

$$Slope(t+1) = Slope(t)$$

The initial condition of the dynamic model is given by:

$$\begin{bmatrix} Level(0) \\ Slope(0) \end{bmatrix} \sim N\left(\begin{bmatrix} \mu_{Level0} \\ \mu_{Slope0} \end{bmatrix}, \begin{bmatrix} v_{11} & c_{12} \\ c_{12} & v_{22} \end{bmatrix} \right)$$