$y(t)$ vs $x(t)$
$x(t)|y(1),...,y(t),\theta$ vs $x(t)|y(1),...,y(n),\theta$

$\theta=(\phi,V,W)$
Likelihood

\( \phi = 0.95 \)

\( \text{phihat} = 0.9697 \)
Likelihood of (phi, V)
W = 0.206

- True: (0.95, 1)
- MLE: (0.973, 1.071)
Likelihood of \((\phi, W)\)

\[ V = 1.071 \]
Likelihood of $(V,W)$

$\phi = 0.973$