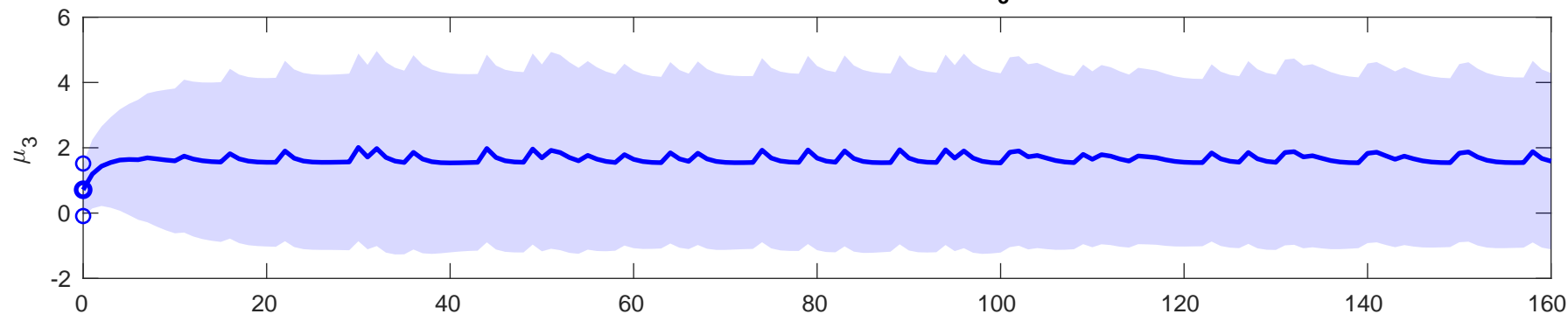


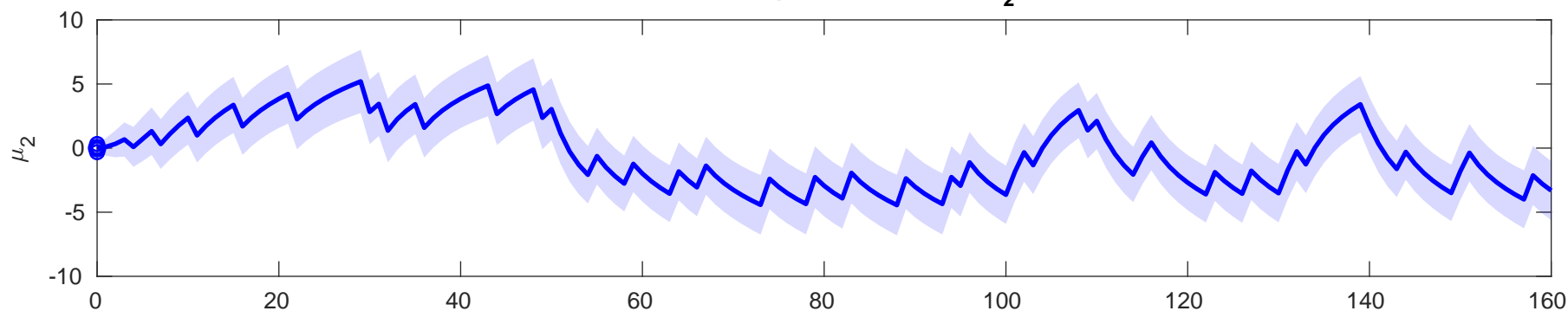
Posterior expectation of  $x$

3



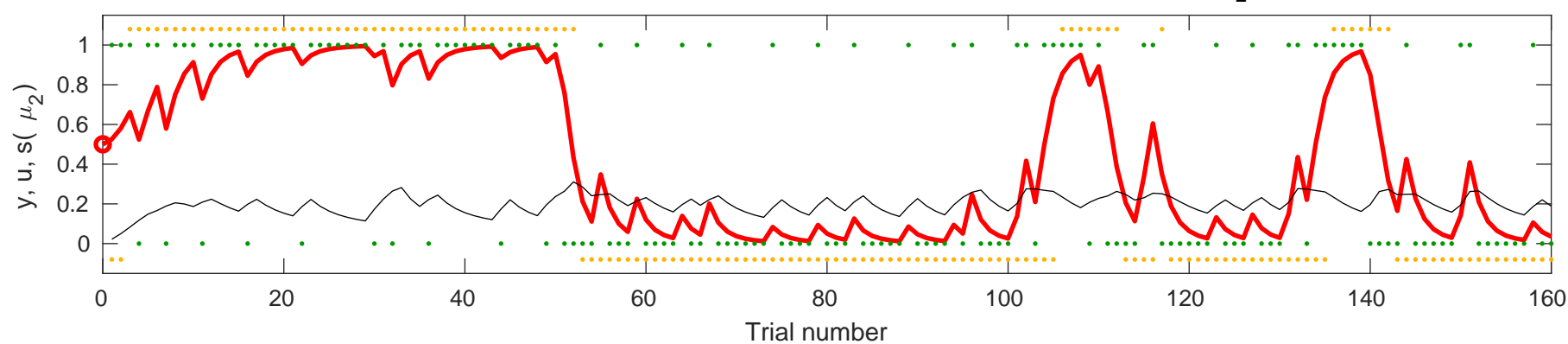
Posterior expectation of  $x$

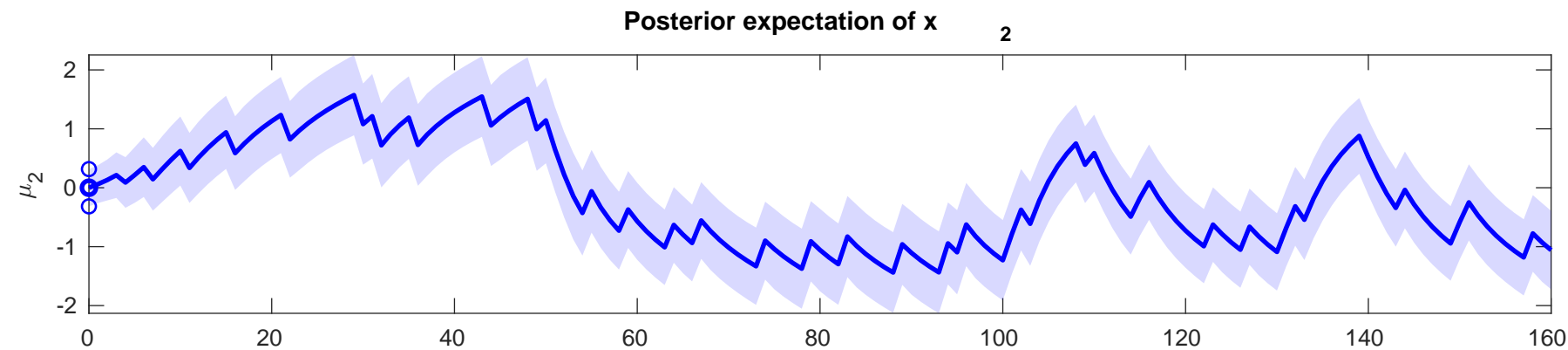
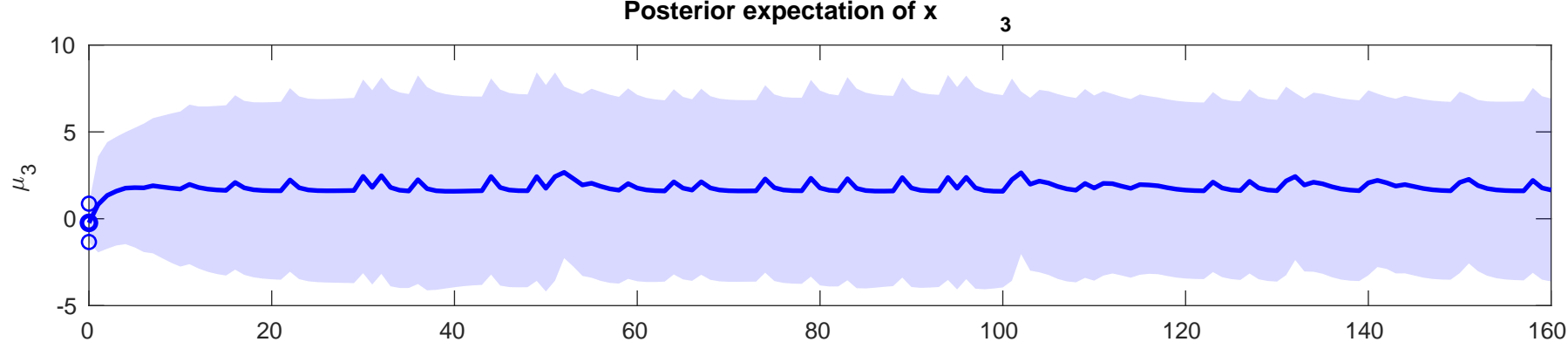
2



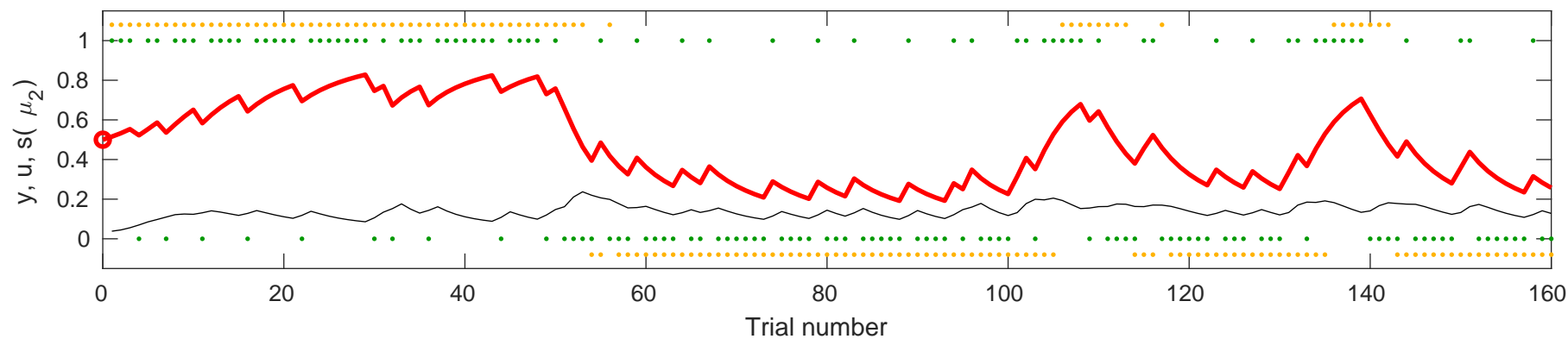
se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s$ (

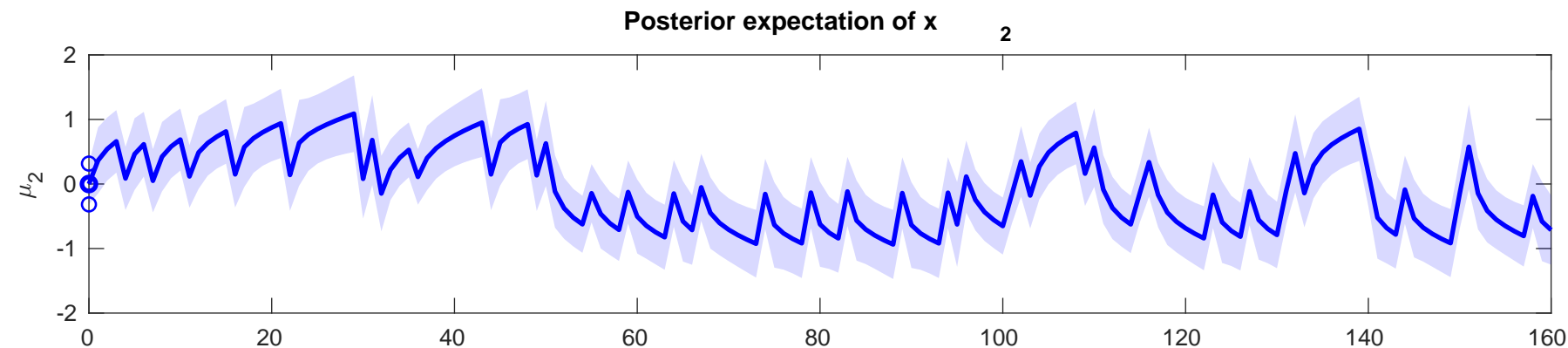
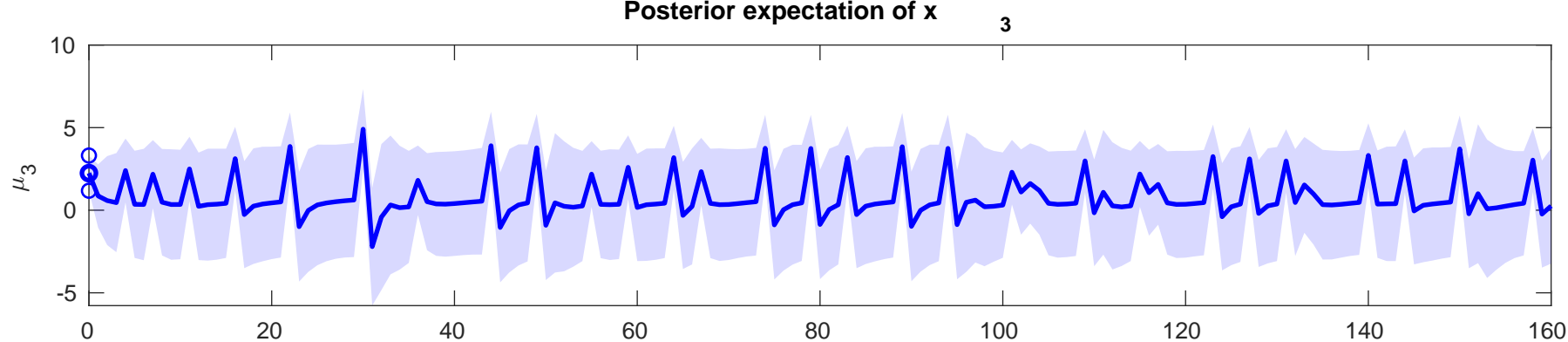
$\mu_2$ ) (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-1.618$



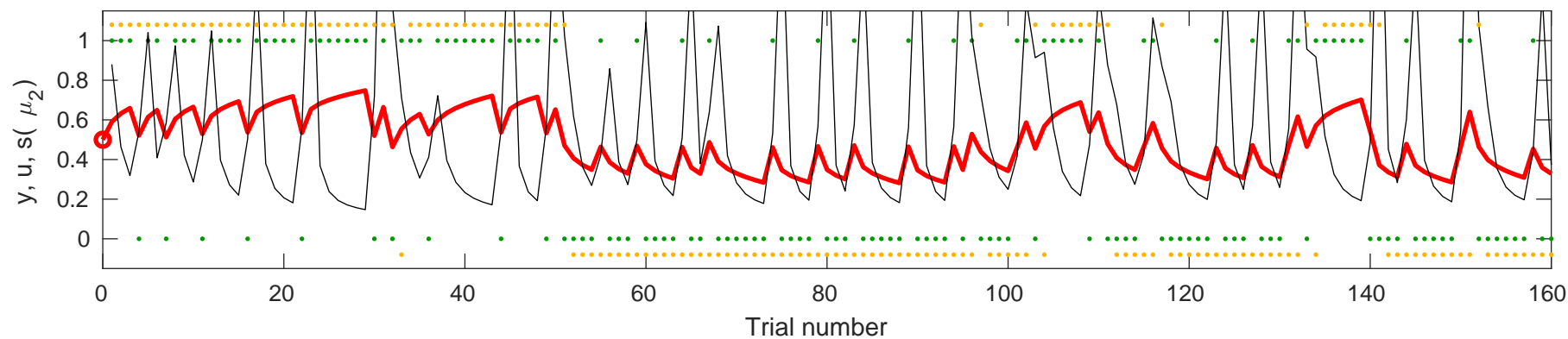


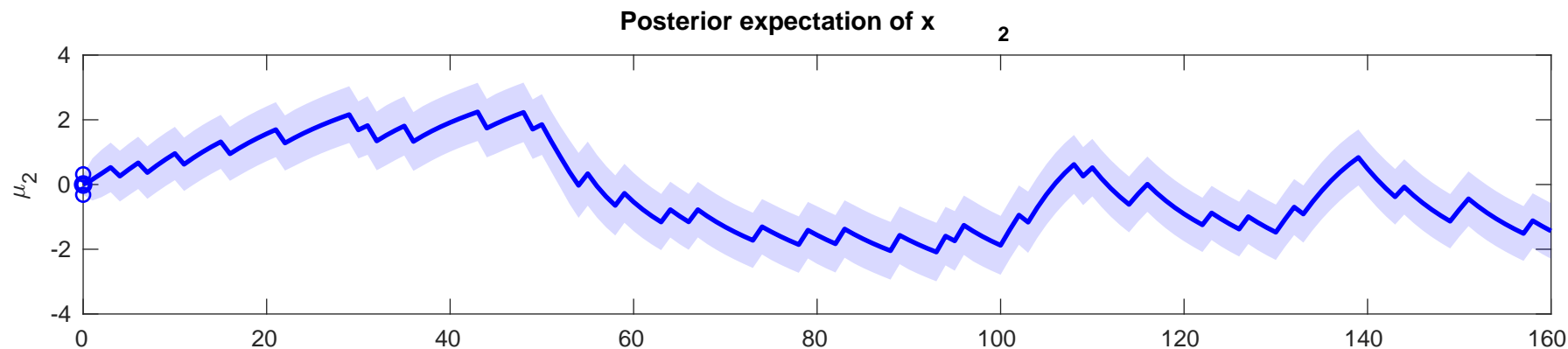
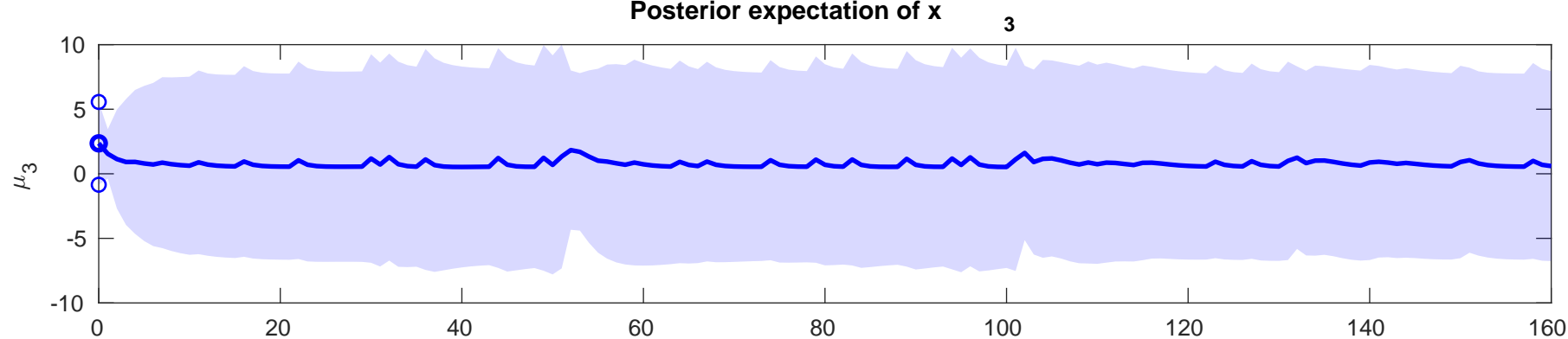
se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-4.6245$



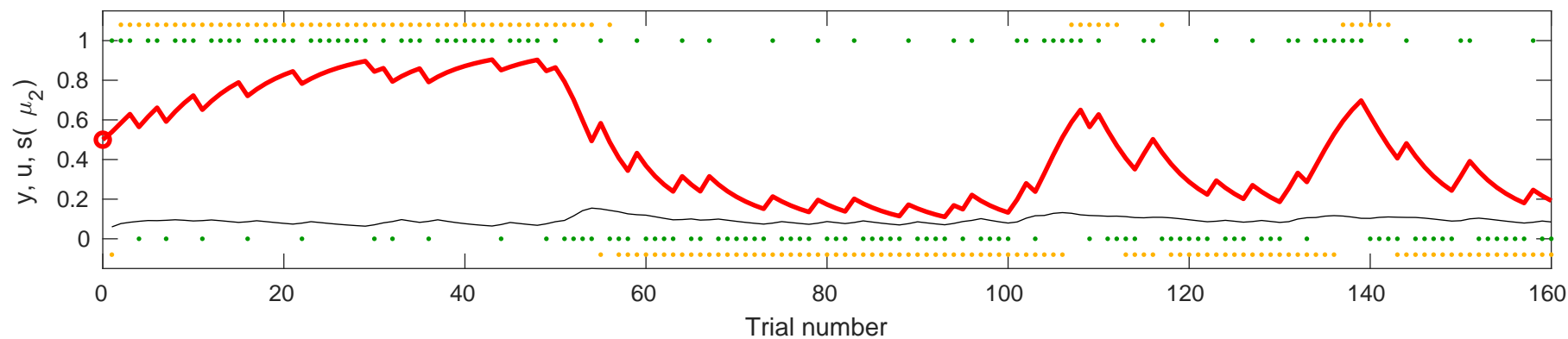


se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-3.0773$



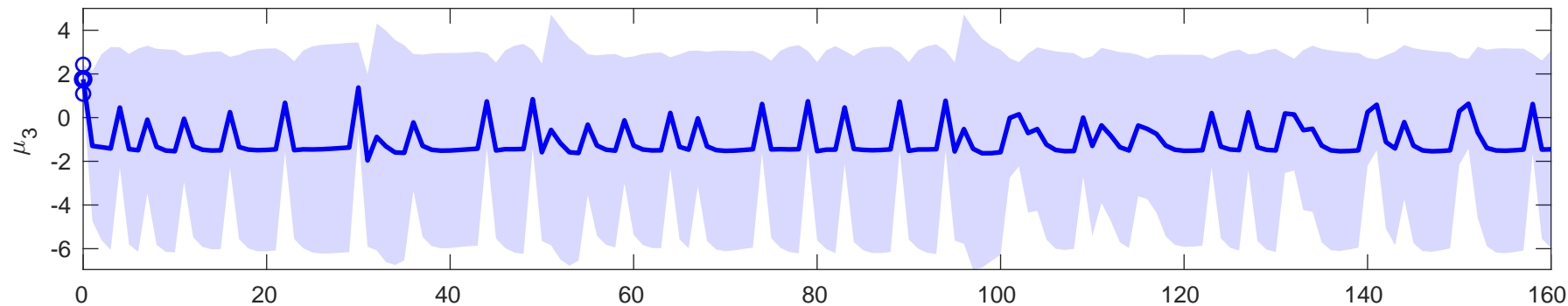


se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-3.4142$

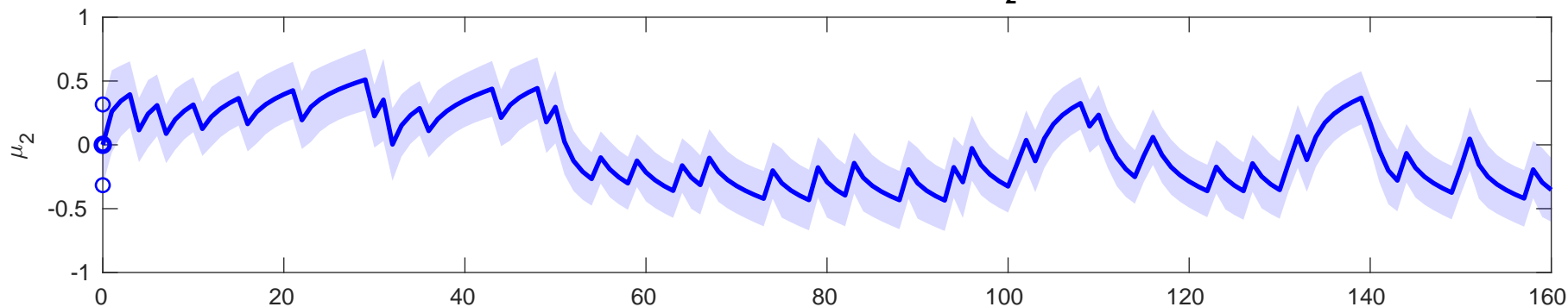


Posterior expectation of  $x$ 

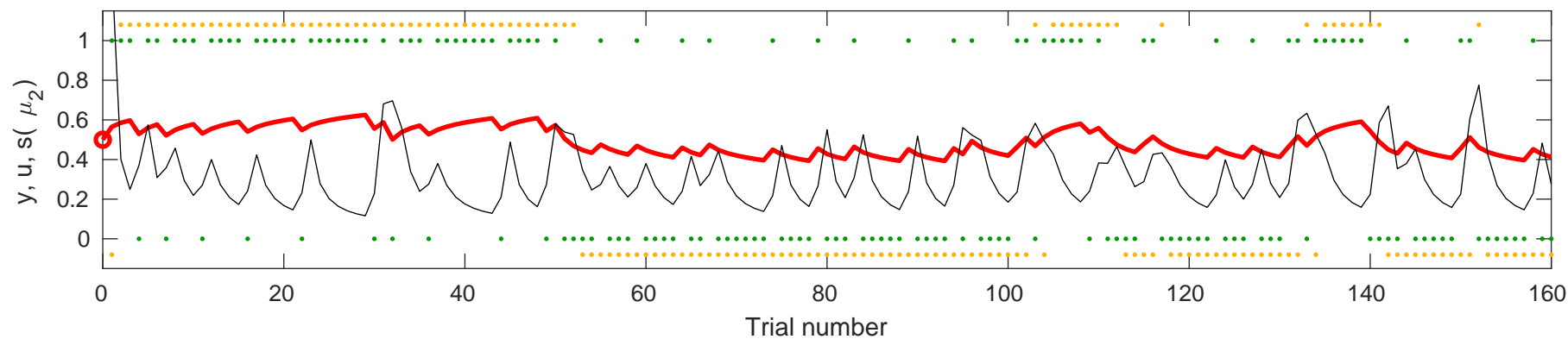
3

Posterior expectation of  $x$ 

2

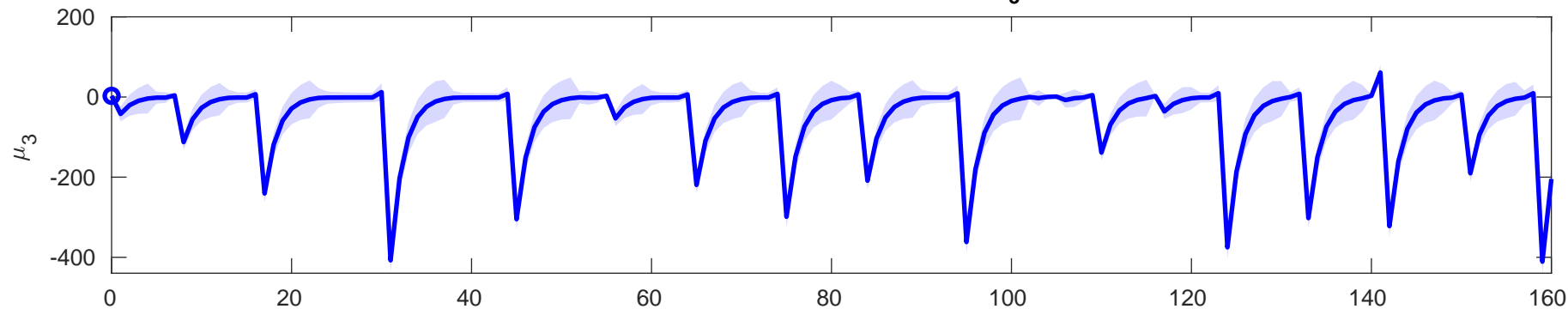


se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-3.3374$

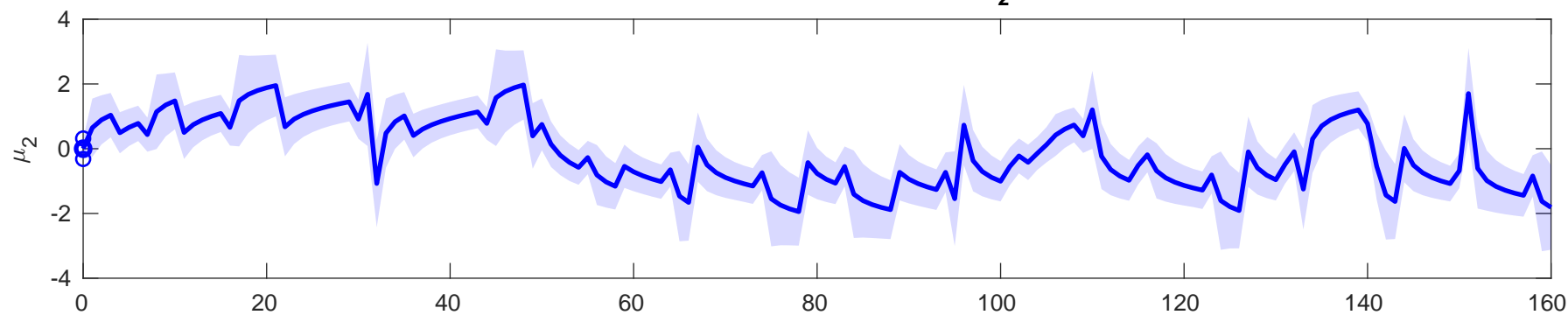


Posterior expectation of  $x$ 

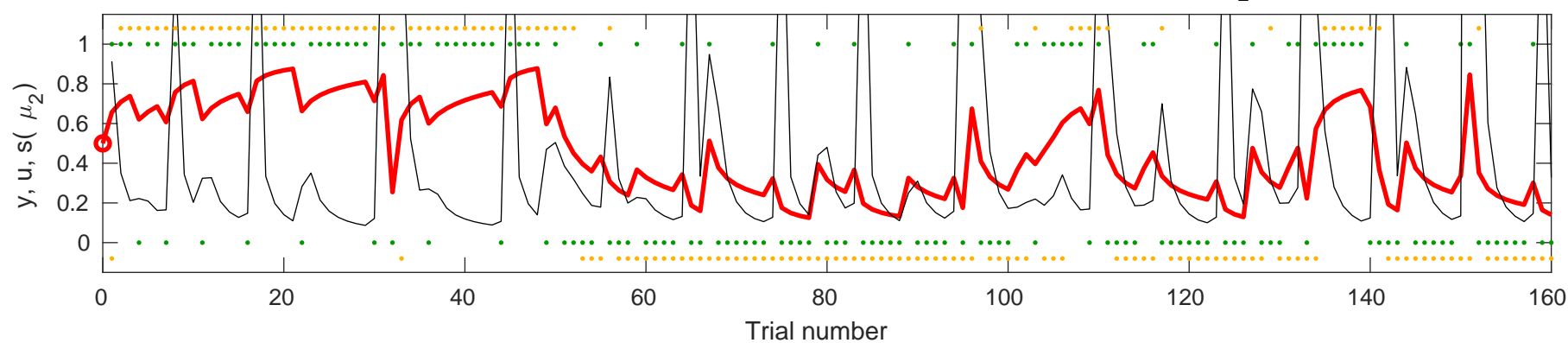
3

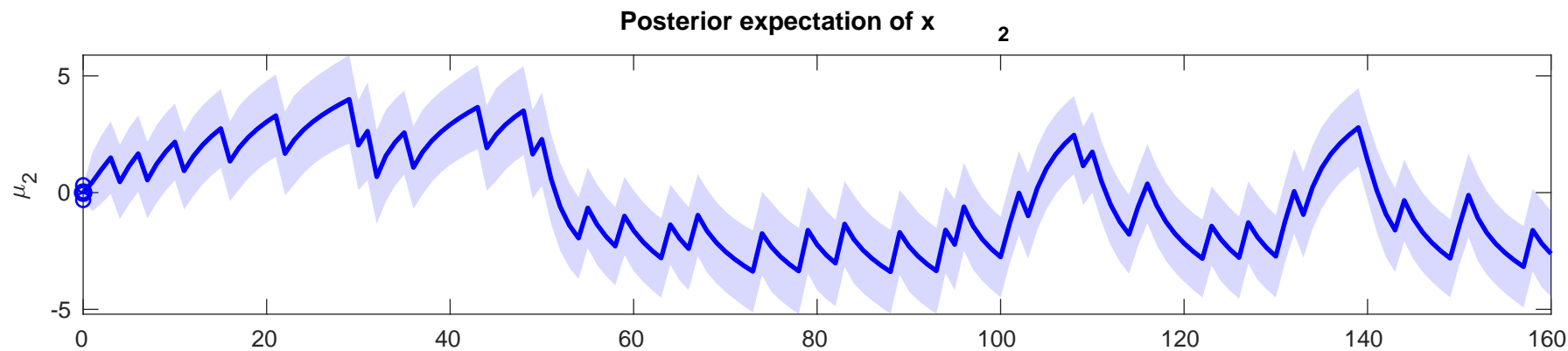
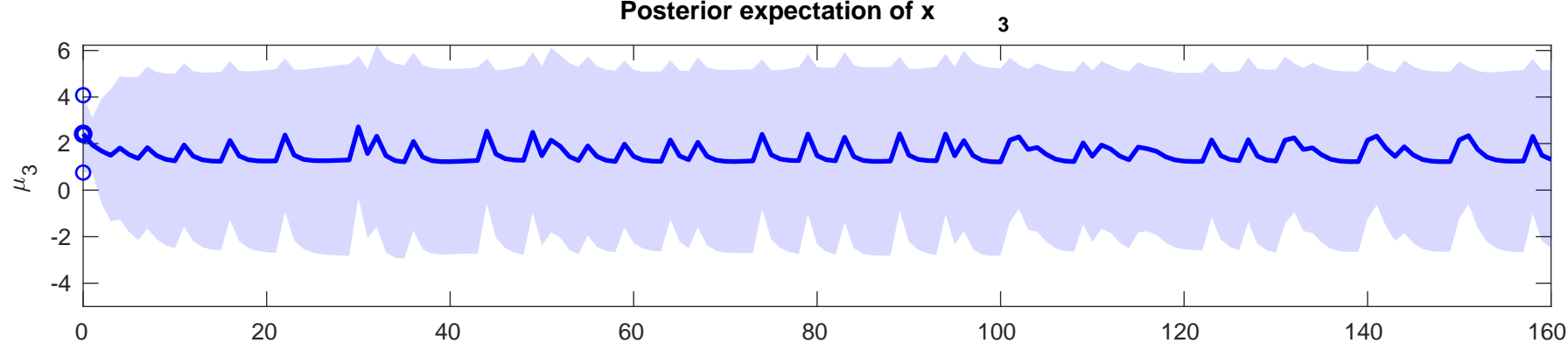
Posterior expectation of  $x$ 

2

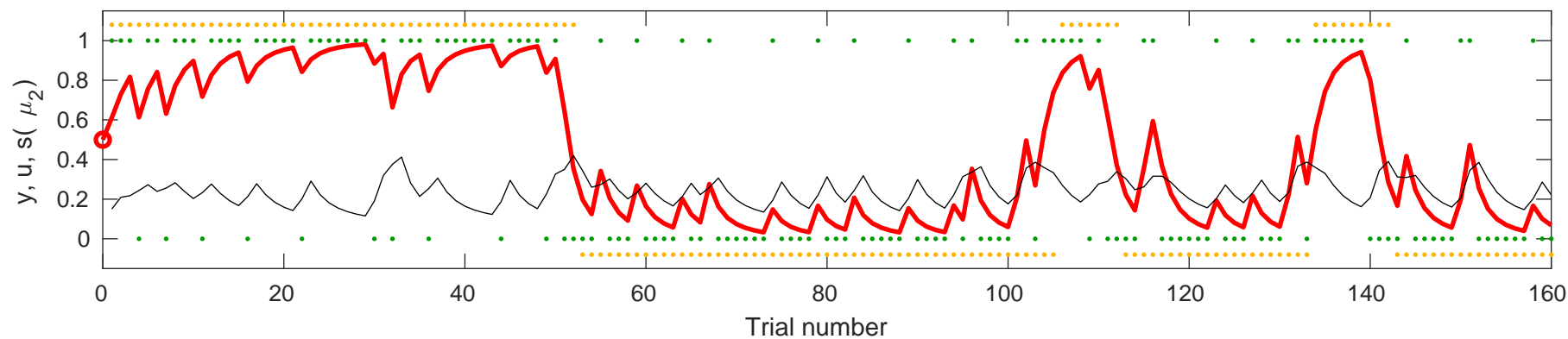


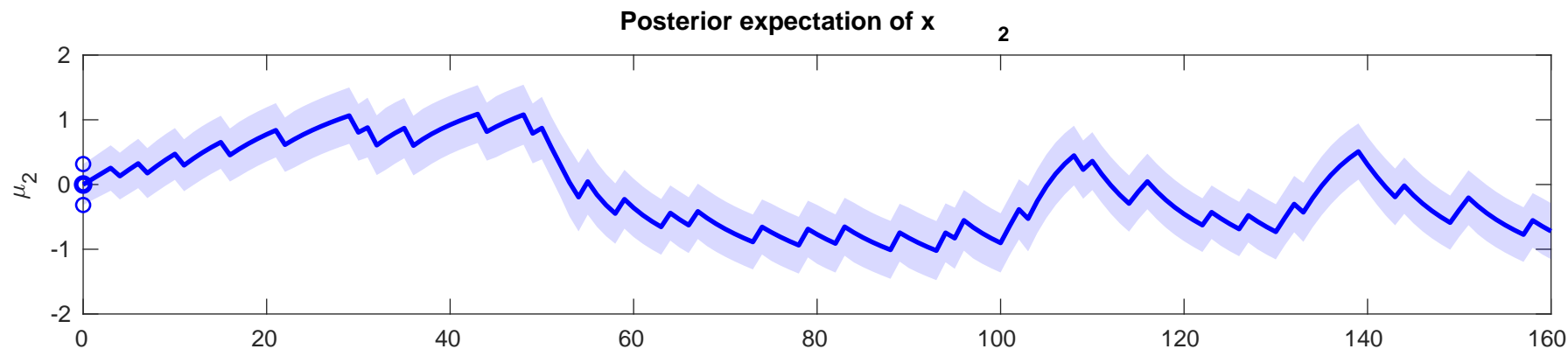
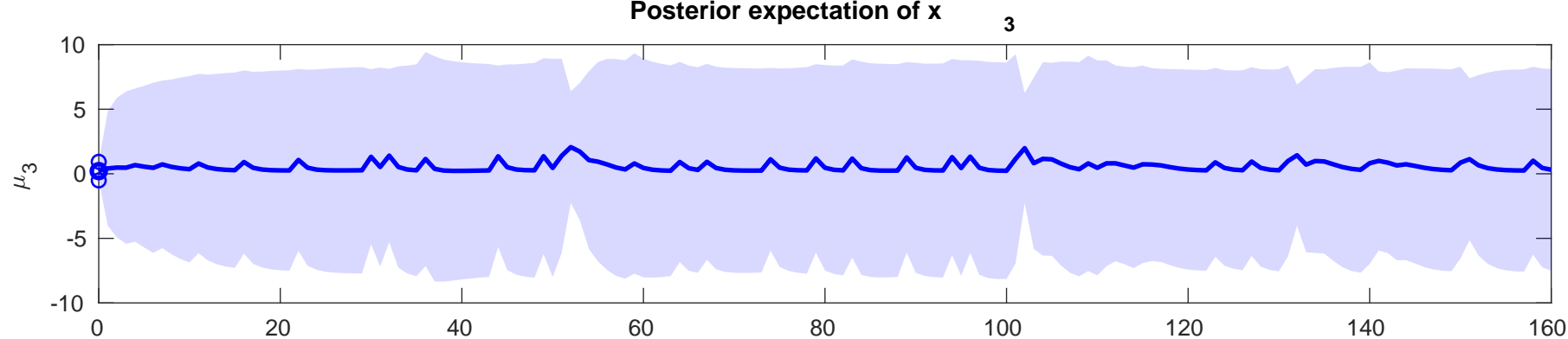
se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-2.3997$



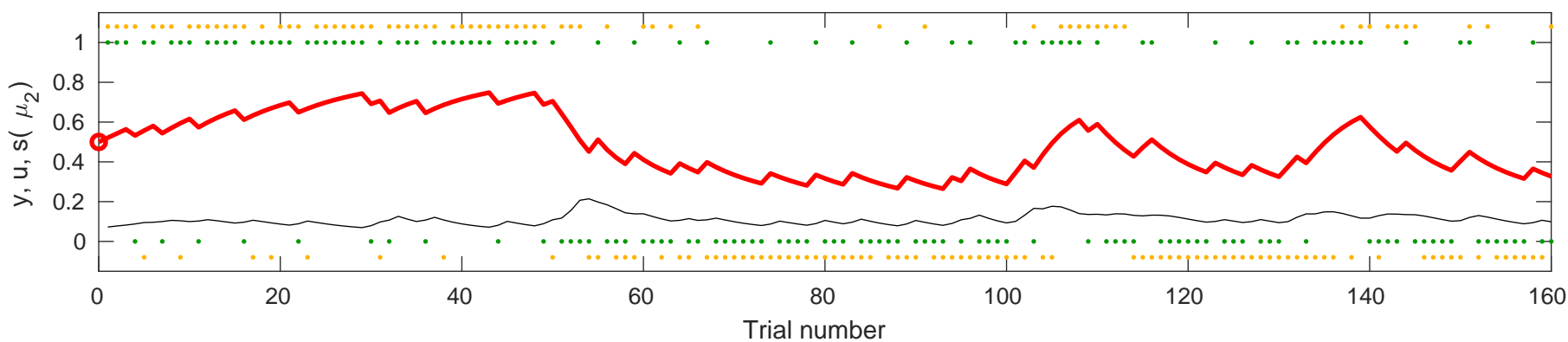


se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-1.8889$

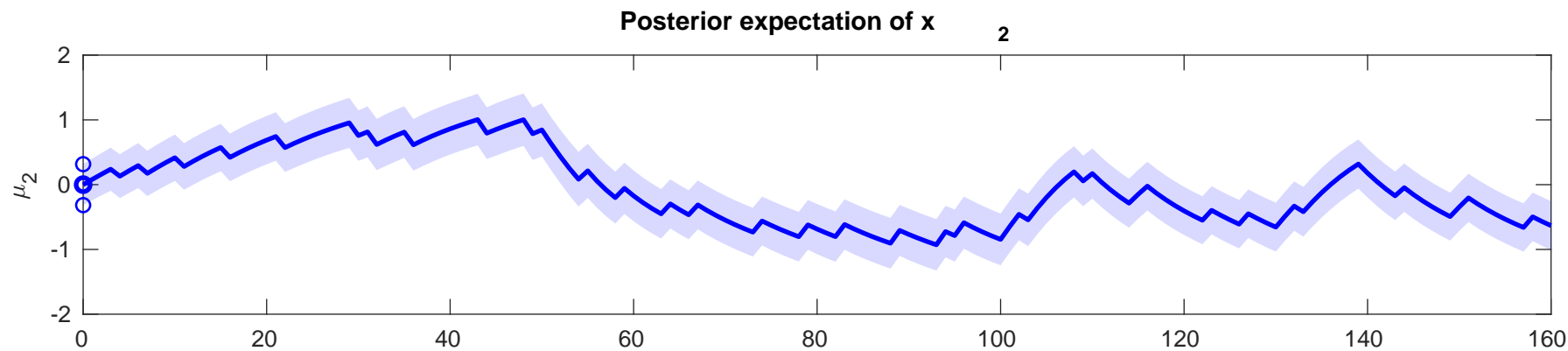
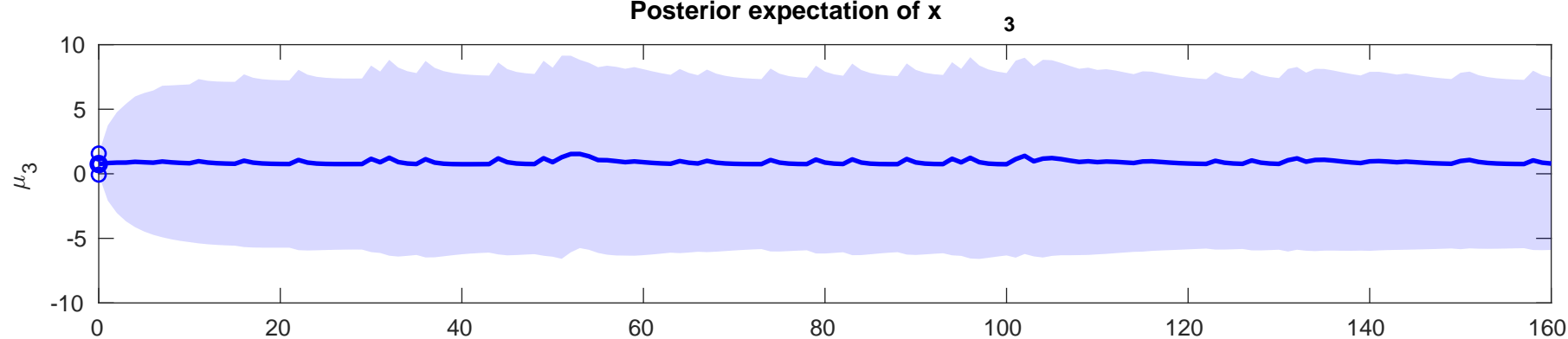




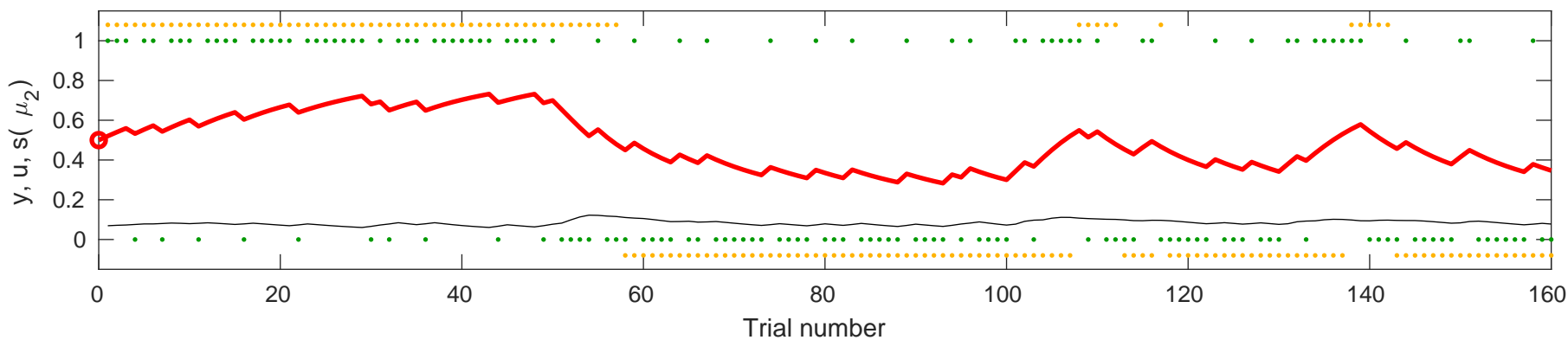
use  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-4.463$

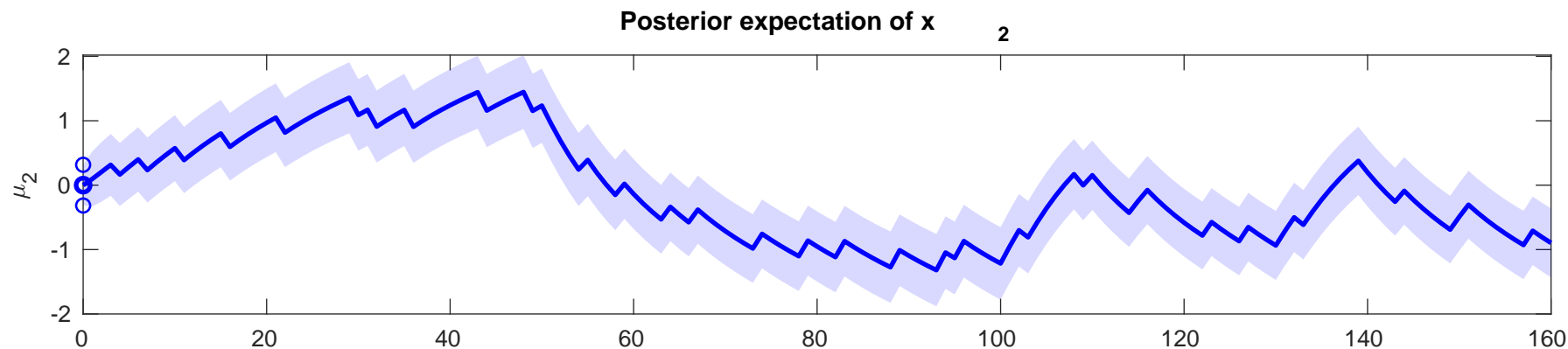
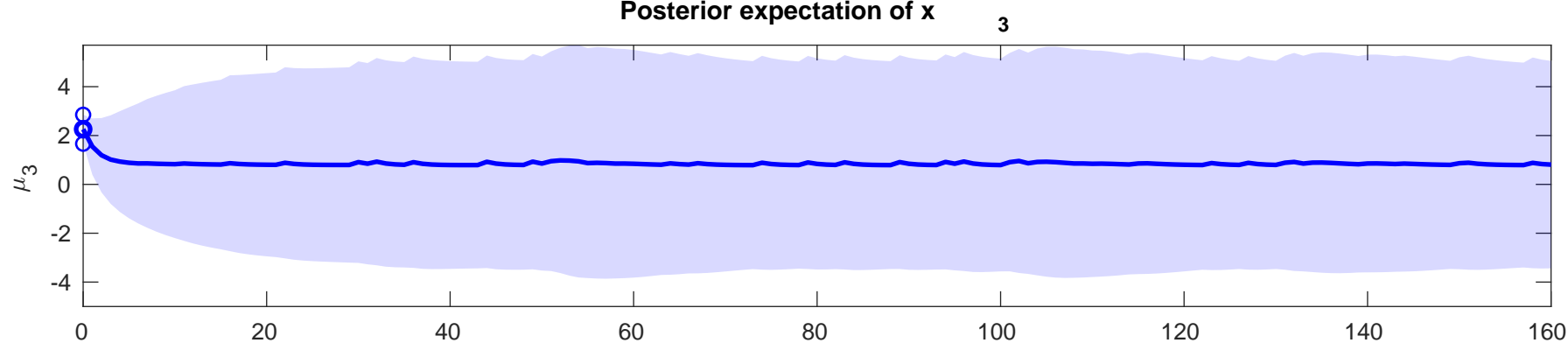




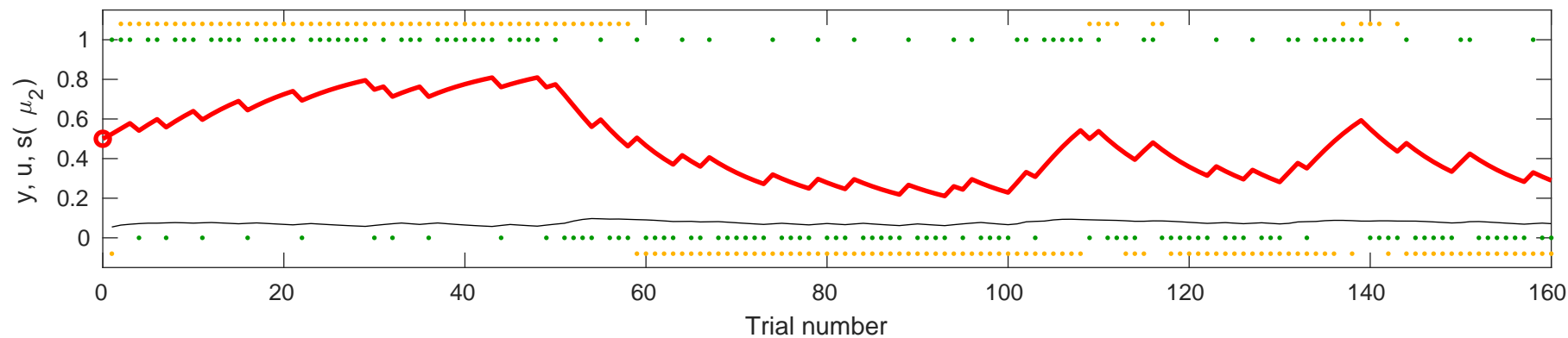


se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-5.2889$



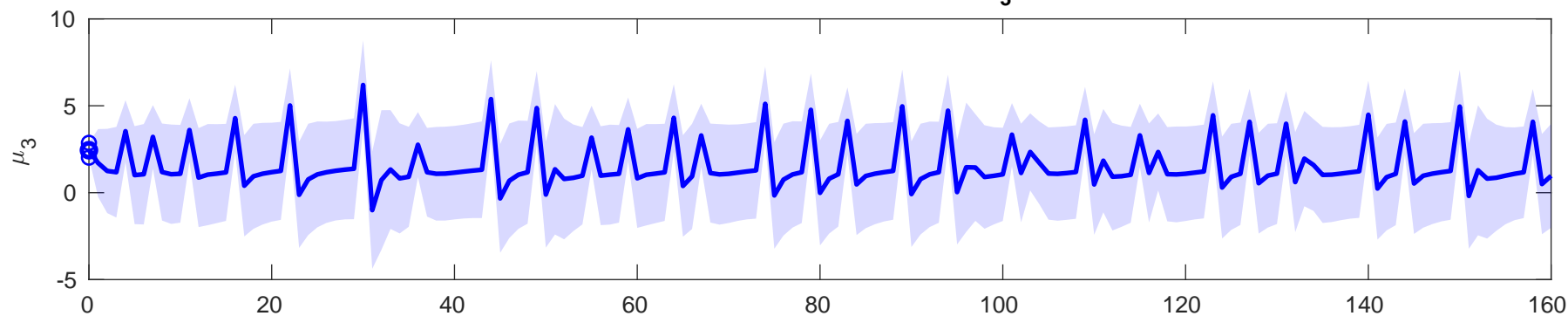


the  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-4.6366$

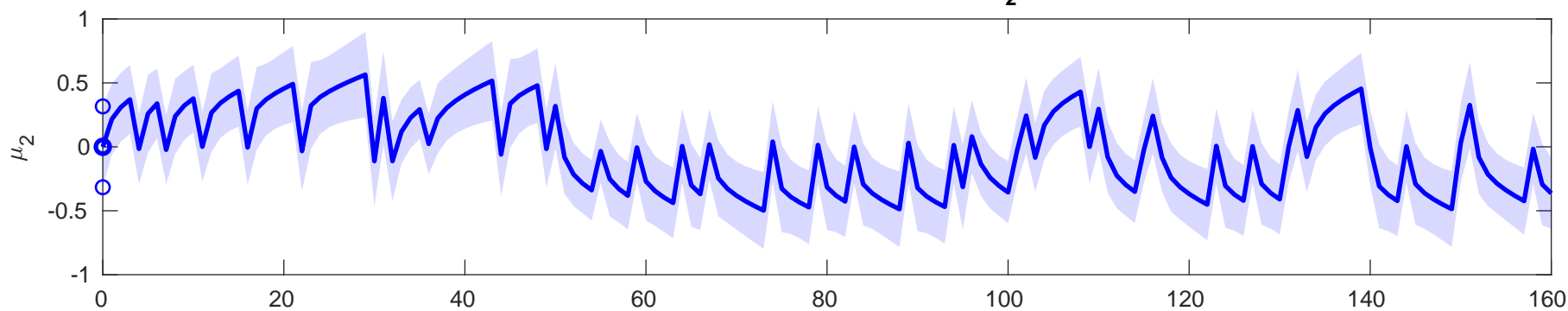


Posterior expectation of  $x$ 

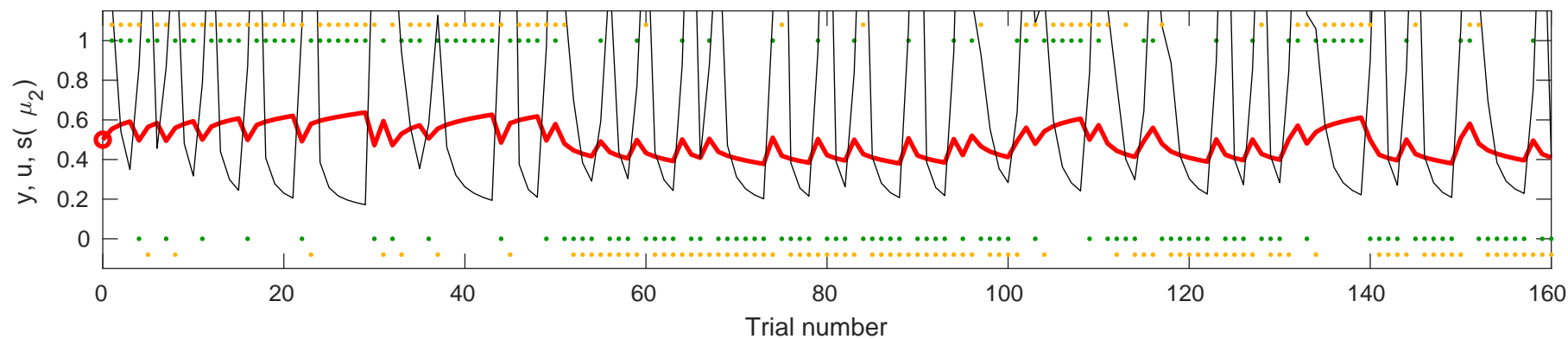
3

Posterior expectation of  $x$ 

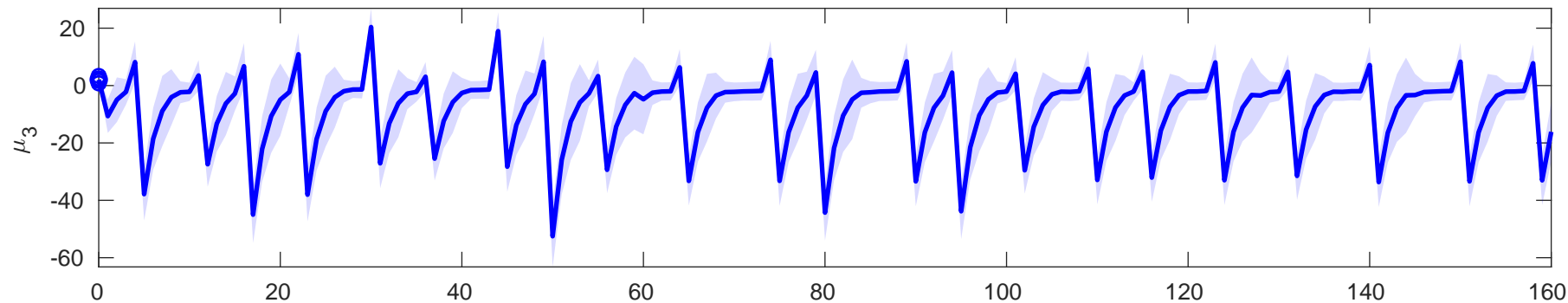
2



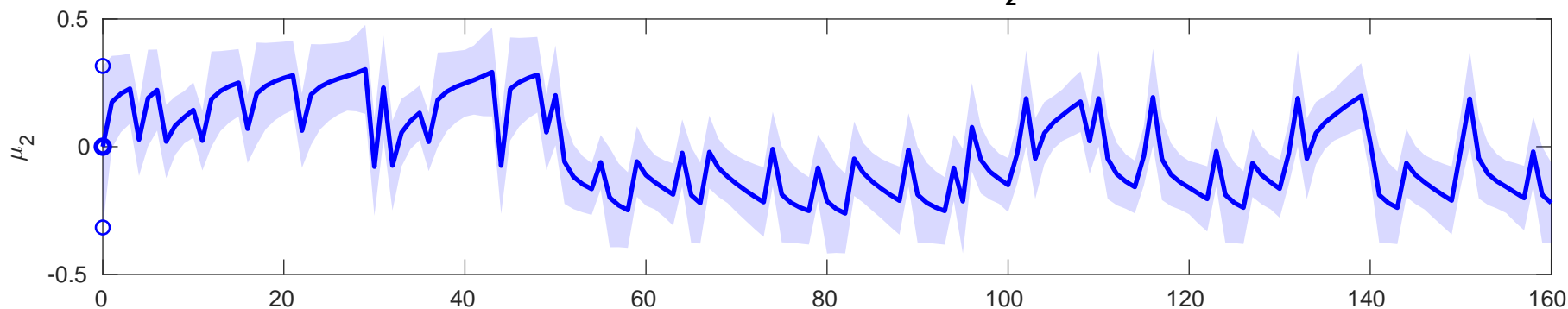
se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-4.7642$



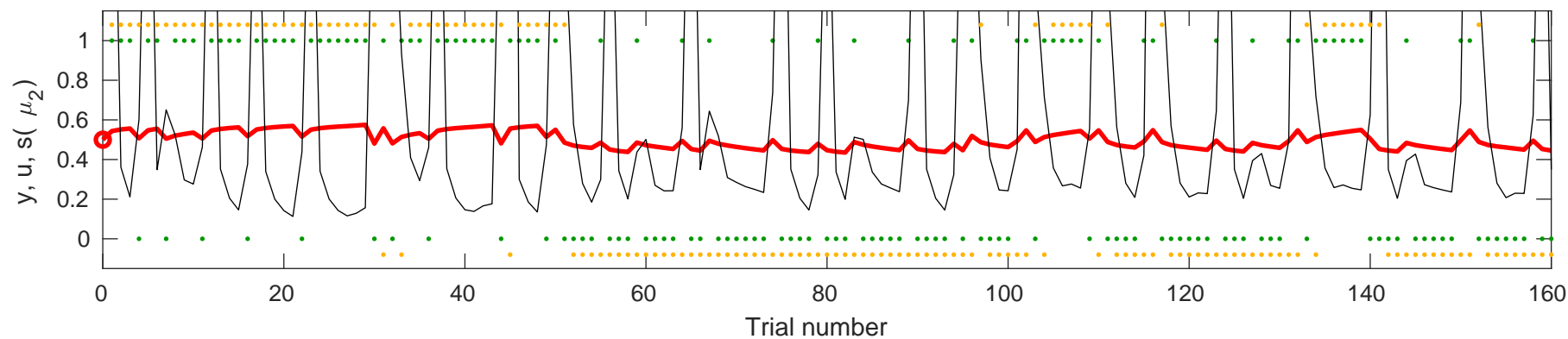
Posterior expectation of  $x$  **3**



Posterior expectation of  $x$  **2**

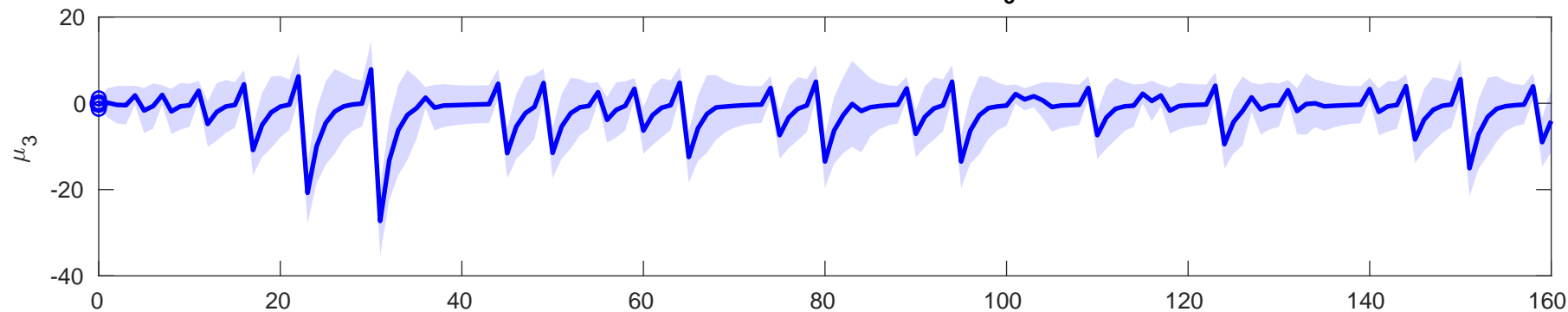


Plot of the posterior expectation of  $x_2$  (red line) over 160 trials. The y-axis ranges from -0.5 to 0.5. The plot shows a highly oscillatory signal with a light blue shaded area representing the uncertainty. The signal starts at approximately 0.3, drops to -0.3, and then fluctuates between -0.3 and 0.3.

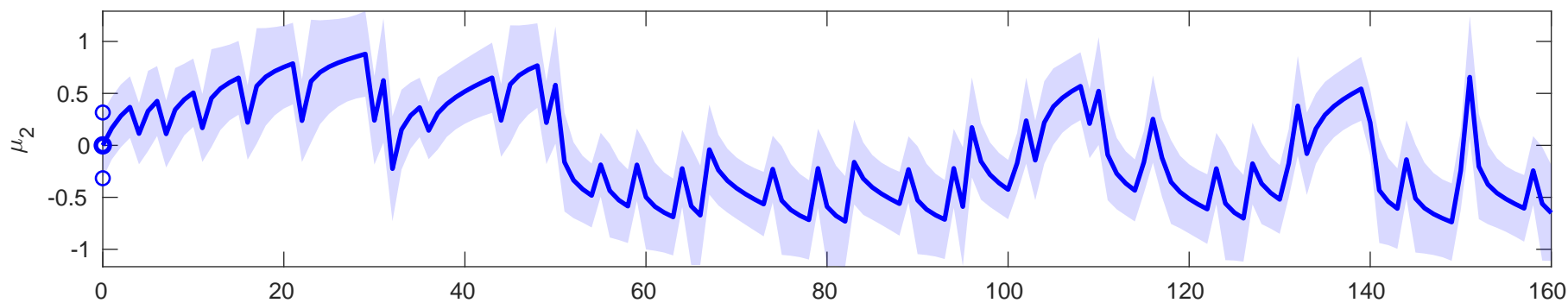


Posterior expectation of  $x$ 

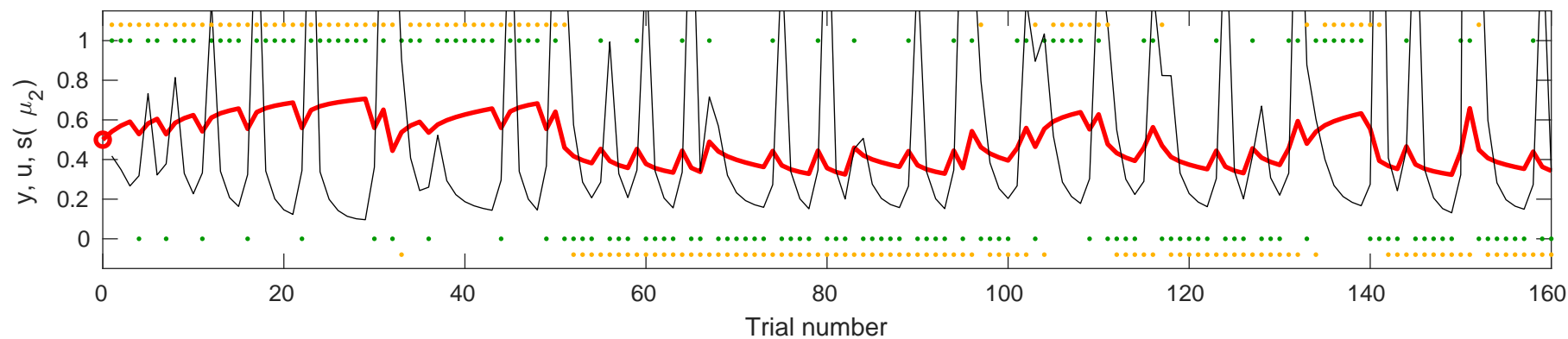
3

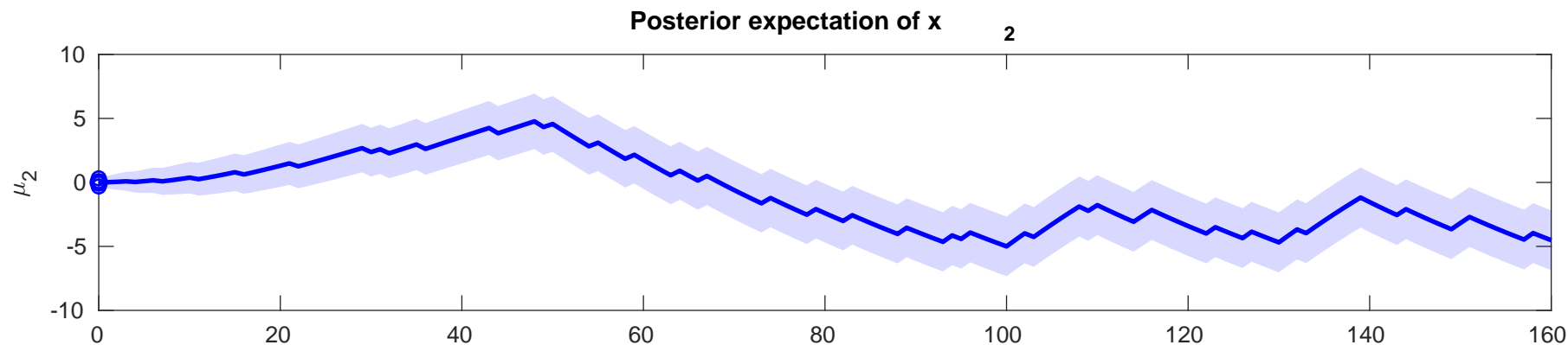
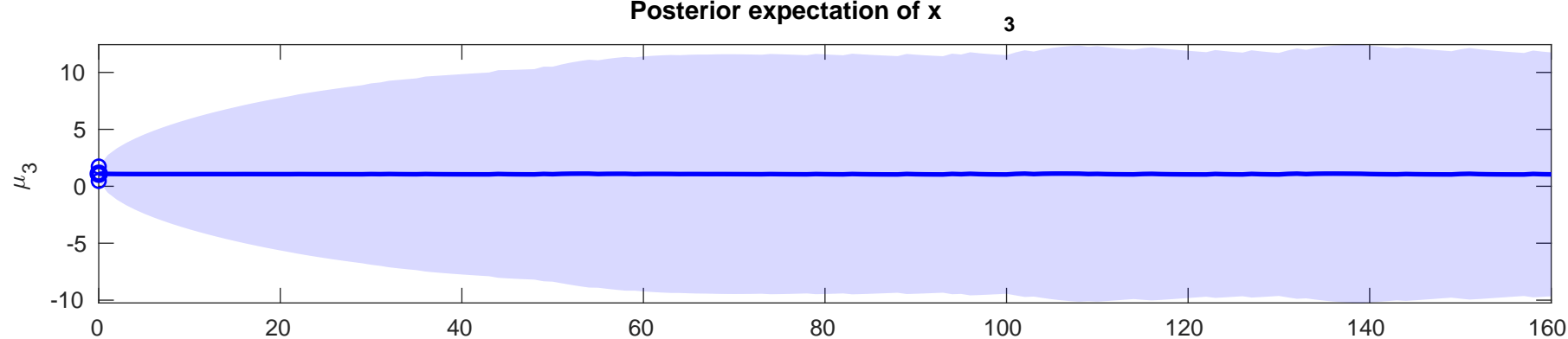
Posterior expectation of  $x$ 

2

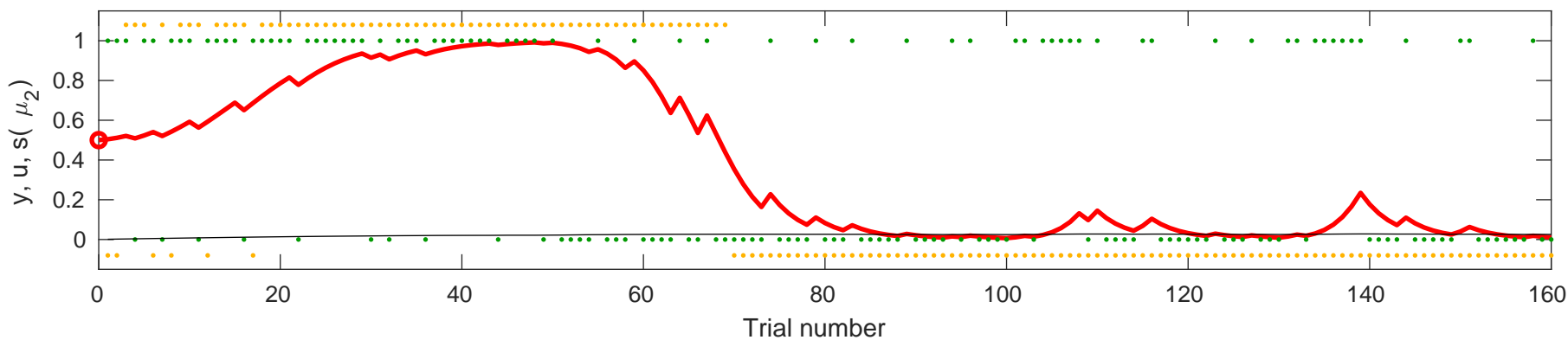


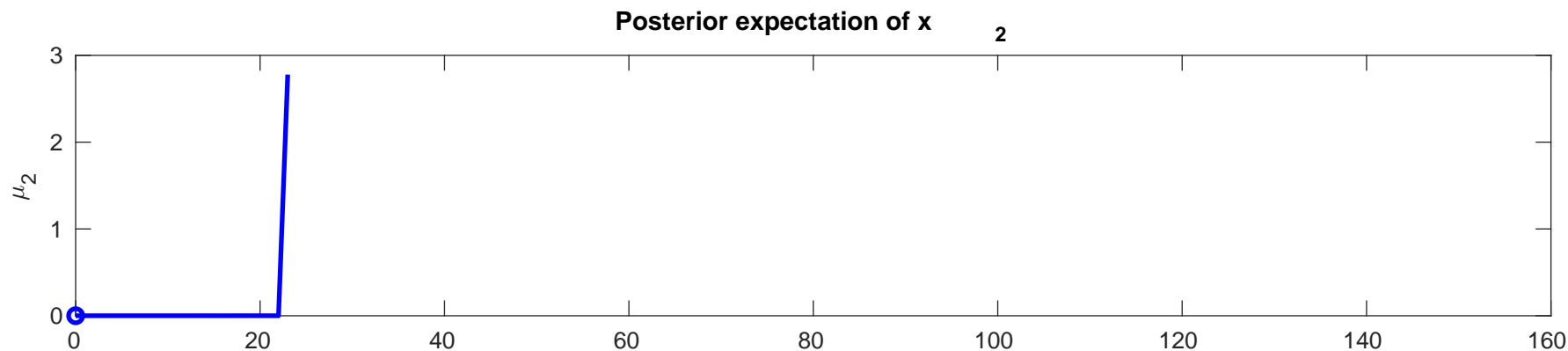
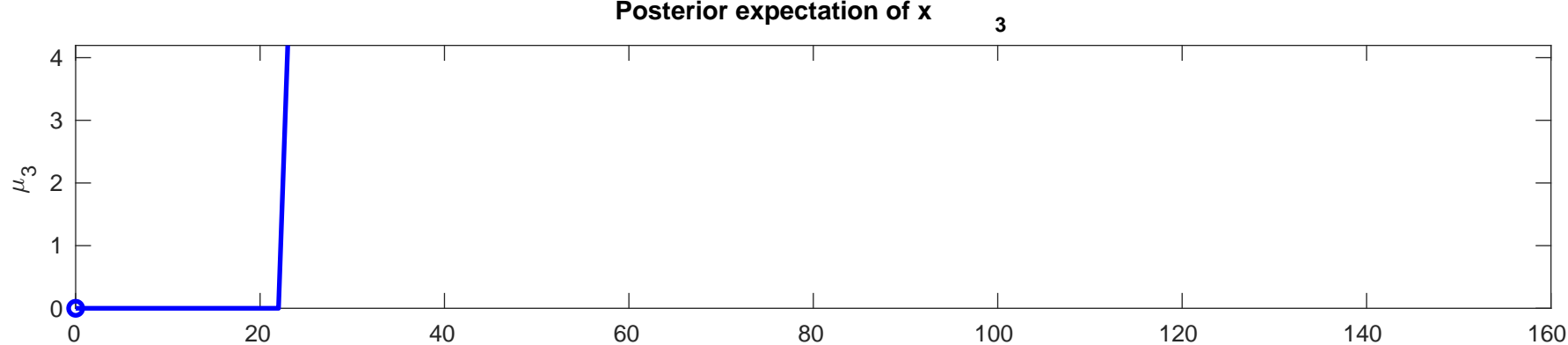
Plot of the posterior expectation of  $x_2$  (red line) over 160 trials. The y-axis is labeled  $\mu_2$  and ranges from -1 to 1. The plot shows a highly volatile signal fluctuating around zero, with a light blue shaded area representing the uncertainty. The signal starts at 0 at trial 0.



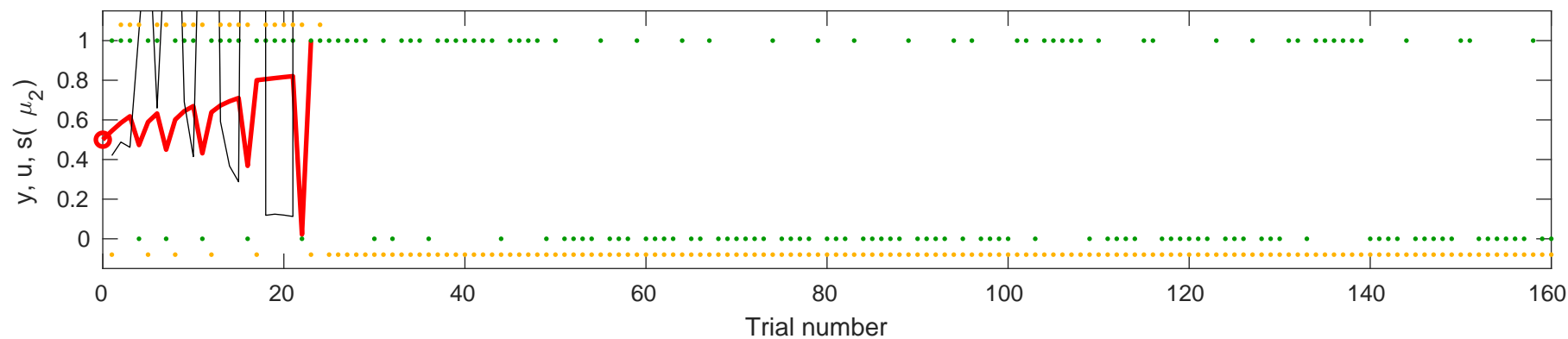


se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-2.9923$



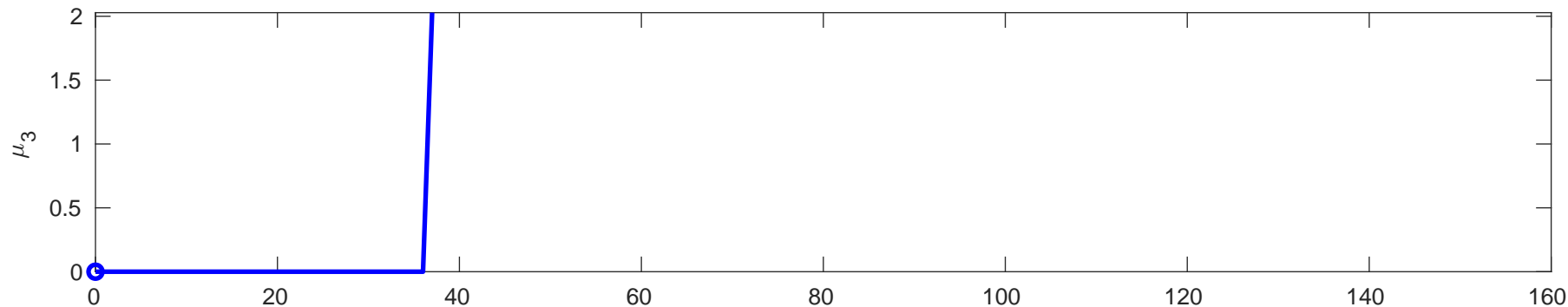


se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0.0$ ,  $\kappa=1$ ,  $\omega=-2.4053$



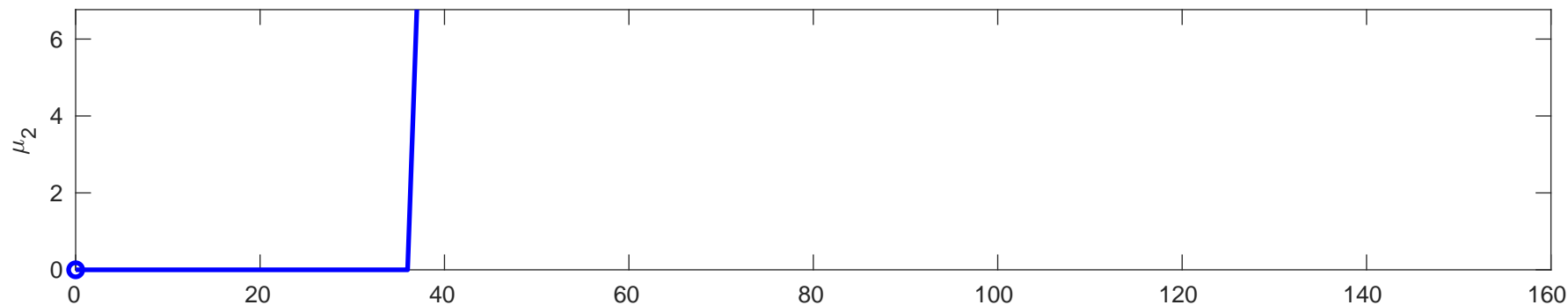
Posterior expectation of  $x$

3

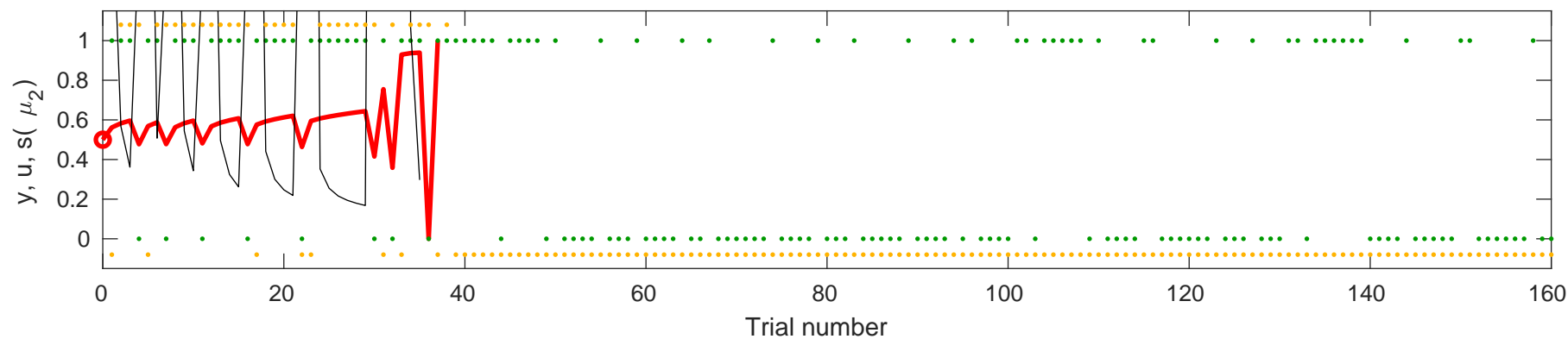


Posterior expectation of  $x$

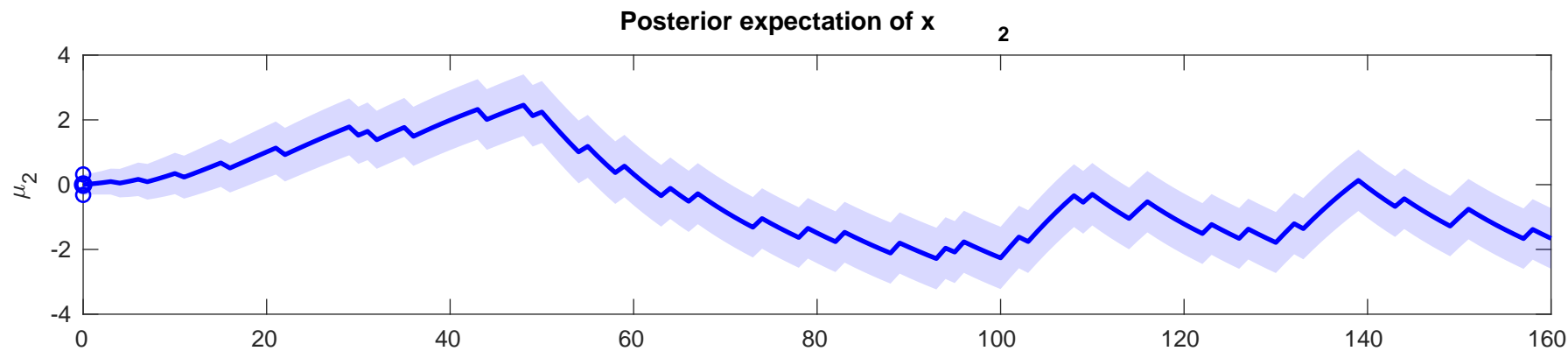
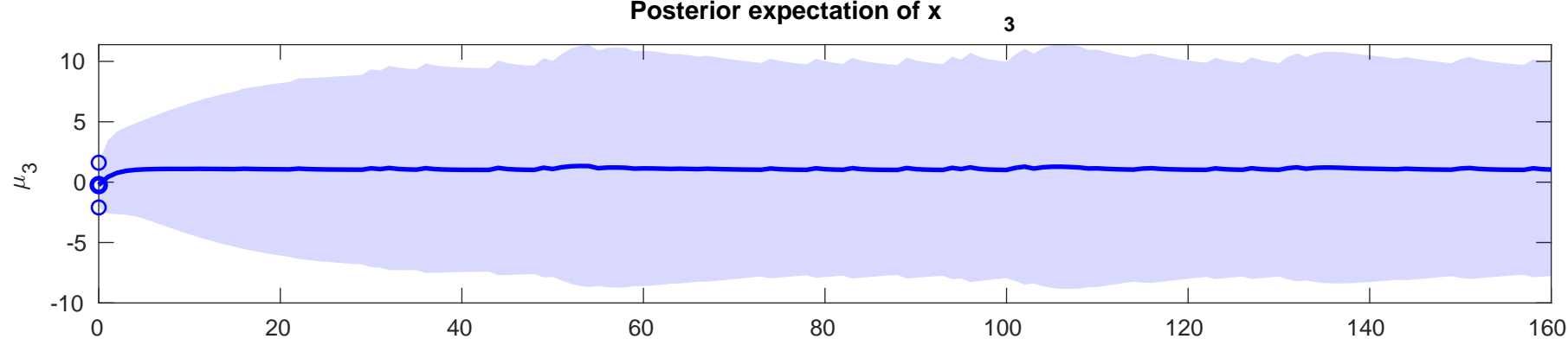
2



se  $y$  (orange), input  $u$  (green), learning rate (fine black), and posterior expectation of input  $s(\mu_2)$  (red) for  $\rho=0$ ,  $\kappa=1$ ,  $\omega=-2.7853$







se y (orange), input u (green), learning rate (fine black), and posterior expectation of input s(  $\mu_2$  ) (red) for  $\rho=0$  0,  $\kappa=1$ ,  $\omega=-4.25$

