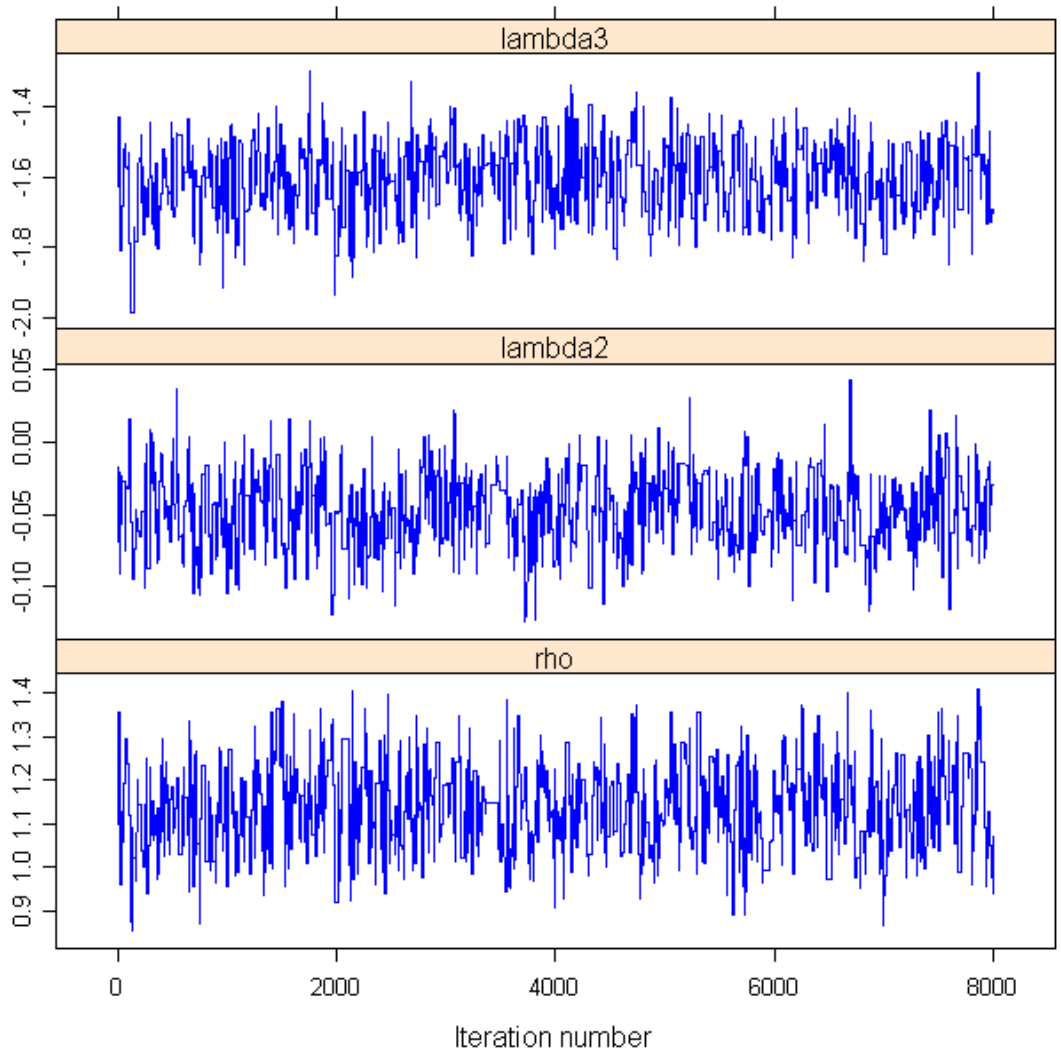
Standard Maximum Likelihood

```
 results
            [,1]       [,2]       [,3]         [,4]
[1,]  1.14217375 0.08810331  12.964027 1.187315e-06
[2,] -0.04587087 0.02420965  -1.894735 9.473289e-02
[3,] -1.60468315 0.09017014 -17.796169 1.017642e-07
```

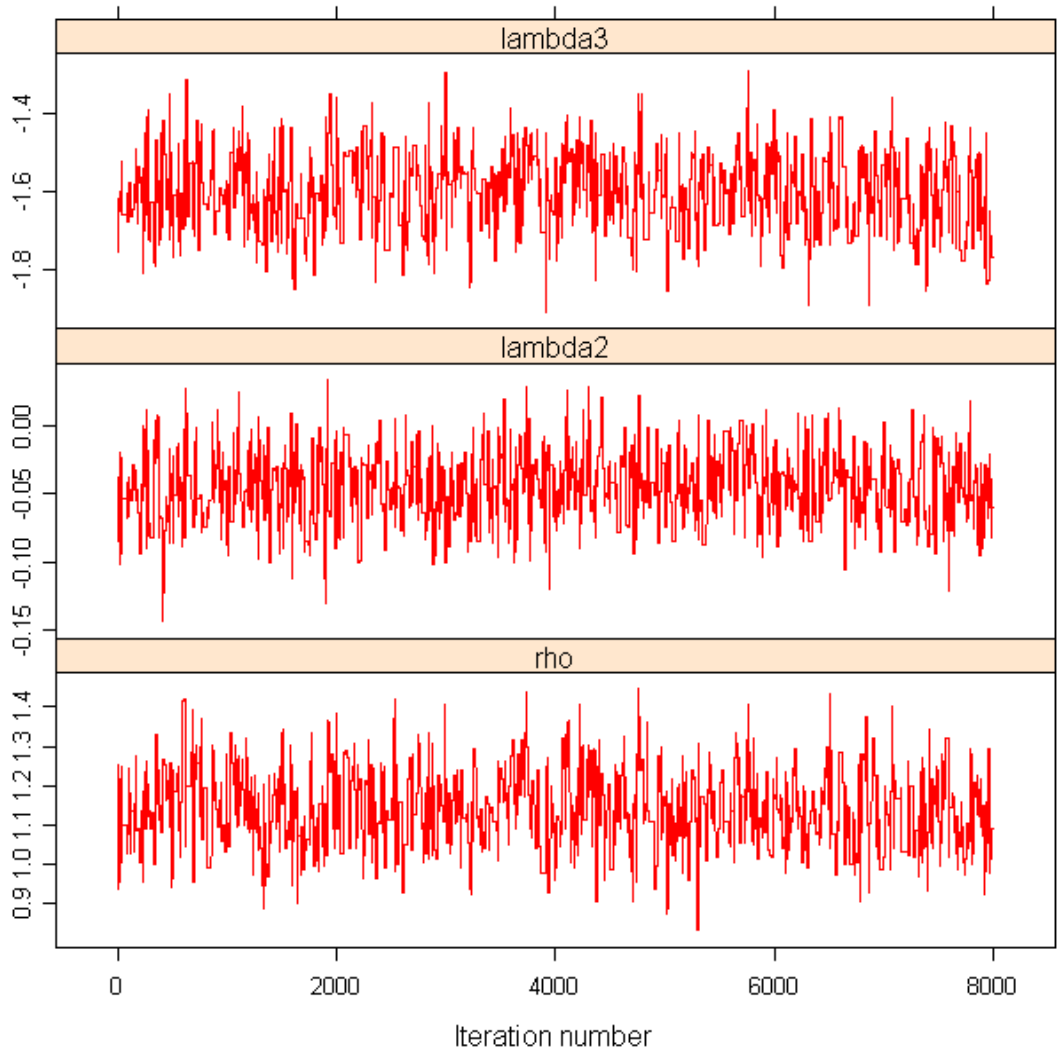
gibbs: Metropolis Within Gibbs from LearnBayes Package



Summary of the Chains Using Coda Package

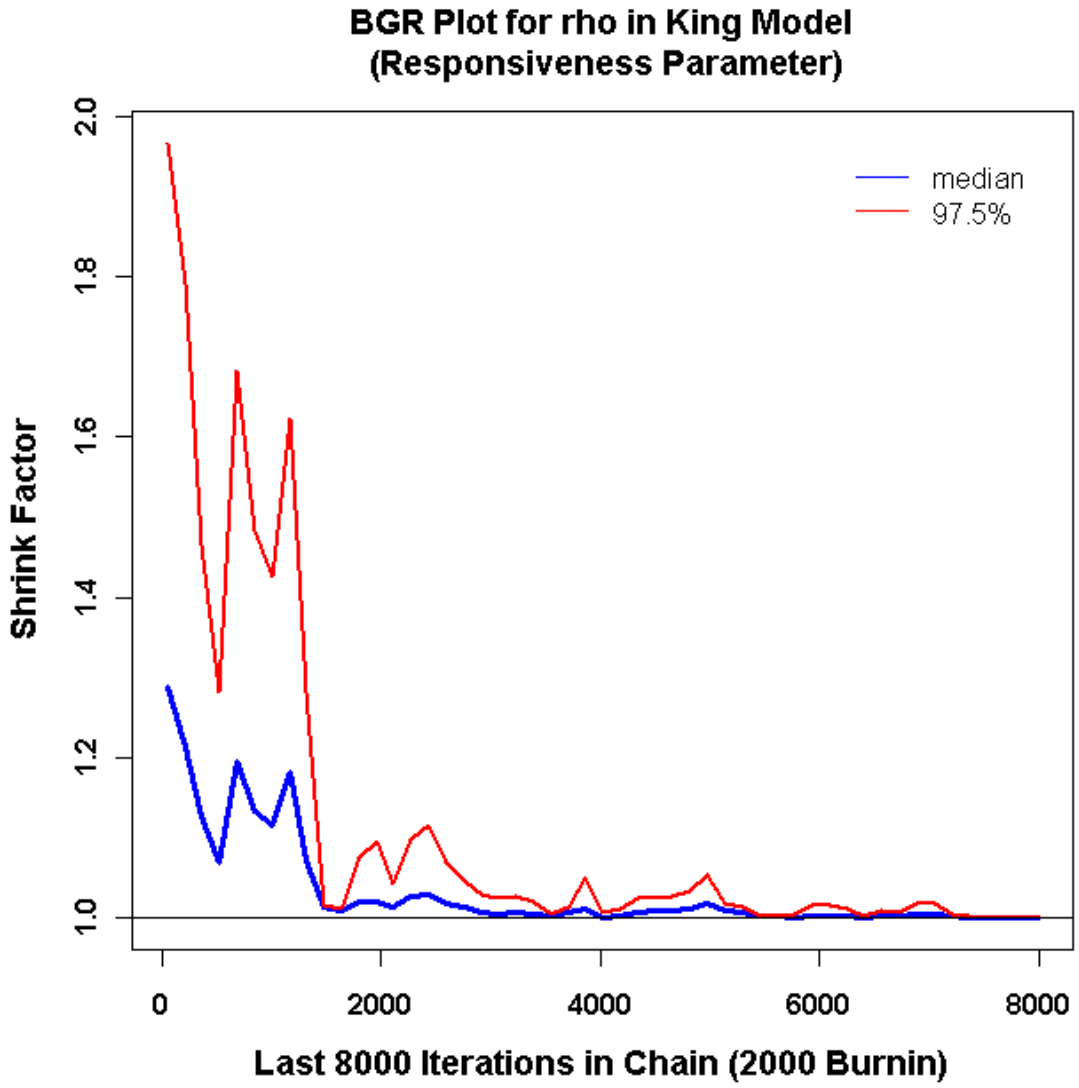
```
mysummary

Iterations = 1:8000
Thinning interval = 1
Number of chains = 1
Sample size per chain = 8000

1. Empirical mean and standard deviation for each variable,
   plus standard error of the mean:

            Mean      SD  Naive SE Time-series SE
rho      1.13718 0.09875 0.0011041       0.005365
lambda2 -0.04733 0.02562 0.0002865       0.001431
lambda3 -1.60683 0.09833 0.0010994       0.006108

2. Quantiles for each variable:

           2.5%      25%      50%      75%     97.5%
rho      0.9577  1.06593  1.13549  1.20791  1.347990
lambda2 -0.1006 -0.06502 -0.04665 -0.02934  0.003464
lambda3 -1.8025 -1.67459 -1.60040 -1.53620 -1.428801


results2 -- directly calculated as a check
             [,1]       [,2]         [,3]        [,4]
[1,]  1.13717543 0.09875170 0.0011040776 0.005365267
[2,] -0.04733337 0.02562136 0.0002864555 0.001430573
[3,] -1.60683243 0.09832984 0.0010993611 0.006107505

results22 -- Time-series SE Using 40 Group Means of Size 200 each
             [,1]        [,2]        [,3]
[1,] 0.004765351 0.001407548 0.005182408
```

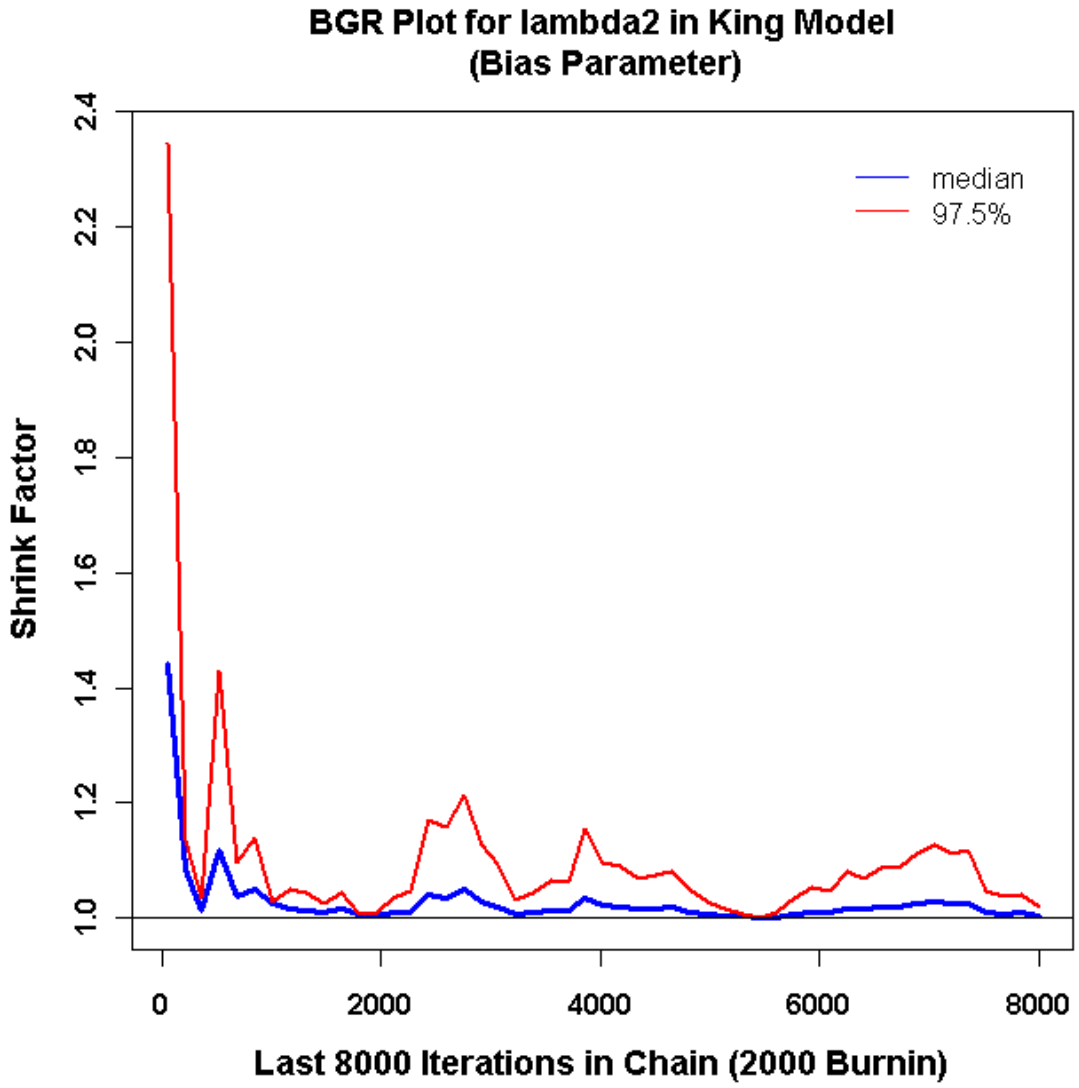
gibbs: Metropolis Within Gibbs from LearnBayes Package with very diffuse starts

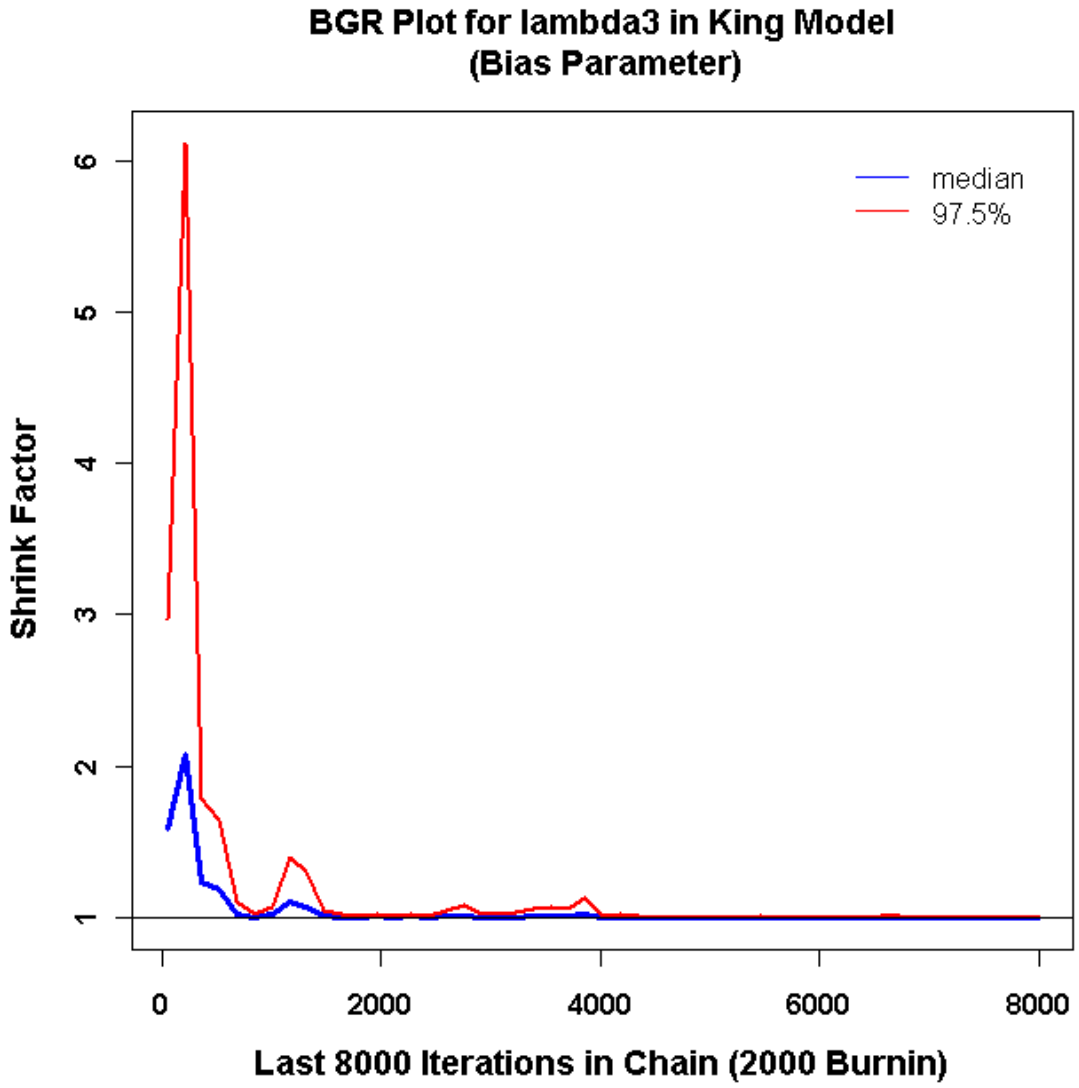


Summary of the Chains Using Coda Package

```
mysummary2

Iterations = 1:8000
Thinning interval = 1
Number of chains = 1
Sample size per chain = 8000

1. Empirical mean and standard deviation for each variable,
   plus standard error of the mean:

          Mean      SD  Naive SE Time-series SE
rho      1.139 0.09511 0.0010634       0.005405
lambda2 -0.045 0.02483 0.0002777       0.001114
lambda3 -1.602 0.09696 0.0010841       0.005633

2. Quantiles for each variable:

            2.5%      25%      50%      75%     97.5%
rho      0.96933  1.07762  1.13459  1.20076  1.322297
lambda2 -0.09106 -0.06169 -0.04575 -0.02872  0.003150
lambda3 -1.78279 -1.66718 -1.60430 -1.53285 -1.421126


results3 – directly calculated as a check
            [,1]       [,2]         [,3]        [,4]
[1,]  1.13948836 0.09511139 0.0010633777 0.005404596
[2,] -0.04500429 0.02483468 0.0002776602 0.001113630
[3,] -1.60217704 0.09696178 0.0010840656 0.005633275

results33 -- Time-series SE Using 40 Group Means of Size 200 each
            [,1]        [,2]        [,3]
[1,] 0.005498435 0.001111277 0.005568497
```


BGR Plot for rho in King Model
(Responsiveness Parameter)
Shrink Factor
2.0
1.8
1.6
1.4
1.2
1.0
median
97.5%
0
2000
4000
6000
8000
Last 8000 Iterations in Chain (2000 Burnin)


BGR Plot for lambda2 in King Model
(Bias Parameter)
Shrink Factor
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
median
97.5%
0
2000
4000
6000
8000
Last 8000 Iterations in Chain (2000 Burnin)


BGR Plot for lambda3 in King Model
(Bias Parameter)
median
97.5%
Shrink Factor
1
2
3
4
5
6
0
2000
4000
6000
8000
Last 8000 Iterations in Chain (2000 Burnin)

Autocorrelation Plots of the two Metropolis Within Gibbs Chains