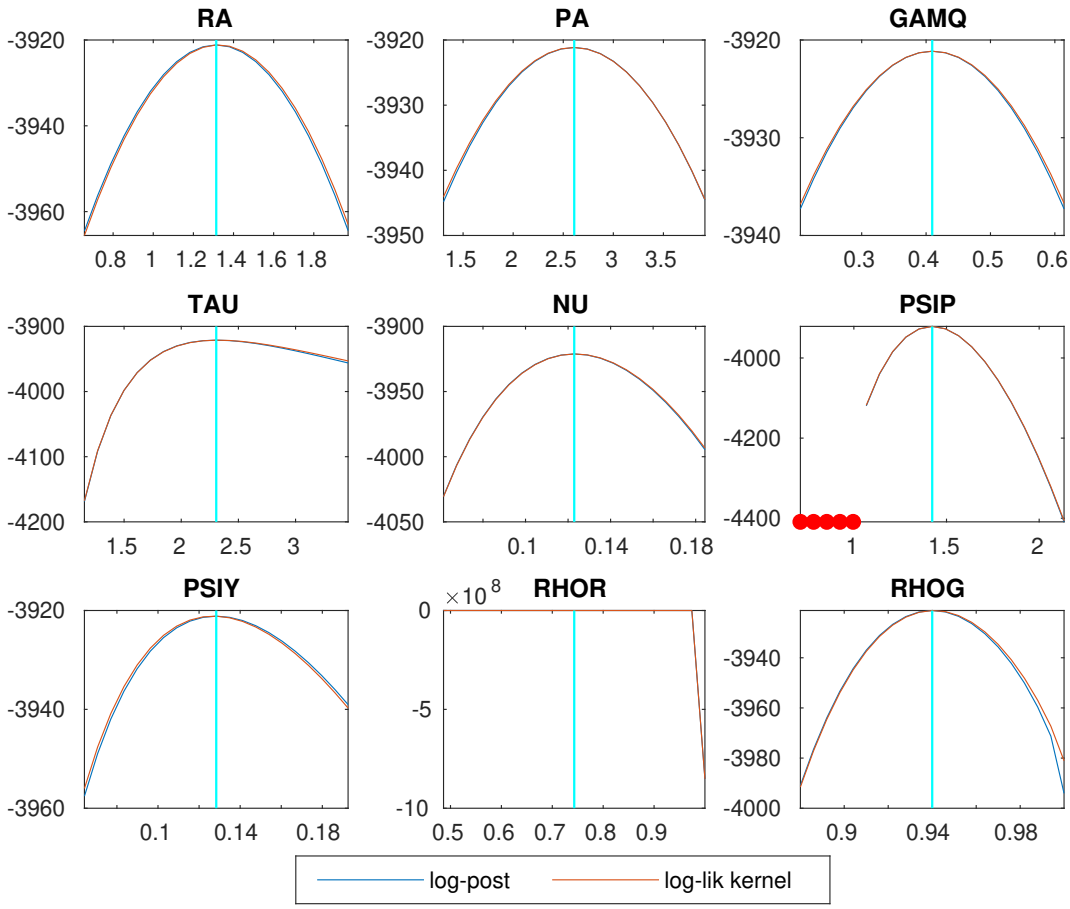

Figure 1: Check plots.

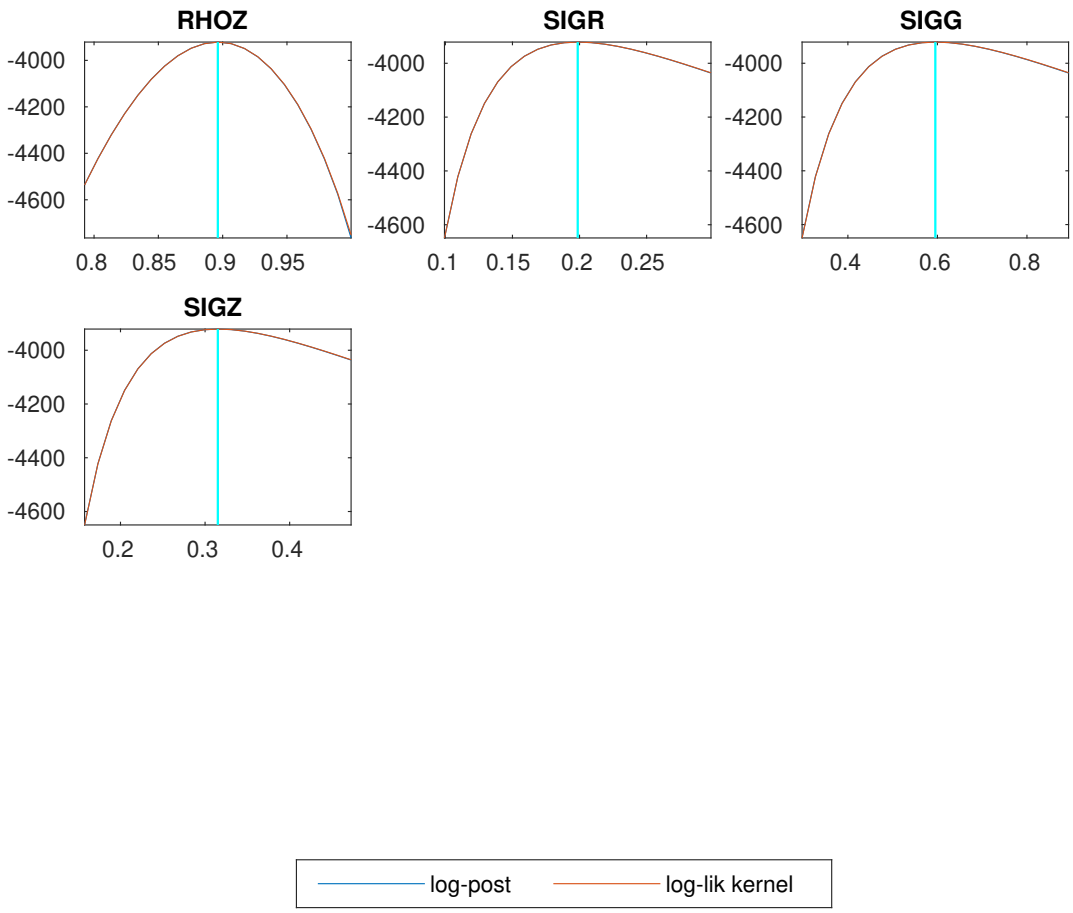

Figure 2: Check plots.

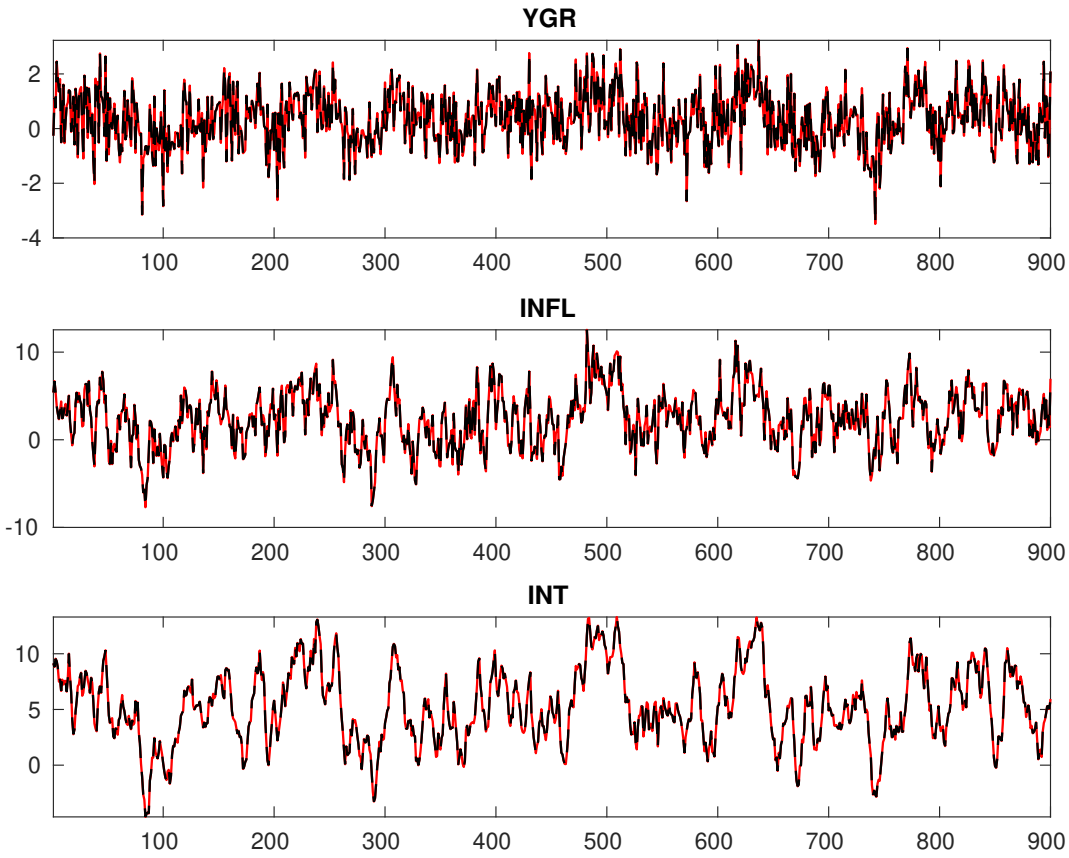

Figure 3: Historical and smoothed variables.

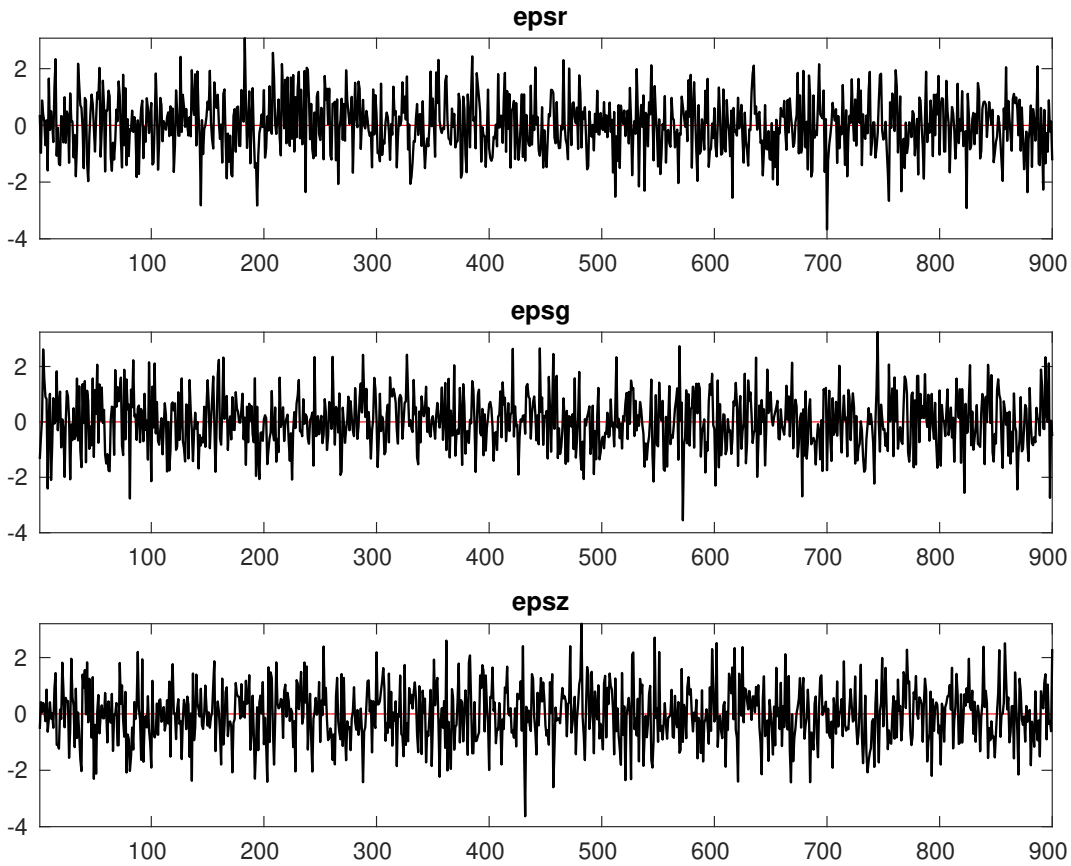

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	44.910	41.360	46.876	46.624
$\pi^{(A)}$	48.487	44.696	49.024	48.265
$\gamma^{(Q)}$	46.615	46.393	48.232	45.777
τ	48.781	49.805	47.223	47.075
ν	50.769	51.987	50.507	46.378
ψ_π	47.792	41.979	47.335	48.844
ψ_y	58.117	56.792	55.001	52.905
ρ_R	47.447	47.916	45.675	45.396
ρ_g	45.295	45.161	45.531	47.006
ρ_z	44.066	50.126	43.957	44.344
σ_R	40.282	46.966	47.341	43.809
σ_g	47.926	47.726	45.920	45.251
σ_z	49.942	45.266	43.825	47.196

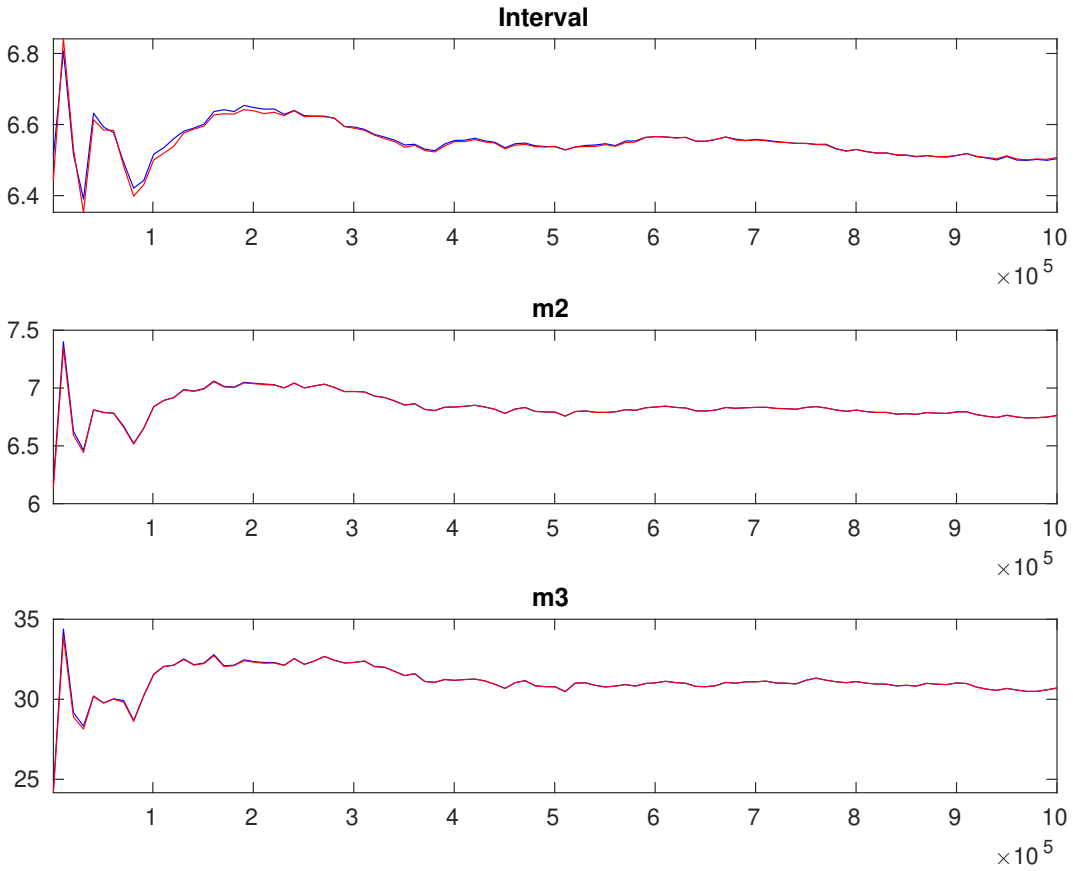

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
r_A	gamm	0.800	0.5000	1.310	0.2230	0.9404	1.6748
$\pi^{(A)}$	gamm	4.000	2.0000	2.620	0.3852	1.9856	3.2512
$\gamma^{(Q)}$	norm	0.400	0.2000	0.411	0.0881	0.2680	0.5573
τ	gamm	2.000	0.5000	2.368	0.2361	1.9763	2.7458
ν	beta	0.100	0.0500	0.128	0.0156	0.1024	0.1531
ψ_π	gamm	1.500	0.2500	1.431	0.0518	1.3455	1.5148
ψ_y	gamm	0.500	0.2500	0.136	0.0270	0.0918	0.1788
ρ_R	beta	0.500	0.2000	0.746	0.0104	0.7284	0.7626
ρ_g	beta	0.800	0.1000	0.941	0.0097	0.9250	0.9568
ρ_z	beta	0.660	0.1500	0.897	0.0069	0.8857	0.9084
σ_R	invg	0.300	4.0000	0.199	0.0051	0.1910	0.2077
σ_g	invg	0.400	4.0000	0.594	0.0206	0.5601	0.6279
σ_z	invg	0.400	4.0000	0.320	0.0149	0.2949	0.3438

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.3139	0.2212
$\pi^{(A)}$	gamm	4.000	2.0000	2.6097	0.3735
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4095	0.0865
τ	gamm	2.000	0.5000	2.3062	0.2281
ν	beta	0.100	0.0500	0.1229	0.0150
ψ_π	gamm	1.500	0.2500	1.4228	0.0503
ψ_y	gamm	0.500	0.2500	0.1284	0.0255
ρ_R	beta	0.500	0.2000	0.7431	0.0103
ρ_g	beta	0.800	0.1000	0.9400	0.0097
ρ_z	beta	0.660	0.1500	0.8962	0.0068
σ_R	invg	0.300	4.0000	0.1987	0.0050
σ_g	invg	0.400	4.0000	0.5953	0.0203
σ_z	invg	0.400	4.0000	0.3151	0.0146

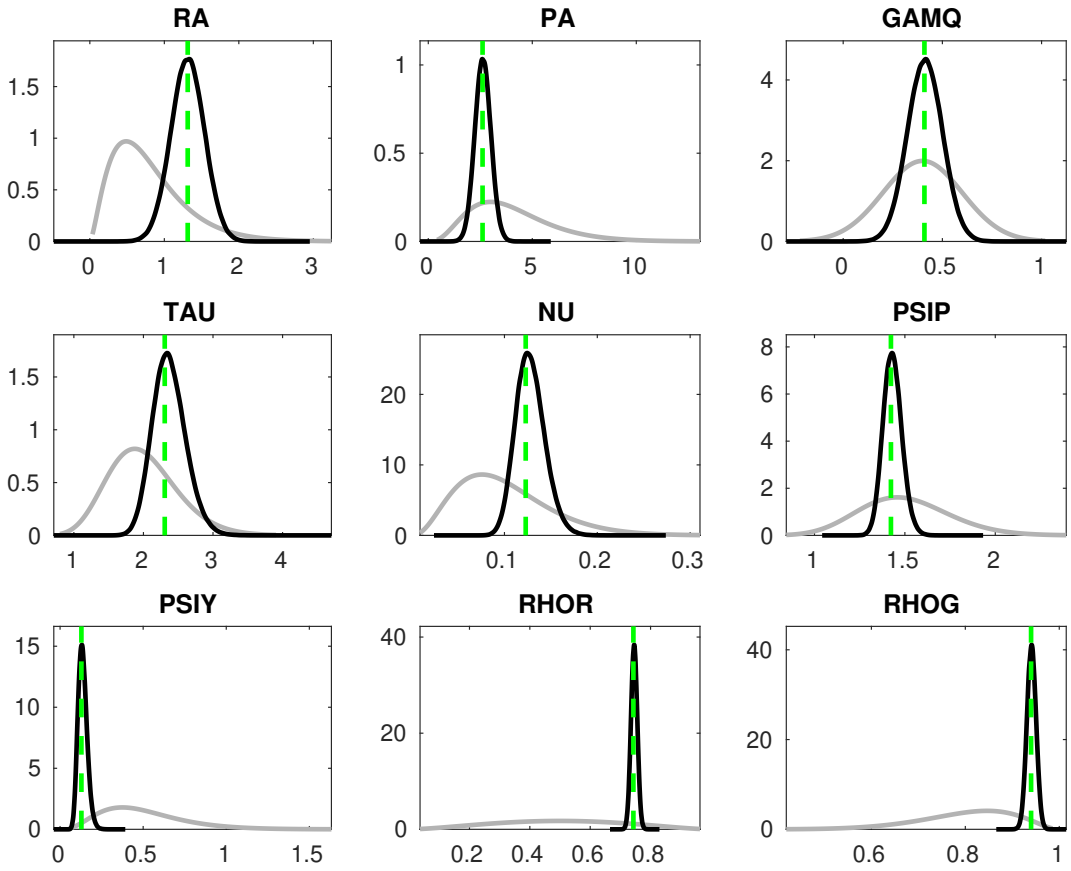

Figure 6: Priors and posteriors.

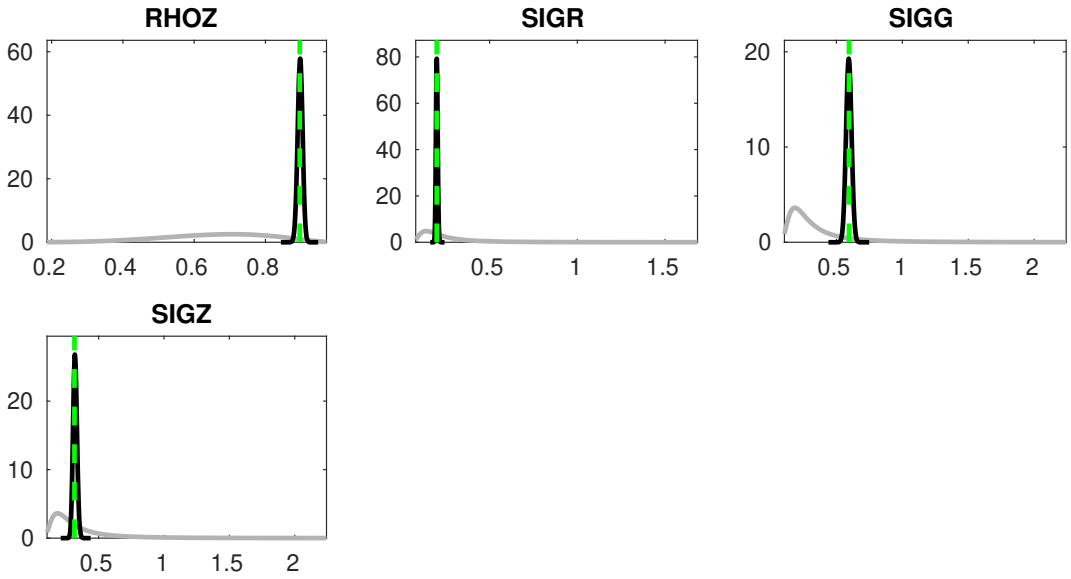

Figure 7: Priors and posteriors.

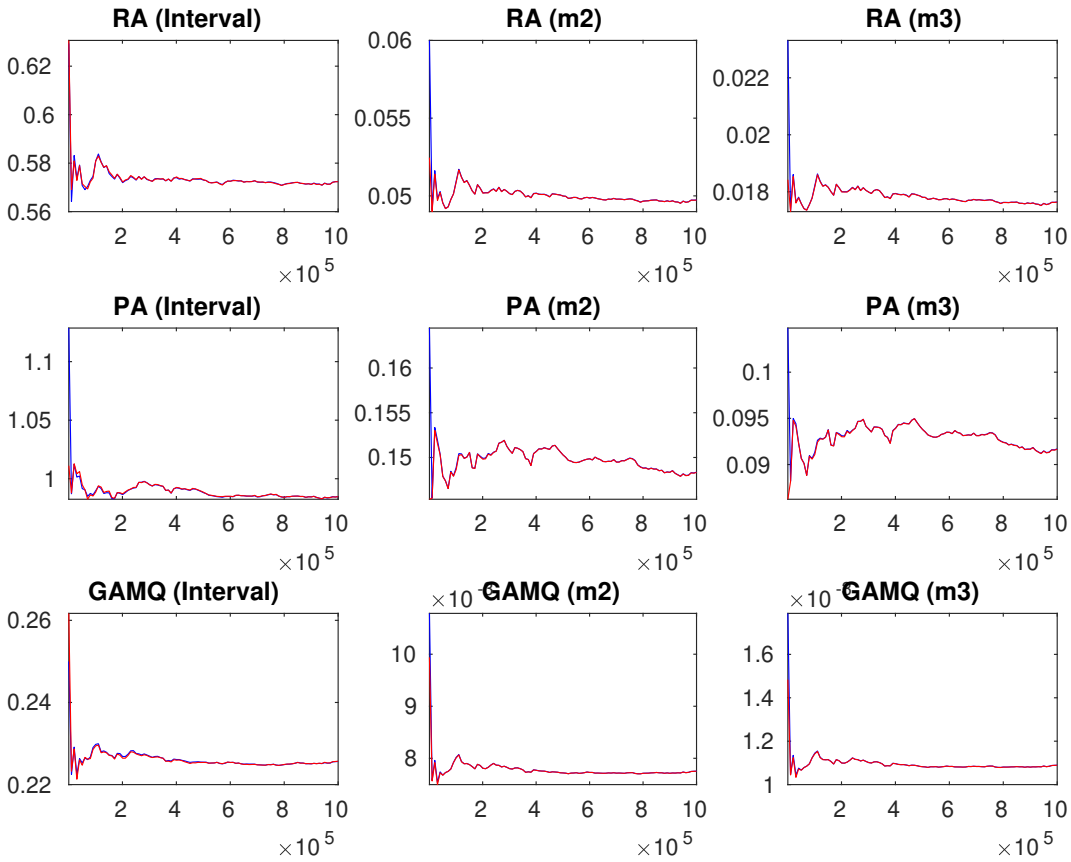

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

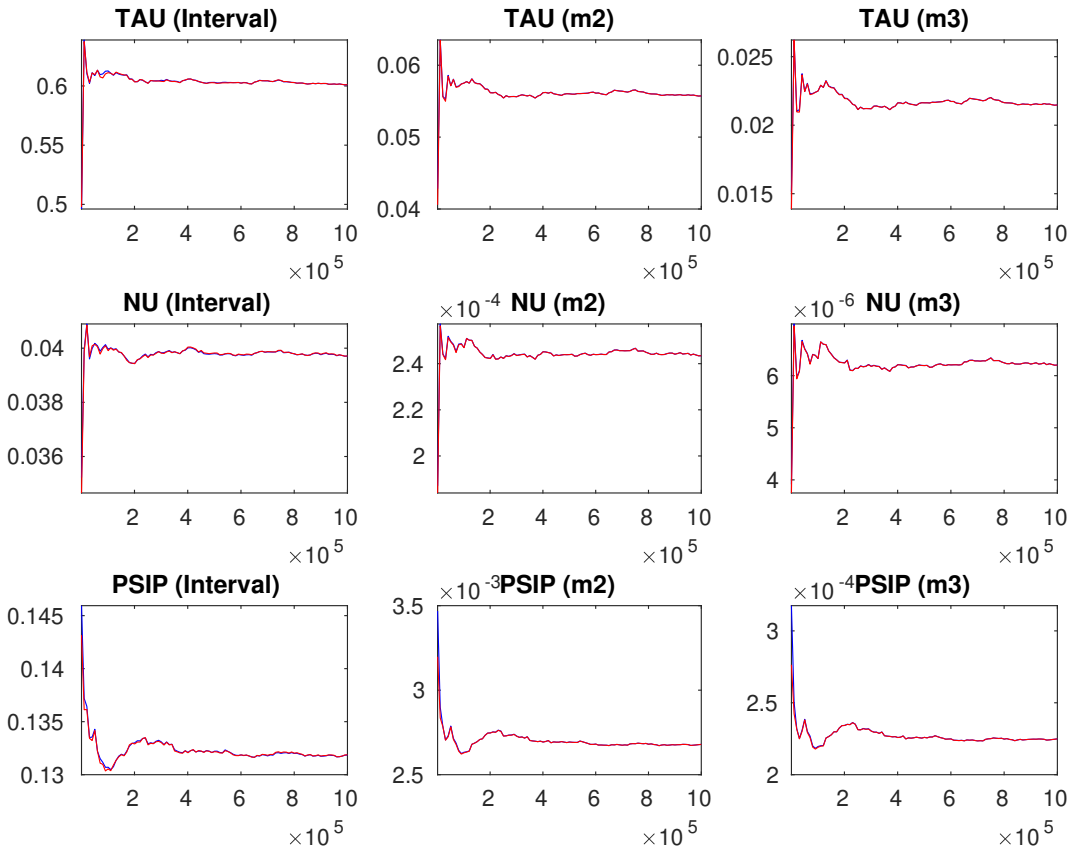

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

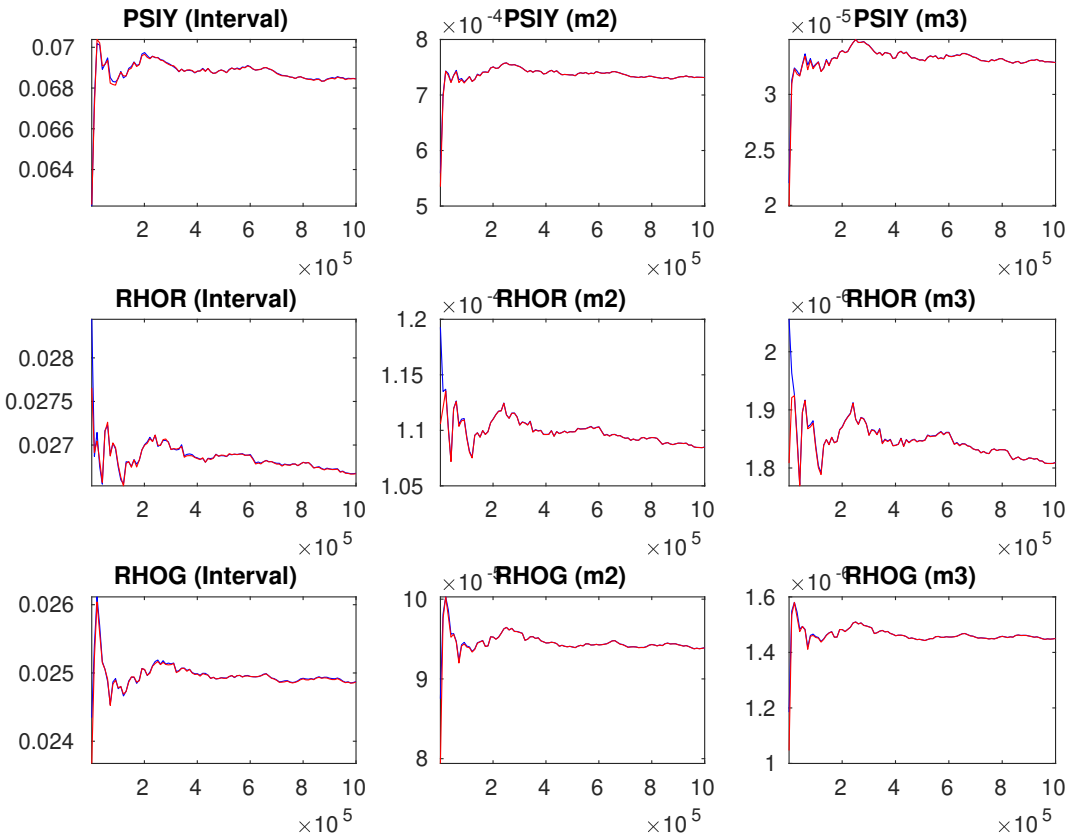

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

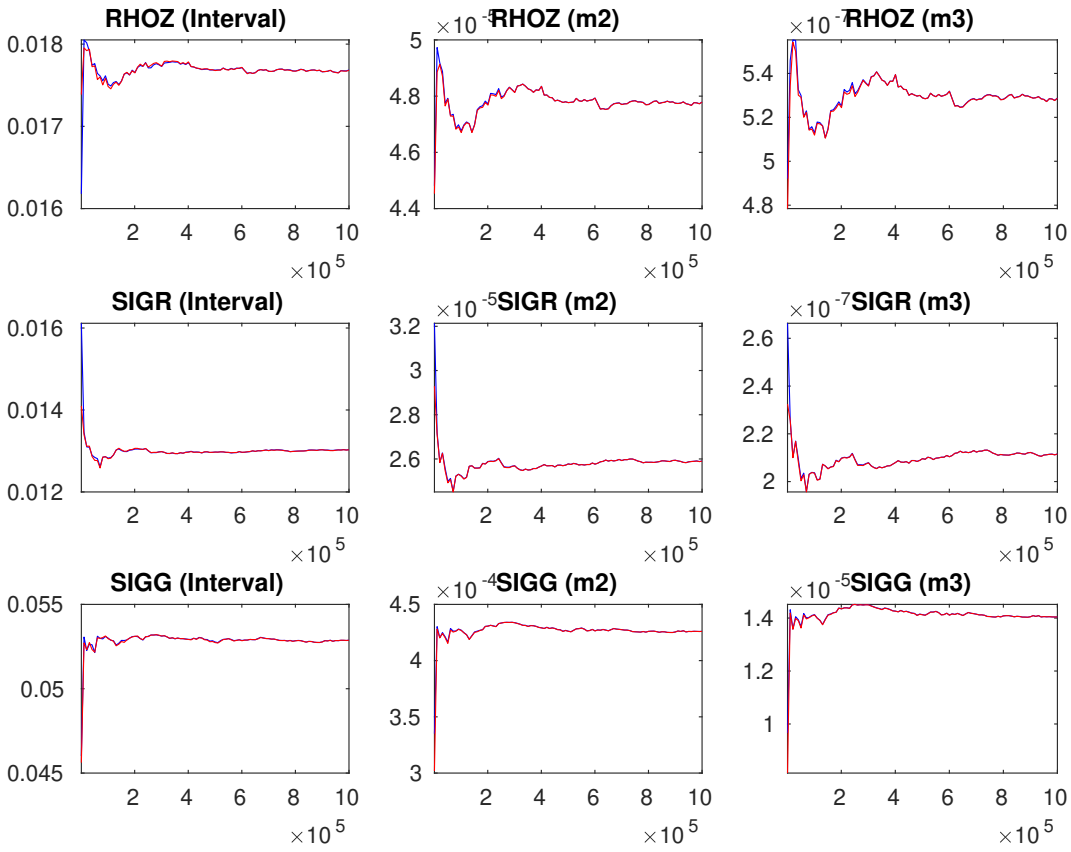

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

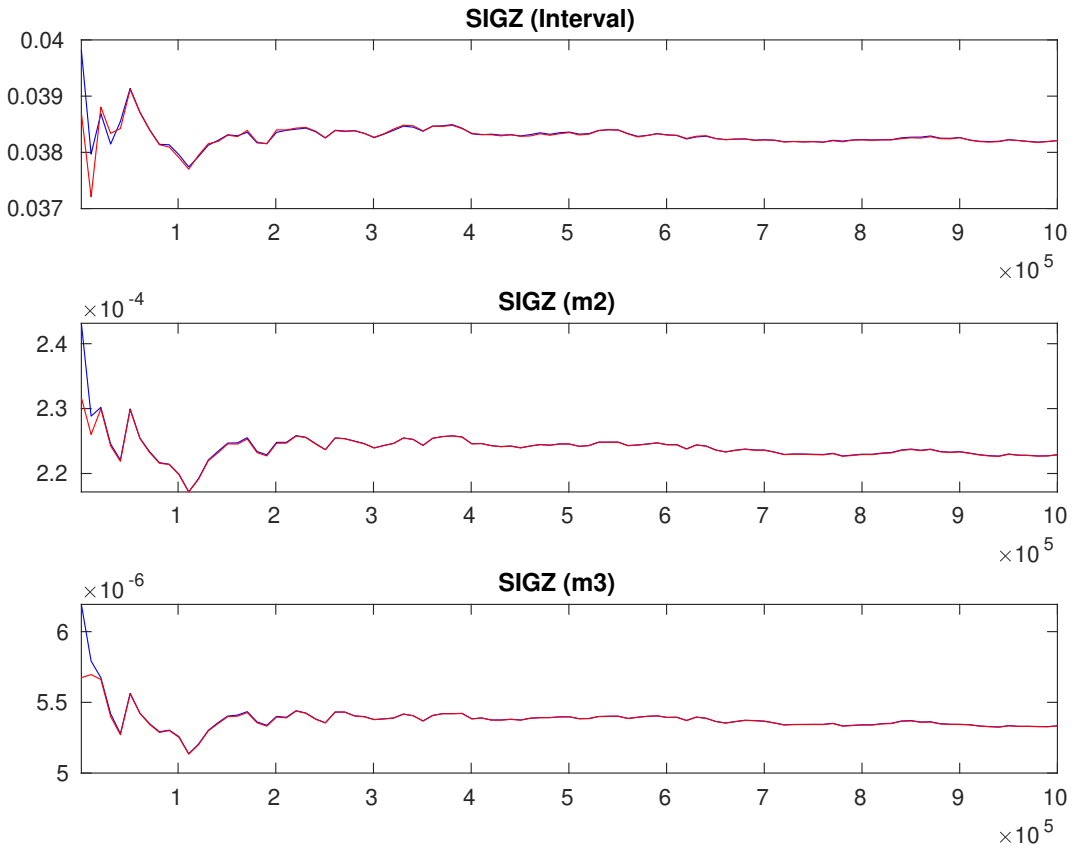

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.