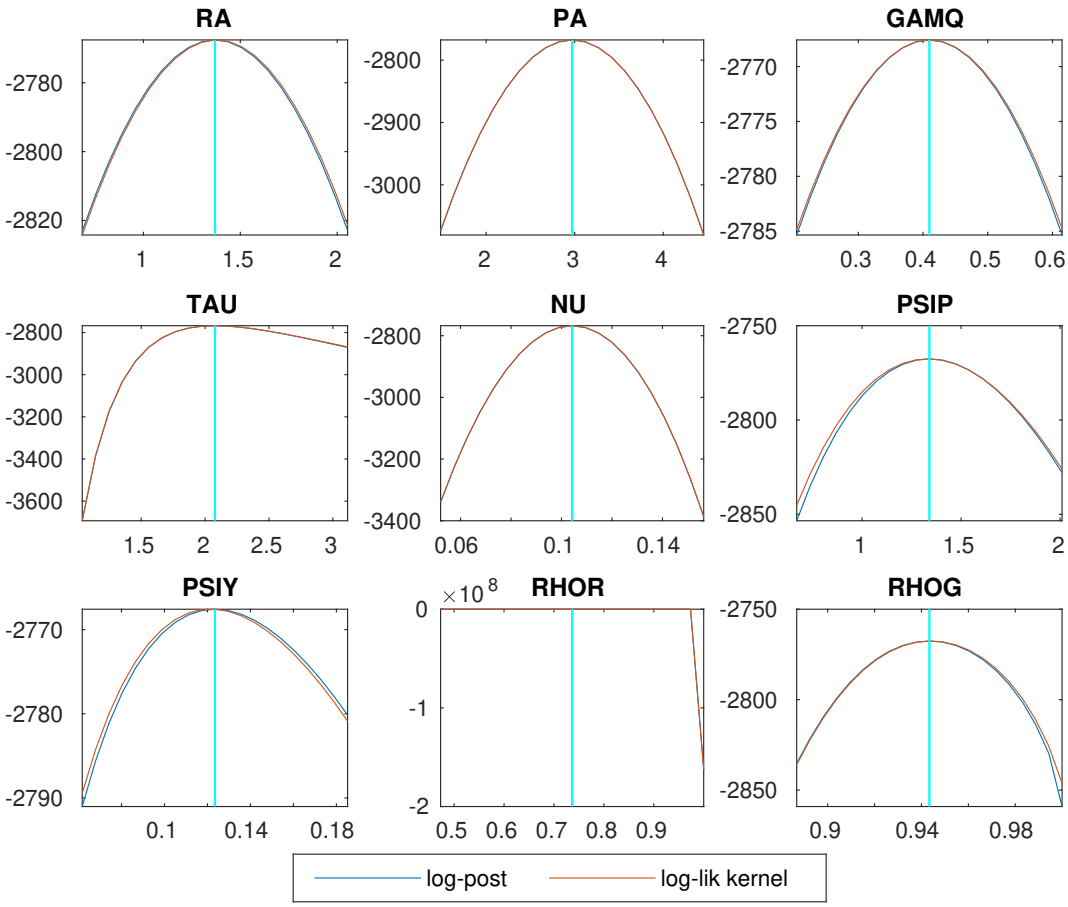

Figure 1: Check plots.

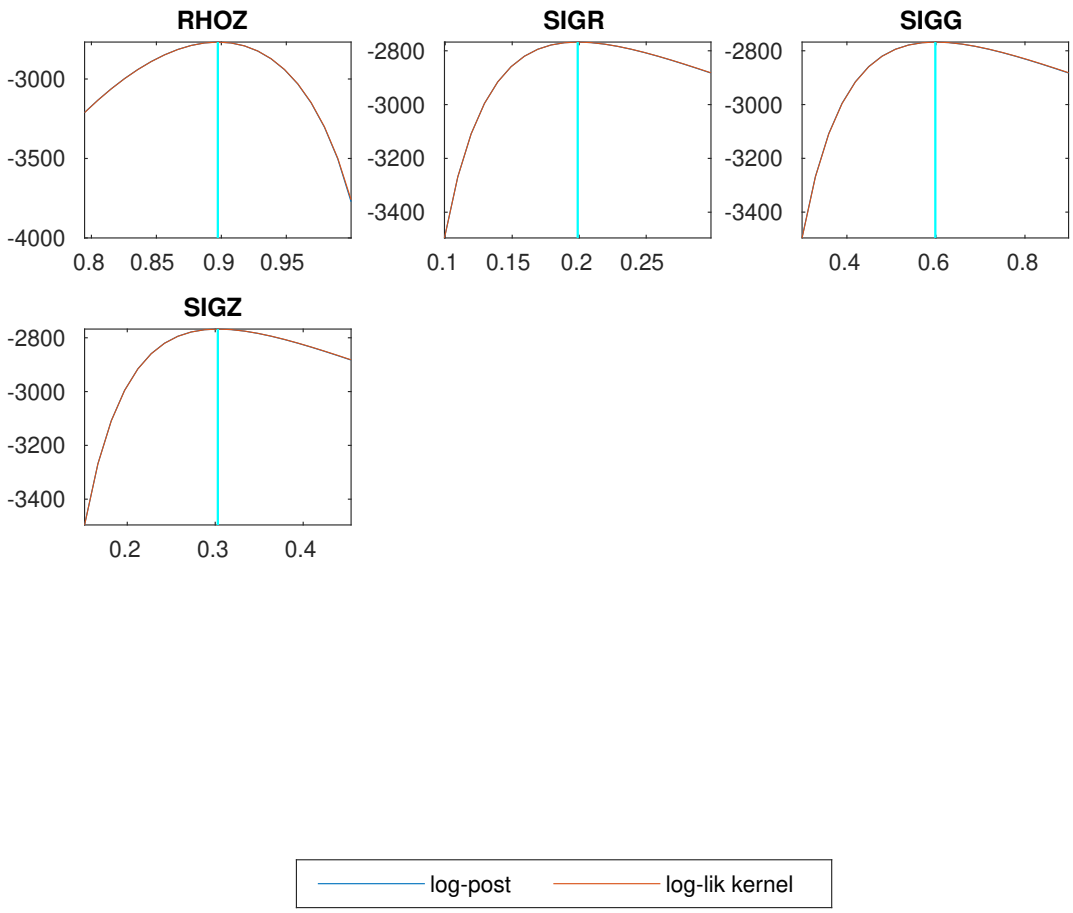

Figure 2: Check plots.

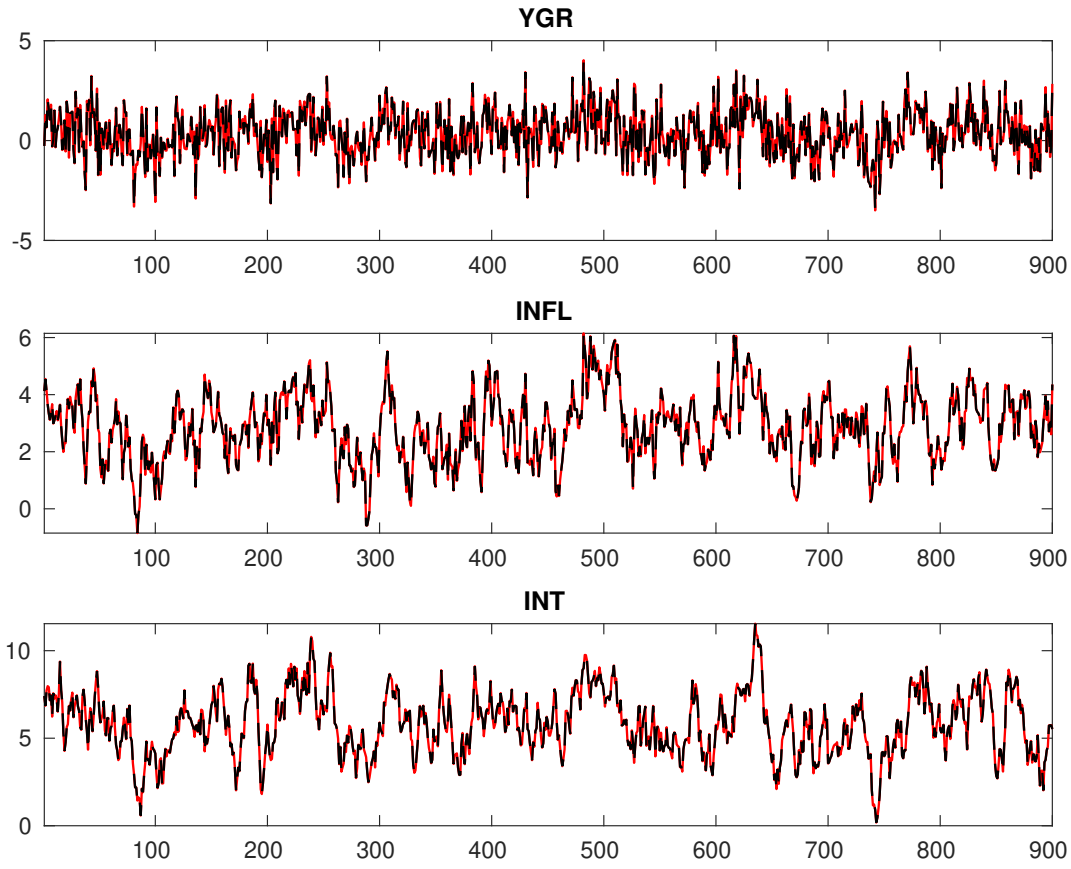

Figure 3: Historical and smoothed variables.

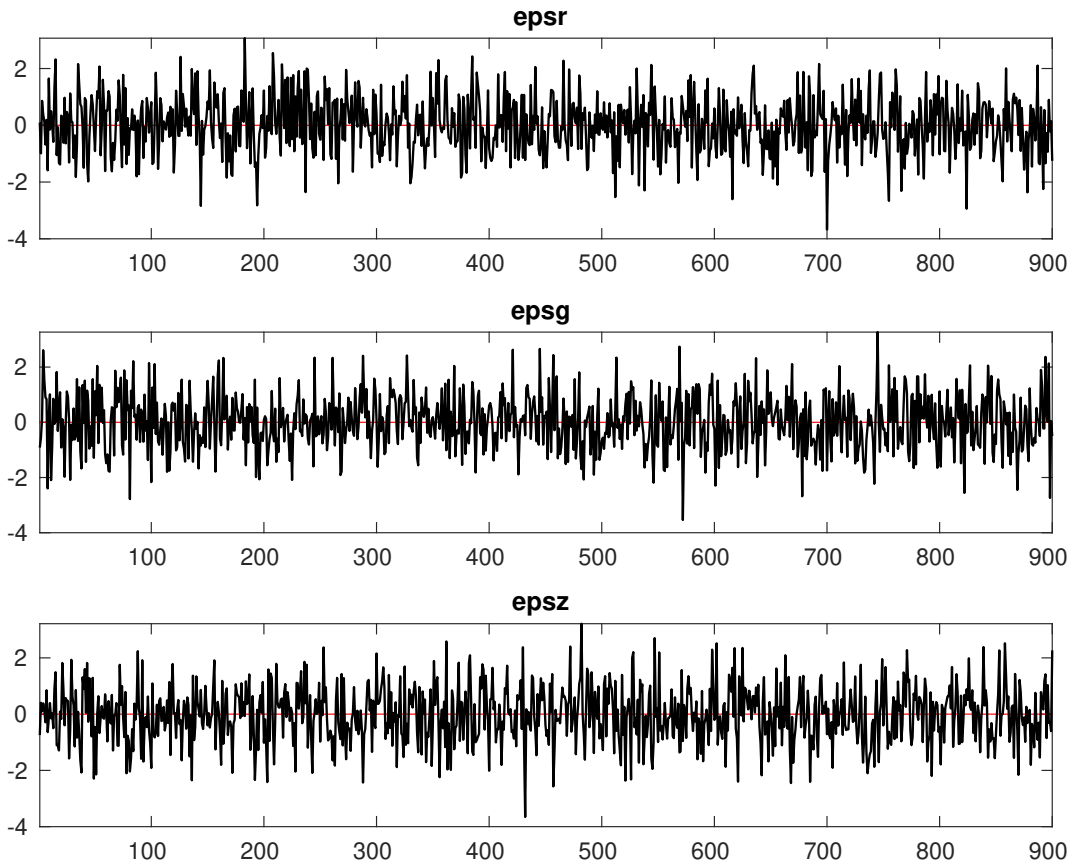

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	47.202	44.296	43.883	45.466
$\pi^{(A)}$	50.296	46.285	44.739	49.398
$\gamma^{(Q)}$	46.586	44.037	44.342	44.341
τ	52.364	52.281	49.358	48.036
ν	51.364	51.157	47.559	47.186
ψ_π	44.099	40.798	46.605	48.690
ψ_y	56.013	48.720	51.581	52.737
ρ_R	46.669	43.514	45.829	44.869
ρ_g	44.333	43.463	44.914	46.860
ρ_z	43.494	48.759	45.358	45.639
σ_R	43.465	42.710	48.064	44.198
σ_g	41.543	46.558	43.968	40.788
σ_z	47.074	44.260	43.454	47.768

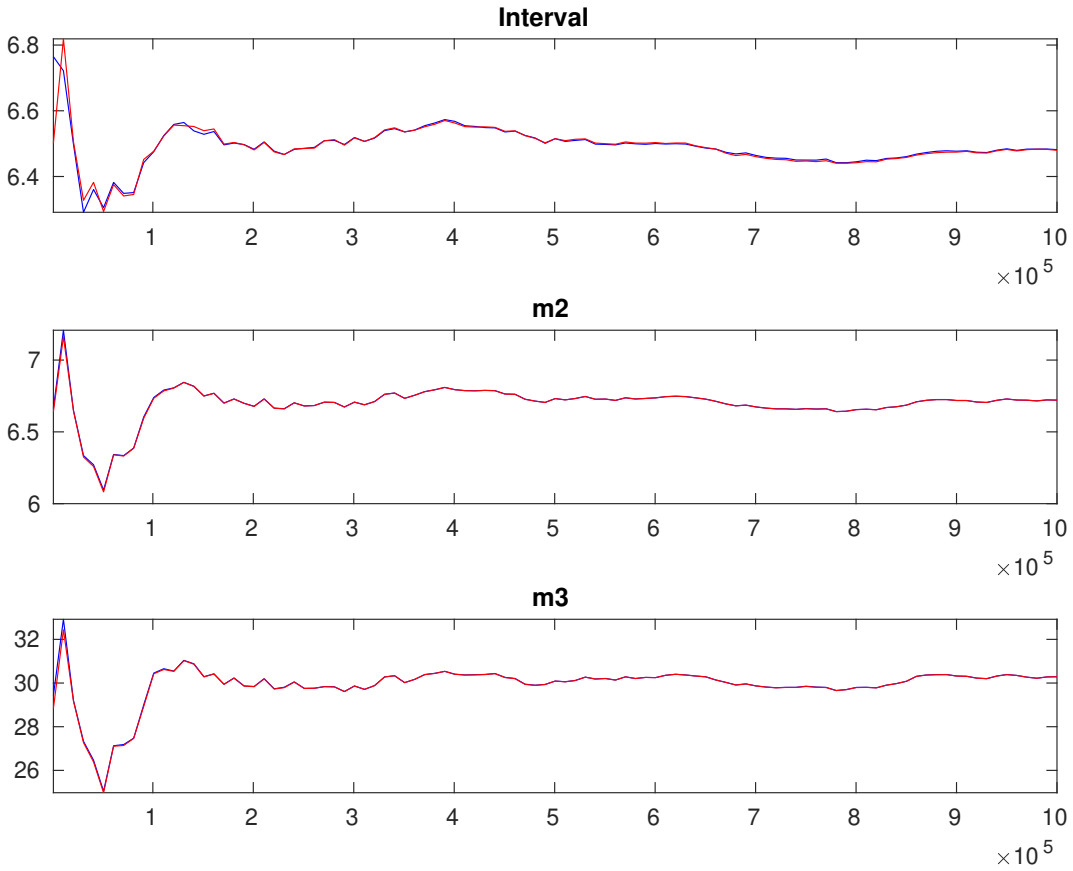

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.366	0.2549	0.9495	1.7885
$\pi^{(A)}$	gamm	4.000	2.0000	2.974	0.1554	2.7167	3.2279
$\gamma^{(Q)}$	norm	0.400	0.2000	0.411	0.0875	0.2684	0.5556
τ	gamm	2.000	0.5000	2.132	0.2131	1.7846	2.4751
ν	beta	0.100	0.0500	0.106	0.0077	0.0940	0.1190
ψ_π	gamm	1.500	0.2500	1.342	0.1213	1.1434	1.5419
ψ_y	gamm	0.500	0.2500	0.130	0.0252	0.0899	0.1718
ρ_R	beta	0.500	0.2000	0.741	0.0163	0.7139	0.7676
ρ_g	beta	0.800	0.1000	0.944	0.0080	0.9313	0.9574
ρ_z	beta	0.660	0.1500	0.899	0.0081	0.8852	0.9118
σ_R	invg	0.300	4.0000	0.200	0.0050	0.1911	0.2076
σ_g	invg	0.400	4.0000	0.600	0.0158	0.5738	0.6256
σ_z	invg	0.400	4.0000	0.307	0.0140	0.2837	0.3297

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.3691	0.2514
$\pi^{(A)}$	gamm	4.000	2.0000	2.9715	0.1504
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4098	0.0857
τ	gamm	2.000	0.5000	2.0770	0.2044
ν	beta	0.100	0.0500	0.1042	0.0074
ψ_π	gamm	1.500	0.2500	1.3399	0.1196
ψ_y	gamm	0.500	0.2500	0.1235	0.0238
ρ_R	beta	0.500	0.2000	0.7364	0.0162
ρ_g	beta	0.800	0.1000	0.9434	0.0080
ρ_z	beta	0.660	0.1500	0.8973	0.0080
σ_R	invg	0.300	4.0000	0.1989	0.0050
σ_g	invg	0.400	4.0000	0.5986	0.0156
σ_z	invg	0.400	4.0000	0.3030	0.0137

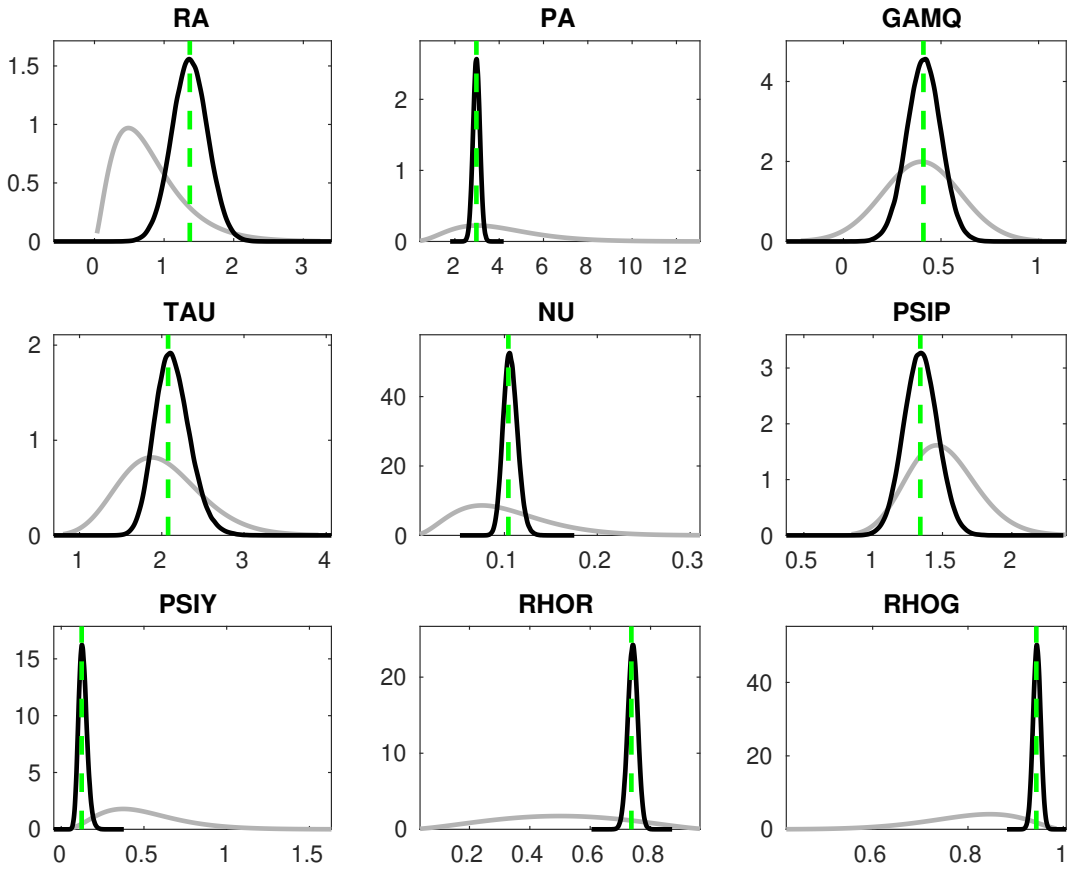

Figure 6: Priors and posteriors.

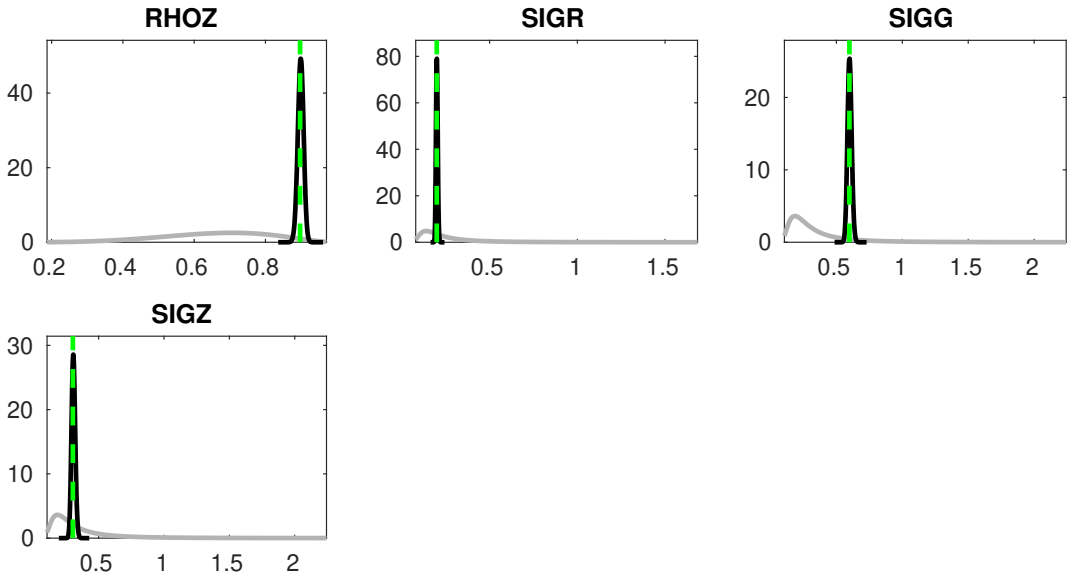

Figure 7: Priors and posteriors.

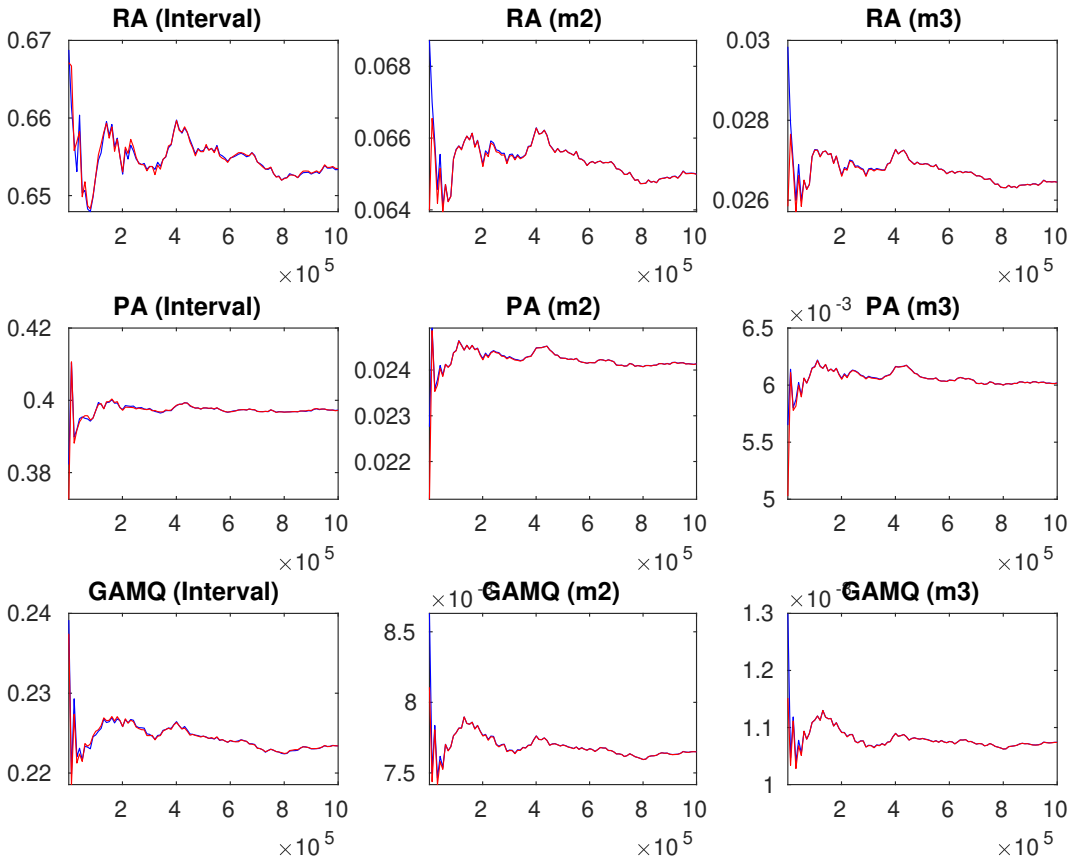

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

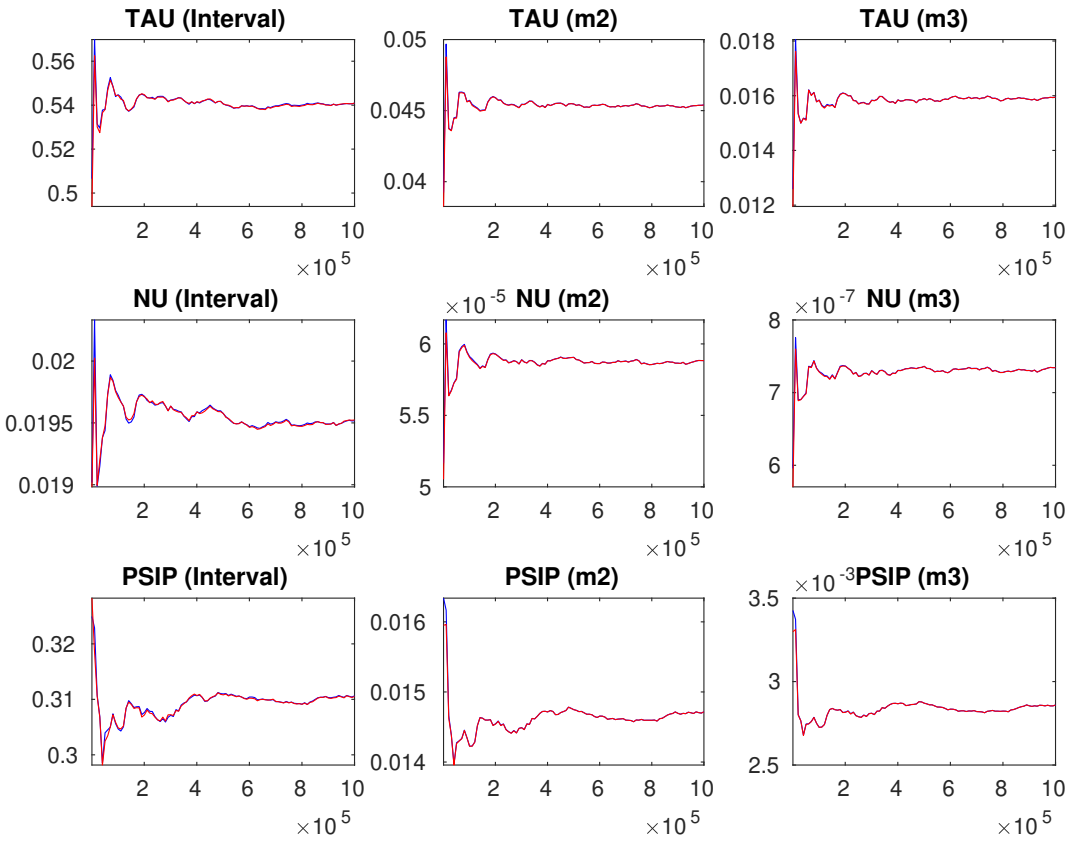

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

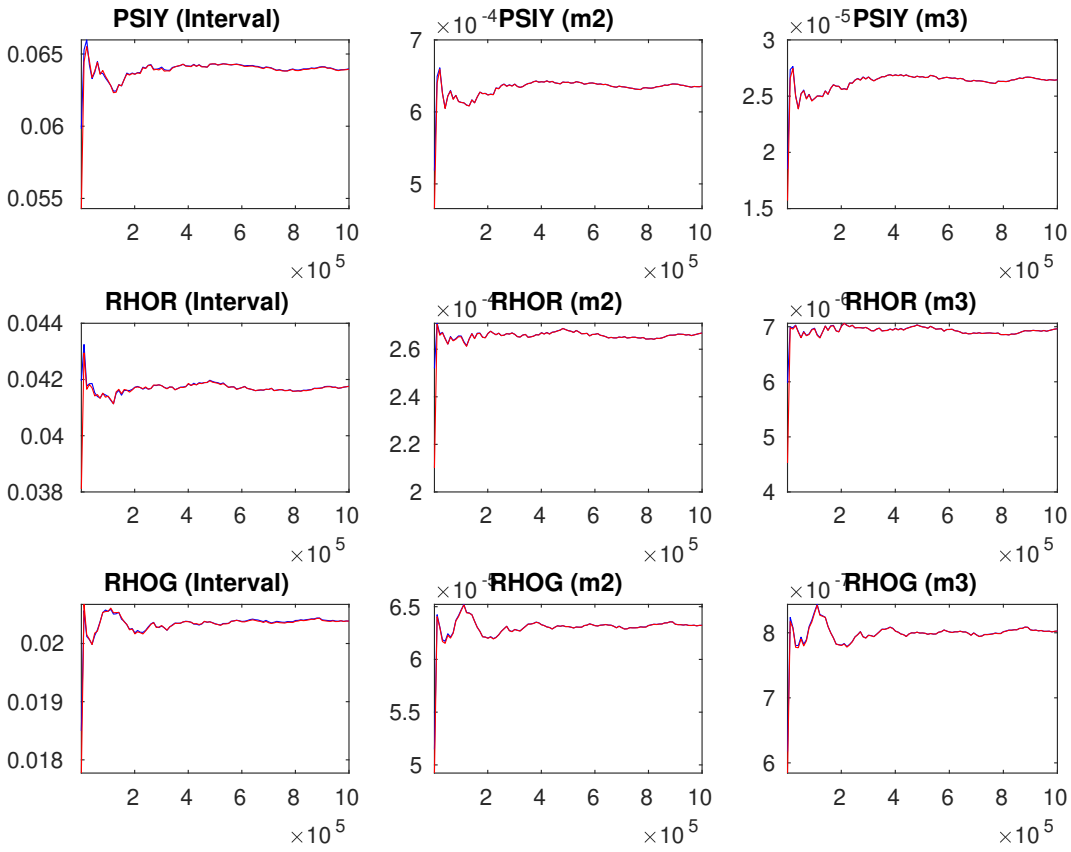

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

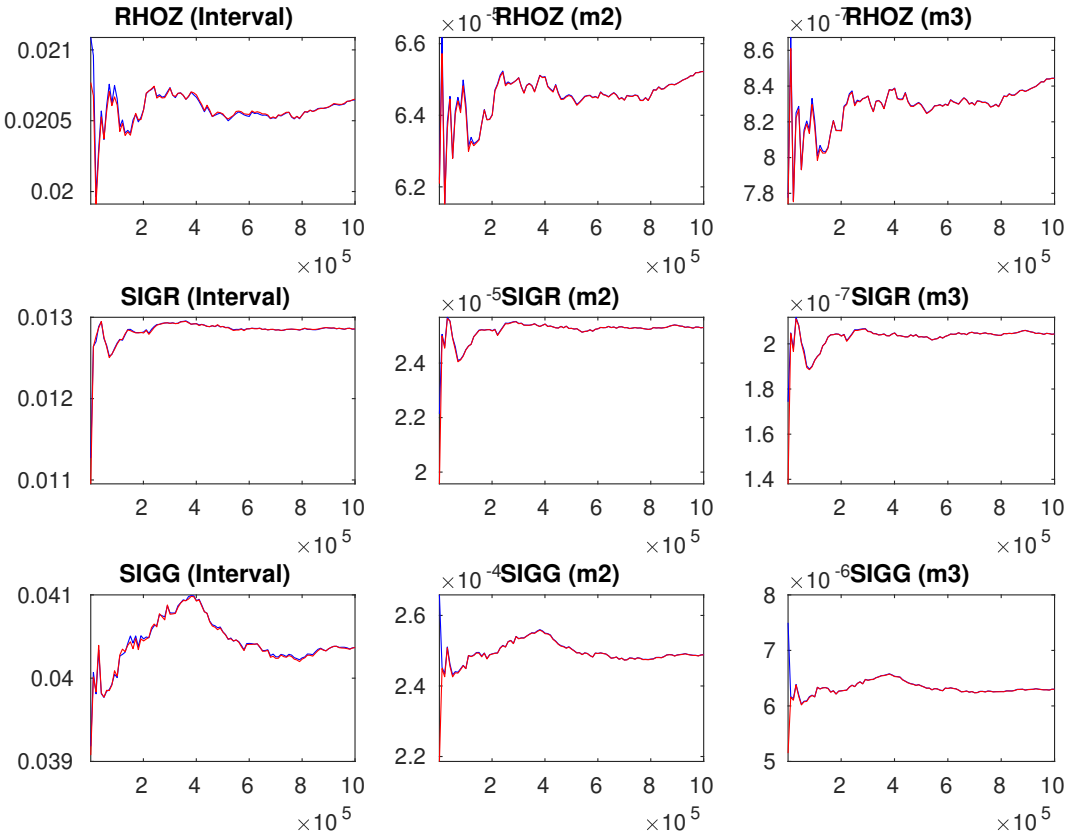

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

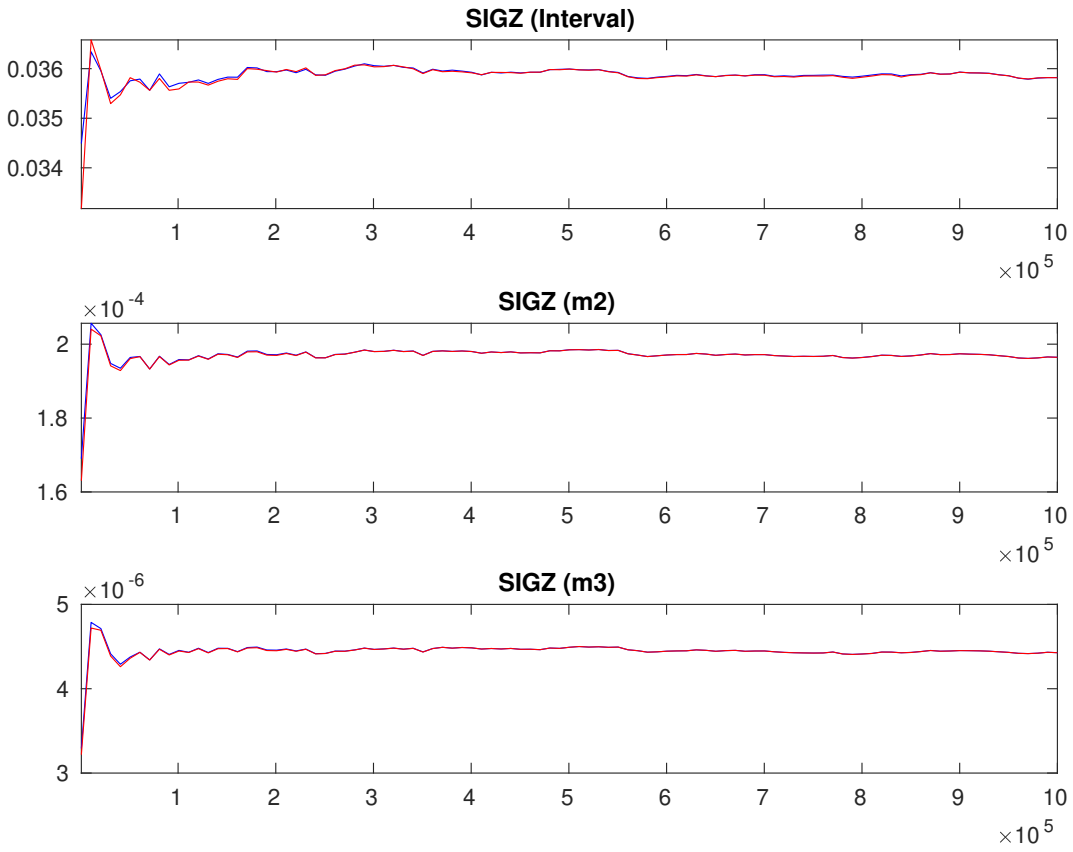

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.