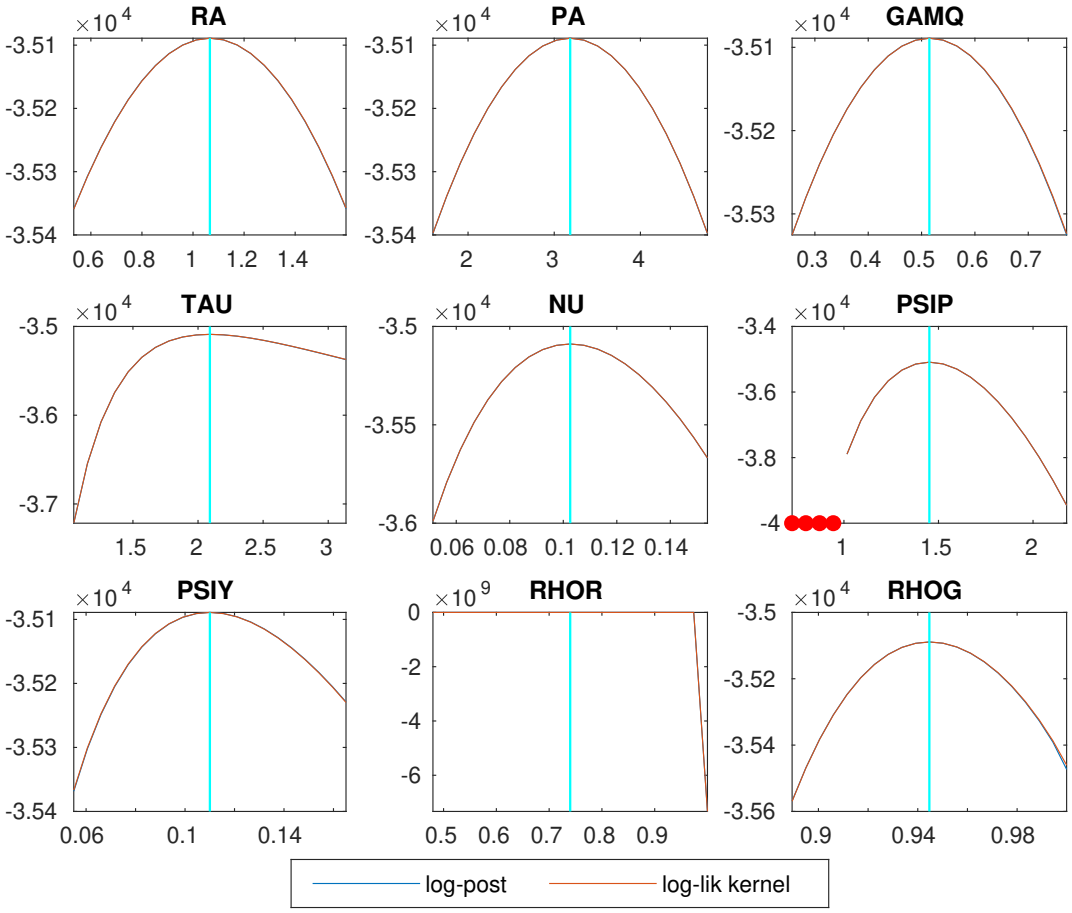

Figure 1: Check plots.

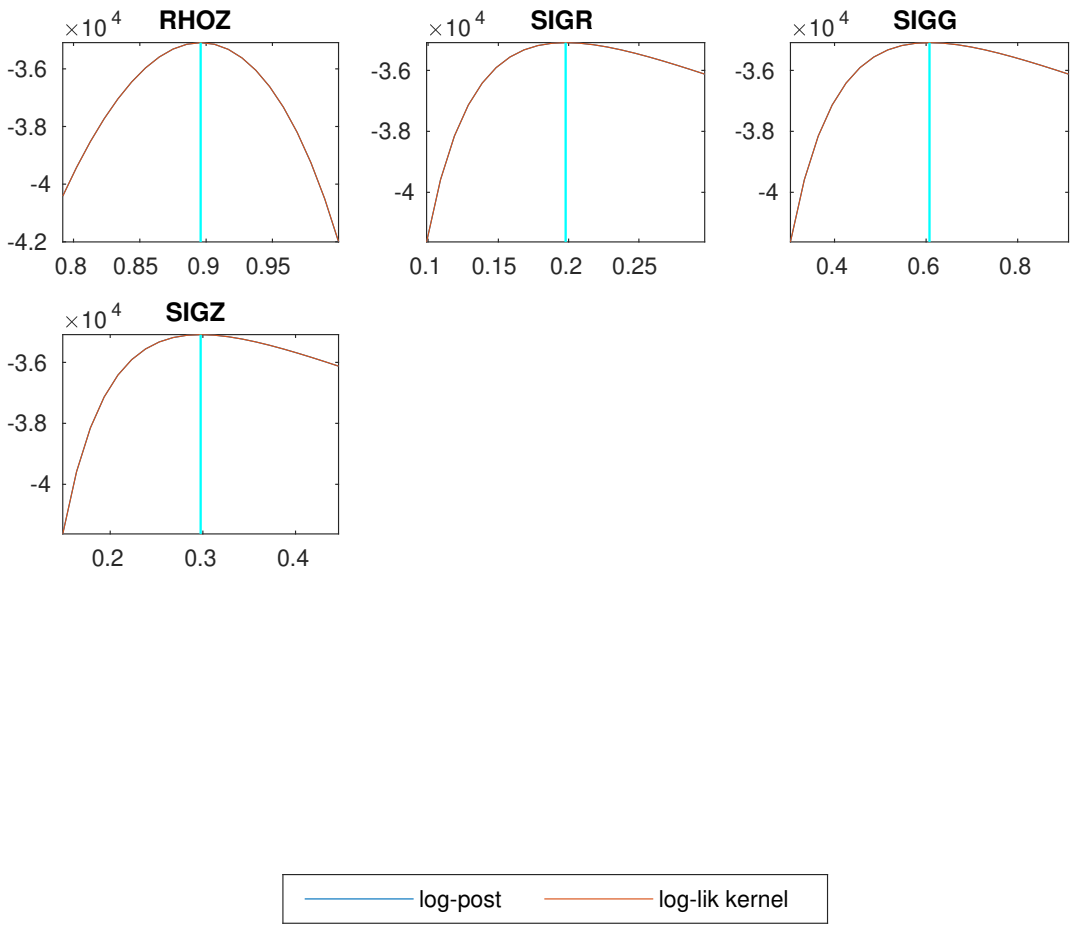

Figure 2: Check plots.

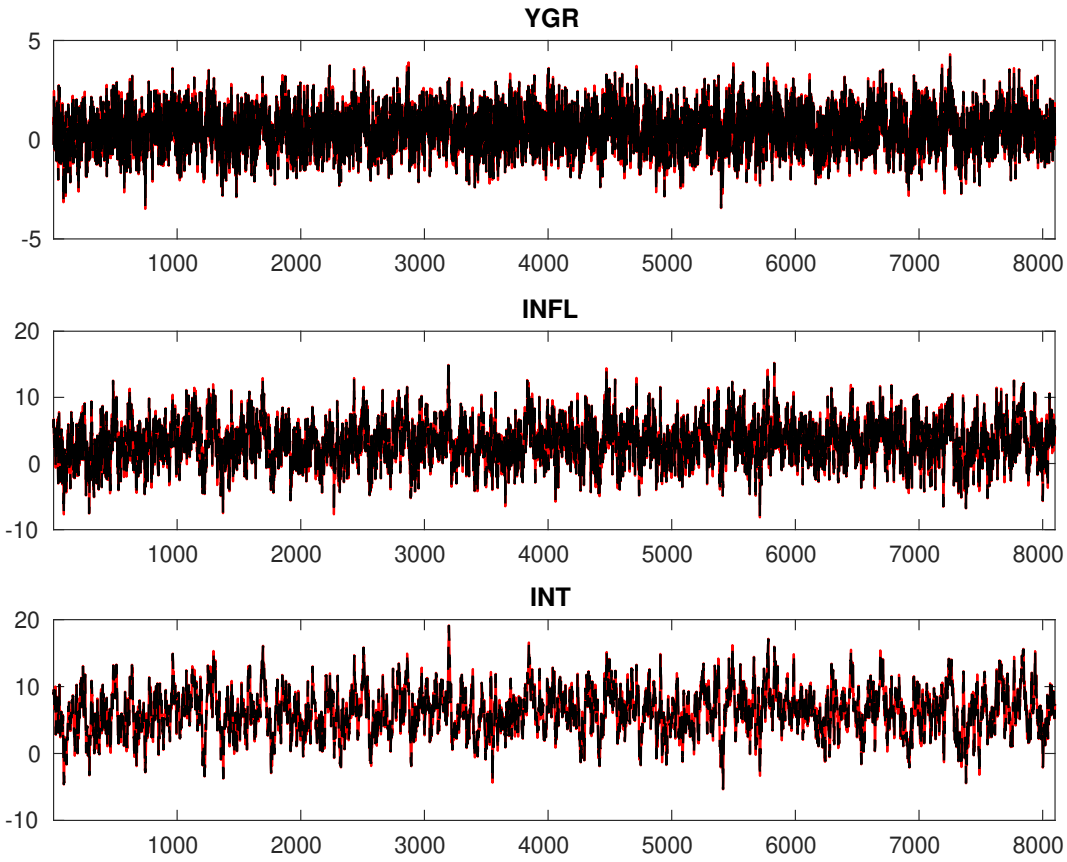

Figure 3: Historical and smoothed variables.

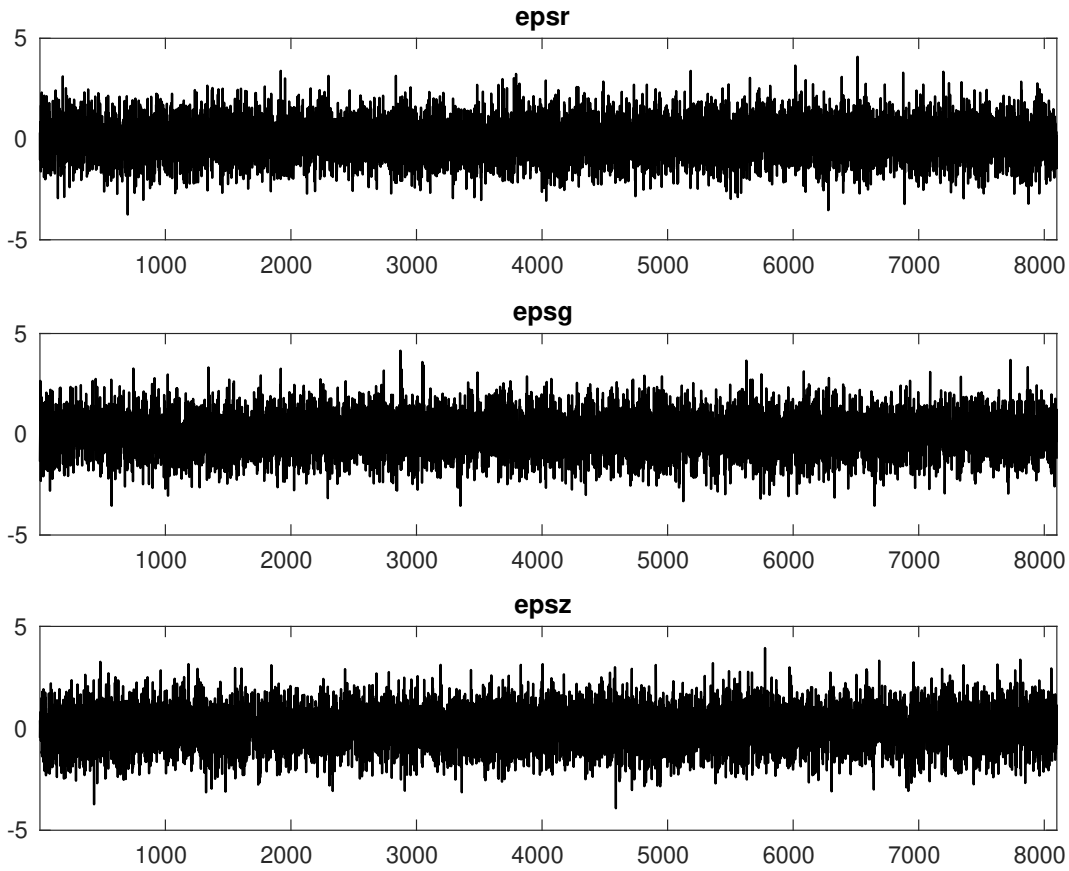

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	42.931	40.413	42.974	44.942
$\pi^{(A)}$	44.208	40.388	45.055	44.825
$\gamma^{(Q)}$	42.996	41.349	43.059	43.764
τ	45.429	46.125	39.317	42.746
ν	46.162	47.150	39.487	42.812
ψ_π	41.639	42.182	43.657	45.128
ψ_y	44.453	45.500	43.278	45.150
ρ_R	41.676	44.688	44.670	44.826
ρ_g	45.138	42.258	41.352	45.146
ρ_z	38.452	45.823	40.892	43.336
σ_R	40.542	43.164	44.341	41.266
σ_g	47.418	43.587	44.668	40.749
σ_z	44.041	48.937	42.785	44.566

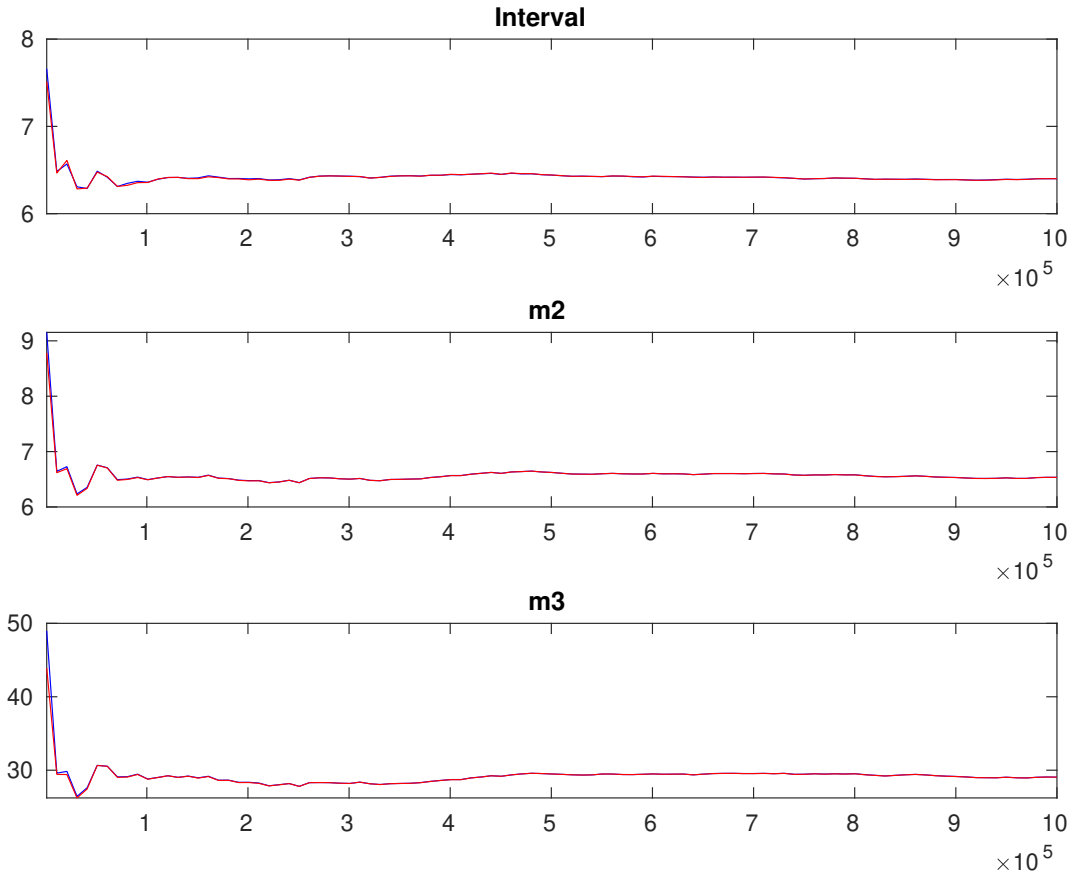

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.067	0.0772	0.9390	1.1931
$\pi^{(A)}$	gamm	4.000	2.0000	3.185	0.1333	2.9647	3.4033
$\gamma^{(Q)}$	norm	0.400	0.2000	0.514	0.0312	0.4633	0.5659
τ	gamm	2.000	0.5000	2.101	0.0810	1.9689	2.2344
ν	beta	0.100	0.0500	0.103	0.0048	0.0954	0.1112
ψ_π	gamm	1.500	0.2500	1.453	0.0168	1.4253	1.4806
ψ_y	gamm	0.500	0.2500	0.111	0.0083	0.0970	0.1243
ρ_R	beta	0.500	0.2000	0.740	0.0035	0.7344	0.7459
ρ_g	beta	0.800	0.1000	0.945	0.0036	0.9389	0.9507
ρ_z	beta	0.660	0.1500	0.896	0.0023	0.8921	0.8998
σ_R	invg	0.300	4.0000	0.198	0.0017	0.1951	0.2007
σ_g	invg	0.400	4.0000	0.607	0.0069	0.5960	0.6185
σ_z	invg	0.400	4.0000	0.298	0.0049	0.2900	0.3062

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.0661	0.0772
$\pi^{(A)}$	gamm	4.000	2.0000	3.1853	0.1326
$\gamma^{(Q)}$	norm	0.400	0.2000	0.5146	0.0312
τ	gamm	2.000	0.5000	2.0911	0.0803
ν	beta	0.100	0.0500	0.1026	0.0048
ψ_π	gamm	1.500	0.2500	1.4517	0.0168
ψ_y	gamm	0.500	0.2500	0.1100	0.0083
ρ_R	beta	0.500	0.2000	0.7399	0.0035
ρ_g	beta	0.800	0.1000	0.9447	0.0036
ρ_z	beta	0.660	0.1500	0.8959	0.0023
σ_R	invg	0.300	4.0000	0.1979	0.0017
σ_g	invg	0.400	4.0000	0.6074	0.0069
σ_z	invg	0.400	4.0000	0.2976	0.0049

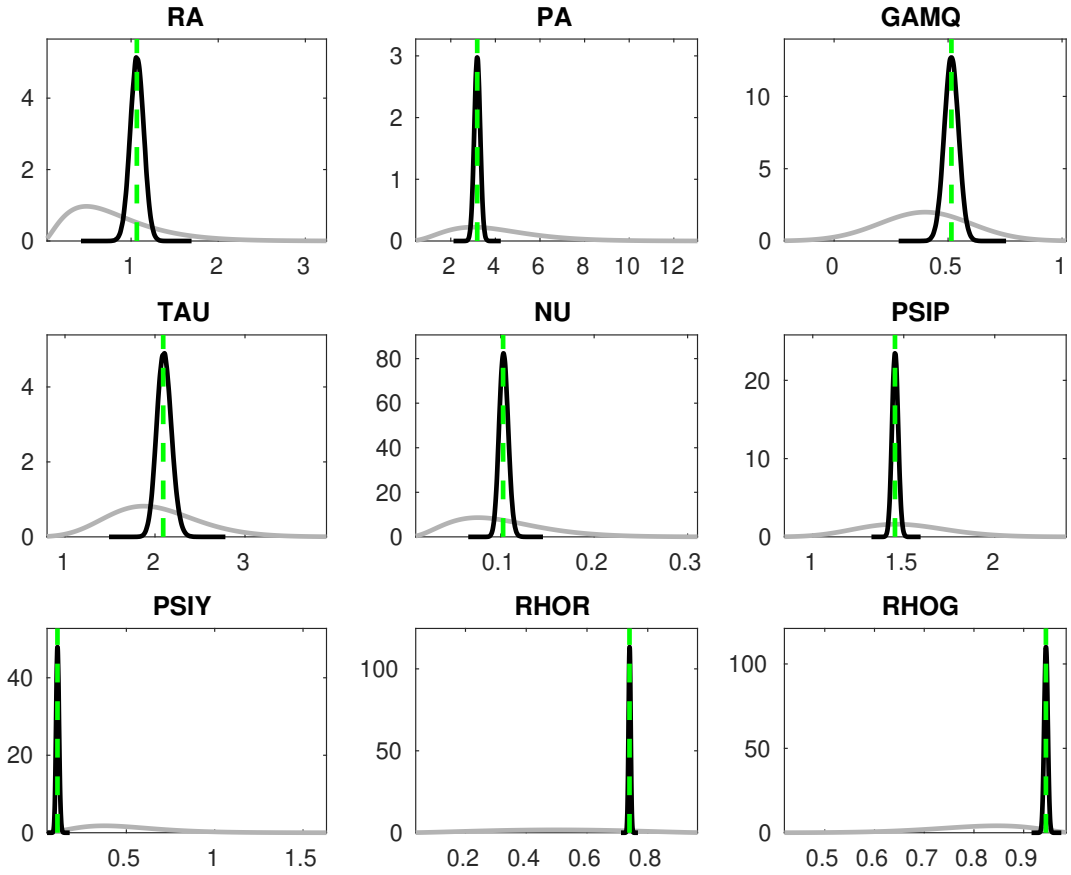

Figure 6: Priors and posteriors.

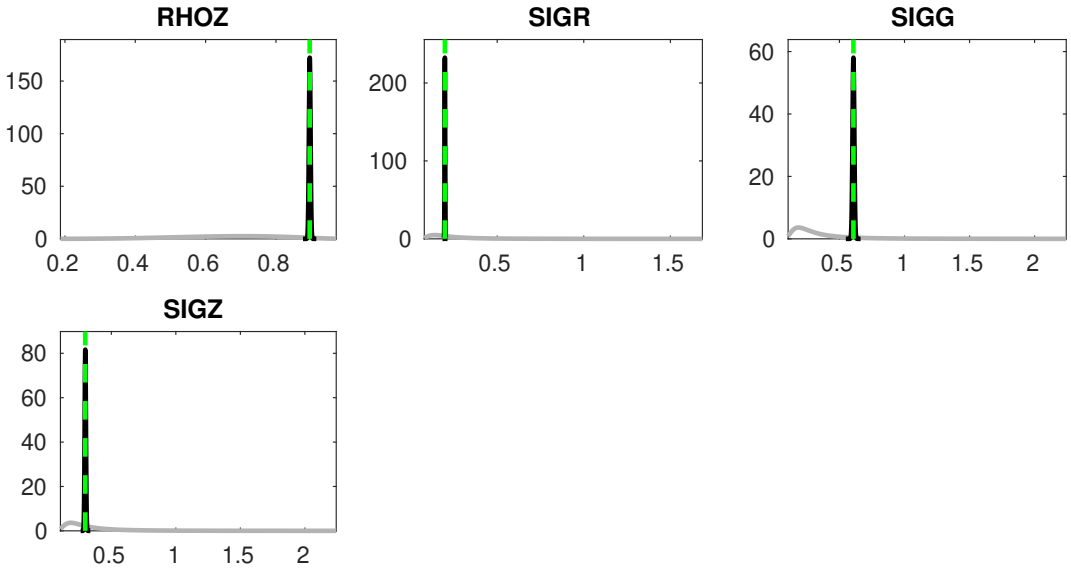

Figure 7: Priors and posteriors.

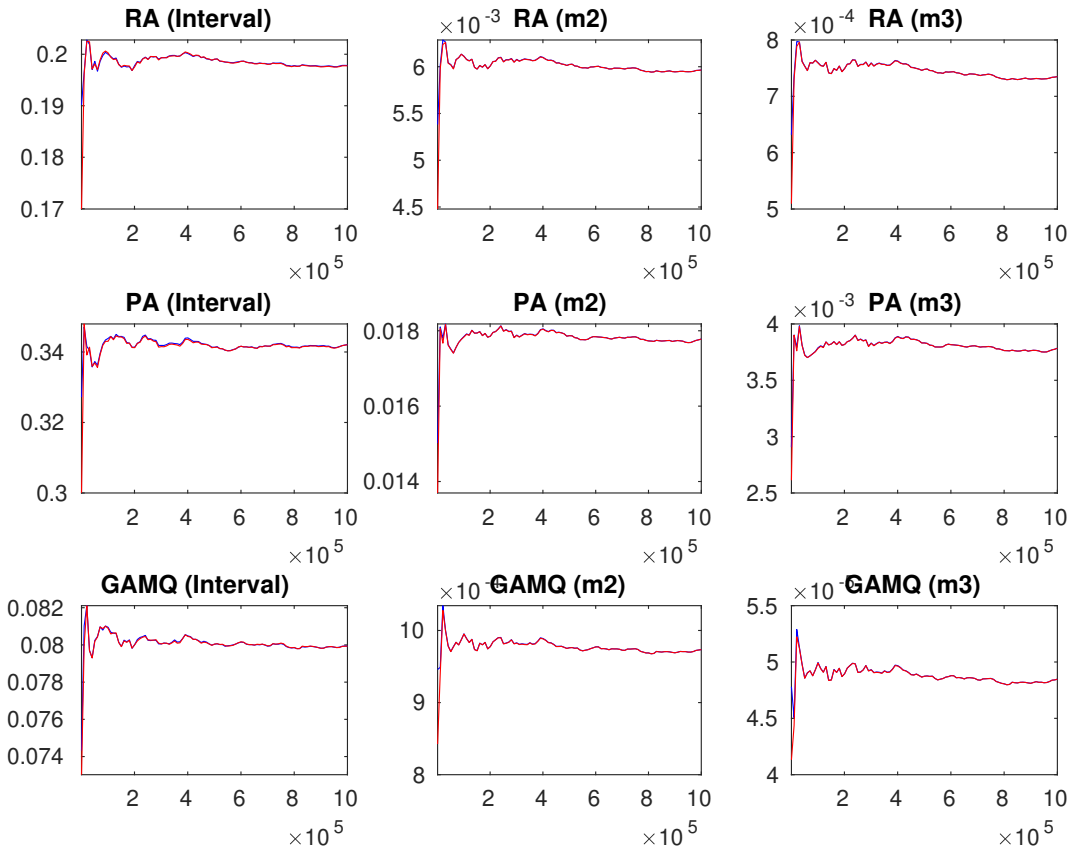

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

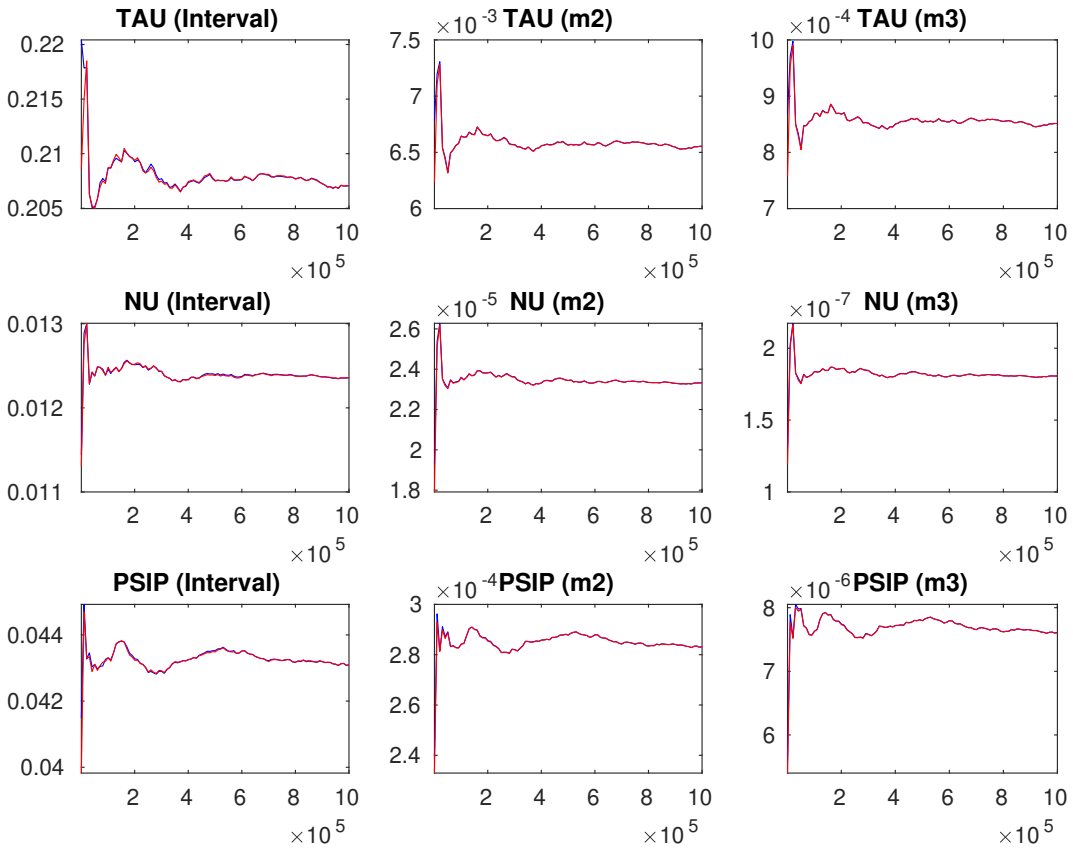

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

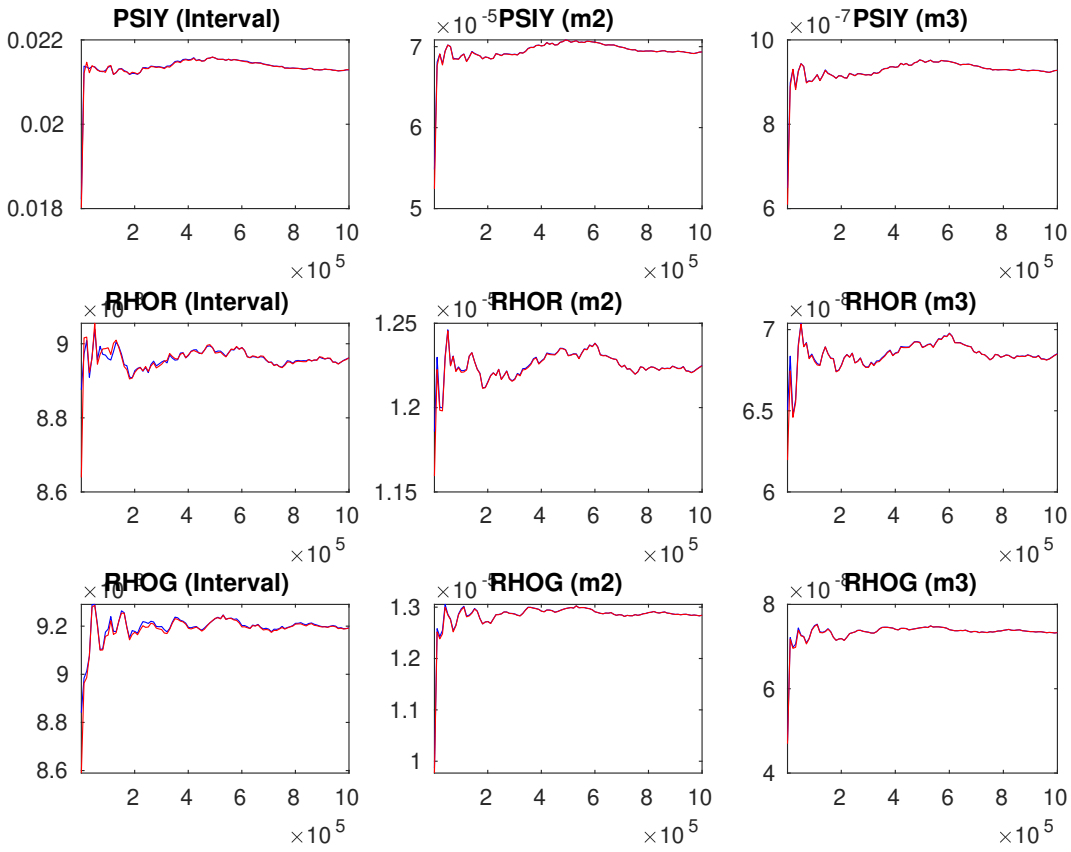

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

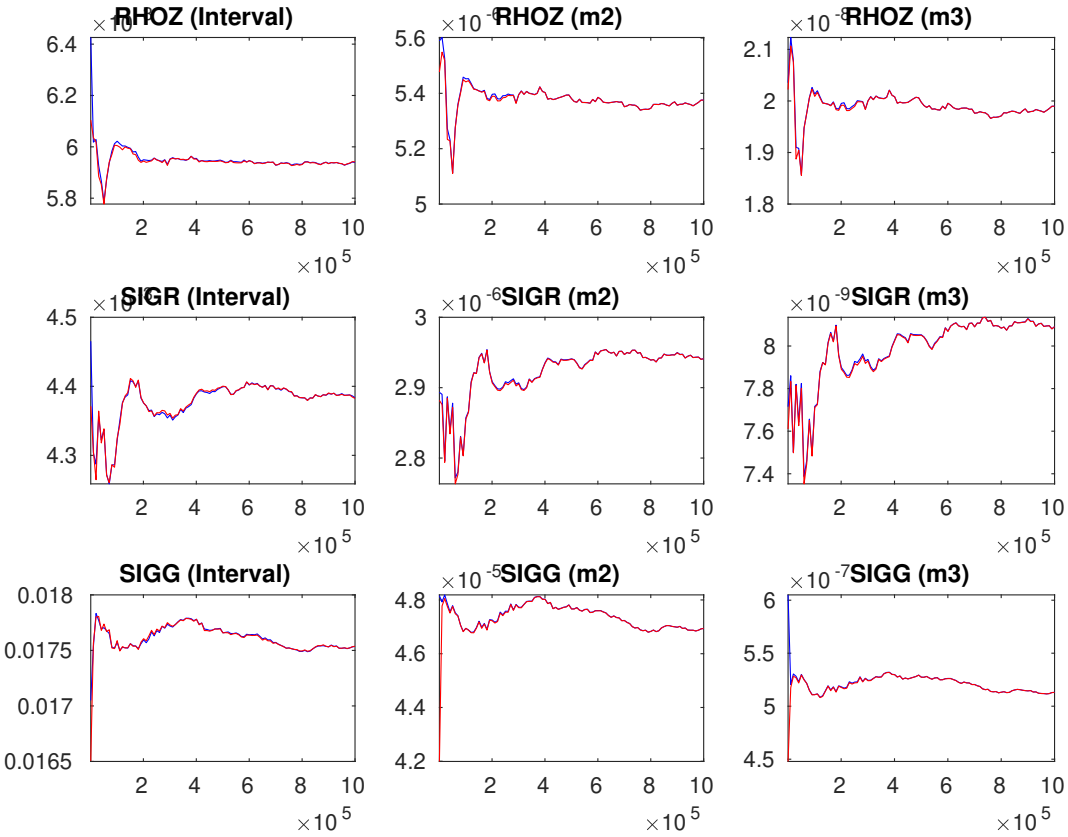

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

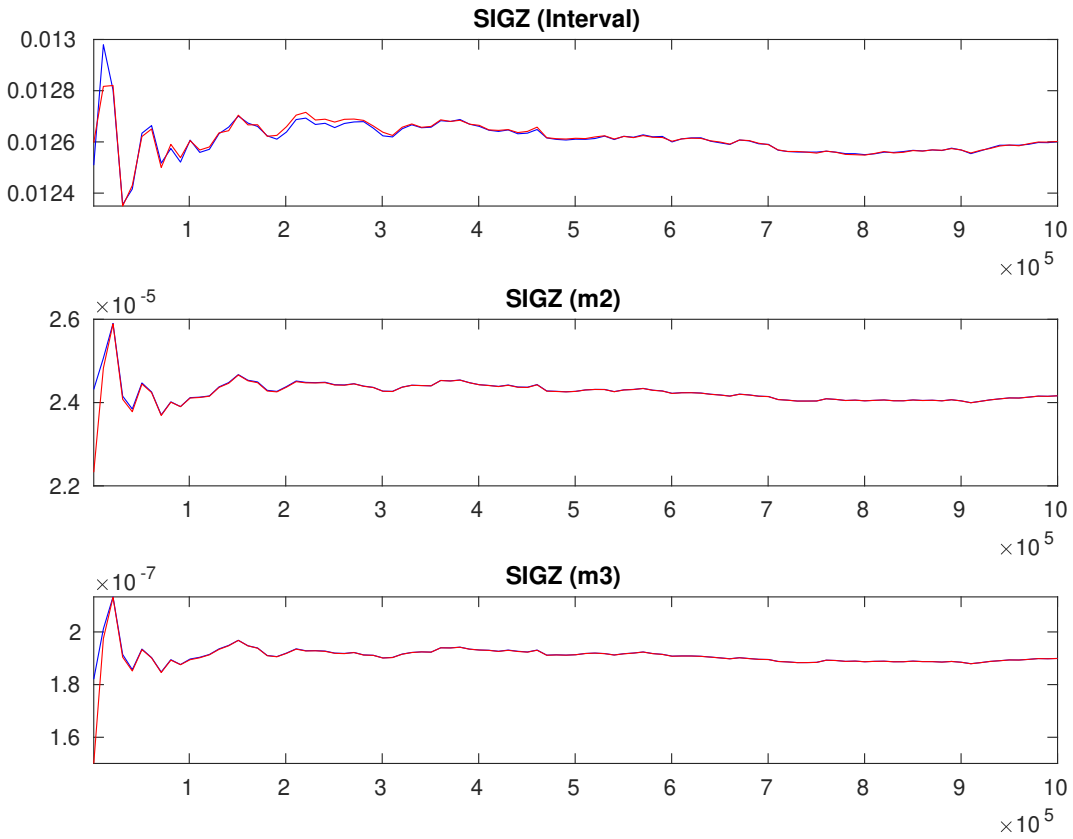

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.