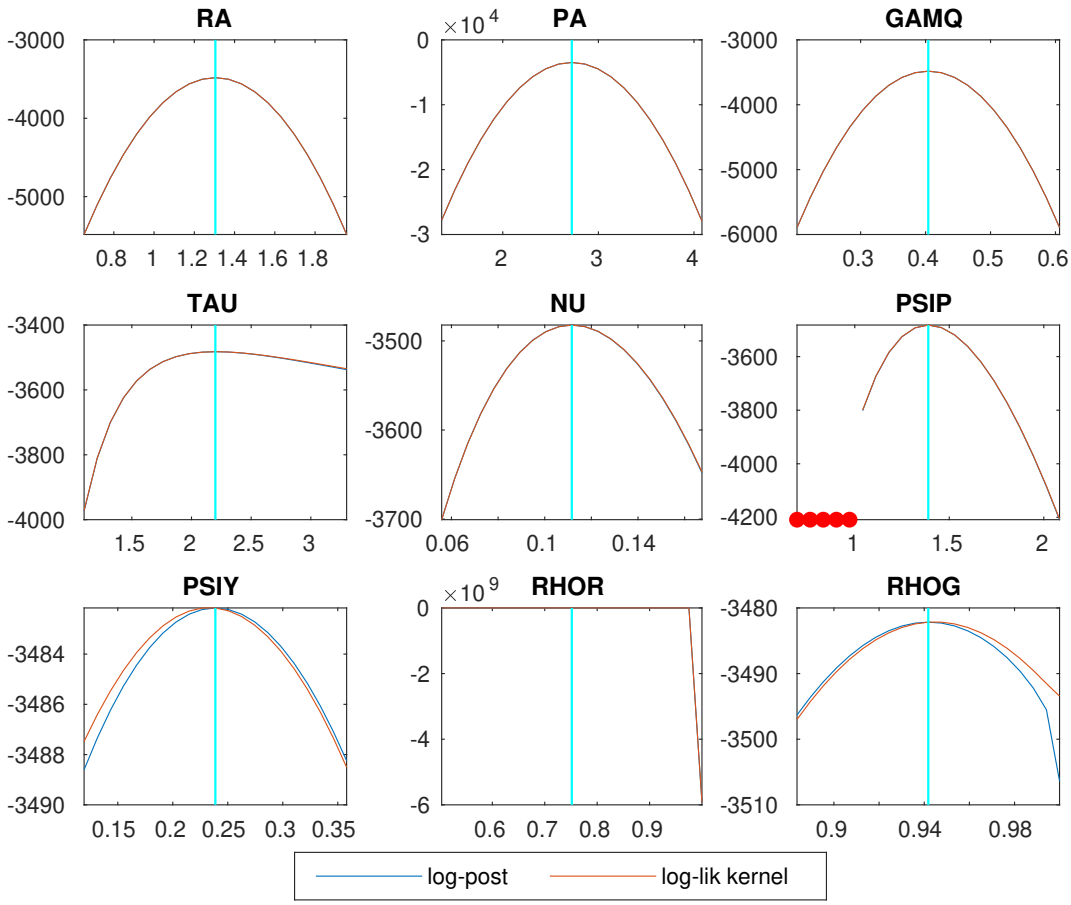

Figure 1: Check plots.

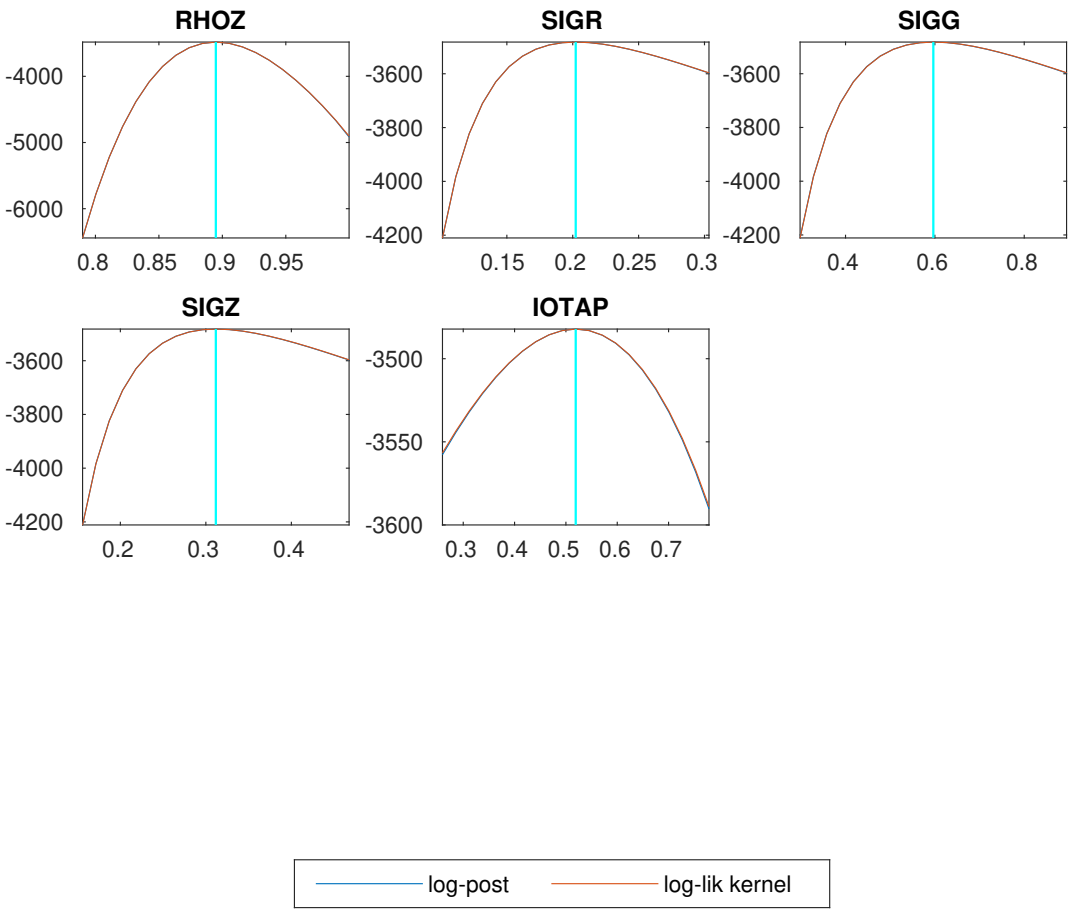

Figure 2: Check plots.

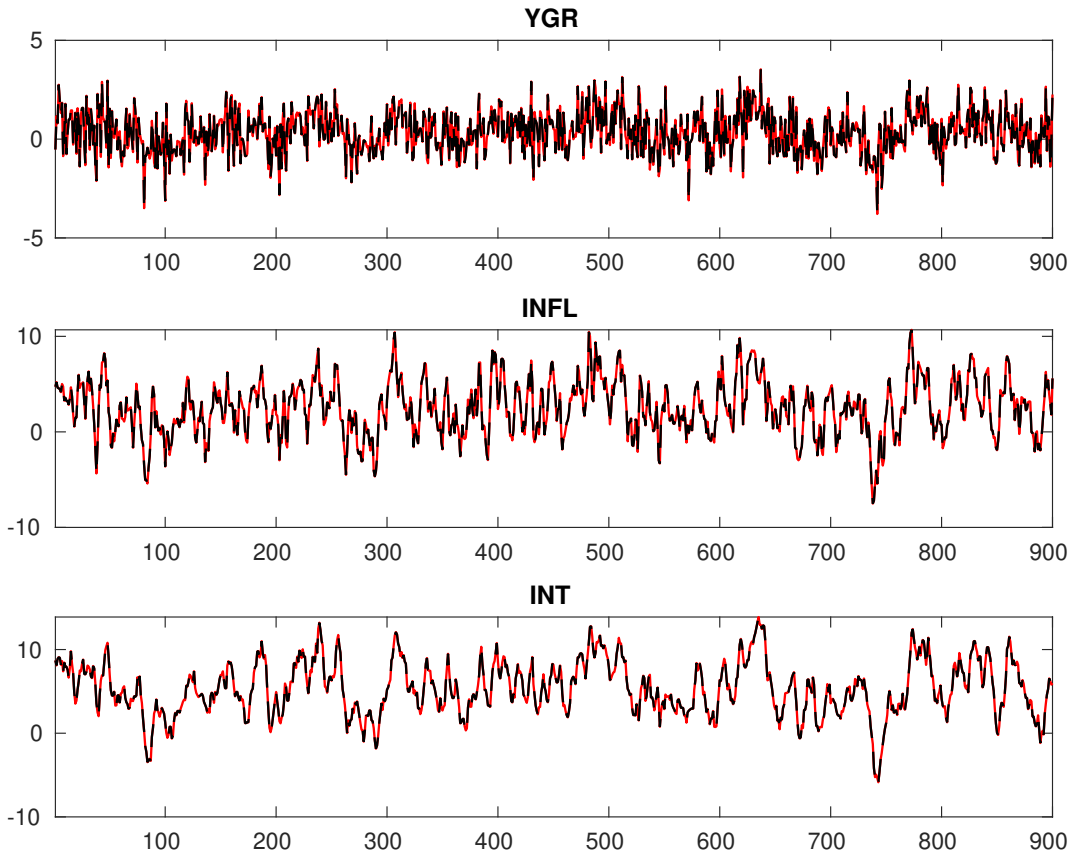

Figure 3: Historical and smoothed variables.

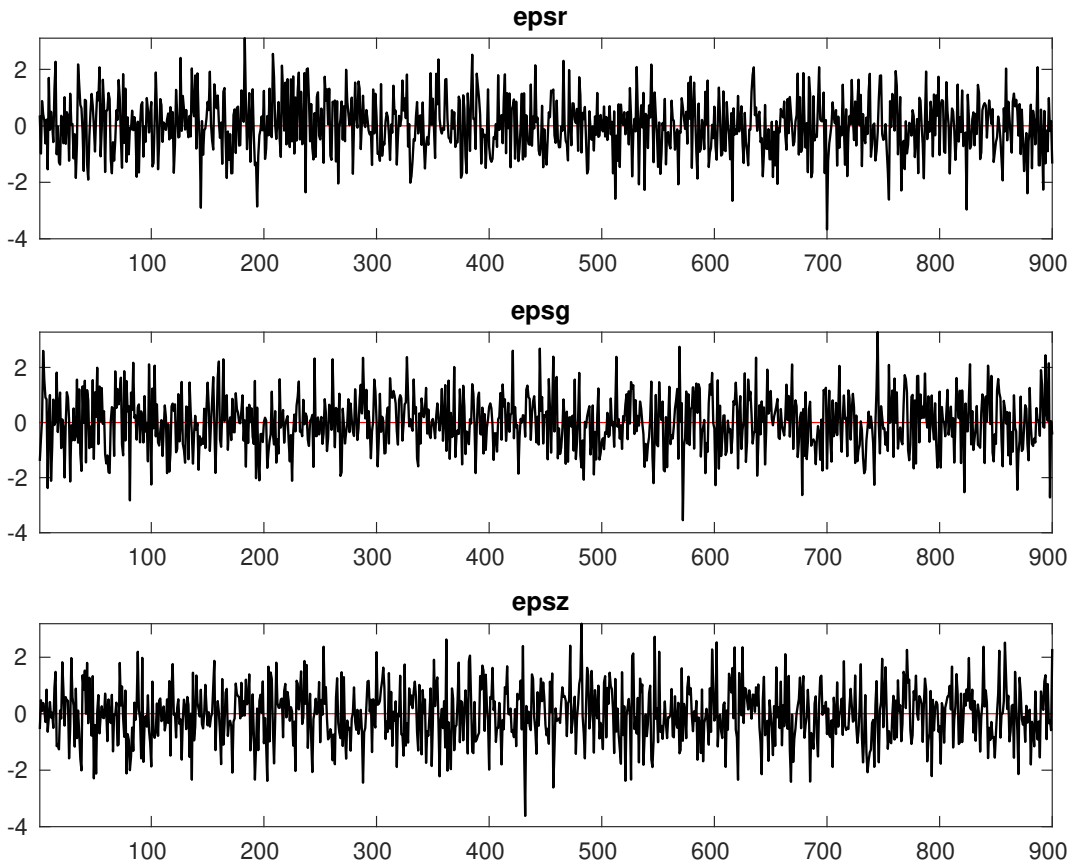

Figure 4: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
r_A	533.881	540.703	534.242	536.017
$\pi^{(A)}$	529.546	535.489	531.798	530.129
$\gamma^{(Q)}$	498.839	504.291	501.196	496.698
τ	265.887	272.105	263.028	259.518
ν	116.668	105.580	107.088	113.345
ψ_π	156.253	146.412	143.967	155.171
ψ_y	305.219	287.082	292.028	306.216
ρ_R	171.983	160.050	164.282	169.949
ρ_g	46.288	46.161	45.596	50.702
ρ_z	69.970	71.318	72.309	71.526
σ_R	139.983	126.066	123.367	128.633
σ_g	49.244	52.566	52.083	49.828
σ_z	213.754	216.193	208.513	208.261
ι_p	186.532	199.005	178.668	191.119

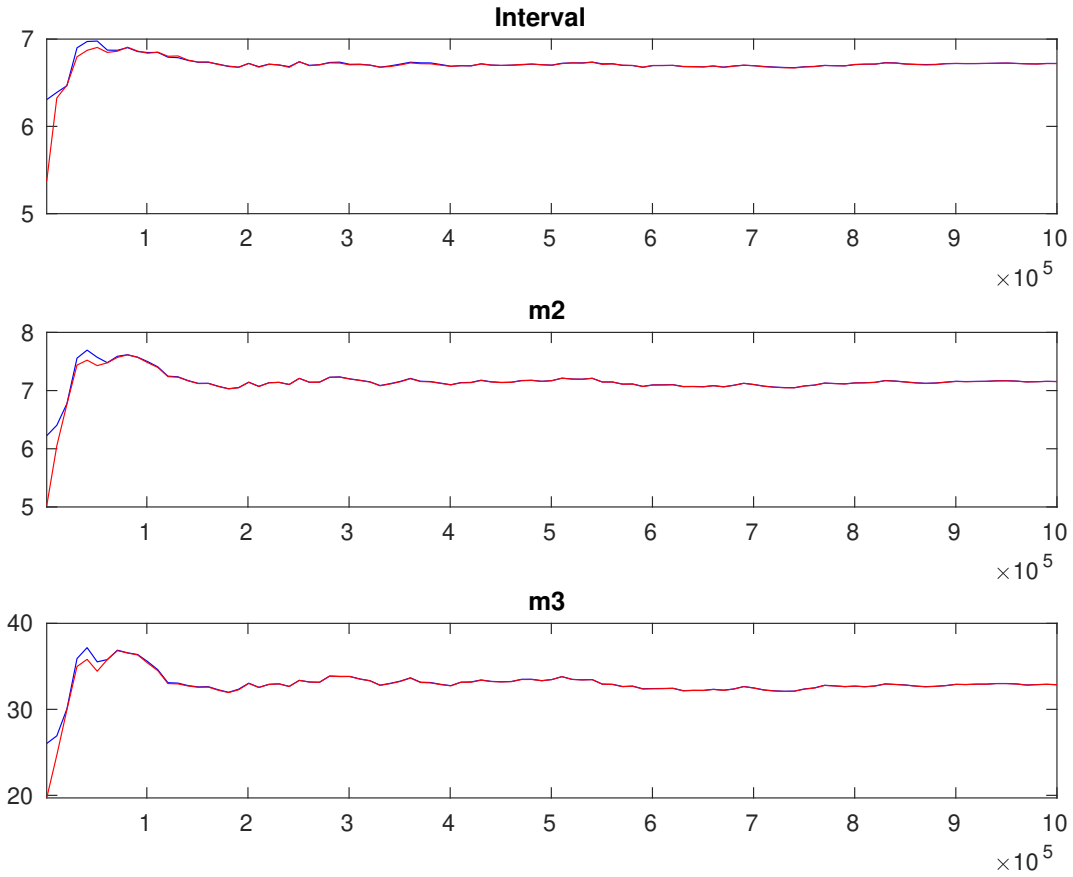

Figure 5: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

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	1.301	0.2099	0.9539	1.6425
$\pi^{(A)}$	gamm	4.000	2.0000	2.729	0.2987	2.2371	3.2161
$\gamma^{(Q)}$	norm	0.400	0.2000	0.406	0.0854	0.2664	0.5470
τ	gamm	2.000	0.5000	2.257	0.2034	1.9238	2.5873
ν	beta	0.100	0.0500	0.115	0.0125	0.0941	0.1349
ψ_π	gamm	1.500	0.2500	1.382	0.0598	1.2858	1.4815
ψ_y	gamm	0.500	0.2500	0.275	0.1152	0.0886	0.4500
ρ_R	beta	0.500	0.2000	0.755	0.0133	0.7338	0.7774
ρ_g	beta	0.800	0.1000	0.945	0.0111	0.9267	0.9631
ρ_z	beta	0.660	0.1500	0.896	0.0068	0.8849	0.9074
σ_R	invg	0.300	4.0000	0.204	0.0058	0.1939	0.2130
σ_g	invg	0.400	4.0000	0.599	0.0143	0.5751	0.6218
σ_z	invg	0.400	4.0000	0.314	0.0144	0.2907	0.3379
ι_p	beta	0.500	0.1500	0.521	0.0438	0.4487	0.5917

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
r_A	gamm	0.800	0.5000	1.3046	0.0434
$\pi^{(A)}$	gamm	4.000	2.0000	2.7222	0.0859
$\gamma^{(Q)}$	norm	0.400	0.2000	0.4042	0.0352
τ	gamm	2.000	0.5000	2.2000	0.0979
ν	beta	0.100	0.0500	0.1116	0.0094
ψ_π	gamm	1.500	0.2500	1.3889	0.0513
ψ_y	gamm	0.500	0.2500	0.2387	0.0560
ρ_R	beta	0.500	0.2000	0.7516	0.0099
ρ_g	beta	0.800	0.1000	0.9418	0.0113
ρ_z	beta	0.660	0.1500	0.8949	0.0061
σ_R	invg	0.300	4.0000	0.2023	0.0051
σ_g	invg	0.400	4.0000	0.5965	0.0137
σ_z	invg	0.400	4.0000	0.3117	0.0111
ι_p	beta	0.500	0.1500	0.5191	0.0260

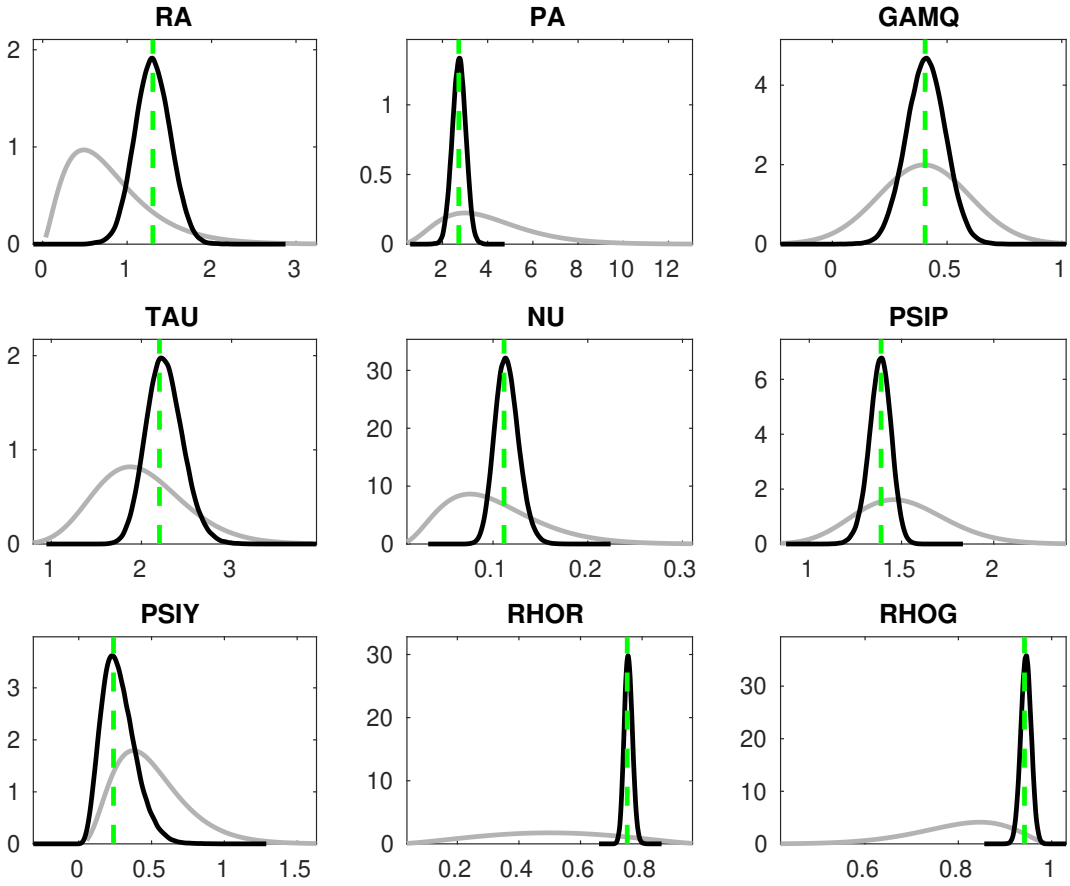

Figure 6: Priors and posteriors.

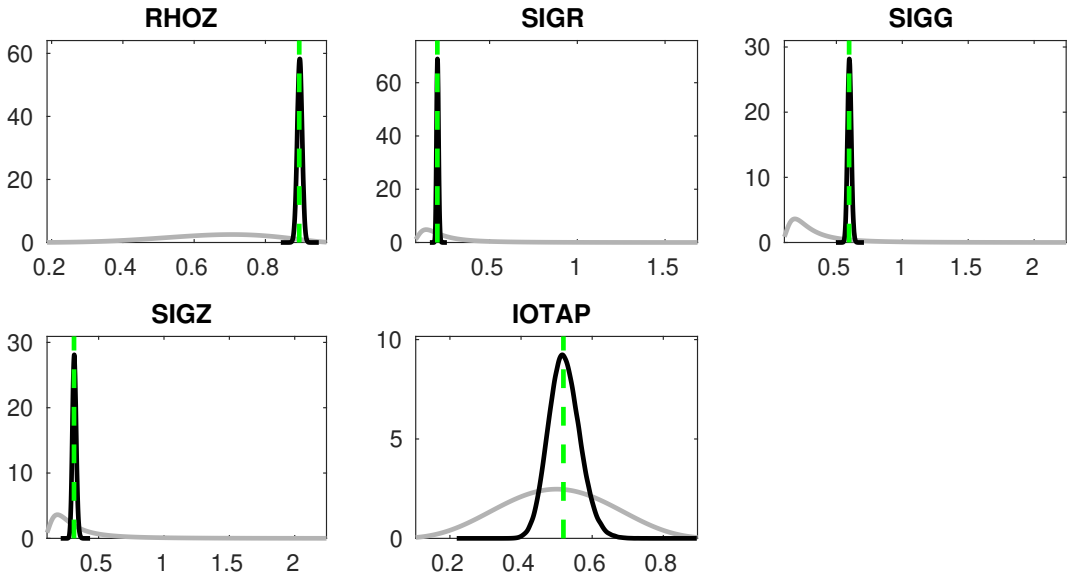

Figure 7: Priors and posteriors.

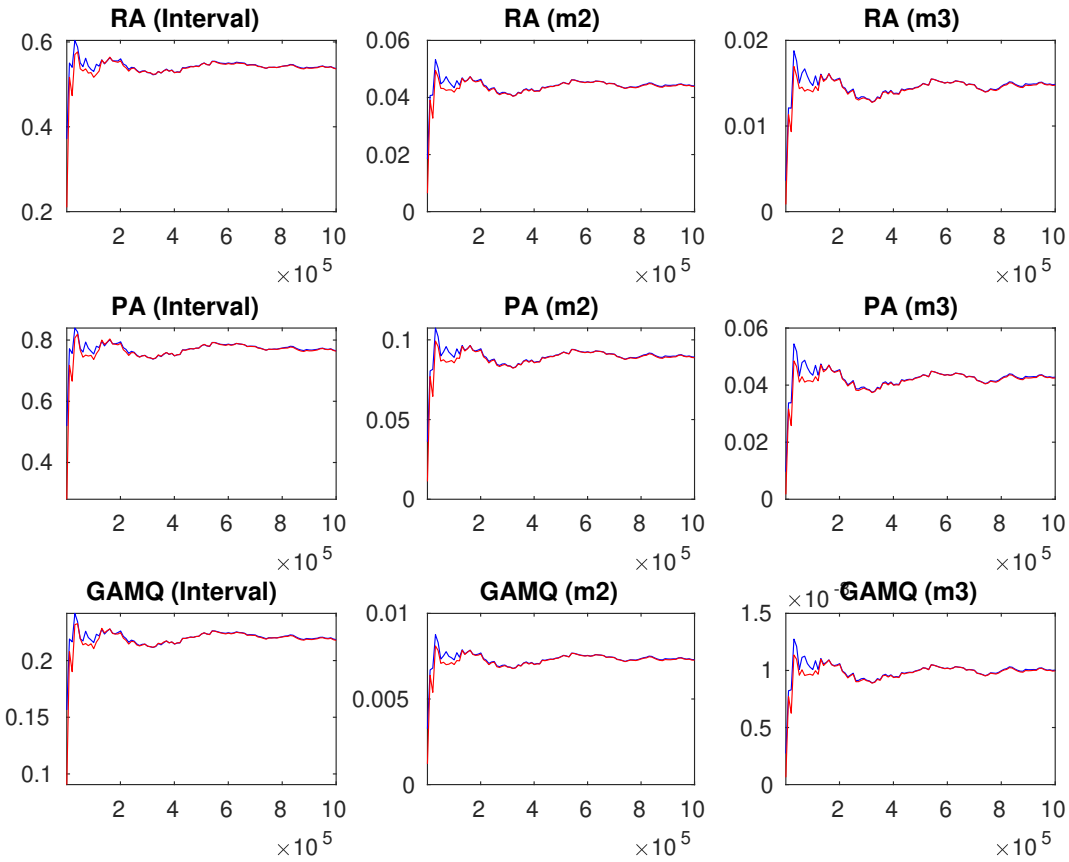

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

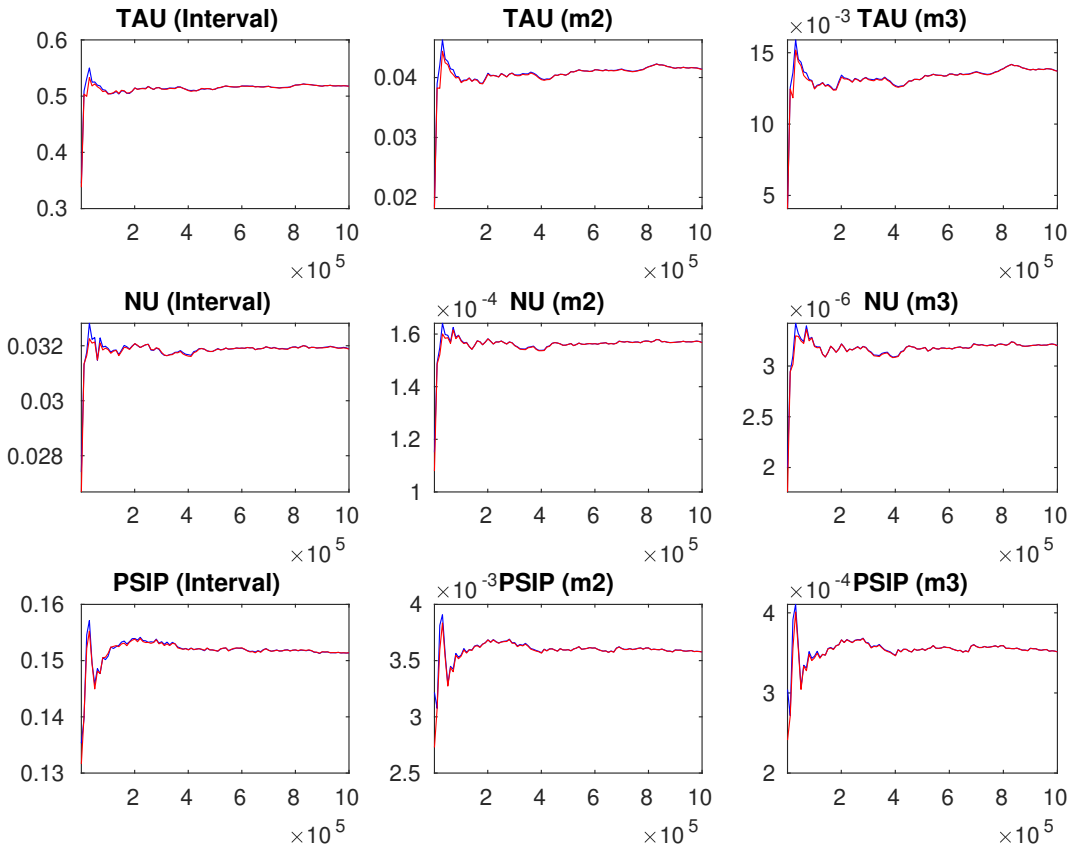

Figure 9: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

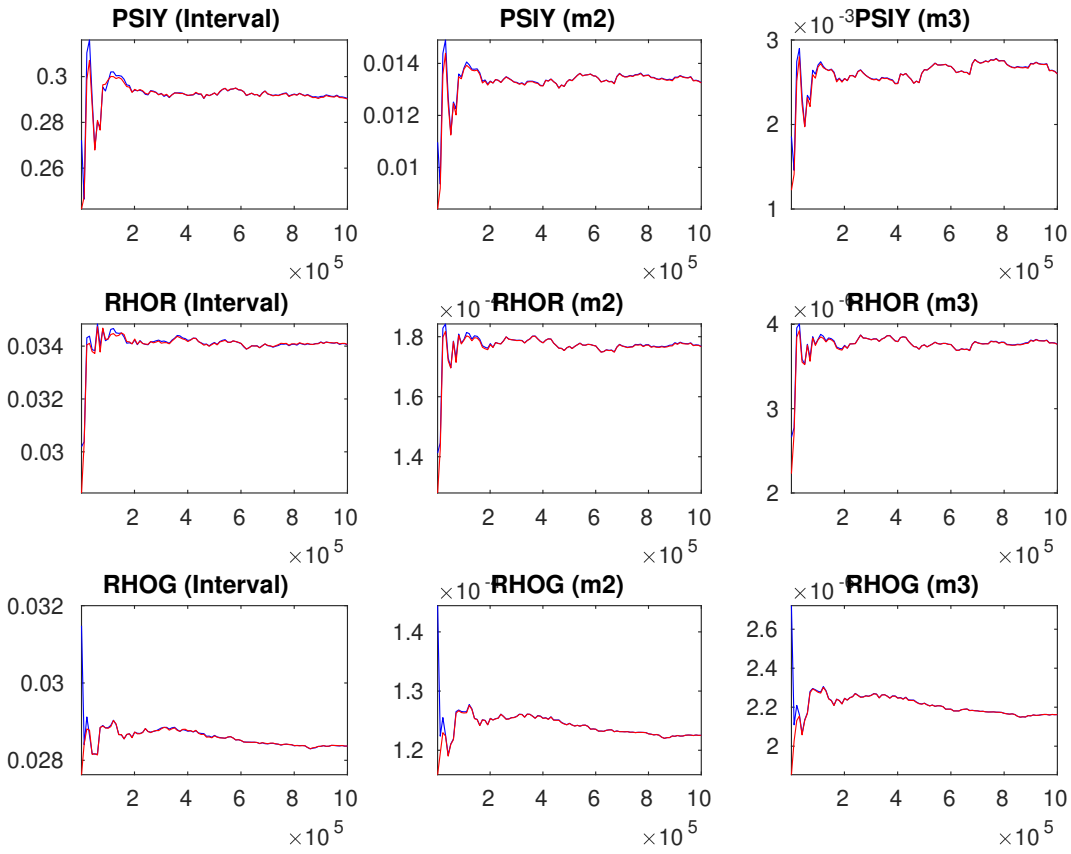

Figure 10: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

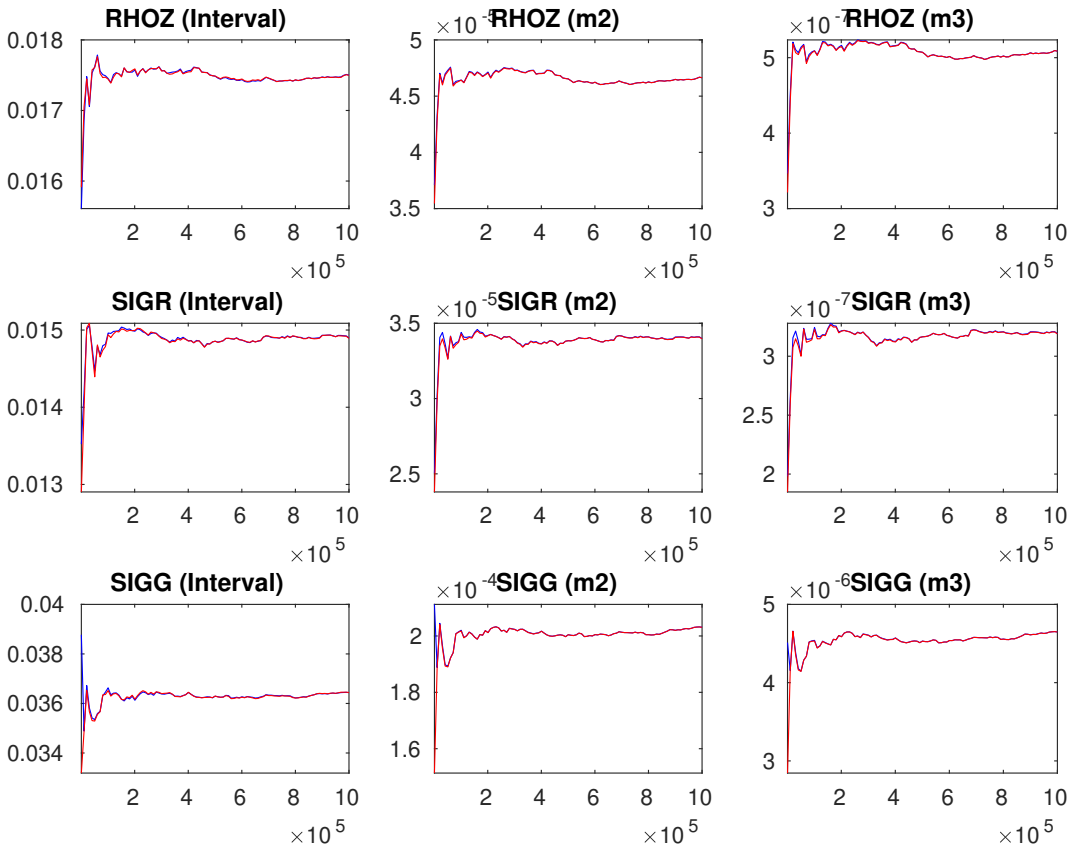

Figure 11: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

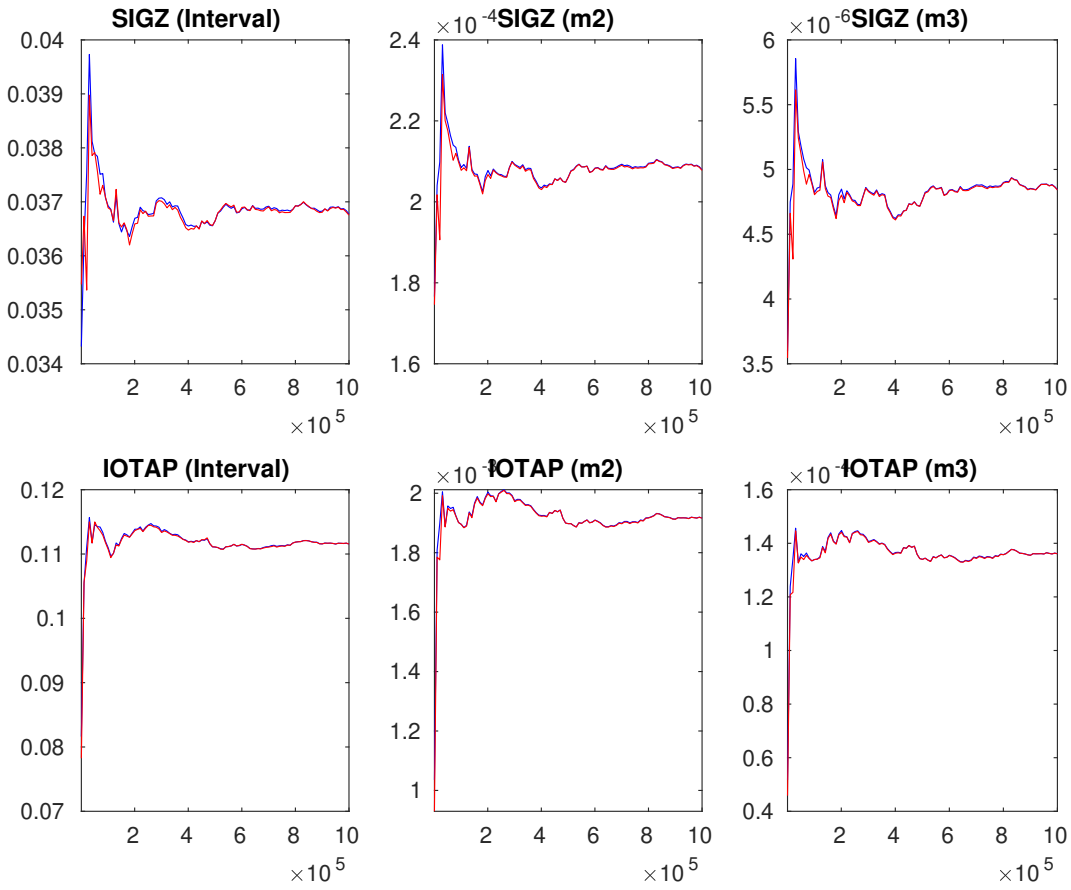

Figure 12: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.