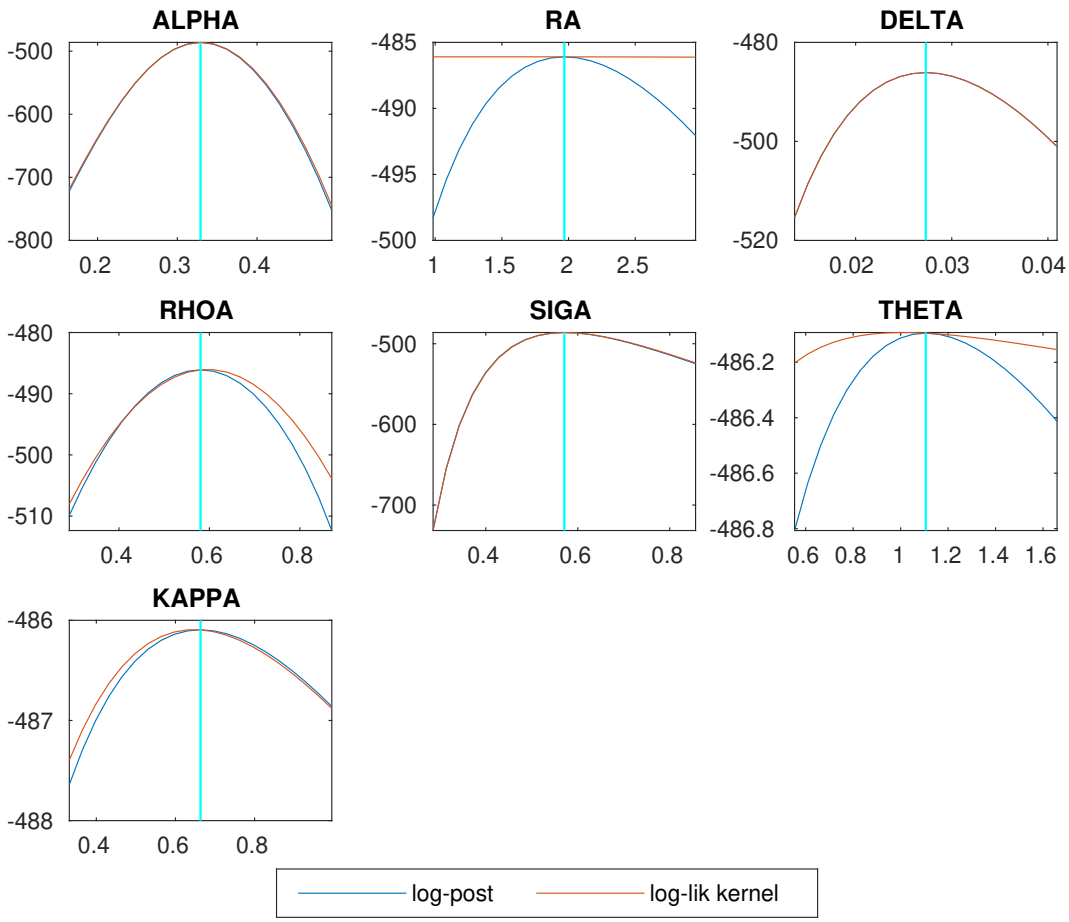

Figure 1: Check plots.

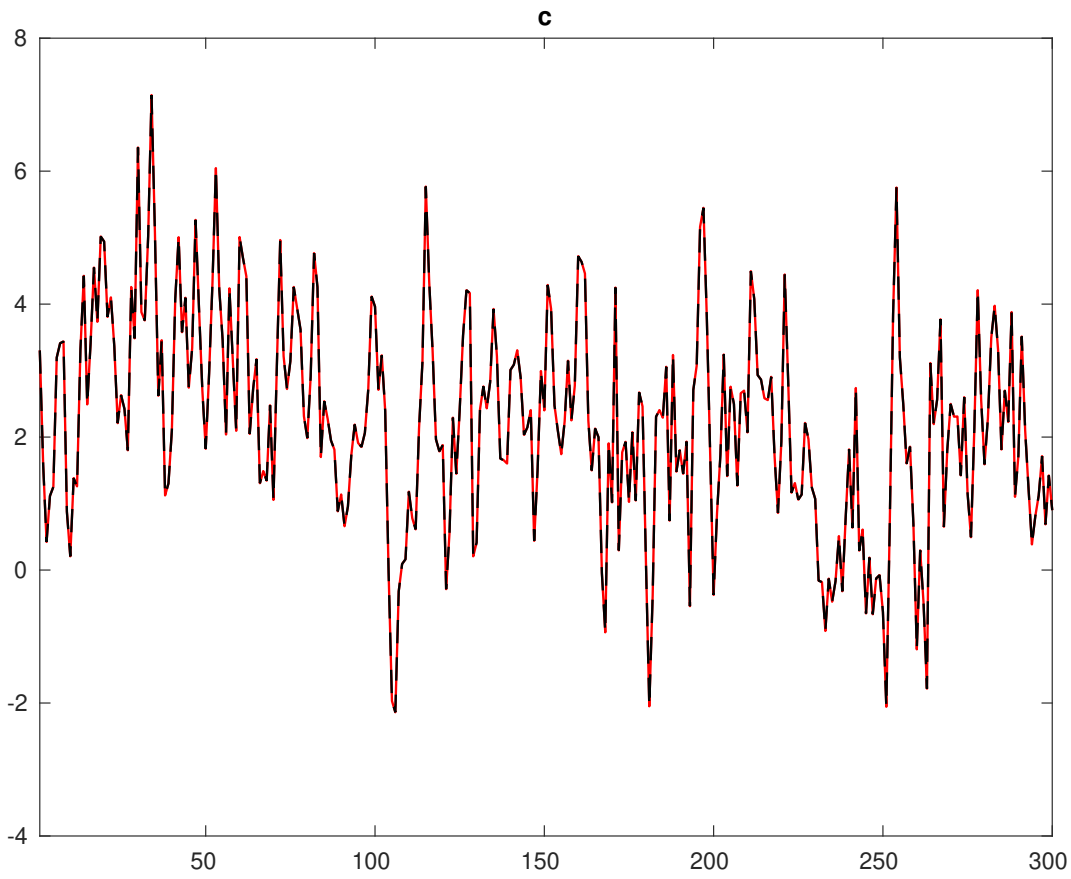

Figure 2: Historical and smoothed variables.

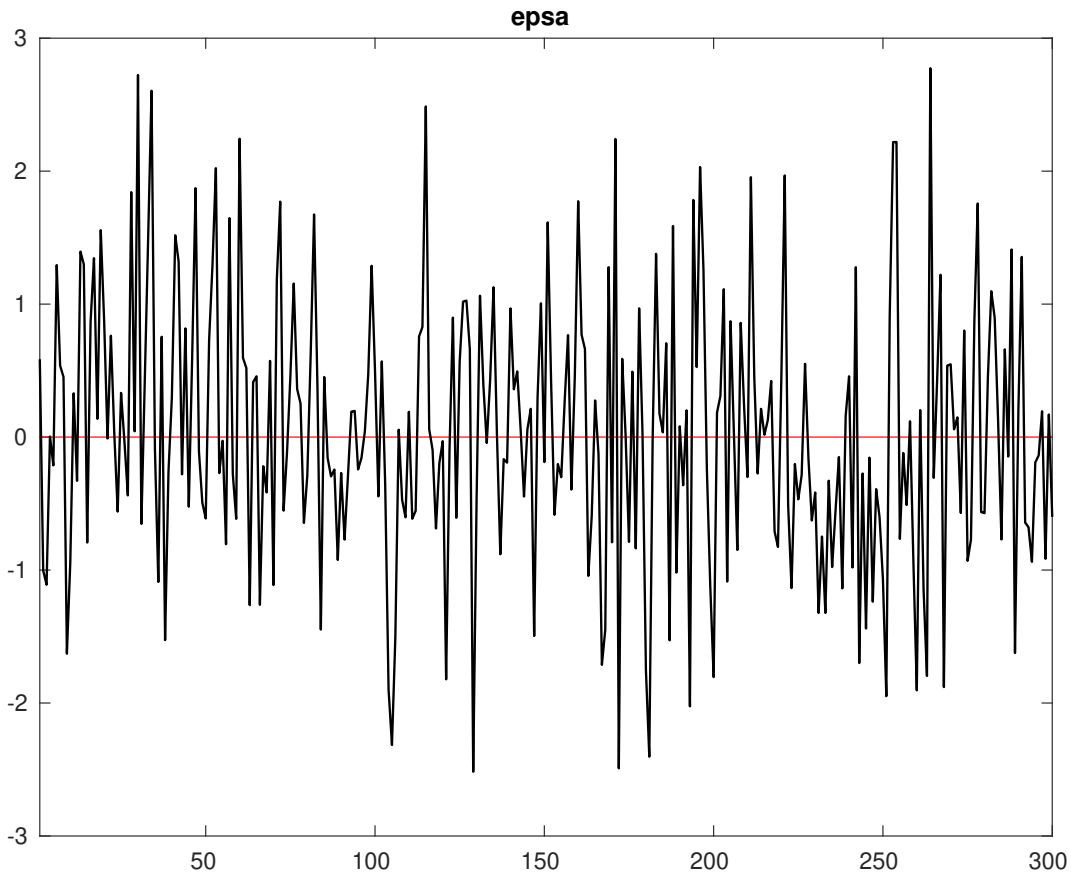

Figure 3: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
α	110.155	108.142	110.692	82.812
r_A	37.985	39.264	38.139	39.945
δ	176.632	176.829	199.873	133.440
ρ_A	53.399	55.339	52.678	54.146
σ_A	108.678	115.438	119.835	123.558
θ	66.426	64.725	68.605	68.454
κ	347.456	396.241	376.693	343.675

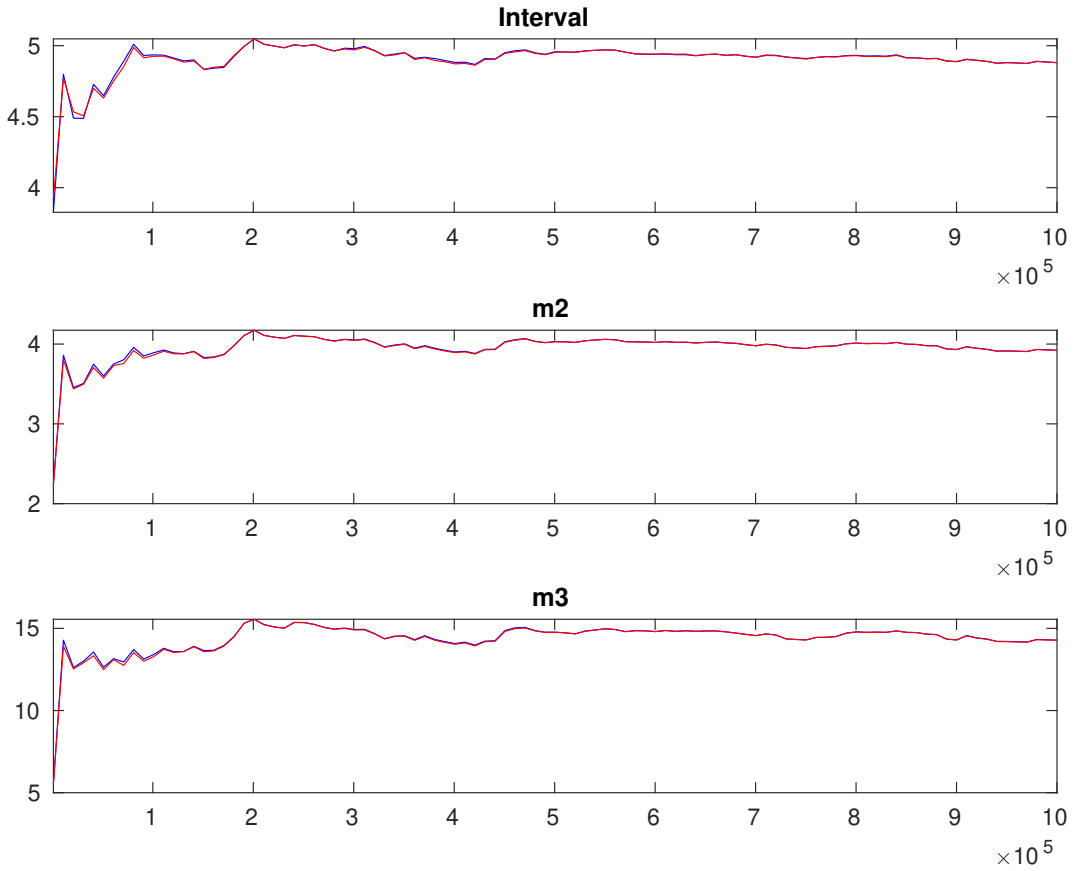

Figure 4: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
α	norm	0.300	0.0500	0.341	0.0448	0.2673	0.4148
r_A	gamm	2.000	0.2500	1.999	0.2500	1.5883	2.4058
δ	unif	0.500	0.2887	0.037	0.0180	0.0091	0.0650
ρ_A	beta	0.500	0.1000	0.585	0.0448	0.5120	0.6591
σ_A	invg	0.600	2.0000	0.574	0.0942	0.4254	0.7170
θ	gamm	1.500	0.7500	1.519	0.7554	0.3766	2.6421
κ	gamm	2.000	1.5000	1.508	1.1909	0.0248	3.1180

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.3292	0.0450
r_A	gamm	2.000	0.2500	1.9683	0.2479
δ	unif	0.500	0.2887	0.0273	0.0150
ρ_A	beta	0.500	0.1000	0.5804	0.0455
σ_A	invg	0.600	2.0000	0.5708	0.0959
θ	gamm	1.500	0.7500	1.1061	0.6454
κ	gamm	2.000	1.5000	0.6634	0.7451

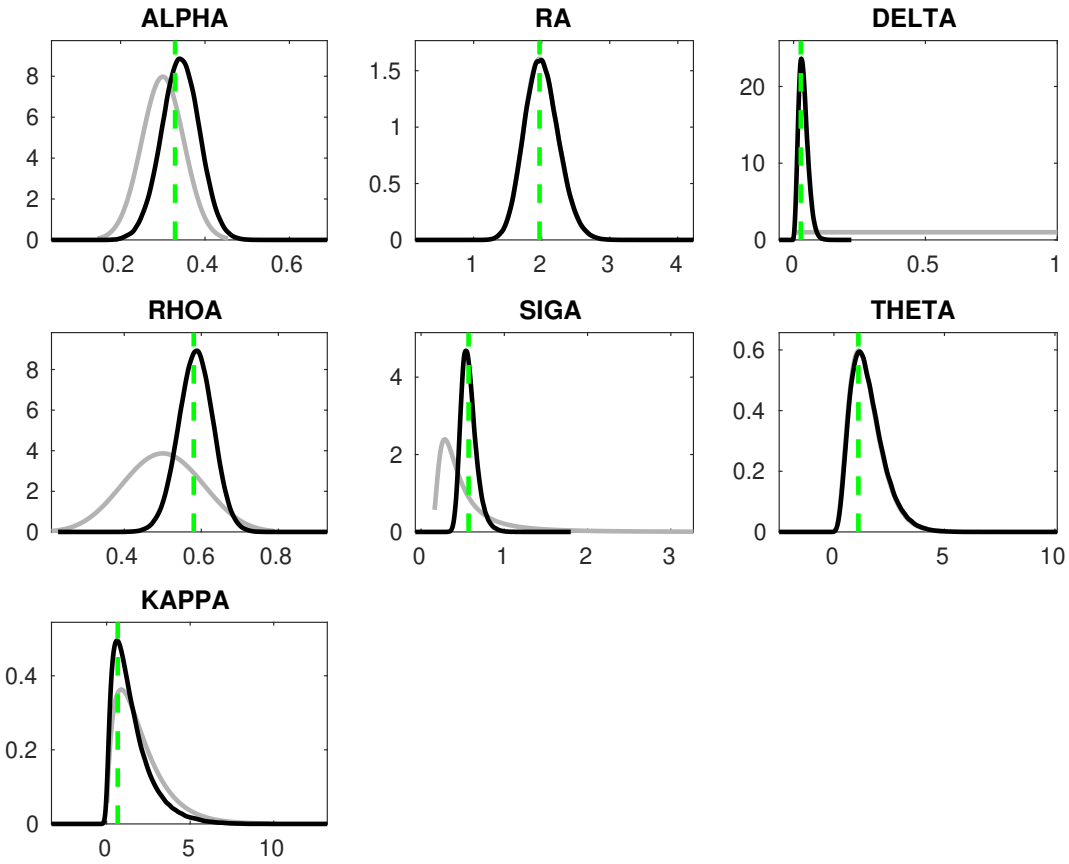

Figure 5: Priors and posteriors.

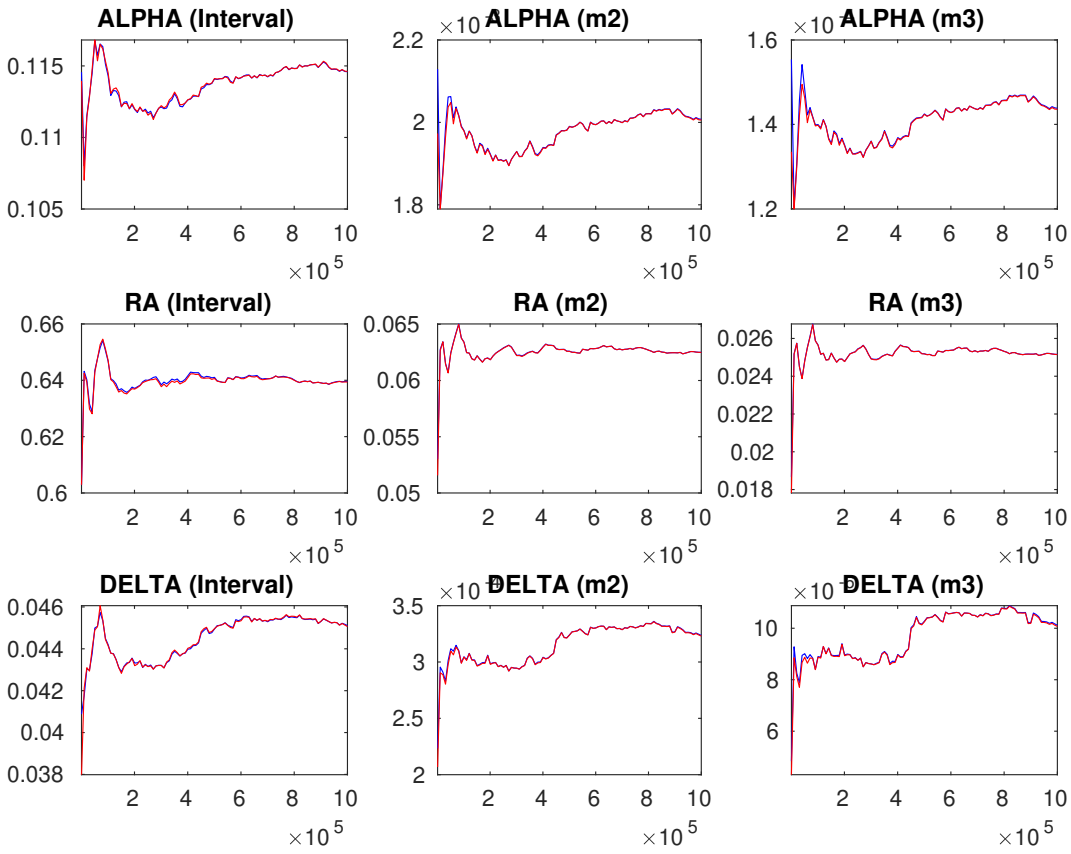

Figure 6: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

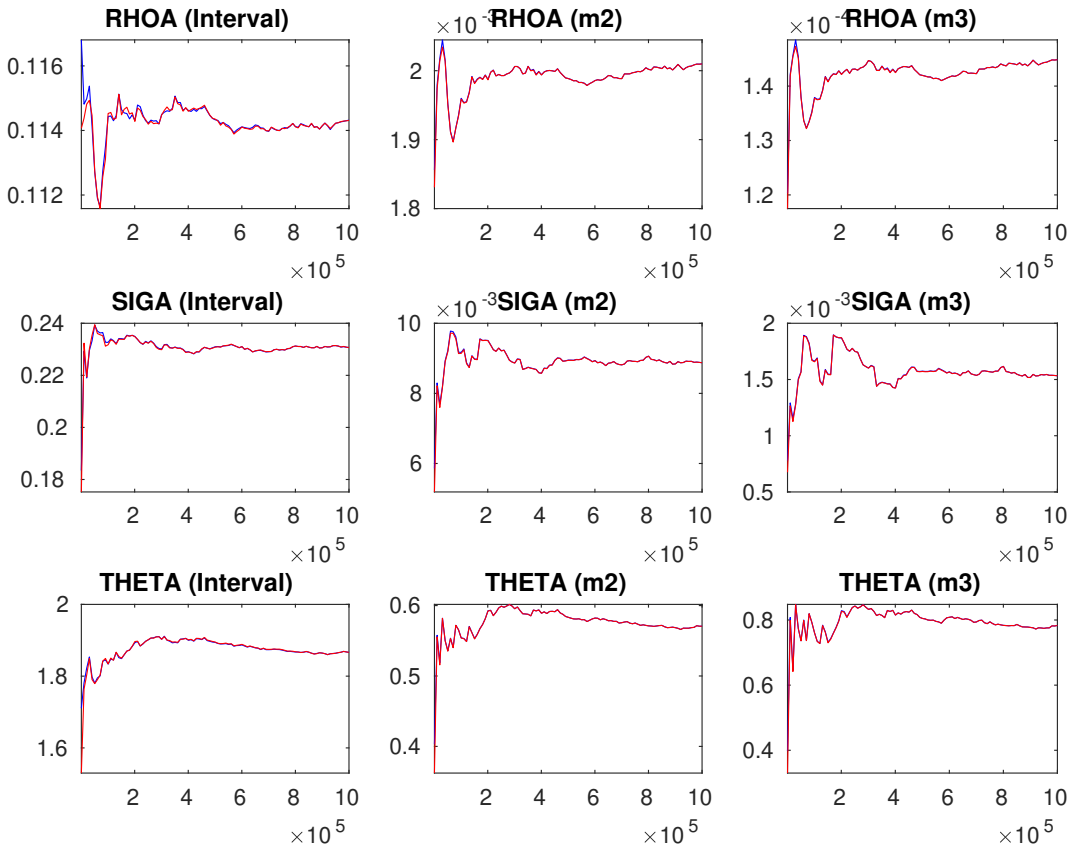

Figure 7: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

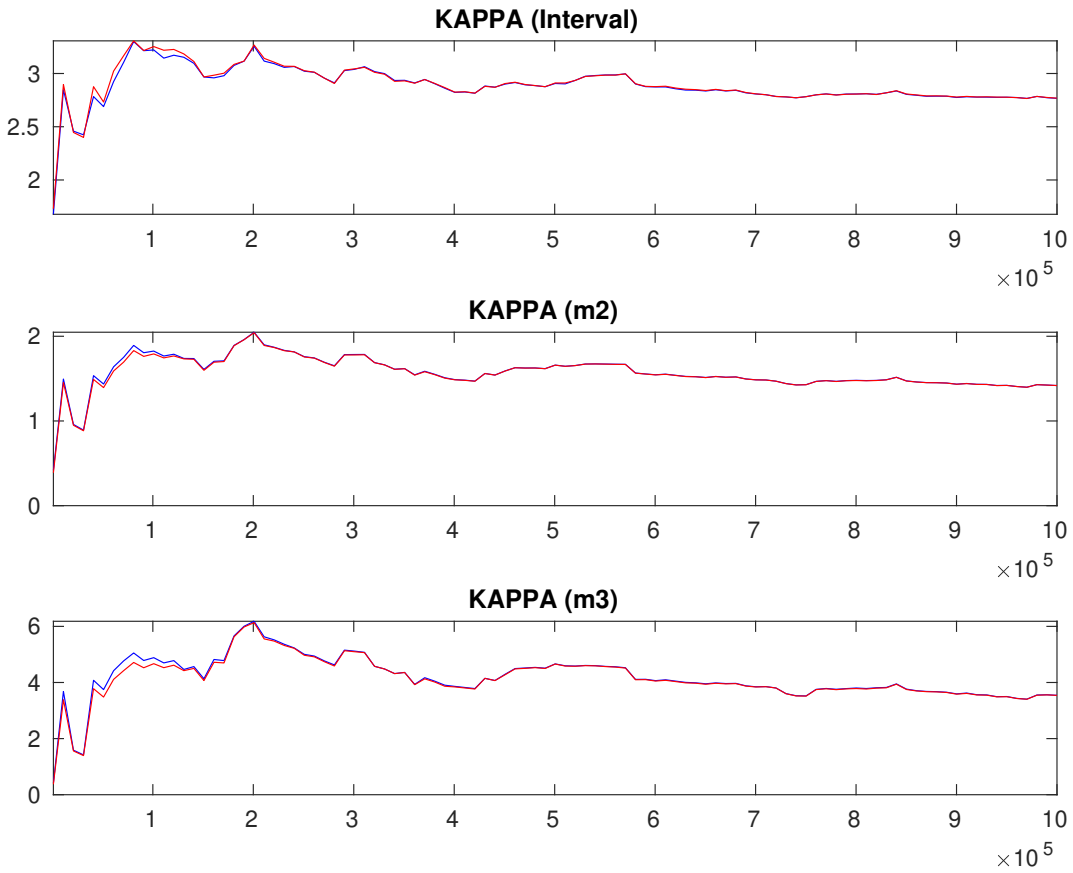

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.