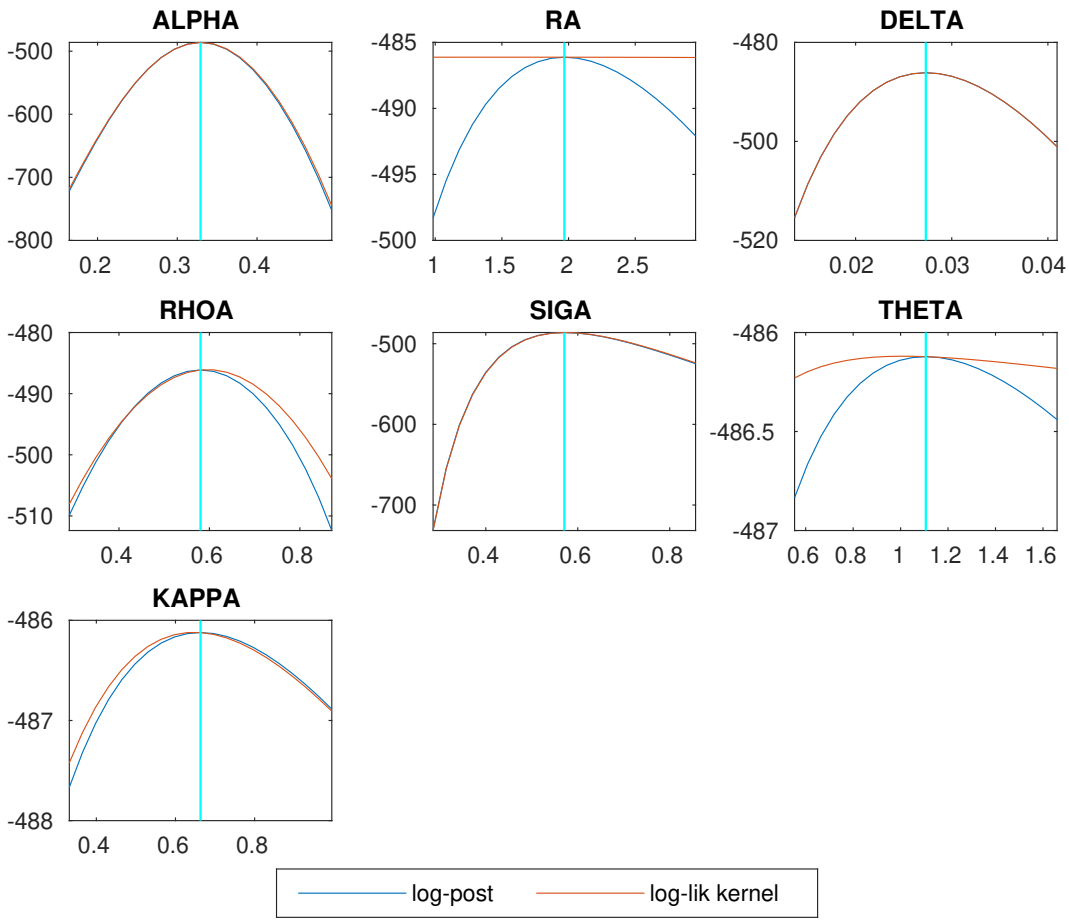

Figure 1: Check plots.

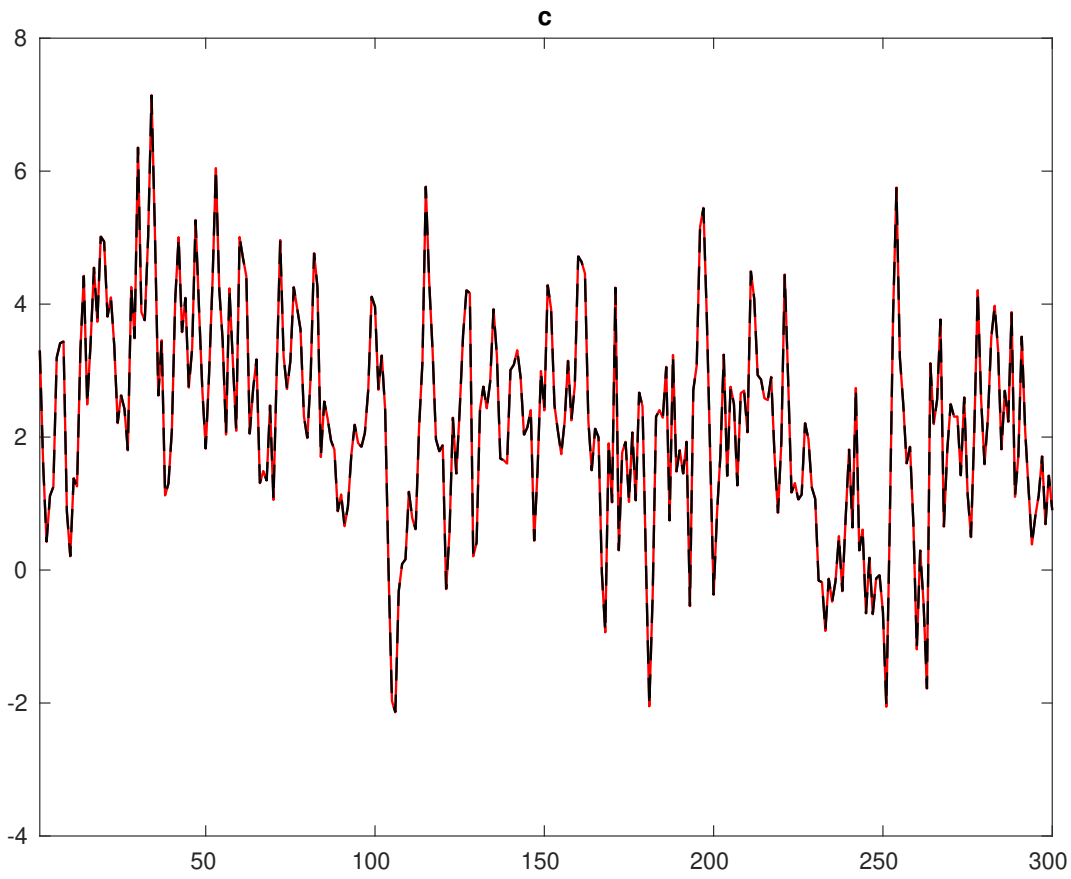

Figure 2: Historical and smoothed variables.

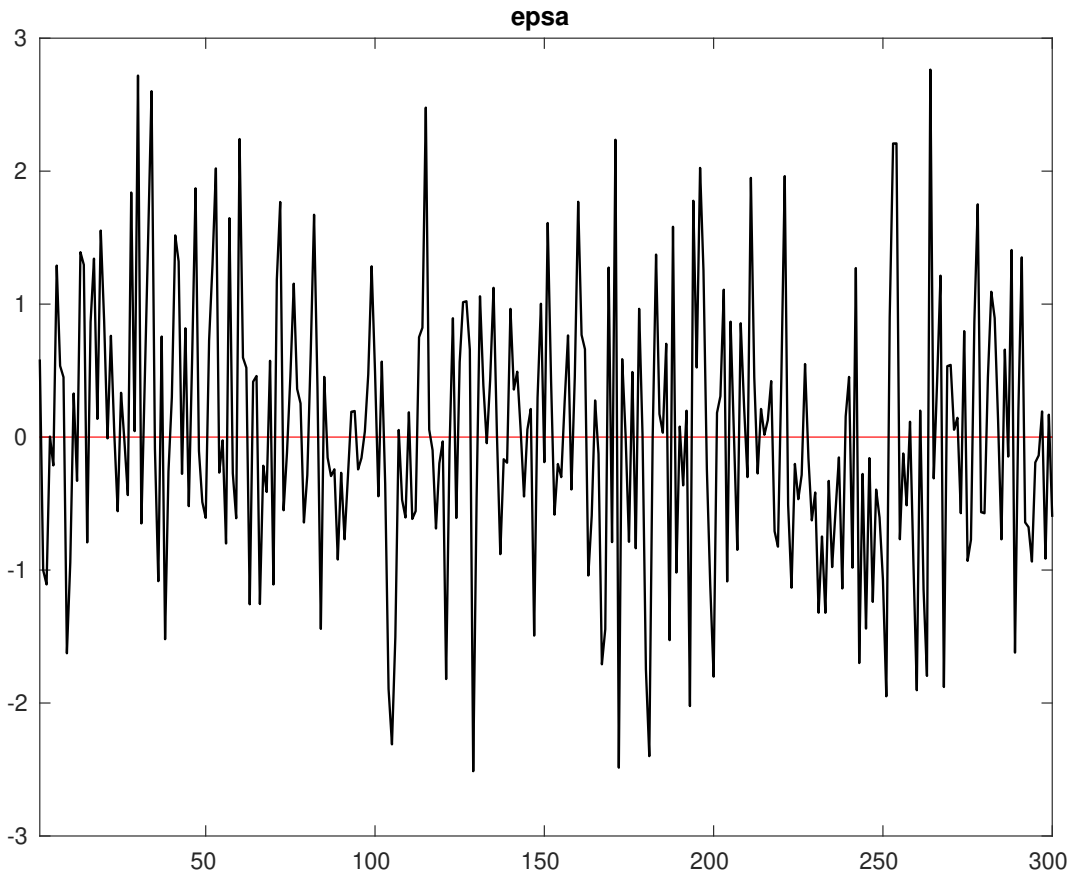

Figure 3: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
α	101.915	103.900	91.225	98.936
r_A	34.559	35.184	40.300	38.377
δ	177.497	169.595	160.706	157.107
ρ_A	59.132	44.392	46.147	56.513
σ_A	131.114	114.426	131.527	106.492
θ	66.718	63.285	72.835	53.849
κ	460.173	326.954	493.663	338.029

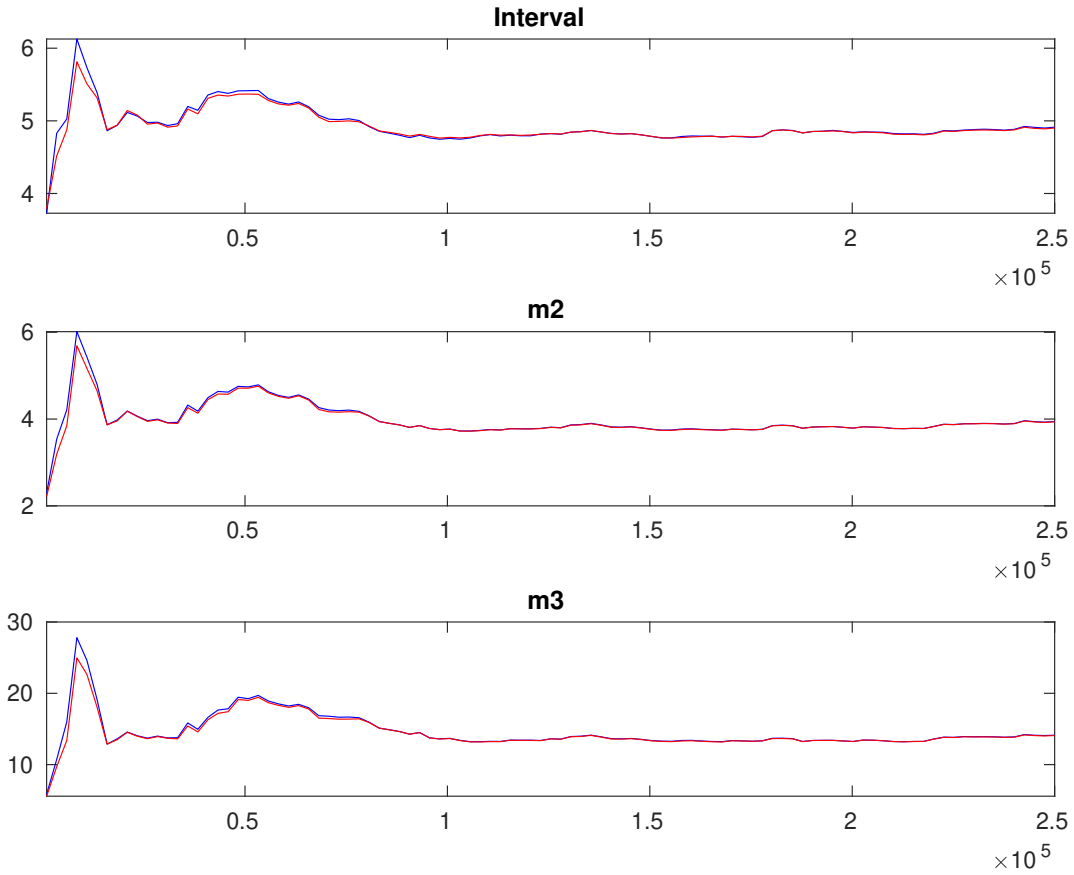

Figure 4: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
α	norm	0.300	0.0500	0.340	0.0447	0.2676	0.4138
r_A	gamm	2.000	0.2500	2.003	0.2492	1.5939	2.4070
δ	unif	0.500	0.2887	0.037	0.0178	0.0090	0.0643
ρ_A	beta	0.500	0.1000	0.585	0.0451	0.5114	0.6590
σ_A	invg	0.600	4.0000	0.569	0.0929	0.4229	0.7105
θ	gamm	1.500	0.7500	1.533	0.7591	0.3599	2.6462
κ	gamm	2.000	1.5000	1.611	1.3091	0.0202	3.2849

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	0.0151
ρ_A	beta	0.500	0.1000	0.5804	0.0455
σ_A	invg	0.600	4.0000	0.5708	0.0960
θ	gamm	1.500	0.7500	1.1063	0.6455
κ	gamm	2.000	1.5000	0.6634	0.7453

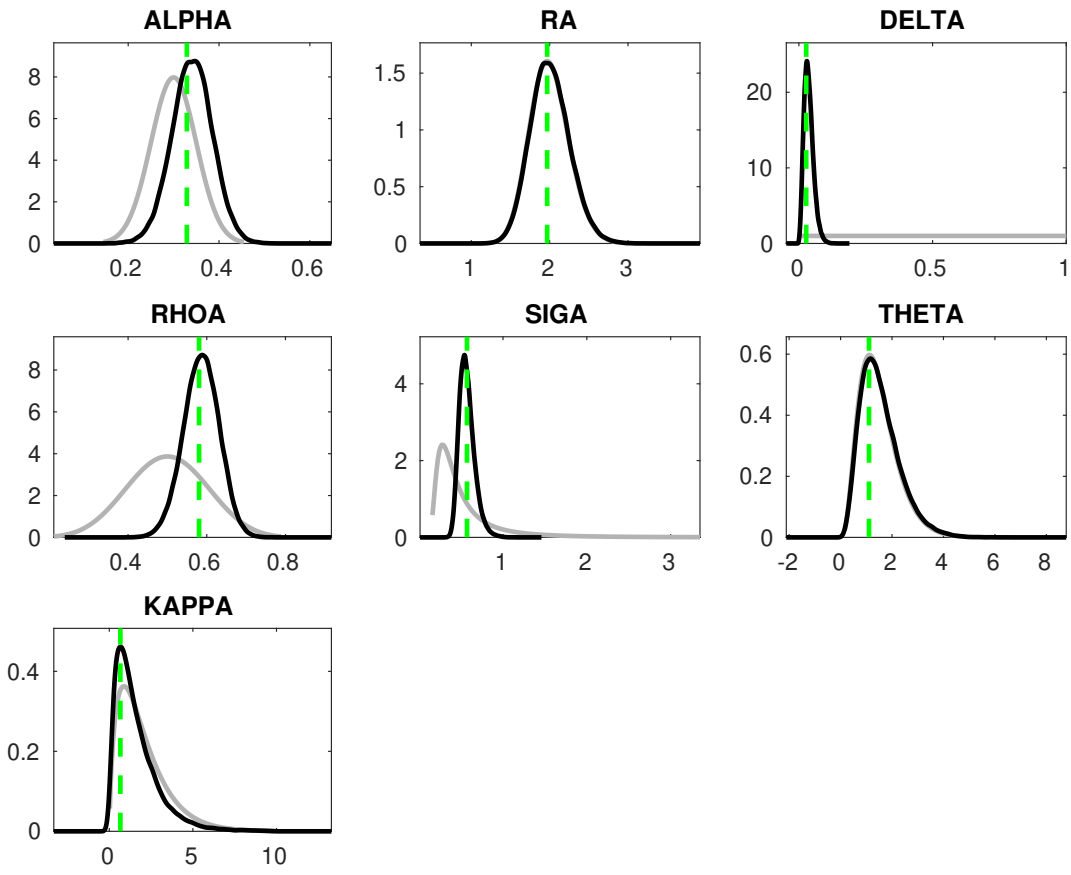

Figure 5: Priors and posteriors.

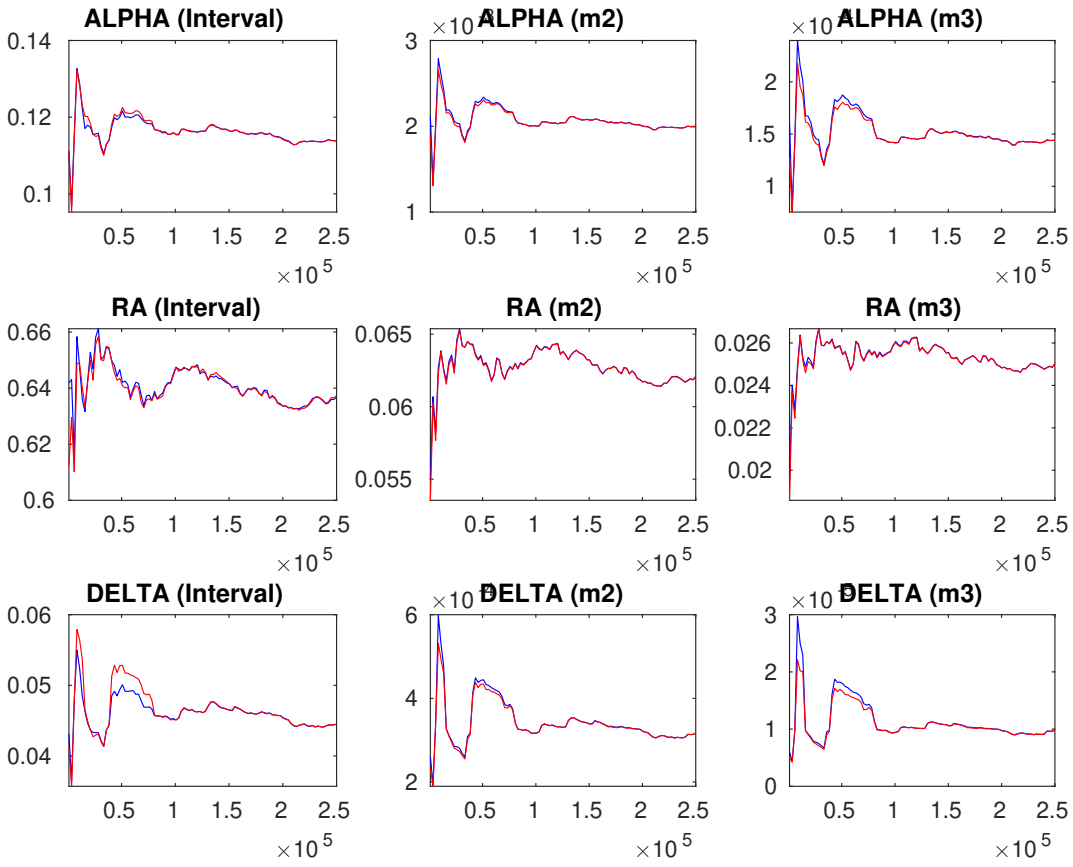

Figure 6: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

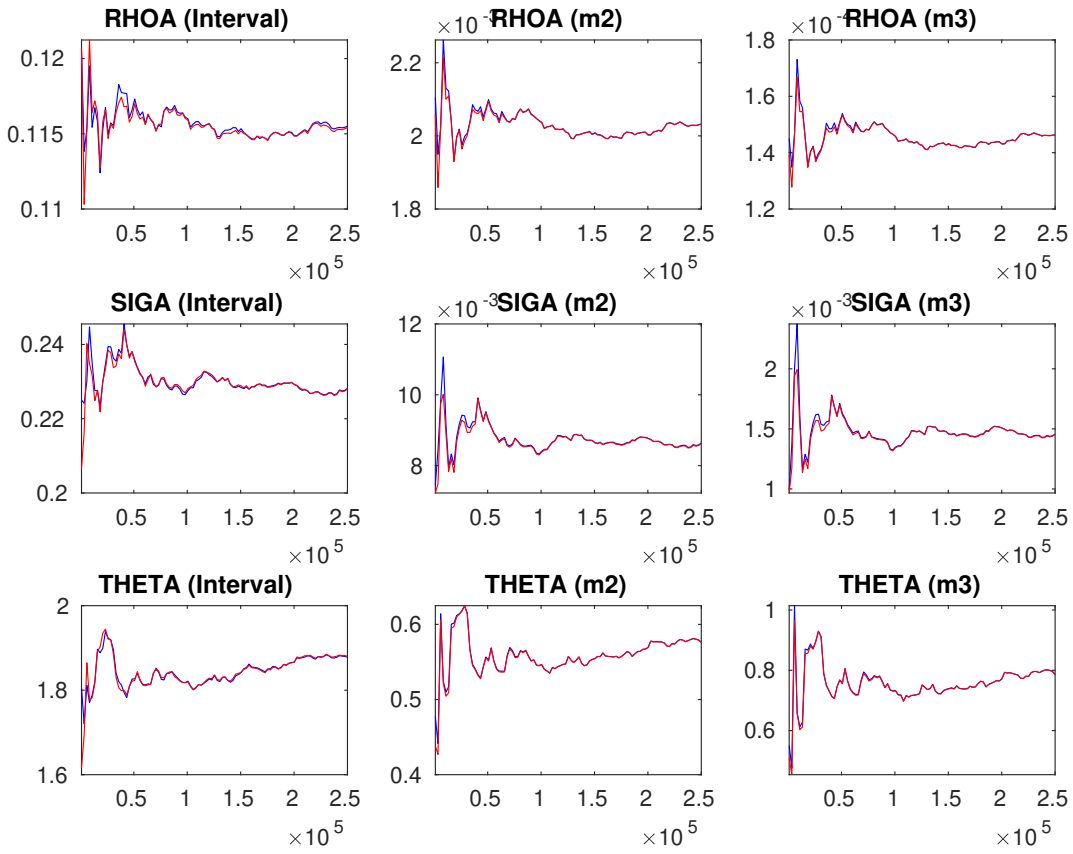

Figure 7: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

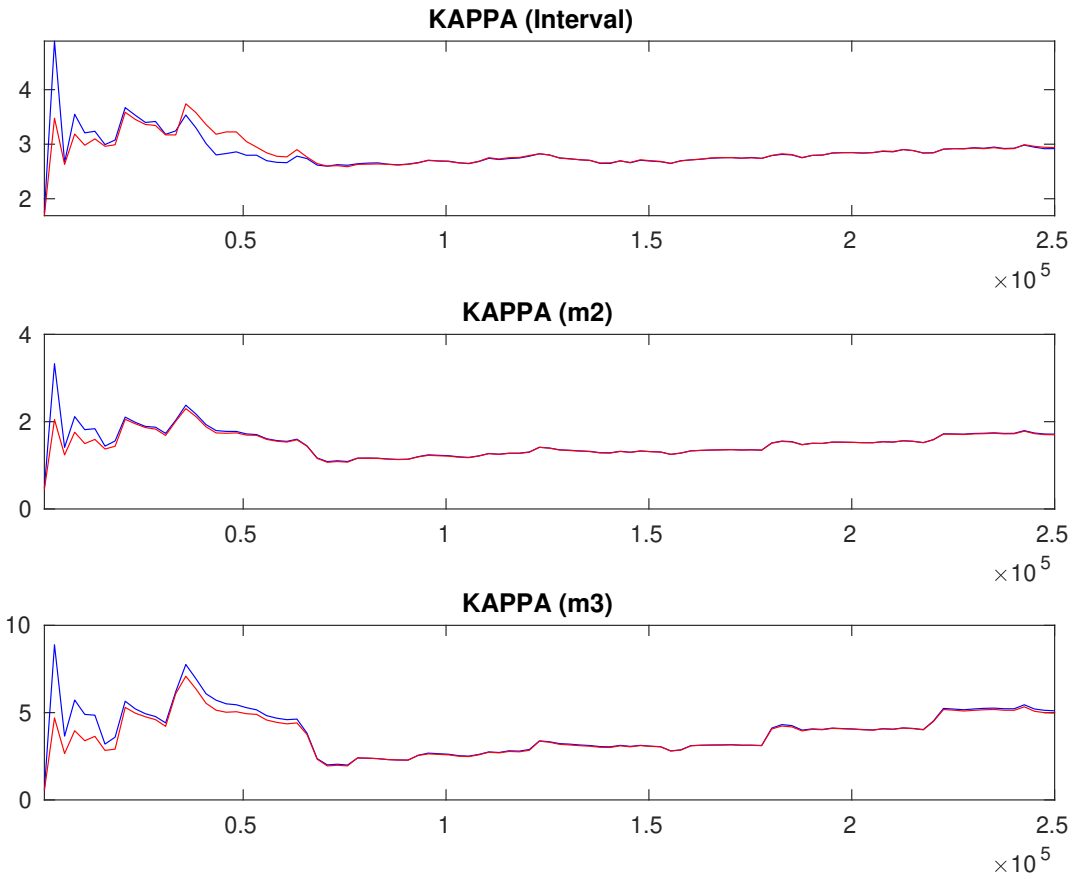

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.