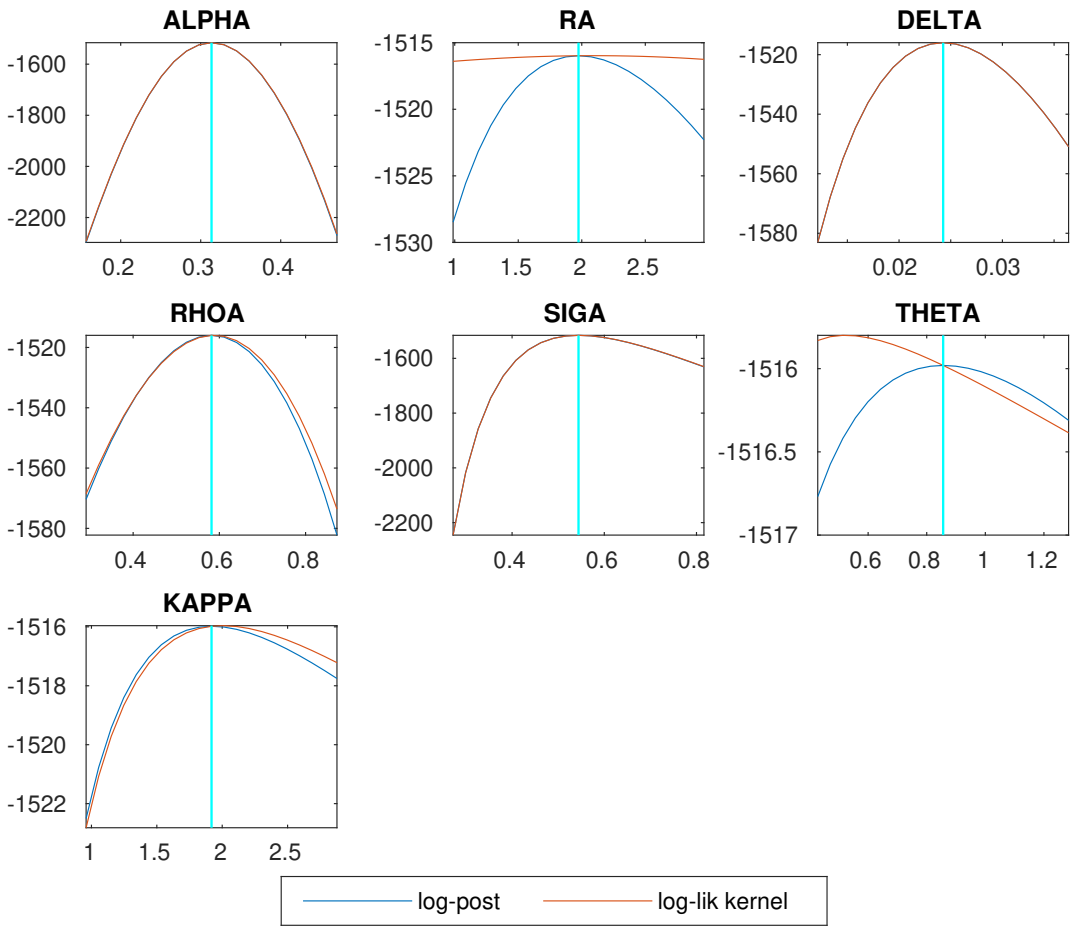

Figure 1: Check plots.

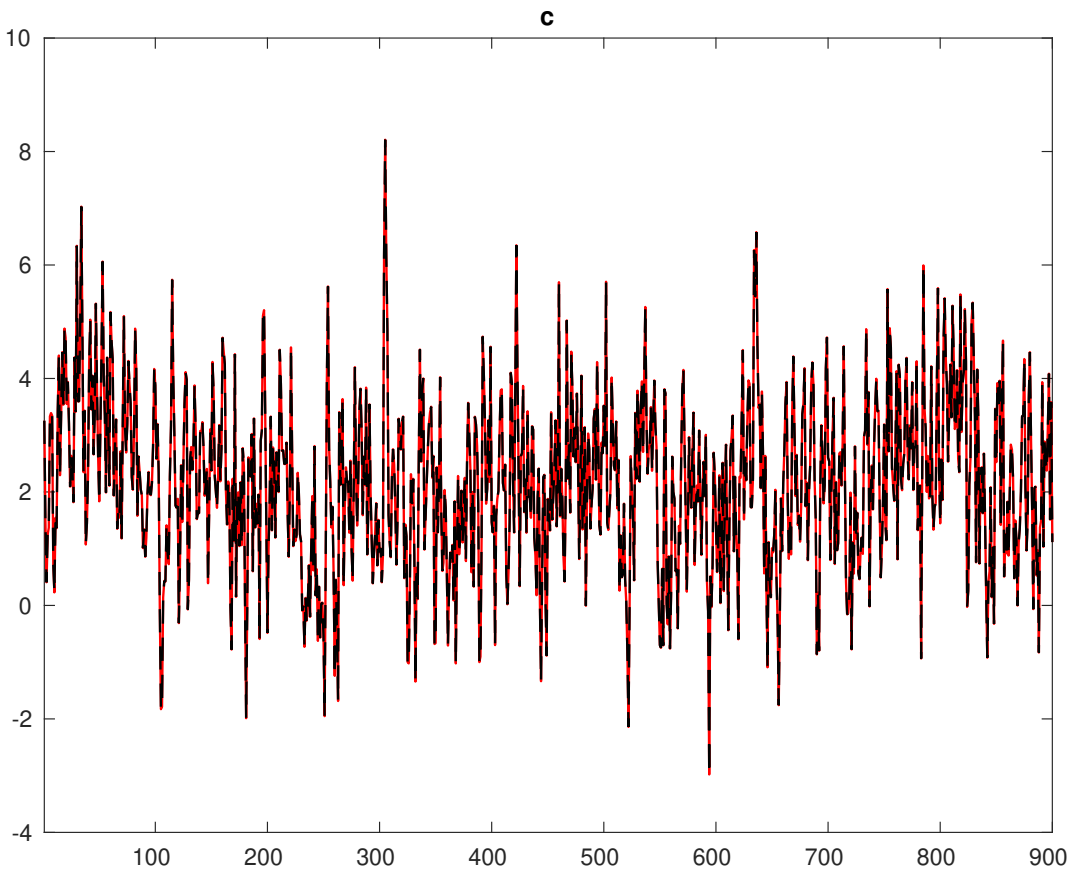

Figure 2: Historical and smoothed variables.

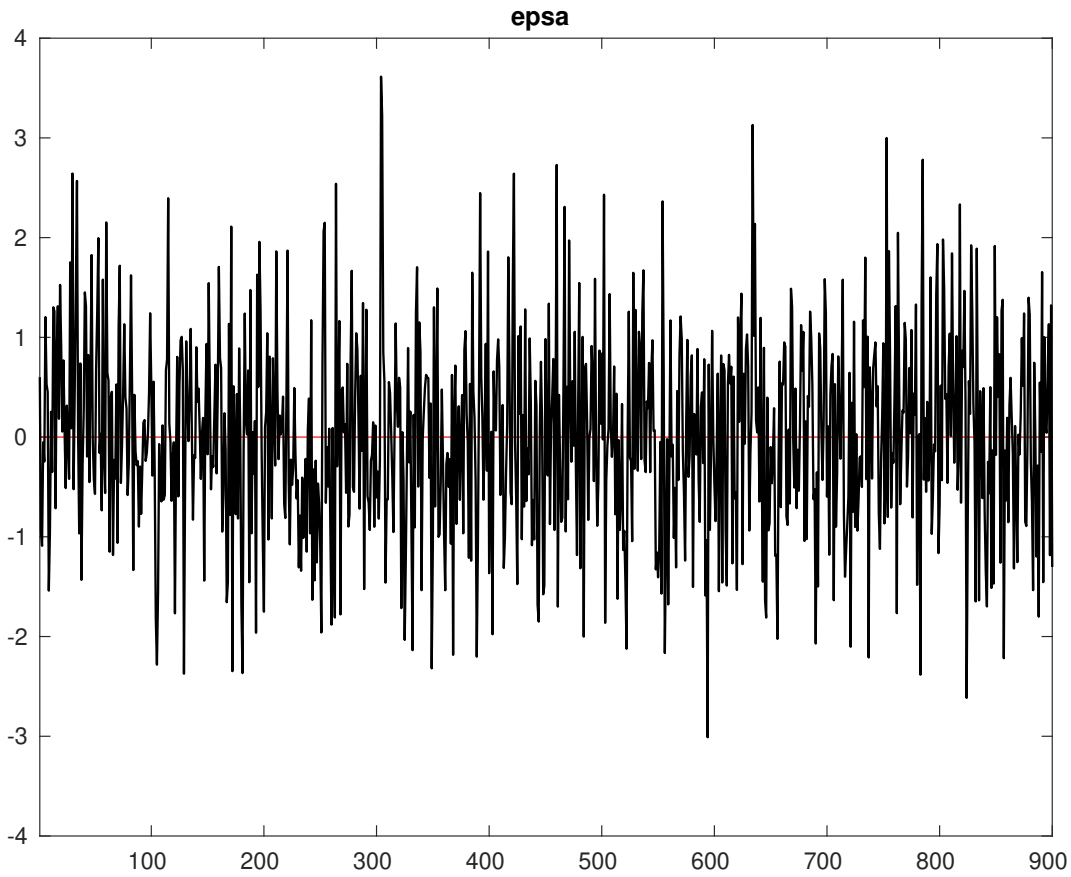

Figure 3: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
α	161.603	96.331	102.787	109.274
r_A	44.181	36.665	43.966	38.109
δ	208.097	132.679	132.792	149.701
ρ_A	69.415	80.487	94.918	88.992
σ_A	106.472	108.136	162.057	133.301
θ	93.735	91.337	77.308	63.639
κ	174.736	208.946	258.417	144.344

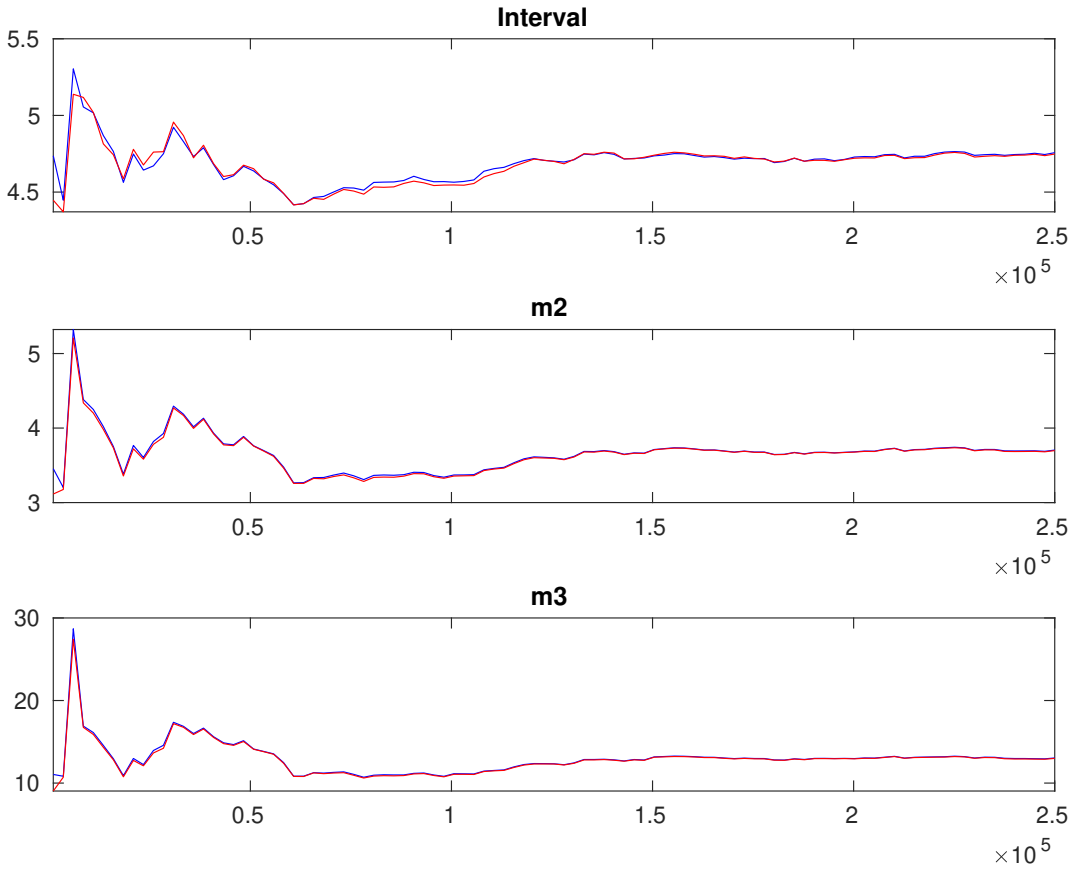

Figure 4: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
α	norm	0.300	0.0500	0.326	0.0376	0.2639	0.3874
r_A	gamm	2.000	0.2500	2.003	0.2496	1.5899	2.4063
δ	unif	0.500	0.2887	0.031	0.0130	0.0097	0.0505
ρ_A	beta	0.500	0.1000	0.569	0.0359	0.5119	0.6298
σ_A	invg	0.600	4.0000	0.556	0.0607	0.4578	0.6545
θ	gamm	1.500	0.7500	1.408	0.7432	0.2930	2.4775
κ	gamm	2.000	1.5000	2.487	1.6734	0.0565	4.7735

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.3135	0.0406
r_A	gamm	2.000	0.2500	1.9743	0.2485
δ	unif	0.500	0.2887	0.0243	0.0125
ρ_A	beta	0.500	0.1000	0.5818	0.0342
σ_A	invg	0.600	4.0000	0.5441	0.0559
θ	gamm	1.500	0.7500	0.8561	0.5651
κ	gamm	2.000	1.5000	1.9184	1.2663

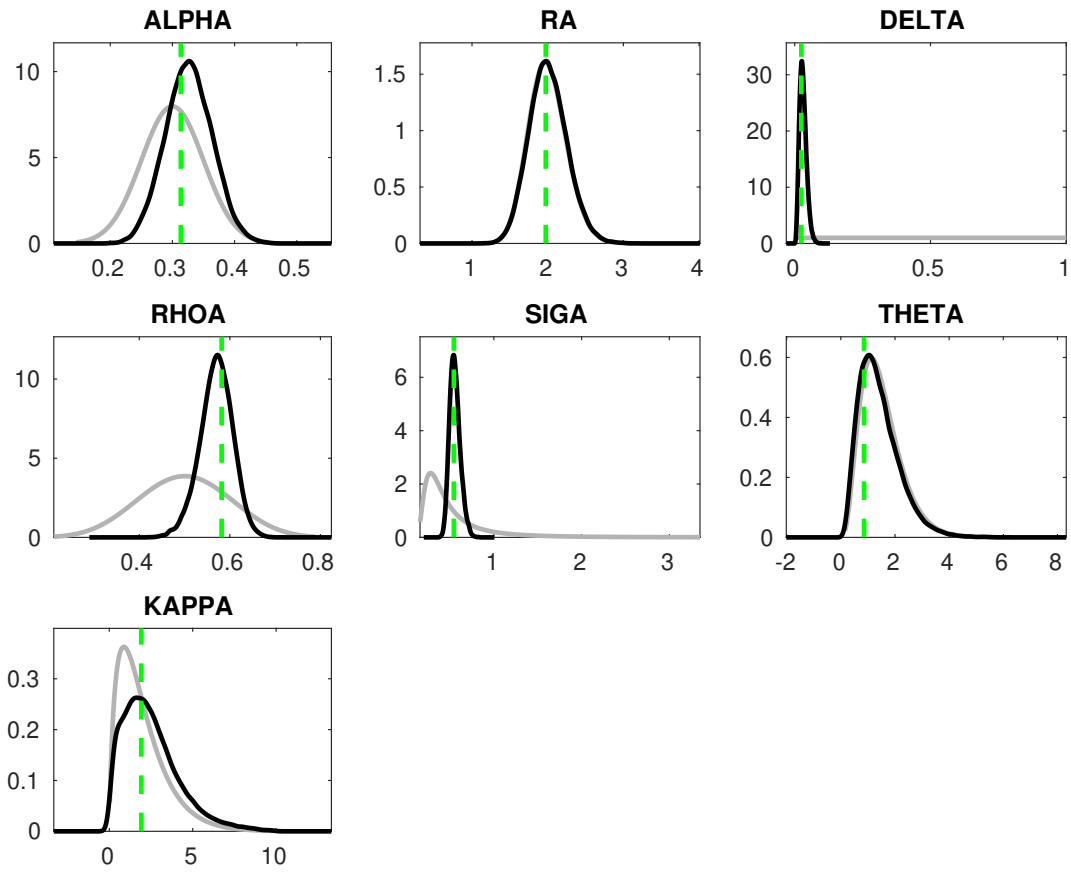

Figure 5: Priors and posteriors.

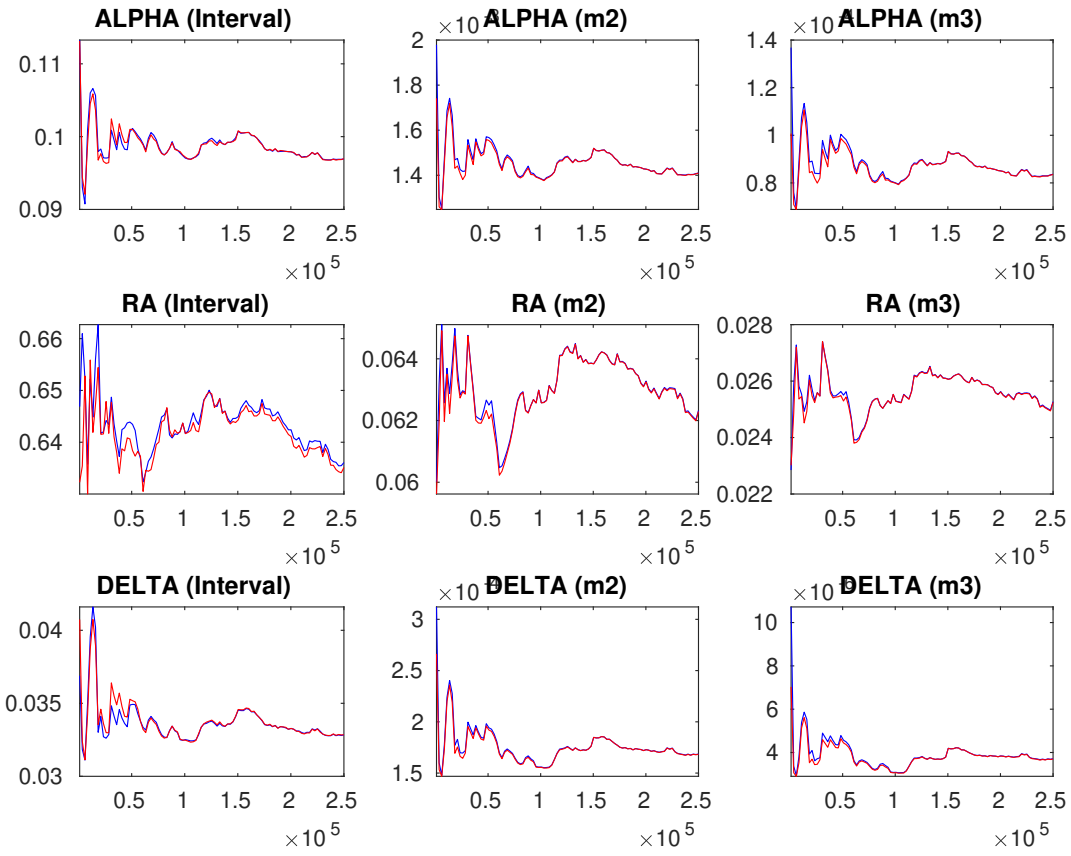

Figure 6: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

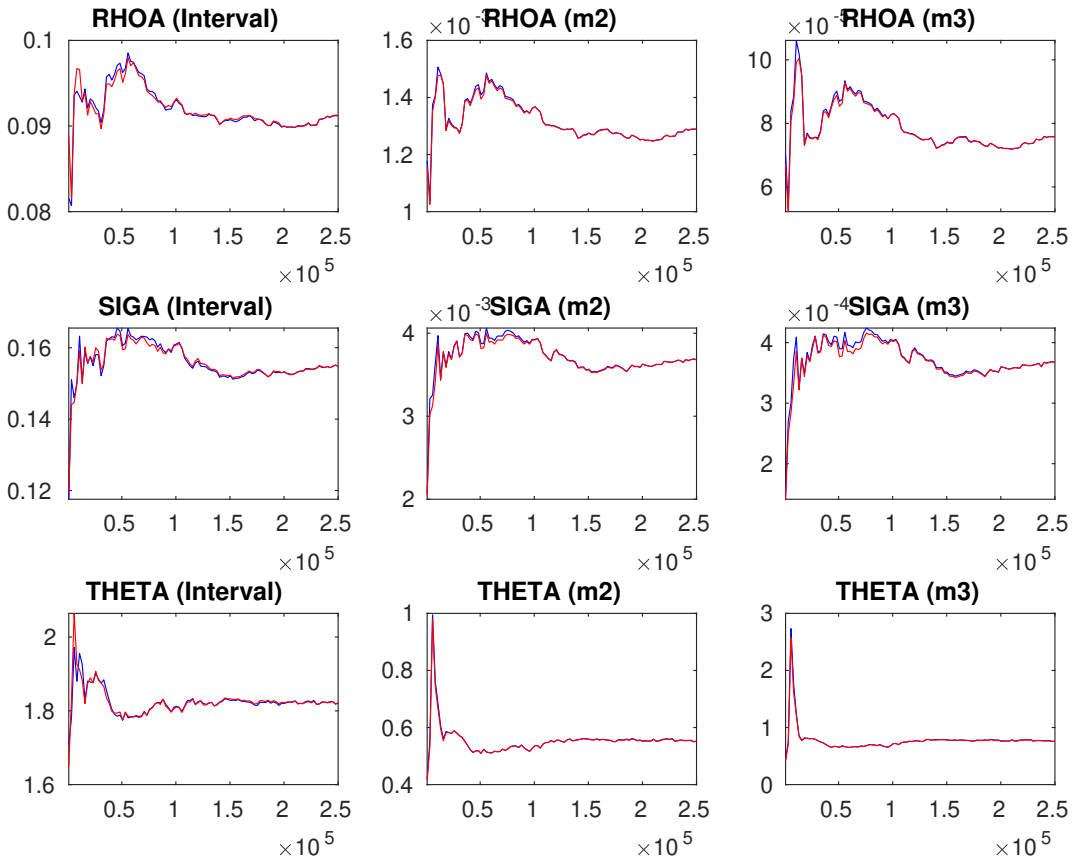

Figure 7: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

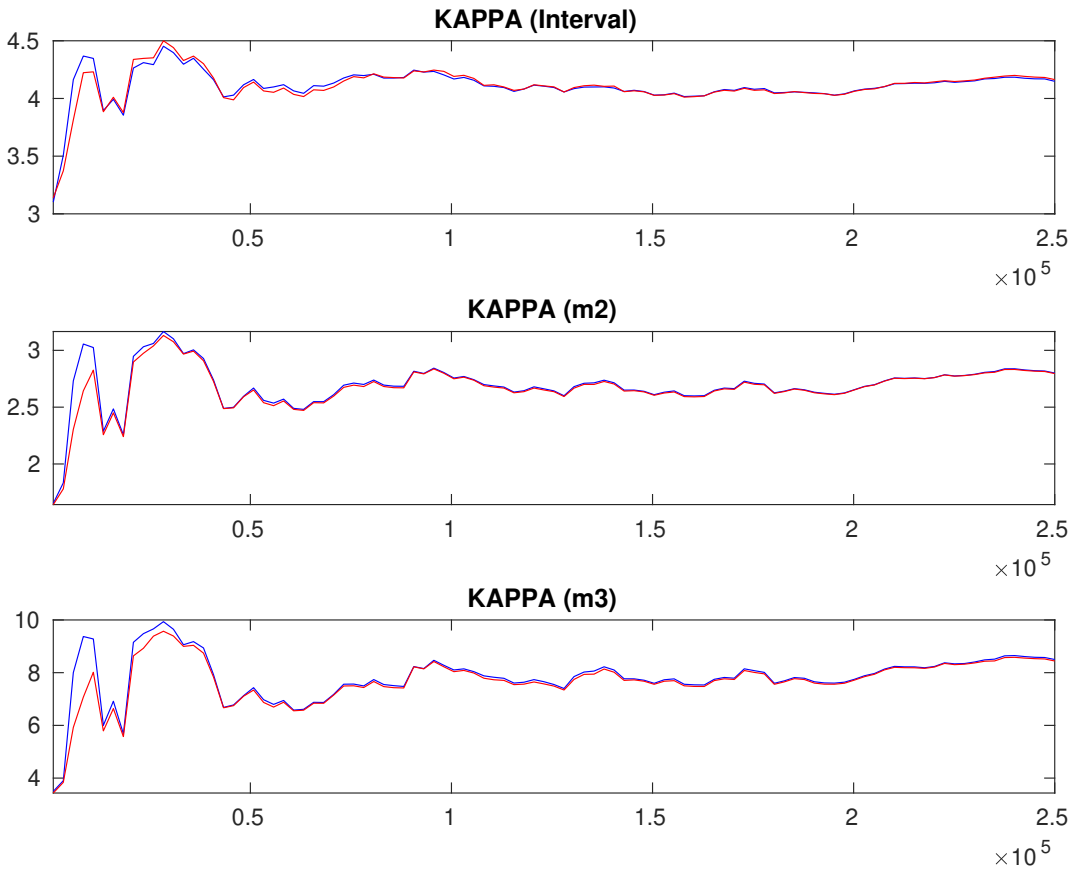

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.