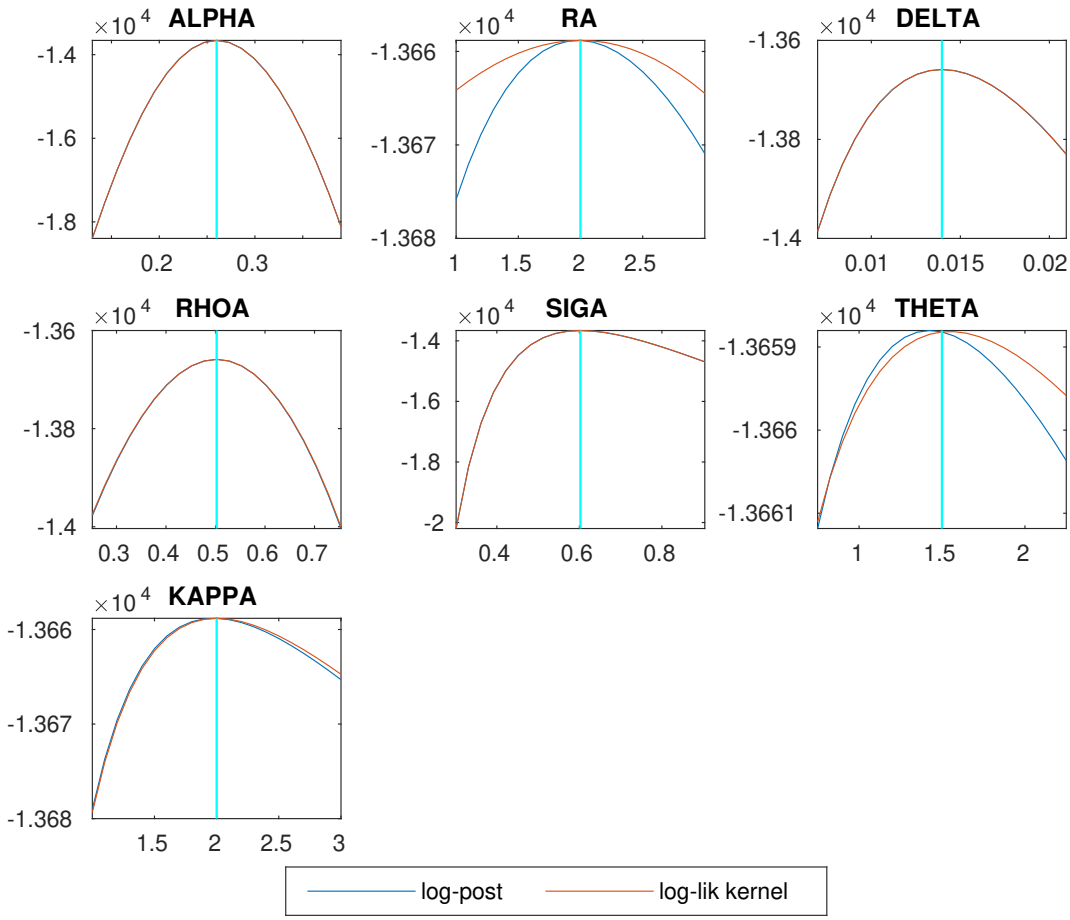

Figure 1: Check plots.

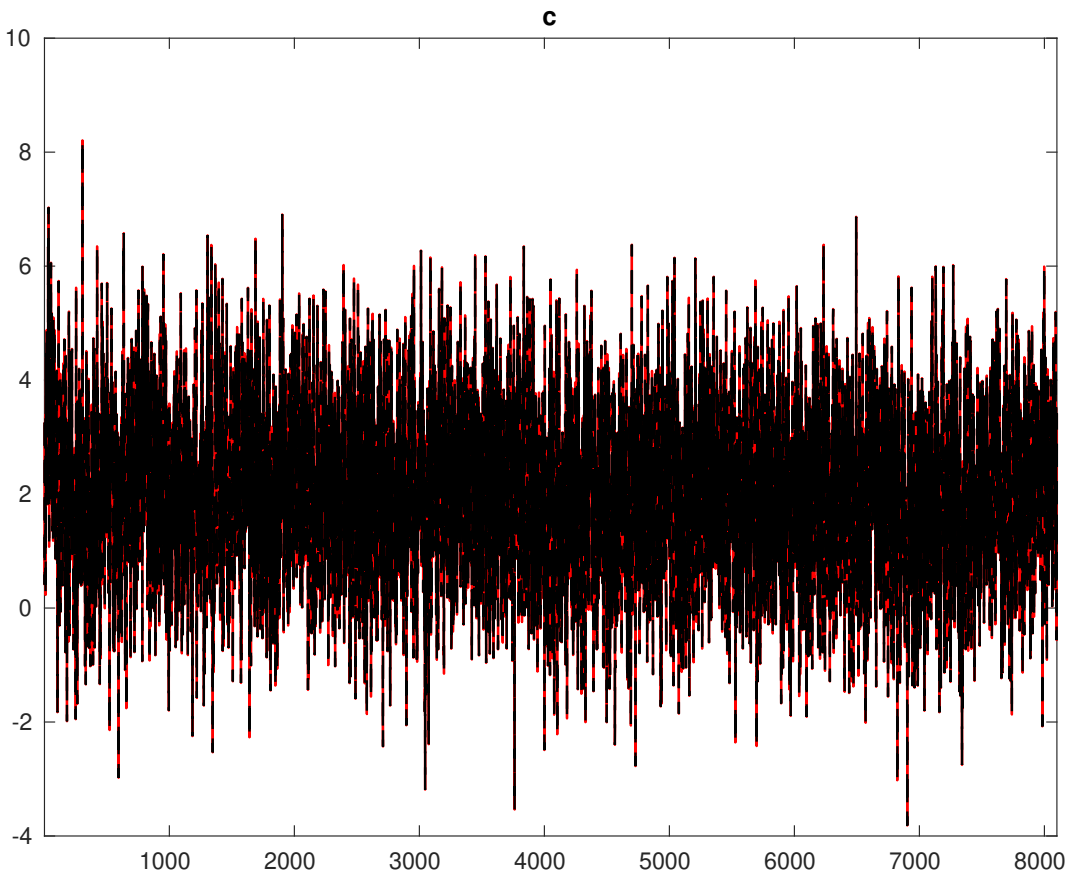

Figure 2: Historical and smoothed variables.

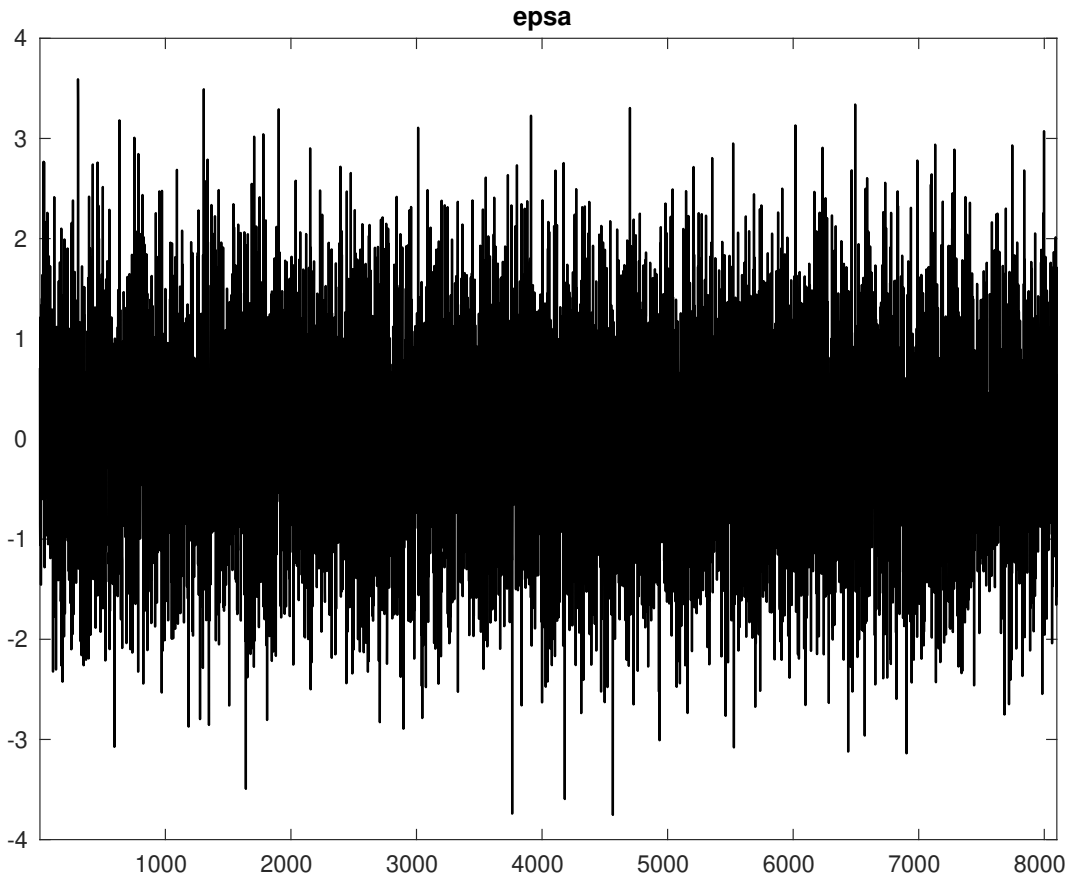

Figure 3: Smoothed shocks.

Table 1: MCMC Inefficiency factors per block

Parameter	*Block* 1	*Block* 2	*Block* 3	*Block* 4
α	198.553	225.253	243.213	212.941
r_A	67.460	65.396	57.748	61.883
δ	198.417	213.587	282.572	218.085
ρ_A	197.161	195.440	162.805	232.824
σ_A	287.726	293.454	273.385	320.320
θ	89.787	89.812	90.444	93.392
κ	286.029	245.027	292.739	256.623

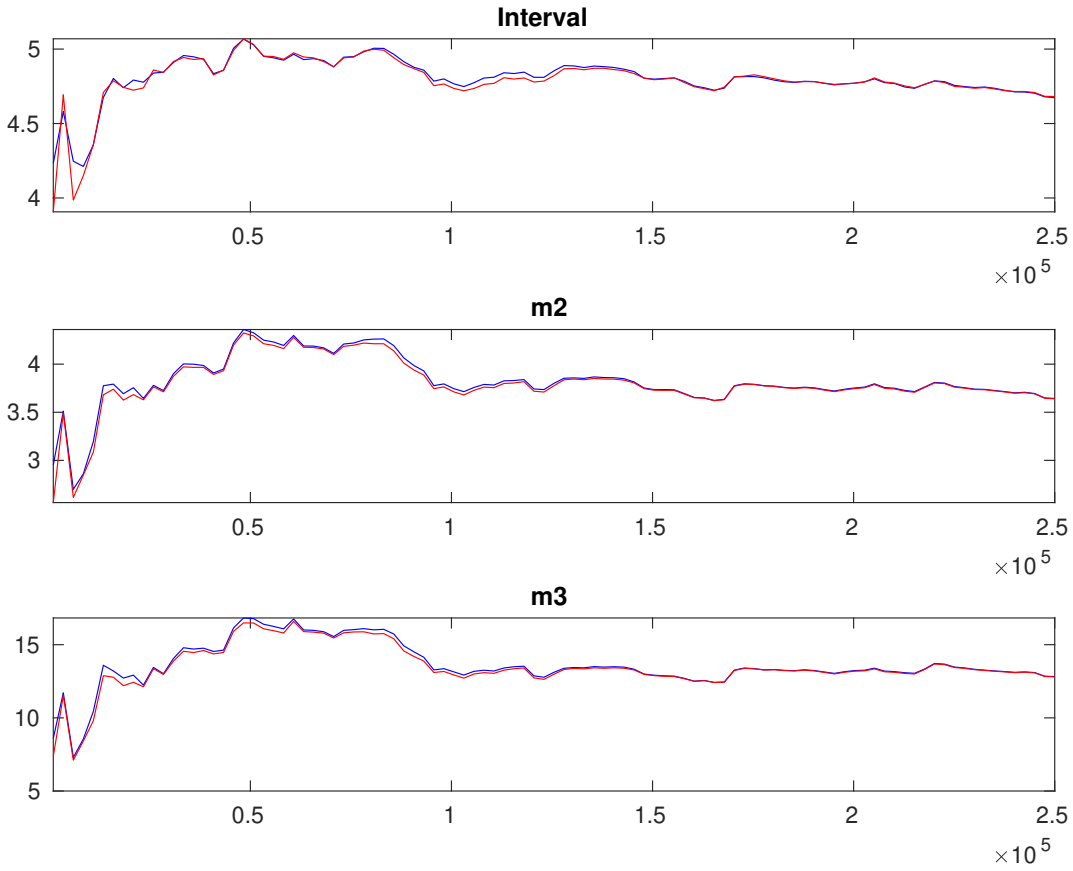

Figure 4: Multivariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments. The different parameters are aggregated using the posterior kernel.

Table 2: Results from Metropolis-Hastings (parameters)

	Prior			Posterior			
	Dist.	Mean	Stdev.	Mean	Stdev.	HPD inf	HPD sup
α	norm	0.300	0.0500	0.262	0.0233	0.2240	0.3015
r_A	gamm	2.000	0.2500	2.000	0.2442	1.5934	2.3930
δ	unif	0.500	0.2887	0.015	0.0055	0.0057	0.0233
ρ_A	beta	0.500	0.1000	0.496	0.0182	0.4676	0.5273
σ_A	invg	0.600	4.0000	0.613	0.0347	0.5545	0.6698
θ	gamm	1.500	0.7500	1.754	0.7548	0.5840	2.8632
κ	gamm	2.000	1.5000	1.996	1.3383	0.1273	3.8377

Table 3: Results from posterior maximization (parameters)

	Prior			Posterior	
	Dist.	Mean	Stdev	Mode	Stdev
α	norm	0.300	0.0500	0.2600	0.0256
r_A	gamm	2.000	0.2500	1.9994	0.2520
δ	unif	0.500	0.2887	0.0140	0.0058
ρ_A	beta	0.500	0.1000	0.5023	0.0169
σ_A	invg	0.600	4.0000	0.6026	0.0389
θ	gamm	1.500	0.7500	1.4995	0.7573
κ	gamm	2.000	1.5000	2.0003	1.5689

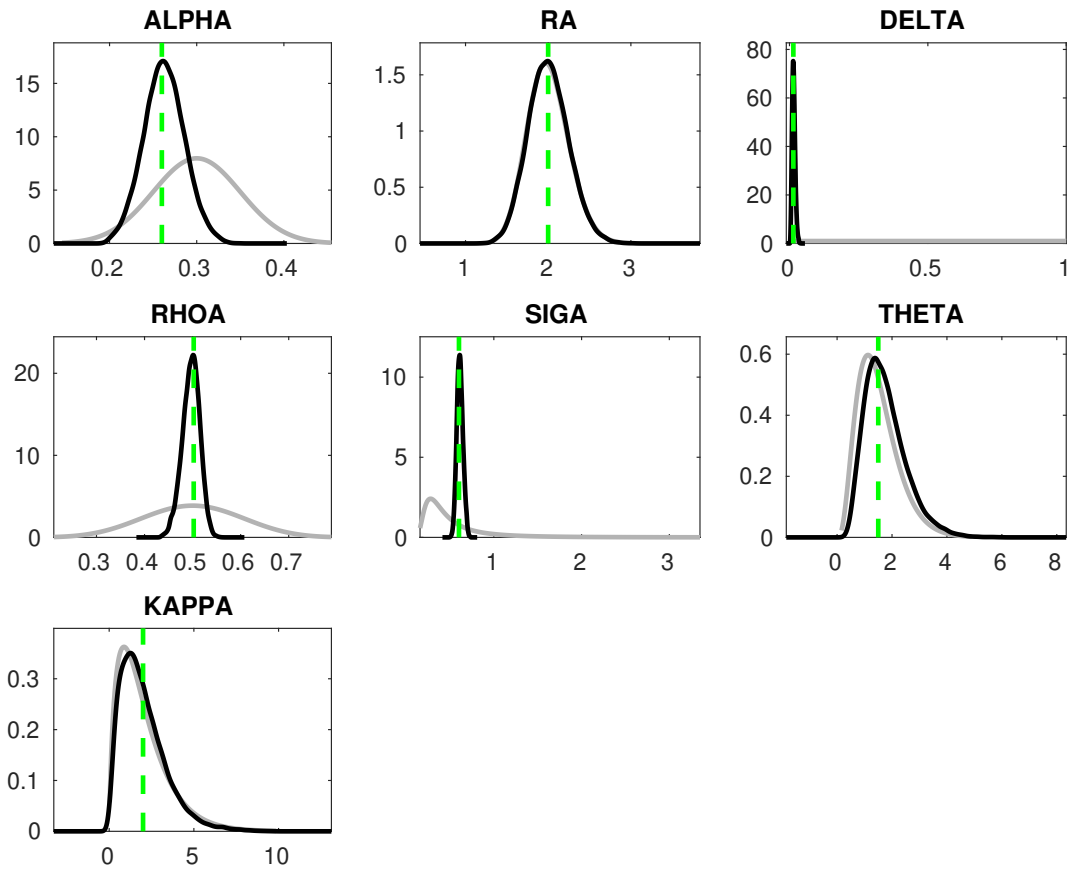

Figure 5: Priors and posteriors.

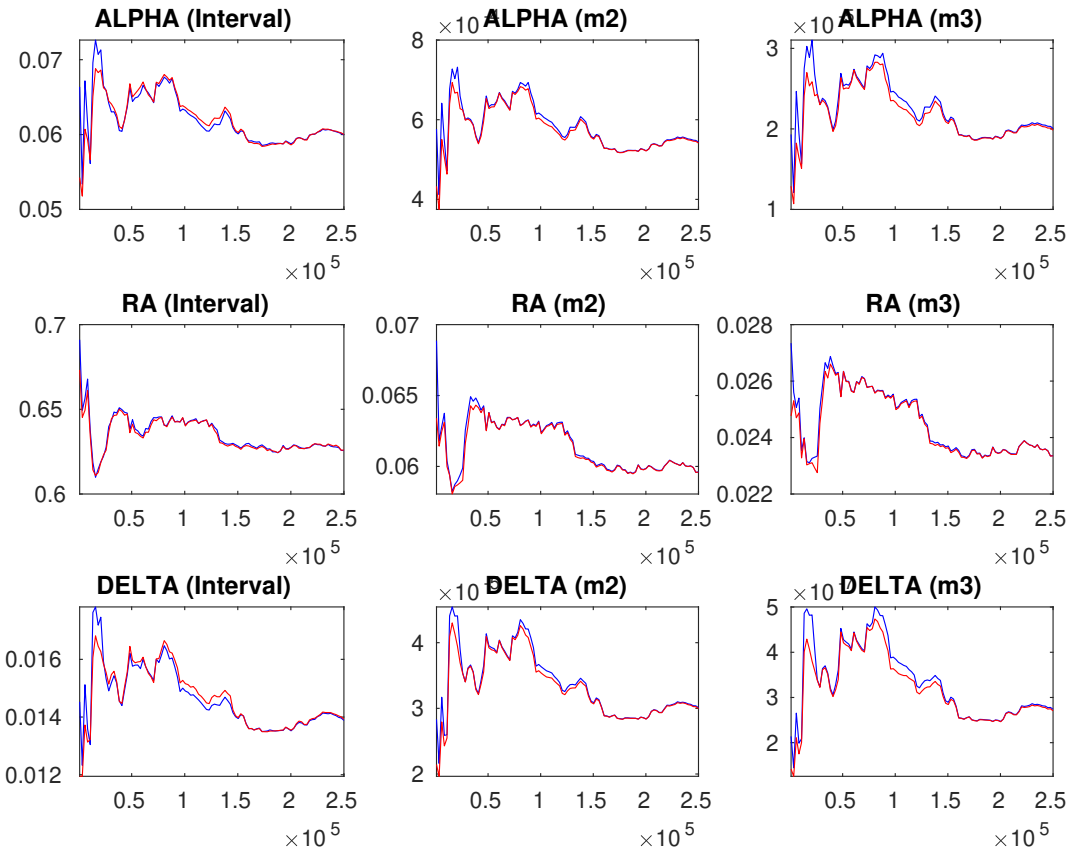

Figure 6: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

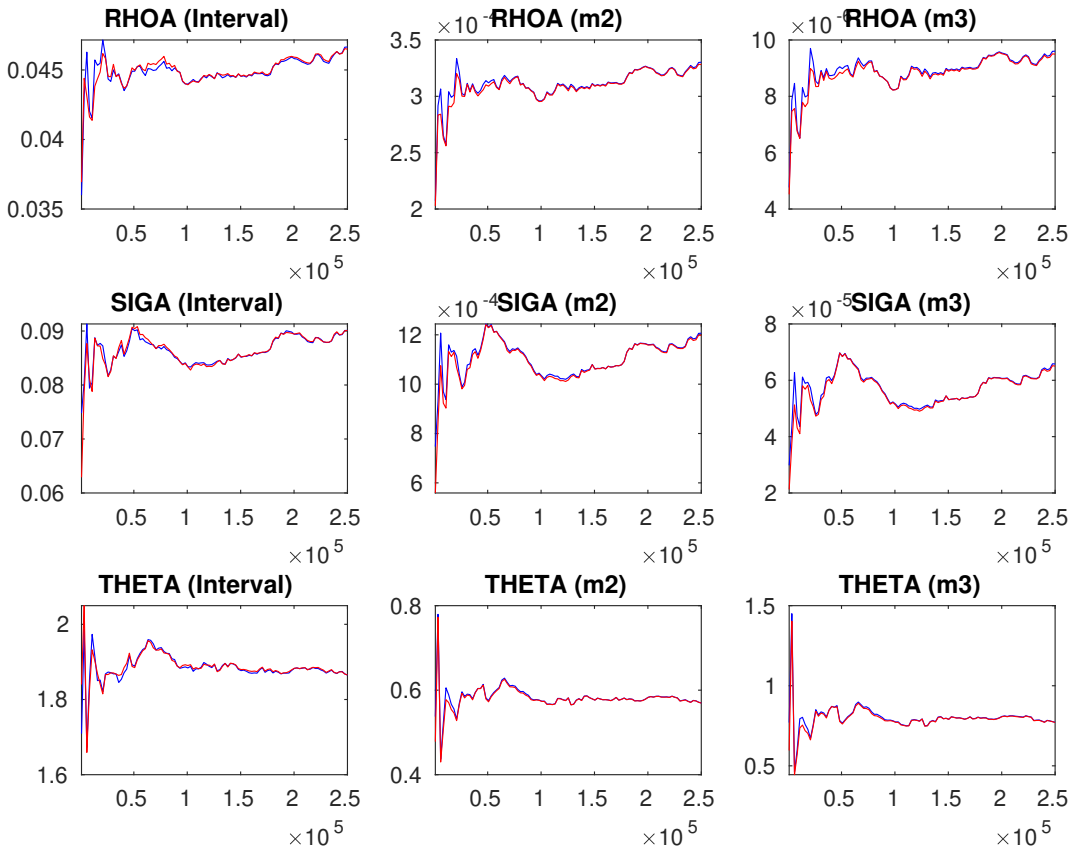

Figure 7: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third columns are respectively the criteria based on the eighty percent interval, the second and third moments.

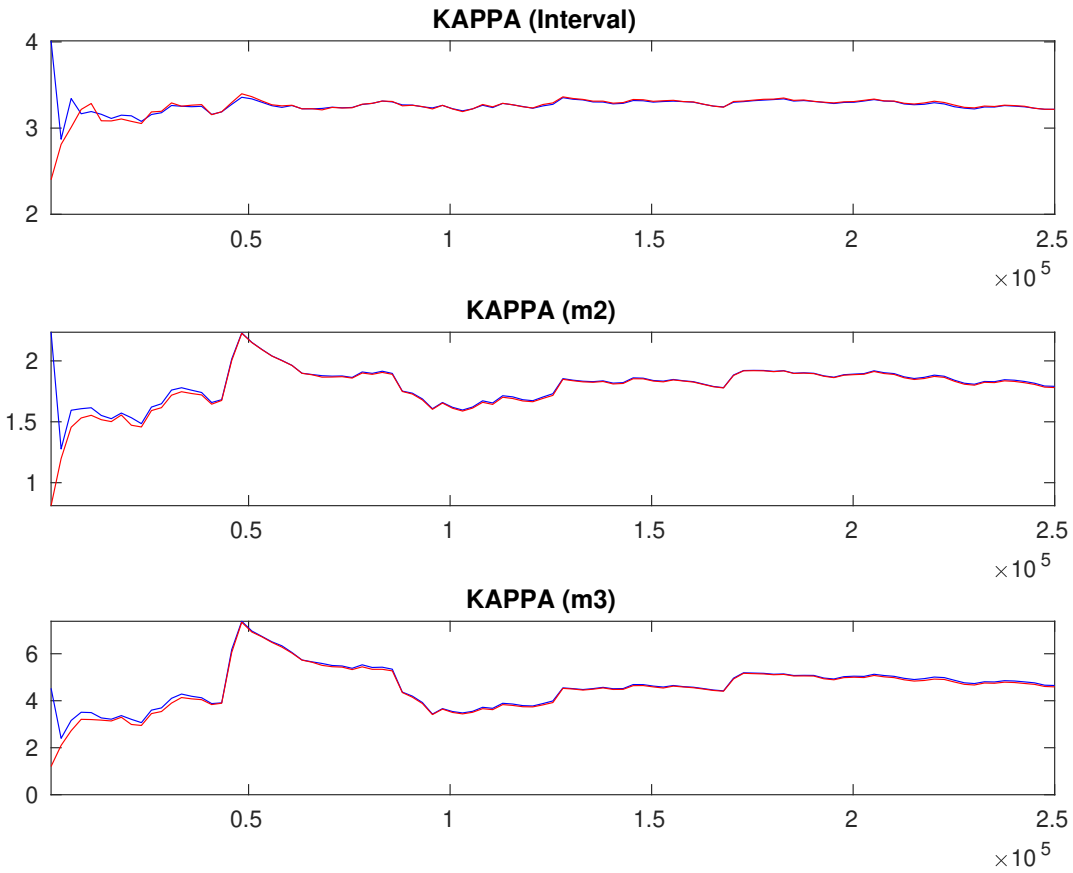

Figure 8: Univariate convergence diagnostics for the Metropolis-Hastings. The first, second and third rows are respectively the criteria based on the eighty percent interval, the second and third moments.