

## Appendix 5: Posterior summaries and trace plots

### Appendix 5

**Table A5:** Posterior summaries, including the mean, standard deviation, 95% credibility interval (highest density interval),  $\hat{R}$ , and effective sample size. Descriptions of parameters can be found in Table 1. More information about parameter  $\rho$  can be found in Appendix 2.1.

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parameter	mean	sd	95 CI	Rhat	ESS
$\log(\mu_y^A)$	3.86	0.03	(3.8, 3.92)	1.01	766
$\sigma_y^A$	0.2	0.01	(0.17, 0.22)	1.01	956
$\mu_y^R$	14.9	1.63	(11.71, 18.06)	1.01	992
$\sigma_y^R$	5.46	0.83	(3.84, 6.91)	1.01	1676
$y_\infty$	83.88	1.1	(81.84, 86.18)	1.05	261
$k$	1.07	0.05	(0.97, 1.16)	1.04	413
$C$	1.08	0.08	(0.92, 1.24)	1.01	1944
$t_s$	-0.71	0.02	(-0.74, -0.67)	1.01	730
$\sigma^G$	2.35	0.19	(1.99, 2.72)	1.04	376
$\beta_1$	0.01	0.01	(0, 0.03)	1.04	551
$\beta_2$	0	0	(0, 0)	1.01	1434
$\beta_3$	0.00049	0.00087	(0, 0.00219)	1.01	2008
$\beta_4$	0.00253	0.00424	(0, 0.01122)	1.03	932
$\beta_5$	0.00177	0.00317	(0, 0.00821)	1.01	1861
$\alpha$	3.9	3.78	(0, 11.54)	1.00	4022
$\beta_\alpha$	0.34	0.22	(0.04, 0.79)	1.02	1458

(continued)

parameter	mean	sd	95 CI	Rhat	ESS
$\beta_\theta$	93.51	38.35	(23.97, 149.99)	1.00	4842
$\alpha_1^o$	4.08	0.39	(3.27, 4.83)	1.01	965
$\alpha_2^o$	3.27	0.78	(1.74, 4.84)	1.00	6827
$\alpha_3^o$	4.07	0.57	(2.95, 5.19)	1.01	616
$\alpha_\alpha^o$	33.25	12.02	(10.38, 50)	1.00	12393
$\alpha_\theta^o$	8.86	3.37	(1.95, 14.73)	1.00	5200
$h_F^{max}$	0	0	(0, 0)	1.00	3922
$h_M^{max}$	0.00043	8e-05	(0.00029, 0.00058)	1.02	799
$h_S^{max}$	0.00444	0.00038	(0.00371, 0.0052)	1.00	5879
$h_F^k$	0.35	0.13	(0.17, 0.62)	1.01	1370
$h_S^k$	0.33	0.06	(0.23, 0.45)	1.00	4300
$h_F^0$	38.72	2.74	(33.59, 44.02)	1.01	678
$h_S^0$	46.77	1.72	(43.54, 50.24)	1.01	1118
$h_M^A$	44.84	0.66	(43.55, 46.15)	1.00	1320
$h_M^\sigma$	6.39	0.37	(5.67, 7.14)	1.00	17108
$\rho$	0.04	0.01	(0.02, 0.05)	1.00	32026
$\lambda^A$	343	43	(274, 430)	1.03	871
$\lambda_1^R$	564	202	(253, 969)	1.01	668
$\lambda_2^R$	42	8	(29, 58)	1.00	5730
$\lambda_3^R$	1142	268	(668, 1669)	1.01	687
$\lambda_4^R$	58	23	(20, 102)	1.00	1495
$\mu_\lambda^R$	435.23	464.12	(1.03, 1228.51)	1.00	9141
$\mu_\sigma^R$	1135.7	1022.93	(194.15, 2937.6)	1.00	5508

**Figure A5:** Trace plots of posterior samples. Colors refer to separate chains. Descriptions of parameters can be found in Table 1.

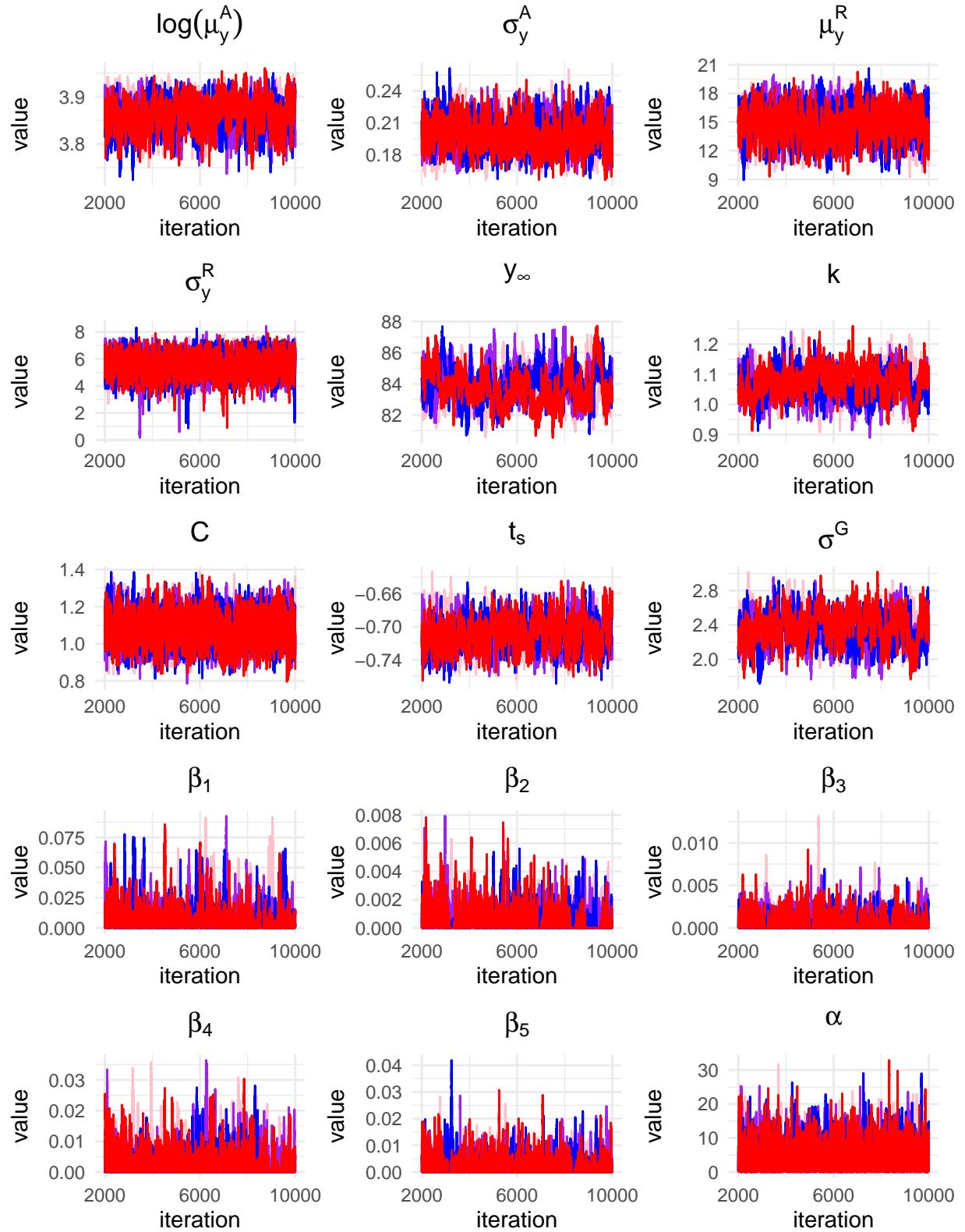


Figure A5 continued.

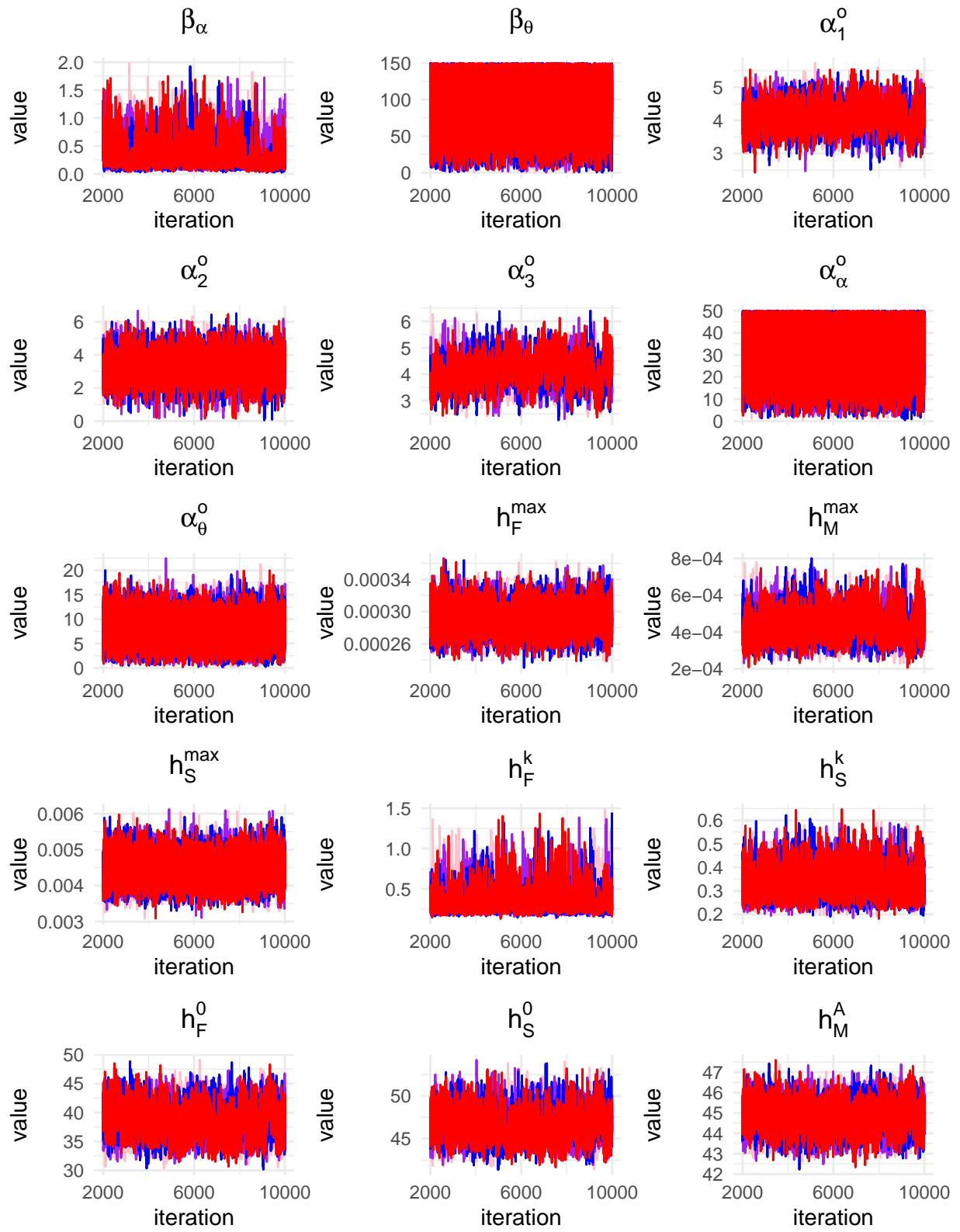


Figure A5 continued.

