Supplementary Document: MCMC Summary and Diagnostics

Within-Host Bayesian Joint Modeling of Longitudinal and Time-to-Event Data of Leishmania Infection

Felix M. Pabon-Rodriguez, Grant D. Brown, Breanna M. Scorza, and Christine A. Petersen

Supplementary Table. Summary of MCMC results for all interpretable parameters in the model. Each column represents the following: (1) Posterior mean, (2) Posterior median, (3) Posterior standard deviation (SD), (4) Lower bound of 95% credible interval (Cr-I), (5) Upper bound of 95% Cr-I, (6) Posterior probability of parameter being positive, (7) Posterior probability of parameter being negative, and (8) Indicator for strength of evidence based on posterior probability. The symbol * in last column is used to indicate which parameter shows a posterior probability greater or equal than 0.65. The results in this table are separated by model components. Last part of the table summarizes parameters associated with the survival submodel.

Pathogen Load (P)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaP[1]	0.3309	0.3315	0.0852	0.1627	0.4967	0.9999	0.0001	*
betaP[2]	3.4030	3.3862	0.4960	2.4751	4.4208	1.0000	0.0000	*
betaP[3]	-0.3678	-0.3647	0.4569	-1.2761	0.5227	0.2093	0.7907	*
betaP[4]	-0.4221	-0.4205	0.4821	-1.3781	0.5209	0.1872	0.8128	*
betaP[5]	-0.3095	-0.3088	0.3041	-0.9072	0.2807	0.1541	0.8459	*
betaP[6]	-0.5382	-0.5344	0.3545	-1.2459	0.1516	0.0616	0.9384	*
betaP[7]	1.7523	1.7418	0.5369	0.7354	2.8337	0.9994	0.0006	*
betaP[8]	0.7970	0.7897	0.3807	0.0665	1.5572	0.9843	0.0157	*
betaP[9]	0.3078	0.3083	0.0998	0.1090	0.5008	0.9989	0.0011	*
betaP[10]	3.1170	3.1061	0.5448	2.0736	4.2116	1.0000	0.0000	*
betaP[11]	-0.1978	-0.1950	0.4299	-1.0467	0.6419	0.3219	0.6781	*
betaP[12]	-0.2284	-0.2295	0.3009	-0.8171	0.3680	0.2208	0.7792	*
betaP[13]	0.0136	0.0172	0.2648	-0.5134	0.5267	0.5255	0.4745	
betaP[14]	-0.6560	-0.6551	0.3801	-1.4064	0.0868	0.0419	0.9581	*
betaP[15]	0.5468	0.5439	0.4553	-0.3445	1.4409	0.8870	0.1130	*
betaP[16]	0.3397	0.3391	0.3275	-0.2959	0.9834	0.8495	0.1505	*
betaP[17]	0.5222	0.5192	0.2001	0.1395	0.9296	0.9971	0.0029	*
betaP[18]	2.5534	2.5307	0.8224	0.9881	4.2106	0.9994	0.0006	*
betaP[19]	-0.6232	-0.6233	0.5678	-1.7371	0.4834	0.1359	0.8641	*
betaP[20]	0.0373	0.0329	0.6088	-1.1519	1.2476	0.5224	0.4776	
betaP[21]	-0.3605	-0.3555	0.4548	-1.2723	0.5136	0.2141	0.7859	*
betaP[22]	-0.1309	-0.1340	0.3970	-0.9011	0.6571	0.3671	0.6329	
betaP[23]	0.5191	0.5188	0.7850	-1.0388	2.0590	0.7479	0.2521	*
betaP[24]	0.4427	0.4432	0.6900	-0.9108	1.8099	0.7410	0.2590	*
alphaP[1]	-2.3296	-2.3307	0.8499	-3.9888	-0.6514	0.0035	0.9965	*
alphaP[2]	-0.5095	-0.5031	0.6452	-1.8032	0.7385	0.2149	0.7851	*
alphaP[3]	-0.1133	-0.1106	0.5503	-1.2064	0.9467	0.4202	0.5798	

alphaP[4]	0.0686	0.0654	0.4642	-0.8374	0.9875	0.5568	0.4432	
alphaP[5]	0.4362	0.4415	0.7595	-1.0598	1.9237	0.7164	0.2836	*
alphaP[6]	-0.5554	-0.5527	0.4351	-1.4181	0.2883	0.0989	0.9011	*

Antibody Levels (A)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaA[1]	0.1207	0.1201	0.0143	0.0940	0.1502	1.0000	0.0000	*
betaA[2]	0.0772	0.0770	0.0554	-0.0301	0.1869	0.9198	0.0802	*
betaA[3]	-0.0682	-0.0670	0.0541	-0.1779	0.0348	0.0993	0.9007	*
betaA[4]	0.0276	0.0272	0.0536	-0.0772	0.1349	0.6990	0.3010	*
betaA[5]	0.0093	0.0094	0.0380	-0.0658	0.0828	0.5999	0.4001	
betaA[6]	0.0359	0.0355	0.0441	-0.0495	0.1240	0.7938	0.2062	*
betaA[7]	0.0013	0.0006	0.0585	-0.1122	0.1184	0.5046	0.4954	
betaA[8]	-0.0732	-0.0727	0.0418	-0.1575	0.0075	0.0377	0.9623	*
betaA[9]	0.1310	0.1305	0.0157	0.1016	0.1631	1.0000	0.0000	*
betaA[10]	0.0094	0.0091	0.0613	-0.1107	0.1310	0.5604	0.4396	
betaA[11]	-0.0292	-0.0287	0.0528	-0.1351	0.0724	0.2923	0.7077	*
betaA[12]	0.0272	0.0271	0.0371	-0.0449	0.1002	0.7692	0.2308	*
betaA[13]	0.0473	0.0476	0.0330	-0.0184	0.1114	0.9248	0.0752	*
betaA[14]	0.0020	0.0021	0.0454	-0.0868	0.0918	0.5181	0.4819	
betaA[15]	-0.0228	-0.0230	0.0531	-0.1282	0.0816	0.3329	0.6671	*
betaA[16]	-0.0904	-0.0898	0.0431	-0.1768	-0.0072	0.0161	0.9839	*
betaA[17]	0.1081	0.1078	0.0219	0.0661	0.1527	1.0000	0.0000	*
betaA[18]	0.2193	0.2139	0.0963	0.0480	0.4219	0.9953	0.0047	*
betaA[19]	-0.0031	-0.0023	0.0547	-0.1142	0.1009	0.4835	0.5165	
betaA[20]	0.0018	0.0026	0.0559	-0.1102	0.1101	0.5191	0.4809	
betaA[21]	0.0260	0.0260	0.0434	-0.0604	0.1106	0.7293	0.2707	*
betaA[22]	0.0310	0.0304	0.0406	-0.0469	0.1124	0.7773	0.2227	*
betaA[23]	-0.0671	-0.0653	0.0718	-0.2134	0.0699	0.1714	0.8286	*
betaA[24]	0.0763	0.0746	0.0646	-0.0475	0.2073	0.8855	0.1145	*
alphaA[1]	-0.6019	-0.5975	0.1857	-0.9775	-0.2489	0.0002	0.9998	*
alphaA[2]	-0.1609	-0.1589	0.1214	-0.4029	0.0724	0.0896	0.9104	*
alphaA[3]	-0.0525	-0.0527	0.1084	-0.2658	0.1590	0.3140	0.6860	*
alphaA[4]	0.1087	0.1077	0.0640	-0.0135	0.2375	0.9578	0.0422	*
alphaA[5]	0.5641	0.5596	0.1860	0.2127	0.9408	0.9995	0.0005	*
alphaA[6]	0.0896	0.0890	0.0596	-0.0250	0.2084	0.9370	0.0630	*

Disease Status (D)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaD2[1]	0.1190	0.1197	0.0603	-0.0018	0.2366	0.9734	0.0266	*
betaD2[2]	0.2068	0.1828	0.2409	-0.2115	0.7481	0.8179	0.1821	*
betaD2[3]	0.1905	0.1707	0.2221	-0.1980	0.6859	0.8170	0.1830	*
betaD2[4]	-0.3565	-0.3227	0.2602	-0.9490	0.0560	0.0541	0.9459	*
betaD2[5]	0.0364	0.0283	0.1599	-0.2598	0.3751	0.5756	0.4244	
betaD2[6]	0.0934	0.0904	0.1721	-0.2443	0.4416	0.7133	0.2867	*
betaD2[7]	0.0260	0.0098	0.2305	-0.3949	0.5354	0.5191	0.4809	
betaD2[8]	-0.1779	-0.1648	0.1833	-0.5697	0.1526	0.1561	0.8439	*
betaD2[9]	0.0942	0.0900	0.0709	-0.0328	0.2466	0.9213	0.0787	*
betaD2[10]	-0.1291	-0.1073	0.2486	-0.6872	0.3218	0.3029	0.6971	*
betaD2[11]	-0.0867	-0.0826	0.2027	-0.5025	0.3139	0.3233	0.6767	*
betaD2[12]	0.0406	0.0378	0.1703	-0.2953	0.3881	0.5951	0.4049	
betaD2[13]	-0.1046	-0.0966	0.1557	-0.4328	0.1835	0.2502	0.7498	*
betaD2[14]	-0.2513	-0.2338	0.2082	-0.7062	0.1098	0.0955	0.9045	*
betaD2[15]	0.1609	0.1432	0.2199	-0.2281	0.6479	0.7734	0.2266	*
betaD2[16]	-0.1047	-0.0918	0.1880	-0.5124	0.2379	0.2944	0.7056	*
betaD2[17]	0.1780	0.1712	0.0891	0.0205	0.3713	0.9871	0.0129	*
betaD2[18]	0.1272	0.1036	0.2718	-0.3645	0.7355	0.6825	0.3175	*
betaD2[19]	-0.3612	-0.3206	0.2854	-1.0258	0.0802	0.0670	0.9330	*
betaD2[20]	-0.0543	-0.0467	0.2104	-0.5014	0.3527	0.3985	0.6015	
betaD2[21]	0.0734	0.0659	0.1787	-0.2661	0.4571	0.6587	0.3413	*
betaD2[22]	-0.2462	-0.2307	0.1903	-0.6562	0.0874	0.0795	0.9205	*
betaD2[23]	0.0498	0.0408	0.2512	-0.4392	0.5795	0.5753	0.4247	
betaD2[24]	-0.0557	-0.0506	0.2437	-0.5622	0.4339	0.4003	0.5997	
betaD3[1]	0.4319	0.4206	0.1277	0.2139	0.7149	1.0000	0.0000	*
betaD3[2]	-0.9633	-0.8977	0.5522	-2.2332	-0.0757	0.0143	0.9857	*
betaD3[3]	1.0814	1.0037	0.6738	-0.0214	2.6240	0.9726	0.0274	*
betaD3[4]	-0.3206	-0.3044	0.4889	-1.3451	0.6007	0.2501	0.7499	*
betaD3[5]	0.4208	0.3996	0.4146	-0.3416	1.3001	0.8543	0.1457	*
betaD3[6]	0.8425	0.7979	0.4971	-0.0164	1.9548	0.9725	0.0275	*
betaD3[7]	-0.0708	-0.0717	0.5529	-1.1817	1.0334	0.4434	0.5566	
betaD3[8]	0.4535	0.4159	0.5154	-0.4546	1.5832	0.8194	0.1806	*
betaD3[9]	0.5870	0.5673	0.1921	0.2694	1.0205	1.0000	0.0000	*
betaD3[10]	-0.5988	-0.5322	0.5687	-1.9090	0.3330	0.1224	0.8776	*
betaD3[11]	0.1353	0.1413	0.5003	-0.8872	1.1143	0.6190	0.3810	
betaD3[12]	-0.1020	-0.1010	0.4034	-0.8991	0.6931	0.3957	0.6043	
betaD3[13]	0.2635	0.2532	0.3996	-0.5024	1.0818	0.7489	0.2511	*
betaD3[14]	0.3250	0.3063	0.4547	-0.5253	1.2770	0.7671	0.2329	*
betaD3[15]	0.0250	0.0166	0.5374	-1.0302	1.1113	0.5130	0.4870	
betaD3[16]	0.6797	0.6148	0.6033	-0.3262	2.0643	0.8940	0.1060	*
betaD3[17]	1.0354	0.9597	0.4571	0.3710	2.1366	0.9998	0.0002	*
betaD3[18]	-0.1478	-0.1091	0.7079	-1.6858	1.1634	0.4311	0.5689	
betaD3[19]	0.2090	0.1969	0.6645	-1.0860	1.5895	0.6284	0.3716	
betaD3[20]	0.4302	0.3653	0.7005	-0.7967	2.0051	0.7323	0.2677	*
betaD3[21]	-0.2307	-0.1953	0.6392	-1.6134	0.9508	0.3642	0.6358	
betaD3[22]	-0.4629	-0.4032	0.6584	-1.9316	0.6860	0.2329	0.7671	*

betaD3[23]	0.0456	0.0265	0.7215	-1.3561	1.5494	0.5171	0.4829	
betaD3[24]	0.4077	0.3530	0.7507	-0.9536	2.0671	0.7100	0.2900	*
alphaD2[1]	0.7345	0.7309	0.6529	-0.5288	2.0272	0.8705	0.1295	*
alphaD2[2]	0.2068	0.2072	0.5469	-0.8659	1.2842	0.6477	0.3523	
alphaD2[3]	0.0666	0.0653	0.4885	-0.8912	1.0153	0.5542	0.4458	
alphaD2[4]	0.6832	0.6841	0.3434	0.0080	1.3544	0.9763	0.0237	*
alphaD2[5]	0.1412	0.1454	0.7068	-1.2508	1.5290	0.5799	0.4201	
alphaD2[6]	-0.0615	-0.0618	0.3317	-0.7132	0.5913	0.4257	0.5743	
alphaD3[1]	1.6677	1.6664	0.7960	0.1120	3.2131	0.9820	0.0180	*
alphaD3[2]	0.9882	0.9872	0.7658	-0.5075	2.5010	0.9016	0.0984	*
alphaD3[3]	1.1736	1.1707	0.6933	-0.1770	2.5378	0.9556	0.0444	*
alphaD3[4]	0.7760	0.7699	0.6662	-0.5213	2.0915	0.8808	0.1192	*
alphaD3[5]	0.1425	0.1458	0.8565	-1.5445	1.8194	0.5672	0.4328	
alphaD3[6]	-0.3173	-0.3147	0.6347	-1.5694	0.9180	0.3093	0.6907	*

Inflammatory Responses (I1, I2, I3)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaI1[1]	-0.0210	-0.0208	0.0152	-0.0513	0.0082	0.0788	0.9212	*
betaI1[2]	0.0608	0.0586	0.0611	-0.0536	0.1869	0.8437	0.1563	*
betaI1[3]	-0.0013	-0.0017	0.0743	-0.1495	0.1481	0.4902	0.5098	
betaI1[4]	0.0320	0.0294	0.0746	-0.1100	0.1871	0.6652	0.3348	*
betaI1[5]	-0.1007	-0.0971	0.0663	-0.2423	0.0195	0.0519	0.9481	*
betaI1[6]	0.0154	0.0145	0.0699	-0.1216	0.1581	0.5871	0.4129	
betaI1[7]	-0.0159	-0.0157	0.0771	-0.1706	0.1382	0.4137	0.5863	
betaI1[8]	-0.0971	-0.0951	0.0581	-0.2165	0.0115	0.0406	0.9594	*
betaI1[9]	-0.0146	-0.0146	0.0180	-0.0501	0.0208	0.2064	0.7936	*
betaI1[10]	-0.0070	-0.0075	0.0645	-0.1340	0.1221	0.4506	0.5494	
betaI1[11]	-0.0724	-0.0707	0.0738	-0.2244	0.0698	0.1529	0.8471	*
betaI1[12]	-0.0232	-0.0211	0.0693	-0.1673	0.1098	0.3738	0.6262	
betaI1[13]	-0.0266	-0.0249	0.0651	-0.1618	0.0982	0.3394	0.6606	*
betaI1[14]	-0.0162	-0.0197	0.0756	-0.1579	0.1455	0.3880	0.6120	
betaI1[15]	0.0628	0.0577	0.0798	-0.0820	0.2357	0.7899	0.2101	*
betaI1[16]	-0.0949	-0.0921	0.0638	-0.2274	0.0212	0.0585	0.9415	*
betaI1[17]	0.0045	0.0051	0.0296	-0.0548	0.0612	0.5700	0.4300	
betaI1[18]	-0.0123	-0.0108	0.0840	-0.1841	0.1532	0.4426	0.5574	
betaI1[19]	0.1570	0.1484	0.0939	-0.0017	0.3638	0.9735	0.0265	*
betaI1[20]	-0.0457	-0.0418	0.0769	-0.2088	0.0976	0.2725	0.7275	*
betaI1[21]	0.0420	0.0400	0.0683	-0.0906	0.1832	0.7401	0.2599	*
betaI1[22]	0.0752	0.0722	0.0649	-0.0454	0.2093	0.8867	0.1133	*
betaI1[23]	-0.0905	-0.0846	0.0906	-0.2846	0.0747	0.1434	0.8566	*
betaI1[24]	-0.0933	-0.0834	0.0950	-0.3061	0.0671	0.1504	0.8496	*
betaI2[1]	0.0049	0.0037	0.0196	-0.0306	0.0465	0.5792	0.4208	
betaI2[2]	-0.0085	-0.0074	0.0523	-0.1175	0.0974	0.4268	0.5732	
betaI2[3]	-0.0573	-0.0437	0.0704	-0.2301	0.0486	0.1829	0.8171	*
betaI2[4]	0.0232	0.0148	0.0613	-0.0813	0.1697	0.6305	0.3695	
betaI2[5]	-0.0362	-0.0288	0.0553	-0.1661	0.0577	0.2472	0.7528	*
betaI2[6]	0.0064	0.0030	0.0554	-0.0996	0.1286	0.5312	0.4688	
betaI2[7]	-0.0479	-0.0352	0.0698	-0.2200	0.0591	0.2352	0.7648	*
betaI2[8]	-0.0226	-0.0182	0.0506	-0.1325	0.0720	0.3269	0.6731	*
betaI2[9]	0.0061	0.0055	0.0211	-0.0346	0.0489	0.6116	0.3884	
betaI2[10]	-0.0033	-0.0018	0.0556	-0.1212	0.1092	0.4810	0.5190	
betaI2[11]	0.0178	0.0116	0.0609	-0.0932	0.1580	0.6058	0.3942	
betaI2[12]	0.0048	0.0056	0.0552	-0.1143	0.1152	0.5548	0.4452	
betaI2[13]	0.0312	0.0255	0.0542	-0.0673	0.1533	0.7248	0.2752	*
betaI2[14]	-0.0143	-0.0104	0.0581	-0.1429	0.0990	0.4042	0.5958	
betaI2[15]	0.0466	0.0362	0.0654	-0.0592	0.2025	0.7759	0.2241	*
betaI2[16]	0.0096	0.0082	0.0515	-0.0947	0.1167	0.5804	0.4196	
betaI2[17]	0.0458	0.0453	0.0287	-0.0082	0.1041	0.9511	0.0489	*
betaI2[18]	0.0037	0.0046	0.0616	-0.1300	0.1280	0.5445	0.4555	
betaI2[19]	0.0356	0.0270	0.0641	-0.0763	0.1855	0.7218	0.2782	*
betaI2[20]	-0.0206	-0.0163	0.0590	-0.1497	0.0936	0.3580	0.6420	
betaI2[21]	-0.0206	-0.0159	0.0552	-0.1434	0.0824	0.3525	0.6475	
betaI2[22]	-0.0114	-0.0080	0.0531	-0.1260	0.0917	0.4203	0.5797	

betaI2[23]	-0.0362	-0.0256	0.0693	-0.1999	0.0794	0.2958	0.7042	*
betaI2[24]	0.0234	0.0161	0.0656	-0.0942	0.1767	0.6358	0.3642	
betaI3[1]	-0.0056	-0.0057	0.0191	-0.0434	0.0321	0.3817	0.6183	
betaI3[2]	0.0174	0.0143	0.0544	-0.0843	0.1339	0.6165	0.3835	
betaI3[3]	0.0207	0.0179	0.0586	-0.0909	0.1457	0.6359	0.3641	
betaI3[4]	0.0261	0.0229	0.0579	-0.0824	0.1494	0.6749	0.3251	*
betaI3[5]	0.0093	0.0085	0.0520	-0.0931	0.1153	0.5734	0.4266	
betaI3[6]	0.0097	0.0092	0.0545	-0.0992	0.1213	0.5744	0.4256	
betaI3[7]	0.0382	0.0334	0.0622	-0.0738	0.1756	0.7321	0.2679	*
betaI3[8]	0.0125	0.0118	0.0501	-0.0864	0.1142	0.6011	0.3989	
betaI3[9]	0.0113	0.0106	0.0232	-0.0326	0.0585	0.6814	0.3186	*
betaI3[10]	-0.0150	-0.0142	0.0567	-0.1318	0.0976	0.3888	0.6112	
betaI3[11]	-0.0373	-0.0343	0.0595	-0.1643	0.0733	0.2550	0.7450	*
betaI3[12]	0.0136	0.0108	0.0576	-0.0946	0.1358	0.5844	0.4156	
betaI3[13]	-0.0249	-0.0235	0.0540	-0.1369	0.0796	0.3153	0.6847	*
betaI3[14]	-0.0298	-0.0278	0.0589	-0.1532	0.0832	0.2965	0.7035	*
betaI3[15]	0.0134	0.0115	0.0599	-0.1026	0.1389	0.5855	0.4145	
betaI3[16]	-0.0159	-0.0141	0.0519	-0.1233	0.0836	0.3809	0.6191	
betaI3[17]	0.1007	0.0992	0.0314	0.0429	0.1675	0.9996	0.0004	*
betaI3[18]	0.0081	0.0093	0.0624	-0.1214	0.1313	0.5685	0.4315	
betaI3[19]	0.0258	0.0236	0.0615	-0.0935	0.1544	0.6715	0.3285	*
betaI3[20]	-0.0231	-0.0202	0.0587	-0.1483	0.0877	0.3446	0.6554	*
betaI3[21]	0.0303	0.0259	0.0569	-0.0718	0.1558	0.7012	0.2988	*
betaI3[22]	-0.0332	-0.0300	0.0555	-0.1519	0.0695	0.2715	0.7285	*
betaI3[23]	-0.0183	-0.0171	0.0638	-0.1507	0.1071	0.3793	0.6207	
betaI3[24]	-0.0287	-0.0236	0.0652	-0.1741	0.0890	0.3324	0.6676	*
alphaI1[1]	-1.6763	-1.6757	0.3078	-2.2853	-1.0692	0.0000	1.0000	*
alphaI1[2]	-0.3421	-0.3430	0.2393	-0.8133	0.1341	0.0748	0.9252	*
alphaI1[3]	-0.2302	-0.2310	0.2149	-0.6532	0.1941	0.1401	0.8599	*
alphaI1[4]	-0.0694	-0.0685	0.1263	-0.3195	0.1780	0.2893	0.7107	*
alphaI1[5]	-0.5677	-0.5663	0.3061	-1.1734	0.0283	0.0312	0.9688	*
alphaI1[6]	0.1472	0.1464	0.1205	-0.0862	0.3869	0.8920	0.1080	*
alphaI2[1]	-0.2769	-0.2809	0.4069	-1.0605	0.5258	0.2483	0.7517	*
alphaI2[2]	-0.0412	-0.0358	0.3501	-0.7403	0.6330	0.4585	0.5415	
alphaI2[3]	0.0593	0.0650	0.3205	-0.5785	0.6747	0.5819	0.4181	
alphaI2[4]	-0.4285	-0.4275	0.1981	-0.8229	-0.0411	0.0147	0.9853	*
alphaI2[5]	-0.3650	-0.3682	0.4336	-1.2075	0.4899	0.1997	0.8003	*
alphaI2[6]	-0.0116	-0.0105	0.1908	-0.3861	0.3591	0.4770	0.5230	
alphaI3[1]	-0.8113	-0.8199	0.4447	-1.6669	0.0704	0.0364	0.9636	*
alphaI3[2]	-0.7361	-0.7337	0.3907	-1.5129	0.0130	0.0274	0.9726	*
alphaI3[3]	-0.5211	-0.5185	0.3593	-1.2352	0.1758	0.0721	0.9279	*
alphaI3[4]	-0.0373	-0.0344	0.2316	-0.4968	0.4137	0.4405	0.5595	
alphaI3[5]	-0.0407	-0.0458	0.4869	-0.9839	0.9229	0.4629	0.5371	
alphaI3[6]	-0.4412	-0.4389	0.2234	-0.8840	-0.0085	0.0229	0.9771	*

Regulatory Responses (R1, R2, R3)

Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
betaR1[1]	0.0005	0.0006	0.0141	-0.0296	0.0295	0.5246	0.4754	
betaR1[2]	-0.0060	-0.0021	0.0305	-0.0814	0.0493	0.4395	0.5605	
betaR1[3]	-0.0002	0.0001	0.0293	-0.0651	0.0605	0.5040	0.4960	
betaR1[4]	-0.0019	-0.0005	0.0293	-0.0689	0.0572	0.4832	0.5168	
betaR1[5]	-0.0009	-0.0001	0.0278	-0.0635	0.0557	0.4975	0.5025	
betaR1[6]	0.0143	0.0064	0.0337	-0.0342	0.1048	0.6611	0.3389	*
betaR1[7]	-0.0037	-0.0013	0.0302	-0.0738	0.0539	0.4600	0.5400	
betaR1[8]	0.0041	0.0017	0.0279	-0.0500	0.0698	0.5509	0.4491	
betaR1[9]	-0.0010	-0.0005	0.0155	-0.0349	0.0305	0.4799	0.5201	
betaR1[10]	0.0008	0.0003	0.0296	-0.0620	0.0655	0.5079	0.4921	
betaR1[11]	-0.0016	-0.0006	0.0296	-0.0677	0.0591	0.4817	0.5183	
betaR1[12]	-0.0022	-0.0008	0.0287	-0.0673	0.0558	0.4760	0.5240	
betaR1[13]	-0.0047	-0.0018	0.0284	-0.0728	0.0488	0.4438	0.5562	
betaR1[14]	0.0025	0.0008	0.0292	-0.0555	0.0696	0.5261	0.4739	
betaR1[15]	-0.0056	-0.0022	0.0304	-0.0784	0.0505	0.4393	0.5607	
betaR1[16]	0.0022	0.0008	0.0282	-0.0551	0.0666	0.5233	0.4767	
betaR1[17]	-0.0028	-0.0020	0.0177	-0.0413	0.0337	0.4308	0.5692	
betaR1[18]	0.0019	0.0005	0.0305	-0.0590	0.0712	0.5147	0.4853	
betaR1[19]	-0.0066	-0.0027	0.0307	-0.0806	0.0488	0.4251	0.5749	
betaR1[20]	-0.0024	-0.0010	0.0293	-0.0691	0.0565	0.4699	0.5301	
betaR1[21]	-0.0080	-0.0033	0.0301	-0.0843	0.0430	0.4062	0.5938	
betaR1[22]	0.0000	-0.0002	0.0284	-0.0599	0.0626	0.4955	0.5045	
betaR1[23]	0.0062	0.0023	0.0321	-0.0506	0.0844	0.5654	0.4346	
betaR1[24]	0.0003	0.0000	0.0306	-0.0646	0.0675	0.4998	0.5002	
betaR2[1]	0.0385	0.0382	0.0165	0.0070	0.0718	0.9923	0.0077	*
betaR2[2]	-0.0009	-0.0006	0.0725	-0.1428	0.1414	0.4963	0.5037	
betaR2[3]	0.2432	0.2405	0.1183	0.0165	0.4834	0.9827	0.0173	*
betaR2[4]	0.0434	0.0449	0.1149	-0.1892	0.2648	0.6534	0.3466	*
betaR2[5]	0.3593	0.3564	0.0980	0.1759	0.5571	0.9999	0.0001	*
betaR2[6]	-0.1078	-0.1084	0.0997	-0.3017	0.0879	0.1421	0.8579	*
betaR2[7]	0.1793	0.1779	0.1232	-0.0584	0.4232	0.9291	0.0709	*
betaR2[8]	0.0026	0.0032	0.0654	-0.1280	0.1288	0.5203	0.4797	
betaR2[9]	0.0491	0.0484	0.0199	0.0117	0.0902	0.9961	0.0039	*
betaR2[10]	0.0151	0.0158	0.0796	-0.1426	0.1708	0.5781	0.4219	
betaR2[11]	0.2665	0.2643	0.1132	0.0506	0.4972	0.9924	0.0076	*
betaR2[12]	0.2056	0.2059	0.1103	-0.0130	0.4227	0.9677	0.0323	*
betaR2[13]	0.2968	0.2943	0.0986	0.1103	0.4952	0.9991	0.0009	*
betaR2[14]	-0.1891	-0.1876	0.1061	-0.4027	0.0148	0.0348	0.9652	*
betaR2[15]	-0.0354	-0.0352	0.1214	-0.2732	0.2025	0.3860	0.6140	
betaR2[16]	-0.0436	-0.0432	0.0672	-0.1757	0.0882	0.2569	0.7431	*
betaR2[17]	0.0770	0.0765	0.0346	0.0096	0.1474	0.9870	0.0130	*
betaR2[18]	-0.0351	-0.0330	0.1229	-0.2826	0.2036	0.3907	0.6093	
betaR2[19]	0.0551	0.0536	0.1180	-0.1725	0.2923	0.6783	0.3217	*
betaR2[20]	0.1932	0.1917	0.1220	-0.0441	0.4373	0.9464	0.0536	*
betaR2[21]	0.2700	0.2671	0.1044	0.0732	0.4844	0.9968	0.0032	*
betaR2[22]	0.0274	0.0271	0.0817	-0.1325	0.1884	0.6302	0.3698	

betaR2[23]	-0.0162	-0.0162	0.1365	-0.2848	0.2537	0.4519	0.5481	
betaR2[24]	-0.1833	-0.1809	0.1221	-0.4305	0.0478	0.0628	0.9372	*
betaR3[1]	0.0232	0.0228	0.0187	-0.0130	0.0613	0.8966	0.1034	*
betaR3[2]	0.1508	0.1520	0.0937	-0.0353	0.3329	0.9436	0.0564	*
betaR3[3]	0.6398	0.6308	0.2185	0.2275	1.0973	0.9991	0.0009	*
betaR3[4]	0.3820	0.3847	0.2404	-0.0988	0.8454	0.9440	0.0560	*
betaR3[5]	0.7092	0.7042	0.1695	0.3862	1.0535	1.0000	0.0000	*
betaR3[6]	-0.1703	-0.1717	0.1645	-0.4842	0.1575	0.1508	0.8492	*
betaR3[7]	-0.2688	-0.2684	0.1987	-0.6597	0.1187	0.0871	0.9129	*
betaR3[8]	0.0326	0.0322	0.0867	-0.1370	0.2033	0.6448	0.3552	
betaR3[9]	-0.0052	-0.0052	0.0218	-0.0478	0.0378	0.4068	0.5932	
betaR3[10]	0.3510	0.3518	0.1056	0.1419	0.5570	0.9995	0.0005	*
betaR3[11]	0.5852	0.5722	0.2116	0.2031	1.0406	0.9990	0.0010	*
betaR3[12]	0.4090	0.4112	0.2235	-0.0340	0.8437	0.9651	0.0349	*
betaR3[13]	0.6963	0.6915	0.1667	0.3747	1.0328	1.0000	0.0000	*
betaR3[14]	-0.1048	-0.1045	0.1680	-0.4345	0.2217	0.2703	0.7297	*
betaR3[15]	-0.5818	-0.5831	0.1855	-0.9407	-0.2129	0.0012	0.9988	*
betaR3[16]	0.1824	0.1831	0.0938	-0.0027	0.3649	0.9732	0.0268	*
betaR3[17]	-0.0340	-0.0338	0.0408	-0.1139	0.0460	0.2032	0.7968	*
betaR3[18]	0.3079	0.3091	0.1714	-0.0265	0.6439	0.9644	0.0356	*
betaR3[19]	0.6147	0.6060	0.2086	0.2276	1.0531	0.9994	0.0006	*
betaR3[20]	0.2567	0.2576	0.2349	-0.2116	0.7149	0.8659	0.1341	*
betaR3[21]	0.7035	0.6992	0.1787	0.3630	1.0719	0.9999	0.0001	*
betaR3[22]	0.0658	0.0642	0.1357	-0.1948	0.3394	0.6867	0.3133	*
betaR3[23]	-0.3015	-0.3001	0.2290	-0.7582	0.1468	0.0929	0.9071	*
betaR3[24]	0.6123	0.6107	0.1728	0.2778	0.9539	0.9998	0.0002	*
alphaR1[1]	-2.0246	-2.0280	0.3840	-2.7691	-1.2604	0.0000	1.0000	*
alphaR1[2]	-0.3496	-0.3439	0.3641	-1.0848	0.3496	0.1662	0.8338	*
alphaR1[3]	-0.1680	-0.1647	0.3327	-0.8301	0.4729	0.3094	0.6906	*
alphaR1[4]	0.1907	0.1904	0.2036	-0.2091	0.5901	0.8260	0.1740	*
alphaR1[5]	-0.9138	-0.9133	0.4598	-1.8227	-0.0204	0.0229	0.9771	*
alphaR1[6]	0.0513	0.0510	0.1948	-0.3308	0.4335	0.6041	0.3959	
alphaR2[1]	1.2782	1.2756	0.3436	0.6085	1.9738	0.9998	0.0002	*
alphaR2[2]	0.5342	0.5311	0.2444	0.0635	1.0262	0.9866	0.0134	*
alphaR2[3]	0.4456	0.4428	0.2196	0.0168	0.8874	0.9788	0.0212	*
alphaR2[4]	0.0991	0.0989	0.1294	-0.1553	0.3547	0.7799	0.2201	*
alphaR2[5]	-0.0689	-0.0671	0.3145	-0.6876	0.5411	0.4153	0.5847	
alphaR2[6]	0.2933	0.2898	0.1247	0.0587	0.5481	0.9936	0.0064	*
alphaR3[1]	2.3673	2.3558	0.4991	1.4062	3.3667	1.0000	0.0000	*
alphaR3[2]	0.5795	0.5727	0.3674	-0.1214	1.3136	0.9460	0.0540	*
alphaR3[3]	0.5307	0.5253	0.3322	-0.1047	1.1960	0.9468	0.0532	*
alphaR3[4]	0.0630	0.0606	0.2275	-0.3775	0.5197	0.6056	0.3944	
alphaR3[5]	-0.5481	-0.5536	0.4811	-1.4770	0.4081	0.1281	0.8719	*
alphaR3[6]	0.1173	0.1130	0.2162	-0.2971	0.5558	0.7059	0.2941	*

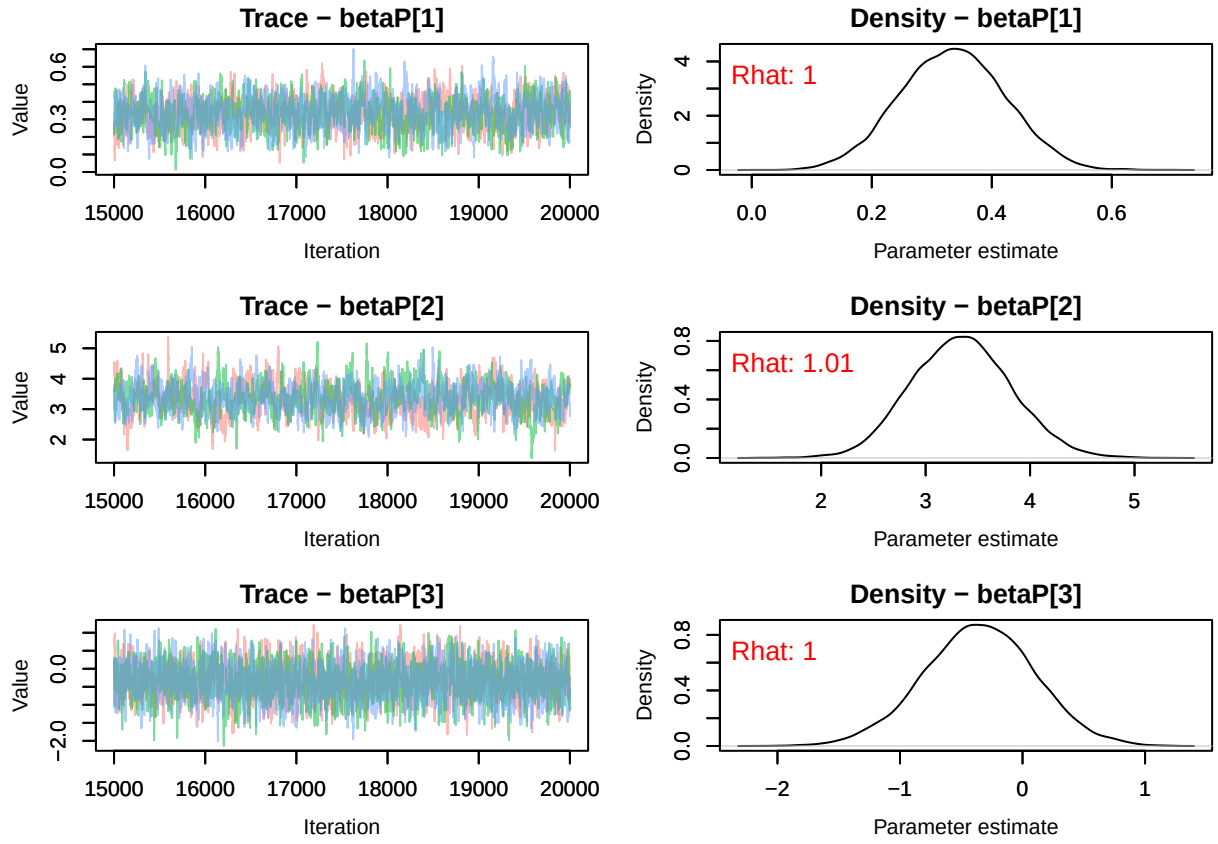
Standard Deviations and Covariance Matrix

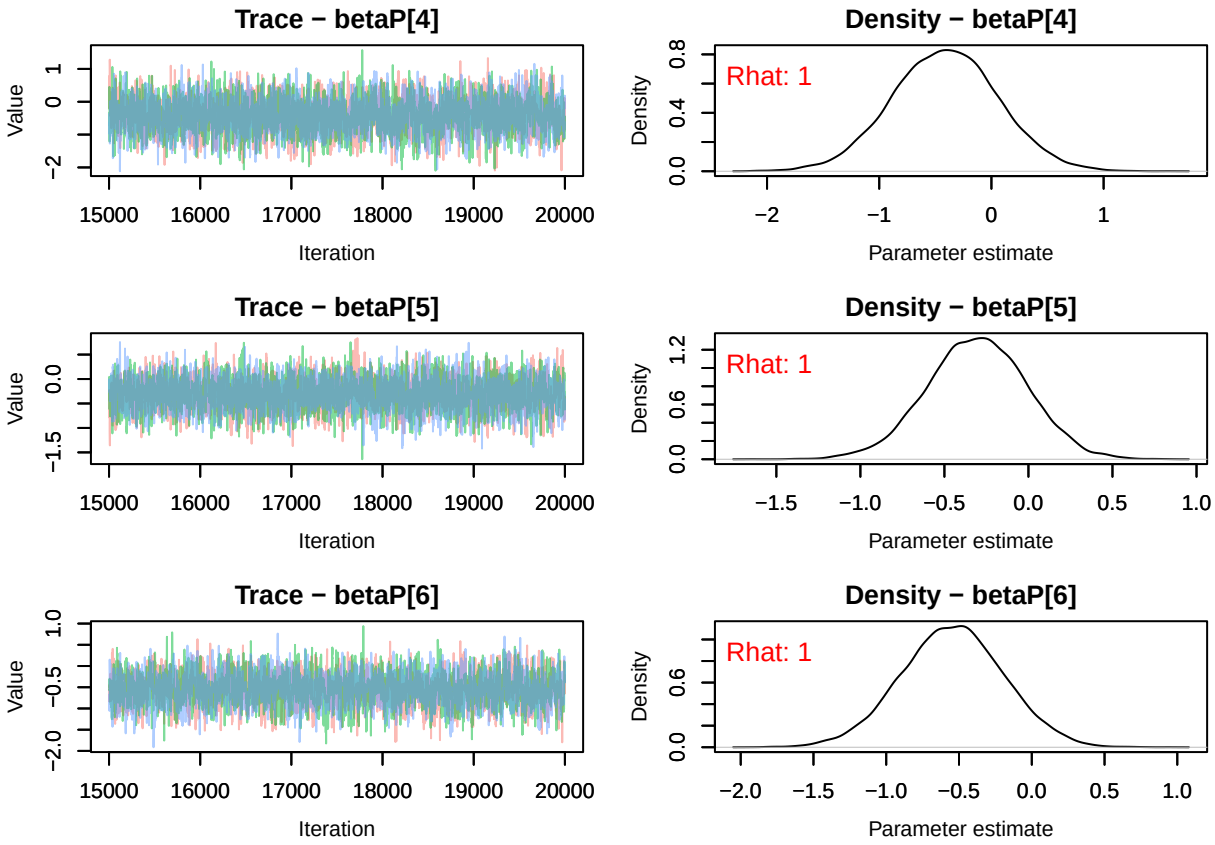
Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
sigmaP	2.6228	2.6108	0.2351	2.2015	3.1185	1.0000	0.0000	*
sigmaA	0.3656	0.3646	0.0288	0.3123	0.4252	1.0000	0.0000	*
SigmaIR[1, 1]	0.8172	0.8134	0.0762	0.6807	0.9771	1.0000	0.0000	*
SigmaIR[2, 1]	0.1629	0.1613	0.0872	-0.0054	0.3397	0.9713	0.0287	*
SigmaIR[3, 1]	-0.0620	-0.0620	0.1059	-0.2716	0.1457	0.2773	0.7227	*
SigmaIR[4, 1]	0.5127	0.5097	0.0794	0.3656	0.6769	1.0000	0.0000	*
SigmaIR[5, 1]	0.0966	0.0962	0.0465	0.0067	0.1897	0.9822	0.0178	*
SigmaIR[6, 1]	-0.0040	-0.0038	0.0448	-0.0920	0.0833	0.4645	0.5355	
SigmaIR[1, 2]	0.1629	0.1613	0.0872	-0.0054	0.3397	0.9713	0.0287	*
SigmaIR[2, 2]	2.1928	2.1821	0.1994	1.8321	2.6117	1.0000	0.0000	*
SigmaIR[3, 2]	1.9109	1.9016	0.2091	1.5286	2.3472	1.0000	0.0000	*
SigmaIR[4, 2]	0.4117	0.4086	0.1317	0.1619	0.6786	0.9996	0.0004	*
SigmaIR[5, 2]	0.7222	0.7183	0.0901	0.5571	0.9099	1.0000	0.0000	*
SigmaIR[6, 2]	0.1866	0.1858	0.0741	0.0435	0.3353	0.9946	0.0054	*
SigmaIR[1, 3]	-0.0620	-0.0620	0.1059	-0.2716	0.1457	0.2773	0.7227	*
SigmaIR[2, 3]	1.9109	1.9016	0.2091	1.5286	2.3472	1.0000	0.0000	*
SigmaIR[3, 3]	3.4600	3.4437	0.2989	2.9186	4.0897	1.0000	0.0000	*
SigmaIR[4, 3]	0.2887	0.2859	0.1525	-0.0018	0.5968	0.9744	0.0256	*
SigmaIR[5, 3]	0.4394	0.4367	0.0992	0.2525	0.6425	1.0000	0.0000	*
SigmaIR[6, 3]	0.1965	0.1944	0.0921	0.0207	0.3823	0.9855	0.0145	*
SigmaIR[1, 4]	0.5127	0.5097	0.0794	0.3656	0.6769	1.0000	0.0000	*
SigmaIR[2, 4]	0.4117	0.4086	0.1317	0.1619	0.6786	0.9996	0.0004	*
SigmaIR[3, 4]	0.2887	0.2859	0.1525	-0.0018	0.5968	0.9744	0.0256	*
SigmaIR[4, 4]	1.4292	1.4234	0.1404	1.1731	1.7233	1.0000	0.0000	*
SigmaIR[5, 4]	0.1395	0.1386	0.0641	0.0163	0.2684	0.9867	0.0133	*
SigmaIR[6, 4]	0.0105	0.0105	0.0596	-0.1070	0.1280	0.5712	0.4288	
SigmaIR[1, 5]	0.0966	0.0962	0.0465	0.0067	0.1897	0.9822	0.0178	*
SigmaIR[2, 5]	0.7222	0.7183	0.0901	0.5571	0.9099	1.0000	0.0000	*
SigmaIR[3, 5]	0.4394	0.4367	0.0992	0.2525	0.6425	1.0000	0.0000	*
SigmaIR[4, 5]	0.1395	0.1386	0.0641	0.0163	0.2684	0.9867	0.0133	*
SigmaIR[5, 5]	0.6210	0.6180	0.0577	0.5171	0.7427	1.0000	0.0000	*
SigmaIR[6, 5]	0.2708	0.2689	0.0438	0.1903	0.3615	1.0000	0.0000	*
SigmaIR[1, 6]	-0.0040	-0.0038	0.0448	-0.0920	0.0833	0.4645	0.5355	
SigmaIR[2, 6]	0.1866	0.1858	0.0741	0.0435	0.3353	0.9946	0.0054	*
SigmaIR[3, 6]	0.1965	0.1944	0.0921	0.0207	0.3823	0.9855	0.0145	*
SigmaIR[4, 6]	0.0105	0.0105	0.0596	-0.1070	0.1280	0.5712	0.4288	
SigmaIR[5, 6]	0.2708	0.2689	0.0438	0.1903	0.3615	1.0000	0.0000	*
SigmaIR[6, 6]	0.5541	0.5513	0.0547	0.4551	0.6693	1.0000	0.0000	*

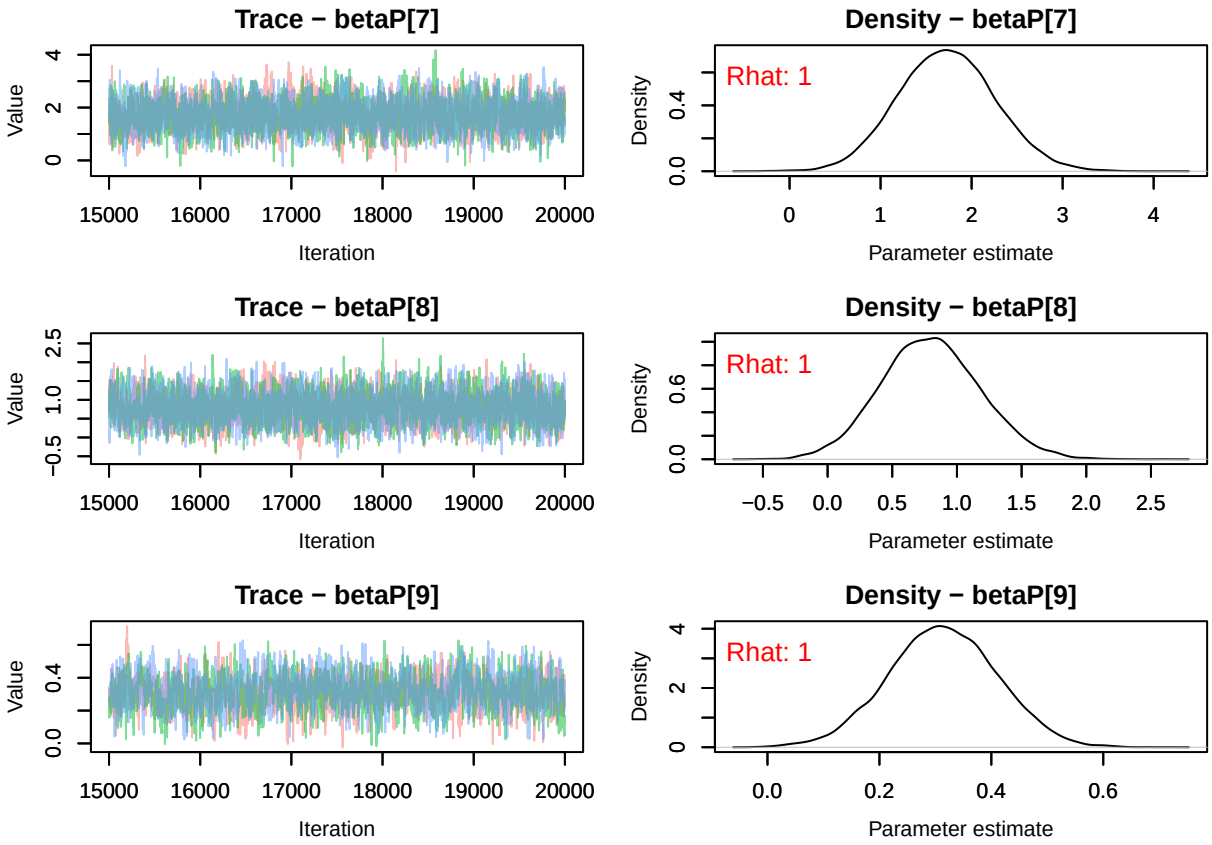
Hazard Parameters

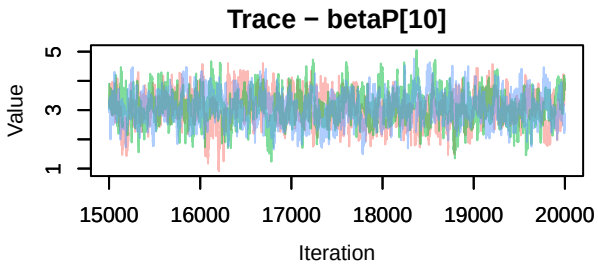
Parameter	Post.Mean	Post.Median	Post.SD	Lower95	Upper95	P.great.0	P.less.0	Evidence
shape	5.6023	5.5076	1.1786	3.5594	8.1241	1.0000	0.0000	*
scale	0.3870	0.2212	0.4731	0.0012	1.5117	1.0000	0.0000	*
assoc[1]	0.3344	0.3242	0.1633	0.0458	0.6844	0.9898	0.0102	*
assoc[2]	0.1818	0.1898	0.7461	-1.3096	1.6201	0.5993	0.4007	
assoc[3]	1.7938	1.7803	0.7478	0.3697	3.2852	0.9941	0.0059	*
assoc[4]	0.7717	0.7701	0.7498	-0.7030	2.2497	0.8506	0.1494	*
assoc[5]	0.4134	0.3940	0.7873	-1.0641	2.0253	0.6955	0.3045	*
assoc[6]	1.2198	1.2072	0.7310	-0.1810	2.6545	0.9545	0.0455	*
assoc[7]	-0.3956	-0.3902	0.8327	-2.0408	1.2367	0.3163	0.6837	*
assoc[8]	-0.2899	-0.3033	0.6338	-1.5022	0.9915	0.3142	0.6858	*
gammaS[1]	-1.9522	-1.5086	1.8841	-6.7302	0.4132	0.0917	0.9083	*
gammaS[2]	0.5945	0.5140	0.8419	-0.9506	2.4268	0.7719	0.2281	*
gammaS[3]	-0.1994	-0.1944	0.7188	-1.6395	1.2822	0.3743	0.6257	
gammaS[4]	-0.1581	-0.1479	0.6698	-1.5178	1.1914	0.4017	0.5983	
gammaS[5]	-0.7895	-0.6332	1.0718	-3.2503	1.0019	0.2231	0.7769	*
gammaS[6]	-0.1477	-0.1303	0.6847	-1.5620	1.2087	0.4141	0.5859	

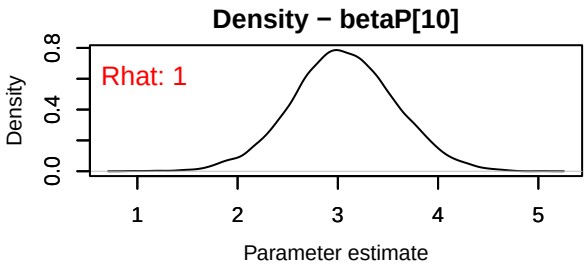
MCMC Diagnostics 1. The following R output provides the Gelman-Rubin diagnostic and traceplots for the model parameters considering the 3 full MCMC chains (20,000 iterations each) after 5,000 iterations were discarded as burn-in. The Rhat value shown in the density plots (right side) represent the point estimate for the Gelman-Rubin diagnostic. The value 1.1 is used as a threshold, as explained in the main text. Therefore, we say that a factor of 1.1 or below indicates that the parameter has reached a level of convergence, which was achieved by all parameters in the model.

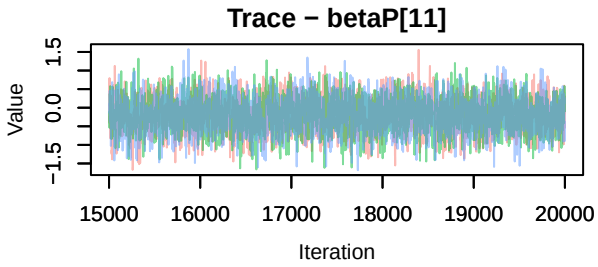


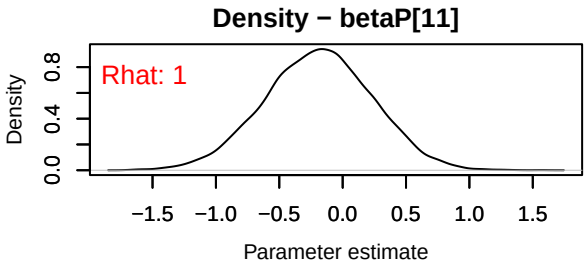

Trace − betaP[4]
Value
Iteration
Density − betaP[4]
Rhat: 1
Density
Parameter estimate
Trace − betaP[5]
Value
Iteration
Density − betaP[5]
Rhat: 1
Density
Parameter estimate
Trace − betaP[6]
Value
Iteration
Density − betaP[6]
Rhat: 1
Density
Parameter estimate

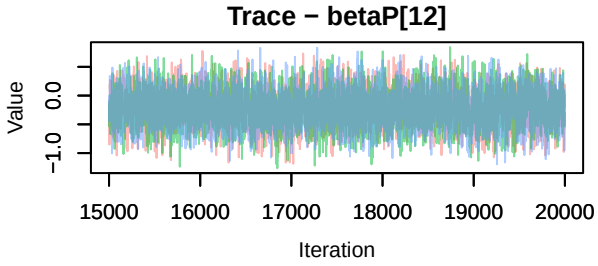

Trace − betaP[7]
Value
Iteration
Density − betaP[7]
Rhat: 1
Density
Parameter estimate
Trace − betaP[8]
Value
Iteration
Density − betaP[8]
Rhat: 1
Density
Parameter estimate
Trace − betaP[9]
Value
Iteration
Density − betaP[9]
Rhat: 1
Density
Parameter estimate

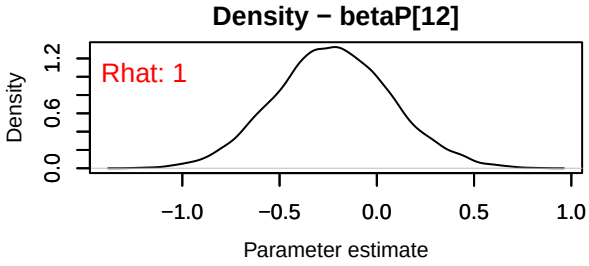

Trace − betaP[10]
Value
1
3
5
15000
16000
17000
18000
19000
20000
Iteration

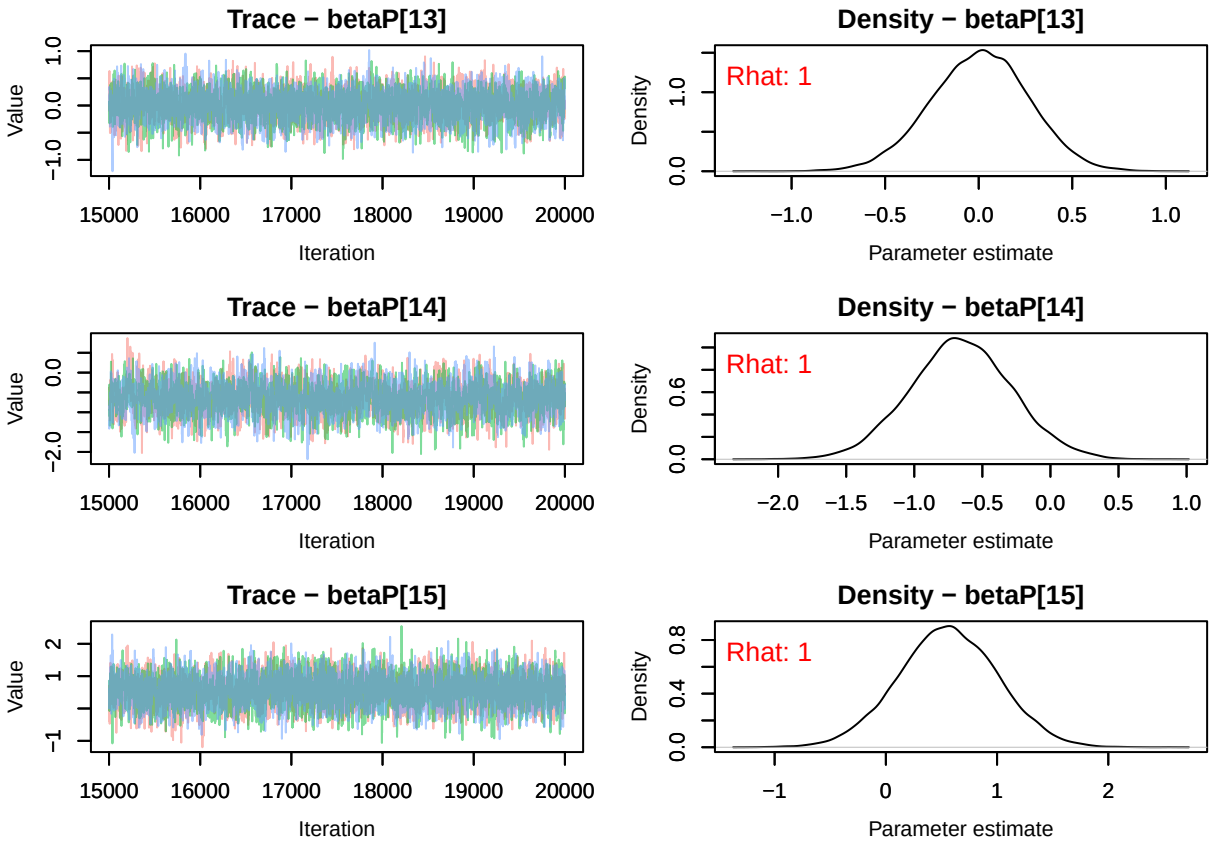

Density − betaP[10]
Rhat: 1
Density
0.0
0.4
0.8
1
2
3
4
5
Parameter estimate

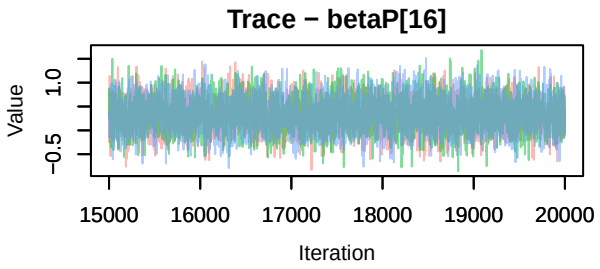

Trace − betaP[11]
Value
−1.5
0.0
1.5
15000
16000
17000
18000
19000
20000
Iteration

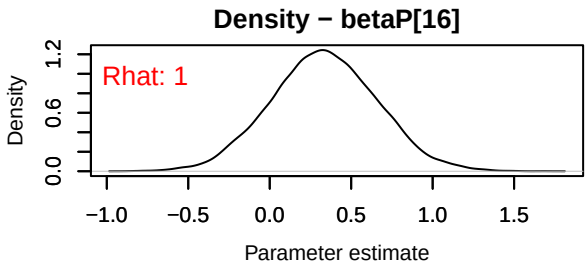

Density − betaP[11]
Rhat: 1
Density
0.0
0.4
0.8
−1.5
−1.0
−0.5
0.0
0.5
1.0
1.5
Parameter estimate

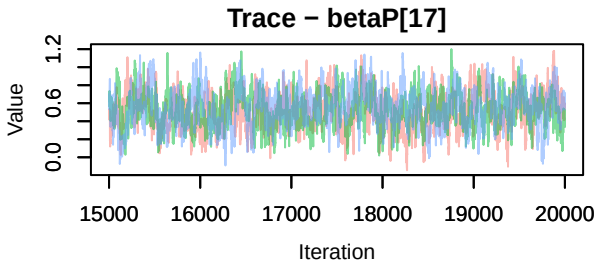

Trace − betaP[12]
Value
−1.0
0.0
15000
16000
17000
18000
19000
20000
Iteration

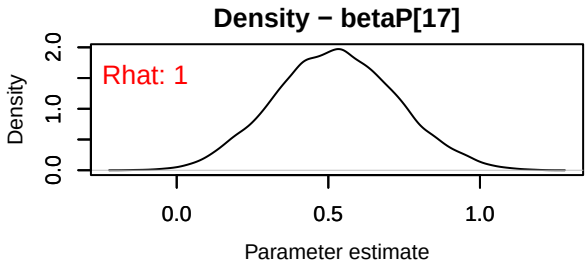

Density − betaP[12]
Rhat: 1
Density
0.0
0.6
1.2
−1.0
−0.5
0.0
0.5
1.0
Parameter estimate

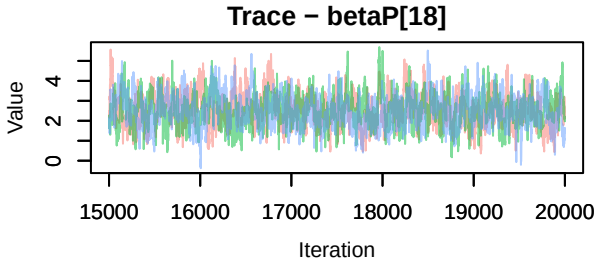

Trace − betaP[13]
Value
Iteration
Density − betaP[13]
Rhat: 1
Density
Parameter estimate
Trace − betaP[14]
Value
Iteration
Density − betaP[14]
Rhat: 1
Density
Parameter estimate
Trace − betaP[15]
Value
Iteration
Density − betaP[15]
Rhat: 1
Density
Parameter estimate

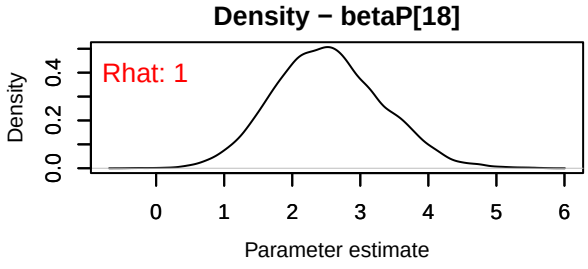

Trace − betaP[16]
Value
Iteration

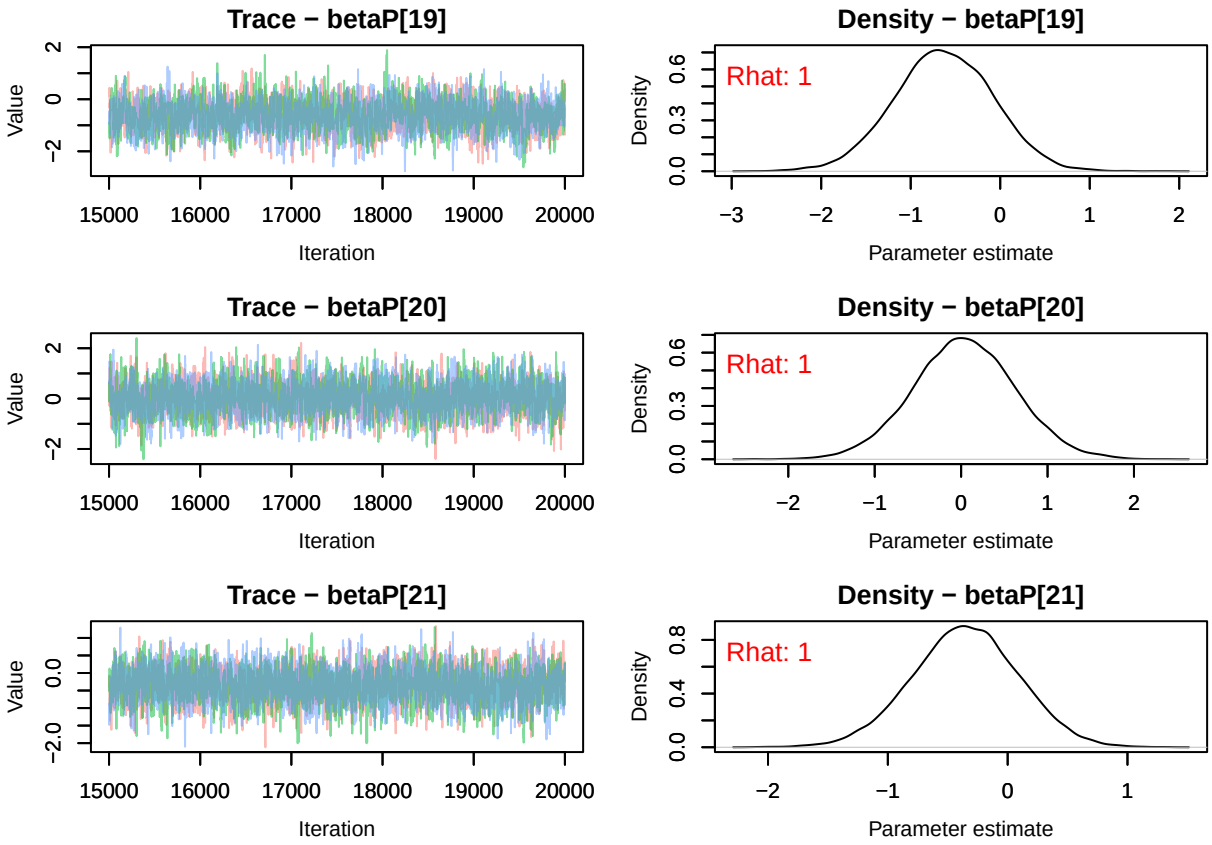

Density − betaP[16]
Rhat: 1
Density
Parameter estimate

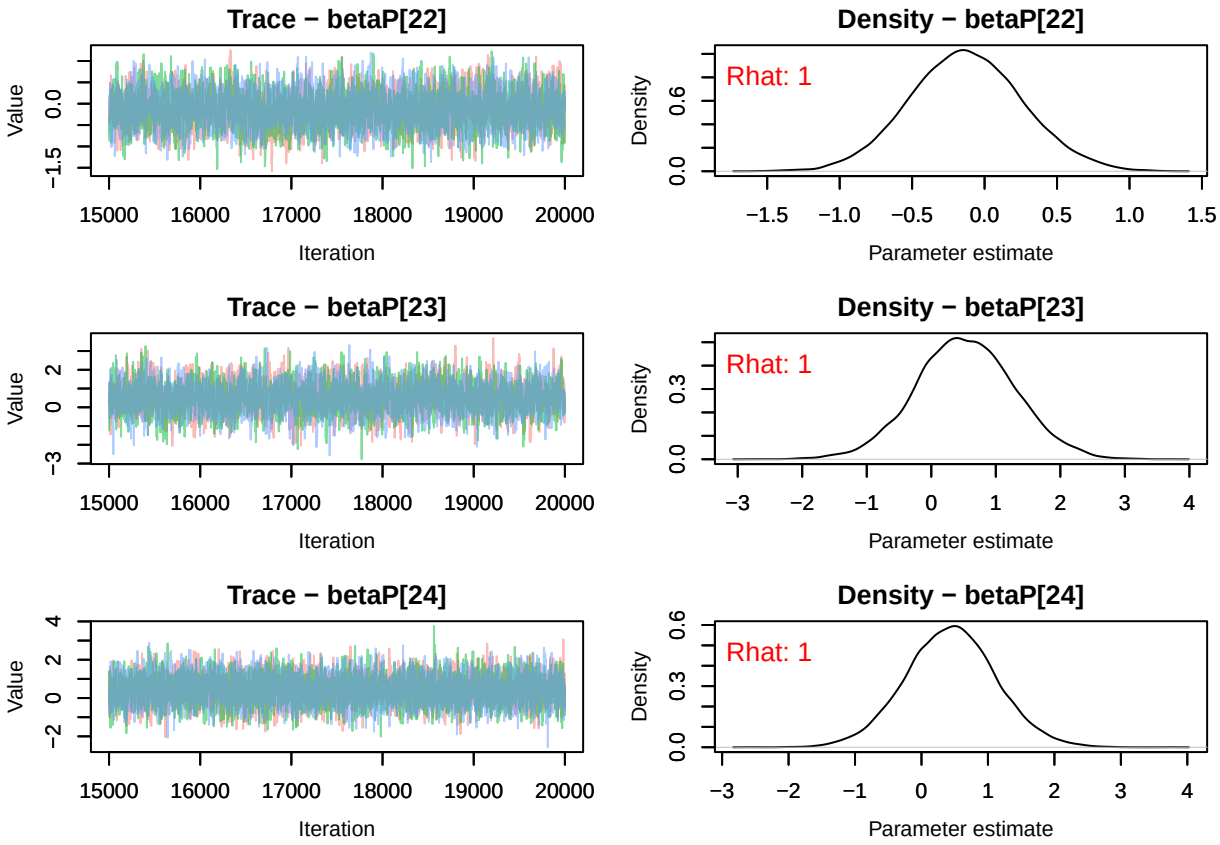

Trace − betaP[17]
Value
Iteration

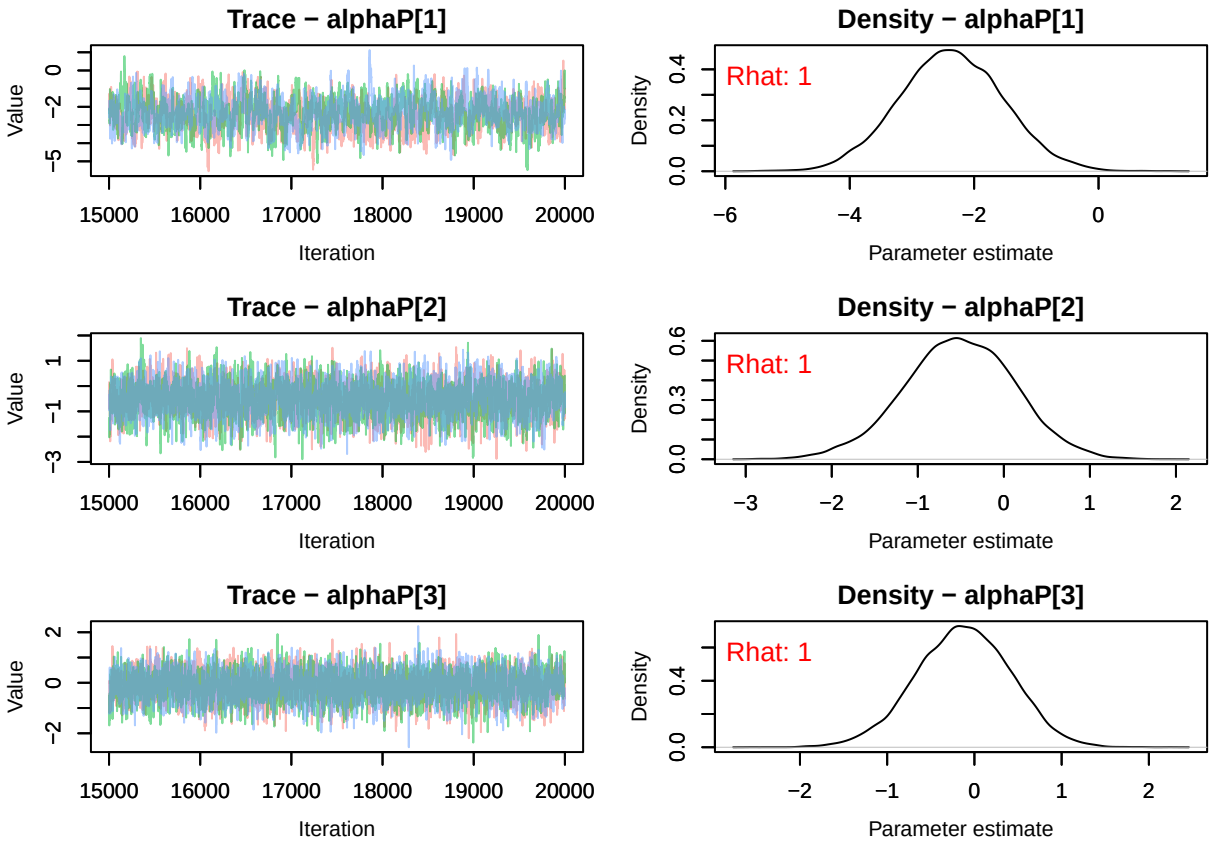

Density − betaP[17]
Rhat: 1
Density
Parameter estimate

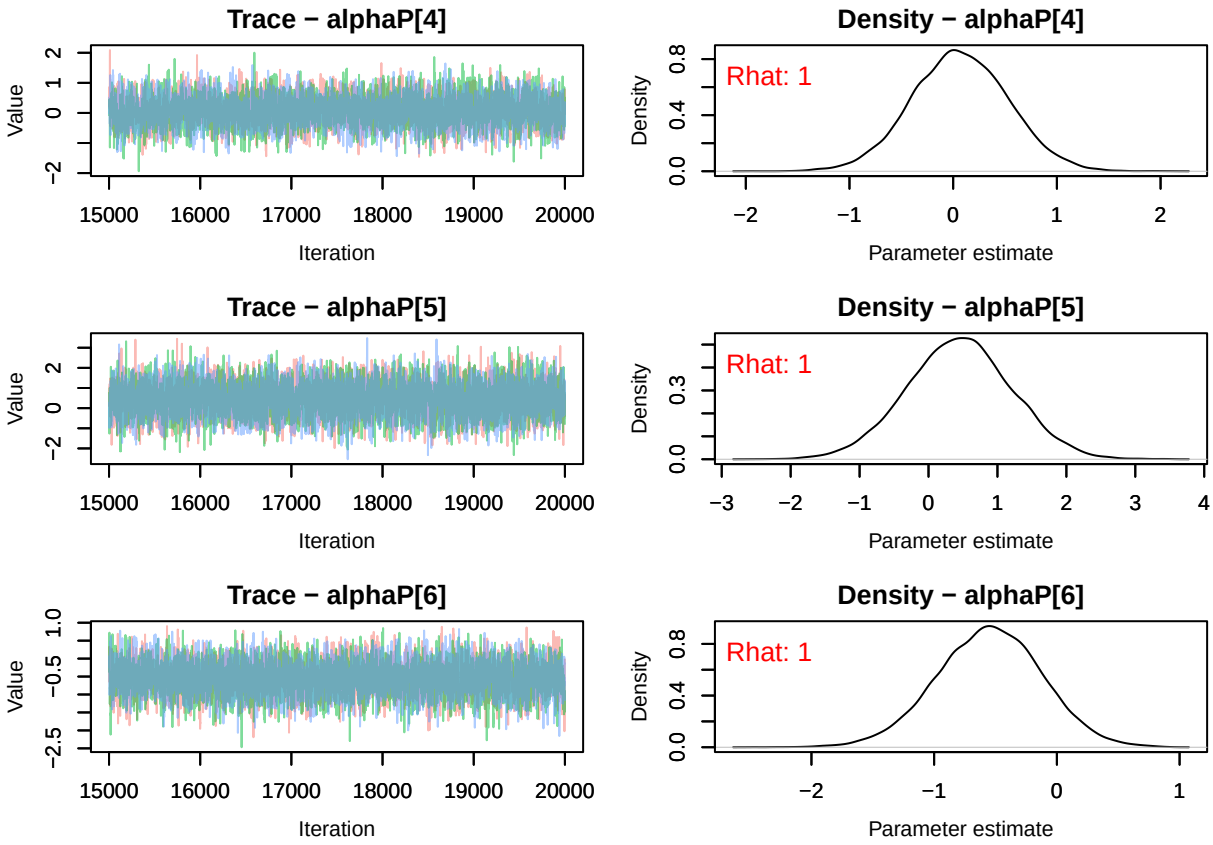

Trace − betaP[18]
Value
Iteration

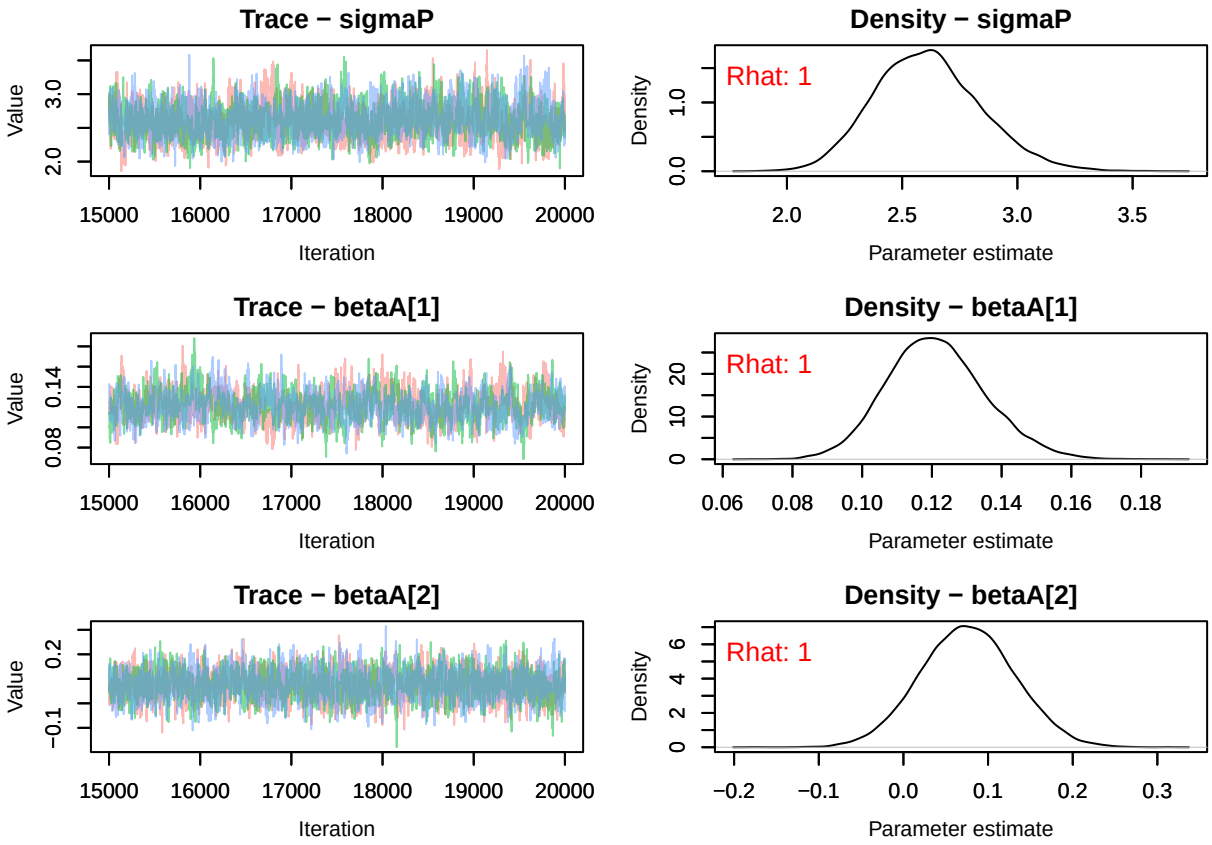

Density − betaP[18]
Rhat: 1
Density
Parameter estimate

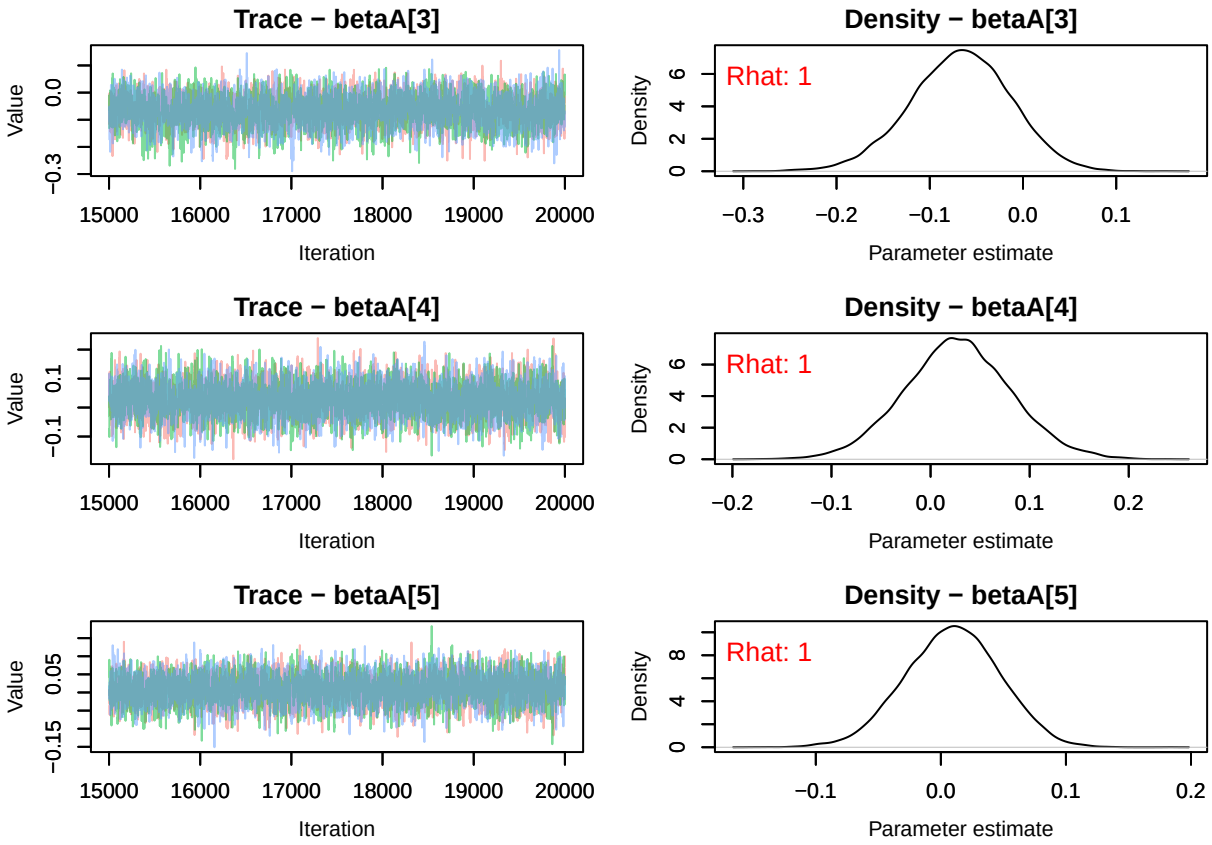

Trace − betaP[19]
Value
Iteration
Density − betaP[19]
Rhat: 1
Density
Parameter estimate
Trace − betaP[20]
Value
Iteration
Density − betaP[20]
Rhat: 1
Density
Parameter estimate
Trace − betaP[21]
Value
Iteration
Density − betaP[21]
Rhat: 1
Density
Parameter estimate

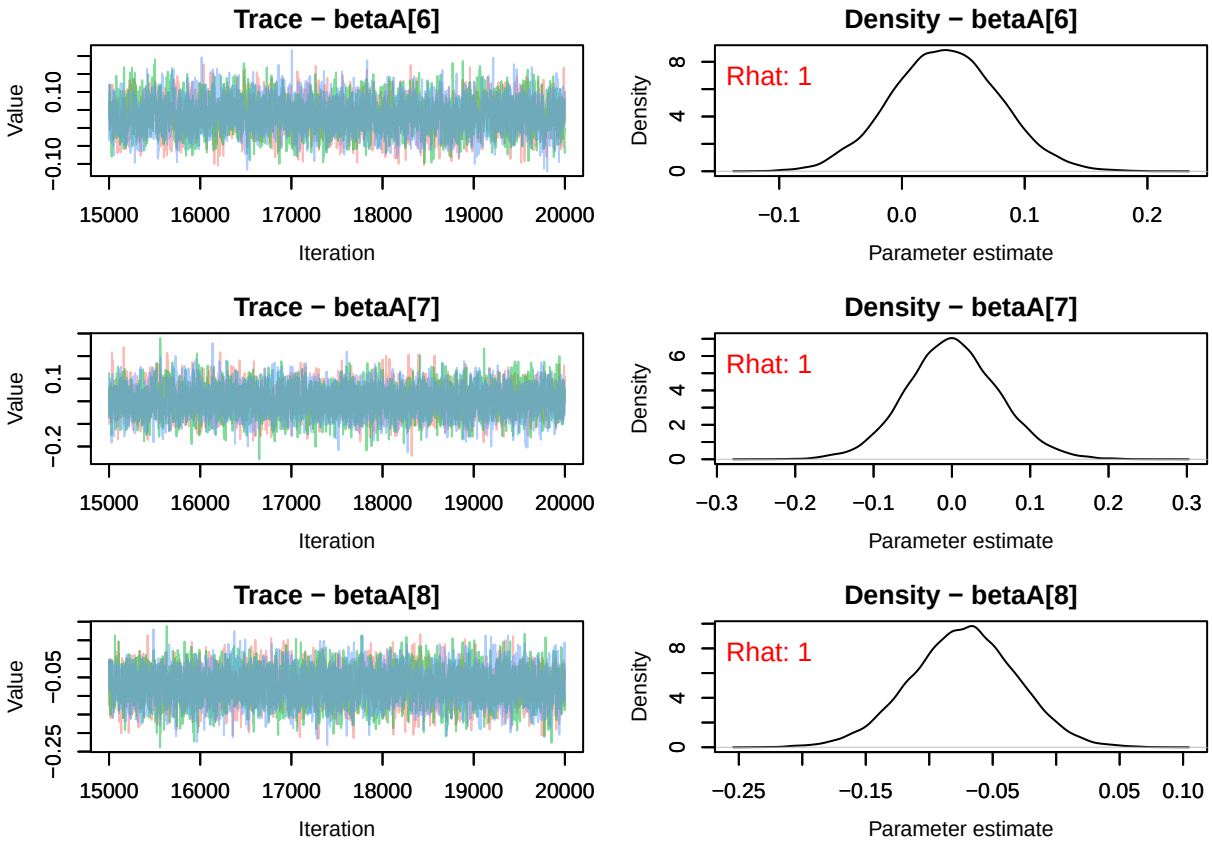

Trace − betaP[22]
Value
Iteration
Density − betaP[22]
Rhat: 1
Density
Parameter estimate
Trace − betaP[23]
Value
Iteration
Density − betaP[23]
Rhat: 1
Density
Parameter estimate
Trace − betaP[24]
Value
Iteration
Density − betaP[24]
Rhat: 1
Density
Parameter estimate

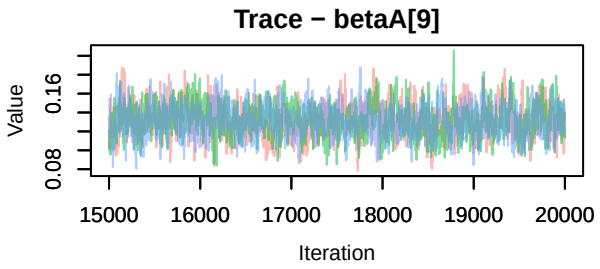

Trace − alphaP[1]
Value
Iteration
Density − alphaP[1]
Rhat: 1
Density
Parameter estimate
Trace − alphaP[2]
Value
Iteration
Density − alphaP[2]
Rhat: 1
Density
Parameter estimate
Trace − alphaP[3]
Value
Iteration
Density − alphaP[3]
Rhat: 1
Density
Parameter estimate

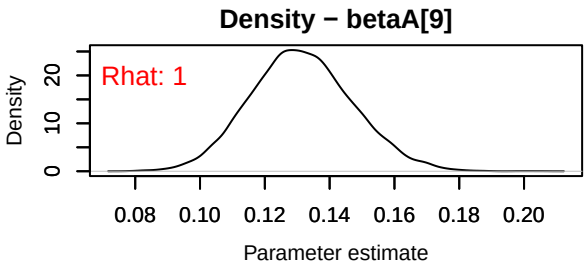

Trace − alphaP[4]
Value
Iteration
Density − alphaP[4]
Rhat: 1
Density
Parameter estimate
Trace − alphaP[5]
Value
Iteration
Density − alphaP[5]
Rhat: 1
Density
Parameter estimate
Trace − alphaP[6]
Value
Iteration
Density − alphaP[6]
Rhat: 1
Density
Parameter estimate

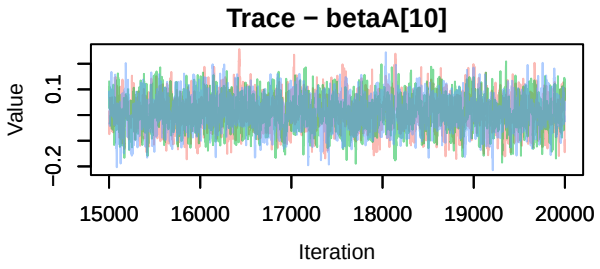

Trace − sigmaP
Value
2.0
3.0
15000
16000
17000
18000
19000
20000
Iteration
Density − sigmaP
Density
0.0
1.0
Rhat: 1
2.0
2.5
3.0
3.5
Parameter estimate
Trace − betaA[1]
Value
0.08
0.14
Iteration
Density − betaA[1]
Density
0
10
20
Rhat: 1
0.06
0.08
0.10
0.12
0.14
0.16
0.18
Parameter estimate
Trace − betaA[2]
Value
−0.1
0.2
Iteration
Density − betaA[2]
Density
0
2
4
6
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

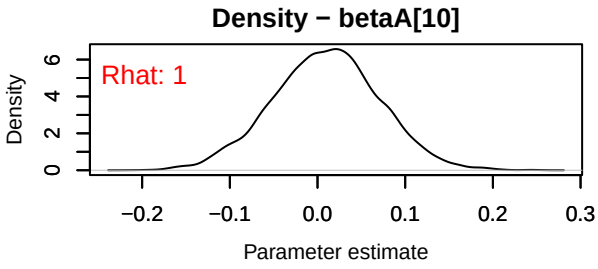

Trace − betaA[3]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[3]
Density
0
2
4
6
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
Parameter estimate
Trace − betaA[4]
Value
−0.1
0.1
Iteration
Density − betaA[4]
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaA[5]
Value
−0.15
0.05
Iteration
Density − betaA[5]
Density
0
4
8
Rhat: 1
−0.1
0.0
0.1
0.2
Parameter estimate

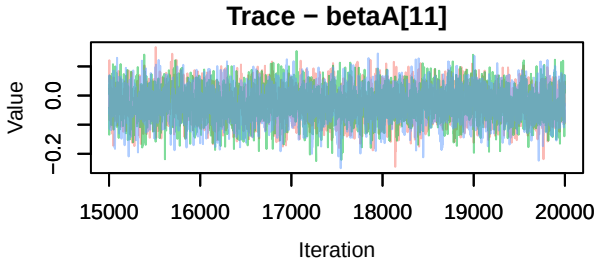

Trace − betaA[6]
Value
−0.10
0.10
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[6]
Density
0
4
8
Rhat: 1
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaA[7]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[7]
Density
0
2
4
6
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate
Trace − betaA[8]
Value
−0.25
−0.05
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[8]
Density
0
4
8
Rhat: 1
−0.25
−0.15
−0.05
0.05
0.10
Parameter estimate

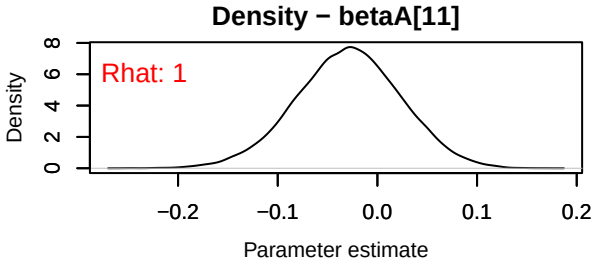

Trace − betaA[9]
Value
0.08
0.16
15000
16000
17000
18000
19000
20000
Iteration

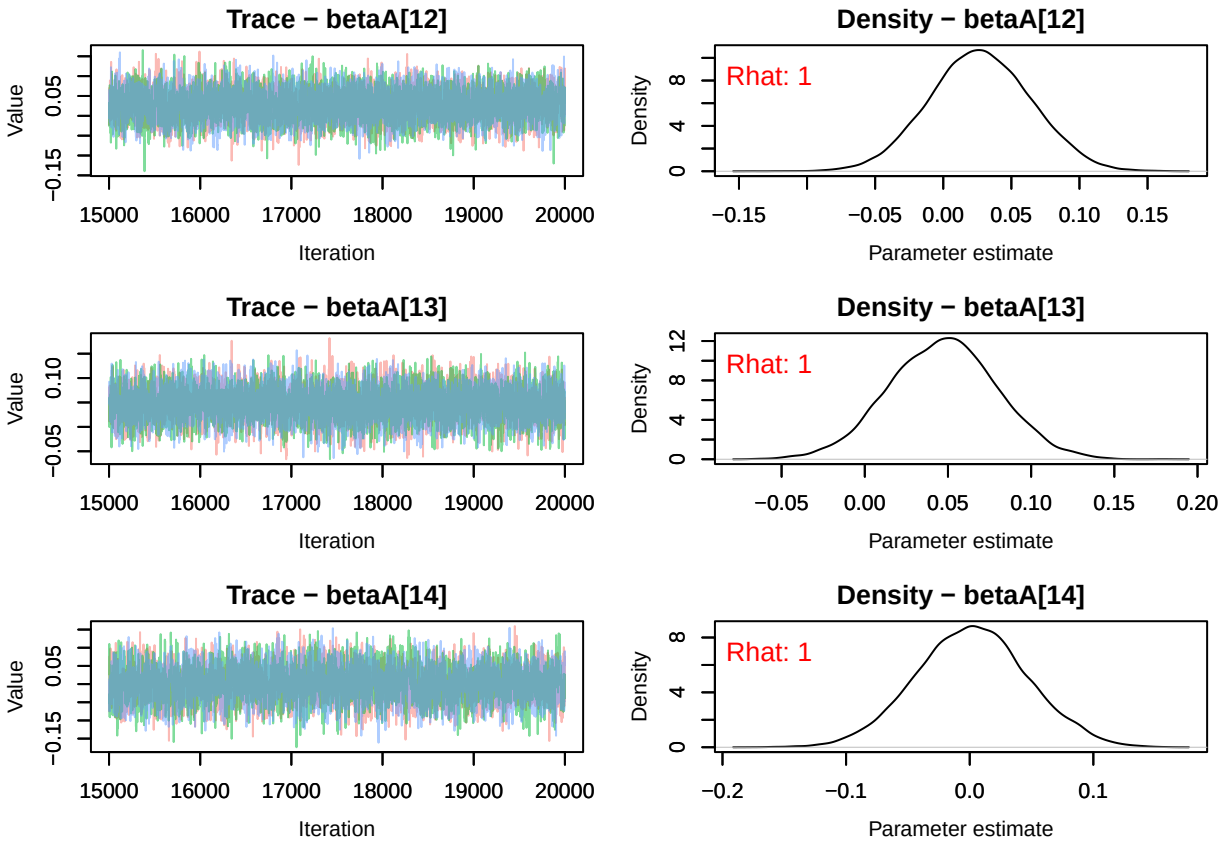

Density − betaA[9]
Rhat: 1
Density
0
10
20
0.08
0.10
0.12
0.14
0.16
0.18
0.20
Parameter estimate

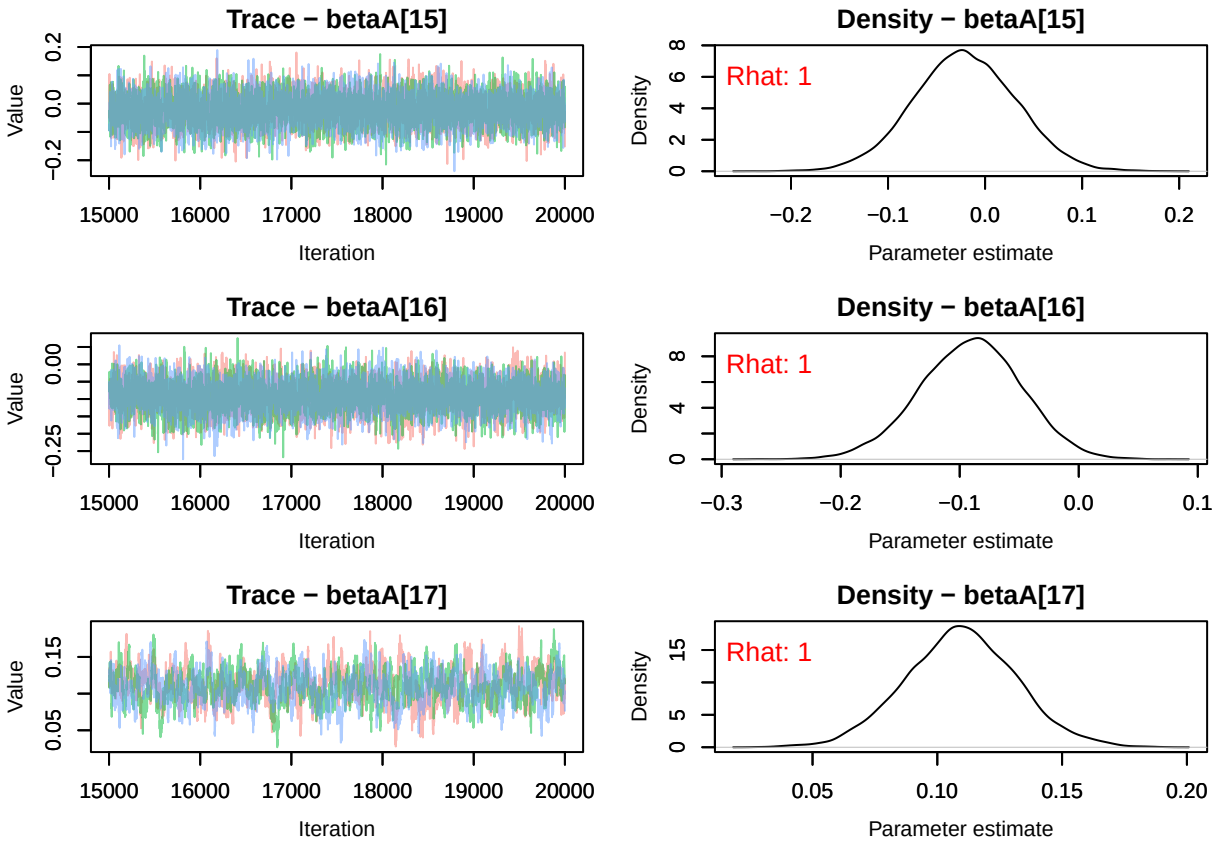

Trace − betaA[10]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration

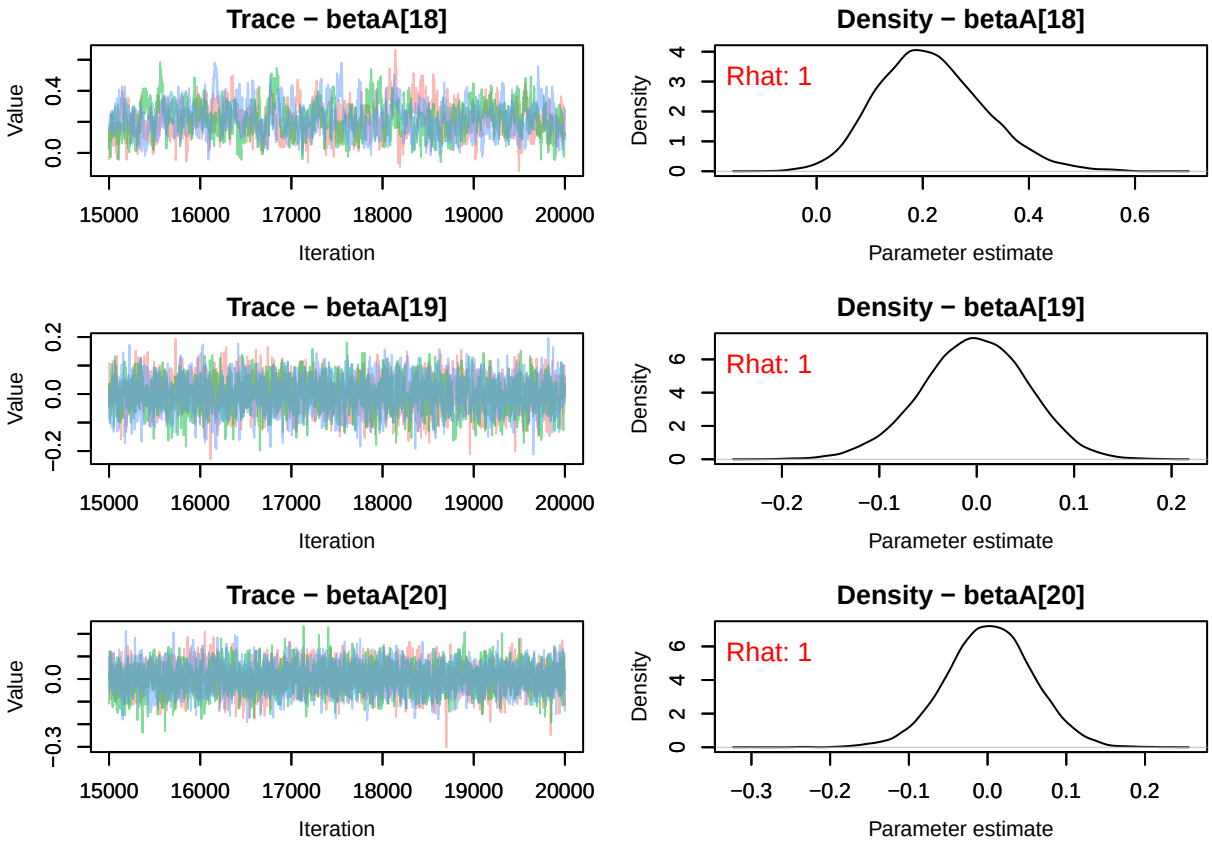

Density − betaA[10]
Rhat: 1
Density
0
2
4
6
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

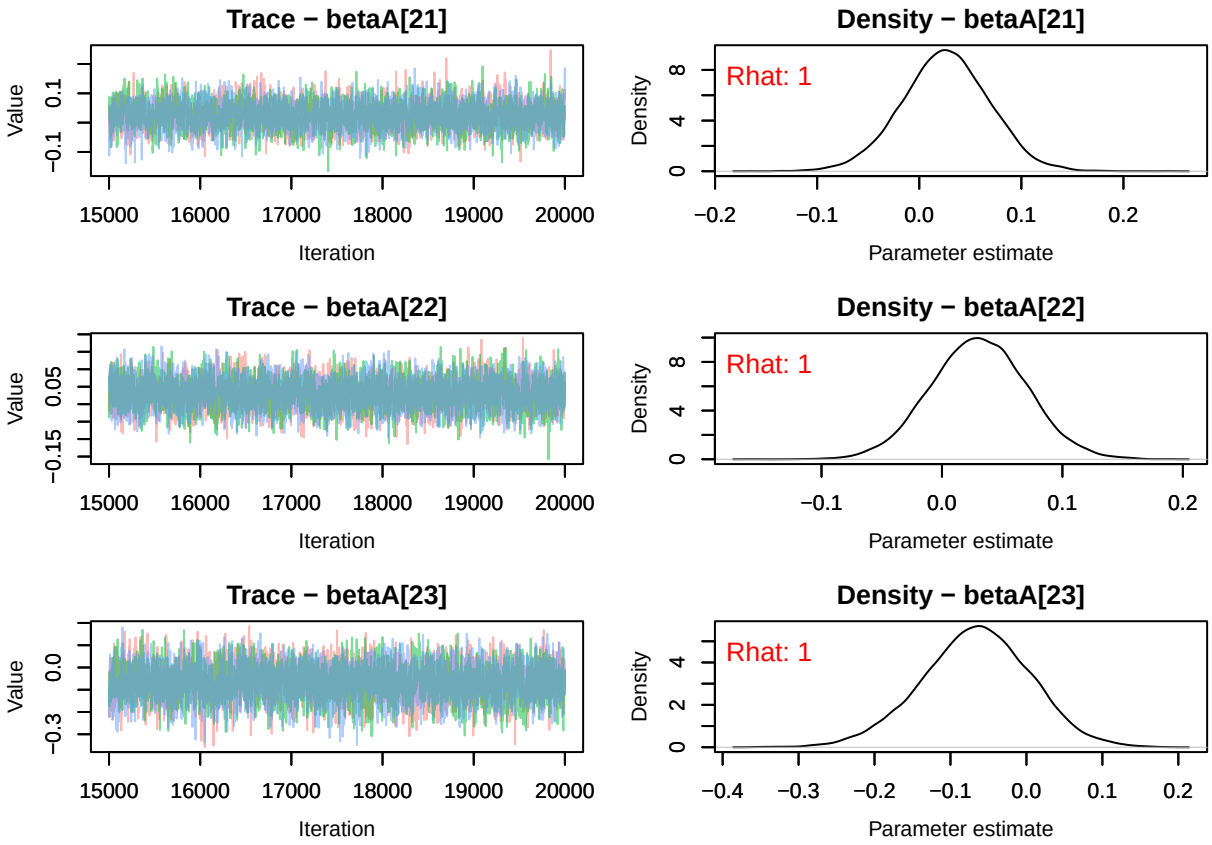

Trace − betaA[11]
Value
−0.2
0.0
15000
16000
17000
18000
19000
20000
Iteration

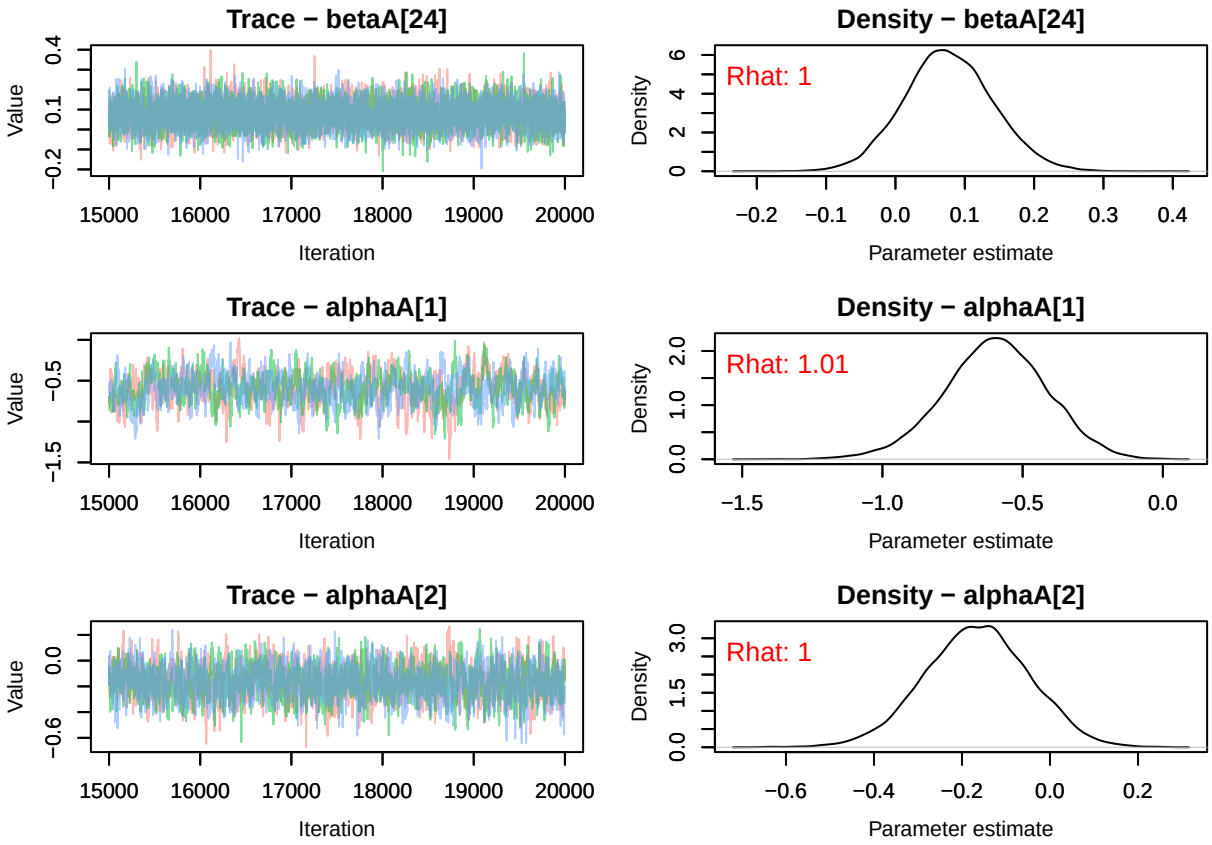

Density − betaA[11]
Rhat: 1
Density
0
2
4
6
8
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

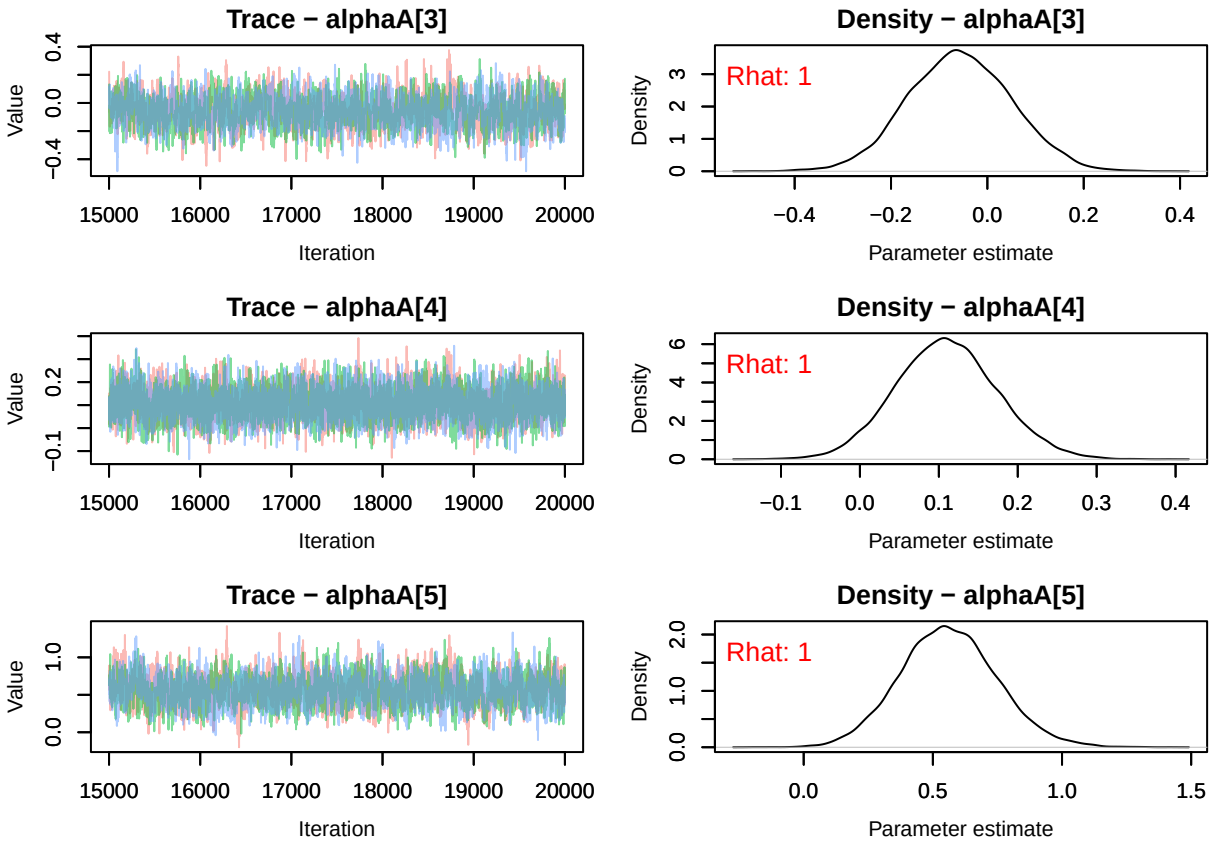

Trace − betaA[12]
Value
−0.15
0.05
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[12]
Density
0
4
8
Rhat: 1
−0.15
−0.05
0.00
0.05
0.10
0.15
Parameter estimate
Trace − betaA[13]
Value
−0.05
0.10
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[13]
Density
0
4
8
12
Rhat: 1
−0.05
0.00
0.05
0.10
0.15
0.20
Parameter estimate
Trace − betaA[14]
Value
−0.15
0.05
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[14]
Density
0
4
8
Rhat: 1
−0.2
−0.1
0.0
0.1
Parameter estimate

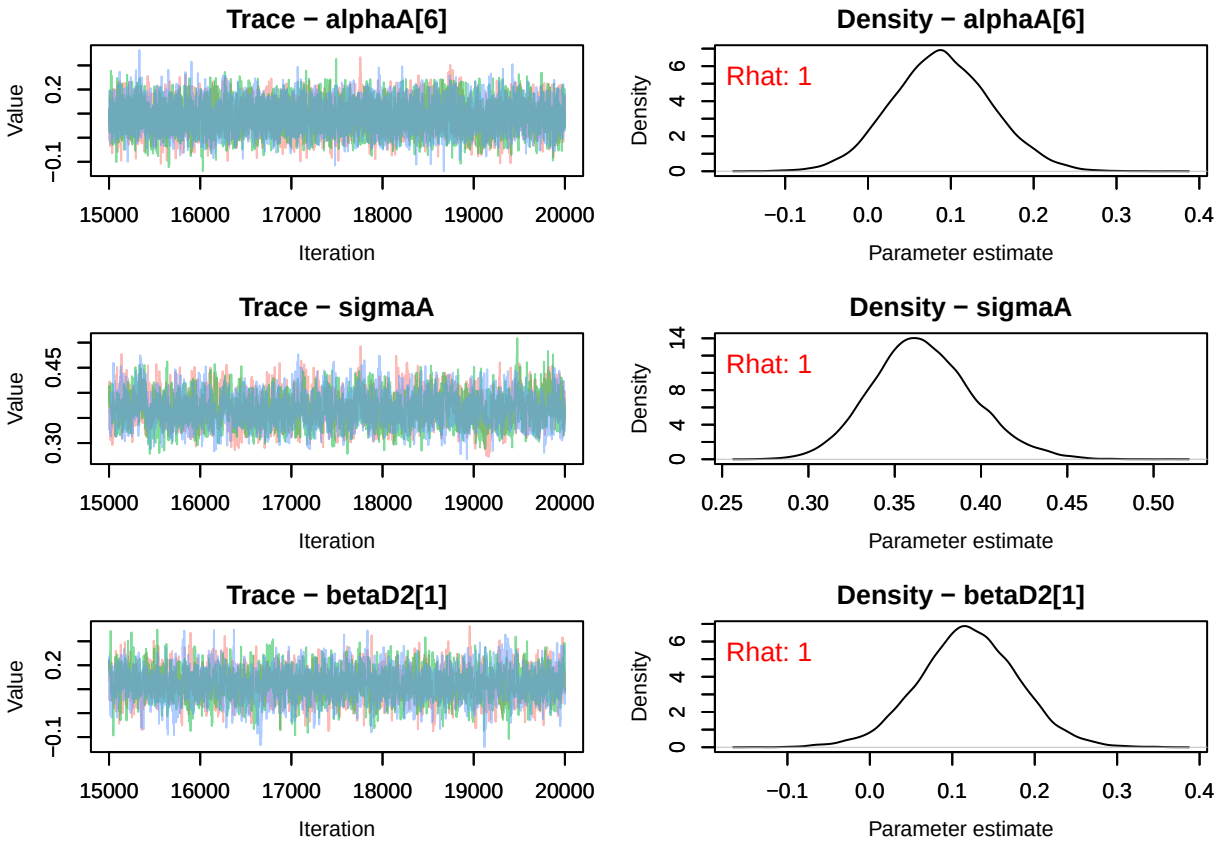

Trace − betaA[15]
Value
Iteration
Density − betaA[15]
Rhat: 1
Density
Parameter estimate
Trace − betaA[16]
Value
Iteration
Density − betaA[16]
Rhat: 1
Density
Parameter estimate
Trace − betaA[17]
Value
Iteration
Density − betaA[17]
Rhat: 1
Density
Parameter estimate

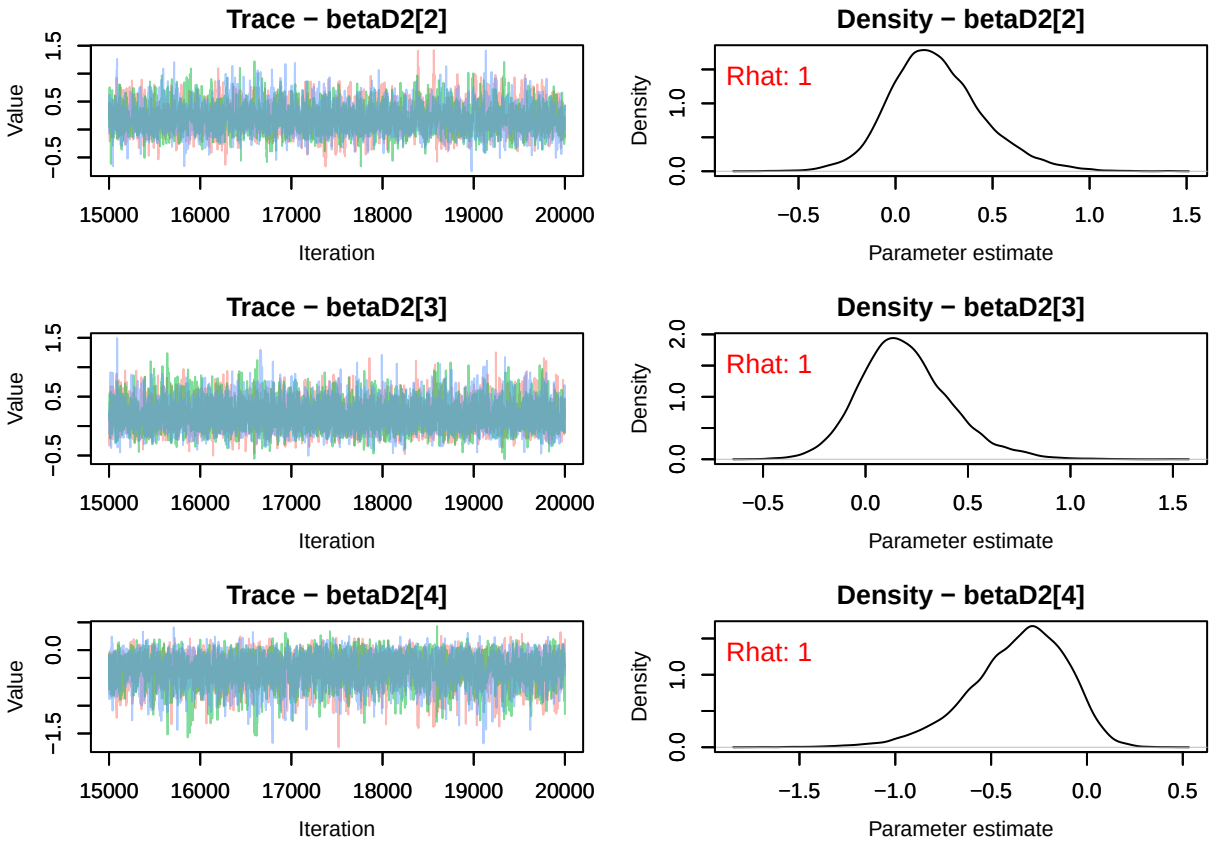

Trace − betaA[18]
Value
0.0
0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[18]
Density
0
1
2
3
4
Rhat: 1
0.0
0.2
0.4
0.6
Parameter estimate
Trace − betaA[19]
Value
−0.2
0.0
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[19]
Density
0
2
4
6
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaA[20]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[20]
Density
0
2
4
6
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

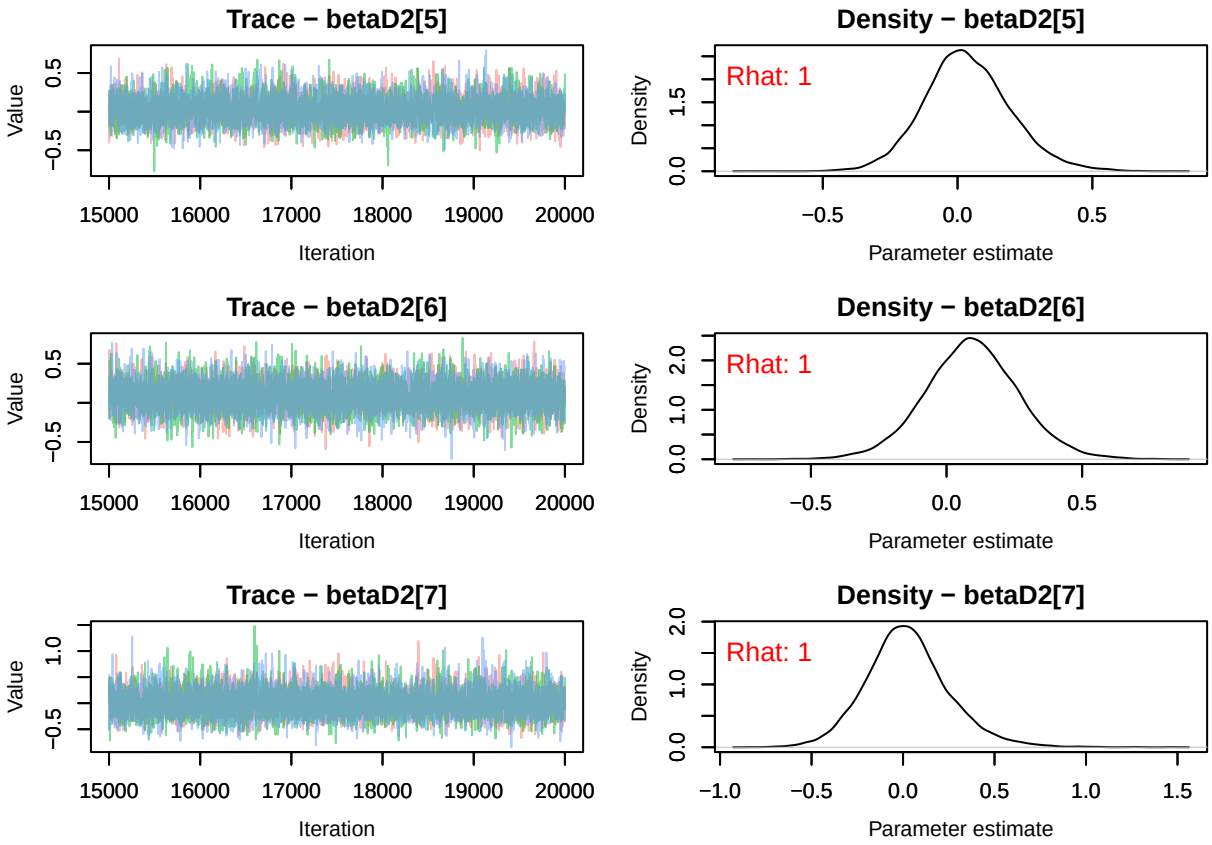

Trace − betaA[21]
Value
−0.1
0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[21]
Density
0
4
8
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaA[22]
Value
−0.15
0.05
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[22]
Density
0
4
8
Rhat: 1
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaA[23]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaA[23]
Density
0
2
4
Rhat: 1
−0.4
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

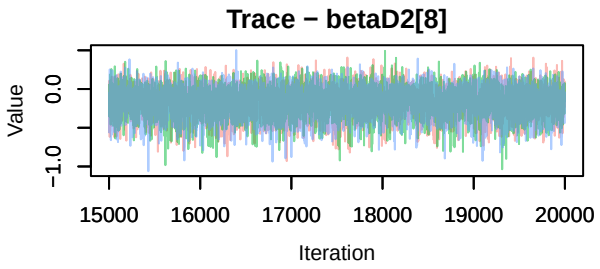

Trace − betaA[24]
Value
Iteration
Density − betaA[24]
Rhat: 1
Density
Parameter estimate
Trace − alphaA[1]
Value
Iteration
Density − alphaA[1]
Rhat: 1.01
Density
Parameter estimate
Trace − alphaA[2]
Value
Iteration
Density − alphaA[2]
Rhat: 1
Density
Parameter estimate

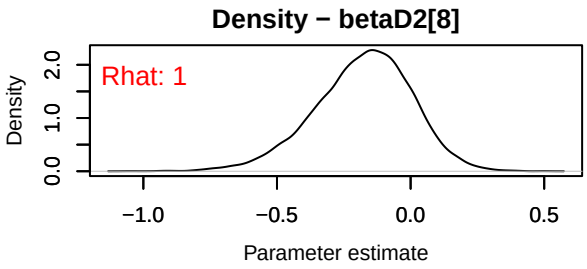

Trace − alphaA[3]
Value
Iteration
Density − alphaA[3]
Rhat: 1
Density
Parameter estimate
Trace − alphaA[4]
Value
Iteration
Density − alphaA[4]
Rhat: 1
Density
Parameter estimate
Trace − alphaA[5]
Value
Iteration
Density − alphaA[5]
Rhat: 1
Density
Parameter estimate

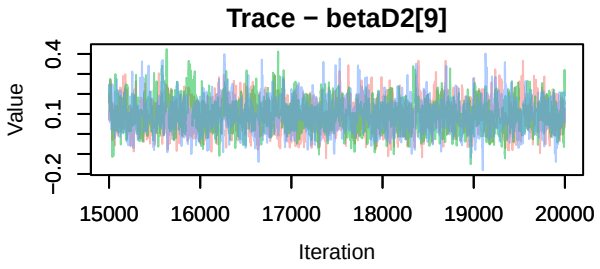

Trace − alphaA[6]
Value
−0.1
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − alphaA[6]
Density
0
2
4
6
Rhat: 1
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate
Trace − sigmaA
Value
0.30
0.45
15000
16000
17000
18000
19000
20000
Iteration
Density − sigmaA
Density
0
4
8
14
Rhat: 1
0.25
0.30
0.35
0.40
0.45
0.50
Parameter estimate
Trace − betaD2[1]
Value
−0.1
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − betaD2[1]
Density
0
2
4
6
Rhat: 1
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate

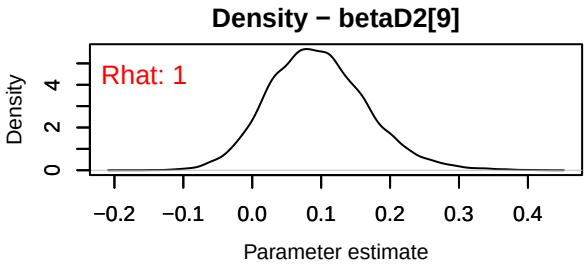

Trace − betaD2[2]
Value
Iteration
Density − betaD2[2]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[3]
Value
Iteration
Density − betaD2[3]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[4]
Value
Iteration
Density − betaD2[4]
Rhat: 1
Density
Parameter estimate

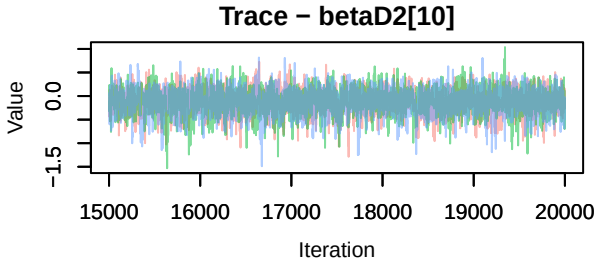

Trace − betaD2[5]
Value
0.5
−0.5
15000
16000
17000
18000
19000
20000
Iteration
Density − betaD2[5]
Density
Rhat: 1
1.5
0.0
−0.5
0.0
0.5
Parameter estimate
Trace − betaD2[6]
Value
0.5
−0.5
15000
16000
17000
18000
19000
20000
Iteration
Density − betaD2[6]
Density
Rhat: 1
2.0
1.0
0.0
−0.5
0.0
0.5
Parameter estimate
Trace − betaD2[7]
Value
1.0
−0.5
15000
16000
17000
18000
19000
20000
Iteration
Density − betaD2[7]
Density
Rhat: 1
2.0
1.0
0.0
−1.0
−0.5
0.0
0.5
1.0
1.5
Parameter estimate

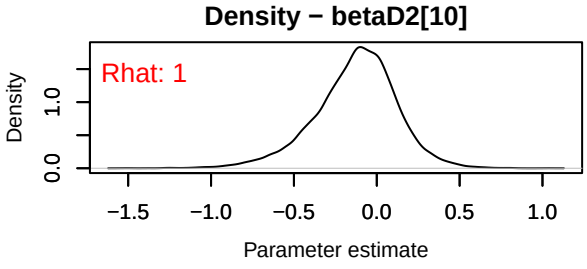

Trace − betaD2[8]
Value
−1.0
0.0
15000
16000
17000
18000
19000
20000
Iteration

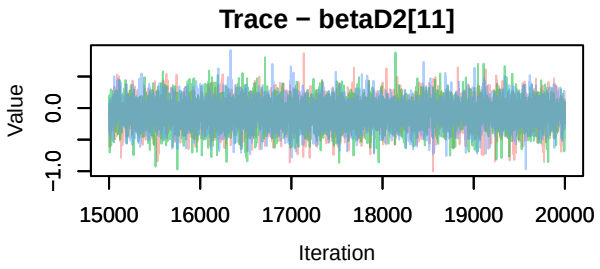

Density − betaD2[8]
Rhat: 1
Density
0.0
1.0
2.0
−1.0
−0.5
0.0
0.5
Parameter estimate

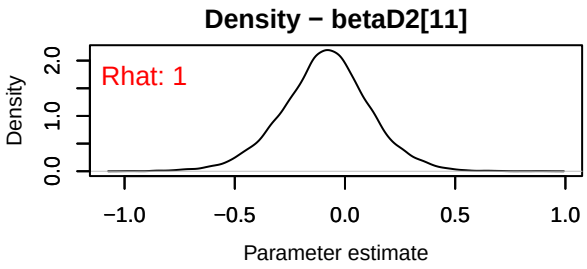

Trace − betaD2[9]
Value
−0.2
0.1
0.4
15000
16000
17000
18000
19000
20000
Iteration

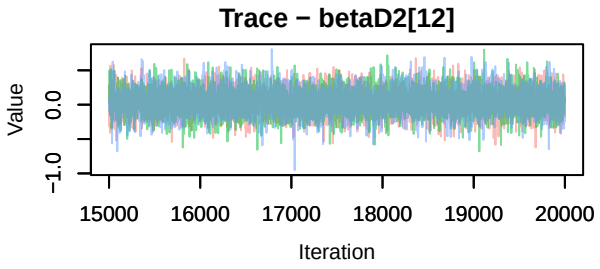

Density − betaD2[9]
Rhat: 1
Density
0
2
4
−0.2
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate

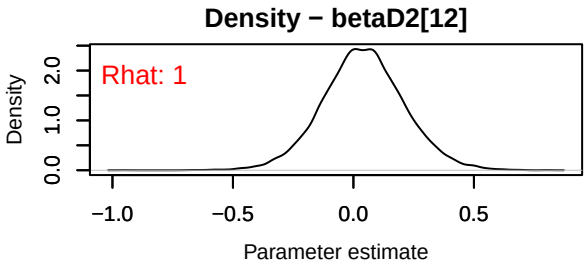

Trace − betaD2[10]
Value
−1.5
0.0
15000
16000
17000
18000
19000
20000
Iteration

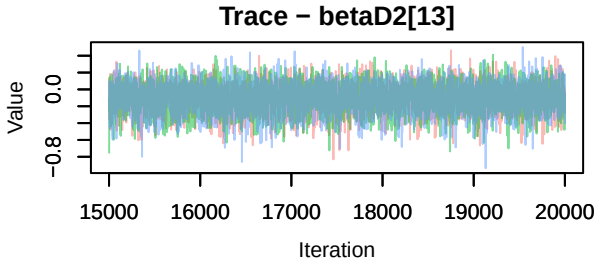

Density − betaD2[10]
Rhat: 1
Density
0.0
1.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
Parameter estimate

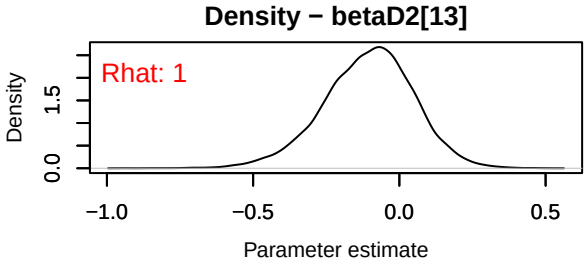

Trace − betaD2[11]
Value
−1.0
0.0
15000
16000
17000
18000
19000
20000
Iteration

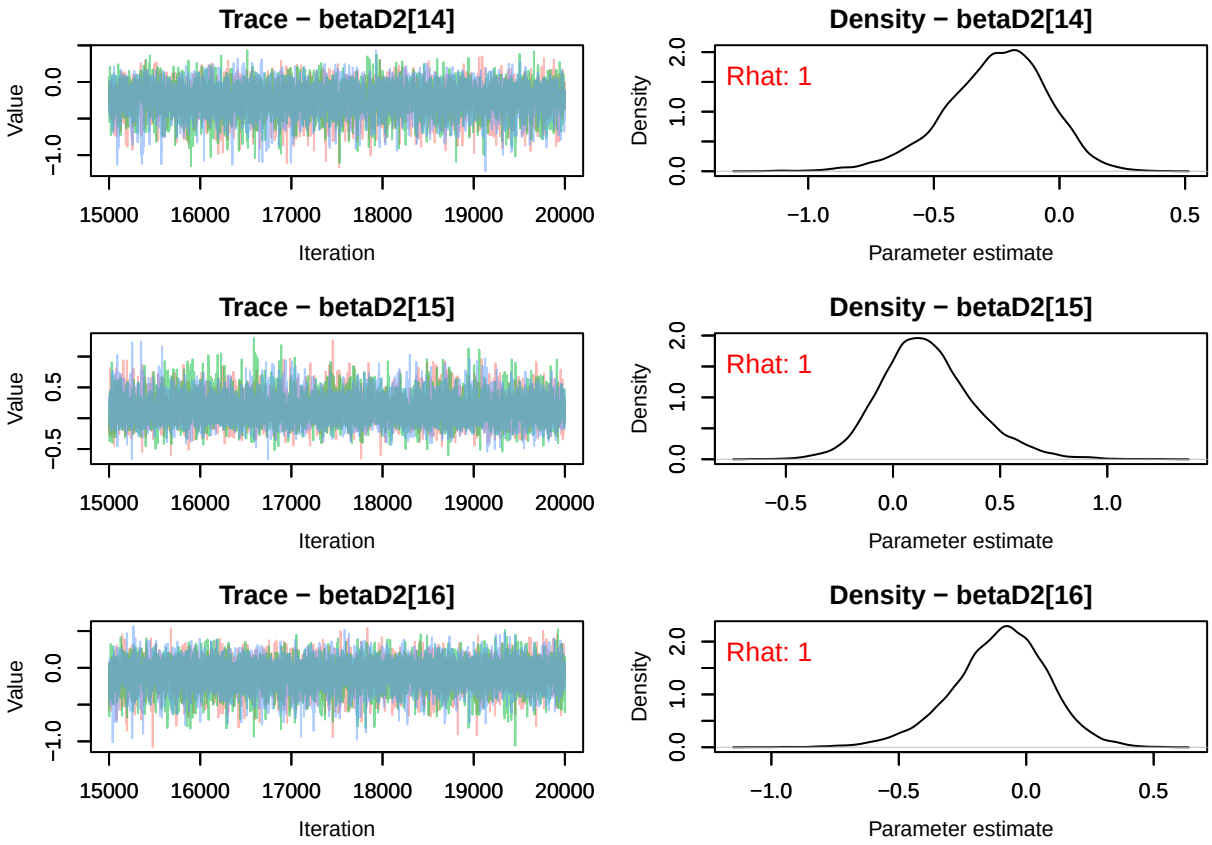

Density − betaD2[11]
Rhat: 1
Density
0.0
1.0
2.0
−1.0
−0.5
0.0
0.5
1.0
Parameter estimate

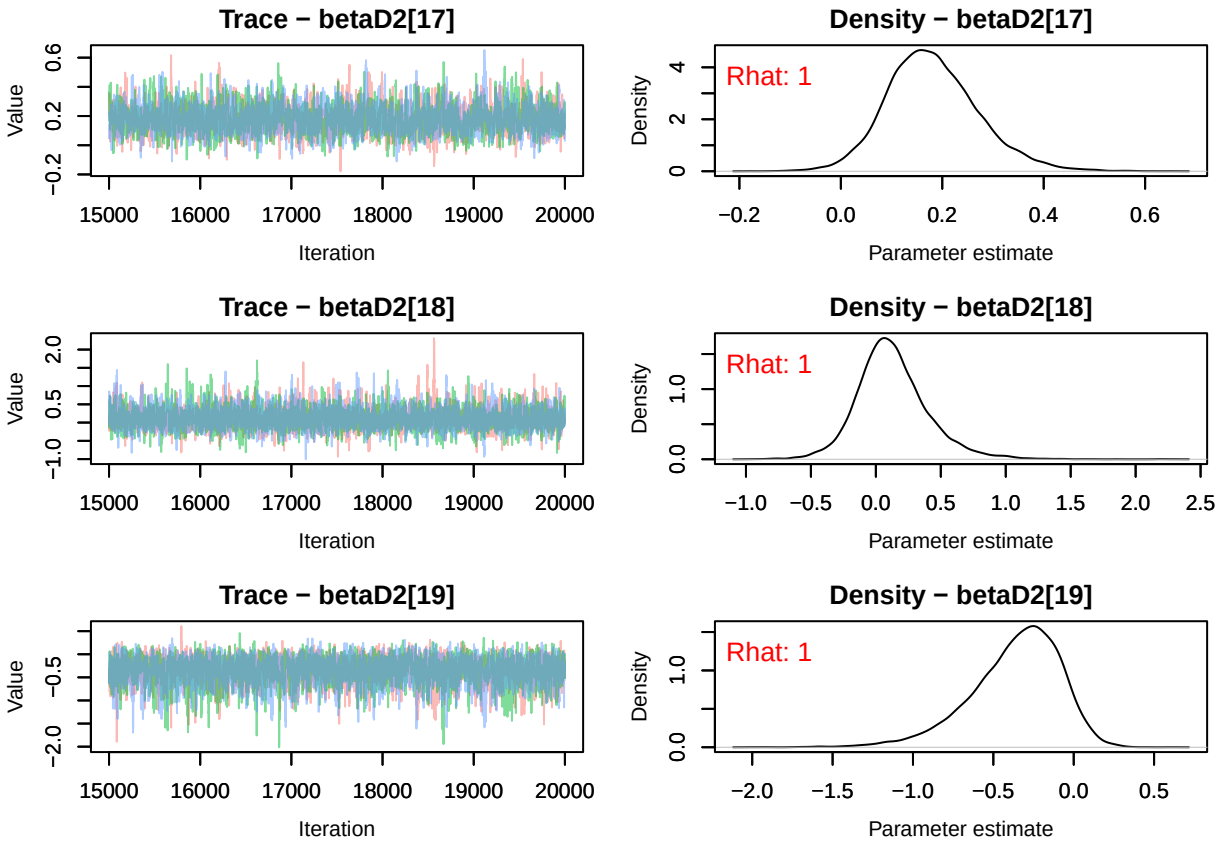

Trace − betaD2[12]
Value
−1.0
0.0
15000
16000
17000
18000
19000
20000
Iteration

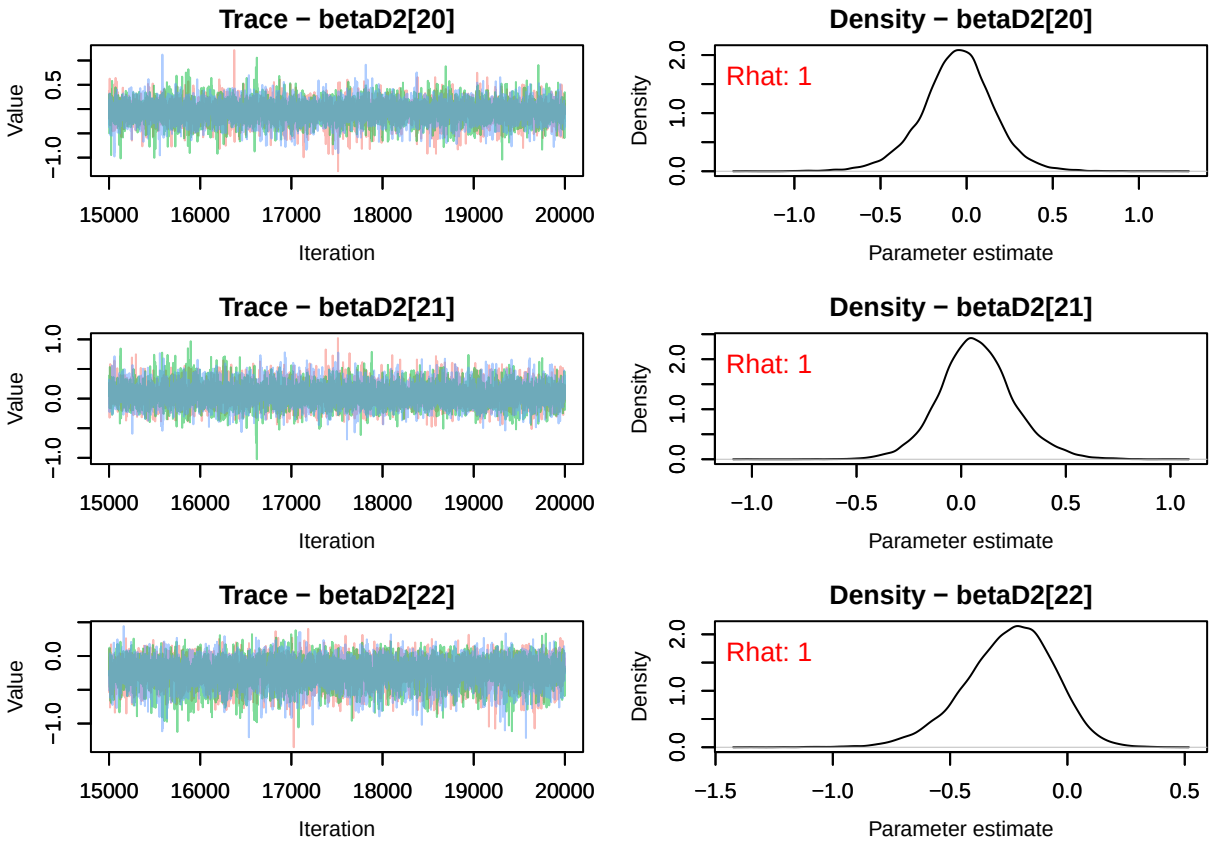

Density − betaD2[12]
Rhat: 1
Density
0.0
1.0
2.0
−1.0
−0.5
0.0
0.5
Parameter estimate

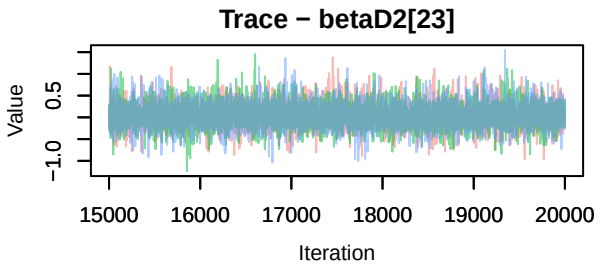

Trace − betaD2[13]
Value
−0.8
0.0
15000
16000
17000
18000
19000
20000
Iteration

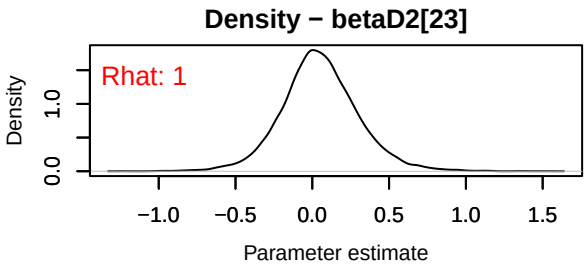

Density − betaD2[13]
Rhat: 1
Density
0.0
1.5
−1.0
−0.5
0.0
0.5
Parameter estimate

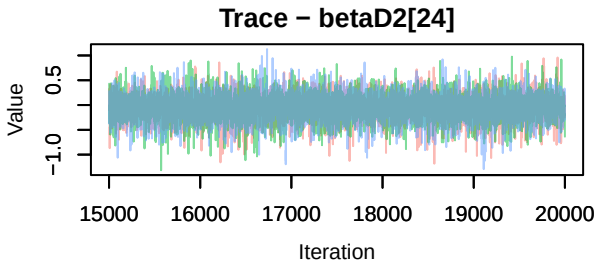

Trace − betaD2[14]
Value
Iteration
Density − betaD2[14]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[15]
Value
Iteration
Density − betaD2[15]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[16]
Value
Iteration
Density − betaD2[16]
Rhat: 1
Density
Parameter estimate

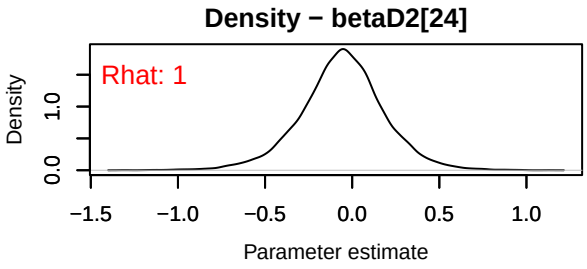

Trace − betaD2[17]
Value
Iteration
Density − betaD2[17]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[18]
Value
Iteration
Density − betaD2[18]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[19]
Value
Iteration
Density − betaD2[19]
Rhat: 1
Density
Parameter estimate

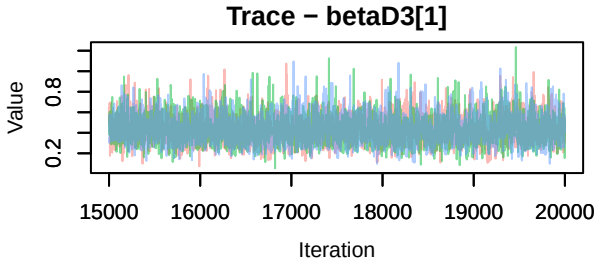

Trace − betaD2[20]
Value
Iteration
Density − betaD2[20]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[21]
Value
Iteration
Density − betaD2[21]
Rhat: 1
Density
Parameter estimate
Trace − betaD2[22]
Value
Iteration
Density − betaD2[22]
Rhat: 1
Density
Parameter estimate

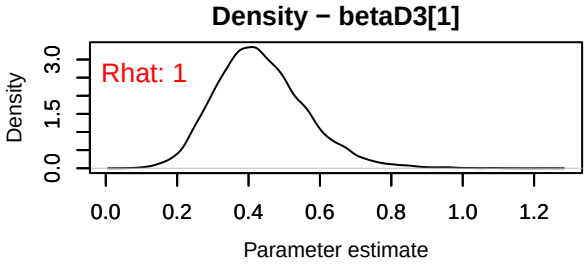

Trace − betaD2[23]
Value
−1.0
0.5
15000
16000
17000
18000
19000
20000
Iteration

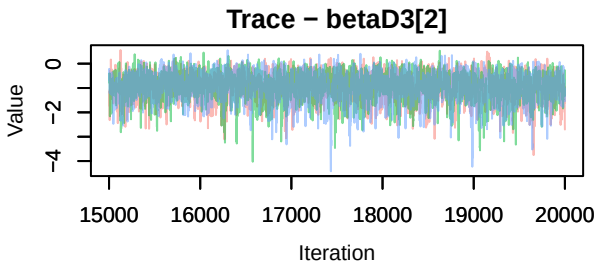

Density − betaD2[23]
Rhat: 1
Density
0.0
1.0
−1.0
−0.5
0.0
0.5
1.0
1.5
Parameter estimate

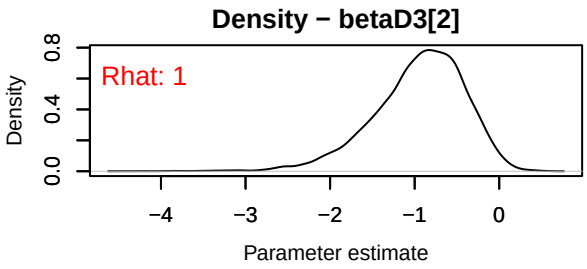

Trace − betaD2[24]
Value
−1.0
0.5
15000
16000
17000
18000
19000
20000
Iteration

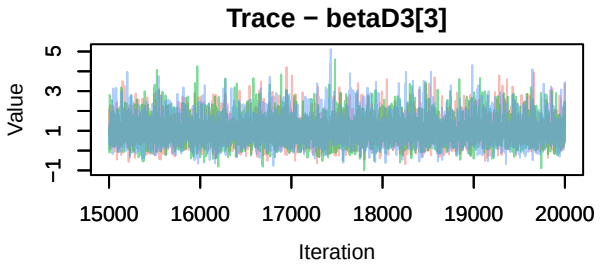

Density − betaD2[24]
Rhat: 1
Density
0.0
1.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
Parameter estimate

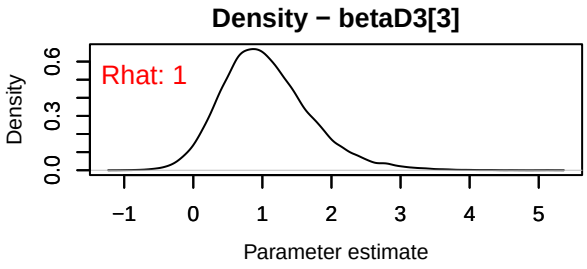

Trace − betaD3[1]
Value
0.2
0.8
15000
16000
17000
18000
19000
20000
Iteration

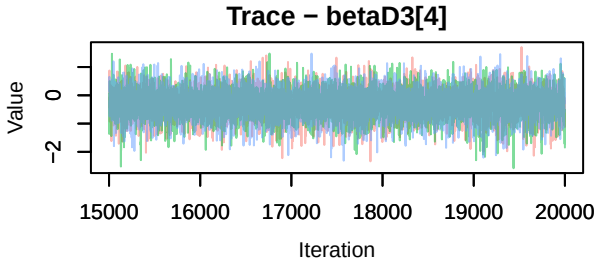

Density − betaD3[1]
Rhat: 1
Density
0.0
1.5
3.0
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Parameter estimate

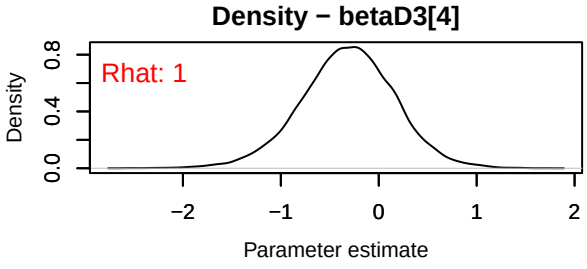

Trace − betaD3[2]
Value
−4
−2
0
15000
16000
17000
18000
19000
20000
Iteration

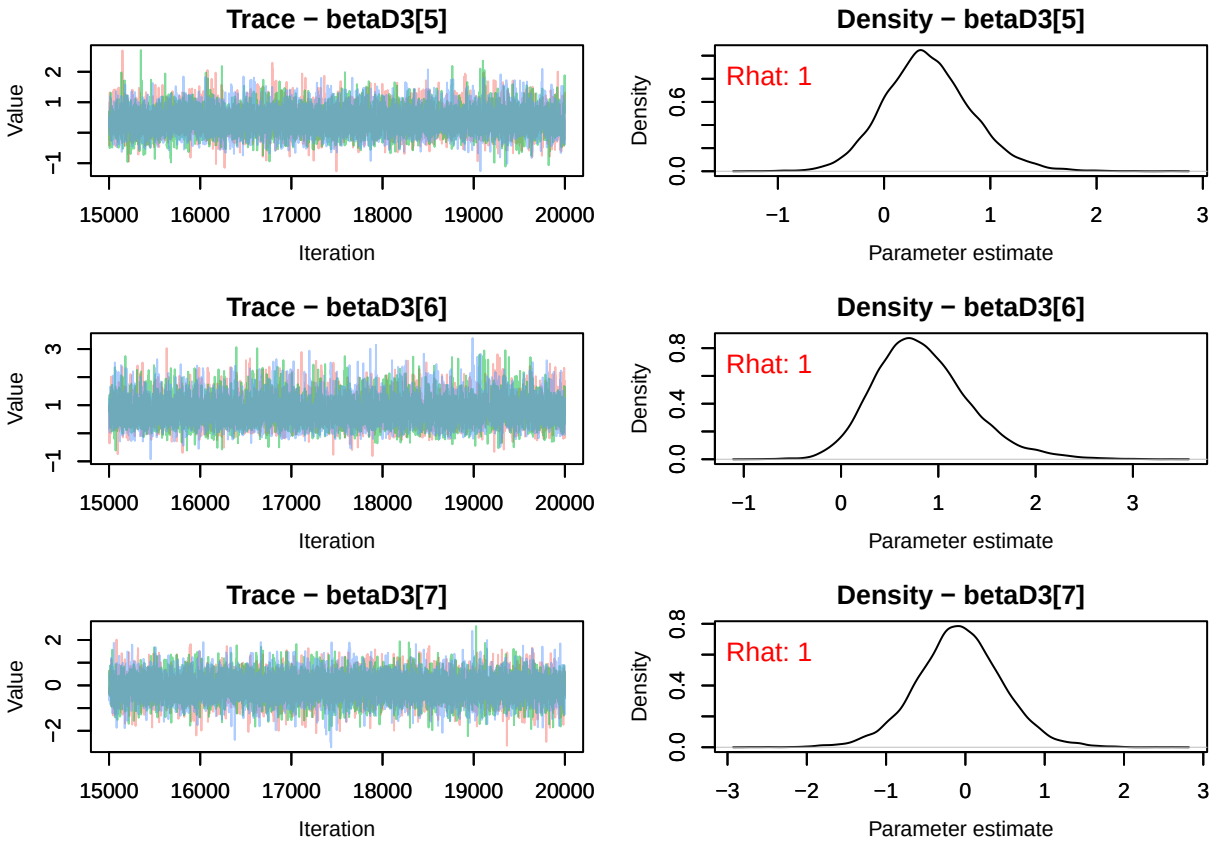

Density − betaD3[2]
Rhat: 1
Density
0.0
0.4
0.8
−4
−3
−2
−1
0
Parameter estimate

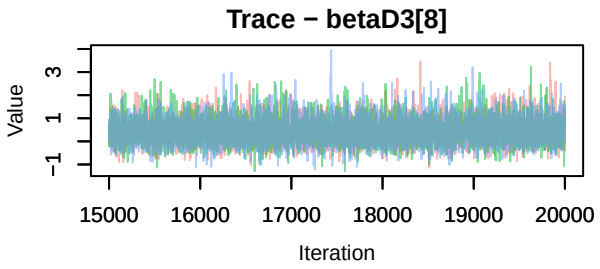

Trace − betaD3[3]
Value
−1
1
3
5
15000
16000
17000
18000
19000
20000
Iteration

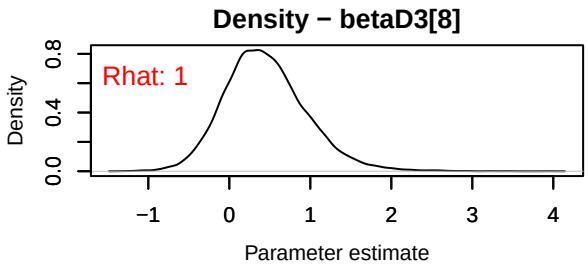

Density − betaD3[3]
Rhat: 1
Density
0.0
0.3
0.6
−1
0
1
2
3
4
5
Parameter estimate

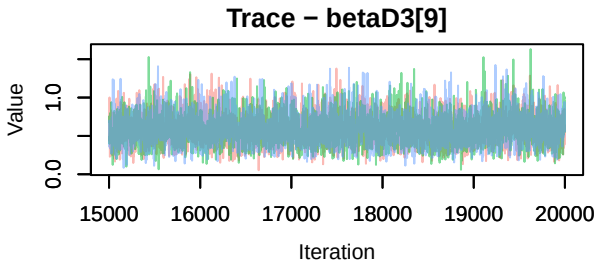

Trace − betaD3[4]
Value
−2
0
15000
16000
17000
18000
19000
20000
Iteration

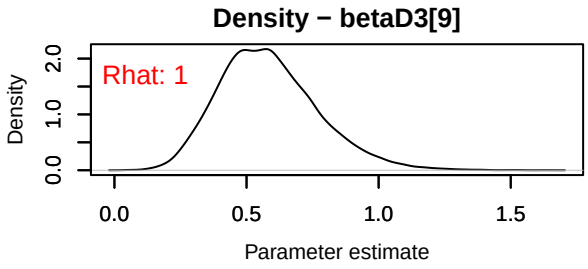

Density − betaD3[4]
Rhat: 1
Density
0.0
0.4
0.8
−2
−1
0
1
2
Parameter estimate

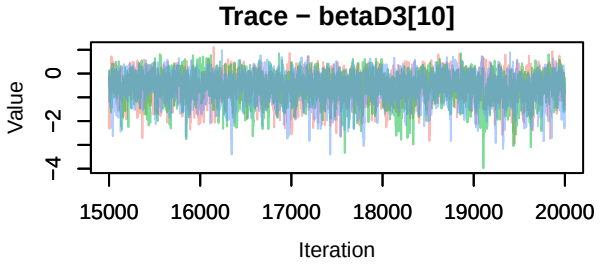

Trace − betaD3[5]
Value
Iteration
Density − betaD3[5]
Rhat: 1
Density
Parameter estimate
Trace − betaD3[6]
Value
Iteration
Density − betaD3[6]
Rhat: 1
Density
Parameter estimate
Trace − betaD3[7]
Value
Iteration
Density − betaD3[7]
Rhat: 1
Density
Parameter estimate

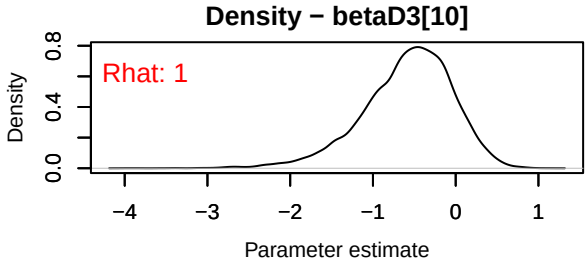

Trace − betaD3[8]
Value
Iteration

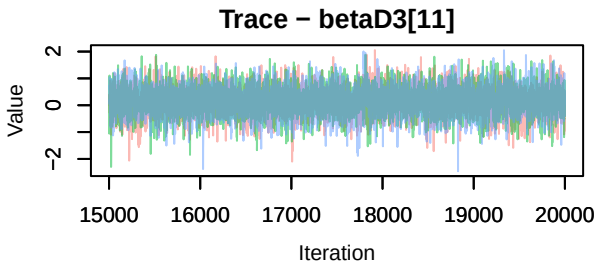

Density − betaD3[8]
Rhat: 1
Density
Parameter estimate

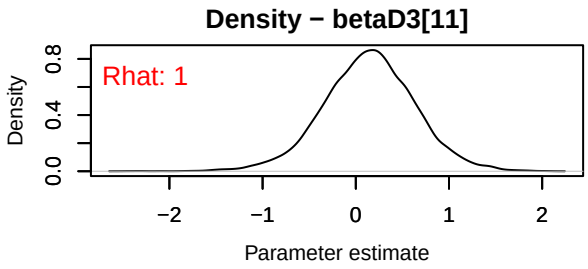

Trace − betaD3[9]
Value
Iteration

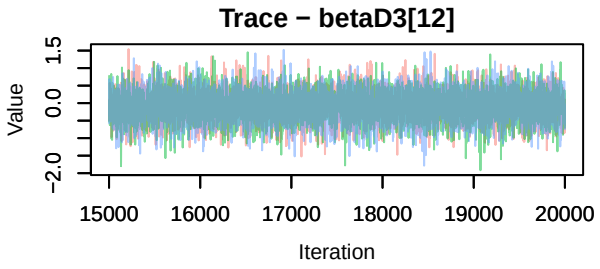

Density − betaD3[9]
Rhat: 1
Density
Parameter estimate

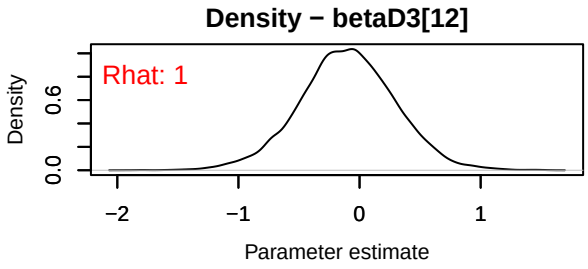

Trace − betaD3[10]
Value
Iteration

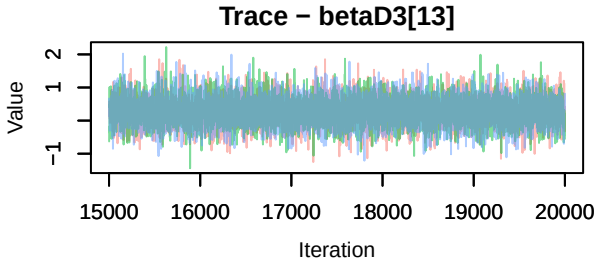

Density − betaD3[10]
Rhat: 1
Density
Parameter estimate

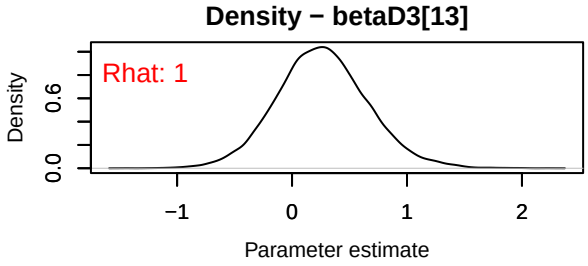

Trace − betaD3[11]
Value
Iteration

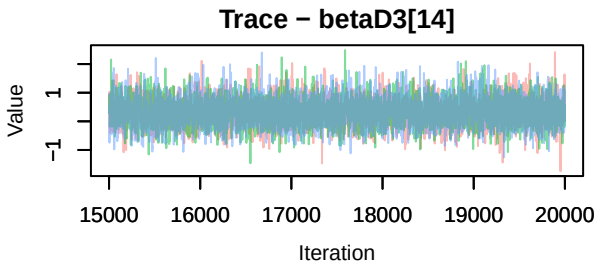

Density − betaD3[11]
Rhat: 1
Density
Parameter estimate

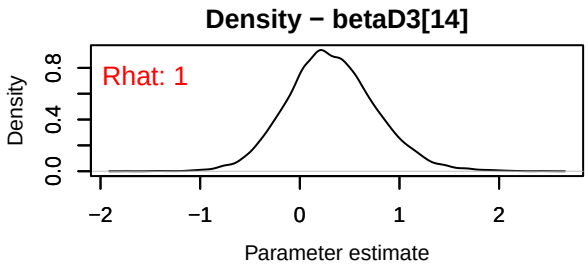

Trace − betaD3[12]
Value
Iteration

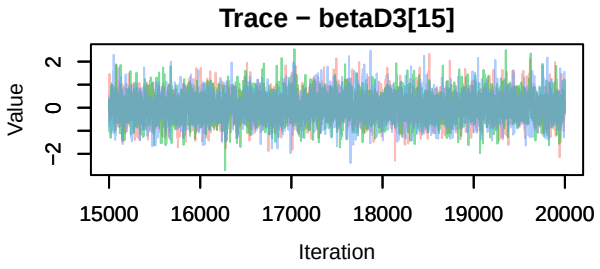

Density − betaD3[12]
Rhat: 1
Density
Parameter estimate

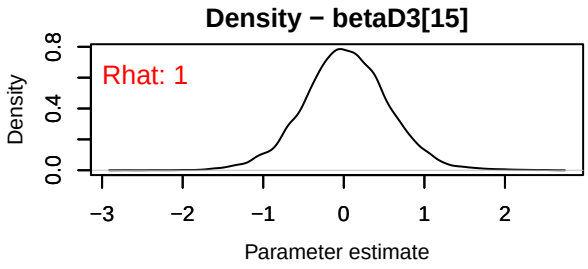

Trace − betaD3[13]
Value
Iteration

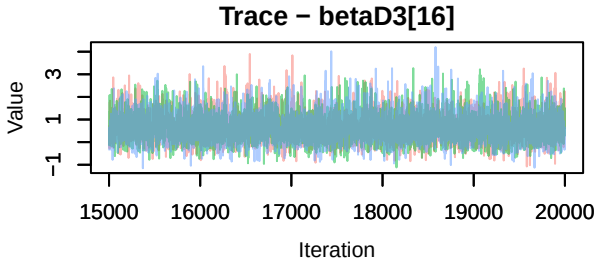

Density − betaD3[13]
Rhat: 1
Density
Parameter estimate

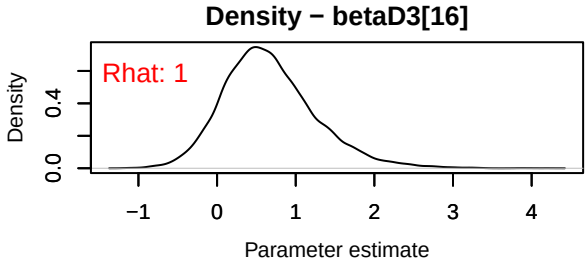

Trace − betaD3[14]
Value
Iteration

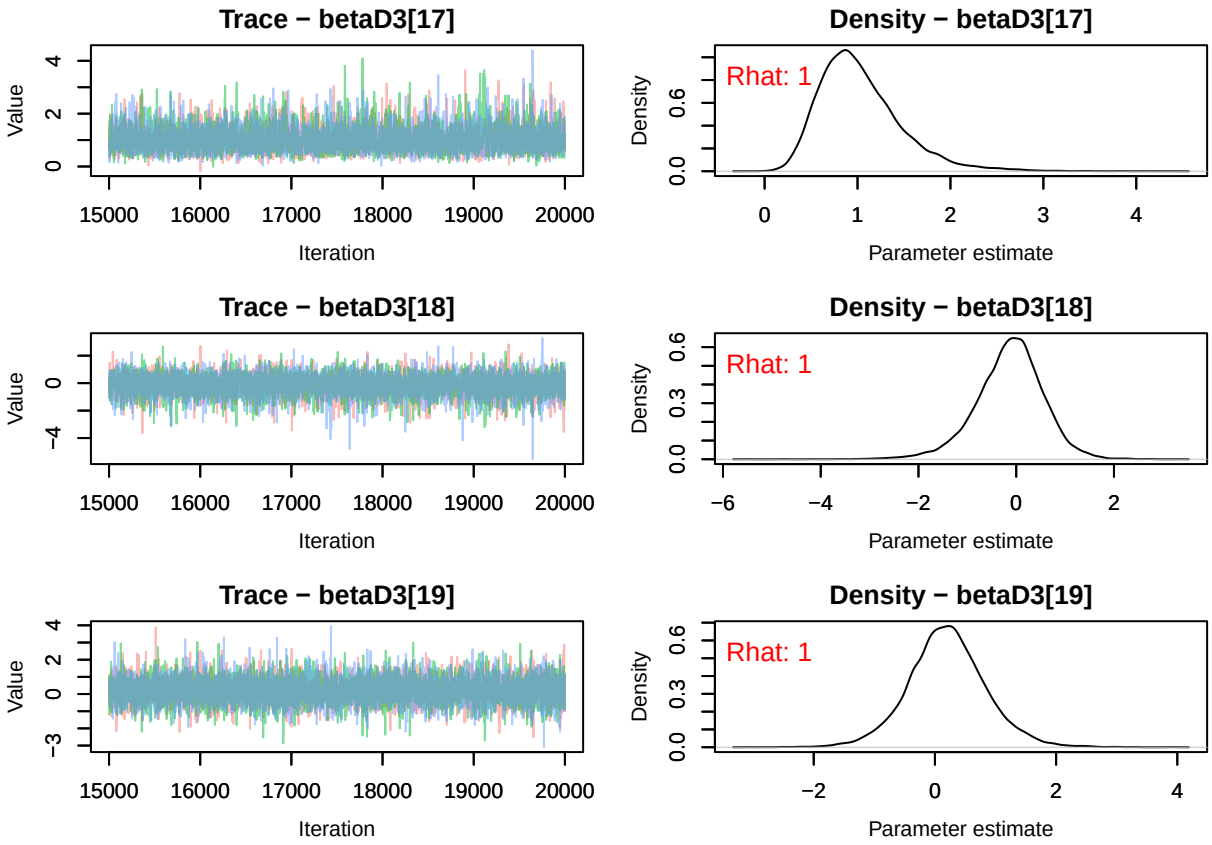

Density − betaD3[14]
Rhat: 1
Density
Parameter estimate

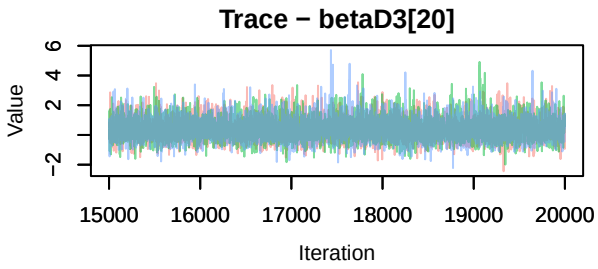

Trace − betaD3[15]
Value
Iteration

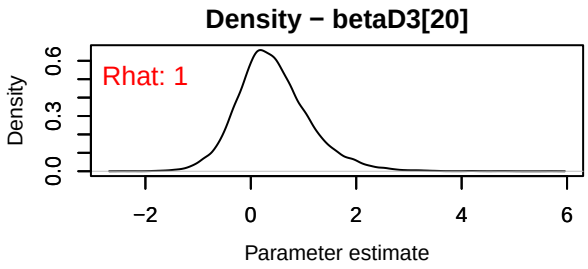

Density − betaD3[15]
Rhat: 1
Density
Parameter estimate

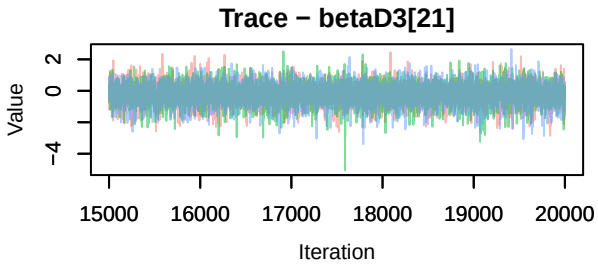

Trace − betaD3[16]
Value
Iteration

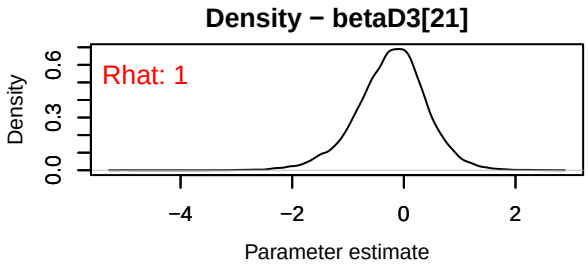

Density − betaD3[16]
Rhat: 1
Density
Parameter estimate

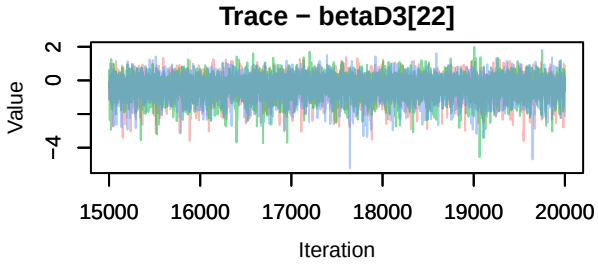

Trace − betaD3[17]
Value
Iteration
Density − betaD3[17]
Rhat: 1
Density
Parameter estimate
Trace − betaD3[18]
Value
Iteration
Density − betaD3[18]
Rhat: 1
Density
Parameter estimate
Trace − betaD3[19]
Value
Iteration
Density − betaD3[19]
Rhat: 1
Density
Parameter estimate

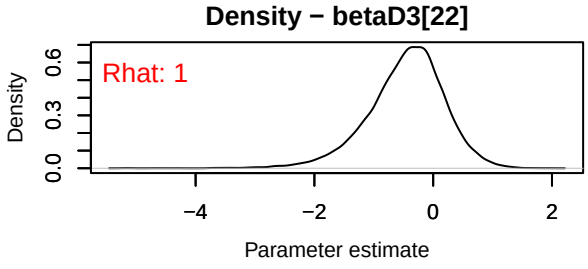

Trace − betaD3[20]
Value
Iteration

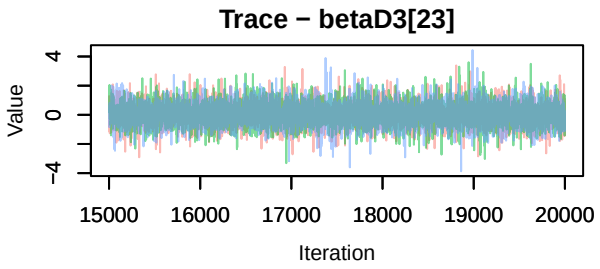

Density − betaD3[20]
Rhat: 1
Density
Parameter estimate

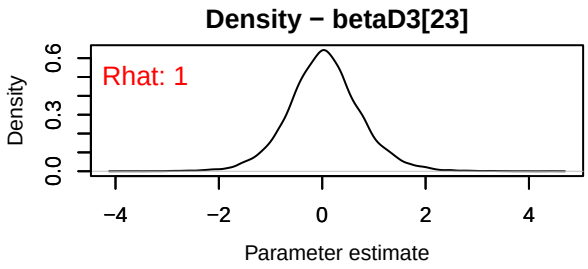

Trace − betaD3[21]
Value
Iteration

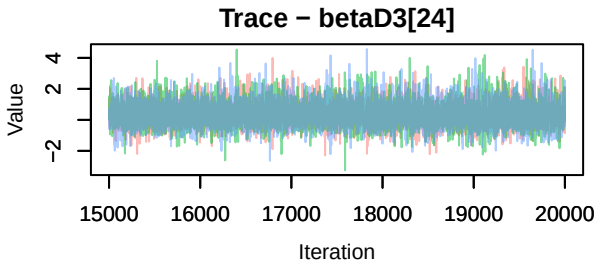

Density − betaD3[21]
Rhat: 1
Density
Parameter estimate

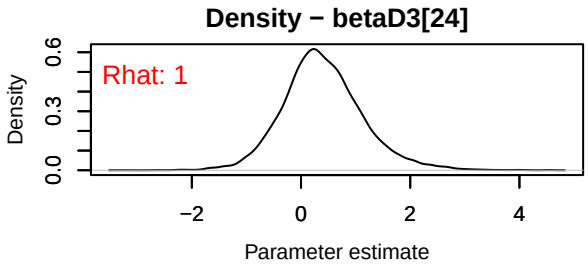

Trace − betaD3[22]
Value
Iteration

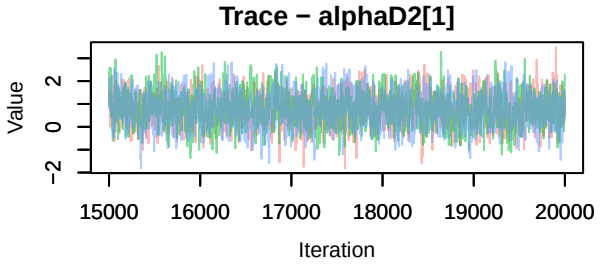

Density − betaD3[22]
Rhat: 1
Density
Parameter estimate

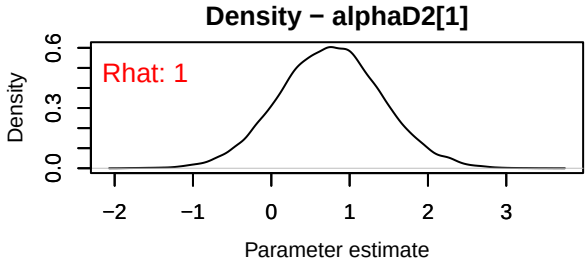

Trace − betaD3[23]
Value
Iteration

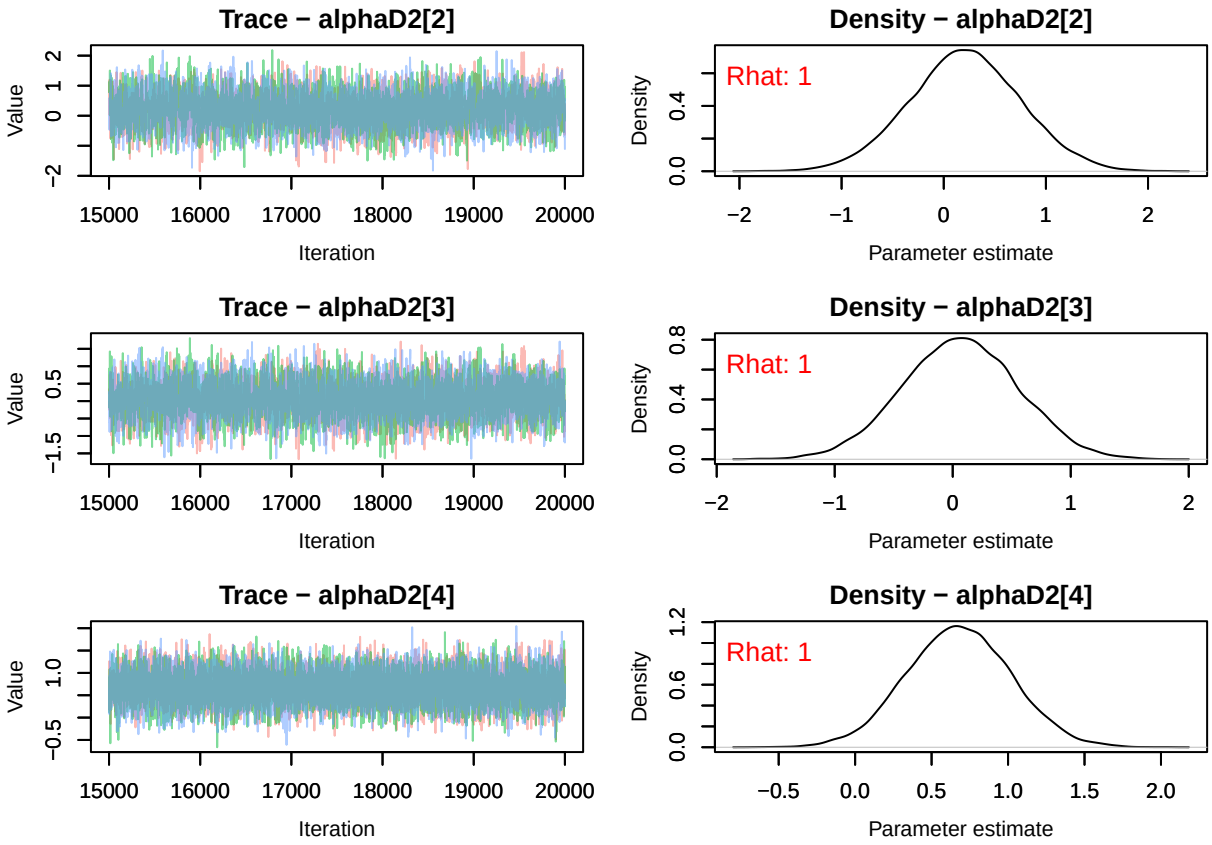

Density − betaD3[23]
Rhat: 1
Density
Parameter estimate

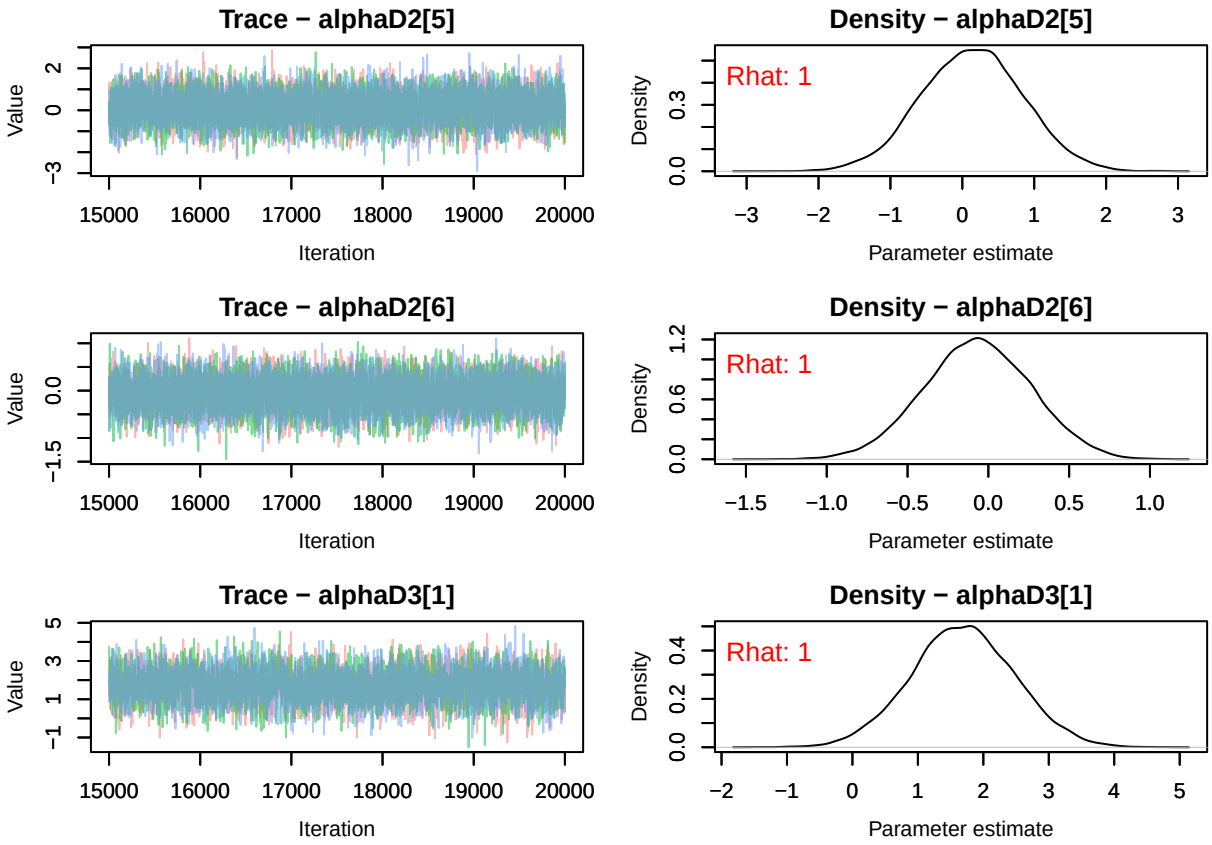

Trace − betaD3[24]
Value
Iteration

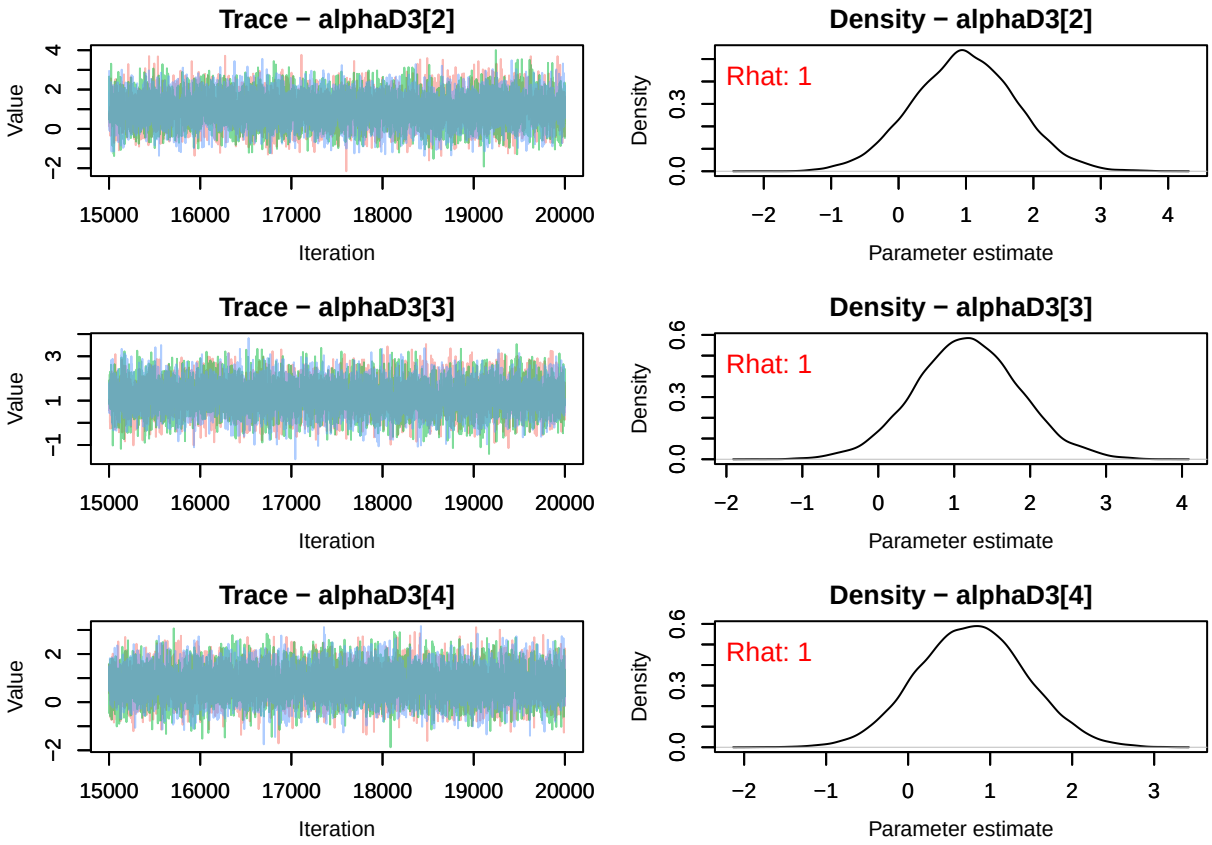

Density − betaD3[24]
Rhat: 1
Density
Parameter estimate

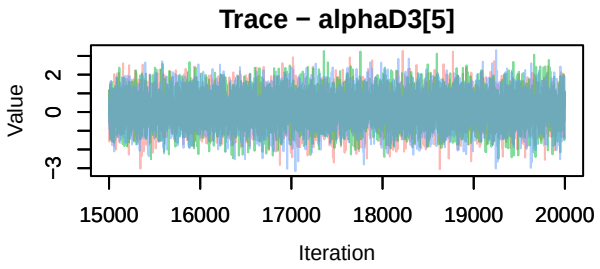

Trace − alphaD2[1]
Value
Iteration

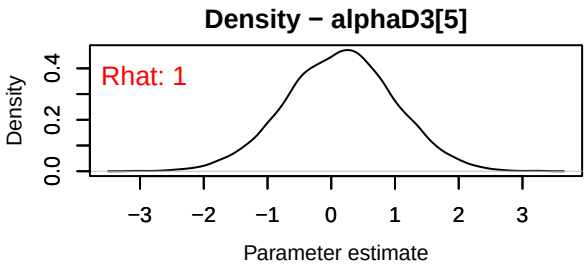

Density − alphaD2[1]
Rhat: 1
Density
Parameter estimate

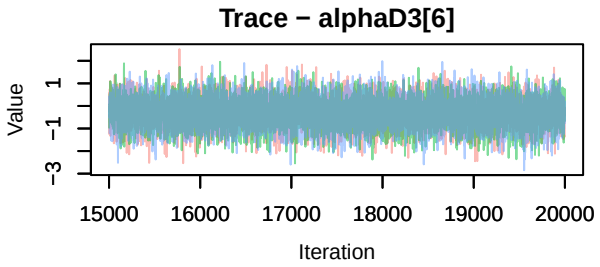

Trace − alphaD2[2]
Value
Iteration
Density − alphaD2[2]
Rhat: 1
Density
Parameter estimate
Trace − alphaD2[3]
Value
Iteration
Density − alphaD2[3]
Rhat: 1
Density
Parameter estimate
Trace − alphaD2[4]
Value
Iteration
Density − alphaD2[4]
Rhat: 1
Density
Parameter estimate

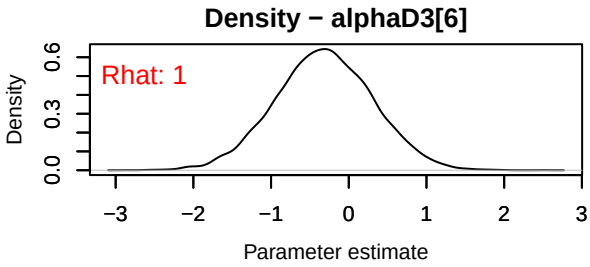

Trace − alphaD2[5]
Value
Iteration
Density − alphaD2[5]
Rhat: 1
Density
Parameter estimate
Trace − alphaD2[6]
Value
Iteration
Density − alphaD2[6]
Rhat: 1
Density
Parameter estimate
Trace − alphaD3[1]
Value
Iteration
Density − alphaD3[1]
Rhat: 1
Density
Parameter estimate

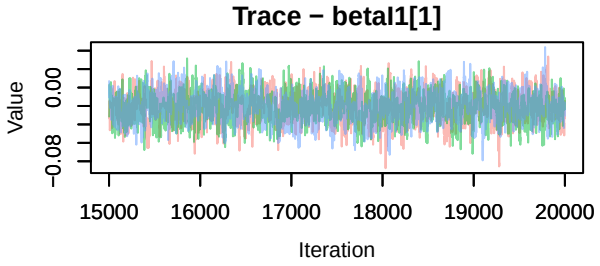

Trace − alphaD3[2]
Value
Iteration
Density − alphaD3[2]
Rhat: 1
Density
Parameter estimate
Trace − alphaD3[3]
Value
Iteration
Density − alphaD3[3]
Rhat: 1
Density
Parameter estimate
Trace − alphaD3[4]
Value
Iteration
Density − alphaD3[4]
Rhat: 1
Density
Parameter estimate

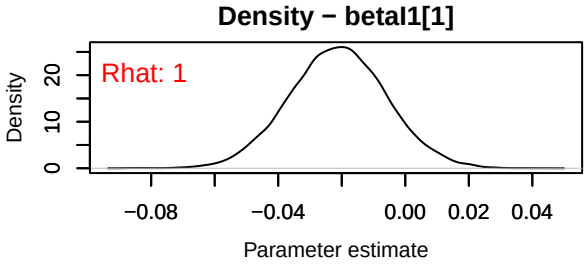

Trace − alphaD3[5]
Value
−3
0
2
15000
16000
17000
18000
19000
20000
Iteration

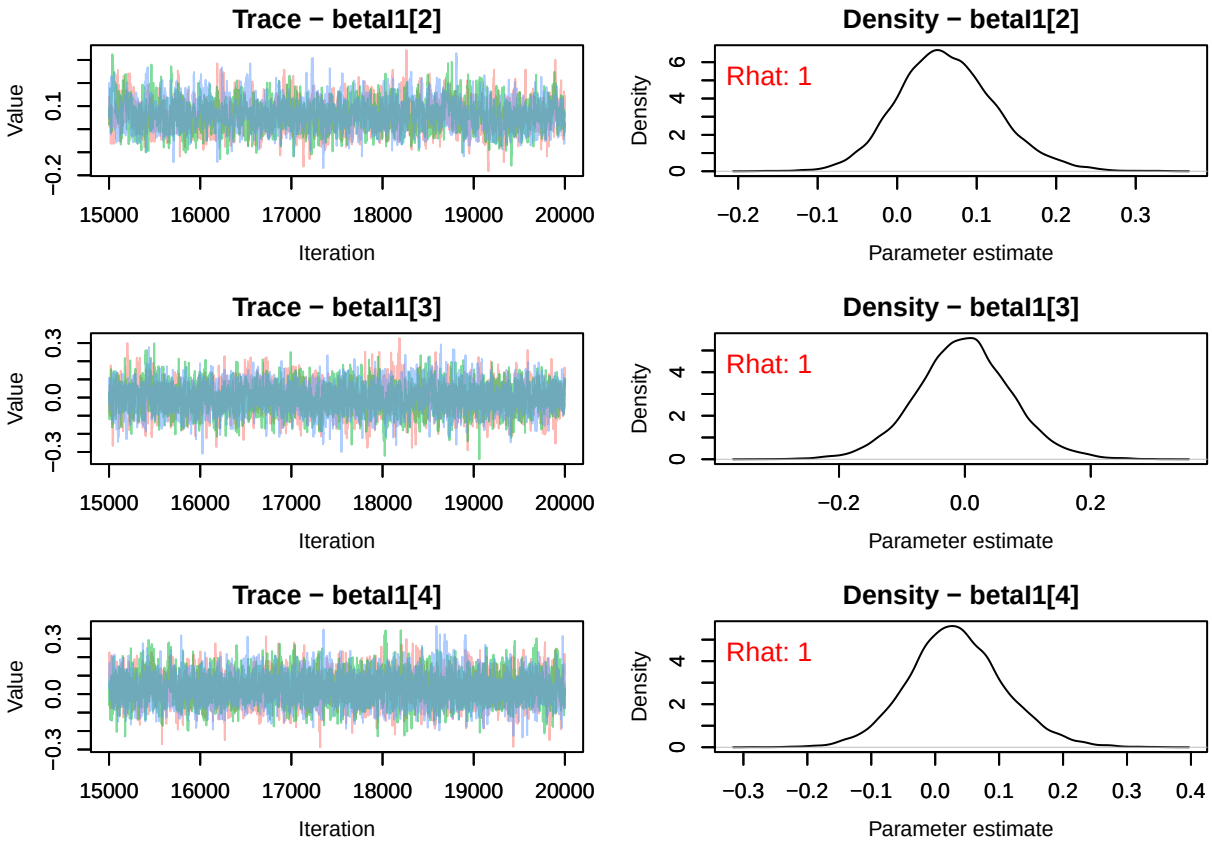

Density − alphaD3[5]
Density
0.0
0.2
0.4
Rhat: 1
−3
−2
−1
0
1
2
3
Parameter estimate

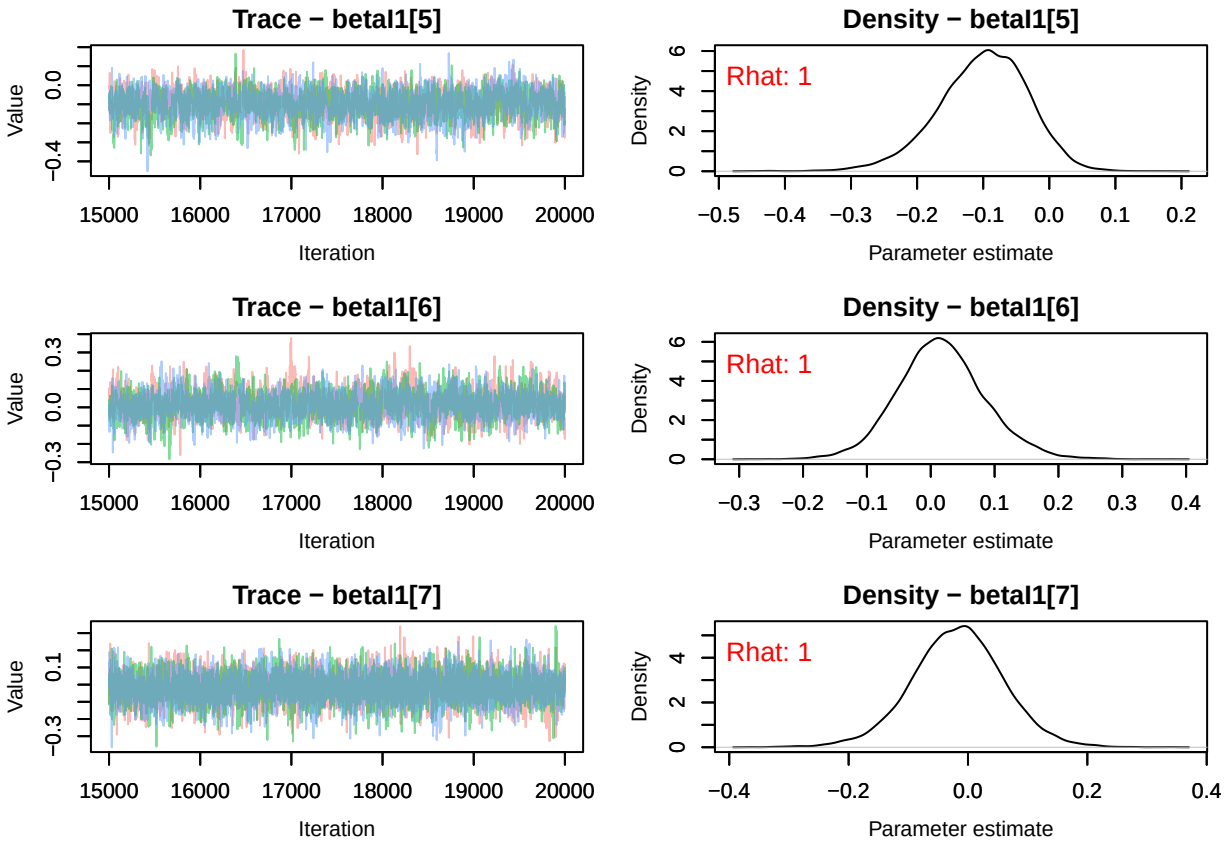

Trace − alphaD3[6]
Value
−3
−1
1
15000
16000
17000
18000
19000
20000
Iteration

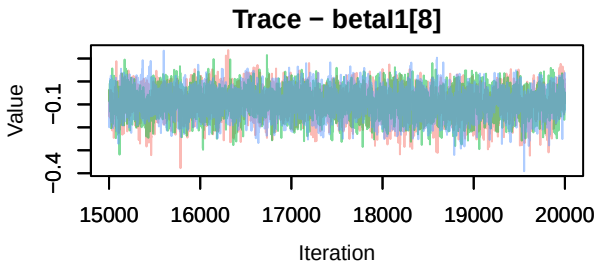

Density − alphaD3[6]
Density
0.0
0.3
0.6
Rhat: 1
−3
−2
−1
0
1
2
3
Parameter estimate

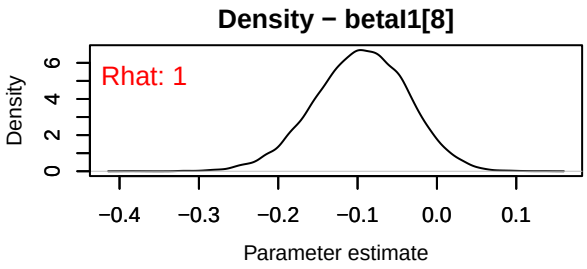

Trace − betaI1[1]
Value
−0.08
0.00
15000
16000
17000
18000
19000
20000
Iteration

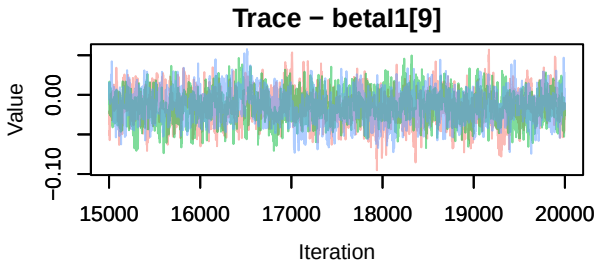

Density − betaI1[1]
Density
0
10
20
Rhat: 1
−0.08
−0.04
0.00
0.02
0.04
Parameter estimate

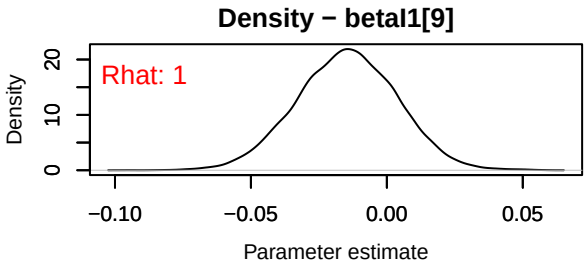

Trace − betaI1[2]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI1[2]
Density
0
2
4
6
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate
Trace − betaI1[3]
Value
−0.3
0.0
0.3
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI1[3]
Density
0
2
4
Rhat: 1
−0.2
0.0
0.2
Parameter estimate
Trace − betaI1[4]
Value
−0.3
0.0
0.3
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI1[4]
Density
0
2
4
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate

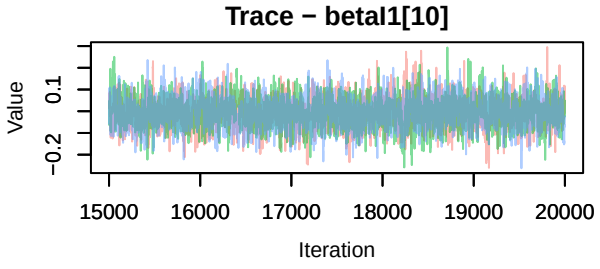

Trace − betaI1[5]
Value
Iteration
Density − betaI1[5]
Rhat: 1
Density
Parameter estimate
Trace − betaI1[6]
Value
Iteration
Density − betaI1[6]
Rhat: 1
Density
Parameter estimate
Trace − betaI1[7]
Value
Iteration
Density − betaI1[7]
Rhat: 1
Density
Parameter estimate

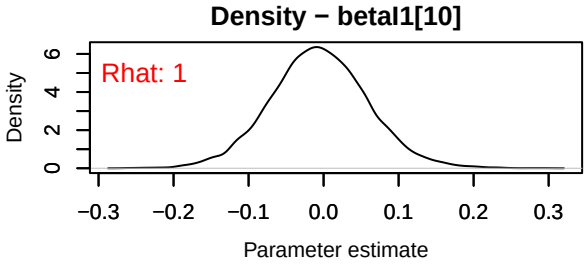

Trace − betal1[8]
Value
−0.4
−0.1
15000
16000
17000
18000
19000
20000
Iteration

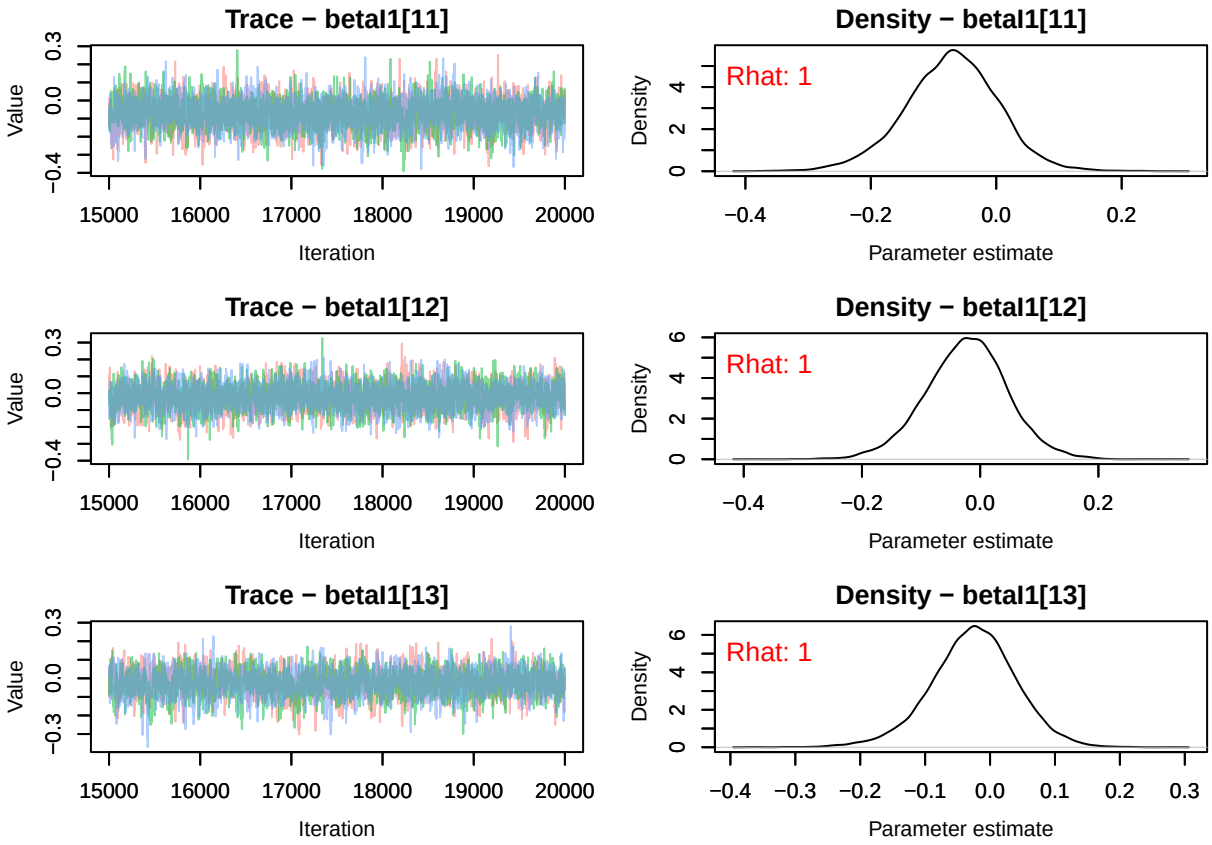

Density − betal1[8]
Rhat: 1
Density
0
2
4
6
−0.4
−0.3
−0.2
−0.1
0.0
0.1
Parameter estimate

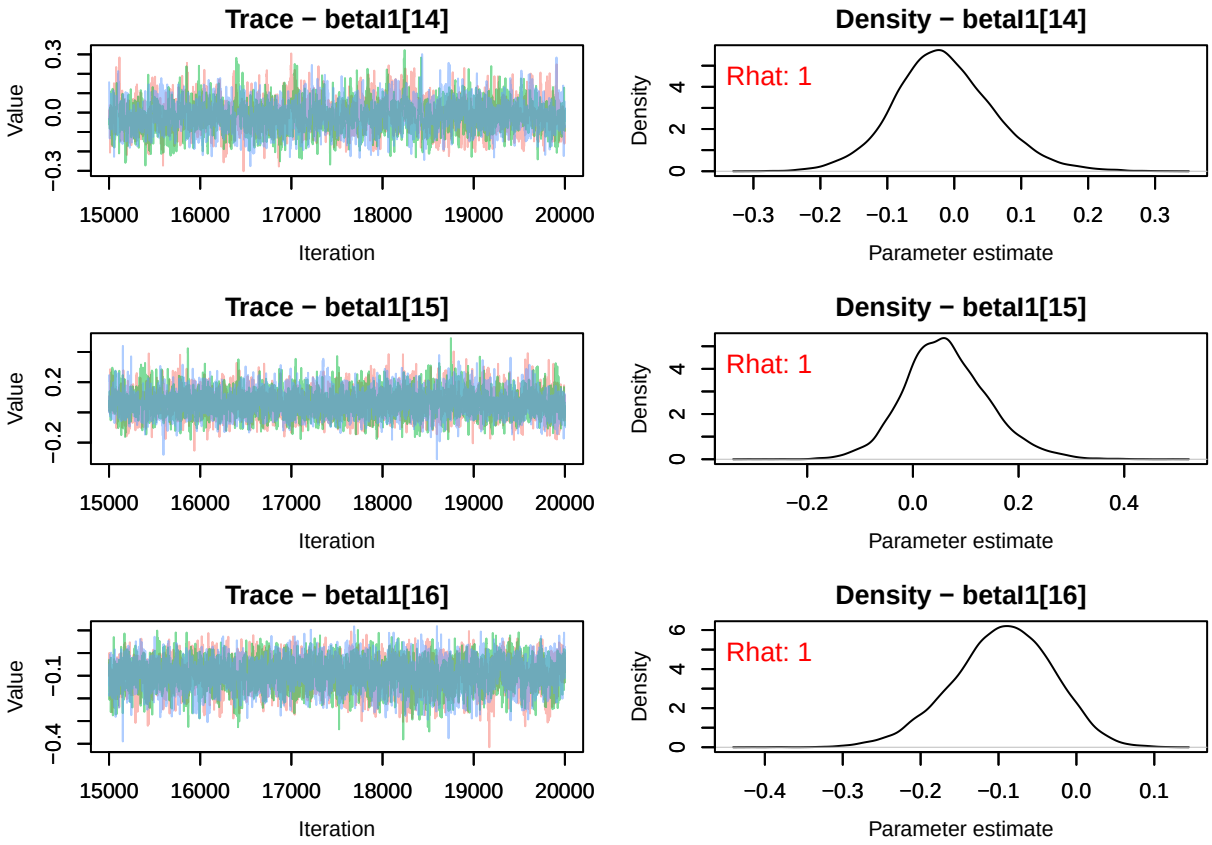

Trace − betal1[9]
Value
−0.10
0.00
15000
16000
17000
18000
19000
20000
Iteration

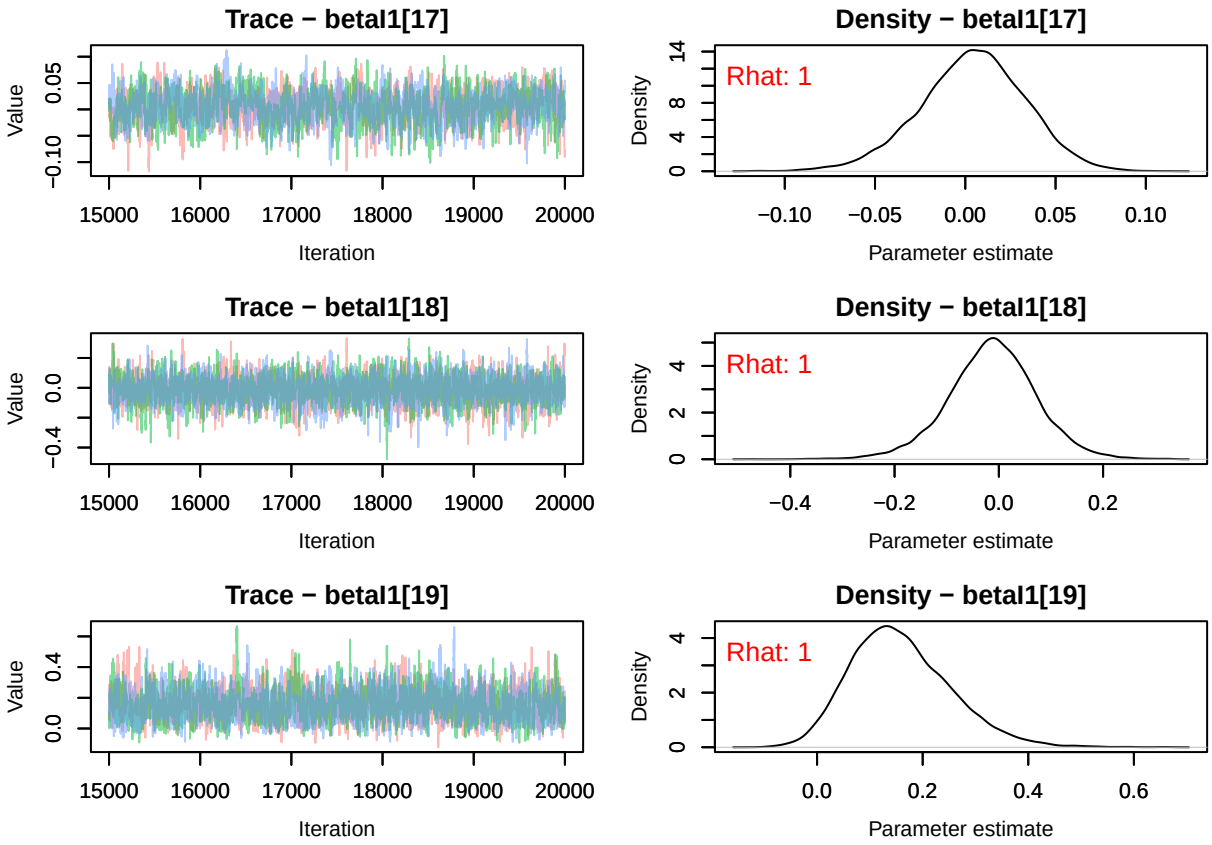

Density − betal1[9]
Rhat: 1
Density
0
10
20
−0.10
−0.05
0.00
0.05
Parameter estimate

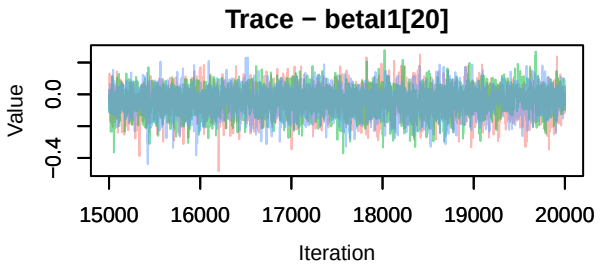

Trace − betal1[10]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration

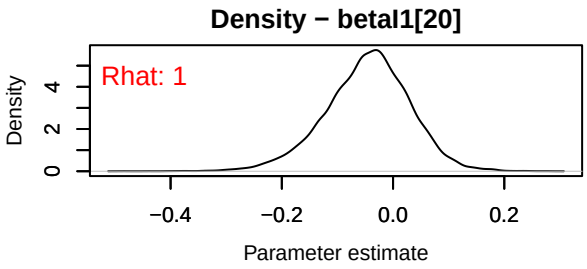

Density − betal1[10]
Rhat: 1
Density
0
2
4
6
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

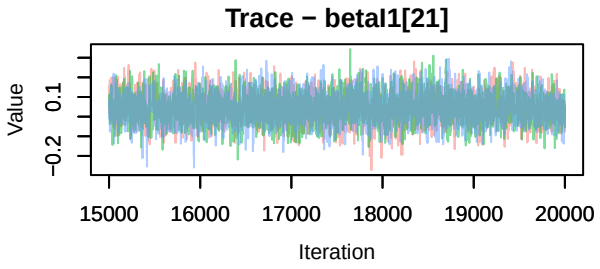

Trace − betal1[11]
Value
Iteration
Density − betal1[11]
Rhat: 1
Density
Parameter estimate
Trace − betal1[12]
Value
Iteration
Density − betal1[12]
Rhat: 1
Density
Parameter estimate
Trace − betal1[13]
Value
Iteration
Density − betal1[13]
Rhat: 1
Density
Parameter estimate

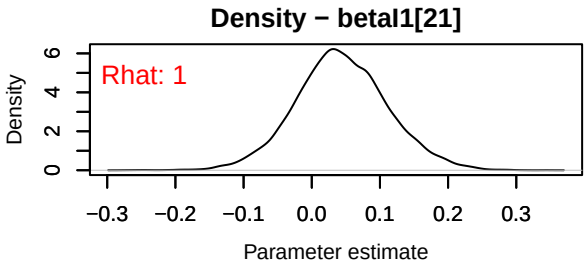

Trace − betal1[14]
Value
−0.3
0.0
0.3
15000
16000
17000
18000
19000
20000
Iteration
Density − betal1[14]
Rhat: 1
Density
0
2
4
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate
Trace − betal1[15]
Value
−0.2
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − betal1[15]
Rhat: 1
Density
0
2
4
−0.2
0.0
0.2
0.4
Parameter estimate
Trace − betal1[16]
Value
−0.4
−0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betal1[16]
Rhat: 1
Density
0
2
4
6
−0.4
−0.3
−0.2
−0.1
0.0
0.1
Parameter estimate

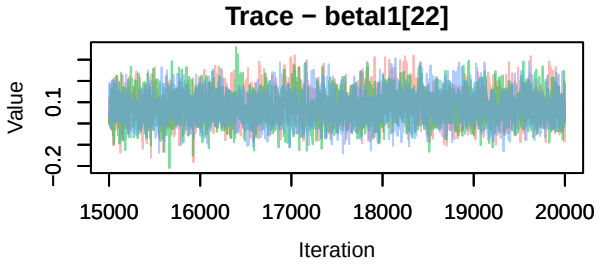

Trace − betal1[17]
Value
Iteration
Density − betal1[17]
Rhat: 1
Density
Parameter estimate
Trace − betal1[18]
Value
Iteration
Density − betal1[18]
Rhat: 1
Density
Parameter estimate
Trace − betal1[19]
Value
Iteration
Density − betal1[19]
Rhat: 1
Density
Parameter estimate

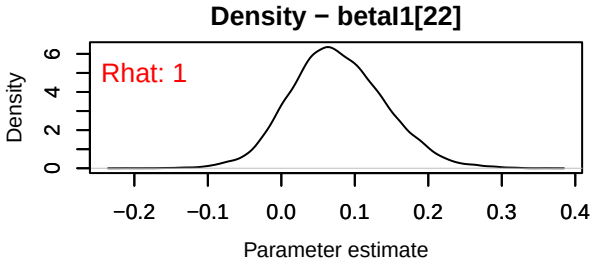

Trace − betal1[20]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

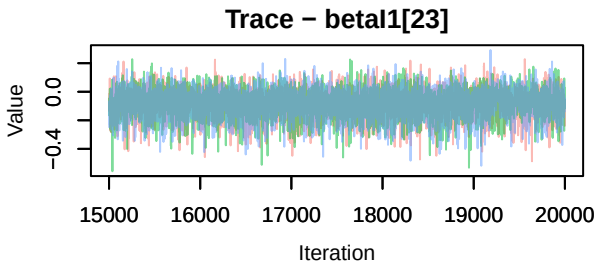

Density − betal1[20]
Rhat: 1
Density
0
2
4
−0.4
−0.2
0.0
0.2
Parameter estimate

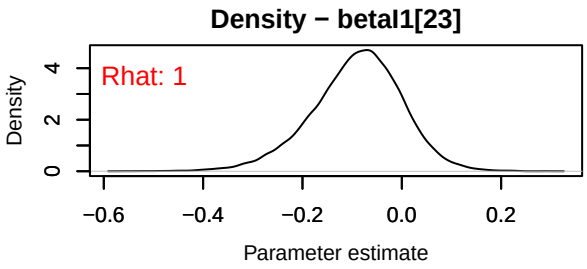

Trace − betal1[21]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration

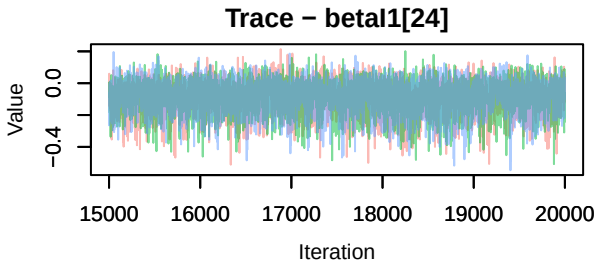

Density − betal1[21]
Rhat: 1
Density
0
2
4
6
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

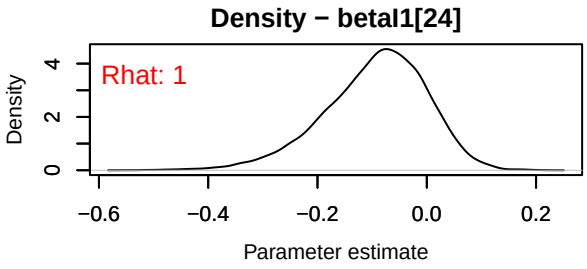

Trace − betal1[22]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration

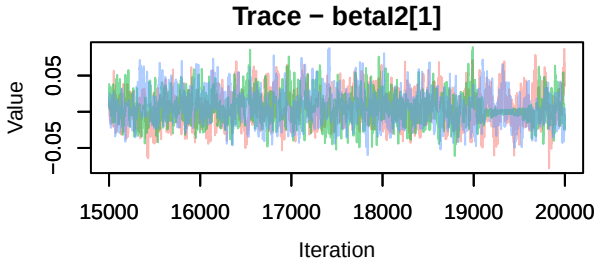

Density − betal1[22]
Rhat: 1
Density
0
2
4
6
−0.2
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate

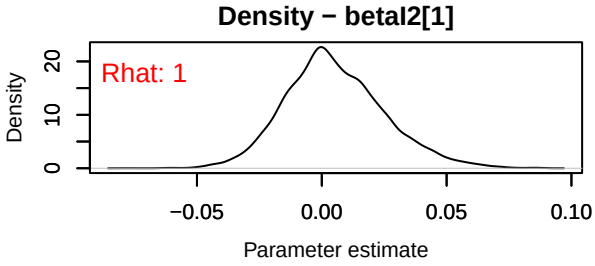

Trace − betaI1[23]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

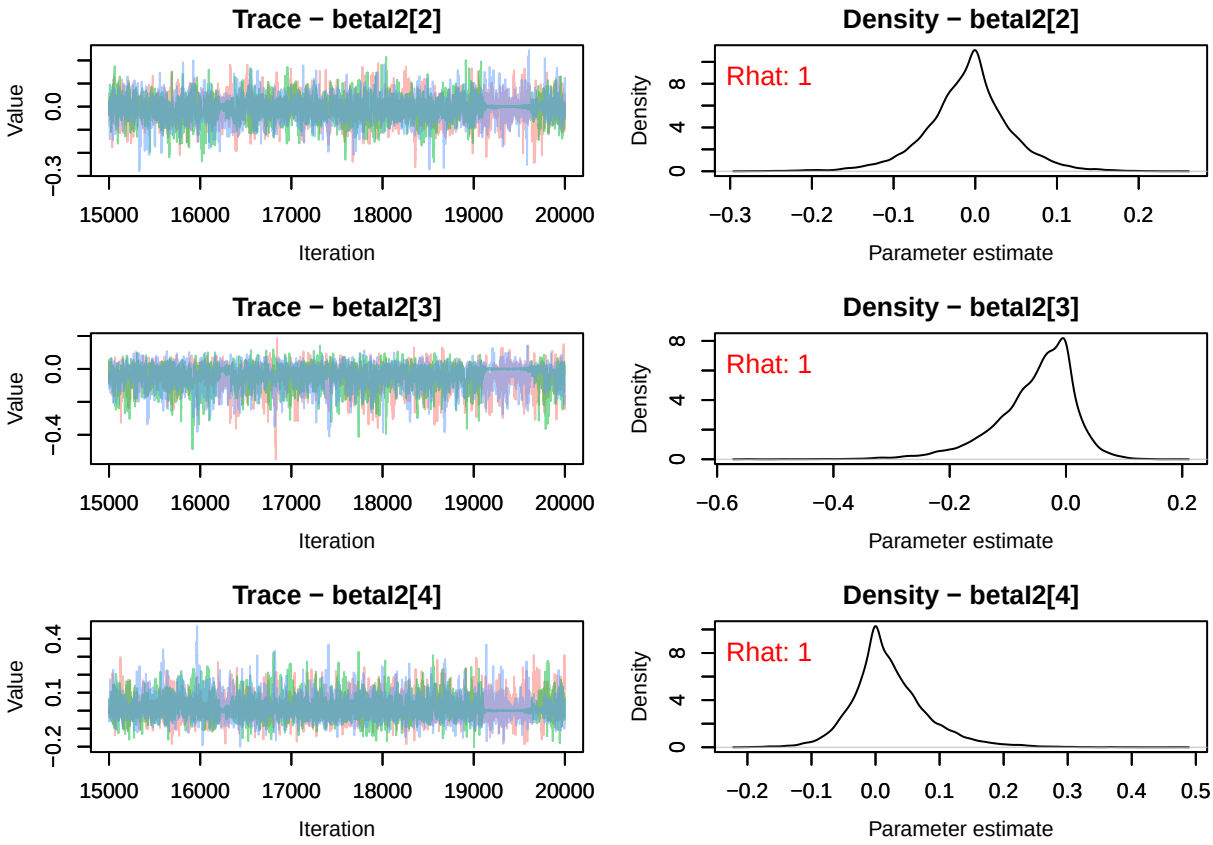

Density − betaI1[23]
Rhat: 1
Density
0
2
4
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

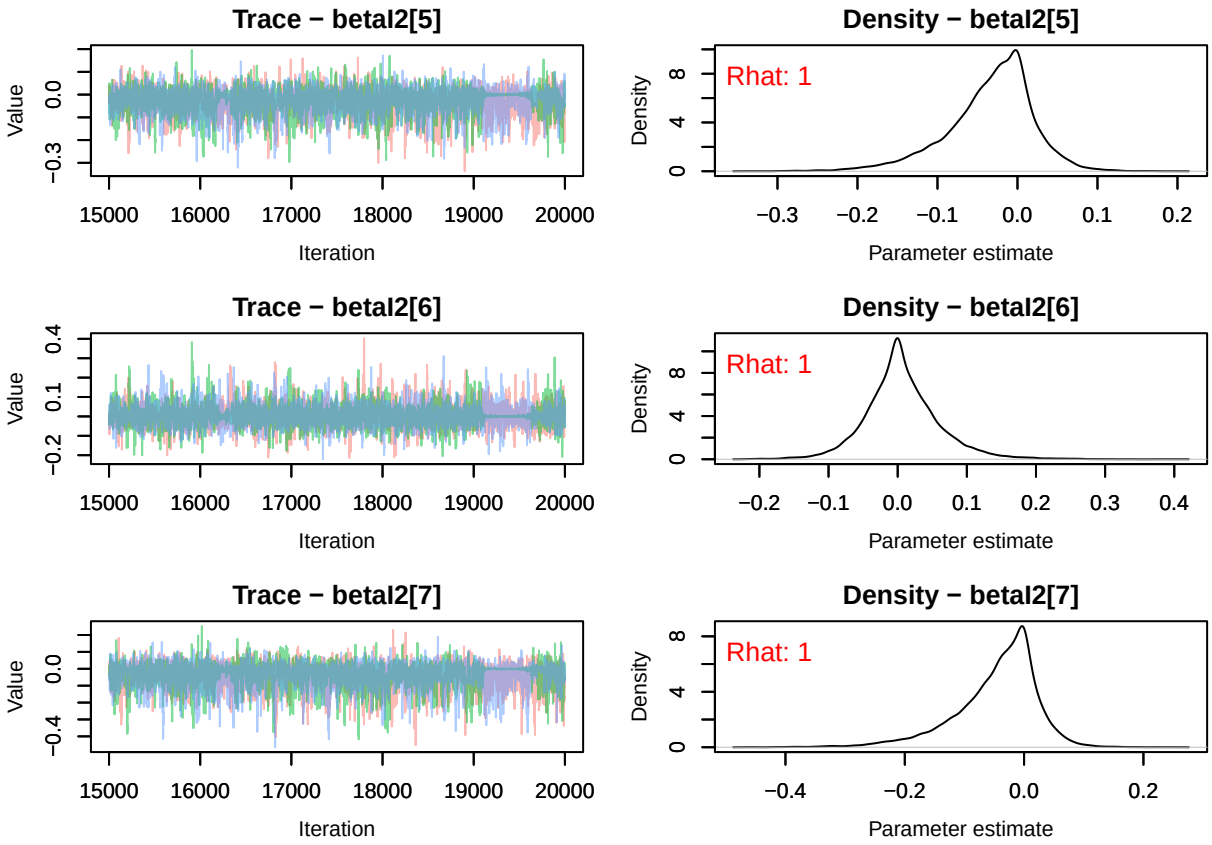

Trace − betaI1[24]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

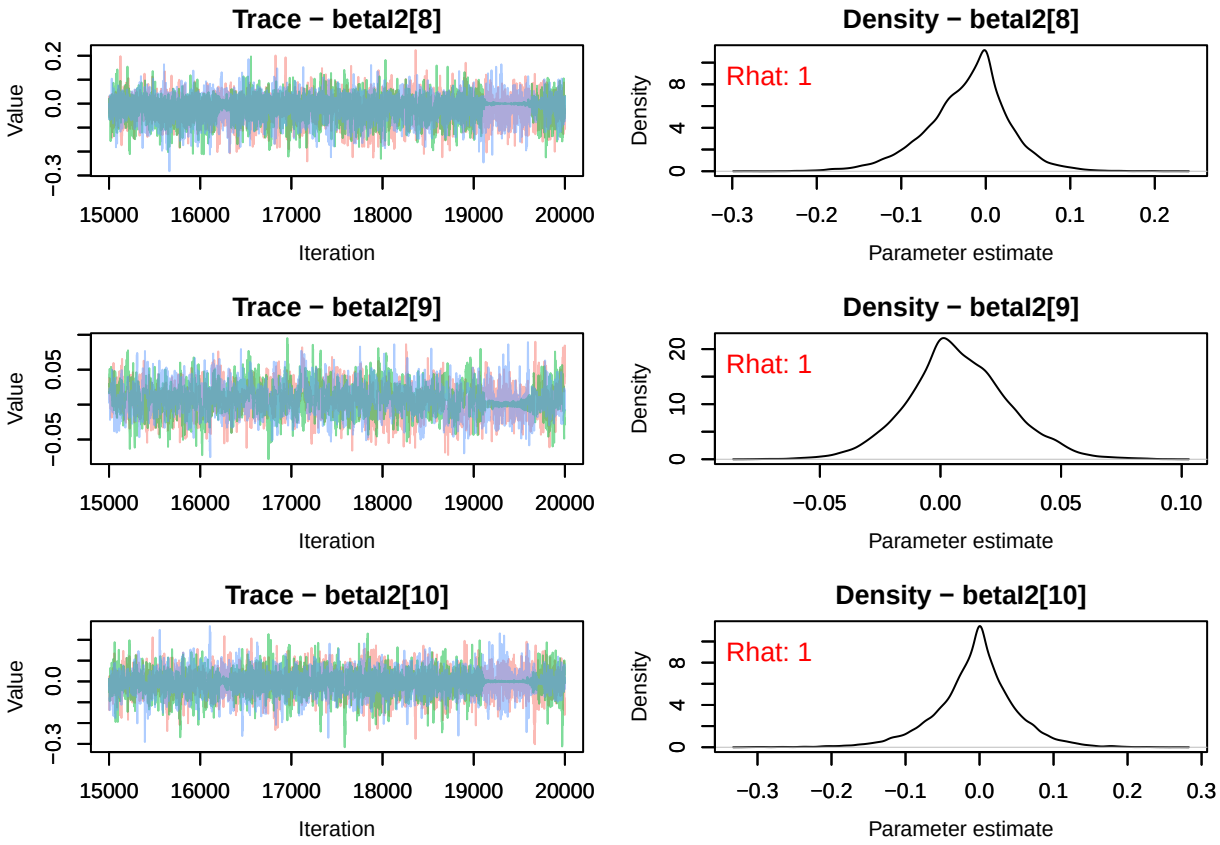

Density − betaI1[24]
Rhat: 1
Density
0
2
4
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

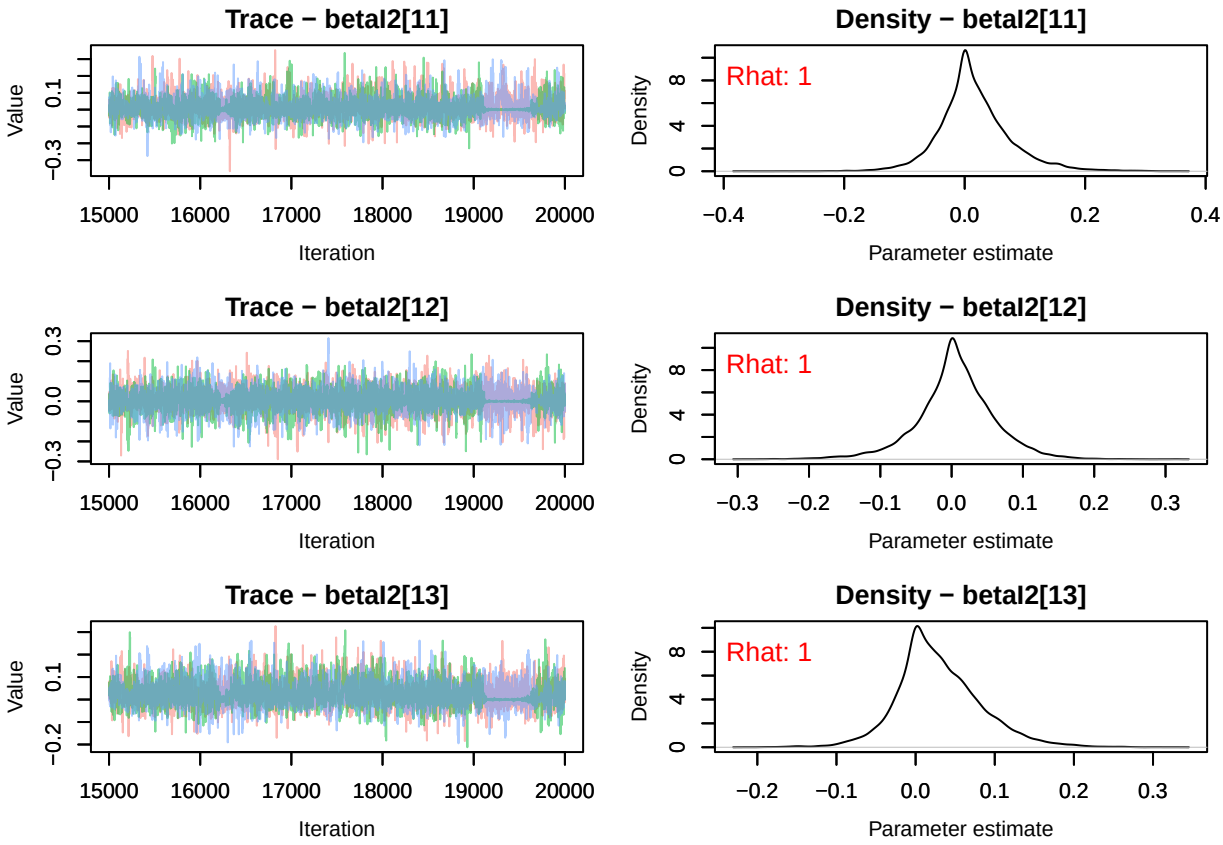

Trace − betaI2[1]
Value
−0.05
0.05
15000
16000
17000
18000
19000
20000
Iteration

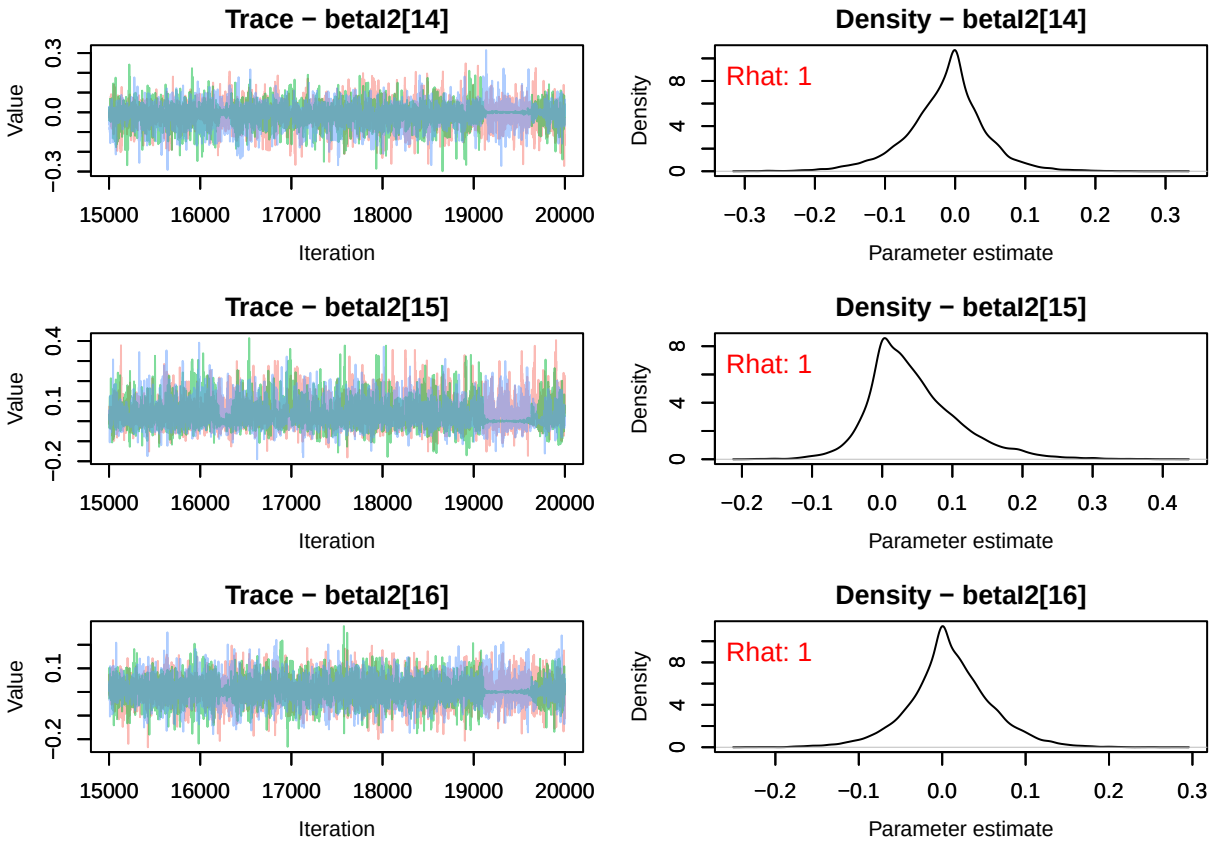

Density − betaI2[1]
Rhat: 1
Density
0
10
20
−0.05
0.00
0.05
0.10
Parameter estimate

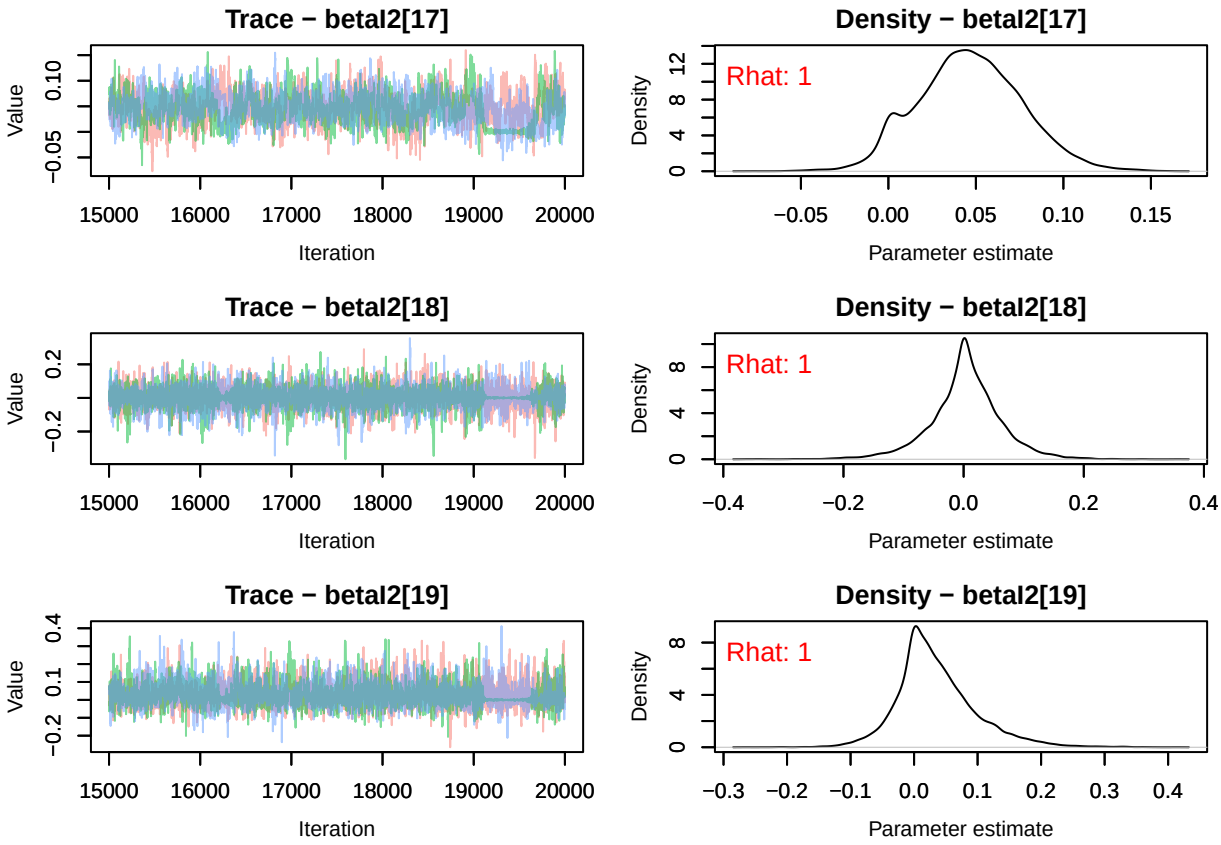

Trace − betaI2[2]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[2]
Rhat: 1
Density
0
4
8
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaI2[3]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[3]
Rhat: 1
Density
0
4
8
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate
Trace − betaI2[4]
Value
−0.2
0.1
0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[4]
Rhat: 1
Density
0
4
8
−0.2
−0.1
0.0
0.1
0.2
0.3
0.4
0.5
Parameter estimate

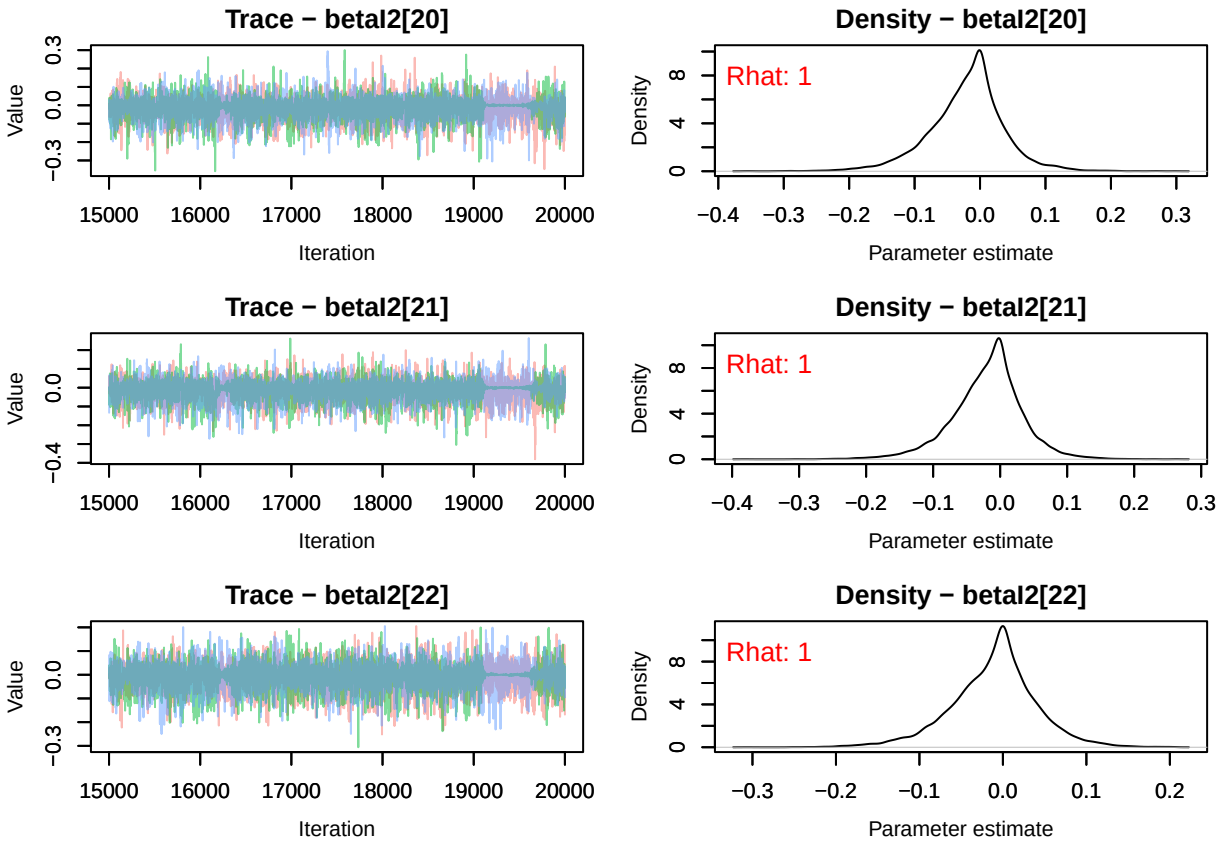

Trace − betaI2[5]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[5]
Rhat: 1
Density
0
4
8
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaI2[6]
Value
−0.2
0.1
0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[6]
Rhat: 1
Density
0
4
8
−0.2
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate
Trace − betaI2[7]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[7]
Rhat: 1
Density
0
4
8
−0.4
−0.2
0.0
0.2
Parameter estimate

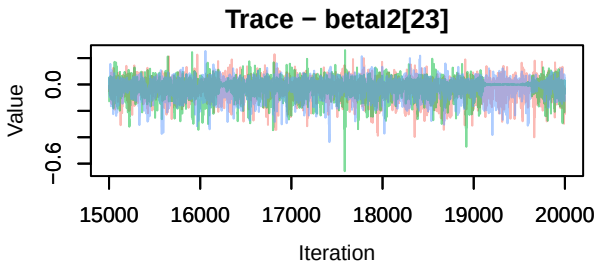

Trace − betaI2[8]
Value
Iteration
Density − betaI2[8]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[9]
Value
Iteration
Density − betaI2[9]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[10]
Value
Iteration
Density − betaI2[10]
Rhat: 1
Density
Parameter estimate

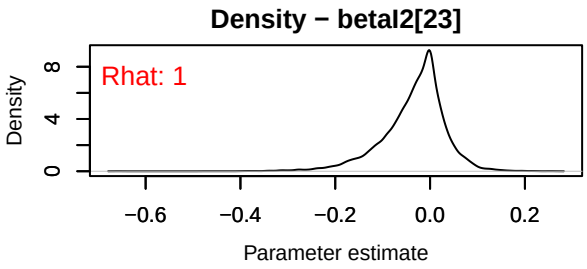

Trace − betaI2[11]
Value
Iteration
Density − betaI2[11]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[12]
Value
Iteration
Density − betaI2[12]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[13]
Value
Iteration
Density − betaI2[13]
Rhat: 1
Density
Parameter estimate

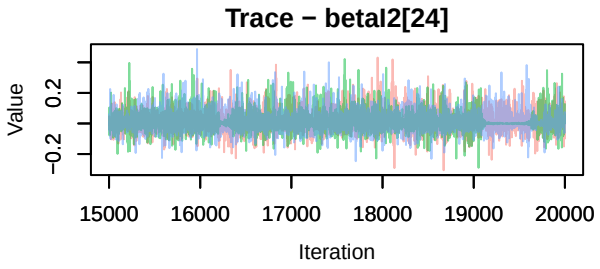

Trace − betaI2[14]
Value
Iteration
Density − betaI2[14]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[15]
Value
Iteration
Density − betaI2[15]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[16]
Value
Iteration
Density − betaI2[16]
Rhat: 1
Density
Parameter estimate

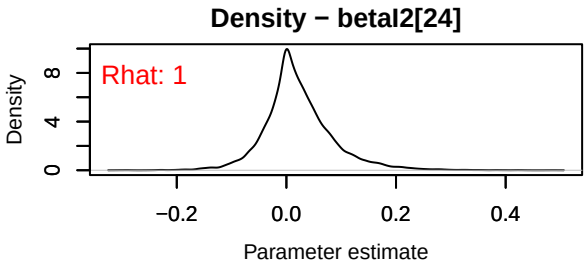

Trace − betaI2[17]
Value
−0.05
0.10
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[17]
Density
0
4
8
12
Rhat: 1
−0.05
0.00
0.05
0.10
0.15
Parameter estimate
Trace − betaI2[18]
Value
−0.2
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[18]
Density
0
4
8
Rhat: 1
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate
Trace − betaI2[19]
Value
−0.2
0.1
0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI2[19]
Density
0
4
8
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate

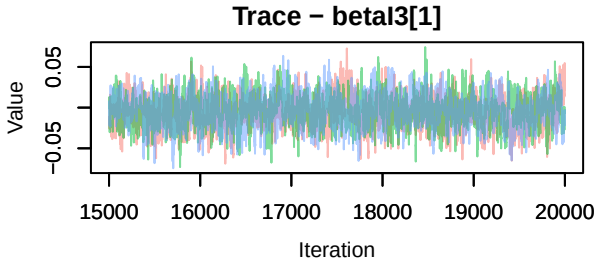

Trace − betaI2[20]
Value
Iteration
Density − betaI2[20]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[21]
Value
Iteration
Density − betaI2[21]
Rhat: 1
Density
Parameter estimate
Trace − betaI2[22]
Value
Iteration
Density − betaI2[22]
Rhat: 1
Density
Parameter estimate

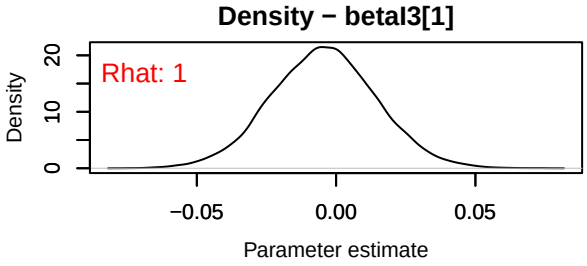

Trace − betaI2[23]
Value
0.0
−0.6
15000
16000
17000
18000
19000
20000
Iteration

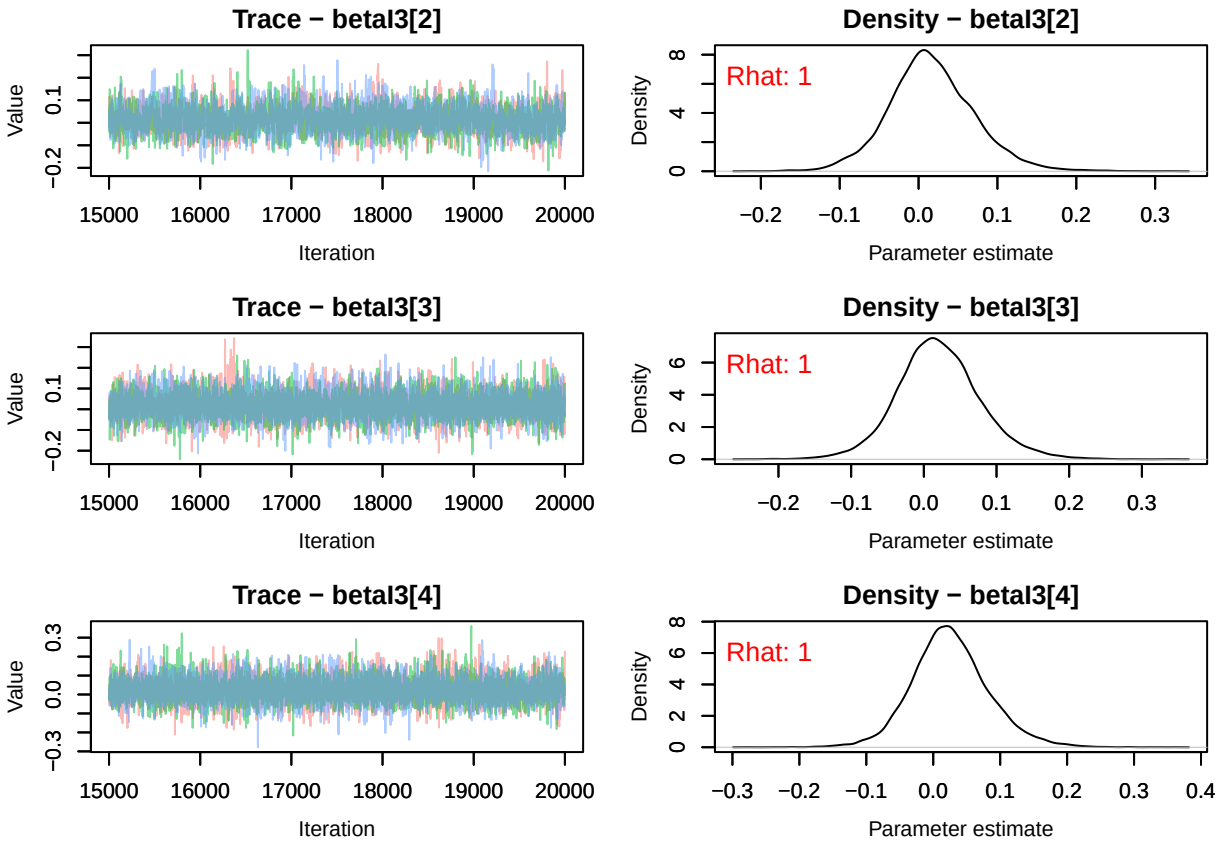

Density − betaI2[23]
Rhat: 1
Density
0
4
8
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

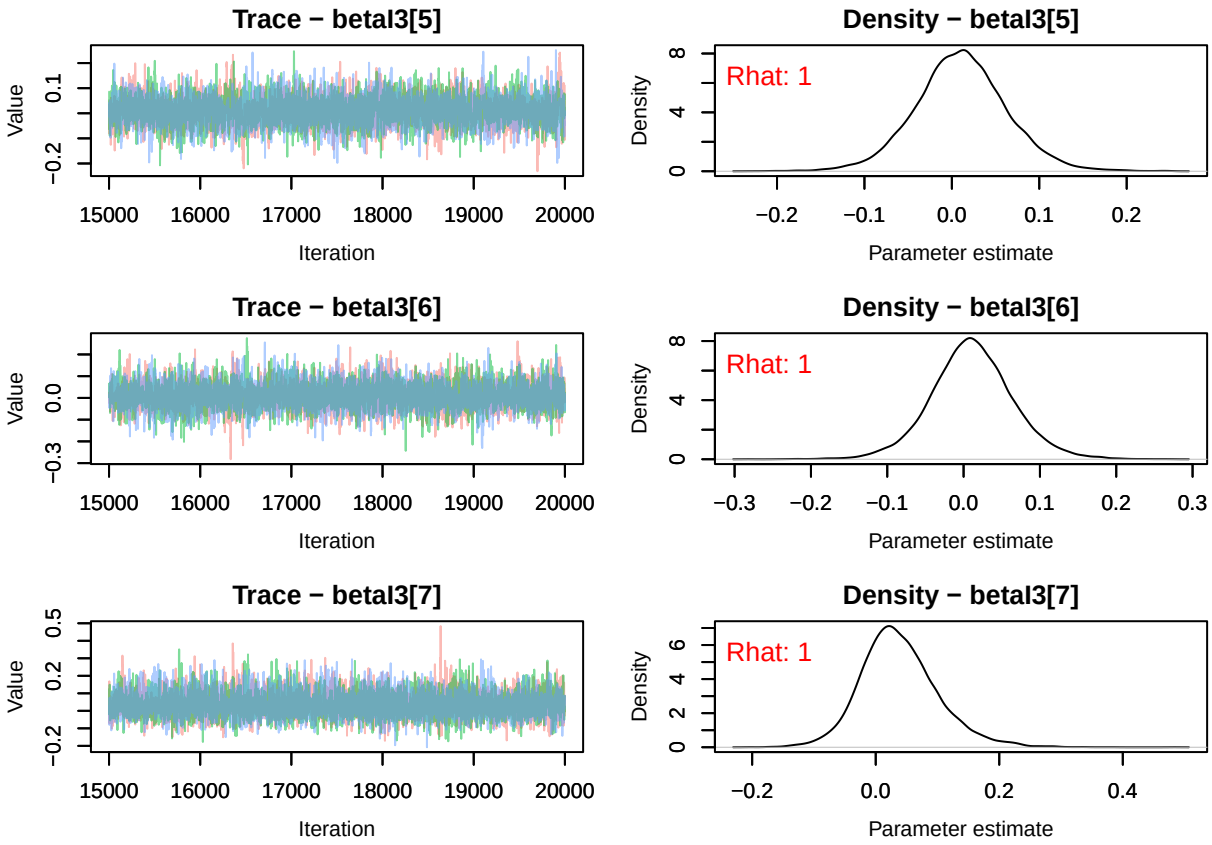

Trace − betaI2[24]
Value
0.2
−0.2
15000
16000
17000
18000
19000
20000
Iteration

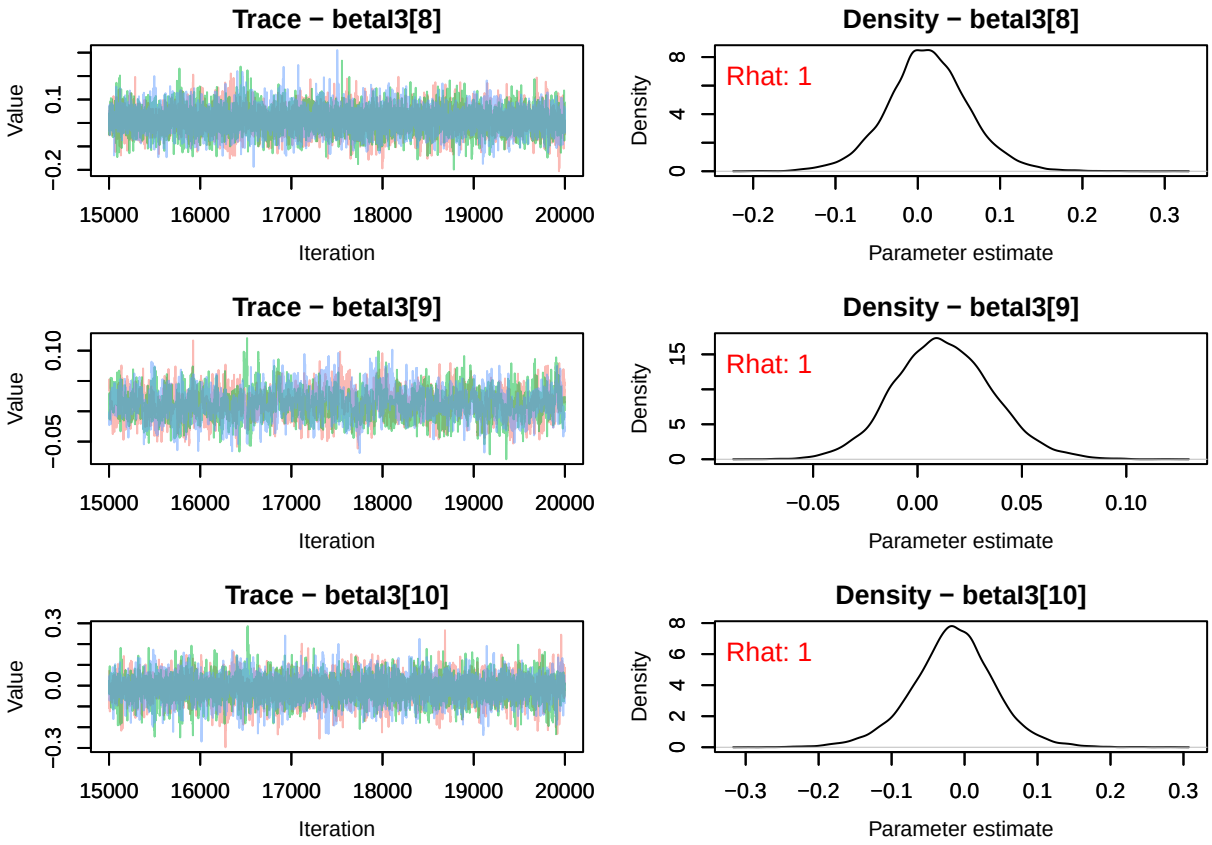

Density − betaI2[24]
Rhat: 1
Density
0
4
8
−0.2
0.0
0.2
0.4
Parameter estimate

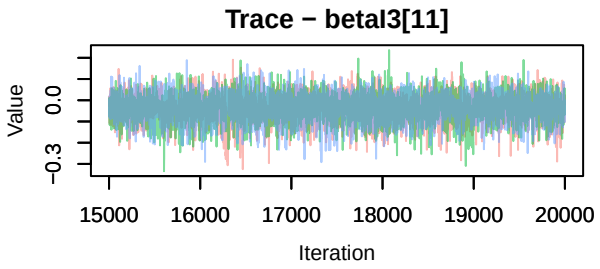

Trace − betaI3[1]
Value
0.05
−0.05
15000
16000
17000
18000
19000
20000
Iteration

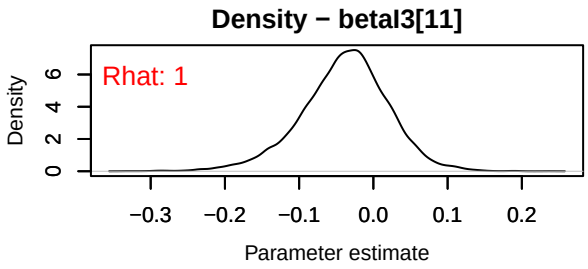

Density − betaI3[1]
Rhat: 1
Density
0
10
20
−0.05
0.00
0.05
Parameter estimate

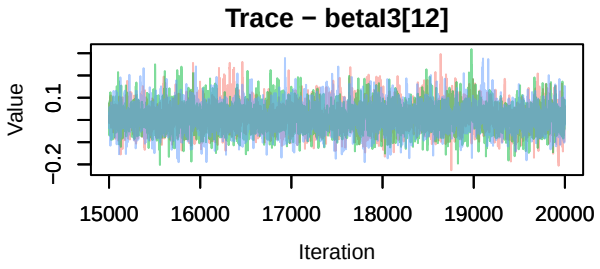

Trace − betaI3[2]
Value
Iteration
Density − betaI3[2]
Rhat: 1
Density
Parameter estimate
Trace − betaI3[3]
Value
Iteration
Density − betaI3[3]
Rhat: 1
Density
Parameter estimate
Trace − betaI3[4]
Value
Iteration
Density − betaI3[4]
Rhat: 1
Density
Parameter estimate

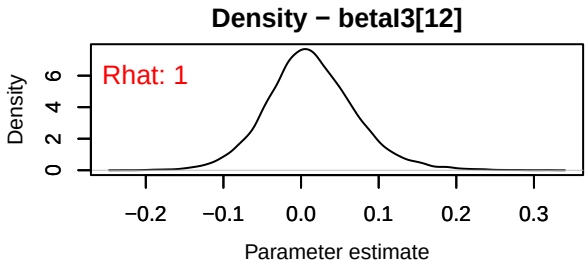

Trace − betaI3[5]
Value
Iteration
Density − betaI3[5]
Rhat: 1
Density
Parameter estimate
Trace − betaI3[6]
Value
Iteration
Density − betaI3[6]
Rhat: 1
Density
Parameter estimate
Trace − betaI3[7]
Value
Iteration
Density − betaI3[7]
Rhat: 1
Density
Parameter estimate

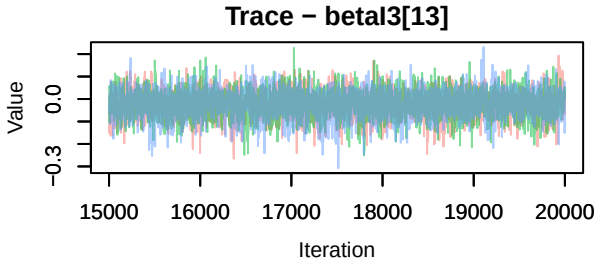

Trace − betaI3[8]
Value
Iteration
Density − betaI3[8]
Rhat: 1
Density
Parameter estimate
Trace − betaI3[9]
Value
Iteration
Density − betaI3[9]
Rhat: 1
Density
Parameter estimate
Trace − betaI3[10]
Value
Iteration
Density − betaI3[10]
Rhat: 1
Density
Parameter estimate

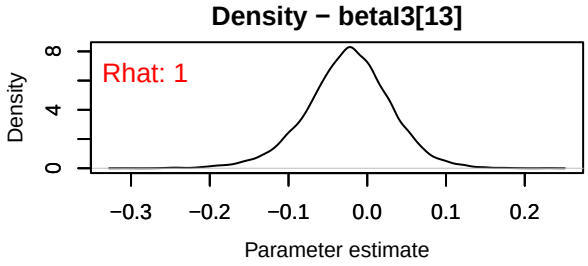

Trace − betal3[11]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration

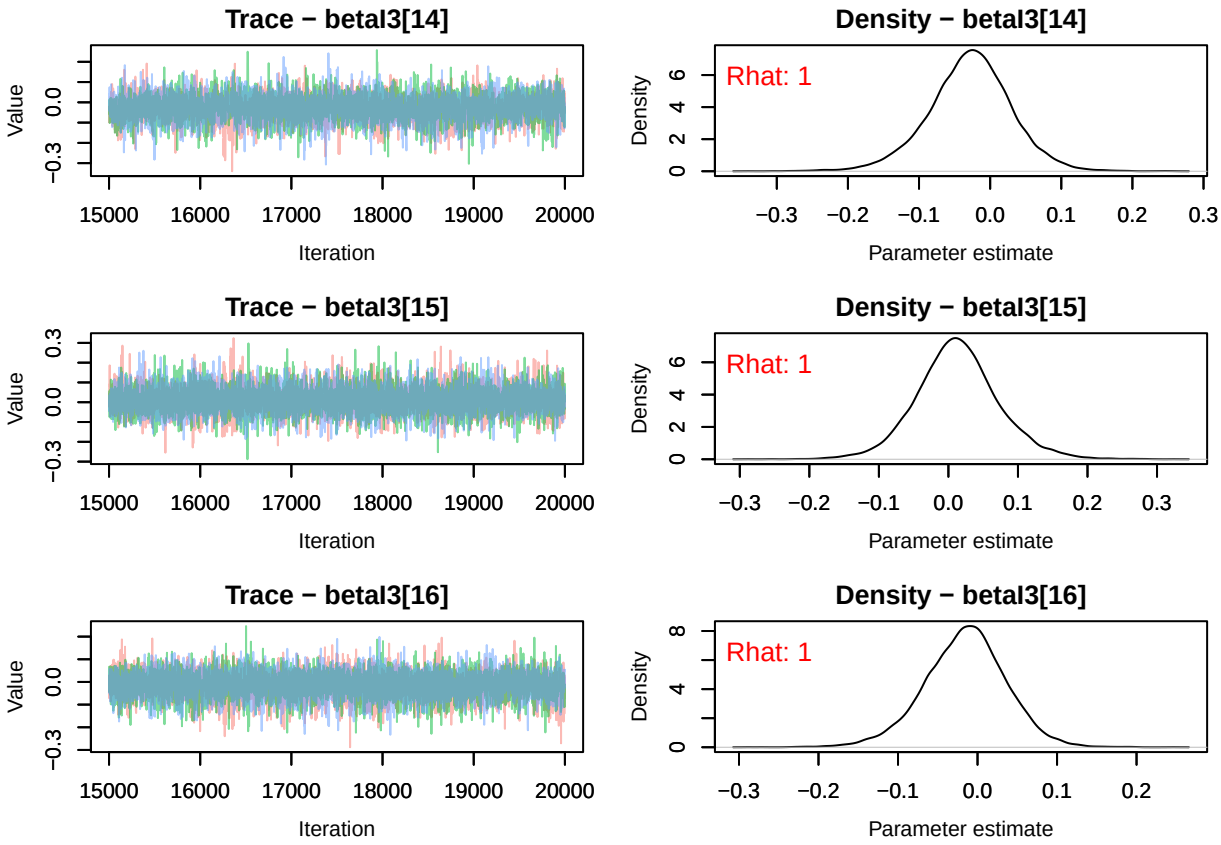

Density − betal3[11]
Rhat: 1
Density
0
2
4
6
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

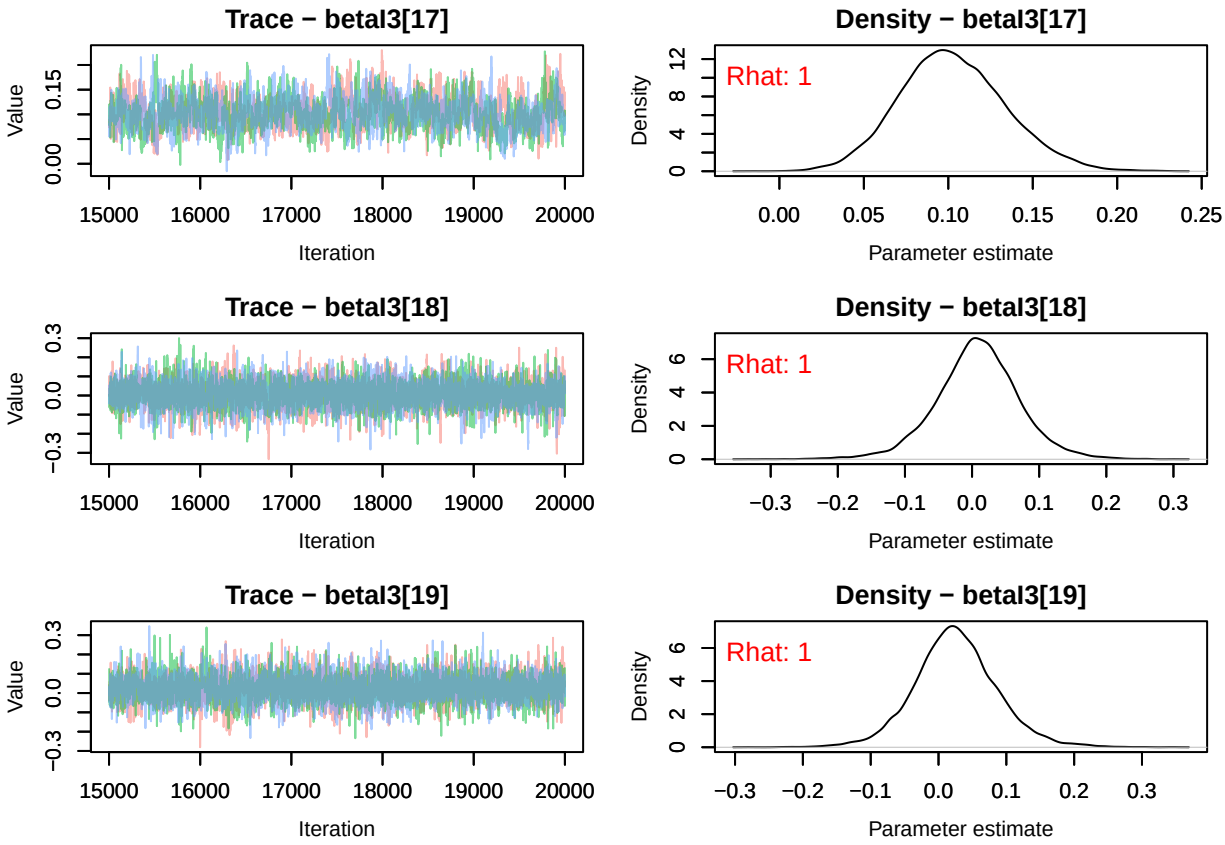

Trace − betal3[12]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration

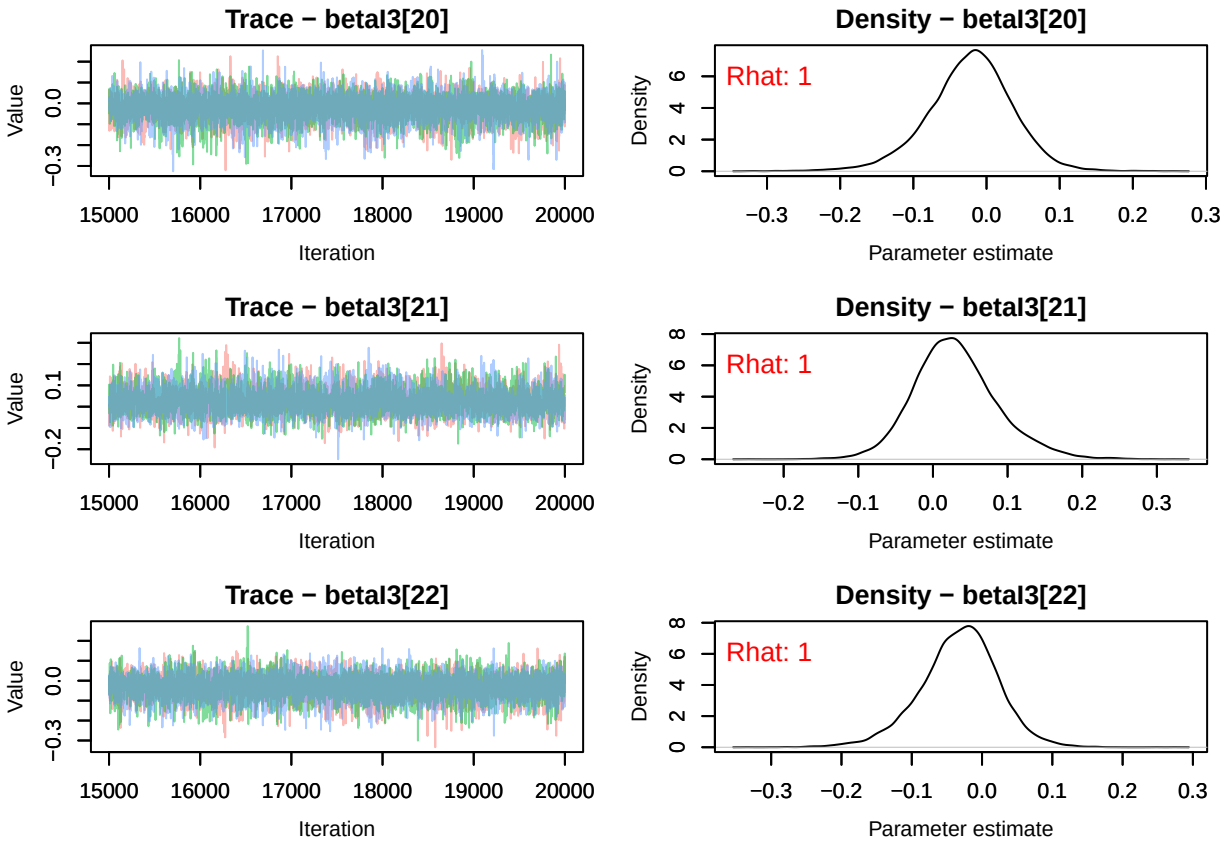

Density − betal3[12]
Rhat: 1
Density
0
2
4
6
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

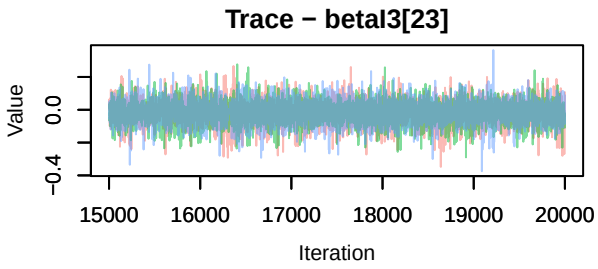

Trace − betal3[13]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration

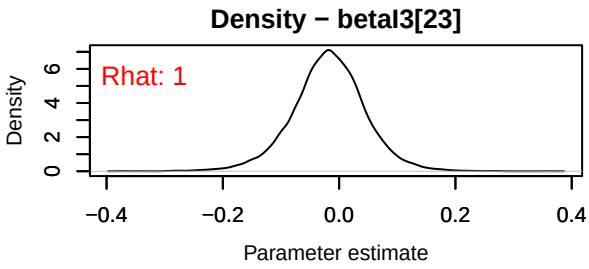

Density − betal3[13]
Rhat: 1
Density
0
4
8
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

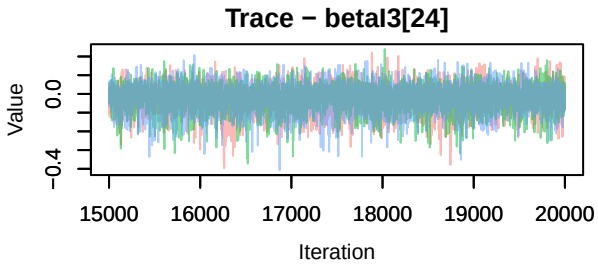

Trace − betal3[14]
Value
Iteration
Density − betal3[14]
Rhat: 1
Density
Parameter estimate
Trace − betal3[15]
Value
Iteration
Density − betal3[15]
Rhat: 1
Density
Parameter estimate
Trace − betal3[16]
Value
Iteration
Density − betal3[16]
Rhat: 1
Density
Parameter estimate

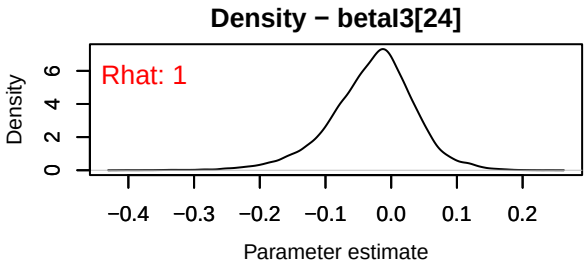

Trace − betal3[17]
Value
0.00
0.15
15000
16000
17000
18000
19000
20000
Iteration
Density − betal3[17]
Density
0
4
8
12
Rhat: 1
0.00
0.05
0.10
0.15
0.20
0.25
Parameter estimate
Trace − betal3[18]
Value
−0.3
0.0
0.3
15000
16000
17000
18000
19000
20000
Iteration
Density − betal3[18]
Density
0
2
4
6
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate
Trace − betal3[19]
Value
−0.3
0.0
0.3
15000
16000
17000
18000
19000
20000
Iteration
Density − betal3[19]
Density
0
2
4
6
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

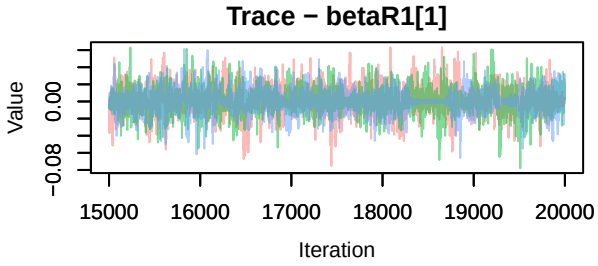

Trace − betaI3[20]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI3[20]
Density
0
2
4
6
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate
Trace − betaI3[21]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI3[21]
Density
0
2
4
6
8
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate
Trace − betaI3[22]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaI3[22]
Density
0
2
4
6
8
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

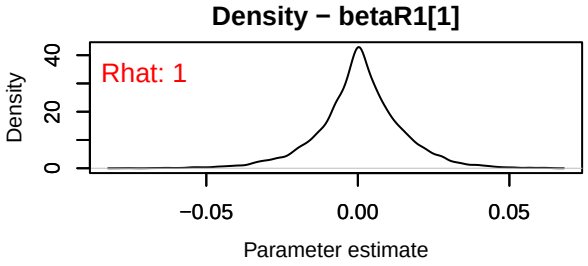

Trace − betaI3[23]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

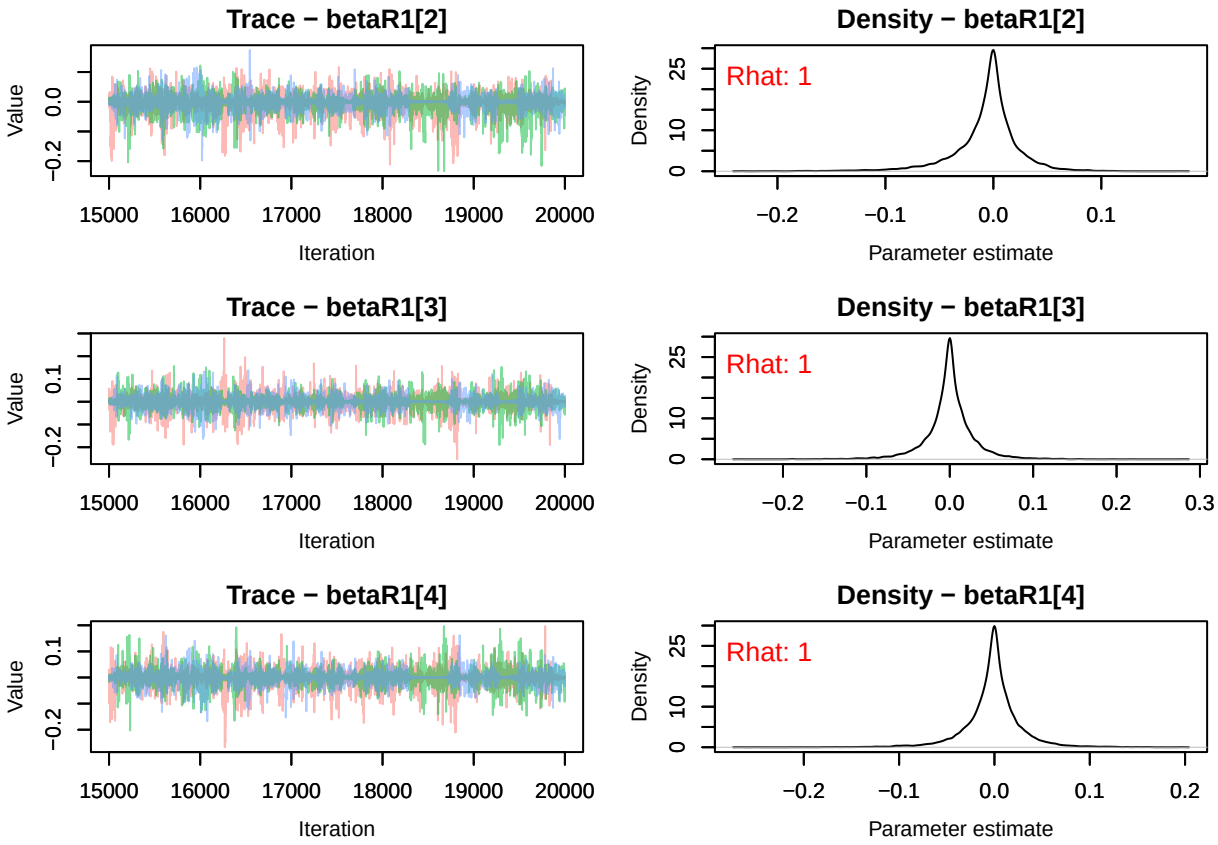

Density − betaI3[23]
Rhat: 1
Density
0
2
4
6
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

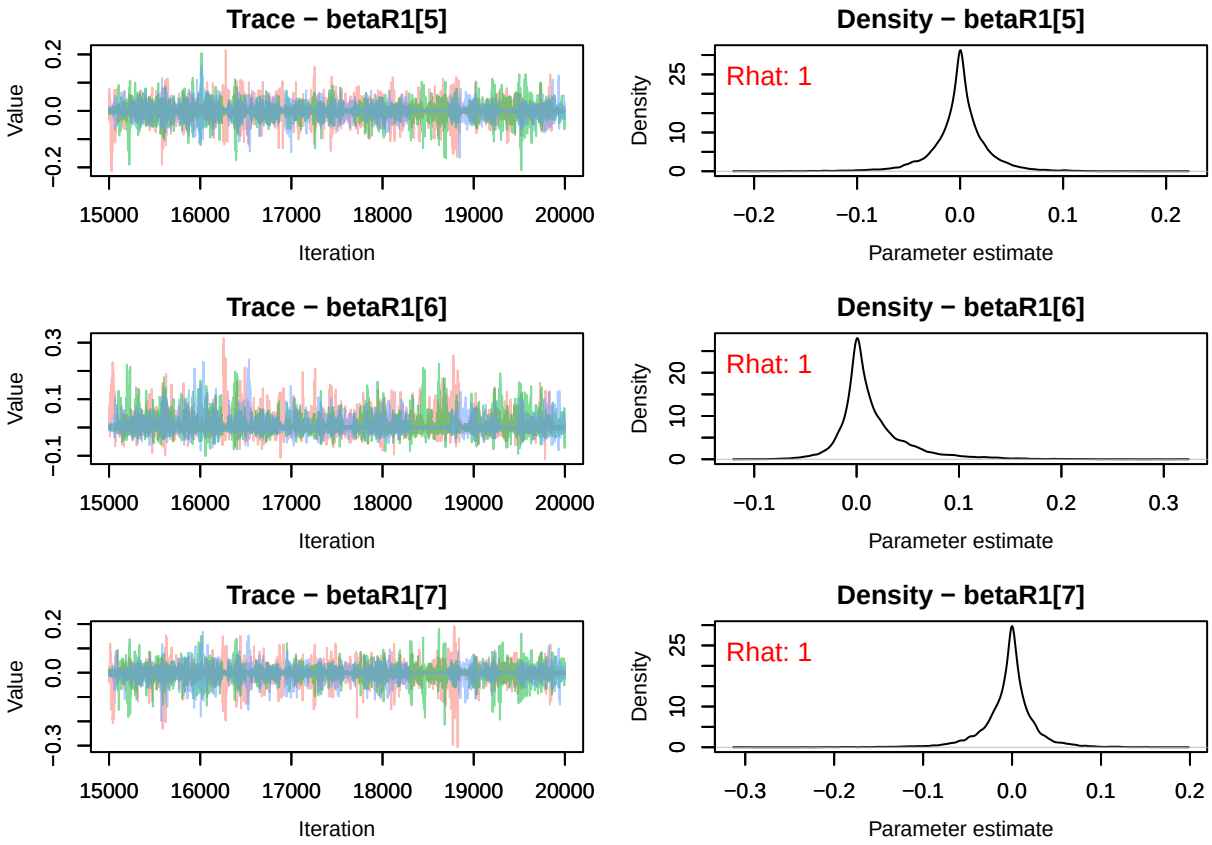

Trace − betaI3[24]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

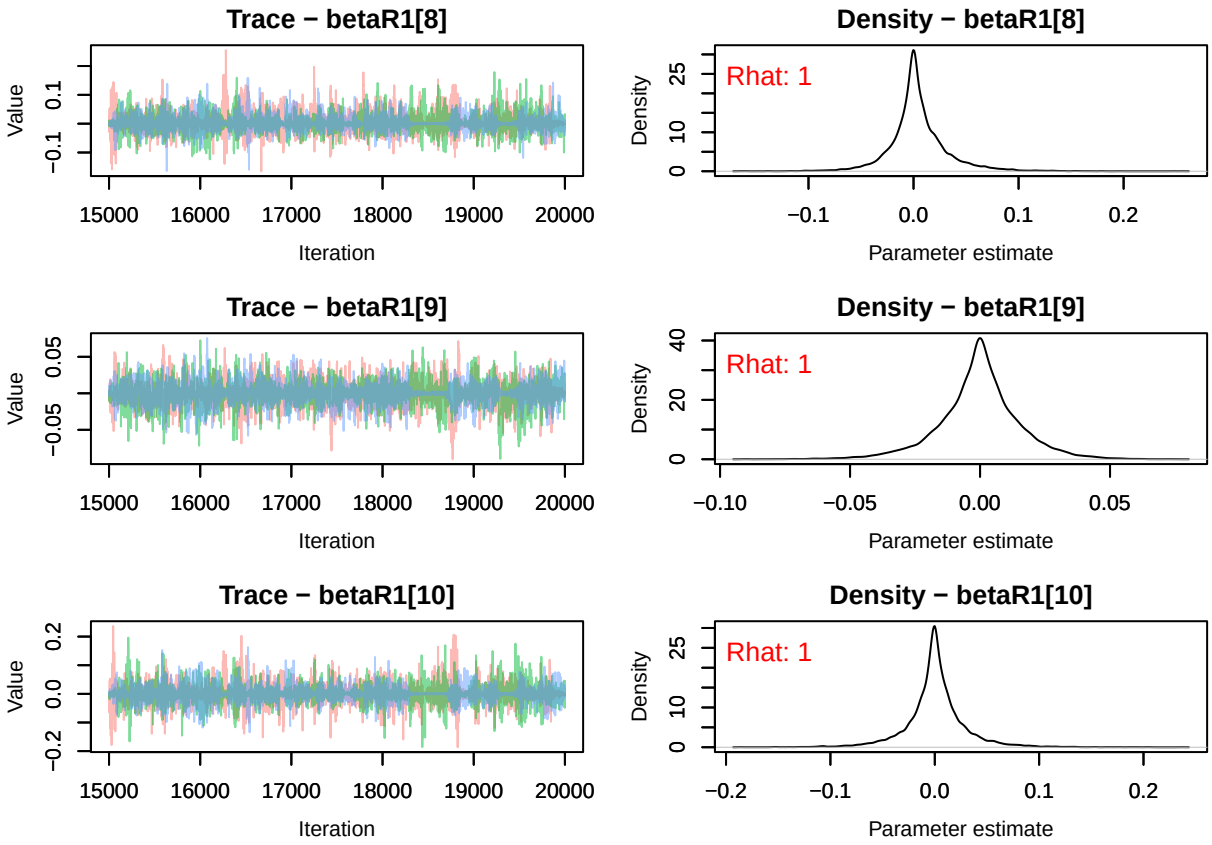

Density − betaI3[24]
Rhat: 1
Density
0
2
4
6
−0.4
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

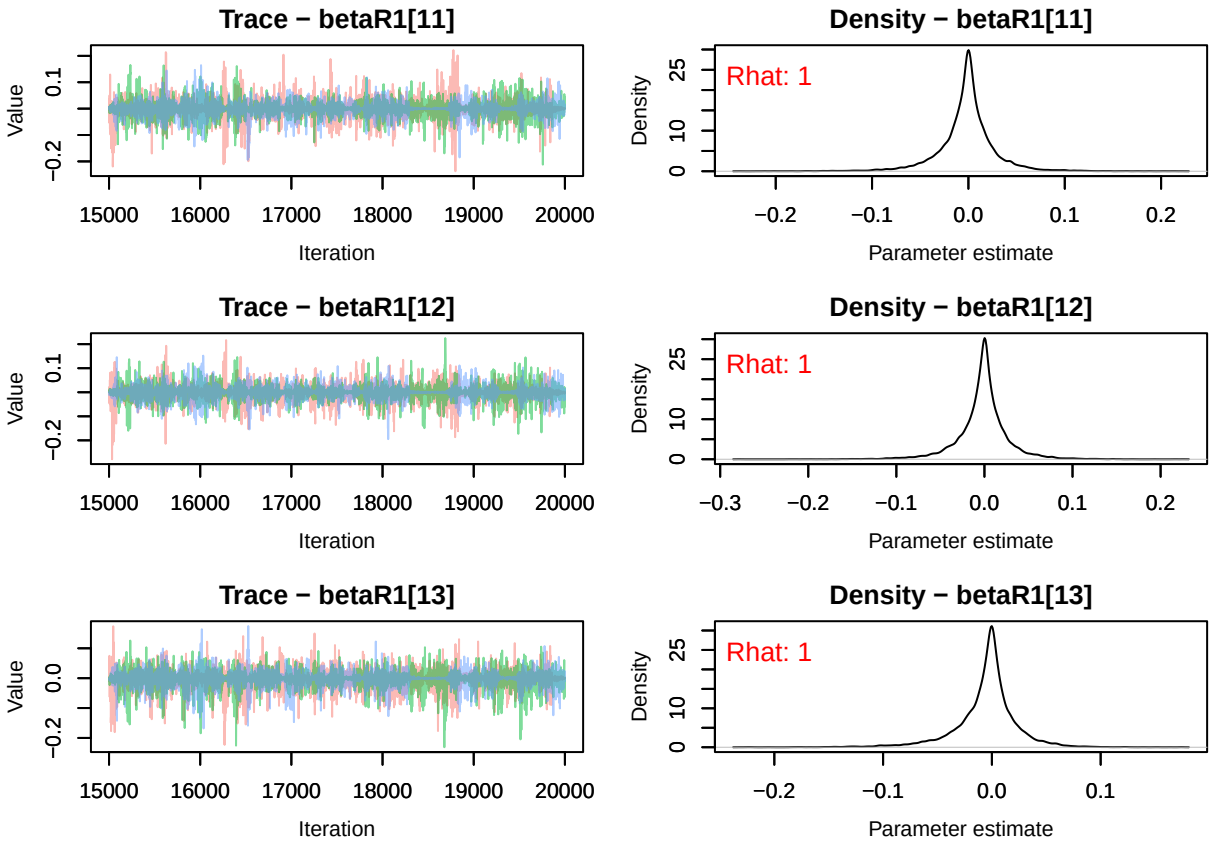

Trace − betaR1[1]
Value
−0.08
0.00
15000
16000
17000
18000
19000
20000
Iteration

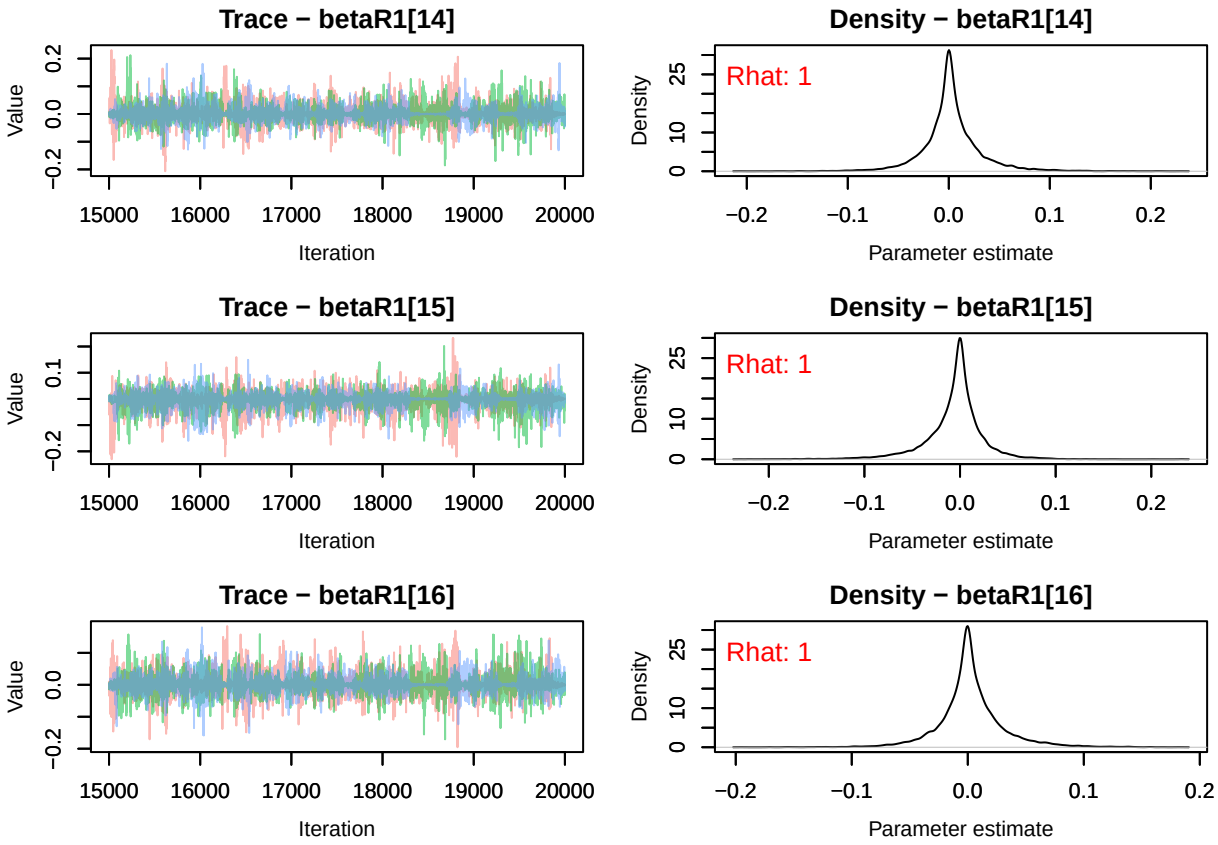

Density − betaR1[1]
Rhat: 1
Density
0
20
40
−0.05
0.00
0.05
Parameter estimate

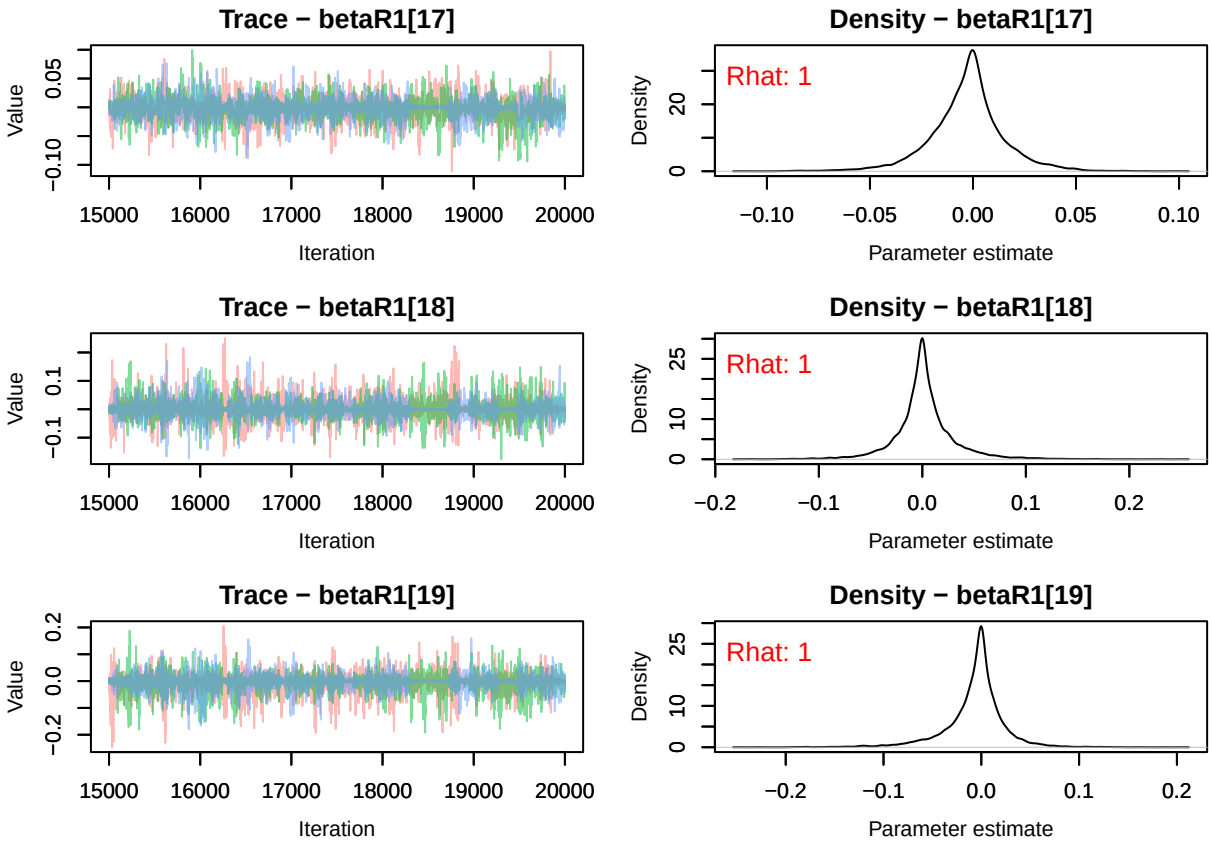

Trace − betaR1[2]
Value
−0.2
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR1[2]
Density
0
10
25
Rhat: 1
−0.2
−0.1
0.0
0.1
Parameter estimate
Trace − betaR1[3]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR1[3]
Density
0
10
25
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate
Trace − betaR1[4]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR1[4]
Density
0
10
25
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

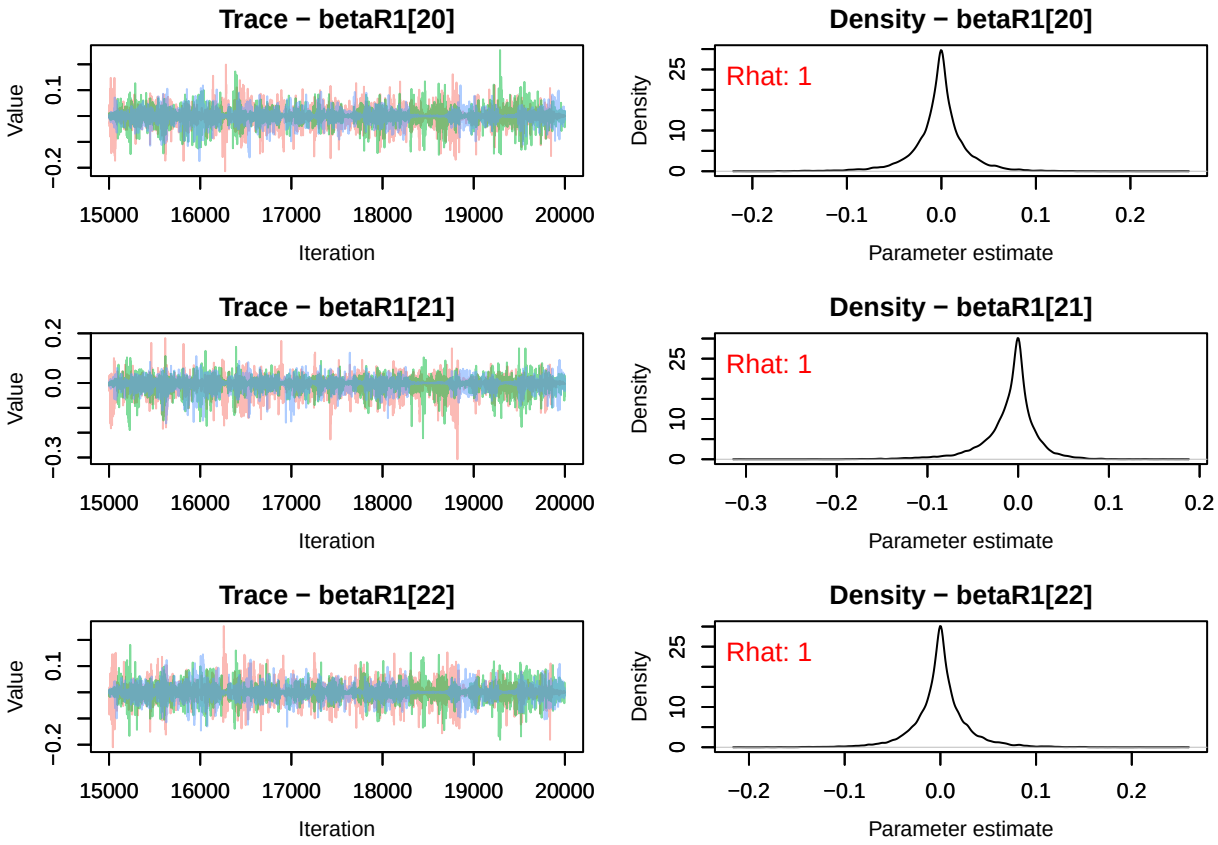

Trace − betaR1[5]
Value
Iteration
Density − betaR1[5]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[6]
Value
Iteration
Density − betaR1[6]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[7]
Value
Iteration
Density − betaR1[7]
Rhat: 1
Density
Parameter estimate

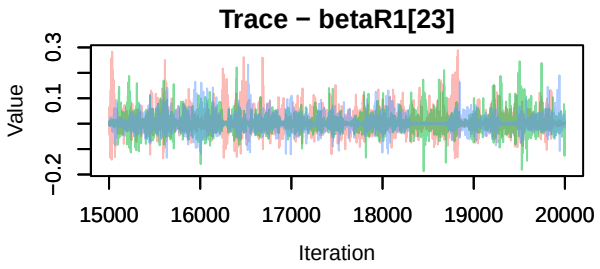

Trace − betaR1[8]
Value
Iteration
Density − betaR1[8]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[9]
Value
Iteration
Density − betaR1[9]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[10]
Value
Iteration
Density − betaR1[10]
Rhat: 1
Density
Parameter estimate

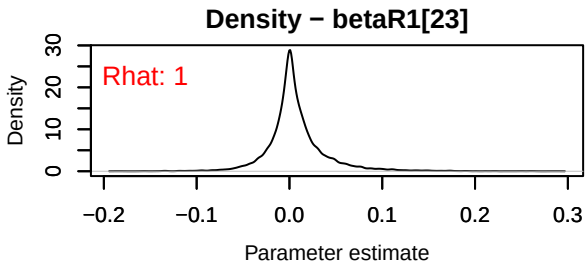

Trace − betaR1[11]
Value
Iteration
Density − betaR1[11]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[12]
Value
Iteration
Density − betaR1[12]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[13]
Value
Iteration
Density − betaR1[13]
Rhat: 1
Density
Parameter estimate

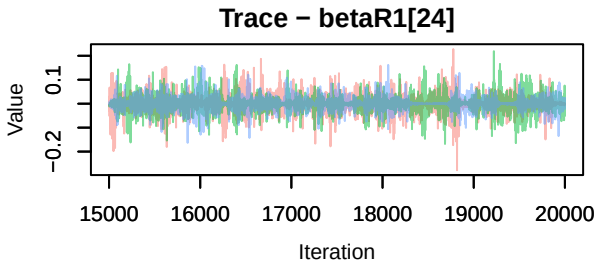

Trace − betaR1[14]
Value
Iteration
Density − betaR1[14]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[15]
Value
Iteration
Density − betaR1[15]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[16]
Value
Iteration
Density − betaR1[16]
Rhat: 1
Density
Parameter estimate

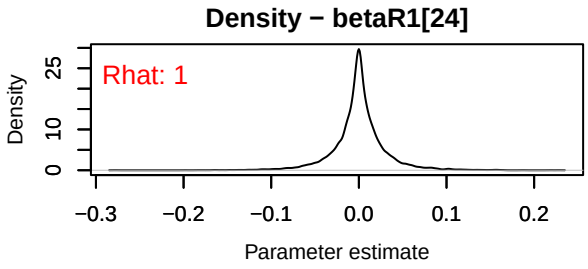

Trace − betaR1[17]
Value
−0.10
0.05
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR1[17]
Rhat: 1
Density
0
20
−0.10
−0.05
0.00
0.05
0.10
Parameter estimate
Trace − betaR1[18]
Value
−0.1
0.1
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR1[18]
Rhat: 1
Density
0
10
25
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate
Trace − betaR1[19]
Value
−0.2
0.0
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR1[19]
Rhat: 1
Density
0
10
25
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

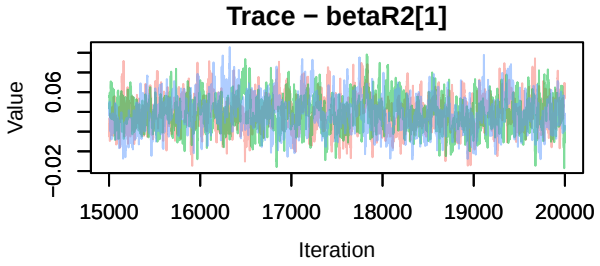

Trace − betaR1[20]
Value
Iteration
Density − betaR1[20]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[21]
Value
Iteration
Density − betaR1[21]
Rhat: 1
Density
Parameter estimate
Trace − betaR1[22]
Value
Iteration
Density − betaR1[22]
Rhat: 1
Density
Parameter estimate

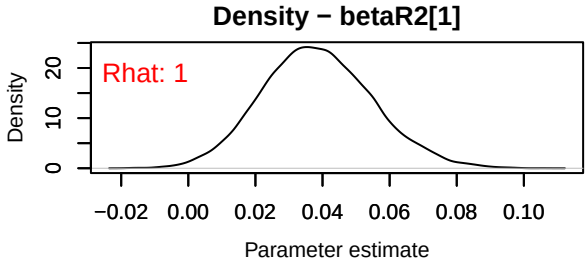

Trace − betaR1[23]
Value
−0.2
0.1
0.3
15000
16000
17000
18000
19000
20000
Iteration

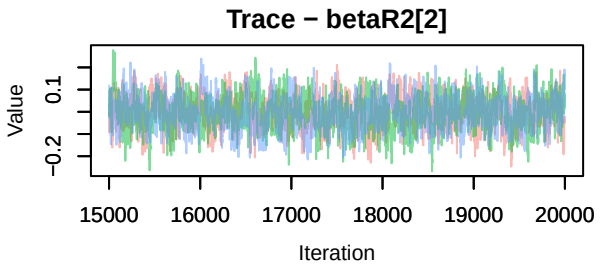

Density − betaR1[23]
Density
0
10
20
30
Rhat: 1
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

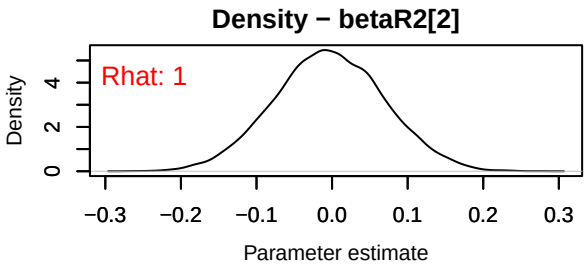

Trace − betaR1[24]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration

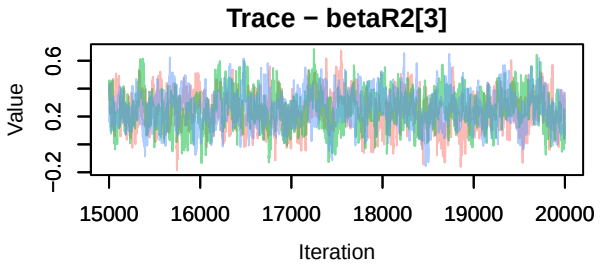

Density − betaR1[24]
Density
0
10
25
Rhat: 1
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

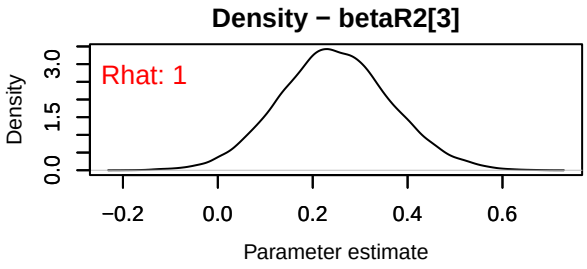

Trace − betaR2[1]
Value
−0.02
0.06
15000
16000
17000
18000
19000
20000
Iteration

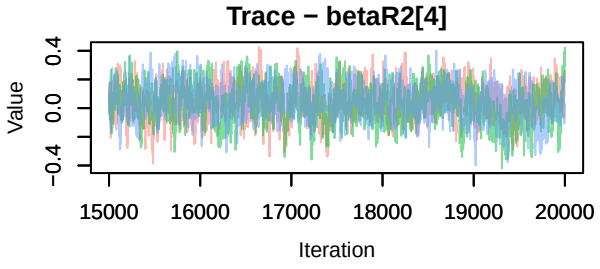

Density − betaR2[1]
Density
0
10
20
Rhat: 1
−0.02
0.00
0.02
0.04
0.06
0.08
0.10
Parameter estimate

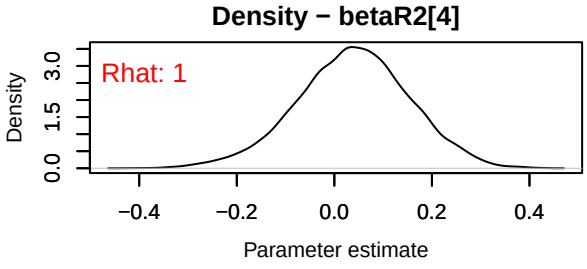

Trace − betaR2[2]
Value
−0.2
0.1
15000
16000
17000
18000
19000
20000
Iteration

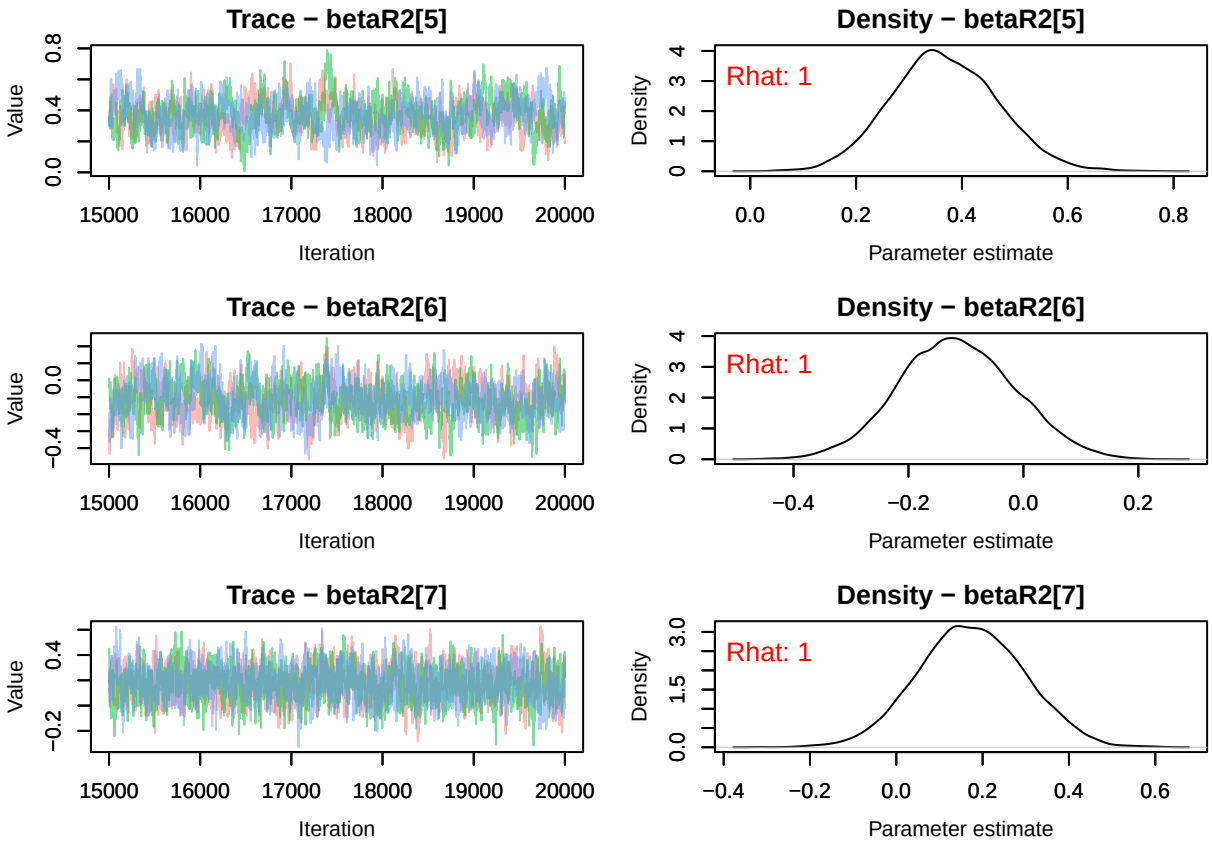

Density − betaR2[2]
Rhat: 1
Density
0
2
4
−0.3
−0.2
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

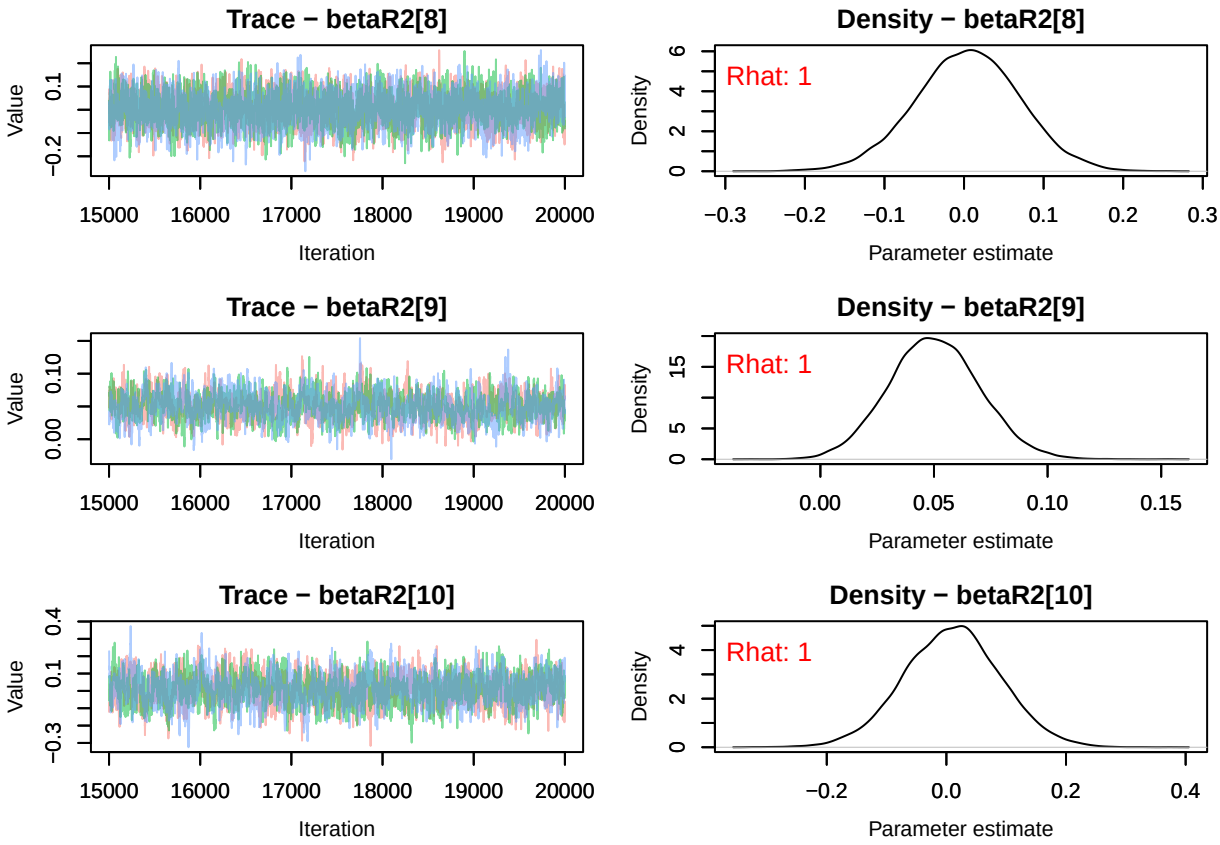

Trace − betaR2[3]
Value
−0.2
0.2
0.6
15000
16000
17000
18000
19000
20000
Iteration

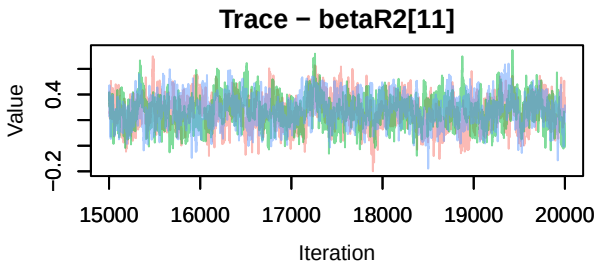

Density − betaR2[3]
Rhat: 1
Density
0.0
1.5
3.0
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

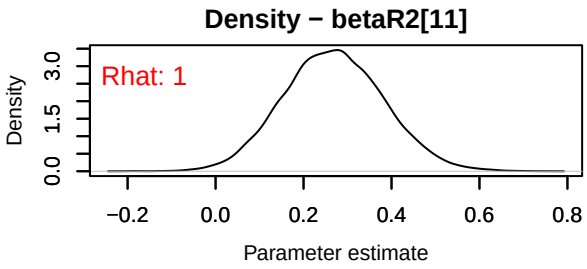

Trace − betaR2[4]
Value
−0.4
0.0
0.4
15000
16000
17000
18000
19000
20000
Iteration

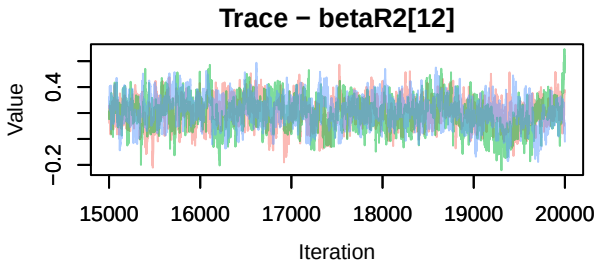

Density − betaR2[4]
Rhat: 1
Density
0.0
1.5
3.0
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

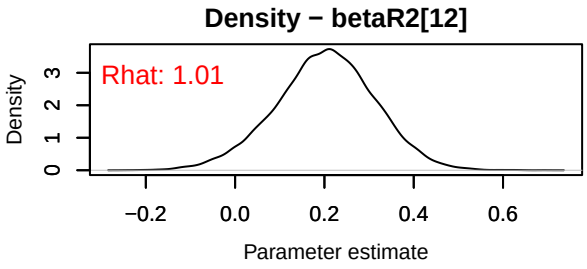

Trace − betaR2[5]
Value
Iteration
Density − betaR2[5]
Rhat: 1
Density
Parameter estimate
Trace − betaR2[6]
Value
Iteration
Density − betaR2[6]
Rhat: 1
Density
Parameter estimate
Trace − betaR2[7]
Value
Iteration
Density − betaR2[7]
Rhat: 1
Density
Parameter estimate

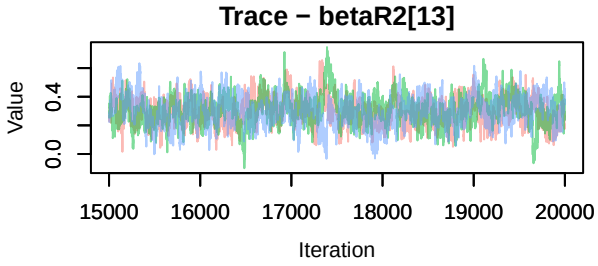

Trace − betaR2[8]
Value
Iteration
Density − betaR2[8]
Rhat: 1
Density
Parameter estimate
Trace − betaR2[9]
Value
Iteration
Density − betaR2[9]
Rhat: 1
Density
Parameter estimate
Trace − betaR2[10]
Value
Iteration
Density − betaR2[10]
Rhat: 1
Density
Parameter estimate

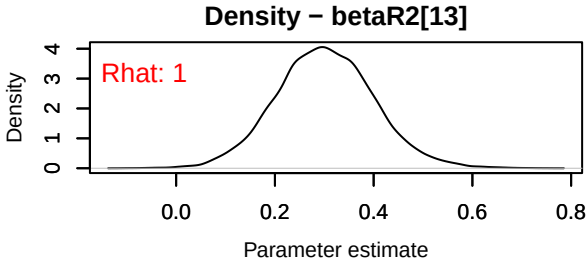

Trace − betaR2[11]
Value
−0.2
0.4
15000
16000
17000
18000
19000
20000
Iteration

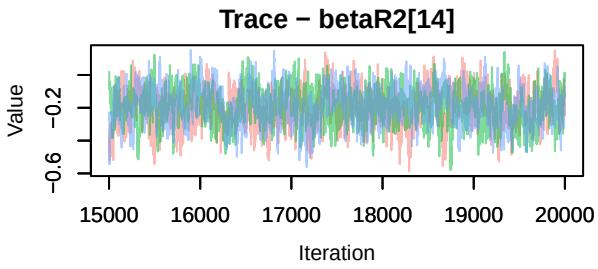

Density − betaR2[11]
Rhat: 1
Density
0.0
1.5
3.0
−0.2
0.0
0.2
0.4
0.6
0.8
Parameter estimate

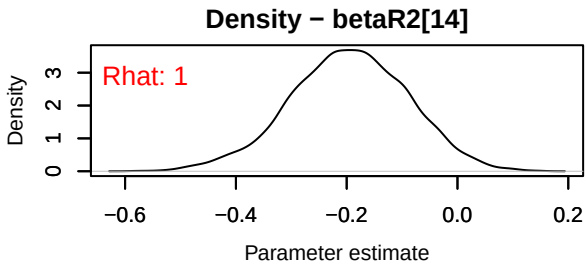

Trace − betaR2[12]
Value
−0.2
0.4
15000
16000
17000
18000
19000
20000
Iteration

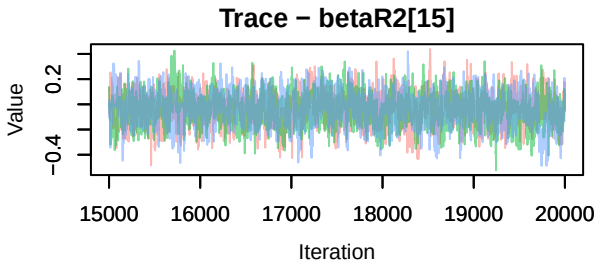

Density − betaR2[12]
Rhat: 1.01
Density
0
1
2
3
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

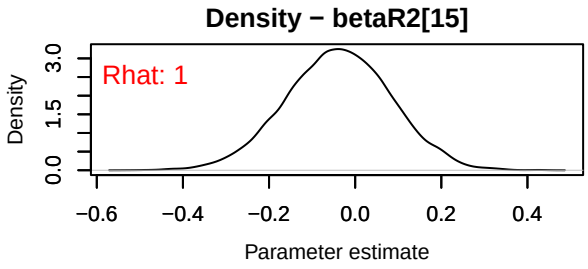

Trace − betaR2[13]
Value
0.0
0.4
15000
16000
17000
18000
19000
20000
Iteration

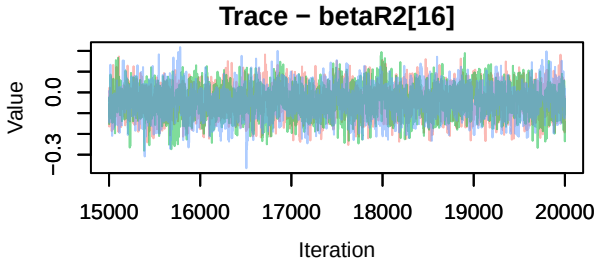

Density − betaR2[13]
Rhat: 1
Density
0
1
2
3
4
0.0
0.2
0.4
0.6
0.8
Parameter estimate

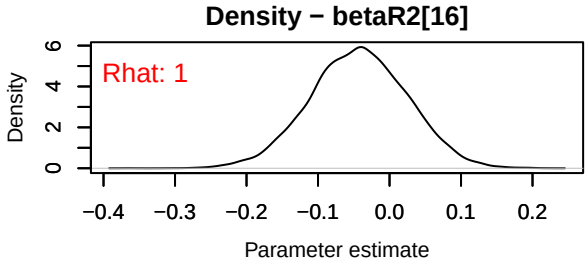

Trace − betaR2[14]
Value
−0.6
−0.2
15000
16000
17000
18000
19000
20000
Iteration

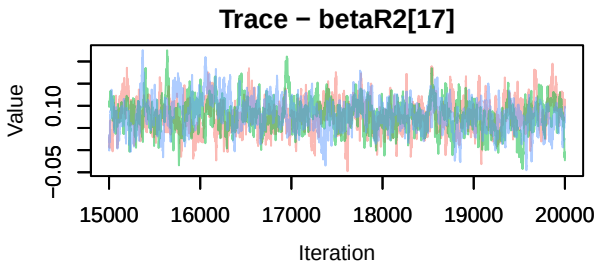

Density − betaR2[14]
Rhat: 1
Density
0
1
2
3
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

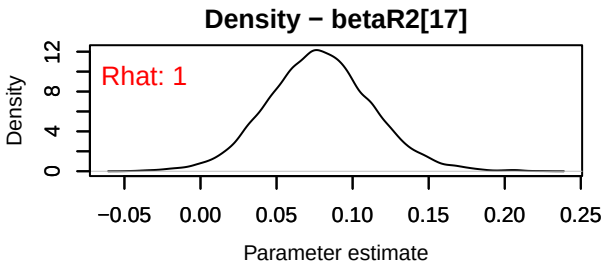

Trace − betaR2[15]
Value
−0.4
0.2
15000
16000
17000
18000
19000
20000
Iteration

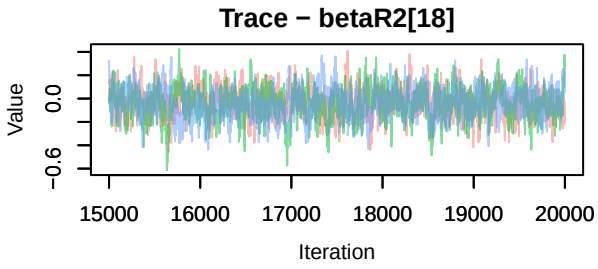

Density − betaR2[15]
Rhat: 1
Density
0.0
1.5
3.0
−0.6
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

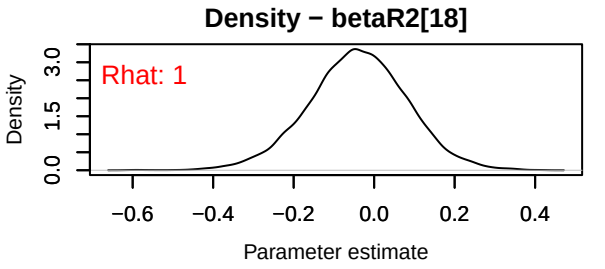

Trace − betaR2[16]
Value
−0.3
0.0
15000
16000
17000
18000
19000
20000
Iteration

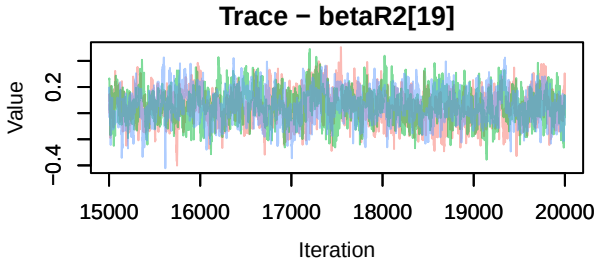

Density − betaR2[16]
Rhat: 1
Density
0
2
4
6
−0.4
−0.3
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

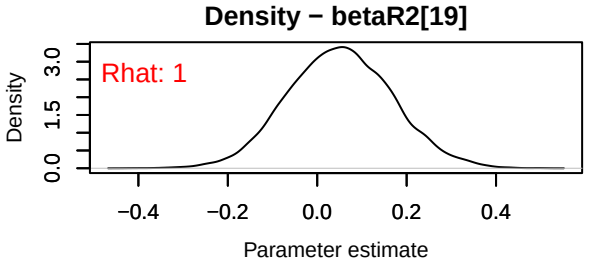

Trace − betaR2[17]
Value
−0.05
0.10
15000
16000
17000
18000
19000
20000
Iteration

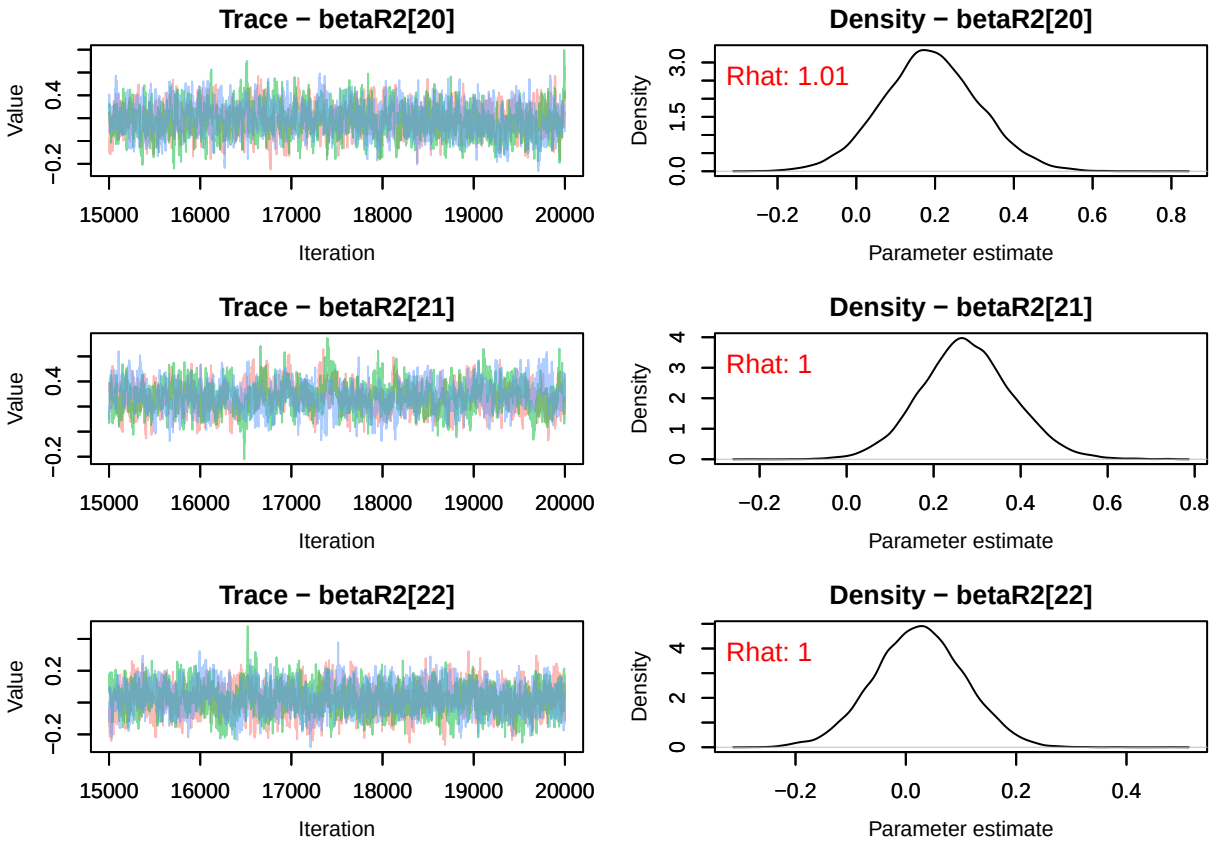

Density − betaR2[17]
Rhat: 1
Density
0
4
8
12
−0.05
0.00
0.05
0.10
0.15
0.20
0.25
Parameter estimate

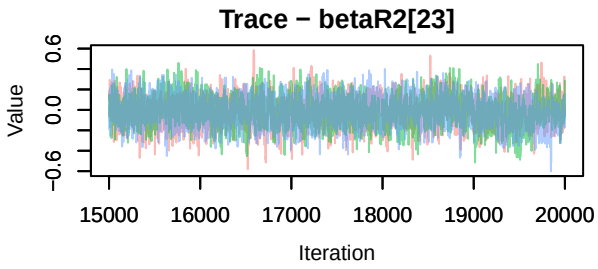

Trace − betaR2[18]
Value
−0.6
0.0
15000
16000
17000
18000
19000
20000
Iteration

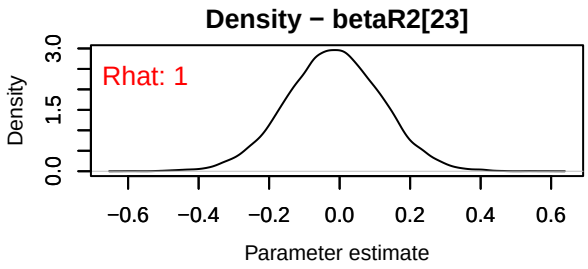

Density − betaR2[18]
Rhat: 1
Density
0.0
1.5
3.0
−0.6
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

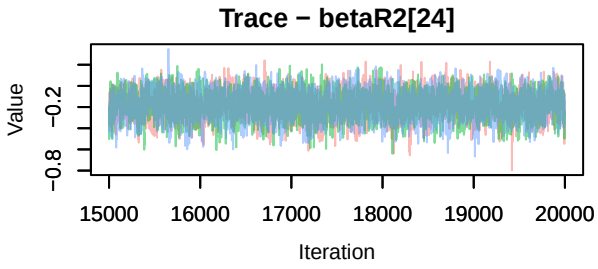

Trace − betaR2[19]
Value
−0.4
0.2
15000
16000
17000
18000
19000
20000
Iteration

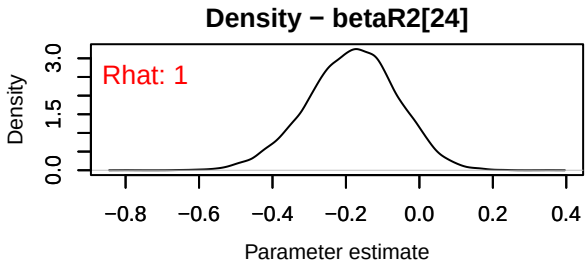

Density − betaR2[19]
Rhat: 1
Density
0.0
1.5
3.0
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

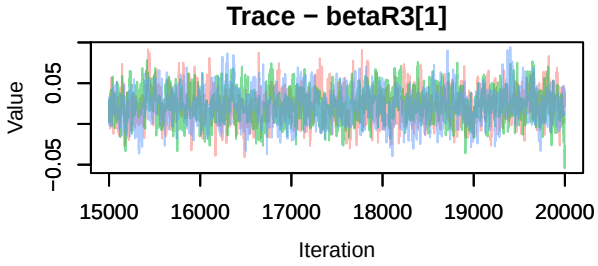

Trace − betaR2[20]
Value
Iteration
Density − betaR2[20]
Rhat: 1.01
Density
Parameter estimate
Trace − betaR2[21]
Value
Iteration
Density − betaR2[21]
Rhat: 1
Density
Parameter estimate
Trace − betaR2[22]
Value
Iteration
Density − betaR2[22]
Rhat: 1
Density
Parameter estimate

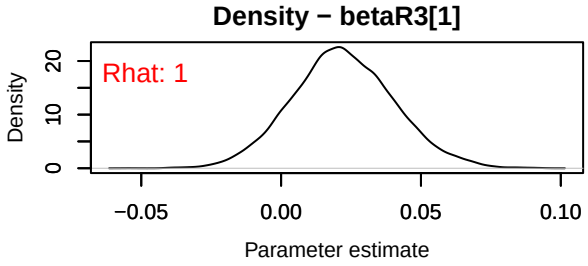

Trace − betaR2[23]
Value
−0.6
0.0
0.6
15000
16000
17000
18000
19000
20000
Iteration

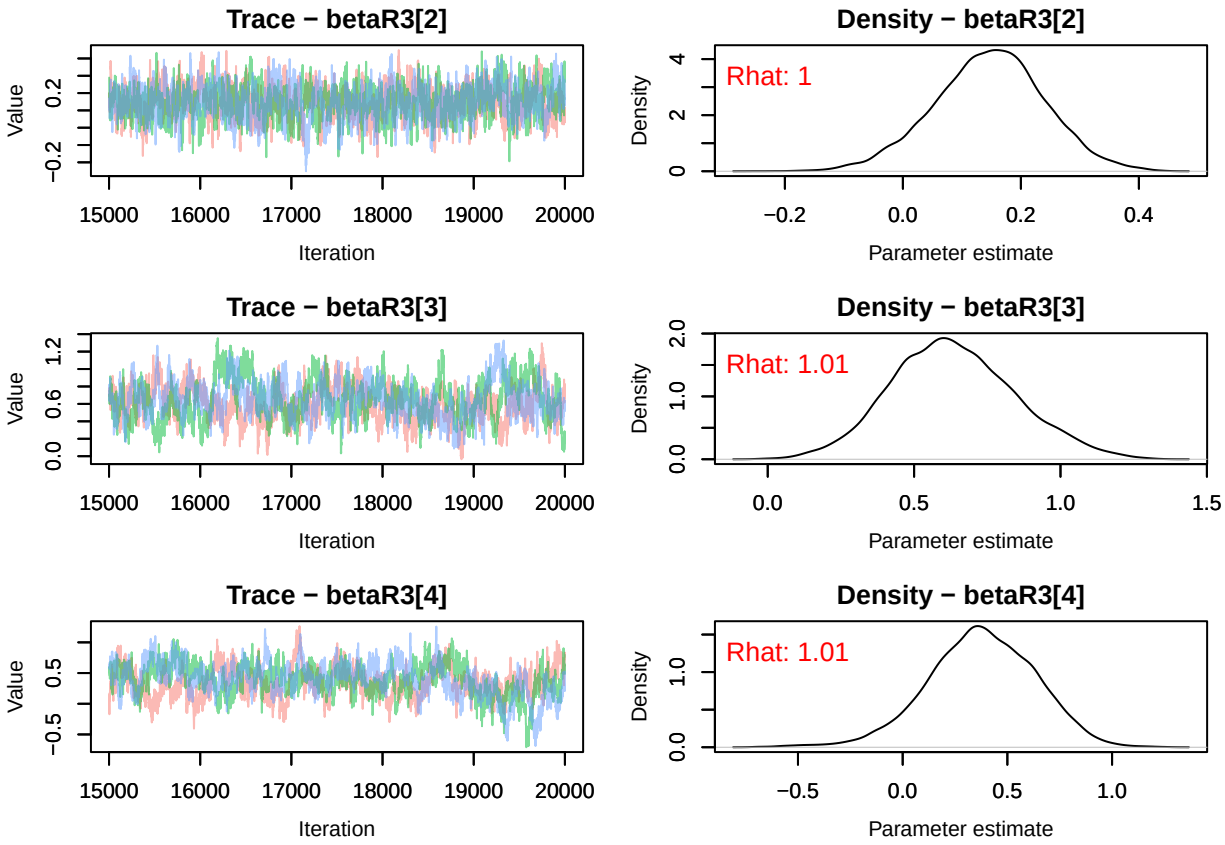

Density − betaR2[23]
Density
0.0
1.5
3.0
Rhat: 1
−0.6
−0.4
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

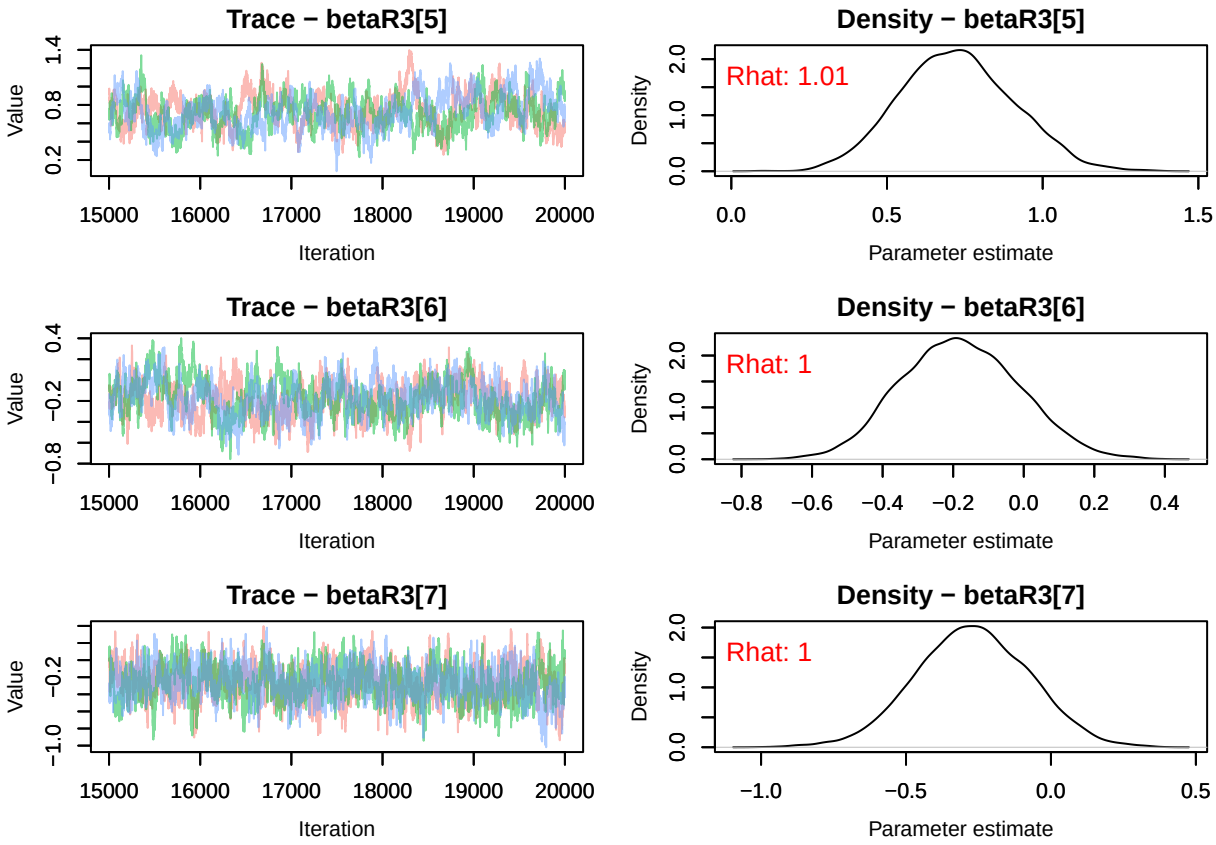

Trace − betaR2[24]
Value
−0.8
−0.2
15000
16000
17000
18000
19000
20000
Iteration

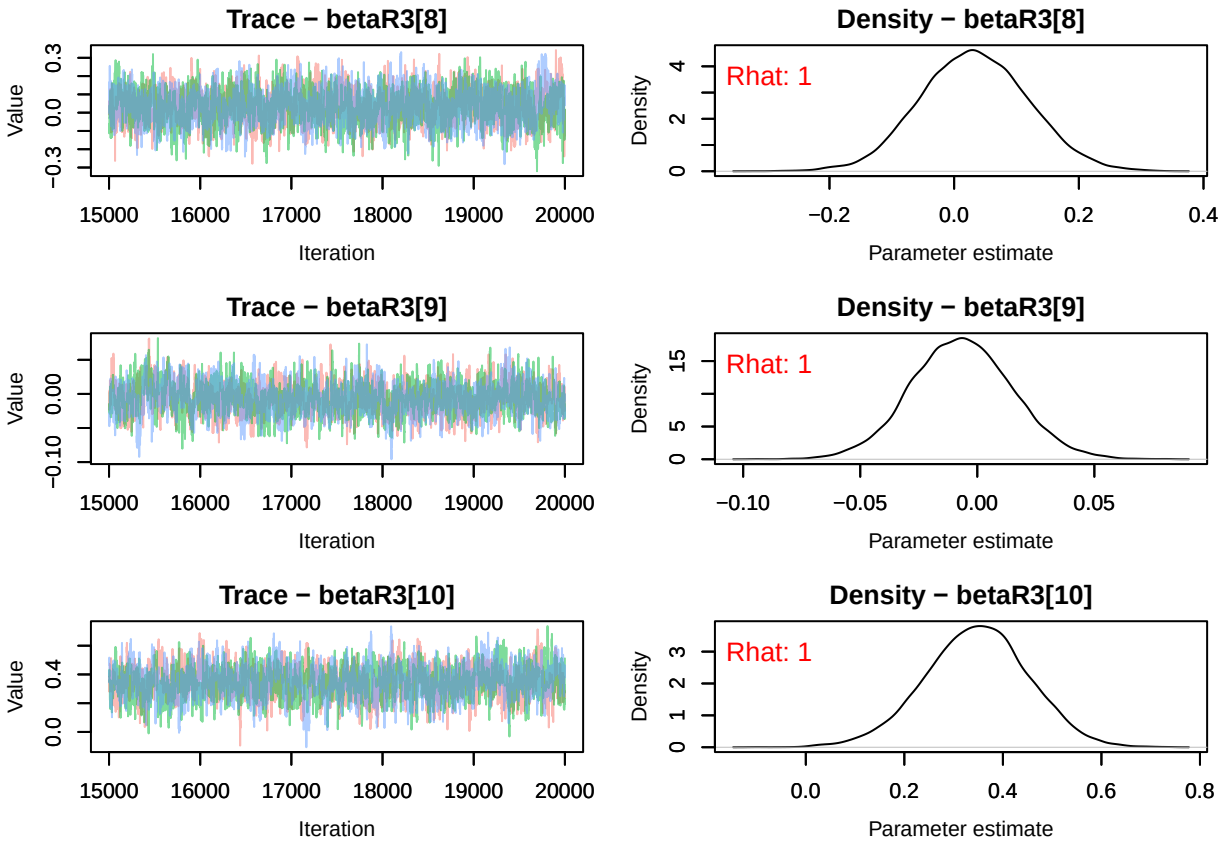

Density − betaR2[24]
Density
0.0
1.5
3.0
Rhat: 1
−0.8
−0.6
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

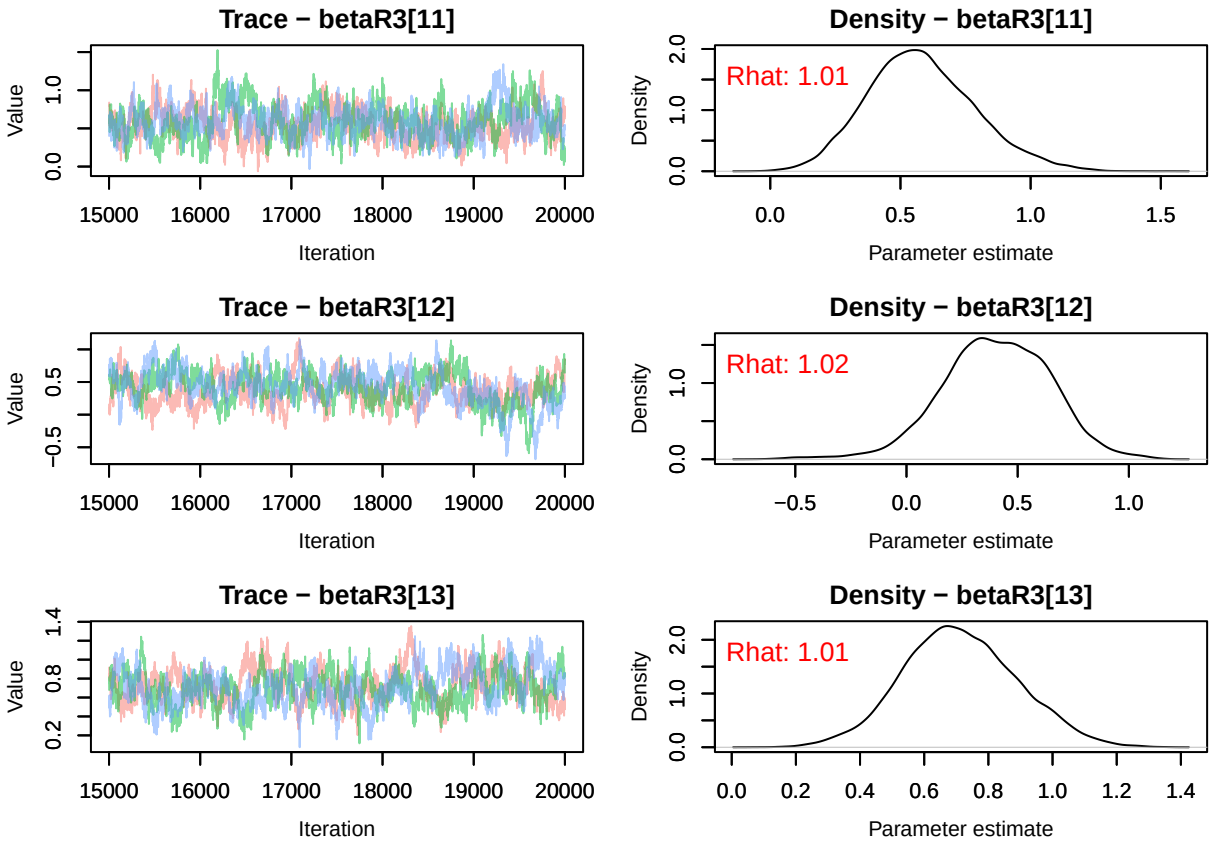

Trace − betaR3[1]
Value
−0.05
0.05
15000
16000
17000
18000
19000
20000
Iteration

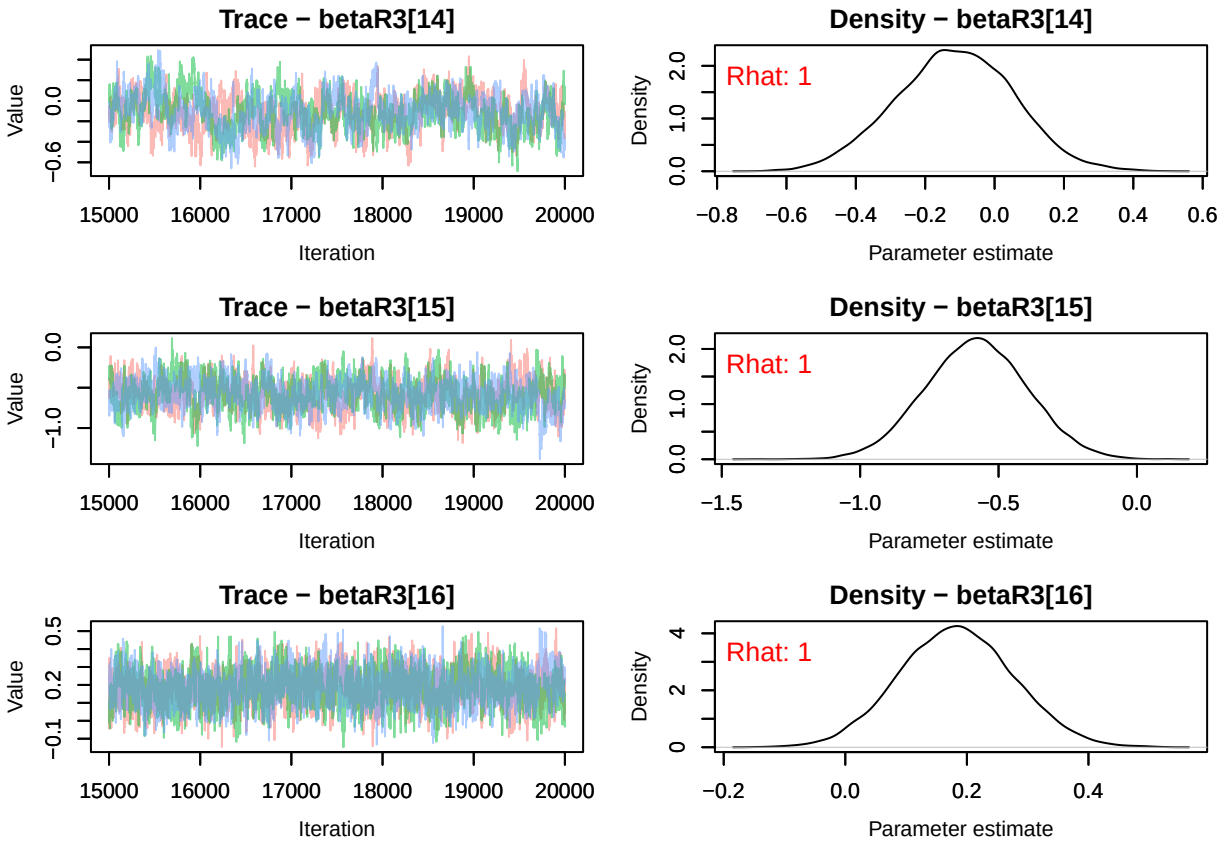

Density − betaR3[1]
Density
0
10
20
Rhat: 1
−0.05
0.00
0.05
0.10
Parameter estimate

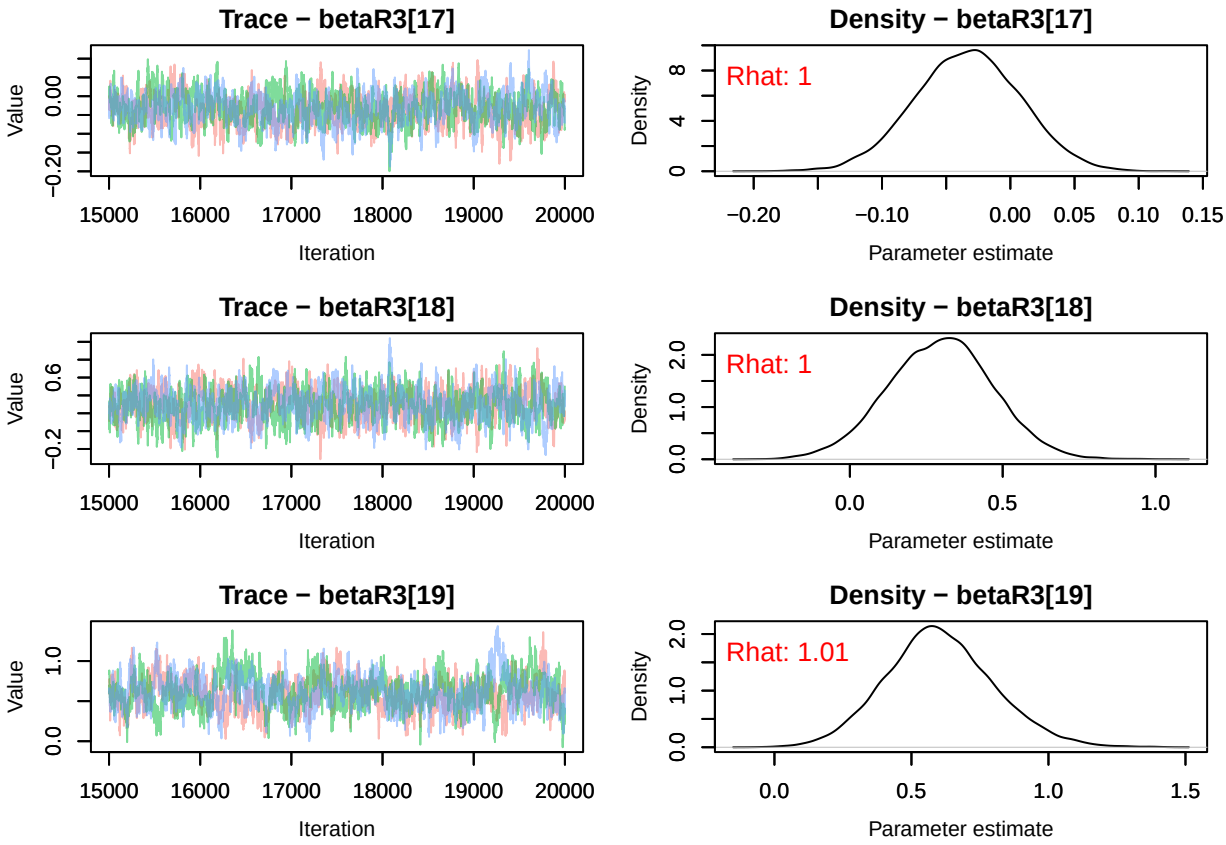

Trace − betaR3[2]
Value
Iteration
Density − betaR3[2]
Rhat: 1
Density
Parameter estimate
Trace − betaR3[3]
Rhat: 1.01
Density − betaR3[3]
Trace − betaR3[4]
Density − betaR3[4]

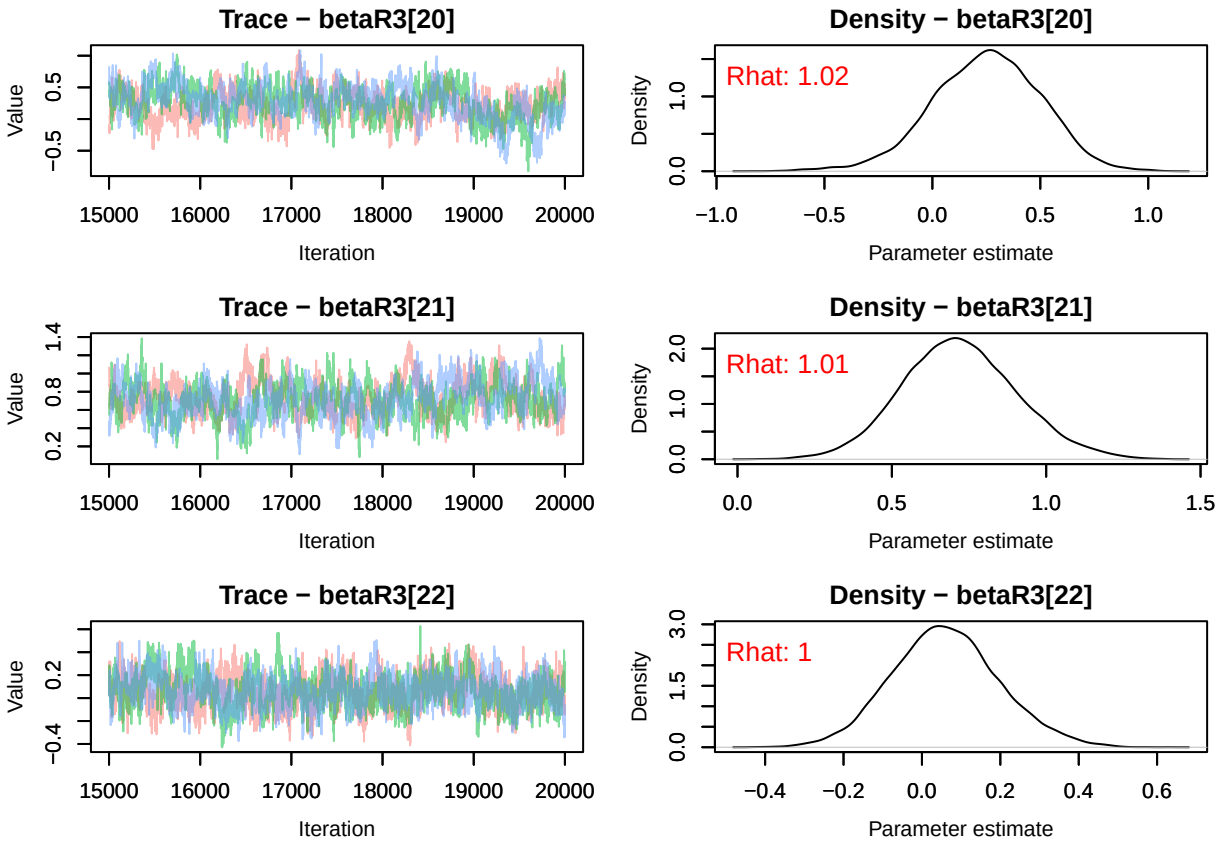

Trace − betaR3[5]
Value
Iteration
Density − betaR3[5]
Rhat: 1.01
Density
Parameter estimate
Trace − betaR3[6]
Value
Iteration
Density − betaR3[6]
Rhat: 1
Density
Parameter estimate
Trace − betaR3[7]
Value
Iteration
Density − betaR3[7]
Rhat: 1
Density
Parameter estimate

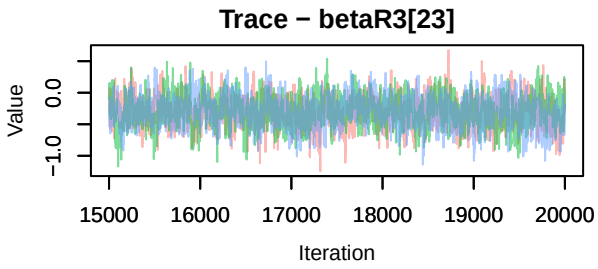

Trace − betaR3[8]
Value
−0.3
0.0
0.3
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR3[8]
Density
0
2
4
Rhat: 1
−0.2
0.0
0.2
0.4
Parameter estimate
Trace − betaR3[9]
Value
−0.10
0.00
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR3[9]
Density
0
5
15
Rhat: 1
−0.10
−0.05
0.00
0.05
Parameter estimate
Trace − betaR3[10]
Value
0.0
0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR3[10]
Density
0
1
2
3
Rhat: 1
0.0
0.2
0.4
0.6
0.8
Parameter estimate

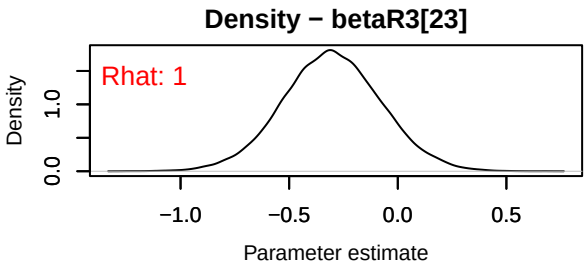

Trace − betaR3[11]
Value
Iteration
Density − betaR3[11]
Rhat: 1.01
Density
Parameter estimate
Trace − betaR3[12]
Value
Iteration
Density − betaR3[12]
Rhat: 1.02
Density
Parameter estimate
Trace − betaR3[13]
Value
Iteration
Density − betaR3[13]
Rhat: 1.01
Density
Parameter estimate

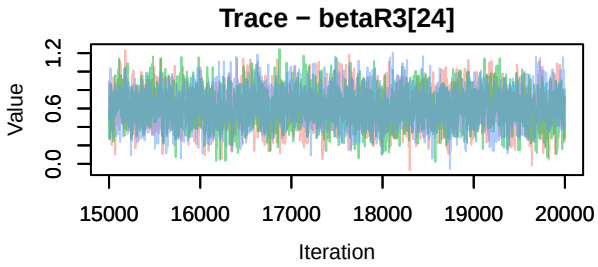

Trace − betaR3[14]
Value
Iteration
Density − betaR3[14]
Rhat: 1
Density
Parameter estimate
Trace − betaR3[15]
Value
Iteration
Density − betaR3[15]
Rhat: 1
Density
Parameter estimate
Trace − betaR3[16]
Value
Iteration
Density − betaR3[16]
Rhat: 1
Density
Parameter estimate

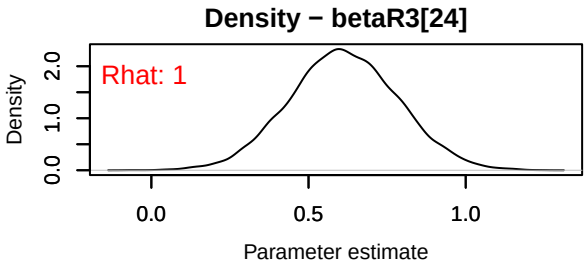

Trace − betaR3[17]
Value
−0.20
0.00
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR3[17]
Density
0
4
8
Rhat: 1
−0.20
−0.10
0.00
0.05
0.10
0.15
Parameter estimate
Trace − betaR3[18]
Value
−0.2
0.6
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR3[18]
Density
0.0
1.0
2.0
Rhat: 1
0.0
0.5
1.0
Parameter estimate
Trace − betaR3[19]
Value
0.0
1.0
15000
16000
17000
18000
19000
20000
Iteration
Density − betaR3[19]
Density
0.0
1.0
2.0
Rhat: 1.01
0.0
0.5
1.0
1.5
Parameter estimate

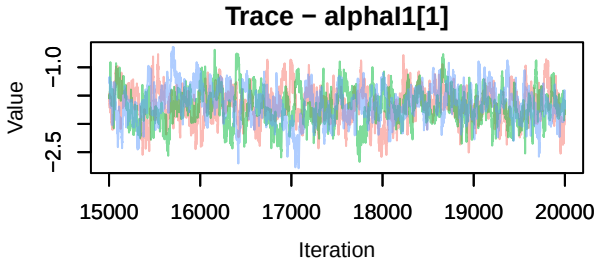

Trace − betaR3[20]
Value
Iteration
Density − betaR3[20]
Rhat: 1.02
Density
Parameter estimate
Trace − betaR3[21]
Value
Iteration
Density − betaR3[21]
Rhat: 1.01
Density
Parameter estimate
Trace − betaR3[22]
Value
Iteration
Density − betaR3[22]
Rhat: 1
Density
Parameter estimate

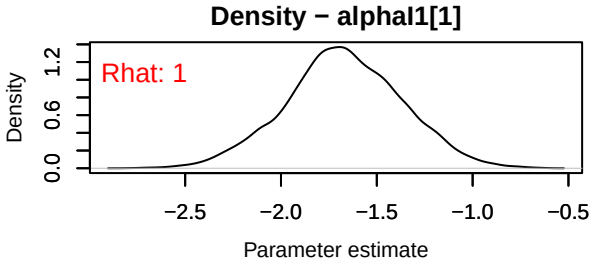

Trace − betaR3[23]
Value
0.0
−1.0
15000
16000
17000
18000
19000
20000
Iteration

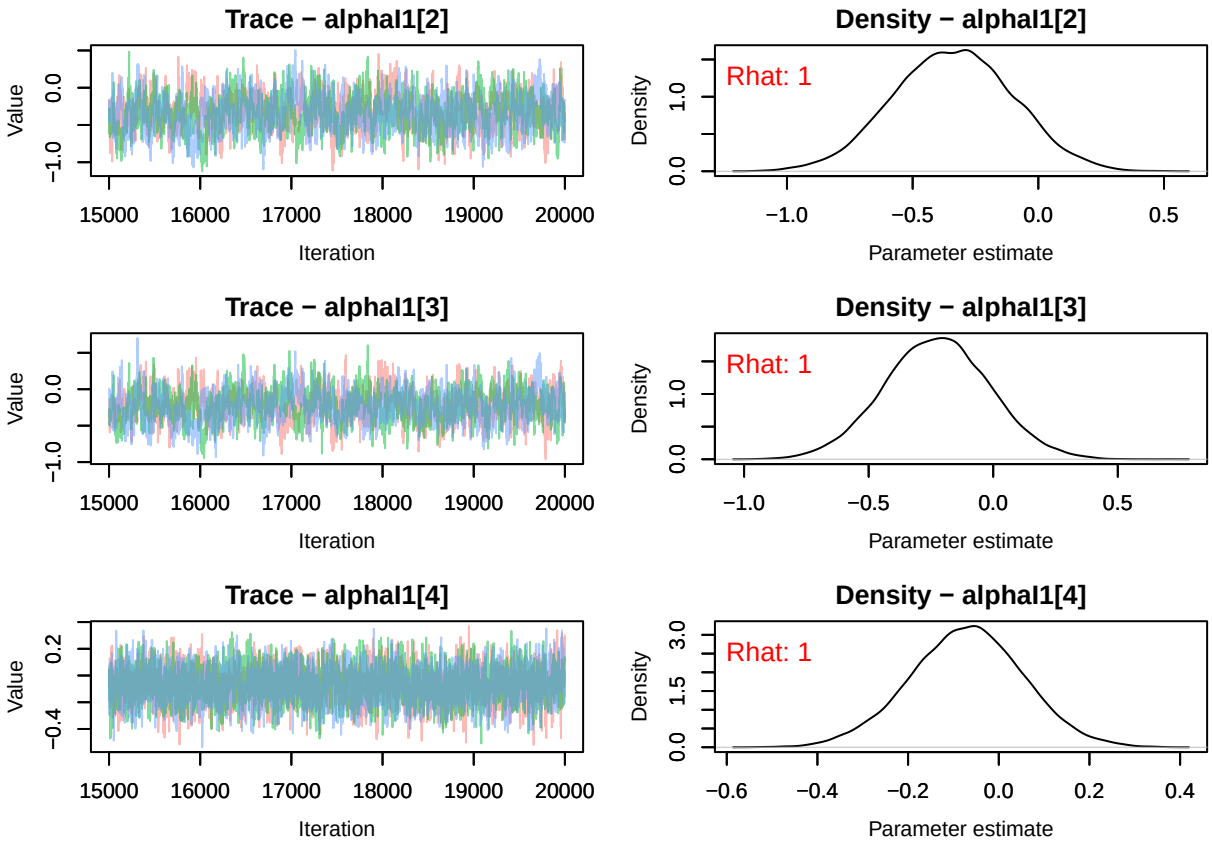

Density − betaR3[23]
Rhat: 1
Density
0.0
1.0
−1.0
−0.5
0.0
0.5
Parameter estimate

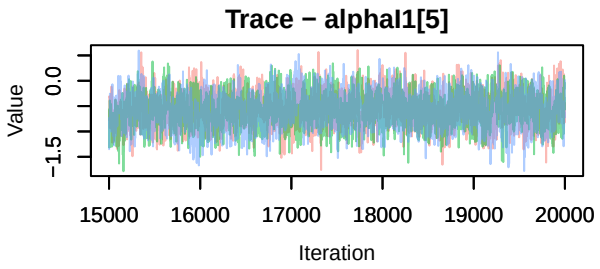

Trace − betaR3[24]
Value
0.0
0.6
1.2
15000
16000
17000
18000
19000
20000
Iteration

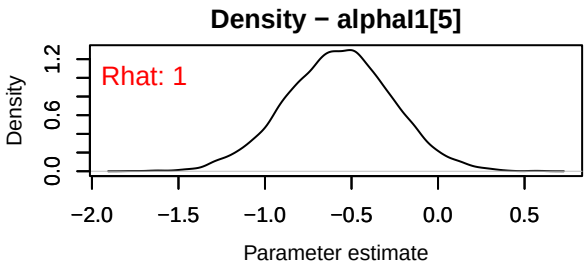

Density − betaR3[24]
Rhat: 1
Density
0.0
1.0
2.0
0.0
0.5
1.0
Parameter estimate

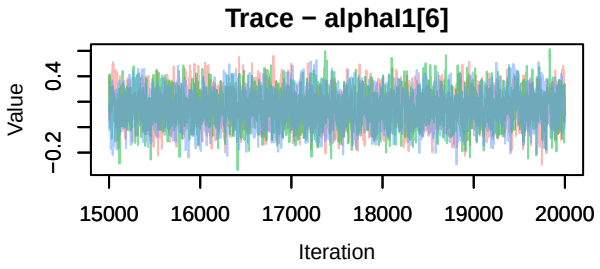

Trace − alphaI1[1]
Value
−2.5
−1.0
15000
16000
17000
18000
19000
20000
Iteration

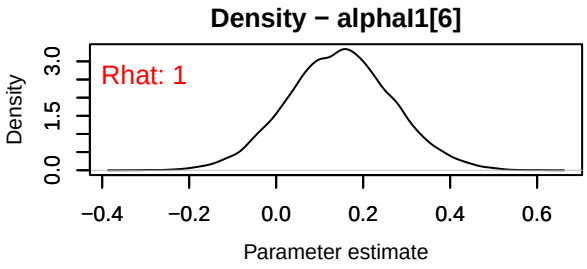

Density − alphaI1[1]
Rhat: 1
Density
0.0
0.6
1.2
−2.5
−2.0
−1.5
−1.0
−0.5
Parameter estimate

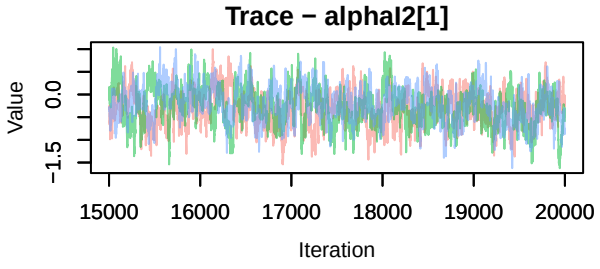

Trace − alphal1[2]
Value
Iteration
Density − alphal1[2]
Rhat: 1
Density
Parameter estimate
Trace − alphal1[3]
Value
Iteration
Density − alphal1[3]
Rhat: 1
Density
Parameter estimate
Trace − alphal1[4]
Value
Iteration
Density − alphal1[4]
Rhat: 1
Density
Parameter estimate

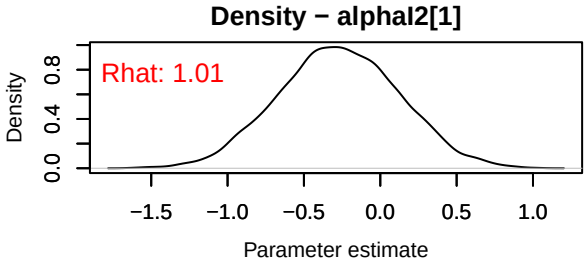

Trace − alphaI1[5]
Value
0.0
−1.5
15000
16000
17000
18000
19000
20000
Iteration

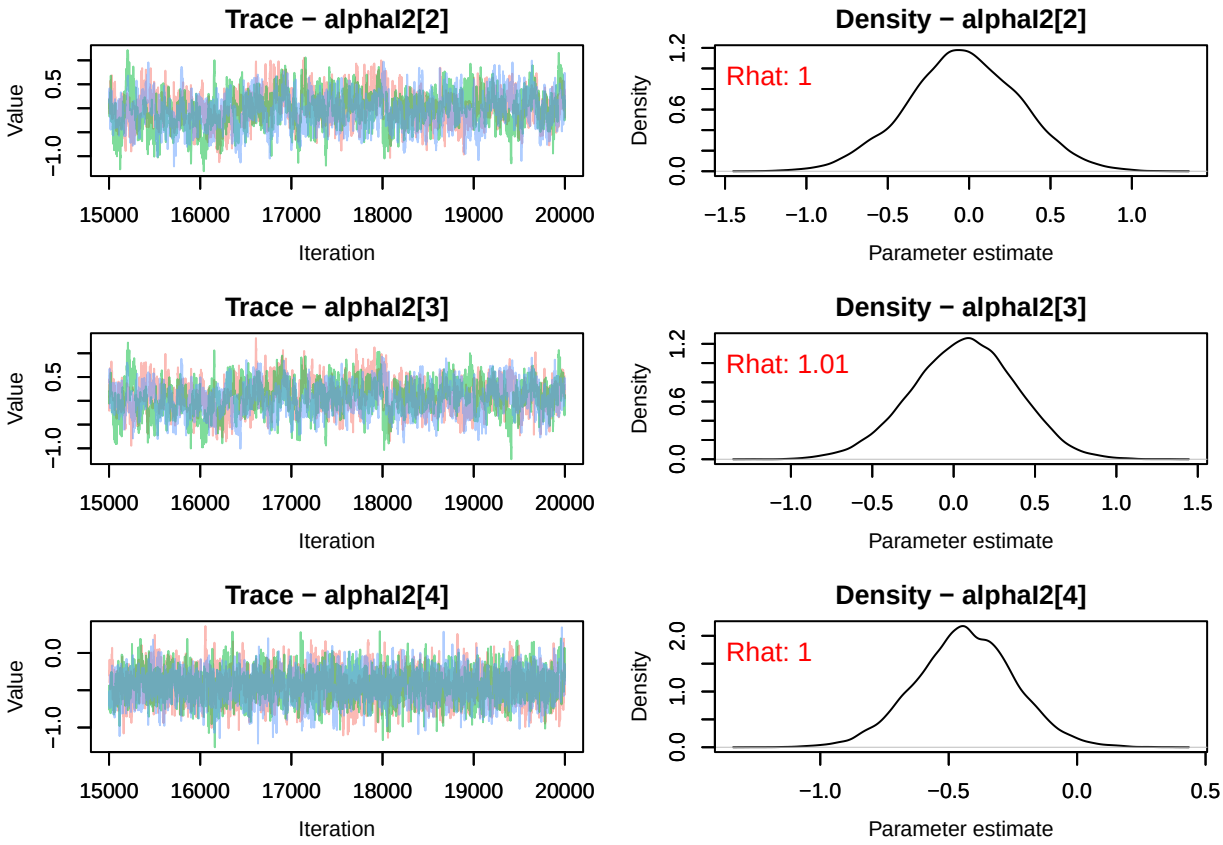

Density − alphaI1[5]
Rhat: 1
Density
0.0
0.6
1.2
−2.0
−1.5
−1.0
−0.5
0.0
0.5
Parameter estimate

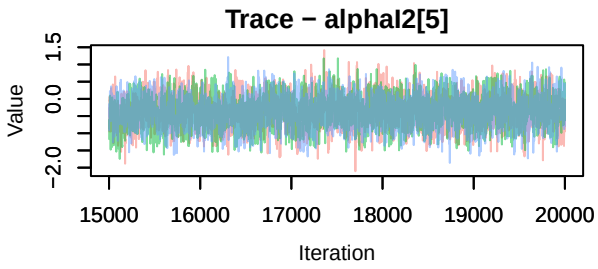

Trace − alphaI1[6]
Value
0.4
−0.2
15000
16000
17000
18000
19000
20000
Iteration

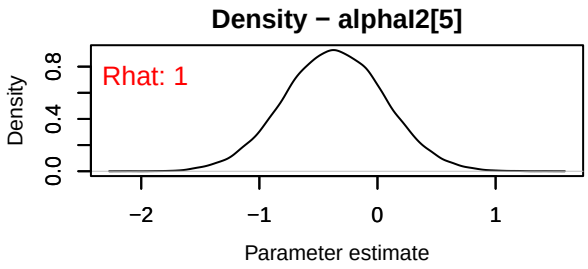

Density − alphaI1[6]
Rhat: 1
Density
0.0
1.5
3.0
−0.4
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

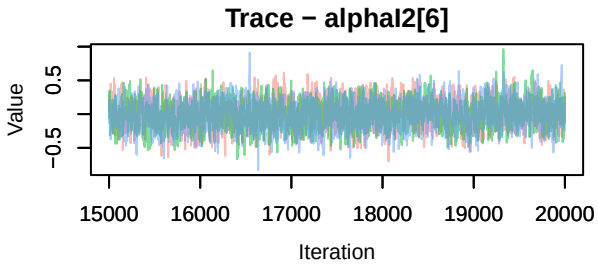

Trace − alphaI2[1]
Value
0.0
−1.5
15000
16000
17000
18000
19000
20000
Iteration

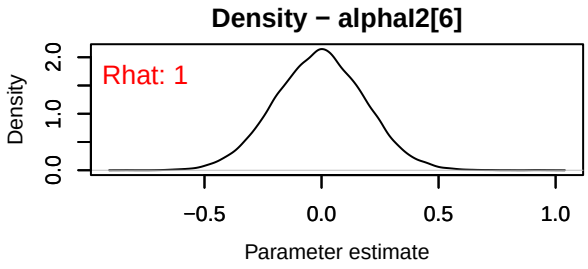

Density − alphaI2[1]
Rhat: 1.01
Density
0.0
0.4
0.8
−1.5
−1.0
−0.5
0.0
0.5
1.0
Parameter estimate

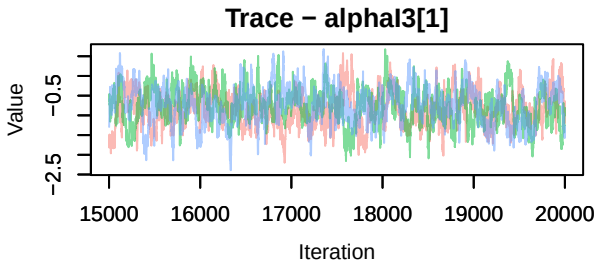

Trace − alphaI2[2]
Value
Iteration
Density − alphaI2[2]
Rhat: 1
Density
Parameter estimate
Trace − alphaI2[3]
Value
Iteration
Density − alphaI2[3]
Rhat: 1.01
Density
Parameter estimate
Trace − alphaI2[4]
Value
Iteration
Density − alphaI2[4]
Rhat: 1
Density
Parameter estimate

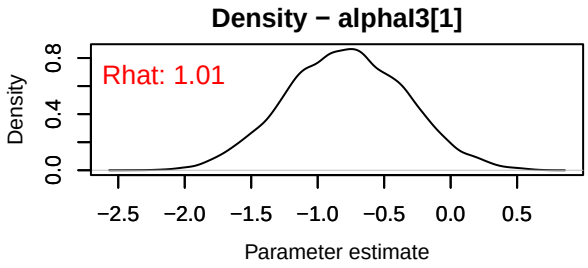

Trace − alphaI2[5]
Value
Iteration

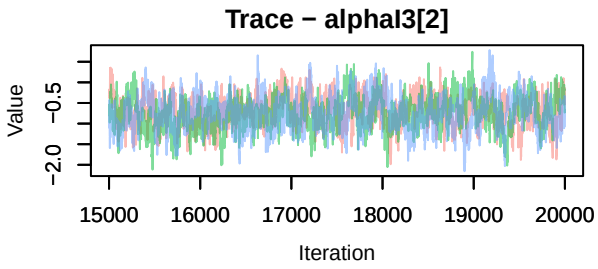

Density − alphaI2[5]
Rhat: 1
Density
Parameter estimate

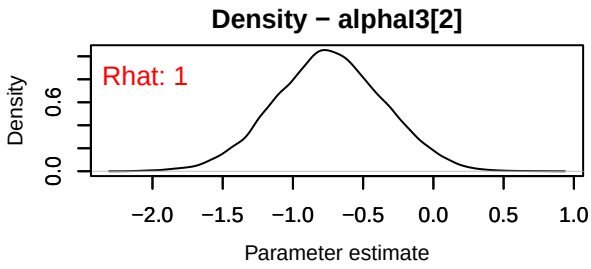

Trace − alphaI2[6]
Value
Iteration

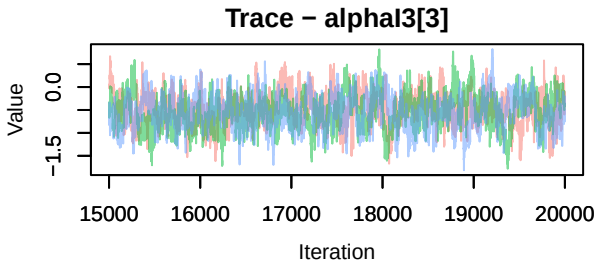

Density − alphaI2[6]
Rhat: 1
Density
Parameter estimate

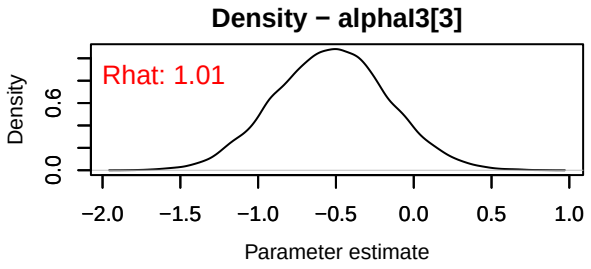

Trace − alphaI3[1]
Value
Iteration

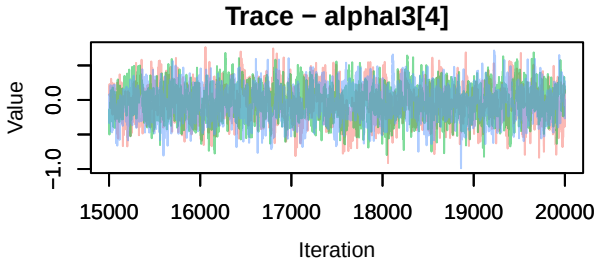

Density − alphaI3[1]
Rhat: 1.01
Density
Parameter estimate

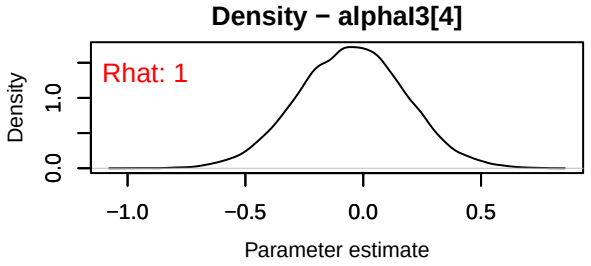

Trace − alphaI3[2]
Value
−2.0
−0.5
15000
16000
17000
18000
19000
20000
Iteration

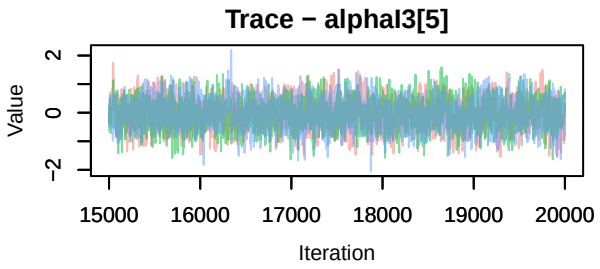

Density − alphaI3[2]
Rhat: 1
Density
0.0
0.6
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
Parameter estimate

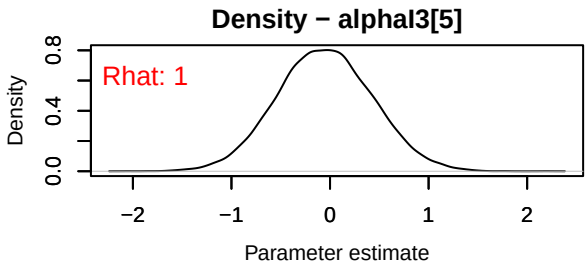

Trace − alphaI3[3]
Value
−1.5
0.0
15000
16000
17000
18000
19000
20000
Iteration

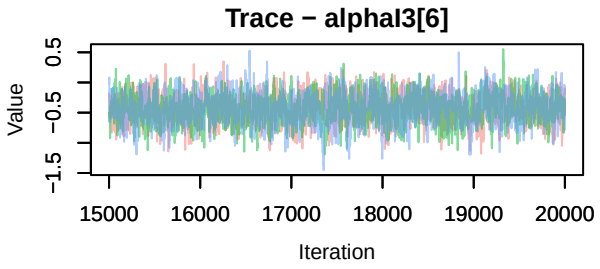

Density − alphaI3[3]
Rhat: 1.01
Density
0.0
0.6
−2.0
−1.5
−1.0
−0.5
0.0
0.5
1.0
Parameter estimate

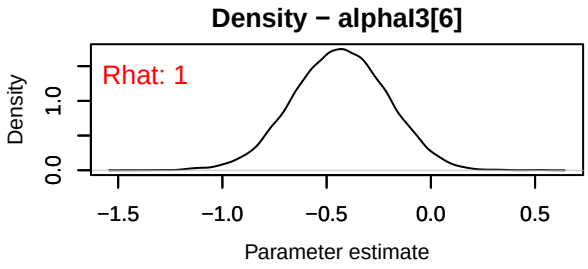

Trace − alphaI3[4]
Value
−1.0
0.0
15000
16000
17000
18000
19000
20000
Iteration

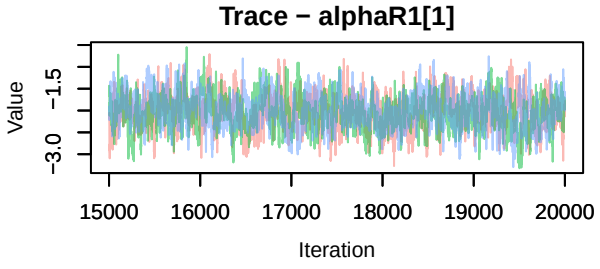

Density − alphaI3[4]
Rhat: 1
Density
0.0
1.0
−1.0
−0.5
0.0
0.5
Parameter estimate

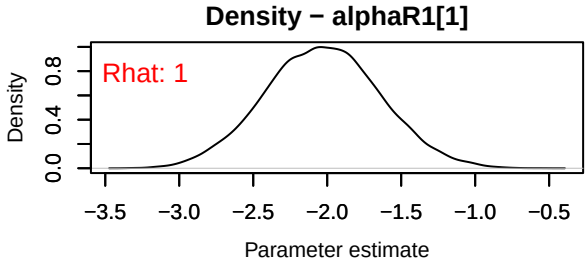

Trace − alphaI3[5]
Value
Iteration

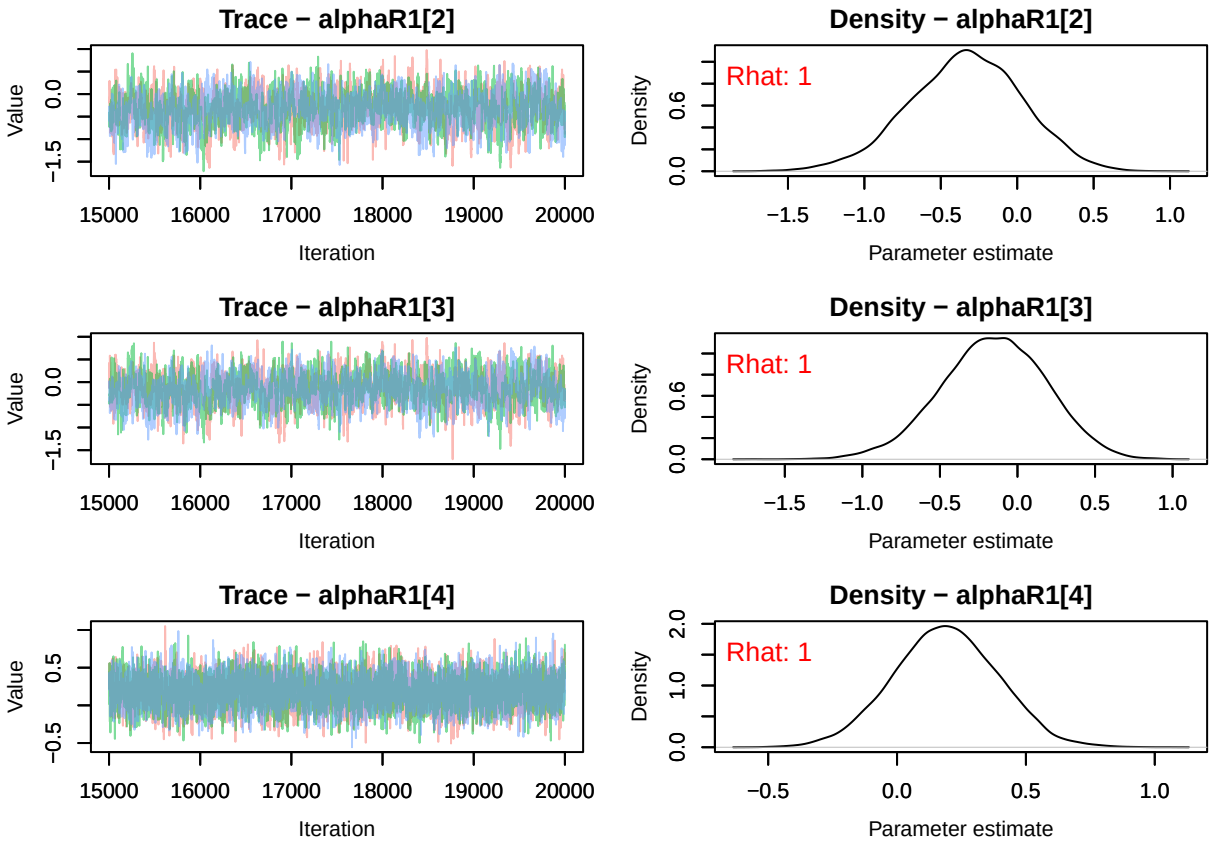

Density − alphaI3[5]
Rhat: 1
Density
Parameter estimate

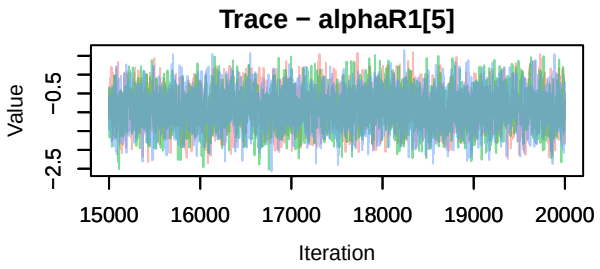

Trace − alphaI3[6]
Value
Iteration

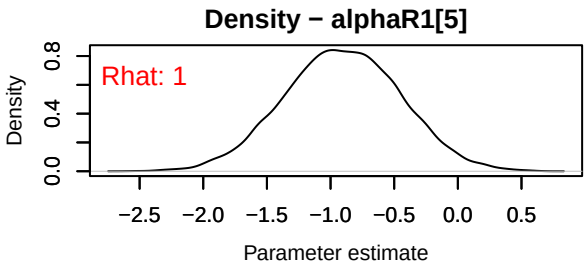

Density − alphaI3[6]
Rhat: 1
Density
Parameter estimate

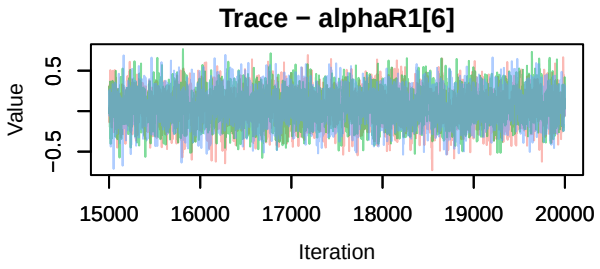

Trace − alphaR1[1]
Value
Iteration

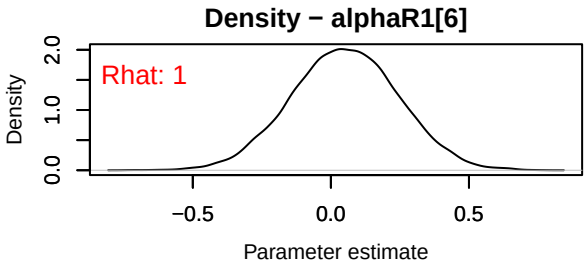

Density − alphaR1[1]
Rhat: 1
Density
Parameter estimate

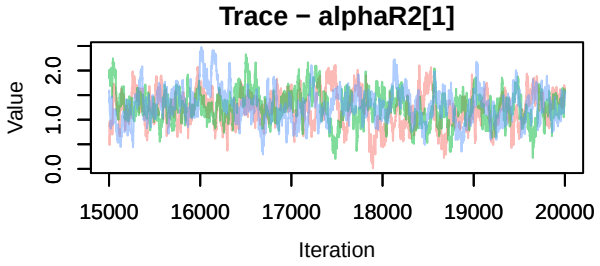

Trace − alphaR1[2]
Value
Iteration
Density − alphaR1[2]
Rhat: 1
Density
Parameter estimate
Trace − alphaR1[3]
Value
Iteration
Density − alphaR1[3]
Rhat: 1
Density
Parameter estimate
Trace − alphaR1[4]
Value
Iteration
Density − alphaR1[4]
Rhat: 1
Density
Parameter estimate

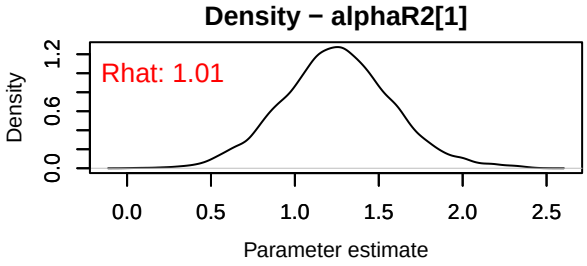

Trace − alphaR1[5]
Value
−2.5
−0.5
15000
16000
17000
18000
19000
20000
Iteration

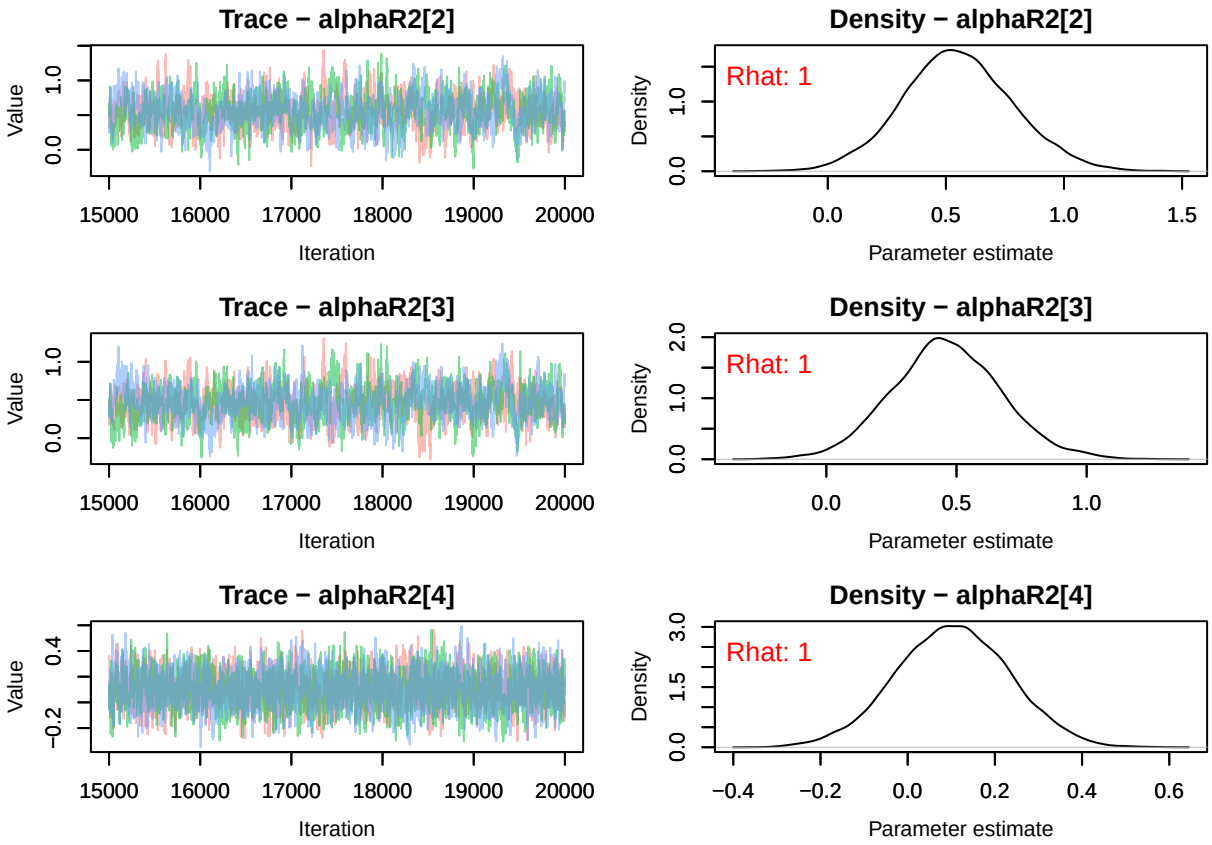

Density − alphaR1[5]
Rhat: 1
Density
0.0
0.4
0.8
−2.5
−2.0
−1.5
−1.0
−0.5
0.0
0.5
Parameter estimate

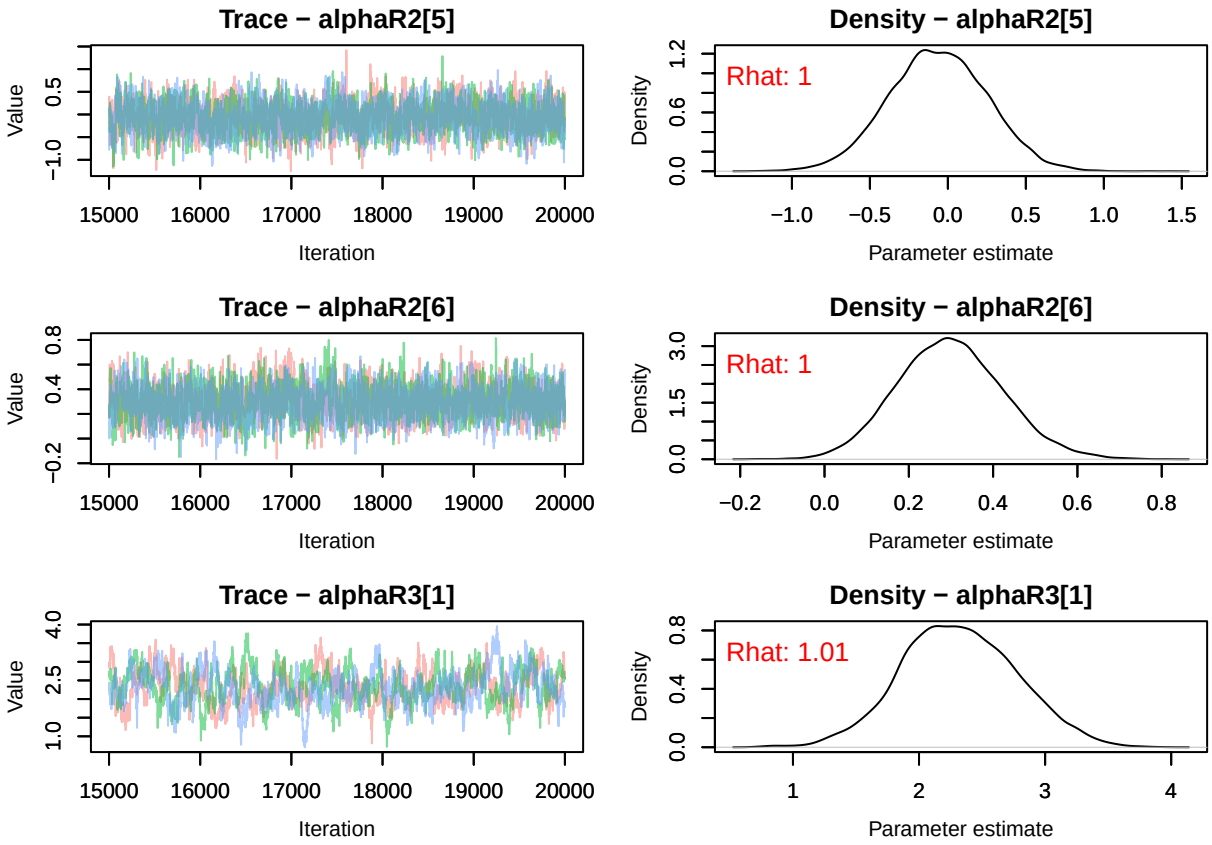

Trace − alphaR1[6]
Value
−0.5
0.5
15000
16000
17000
18000
19000
20000
Iteration

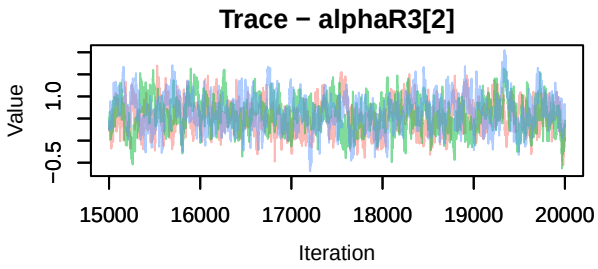

Density − alphaR1[6]
Rhat: 1
Density
0.0
1.0
2.0
−0.5
0.0
0.5
Parameter estimate

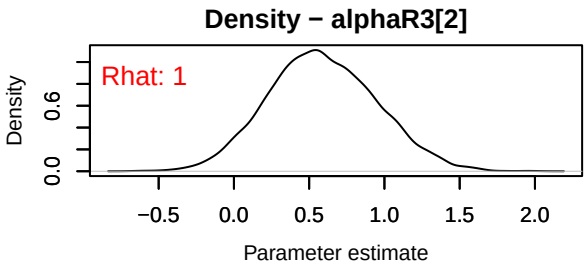

Trace − alphaR2[1]
Value
0.0
1.0
2.0
15000
16000
17000
18000
19000
20000
Iteration

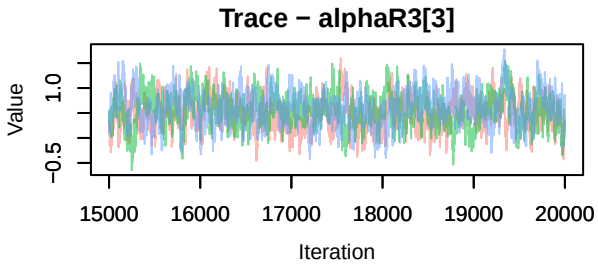

Density − alphaR2[1]
Rhat: 1.01
Density
0.0
0.6
1.2
0.0
0.5
1.0
1.5
2.0
2.5
Parameter estimate

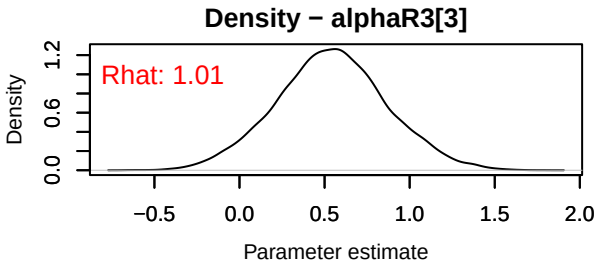

Trace − alphaR2[2]
Value
Iteration
Density − alphaR2[2]
Rhat: 1
Density
Parameter estimate
Trace − alphaR2[3]
Value
Iteration
Density − alphaR2[3]
Rhat: 1
Density
Parameter estimate
Trace − alphaR2[4]
Value
Iteration
Density − alphaR2[4]
Rhat: 1
Density
Parameter estimate

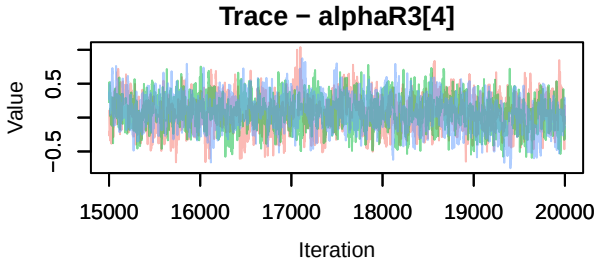

Trace − alphaR2[5]
Value
Iteration
Density − alphaR2[5]
Rhat: 1
Density
Parameter estimate
Trace − alphaR2[6]
Value
Iteration
Density − alphaR2[6]
Rhat: 1
Density
Parameter estimate
Trace − alphaR3[1]
Value
Iteration
Density − alphaR3[1]
Rhat: 1.01
Density
Parameter estimate

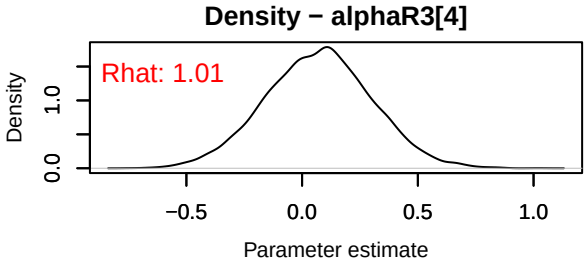

Trace − alphaR3[2]
Value
−0.5
1.0
15000
16000
17000
18000
19000
20000
Iteration

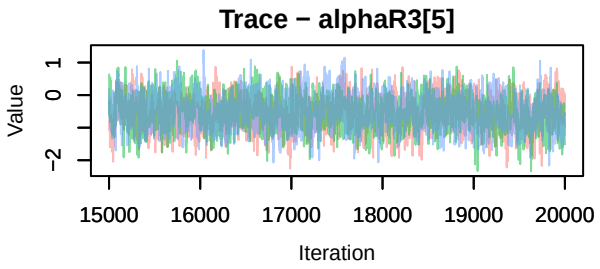

Density − alphaR3[2]
Rhat: 1
Density
0.0
0.6
−0.5
0.0
0.5
1.0
1.5
2.0
Parameter estimate

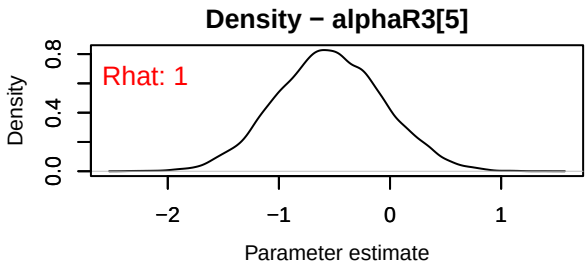

Trace − alphaR3[3]
Value
−0.5
1.0
15000
16000
17000
18000
19000
20000
Iteration

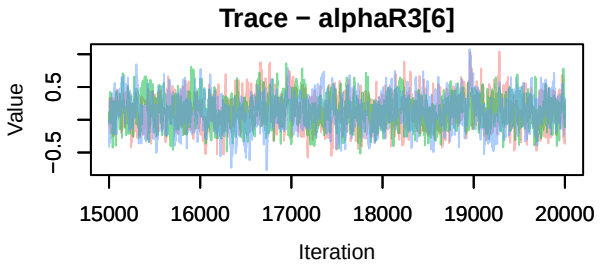

Density − alphaR3[3]
Rhat: 1.01
Density
0.0
0.6
1.2
−0.5
0.0
0.5
1.0
1.5
2.0
Parameter estimate

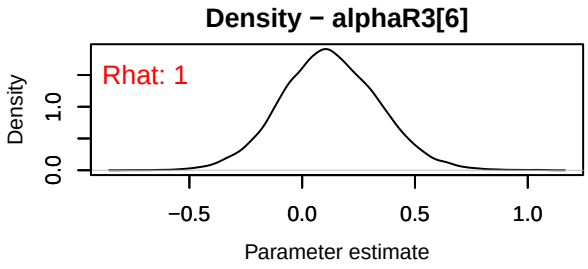

Trace − alphaR3[4]
Value
−0.5
0.5
15000
16000
17000
18000
19000
20000
Iteration

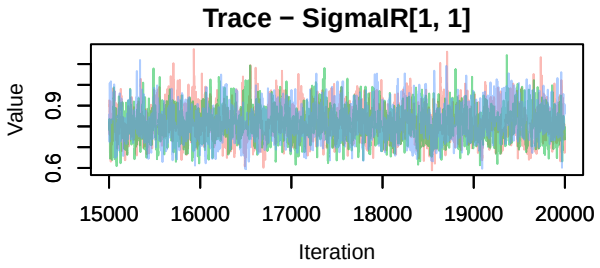

Density − alphaR3[4]
Rhat: 1.01
Density
0.0
1.0
−0.5
0.0
0.5
1.0
Parameter estimate

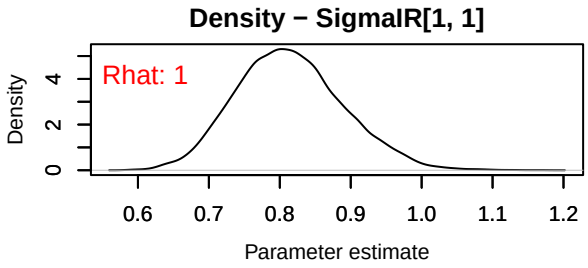

Trace − alphaR3[5]
Value
Iteration

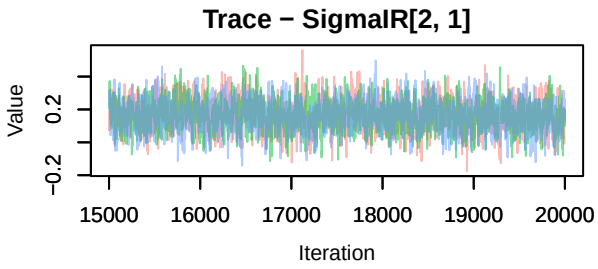

Density − alphaR3[5]
Rhat: 1
Density
Parameter estimate

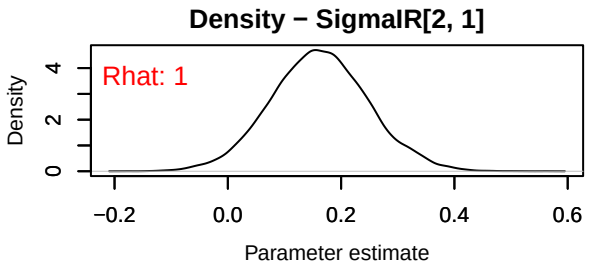

Trace − alphaR3[6]
Value
Iteration

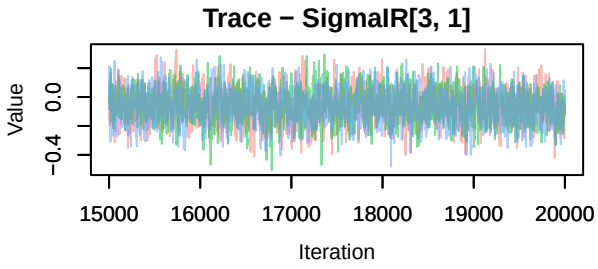

Density − alphaR3[6]
Rhat: 1
Density
Parameter estimate

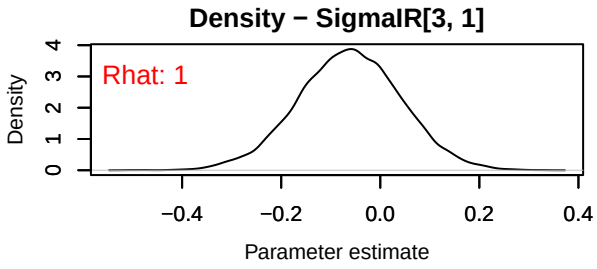

Trace − SigmaIR[1, 1]
Value
Iteration

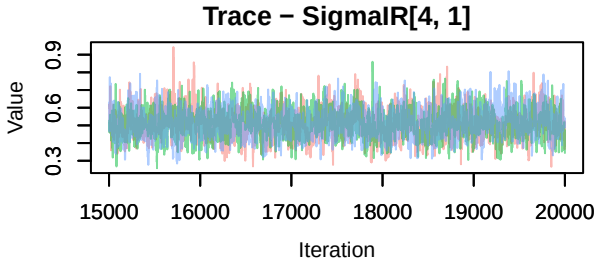

Density − SigmaIR[1, 1]
Rhat: 1
Density
Parameter estimate

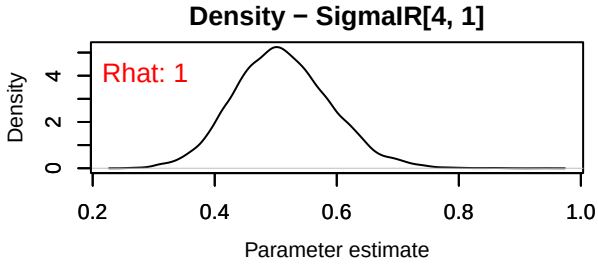

Trace − SigmaIR[2, 1]
Value
−0.2
0.2
15000
16000
17000
18000
19000
20000
Iteration

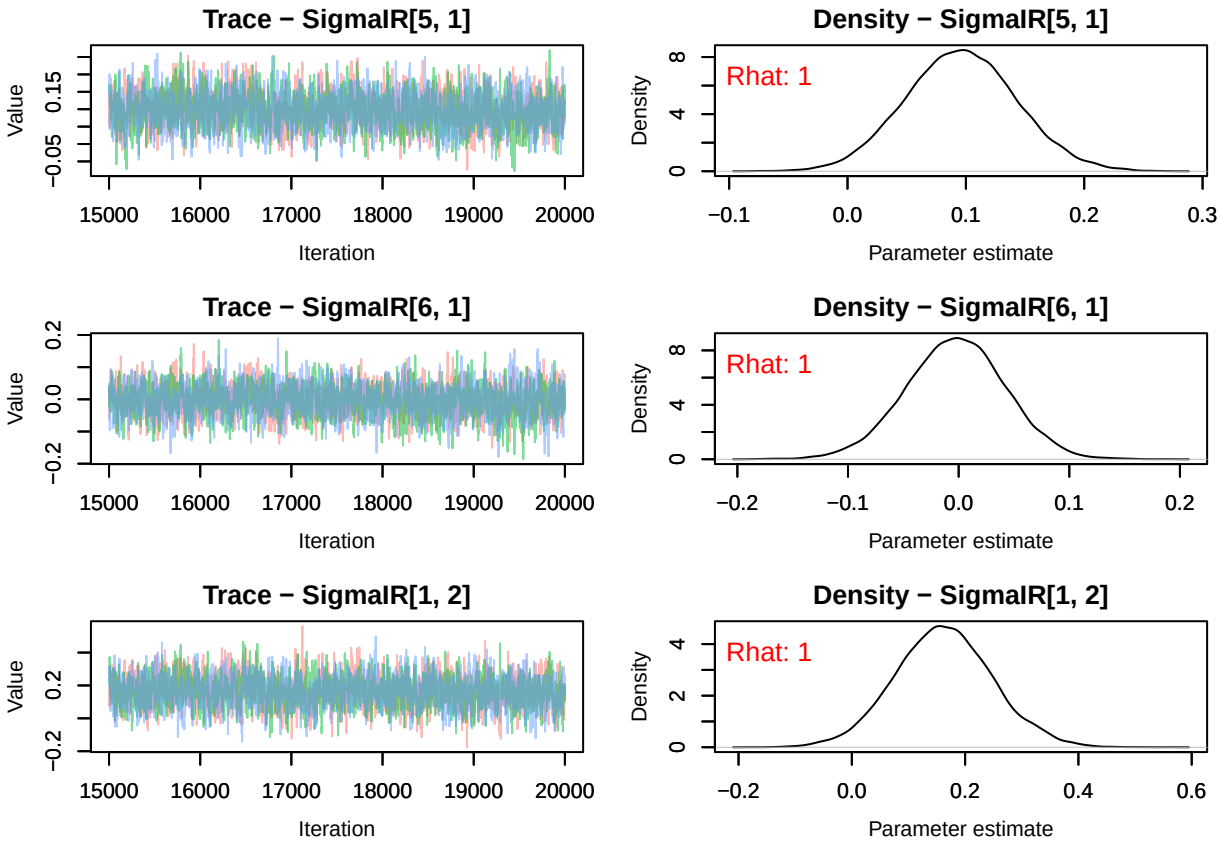

Density − SigmaIR[2, 1]
Rhat: 1
Density
0
2
4
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

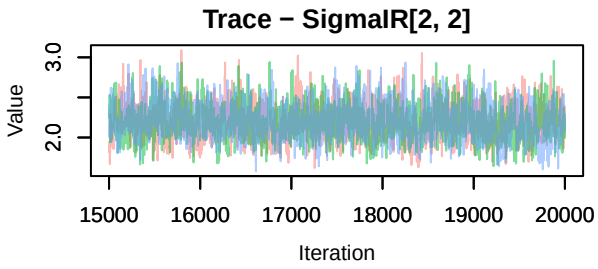

Trace − SigmaIR[3, 1]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

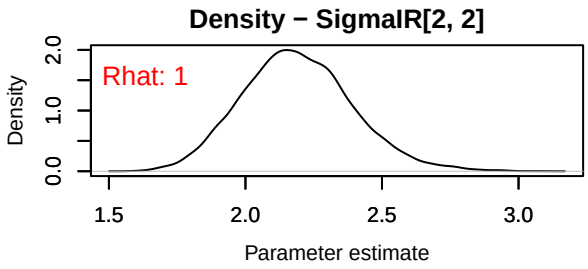

Density − SigmaIR[3, 1]
Rhat: 1
Density
0
1
2
3
4
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

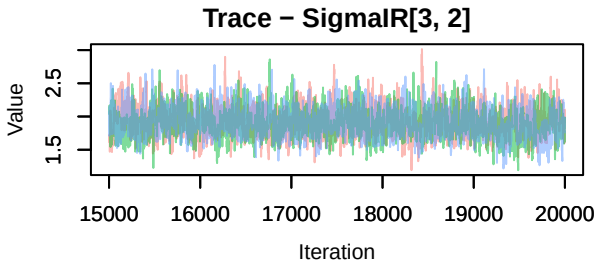

Trace − SigmaIR[4, 1]
Value
0.3
0.6
0.9
15000
16000
17000
18000
19000
20000
Iteration

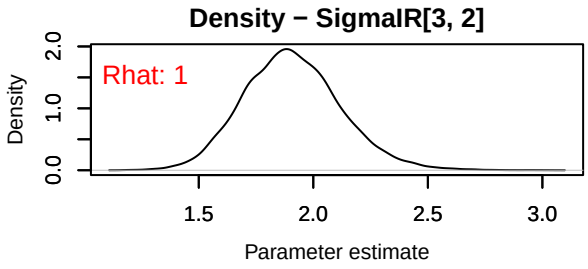

Density − SigmaIR[4, 1]
Rhat: 1
Density
0
2
4
0.2
0.4
0.6
0.8
1.0
Parameter estimate

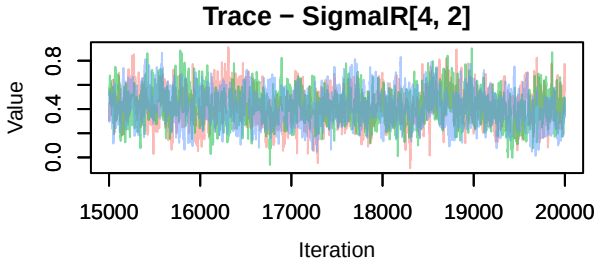

Trace − SigmaIR[5, 1]
Value
Iteration
Density − SigmaIR[5, 1]
Rhat: 1
Density
Parameter estimate
Trace − SigmaIR[6, 1]
Value
Iteration
Density − SigmaIR[6, 1]
Rhat: 1
Density
Parameter estimate
Trace − SigmaIR[1, 2]
Value
Iteration
Density − SigmaIR[1, 2]
Rhat: 1
Density
Parameter estimate

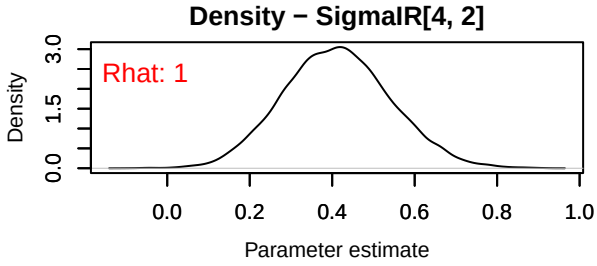

Trace − SigmaIR[2, 2]
Value
Iteration

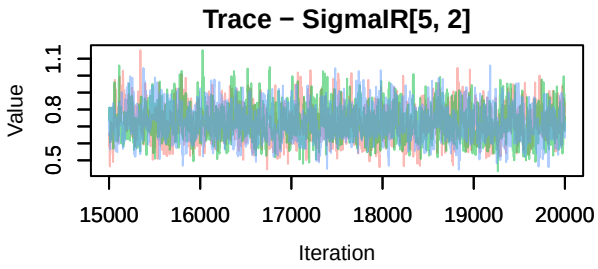

Density − SigmaIR[2, 2]
Rhat: 1
Density
Parameter estimate

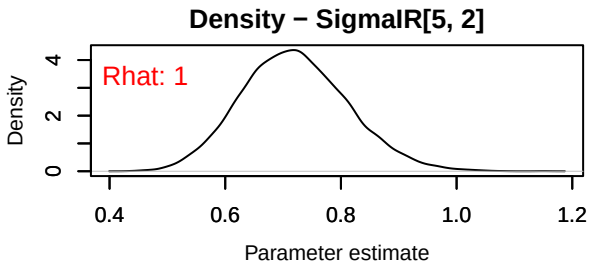

Trace − SigmaIR[3, 2]
Value
Iteration

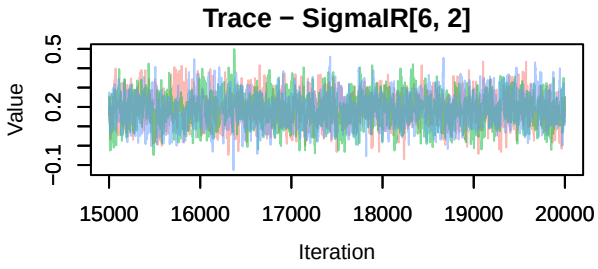

Density − SigmaIR[3, 2]
Rhat: 1
Density
Parameter estimate

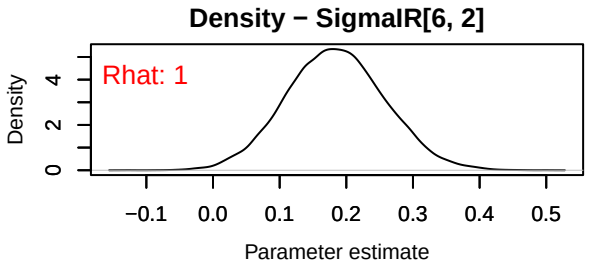

Trace − SigmaIR[4, 2]
Value
Iteration

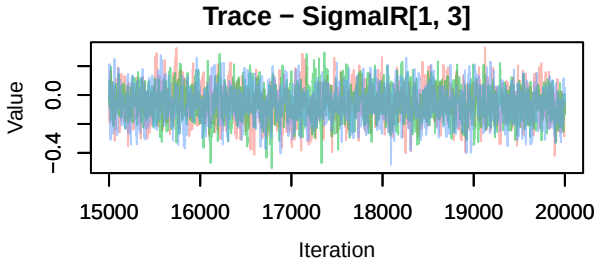

Density − SigmaIR[4, 2]
Rhat: 1
Density
Parameter estimate

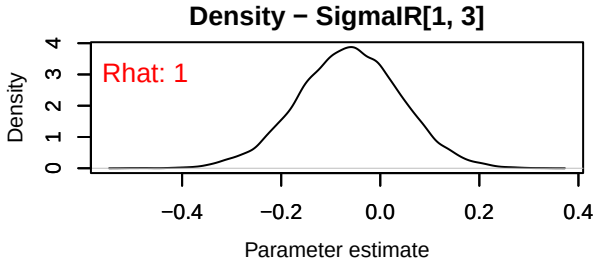

Trace − SigmaIR[5, 2]
Value
0.5
0.8
1.1
15000
16000
17000
18000
19000
20000
Iteration

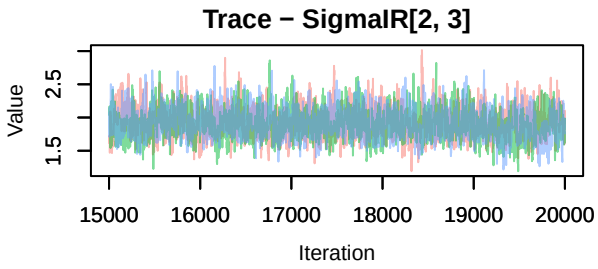

Density − SigmaIR[5, 2]
Rhat: 1
Density
0
2
4
0.4
0.6
0.8
1.0
1.2
Parameter estimate

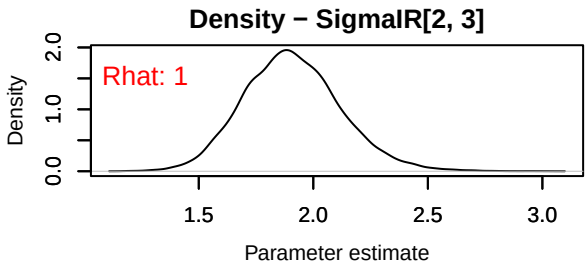

Trace − SigmaIR[6, 2]
Value
−0.1
0.2
0.5
15000
16000
17000
18000
19000
20000
Iteration

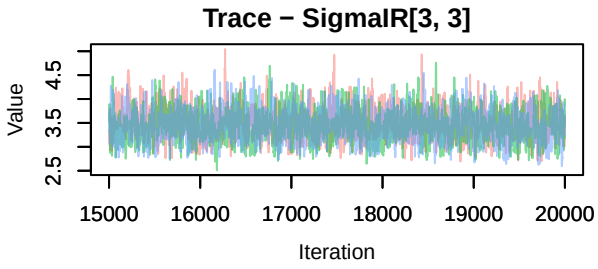

Density − SigmaIR[6, 2]
Rhat: 1
Density
0
2
4
−0.1
0.0
0.1
0.2
0.3
0.4
0.5
Parameter estimate

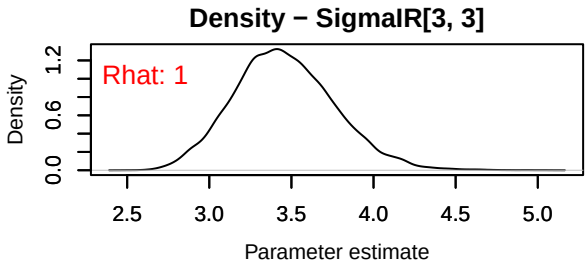

Trace − SigmaIR[1, 3]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

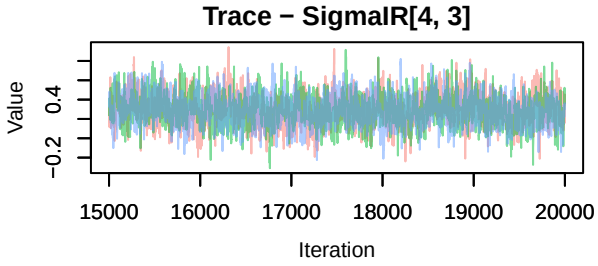

Density − SigmaIR[1, 3]
Rhat: 1
Density
0
1
2
3
4
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

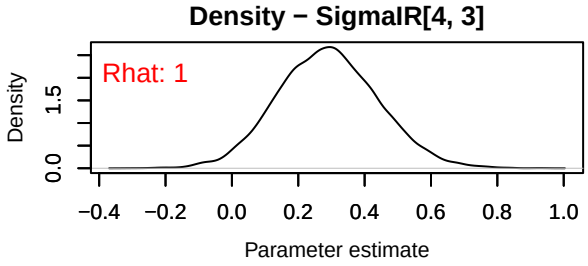

Trace − SigmaIR[2, 3]
Value
Iteration

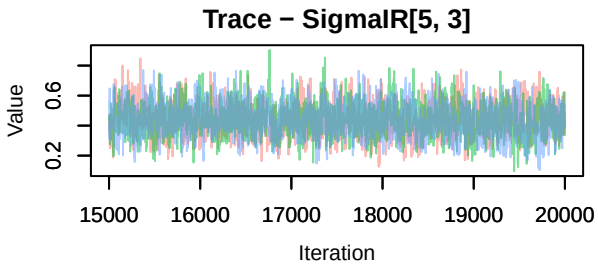

Density − SigmaIR[2, 3]
Rhat: 1
Density
Parameter estimate

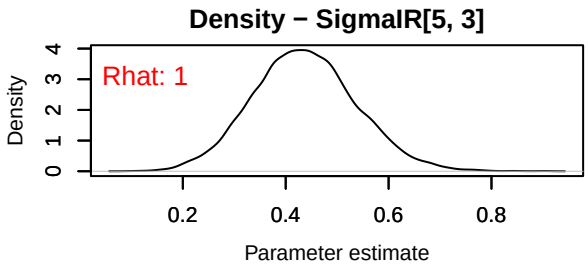

Trace − SigmaIR[3, 3]
Value
Iteration

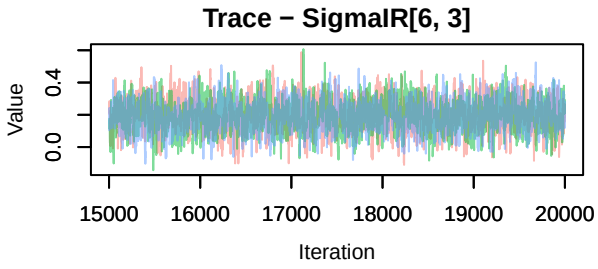

Density − SigmaIR[3, 3]
Rhat: 1
Density
Parameter estimate

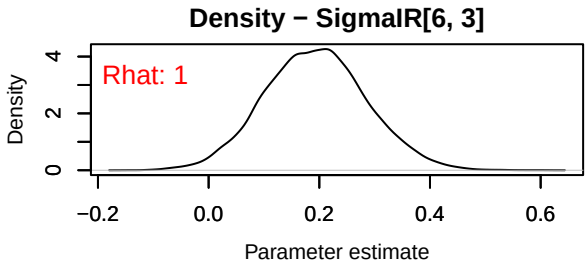

Trace − SigmaIR[4, 3]
Value
Iteration

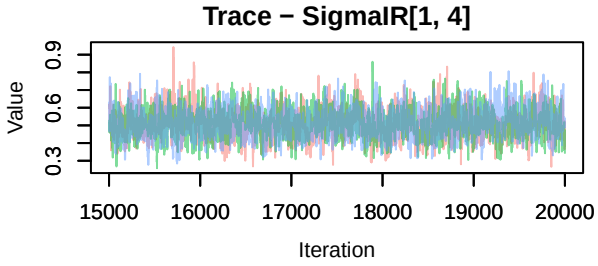

Density − SigmaIR[4, 3]
Rhat: 1
Density
Parameter estimate

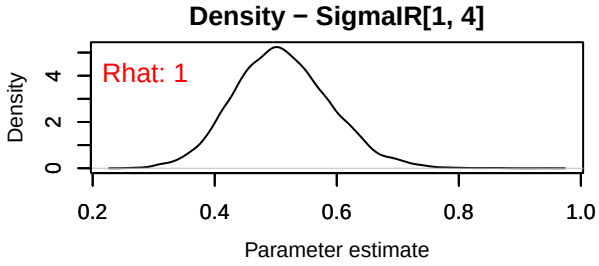

Trace − SigmaIR[5, 3]
Value
0.2
0.6
15000
16000
17000
18000
19000
20000
Iteration

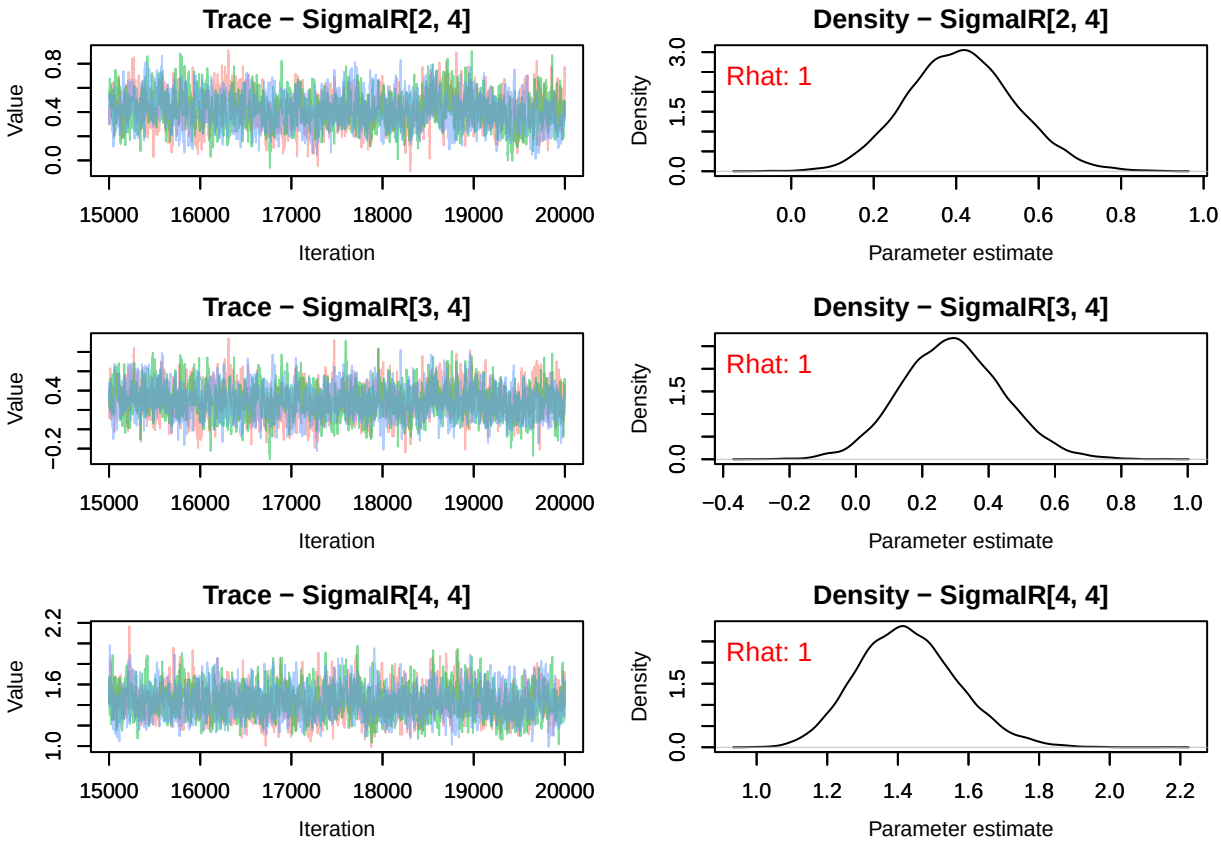

Density − SigmaIR[5, 3]
Density
0
1
2
3
4
Rhat: 1
0.2
0.4
0.6
0.8
Parameter estimate

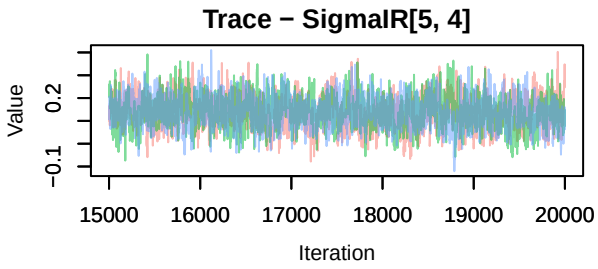

Trace − SigmaIR[6, 3]
Value
0.0
0.4
15000
16000
17000
18000
19000
20000
Iteration

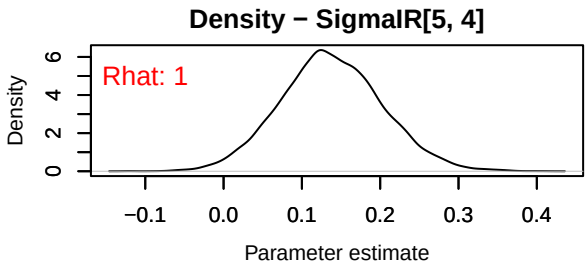

Density − SigmaIR[6, 3]
Density
0
2
4
Rhat: 1
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

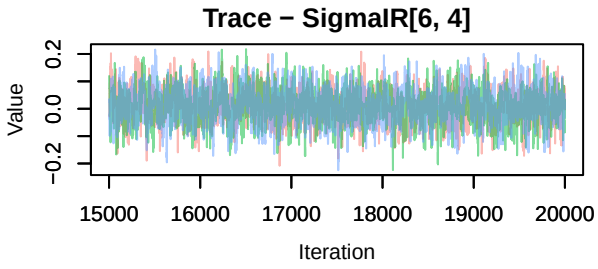

Trace − SigmaIR[1, 4]
Value
0.3
0.6
0.9
15000
16000
17000
18000
19000
20000
Iteration

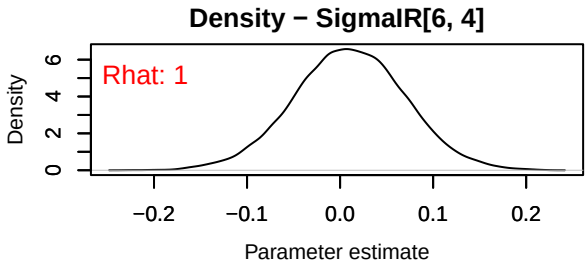

Density − SigmaIR[1, 4]
Density
0
2
4
Rhat: 1
0.2
0.4
0.6
0.8
1.0
Parameter estimate

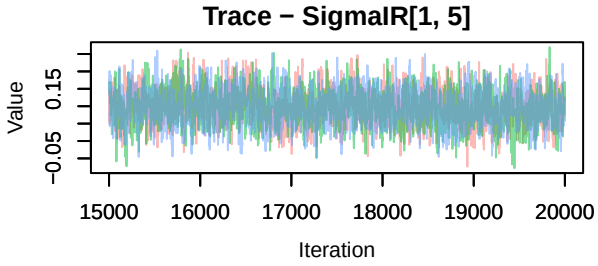

Trace − SigmaIR[2, 4]
Value
0.0
0.4
0.8
15000
16000
17000
18000
19000
20000
Iteration
Density − SigmaIR[2, 4]
Density
0.0
1.5
3.0
Rhat: 1
0.0
0.2
0.4
0.6
0.8
1.0
Parameter estimate
Trace − SigmaIR[3, 4]
Value
−0.2
0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − SigmaIR[3, 4]
Density
0.0
1.5
Rhat: 1
−0.4
−0.2
0.0
0.2
0.4
0.6
0.8
1.0
Parameter estimate
Trace − SigmaIR[4, 4]
Value
1.0
1.6
2.2
15000
16000
17000
18000
19000
20000
Iteration
Density − SigmaIR[4, 4]
Density
0.0
1.5
Rhat: 1
1.0
1.2
1.4
1.6
1.8
2.0
2.2
Parameter estimate

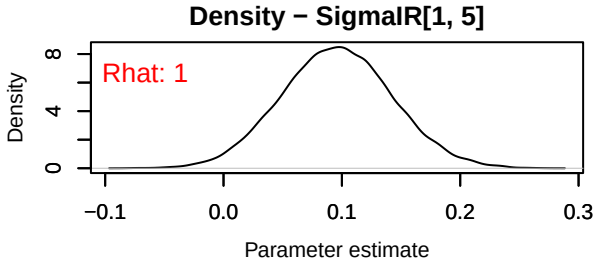

Trace − SigmaIR[5, 4]
Value
−0.1
0.2
15000
16000
17000
18000
19000
20000
Iteration

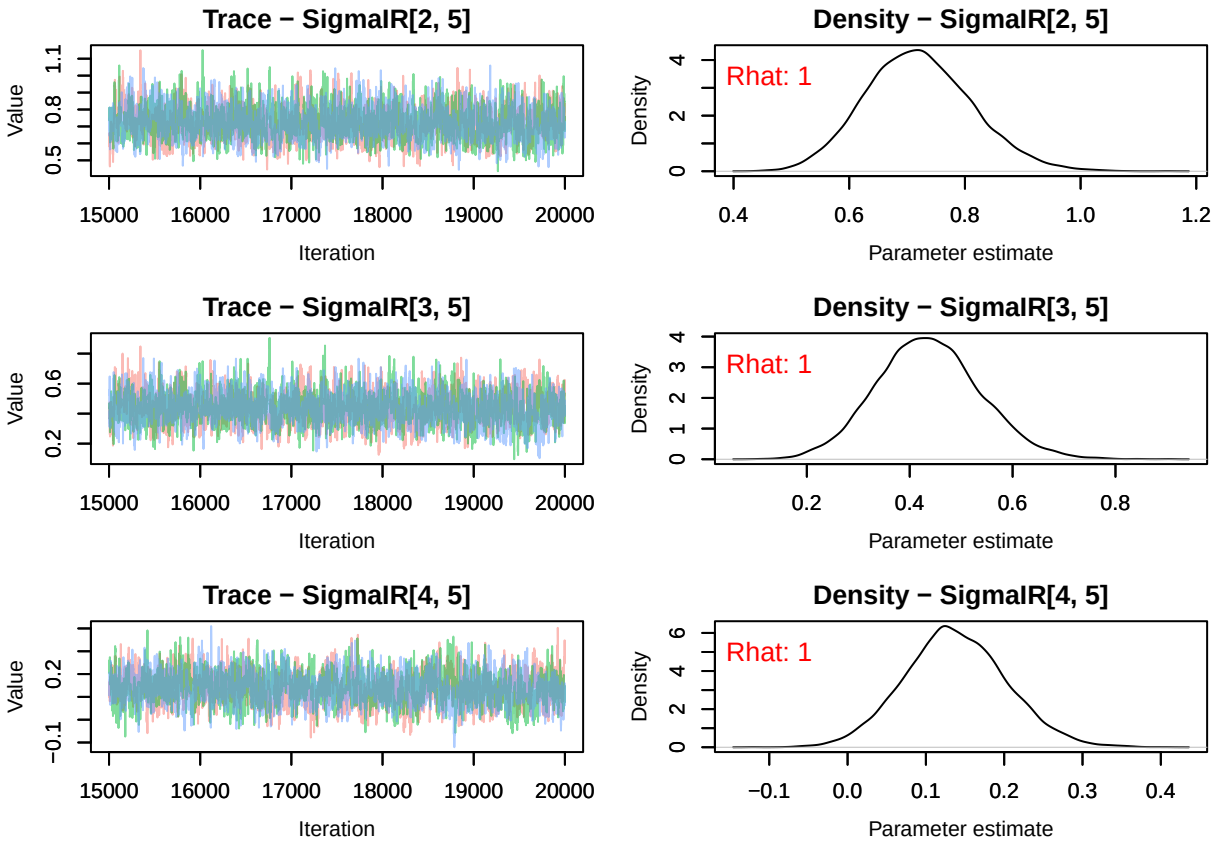

Density − SigmaIR[5, 4]
Rhat: 1
Density
0
2
4
6
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate

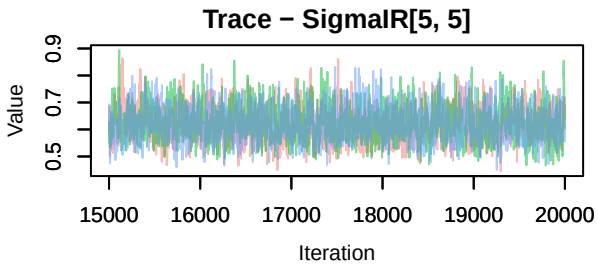

Trace − SigmaIR[6, 4]
Value
−0.2
0.0
0.2
15000
16000
17000
18000
19000
20000
Iteration

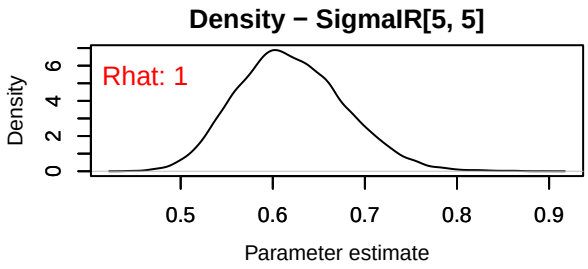

Density − SigmaIR[6, 4]
Rhat: 1
Density
0
2
4
6
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

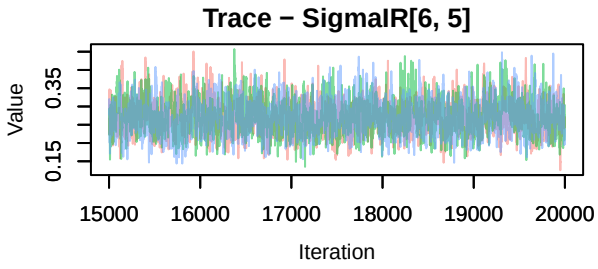

Trace − SigmaIR[1, 5]
Value
−0.05
0.15
15000
16000
17000
18000
19000
20000
Iteration

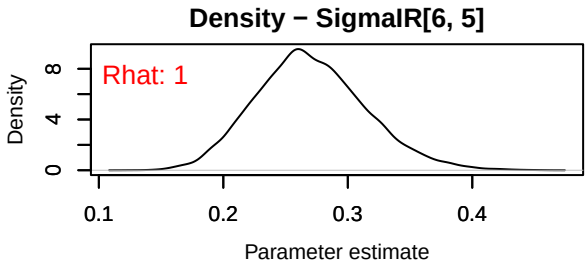

Density − SigmaIR[1, 5]
Rhat: 1
Density
0
4
8
−0.1
0.0
0.1
0.2
0.3
Parameter estimate

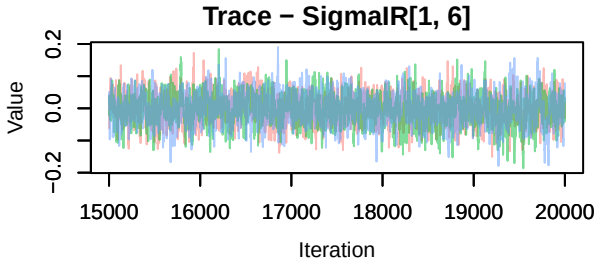

Trace − SigmaIR[2, 5]
Value
0.5
0.8
1.1
15000
16000
17000
18000
19000
20000
Iteration
Density − SigmaIR[2, 5]
Density
0
2
4
Rhat: 1
0.4
0.6
0.8
1.0
1.2
Parameter estimate
Trace − SigmaIR[3, 5]
Value
0.2
0.6
15000
16000
17000
18000
19000
20000
Iteration
Density − SigmaIR[3, 5]
Density
0
1
2
3
4
Rhat: 1
0.2
0.4
0.6
0.8
Parameter estimate
Trace − SigmaIR[4, 5]
Value
−0.1
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − SigmaIR[4, 5]
Density
0
2
4
6
Rhat: 1
−0.1
0.0
0.1
0.2
0.3
0.4
Parameter estimate

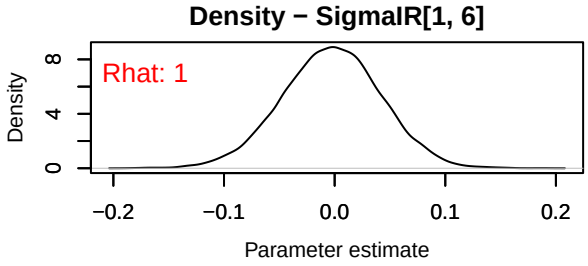

Trace − SigmaIR[5, 5]
Value
0.5
0.7
0.9
15000
16000
17000
18000
19000
20000
Iteration

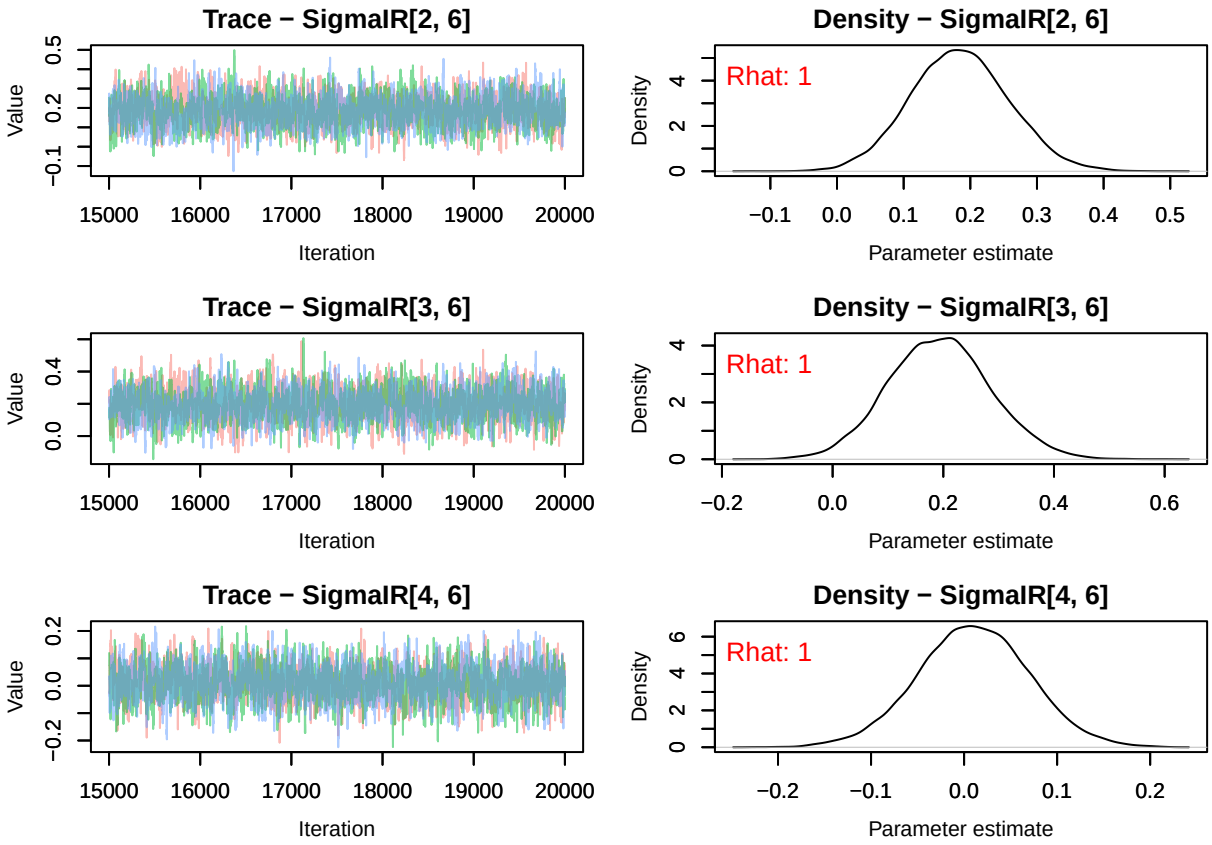

Density − SigmaIR[5, 5]
Rhat: 1
Density
0
2
4
6
0.5
0.6
0.7
0.8
0.9
Parameter estimate

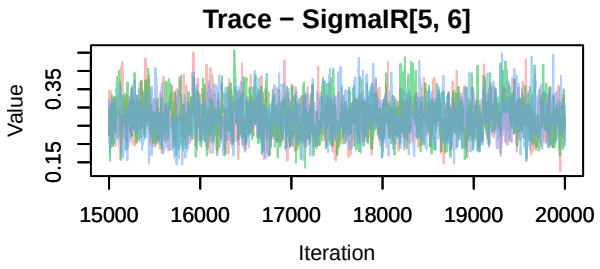

Trace − SigmaIR[6, 5]
Value
0.15
0.35
15000
16000
17000
18000
19000
20000
Iteration

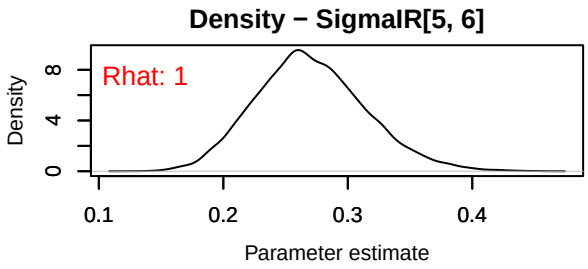

Density − SigmaIR[6, 5]
Rhat: 1
Density
0
4
8
0.1
0.2
0.3
0.4
Parameter estimate

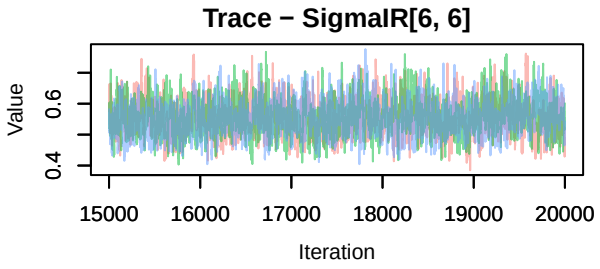

Trace − SigmaIR[1, 6]
Value
−0.2
0.0
0.2
15000
16000
17000
18000
19000
20000
Iteration

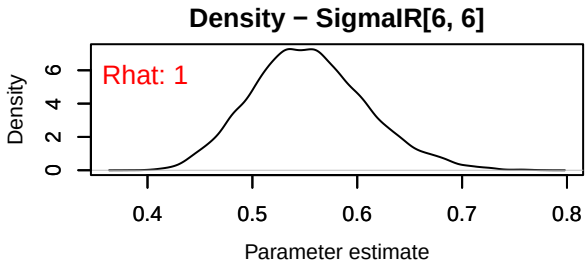

Density − SigmaIR[1, 6]
Rhat: 1
Density
0
4
8
−0.2
−0.1
0.0
0.1
0.2
Parameter estimate

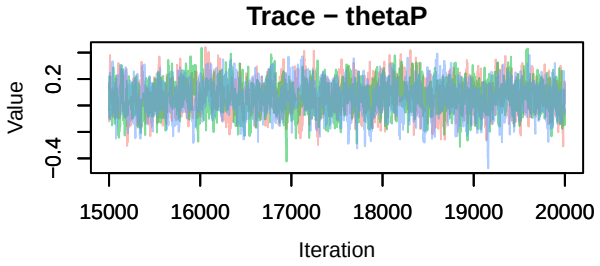

Trace − SigmaIR[2, 6]
Value
Iteration
Density − SigmaIR[2, 6]
Rhat: 1
Density
Parameter estimate
Trace − SigmaIR[3, 6]
Value
Iteration
Density − SigmaIR[3, 6]
Rhat: 1
Density
Parameter estimate
Trace − SigmaIR[4, 6]
Value
Iteration
Density − SigmaIR[4, 6]
Rhat: 1
Density
Parameter estimate

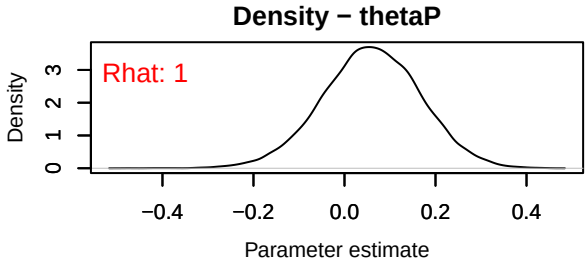

Trace − SigmaIR[5, 6]
Value
0.15
0.35
15000
16000
17000
18000
19000
20000
Iteration

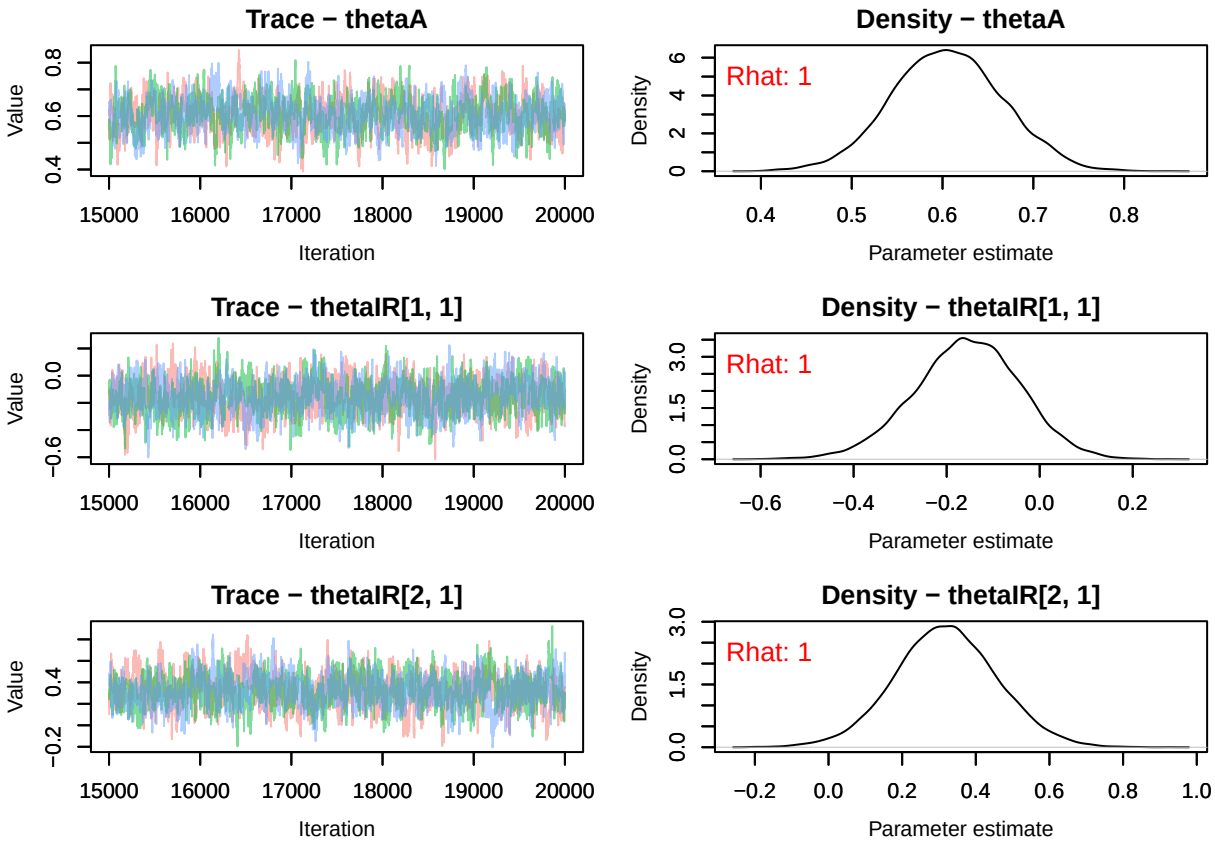

Density − SigmaIR[5, 6]
Rhat: 1
Density
0
4
8
0.1
0.2
0.3
0.4
Parameter estimate

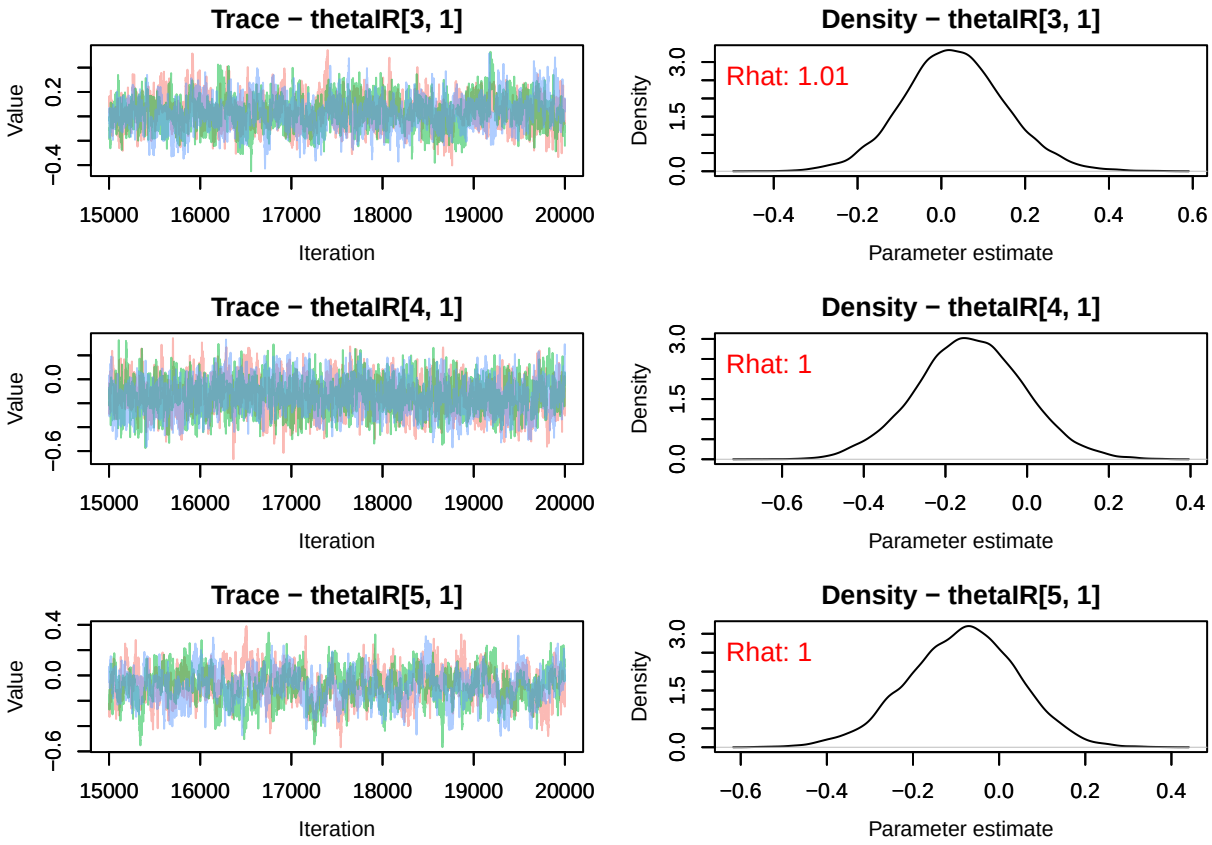

Trace − SigmaIR[6, 6]
Value
0.4
0.6
15000
16000
17000
18000
19000
20000
Iteration

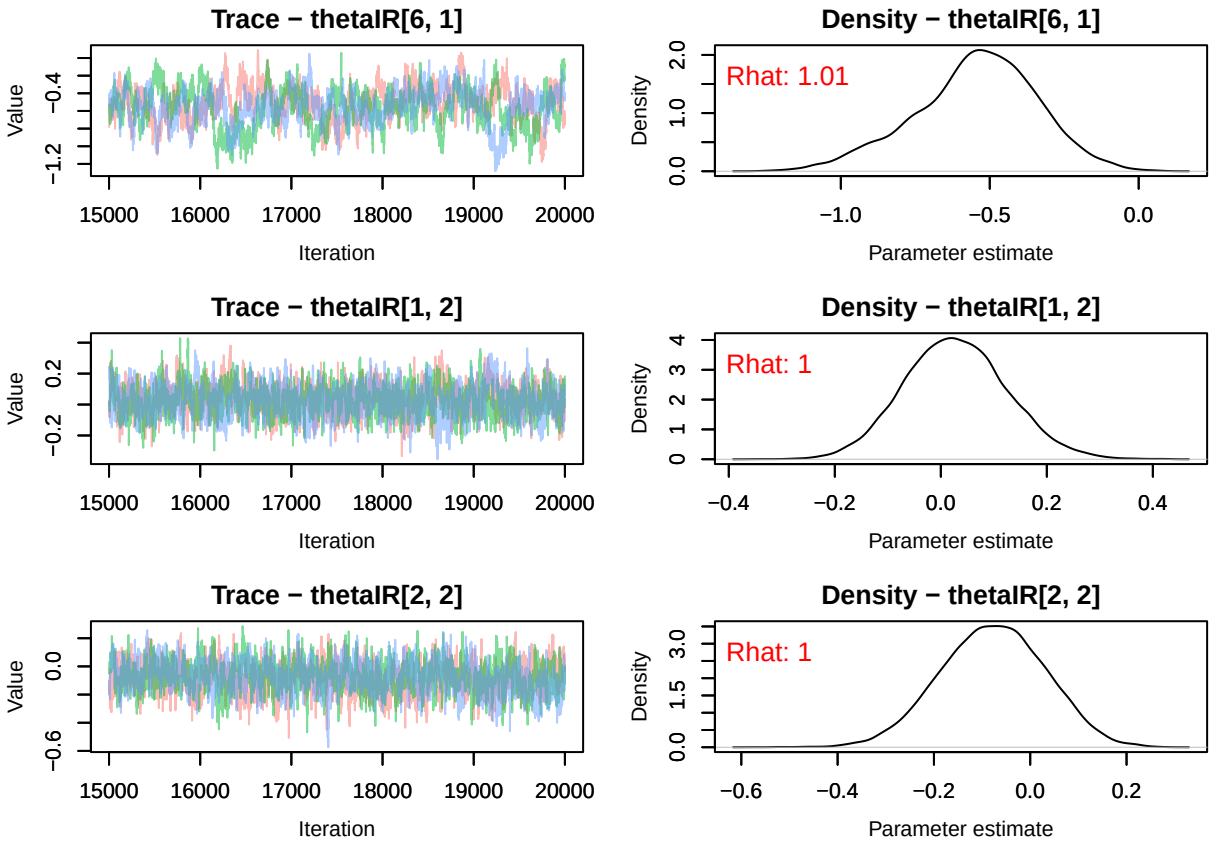

Density − SigmaIR[6, 6]
Rhat: 1
Density
0
2
4
6
0.4
0.5
0.6
0.7
0.8
Parameter estimate

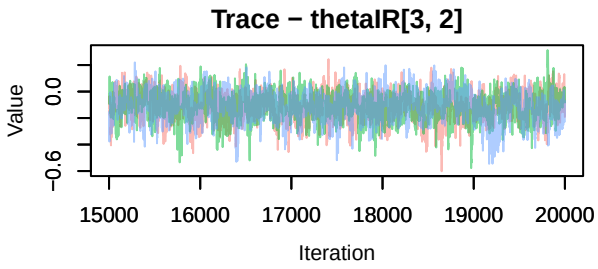

Trace − thetaP
Value
−0.4
0.2
15000
16000
17000
18000
19000
20000
Iteration

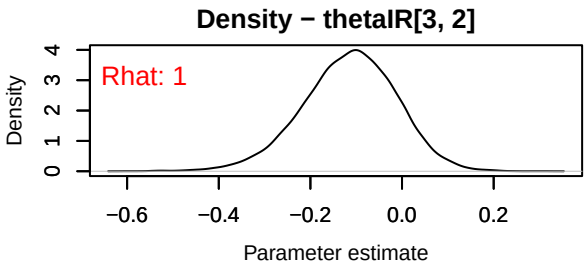

Density − thetaP
Rhat: 1
Density
0
1
2
3
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

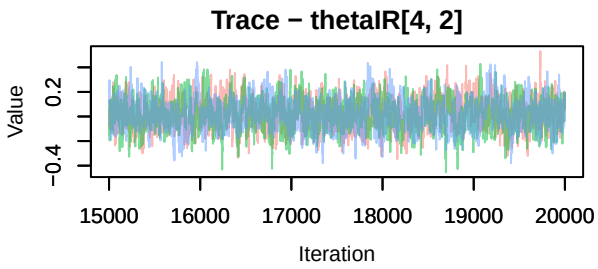

Trace − thetaA
Value
0.4
0.6
0.8
15000
16000
17000
18000
19000
20000
Iteration
Density − thetaA
Density
0
2
4
6
Rhat: 1
0.4
0.5
0.6
0.7
0.8
Parameter estimate
Trace − thetaIR[1, 1]
Value
−0.6
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − thetaIR[1, 1]
Density
0.0
1.5
3.0
Rhat: 1
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate
Trace − thetaIR[2, 1]
Value
−0.2
0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − thetaIR[2, 1]
Density
0.0
1.5
3.0
Rhat: 1
−0.2
0.0
0.2
0.4
0.6
0.8
1.0
Parameter estimate

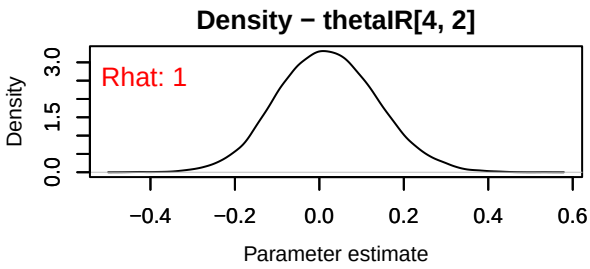

Trace − thetaIR[3, 1]
Value
Iteration
Density − thetaIR[3, 1]
Rhat: 1.01
Density
Parameter estimate
Trace − thetaIR[4, 1]
Value
Iteration
Density − thetaIR[4, 1]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[5, 1]
Value
Iteration
Density − thetaIR[5, 1]
Rhat: 1
Density
Parameter estimate

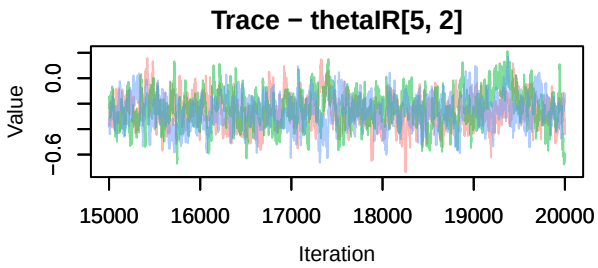

Trace − thetaIR[6, 1]
Value
−1.2
−0.4
15000
16000
17000
18000
19000
20000
Iteration
Density − thetaIR[6, 1]
Density
0.0
1.0
2.0
Rhat: 1.01
−1.0
−0.5
0.0
Parameter estimate
Trace − thetaIR[1, 2]
Value
−0.2
0.2
15000
16000
17000
18000
19000
20000
Iteration
Density − thetaIR[1, 2]
Density
0
1
2
3
4
Rhat: 1
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate
Trace − thetaIR[2, 2]
Value
−0.6
0.0
15000
16000
17000
18000
19000
20000
Iteration
Density − thetaIR[2, 2]
Density
0.0
1.5
3.0
Rhat: 1
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

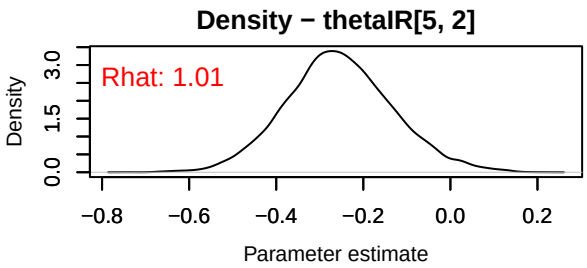

Trace − thetaIR[3, 2]
Value
0.0
−0.6
15000
16000
17000
18000
19000
20000
Iteration

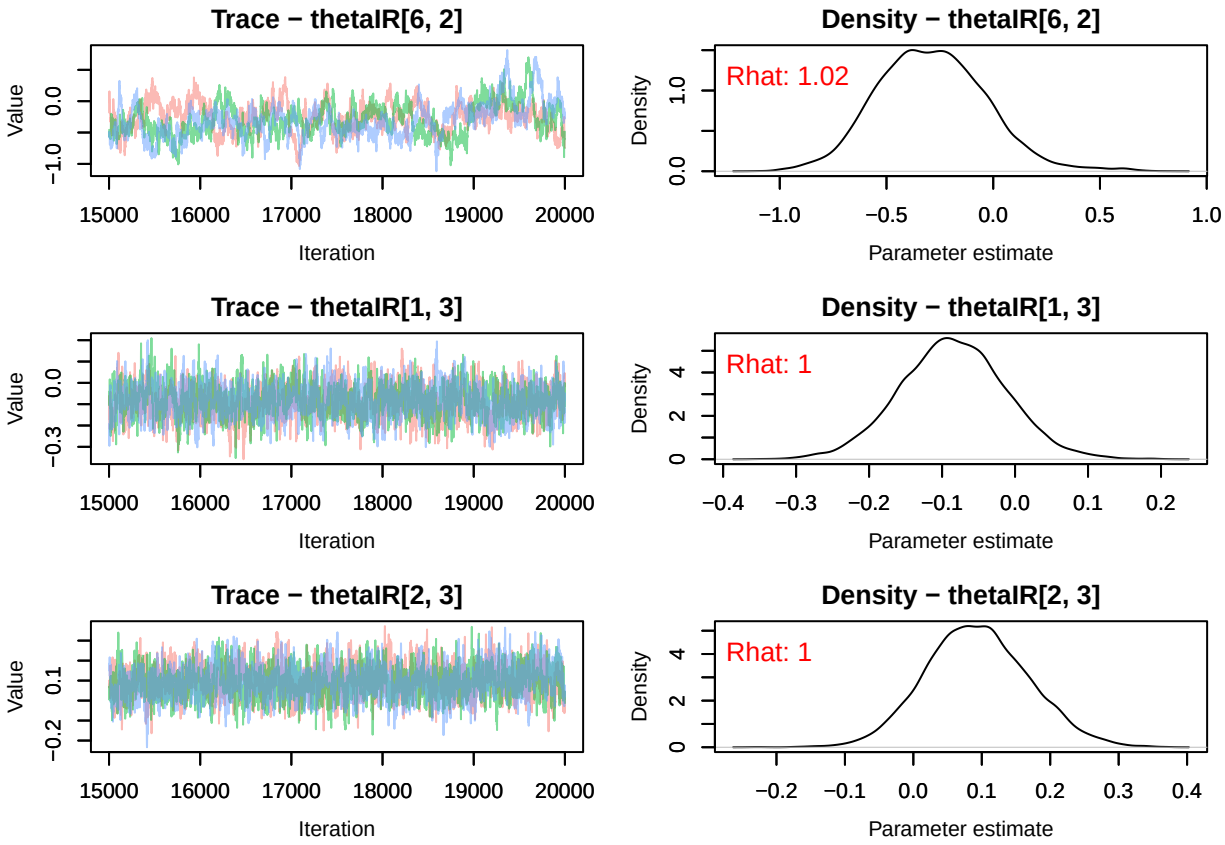

Density − thetaIR[3, 2]
Rhat: 1
Density
0
1
2
3
4
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

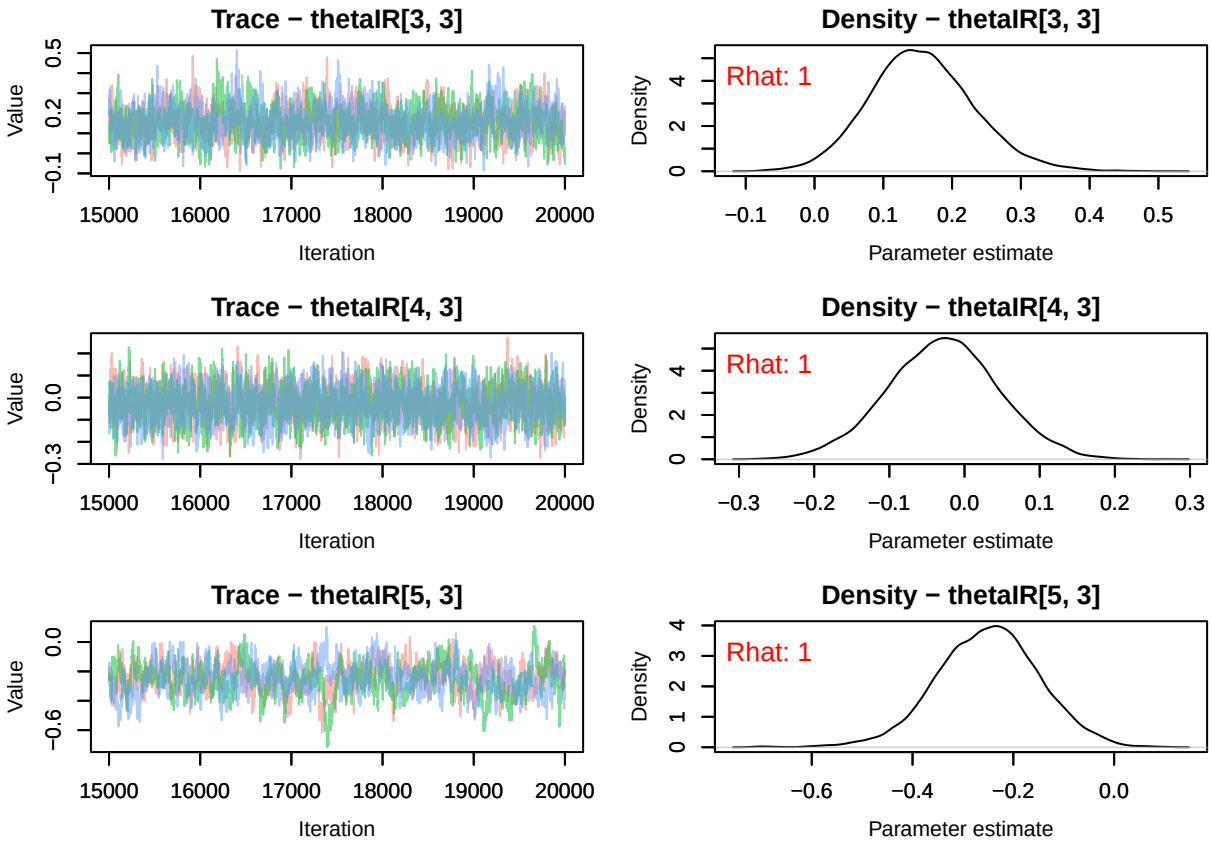

Trace − thetaIR[4, 2]
Value
0.2
−0.4
15000
16000
17000
18000
19000
20000
Iteration

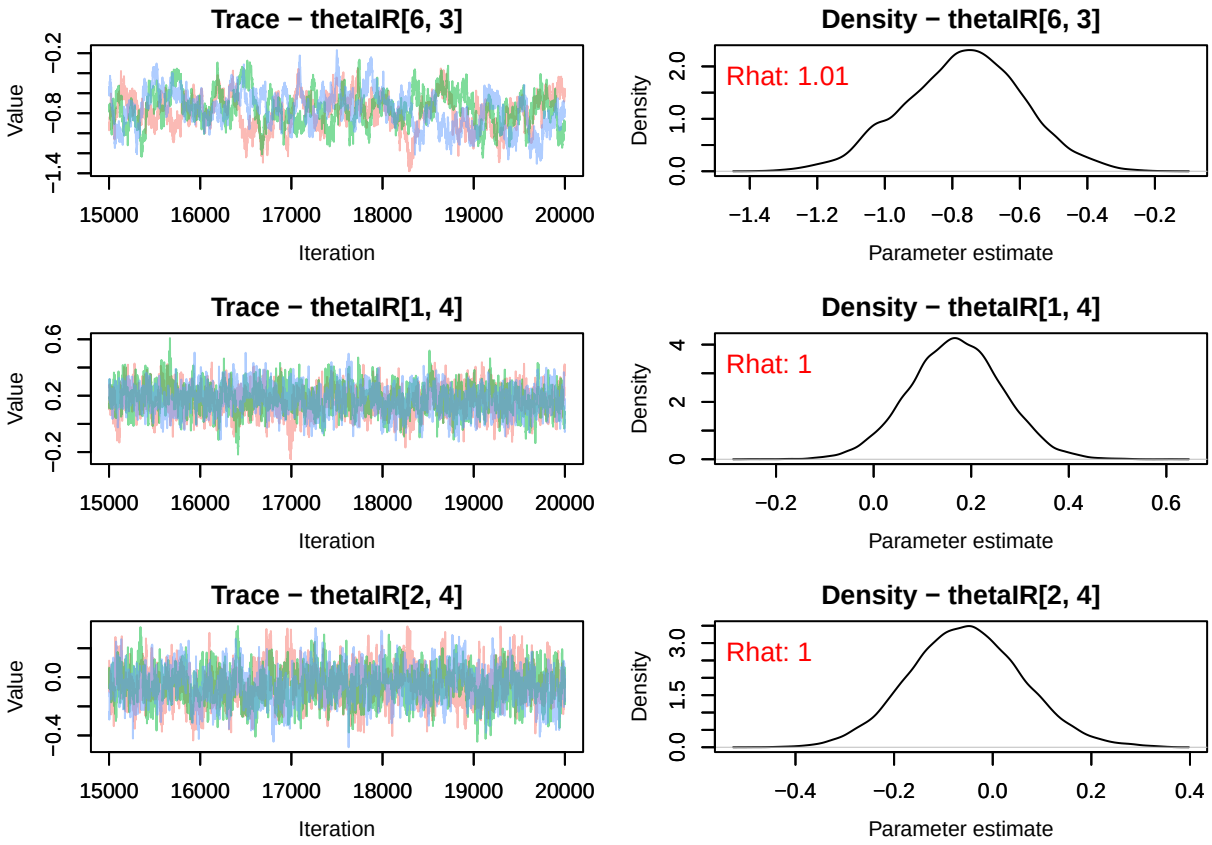

Density − thetaIR[4, 2]
Rhat: 1
Density
0.0
1.5
3.0
−0.4
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

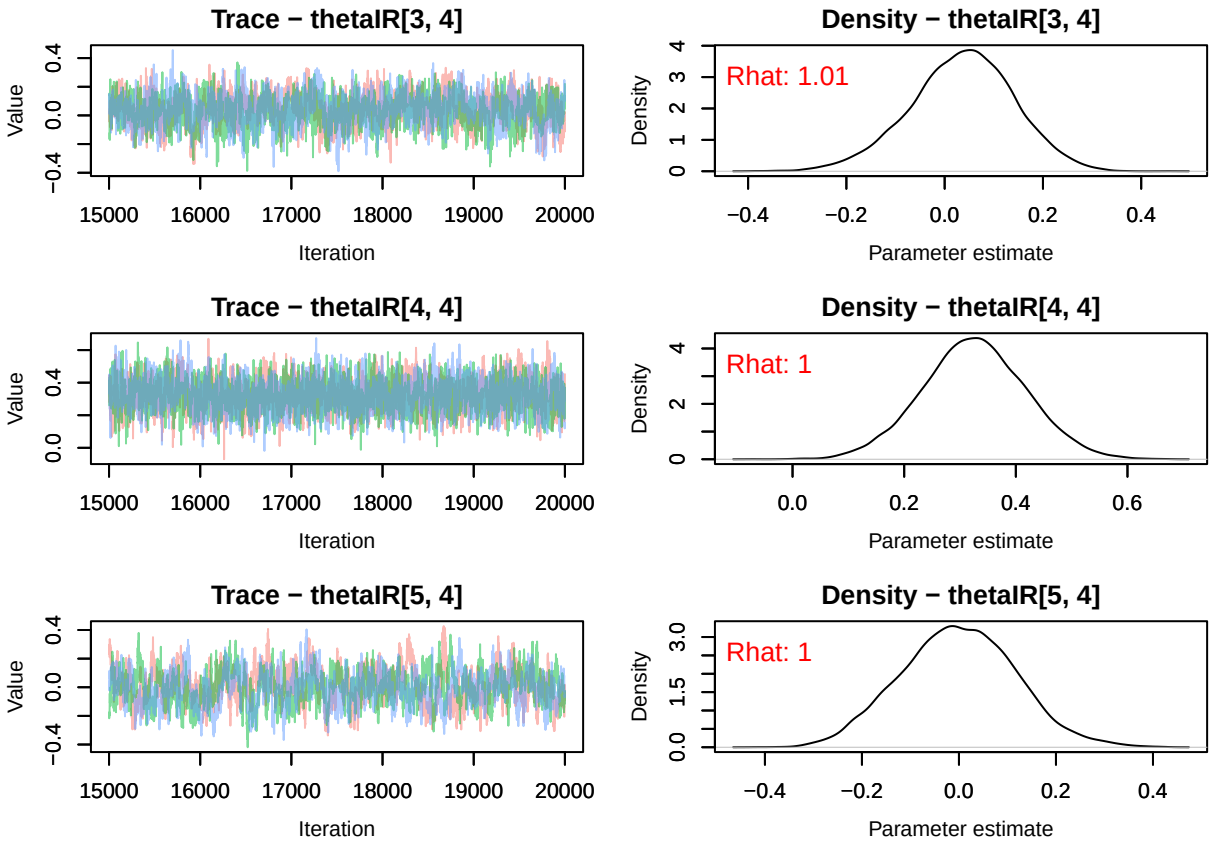

Trace − thetaIR[5, 2]
Value
0.0
−0.6
15000
16000
17000
18000
19000
20000
Iteration

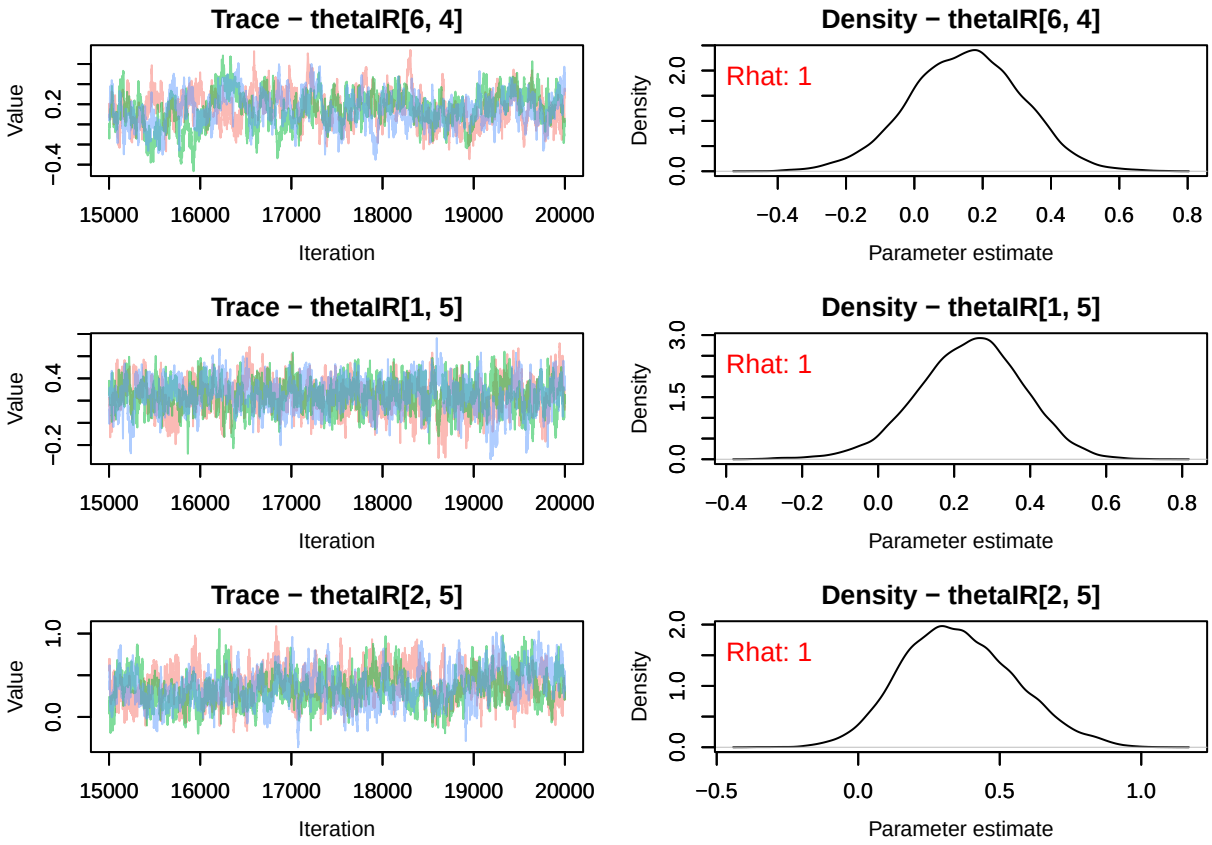

Density − thetaIR[5, 2]
Rhat: 1.01
Density
0.0
1.5
3.0
−0.8
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

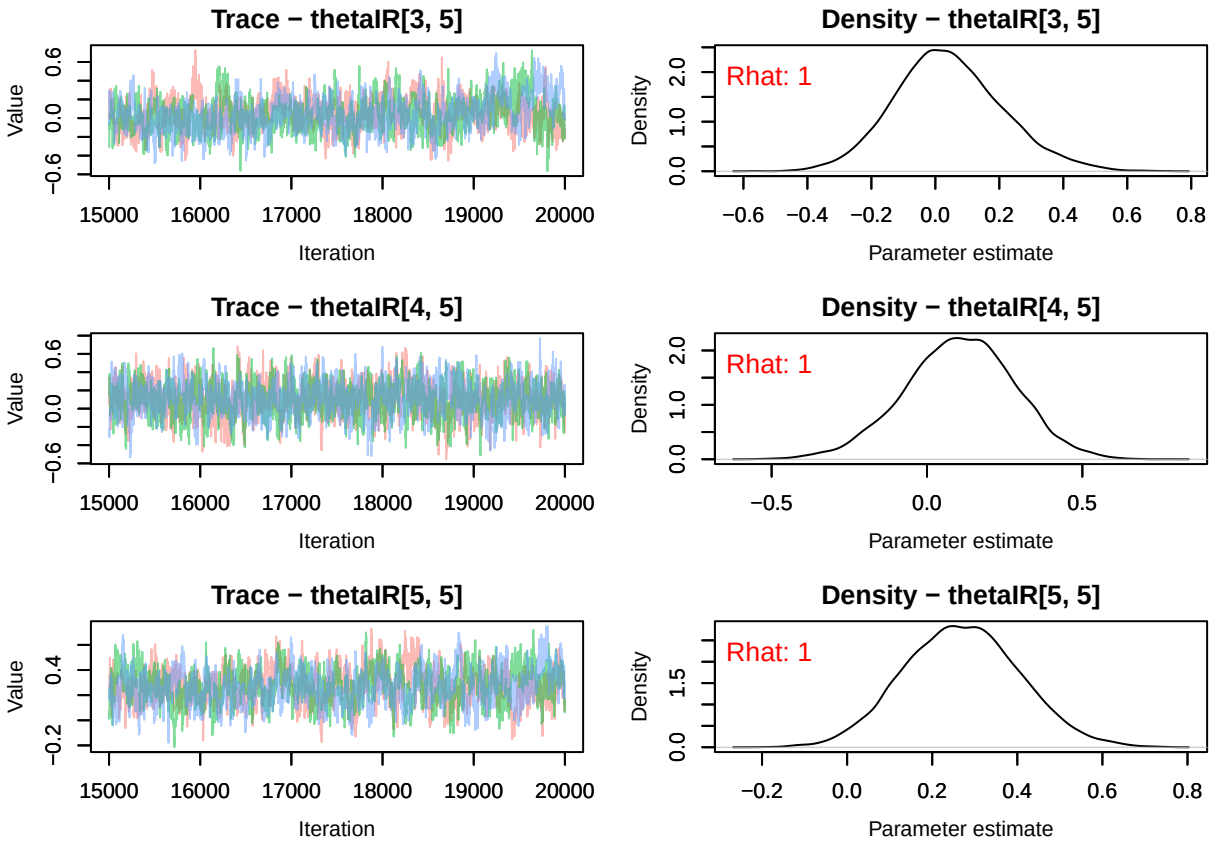

Trace − thetaIR[6, 2]
Value
Iteration
Density − thetaIR[6, 2]
Rhat: 1.02
Density
Parameter estimate
Trace − thetaIR[1, 3]
Value
Iteration
Density − thetaIR[1, 3]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[2, 3]
Value
Iteration
Density − thetaIR[2, 3]
Rhat: 1
Density
Parameter estimate

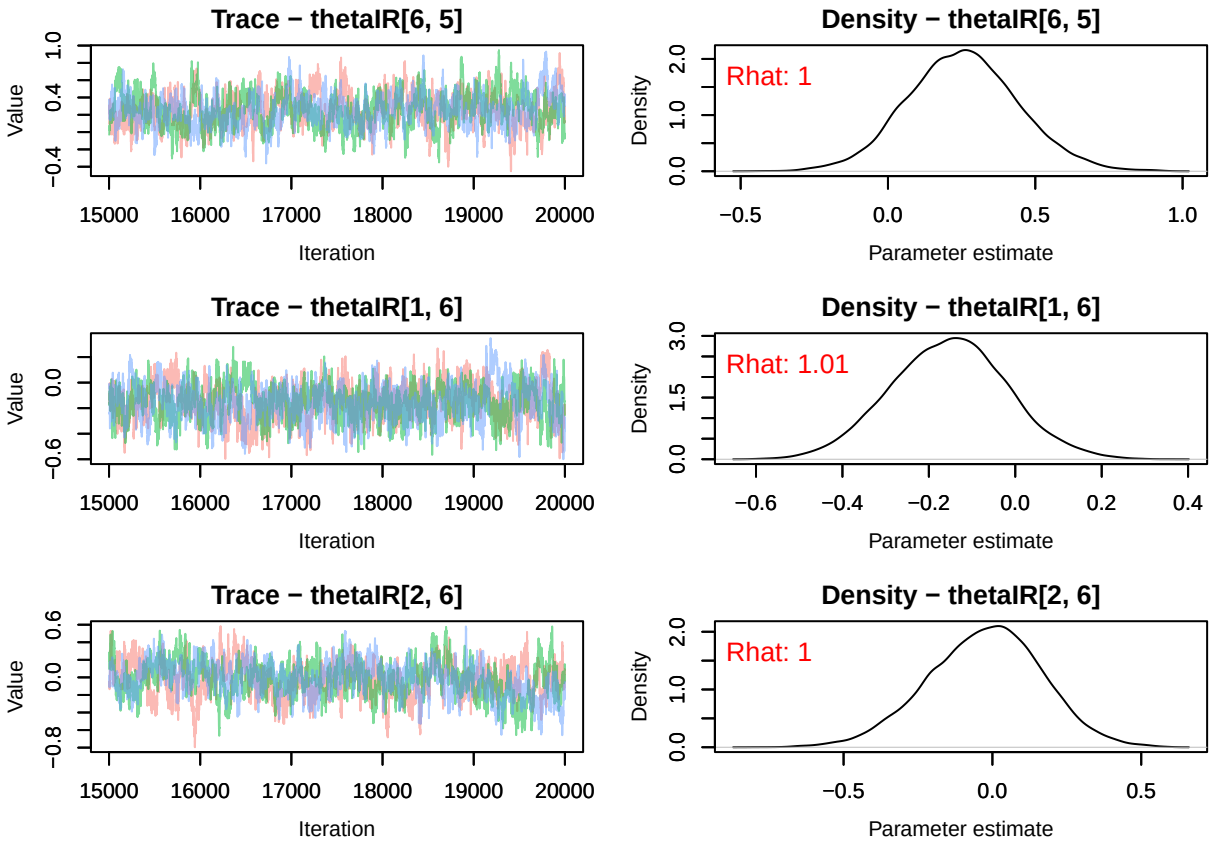

Trace − thetaIR[3, 3]
Value
Iteration
Density − thetaIR[3, 3]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[4, 3]
Value
Iteration
Density − thetaIR[4, 3]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[5, 3]
Value
Iteration
Density − thetaIR[5, 3]
Rhat: 1
Density
Parameter estimate

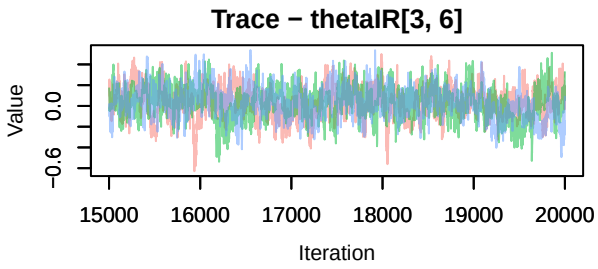

Trace − thetaIR[6, 3]
Value
Iteration
Density − thetaIR[6, 3]
Rhat: 1.01
Density
Parameter estimate
Trace − thetaIR[1, 4]
Value
Iteration
Density − thetaIR[1, 4]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[2, 4]
Value
Iteration
Density − thetaIR[2, 4]
Rhat: 1
Density
Parameter estimate

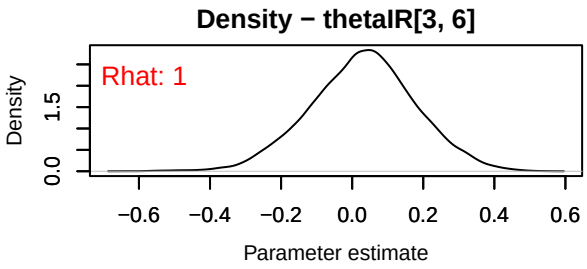

Trace − thetaIR[3, 4]
Value
Iteration
Density − thetaIR[3, 4]
Rhat: 1.01
Density
Parameter estimate
Trace − thetaIR[4, 4]
Value
Iteration
Density − thetaIR[4, 4]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[5, 4]
Value
Iteration
Density − thetaIR[5, 4]
Rhat: 1
Density
Parameter estimate

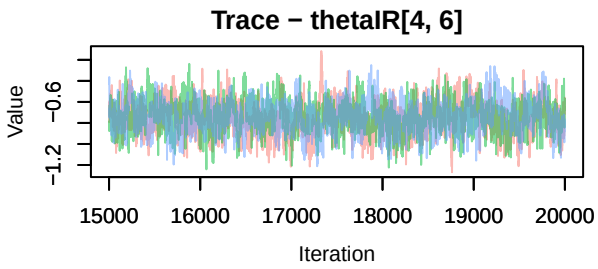

Trace − thetaIR[6, 4]
Value
Iteration
Density − thetaIR[6, 4]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[1, 5]
Value
Iteration
Density − thetaIR[1, 5]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[2, 5]
Value
Iteration
Density − thetaIR[2, 5]
Rhat: 1
Density
Parameter estimate

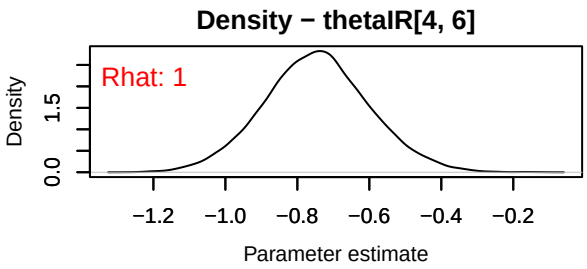

Trace − thetaIR[3, 5]
Value
Iteration
Density − thetaIR[3, 5]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[4, 5]
Value
Iteration
Density − thetaIR[4, 5]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[5, 5]
Value
Iteration
Density − thetaIR[5, 5]
Rhat: 1
Density
Parameter estimate

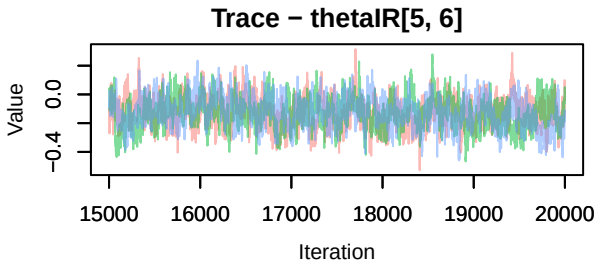

Trace − thetaIR[6, 5]
Value
Iteration
Density − thetaIR[6, 5]
Rhat: 1
Density
Parameter estimate
Trace − thetaIR[1, 6]
Value
Iteration
Density − thetaIR[1, 6]
Rhat: 1.01
Density
Parameter estimate
Trace − thetaIR[2, 6]
Value
Iteration
Density − thetaIR[2, 6]
Rhat: 1
Density
Parameter estimate

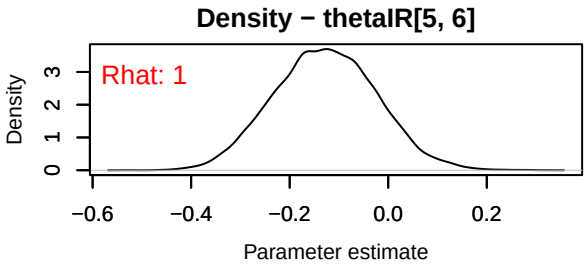

Trace − thetaIR[3, 6]
Value
−0.6
0.0
15000
16000
17000
18000
19000
20000
Iteration

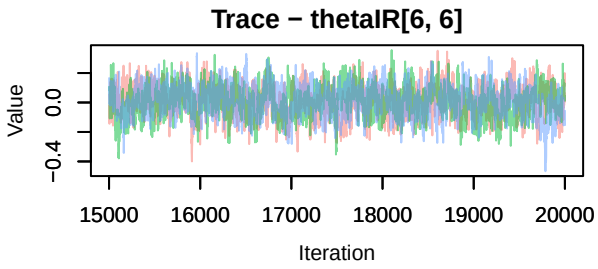

Density − thetaIR[3, 6]
Rhat: 1
Density
0.0
1.5
−0.6
−0.4
−0.2
0.0
0.2
0.4
0.6
Parameter estimate

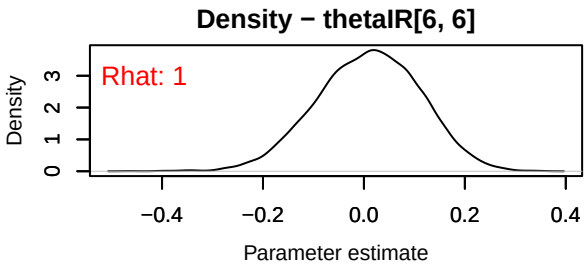

Trace − thetaIR[4, 6]
Value
−1.2
−0.6
15000
16000
17000
18000
19000
20000
Iteration

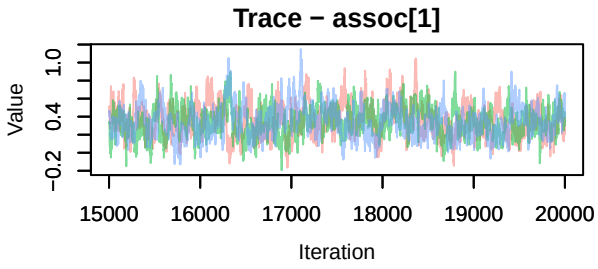

Density − thetaIR[4, 6]
Rhat: 1
Density
0.0
1.5
−1.2
−1.0
−0.8
−0.6
−0.4
−0.2
Parameter estimate

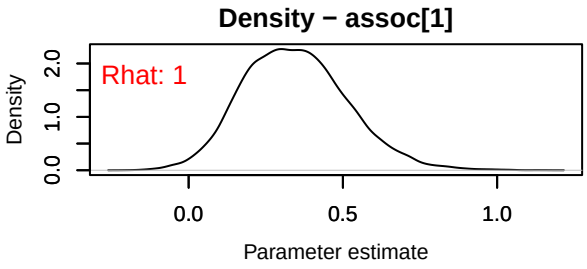

Trace − thetaIR[5, 6]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

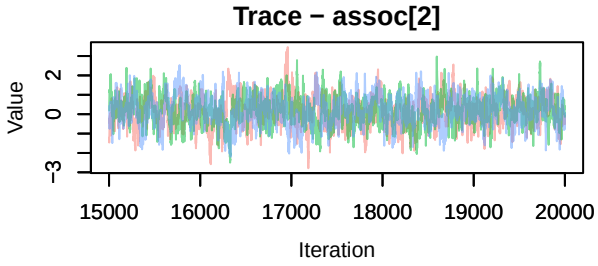

Density − thetaIR[5, 6]
Rhat: 1
Density
0
1
2
3
−0.6
−0.4
−0.2
0.0
0.2
Parameter estimate

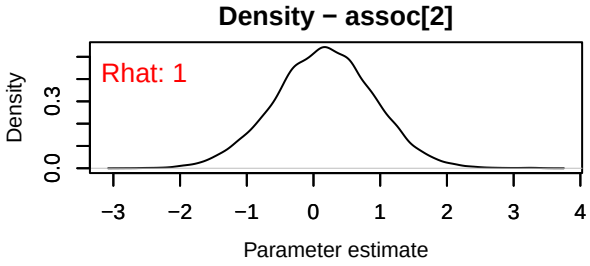

Trace − thetaIR[6, 6]
Value
−0.4
0.0
15000
16000
17000
18000
19000
20000
Iteration

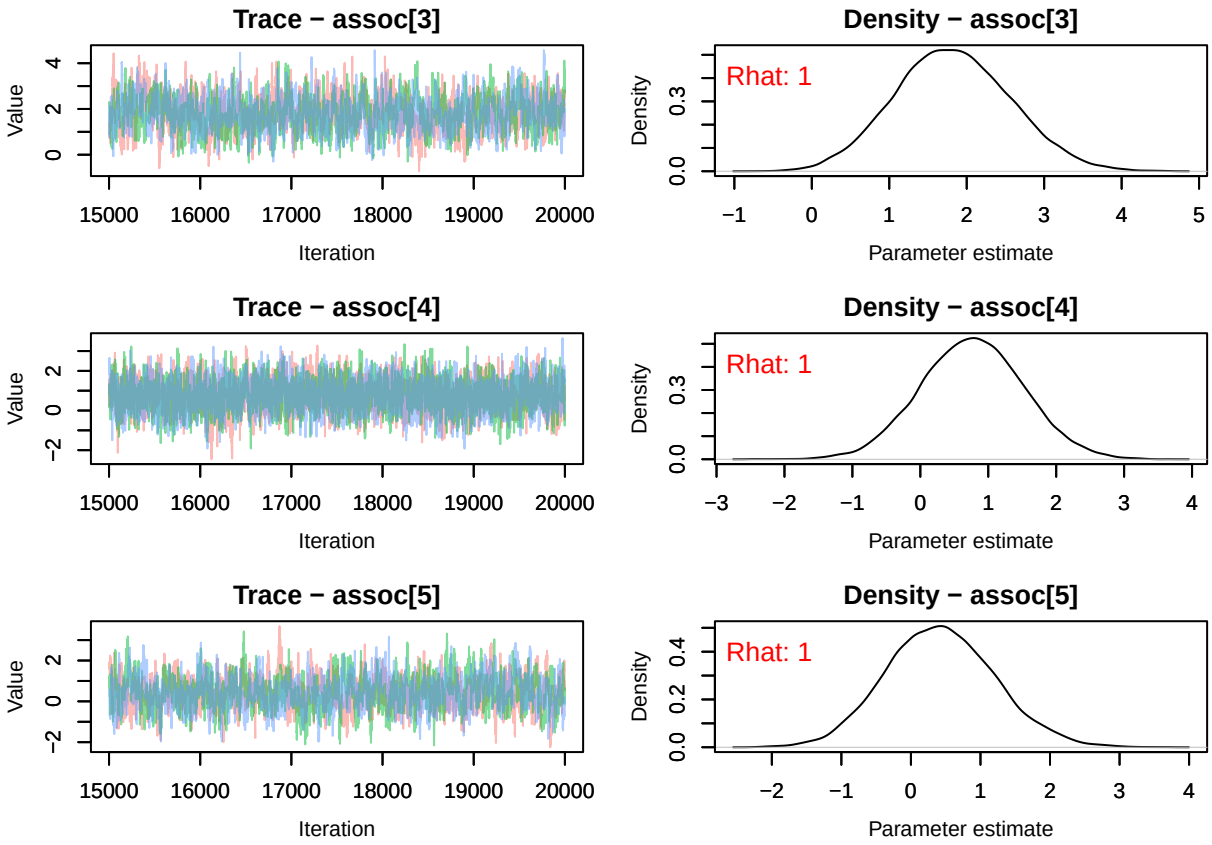

Density − thetaIR[6, 6]
Rhat: 1
Density
0
1
2
3
−0.4
−0.2
0.0
0.2
0.4
Parameter estimate

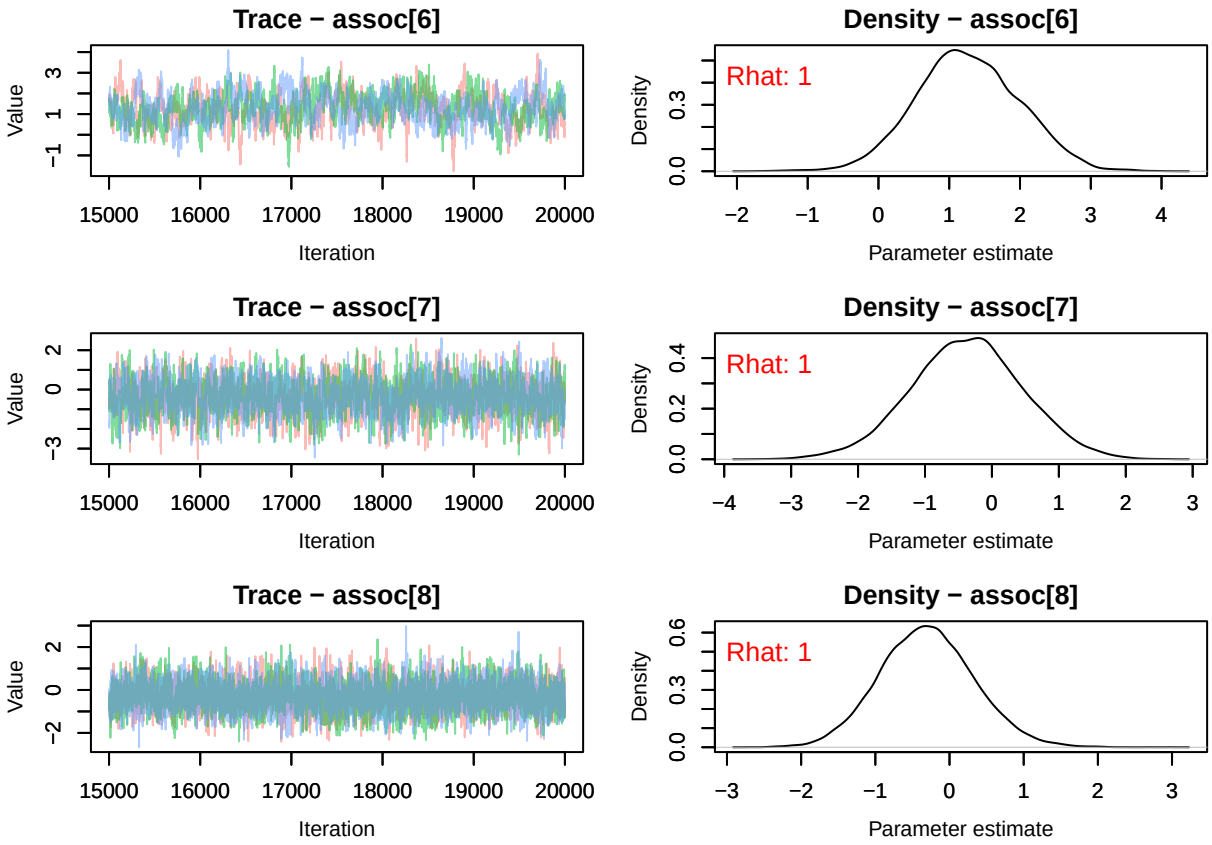

Trace − assoc[1]
Value
−0.2
0.4
1.0
15000
16000
17000
18000
19000
20000
Iteration

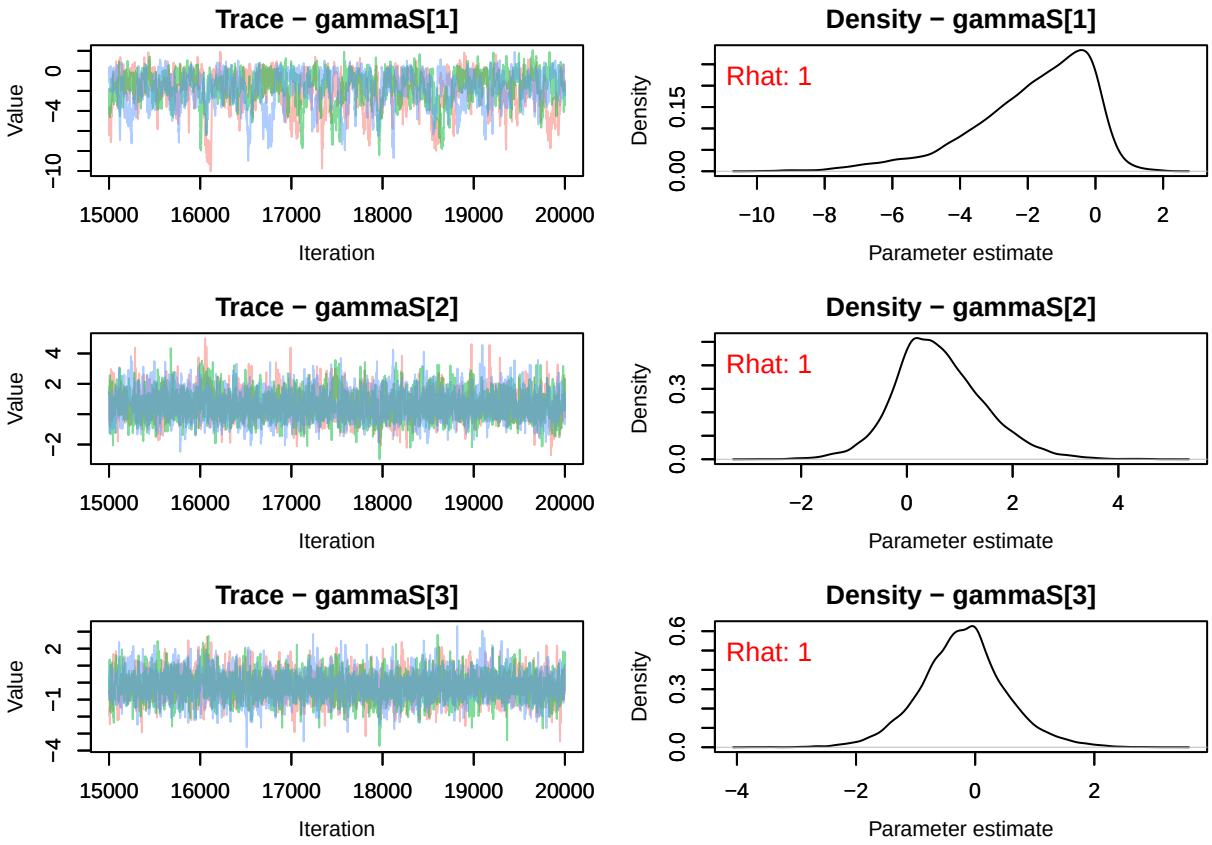

Density − assoc[1]
Rhat: 1
Density
0.0
1.0
2.0
0.0
0.5
1.0
Parameter estimate

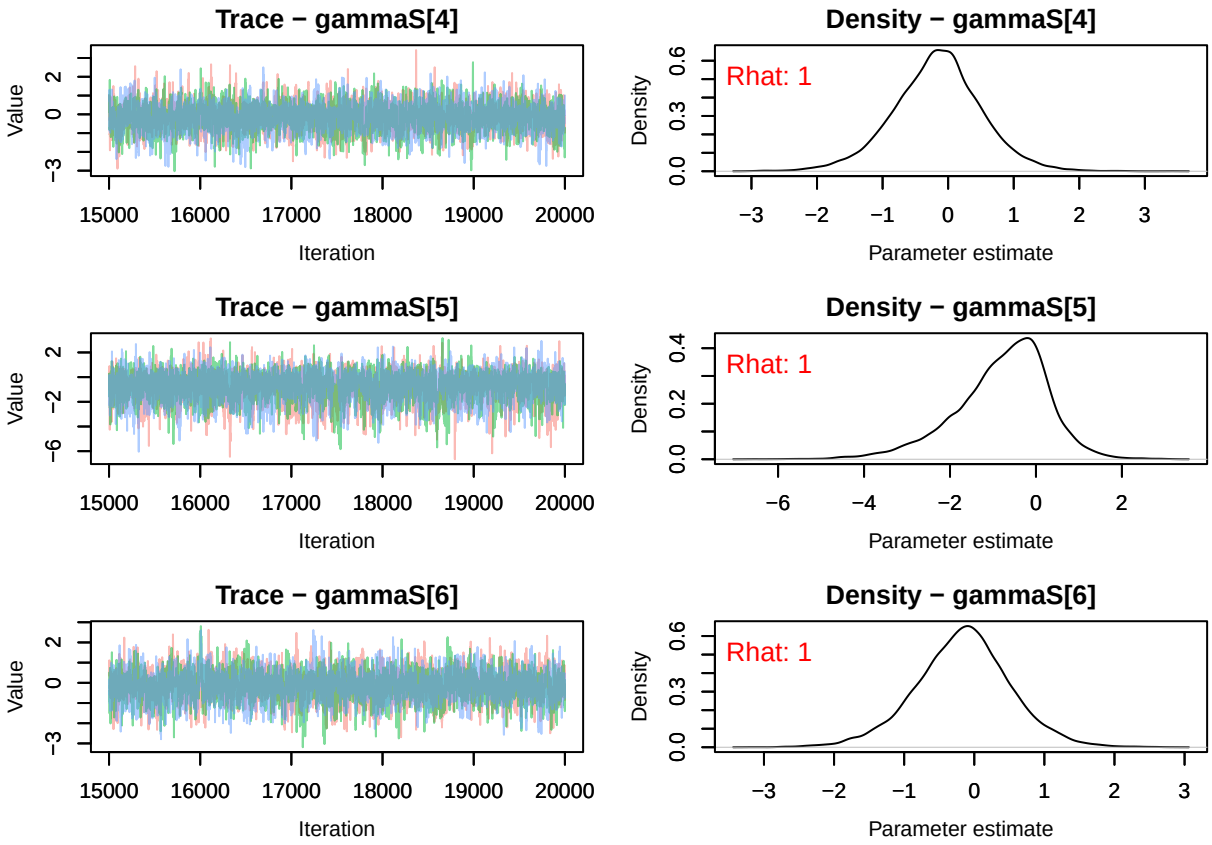

Trace − assoc[2]
Value
−3
0
2
15000
16000
17000
18000
19000
20000
Iteration

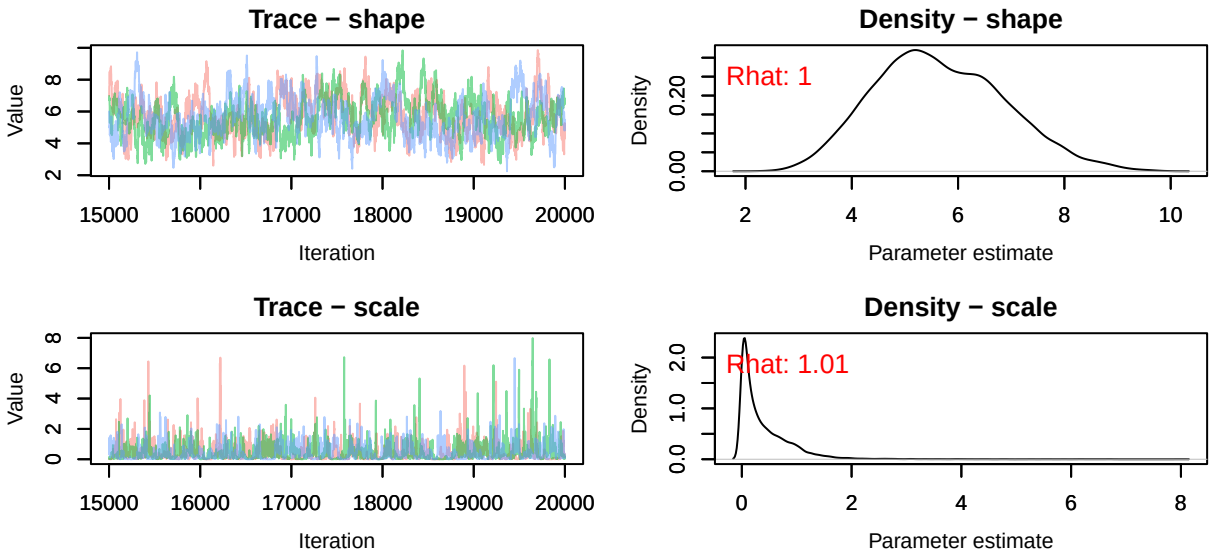

Density − assoc[2]
Rhat: 1
Density
0.0
0.3
−3
−2
−1
0
1
2
3
4
Parameter estimate


Trace − assoc[3]
Value
Iteration
Density − assoc[3]
Rhat: 1
Density
Parameter estimate
Trace − assoc[4]
Value
Iteration
Density − assoc[4]
Rhat: 1
Density
Parameter estimate
Trace − assoc[5]
Value
Iteration
Density − assoc[5]
Rhat: 1
Density
Parameter estimate


Trace − assoc[6]
Value
Iteration
Density − assoc[6]
Rhat: 1
Density
Parameter estimate
Trace − assoc[7]
Value
Iteration
Density − assoc[7]
Rhat: 1
Density
Parameter estimate
Trace − assoc[8]
Value
Iteration
Density − assoc[8]
Rhat: 1
Density
Parameter estimate


Trace − gammaS[1]
Value
Iteration
Density − gammaS[1]
Rhat: 1
Density
Parameter estimate
Trace − gammaS[2]
Value
Iteration
Density − gammaS[2]
Rhat: 1
Density
Parameter estimate
Trace − gammaS[3]
Value
Iteration
Density − gammaS[3]
Rhat: 1
Density
Parameter estimate


Trace − gammaS[4]
Value
Iteration
Density − gammaS[4]
Rhat: 1
Density
Parameter estimate
Trace − gammaS[5]
Value
Iteration
Density − gammaS[5]
Rhat: 1
Density
Parameter estimate
Trace − gammaS[6]
Value
Iteration
Density − gammaS[6]
Rhat: 1
Density
Parameter estimate


Trace − shape
Value
2 4 6 8
15000 16000 17000 18000 19000 20000
Iteration
Density − shape
Rhat: 1
Density
0.00 0.20
2 4 6 8 10
Parameter estimate
Trace − scale
Value
0 2 4 6 8
15000 16000 17000 18000 19000 20000
Iteration
Density − scale
Rhat: 1.01
Density
0.0 1.0 2.0
0 2 4 6 8
Parameter estimate

MCMC Diagnostics 2. We computed the Monte-Carlo Standard Error (MCSE), which is a measure of the precision of the posterior distribution obtained from a MCMC algorithm. The purpose of MCSE is to provide a measure of the accuracy of the estimate of the posterior distribution, which is the distribution of the parameters of interest after taking into account the data and prior information. MCSE is calculated by estimating the standard deviation of the MCMC samples of the posterior distribution, which provides a measure of the variability in the posterior estimates due to the Monte Carlo sampling process. This value is then divided by the square root of the effective sample size (ESS), which is the number of independent samples that the MCMC algorithm generates. For the parameters in the model, we obtained MCSE values between 0.00017 and 0.07442, with mean of 0.00447 and median of 0.00261.

Parameter	MCSE
betaP[1]	0.0021
betaP[2]	0.0166
betaP[3]	0.0079
betaP[4]	0.0081
betaP[5]	0.0047
betaP[6]	0.0061
betaP[7]	0.0083
betaP[8]	0.0057
betaP[9]	0.0024
betaP[10]	0.0166
betaP[11]	0.0068
betaP[12]	0.0035
betaP[13]	0.0036
betaP[14]	0.0065
betaP[15]	0.0063
betaP[16]	0.0041
betaP[17]	0.0066
betaP[18]	0.0254
betaP[19]	0.0112
betaP[20]	0.0112
betaP[21]	0.0078
betaP[22]	0.0059
betaP[23]	0.0123
betaP[24]	0.0070
betaP[1]	0.0021
betaP[2]	0.0166
betaP[3]	0.0079
betaP[4]	0.0081
betaP[5]	0.0047
betaP[6]	0.0061
betaP[7]	0.0083
betaP[8]	0.0057
betaP[9]	0.0024
betaP[10]	0.0166
betaP[11]	0.0068
betaP[12]	0.0035
betaP[13]	0.0036
betaP[14]	0.0065
betaP[15]	0.0063

betaP[16]	0.0041
betaP[17]	0.0066
betaP[18]	0.0254
betaP[19]	0.0112
betaP[20]	0.0112
betaP[21]	0.0078
betaP[22]	0.0059
betaP[23]	0.0123
betaP[24]	0.0070
alphaP[1]	0.0224
alphaP[2]	0.0101
alphaP[3]	0.0077
alphaP[4]	0.0059
alphaP[5]	0.0074
alphaP[6]	0.0047
sigmaP	0.0066
betaA[1]	0.0004
betaA[2]	0.0011
betaA[3]	0.0008
betaA[4]	0.0007
betaA[5]	0.0005
betaA[6]	0.0006
betaA[7]	0.0006
betaA[8]	0.0004
betaA[9]	0.0004
betaA[10]	0.0010
betaA[11]	0.0007
betaA[12]	0.0004
betaA[13]	0.0004
betaA[14]	0.0006
betaA[15]	0.0005
betaA[16]	0.0005
betaA[17]	0.0007
betaA[18]	0.0031
betaA[19]	0.0009
betaA[20]	0.0008
betaA[21]	0.0006
betaA[22]	0.0006
betaA[23]	0.0009
betaA[24]	0.0006
alphaA[1]	0.0064
alphaA[2]	0.0025
alphaA[3]	0.0024
alphaA[4]	0.0009
alphaA[5]	0.0048
alphaA[6]	0.0006
sigmaA	0.0006
betaD2[1]	0.0009
betaD2[2]	0.0038
betaD2[3]	0.0022

betaD2[4]	0.0040
betaD2[5]	0.0017
betaD2[6]	0.0012
betaD2[7]	0.0019
betaD2[8]	0.0016
betaD2[9]	0.0014
betaD2[10]	0.0039
betaD2[11]	0.0014
betaD2[12]	0.0010
betaD2[13]	0.0013
betaD2[14]	0.0024
betaD2[15]	0.0020
betaD2[16]	0.0016
betaD2[17]	0.0015
betaD2[18]	0.0037
betaD2[19]	0.0047
betaD2[20]	0.0016
betaD2[21]	0.0014
betaD2[22]	0.0016
betaD2[23]	0.0015
betaD2[24]	0.0012
betaD3[1]	0.0019
betaD3[2]	0.0090
betaD3[3]	0.0079
betaD3[4]	0.0036
betaD3[5]	0.0030
betaD3[6]	0.0041
betaD3[7]	0.0033
betaD3[8]	0.0038
betaD3[9]	0.0029
betaD3[10]	0.0100
betaD3[11]	0.0044
betaD3[12]	0.0029
betaD3[13]	0.0029
betaD3[14]	0.0050
betaD3[15]	0.0050
betaD3[16]	0.0060
betaD3[17]	0.0056
betaD3[18]	0.0062
betaD3[19]	0.0044
betaD3[20]	0.0049
betaD3[21]	0.0045
betaD3[22]	0.0056
betaD3[23]	0.0038
betaD3[24]	0.0044
alphaD2[1]	0.0111
alphaD2[2]	0.0070
alphaD2[3]	0.0061
alphaD2[4]	0.0026
alphaD2[5]	0.0060

alphaD2[6]	0.0022
alphaD3[1]	0.0084
alphaD3[2]	0.0056
alphaD3[3]	0.0055
alphaD3[4]	0.0052
alphaD3[5]	0.0045
alphaD3[6]	0.0042
betaI1[1]	0.0004
betaI1[2]	0.0012
betaI1[3]	0.0012
betaI1[4]	0.0010
betaI1[5]	0.0013
betaI1[6]	0.0015
betaI1[7]	0.0010
betaI1[8]	0.0008
betaI1[9]	0.0004
betaI1[10]	0.0010
betaI1[11]	0.0011
betaI1[12]	0.0011
betaI1[13]	0.0012
betaI1[14]	0.0017
betaI1[15]	0.0012
betaI1[16]	0.0010
betaI1[17]	0.0008
betaI1[18]	0.0014
betaI1[19]	0.0020
betaI1[20]	0.0009
betaI1[21]	0.0010
betaI1[22]	0.0010
betaI1[23]	0.0009
betaI1[24]	0.0012
betaI2[1]	0.0005
betaI2[2]	0.0007
betaI2[3]	0.0014
betaI2[4]	0.0008
betaI2[5]	0.0009
betaI2[6]	0.0007
betaI2[7]	0.0012
betaI2[8]	0.0005
betaI2[9]	0.0005
betaI2[10]	0.0007
betaI2[11]	0.0008
betaI2[12]	0.0006
betaI2[13]	0.0008
betaI2[14]	0.0007
betaI2[15]	0.0009
betaI2[16]	0.0005
betaI2[17]	0.0009
betaI2[18]	0.0007
betaI2[19]	0.0010

betaI2[20]	0.0006
betaI2[21]	0.0006
betaI2[22]	0.0005
betaI2[23]	0.0008
betaI2[24]	0.0006
betaI3[1]	0.0005
betaI3[2]	0.0008
betaI3[3]	0.0006
betaI3[4]	0.0005
betaI3[5]	0.0006
betaI3[6]	0.0006
betaI3[7]	0.0006
betaI3[8]	0.0005
betaI3[9]	0.0006
betaI3[10]	0.0007
betaI3[11]	0.0006
betaI3[12]	0.0007
betaI3[13]	0.0007
betaI3[14]	0.0007
betaI3[15]	0.0005
betaI3[16]	0.0004
betaI3[17]	0.0009
betaI3[18]	0.0007
betaI3[19]	0.0007
betaI3[20]	0.0005
betaI3[21]	0.0007
betaI3[22]	0.0005
betaI3[23]	0.0004
betaI3[24]	0.0005
betaR1[1]	0.0002
betaR1[2]	0.0004
betaR1[3]	0.0002
betaR1[4]	0.0002
betaR1[5]	0.0002
betaR1[6]	0.0007
betaR1[7]	0.0002
betaR1[8]	0.0002
betaR1[9]	0.0002
betaR1[10]	0.0002
betaR1[11]	0.0002
betaR1[12]	0.0002
betaR1[13]	0.0003
betaR1[14]	0.0002
betaR1[15]	0.0003
betaR1[16]	0.0002
betaR1[17]	0.0003
betaR1[18]	0.0002
betaR1[19]	0.0003
betaR1[20]	0.0002
betaR1[21]	0.0004

betaR1[22]	0.0002
betaR1[23]	0.0003
betaR1[24]	0.0002
betaR2[1]	0.0005
betaR2[2]	0.0019
betaR2[3]	0.0039
betaR2[4]	0.0034
betaR2[5]	0.0035
betaR2[6]	0.0033
betaR2[7]	0.0031
betaR2[8]	0.0012
betaR2[9]	0.0005
betaR2[10]	0.0018
betaR2[11]	0.0034
betaR2[12]	0.0035
betaR2[13]	0.0035
betaR2[14]	0.0033
betaR2[15]	0.0029
betaR2[16]	0.0011
betaR2[17]	0.0011
betaR2[18]	0.0034
betaR2[19]	0.0034
betaR2[20]	0.0029
betaR2[21]	0.0032
betaR2[22]	0.0022
betaR2[23]	0.0025
betaR2[24]	0.0016
betaR3[1]	0.0005
betaR3[2]	0.0026
betaR3[3]	0.0095
betaR3[4]	0.0105
betaR3[5]	0.0075
betaR3[6]	0.0067
betaR3[7]	0.0067
betaR3[8]	0.0020
betaR3[9]	0.0006
betaR3[10]	0.0027
betaR3[11]	0.0091
betaR3[12]	0.0100
betaR3[13]	0.0074
betaR3[14]	0.0066
betaR3[15]	0.0062
betaR3[16]	0.0024
betaR3[17]	0.0013
betaR3[18]	0.0053
betaR3[19]	0.0083
betaR3[20]	0.0096
betaR3[21]	0.0073
betaR3[22]	0.0048
betaR3[23]	0.0064

betaR3[24]	0.0026
alphaI1[1]	0.0118
alphaI1[2]	0.0074
alphaI1[3]	0.0067
alphaI1[4]	0.0020
alphaI1[5]	0.0059
alphaI1[6]	0.0018
alphaI2[1]	0.0154
alphaI2[2]	0.0115
alphaI2[3]	0.0105
alphaI2[4]	0.0035
alphaI2[5]	0.0074
alphaI2[6]	0.0033
alphaI3[1]	0.0178
alphaI3[2]	0.0137
alphaI3[3]	0.0127
alphaI3[4]	0.0047
alphaI3[5]	0.0086
alphaI3[6]	0.0043
alphaR1[1]	0.0110
alphaR1[2]	0.0096
alphaR1[3]	0.0086
alphaR1[4]	0.0025
alphaR1[5]	0.0064
alphaR1[6]	0.0023
alphaR2[1]	0.0146
alphaR2[2]	0.0082
alphaR2[3]	0.0075
alphaR2[4]	0.0024
alphaR2[5]	0.0066
alphaR2[6]	0.0025
alphaR3[1]	0.0226
alphaR3[2]	0.0136
alphaR3[3]	0.0121
alphaR3[4]	0.0061
alphaR3[5]	0.0115
alphaR3[6]	0.0053
SigmaIR[1, 1]	0.0015
SigmaIR[2, 1]	0.0017
SigmaIR[3, 1]	0.0019
SigmaIR[4, 1]	0.0016
SigmaIR[5, 1]	0.0008
SigmaIR[6, 1]	0.0009
SigmaIR[1, 2]	0.0017
SigmaIR[2, 2]	0.0042
SigmaIR[3, 2]	0.0041
SigmaIR[4, 2]	0.0035
SigmaIR[5, 2]	0.0018
SigmaIR[6, 2]	0.0015
SigmaIR[1, 3]	0.0019

SigmaIR[2, 3]	0.0041
SigmaIR[3, 3]	0.0054
SigmaIR[4, 3]	0.0035
SigmaIR[5, 3]	0.0020
SigmaIR[6, 3]	0.0018
SigmaIR[1, 4]	0.0016
SigmaIR[2, 4]	0.0035
SigmaIR[3, 4]	0.0035
SigmaIR[4, 4]	0.0031
SigmaIR[5, 4]	0.0014
SigmaIR[6, 4]	0.0011
SigmaIR[1, 5]	0.0008
SigmaIR[2, 5]	0.0018
SigmaIR[3, 5]	0.0020
SigmaIR[4, 5]	0.0014
SigmaIR[5, 5]	0.0011
SigmaIR[6, 5]	0.0009
SigmaIR[1, 6]	0.0009
SigmaIR[2, 6]	0.0015
SigmaIR[3, 6]	0.0018
SigmaIR[4, 6]	0.0011
SigmaIR[5, 6]	0.0009
SigmaIR[6, 6]	0.0011
thetaP	0.0022
thetaA	0.0020
thetaIR[1, 1]	0.0033
thetaIR[2, 1]	0.0041
thetaIR[3, 1]	0.0034
thetaIR[4, 1]	0.0029
thetaIR[5, 1]	0.0043
thetaIR[6, 1]	0.0093
thetaIR[1, 2]	0.0026
thetaIR[2, 2]	0.0032
thetaIR[3, 2]	0.0032
thetaIR[4, 2]	0.0028
thetaIR[5, 2]	0.0042
thetaIR[6, 2]	0.0108
thetaIR[1, 3]	0.0017
thetaIR[2, 3]	0.0021
thetaIR[3, 3]	0.0024
thetaIR[4, 3]	0.0015
thetaIR[5, 3]	0.0038
thetaIR[6, 3]	0.0075
thetaIR[1, 4]	0.0026
thetaIR[2, 4]	0.0030
thetaIR[3, 4]	0.0031
thetaIR[4, 4]	0.0019
thetaIR[5, 4]	0.0042
thetaIR[6, 4]	0.0067
thetaIR[1, 5]	0.0043

thetaIR[2, 5]	0.0072
thetaIR[3, 5]	0.0059
thetaIR[4, 5]	0.0048
thetaIR[5, 5]	0.0048
thetaIR[6, 5]	0.0076
thetaIR[1, 6]	0.0047
thetaIR[2, 6]	0.0072
thetaIR[3, 6]	0.0051
thetaIR[4, 6]	0.0044
thetaIR[5, 6]	0.0036
thetaIR[6, 6]	0.0031
assoc[1]	0.0058
assoc[2]	0.0222
assoc[3]	0.0194
assoc[4]	0.0123
assoc[5]	0.0222
assoc[6]	0.0273
assoc[7]	0.0162
assoc[8]	0.0096
gammaS[1]	0.0744
gammaS[2]	0.0134
gammaS[3]	0.0107
gammaS[4]	0.0096
gammaS[5]	0.0174
gammaS[6]	0.0111
shape	0.0493
scale	0.0123