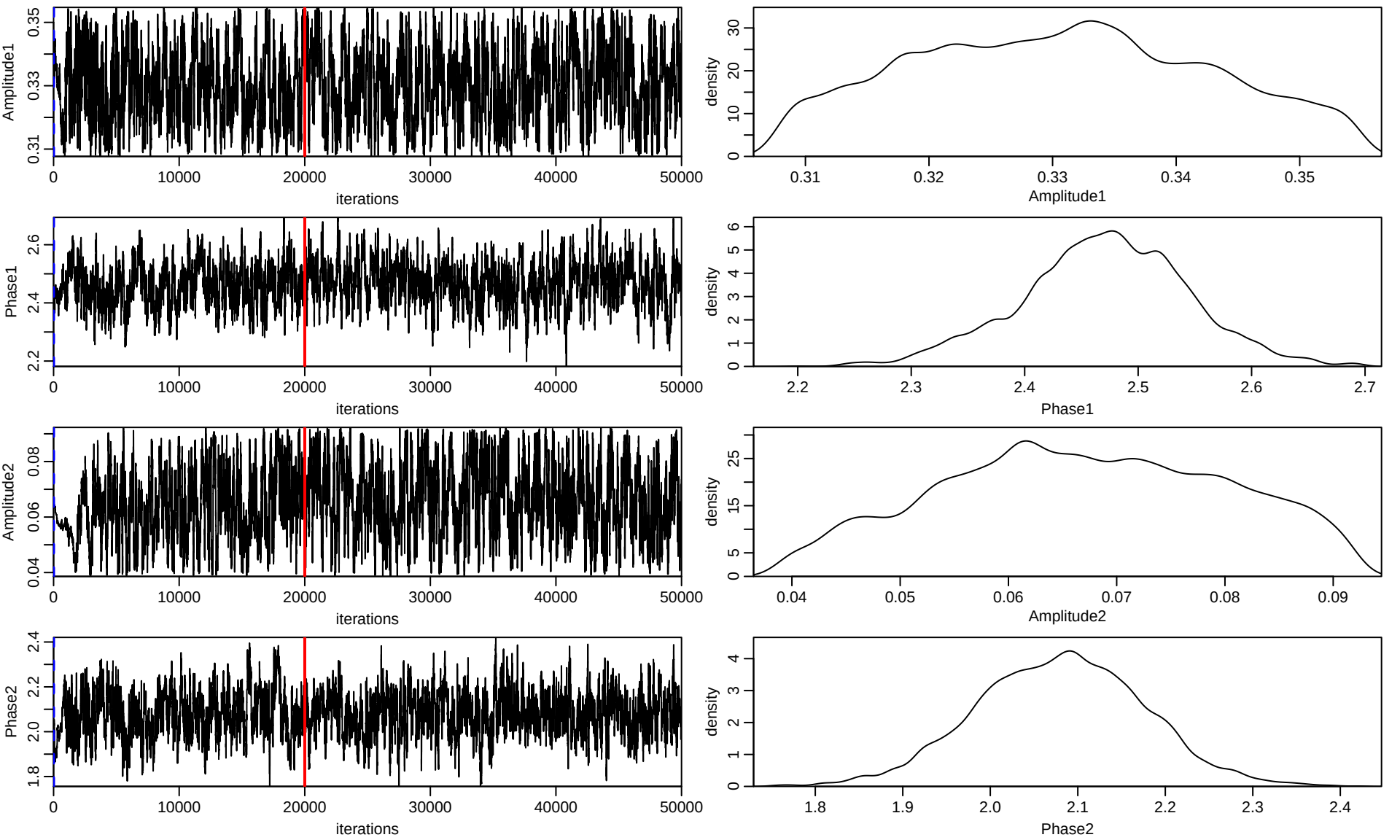
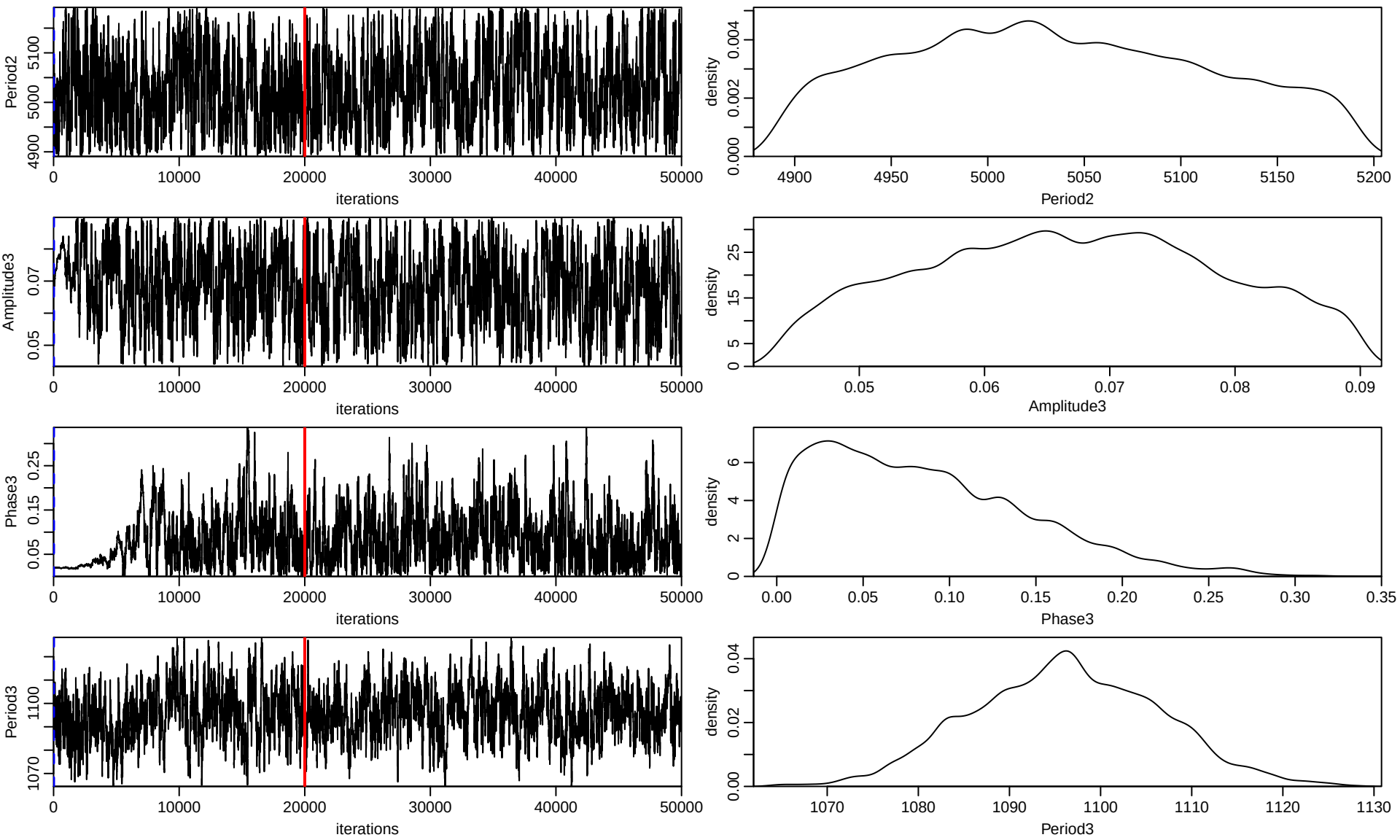
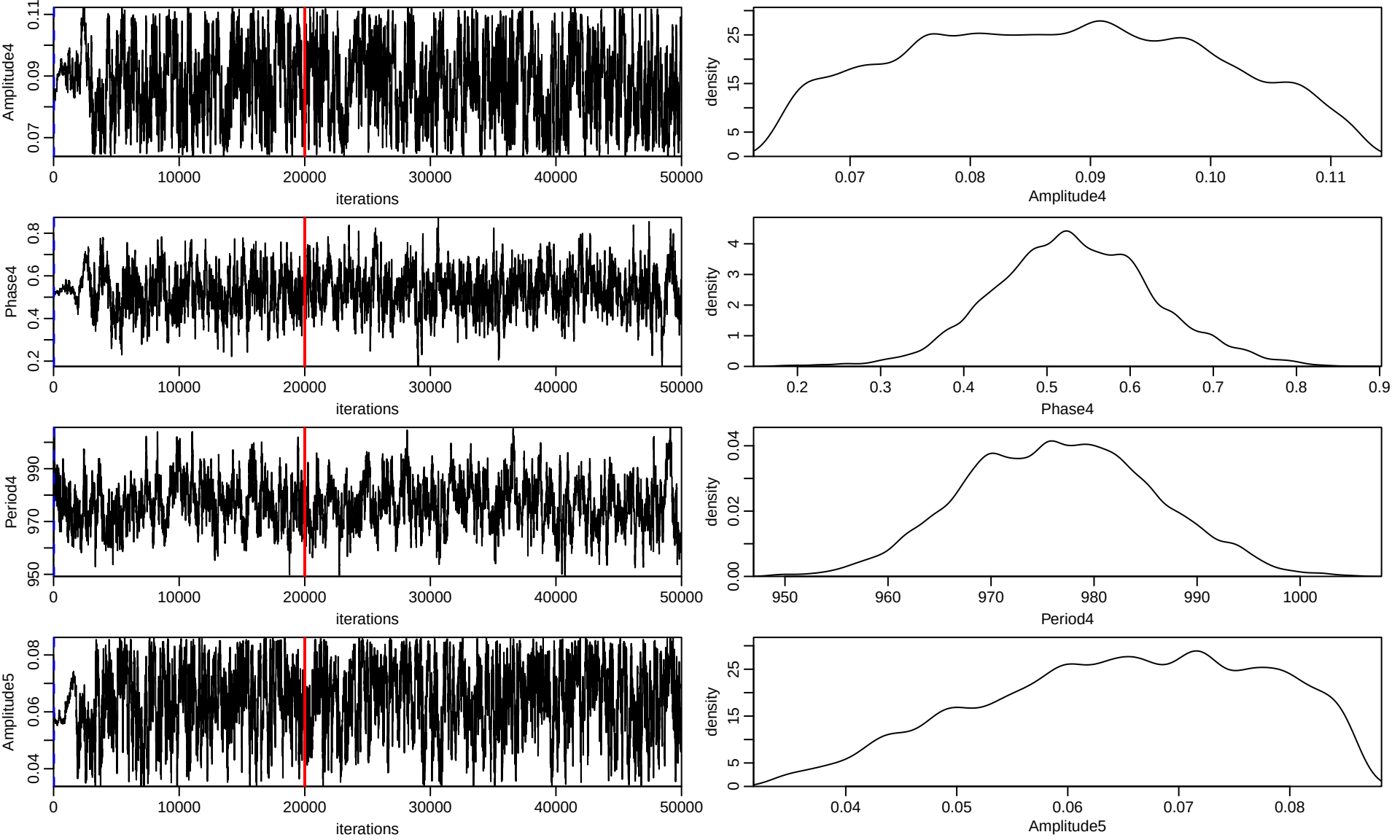
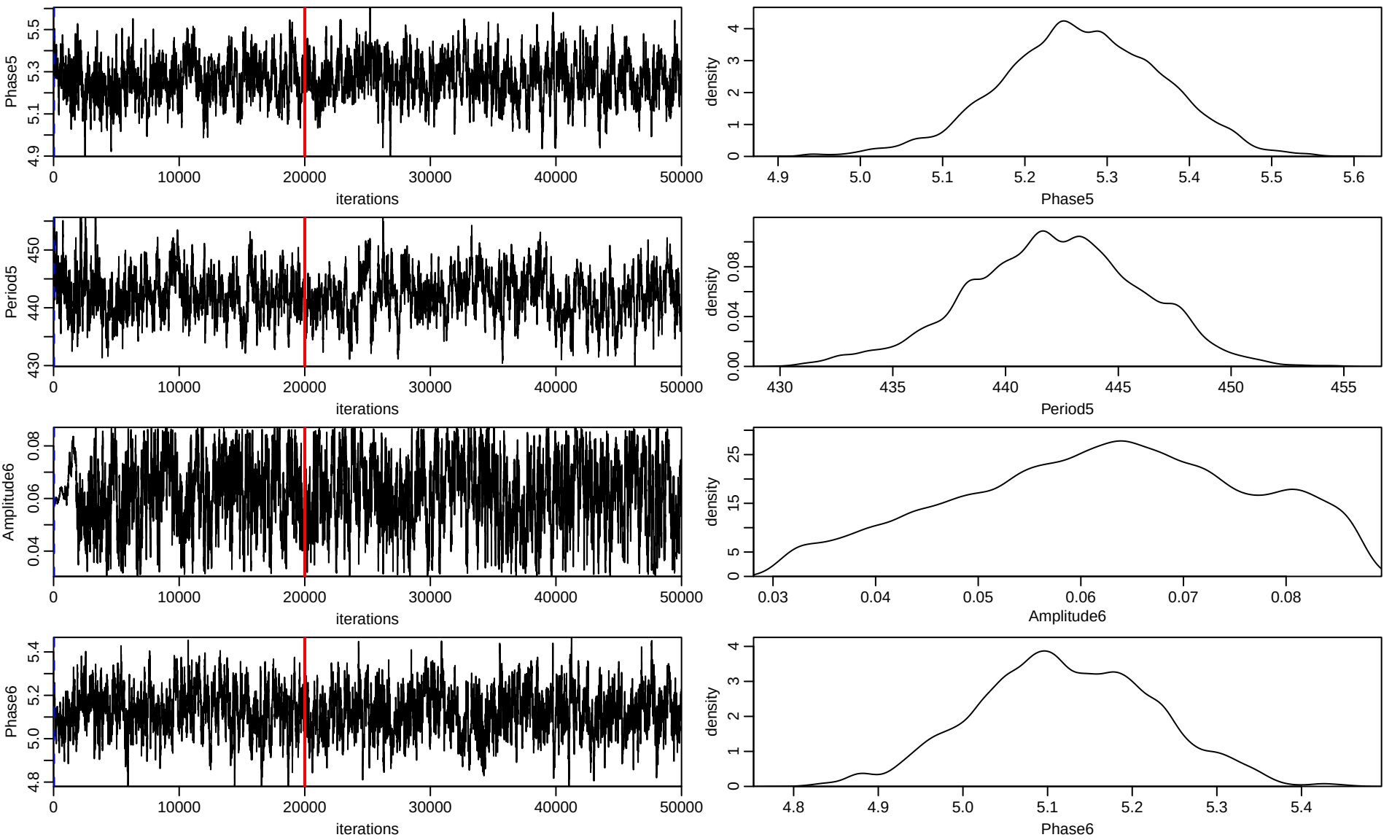
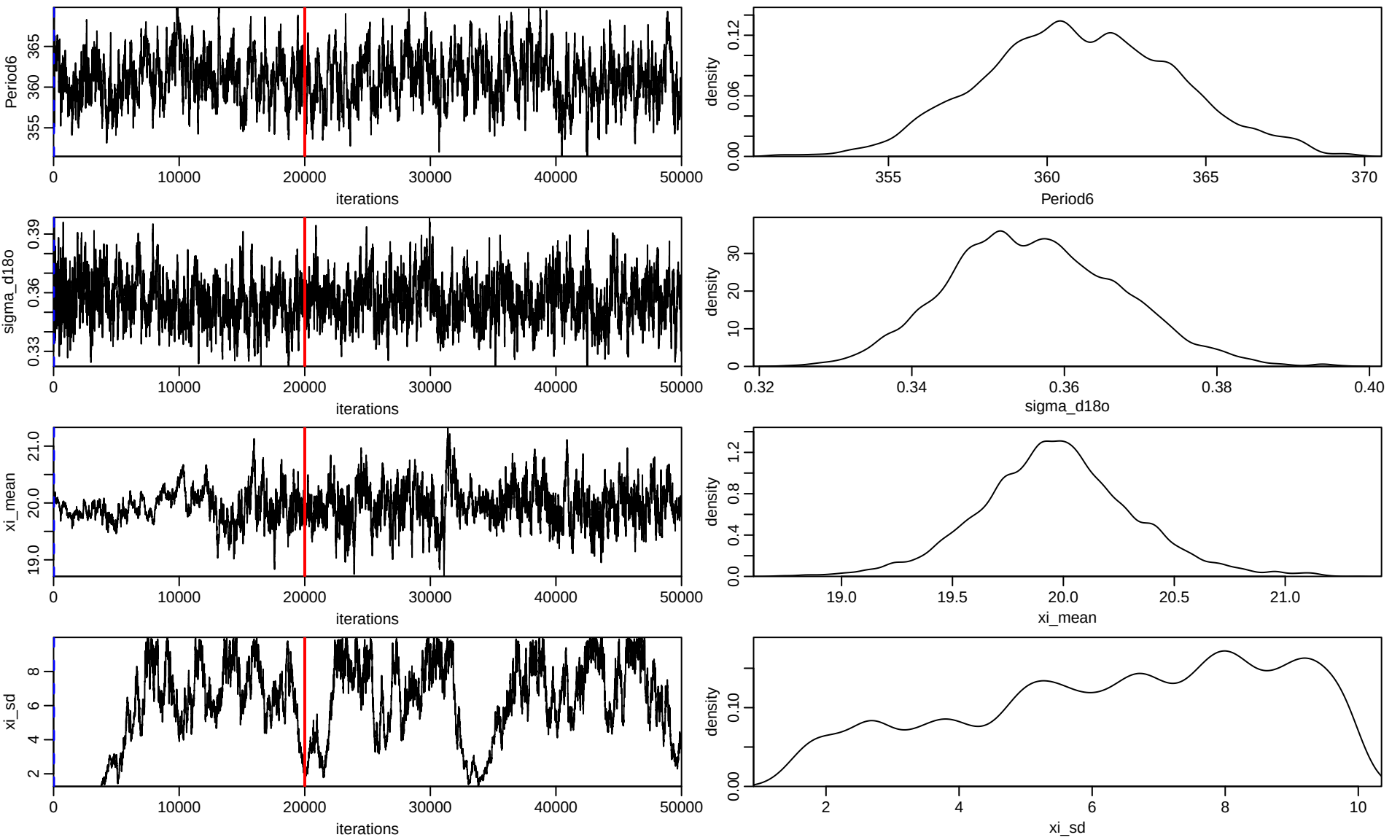
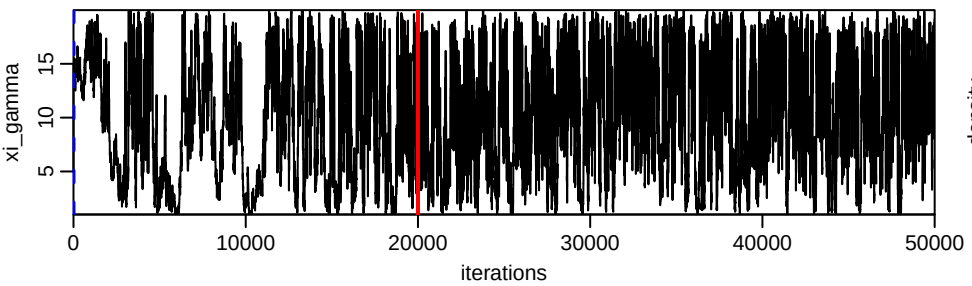

Amplitude1
0.31
0.33
0.35
0
10000
20000
30000
40000
50000
iterations
density
0
10
20
30
0.31
0.32
0.33
0.34
0.35
Amplitude1
Phase1
2.2
2.4
2.6
iterations
density
0
1
2
3
4
5
6
2.2
2.3
2.4
2.5
2.6
2.7
Phase1
Amplitude2
0.04
0.06
0.08
iterations
density
0
5
15
25
0.04
0.05
0.06
0.07
0.08
0.09
Amplitude2
Phase2
1.8
2.0
2.2
2.4
iterations
density
0
1
2
3
4
1.8
1.9
2.0
2.1
2.2
2.3
2.4
Phase2

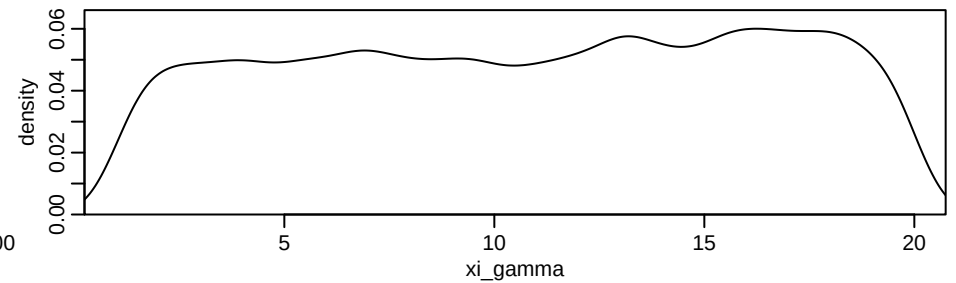

Period2
iterations
density
Period2
Amplitude3
iterations
density
Amplitude3
Phase3
iterations
density
Phase3
Period3
iterations
density
Period3

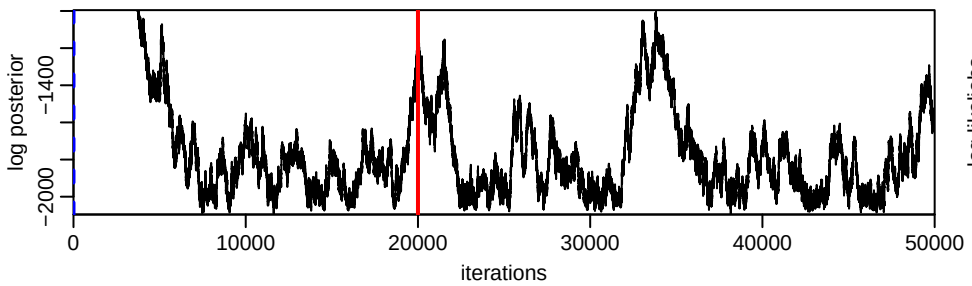

Amplitude4
iterations
density
Amplitude4
Phase4
iterations
density
Phase4
Period4
iterations
density
Period4
Amplitude5
iterations
density
Amplitude5

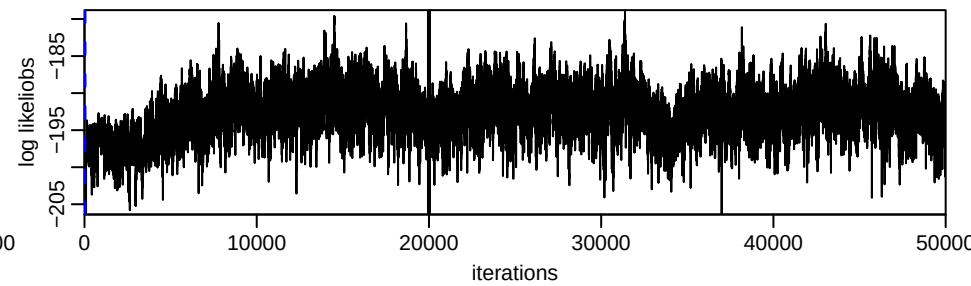

Phase5
iterations
density
Phase5
Period5
iterations
density
Period5
Amplitude6
iterations
density
Amplitude6
Phase6
iterations
density
Phase6

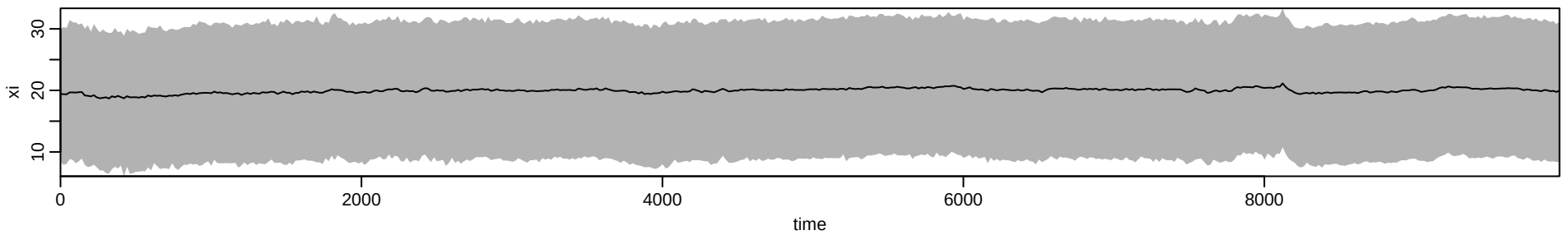

Period6
iterations
density
Period6
sigma_d18o
iterations
density
sigma_d18o
xi_mean
iterations
density
xi_mean
xi_sd
iterations
density
xi_sd


xi_gamma
5
10
15
0
10000
20000
30000
40000
50000
iterations


density
0.00
0.02
0.04
0.06
5
10
15
20
xi_gamma


log posterior
−1400
−2000
0
10000
20000
30000
40000
50000
iterations


log likeliobs
−185
−195
−205
0
10000
20000
30000
40000
50000
iterations

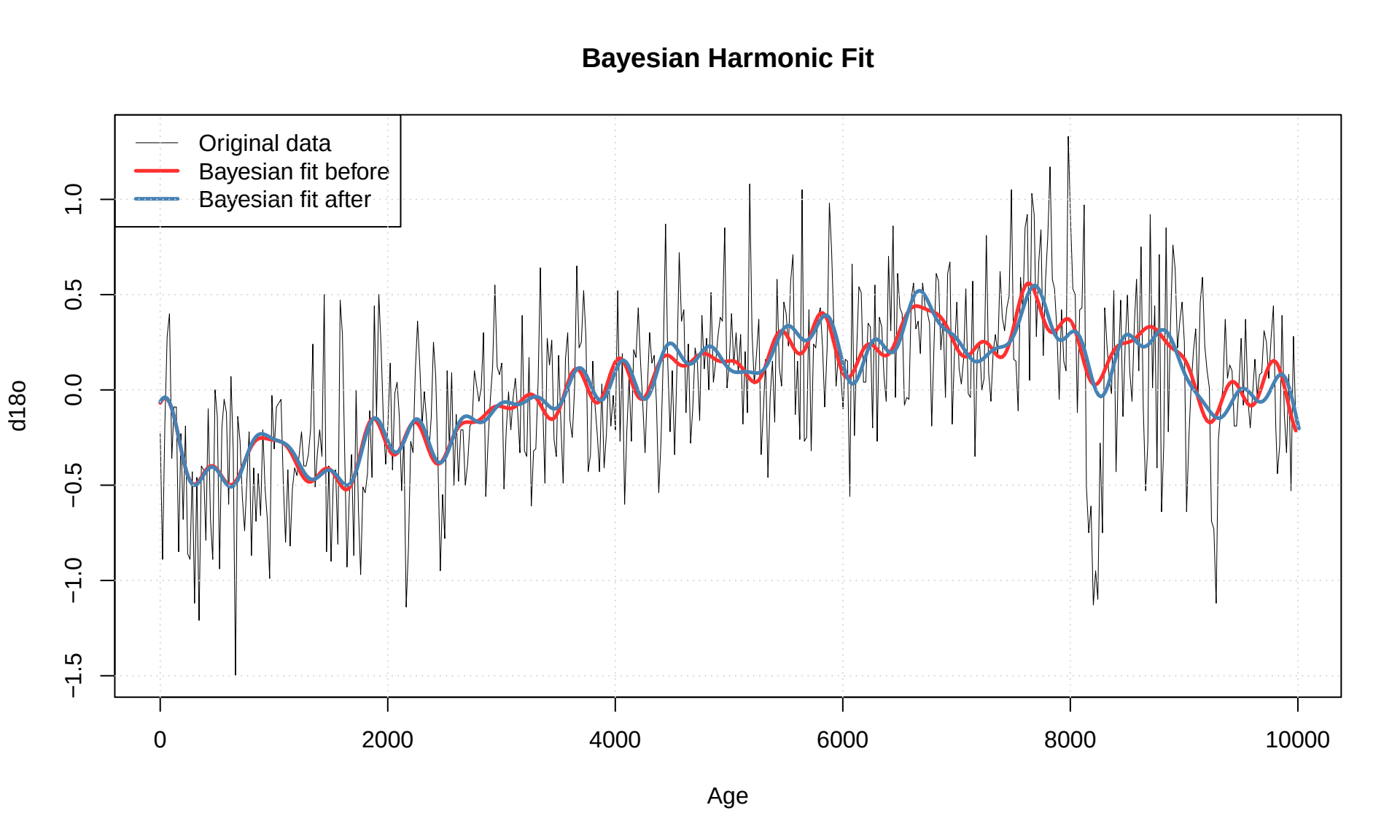

xi
30
20
10
0
2000
4000
6000
8000
time

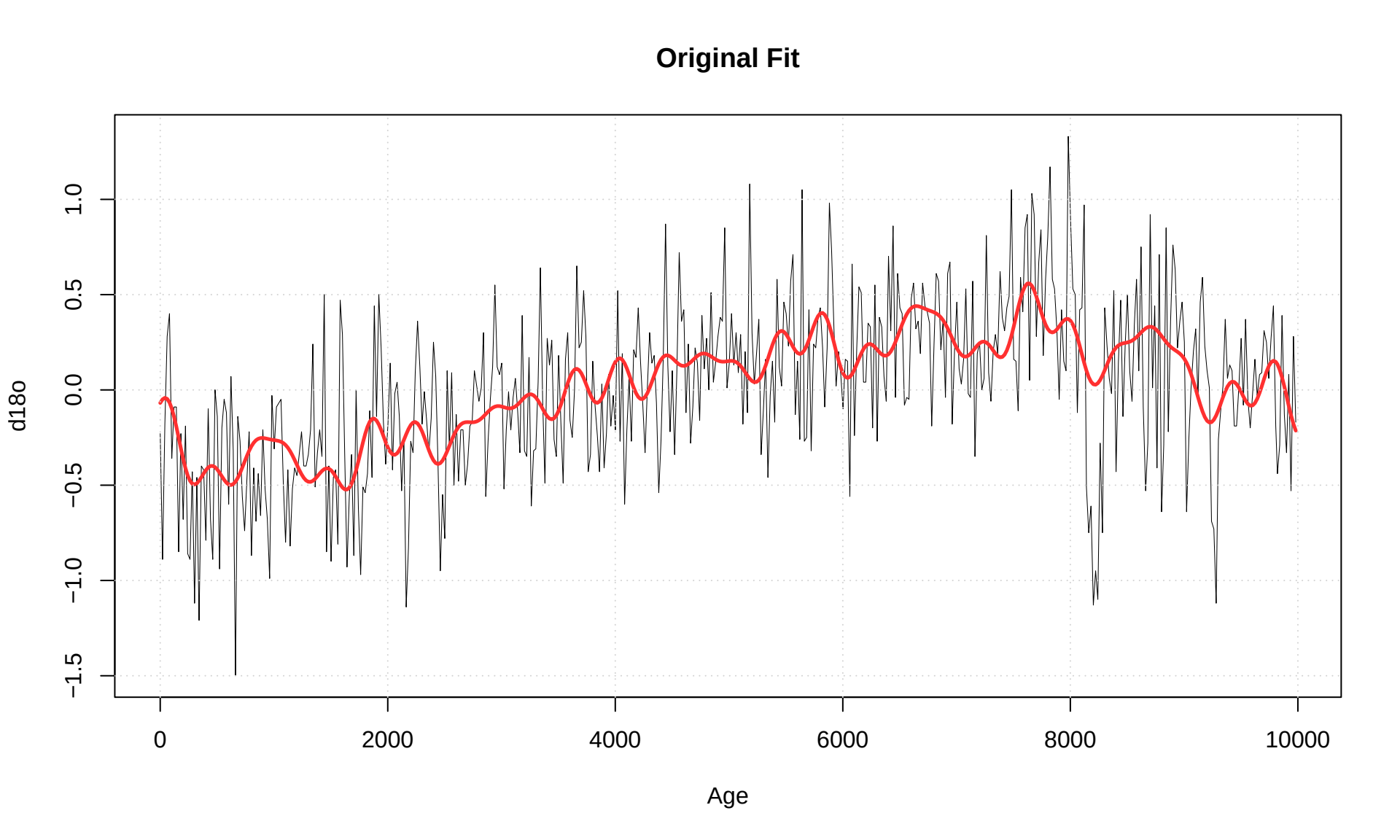
Harmonics before

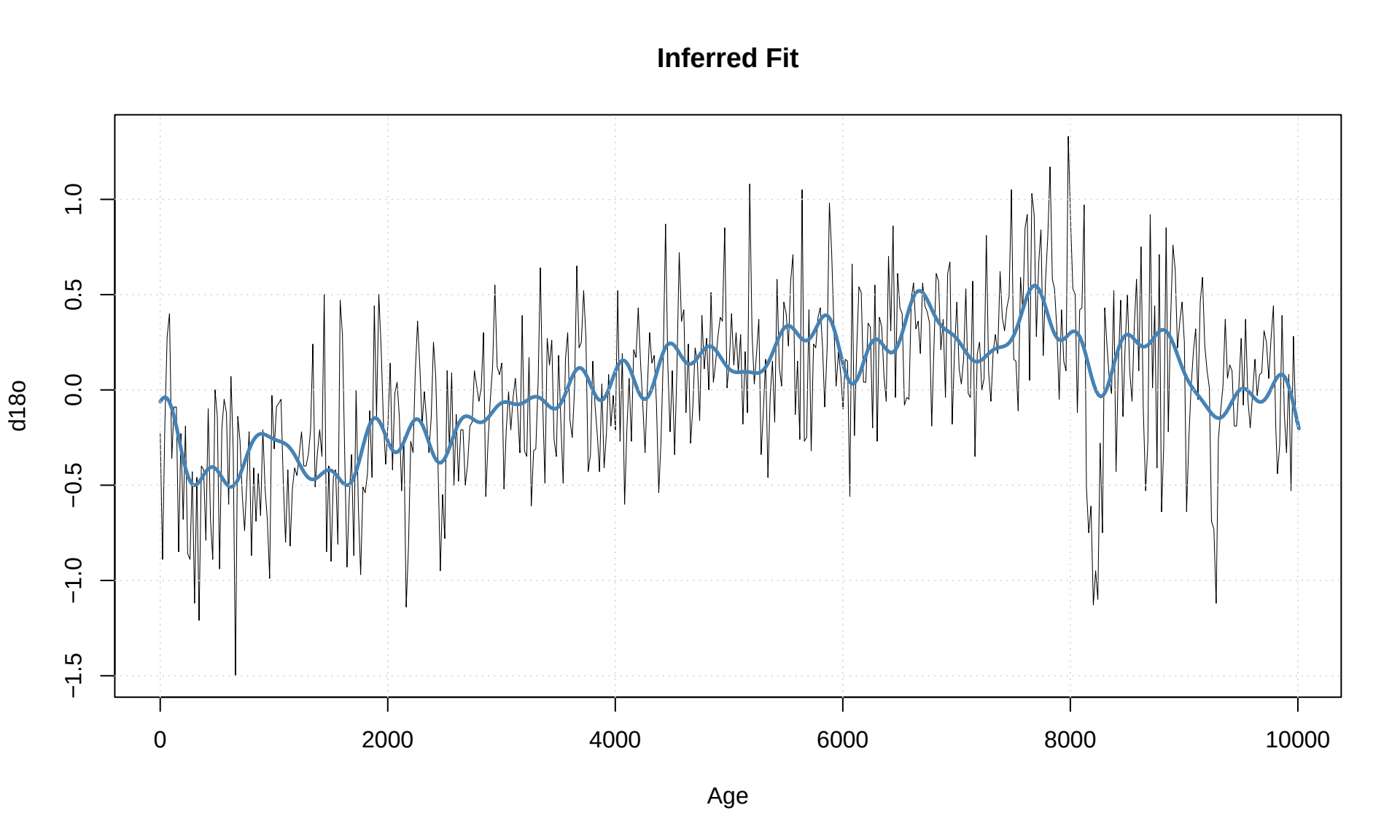
	Period	dPeriod	Amplitude	dAmplitude	Phase	dPhase	FixedPeriod
1	10718.38	236.84	0.33	0.02	2.38	0.1	1
2	5040.79	144.99	0.07	0.03	2.04	0.9	0
3	1096.24	17.47	0.07	0.02	0.02	0.58	0
4	977.3	13.79	0.09	0.02	0.51	0.53	0
5	443.12	7.41	0.06	0.03	5.28	0.66	0
6	360.17	6.23	0.06	0.03	5.14	1.01	0

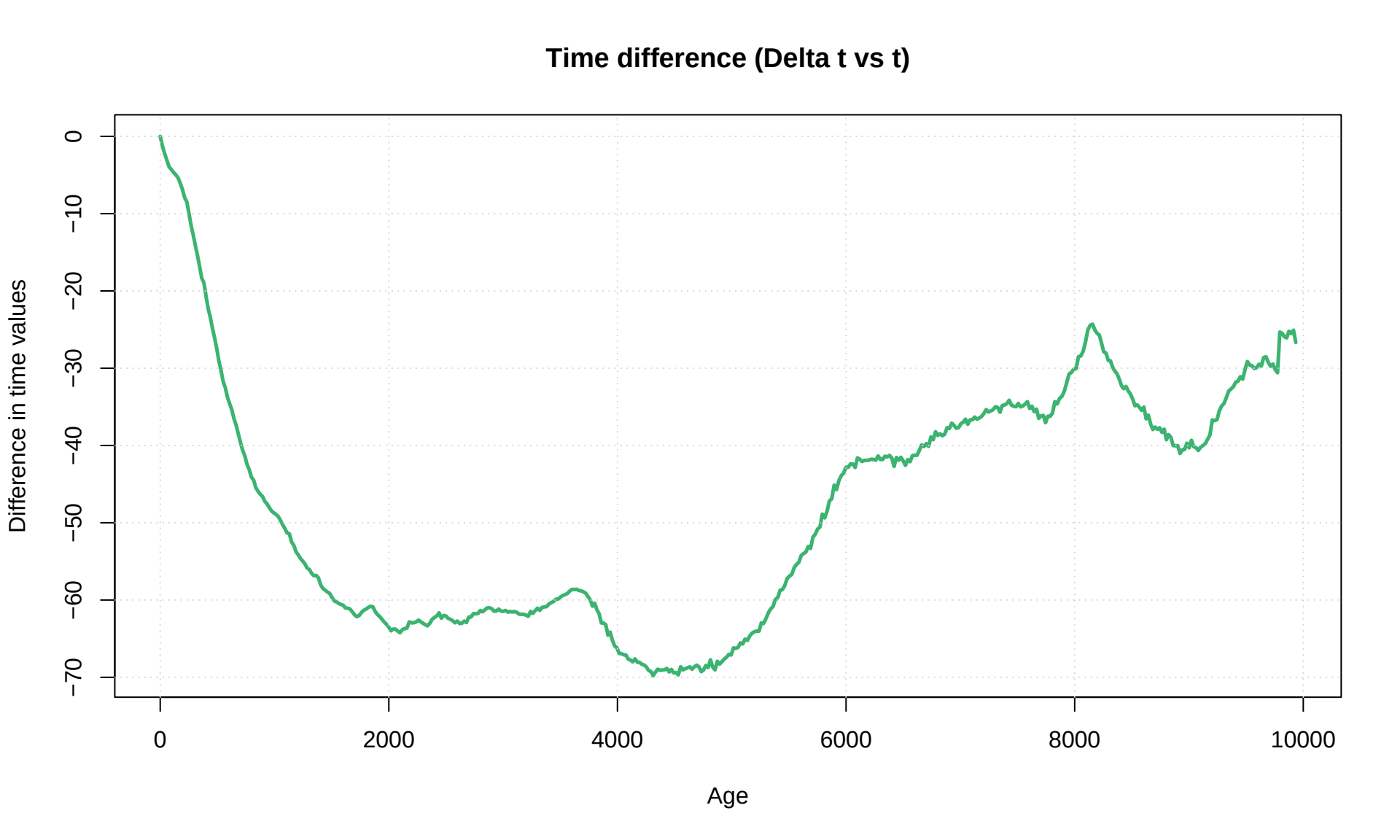
Harmonics inferred

	Period	Amplitude	Phase
1	10718.38	0.33	2.42
2	5013.58	0.06	2.02
3	1103.24	0.08	0.02
4	975.96	0.09	0.53
5	444.55	0.06	5.36
6	364.04	0.06	5.1


Bayesian Harmonic Fit
Original data
Bayesian fit before
Bayesian fit after
d18o
1.0
0.5
0.0
−0.5
−1.0
−1.5
0
2000
4000
6000
8000
10000
Age


Original Fit
d18o
1.0
0.5
0.0
−0.5
−1.0
−1.5
0
2000
4000
6000
8000
10000
Age


Inferred Fit
d18o
1.0
0.5
0.0
−0.5
−1.0
−1.5
0
2000
4000
6000
8000
10000
Age


Time difference (Delta t vs t)
Difference in time values
0
−10
−20
−30
−40
−50
−60
−70
0
2000
4000
6000
8000
10000
Age