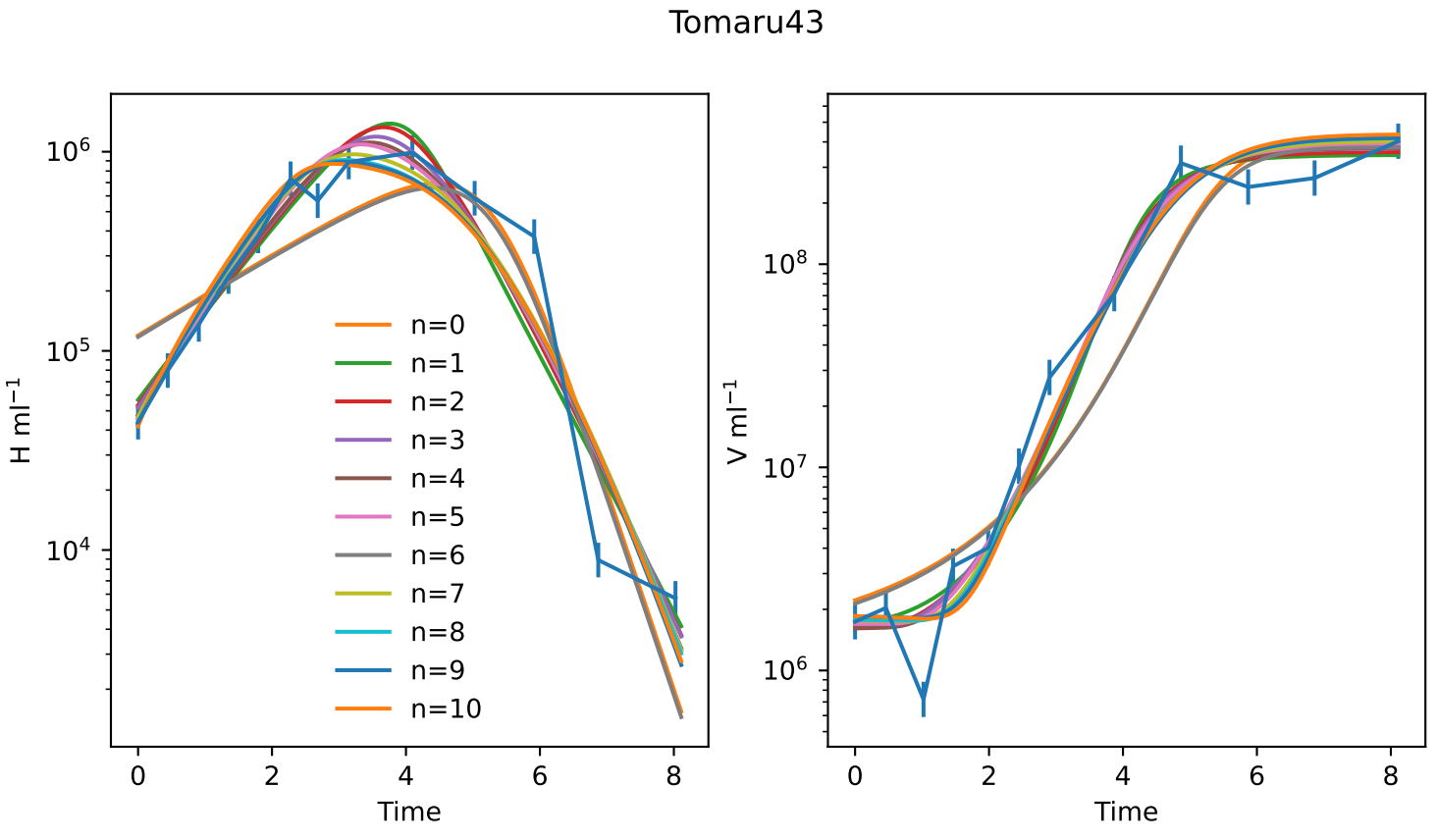
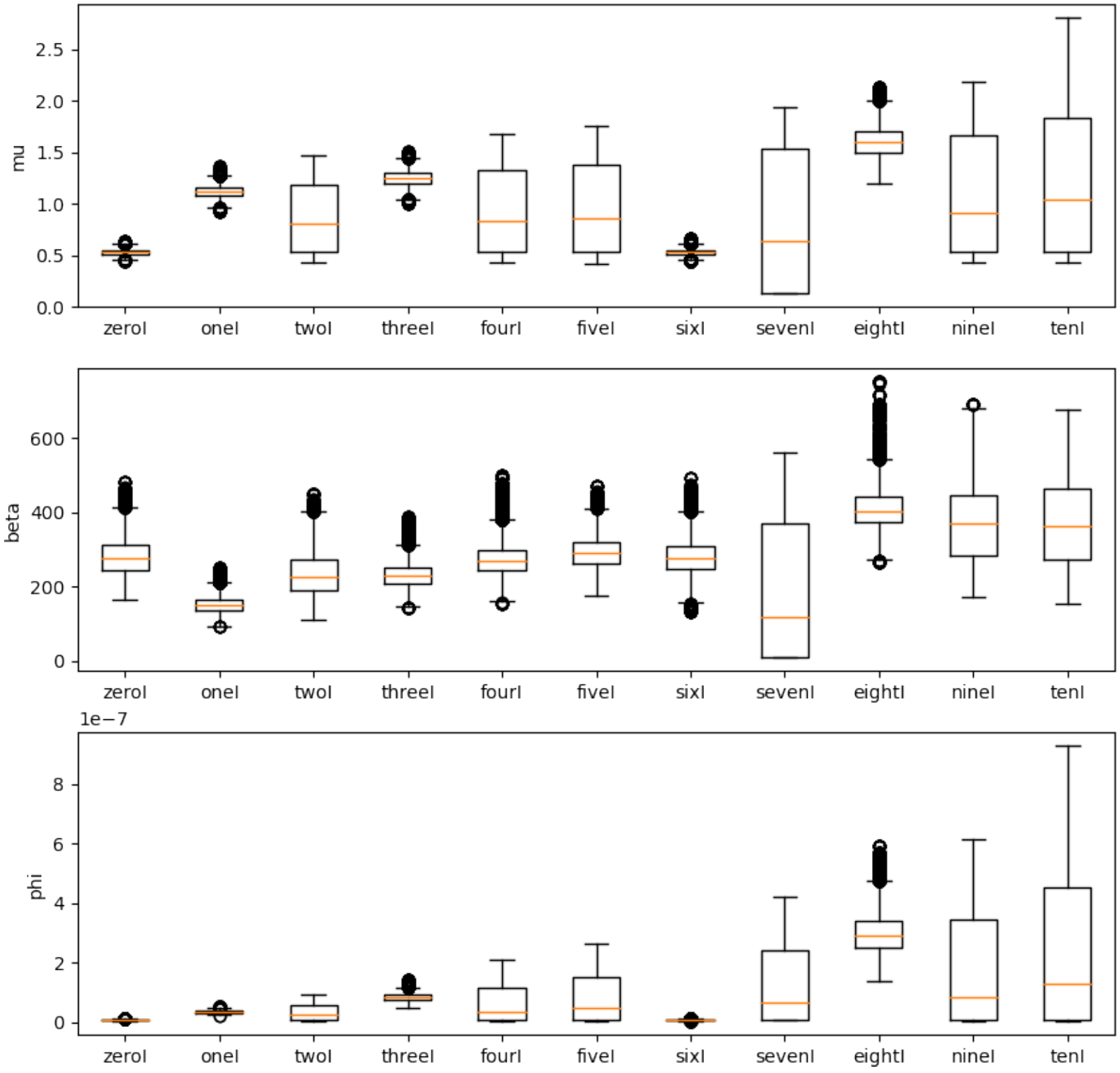
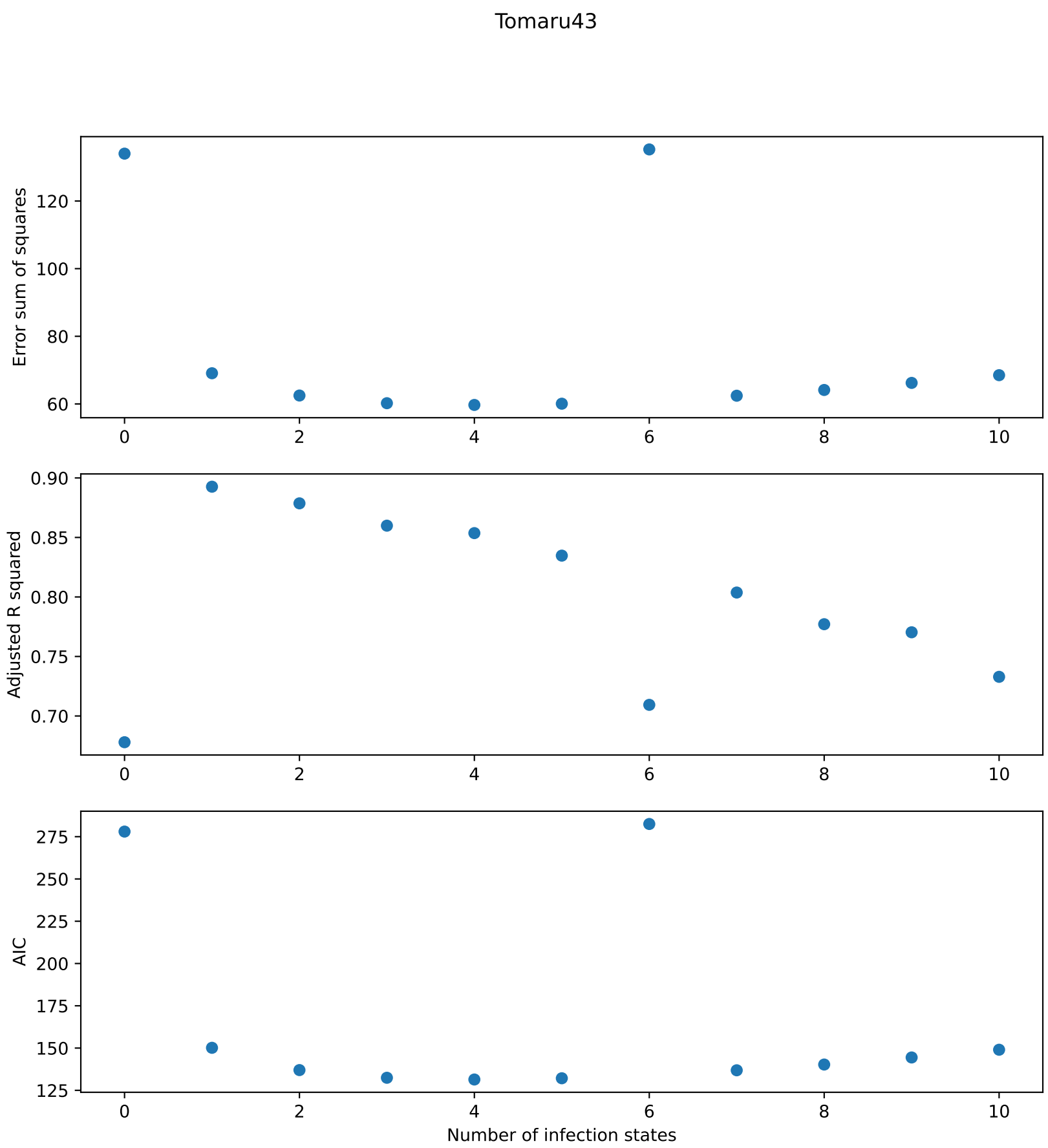
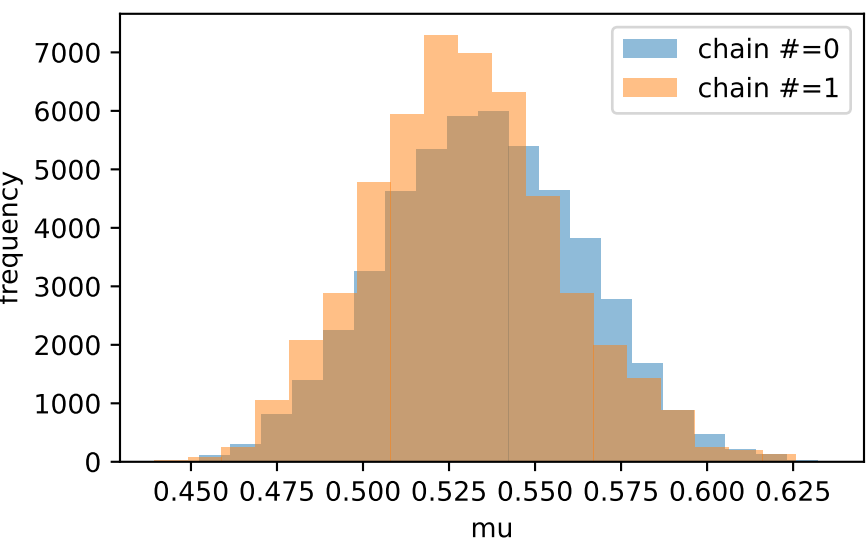

Tomaru43
H ml^{-1}
10^6
10^5
10^4
n=0
n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10
0
2
4
6
8
Time
V ml^{-1}
10^8
10^7
10^6
0
2
4
6
8
Time

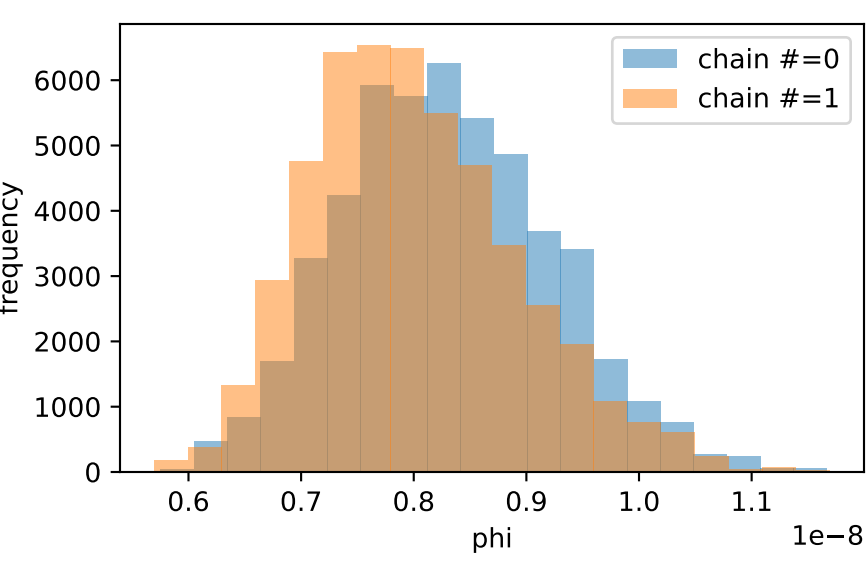
Tomaru43

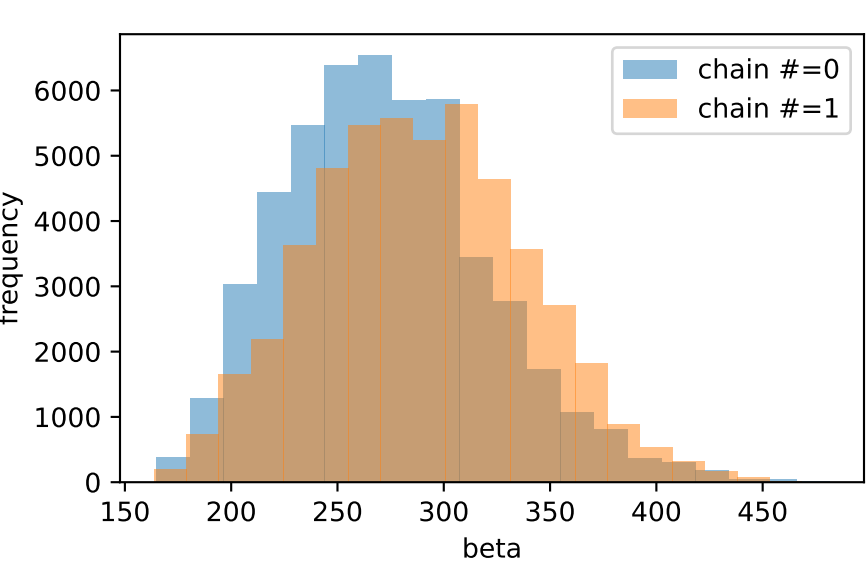

mu
2.5
2.0
1.5
1.0
0.5
0.0
zeroI
oneI
twoI
threeI
fourI
fiveI
sixI
sevenI
eightI
nineI
tenI
beta
600
400
200
0
zeroI
oneI
twoI
threeI
fourI
fiveI
sixI
sevenI
eightI
nineI
tenI
1e−7
phi
8
6
4
2
0
zeroI
oneI
twoI
threeI
fourI
fiveI
sixI
sevenI
eightI
nineI
tenI

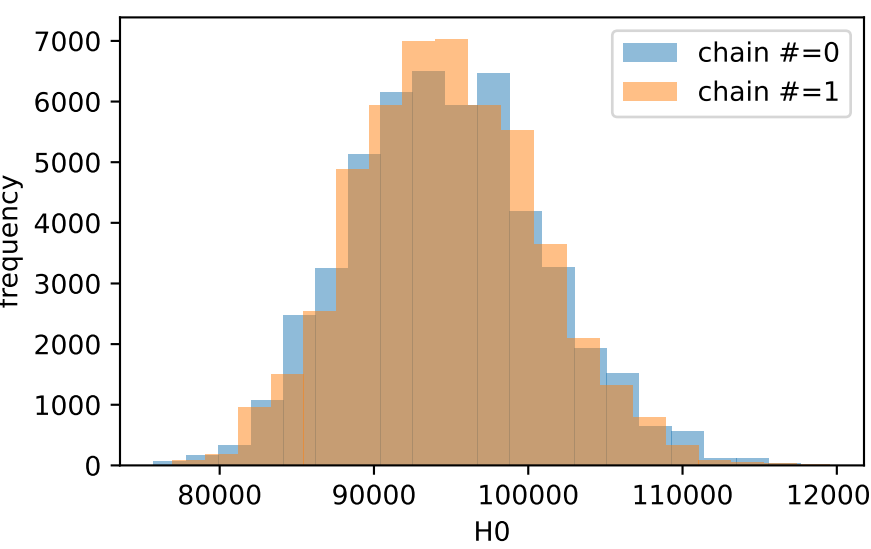

Tomaru43
Error sum of squares
120
100
80
60
0
2
4
6
8
10
Adjusted R squared
0.90
0.85
0.80
0.75
0.70
0
2
4
6
8
10
AIC
275
250
225
200
175
150
125
0
2
4
6
8
10
Number of infection states

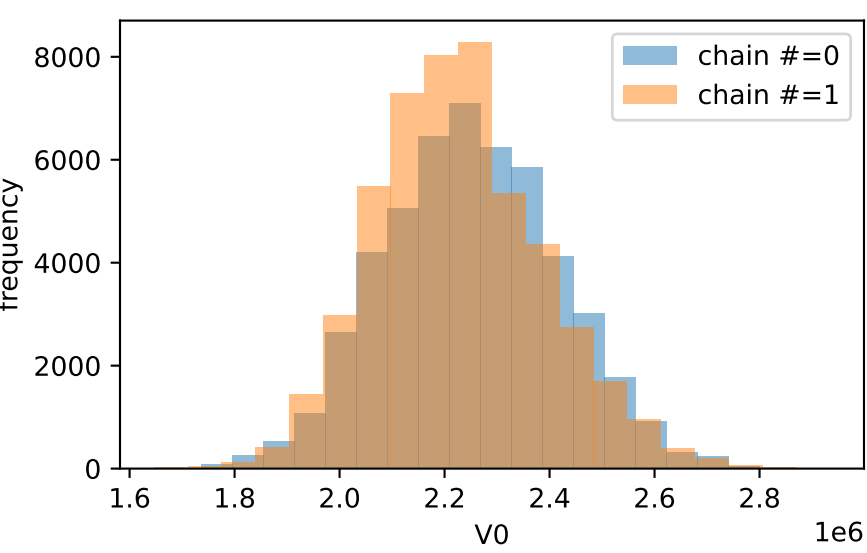
zero_i


chain #=0
chain #=1
frequency
7000
6000
5000
4000
3000
2000
1000
0
0.450 0.475 0.500 0.525 0.550 0.575 0.600 0.625
mu

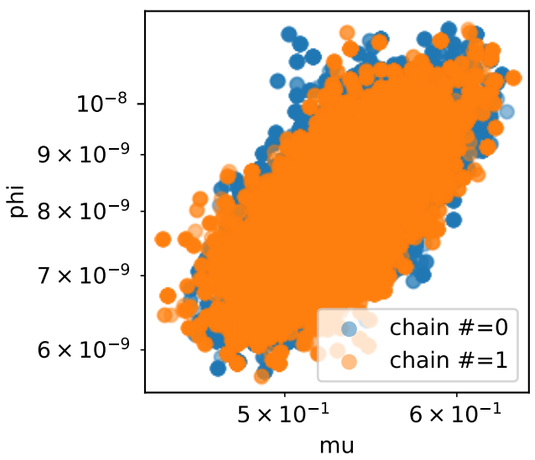

chain #=0
chain #=1
frequency
6000
5000
4000
3000
2000
1000
0
0.6 0.7 0.8 0.9 1.0 1.1
phi
1e−8

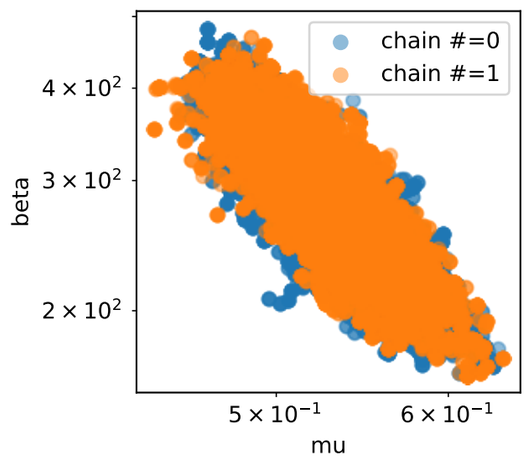

chain #=0
chain #=1
frequency
6000
5000
4000
3000
2000
1000
0
150 200 250 300 350 400 450
beta

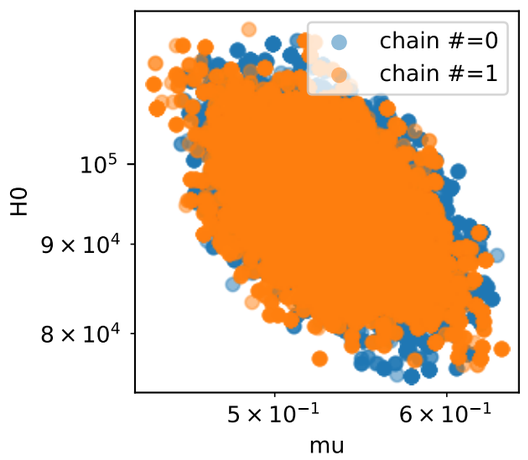

chain #=0
chain #=1
frequency
7000
6000
5000
4000
3000
2000
1000
0
80000 90000 100000 110000 120000
H0

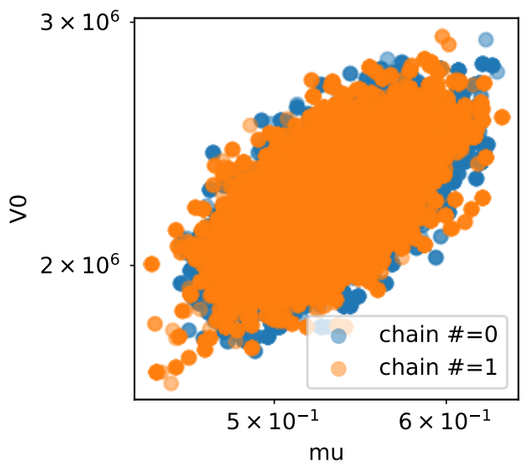

chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
1.6 1.8 2.0 2.2 2.4 2.6 2.8
V0
1e6

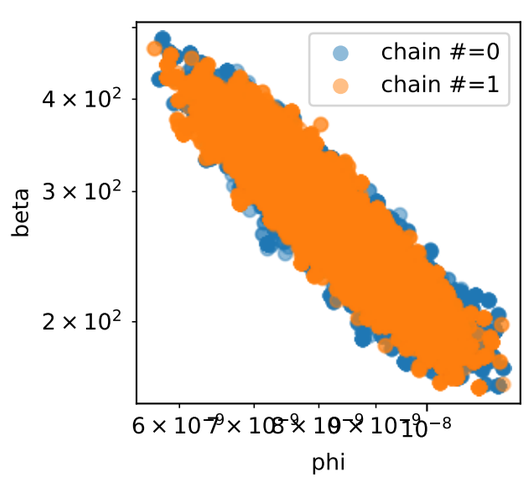
zero_i

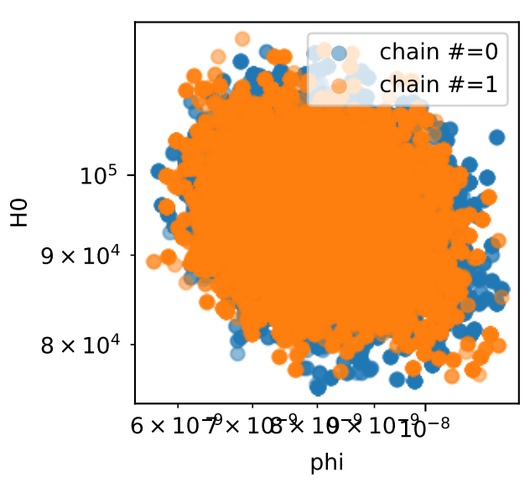

phi
mu
chain #=0
chain #=1

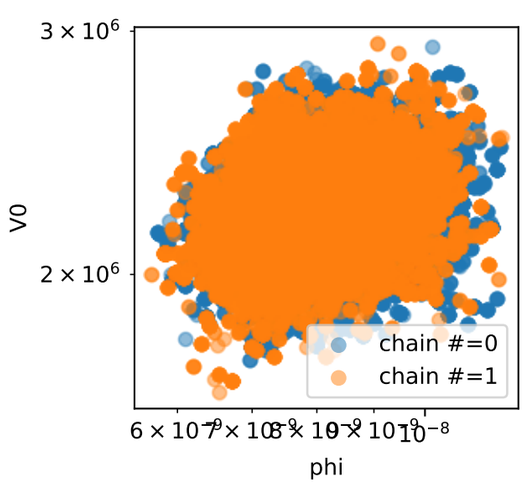

beta
mu
chain #=0
chain #=1

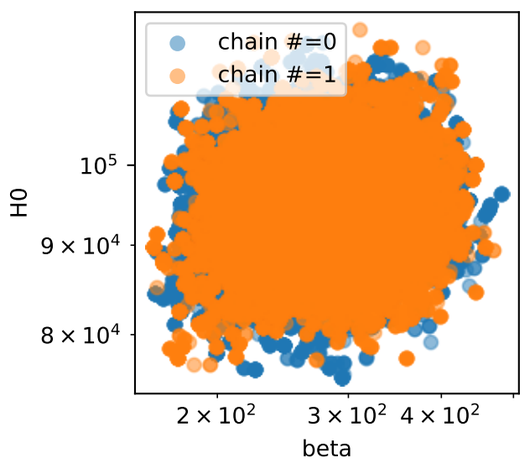

H0
mu
chain #=0
chain #=1

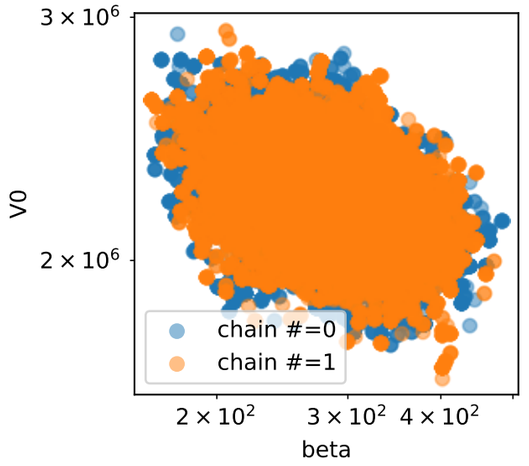

V0
mu
chain #=0
chain #=1

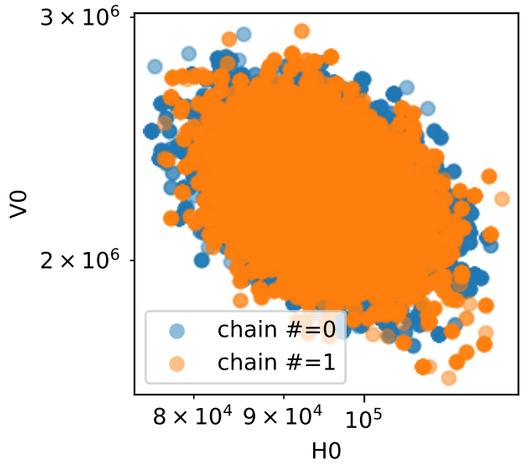

beta
phi
chain #=0
chain #=1

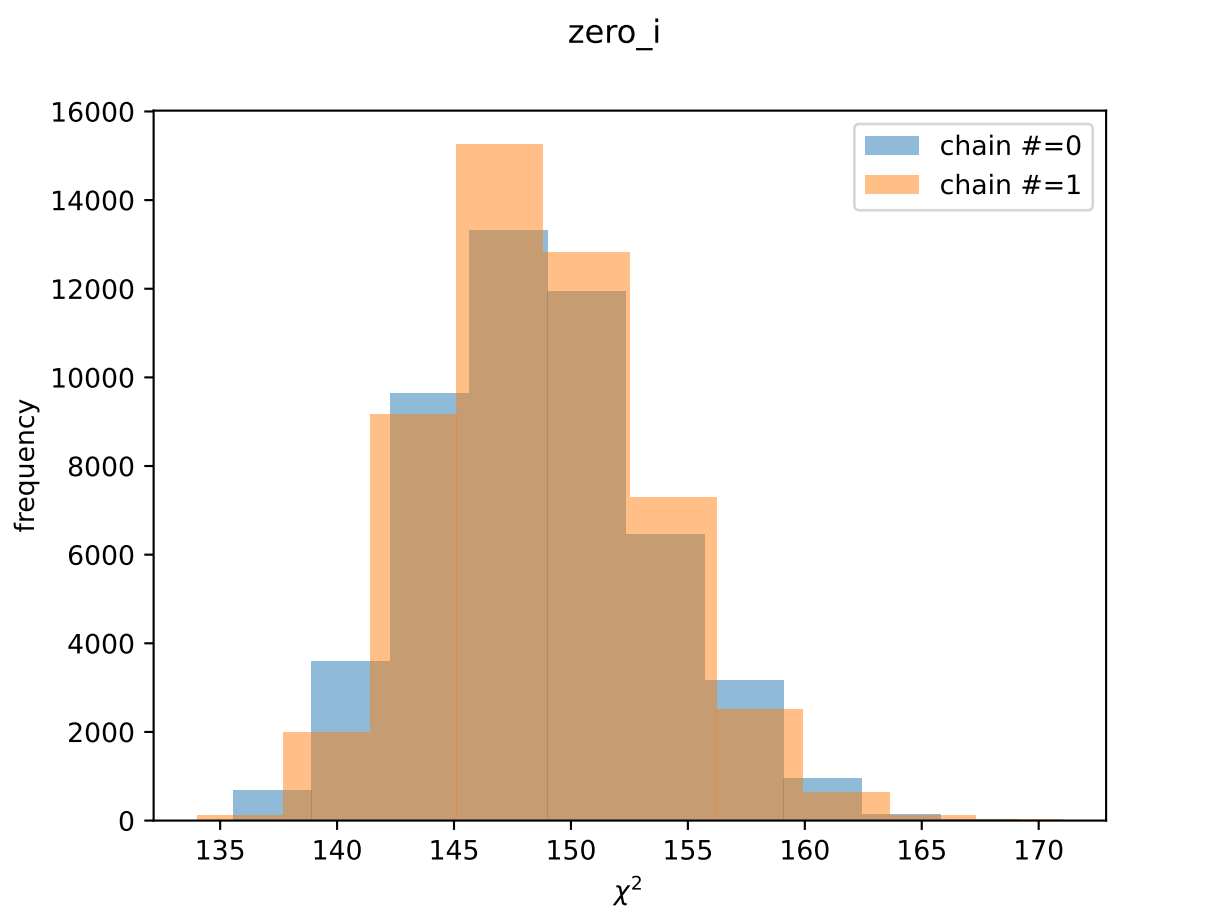

H0
phi
chain #=0
chain #=1

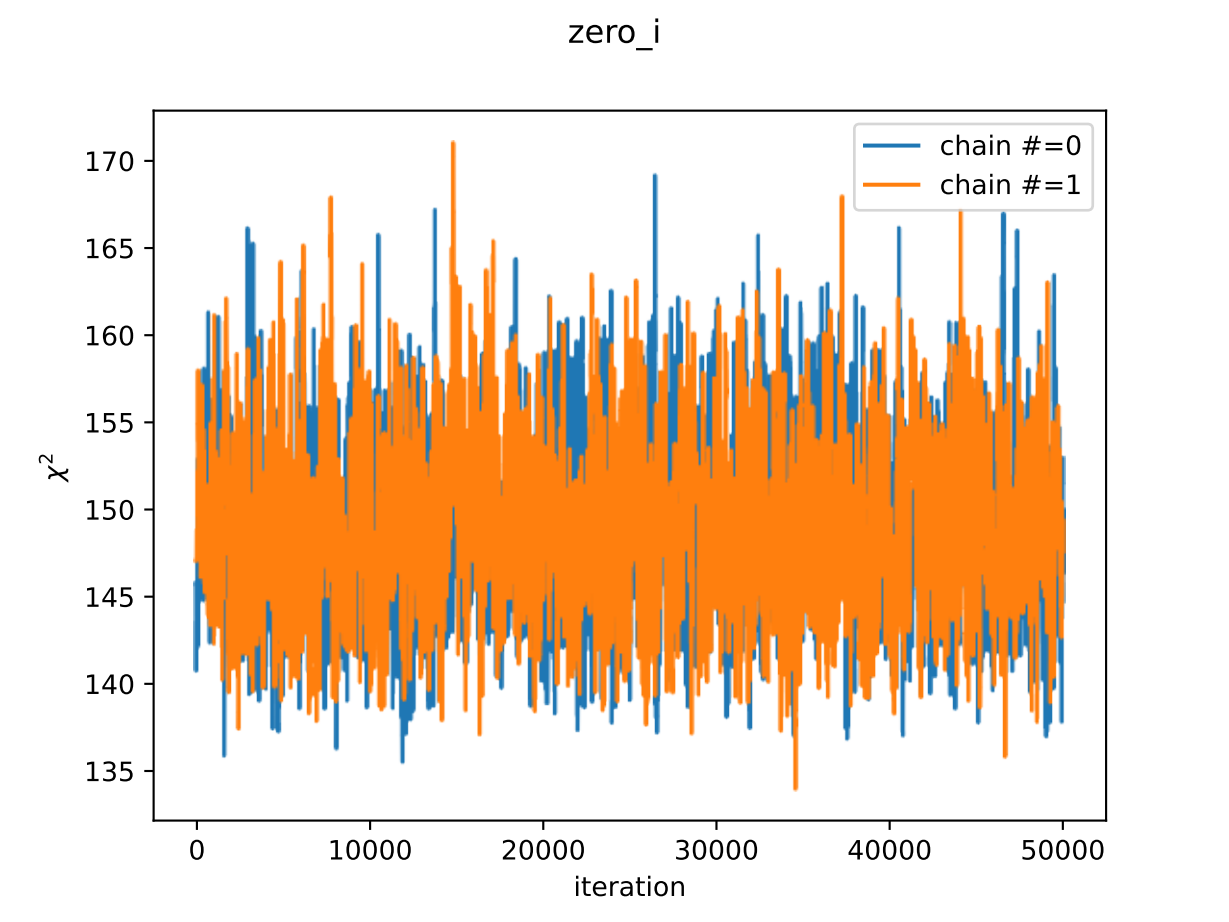

V0
phi
chain #=0
chain #=1


H0
beta
chain #=0
chain #=1

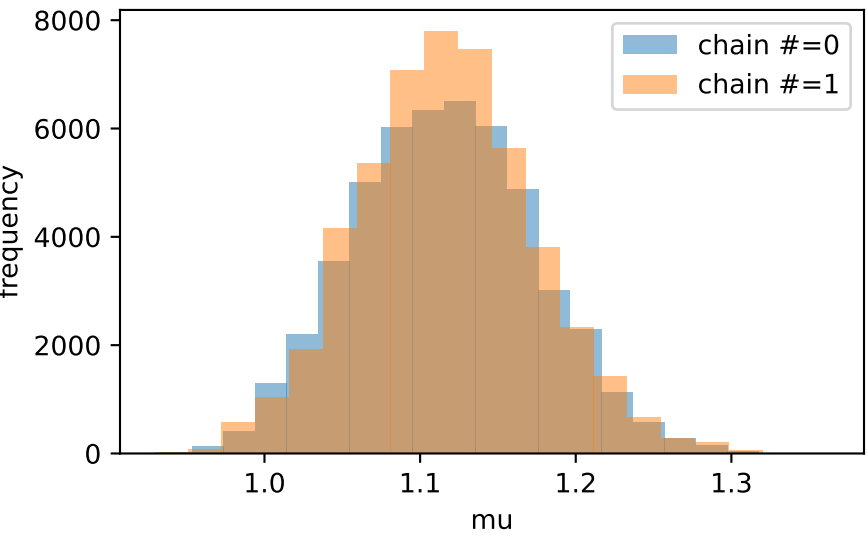

V0
beta
chain #=0
chain #=1

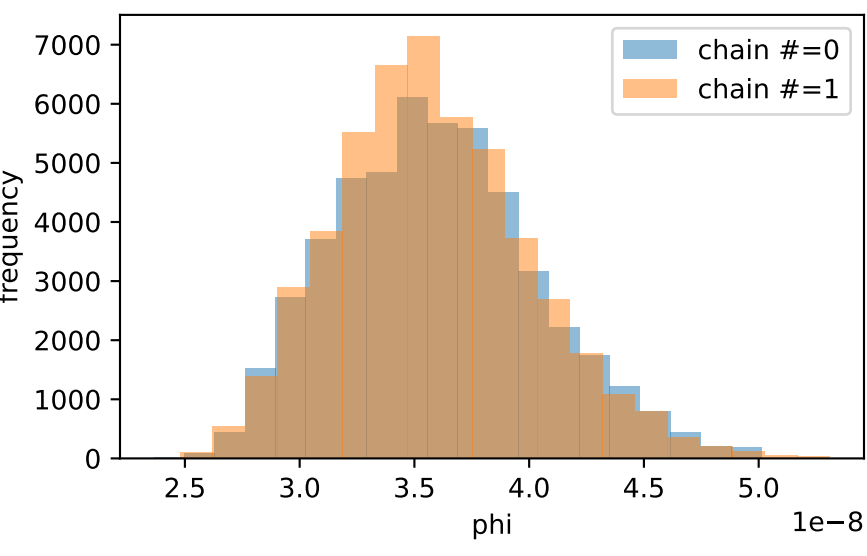

V0
H0
chain #=0
chain #=1

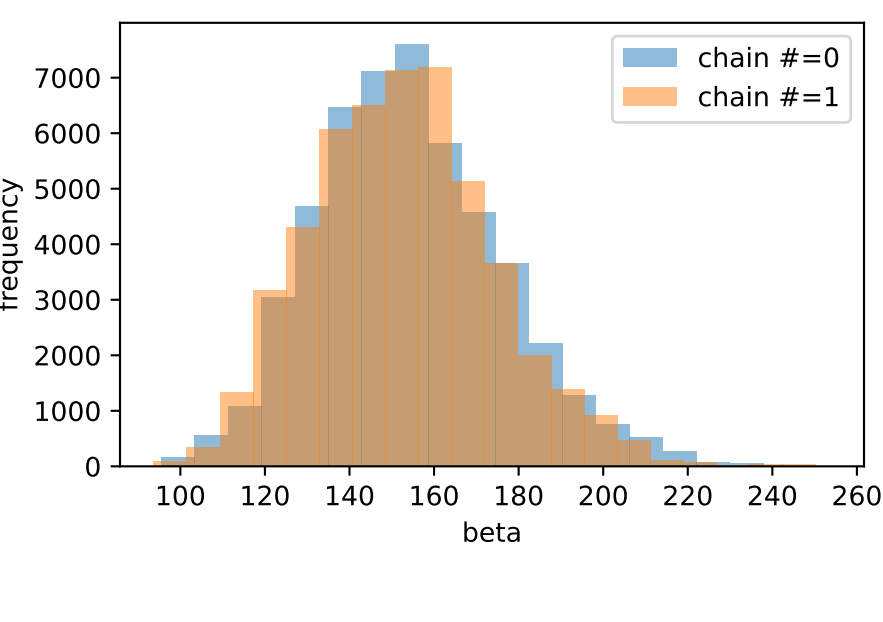

zero_i
chain #=0
chain #=1
frequency
16000
14000
12000
10000
8000
6000
4000
2000
0
135
140
145
150
155
160
165
170
χ^2

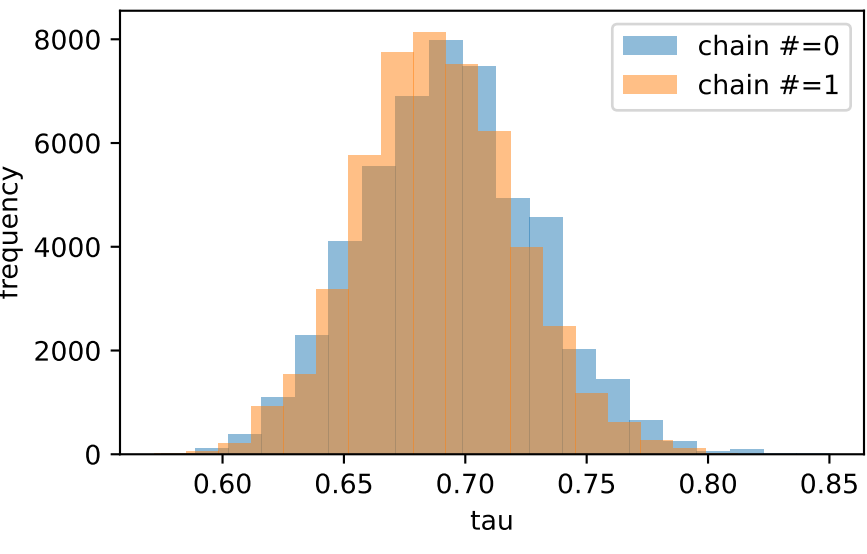

zero_i
chain #=0
chain #=1
170
165
160
155
150
145
140
135
χ^2
0
10000
20000
30000
40000
50000
iteration

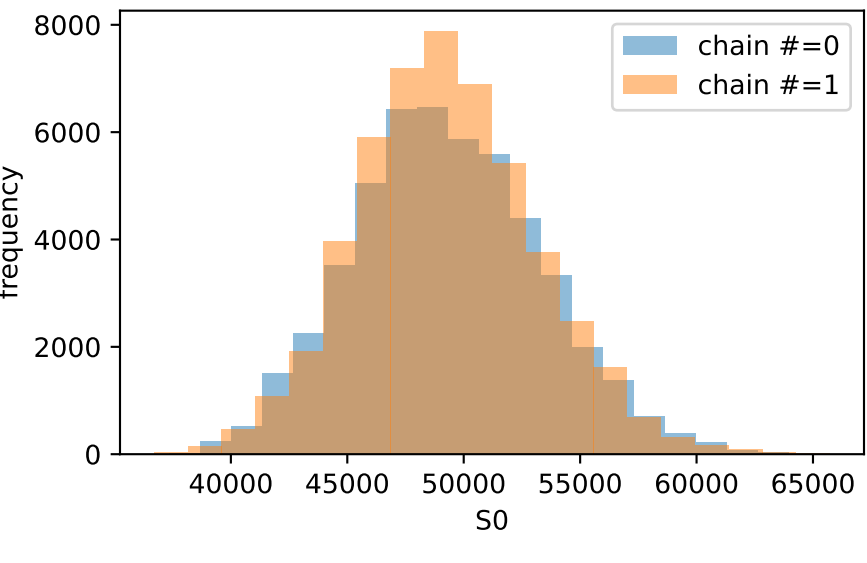
one_i

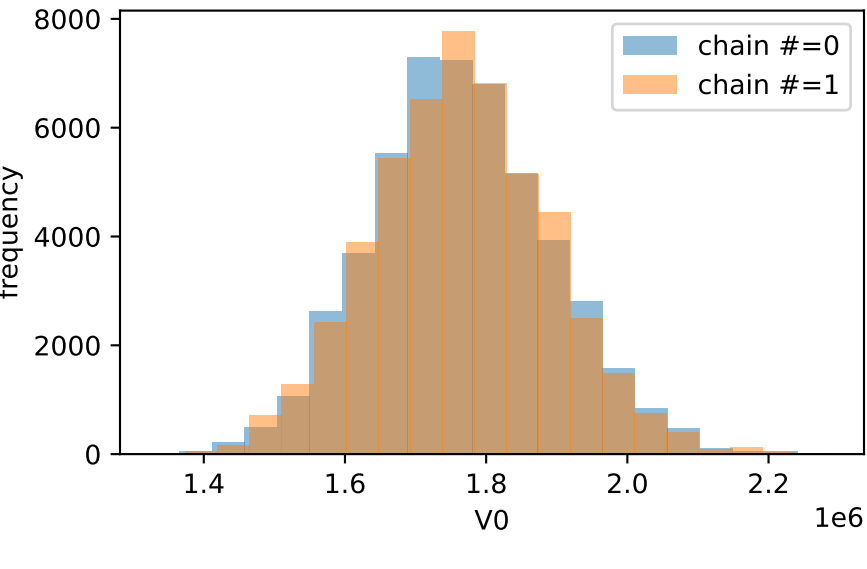

chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
1.0
1.1
1.2
1.3
mu


chain #=0
chain #=1
frequency
7000
6000
5000
4000
3000
2000
1000
0
2.5
3.0
3.5
4.0
4.5
5.0
phi
1e−8

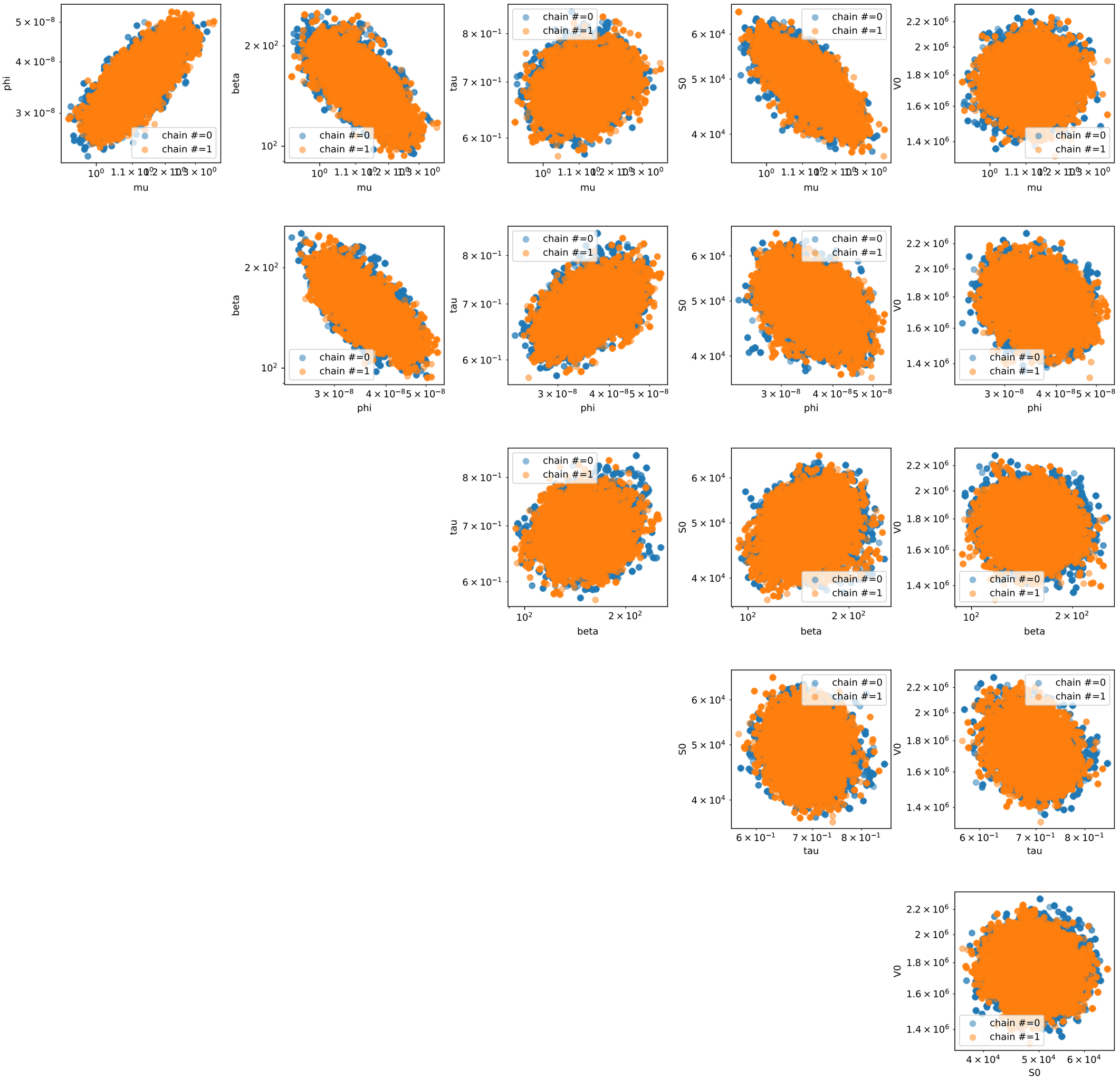

chain #=0
chain #=1
frequency
7000
6000
5000
4000
3000
2000
1000
0
100
120
140
160
180
200
220
240
260
beta

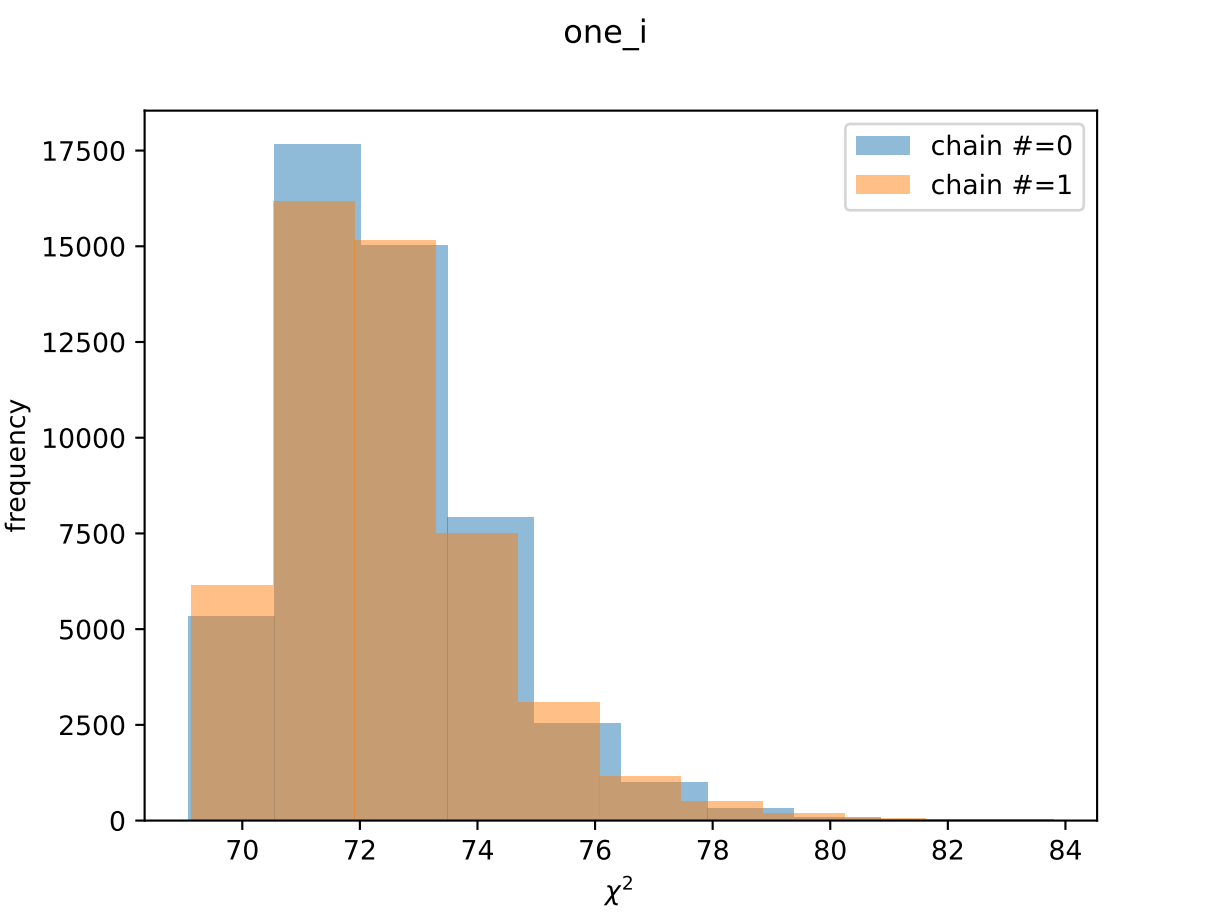

chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
0.60
0.65
0.70
0.75
0.80
0.85
tau

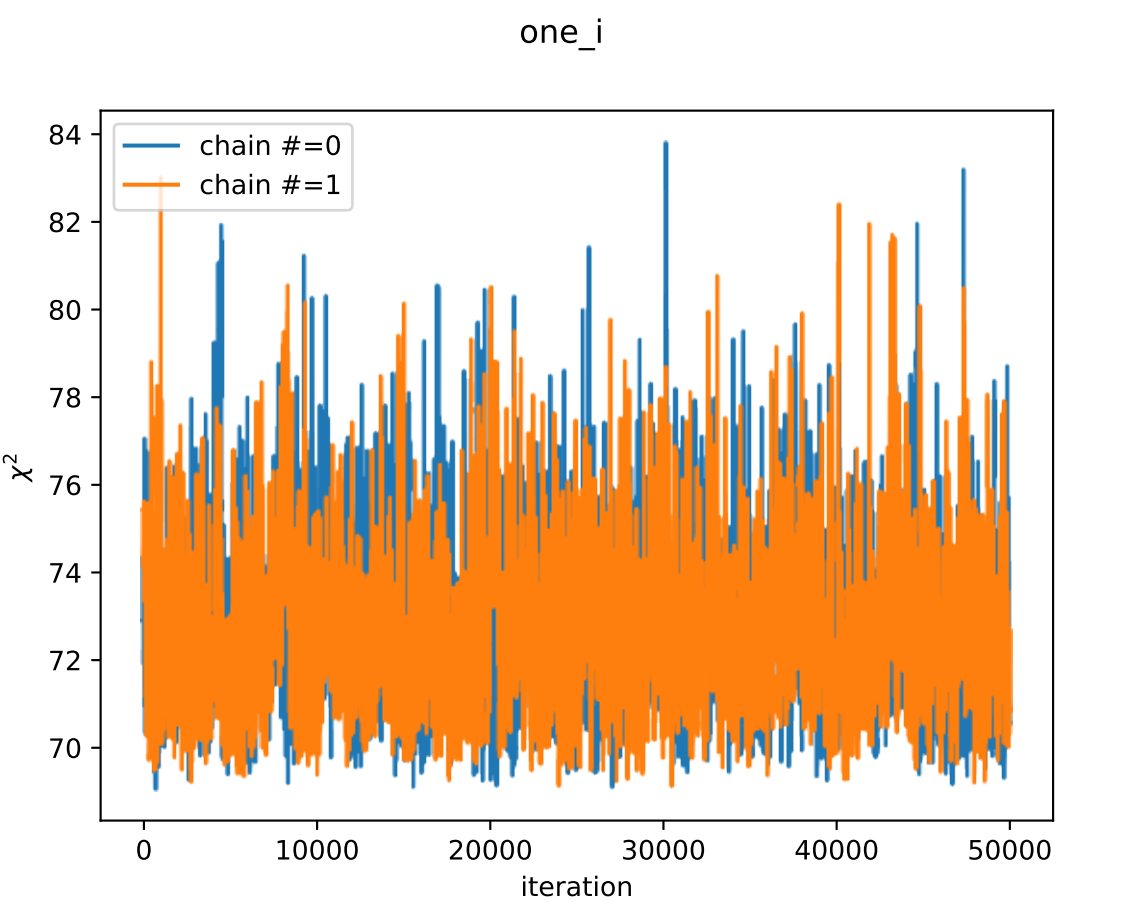

chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
40000
45000
50000
55000
60000
65000
S0


chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
1.4
1.6
1.8
2.0
2.2
V0
1e6

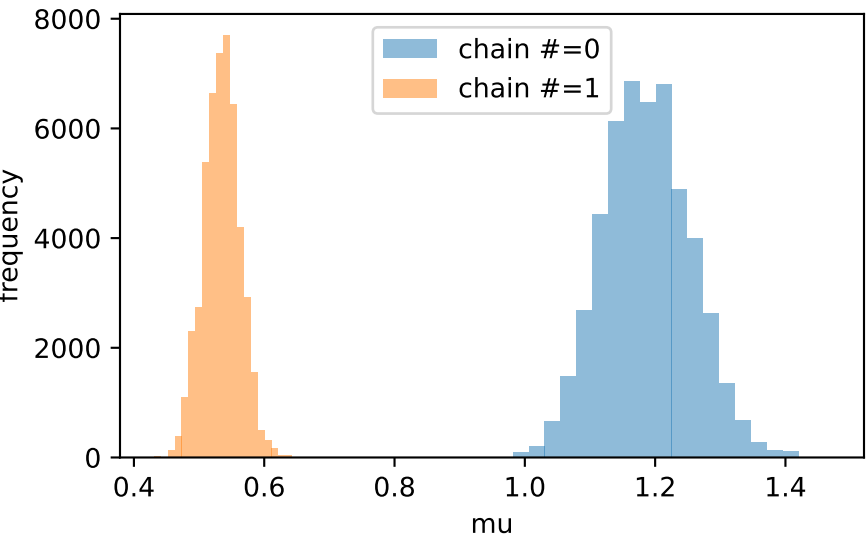
one_i

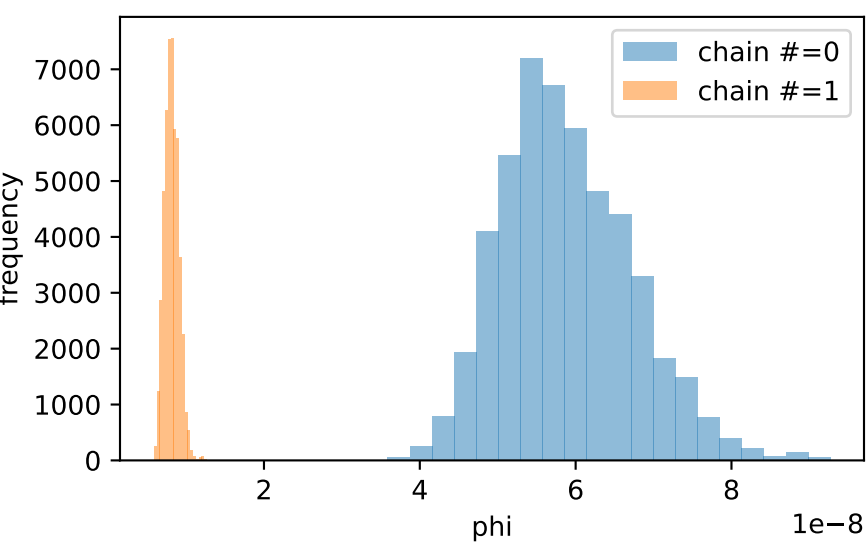


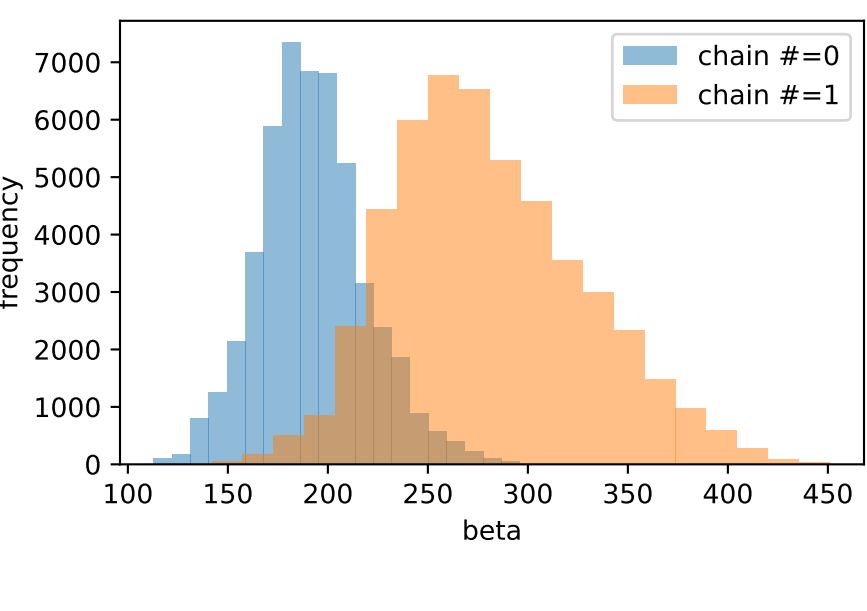

one_i
chain #=0
chain #=1
frequency
17500
15000
12500
10000
7500
5000
2500
0
70
72
74
76
78
80
82
84
χ^2

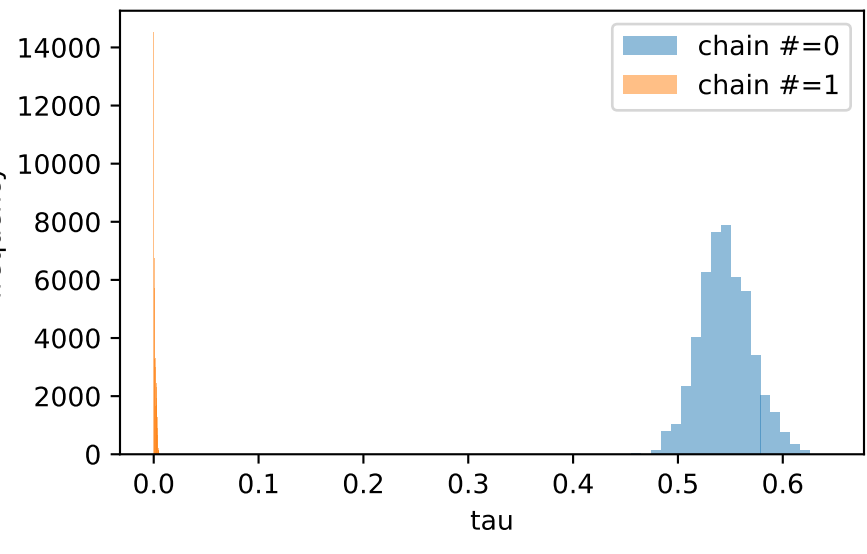

one_i
chain #=0
chain #=1
84
82
80
78
76
74
72
70
χ^2
0
10000
20000
30000
40000
50000
iteration

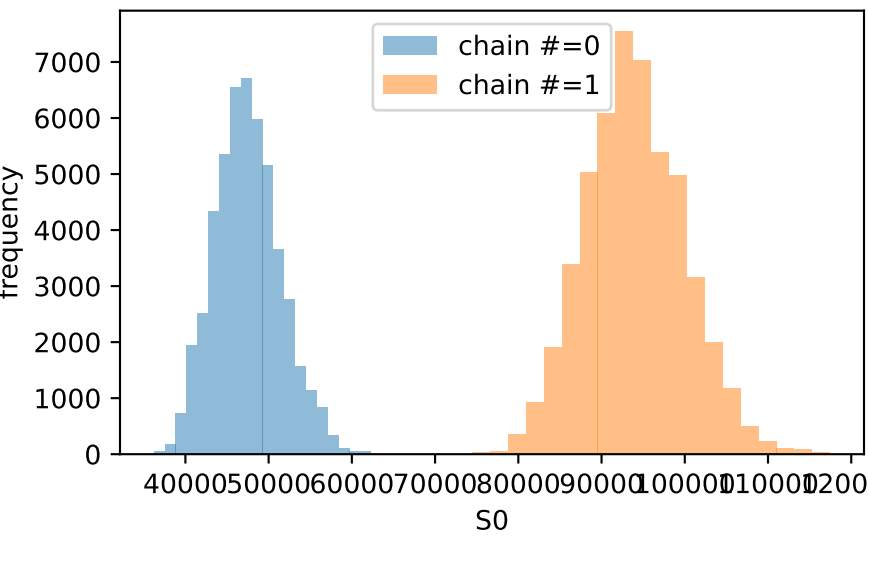
two_i

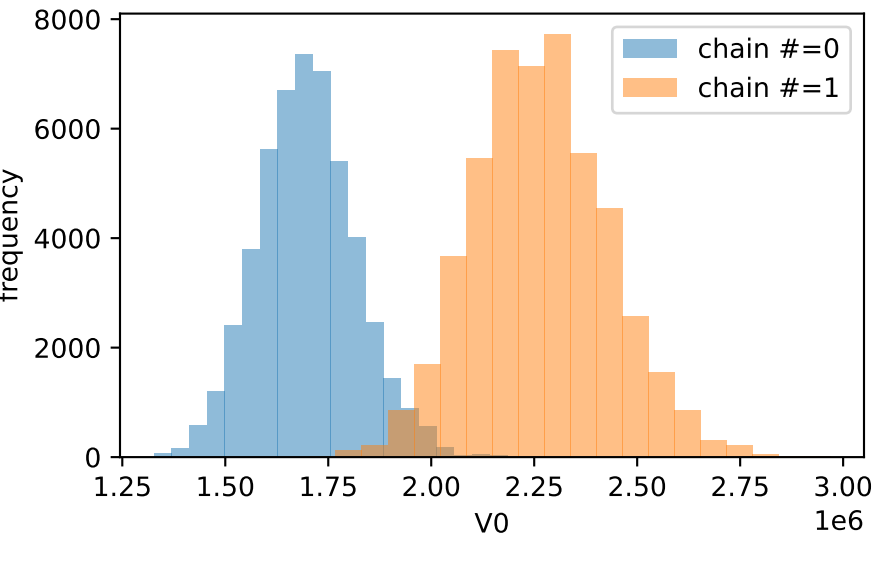

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
frequency
phi
1e−8

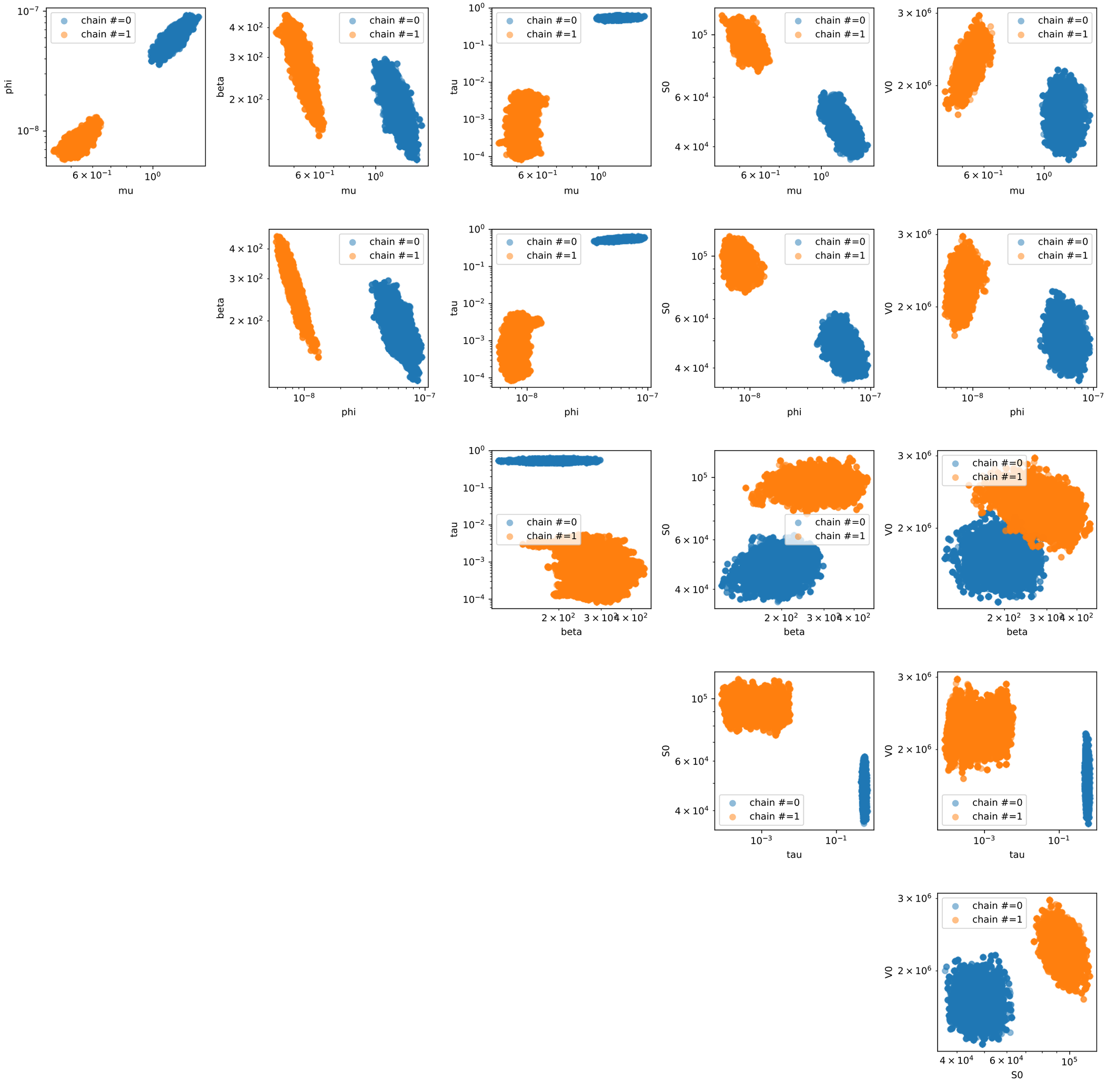

chain #=0
chain #=1
frequency
beta

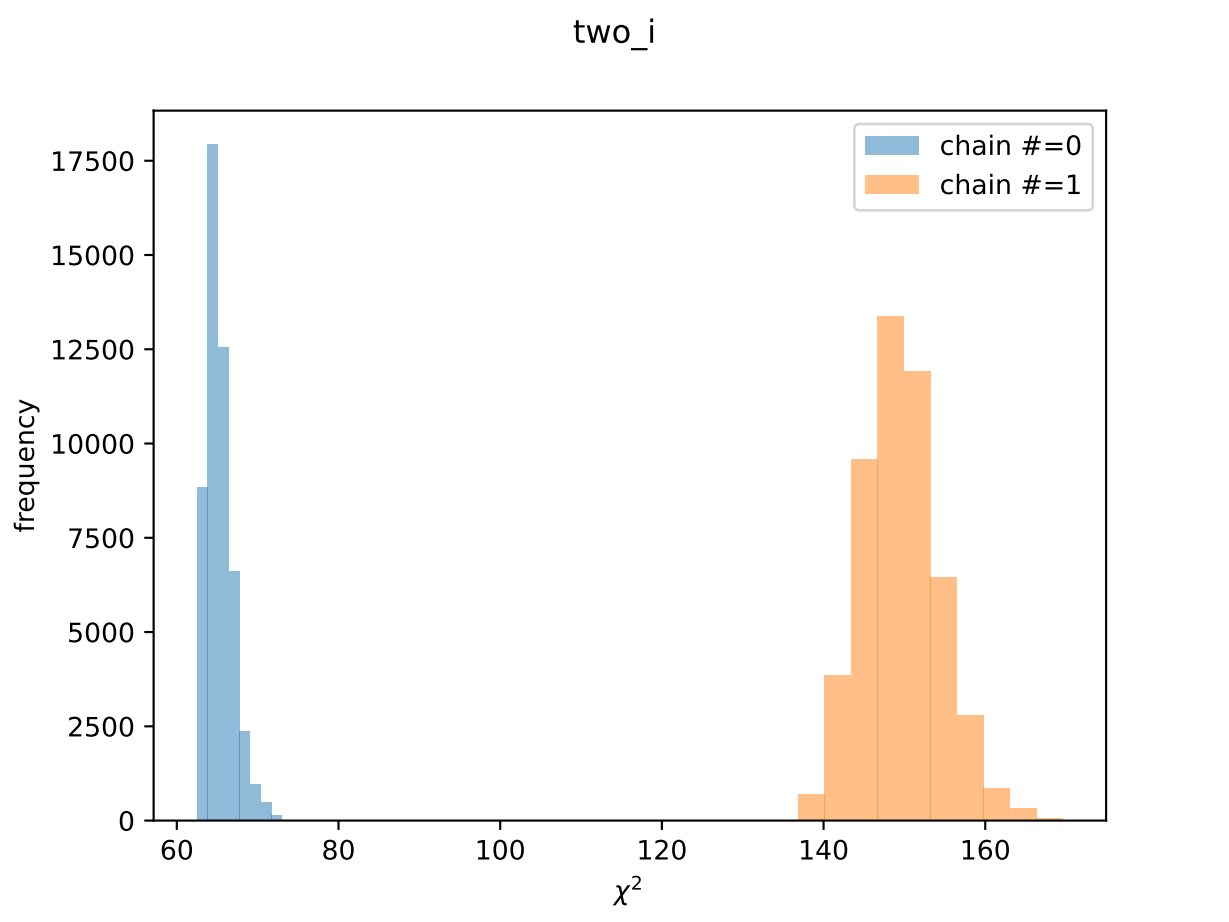

chain #=0
chain #=1
tau

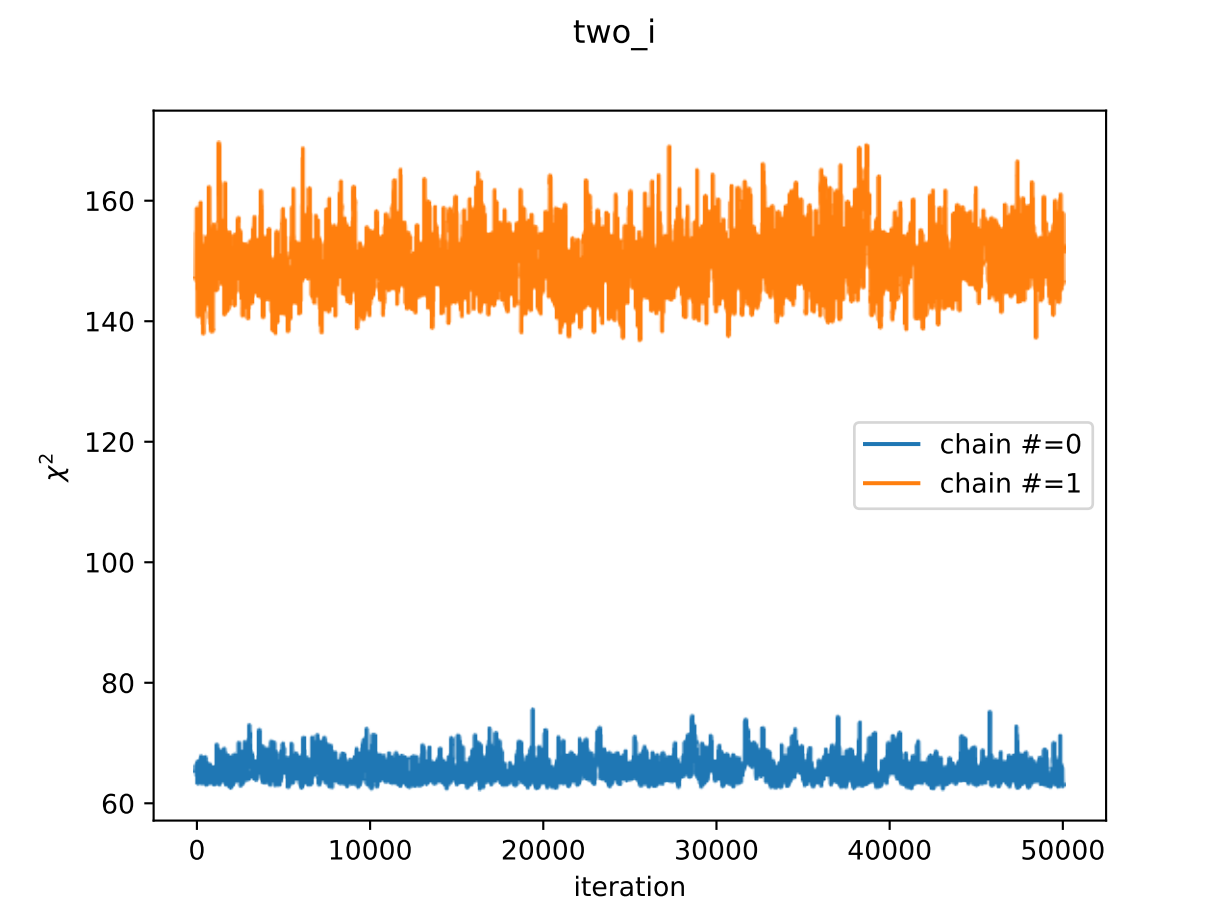

chain #=0
chain #=1
frequency
S0


chain #=0
chain #=1
frequency
V0
1e6

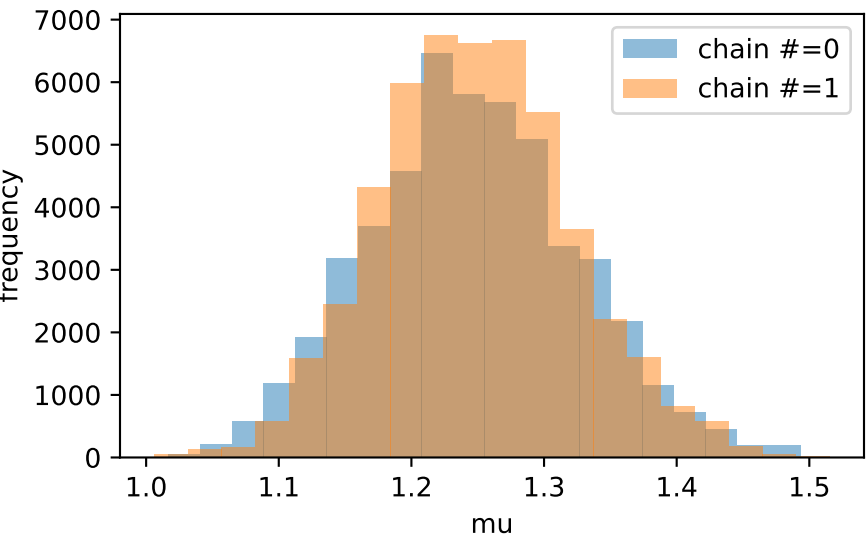
two_i

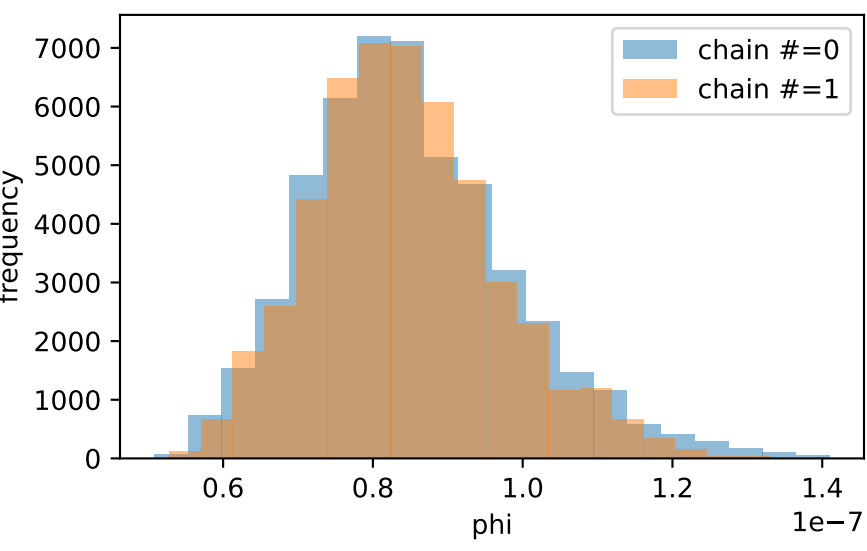



two_i
chain #=0
chain #=1
frequency
17500
15000
12500
10000
7500
5000
2500
0
60
80
100
120
140
160
χ^2

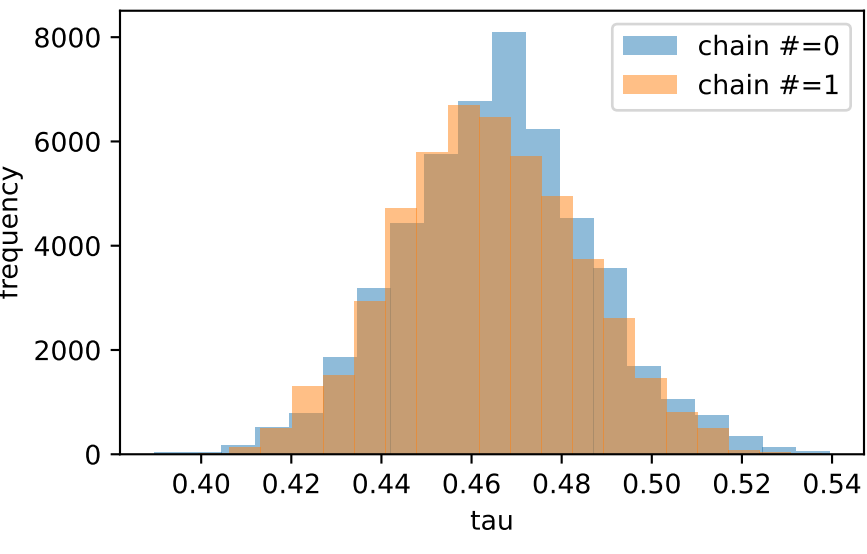

two_i
160
140
120
100
80
60
χ^2
chain #=0
chain #=1
0
10000
20000
30000
40000
50000
iteration

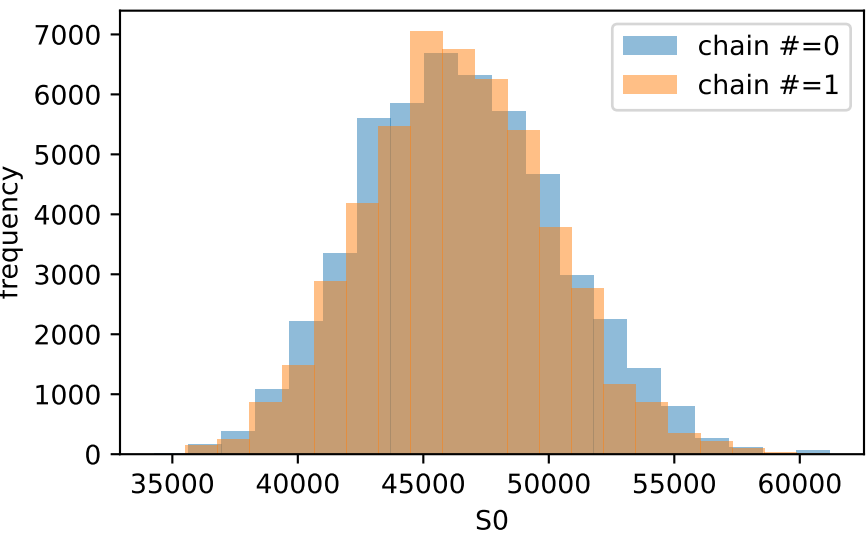
three_i

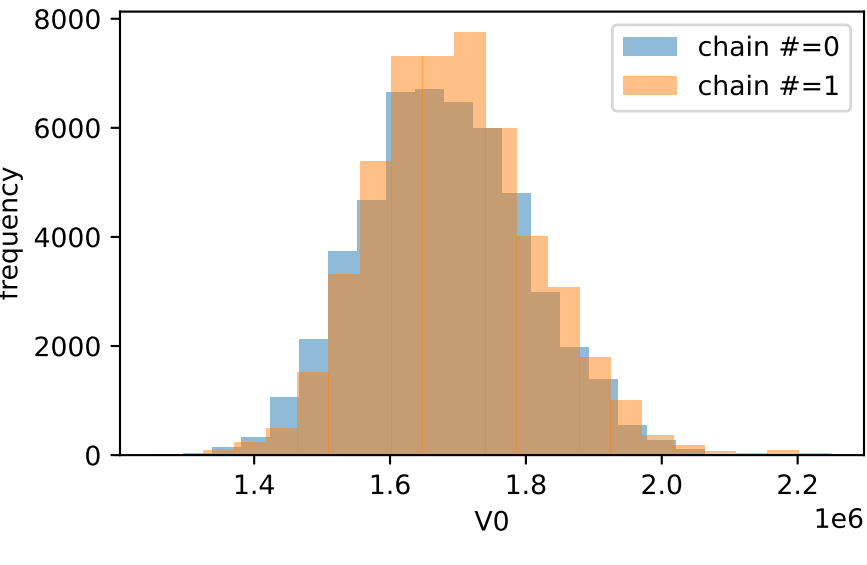

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
frequency
phi
1e−7

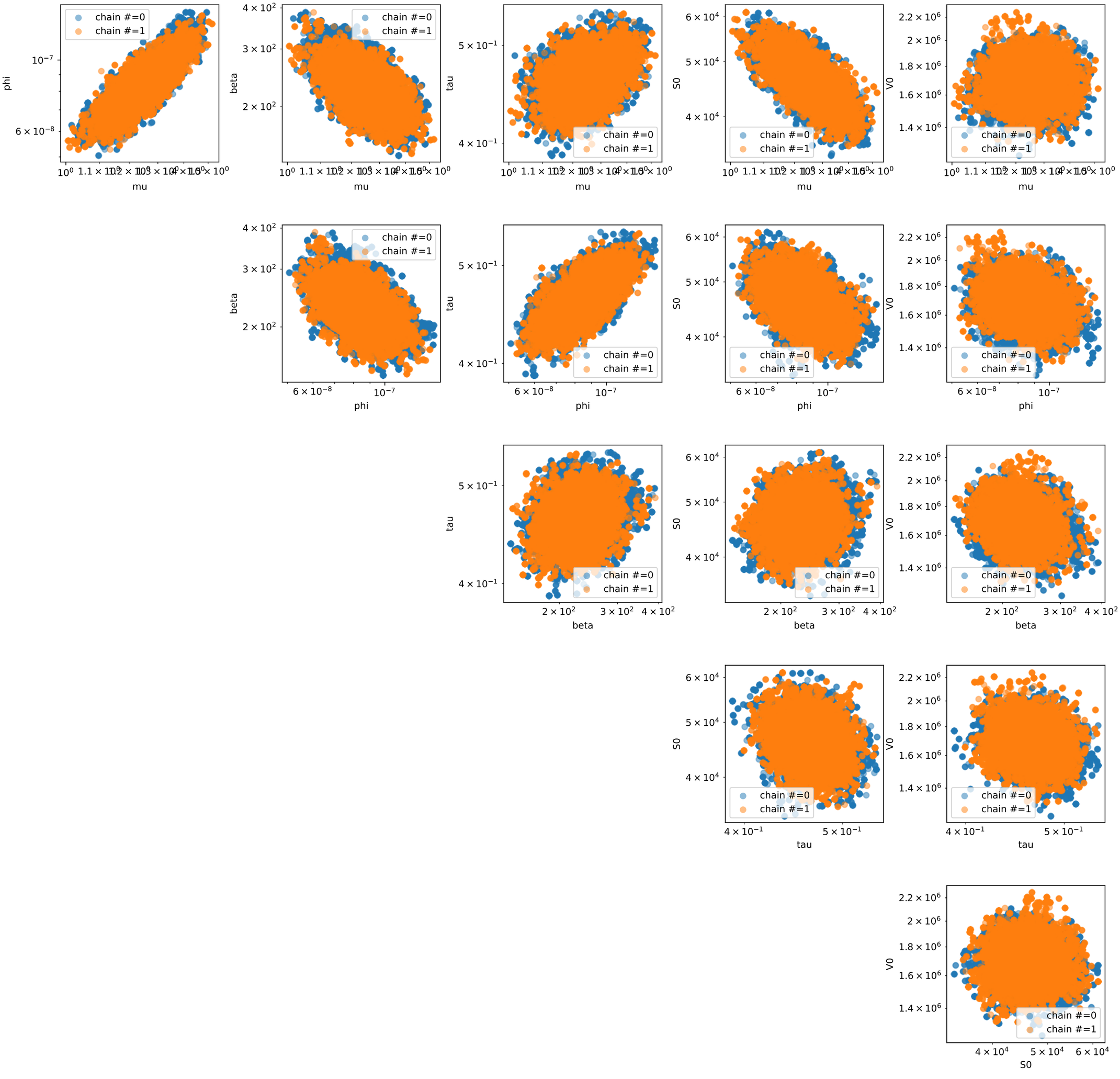
chain #=0
chain #=1
frequency
beta

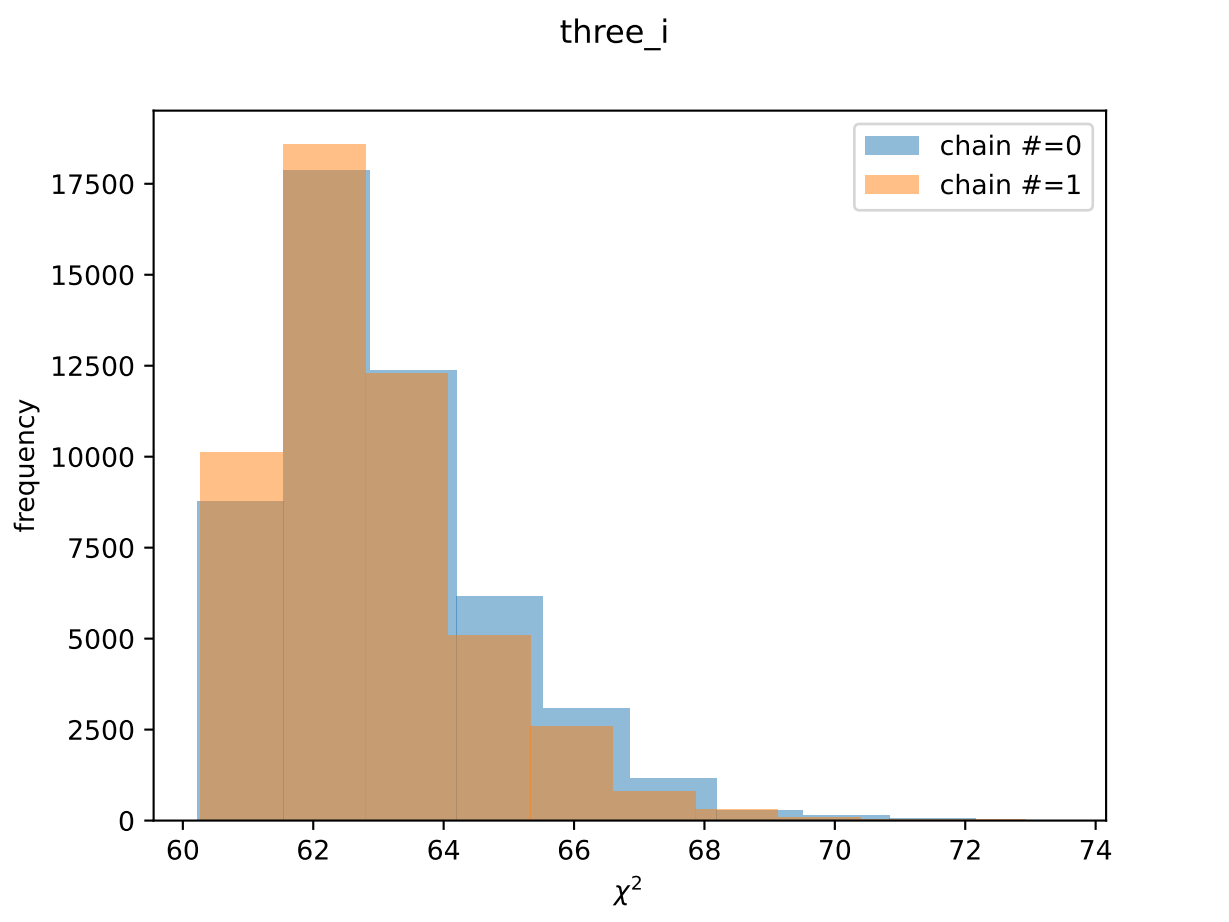

chain #=0
chain #=1
frequency
tau

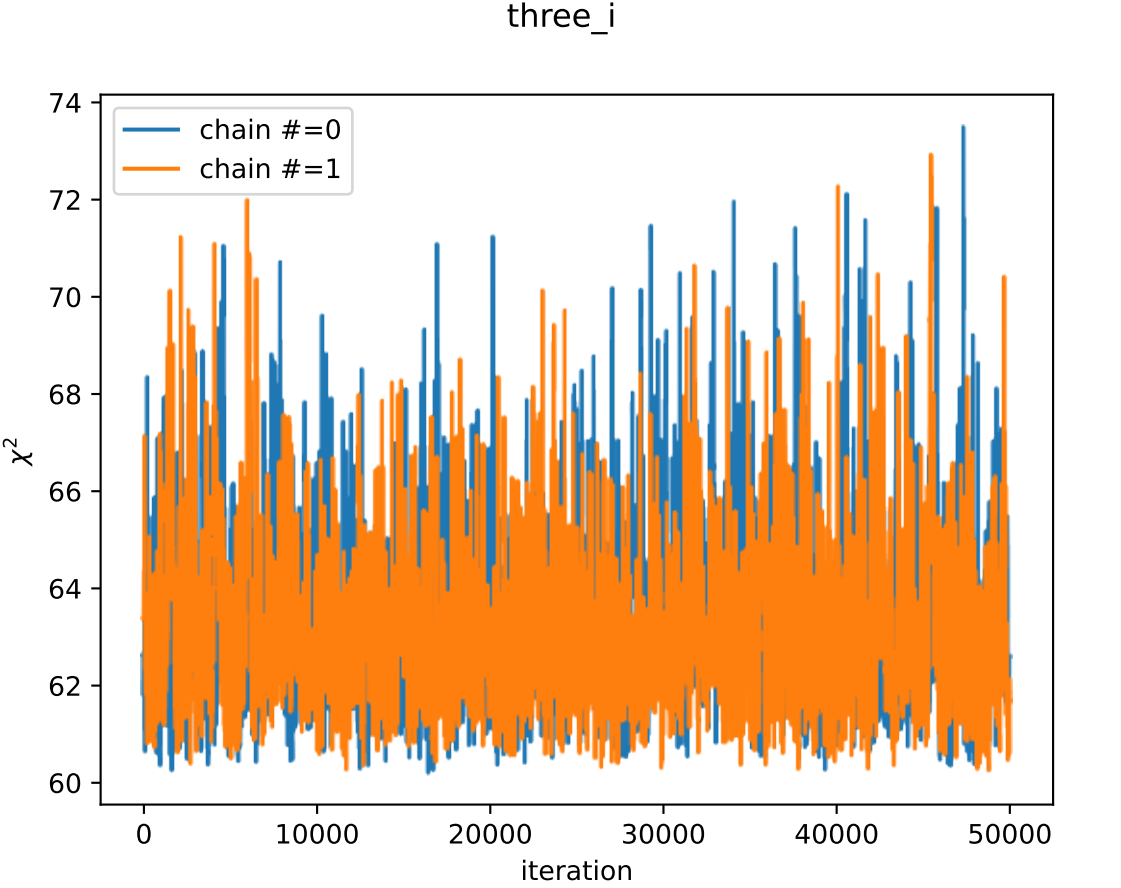

chain #=0
chain #=1
frequency
S0


chain #=0
chain #=1
frequency
V0
1e6

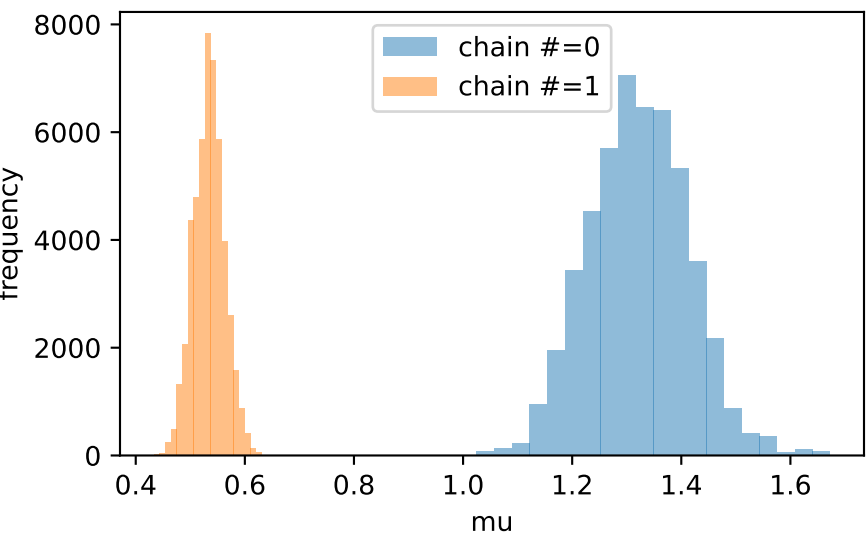
three_i

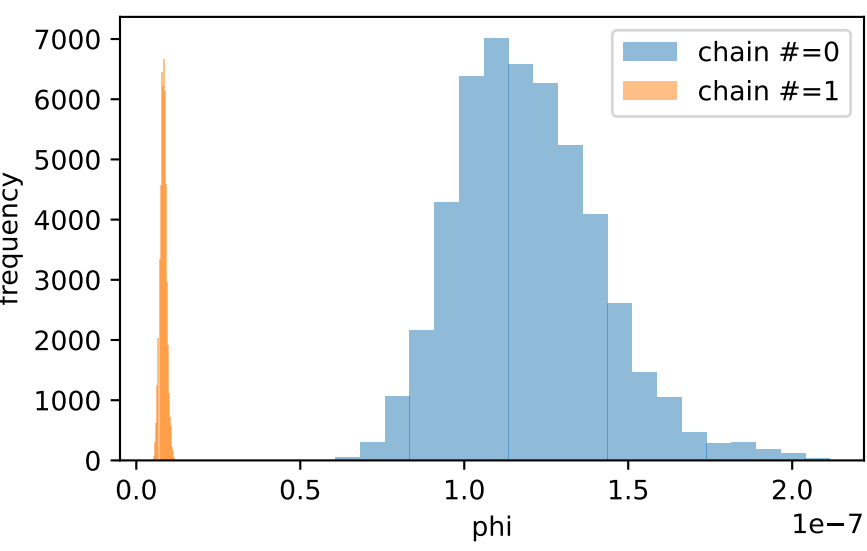


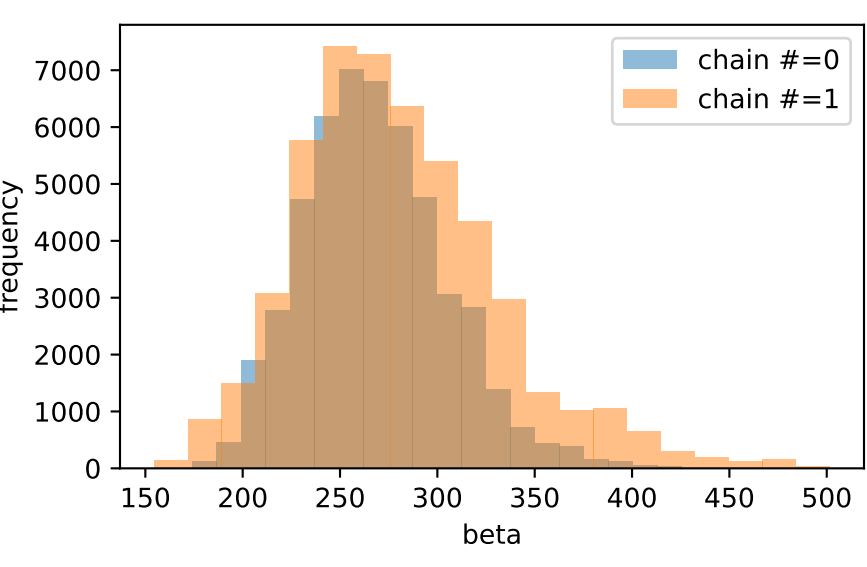

three_i
chain #=0
chain #=1
17500
15000
12500
10000
7500
5000
2500
0
frequency
60
62
64
66
68
70
72
74
χ^2

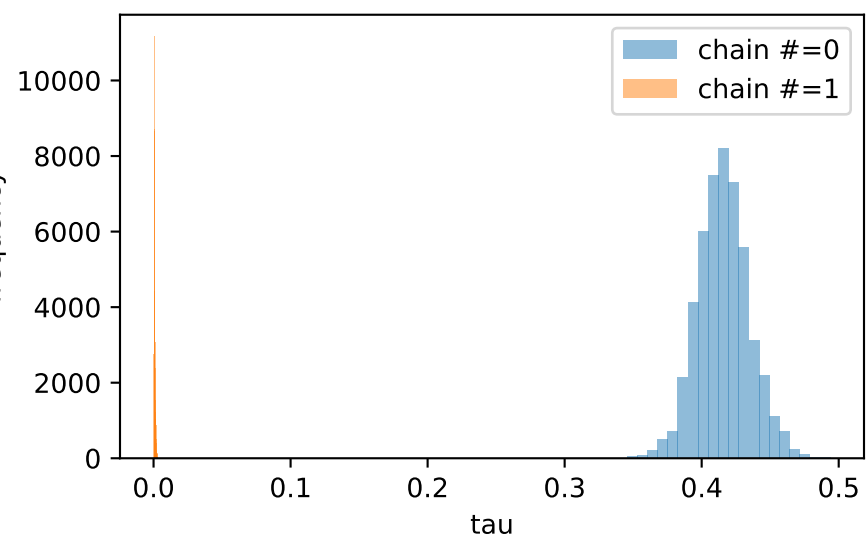

three_i
chain #=0
chain #=1
74
72
70
68
66
64
62
60
χ^2
0
10000
20000
30000
40000
50000
iteration

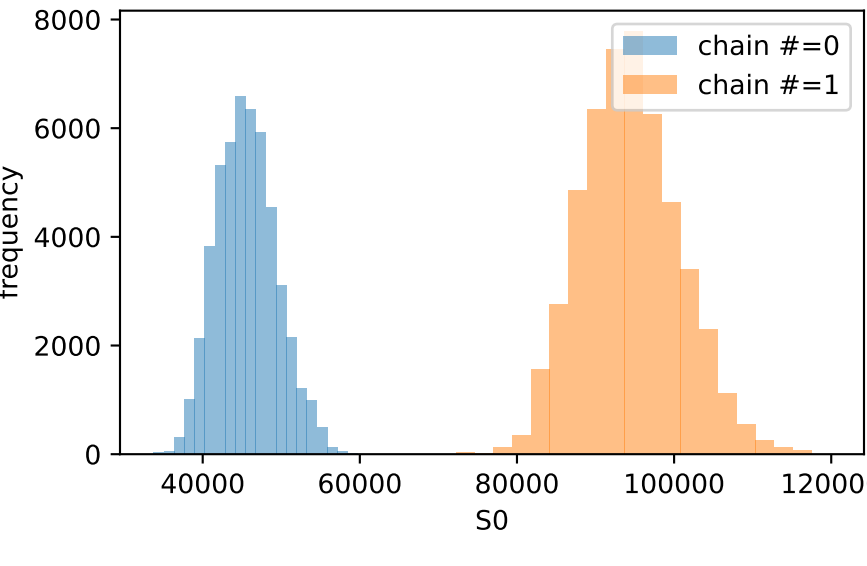
four_i

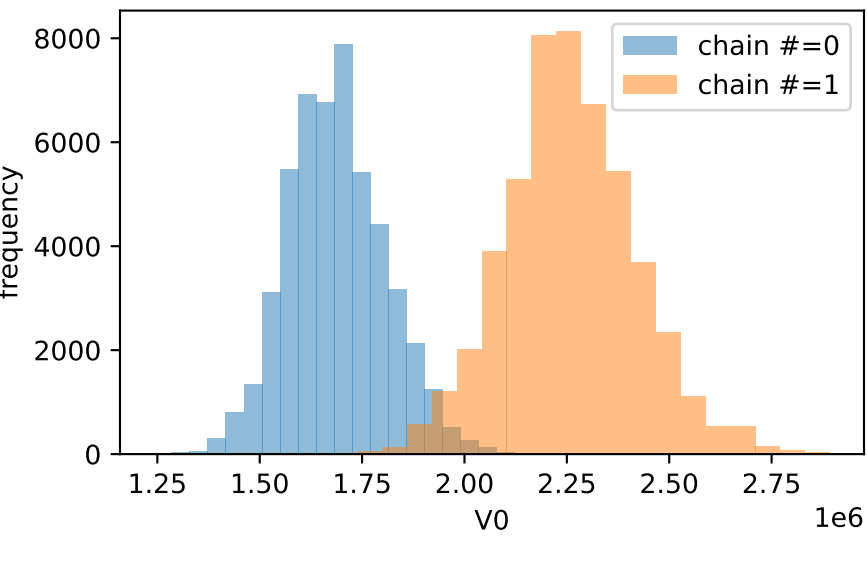

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
frequency
phi
1e−7

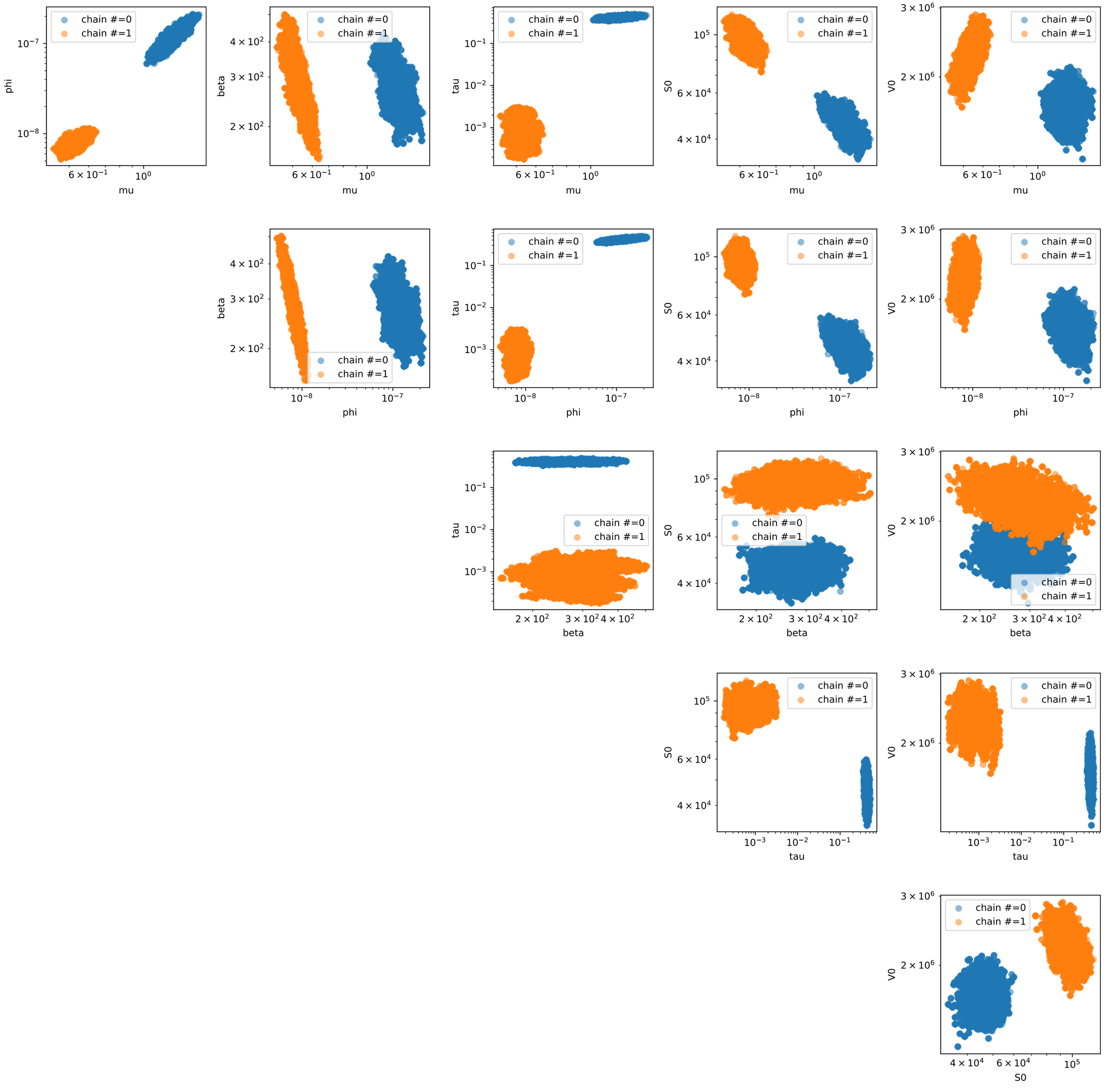

chain #=0
chain #=1
frequency
beta

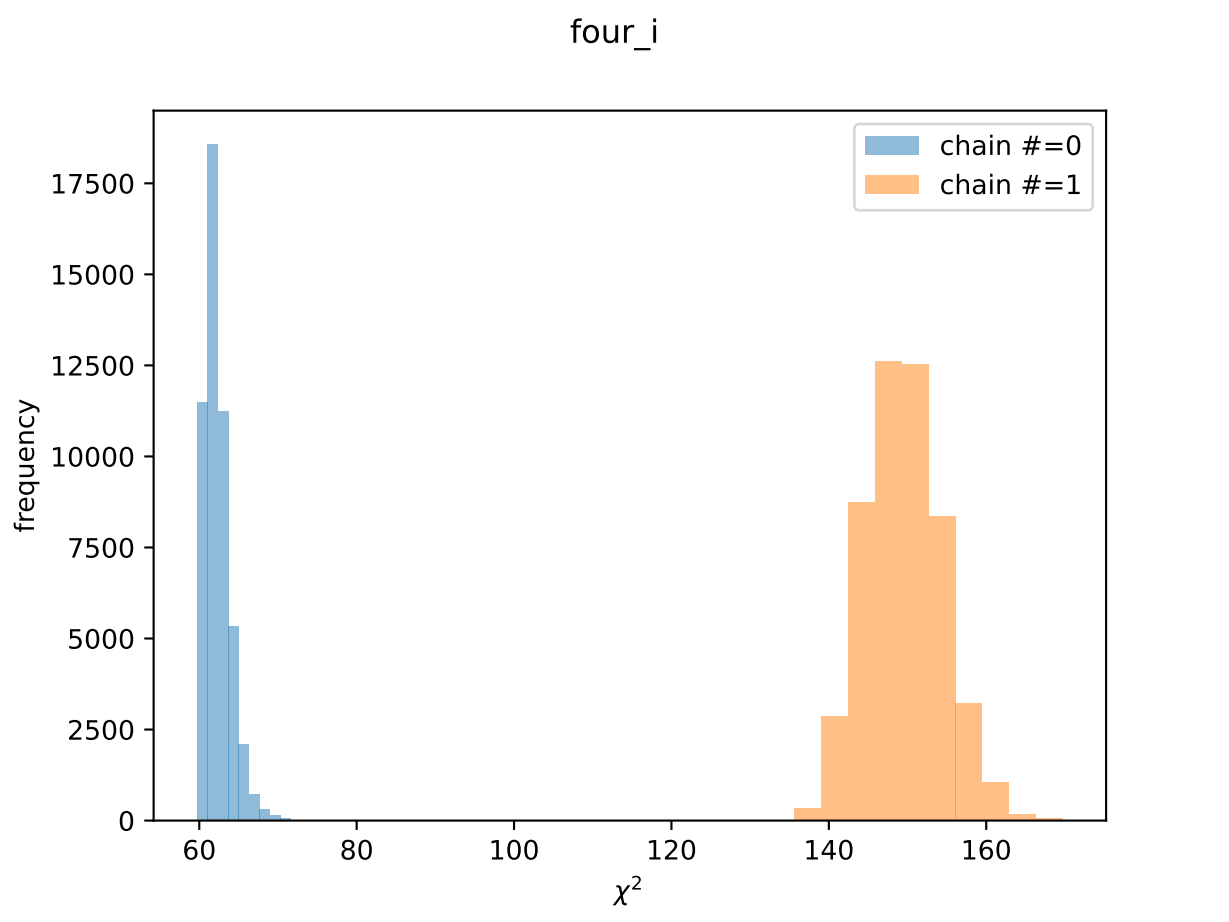

chain #=0
chain #=1
tau

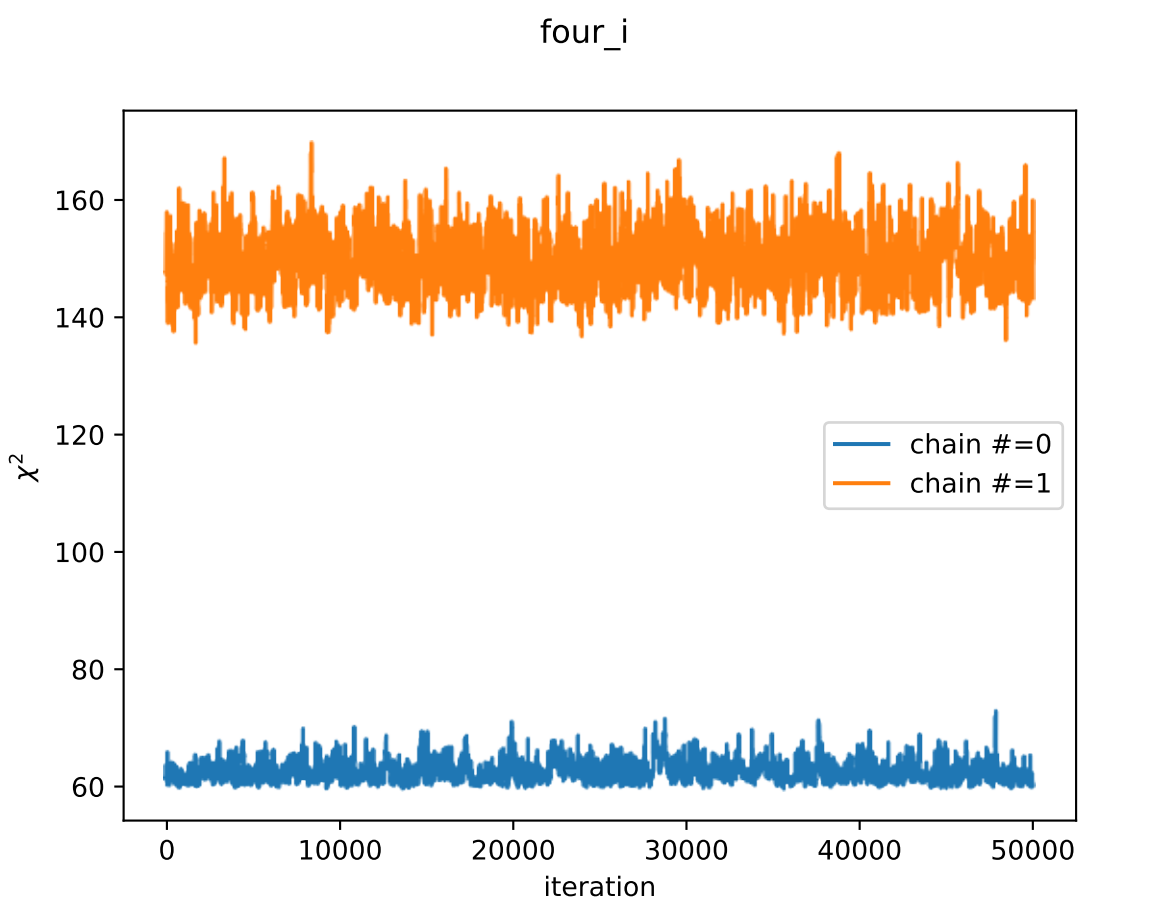

chain #=0
chain #=1
frequency
S0


chain #=0
chain #=1
frequency
V0
1e6

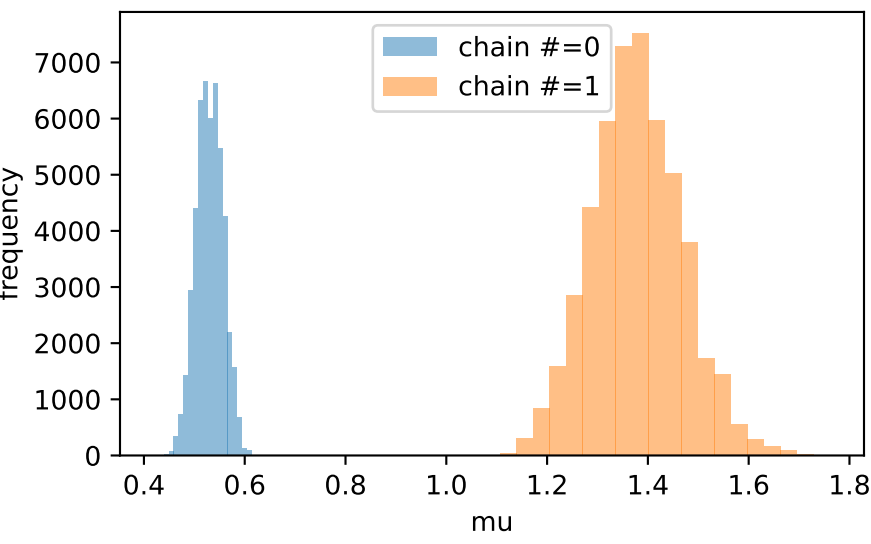
four_i

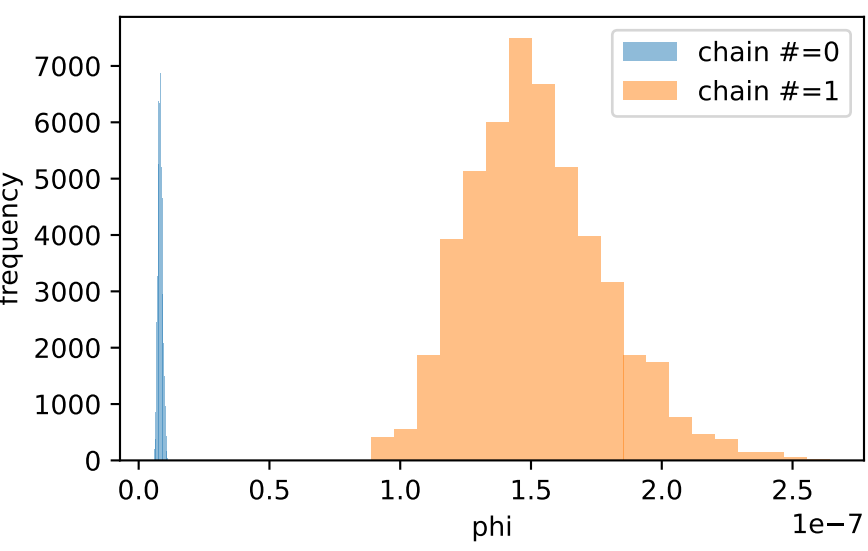



four_i
chain #=0
chain #=1
17500
15000
12500
10000
7500
5000
2500
0
frequency
60
80
100
120
140
160
χ^2

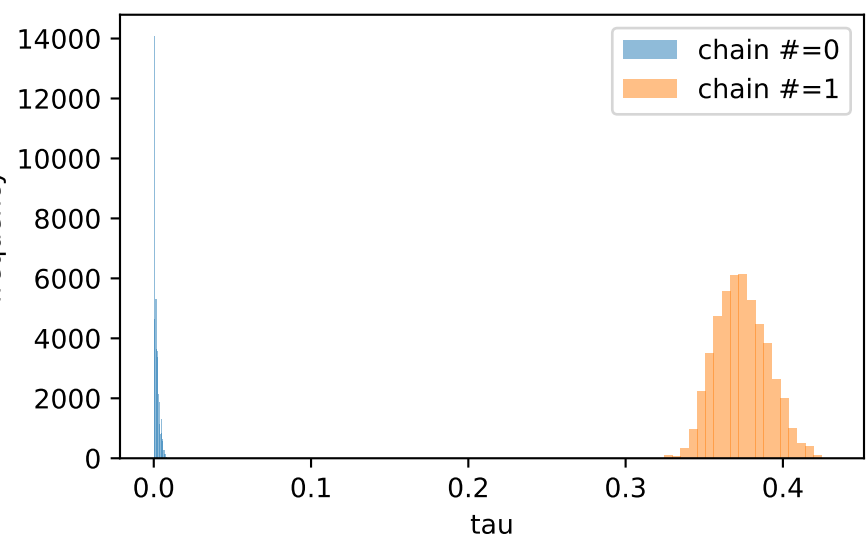

four_i
160
140
120
100
80
60
χ^2
chain #=0
chain #=1
0
10000
20000
30000
40000
50000
iteration

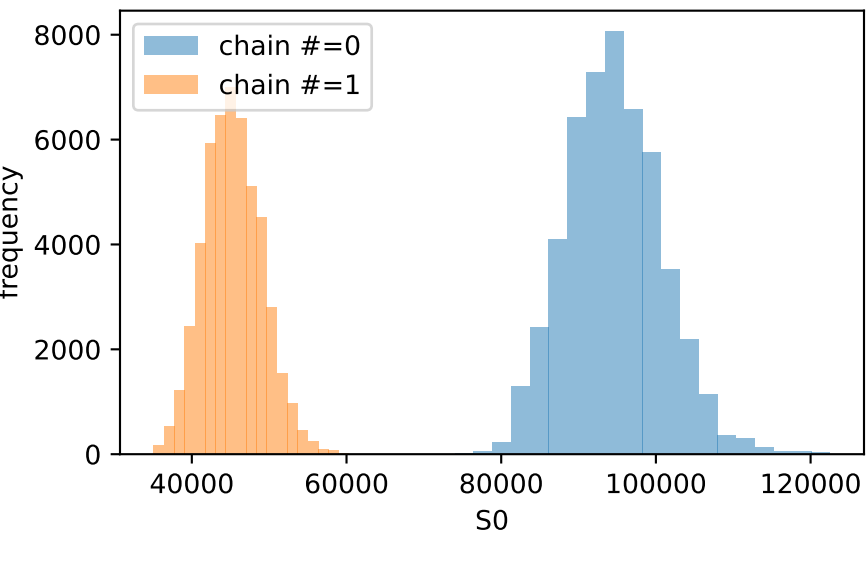
five_i

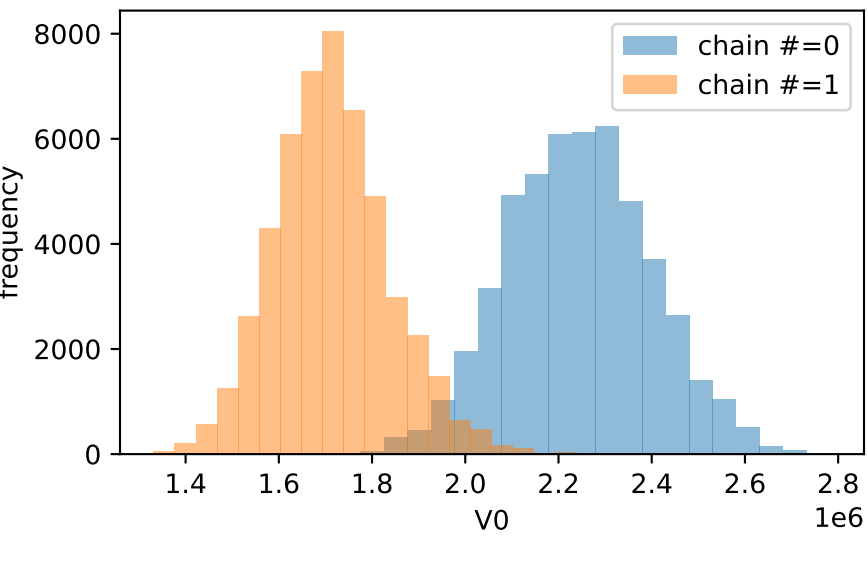

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
frequency
phi
1e−7

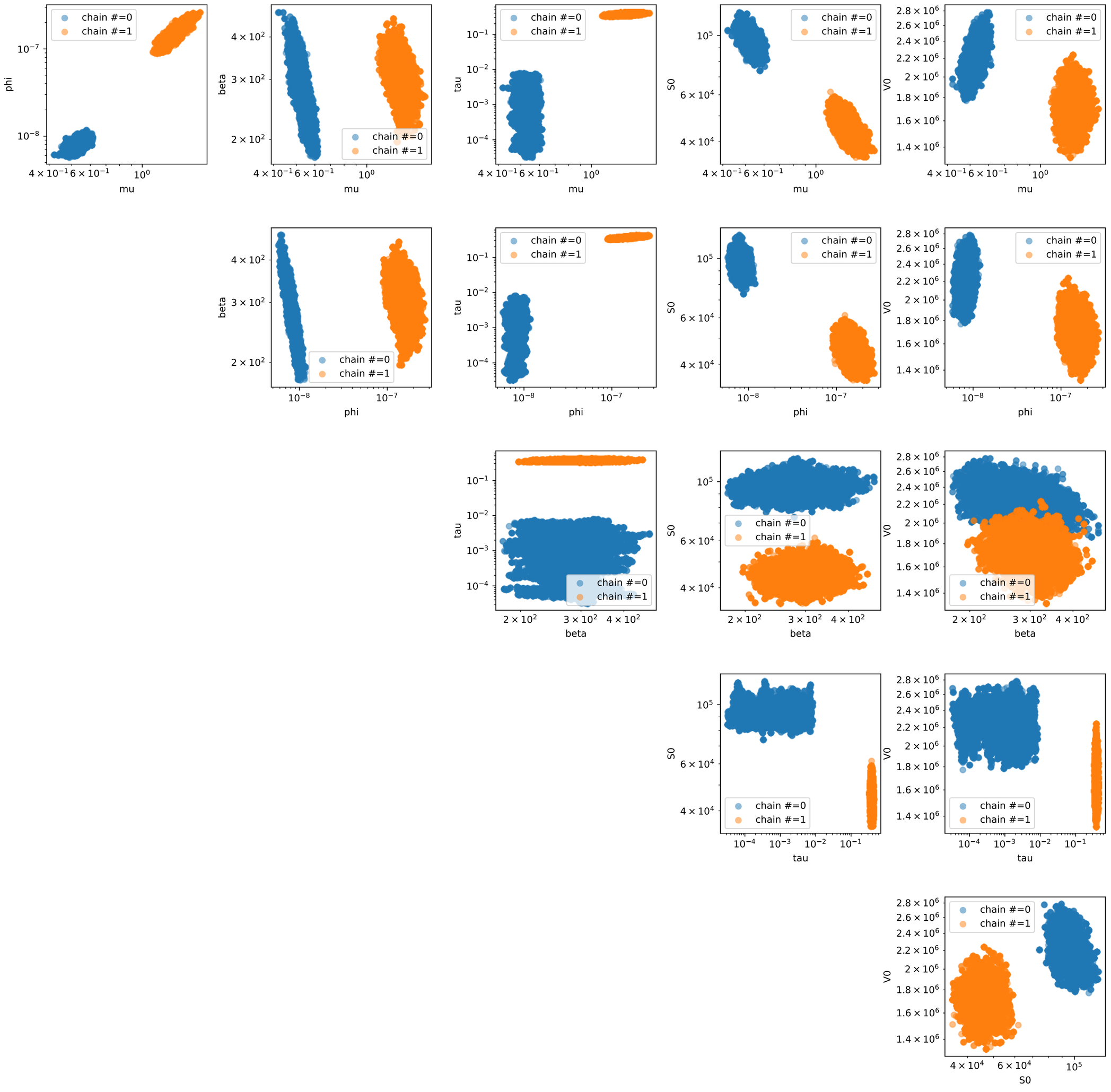
chain #=0
chain #=1
frequency
beta

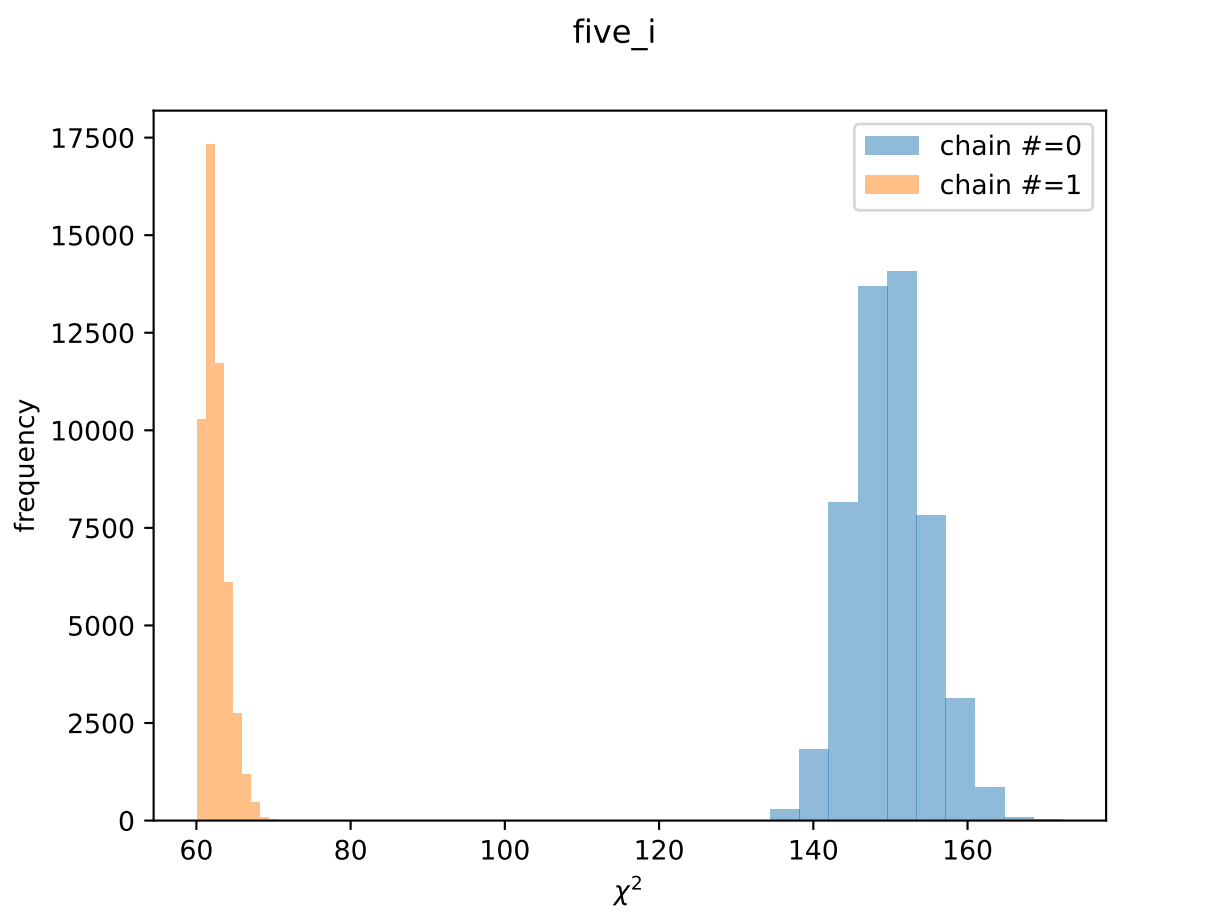

chain #=0
chain #=1
tau

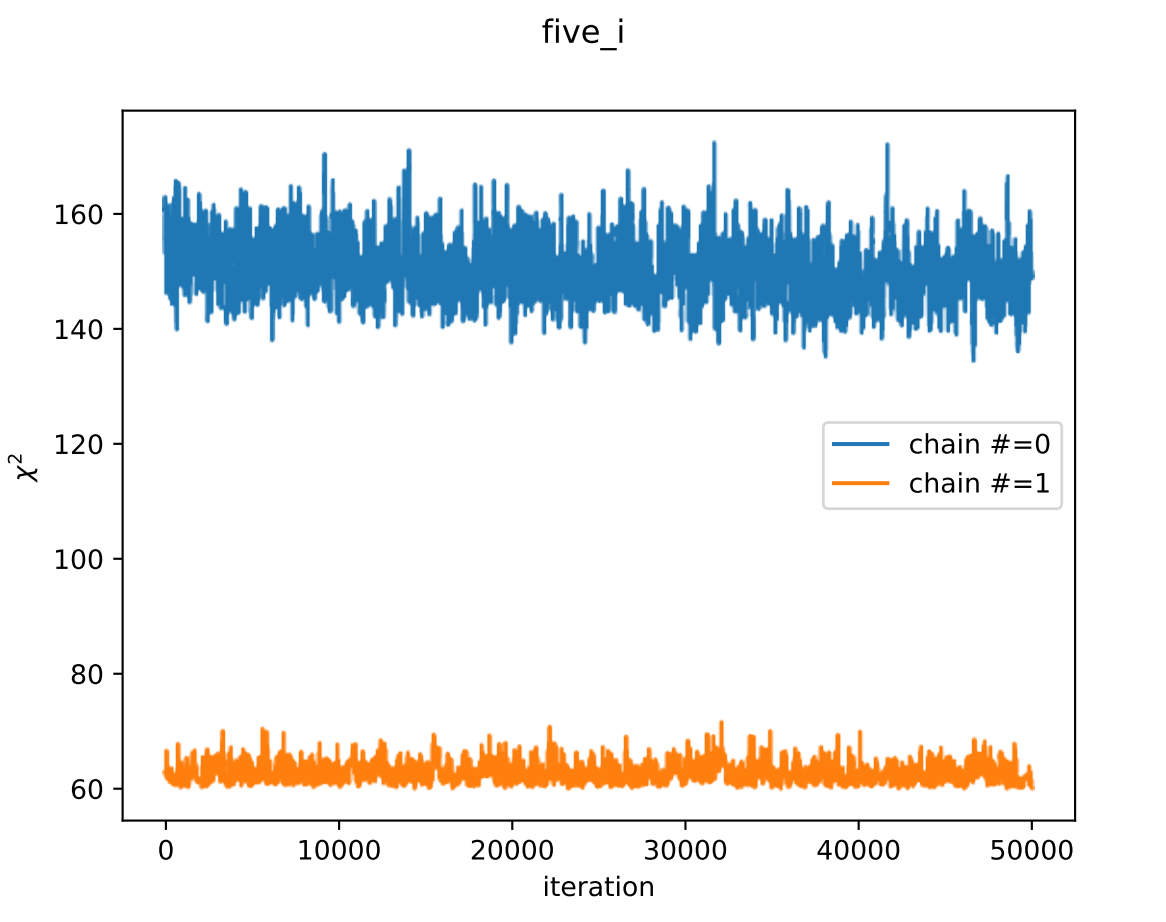

chain #=0
chain #=1
frequency
S0


chain #=0
chain #=1
frequency
V0
1e6

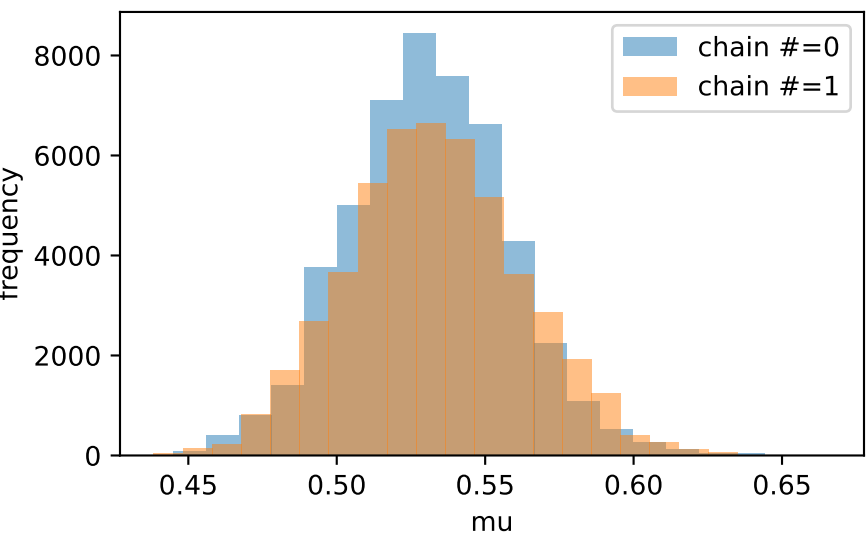
five_i

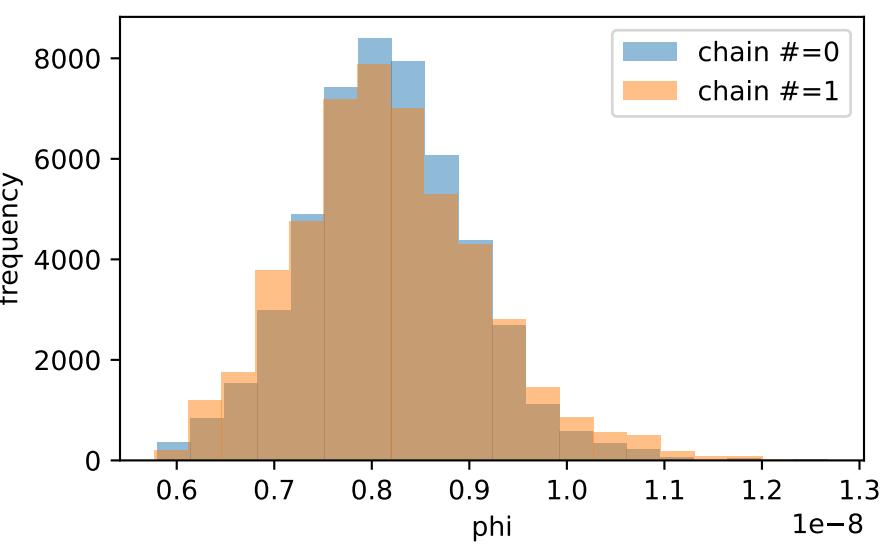


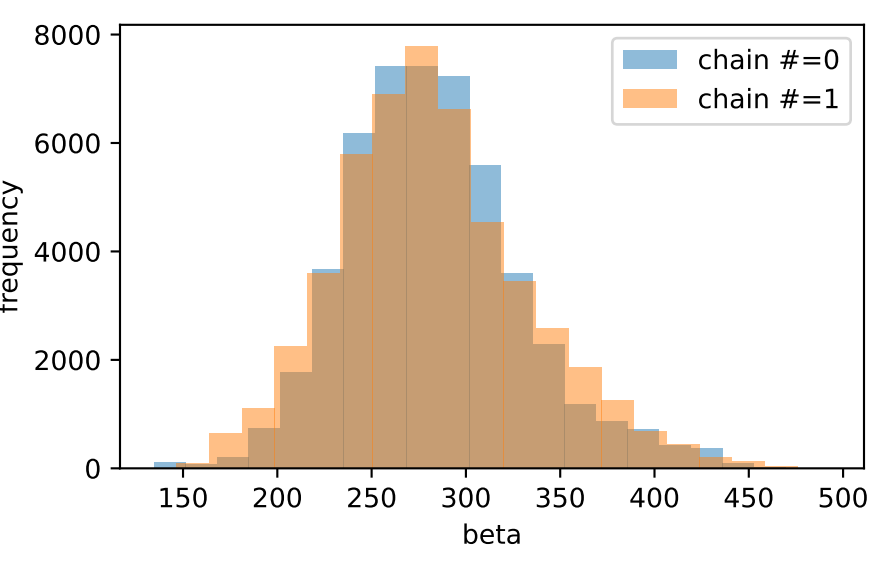

five_i
chain #=0
chain #=1
frequency
17500
15000
12500
10000
7500
5000
2500
0
60
80
100
120
140
160
χ^2

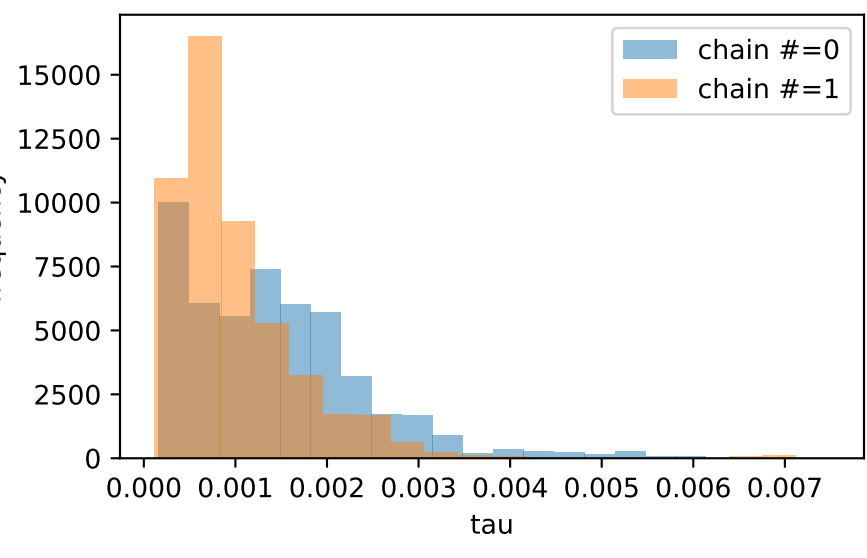

five_i
160
140
120
100
80
60
χ^2
chain #=0
chain #=1
0
10000
20000
30000
40000
50000
iteration

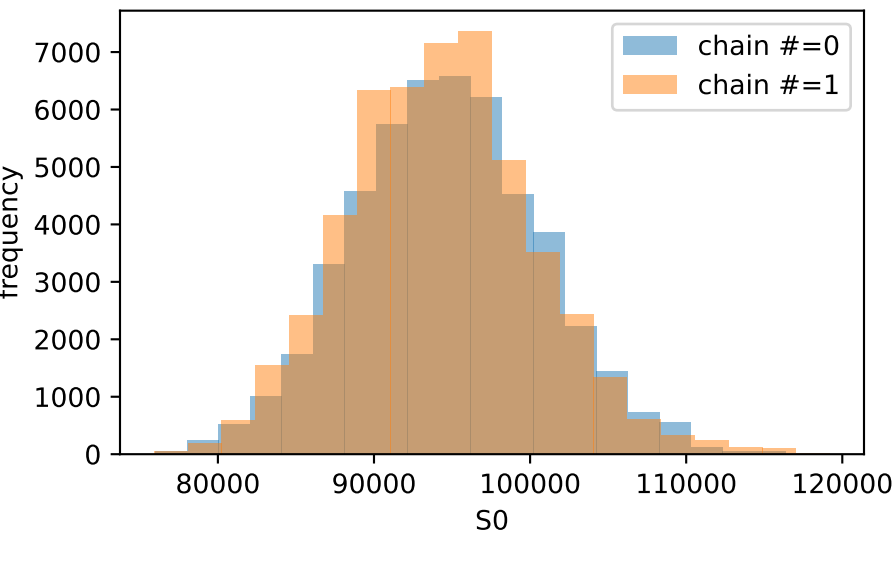
six_i

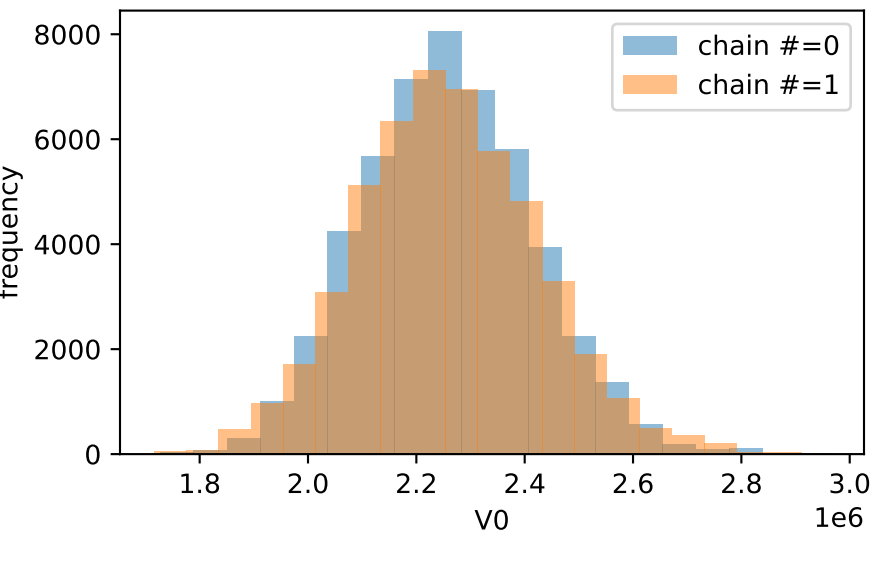

chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
0.45
0.50
0.55
0.60
0.65
mu


chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
phi
1e−8

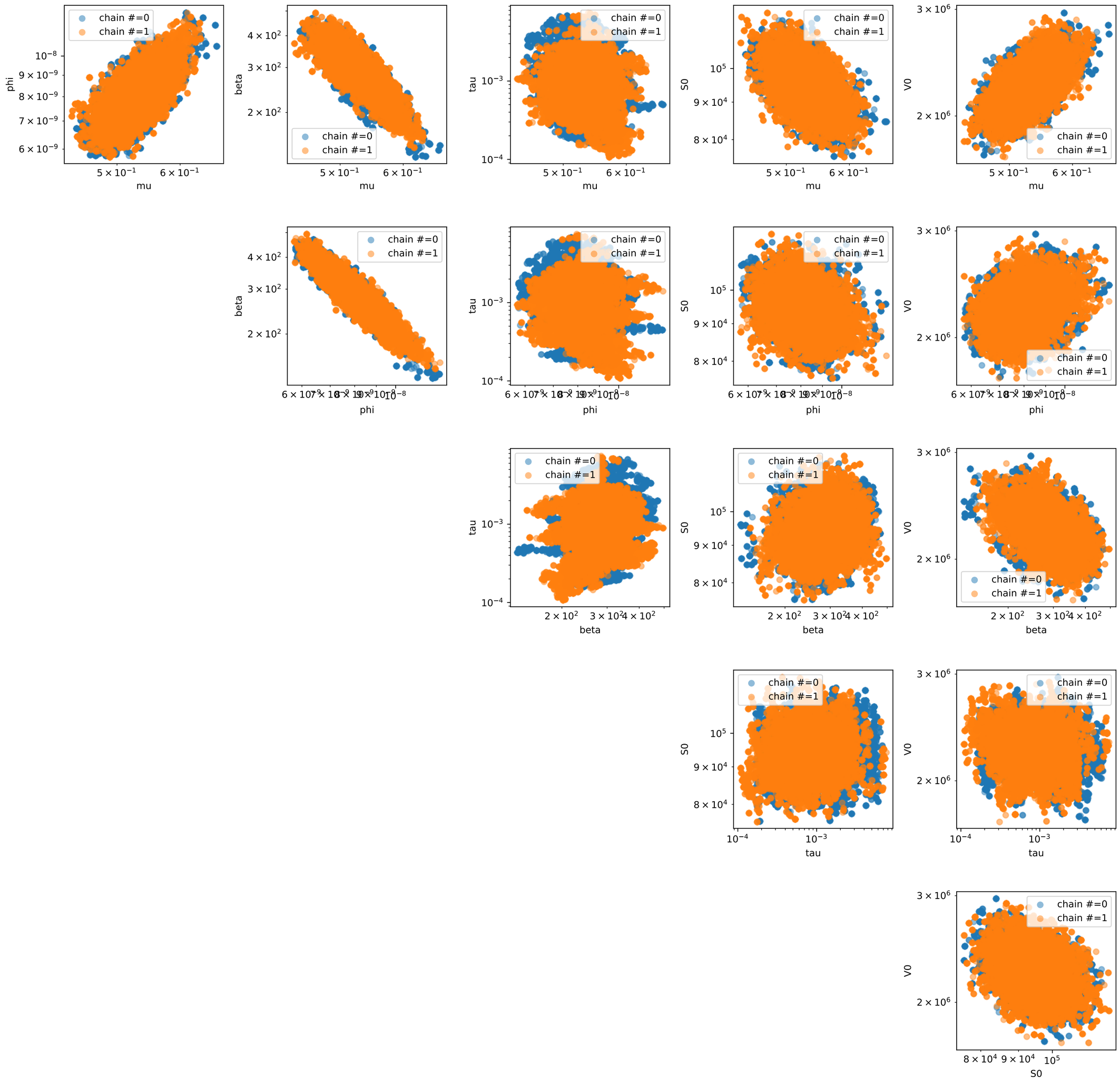

chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
150
200
250
300
350
400
450
500
beta

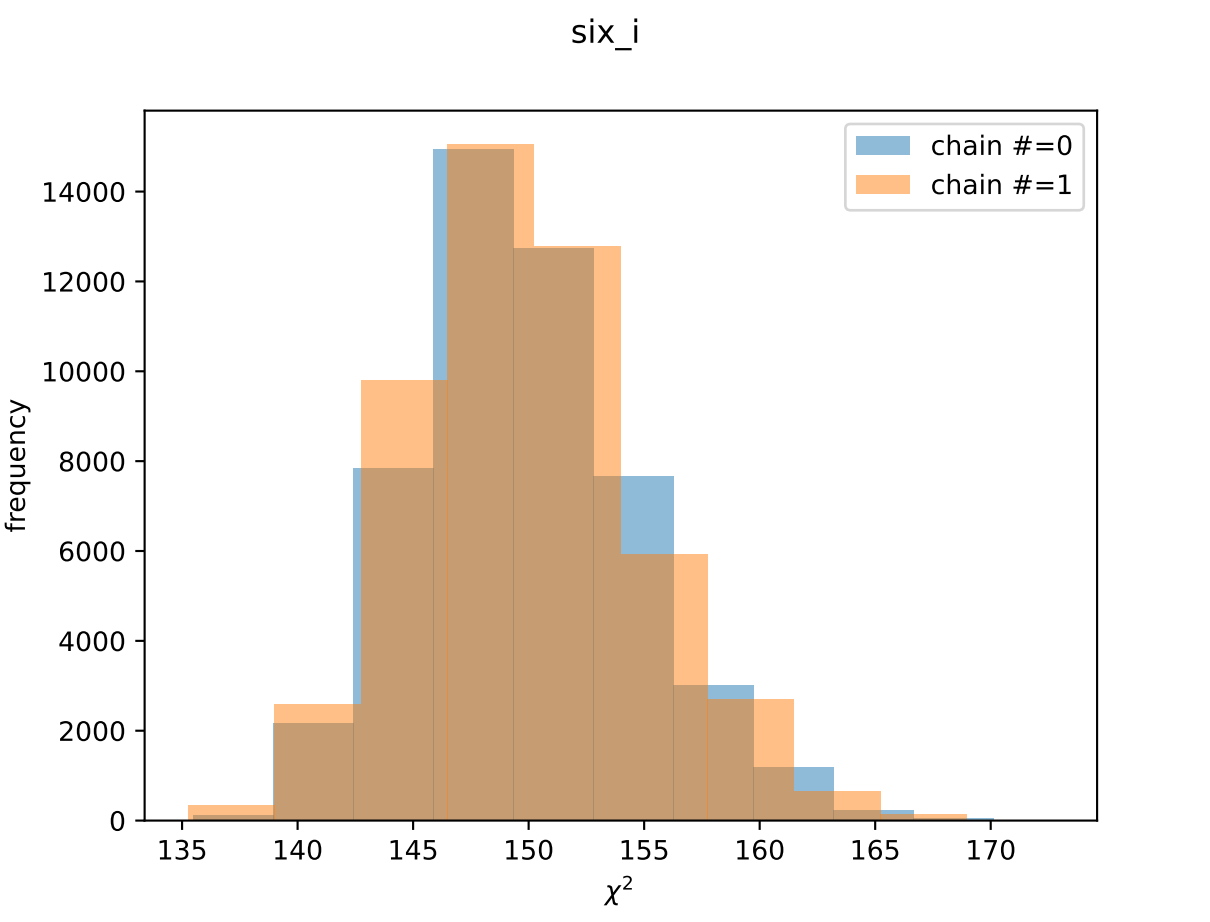

chain #=0
chain #=1
15000
12500
10000
7500
5000
2500
0
0.000
0.001
0.002
0.003
0.004
0.005
0.006
0.007
tau

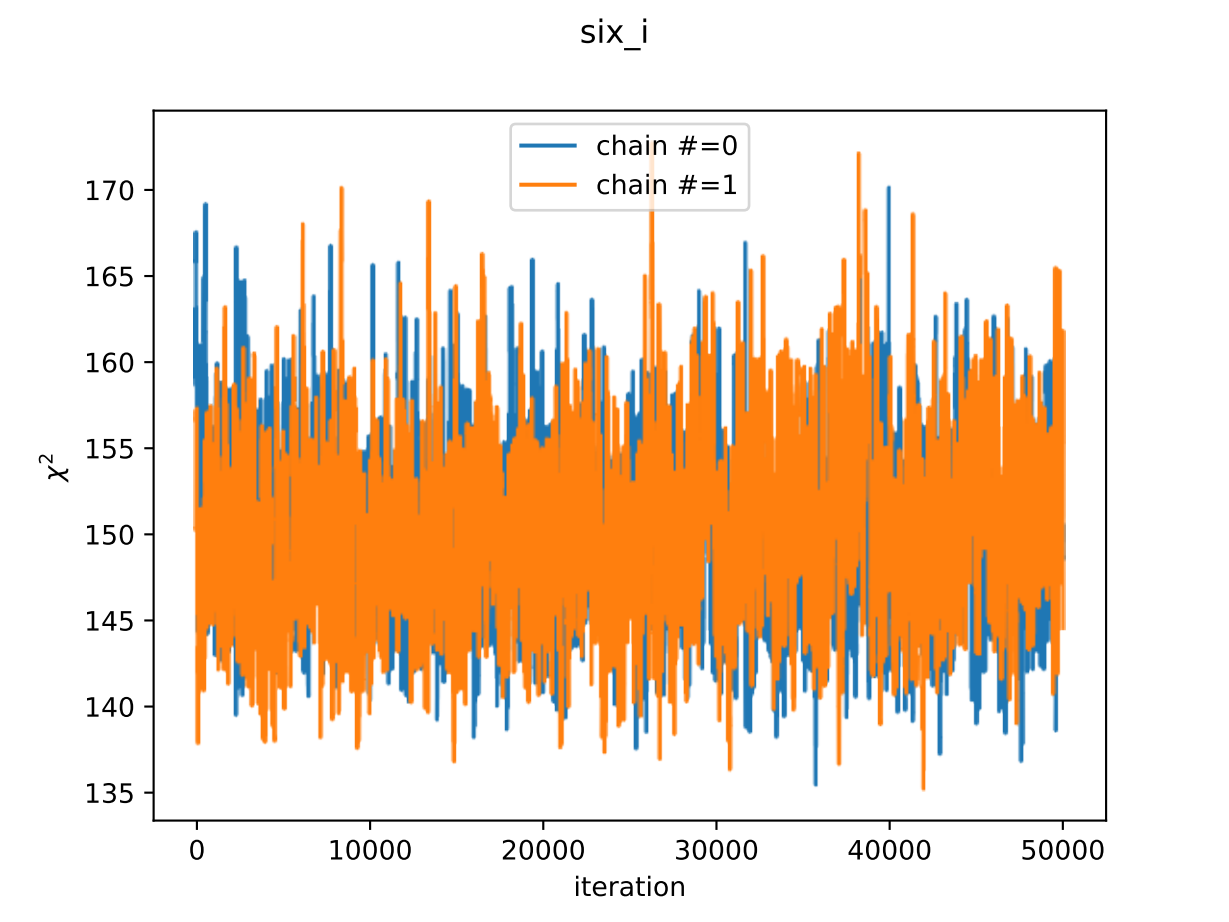

chain #=0
chain #=1
frequency
7000
6000
5000
4000
3000
2000
1000
0
80000
90000
100000
110000
120000
S0


chain #=0
chain #=1
frequency
8000
6000
4000
2000
0
1.8
2.0
2.2
2.4
2.6
2.8
3.0
V0
1e6

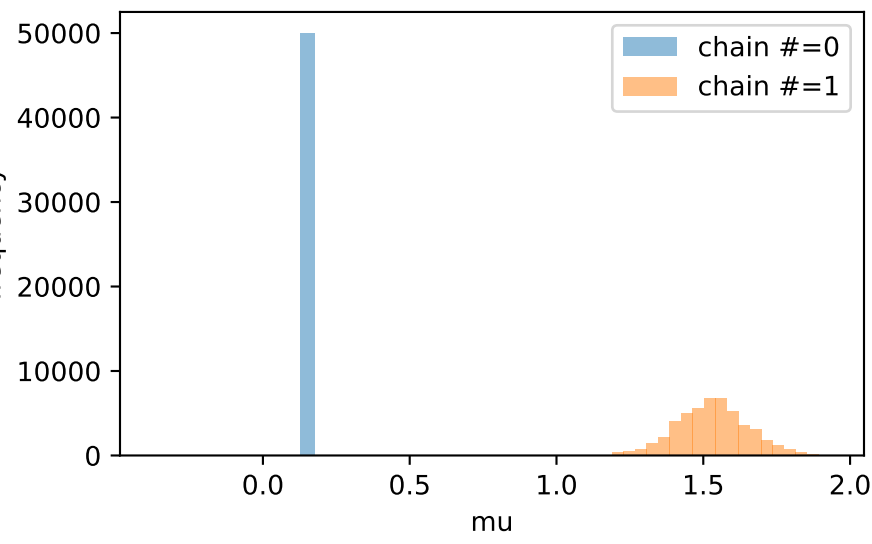
six_i

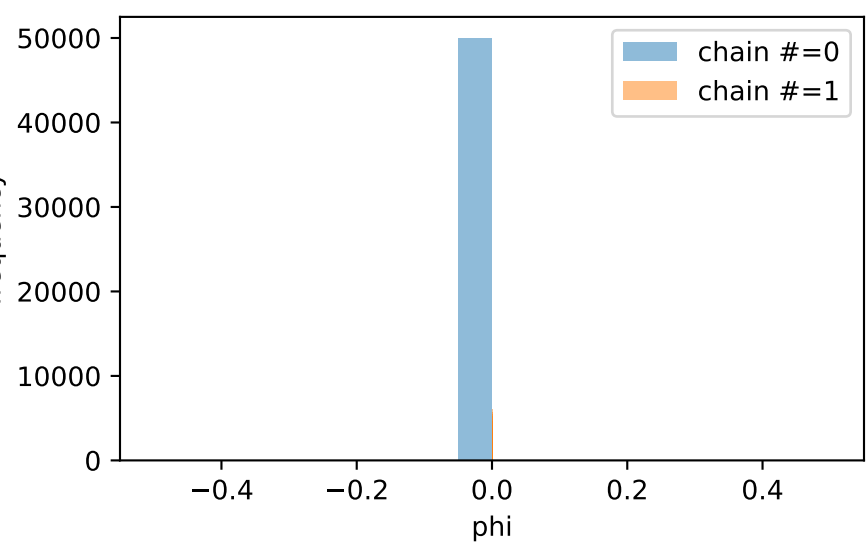



six_i
chain #=0
chain #=1
frequency
0
2000
4000
6000
8000
10000
12000
14000
135
140
145
150
155
160
165
170
χ^2


six_i
chain #=0
chain #=1
170
165
160
155
150
145
140
135
χ^2
0
10000
20000
30000
40000
50000
iteration

seven_i


chain #=0
chain #=1
50000
40000
30000
20000
10000
0
0.0
0.5
1.0
1.5
2.0
mu


chain #=0
chain #=1
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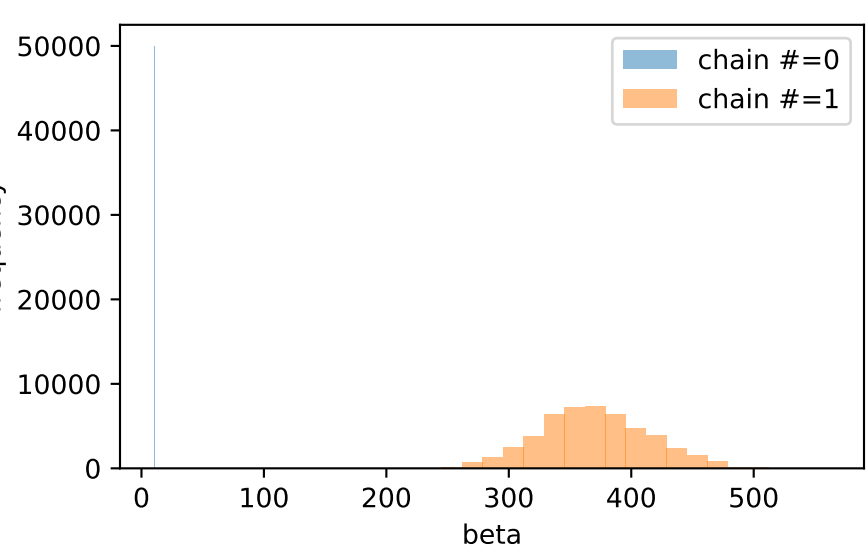
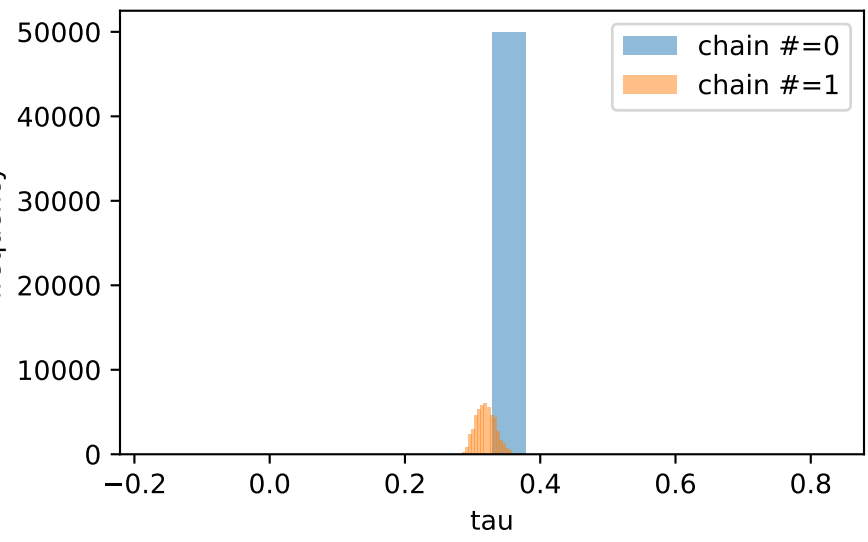
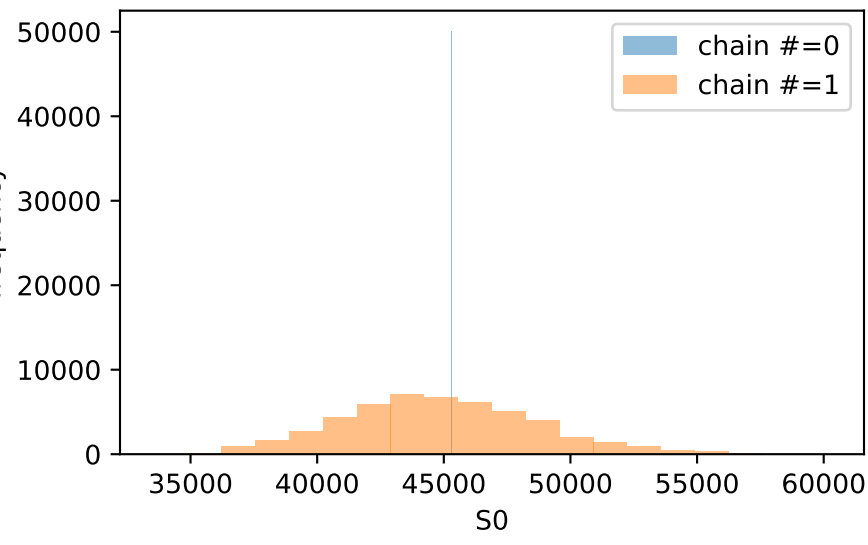
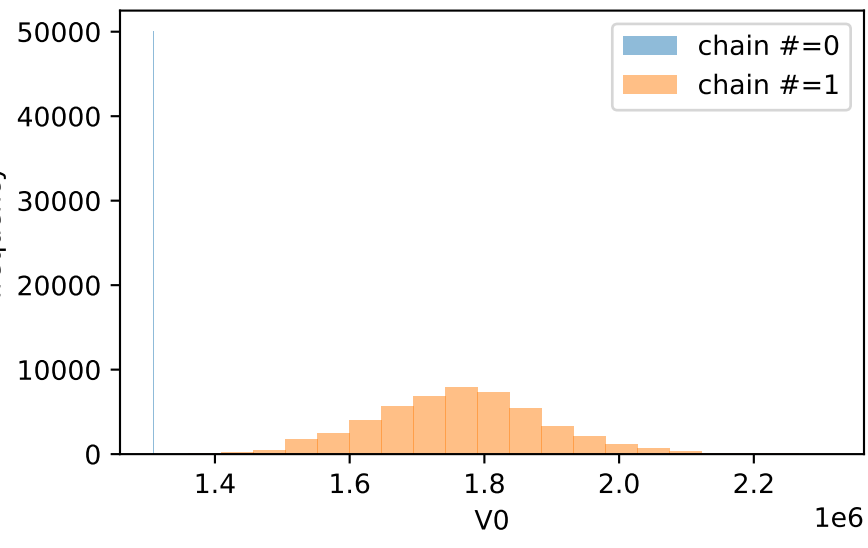
40000
30000
20000
10000
0
−0.4
−0.2
0.0
0.2
0.4
phi

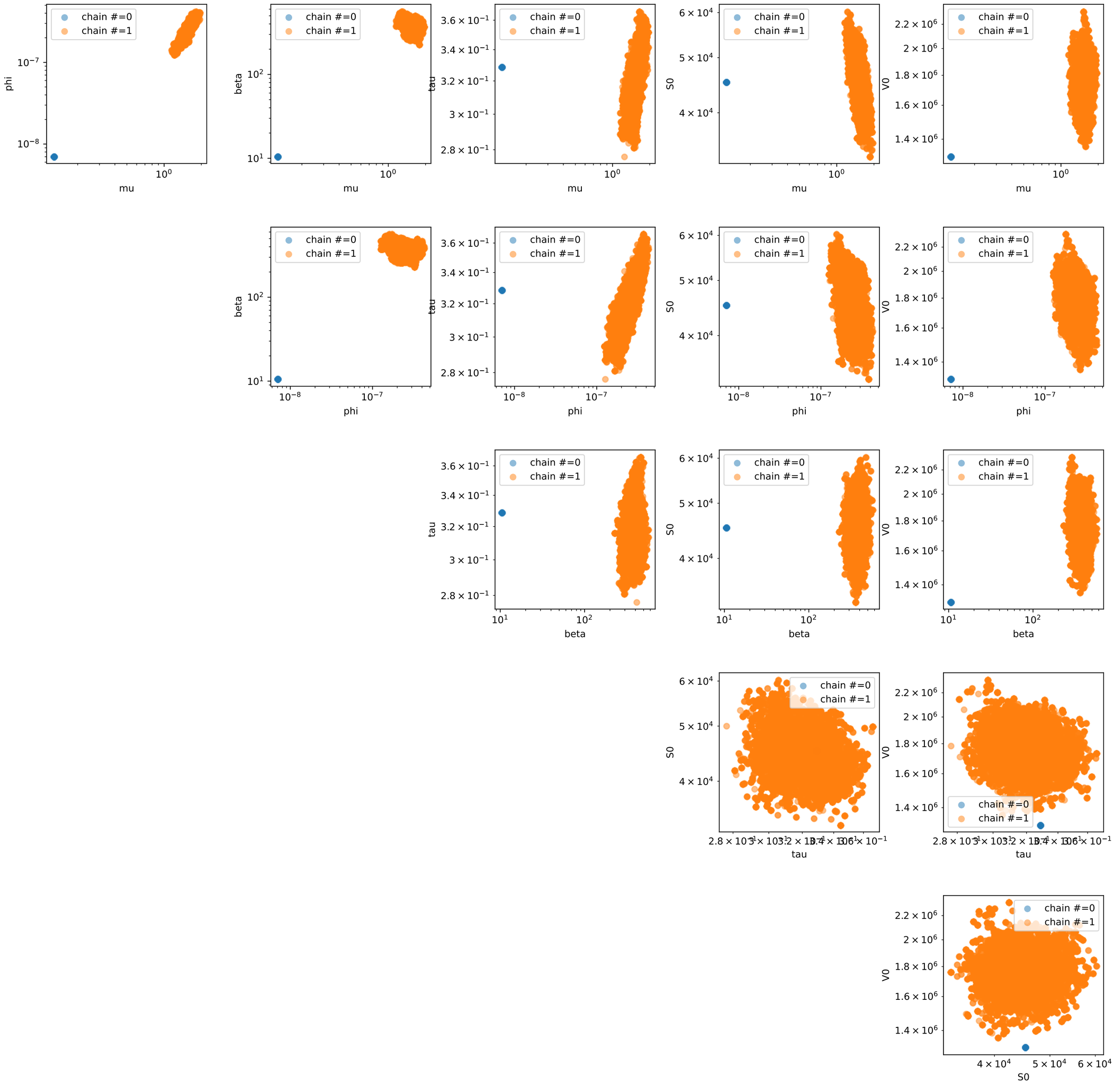

chain #=0
chain #=1
50000
40000
30000
20000
10000
0
0
100
200
300
400
500
beta

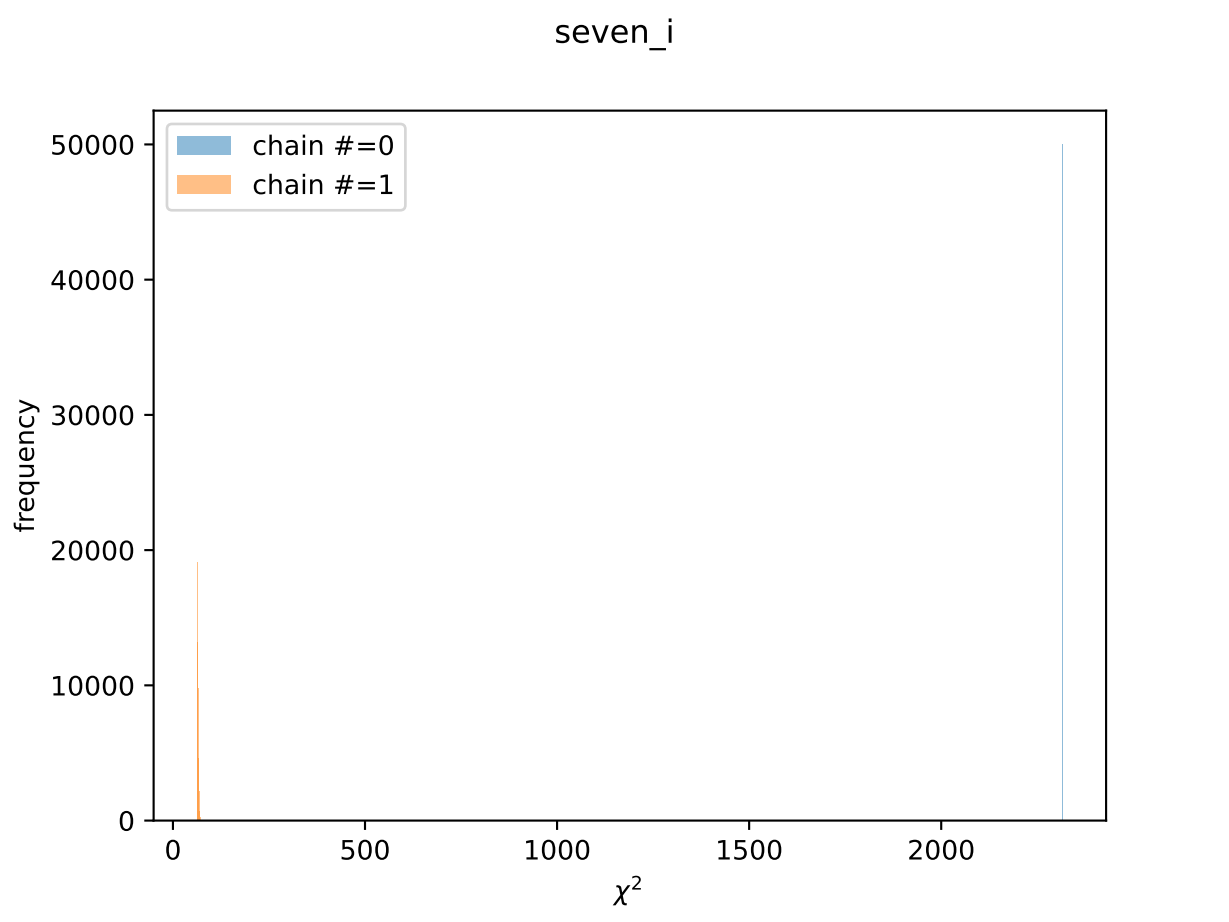

chain #=0
chain #=1
50000
40000
30000
20000
10000
0
−0.2
0.0
0.2
0.4
0.6
0.8
tau

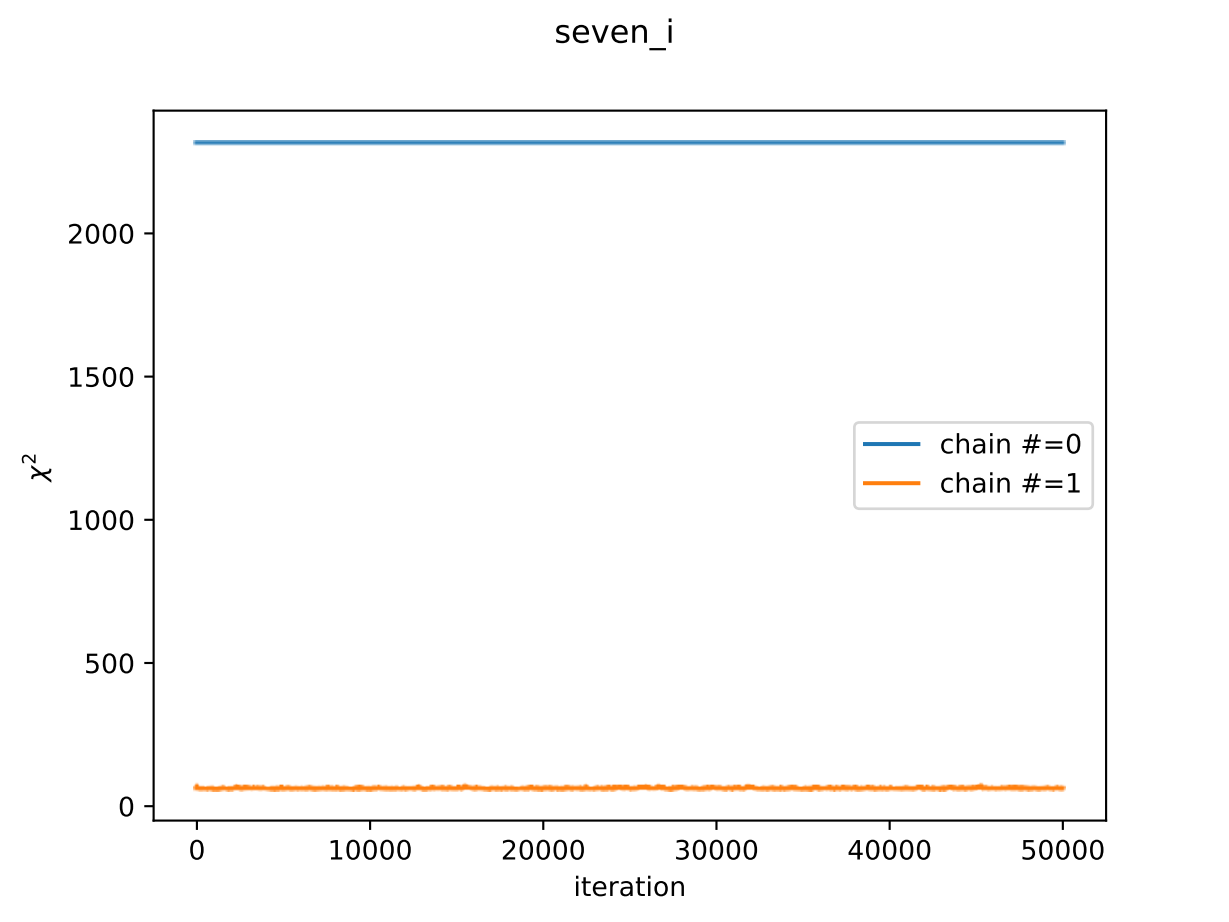

chain #=0
chain #=1
50000
40000
30000
20000
10000
0
35000
40000
45000
50000
55000
60000
S0


chain #=0
chain #=1
50000
40000
30000
20000
10000
0
1.4
1.6
1.8
2.0
2.2
V0
1e6

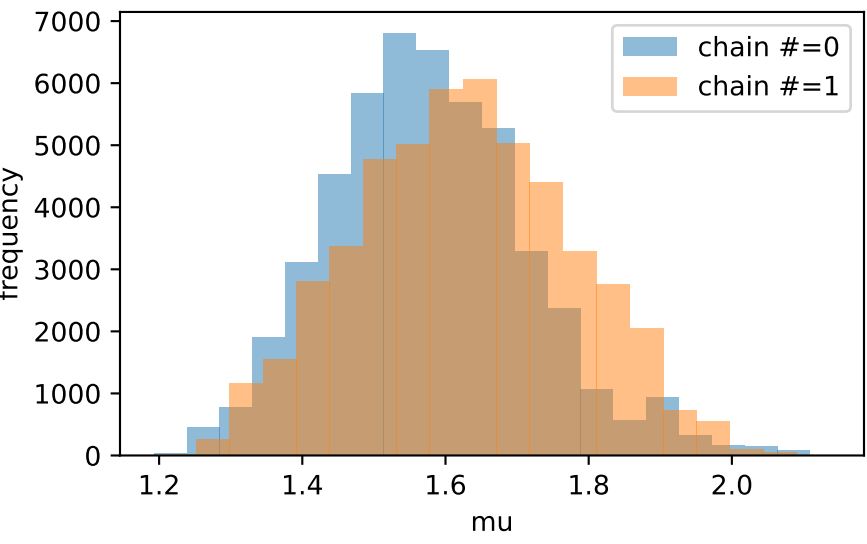
seven_i

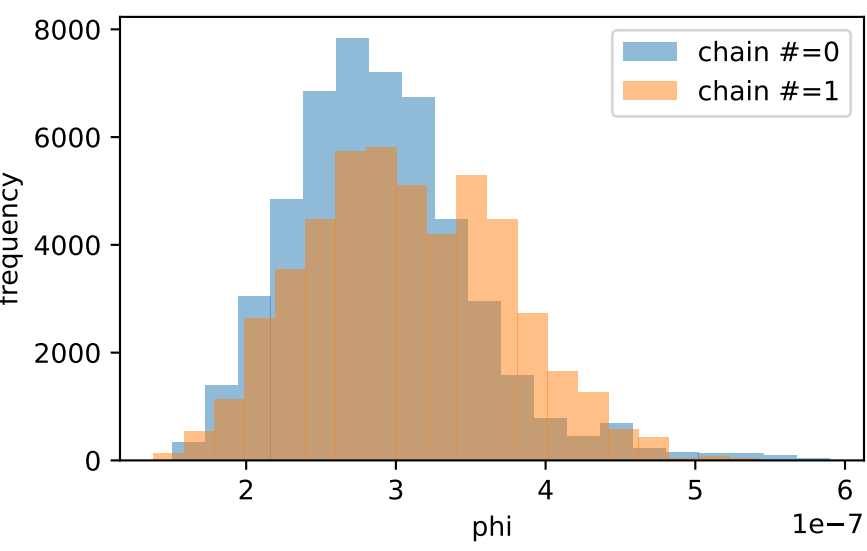


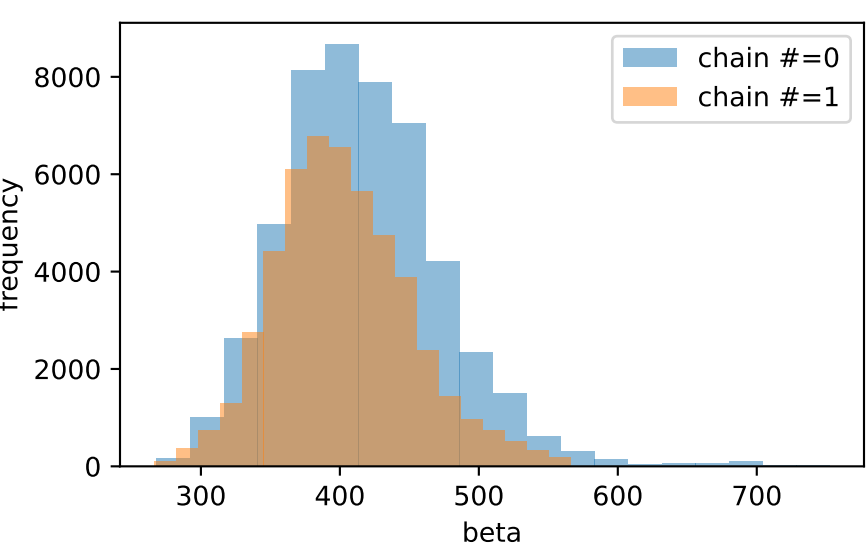

seven_i
chain #=0
chain #=1
50000
40000
30000
20000
10000
0
frequency
0
500
1000
1500
2000
χ^2

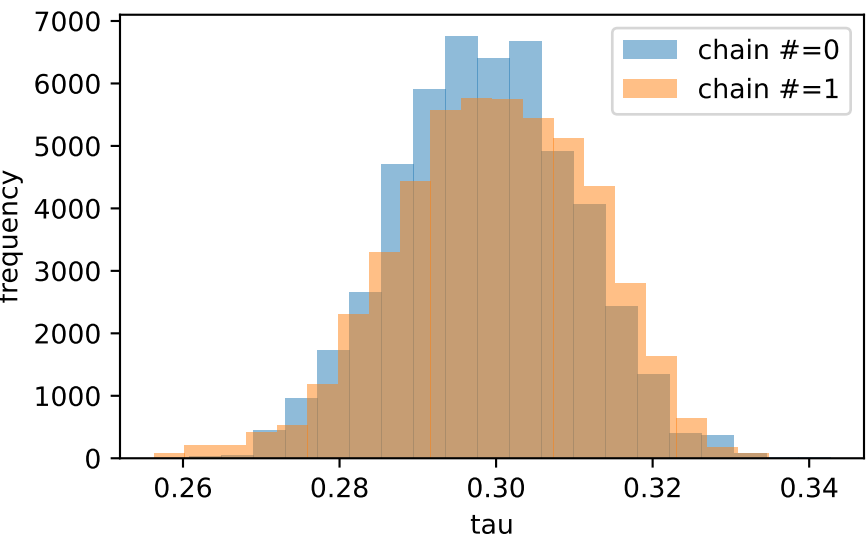

seven_i
2000
1500
1000
500
0
χ^2
chain #=0
chain #=1
0
10000
20000
30000
40000
50000
iteration

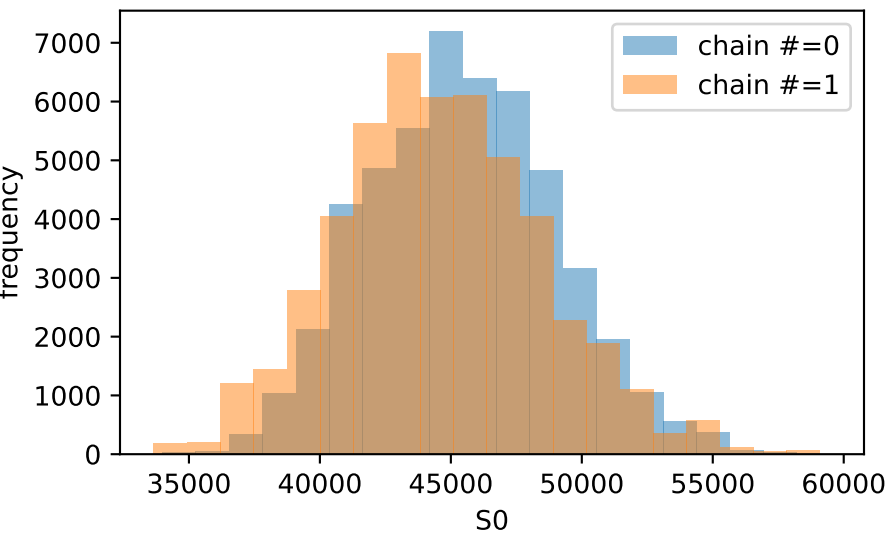
eight_i

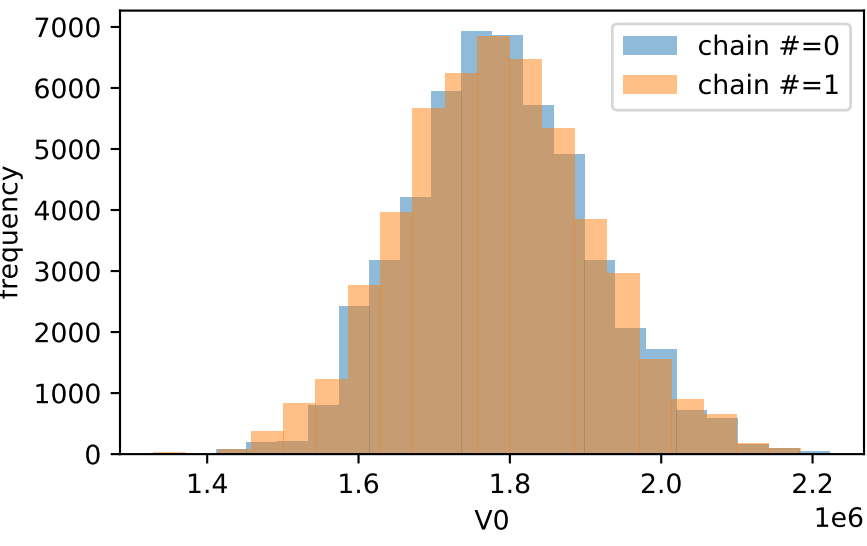

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
frequency
phi
1e−7

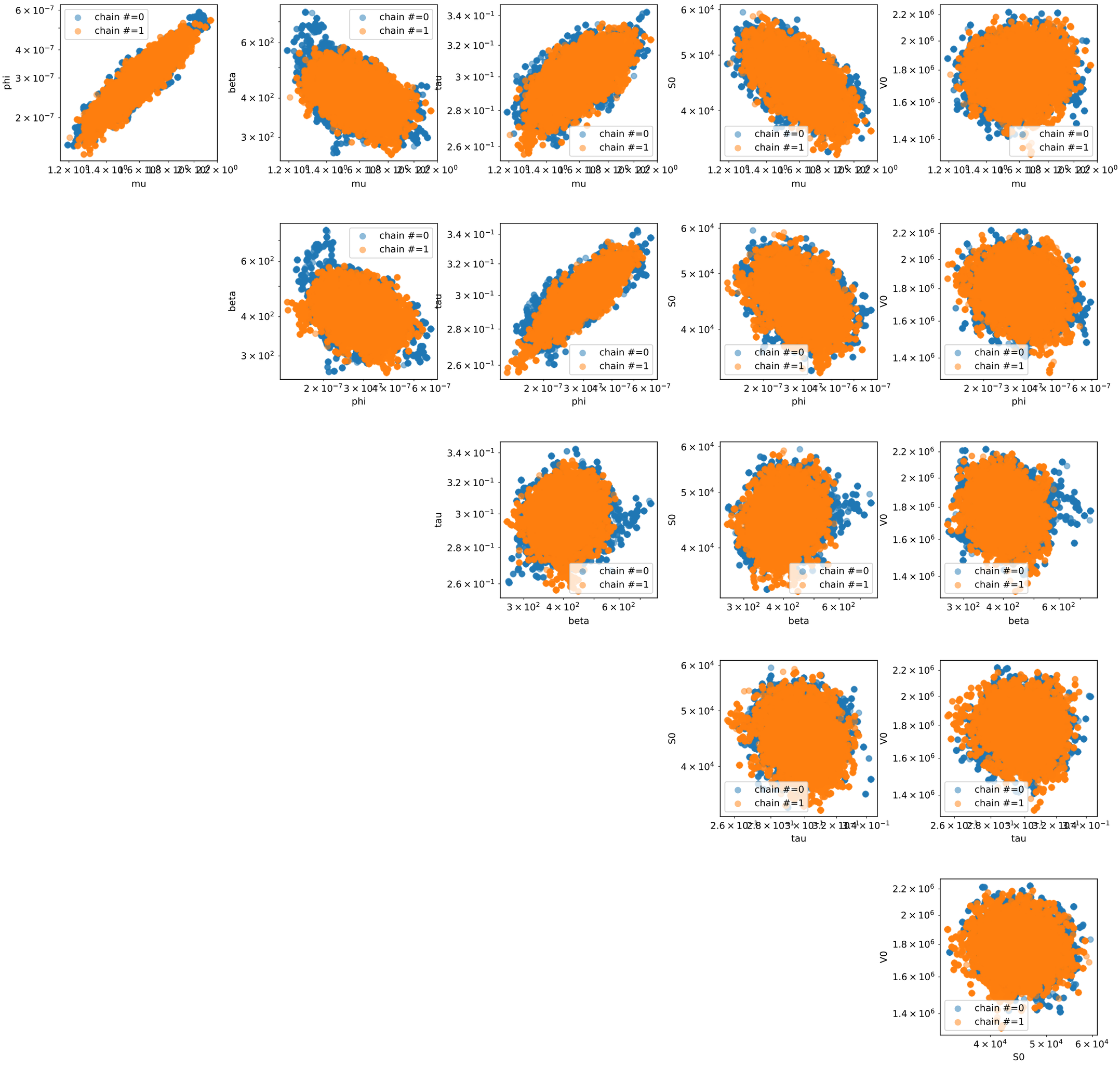

chain #=0
chain #=1
frequency
beta

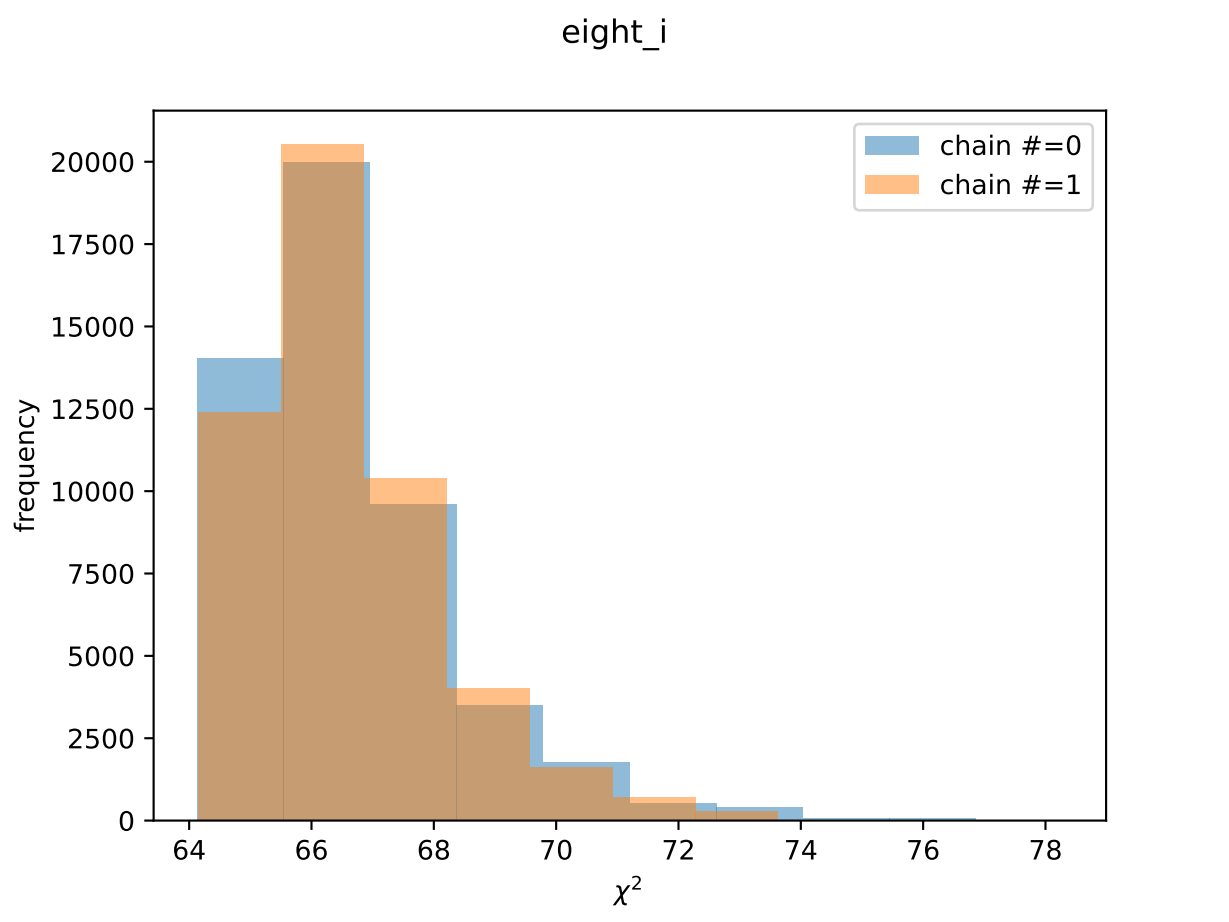

chain #=0
chain #=1
frequency
tau

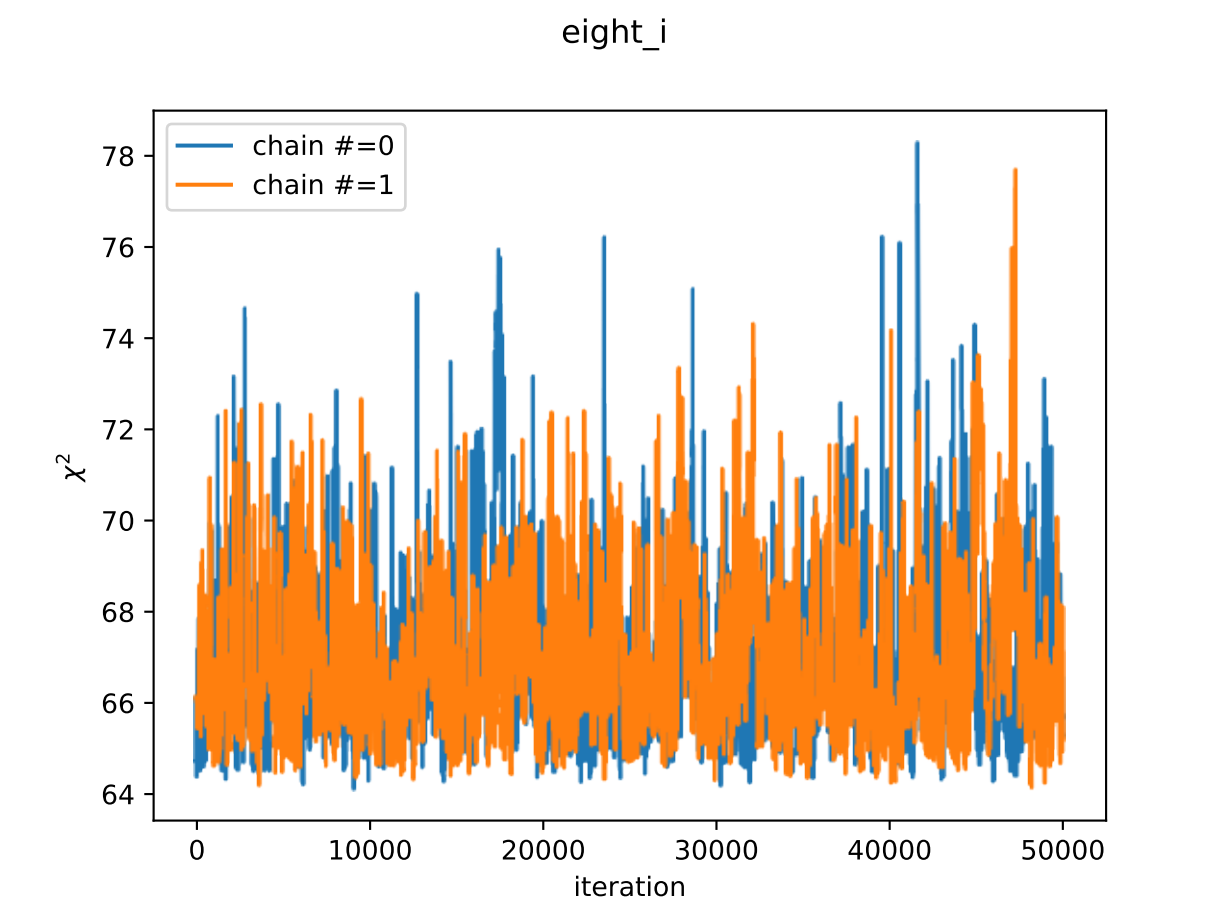

chain #=0
chain #=1
frequency
S0


chain #=0
chain #=1
frequency
V0
1e6

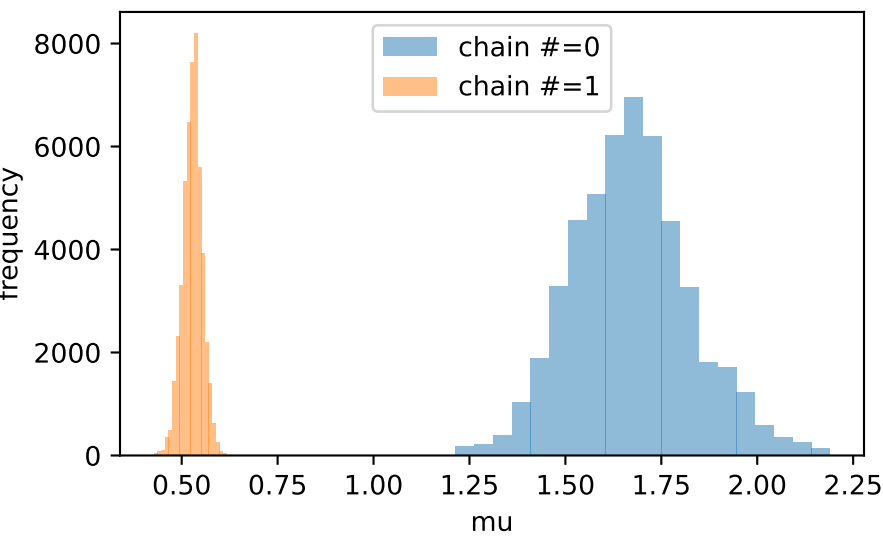
eight_i

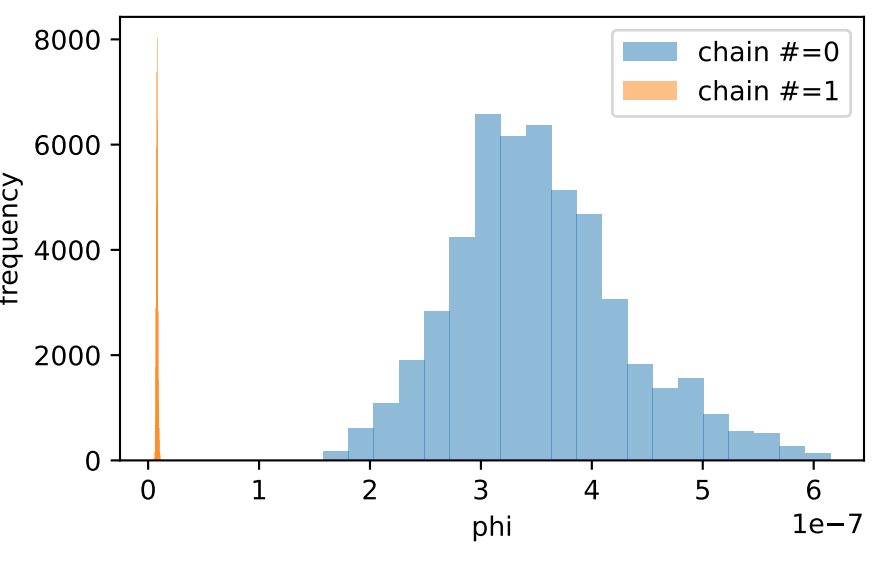


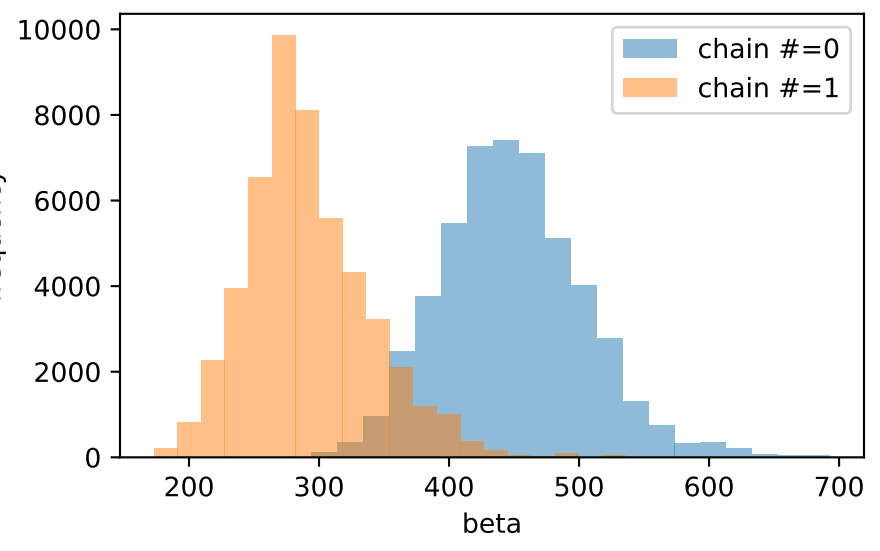

eight_i
chain #=0
chain #=1
frequency
20000
17500
15000
12500
10000
7500
5000
2500
0
64
66
68
70
72
74
76
78
χ^2

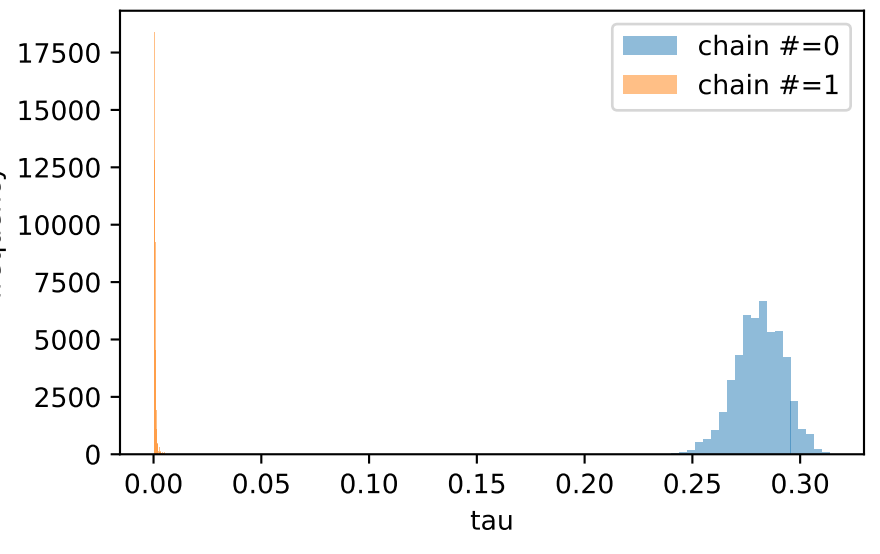

eight_i
chain #=0
chain #=1
78
76
74
72
70
68
66
64
χ^2
0
10000
20000
30000
40000
50000
iteration

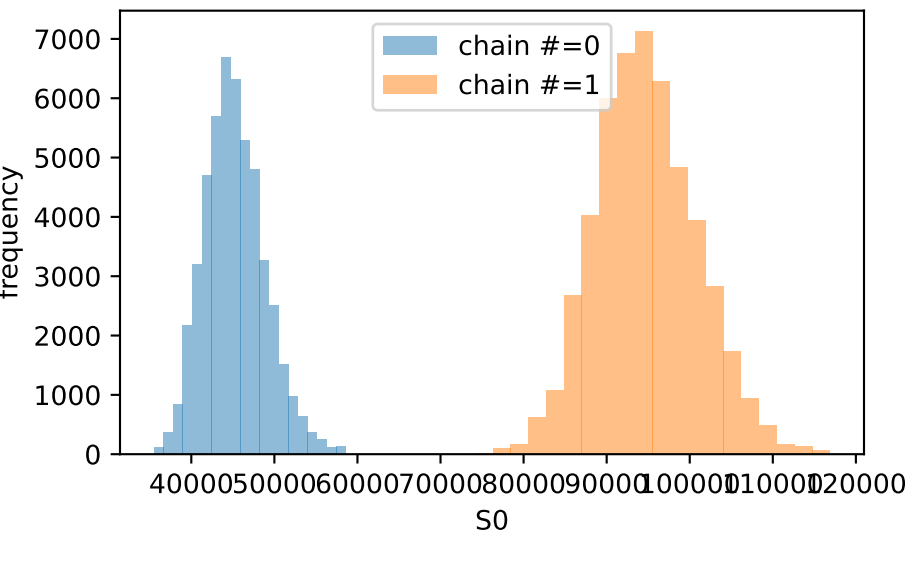
nine_i

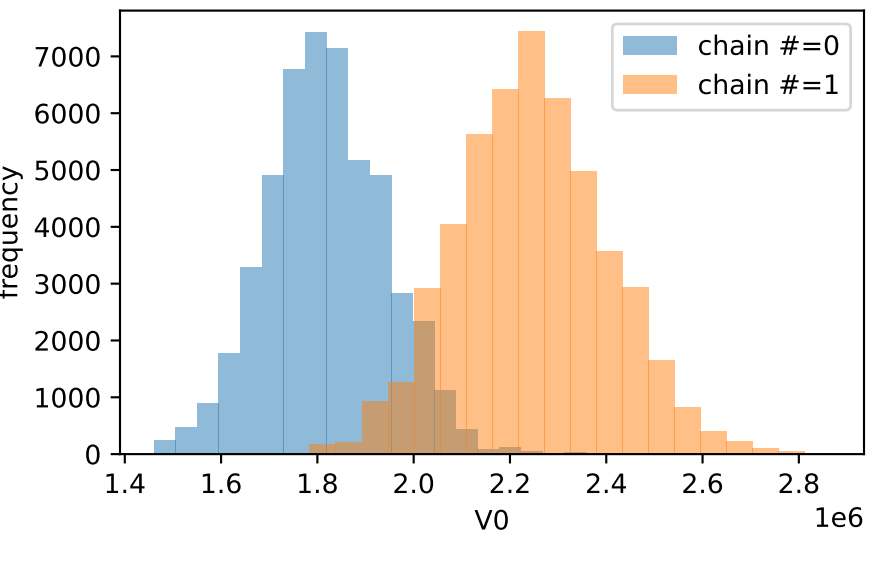

chain #=0
chain #=1
frequency
mu
0.50
0.75
1.00
1.25
1.50
1.75
2.00
2.25
0
2000
4000
6000
8000


chain #=0
chain #=1
frequency
phi
1e−7
0
1
2
3
4
5
6
0
2000
4000
6000
8000

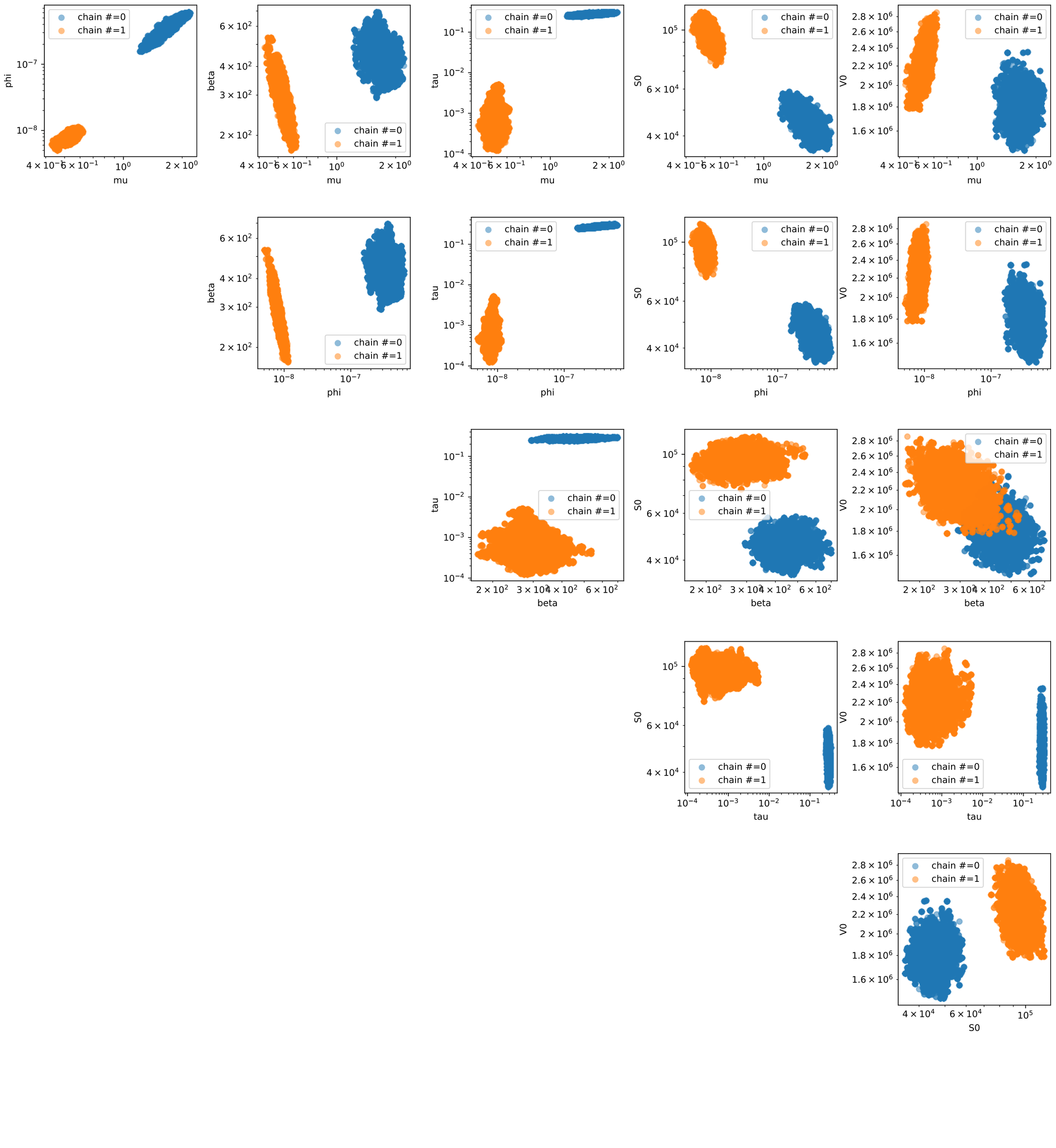

chain #=0
chain #=1
beta
200
300
400
500
600
700
0
2000
4000
6000
8000
10000

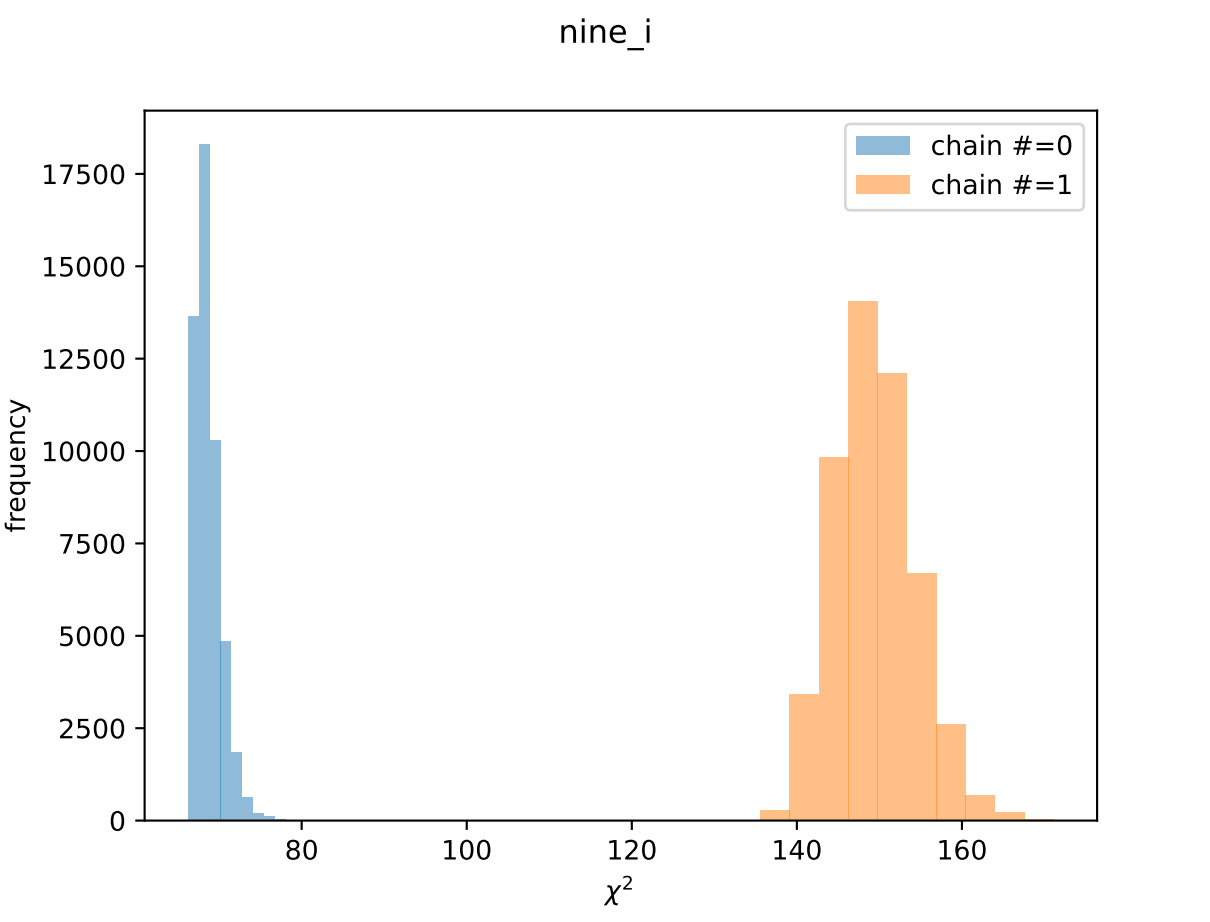

chain #=0
chain #=1
tau
0.00
0.05
0.10
0.15
0.20
0.25
0.30
0
2500
5000
7500
10000
12500
15000
17500

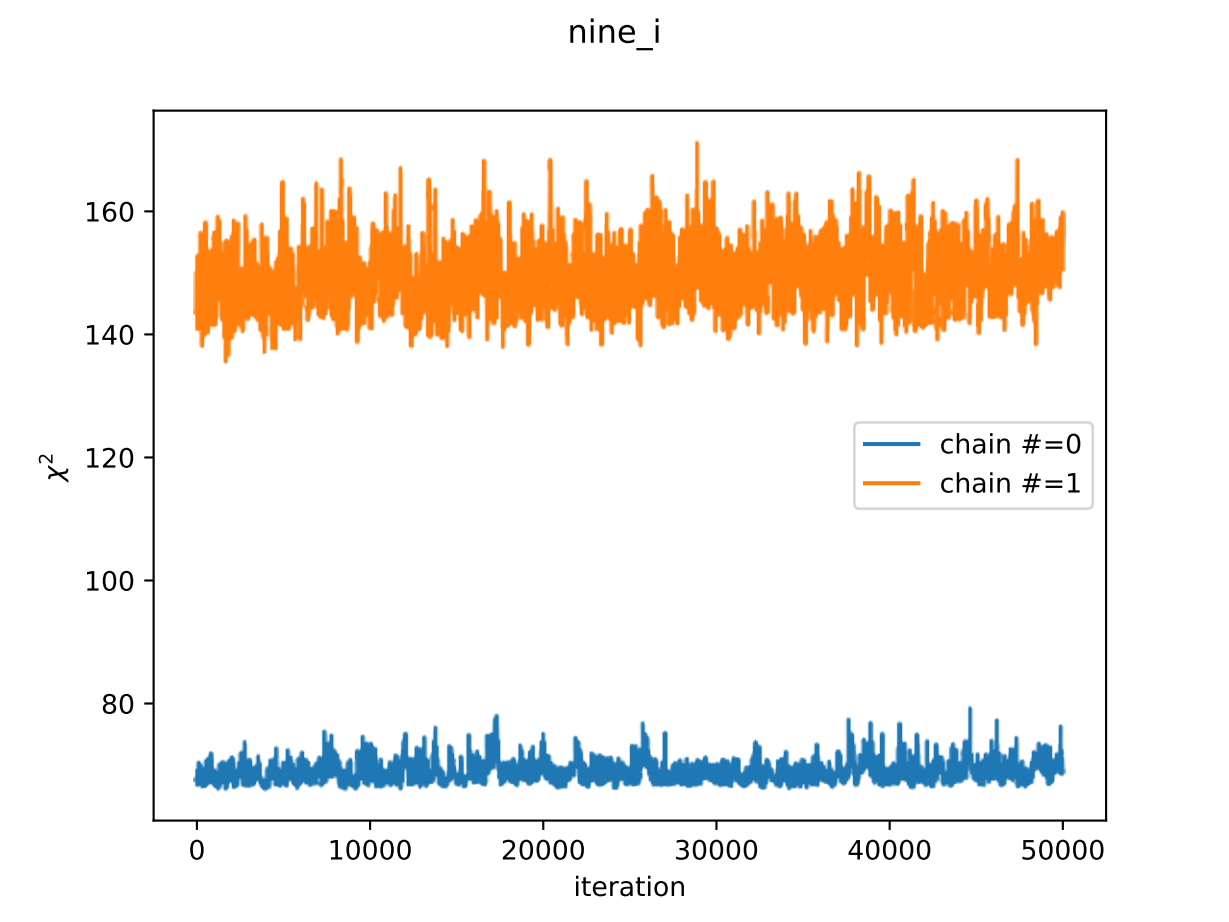

chain #=0
chain #=1
frequency
S0
0
1000
2000
3000
4000
5000
6000
7000


chain #=0
chain #=1
frequency
V0
1e6
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
0
1000
2000
3000
4000
5000
6000
7000

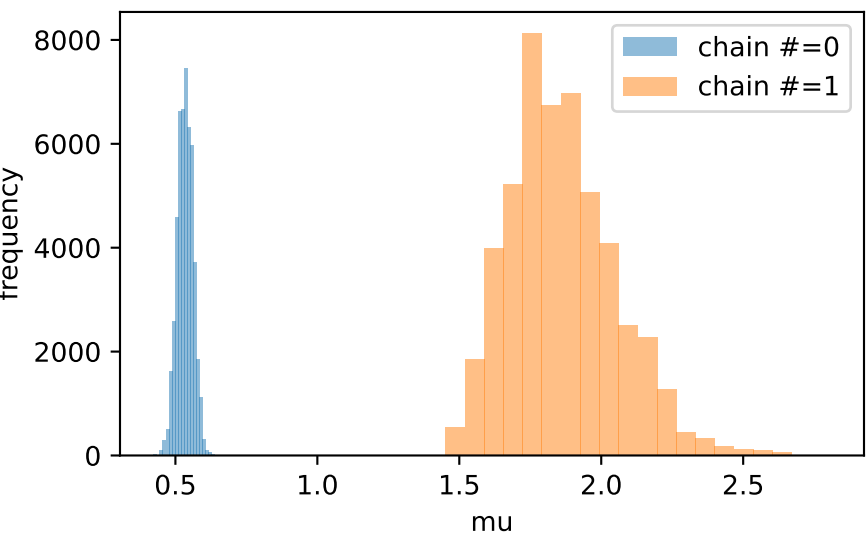
nine_i

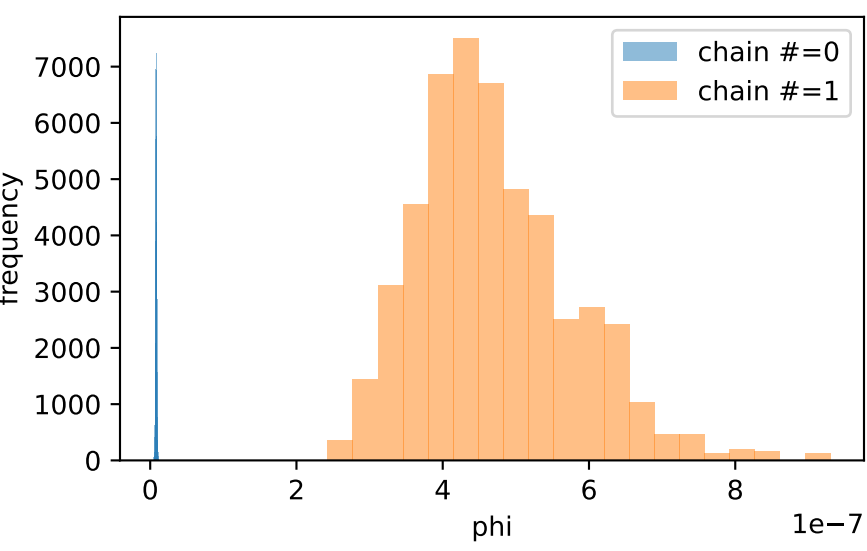


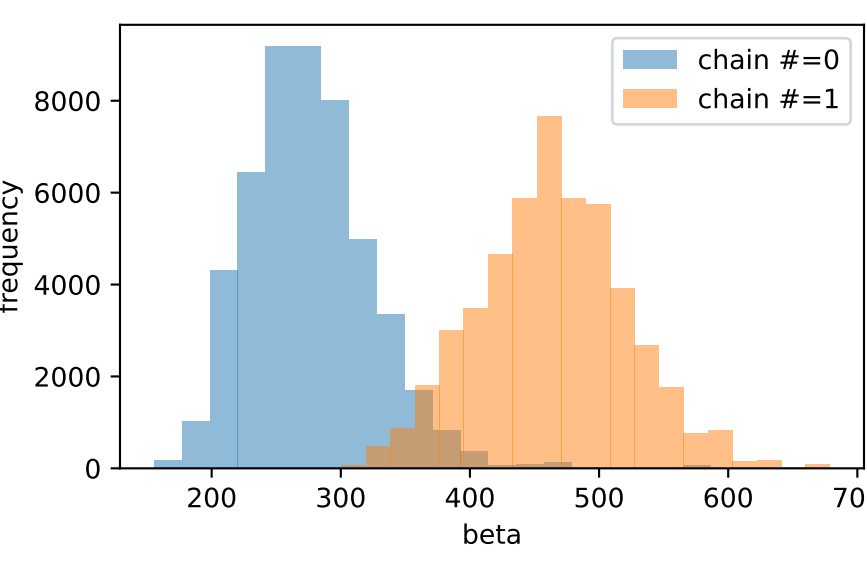

nine_i
chain #=0
chain #=1
frequency
17500
15000
12500
10000
7500
5000
2500
0
80
100
120
140
160
χ^2

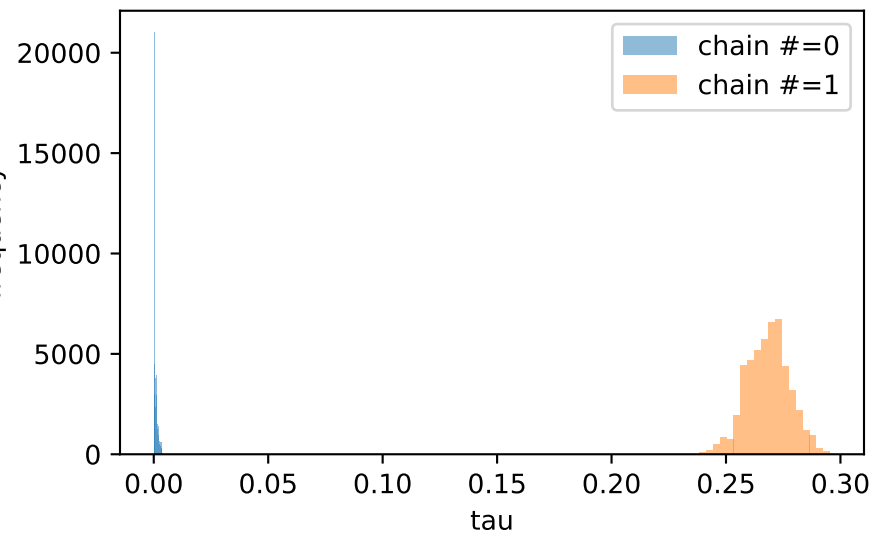

nine_i
160
140
120
100
80
χ^2
chain #=0
chain #=1
0
10000
20000
30000
40000
50000
iteration

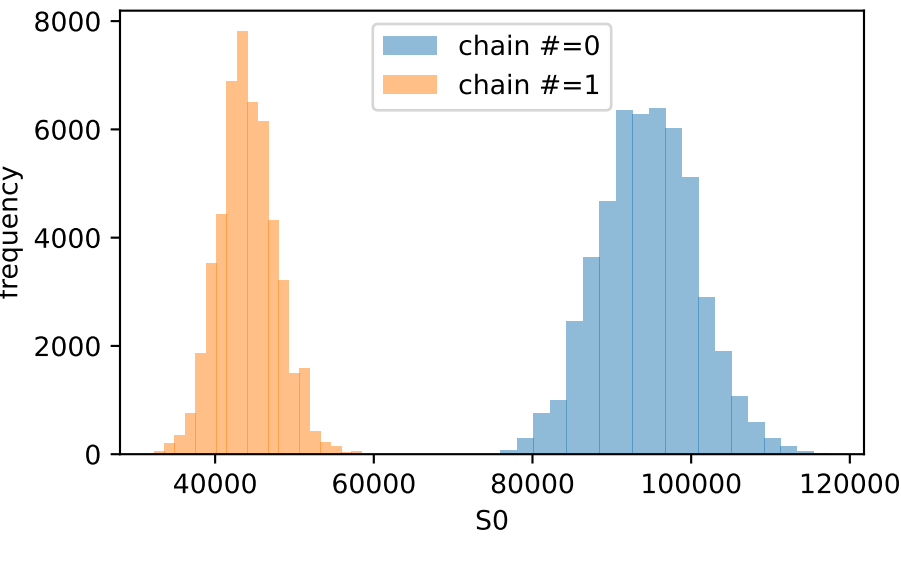
ten_i

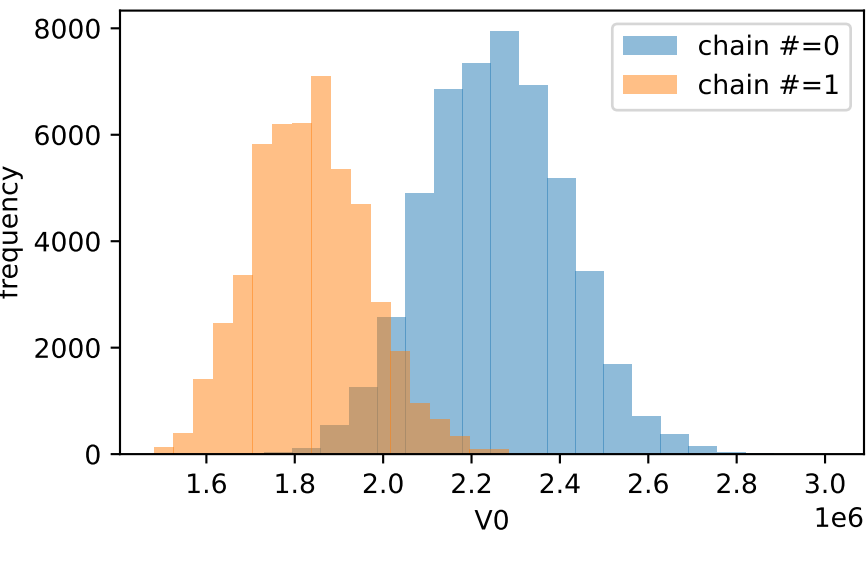

chain #=0
chain #=1
frequency
mu
0
2000
4000
6000
8000
0.5
1.0
1.5
2.0
2.5


chain #=0
chain #=1
frequency
phi
1e−7
0
1000
2000
3000
4000
5000
6000
7000
0
2
4
6
8

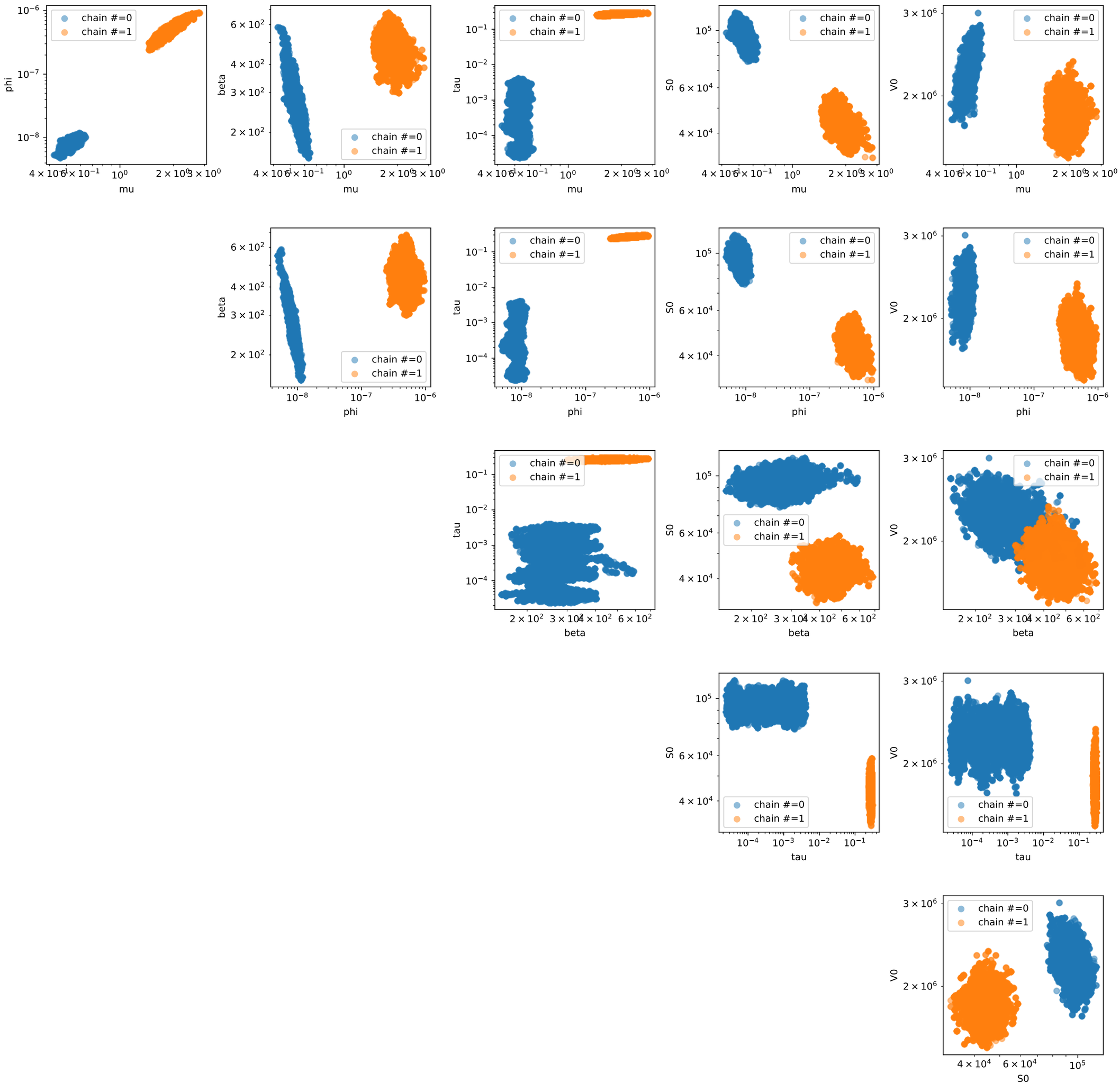

chain #=0
chain #=1
frequency
beta
0
2000
4000
6000
8000
200
300
400
500
600
700

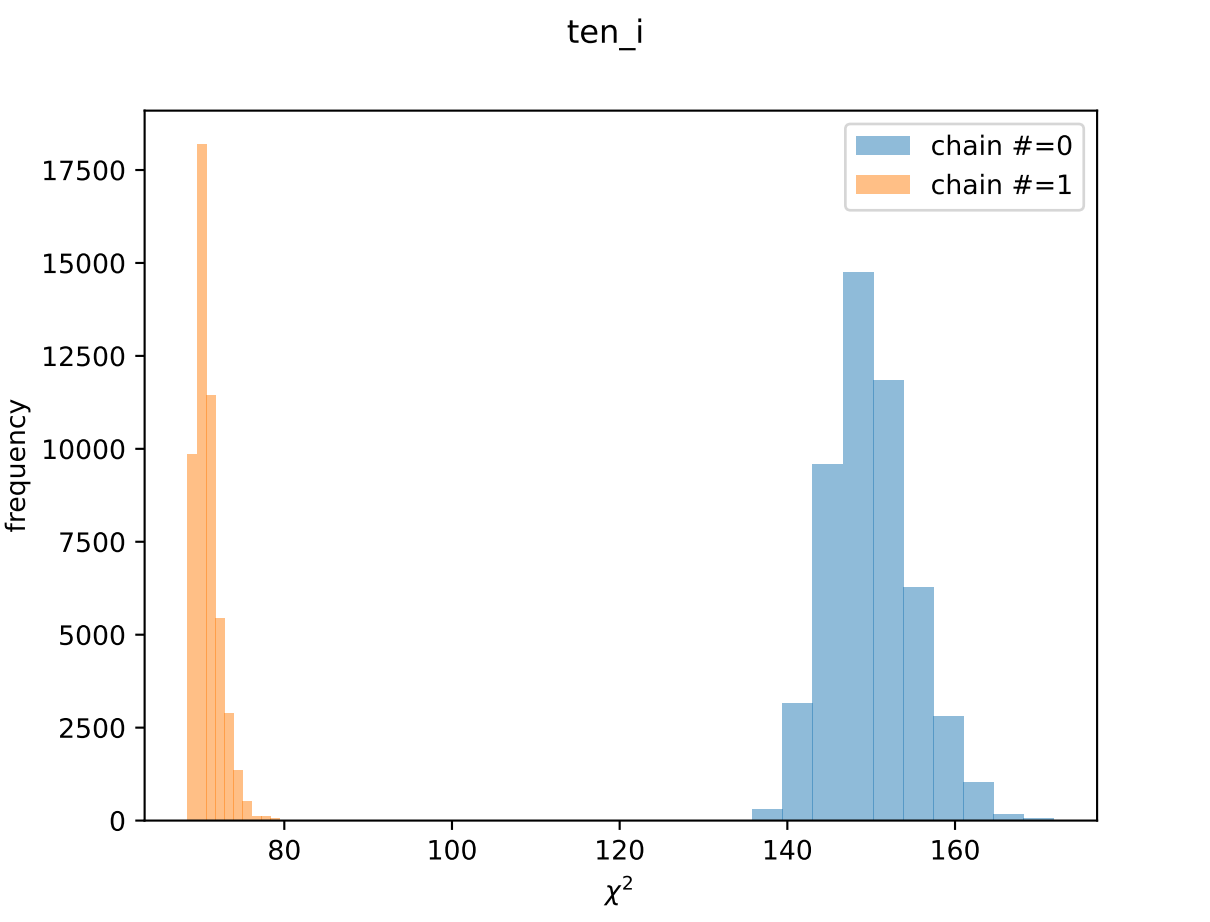

chain #=0
chain #=1
tau
0
5000
10000
15000
20000
0.00
0.05
0.10
0.15
0.20
0.25
0.30

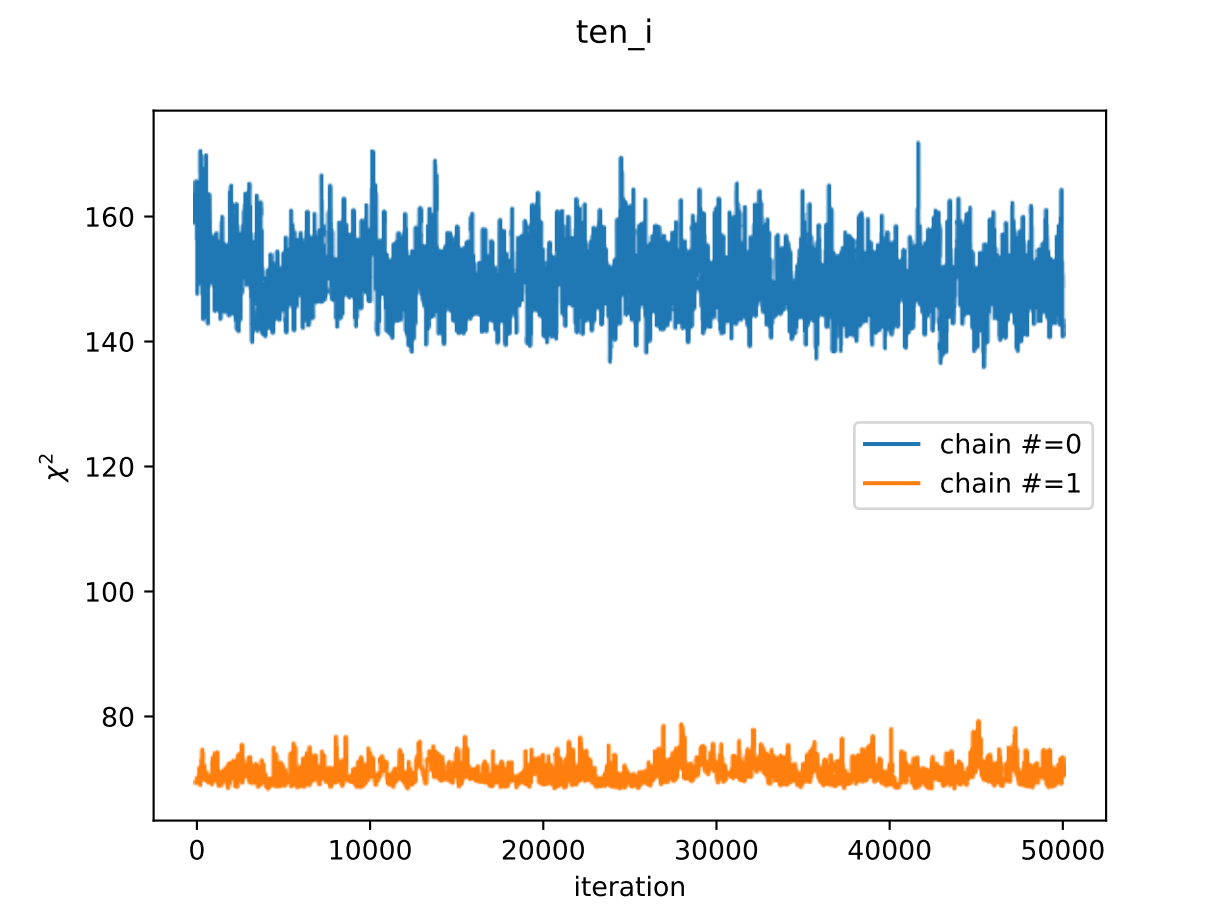

chain #=0
chain #=1
frequency
S0
0
2000
4000
6000
8000
40000
60000
80000
100000
120000


chain #=0
chain #=1
frequency
V0
1e6
0
2000
4000
6000
8000
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0

ten_i


phi
beta
tau
S0
V0
mu
phi
beta
tau
S0
V0
mu
phi
beta
tau
S0
V0
mu
phi
beta
tau
S0
V0
mu
chain #=0
chain #=1


ten_i
chain #=0
chain #=1
frequency
17500
15000
12500
10000
7500
5000
2500
0
80
100
120
140
160
χ^2


ten_i
160
140
120
100
80
χ^2
chain #=0
chain #=1
0
10000
20000
30000
40000
50000
iteration