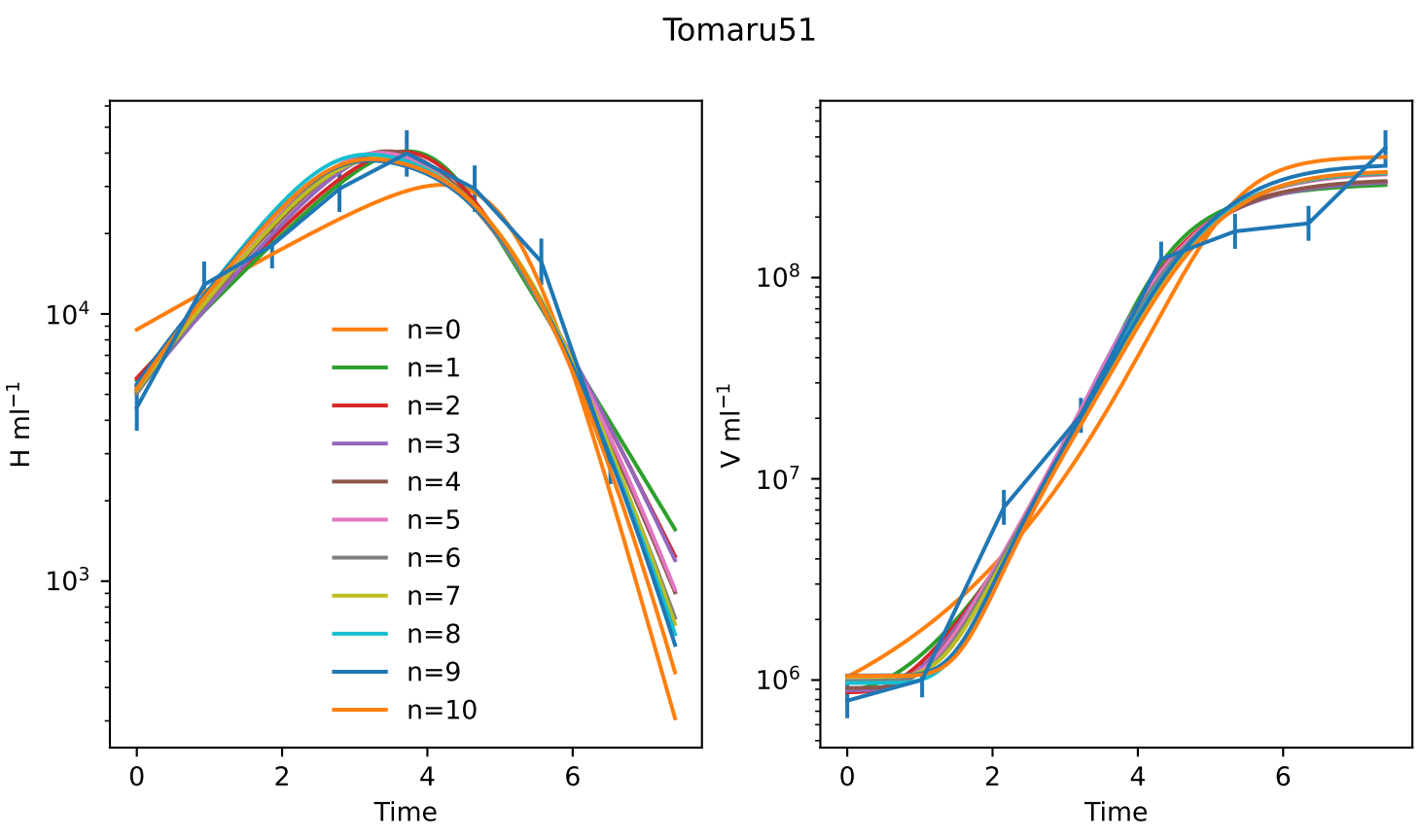
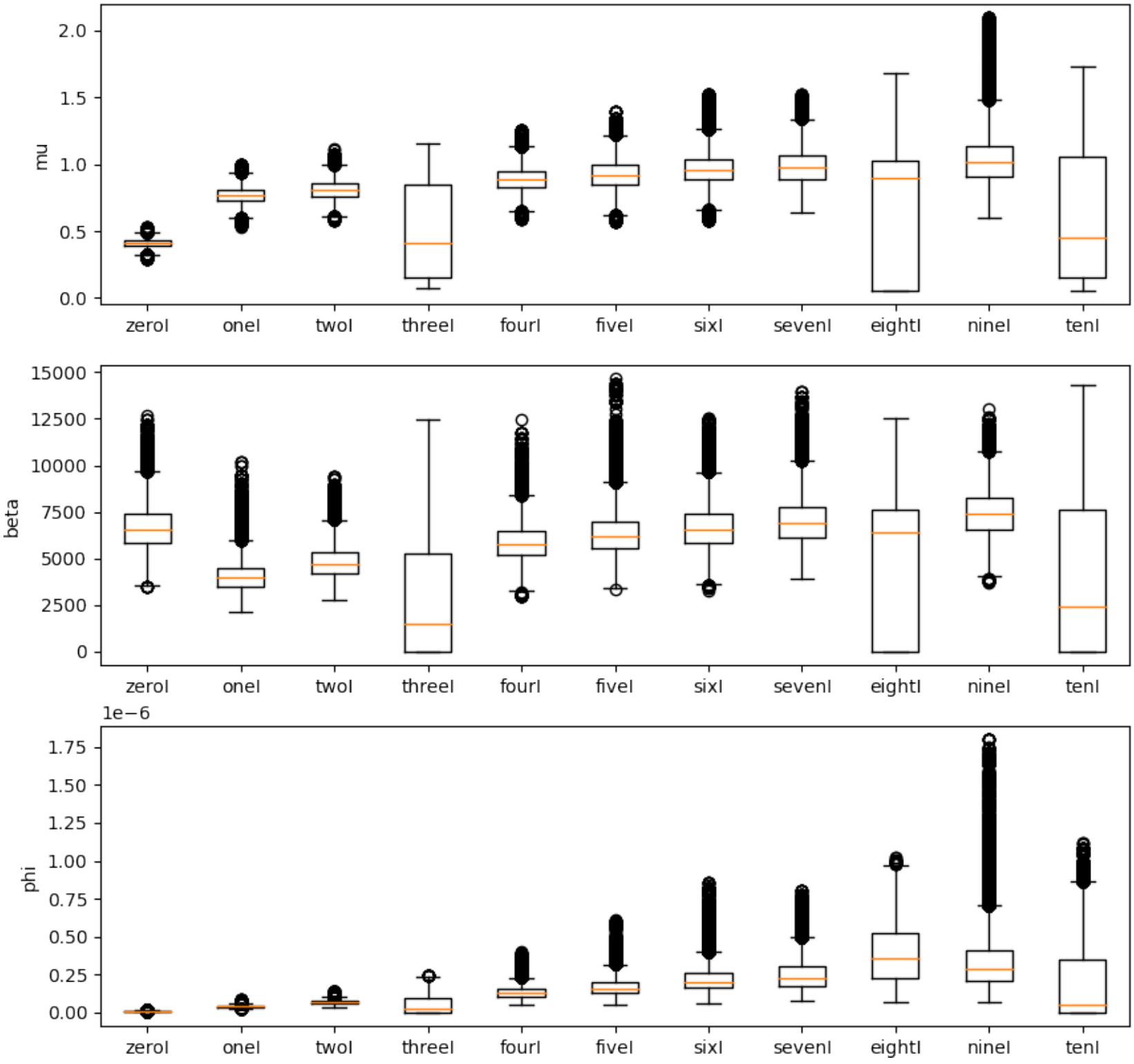
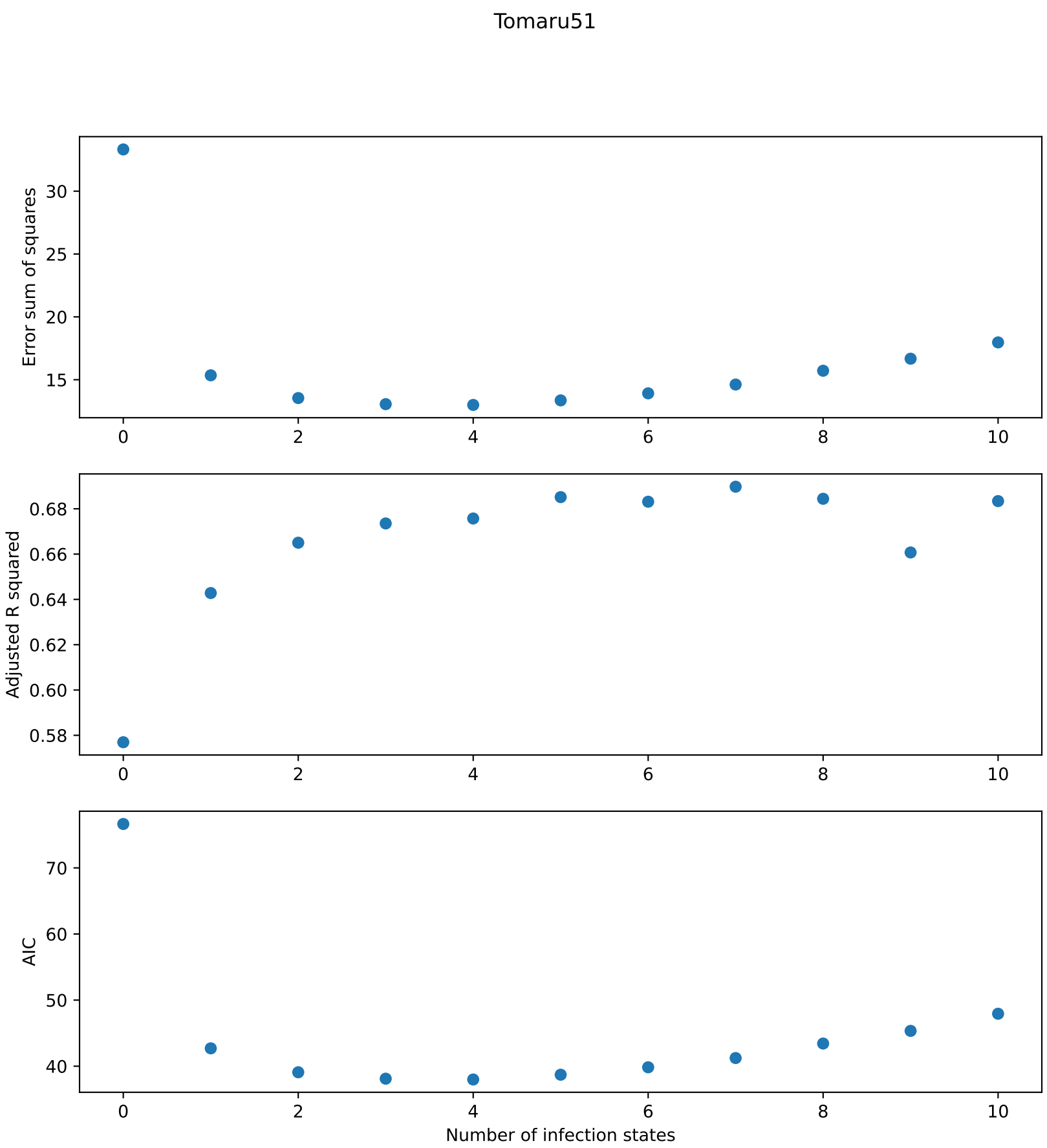
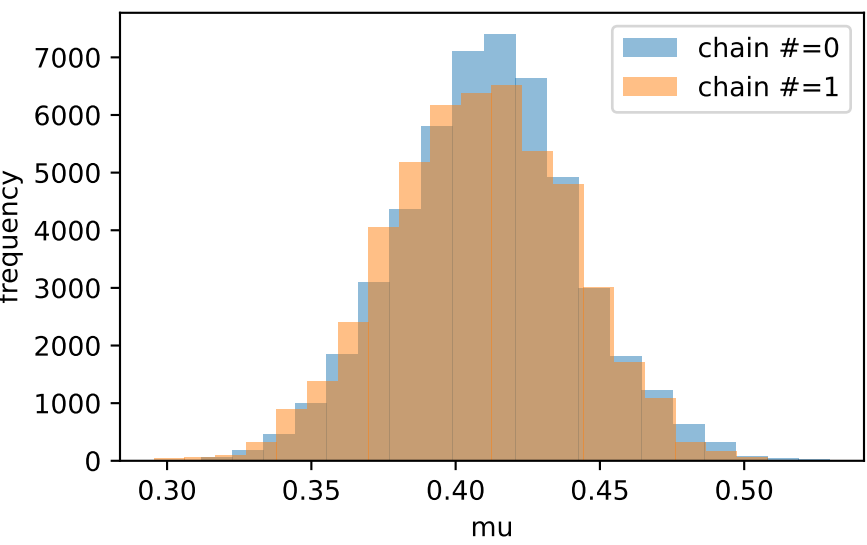

Tomaru51
H ml^{-1}
10^4
10^3
n=0
n=1
n=2
n=3
n=4
n=5
n=6
n=7
n=8
n=9
n=10
0
2
4
6
Time
V ml^{-1}
10^8
10^7
10^6
0
2
4
6
Time

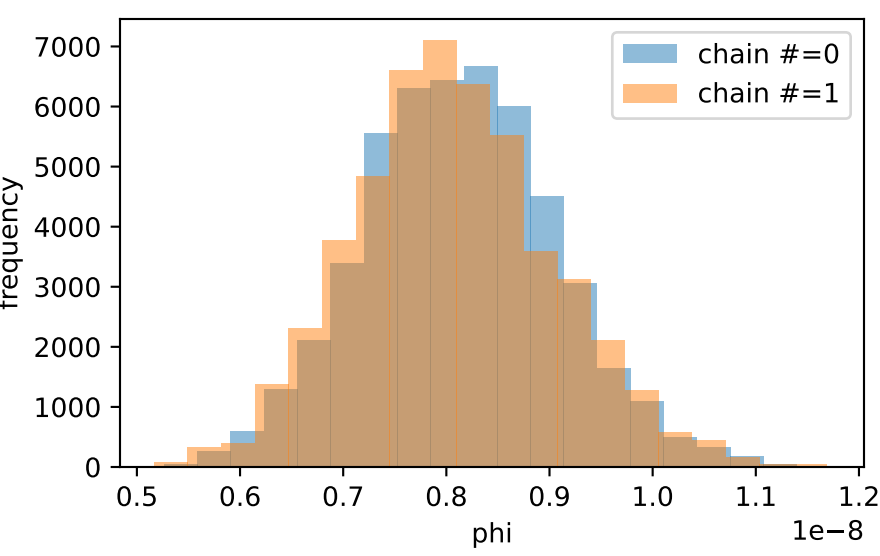
Tomaru51

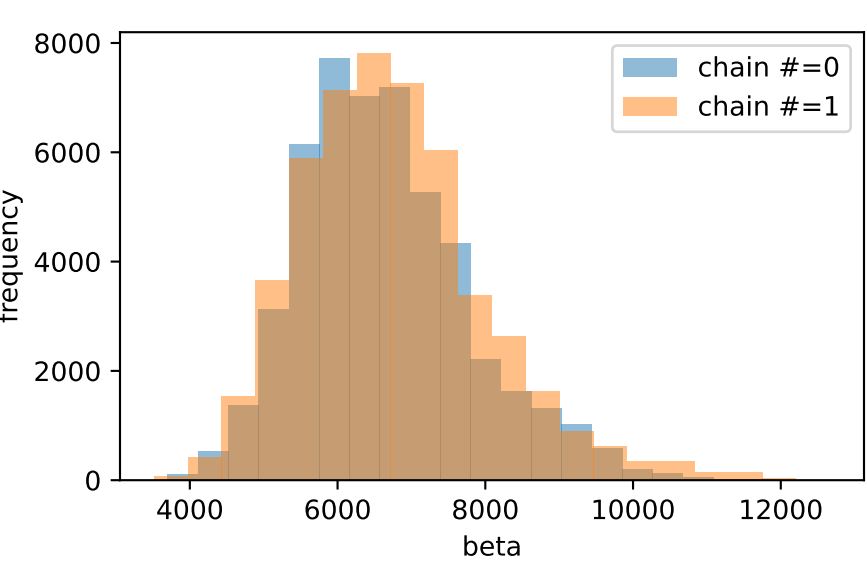

mu
2.0
1.5
1.0
0.5
0.0
zeroI
oneI
twoI
threeI
fourI
fiveI
sixI
sevenI
eightI
nineI
tenI
beta
15000
12500
10000
7500
5000
2500
0
zeroI
oneI
twoI
threeI
fourI
fiveI
sixI
sevenI
eightI
nineI
tenI
1e−6
phi
1.75
1.50
1.25
1.00
0.75
0.50
0.25
0.00
zeroI
oneI
twoI
threeI
fourI
fiveI
sixI
sevenI
eightI
nineI
tenI

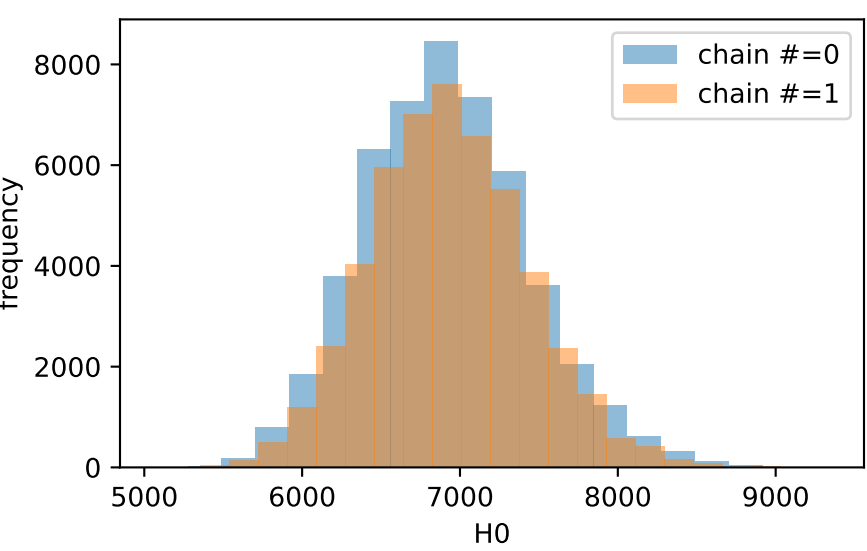

Tomaru51
Error sum of squares
30
25
20
15
0
2
4
6
8
10
Adjusted R squared
0.68
0.66
0.64
0.62
0.60
0.58
0
2
4
6
8
10
AIC
70
60
50
40
0
2
4
6
8
10
Number of infection states

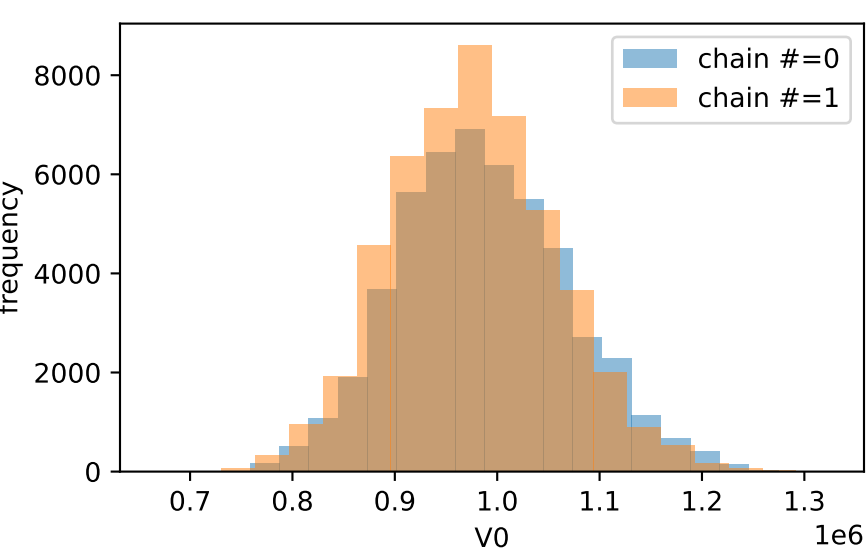
zero_i


chain #=0
chain #=1
frequency
0
1000
2000
3000
4000
5000
6000
7000
0.30
0.35
0.40
0.45
0.50
mu

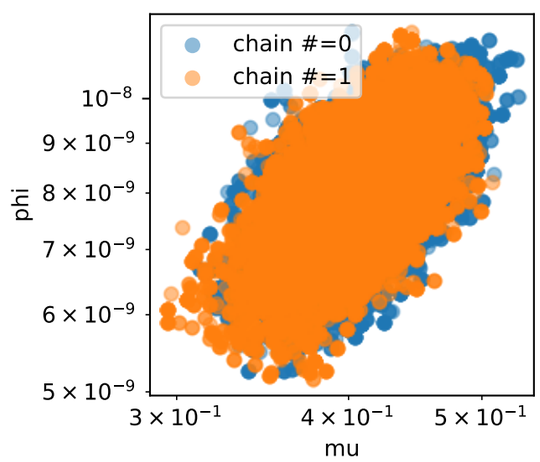

chain #=0
chain #=1
frequency
0
1000
2000
3000
4000
5000
6000
7000
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
phi
1e−8

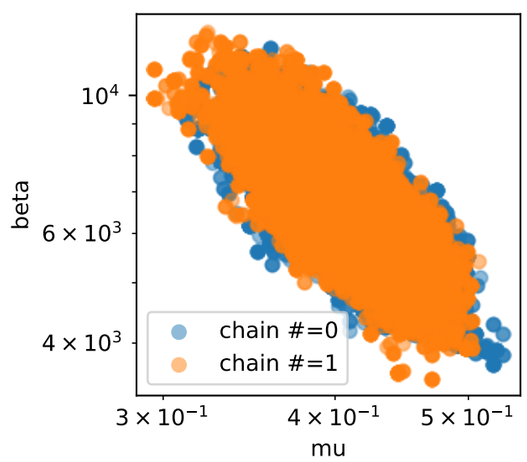

chain #=0
chain #=1
frequency
0
2000
4000
6000
8000
4000
6000
8000
10000
12000
beta

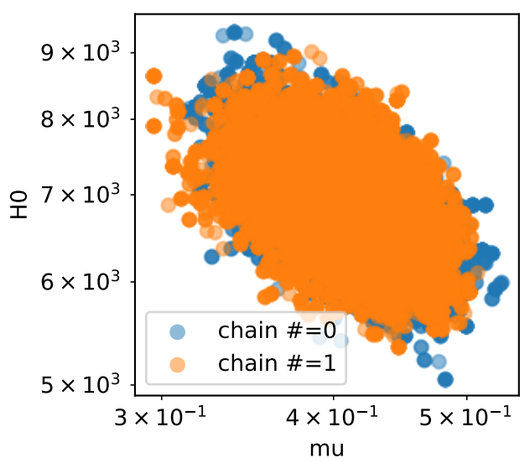

chain #=0
chain #=1
frequency
0
2000
4000
6000
8000
5000
6000
7000
8000
9000
H0

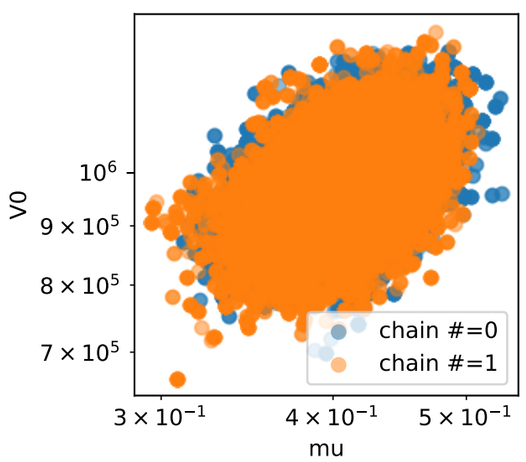

chain #=0
chain #=1
frequency
0
2000
4000
6000
8000
0.7
0.8
0.9
1.0
1.1
1.2
1.3
V0
1e6

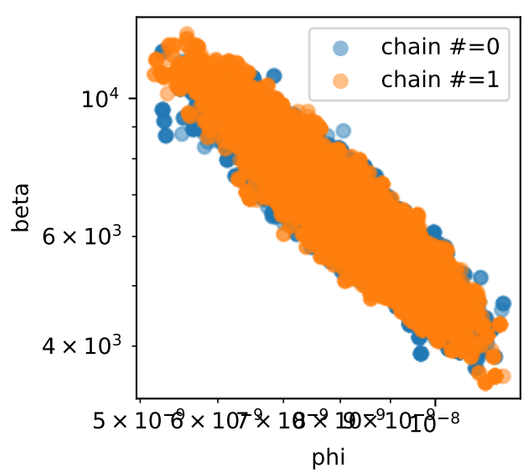
zero_i

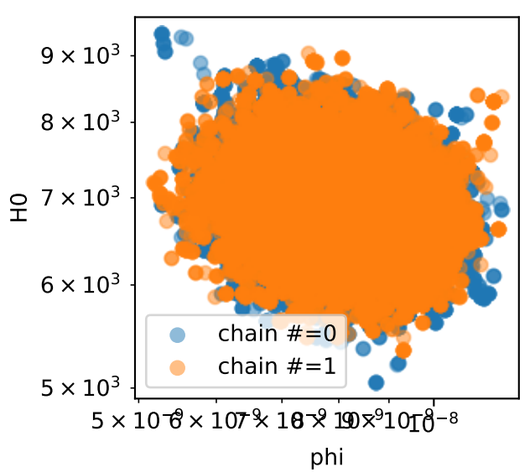

chain #=0
chain #=1
phi
mu

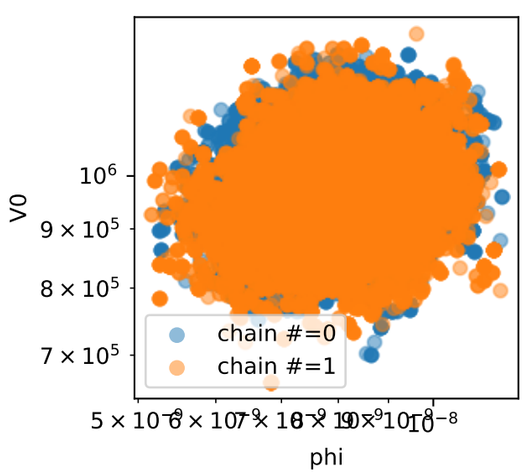

chain #=0
chain #=1
beta
mu

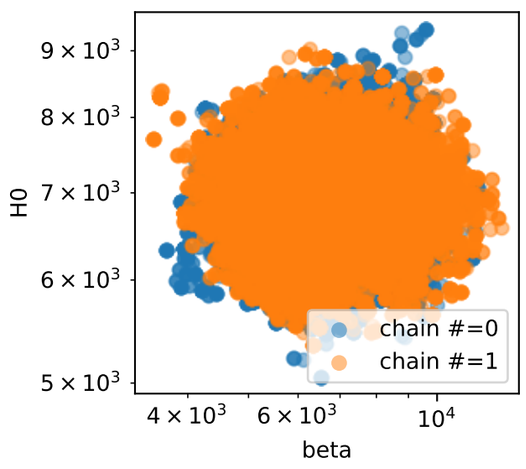

chain #=0
chain #=1
H0
mu

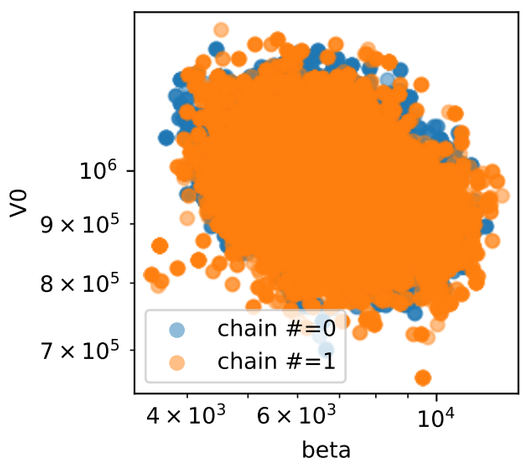

chain #=0
chain #=1
V0
mu

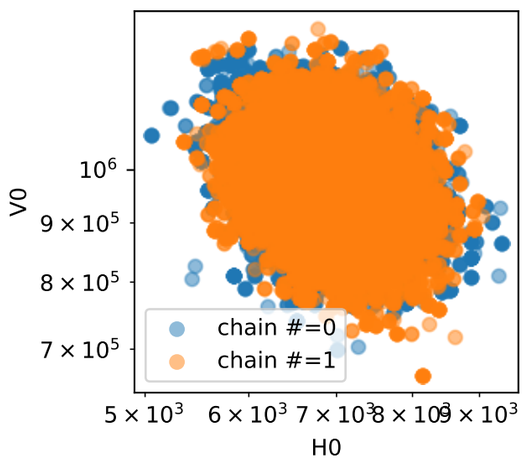

chain #=0
chain #=1
beta
phi

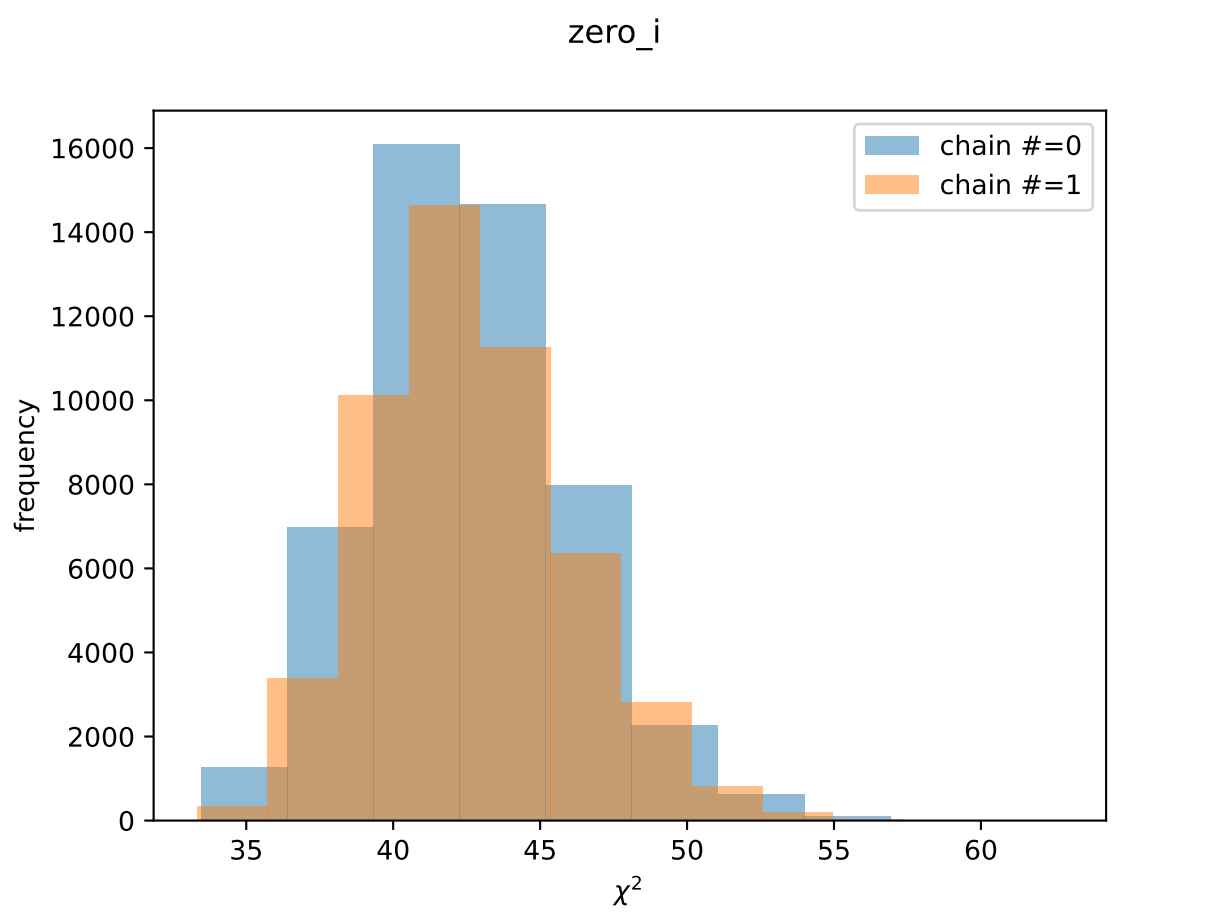

chain #=0
chain #=1
H0
phi

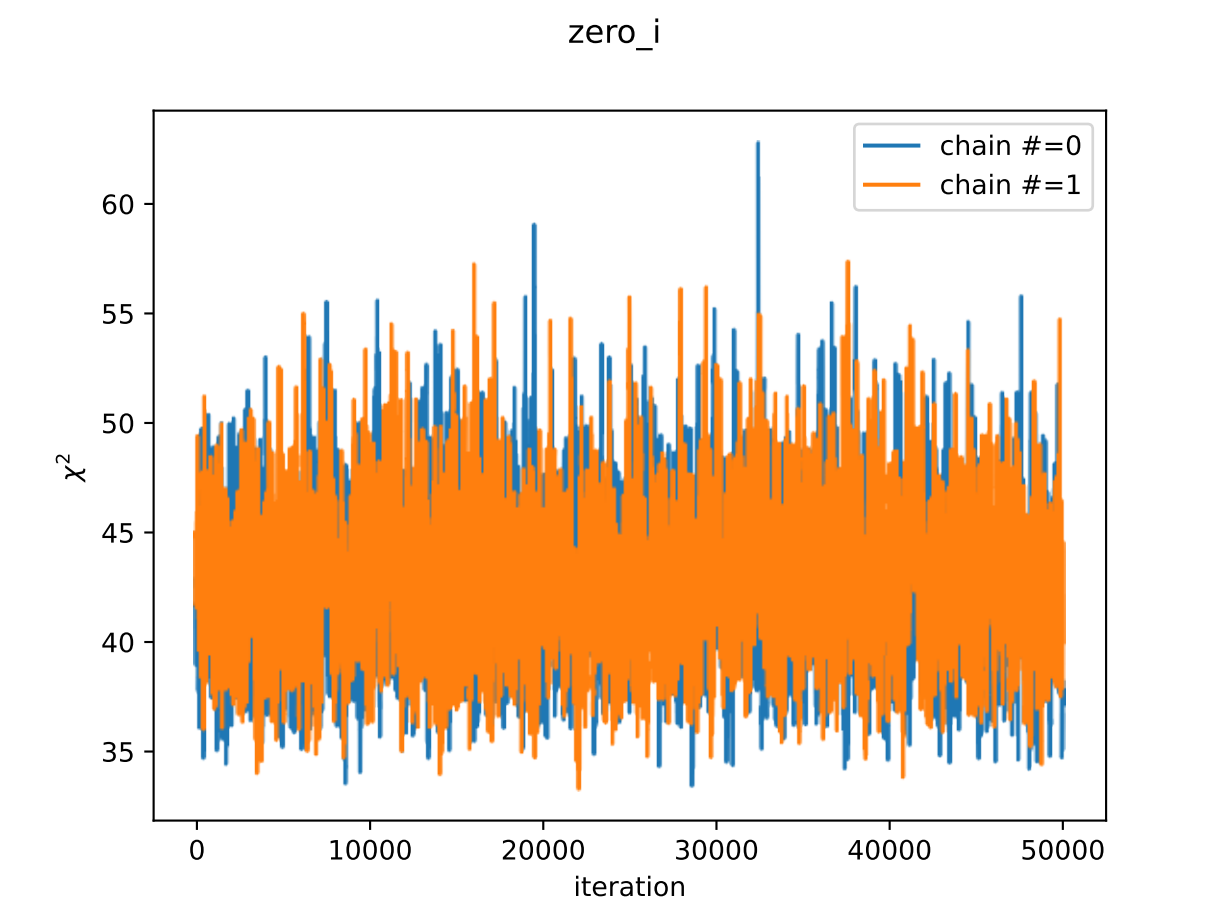

chain #=0
chain #=1
V0
phi


chain #=0
chain #=1
H0
beta

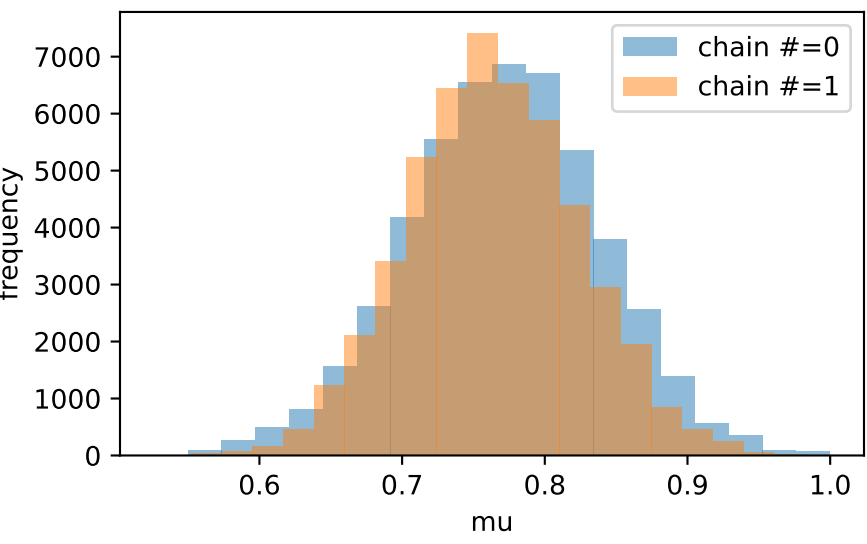

chain #=0
chain #=1
V0
beta

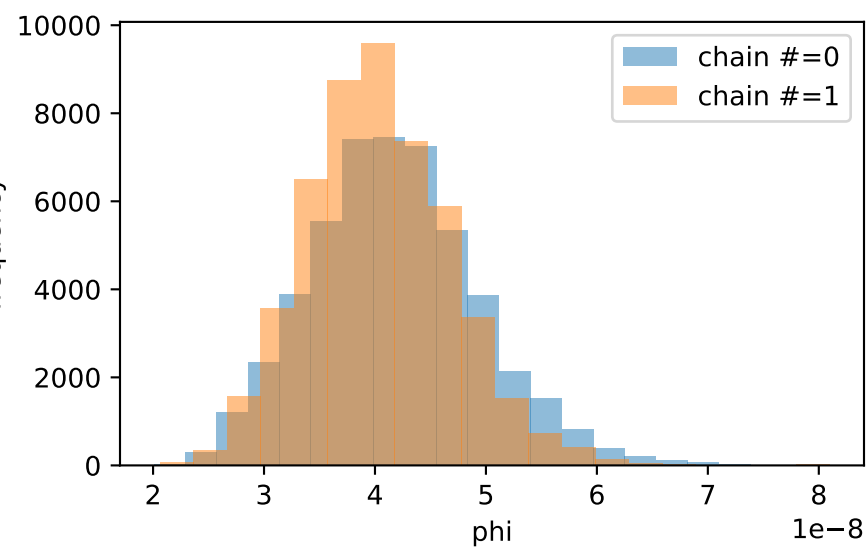

chain #=0
chain #=1
V0
H0

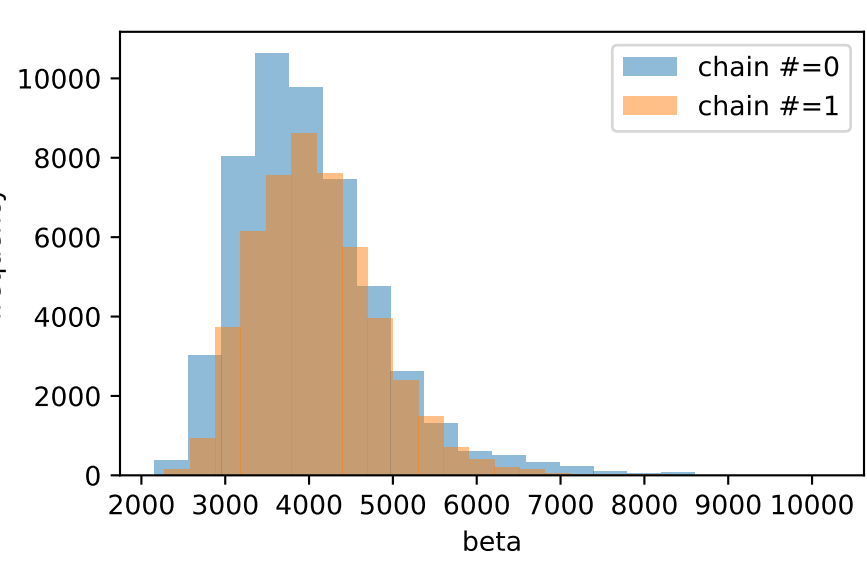

zero_i
chain #=0
chain #=1
frequency
16000
14000
12000
10000
8000
6000
4000
2000
0
35
40
45
50
55
60
χ^2

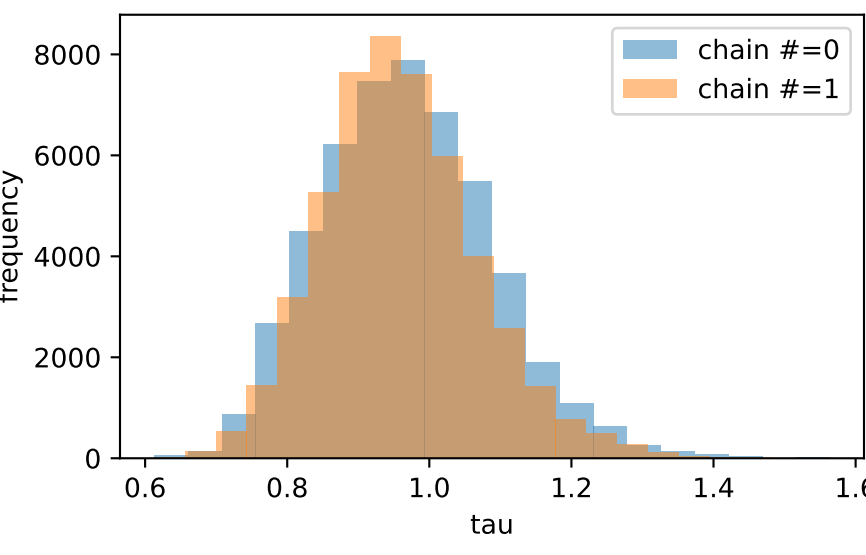

zero_i
chain #=0
chain #=1
60
55
50
45
40
35
χ^2
0
10000
20000
30000
40000
50000
iteration

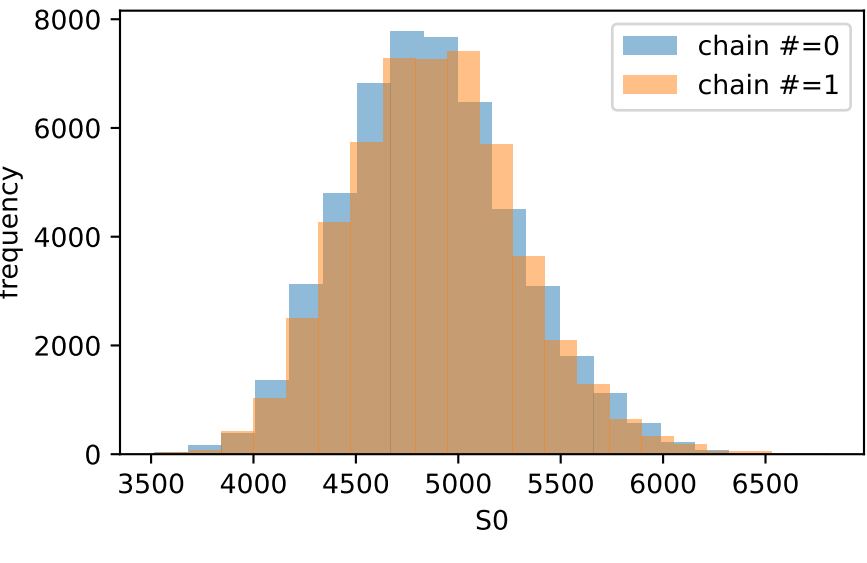
one_i

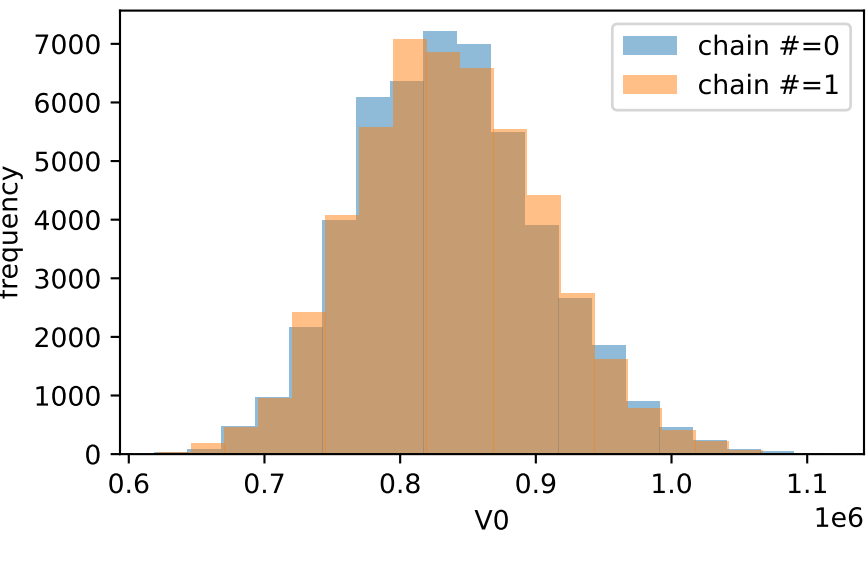

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
phi
1e−8

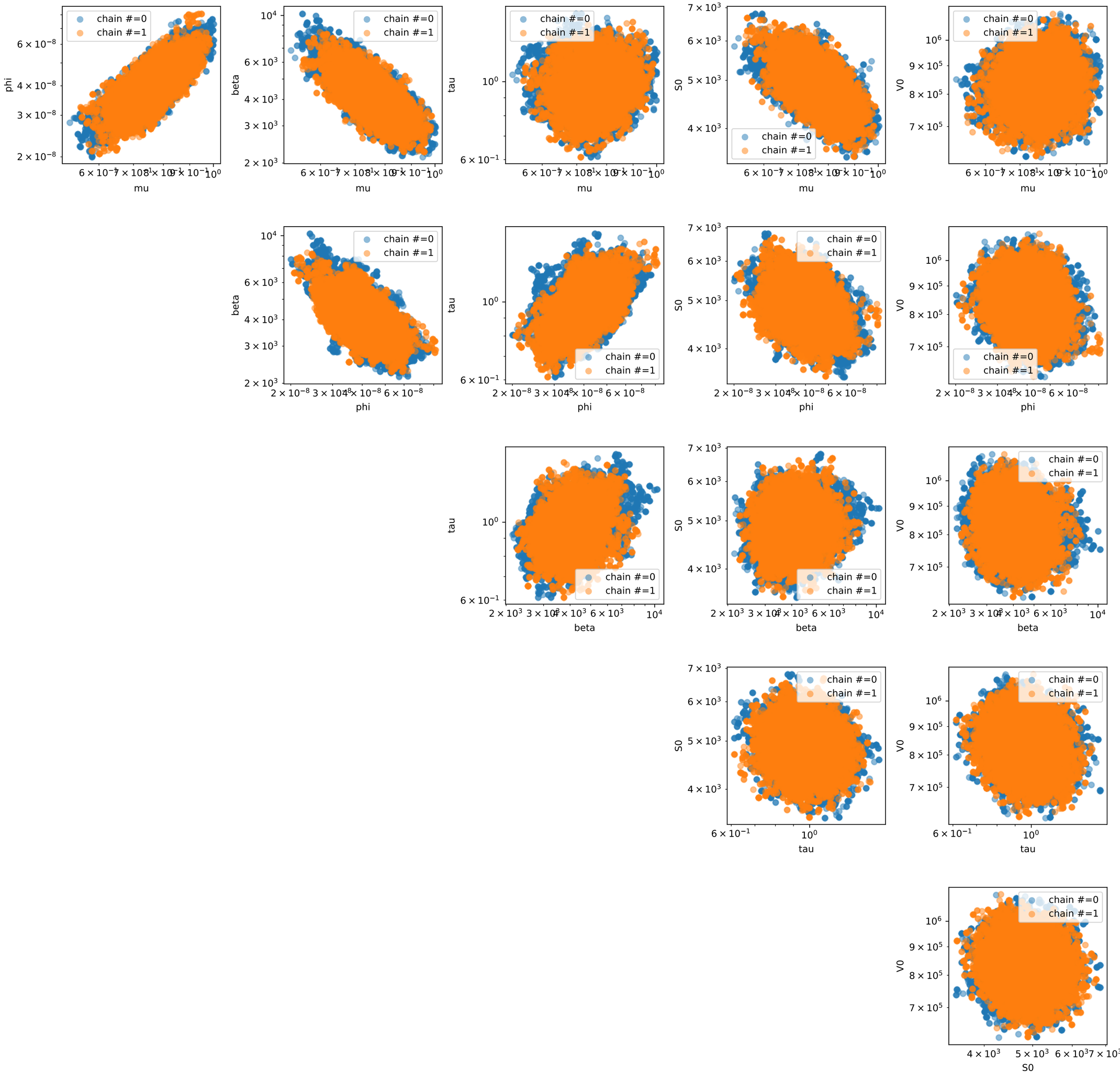

chain #=0
chain #=1
beta

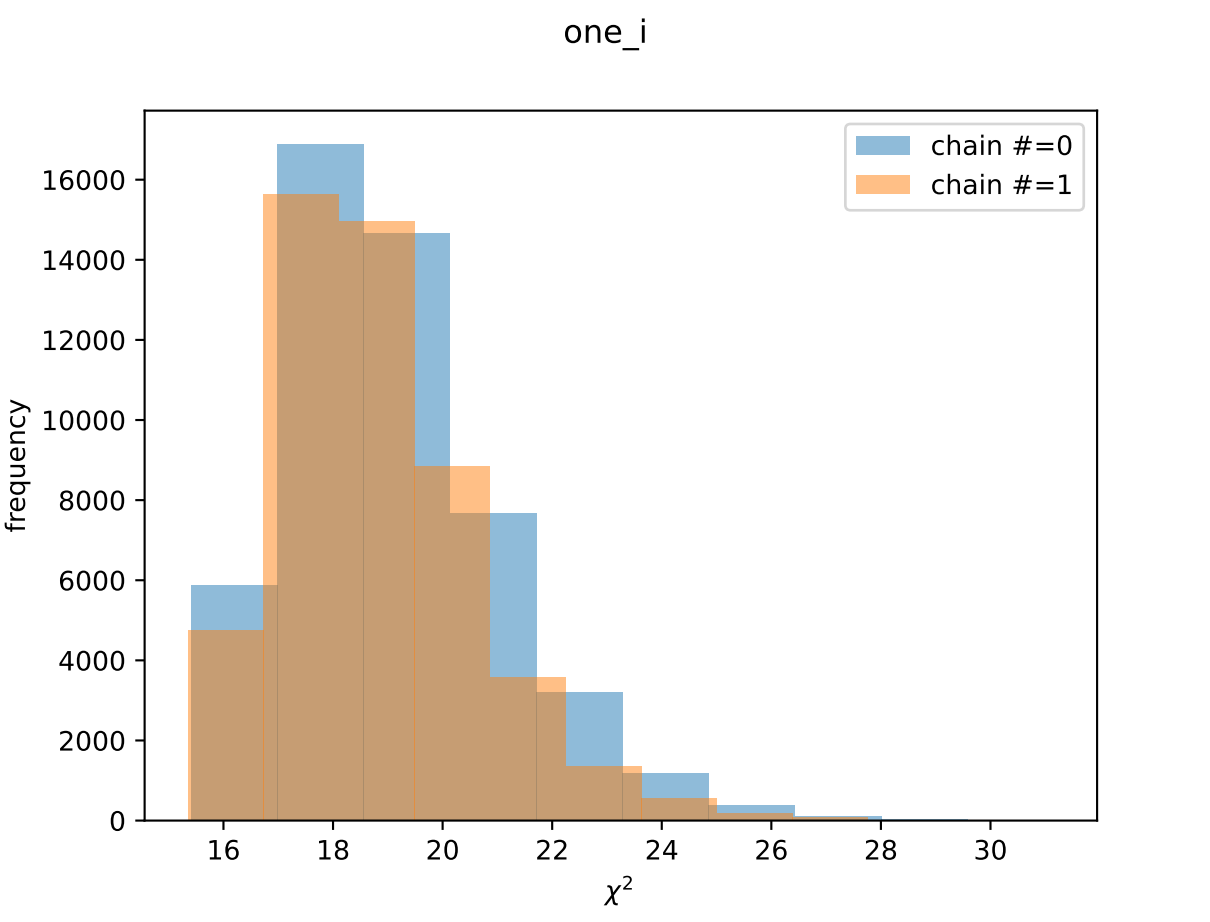

chain #=0
chain #=1
frequency
tau

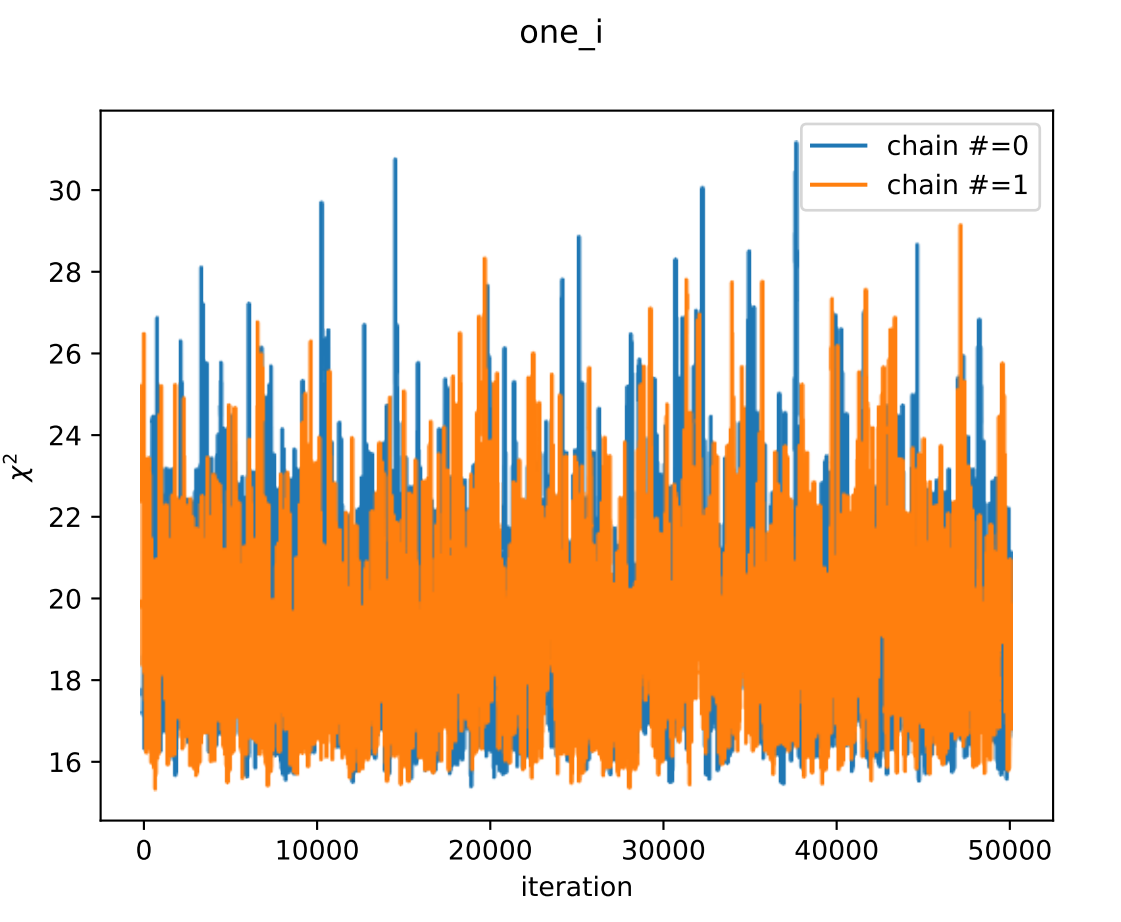

chain #=0
chain #=1
frequency
S0


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

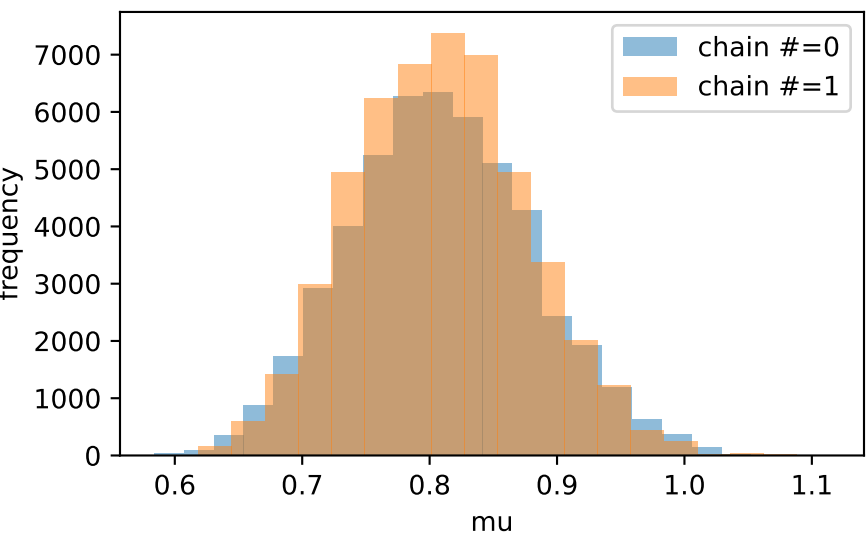
one_i

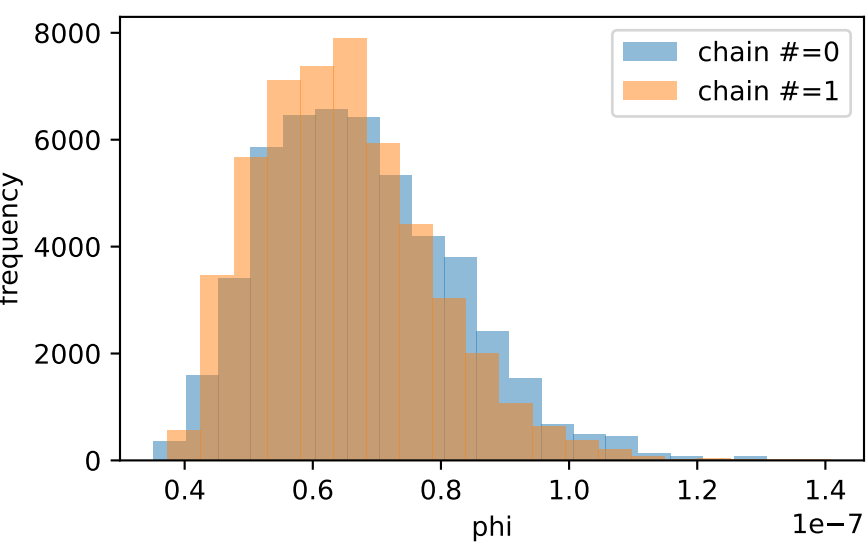


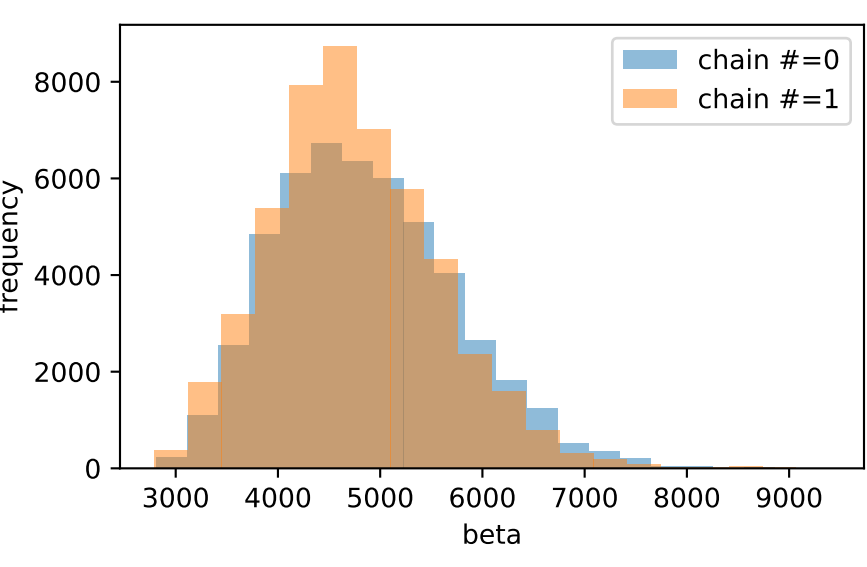

one_i
chain #=0
chain #=1
frequency
16000
14000
12000
10000
8000
6000
4000
2000
0
16
18
20
22
24
26
28
30
χ^2

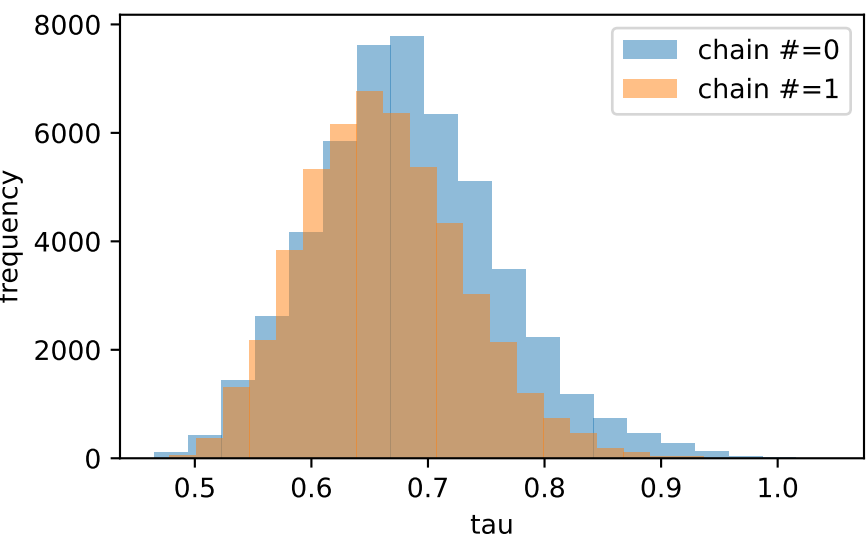

one_i
chain #=0
chain #=1
30
28
26
24
22
20
18
16
χ^2
0
10000
20000
30000
40000
50000
iteration

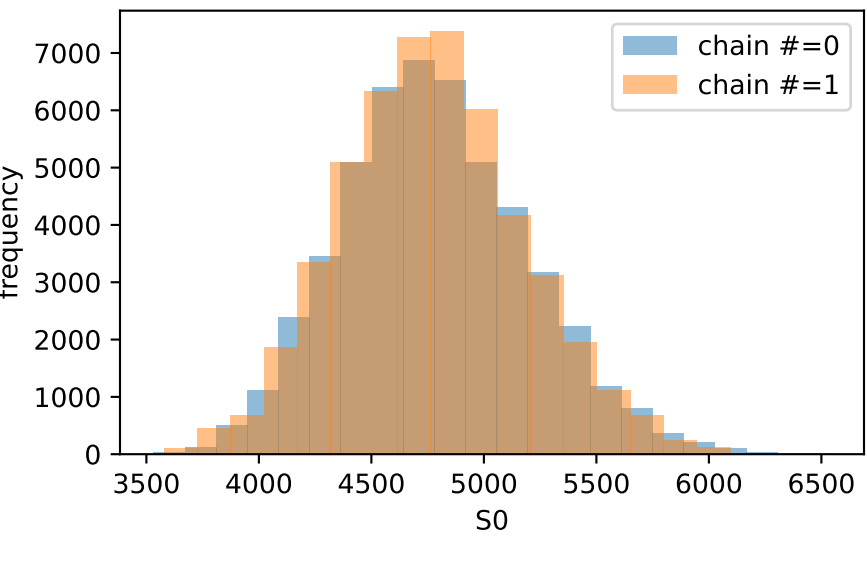
two_i

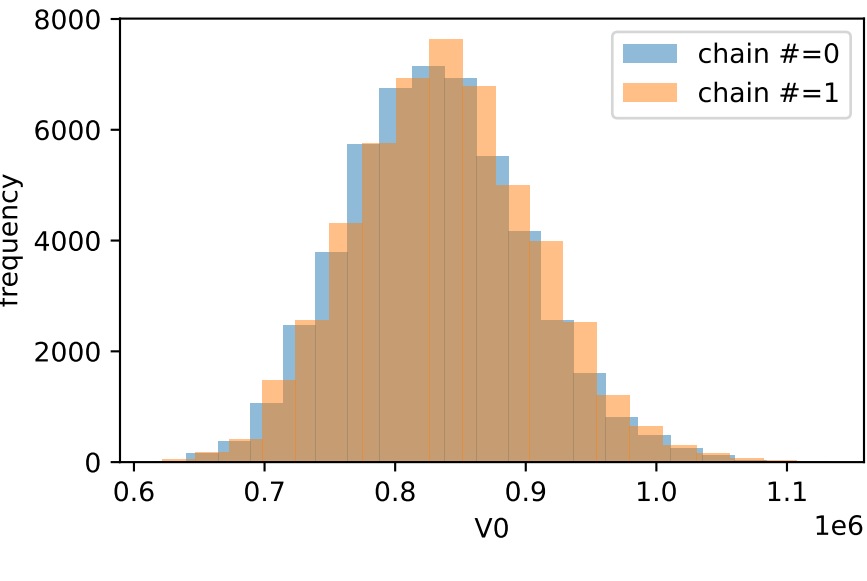

chain #=0
chain #=1
frequency
mu


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

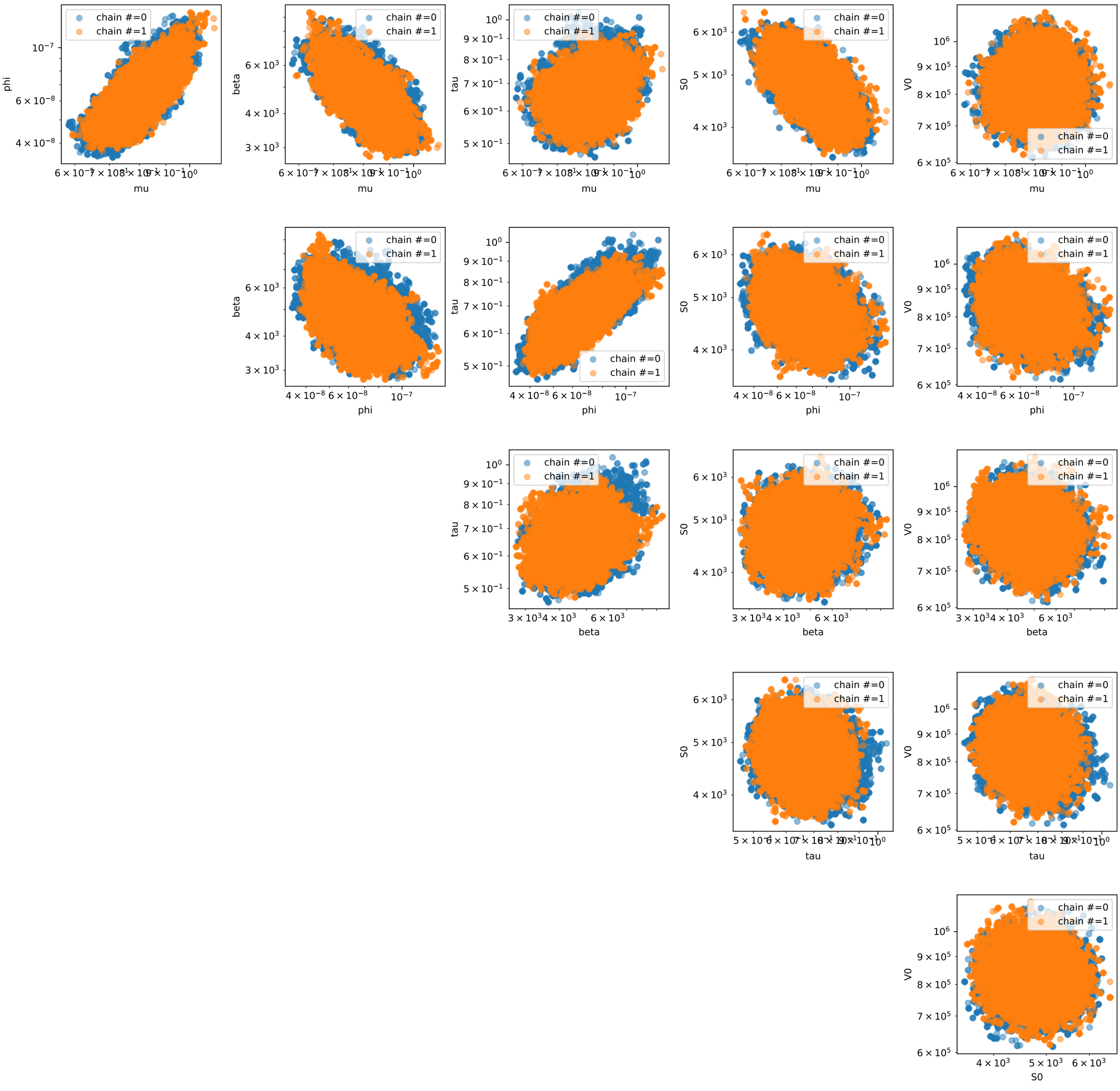

chain #=0
chain #=1
frequency
beta

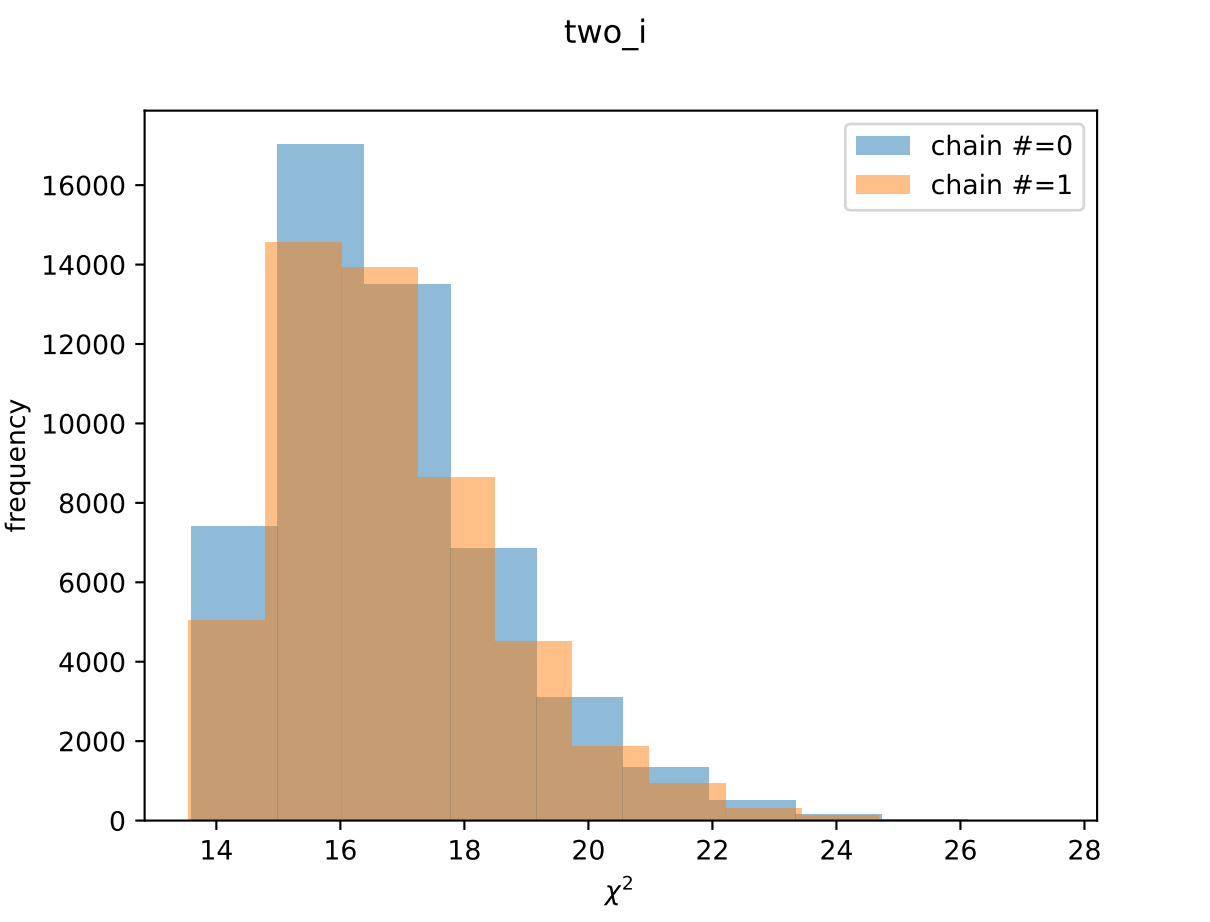

chain #=0
chain #=1
frequency
tau

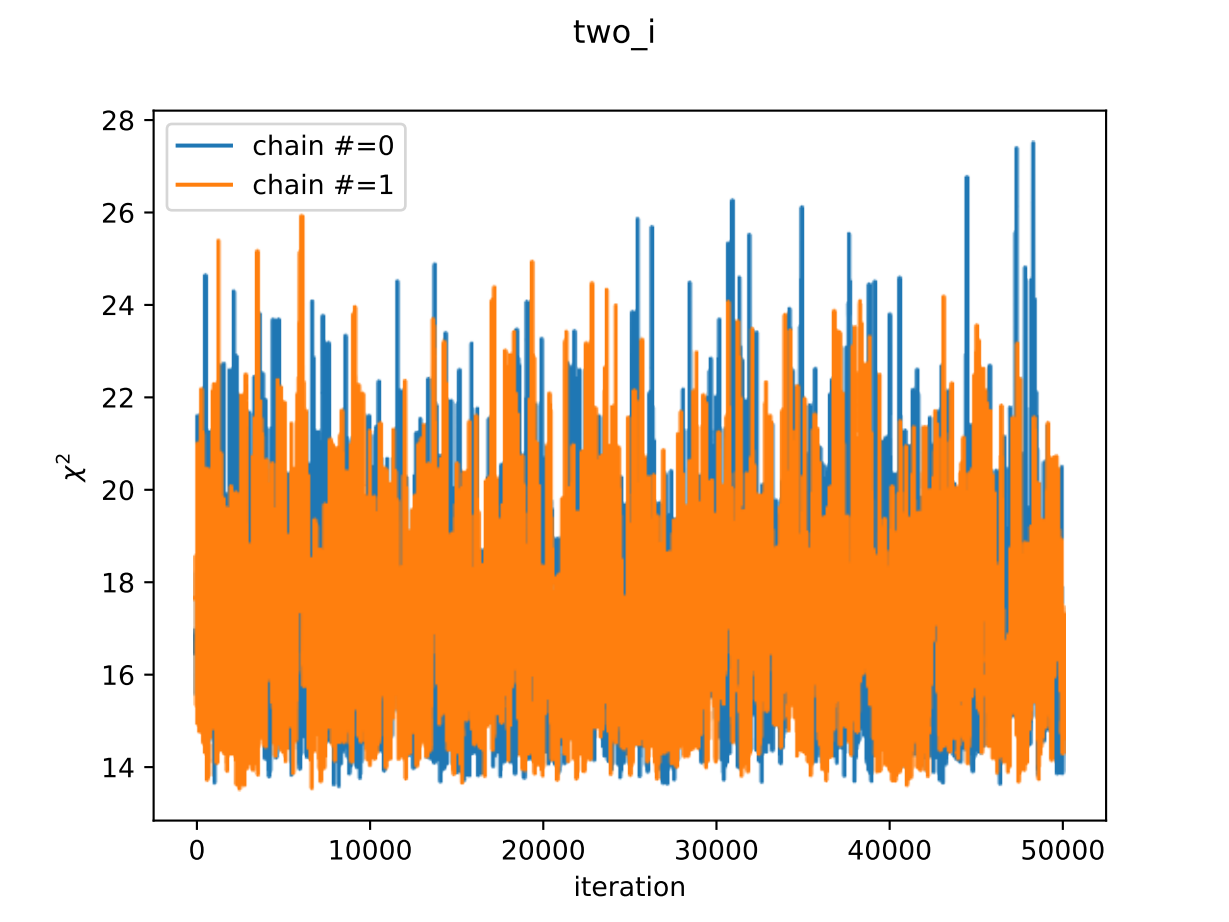

chain #=0
chain #=1
frequency
S0


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

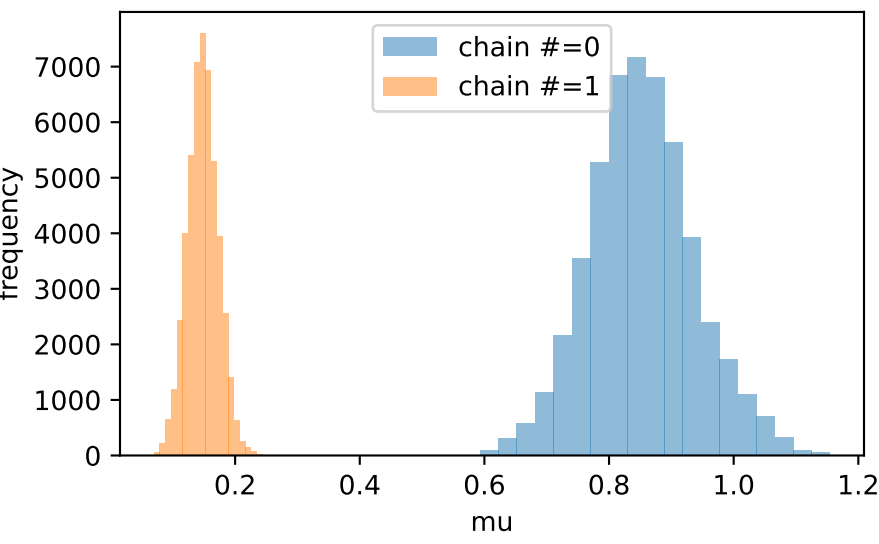
two_i

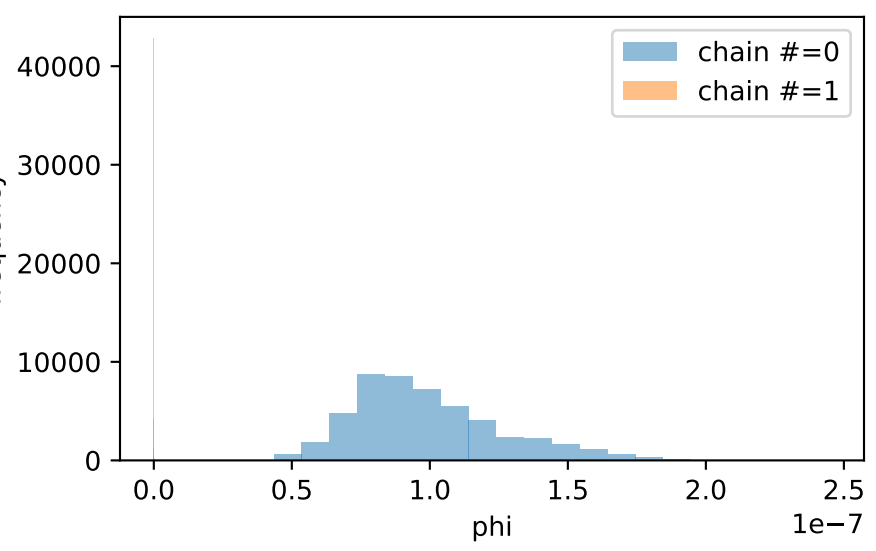


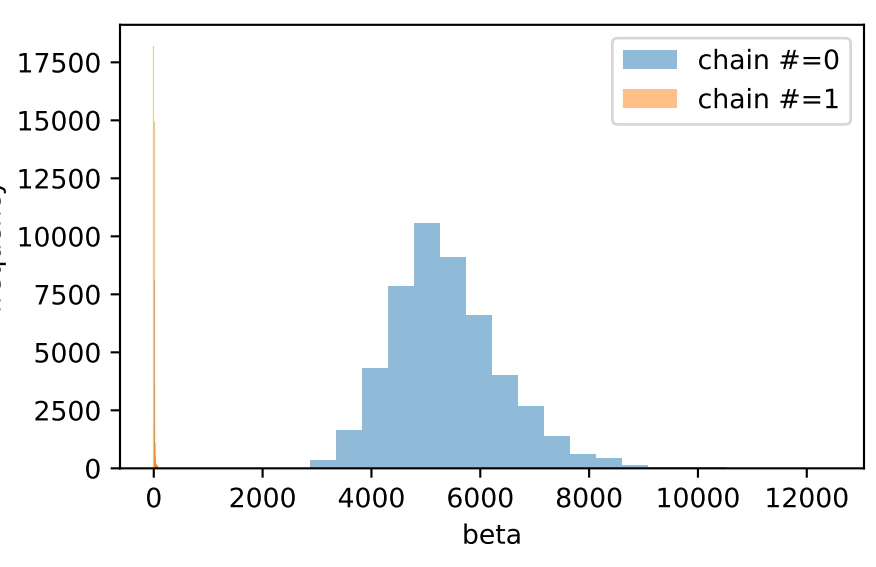

two_i
chain #=0
chain #=1
frequency
16000
14000
12000
10000
8000
6000
4000
2000
0
14
16
18
20
22
24
26
28
χ^2

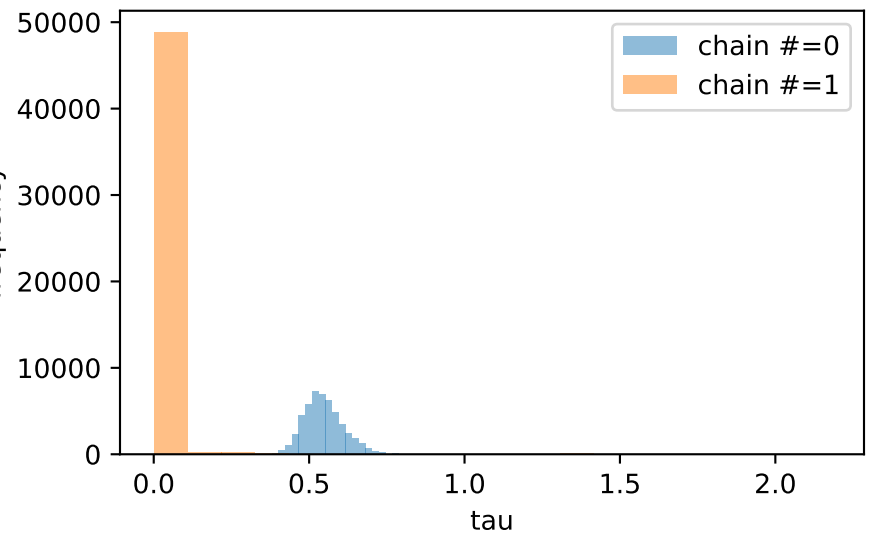

two_i
chain #=0
chain #=1
28
26
24
22
20
18
16
14
χ^2
0
10000
20000
30000
40000
50000
iteration

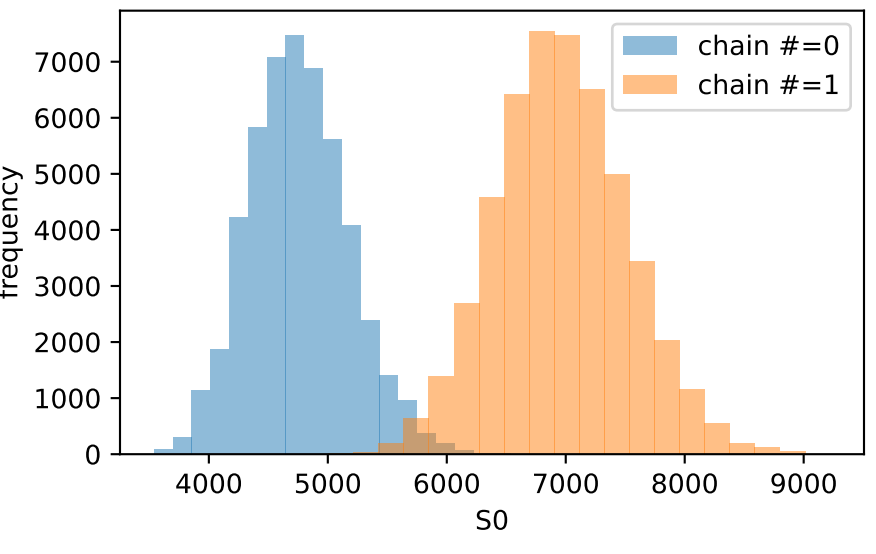
three_i

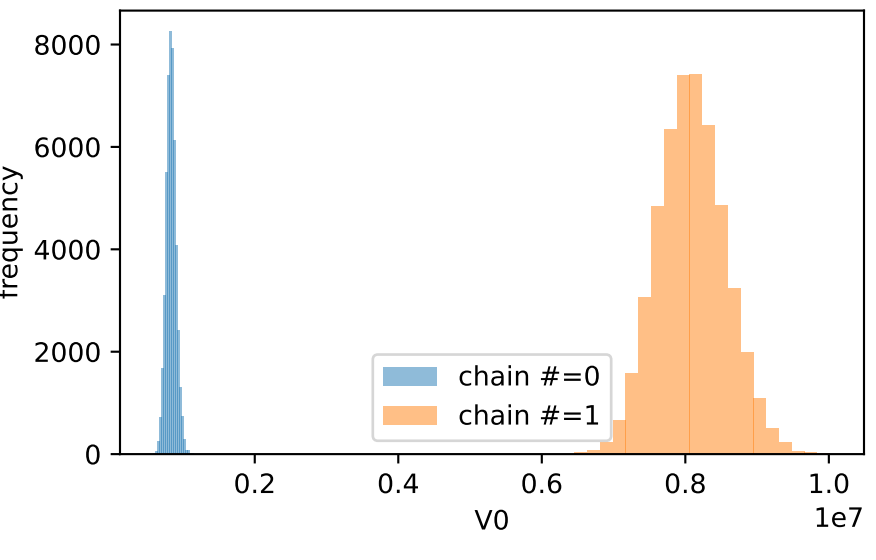

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
phi
1e−7

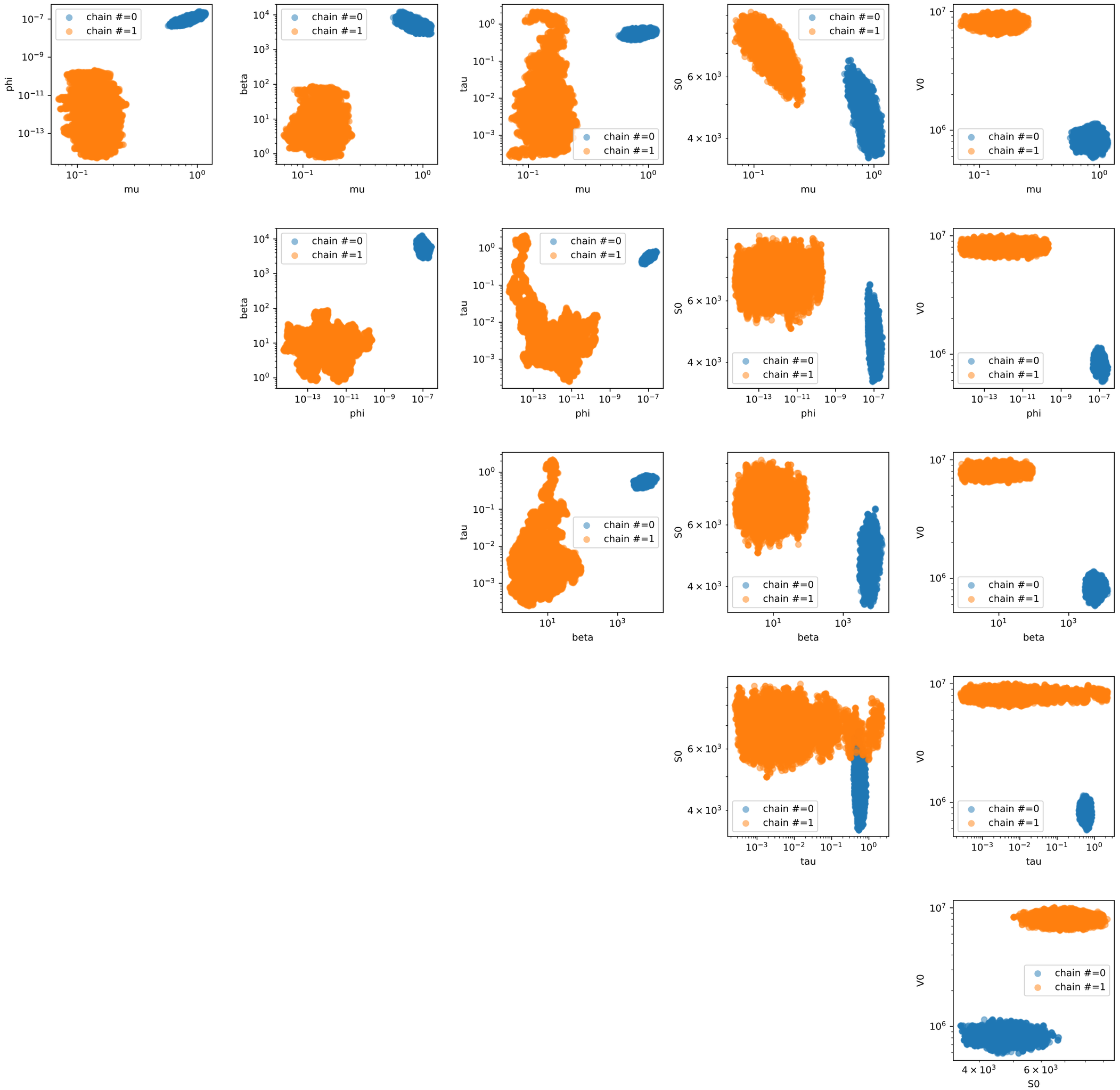

chain #=0
chain #=1
beta

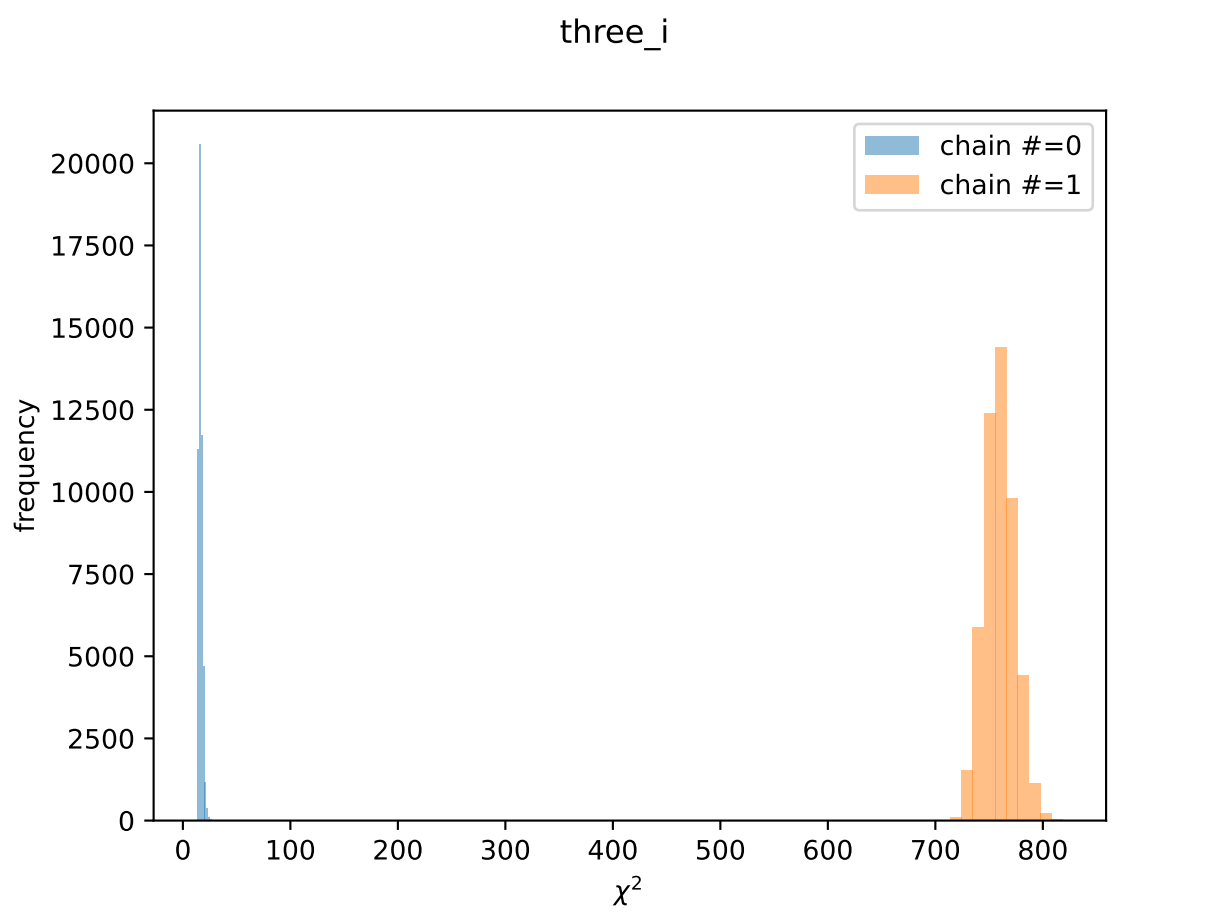

chain #=0
chain #=1
tau

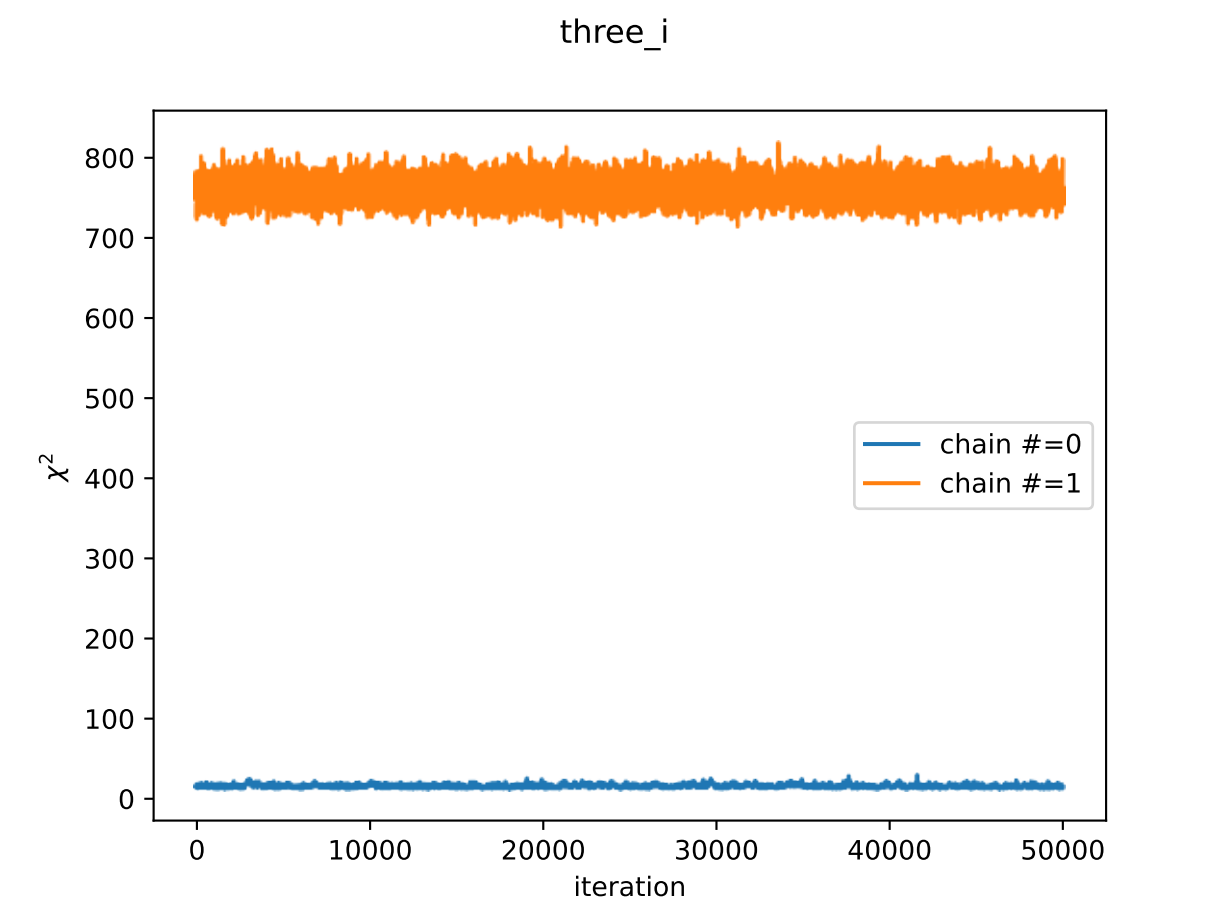

chain #=0
chain #=1
frequency
S0


chain #=0
chain #=1
frequency
V0
1e7

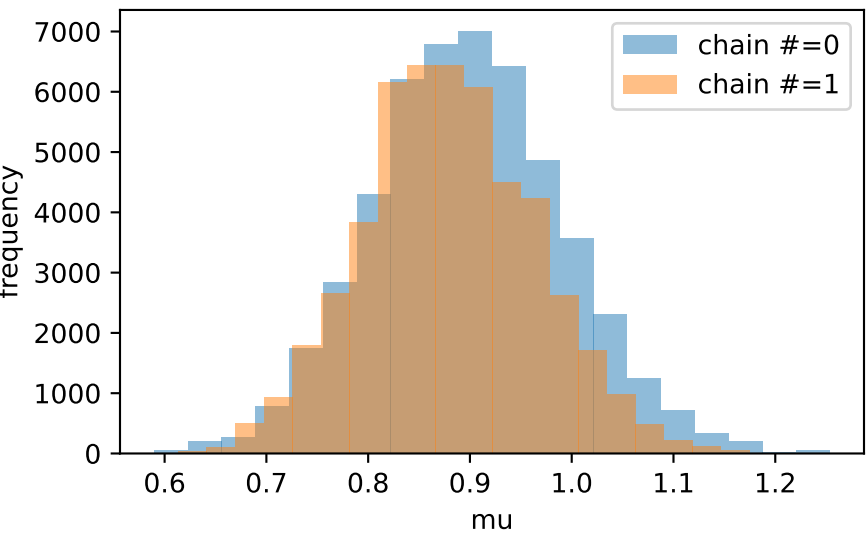
three_i


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


three_i
chain #=0
chain #=1
frequency
20000
17500
15000
12500
10000
7500
5000
2500
0
0
100
200
300
400
500
600
700
800
χ^2


three_i
800
700
600
500
400
300
200
100
0
χ^2
0
10000
20000
30000
40000
50000
iteration
chain #=0
chain #=1

four_i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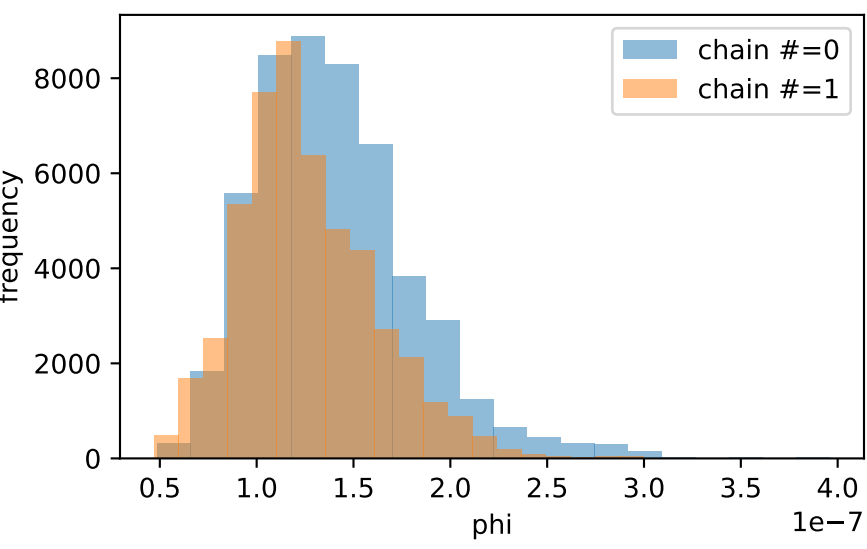
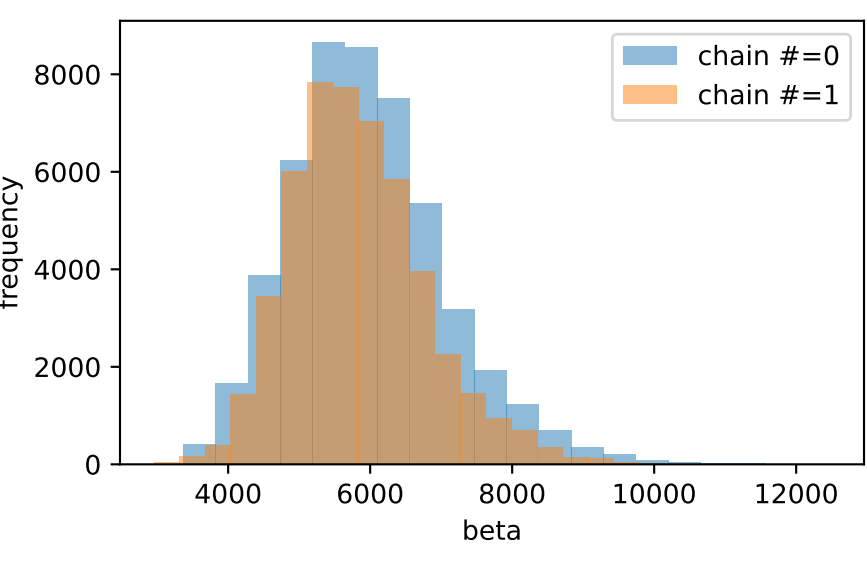
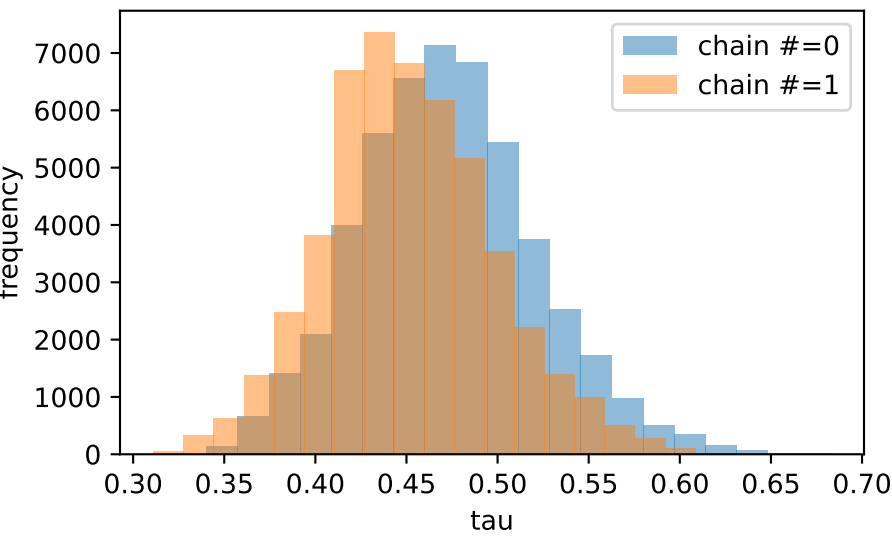
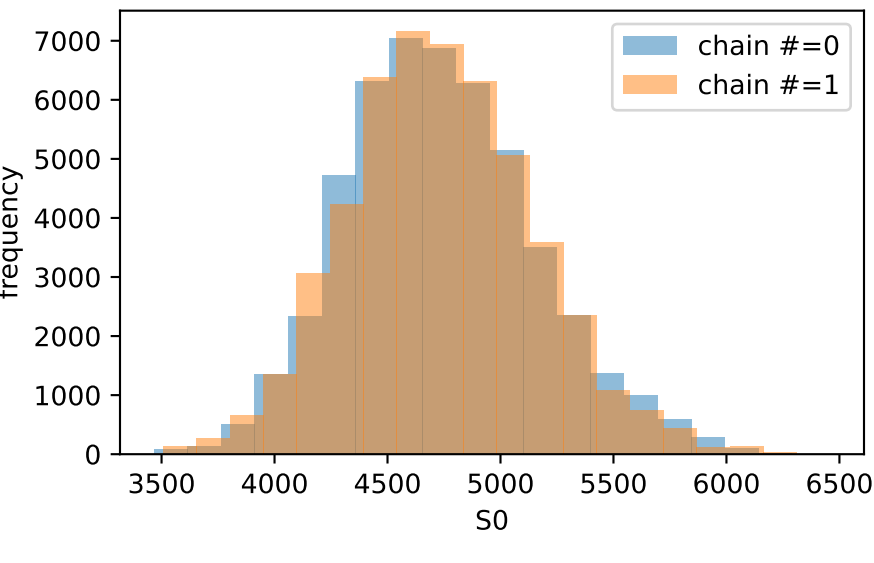
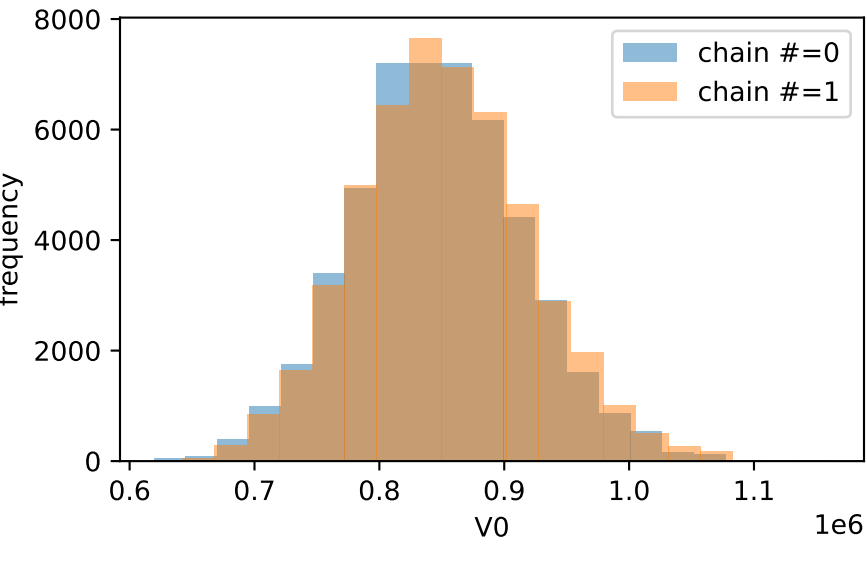
chain #=1
frequency
mu


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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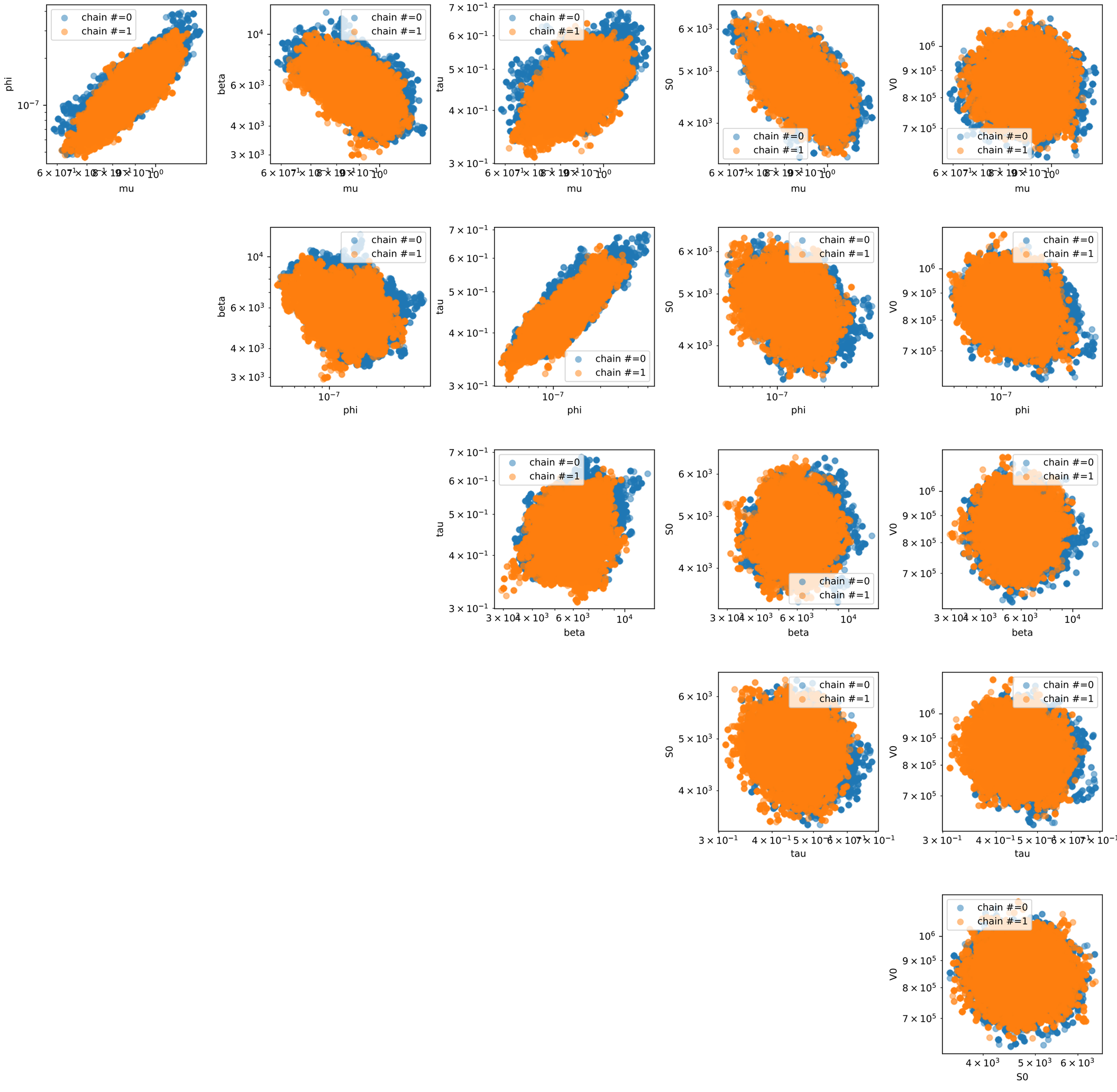
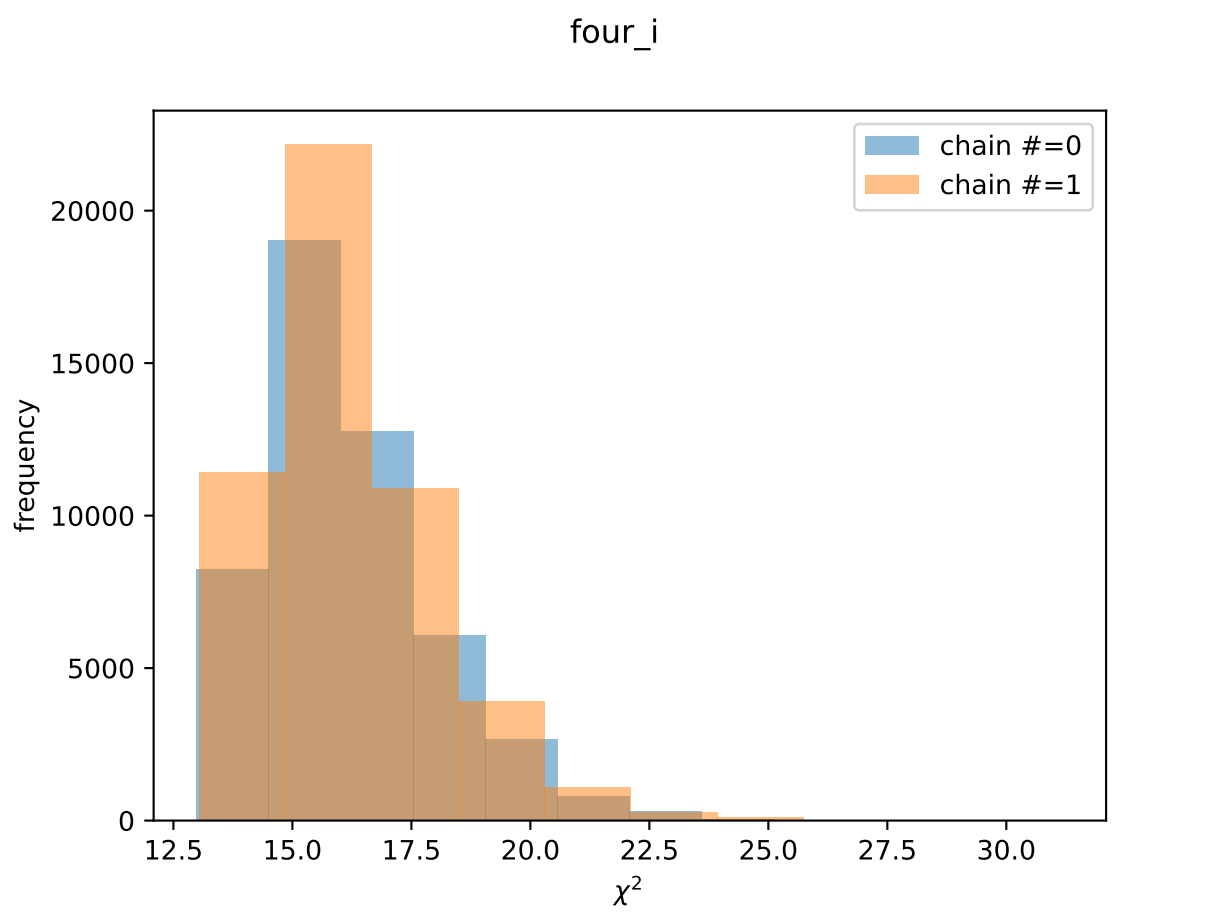
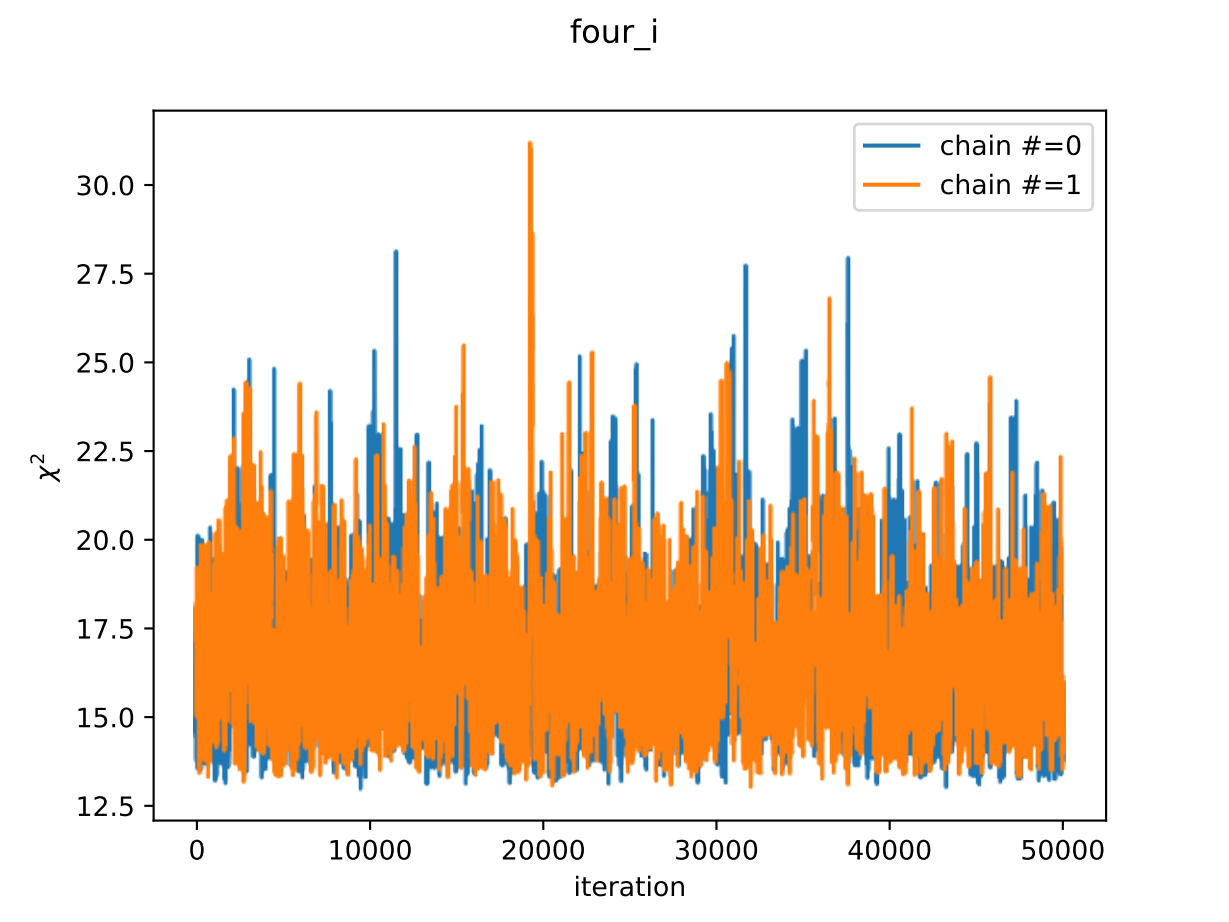
chain #=1
frequency
V0
1e6

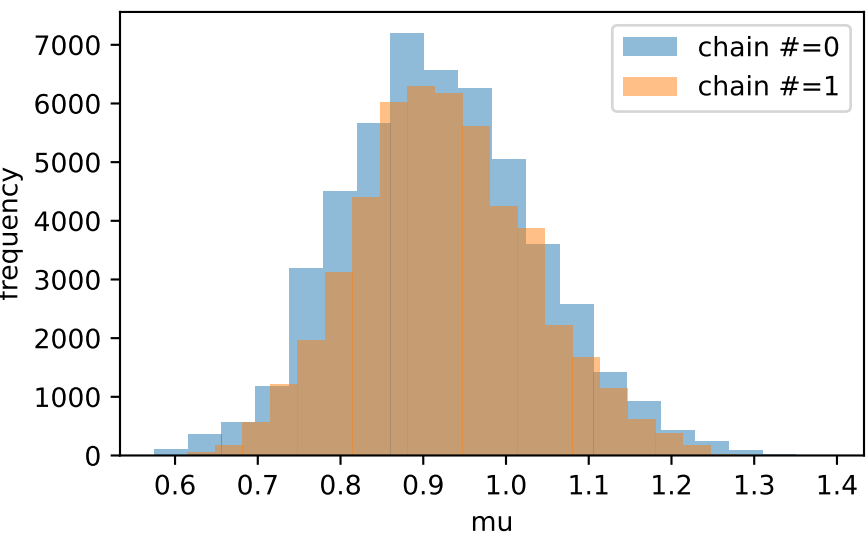
four_i

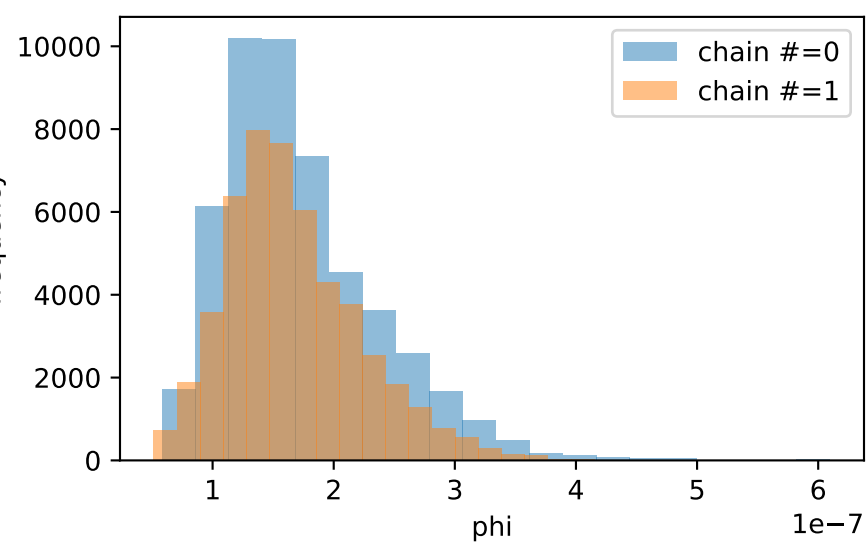


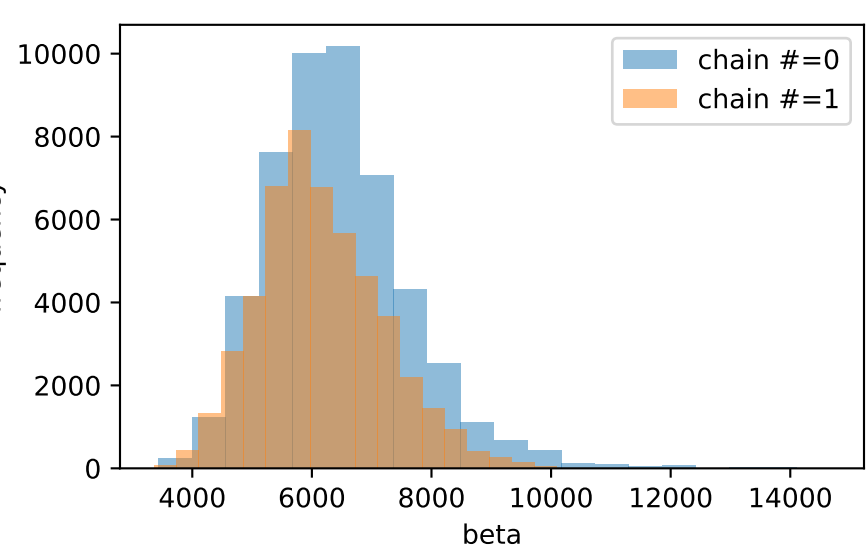

four_i
chain #=0
chain #=1
20000
15000
10000
5000
0
frequency
12.5
15.0
17.5
20.0
22.5
25.0
27.5
30.0
χ^2


four_i
chain #=0
chain #=1
30.0
27.5
25.0
22.5
20.0
17.5
15.0
12.5
χ^2
0
10000
20000
30000
40000
50000
iteration

five_i


chain #=0
chain #=1
frequency
mu


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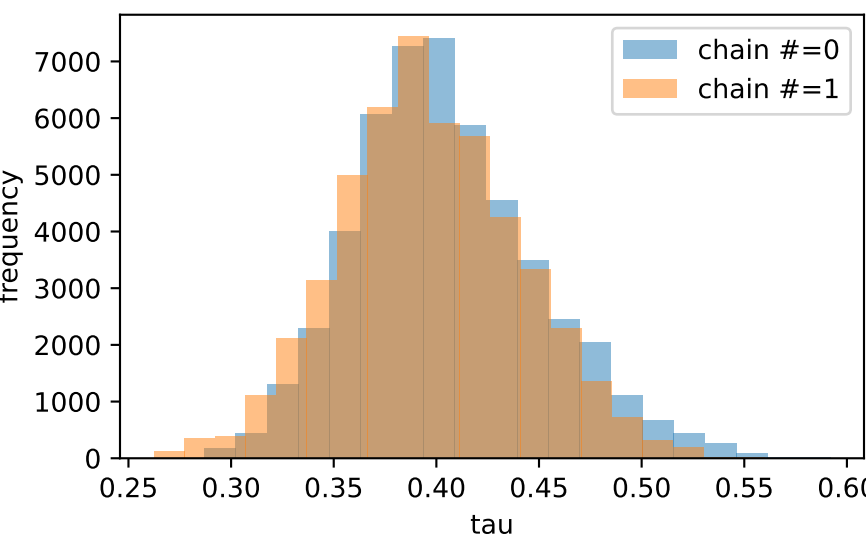
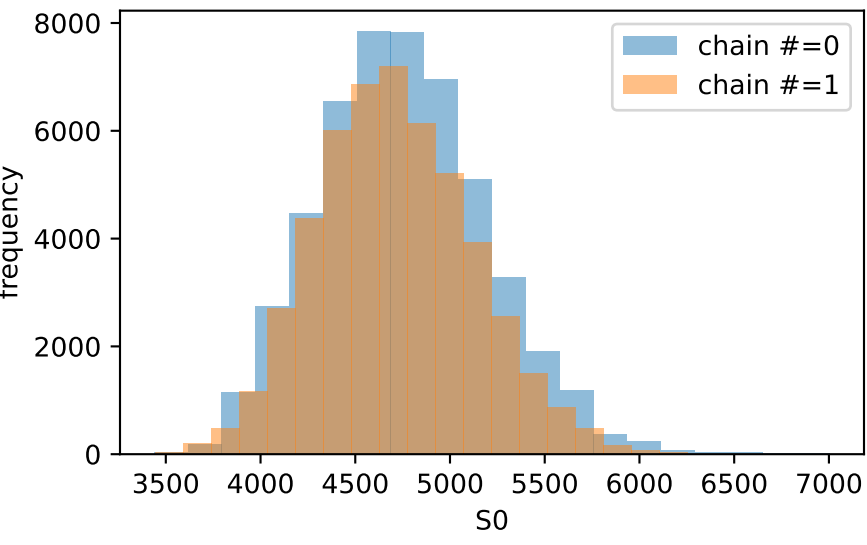
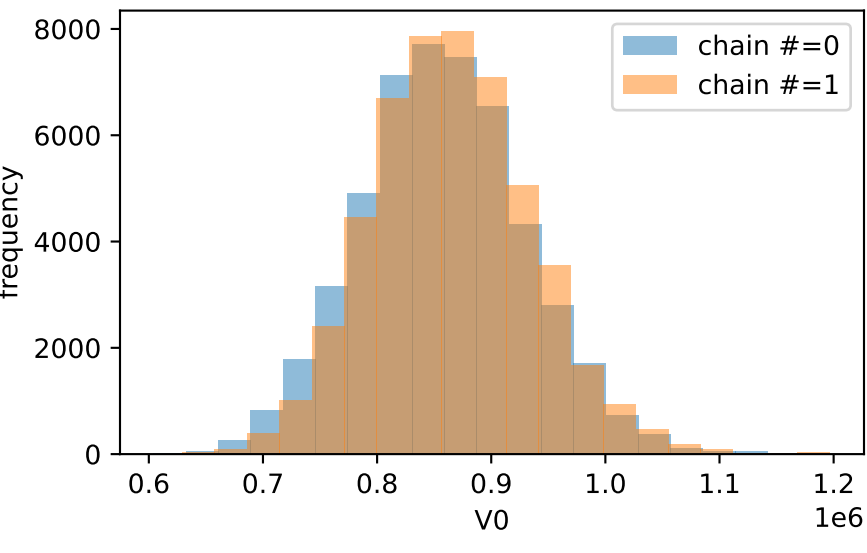
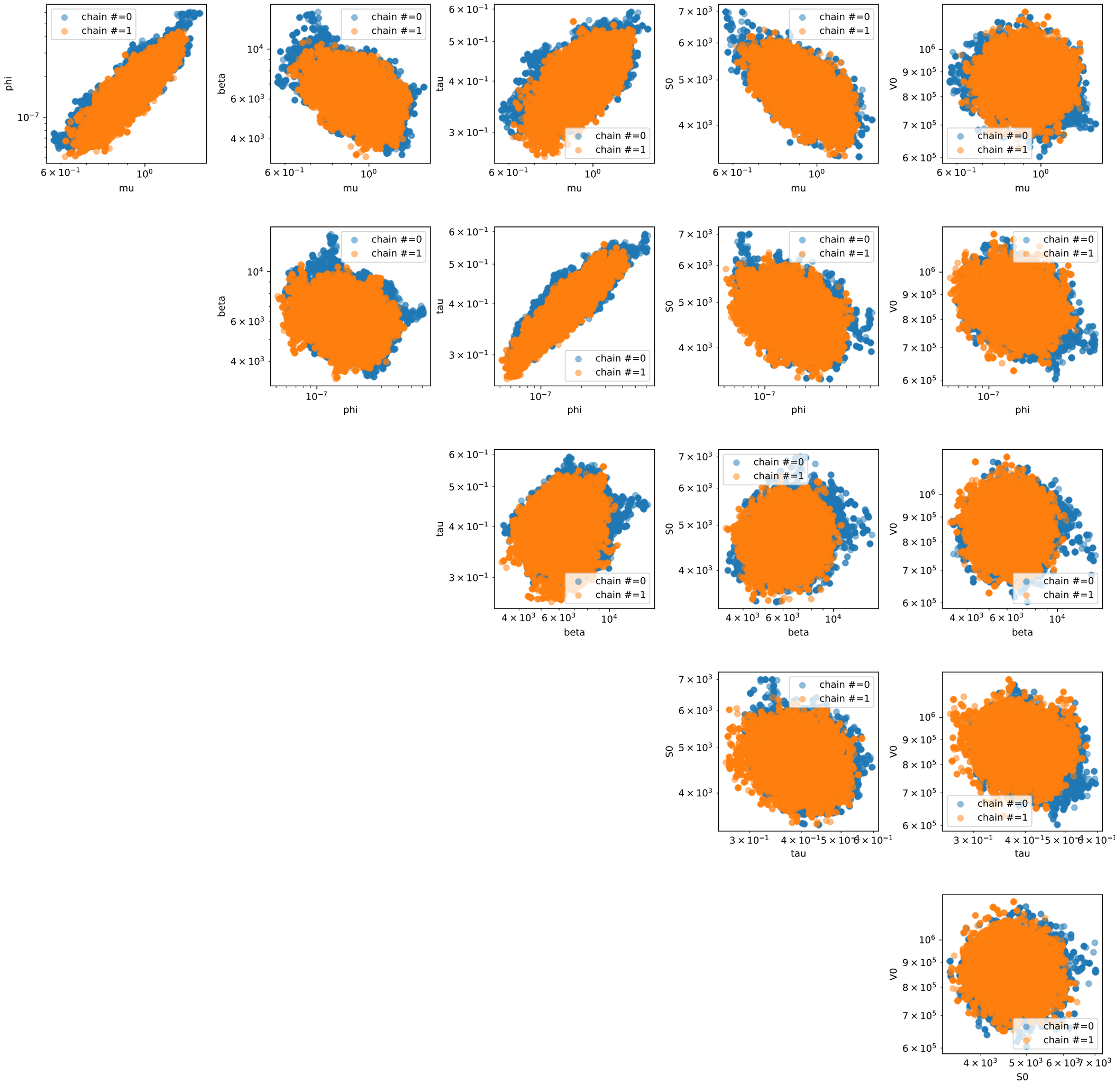
chain #=1
beta

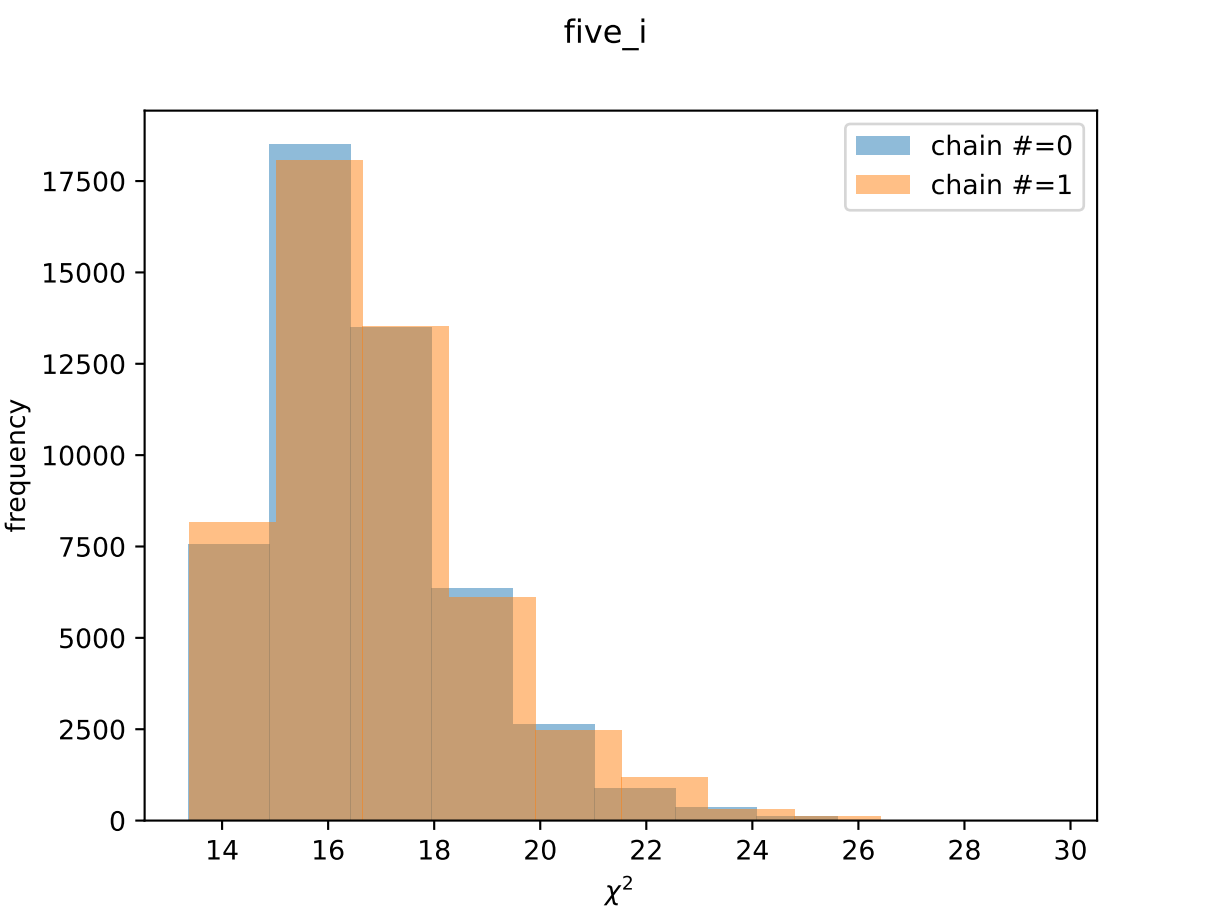

chain #=0
chain #=1
frequency
tau

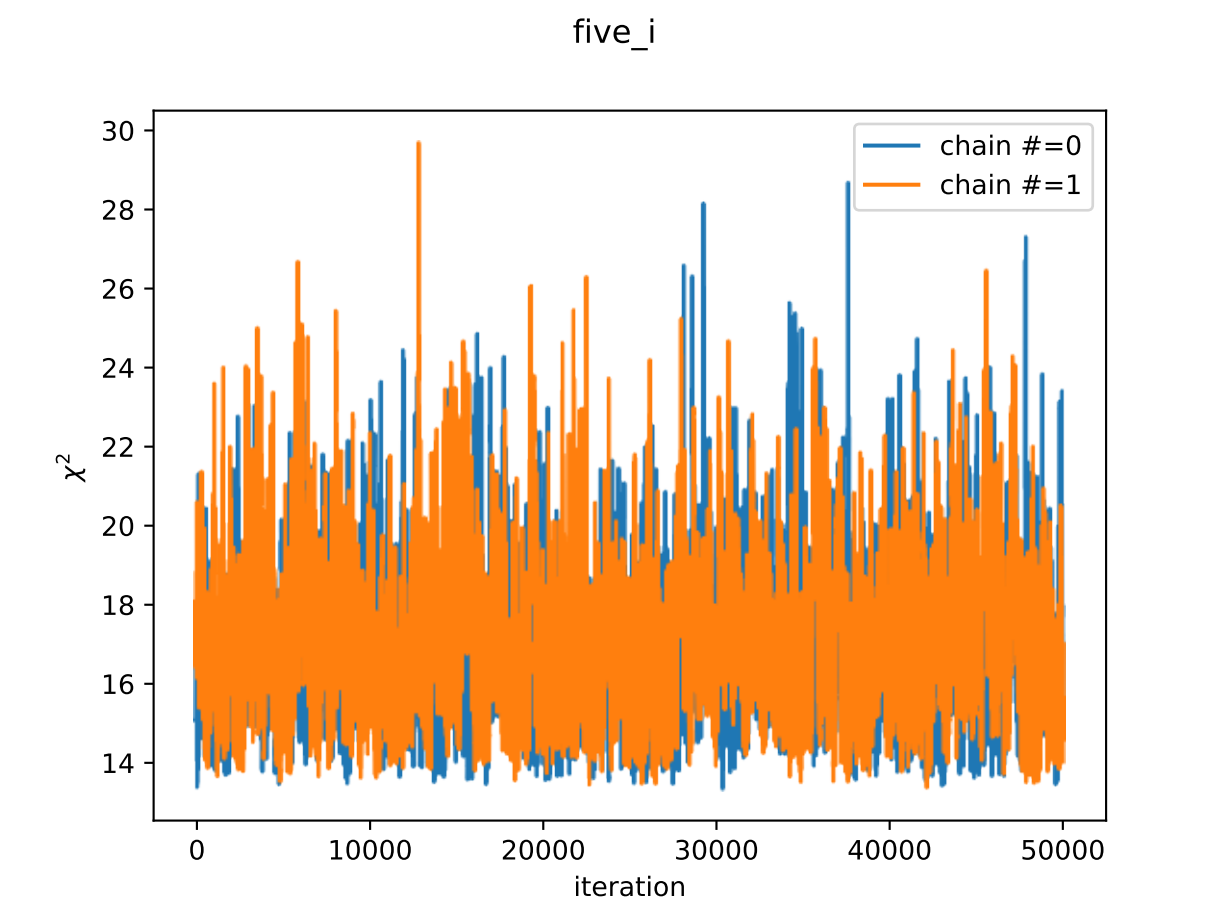

chain #=0
chain #=1
frequency
S0


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

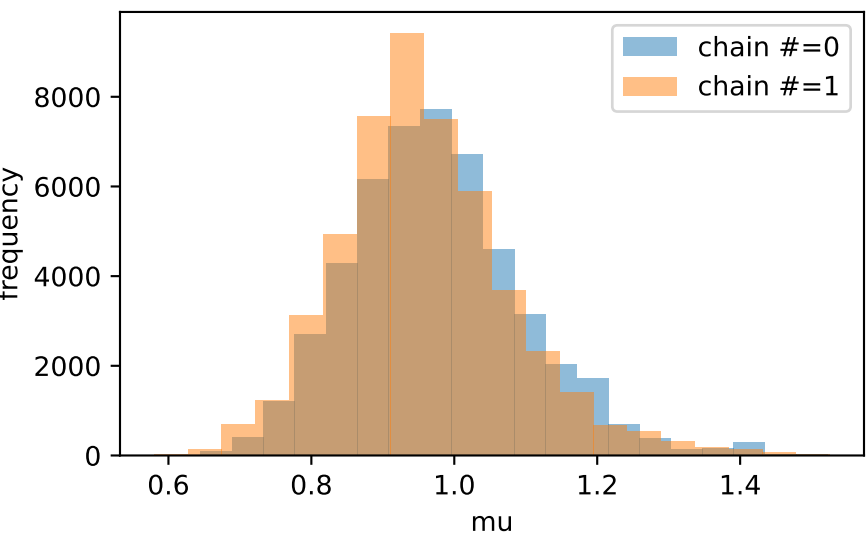
five_i

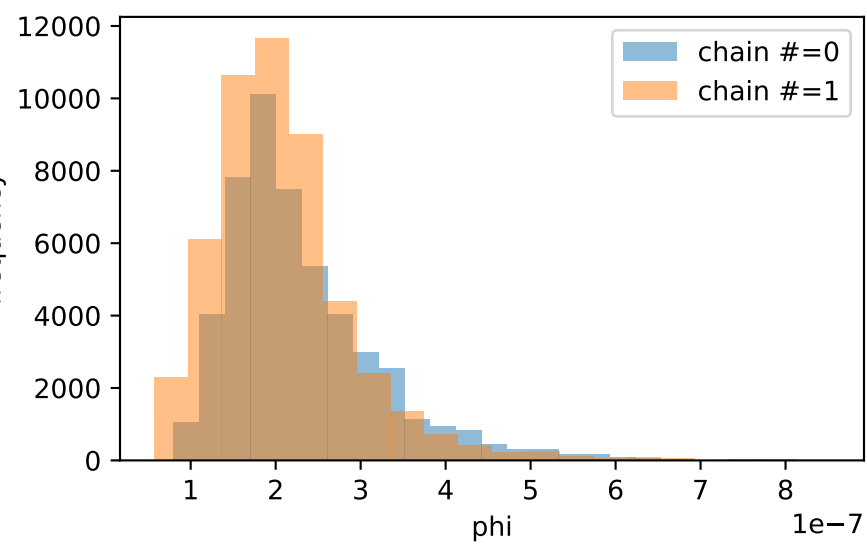


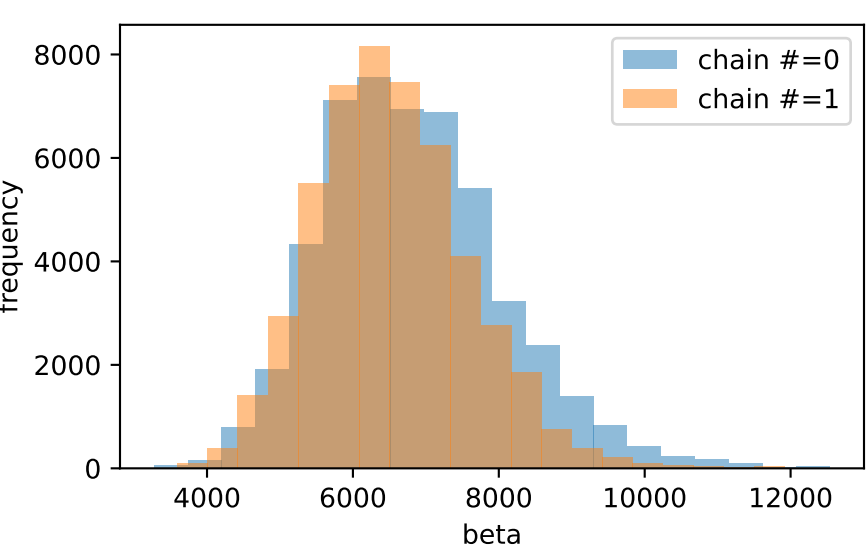

five_i
chain #=0
chain #=1
frequency
17500
15000
12500
10000
7500
5000
2500
0
14
16
18
20
22
24
26
28
30
χ^2

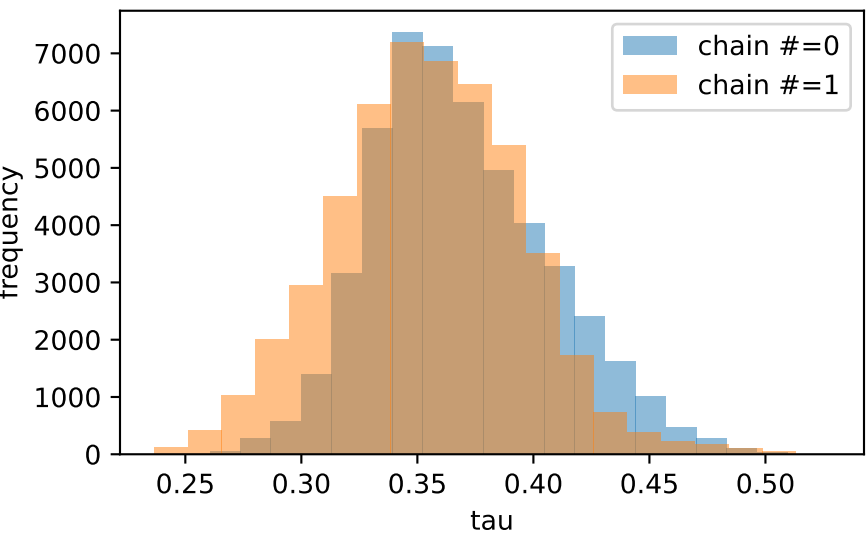

five_i
chain #=0
chain #=1
30
28
26
24
22
20
18
16
14
χ^2
0
10000
20000
30000
40000
50000
iteration

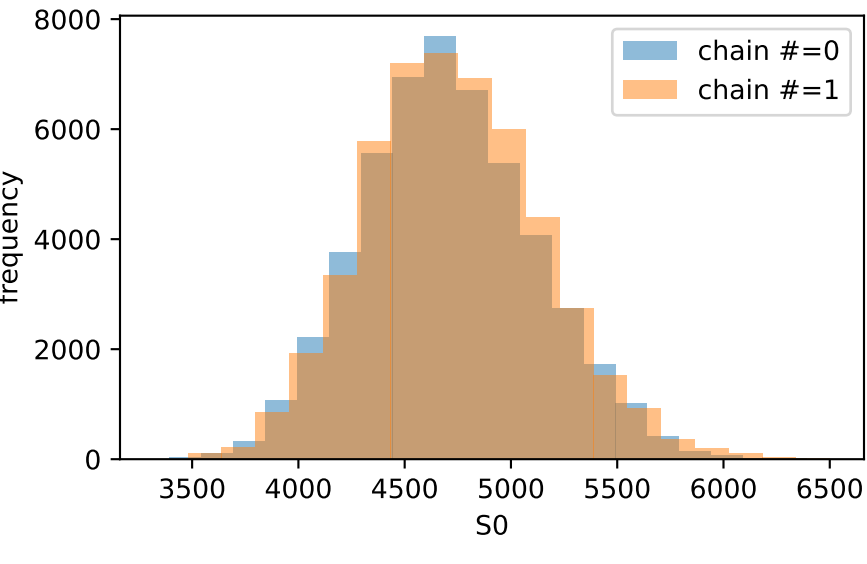
six_i

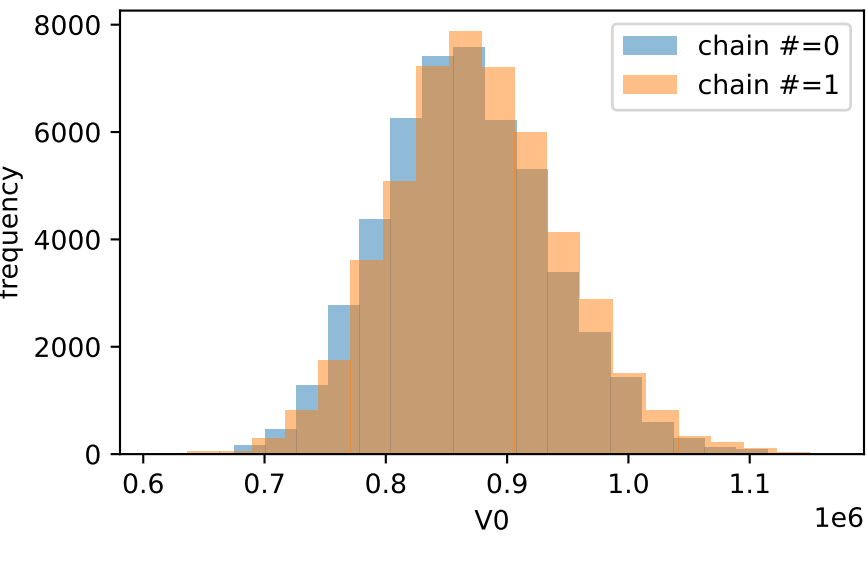

chain #=0
chain #=1
frequency
mu


chain #=0
chain #=1
phi
1e−7

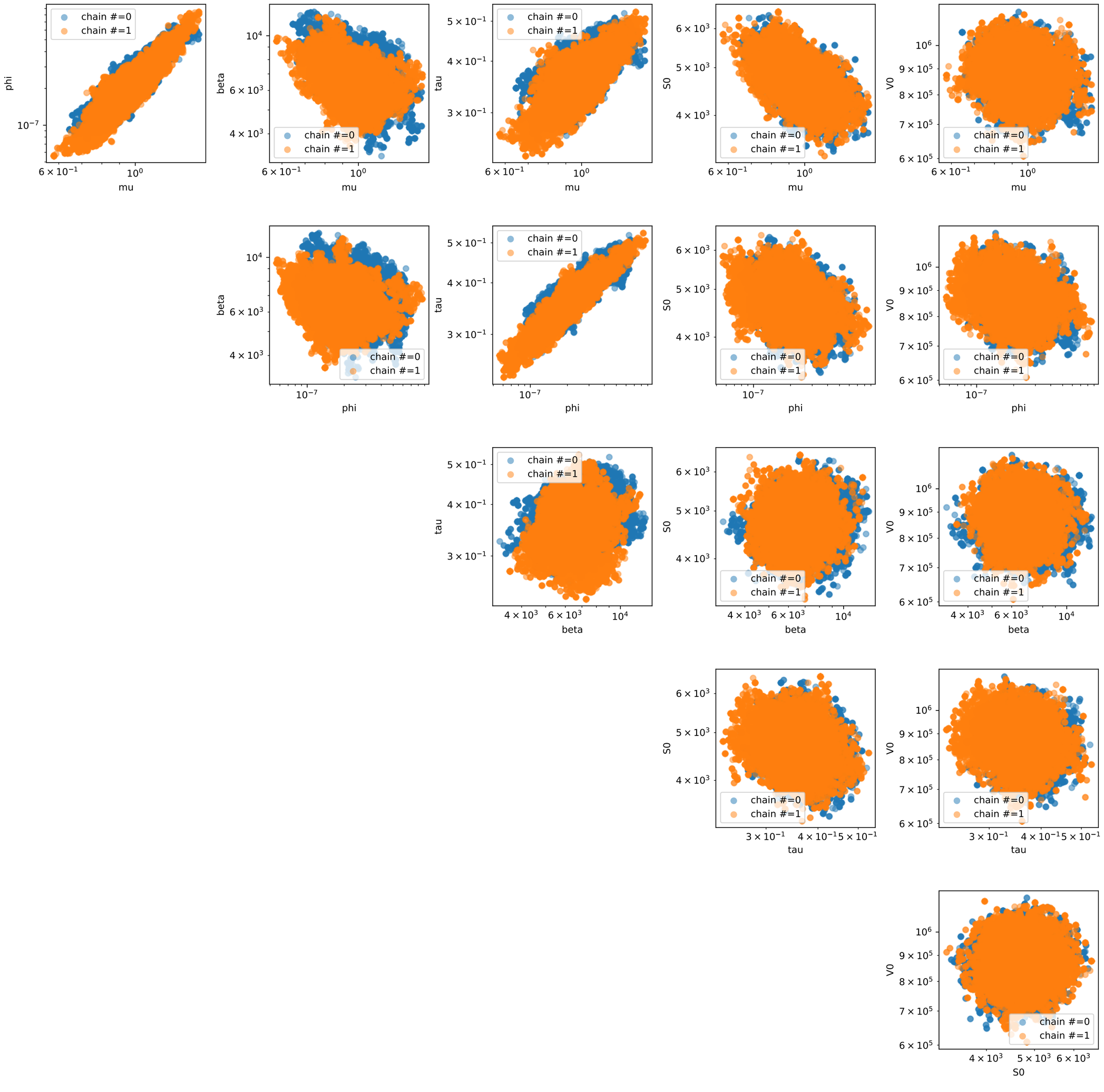

chain #=0
chain #=1
frequency
beta

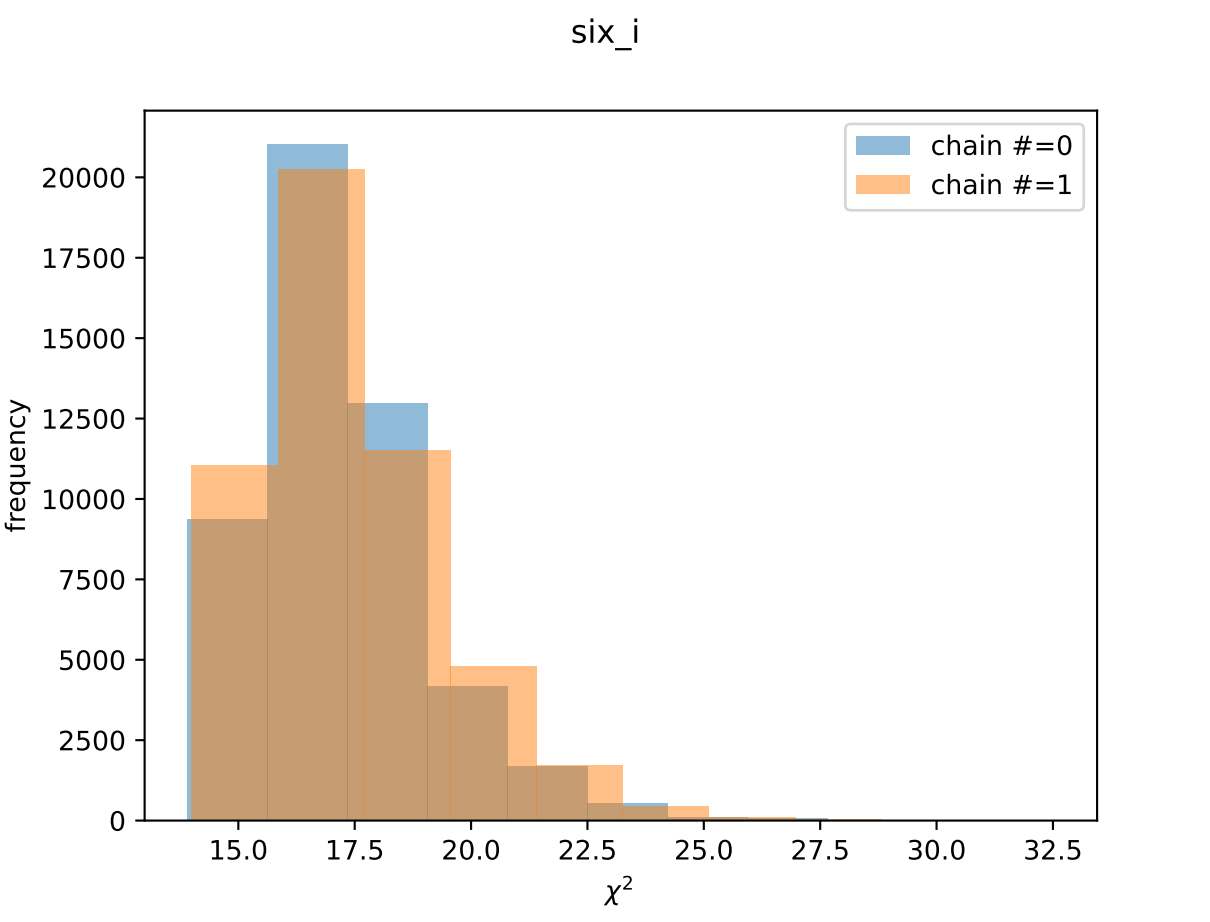

chain #=0
chain #=1
frequency
tau

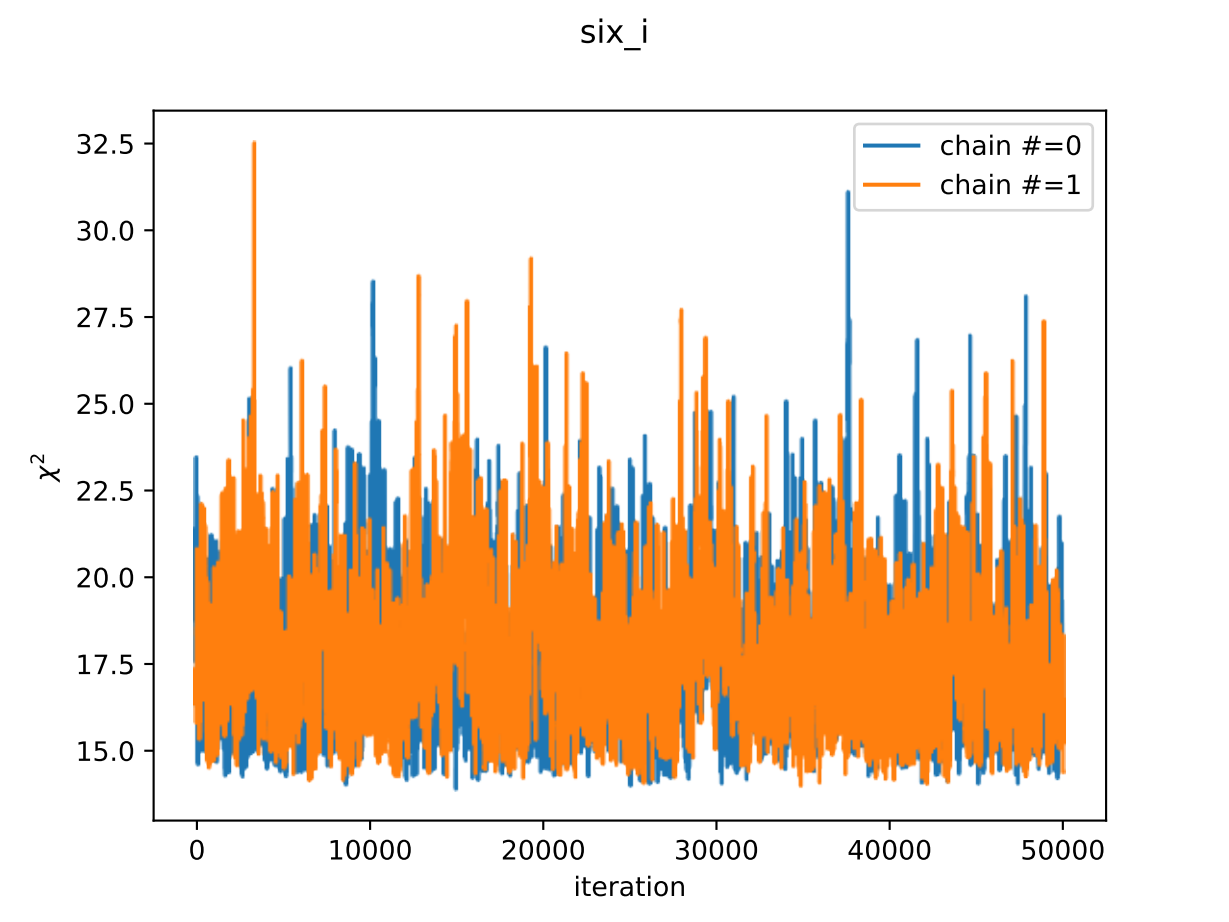

chain #=0
chain #=1
frequency
S0


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

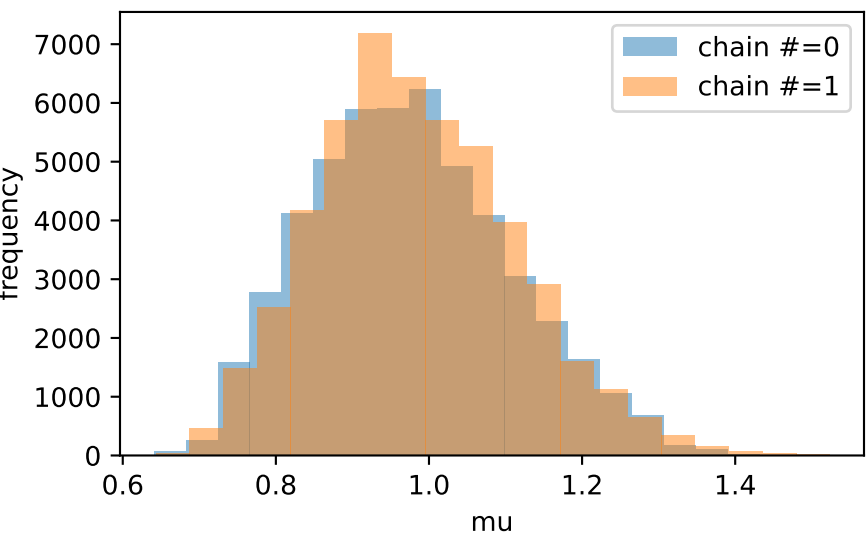
six_i

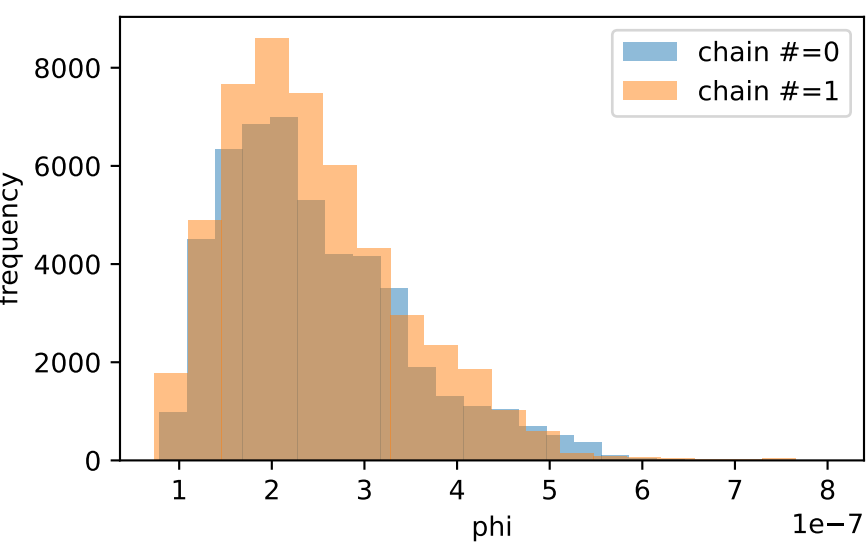



six_i
chain #=0
chain #=1
frequency
20000
17500
15000
12500
10000
7500
5000
2500
0
15.0
17.5
20.0
22.5
25.0
27.5
30.0
32.5
χ^2


six_i
chain #=0
chain #=1
32.5
30.0
27.5
25.0
22.5
20.0
17.5
15.0
χ^2
0
10000
20000
30000
40000
50000
iteration

seven_i


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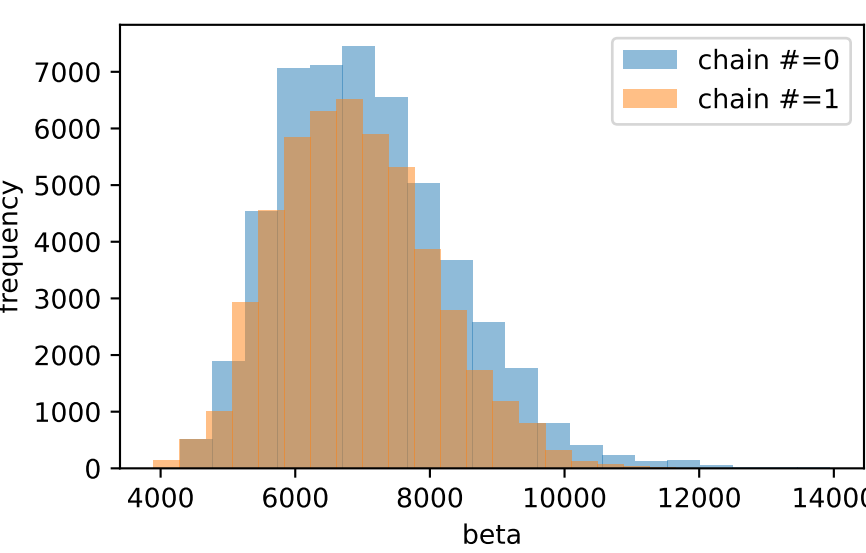
chain #=1
frequency
phi
1e−7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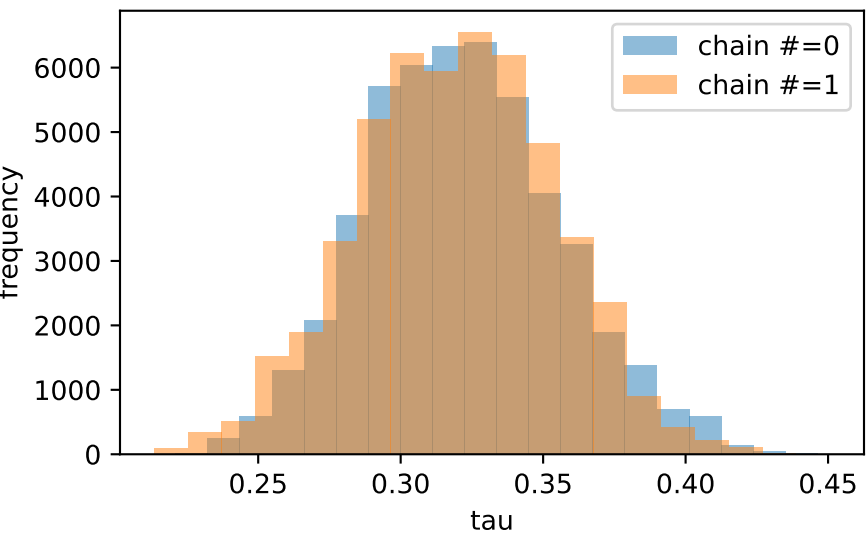
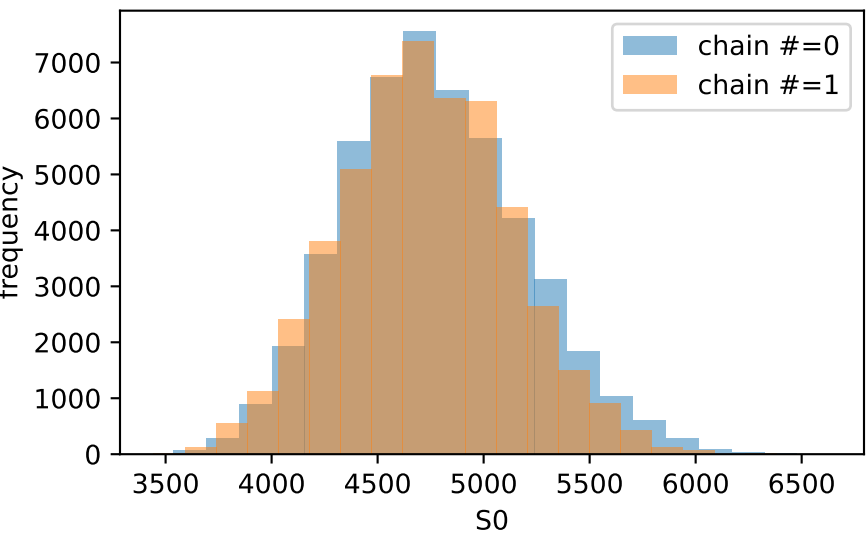
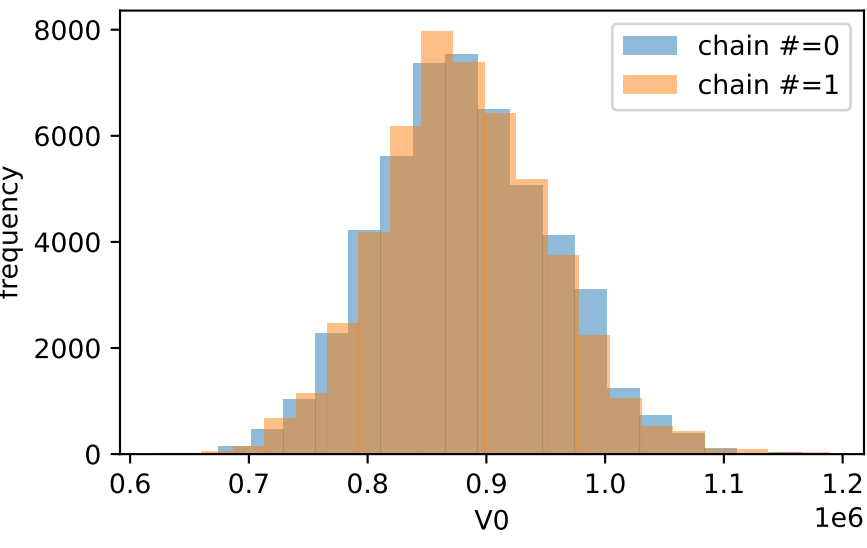
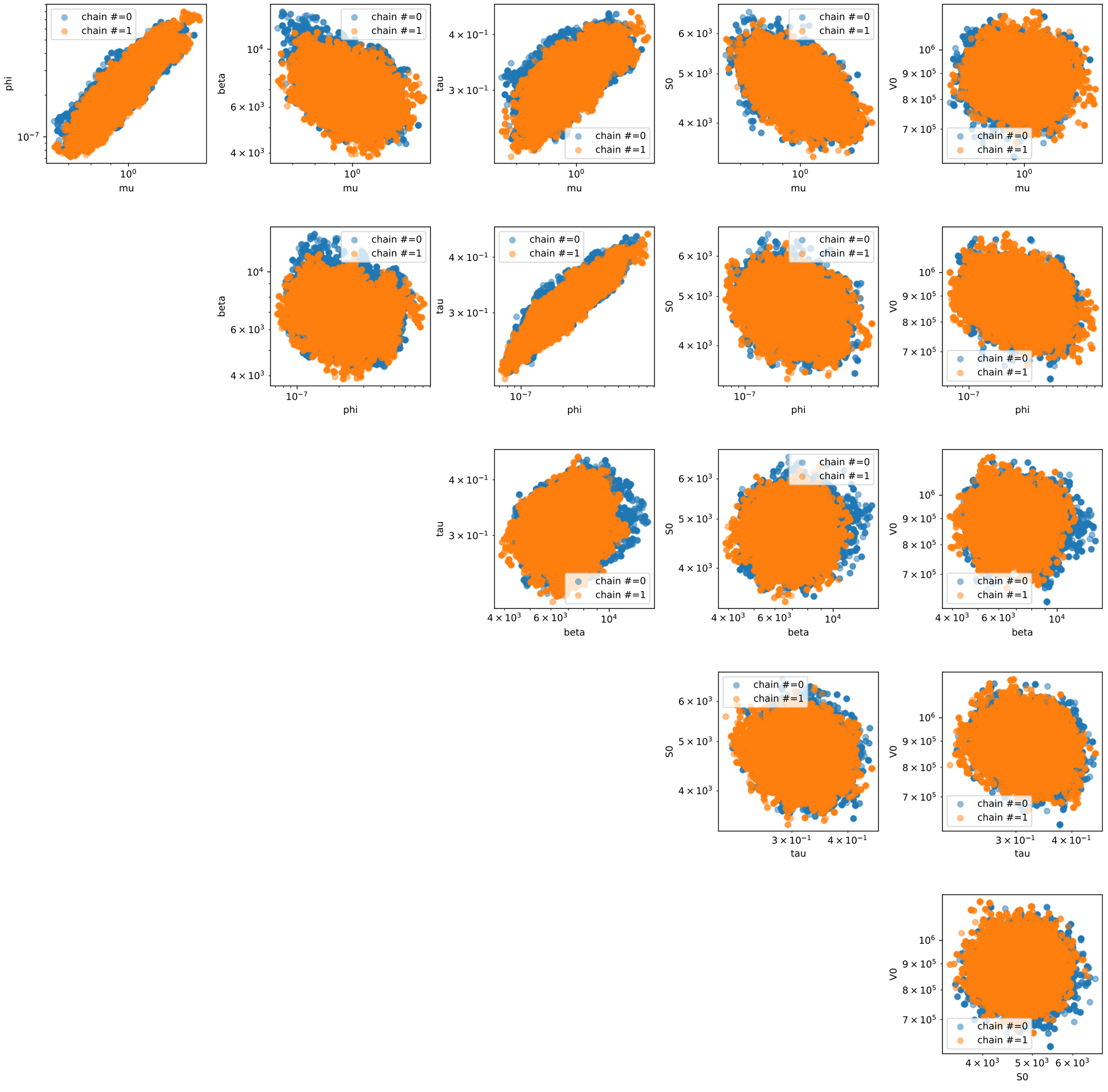
chain #=1
frequency
beta

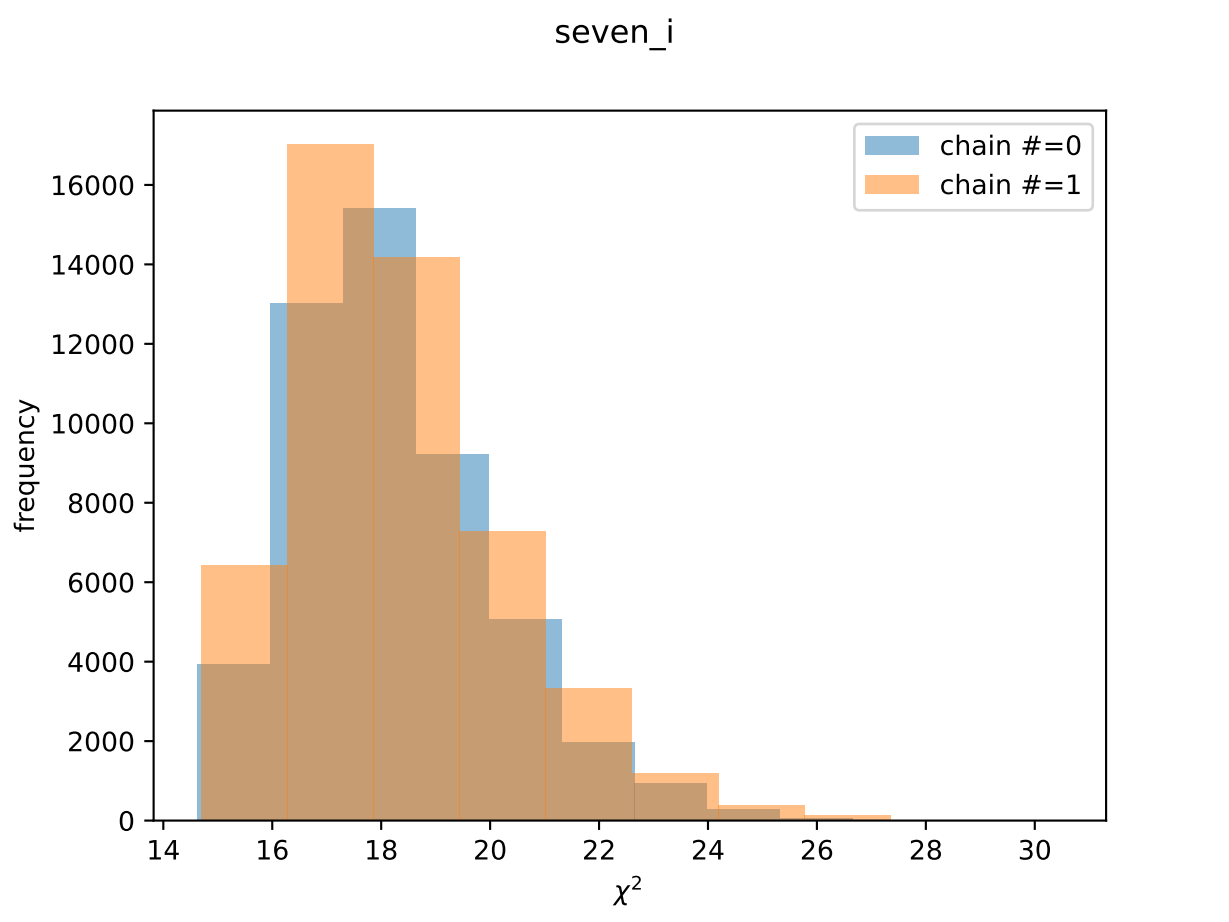

chain #=0
chain #=1
frequency
tau


chain #=0
chain #=1
frequency
S0


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

seven_i




seven_i
chain #=0
chain #=1
frequency
0
2000
4000
6000
8000
10000
12000
14000
16000
14
16
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20
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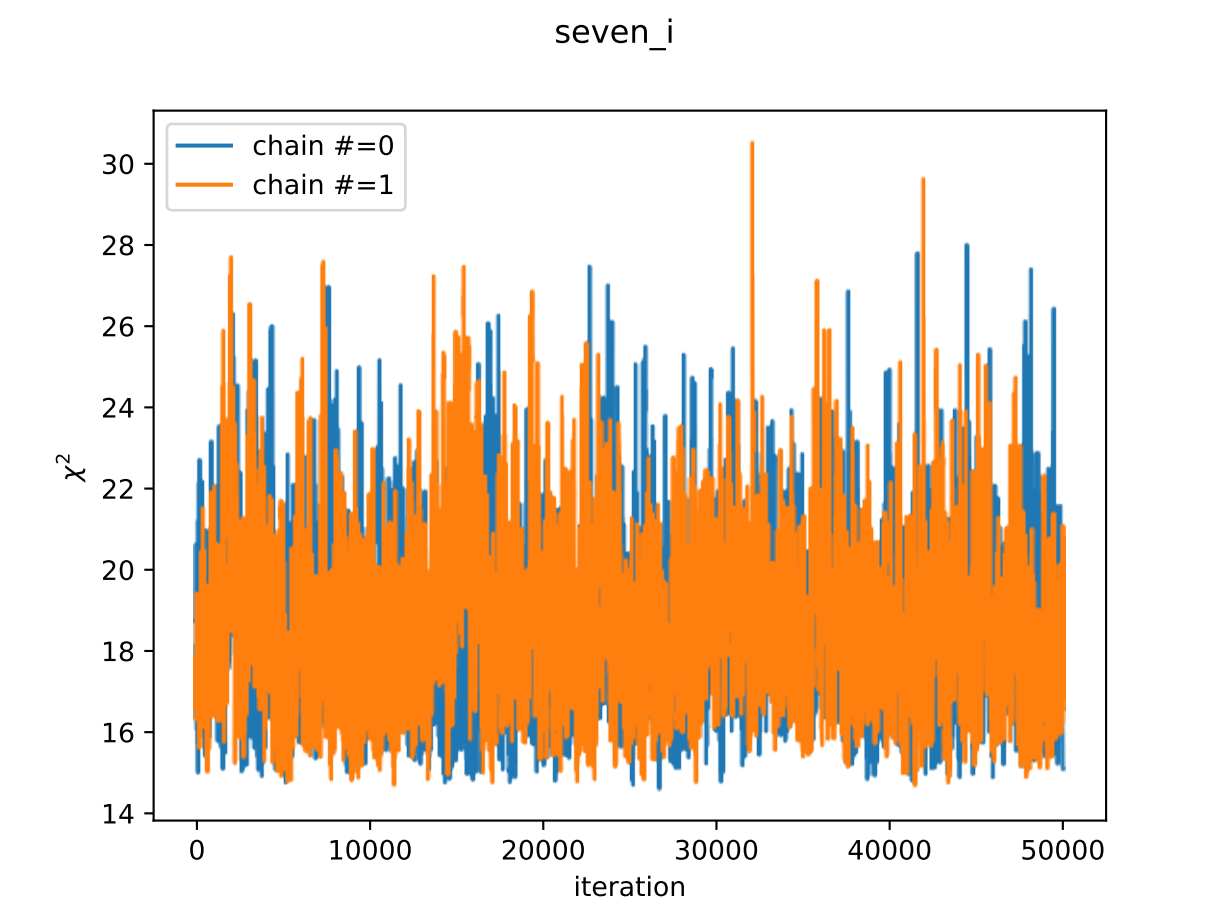
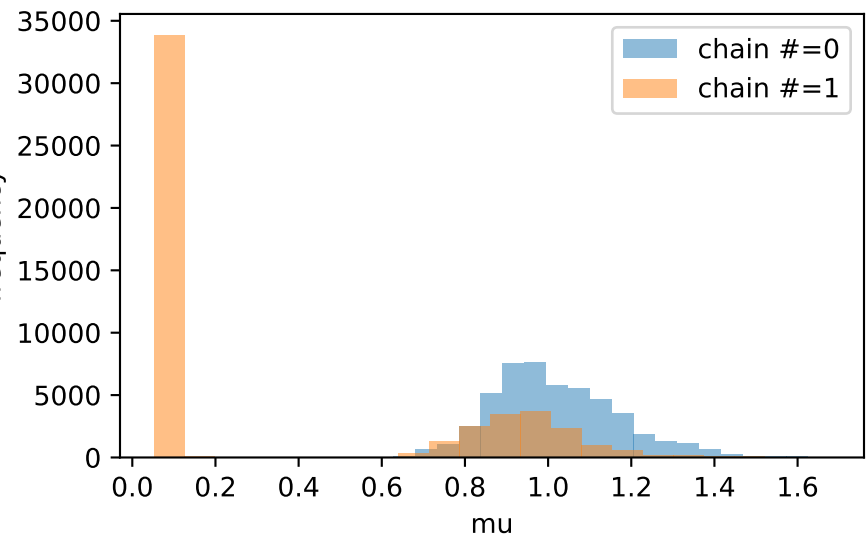
24
26
28
30
χ^2


seven_i
chain #=0
chain #=1
30
28
26
24
22
20
18
16
14
χ^2
0
10000
20000
30000
40000
50000
iteration

eight_i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chain #=1
35000
30000
25000
20000
15000
10000
5000
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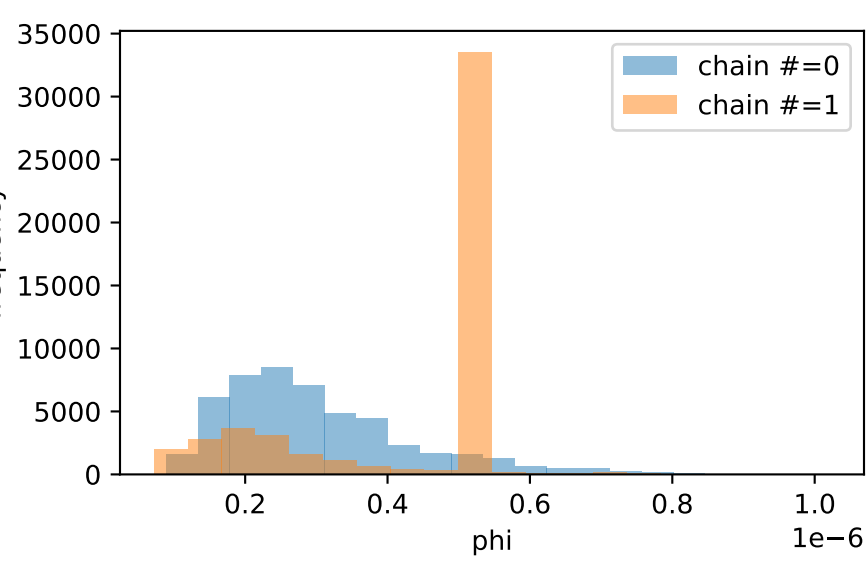
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
mu


chain #=0
chain #=1
35000
30000
25000
20000
15000
10000
5000
0
0.2
0.4
0.6
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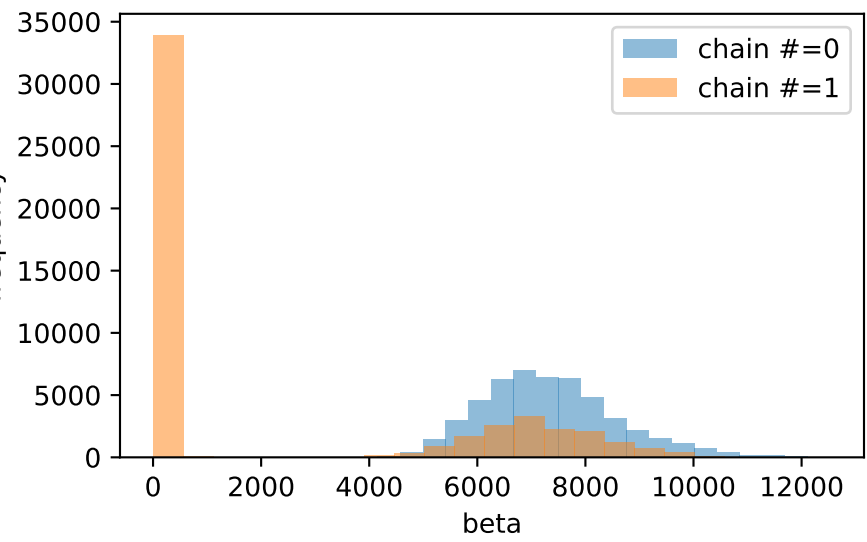
1.0
phi
1e−6


chain #=0
chain #=1
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20000
15000
10000
5000
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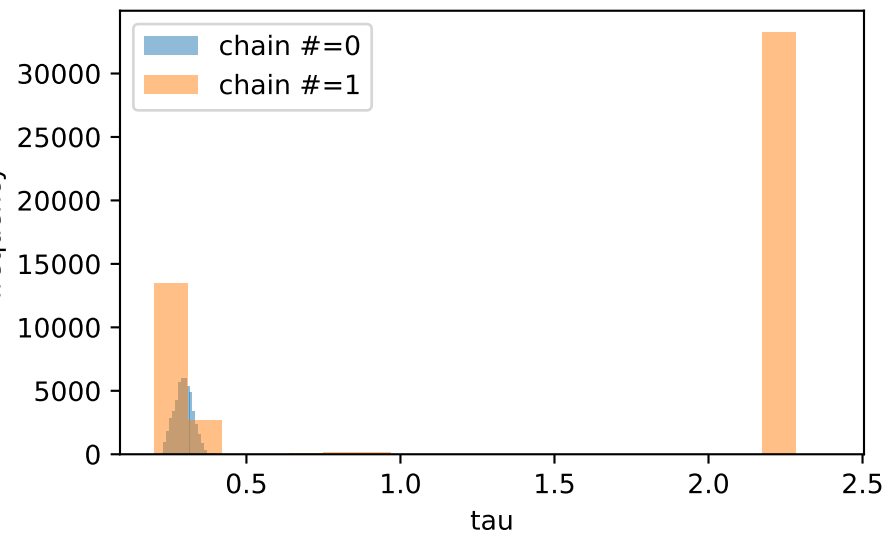
0
2000
4000
6000
8000
10000
12000
beta


chain #=0
chain #=1
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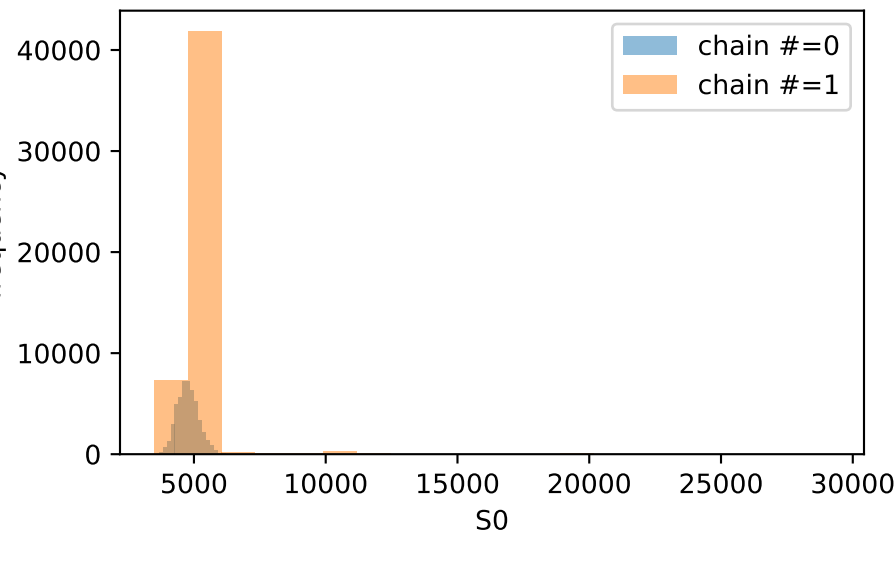
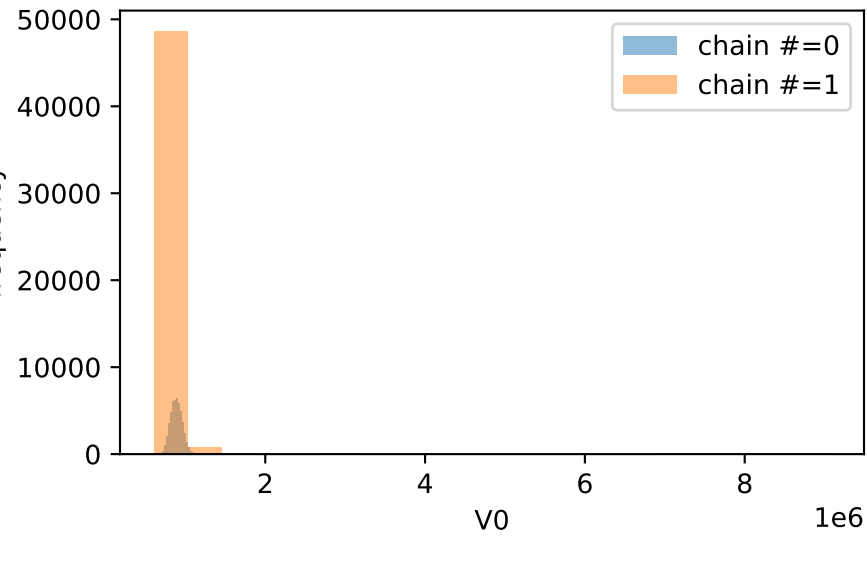
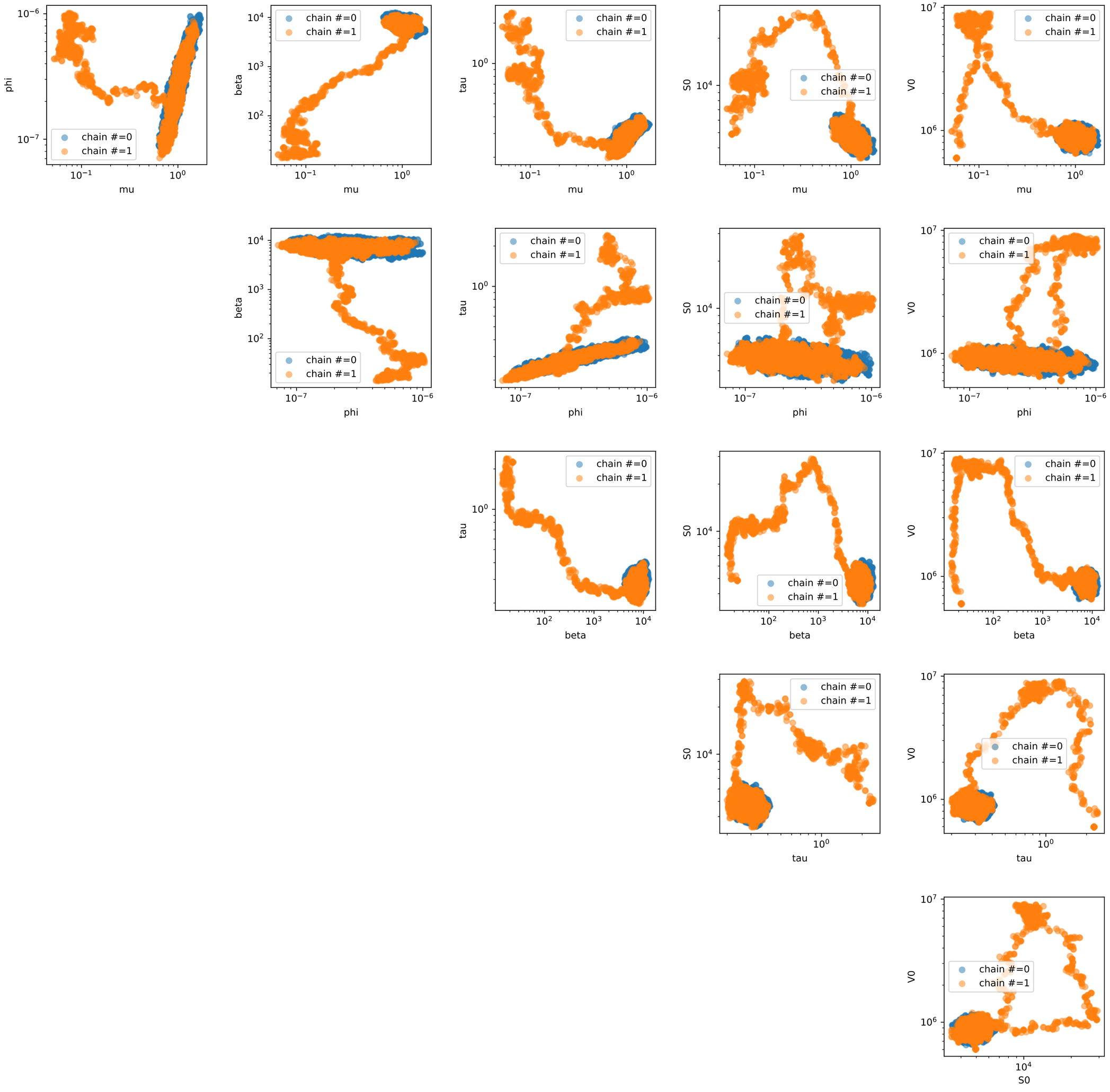
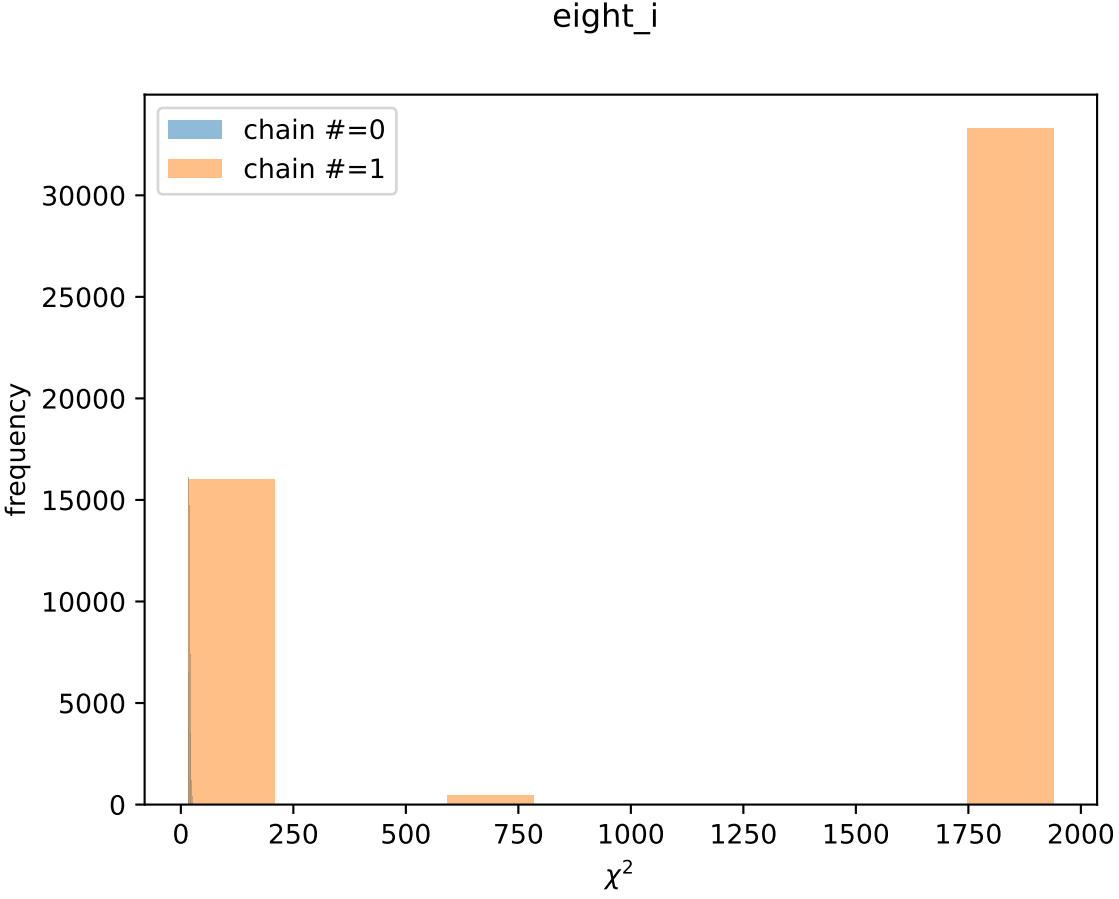
25000
20000
15000
10000
5000
0
0.5
1.0
1.5
2.0
2.5
tau

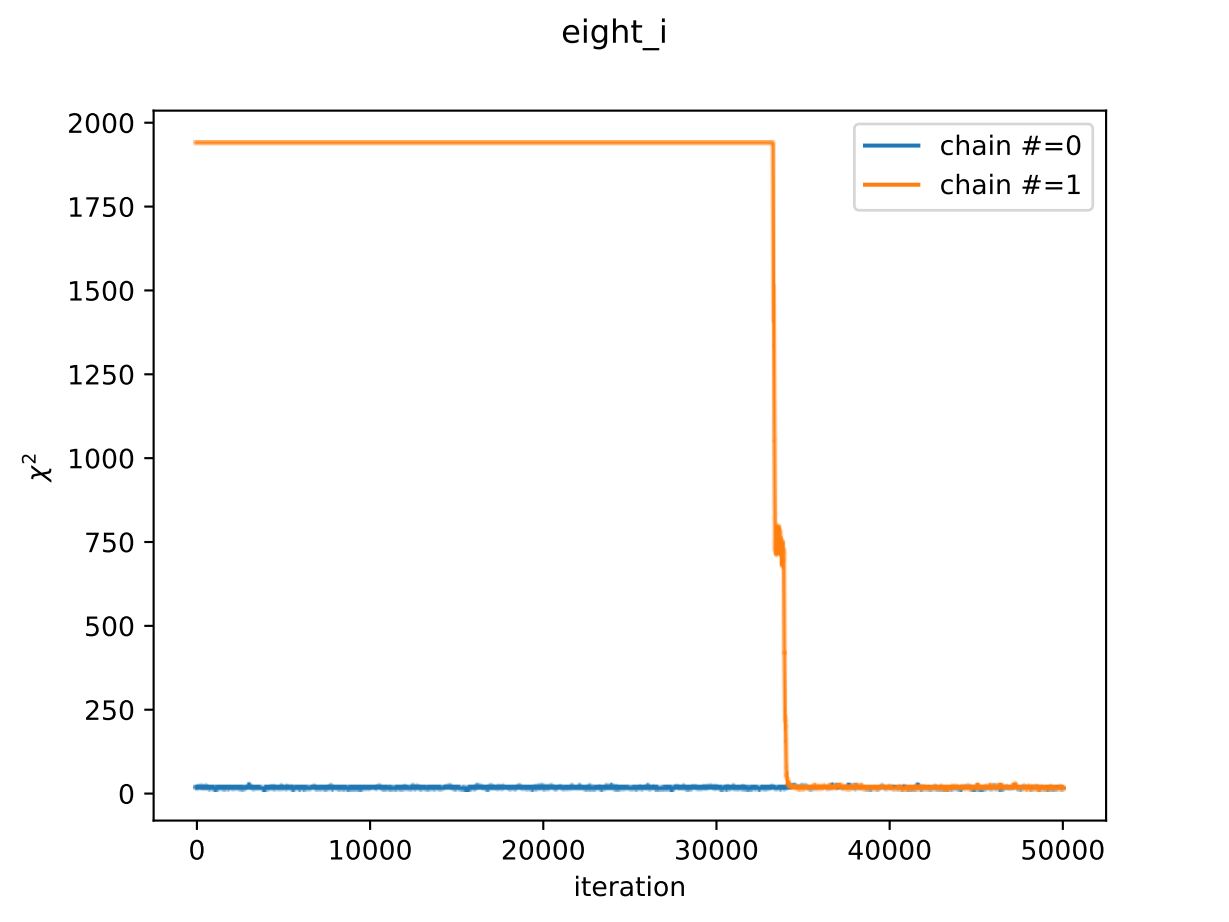

chain #=0
chain #=1
40000
30000
20000
10000
0
5000
10000
15000
20000
25000
30000
S0


chain #=0
chain #=1
50000
40000
30000
20000
10000
0
2
4
6
8
V0
1e6

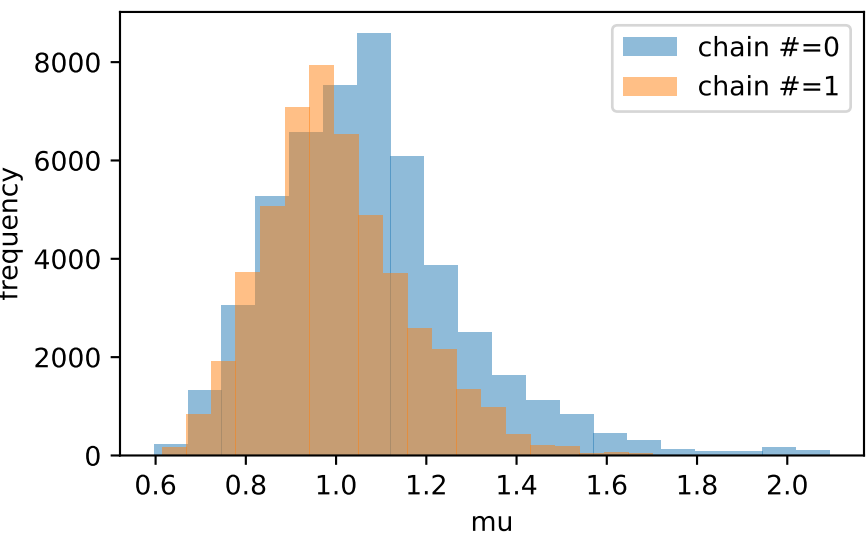
eight_i

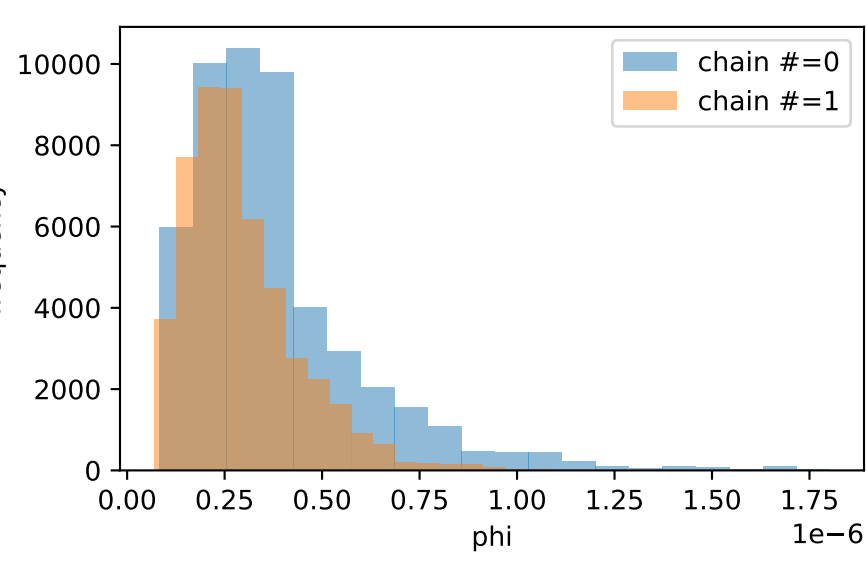


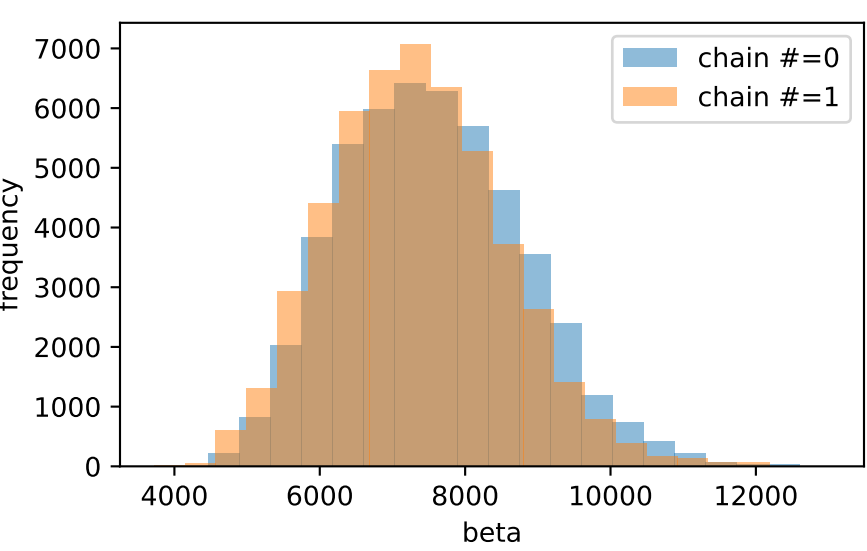

eight_i
chain #=0
chain #=1
frequency
30000
25000
20000
15000
10000
5000
0
0
250
500
750
1000
1250
1500
1750
2000
χ^2

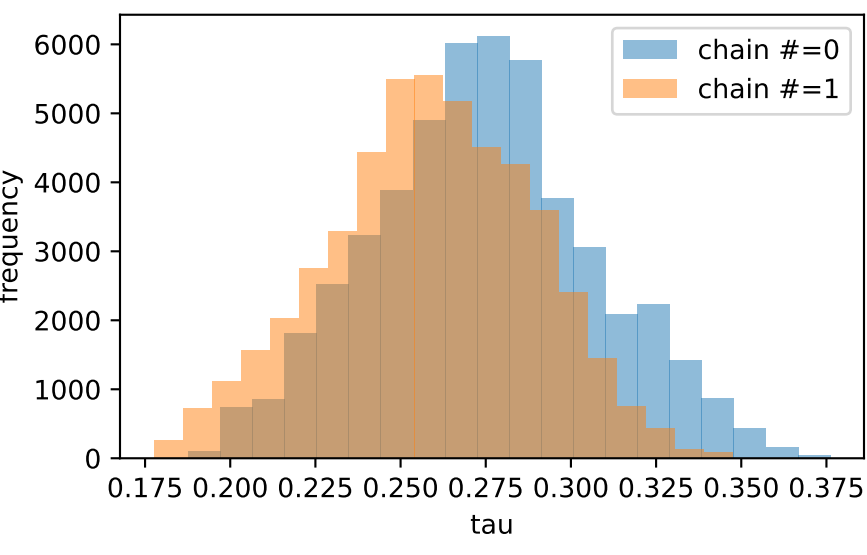

eight_i
chain #=0
chain #=1
2000
1750
1500
1250
1000
750
500
250
0
χ^2
0
10000
20000
30000
40000
50000
iteration

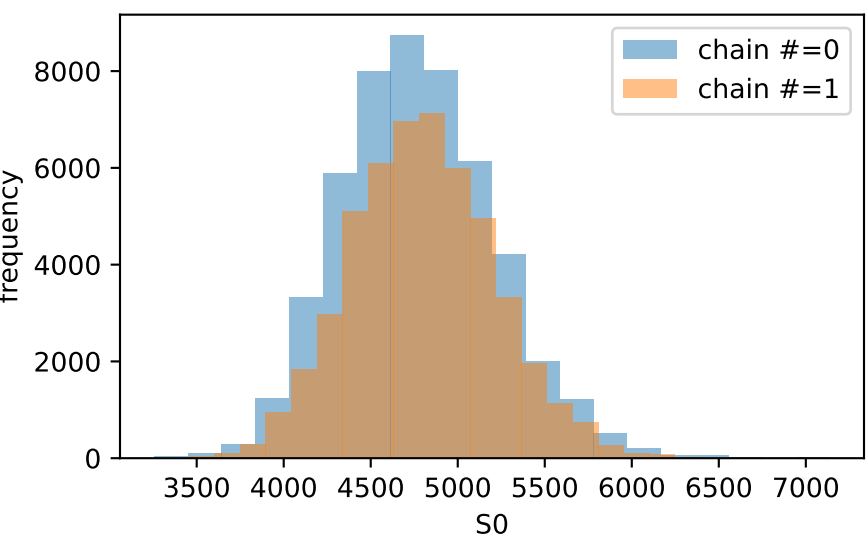
nine_i

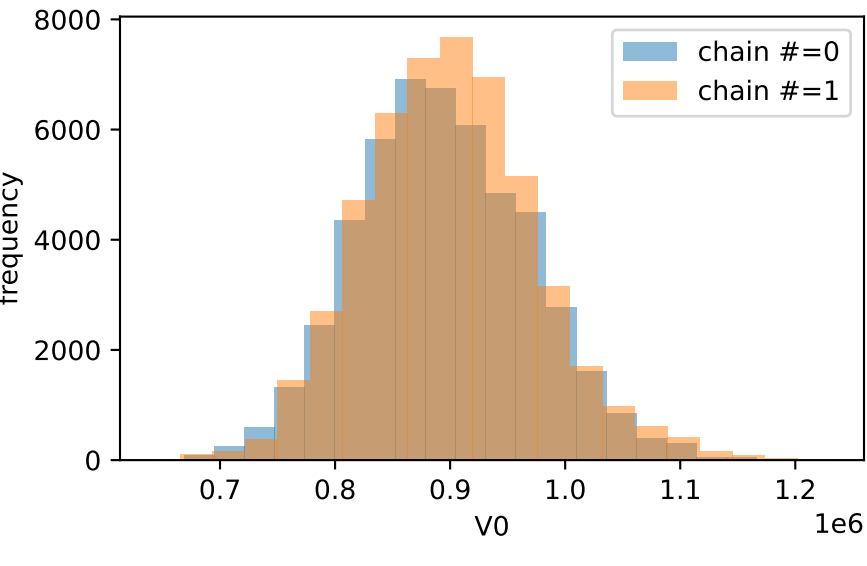

chain #=0
chain #=1
frequency
mu
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
0
2000
4000
6000
8000


chain #=0
chain #=1
phi
1e−6
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
0
2000
4000
6000
8000
10000

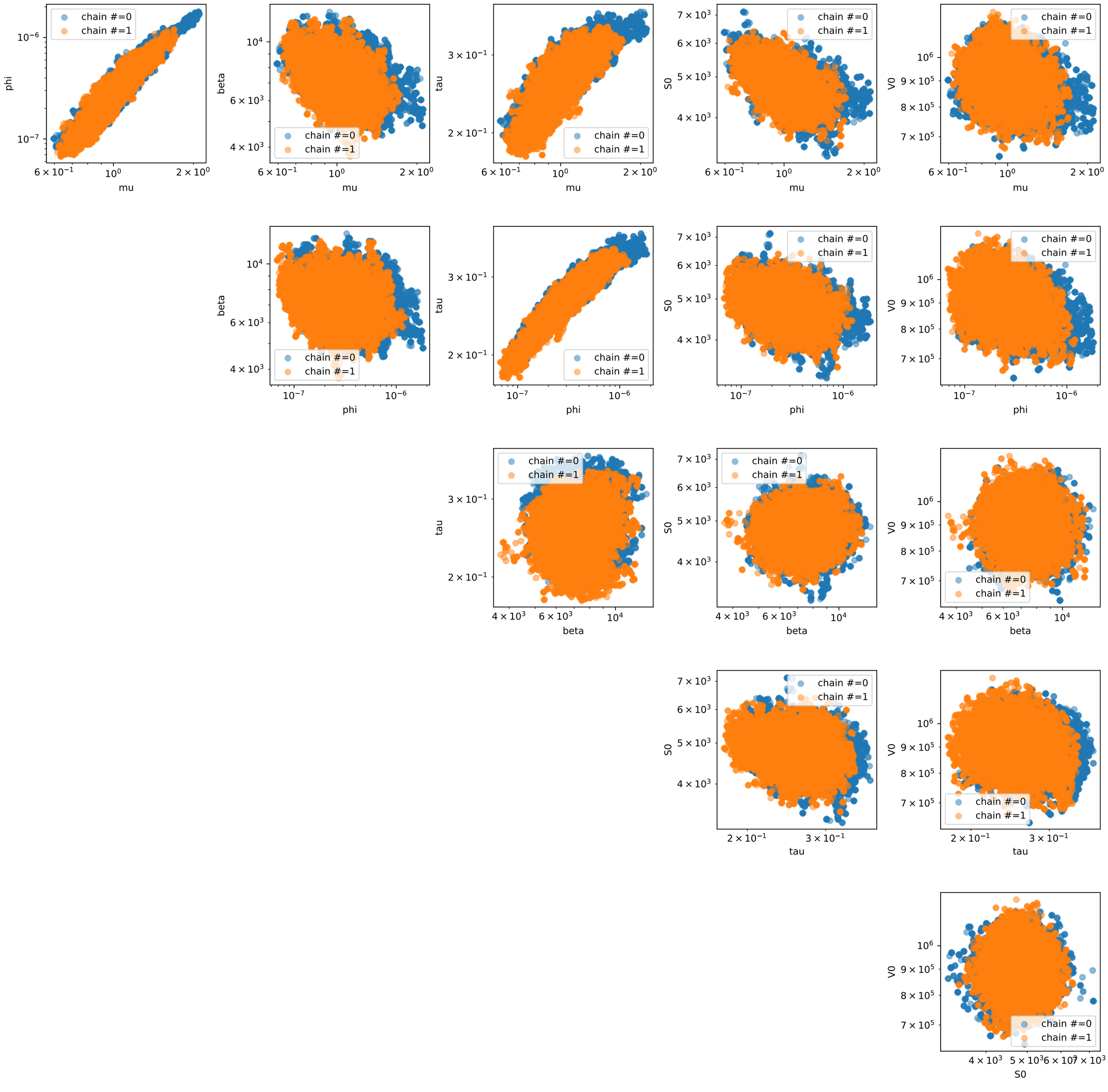

chain #=0
chain #=1
frequency
beta
4000
6000
8000
10000
12000
0
1000
2000
3000
4000
5000
6000
7000

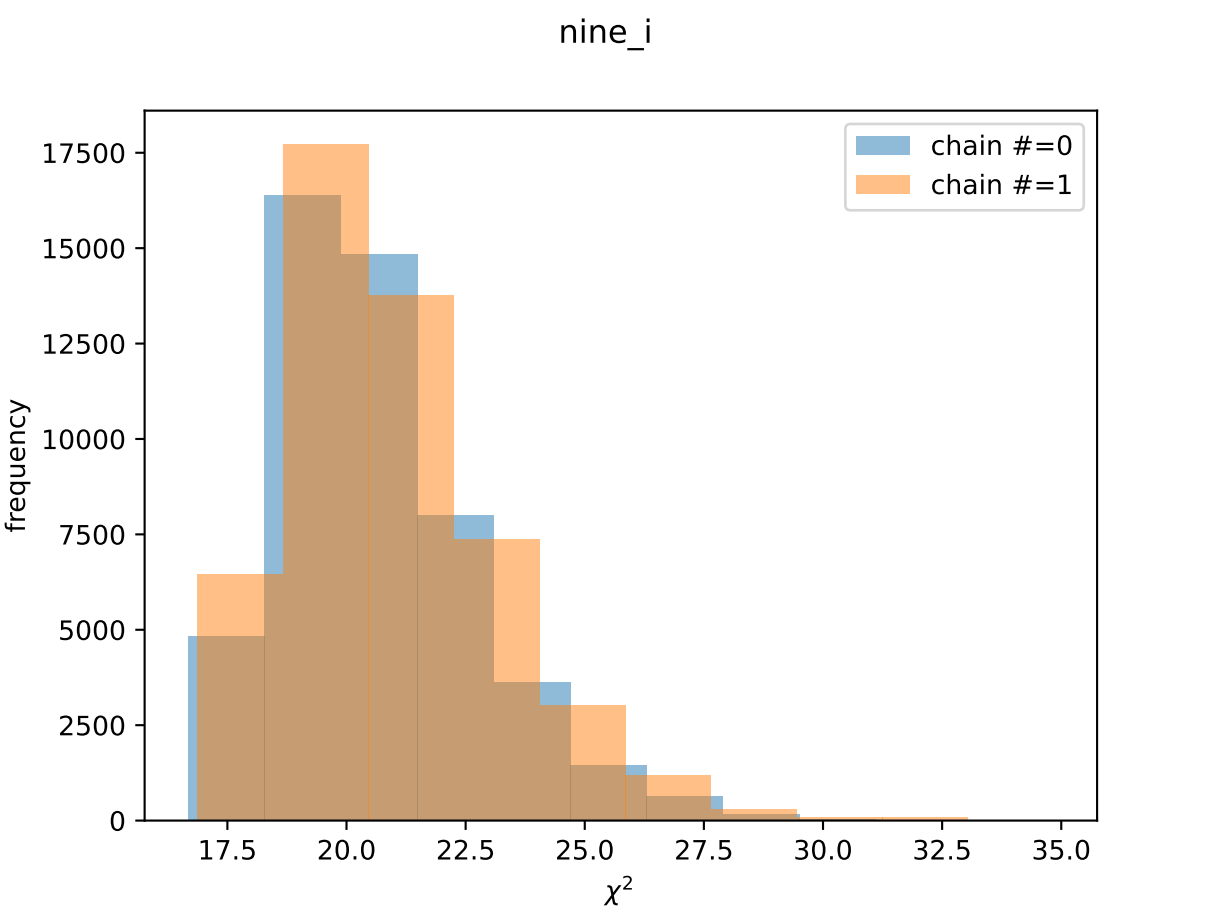

chain #=0
chain #=1
frequency
tau
0.175
0.200
0.225
0.250
0.275
0.300
0.325
0.350
0.375
0
1000
2000
3000
4000
5000
6000

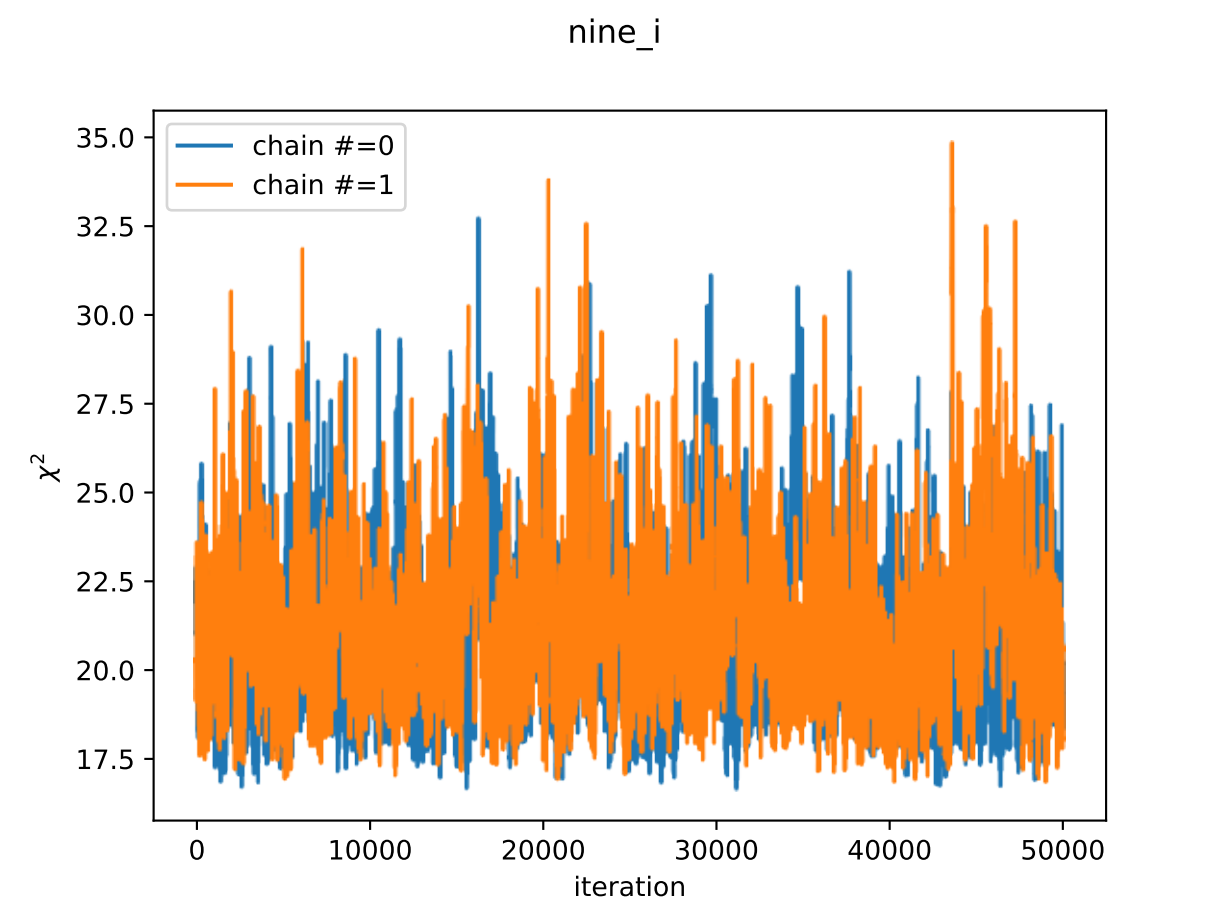

chain #=0
chain #=1
frequency
S0
3500
4000
4500
5000
5500
6000
6500
7000
0
2000
4000
6000
8000


chain #=0
chain #=1
frequency
V0
1e6
0.7
0.8
0.9
1.0
1.1
1.2
0
2000
4000
6000
8000

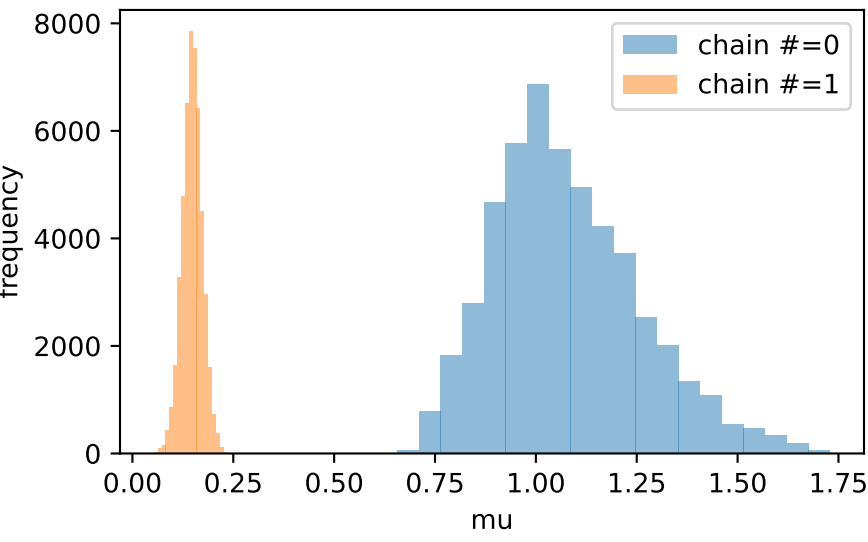
nine_i

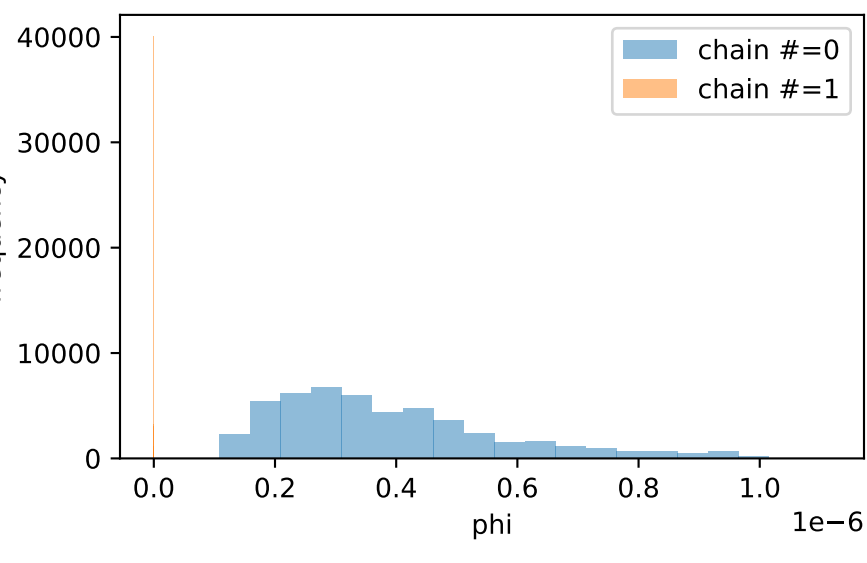


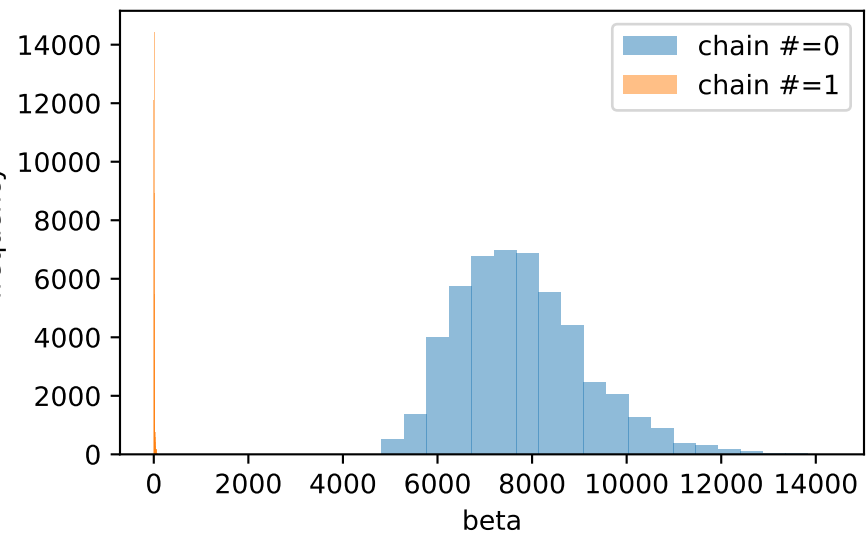

nine_i
chain #=0
chain #=1
frequency
17500
15000
12500
10000
7500
5000
2500
0
17.5
20.0
22.5
25.0
27.5
30.0
32.5
35.0
χ^2

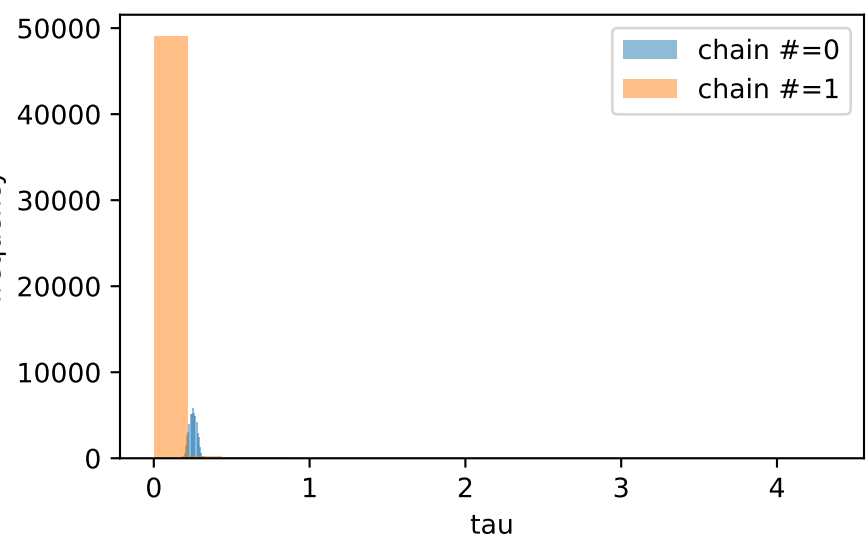

nine_i
chain #=0
chain #=1
35.0
32.5
30.0
27.5
25.0
22.5
20.0
17.5
χ^2
0
10000
20000
30000
40000
50000
iteration

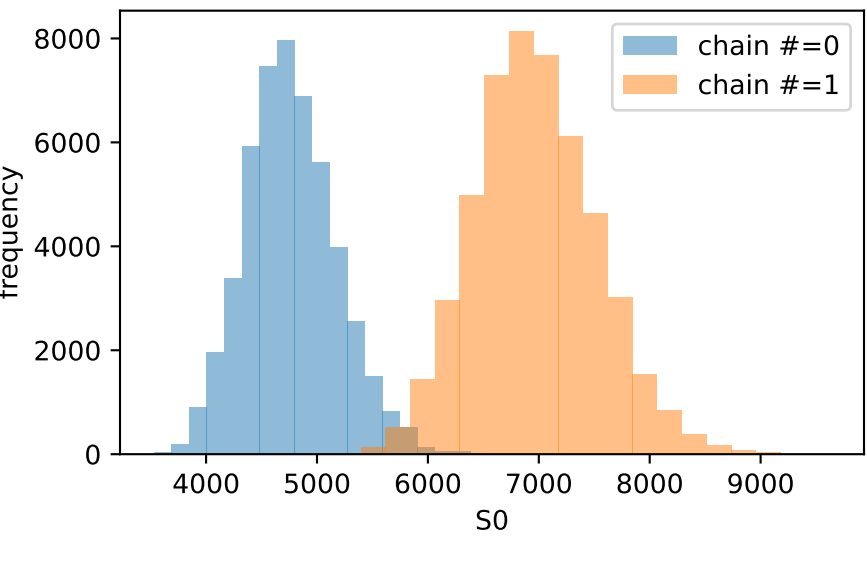
ten_i

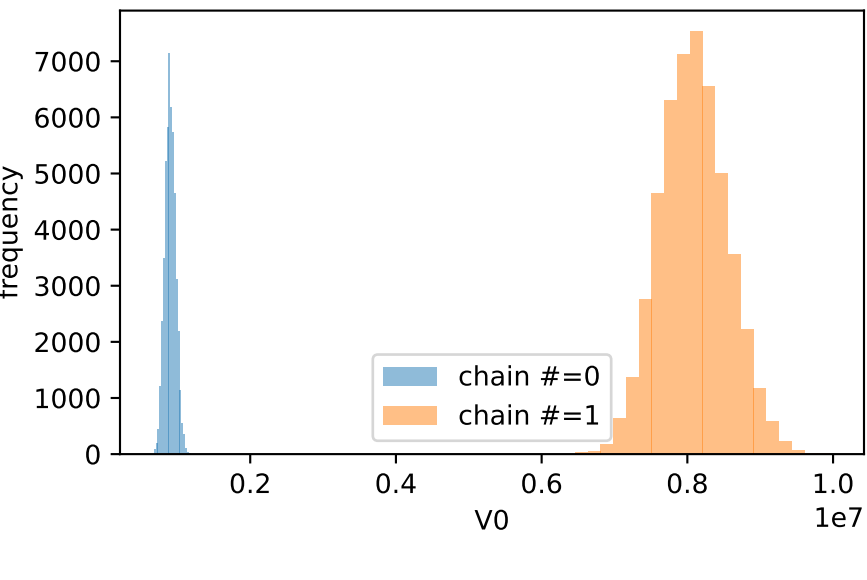

chain #=0
chain #=1
frequency
mu
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
0
2000
4000
6000
8000


chain #=0
chain #=1
phi
1e−6
0.0
0.2
0.4
0.6
0.8
1.0
0
10000
20000
30000
40000

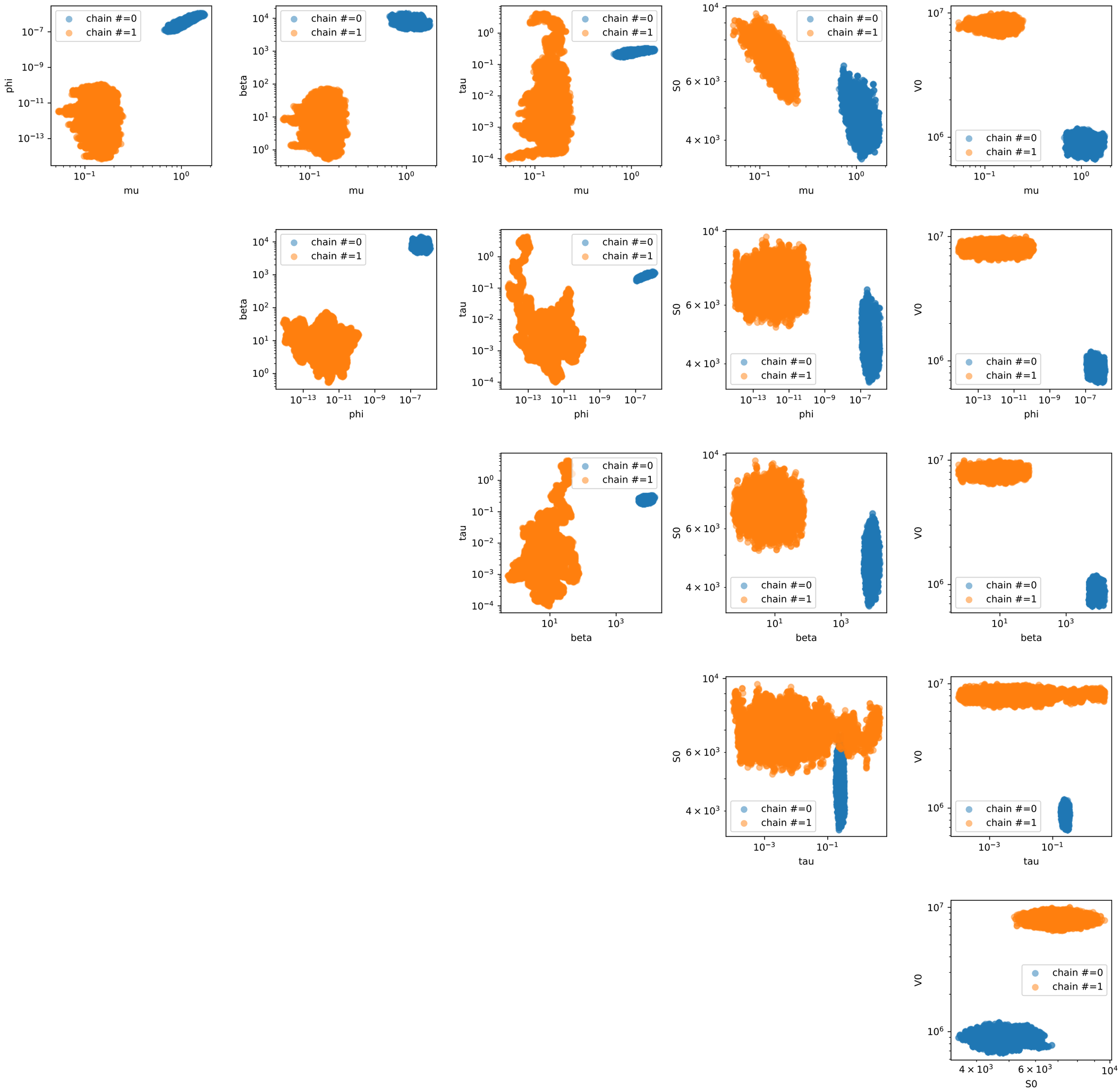

chain #=0
chain #=1
beta
0
2000
4000
6000
8000
10000
12000
14000

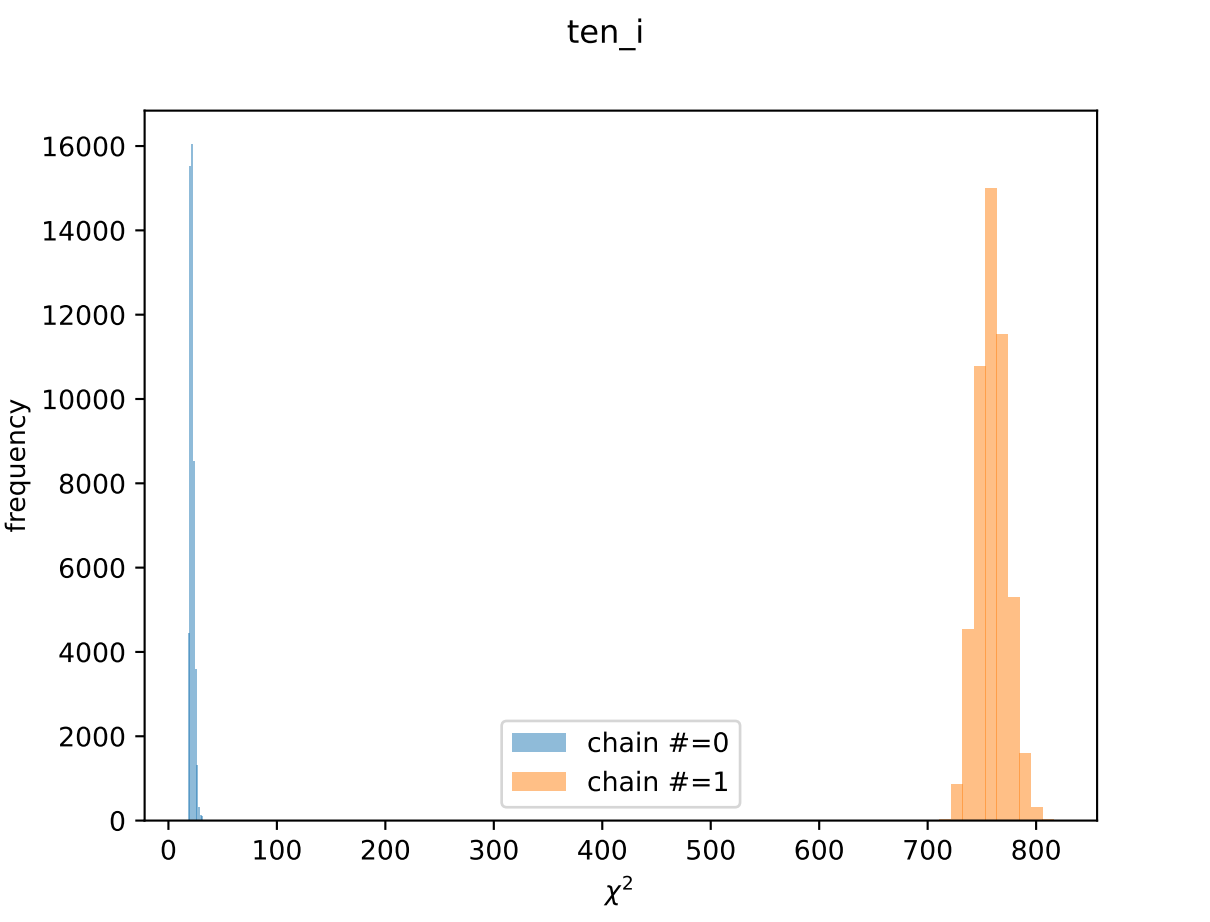

chain #=0
chain #=1
tau
0
1
2
3
4
0
10000
20000
30000
40000
50000

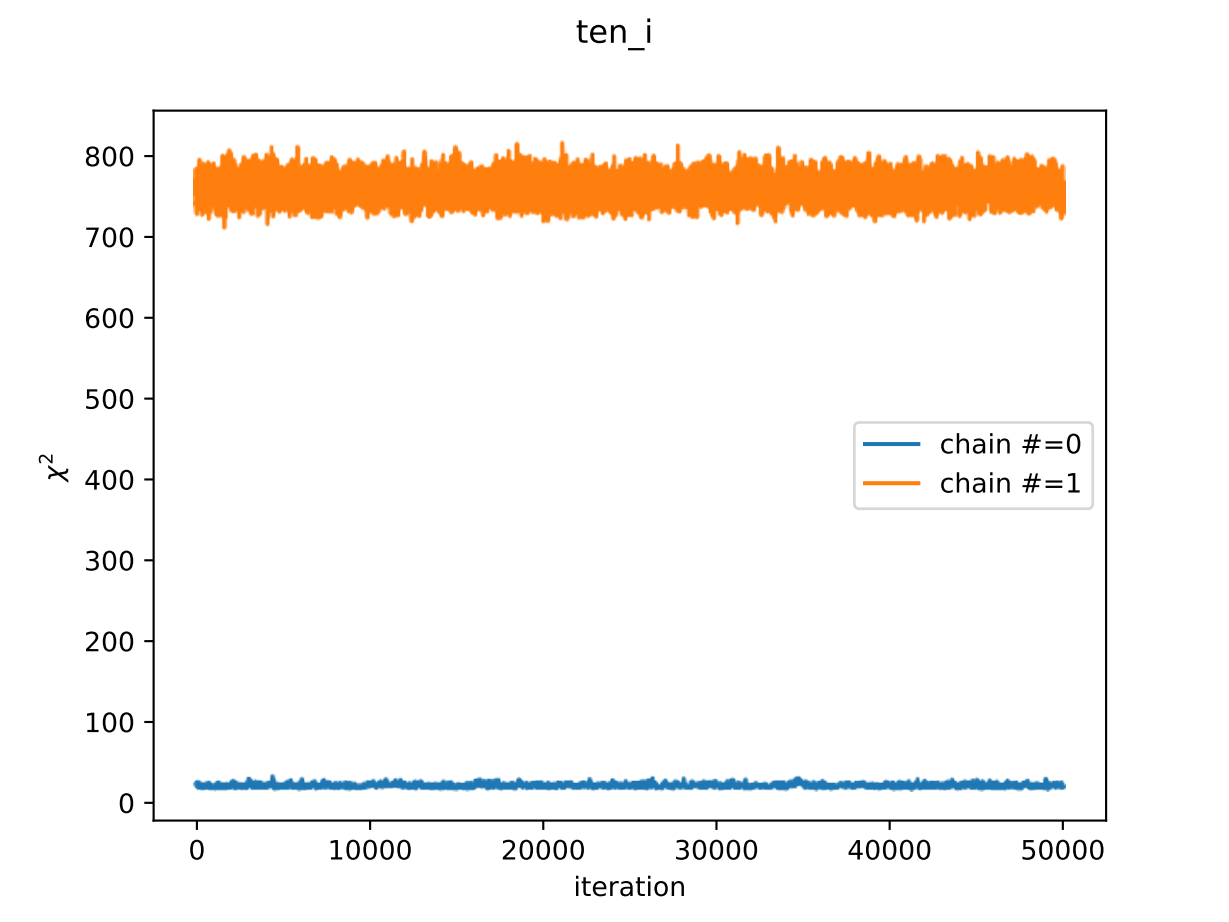

chain #=0
chain #=1
frequency
S0
4000
5000
6000
7000
8000
9000
0
2000
4000
6000
8000


chain #=0
chain #=1
frequency
V0
1e7
0.2
0.4
0.6
0.8
1.0
0
1000
2000
3000
4000
5000
6000
7000

ten_i




ten_i
frequency
16000
14000
12000
10000
8000
6000
4000
2000
0
0
100
200
300
400
500
600
700
800
χ^2
chain #=0
chain #=1


ten_i
800
700
600
500
400
300
200
100
0
χ^2
chain #=0
chain #=1
0
10000
20000
30000
40000
50000
iteration