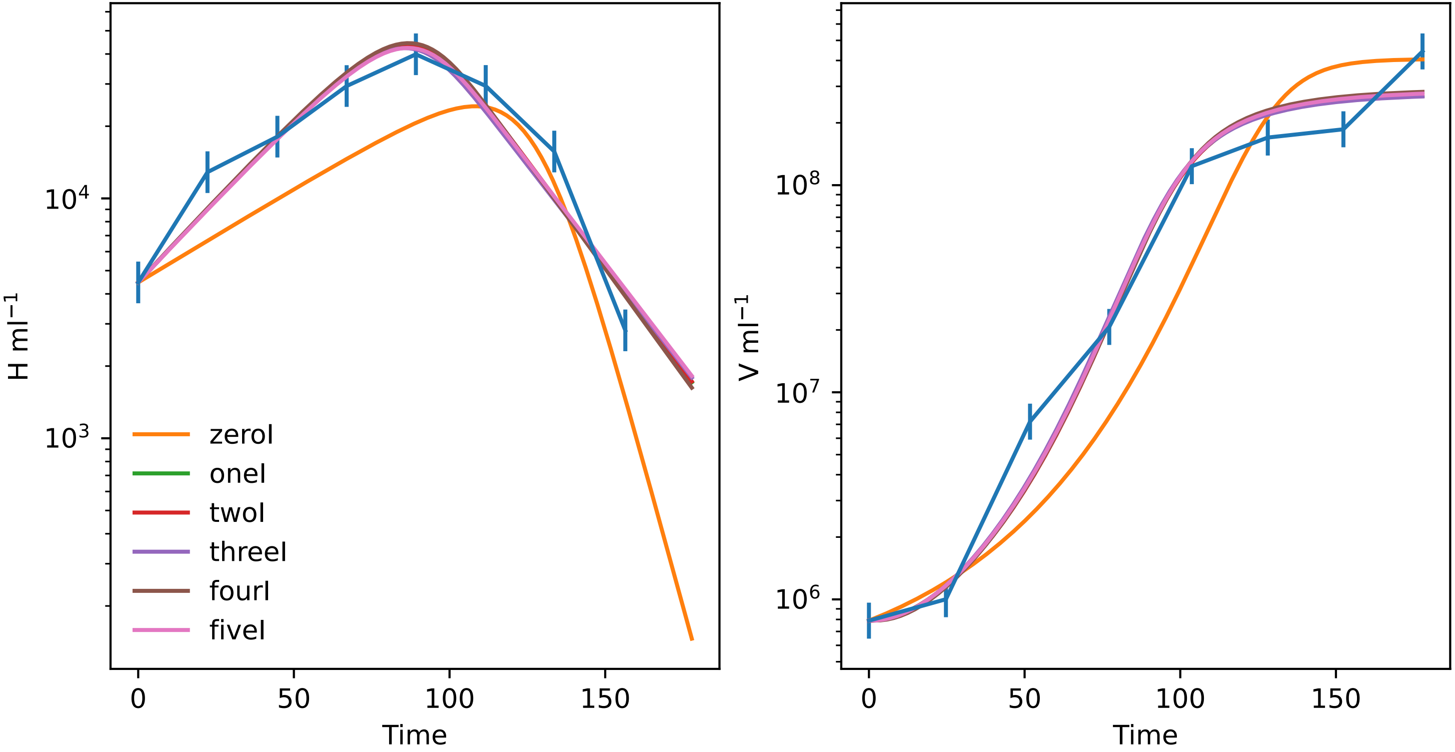
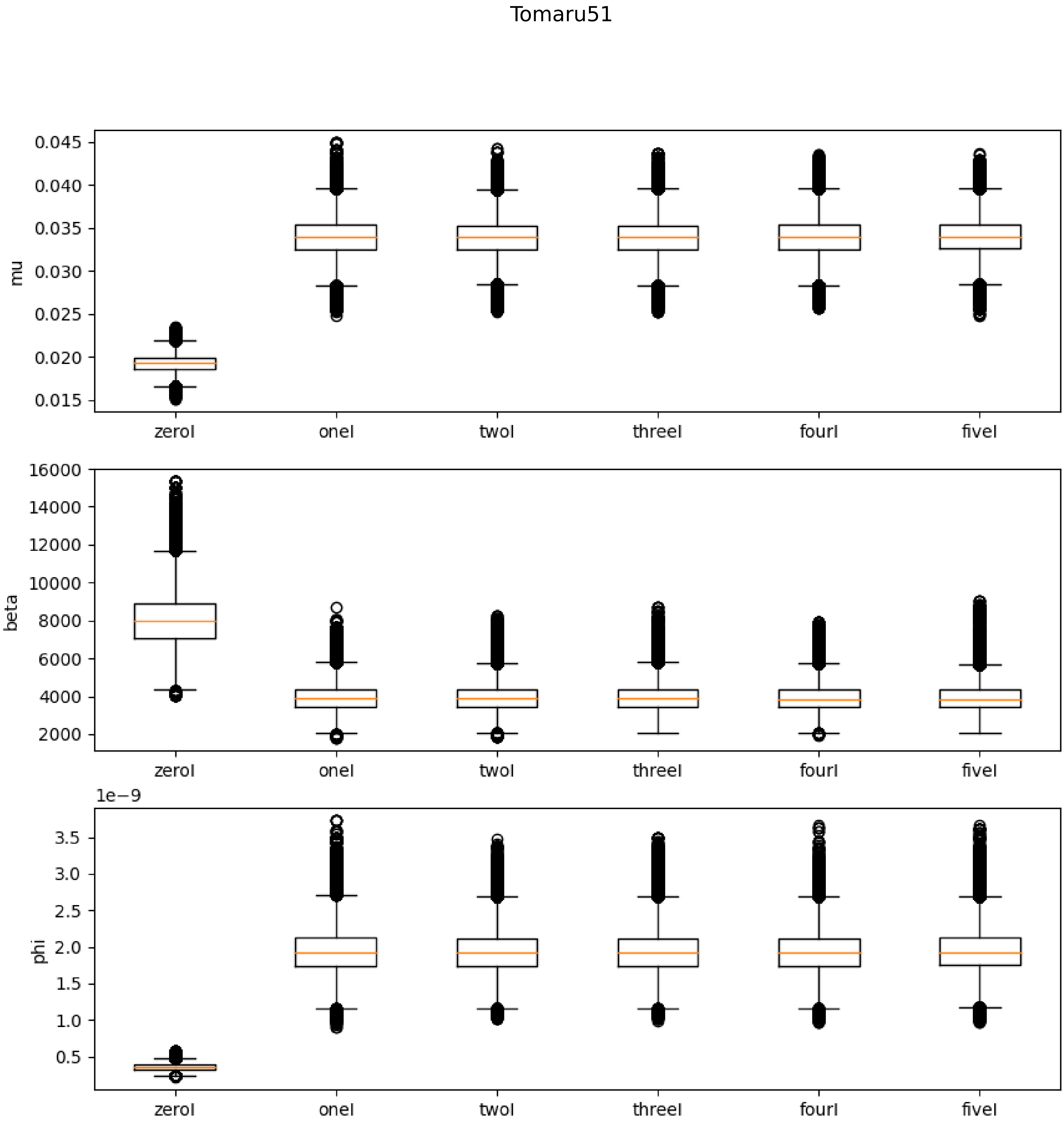
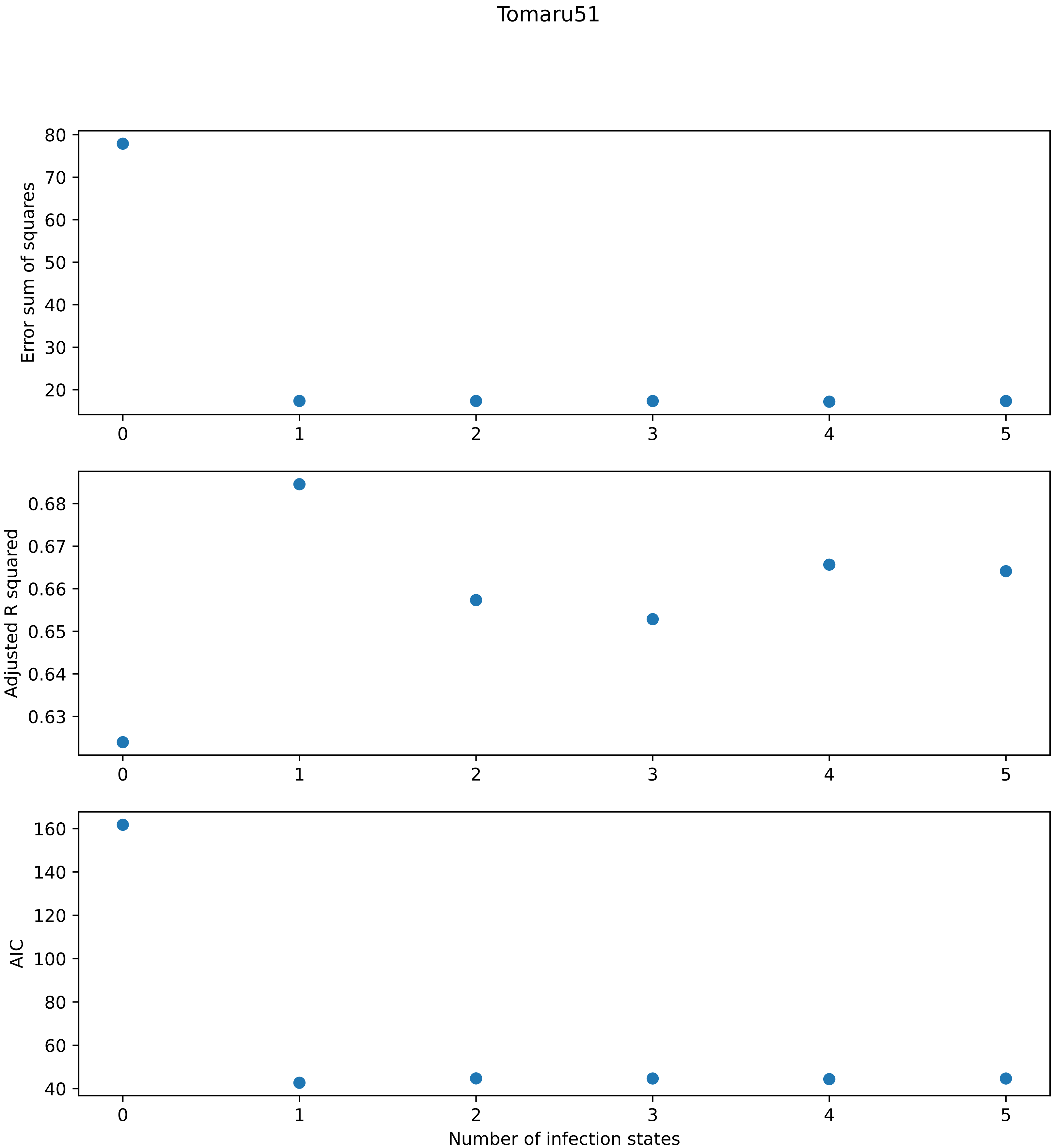
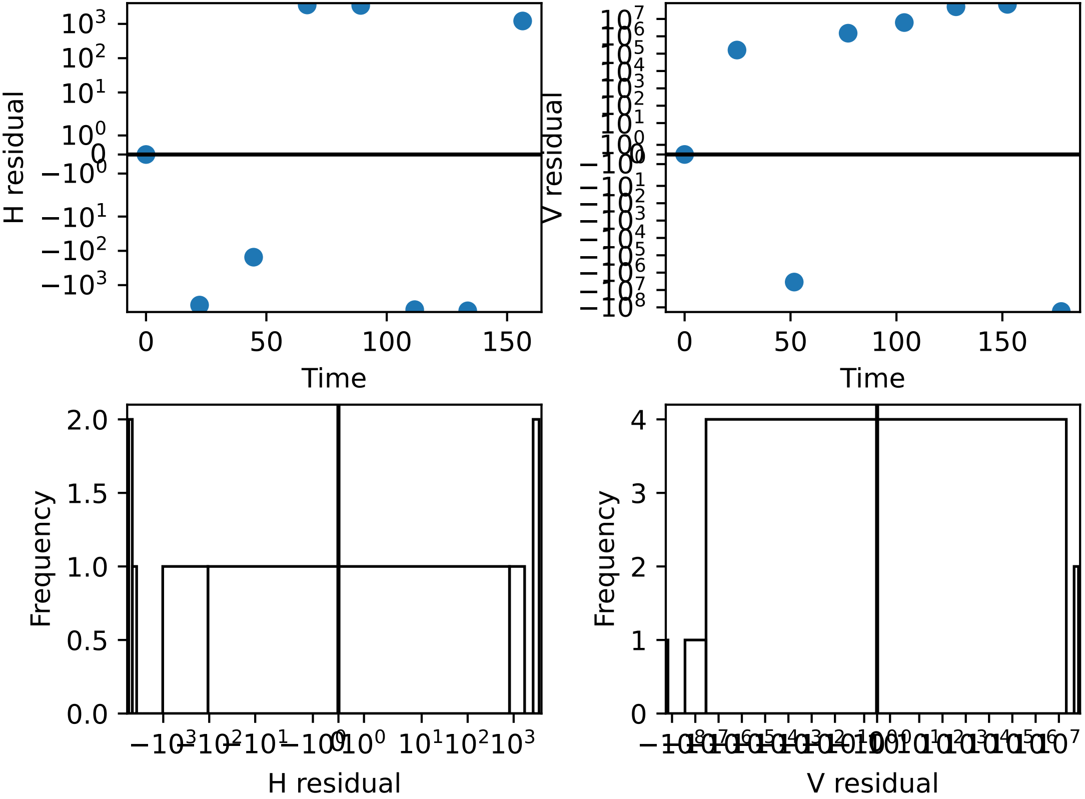
Tomaru51

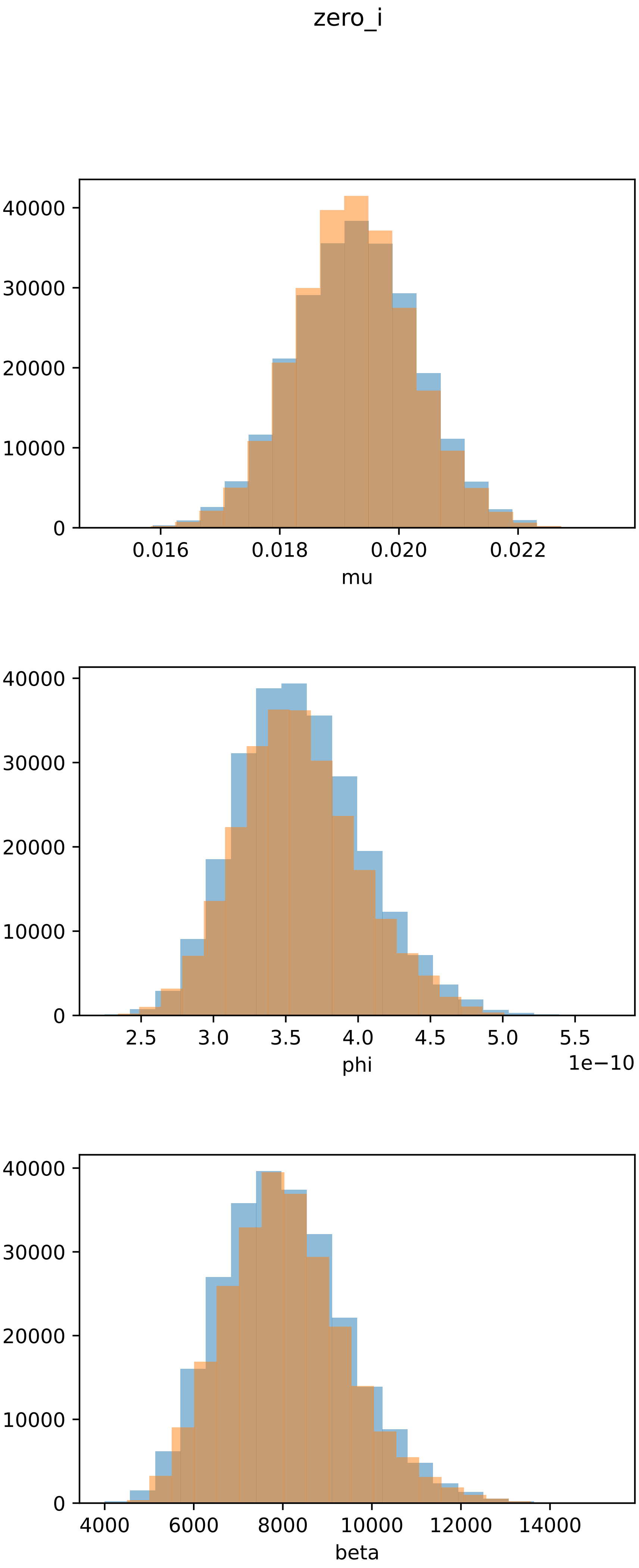

H ml⁻¹
10^4
10^3
0
50
100
150
Time
zeroI
oneI
twoI
threeI
fourI
fiveI
V ml⁻¹
10^8
10^7
10^6
0
50
100
150
Time

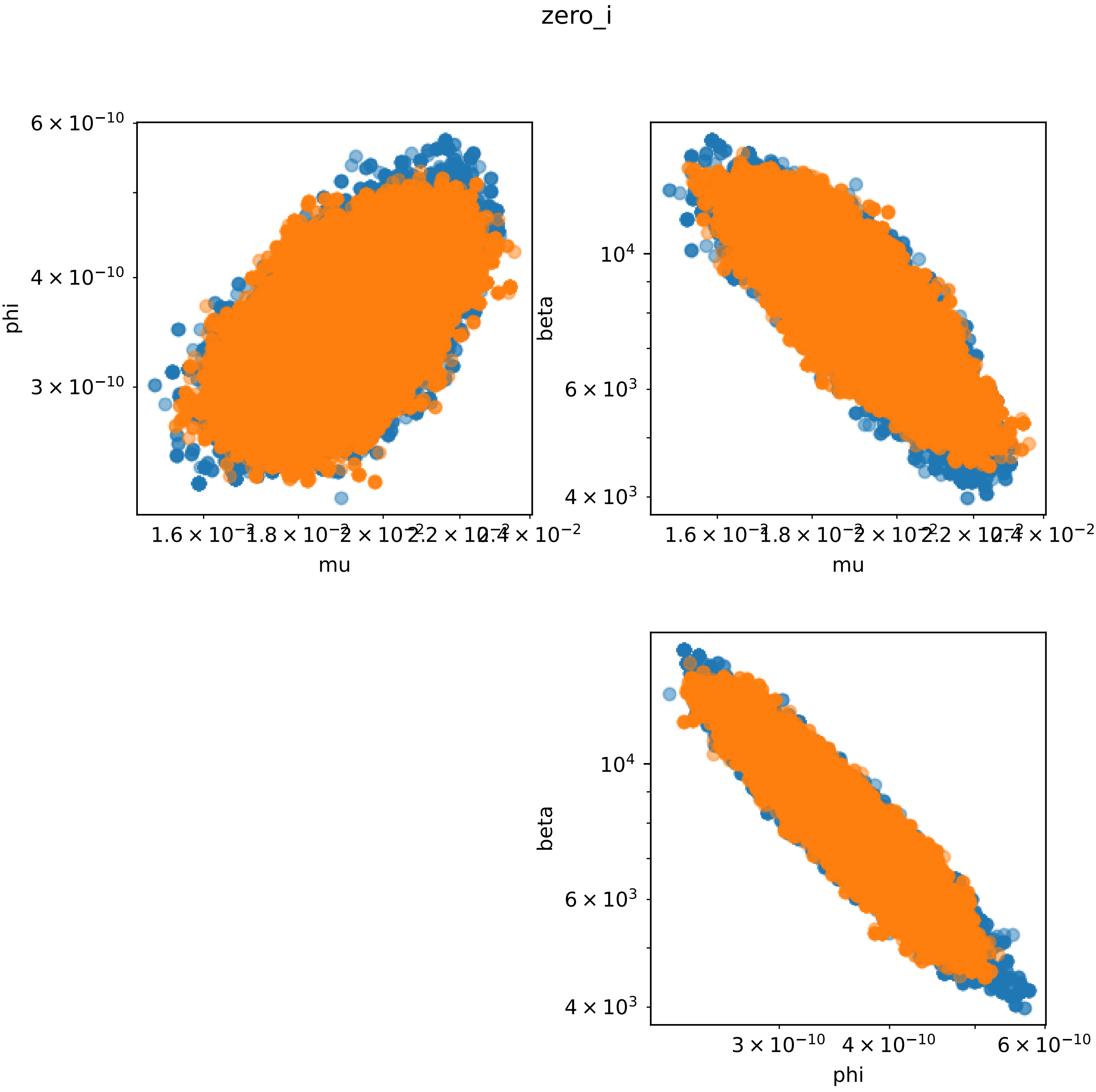

Tomaru51
mu
0.045
0.040
0.035
0.030
0.025
0.020
0.015
zeroI
oneI
twoI
threeI
fourI
fiveI
beta
16000
14000
12000
10000
8000
6000
4000
2000
zeroI
oneI
twoI
threeI
fourI
fiveI
1e−9
phi
3.5
3.0
2.5
2.0
1.5
1.0
0.5
zeroI
oneI
twoI
threeI
fourI
fiveI

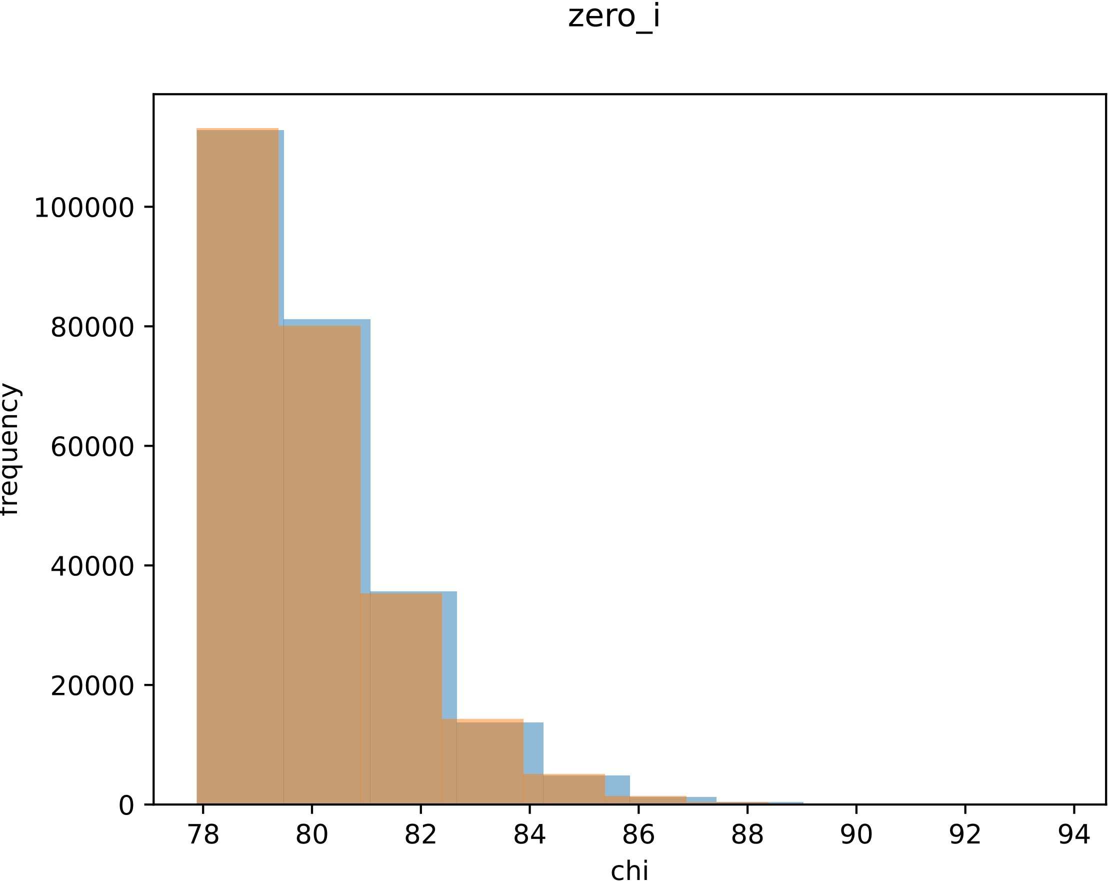

Tomaru51
Error sum of squares
80
70
60
50
40
30
20
0
1
2
3
4
5
Adjusted R squared
0.68
0.67
0.66
0.65
0.64
0.63
0
1
2
3
4
5
AIC
160
140
120
100
80
60
40
0
1
2
3
4
5
Number of infection states

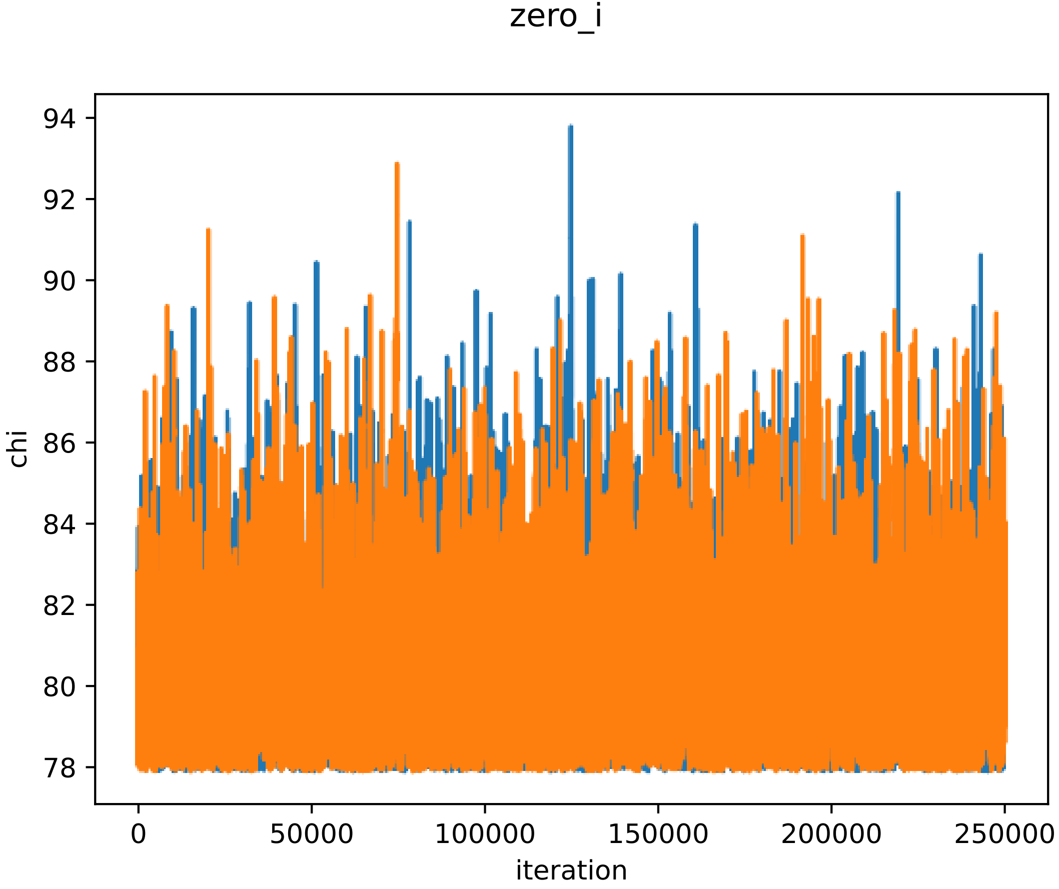
Residuals for model with lowest AIC

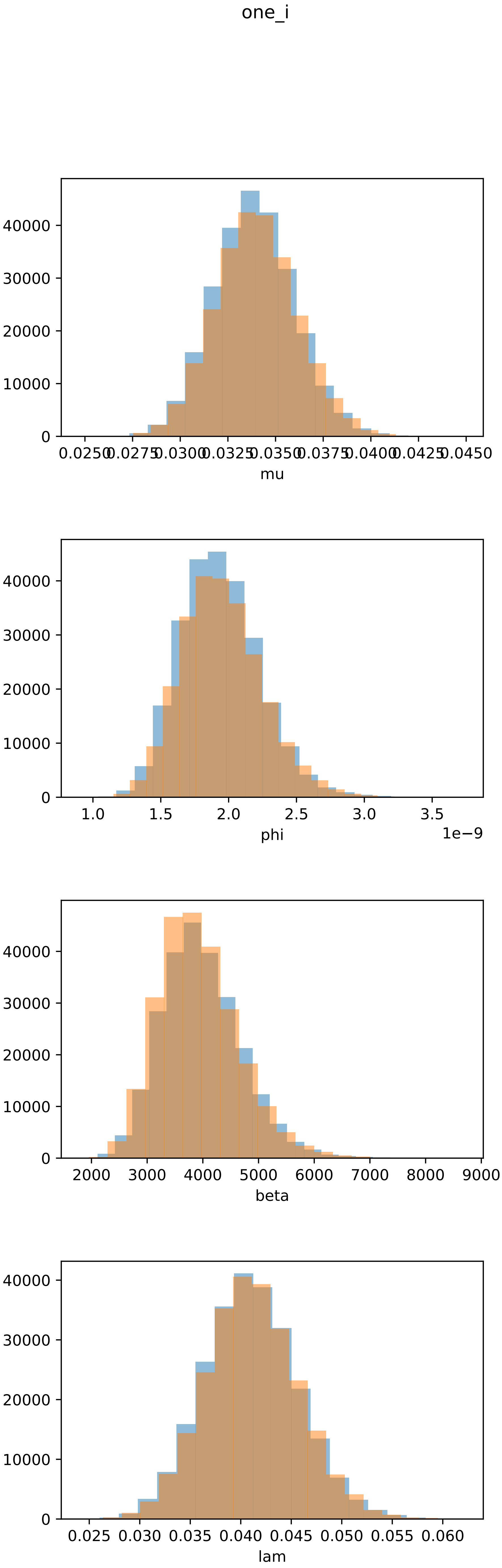



zero_i
40000
30000
20000
10000
0
0.016
0.018
0.020
0.022
mu
40000
30000
20000
10000
0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
1e−10
phi
40000
30000
20000
10000
0
4000
6000
8000
10000
12000
14000
beta

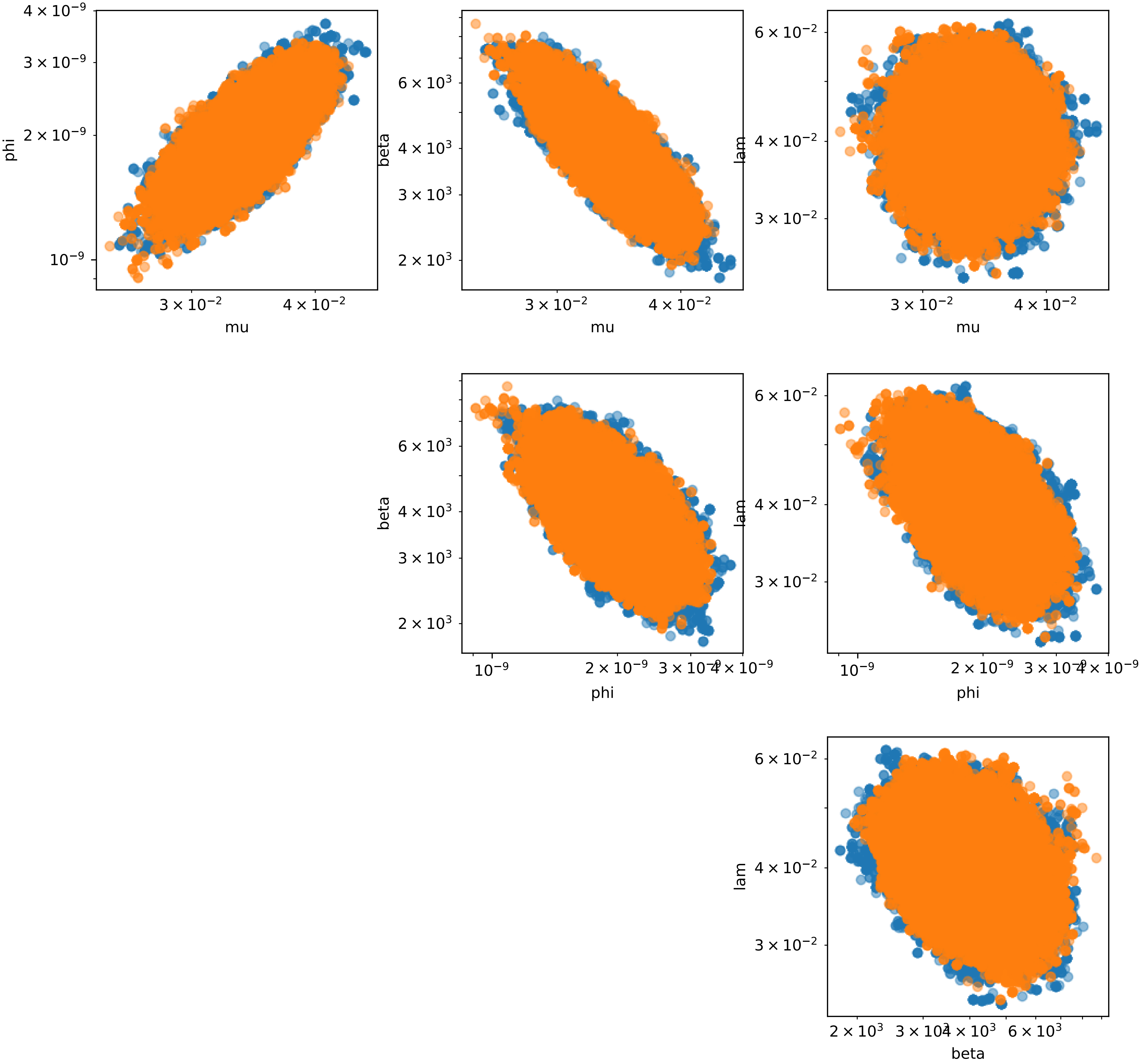

zero_i
phi
mu
6×10^{-10}
4×10^{-10}
3×10^{-10}
1.6×10^{-2}
1.8×10^{-2}
2×10^{-2}
2.2×10^{-2}
2.4×10^{-2}
beta
mu
10^4
6×10^3
4×10^3
1.6×10^{-2}
1.8×10^{-2}
2×10^{-2}
2.2×10^{-2}
2.4×10^{-2}
beta
phi
10^4
6×10^3
4×10^3
3×10^{-10}
4×10^{-10}
6×10^{-10}

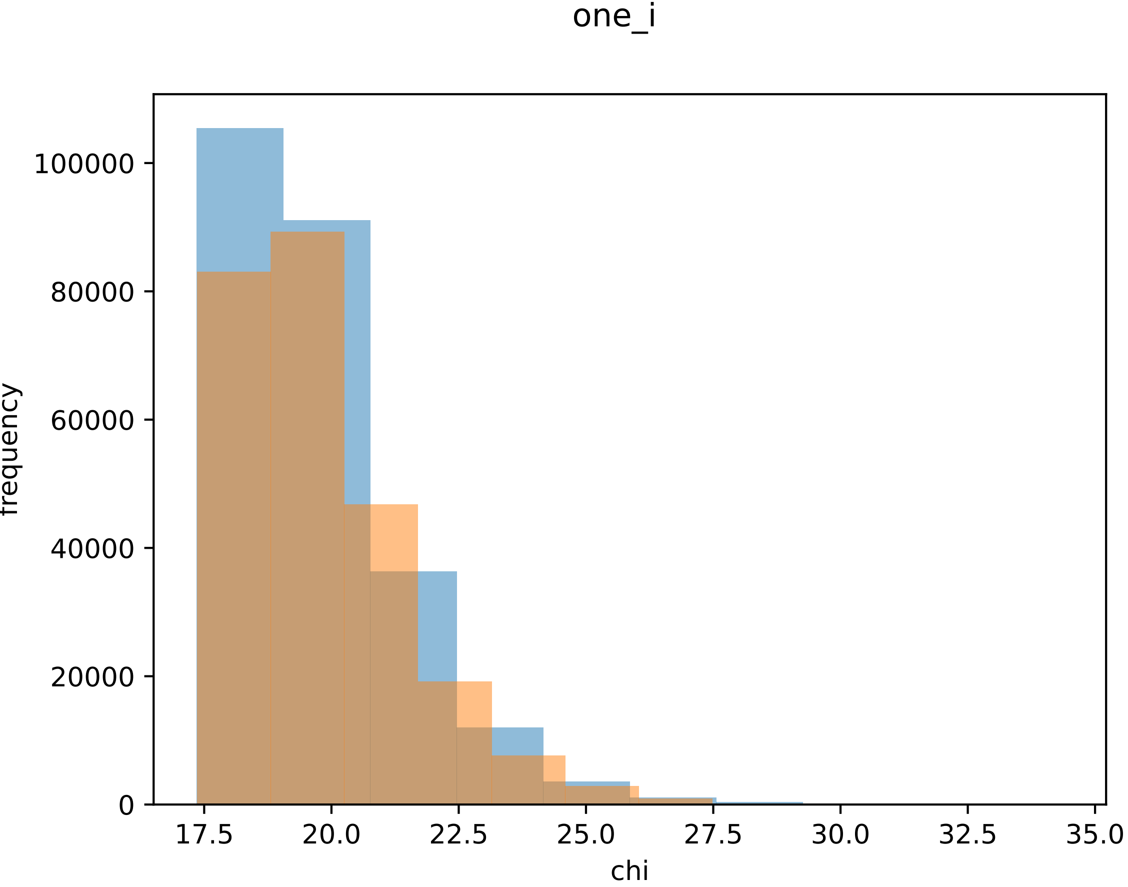

zero_i
frequency
100000
80000
60000
40000
20000
0
78
80
82
84
86
88
90
92
94
chi

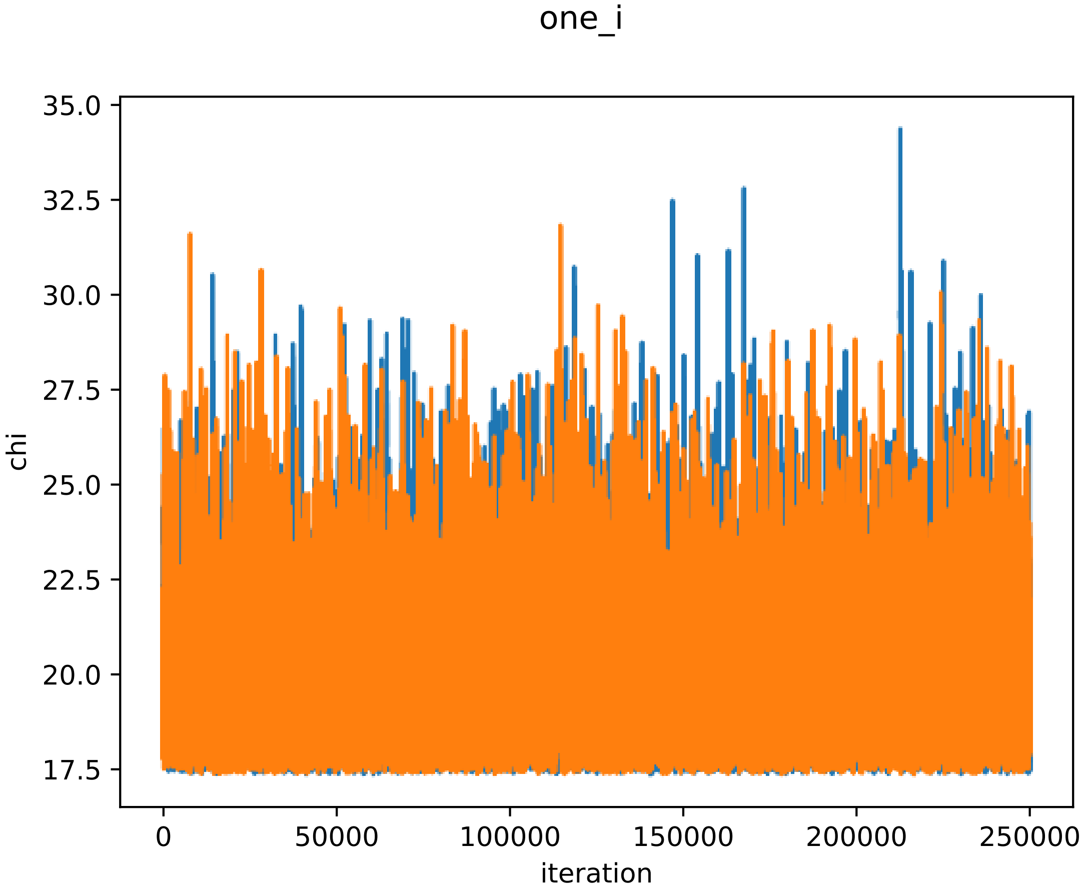

zero_i
chi
94
92
90
88
86
84
82
80
78
0
50000
100000
150000
200000
250000
iteration

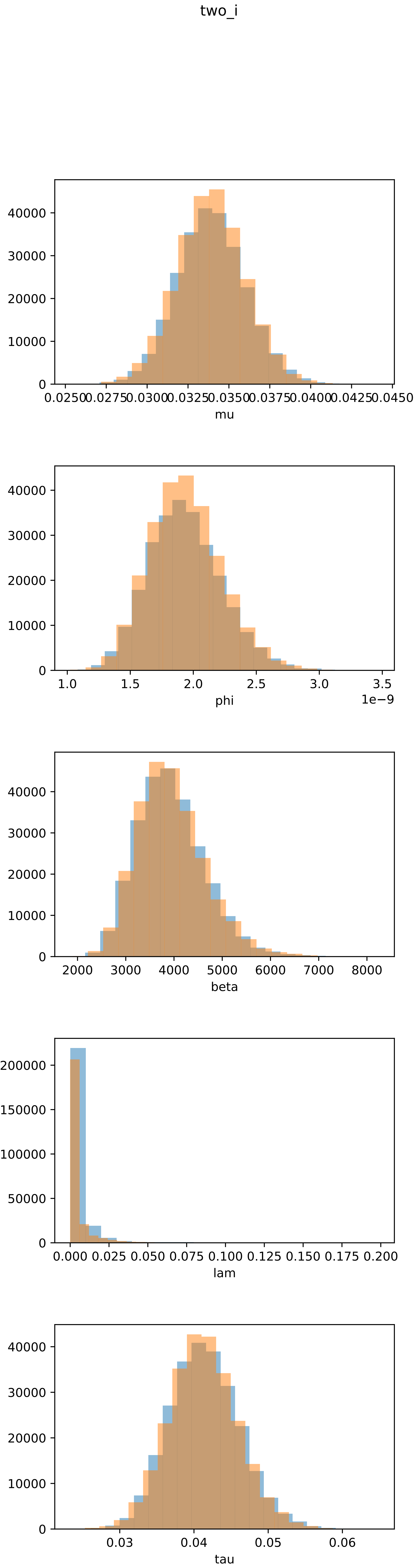

one_i
0
10000
20000
30000
40000
0.0250
0.0275
0.0300
0.0325
0.0350
0.0375
0.0400
0.0425
0.0450
mu
0
10000
20000
30000
40000
1.0
1.5
2.0
2.5
3.0
3.5
1e−9
phi
0
10000
20000
30000
40000
2000
3000
4000
5000
6000
7000
8000
9000
beta
0
10000
20000
30000
40000
0.025
0.030
0.035
0.040
0.045
0.050
0.055
0.060
lam

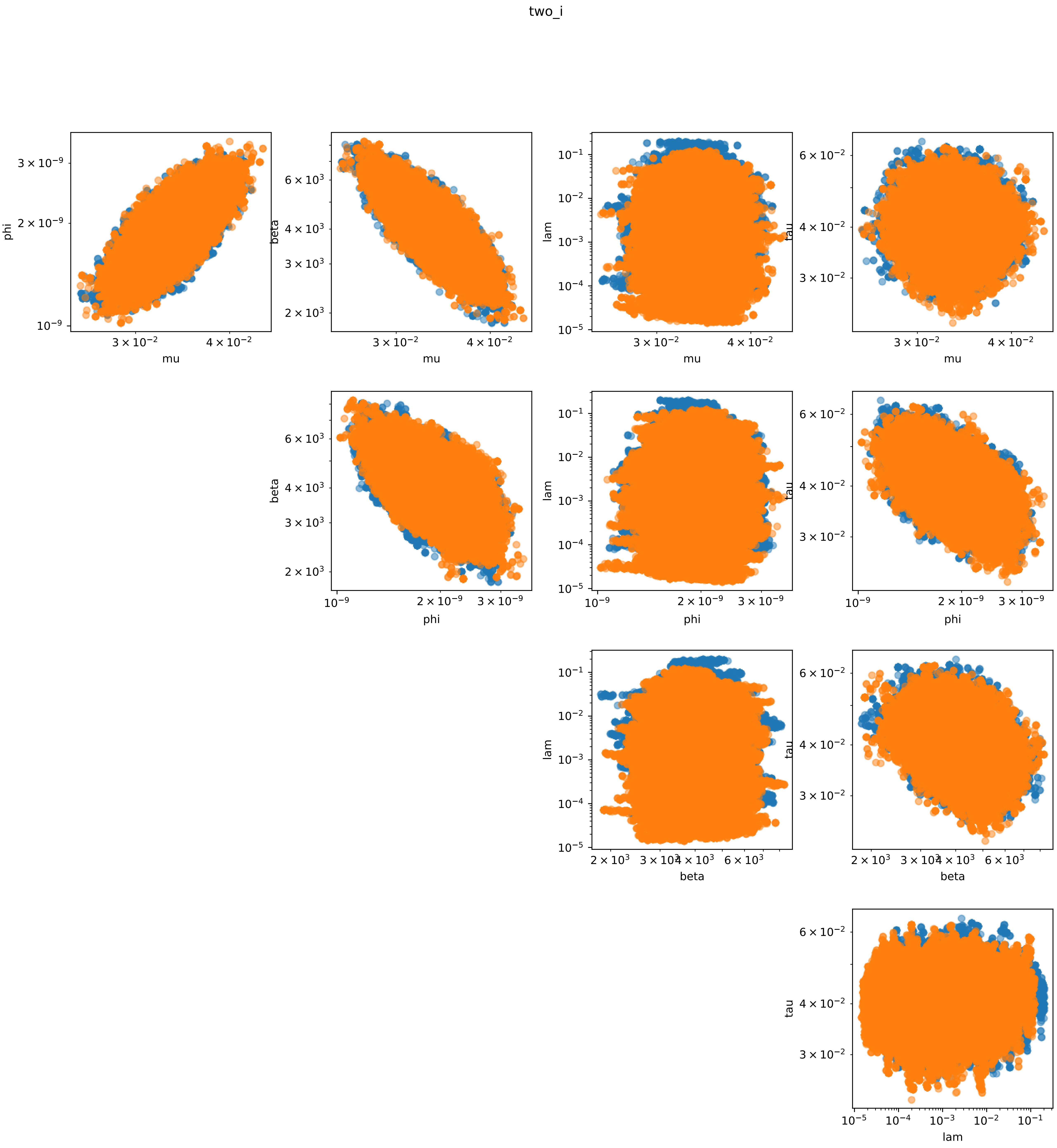
one_i

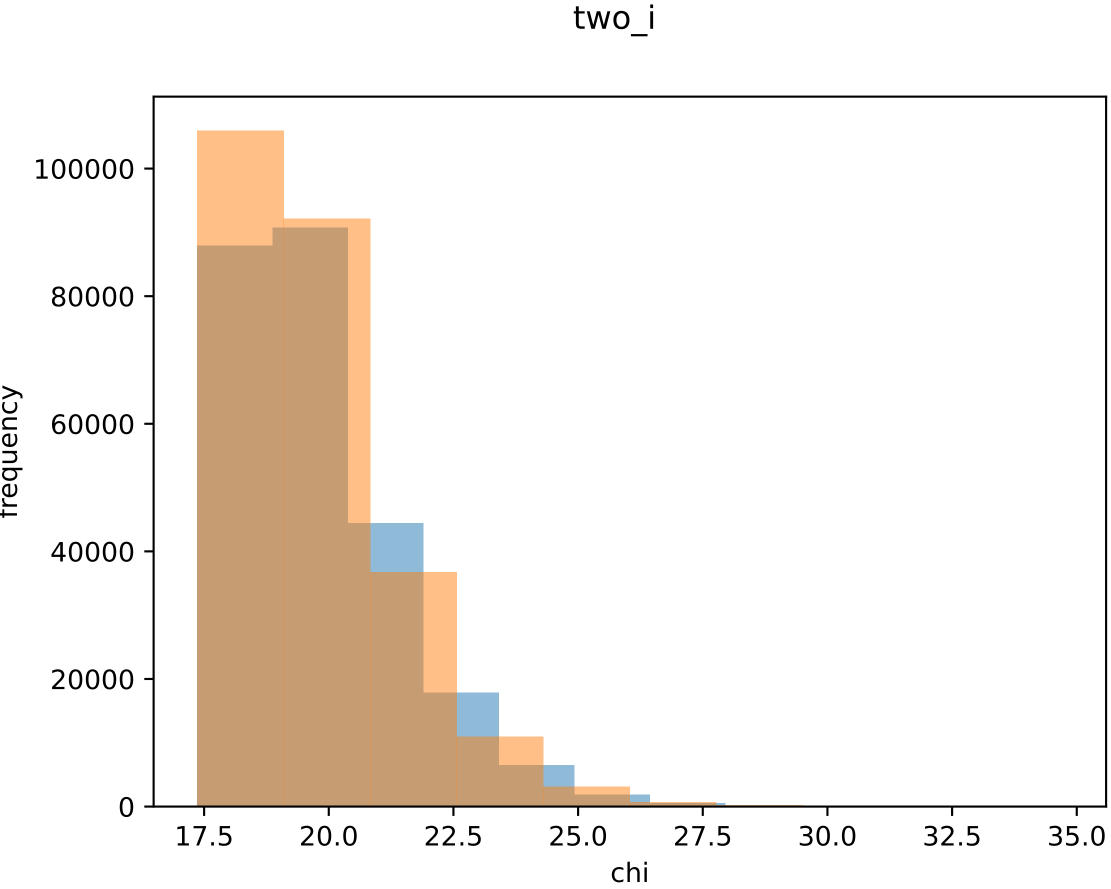

phi
4×10^{-9}
3×10^{-9}
2×10^{-9}
10^{-9}
mu
3×10^{-2}
4×10^{-2}
beta
6×10^{3}
4×10^{3}
3×10^{3}
2×10^{3}
lam
6×10^{-2}
4×10^{-2}
3×10^{-2}
phi
10^{-9}
2×10^{-9}
3×10^{-9}
4×10^{-9}
beta
2×10^{3}
3×10^{3}
4×10^{3}
6×10^{3}


one_i
frequency
100000
80000
60000
40000
20000
0
17.5
20.0
22.5
25.0
27.5
30.0
32.5
35.0
chi

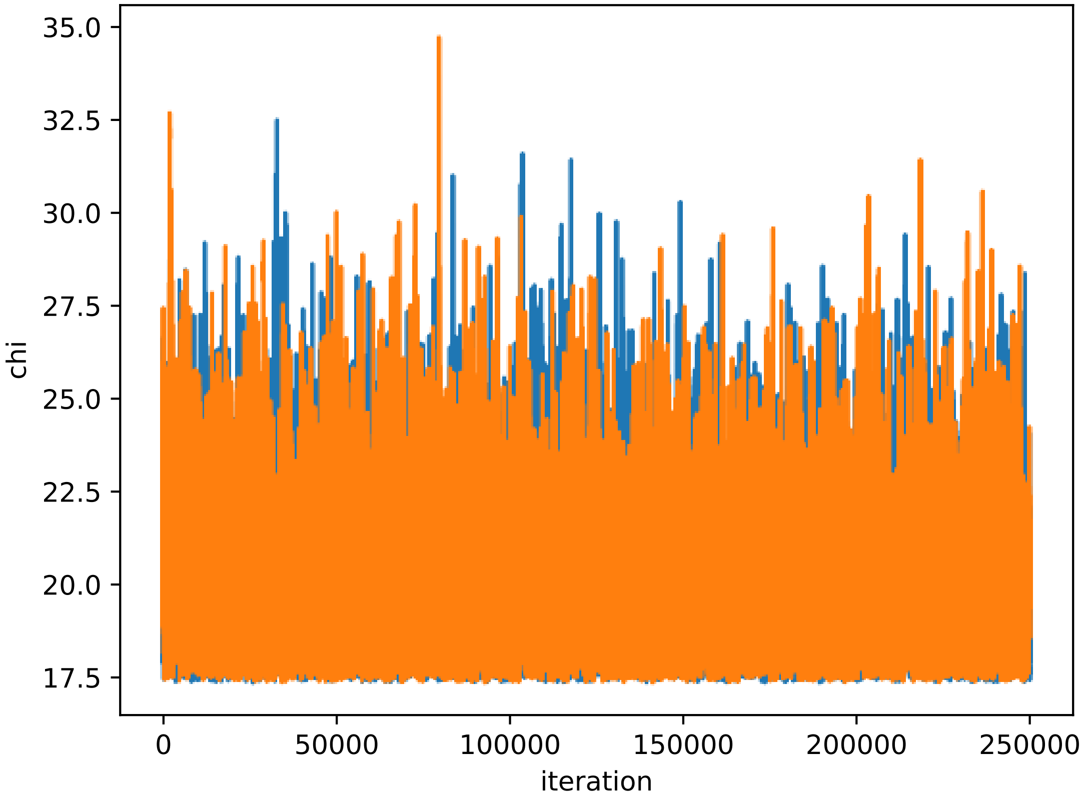

one_i
chi
35.0
32.5
30.0
27.5
25.0
22.5
20.0
17.5
0
50000
100000
150000
200000
250000
iteration


two_i
40000
30000
20000
10000
0
0.0250
0.0275
0.0300
0.0325
0.0350
0.0375
0.0400
0.0425
0.0450
mu
40000
30000
20000
10000
0
1.0
1.5
2.0
2.5
3.0
3.5
1e−9
phi
40000
30000
20000
10000
0
2000
3000
4000
5000
6000
7000
8000
beta
200000
150000
100000
50000
0
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
lam
40000
30000
20000
10000
0
0.03
0.04
0.05
0.06
tau


two_i
phi
3×10^{-9}
2×10^{-9}
10^{-9}
beta
6×10^{3}
4×10^{3}
3×10^{3}
2×10^{3}
lam
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
tau
6×10^{-2}
4×10^{-2}
3×10^{-2}
mu
3×10^{-2}
4×10^{-2}
phi
10^{-9}
2×10^{-9}
3×10^{-9}
beta
2×10^{3}
3×10^{3}
4×10^{3}
6×10^{3}
lam
10^{-5}
10^{-4}
10^{-3}
10^{-2}
10^{-1}

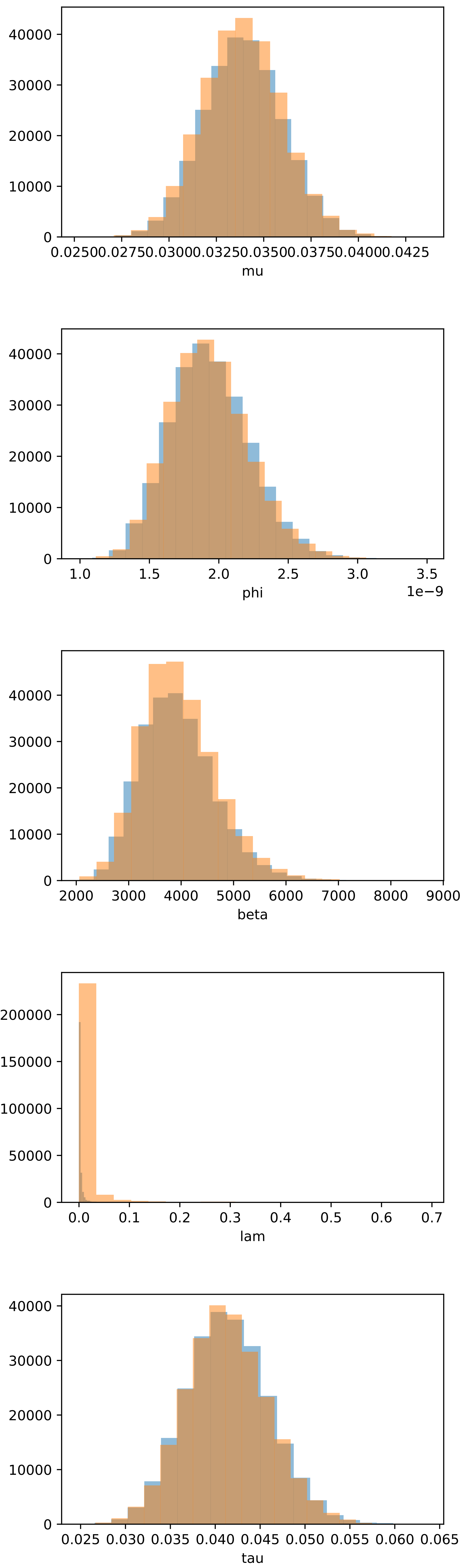

two_i
100000
80000
60000
40000
20000
0
frequency
17.5
20.0
22.5
25.0
27.5
30.0
32.5
35.0
chi

two_i



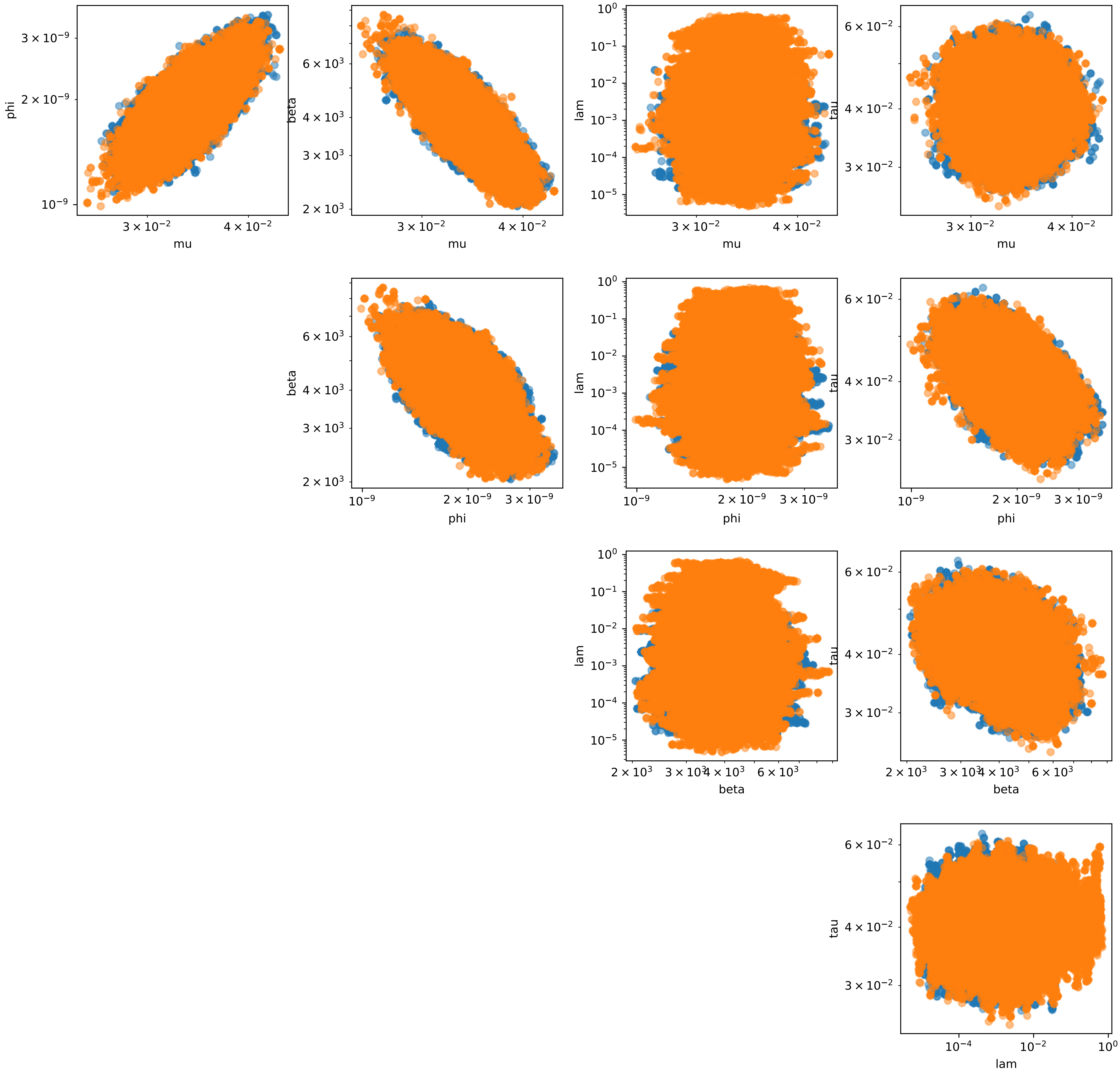
chi
35.0
32.5
30.0
27.5
25.0
22.5
20.0
17.5
0
50000
100000
150000
200000
250000
iteration

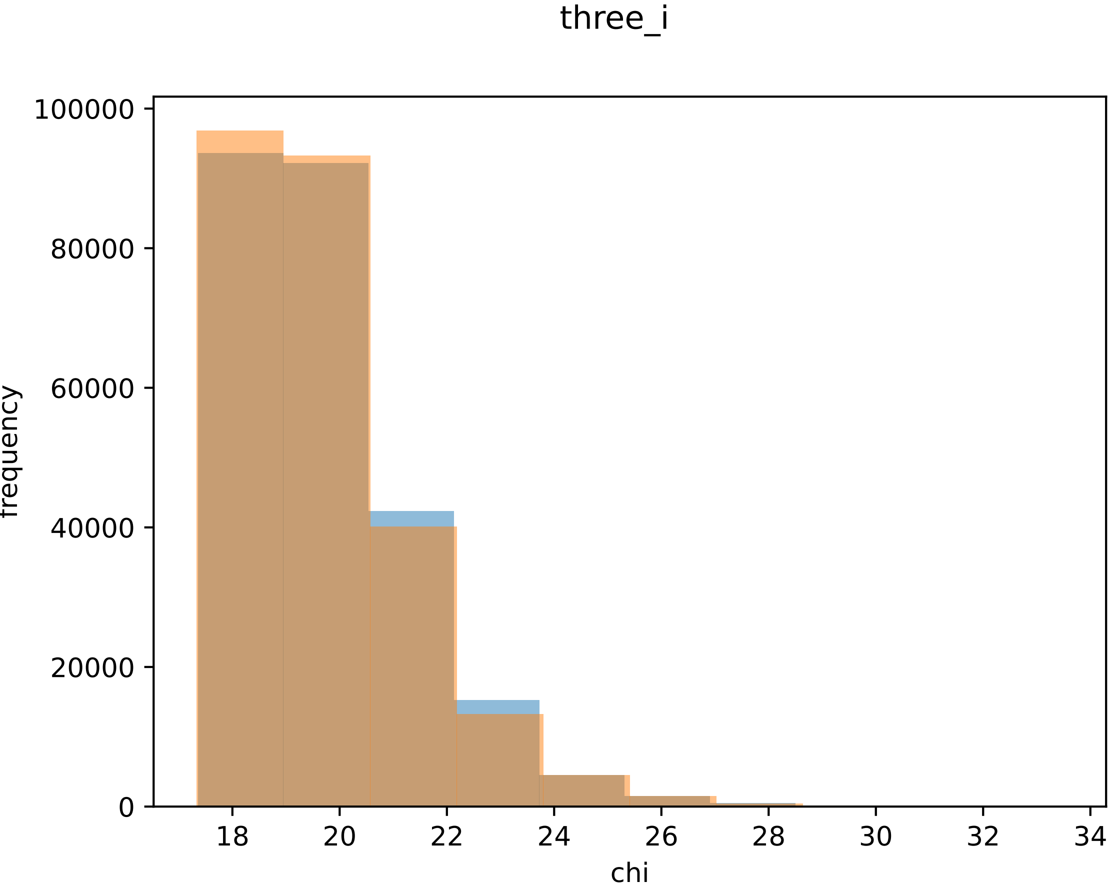
three_i

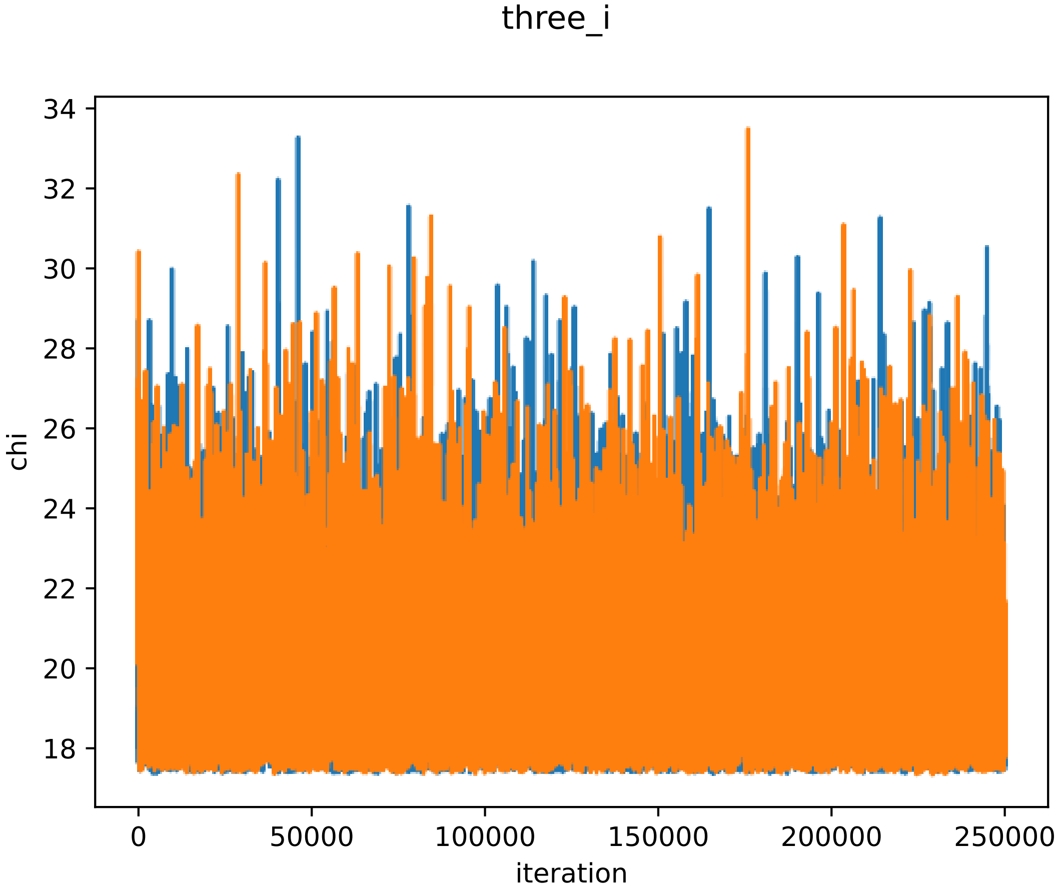


40000
30000
20000
10000
0
0.02500.02750.03000.03250.03500.03750.04000.0425
mu
40000
30000
20000
10000
0
1.0
1.5
2.0
2.5
3.0
3.5
1e−9
phi
40000
30000
20000
10000
0
2000
3000
4000
5000
6000
7000
8000
9000
beta
200000
150000
100000
50000
0
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
lam
40000
30000
20000
10000
0
0.025
0.030
0.035
0.040
0.045
0.050
0.055
0.060
0.065
tau

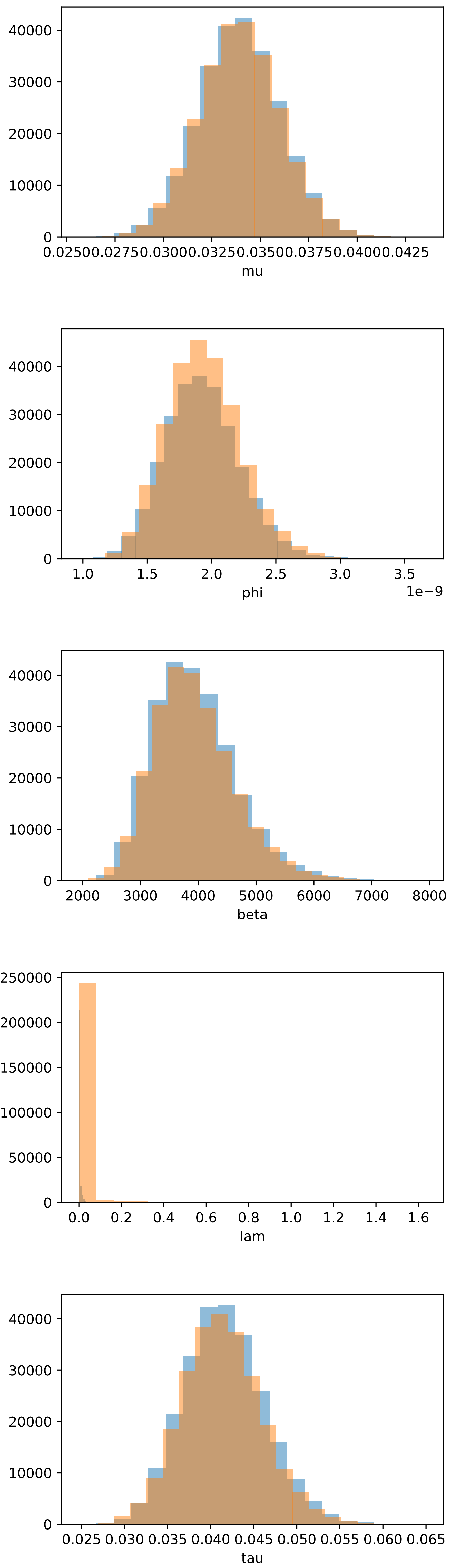
three_i

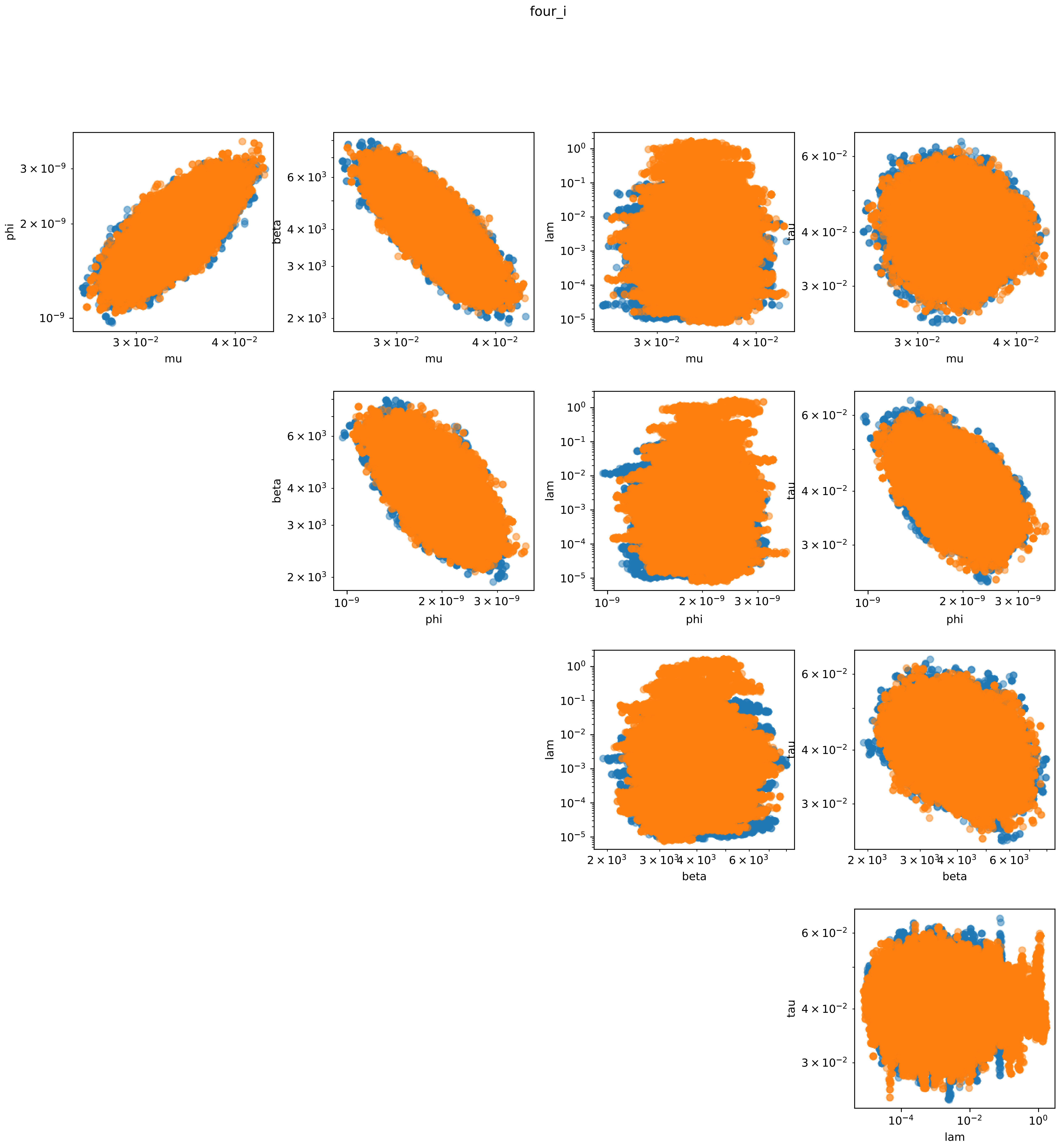

phi
beta
lam
tau
mu
3×10^{-9}
2×10^{-9}
10^{-9}
3×10^{-2}
4×10^{-2}
6×10^{3}
4×10^{3}
3×10^{3}
2×10^{3}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
6×10^{-2}
4×10^{-2}
3×10^{-2}
10^{-4}
10^{-2}
10^{0}

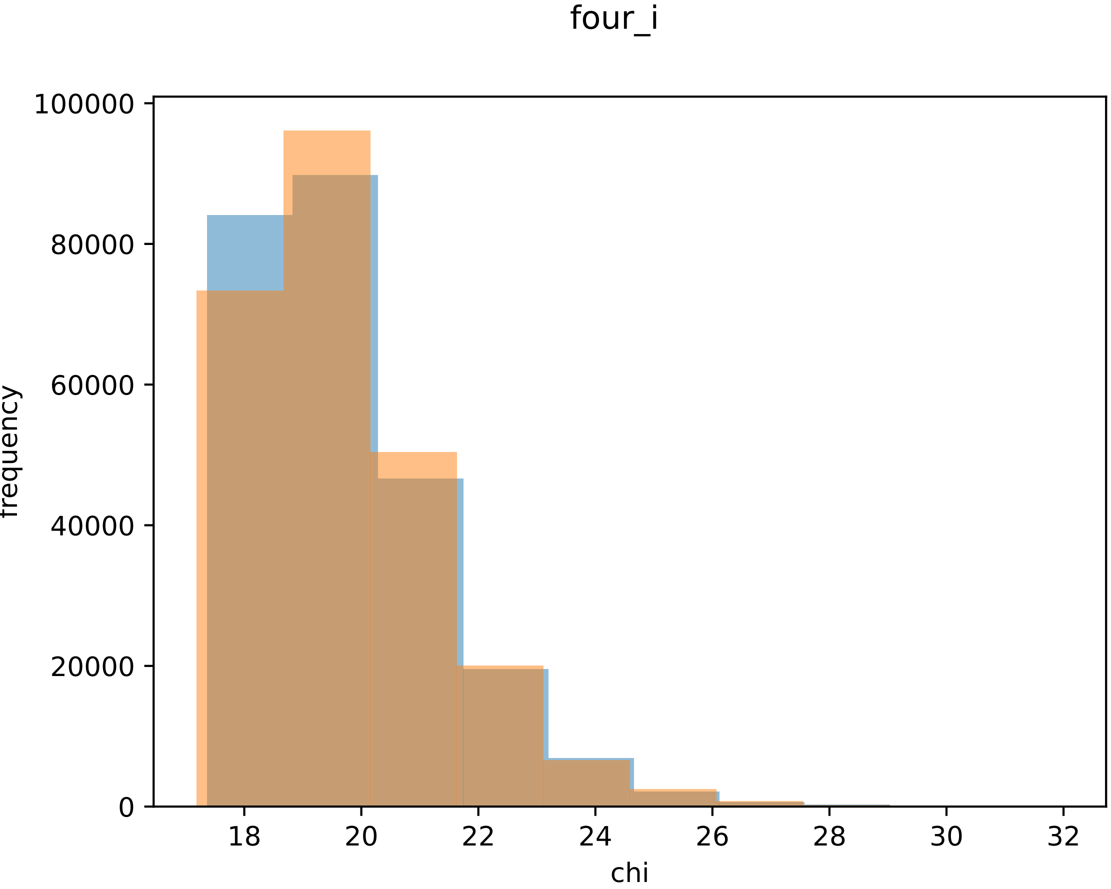

three_i
frequency
100000
80000
60000
40000
20000
0
18
20
22
24
26
28
30
32
34
chi

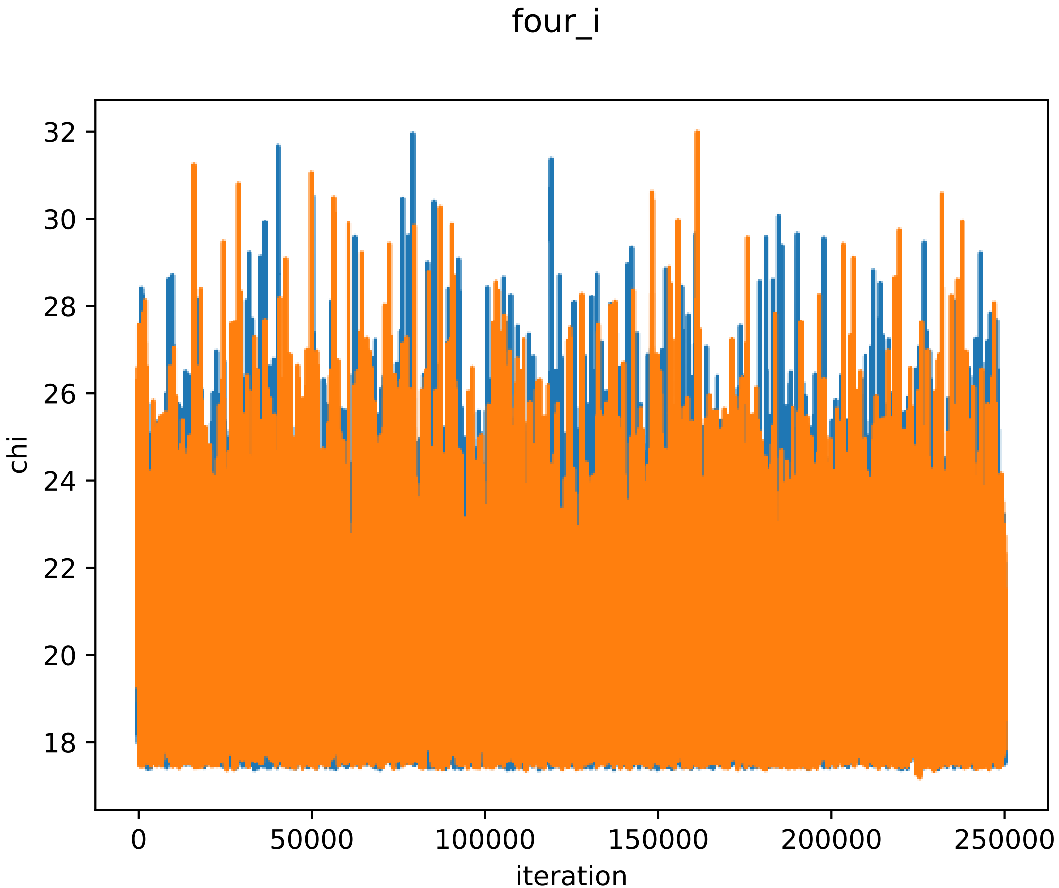

three_i
chi
iteration
34
32
30
28
26
24
22
20
18
0
50000
100000
150000
200000
250000

four_i

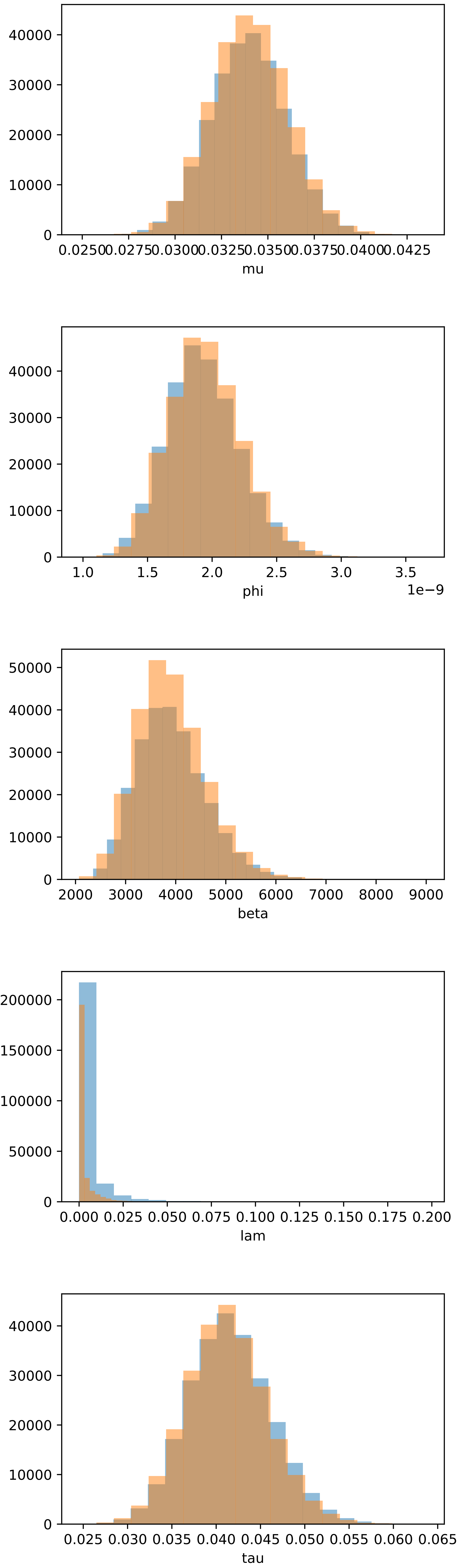

0
10000
20000
30000
40000
0.02500.02750.03000.03250.03500.03750.04000.0425
mu
0
10000
20000
30000
40000
1.0
1.5
2.0
2.5
3.0
3.5
1e−9
phi
0
10000
20000
30000
40000
2000
3000
4000
5000
6000
7000
8000
beta
0
50000
100000
150000
200000
250000
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
lam
0
10000
20000
30000
40000
0.025
0.030
0.035
0.040
0.045
0.050
0.055
0.060
0.065
tau


four_i
phi
beta
lam
tau
mu
phi
beta
lam
3×10^{-9}
2×10^{-9}
10^{-9}
6×10^{3}
4×10^{3}
3×10^{3}
2×10^{3}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
6×10^{-2}
4×10^{-2}
3×10^{-2}
4×10^{-2}

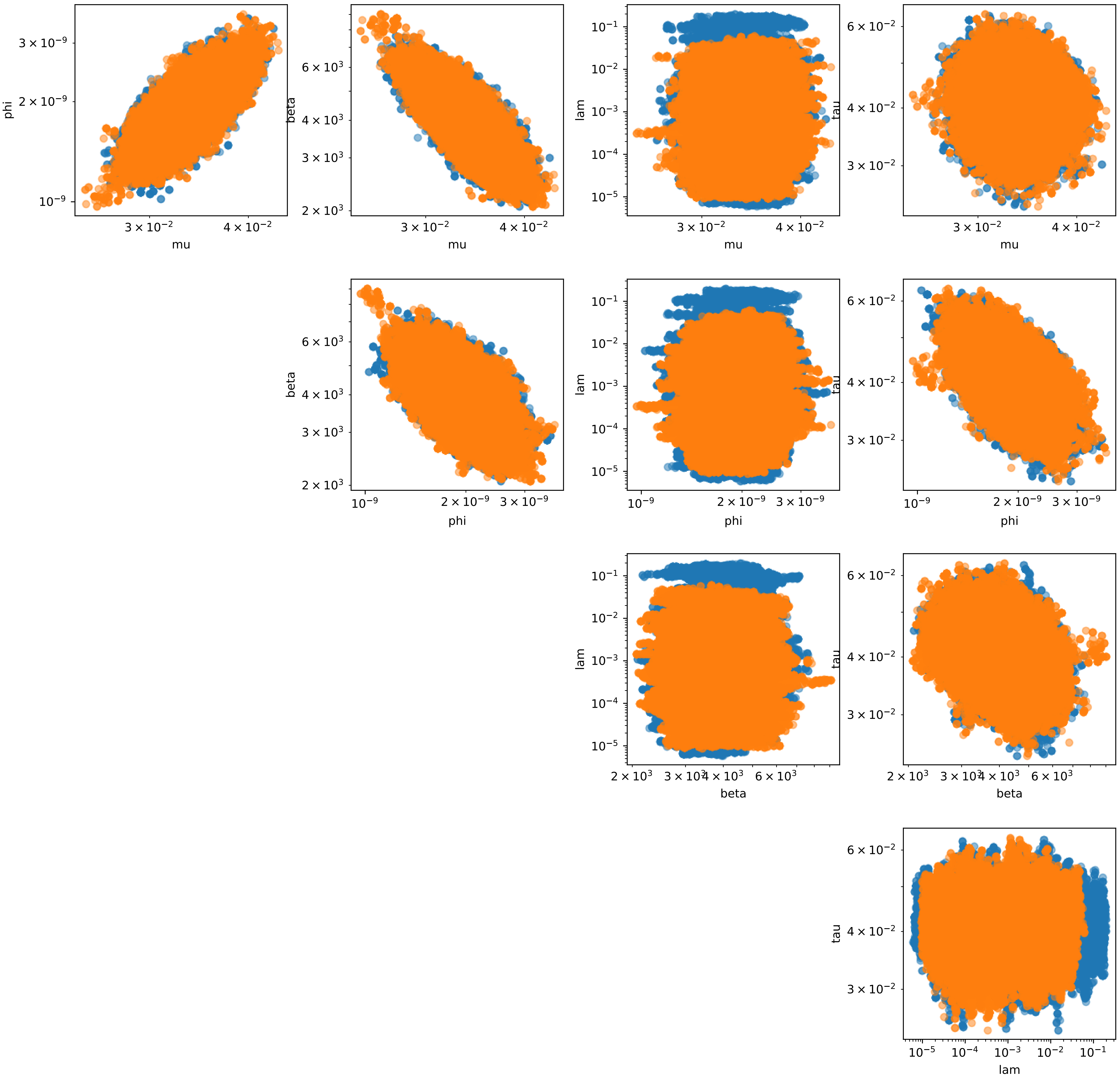

four_i
100000
80000
60000
40000
20000
0
18
20
22
24
26
28
30
32
chi
frequency


four_i
chi
32
30
28
26
24
22
20
18
0
50000
100000
150000
200000
250000
iteration

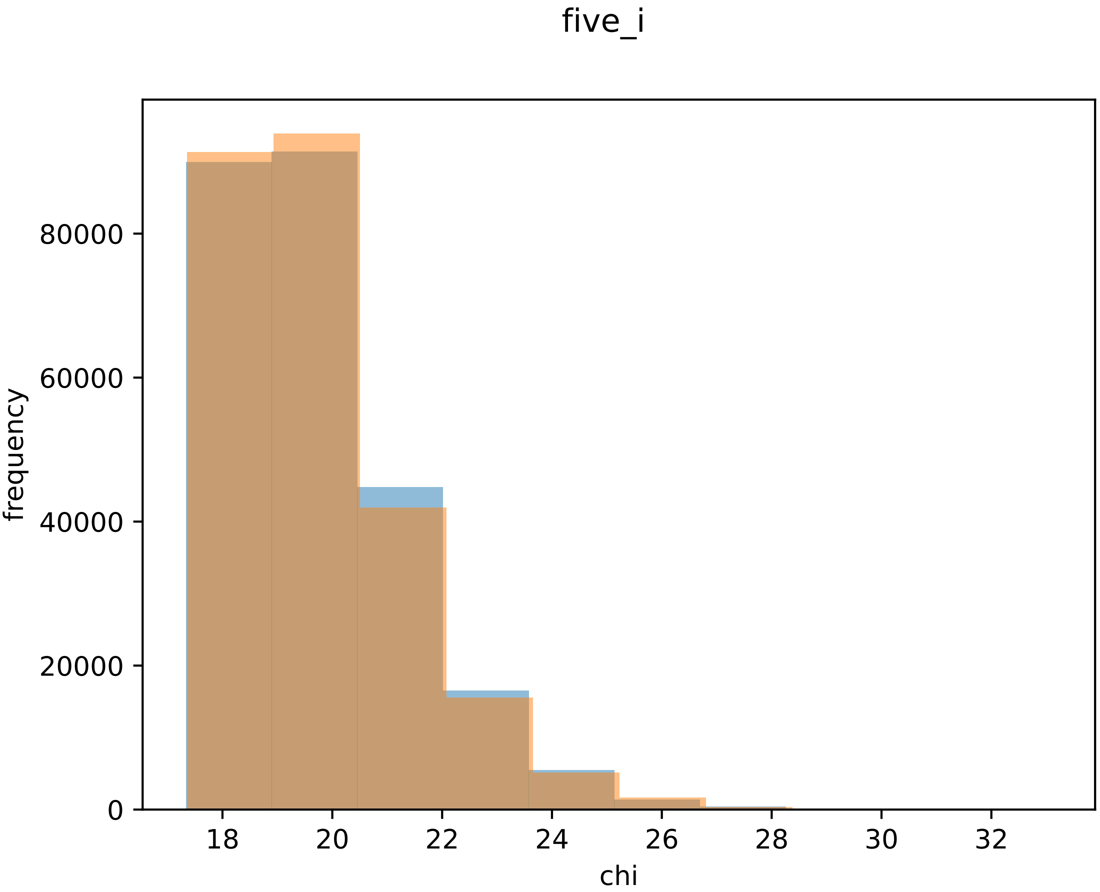
five_i

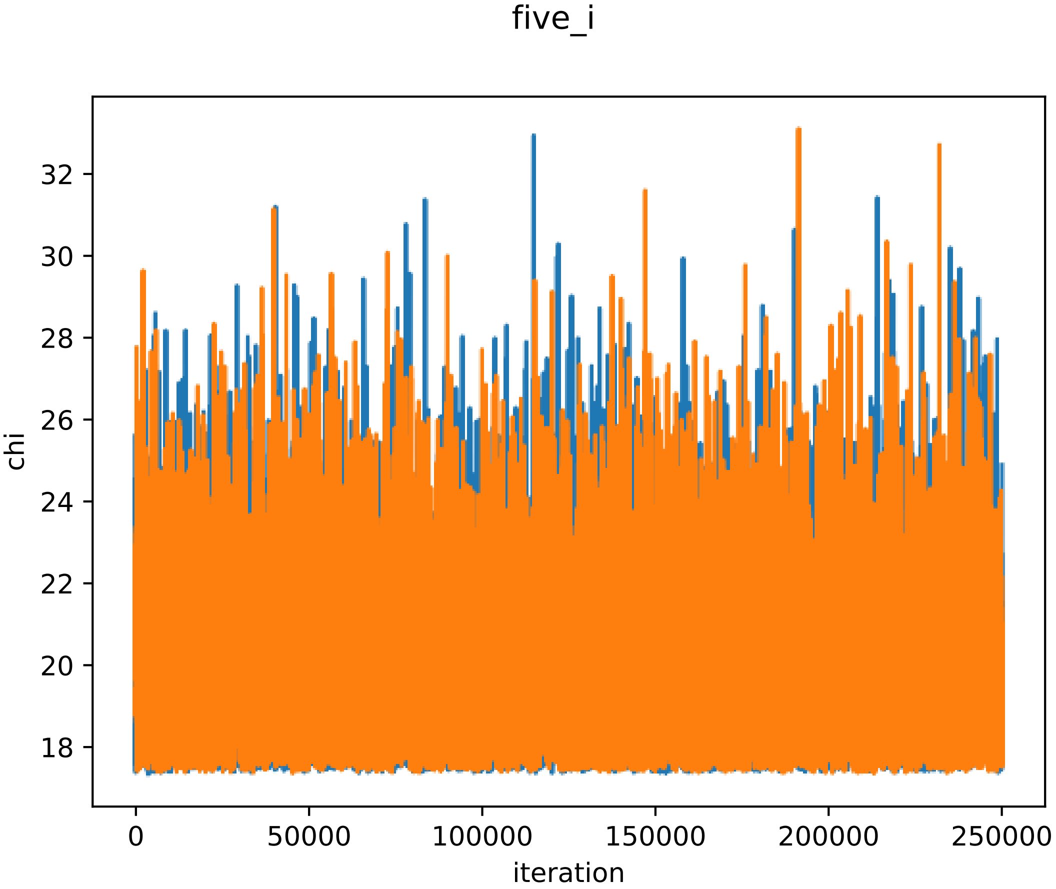

40000
30000
20000
10000
0
0.0250
0.0275
0.0300
0.0325
0.0350
0.0375
0.0400
0.0425
mu
40000
30000
20000
10000
0
1.0
1.5
2.0
2.5
3.0
3.5
1e−9
phi
50000
40000
30000
20000
10000
0
2000
3000
4000
5000
6000
7000
8000
9000
beta
200000
150000
100000
50000
0
0.000
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
lam
40000
30000
20000
10000
0
0.025
0.030
0.035
0.040
0.045
0.050
0.055
0.060
0.065
tau

five_i



mu
phi
beta
lam
tau
3×10^{-9}
2×10^{-9}
10^{-9}
3×10^{-2}
4×10^{-2}
6×10^{3}
4×10^{3}
3×10^{3}
2×10^{3}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
6×10^{-2}
4×10^{-2}
3×10^{-2}


five_i
frequency
80000
60000
40000
20000
0
18
20
22
24
26
28
30
32
chi


five_i
chi
iteration
18
20
22
24
26
28
30
32
0
50000
100000
150000
200000
250000