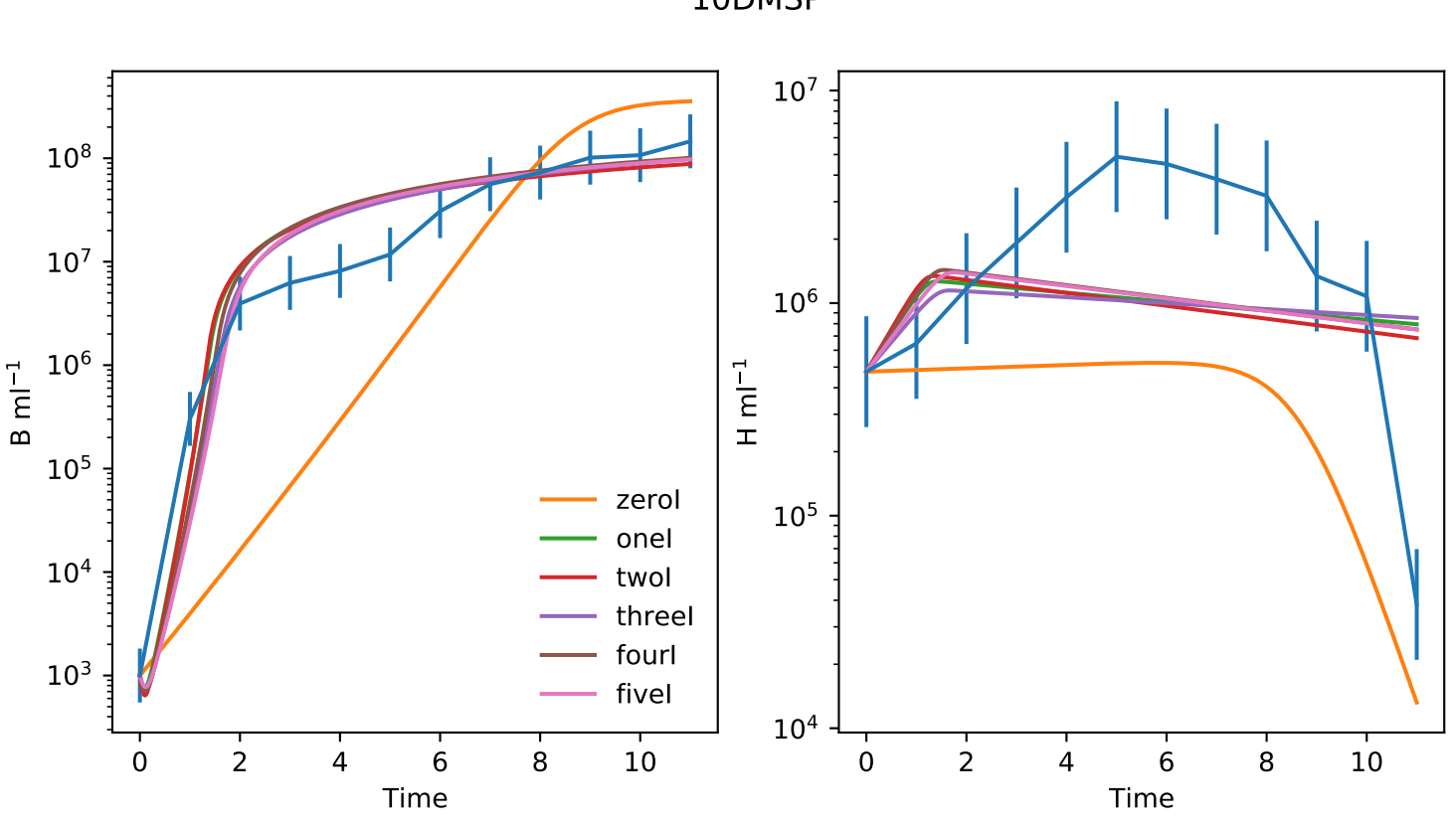
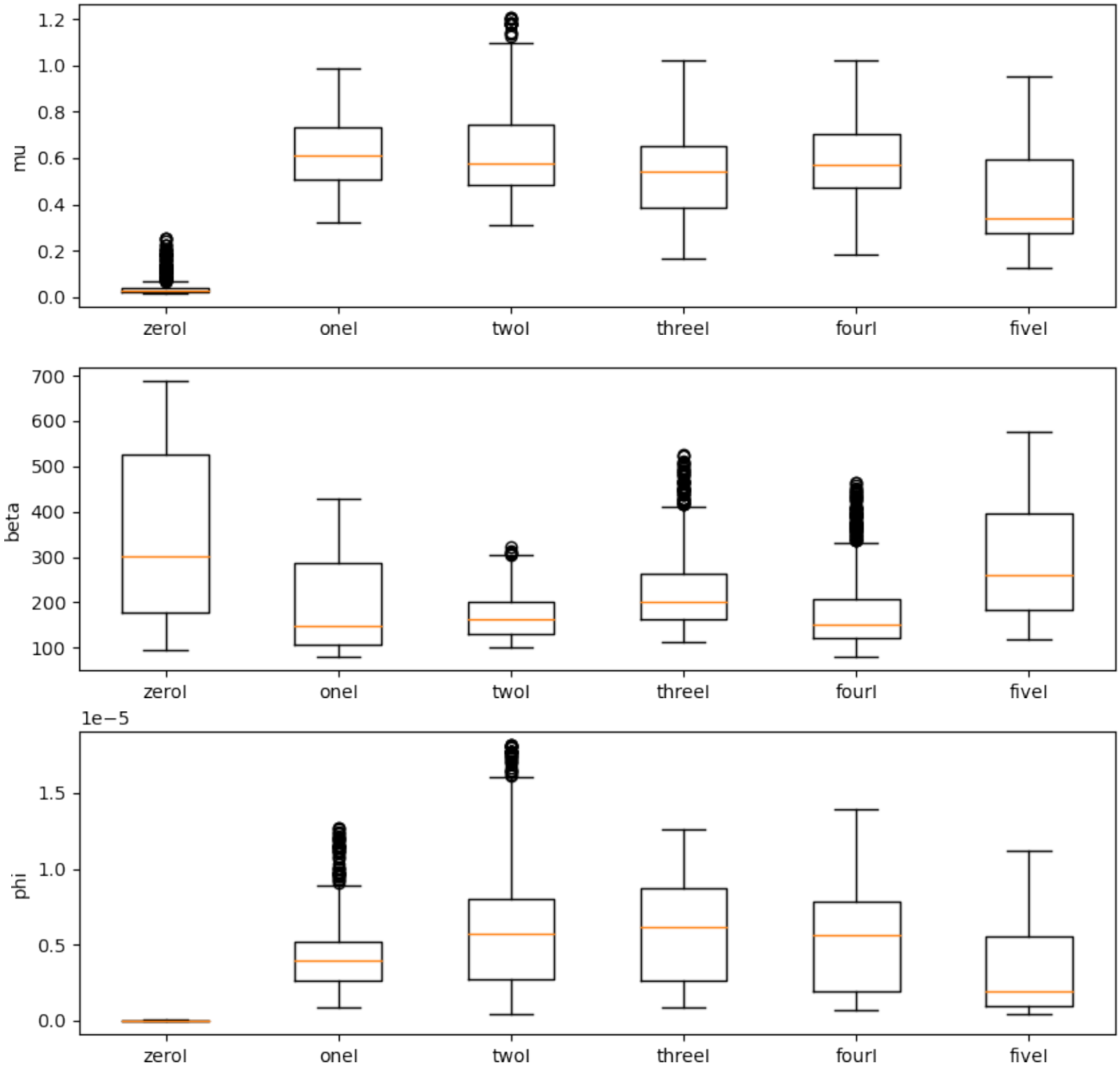
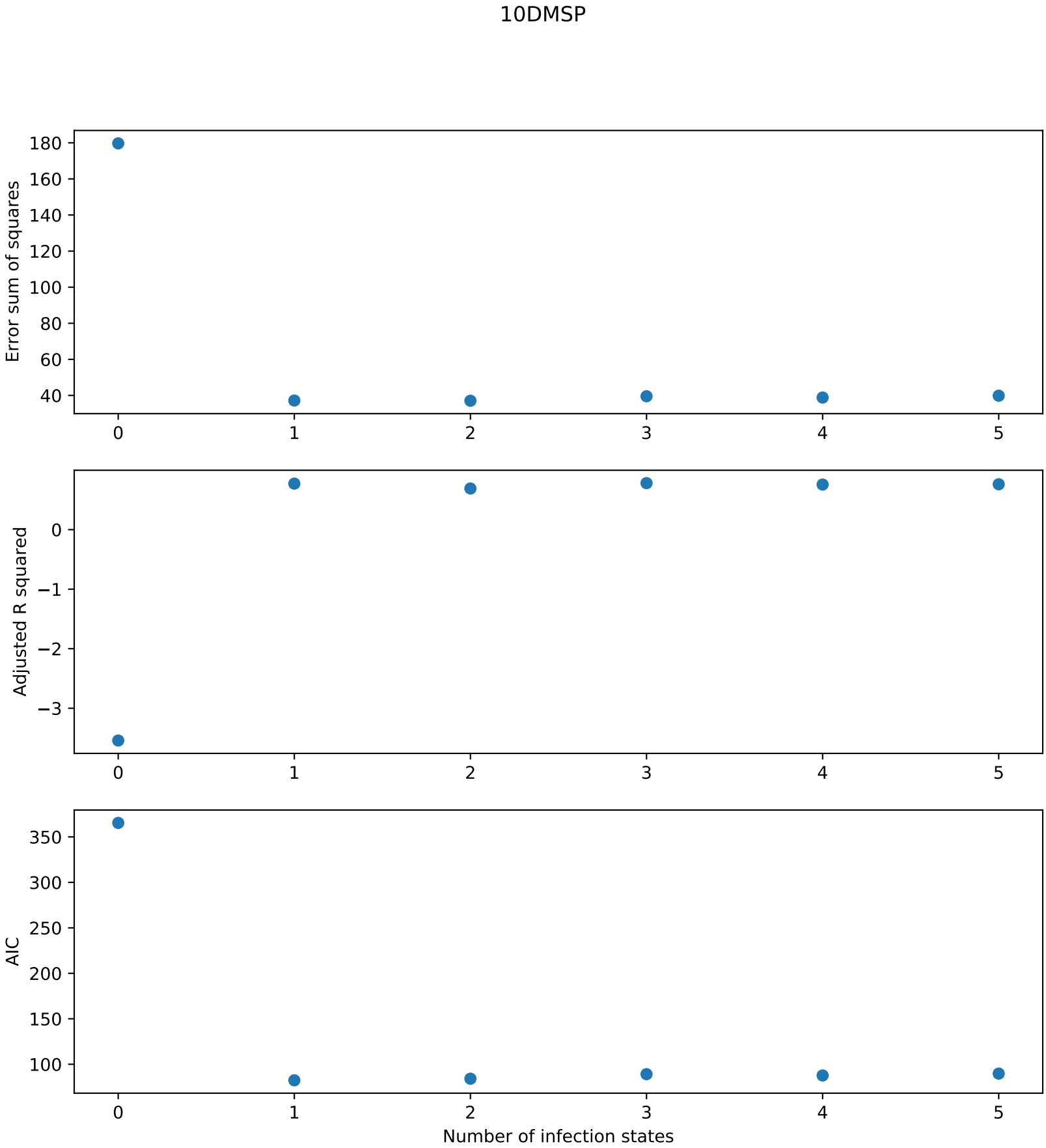
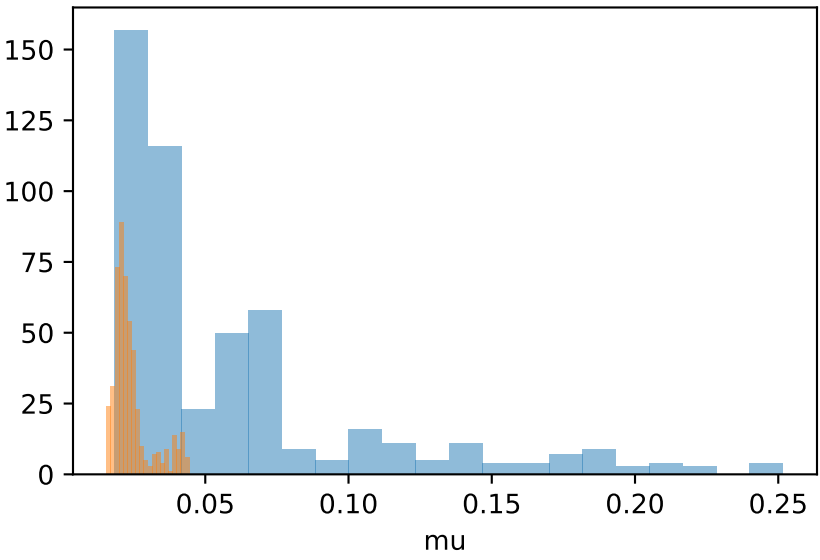

10DMSP
B ml^{-1}
H ml^{-1}
Time
Time
zerol
onel
twol
threel
fourl
fivel

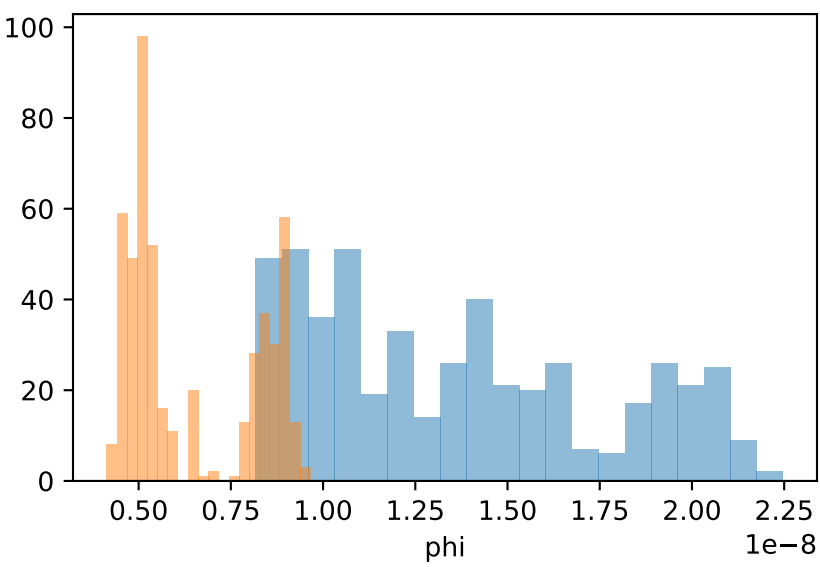
10DMSP

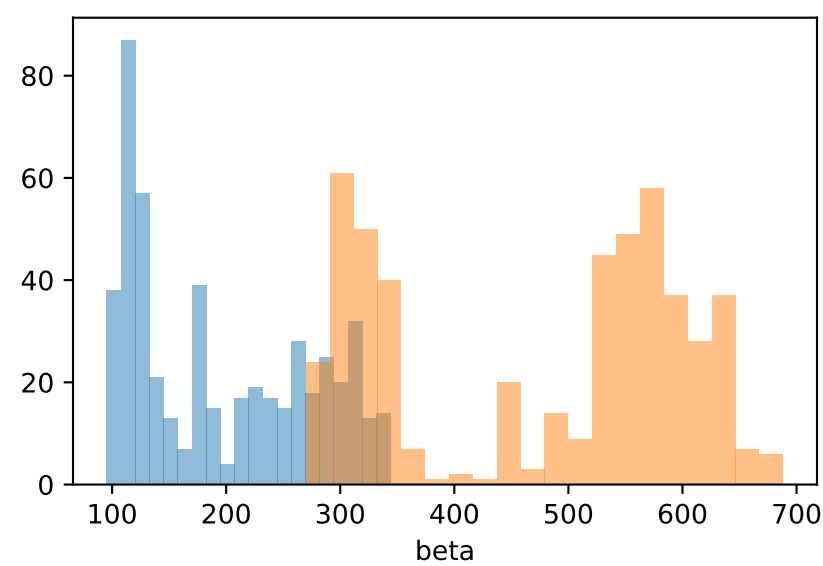

mu
1.2
1.0
0.8
0.6
0.4
0.2
0.0
zeroI
oneI
twoI
threeI
fourI
fiveI
beta
700
600
500
400
300
200
100
zeroI
oneI
twoI
threeI
fourI
fiveI
1e−5
phi
1.5
1.0
0.5
0.0
zeroI
oneI
twoI
threeI
fourI
fiveI

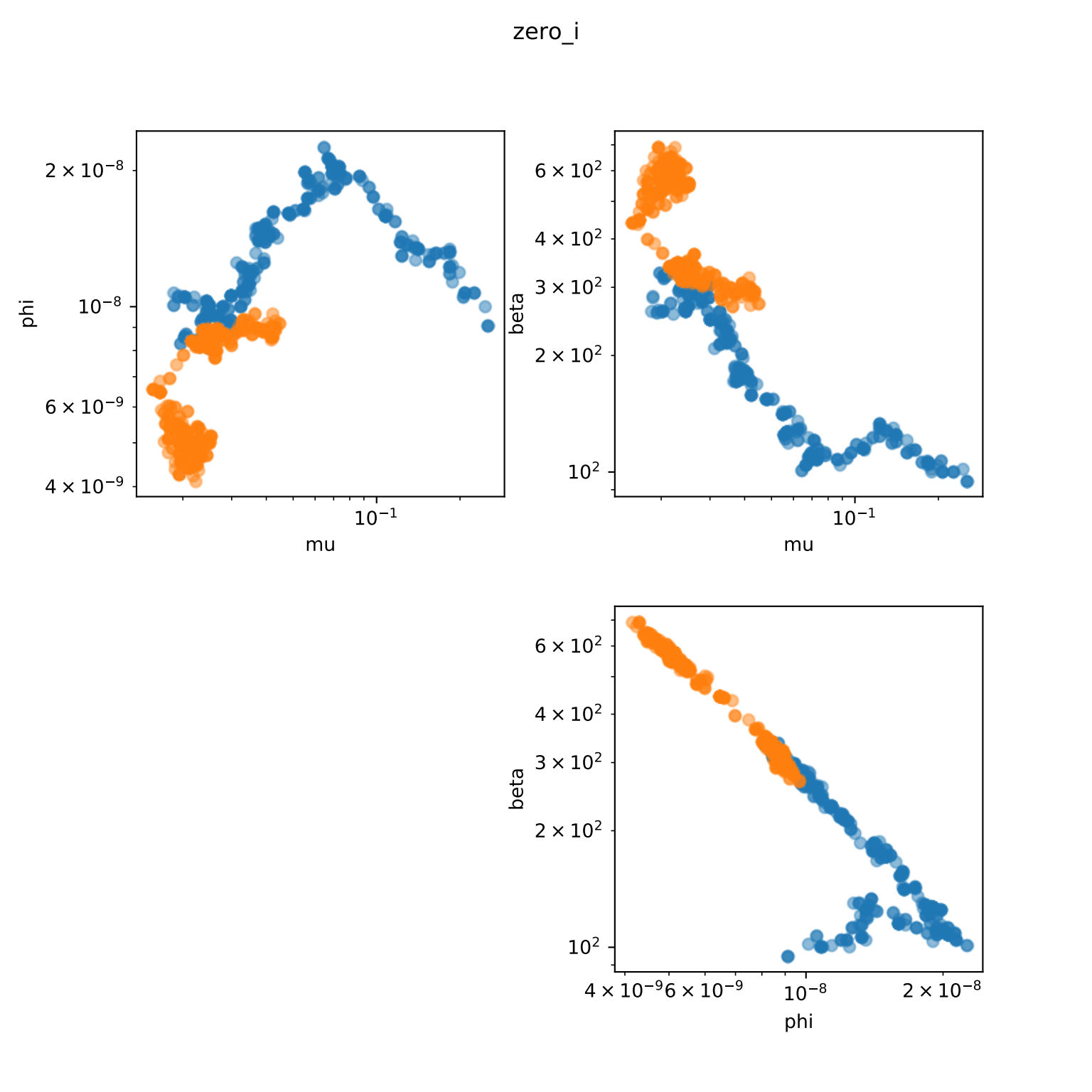

10DMSP
Error sum of squares
180
160
140
120
100
80
60
40
0
1
2
3
4
5
Adjusted R squared
0
−1
−2
−3
0
1
2
3
4
5
AIC
350
300
250
200
150
100
0
1
2
3
4
5
Number of infection states

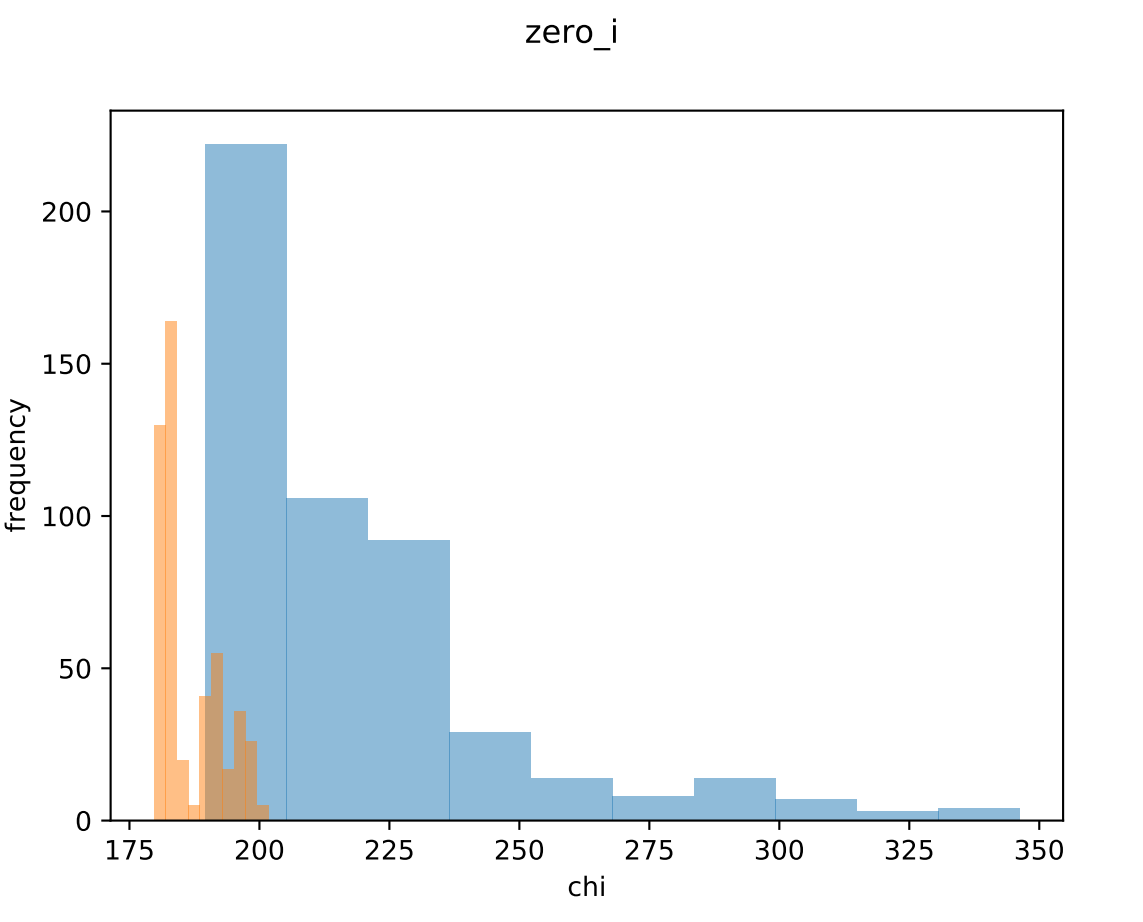
zero_i

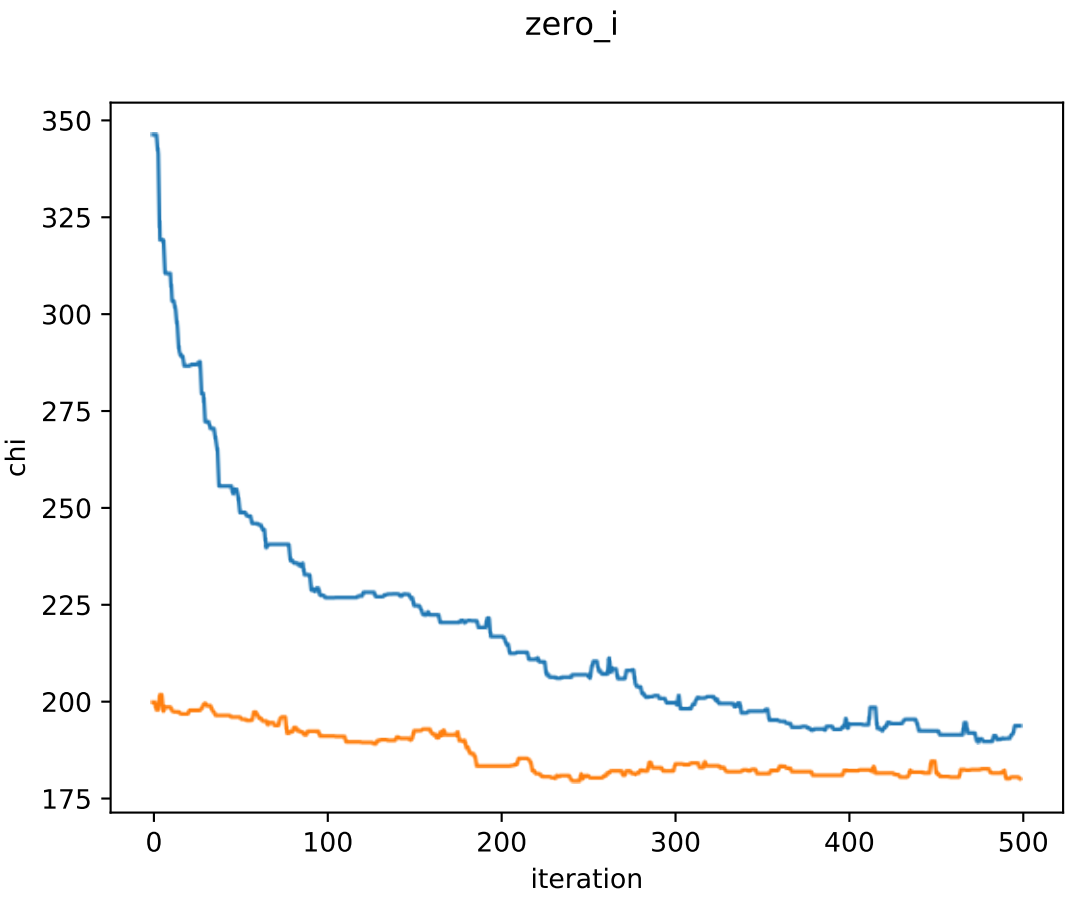

150
125
100
75
50
25
0
0.05
0.10
0.15
0.20
0.25
mu


100
80
60
40
20
0
0.50
0.75
1.00
1.25
1.50
1.75
2.00
2.25
phi
1e−8

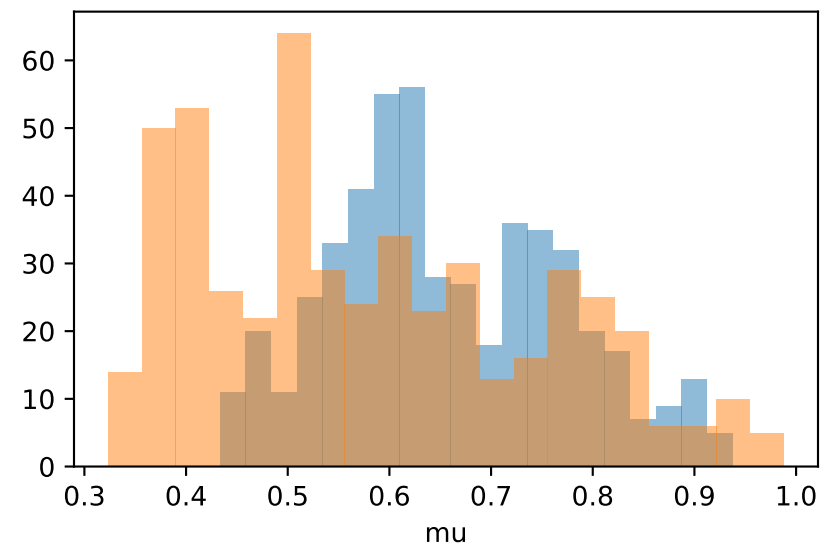

80
60
40
20
0
100
200
300
400
500
600
700
beta

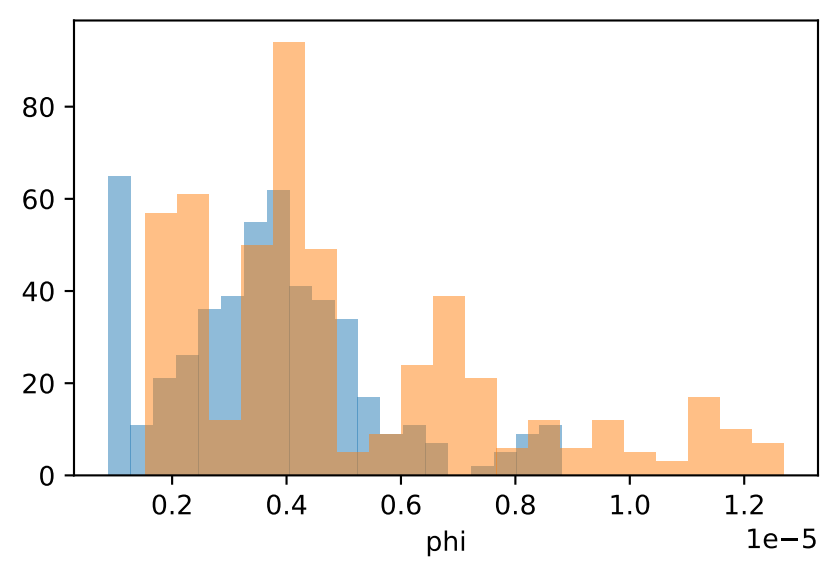

zero_i
phi
mu
beta
mu
beta
phi

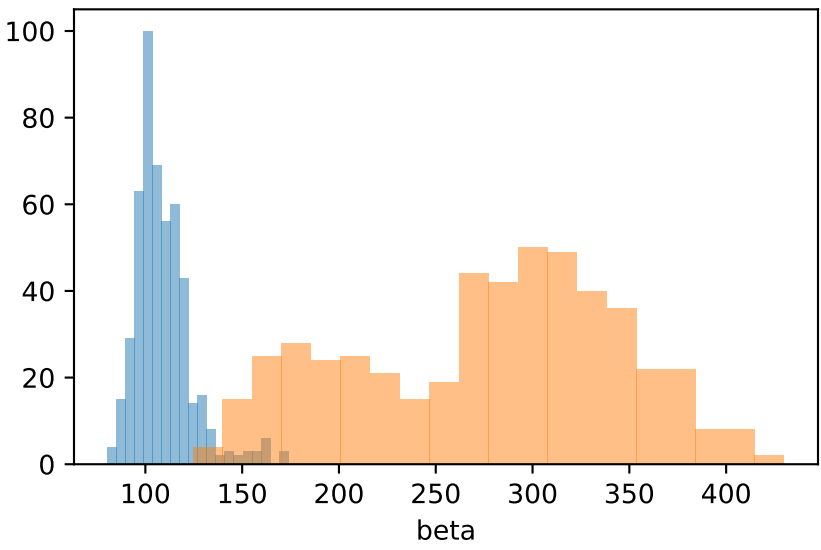

zero_i
frequency
chi
0
50
100
150
200
175
200
225
250
275
300
325
350

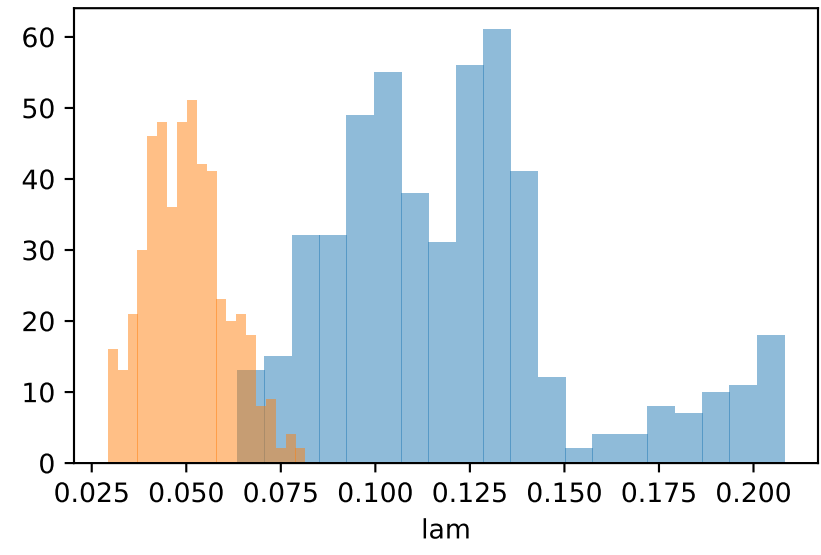

zero_i
chi
iteration
350
325
300
275
250
225
200
175
0
100
200
300
400
500

one_i

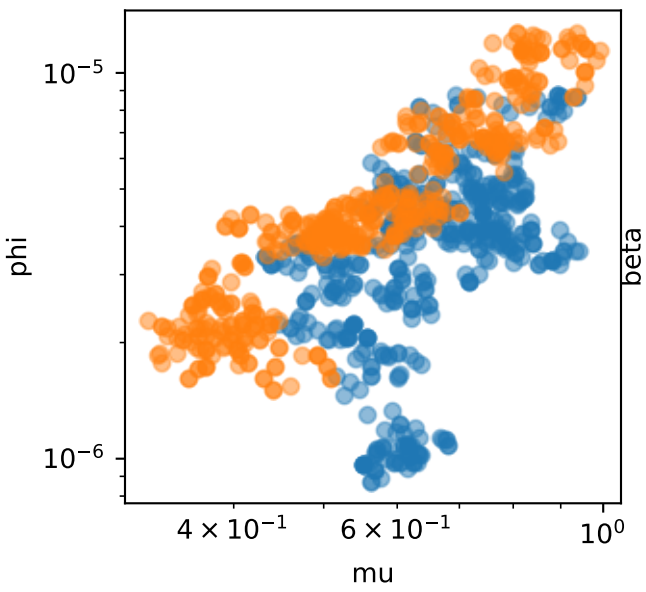

60
50
40
30
20
10
0
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
mu

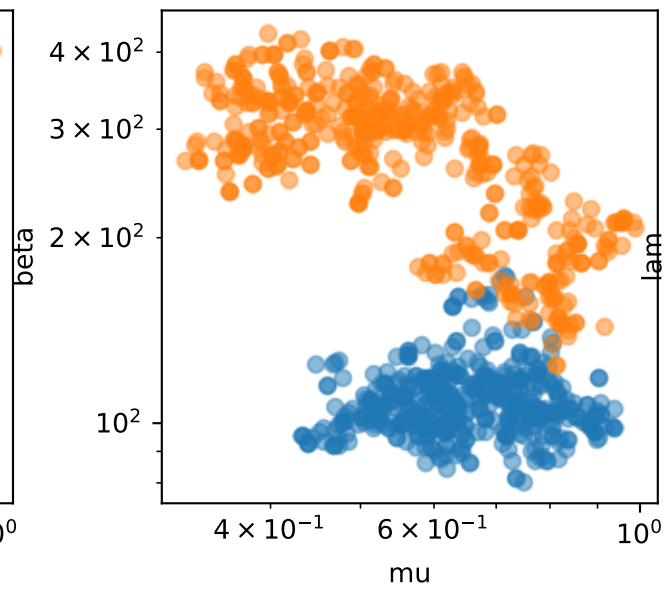

80
60
40
20
0
0.2
0.4
0.6
0.8
1.0
1.2
phi
1e−5

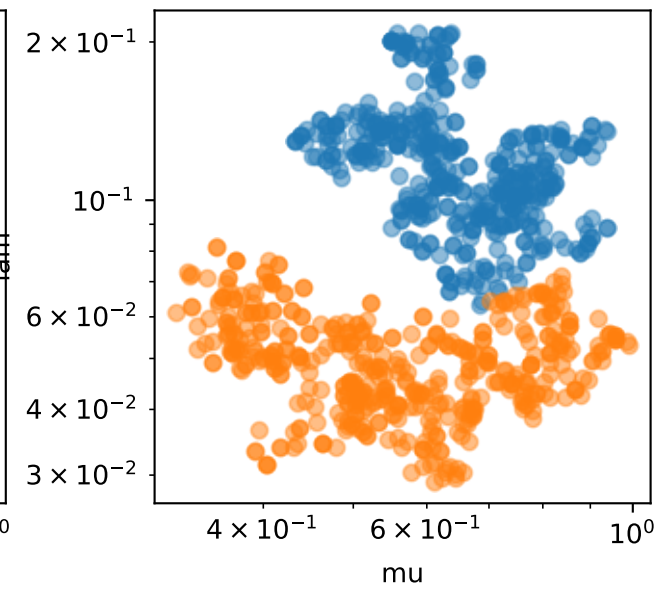

100
80
60
40
20
0
100
150
200
250
300
350
400
beta

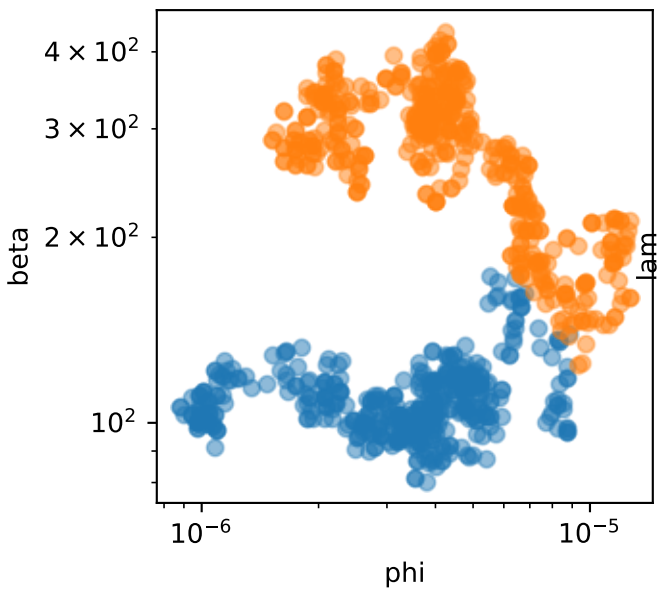

60
50
40
30
20
10
0
0.025
0.050
0.075
0.100
0.125
0.150
0.175
0.200
lam

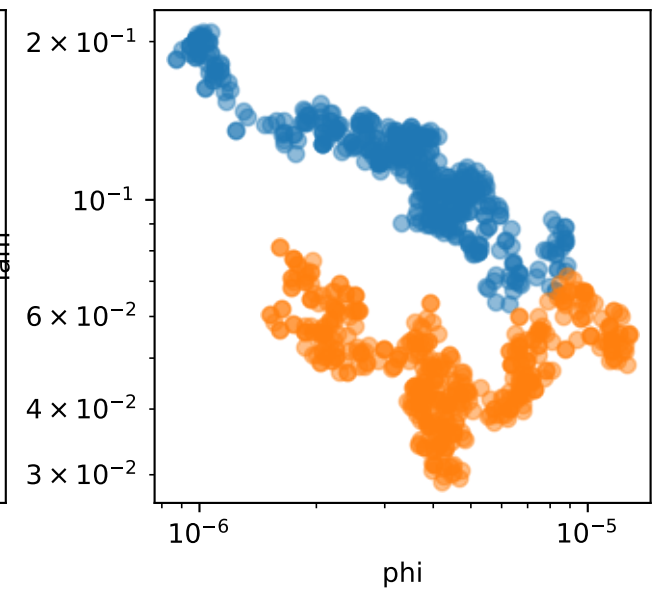
one_i

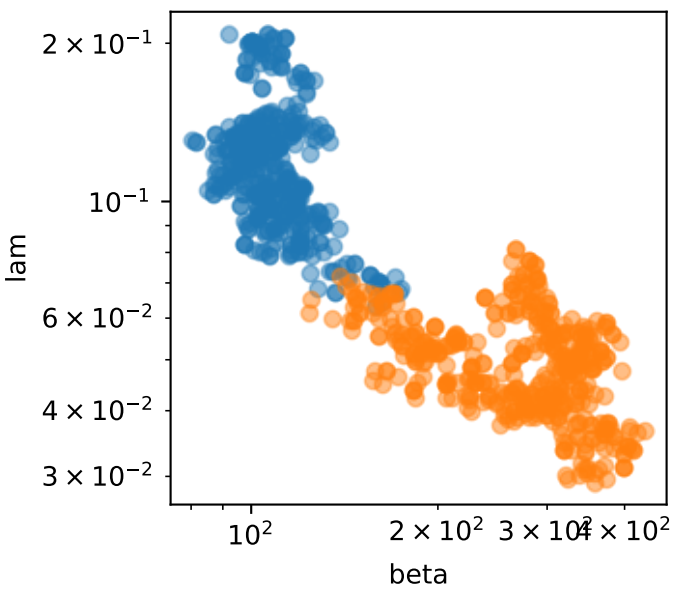

phi
10^{-5}
10^{-6}
4×10^{-1}
6×10^{-1}
10^{0}
mu

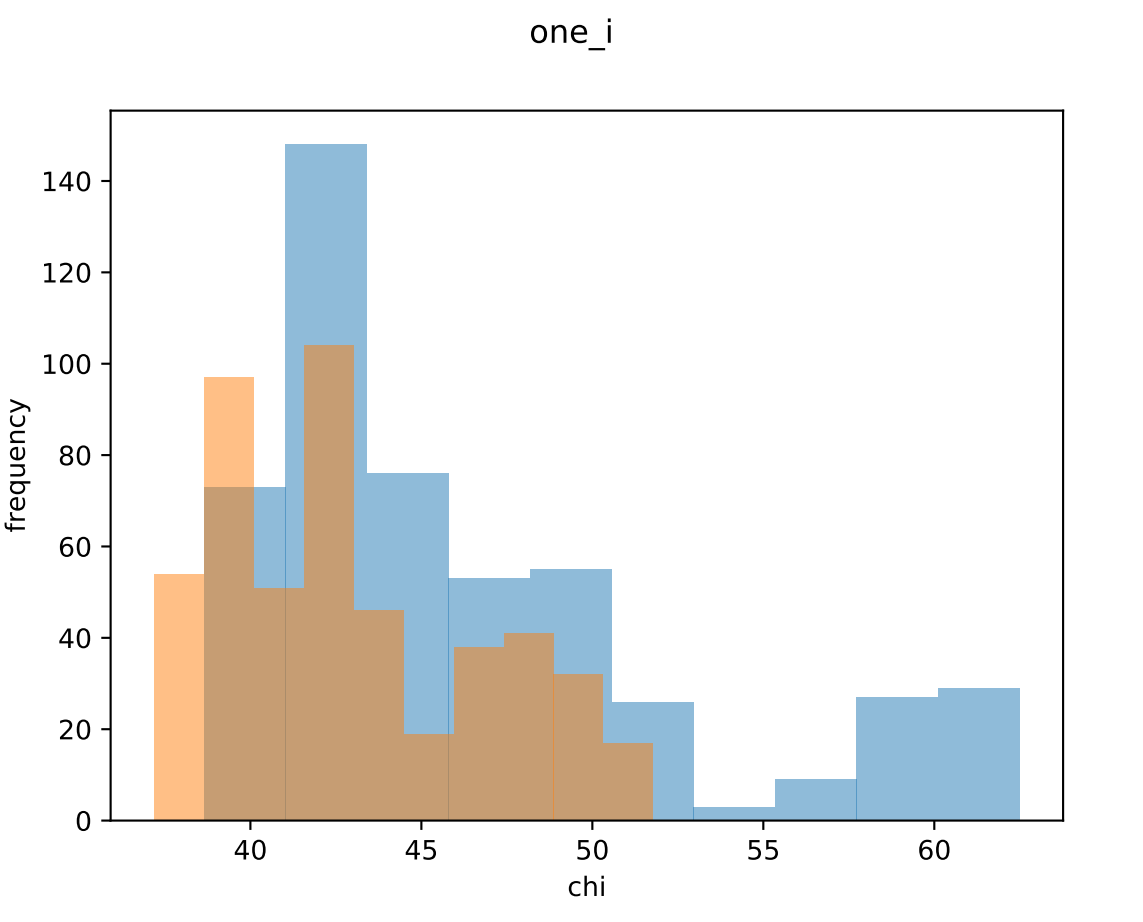

beta
4×10^{2}
3×10^{2}
2×10^{2}
10^{2}
4×10^{-1}
6×10^{-1}
10^{0}
mu

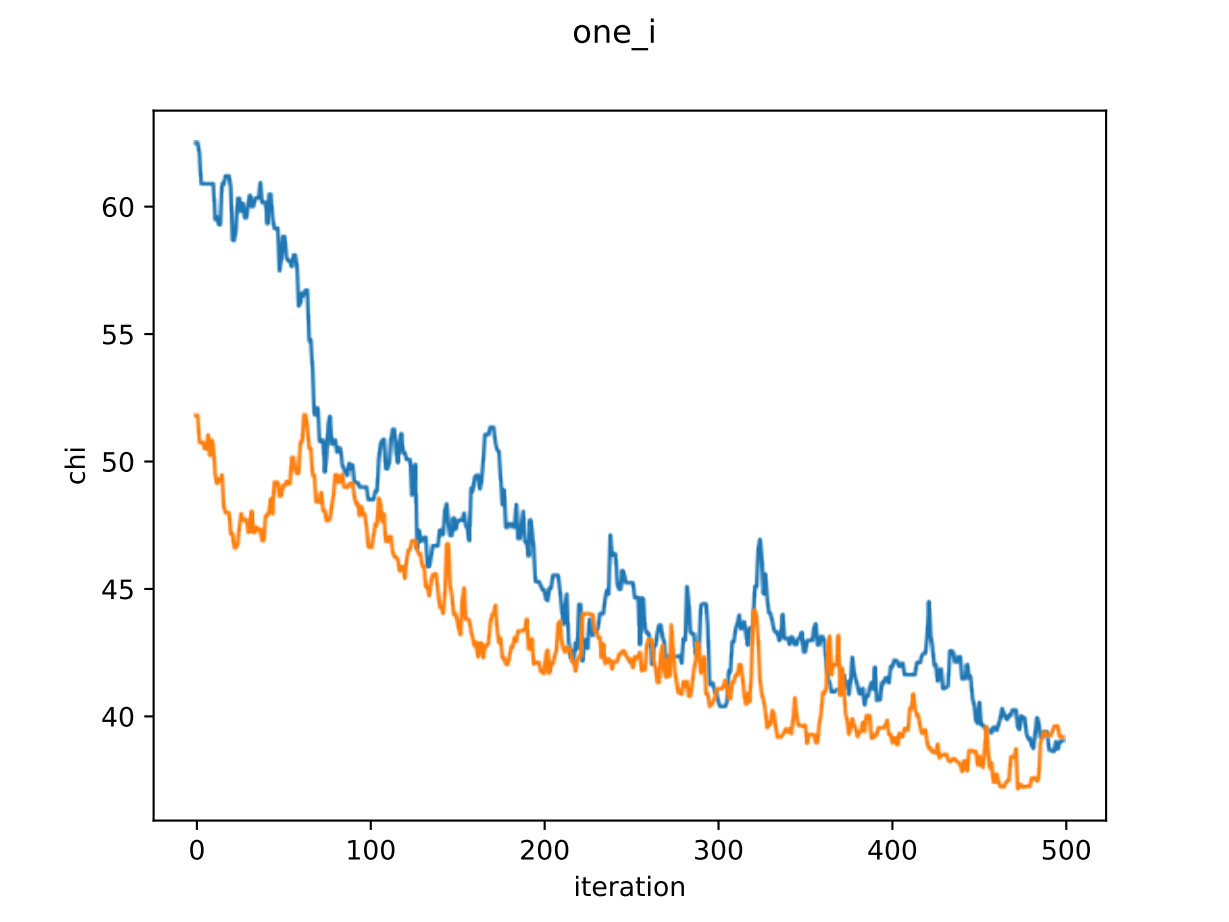

lam
2×10^{-1}
10^{-1}
6×10^{-2}
4×10^{-2}
3×10^{-2}
4×10^{-1}
6×10^{-1}
10^{0}
mu


beta
4×10^{2}
3×10^{2}
2×10^{2}
10^{2}
10^{-6}
10^{-5}
phi

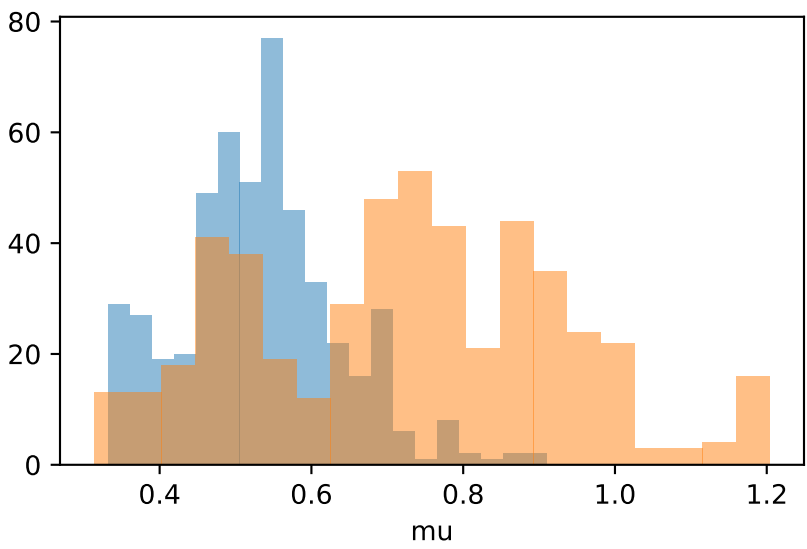

lam
2×10^{-1}
10^{-1}
6×10^{-2}
4×10^{-2}
3×10^{-2}
10^{-6}
10^{-5}
phi

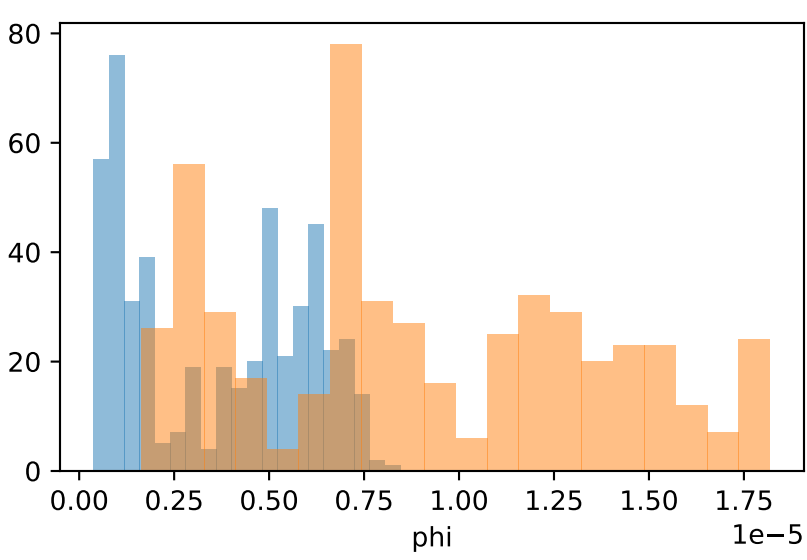

lam
2×10^{-1}
10^{-1}
6×10^{-2}
4×10^{-2}
3×10^{-2}
10^{2}
2×10^{2}
3×10^{2}
4×10^{2}
beta

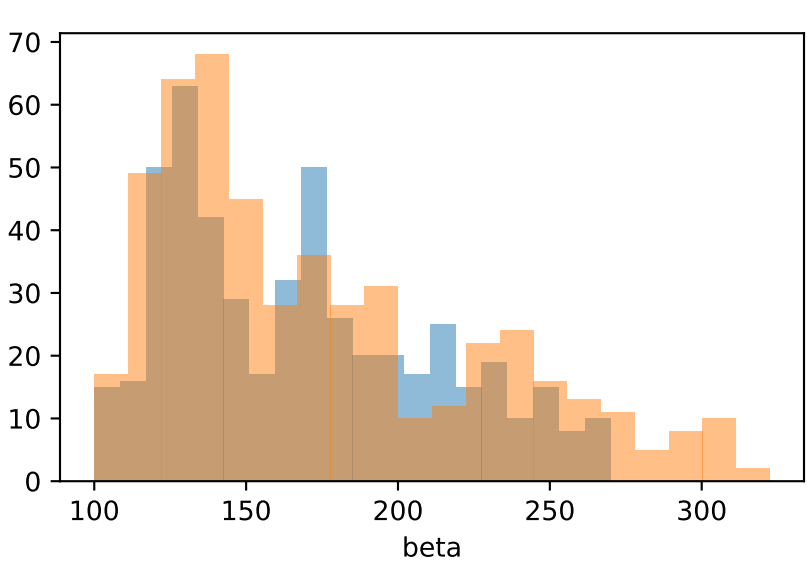

one_i
frequency
chi
0
20
40
60
80
100
120
140
40
45
50
55
60

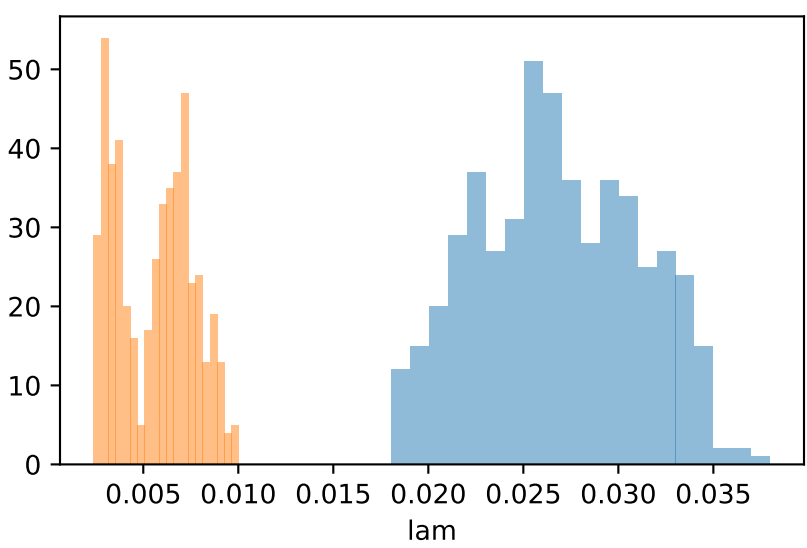

one_i
chi
iteration
60
55
50
45
40
0
100
200
300
400
500

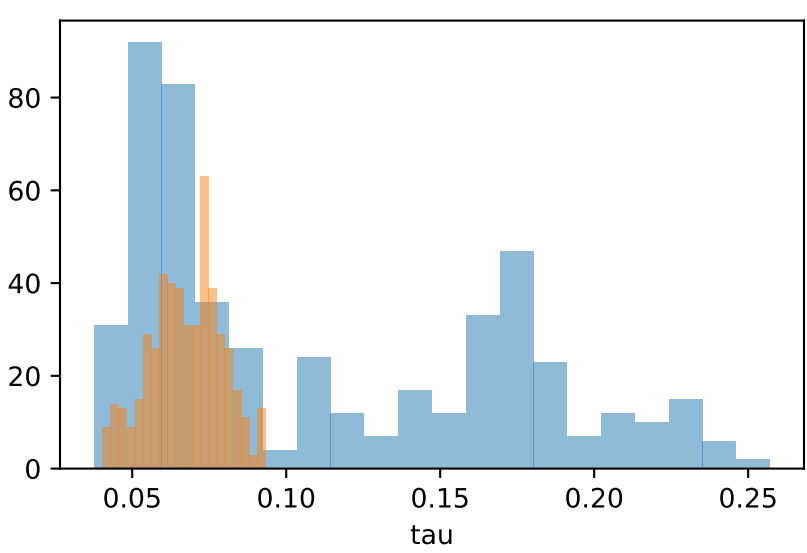
two_i


80
60
40
20
0
0.4
0.6
0.8
1.0
1.2
mu

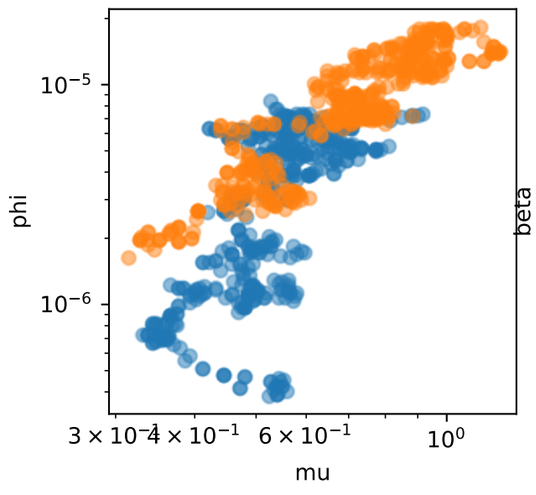

80
60
40
20
0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
phi
1e−5

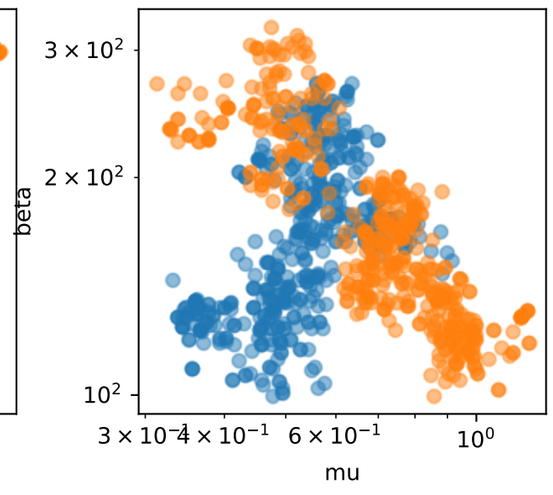

70
60
50
40
30
20
10
0
100
150
200
250
300
beta

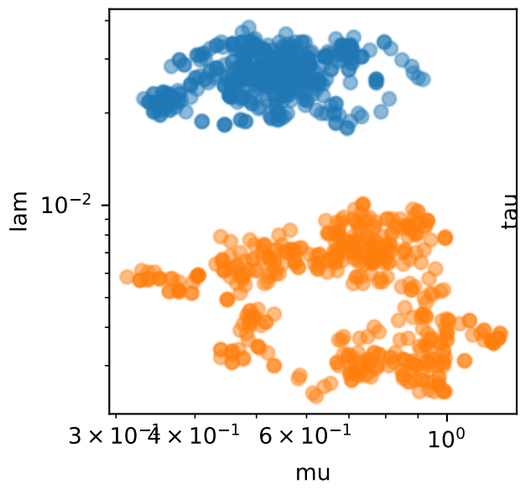

50
40
30
20
10
0
0.005
0.010
0.015
0.020
0.025
0.030
0.035
lam

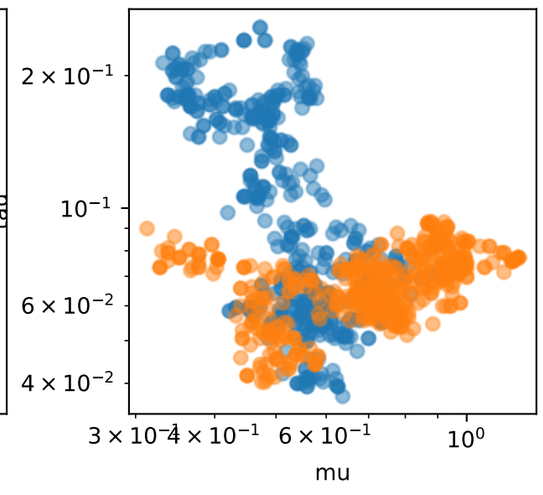

80
60
40
20
0
0.05
0.10
0.15
0.20
0.25
tau

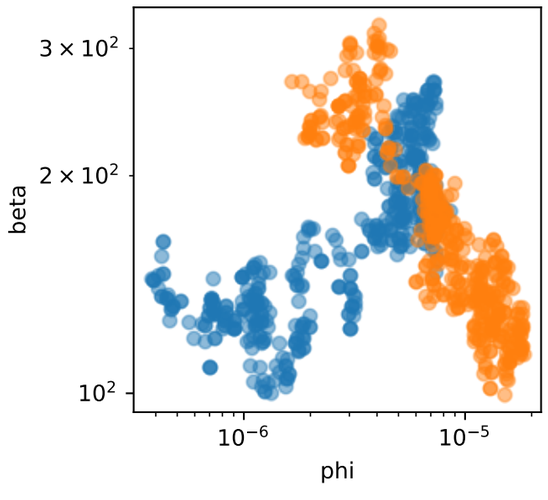
two_i

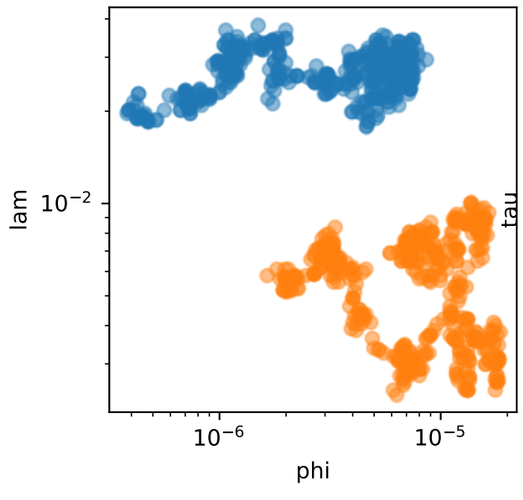

phi
10^{-5}
10^{-6}
3×10^{-1}
4×10^{-1}
6×10^{-1}
10^{0}
mu

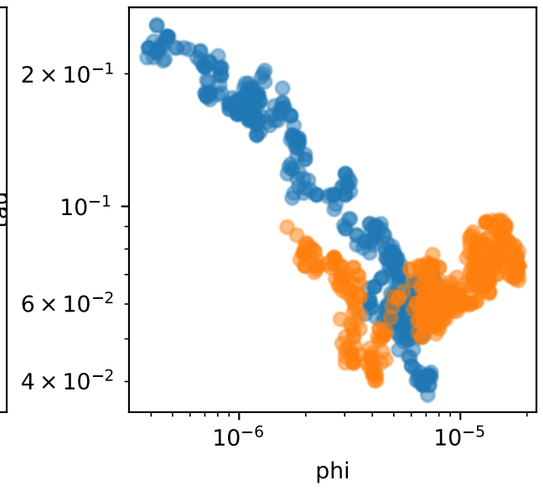

beta
3×10^{2}
2×10^{2}
10^{2}
3×10^{-1}
4×10^{-1}
6×10^{-1}
10^{0}
mu

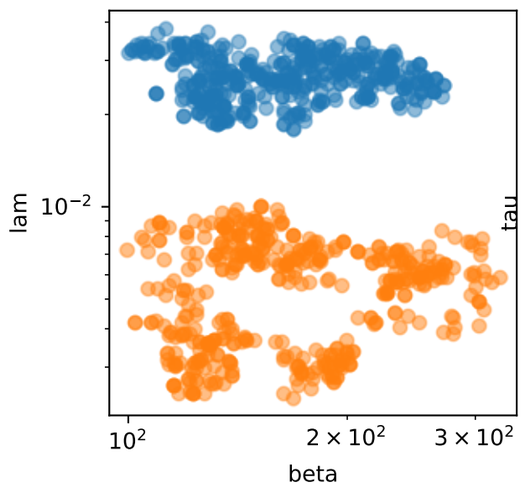

lam
10^{-2}
3×10^{-1}
4×10^{-1}
6×10^{-1}
10^{0}
mu

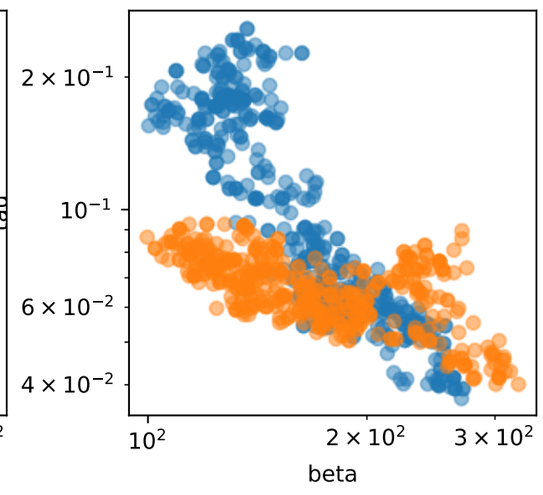

tau
2×10^{-1}
10^{-1}
6×10^{-2}
4×10^{-2}
3×10^{-1}
4×10^{-1}
6×10^{-1}
10^{0}
mu

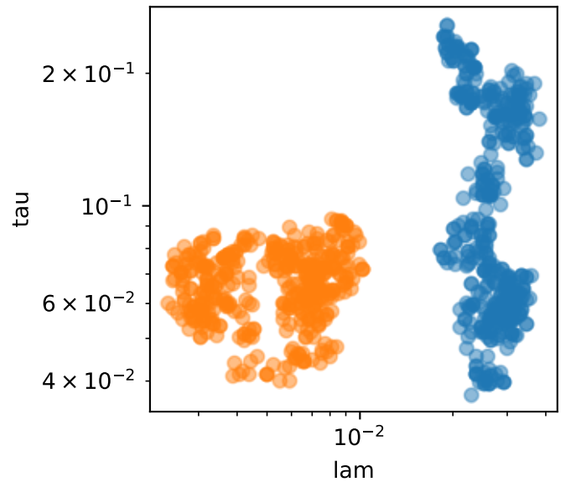

beta
3×10^{2}
2×10^{2}
10^{2}
10^{-6}
10^{-5}
phi

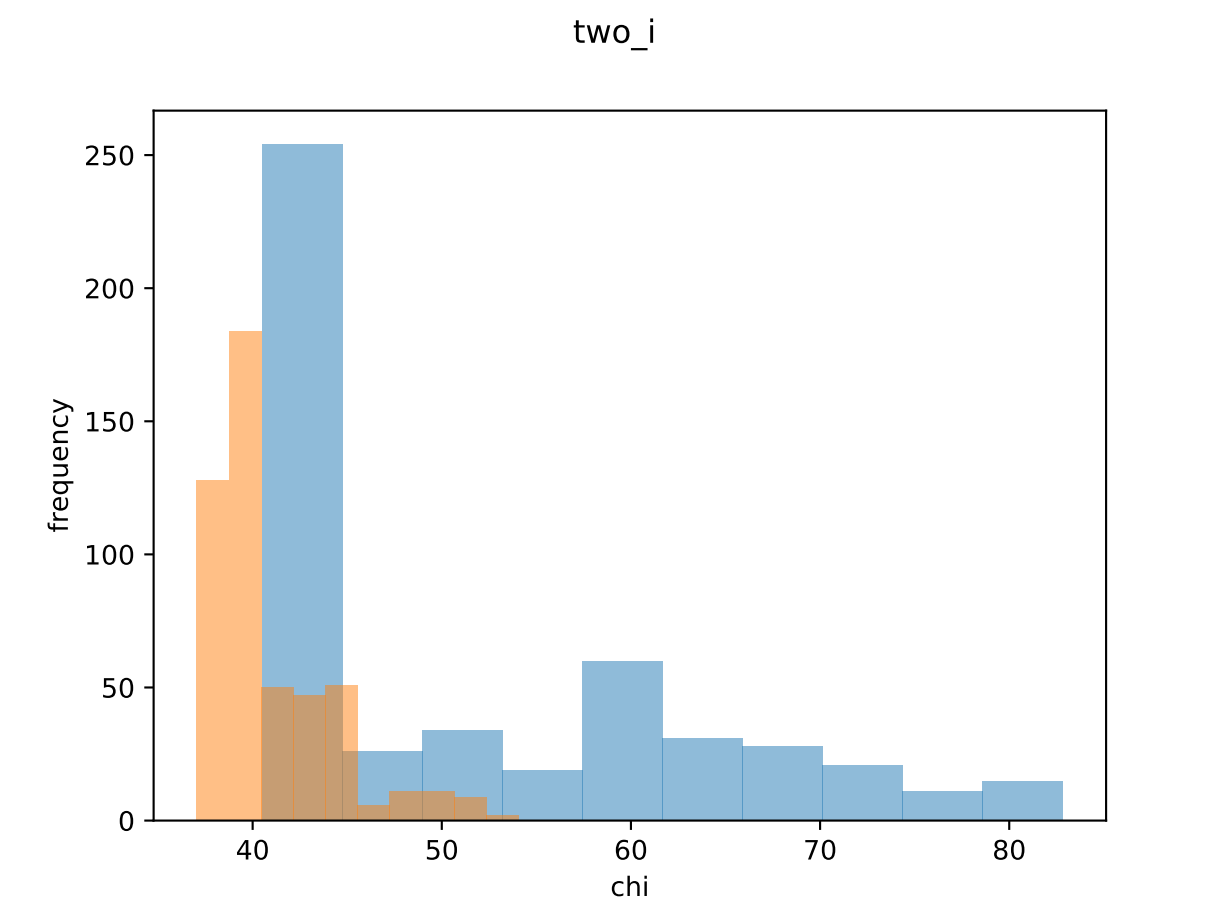

lam
10^{-2}
10^{-6}
10^{-5}
phi

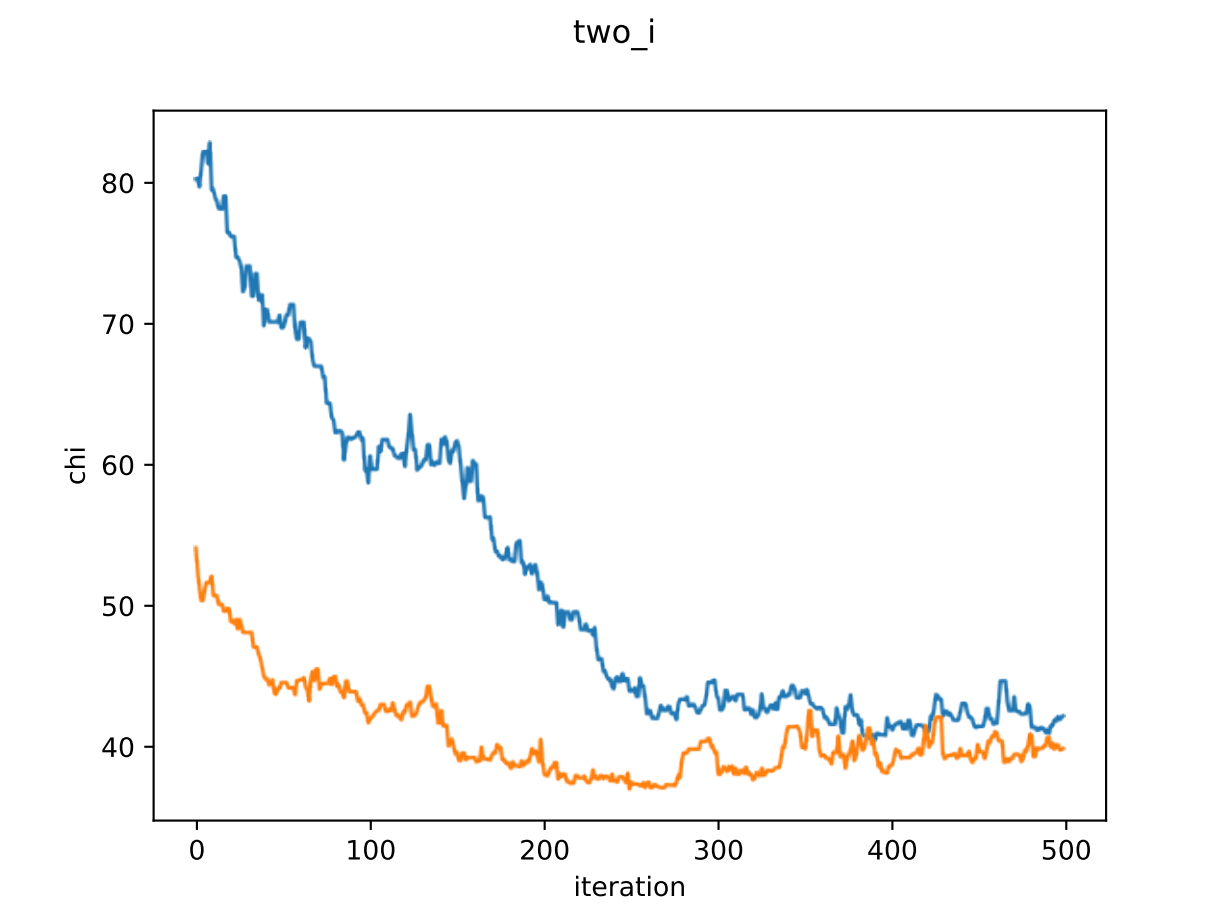

tau
2×10^{-1}
10^{-1}
6×10^{-2}
4×10^{-2}
10^{-6}
10^{-5}
phi


lam
10^{-2}
10^{2}
2×10^{2}
3×10^{2}
beta

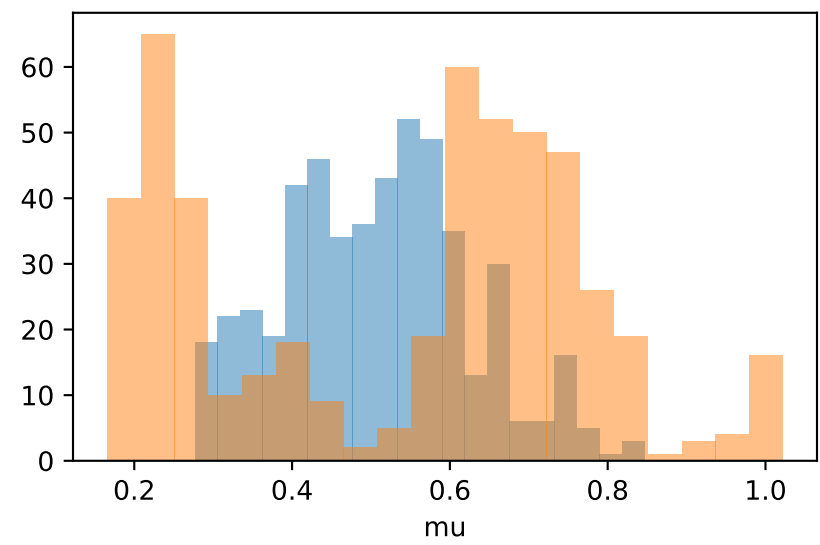

tau
2×10^{-1}
10^{-1}
6×10^{-2}
4×10^{-2}
10^{2}
2×10^{2}
3×10^{2}
beta

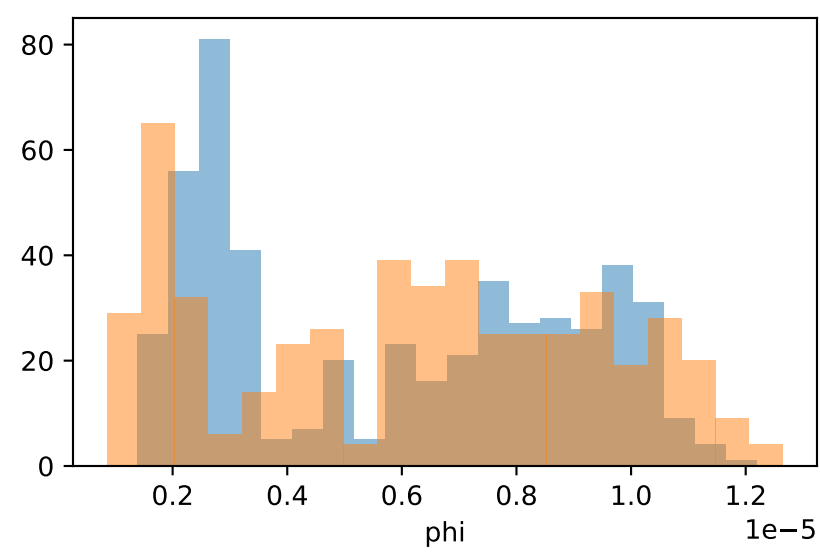

tau
2×10^{-1}
10^{-1}
6×10^{-2}
4×10^{-2}
10^{-2}
lam

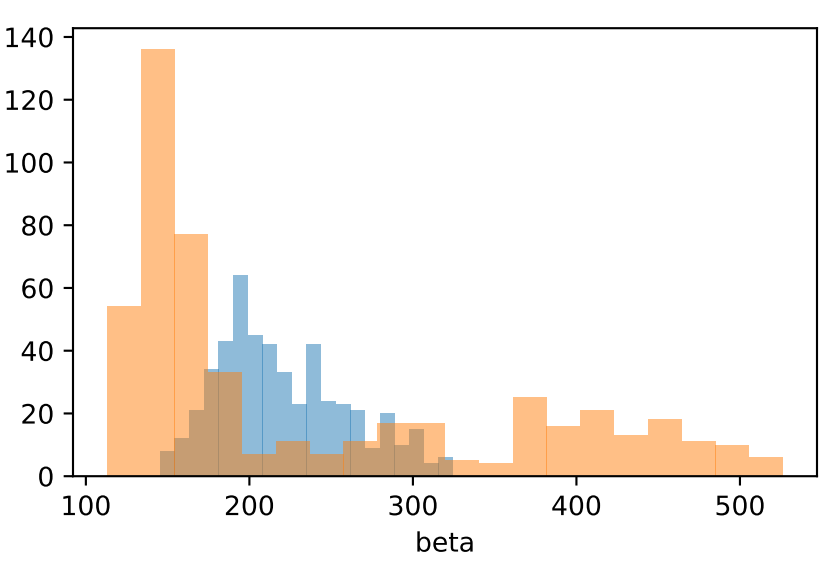

two_i
250
200
150
100
50
0
frequency
40
50
60
70
80
chi

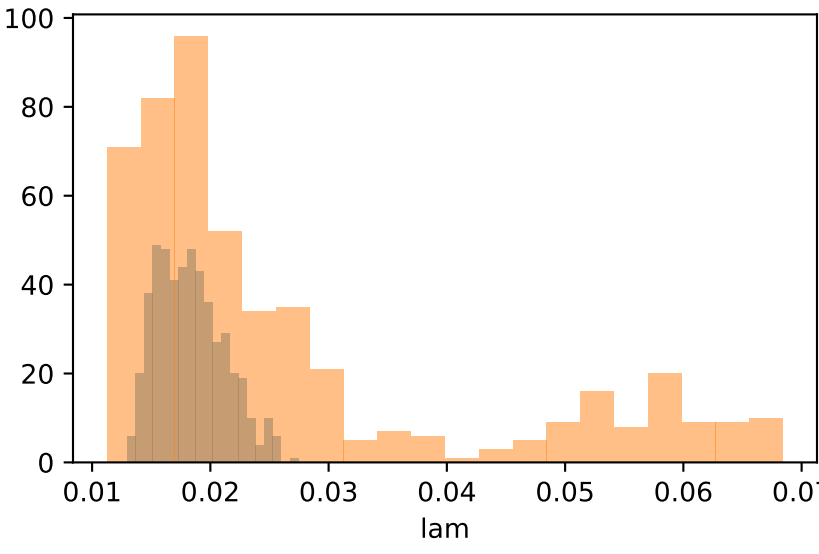

two_i
chi
iteration
80
70
60
50
40
0
100
200
300
400
500

three_i


60
50
40
30
20
10
0
0.2
0.4
0.6
0.8
1.0
mu


80
60
40
20
0
0.2
0.4
0.6
0.8
1.0
1.2
phi
1e−5


140
120
100
80
60
40
20
0
100
200
300
400
500
beta


100
80
60
40
20
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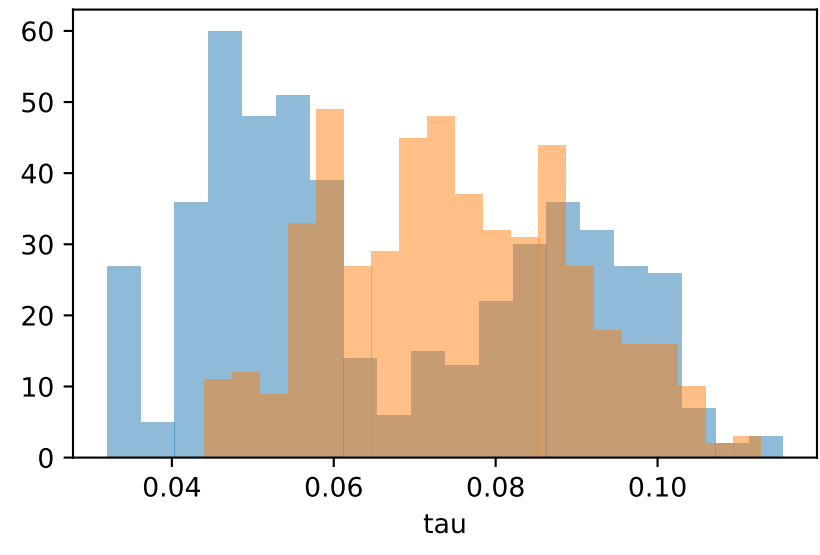
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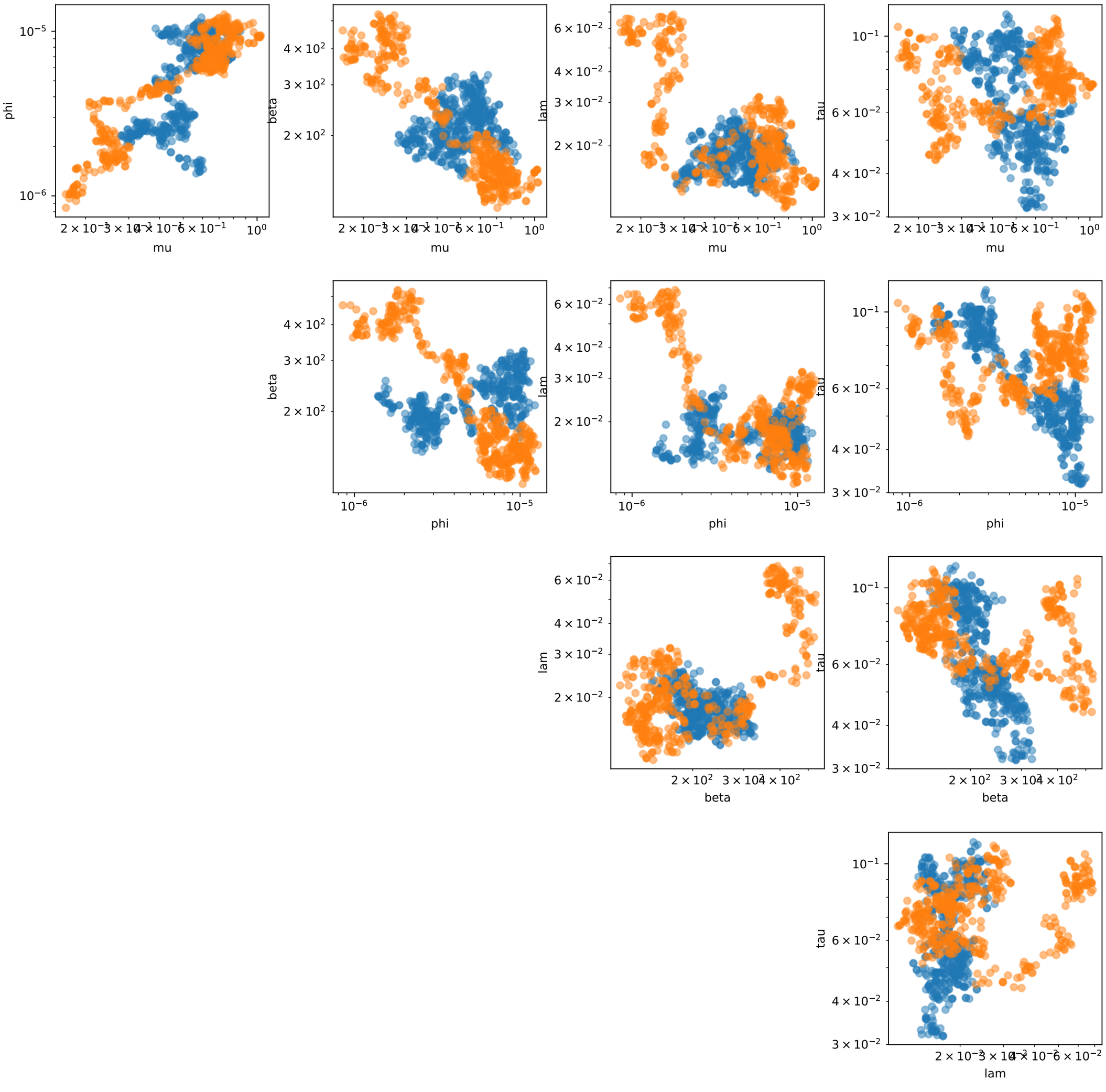
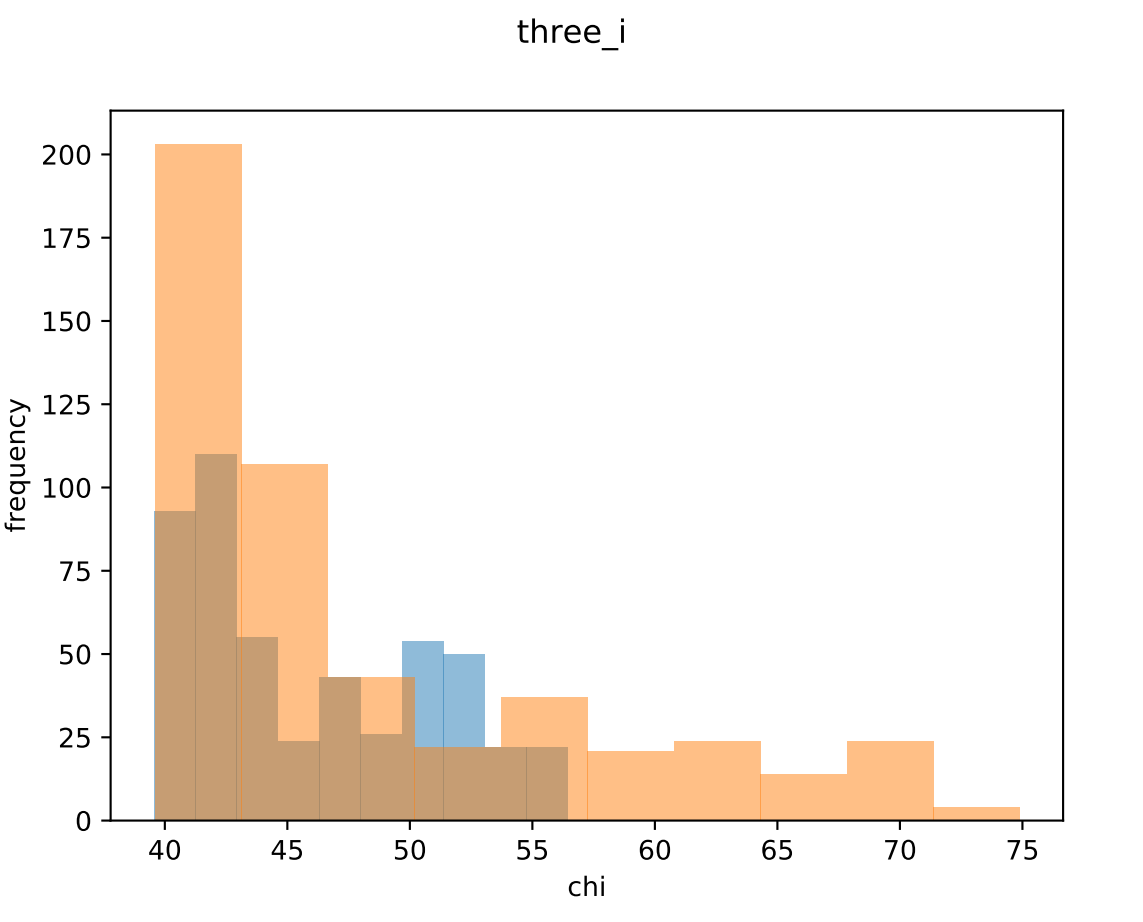
tau

three_i

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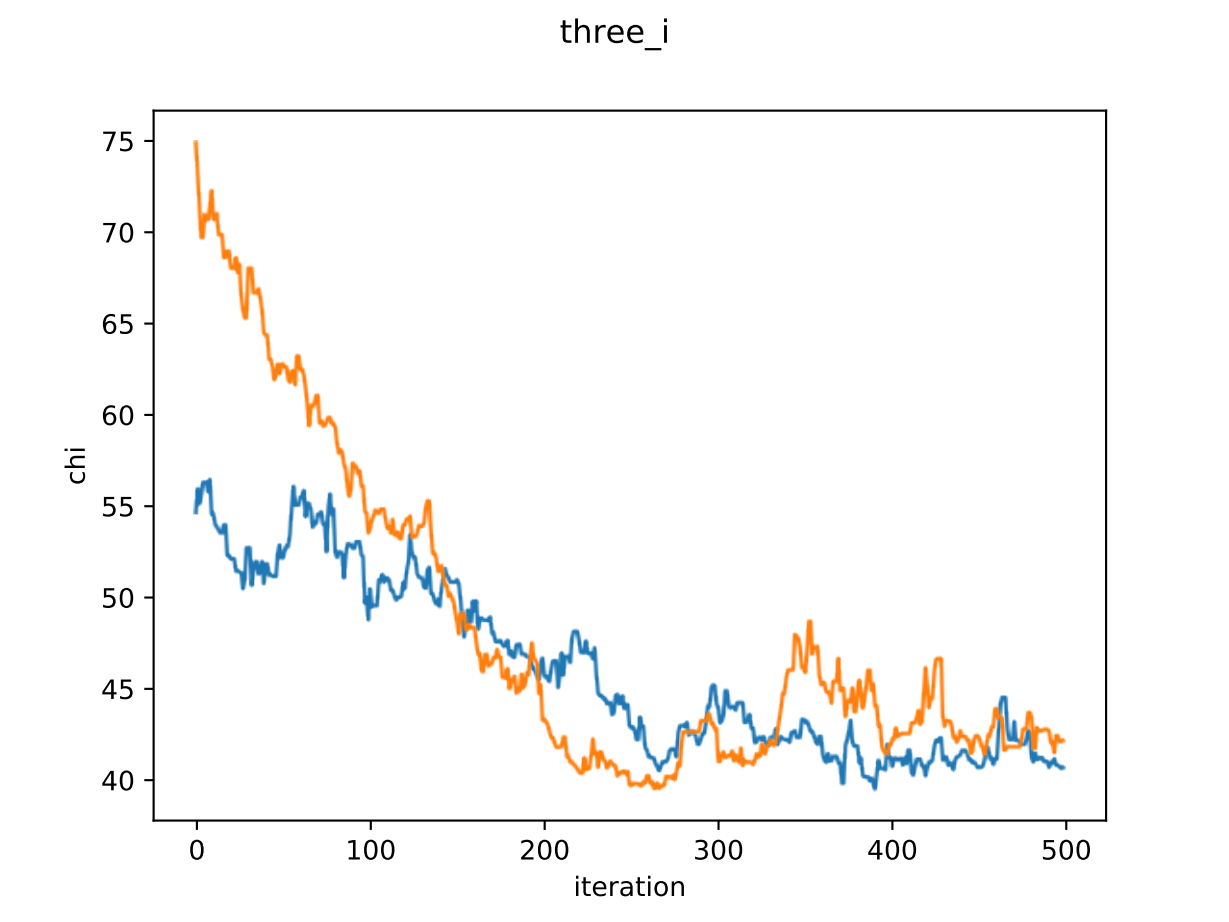
three_i
chi
iteration
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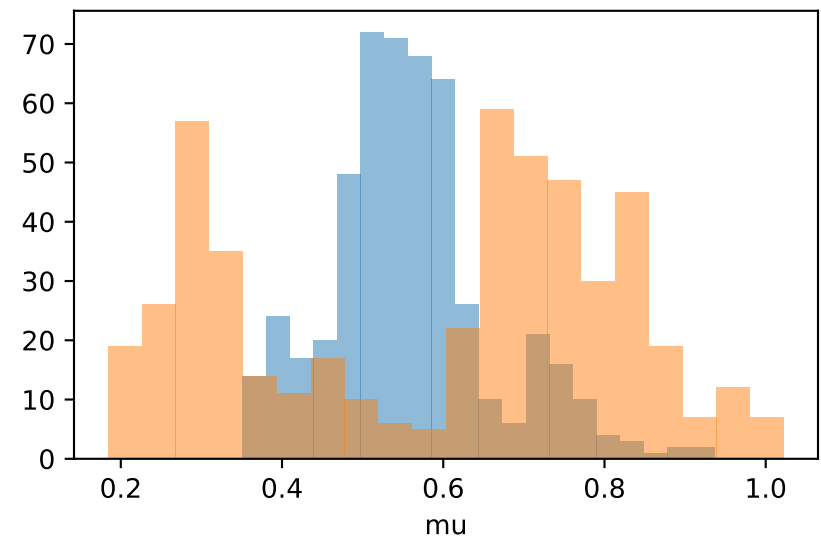
400
500

four_i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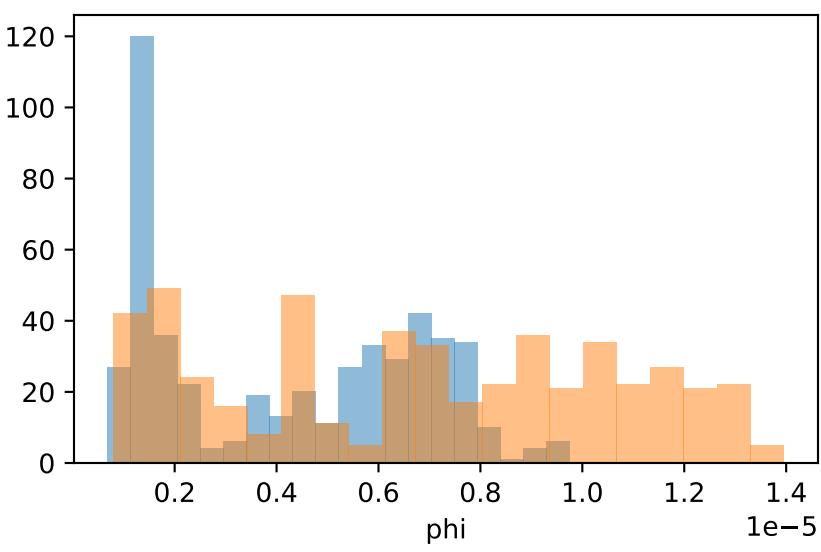
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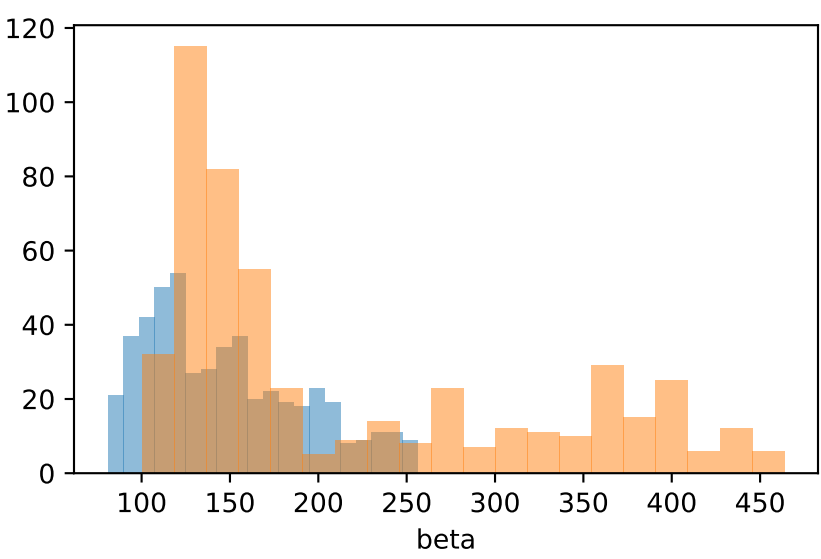
phi
1e−5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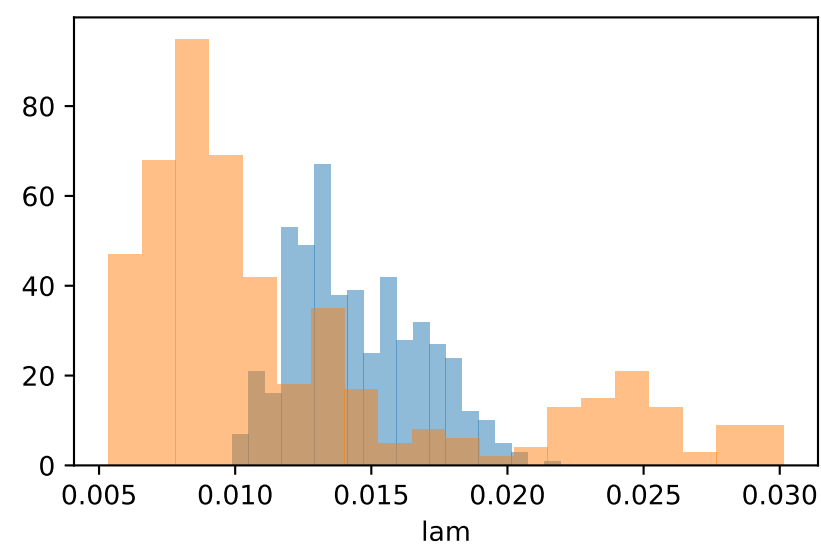
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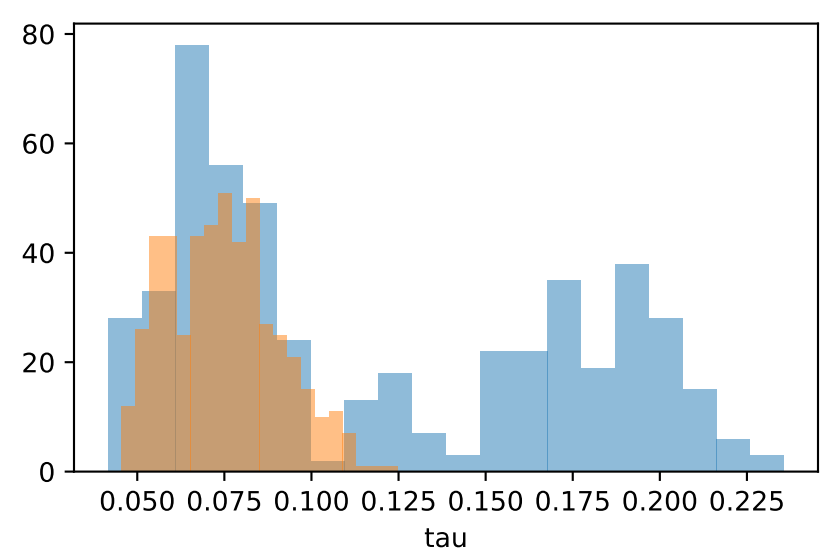
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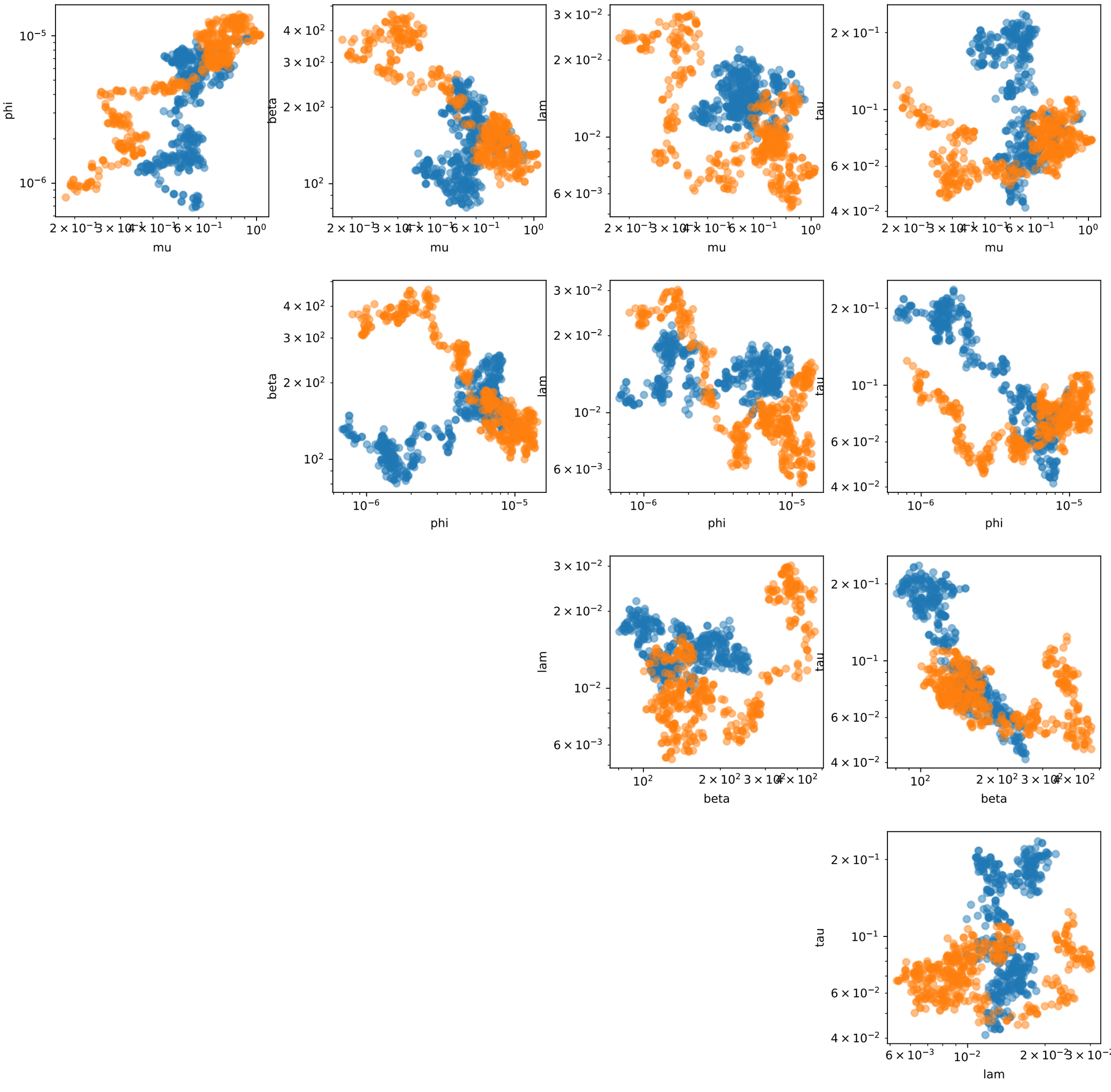
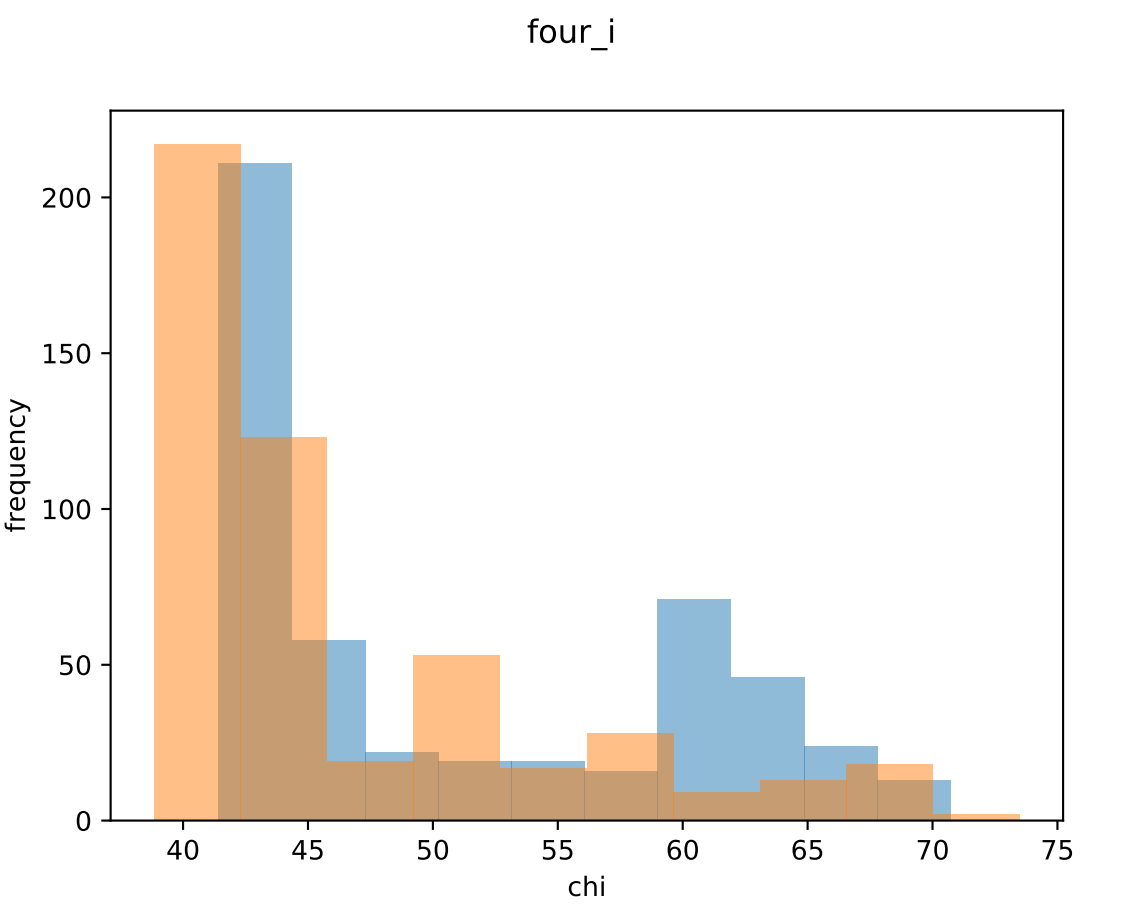
0.225
tau

four_i

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frequency
chi
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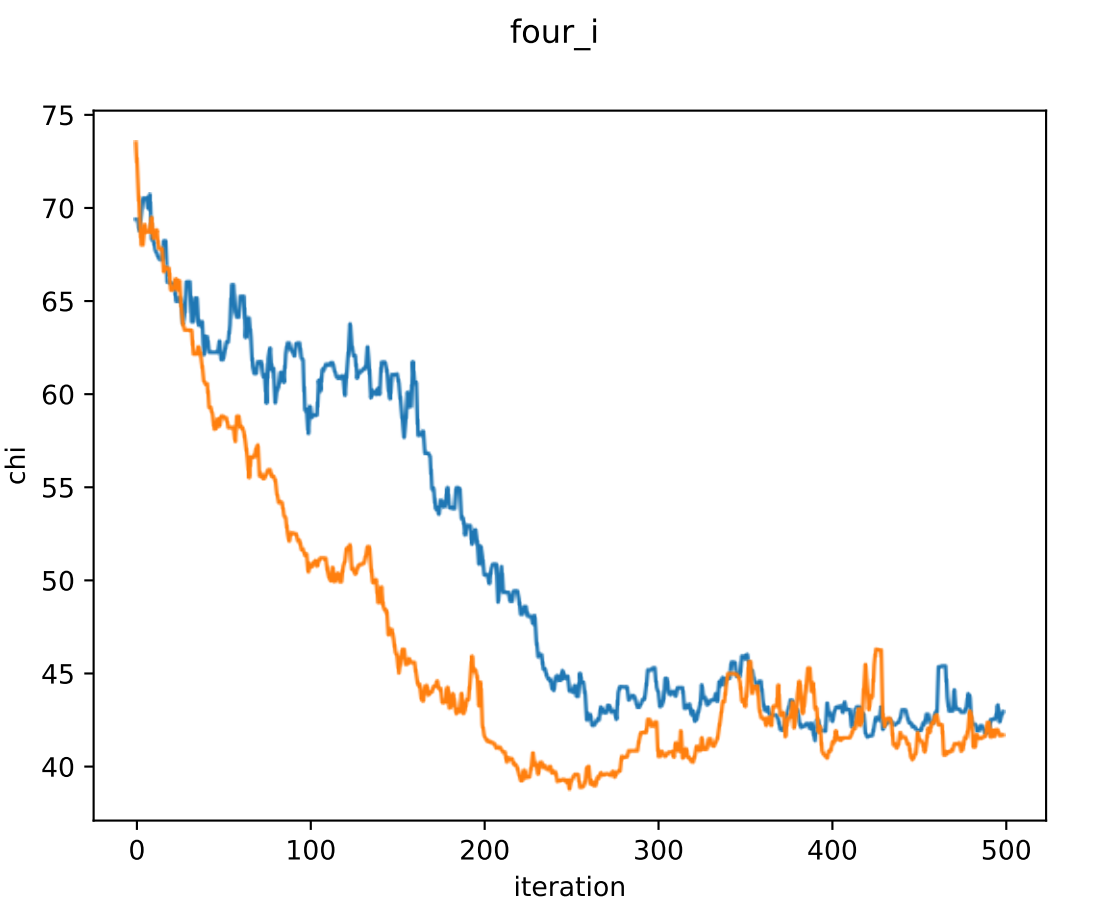
75


four_i
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iteration
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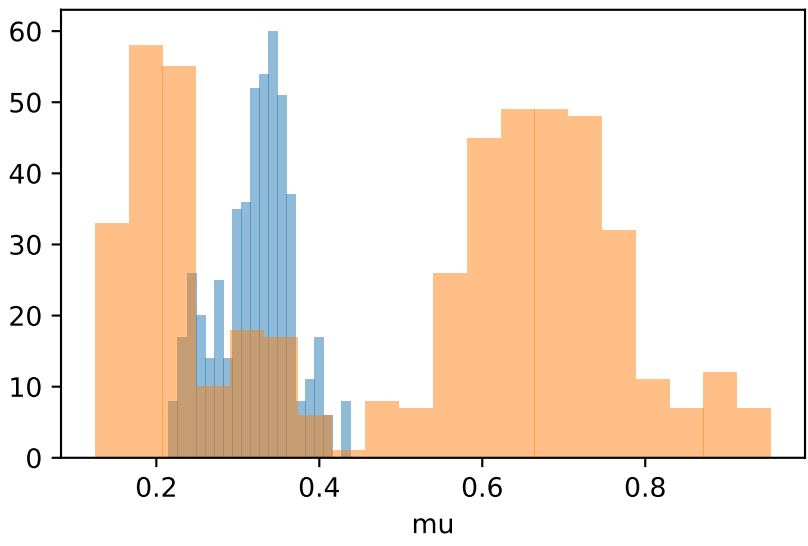
500

five_i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0.8
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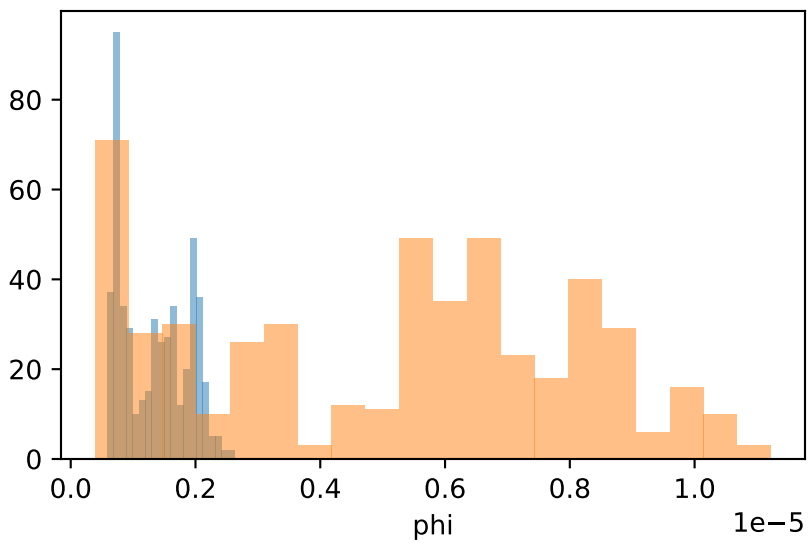
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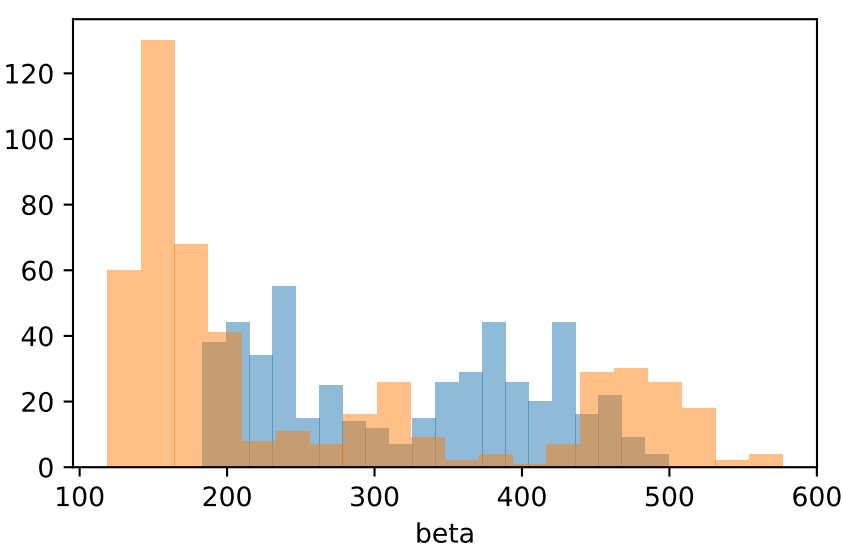
0.6
0.8
1.0
phi
1e−5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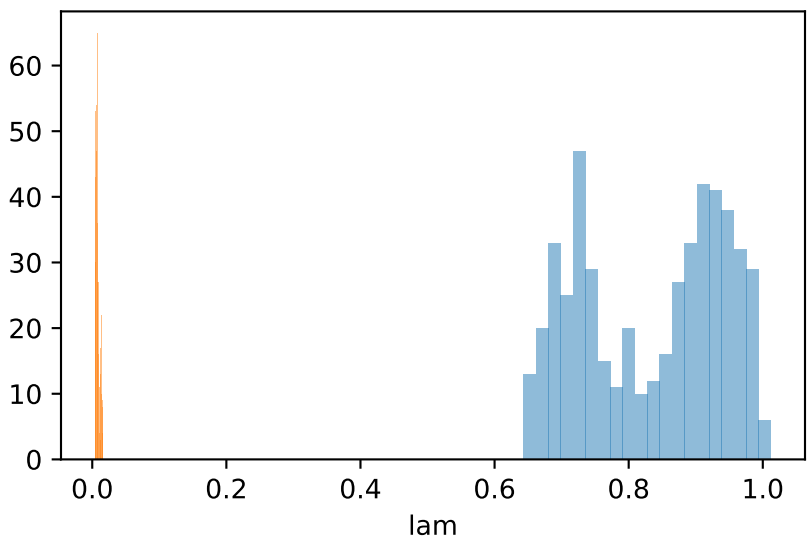
600
beta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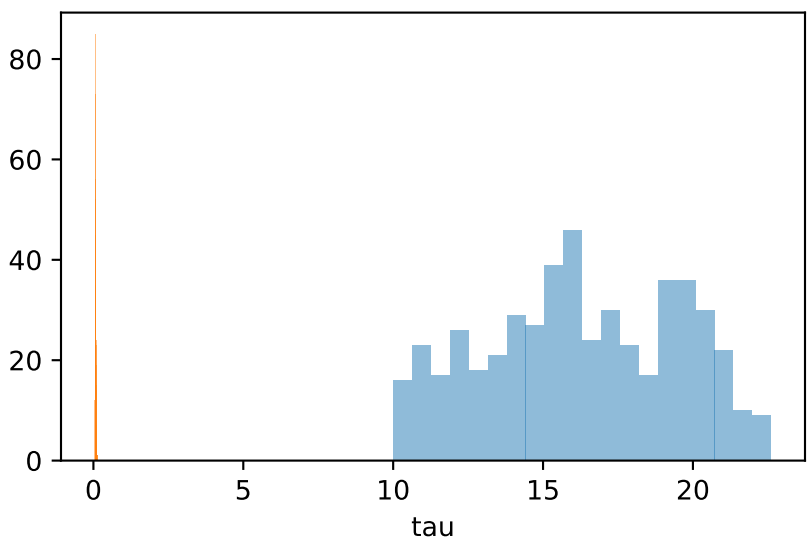
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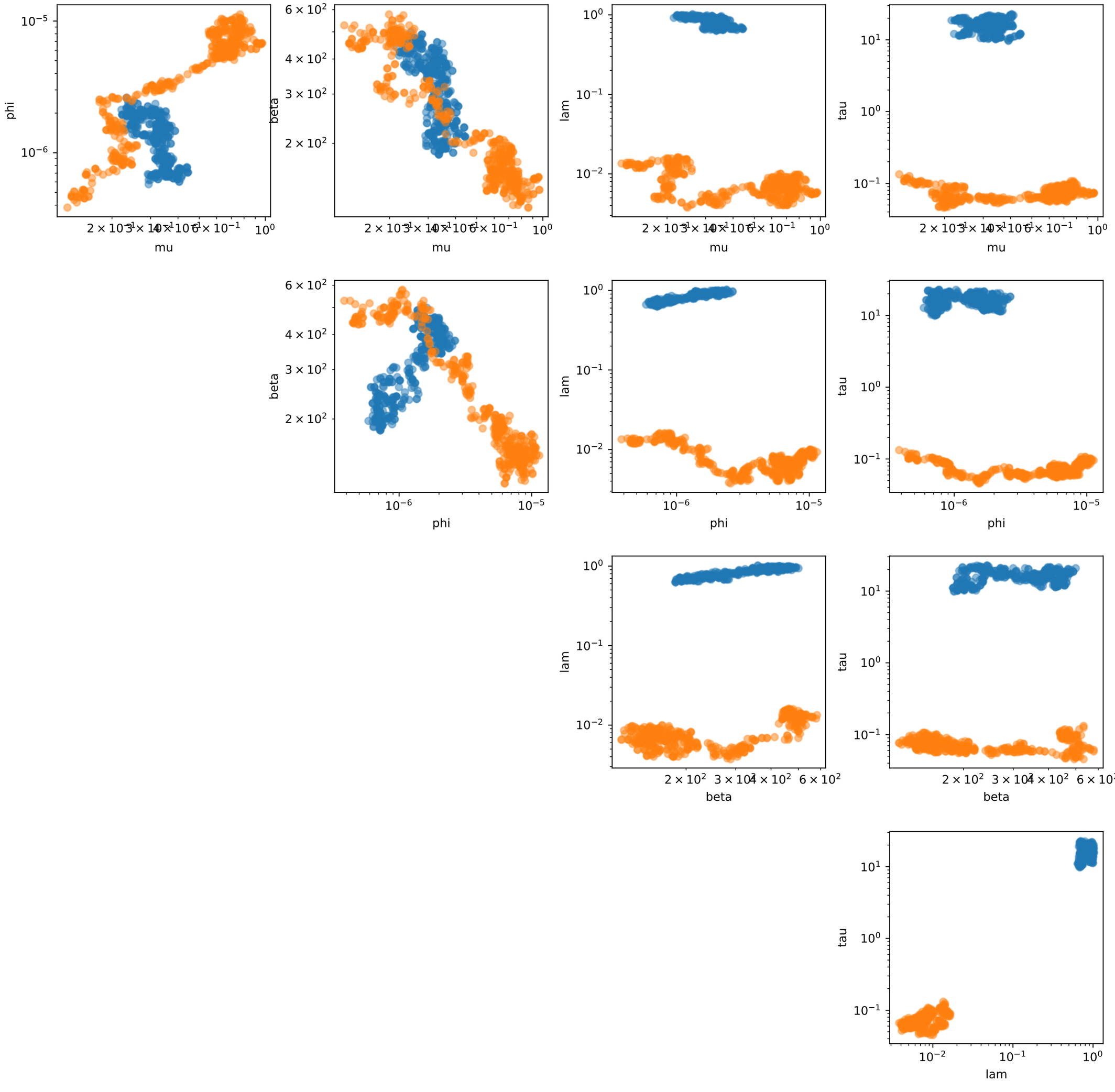
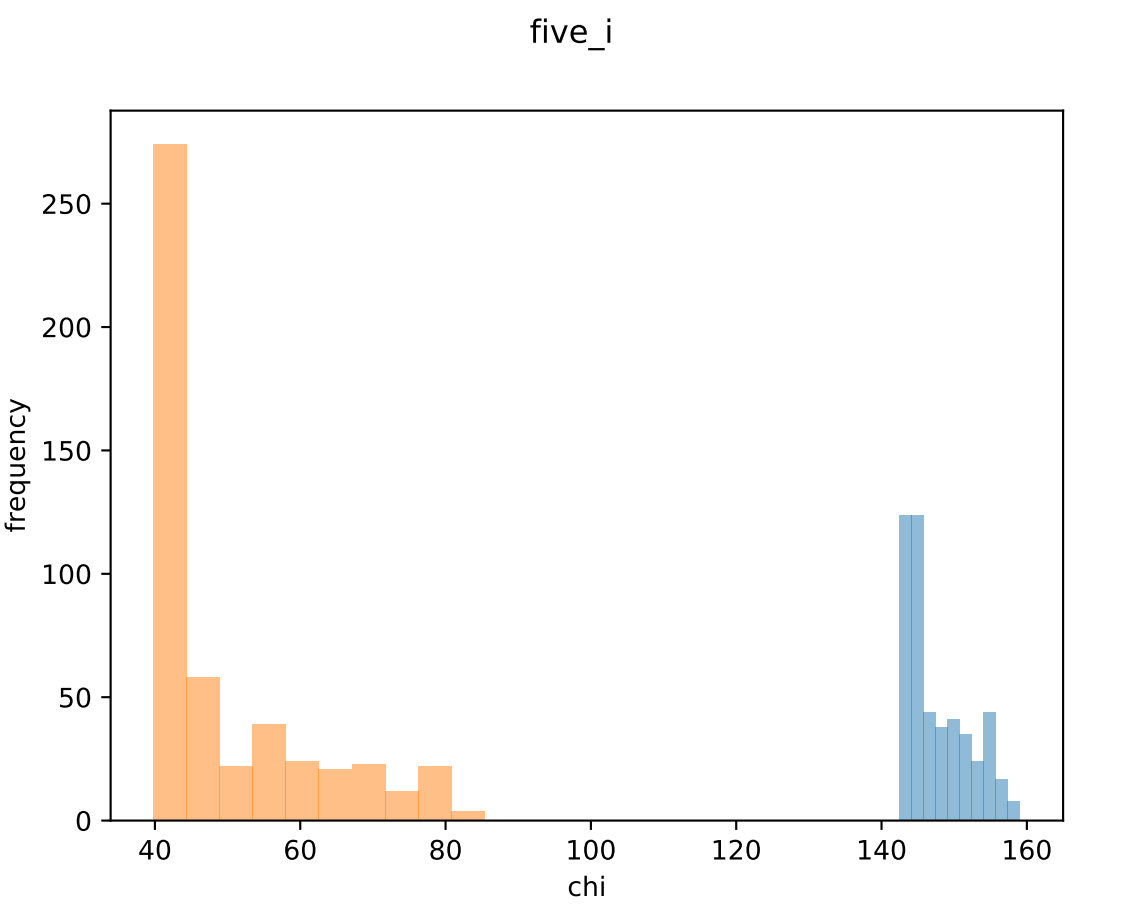
0
0
5
10
15
20
tau

five_i




five_i
frequency
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100
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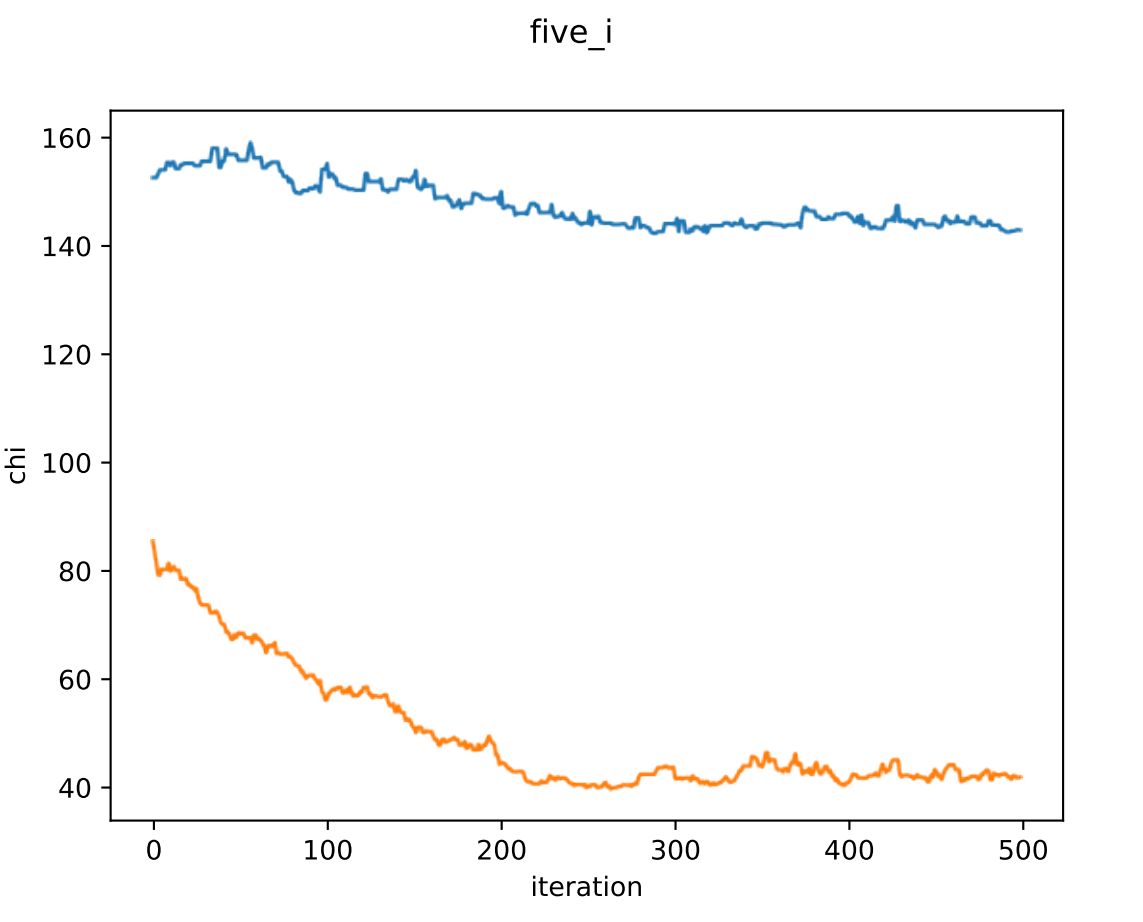
140
160


five_i
chi
iteration
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500