

mice\_F\_post.csv\_run\_1\_20250529\_133803

May 29, 2025

/Users/navehr/Dropbox/naveh/weizmann/uri\_alon/aging/code\_3

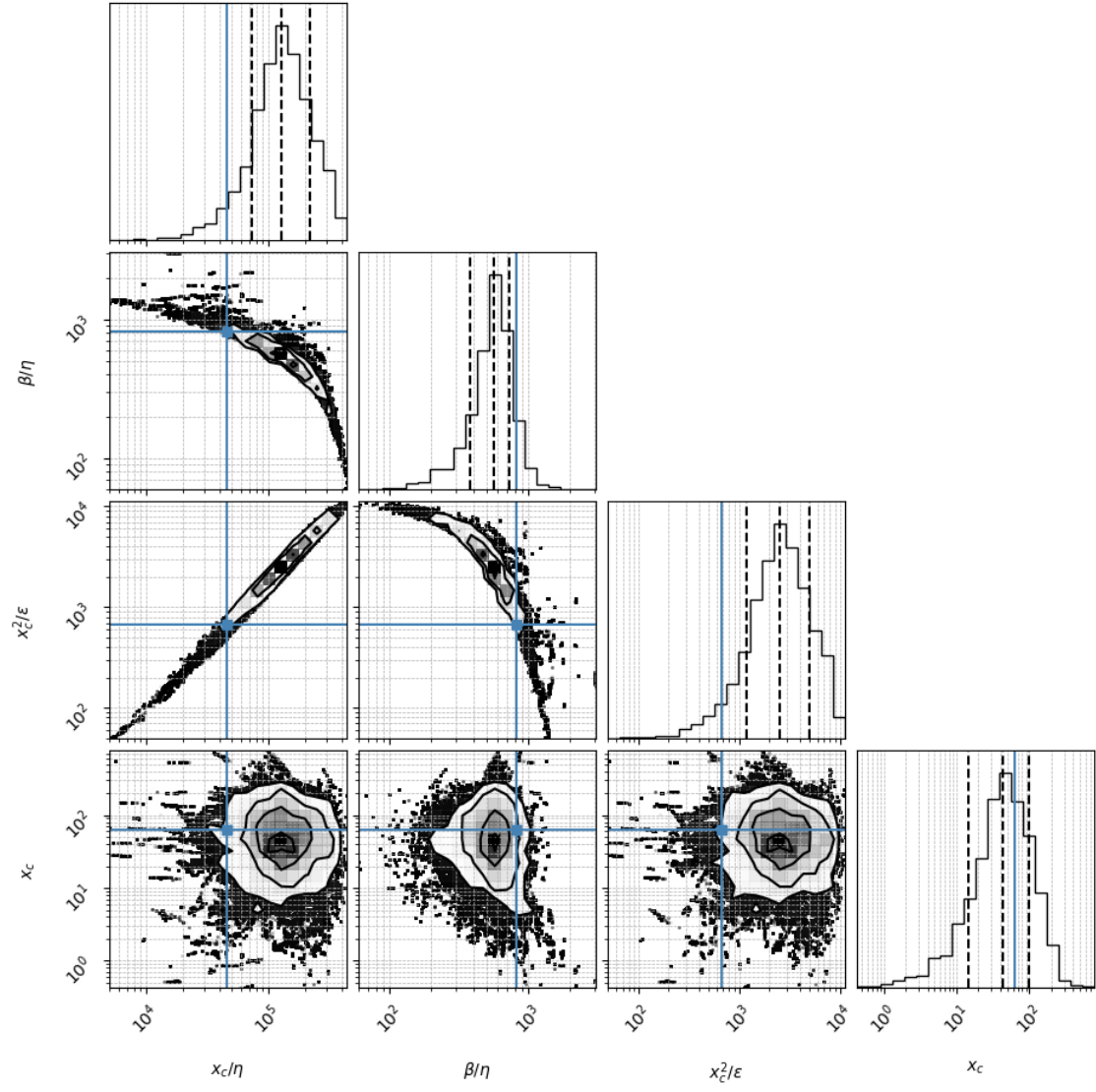
Loading file from: /Users/navehr/Dropbox/naveh/weizmann/uri\_alon/aging/code\_3/baysian02/posterior\_csvs\_baysian01/mice\_F\_post.csv

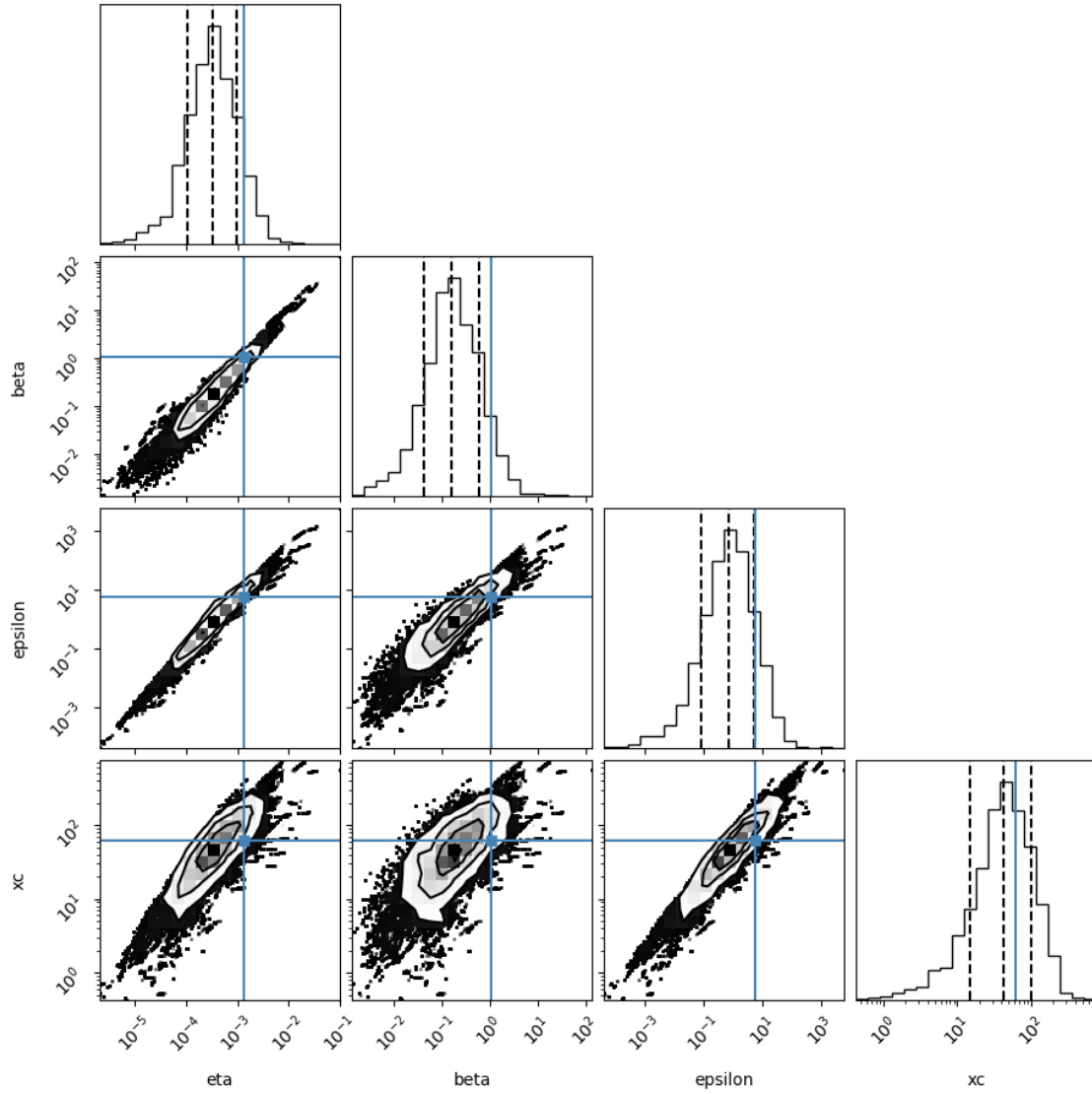
Reading Mice\_F

## 1 # 1. Density coner plot

A sample is 1 parameter set scanned. For the corner plot below, the quantiles (represented by the solid lines) are 0.16,0.5,0.84 of the samples. Dots represent individual samples (outside the line surrounding 0.84 of the samples) The parameter search is performed in the transformed space of  $x_c/\eta$ ,  $\beta/\eta$ ,  $x_c^2/\epsilon$ ,  $x_c$  but we also show the regular parameters

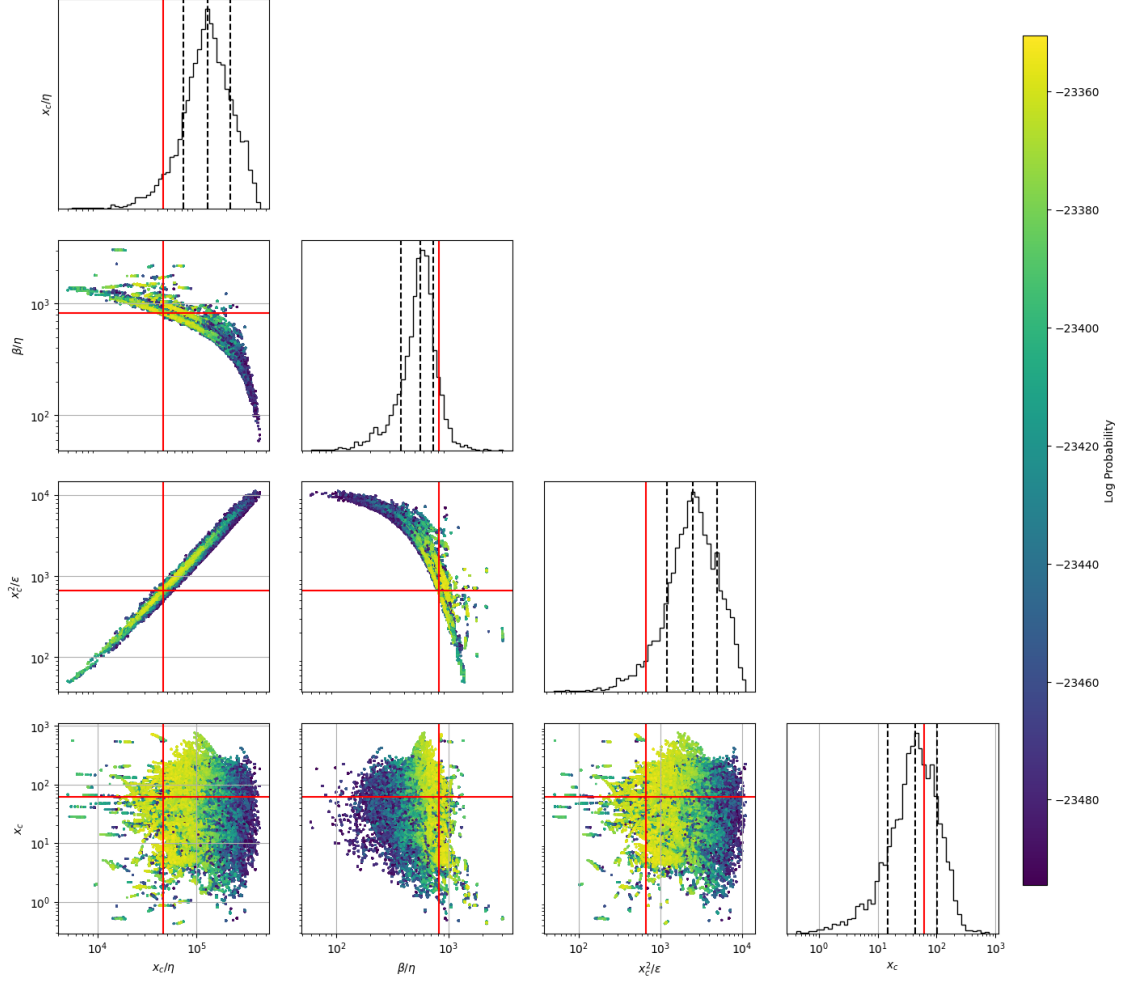
(16,)





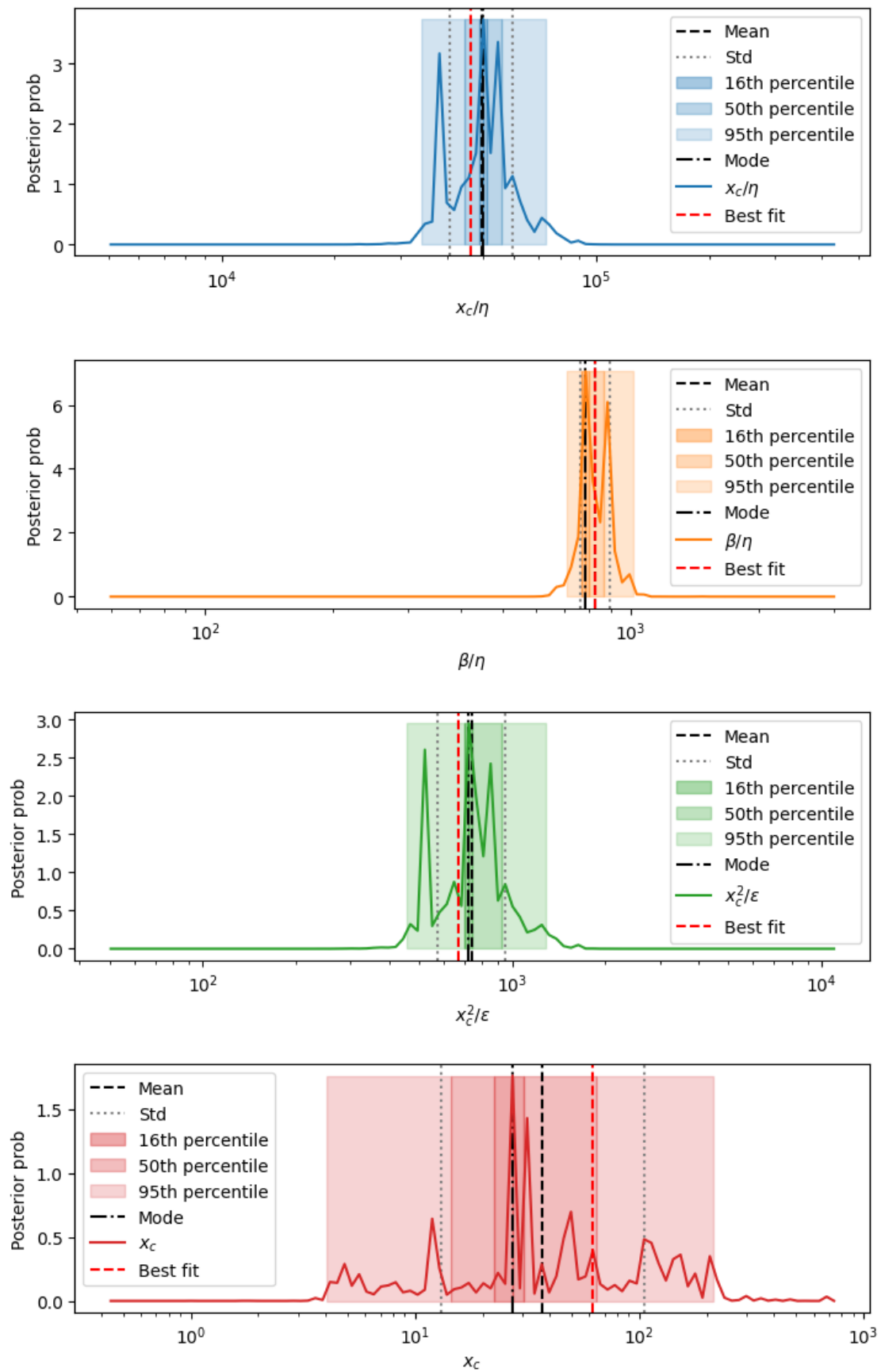
## 2. Heat map corner plot of raw samples

This plot shows all the raw sample points and their lnprobability



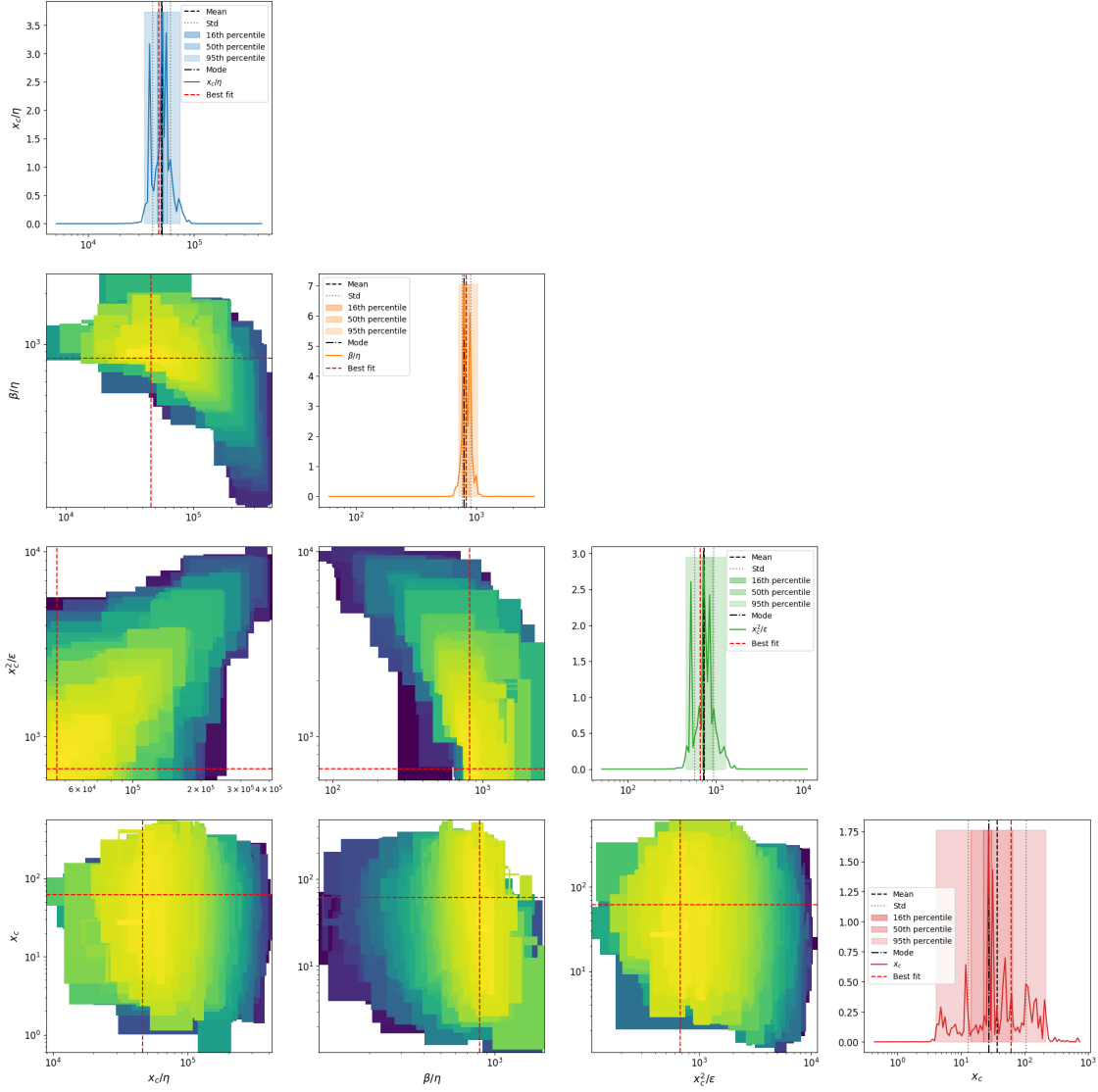
### 3. Posterior distributions of parameters

1d marginalizations of posterior distributions. we use a grid of size nbins=100-150



## 2D marginalizations of posterior distributions

2D Marginalized Posterior



## 4. Table of results

mode is the marginalized mode, max\_likwlihood is the sample with highest likelihood mode\_overall is the 4D posterior mode

	mean	std	mode \
xc/eta	50942.565	[11336.891, 9273.207]	51832.668

beta/eta	817.858	[74.413, 68.207]	810.708
xc^2/epsilon	771.968	[224.013, 173.629]	756.961
xc	38.975	[69.44, 24.964]	50.279
eta	0.0008	[0.00155, 0.000528]	0.00264
beta	0.667	[1.213, 0.431]	0.71
epsilon	2.072	[15.599, 1.829]	20.192
sqrt(xc/eta)	227.789	[24.004, 21.716]	227.668
s= eta^0.5*xc^1.5/epsilon	3.46	[0.58, 0.497]	3.384
beta*xc/epsilon	12.262	[0.778, 0.731]	12.234
eta*xc/epsilon	0.0152	[0.000905, 0.000854]	0.0151
Fx=beta^2/eta*xc	12.548	[5.294, 3.723]	12.658
Dx =beta*epsilon/eta*xc^2	1.026	[0.399, 0.287]	1.036
Pk=beta*k/epsilon	0.164	[0.324, 0.109]	0.052
Fk=beta^2/eta*k	1029.941	[1725.101, 644.909]	1320.887
Dk =beta*epsilon/eta*k^2	7050.27	[51276.8, 6198.07]	66974.732
Fk^2/Dk=beta^3/eta*epsilon	171.055	[78.891, 53.991]	171.586
epsilon/beta^2	4.864	[1.678, 1.247]	5.083
k/beta	0.703	[1.19, 0.442]	0.704
k^2/epsilon	0.101	[0.68, 0.0877]	0.014
best fit_MedianLifetime	887.58	0.51	887.58
best fit_MaxLifetime	1411.18	0	1411.18
data_MedianLifetime	882.0	0.52	882.0
data_MaxLifetime	1456.0	0	1456.0

	percentile_16	percentile_50 \
xc/eta	[49556.82, 54213.033]	[45300.516, 59306.731]
beta/eta	[779.277, 821.464]	[759.003, 865.935]
xc^2/epsilon	[716.902, 799.258]	[666.769, 923.966]
xc	[40.144, 59.901]	[20.95, 89.38]
eta	[0.00191, 0.00294]	[0.000748, 0.00316]
beta	[0.586, 0.86]	[0.543, 2.002]
epsilon	[14.738, 31.377]	[1.965, 35.588]
sqrt(xc/eta)	[222.614, 232.837]	[212.839, 243.53]
s= eta^0.5*xc^1.5/epsilon	[3.275, 3.496]	[3.068, 3.815]
beta*xc/epsilon	[12.096, 12.374]	[11.824, 12.95]
eta*xc/epsilon	[0.0149, 0.0153]	[0.0145, 0.0157]
Fx=beta^2/eta*xc	[11.306, 13.143]	[9.726, 15.279]
Dx =beta*epsilon/eta*xc^2	[0.952, 1.128]	[0.804, 1.263]
Pk=beta*k/epsilon	[0.0419, 0.0647]	[0.037, 0.175]
Fk=beta^2/eta*k	[1046.24, 1667.63]	[790.953, 3202.987]
Dk =beta*epsilon/eta*k^2	[42730.29, 92325.529]	[7080.033, 119357.706]
Fk^2/Dk=beta^3/eta*epsilon	[148.439, 180.077]	[122.36, 218.459]
epsilon/beta^2	[4.907, 5.648]	[3.974, 6.059]
k/beta	[0.538, 0.789]	[0.25, 0.852]
k^2/epsilon	[0.0102, 0.0218]	[0.00796, 0.0988]
best fit_MedianLifetime	[887.09, 888.09]	[887.09, 888.09]
best fit_MaxLifetime	[1411.18, 1411.18]	[1411.18, 1411.18]

data_MedianLifetime	[881.52, 882.52]	[881.52, 882.52]	
data_MaxLifetime	[1456.0, 1456.0]	[1456.0, 1456.0]	
	percentile_95	max_likelihood	mode_overall
xc/eta	[35653.519, 77643.449]	46236.322	37651.206
beta/eta	[683.047, 962.229]	824.86	899.104
xc^2/epsilon	[481.166, 1327.636]	670.741	526.572
xc	[5.162, 189.293]	62.013	27.471
eta	[9.24e-05, 0.00393]	0.00134	0.00073
beta	[0.086, 2.939]	1.106	0.656
epsilon	[0.0308, 51.926]	5.733	1.433
sqrt(xc/eta)	[188.821, 278.646]	215.026	194.039
s= eta^0.5*xc^1.5/epsilon	[2.578, 4.742]	3.119	2.714
beta*xc/epsilon	[11.558, 14.842]	11.966	12.574
eta*xc/epsilon	[0.0136, 0.0171]	0.0145	0.014
Fx=beta^2/eta*xc	[6.191, 24.001]	14.716	21.47
Dx =beta*epsilon/eta*xc^2	[0.511, 1.876]	1.23	1.707
Pk=beta*k/epsilon	[0.0288, 1.445]	0.0965	0.229
Fk=beta^2/eta*k	[162.091, 5105.324]	1825.116	1179.612
Dk =beta*epsilon/eta*k^2	[116.299, 154304.686]	18916.972	5154.043
Fk^2/Dk=beta^3/eta*epsilon	[75.486, 354.115]	176.088	269.979
epsilon/beta^2	[3.0, 9.239]	4.684	3.33
k/beta	[0.17, 5.81]	0.452	0.762
k^2/epsilon	[0.00424, 6.302]	0.0436	0.174
best fit_MedianLifetime	[887.09, 888.09]	887.58	NaN
best fit_MaxLifetime	[1411.18, 1411.18]	1411.18	NaN
data_MedianLifetime	[881.52, 882.52]	882.0	NaN
data_MaxLifetime	[1456.0, 1456.0]	1456.0	NaN

## 5 5. Fits of simulations to data

best params is the sample with highest likelihood. mode trans is the 4D posterior mode in the transformed space of  $x_c/\eta$ ,  $\beta/\eta$ ,  $x_c^2/\epsilon$ ,  $x_c$



