

German\_Shepherd\_vetCompass\_post.csv\_run\_25\_20250529\_154251

May 29, 2025

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

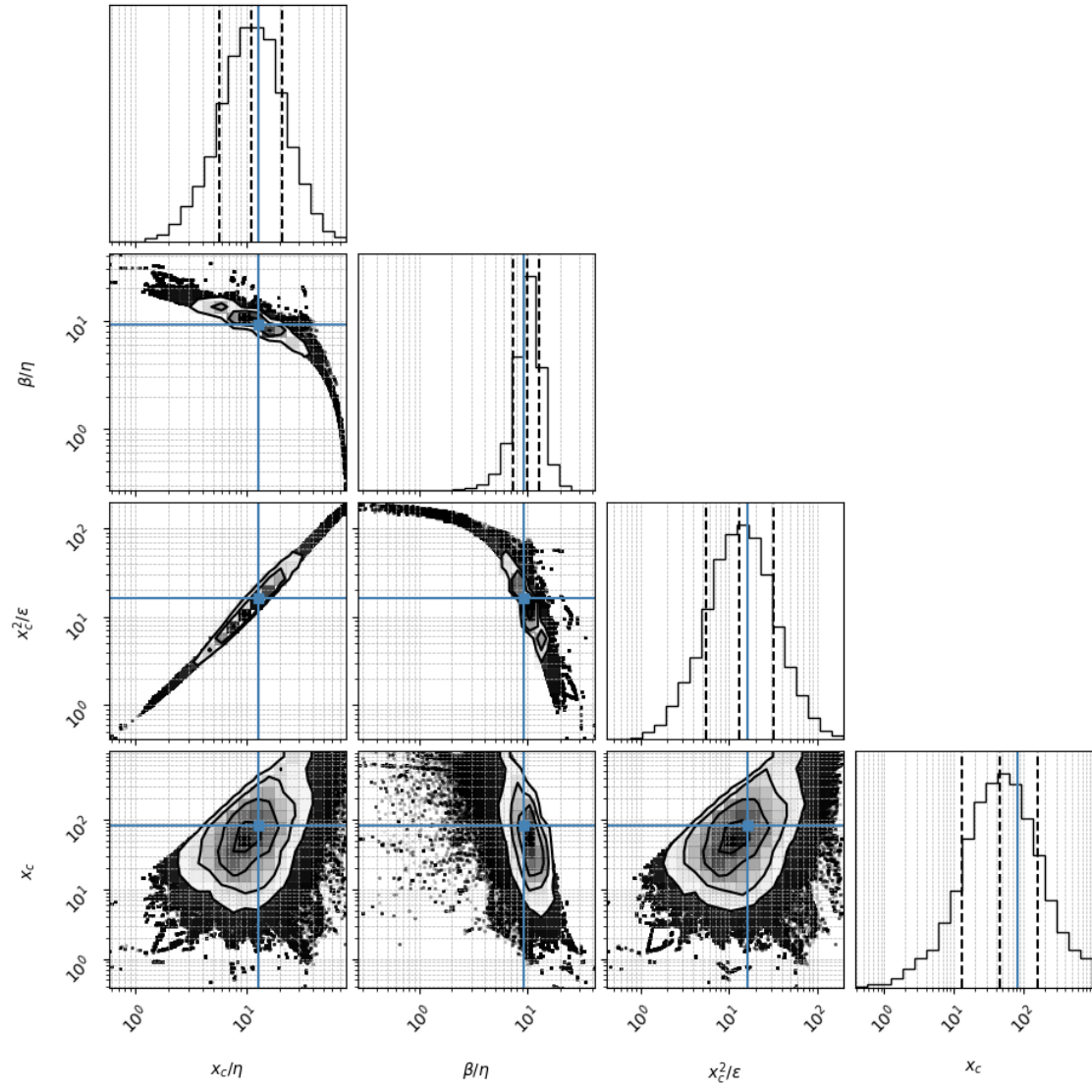
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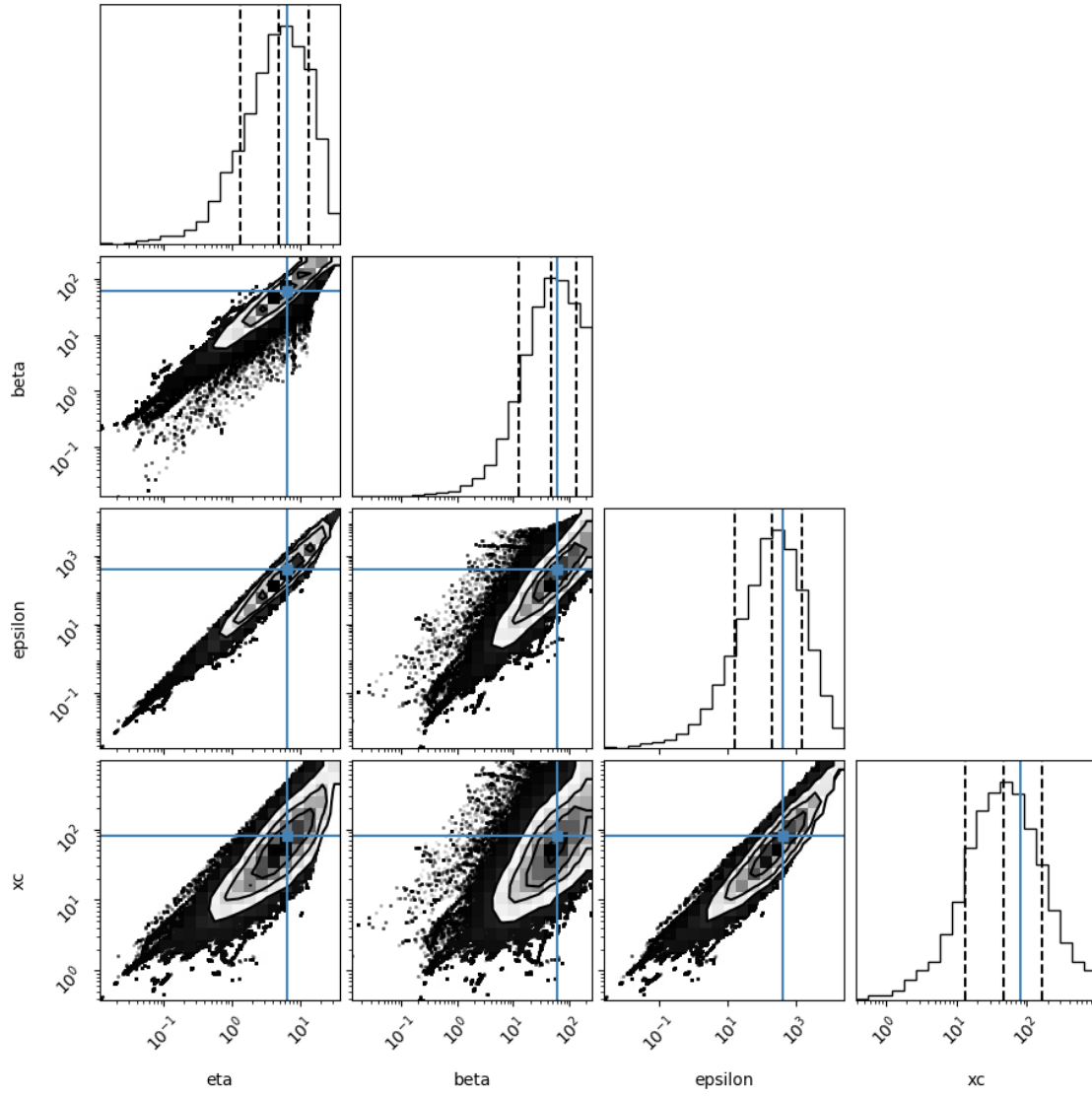
Reading German\_Shepherd

## 1 # 1. Density corner 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

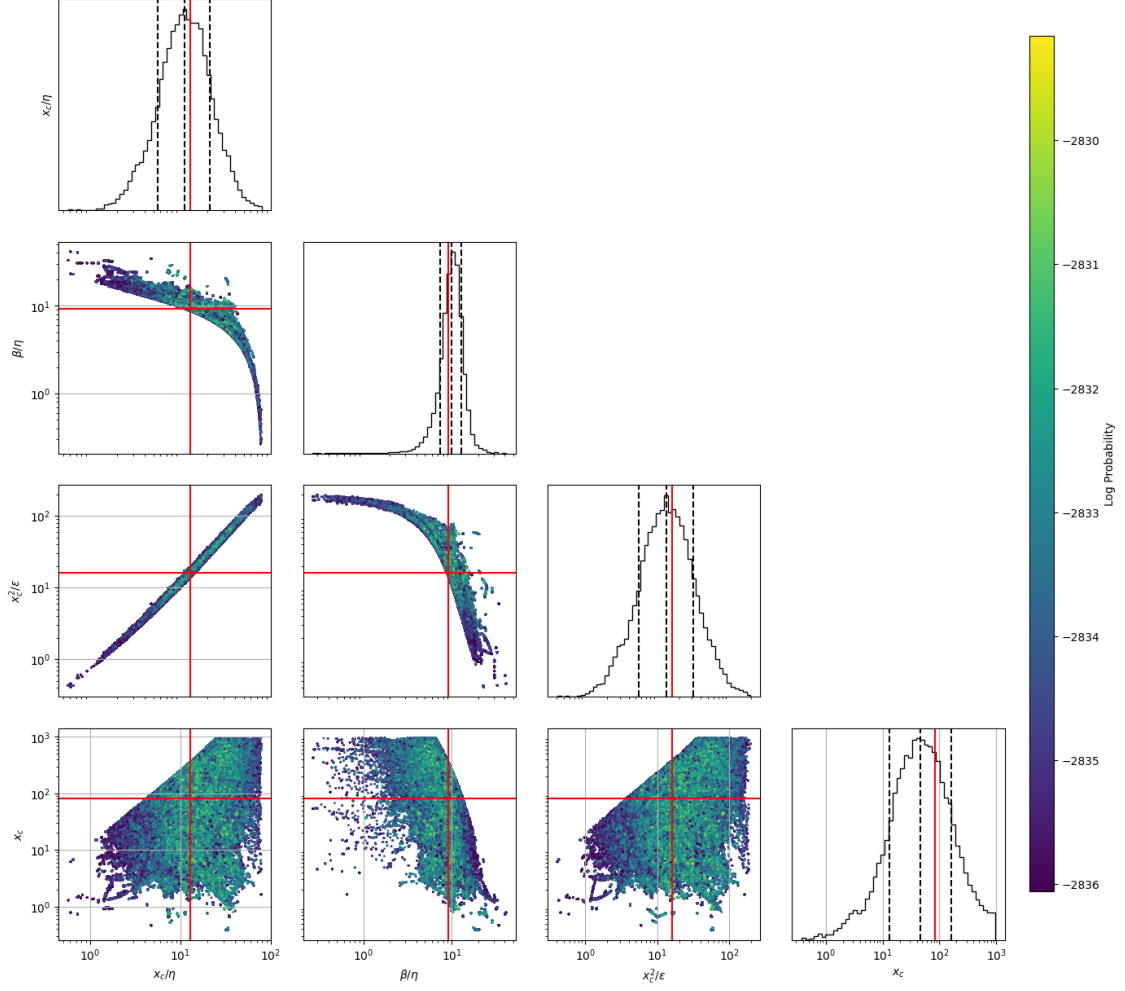
(16,)





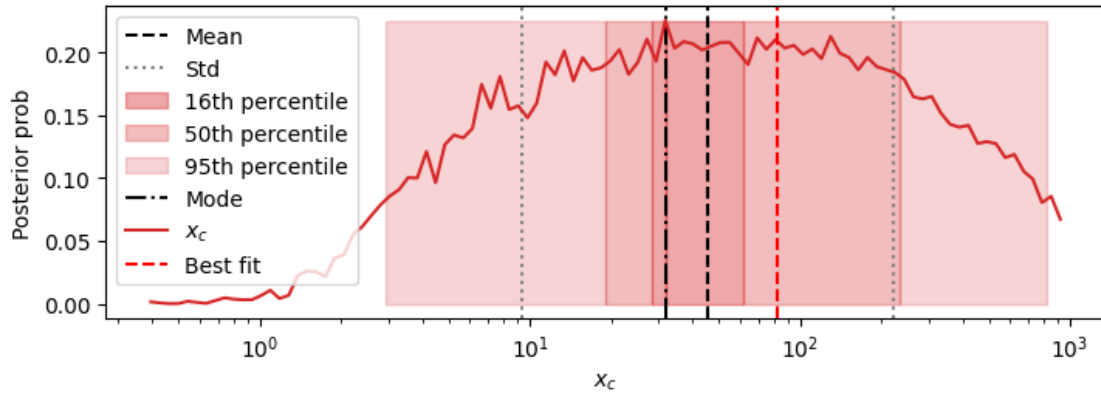
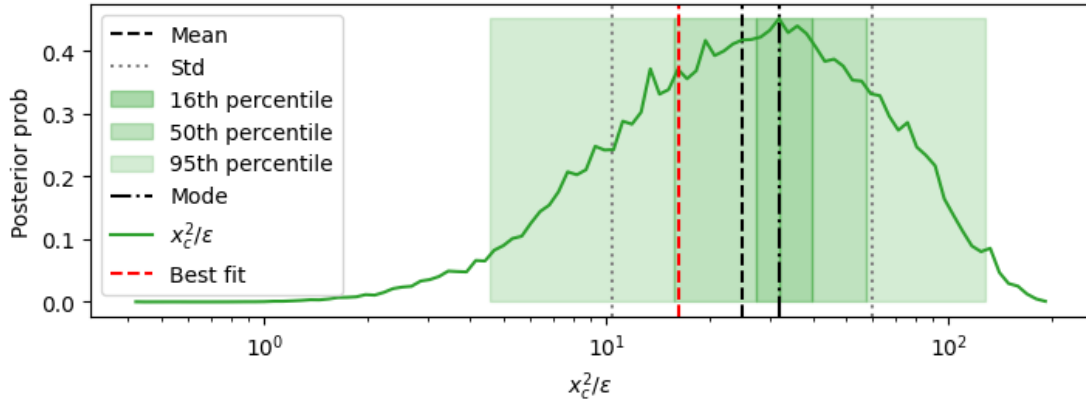
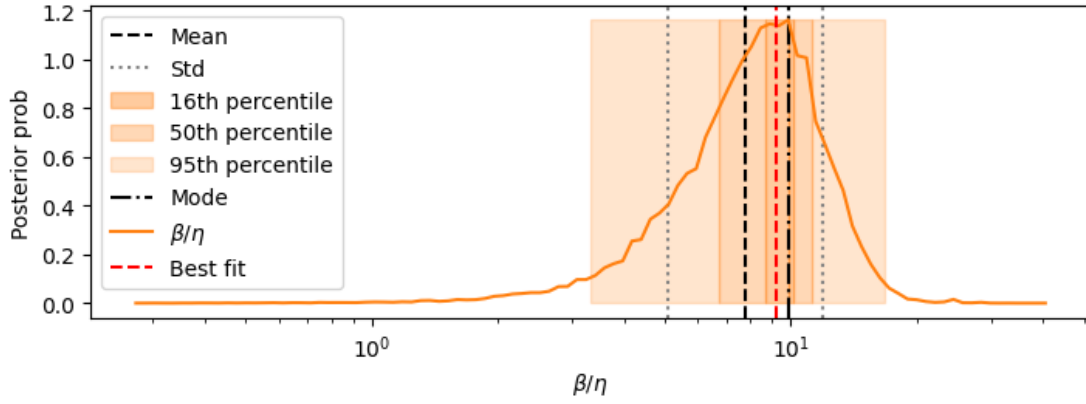
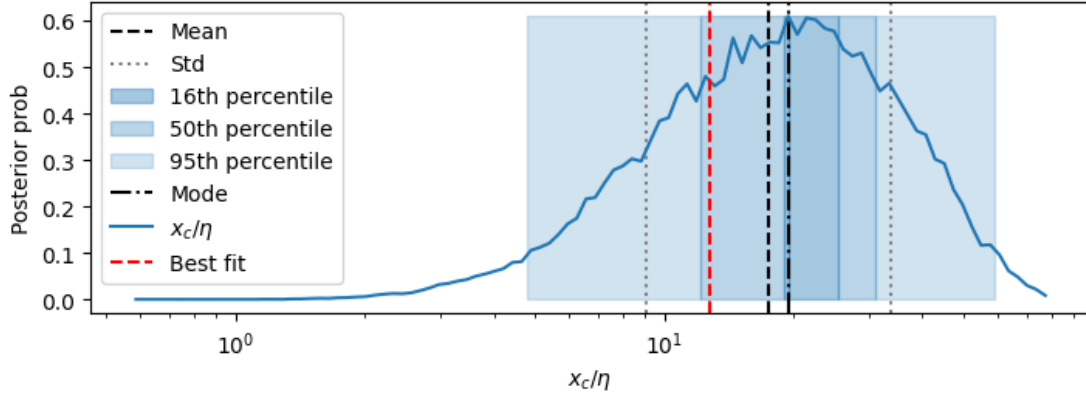
## 2. Heat map corner plot of raw samples

This plot shows all the raw sample points and their lnprobability



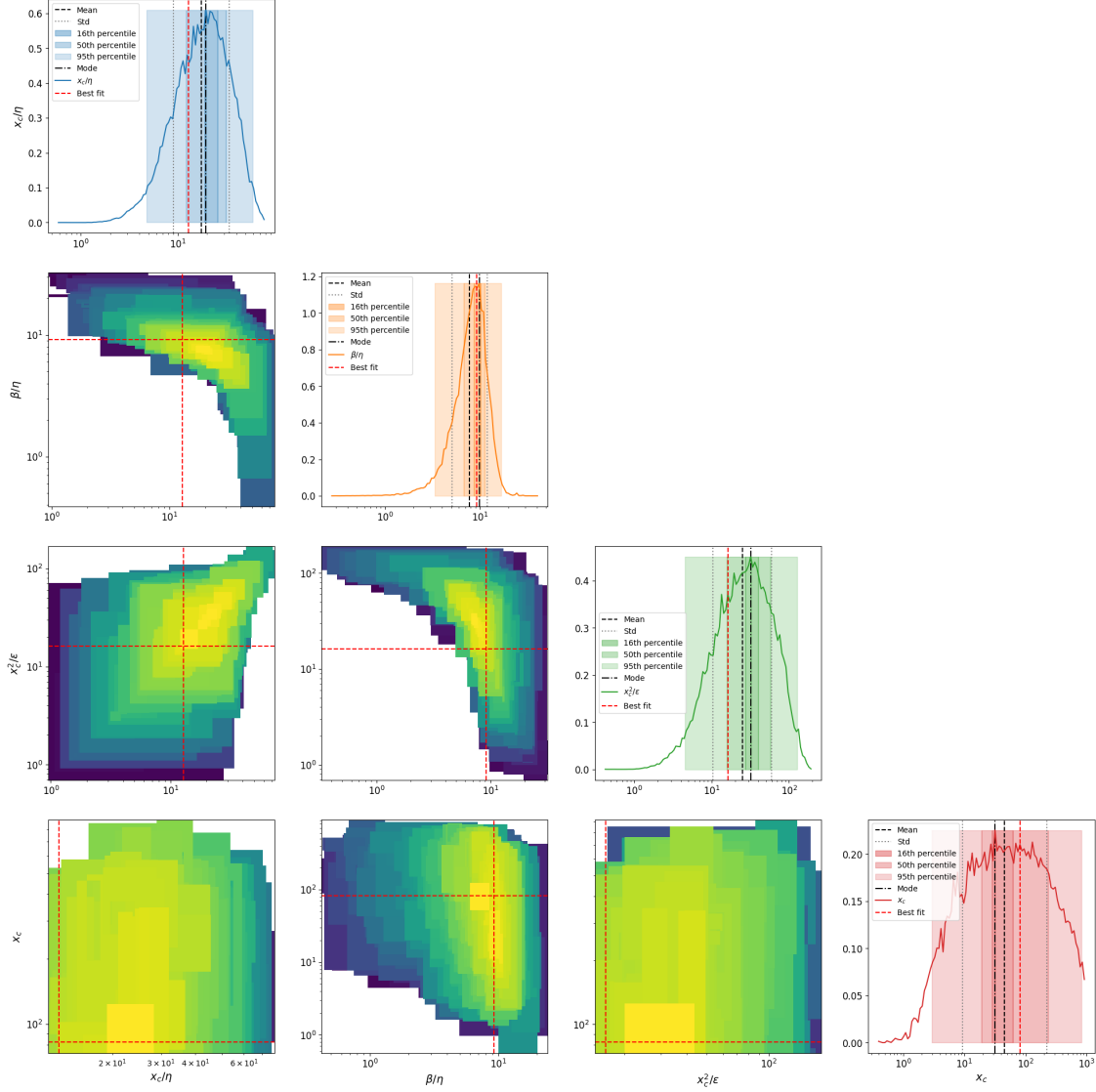
### 3. Posterior distributions of parameters

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



## 2D marginalizations of posterior distributions

2D Marginalized Posterior



Rescaling the samples TIME by 365

## 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	17.443	[16.241, 8.41]	21.45
beta/eta	7.789	[4.104, 2.688]	8.905
xc^2/epsilon	24.936	[34.762, 14.52]	31.889
xc	45.557	[176.89, 36.227]	34.344
eta	2.202	[8.527, 1.75]	2.988
beta	17.024	[65.533, 13.513]	22.61
epsilon	59.479	[1346.824, 56.963]	184.432
sqrt(xc/eta)	4.13	[1.493, 1.097]	4.408
s= eta^0.5*xc^1.5/epsilon	5.836	[3.907, 2.34]	6.104
beta*xc/epsilon	11.169	[2.715, 2.184]	11.601
eta*xc/epsilon	1.408	[0.32, 0.261]	1.411
Fx=beta^2/eta*xc	3.725	[10.169, 2.726]	4.274
Dx =beta*epsilon/eta*xc^2	0.333	[0.724, 0.228]	0.342
Pk=beta*k/epsilon	0.121	[0.665, 0.102]	0.0584
Fk=beta^2/eta*k	239.582	[1055.626, 195.265]	242.291
Dk =beta*epsilon/eta*k^2	1983.838	[40063.022, 1890.238]	11504.045
Fk^2/Dk=beta^3/eta*epsilon	29.679	[155.659, 24.926]	50.593
epsilon/beta^2	0.222	[0.62, 0.163]	0.17
k/beta	0.0284	[0.107, 0.0224]	0.0269
k^2/epsilon	0.00364	[0.0814, 0.00348]	0.000515
best fit_MedianLifetime	11.24	0.51	11.24
best fit_MaxLifetime	18.87	0	18.87
data_MedianLifetime	10.73	0.53	10.73
data_MaxLifetime	19.0	0	19.0

	percentile_16	percentile_50 \
xc/eta	[18.048, 24.266]	[12.777, 32.626]
beta/eta	[8.255, 9.605]	[6.745, 11.176]
xc^2/epsilon	[25.687, 37.216]	[15.668, 53.92]
xc	[28.237, 61.793]	[15.091, 184.976]
eta	[2.645, 5.961]	[1.624, 17.147]
beta	[16.028, 35.191]	[6.616, 77.265]
epsilon	[123.262, 617.82]	[20.931, 2635.673]
sqrt(xc/eta)	[4.044, 4.689]	[3.487, 5.437]
s= eta^0.5*xc^1.5/epsilon	[5.558, 6.96]	[4.276, 9.048]
beta*xc/epsilon	[10.874, 11.854]	[10.415, 12.922]
eta*xc/epsilon	[1.346, 1.479]	[1.225, 1.647]
Fx=beta^2/eta*xc	[2.941, 5.348]	[1.617, 9.726]
Dx =beta*epsilon/eta*xc^2	[0.259, 0.451]	[0.149, 0.784]
Pk=beta*k/epsilon	[0.049, 0.124]	[0.0193, 0.354]
Fk=beta^2/eta*k	[149.126, 342.687]	[85.636, 1039.179]
Dk =beta*epsilon/eta*k^2	[6442.806, 28608.676]	[748.013, 77288.144]
Fk^2/Dk=beta^3/eta*epsilon	[31.527, 67.194]	[12.243, 143.213]
epsilon/beta^2	[0.138, 0.241]	[0.0793, 0.42]
k/beta	[0.0142, 0.0312]	[0.00586, 0.062]
k^2/epsilon	[0.000212, 0.00106]	[5.84e-05, 0.00735]

best_fit_MedianLifetime	[10.75, 11.75]	[10.75, 11.75]
best_fit_MaxLifetime	[18.87, 18.87]	[18.87, 18.87]
data_MedianLifetime	[10.26, 11.26]	[10.26, 11.26]
data_MaxLifetime	[19.0, 19.0]	[19.0, 19.0]

	percentile_95	max_likelihood	mode_overall
xc/eta	[4.763, 58.979]	12.778	23.219
beta/eta	[3.163, 15.915]	9.206	7.114
xc^2/epsilon	[4.553, 120.403]	16.188	32.674
xc	[2.914, 819.125]	82.303	90.948
eta	[0.111, 30.288]	6.441	0.48
beta	[1.022, 251.376]	59.295	4.504
epsilon	[0.195, 13210.652]	418.446	2.867
sqrt(xc/eta)	[2.237, 7.31]	3.575	3.8
s= eta^0.5*xc^1.5/epsilon	[2.178, 15.292]	4.528	5.262
beta*xc/epsilon	[6.766, 17.477]	11.663	14.123
eta*xc/epsilon	[0.962, 2.071]	1.267	1.385
Fx=beta^2/eta*xc	[0.269, 50.37]	6.633	7.205
Dx =beta*epsilon/eta*xc^2	[0.0354, 3.306]	0.569	0.51
Pk=beta*k/epsilon	[0.00479, 4.073]	0.0709	0.068
Fk=beta^2/eta*k	[10.698, 4776.997]	1091.783	295.401
Dk =beta*epsilon/eta*k^2	[7.239, 343190.739]	15409.378	5.998
Fk^2/Dk=beta^3/eta*epsilon	[0.717, 949.742]	77.355	309.593
epsilon/beta^2	[0.0172, 3.866]	0.119	0.0477
k/beta	[0.00199, 0.443]	0.00843	0.343
k^2/epsilon	[1.89e-05, 1.088]	0.000597	2.461
best_fit_MedianLifetime	[10.75, 11.75]	11.24	NaN
best_fit_MaxLifetime	[18.87, 18.87]	18.87	NaN
data_MedianLifetime	[10.26, 11.26]	10.73	NaN
data_MaxLifetime	[19.0, 19.0]	19.0	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  $x_c/\eta$ ,  $\beta/\eta$ ,  $x_c^2/\epsilon$ ,  $x_c$



