

Sweden_F_1910_hetro_post.csv_run_15_20250529_150456

May 29, 2025

/Users/navehr/Dropbox/naveh/weizmann/uri_alon/aging/code_3

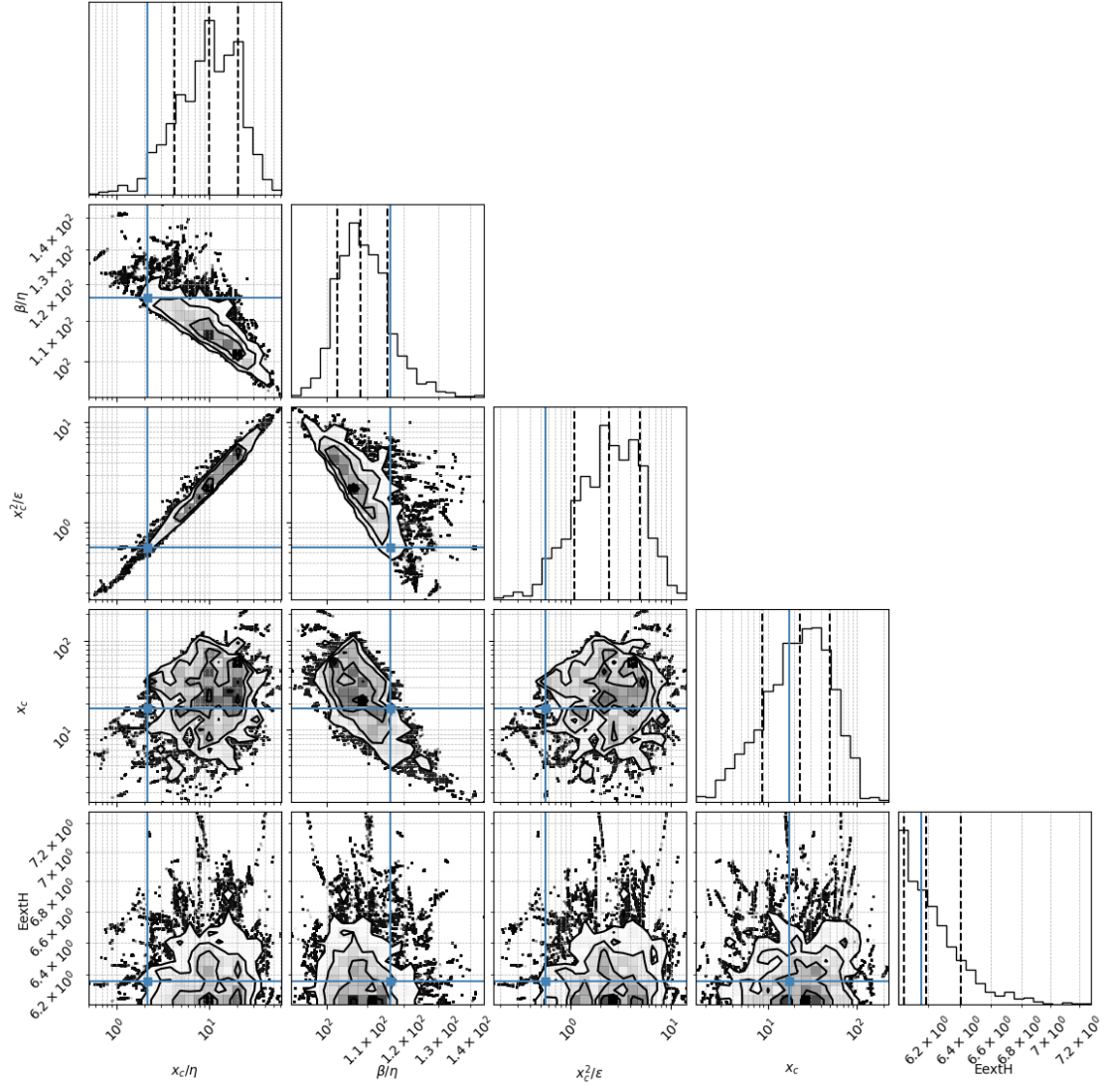
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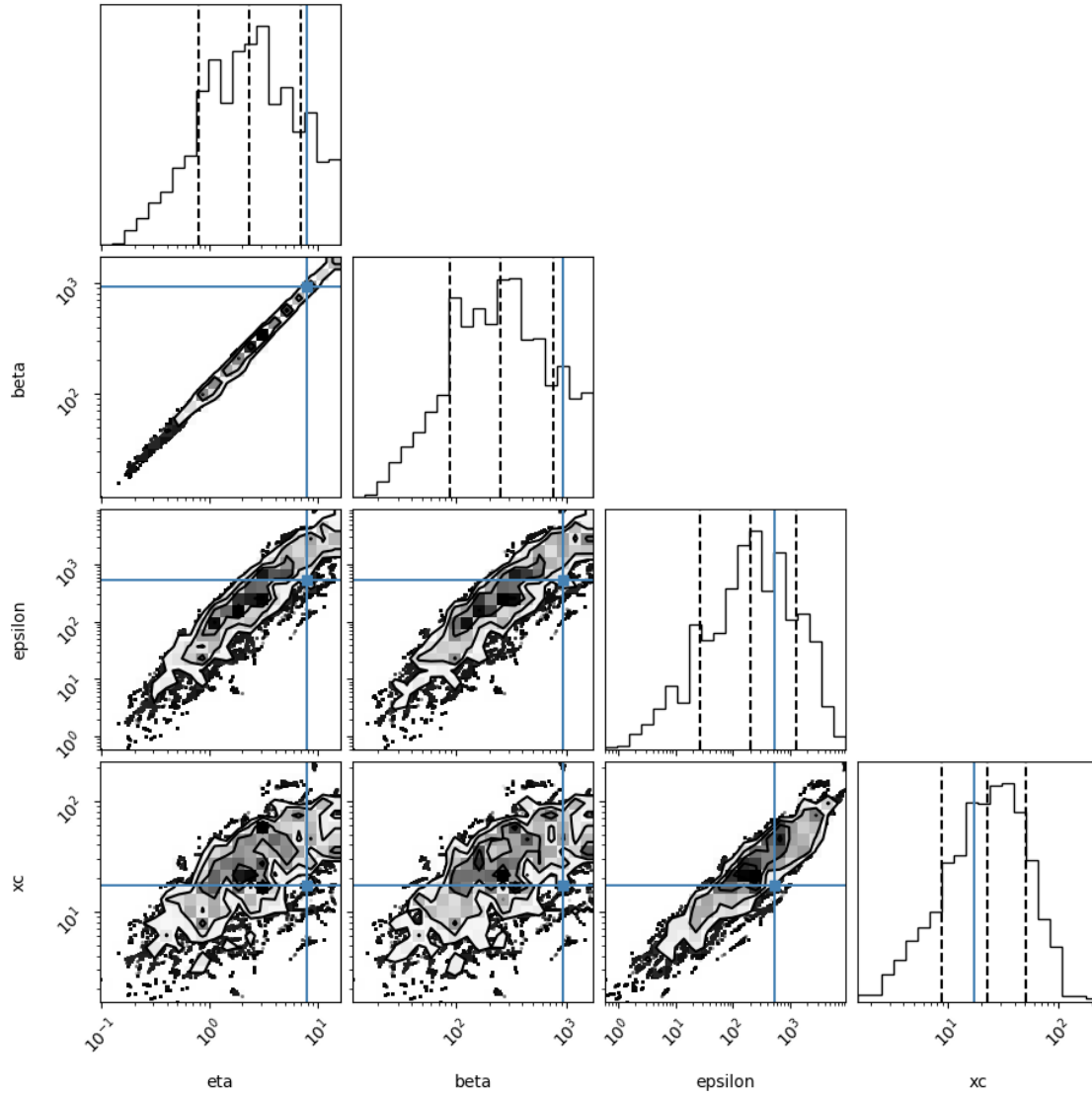
Reading Humans_F

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/η , β/η , x_c^2/ϵ , x_c but we also show the regular parameters

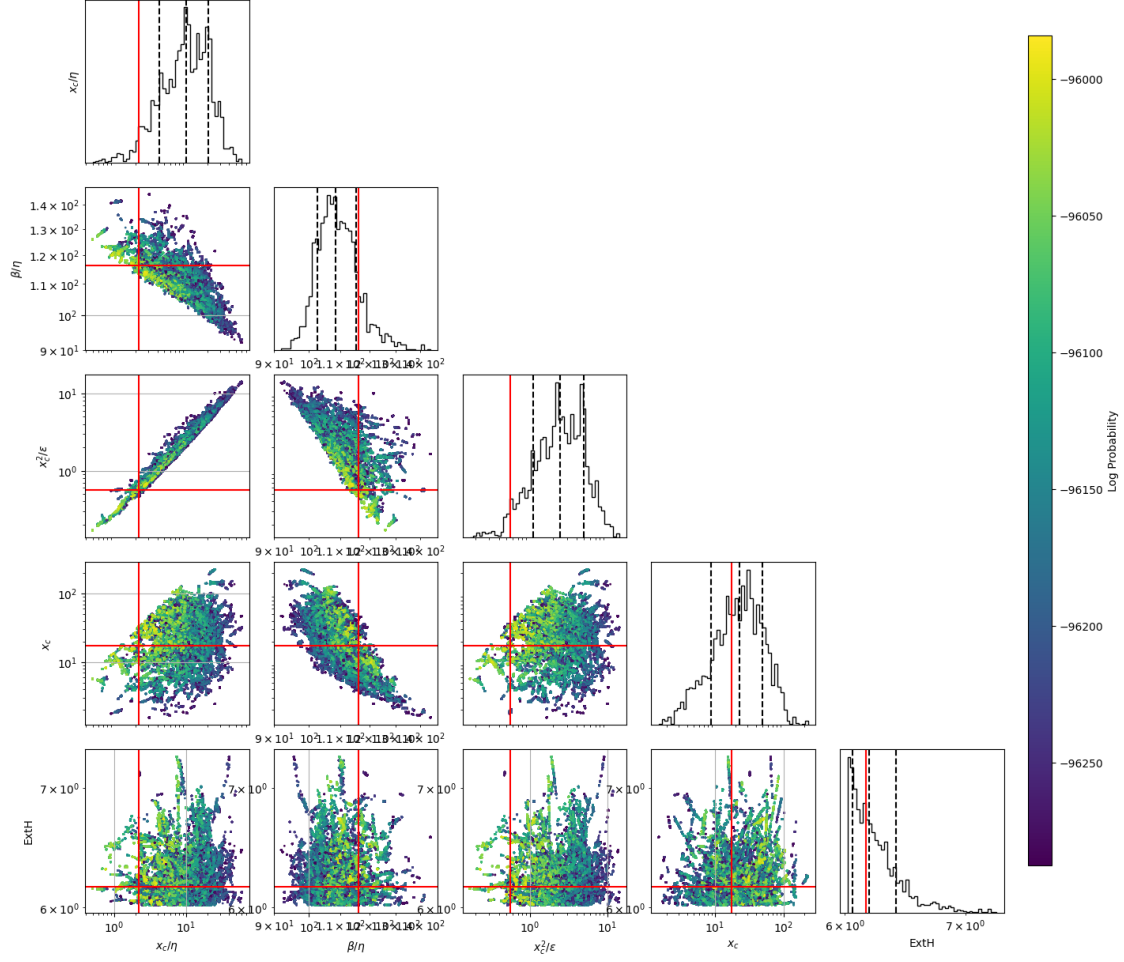
(25,)





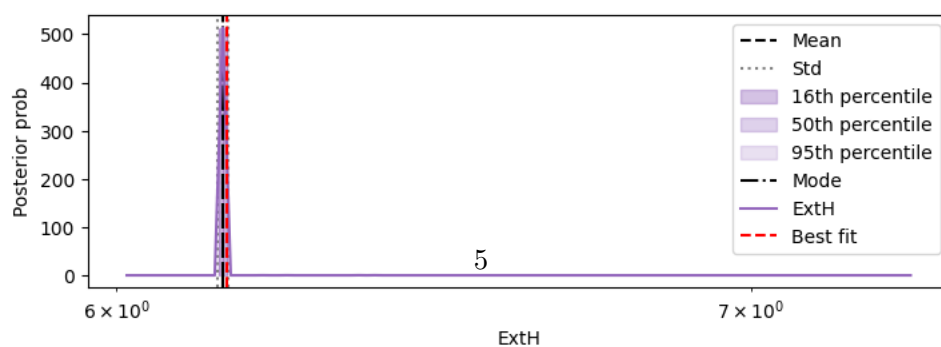
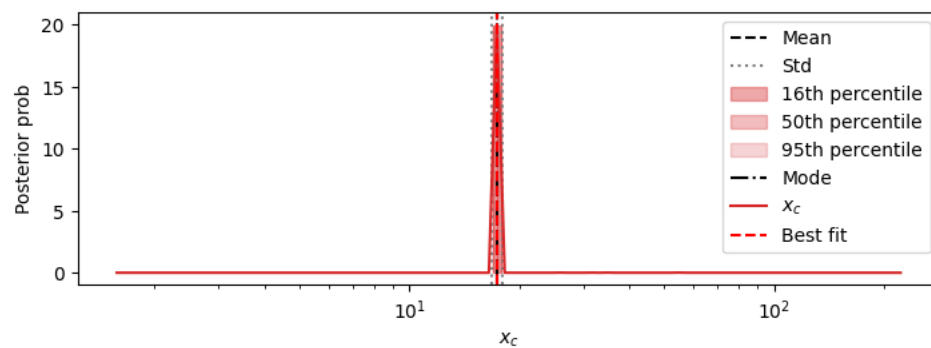
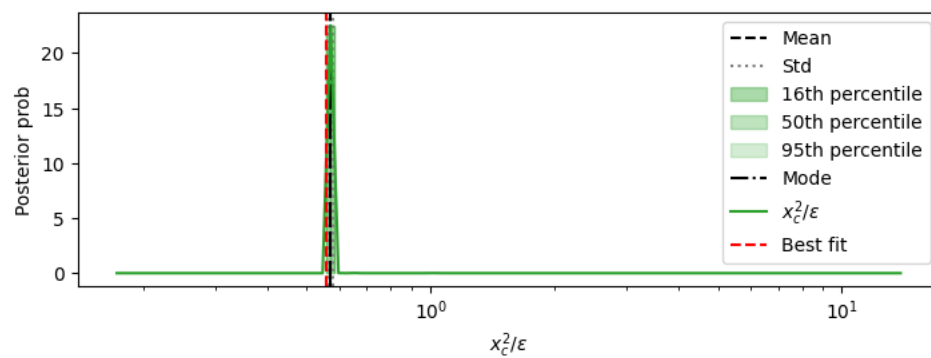
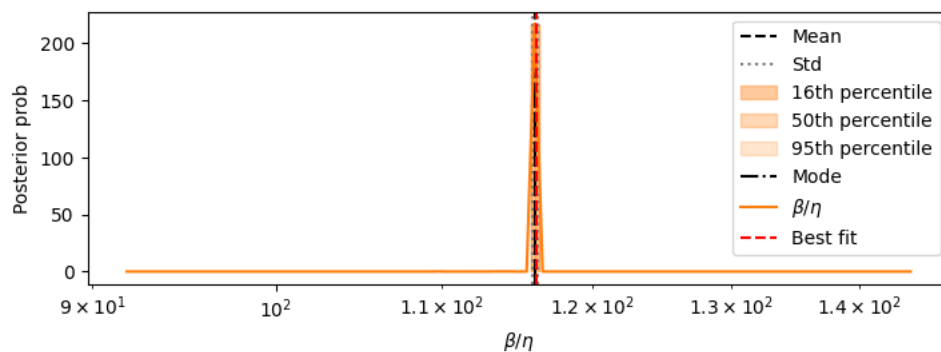
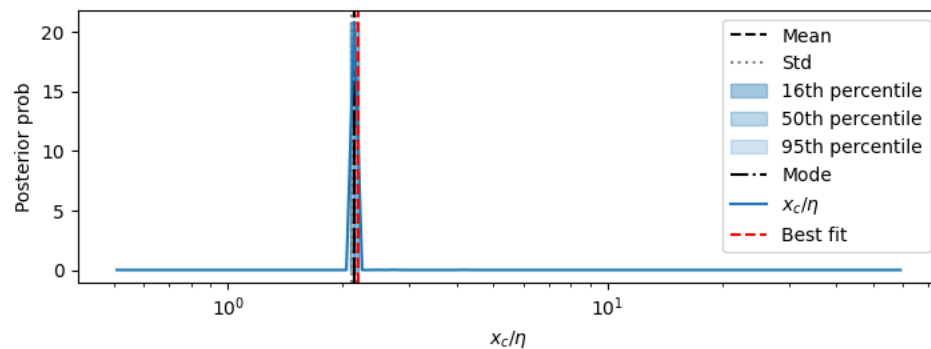
2. Heat map corner plot of raw samples

This plot shows all the raw sample points and their lnprobability



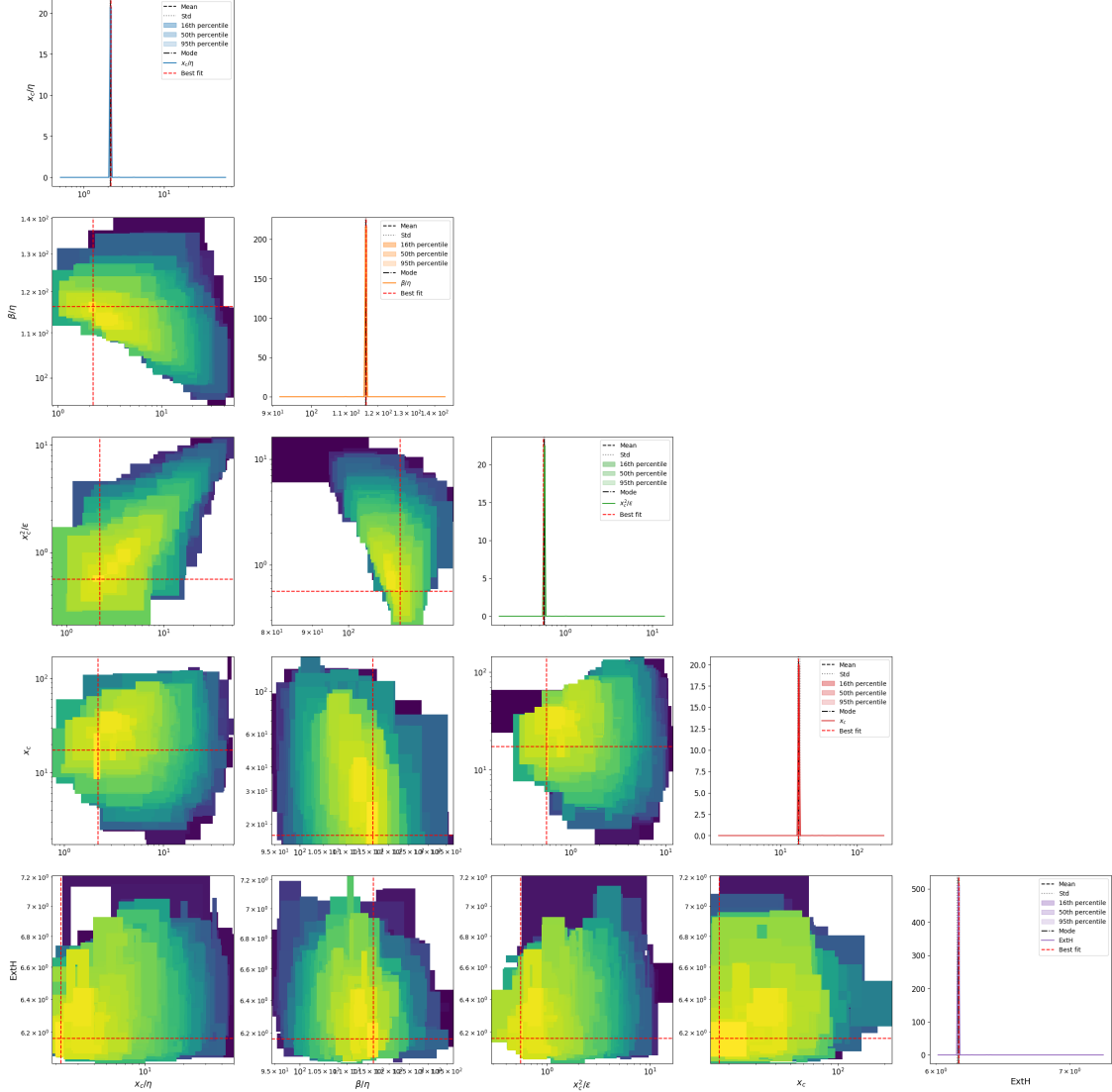
3. Posterior distributions of parameters

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 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	2.152	[0.038, 0.0373]	2.735
beta/eta	116.084	[0.17, 0.17]	113.971
xc^2/epsilon	0.571	[0.00808, 0.00797]	0.597
xc	17.383	[0.606, 0.585]	30.084
ExtH	6.157	[0.00754, 0.00753]	6.157
eta	11.659	[2.034, 1.732]	12.849
beta	1299.634	[208.148, 179.413]	1535.441
epsilon	1723.63	[991.035, 629.241]	2094.361
sqrt(xc/eta)	1.794	[0.261, 0.228]	1.614
s= eta^0.5*xc^1.5/epsilon	0.429	[0.0552, 0.0489]	0.477
beta*xc/epsilon	26.946	[0.923, 0.892]	27.006
eta*xc/epsilon	0.235	[0.00486, 0.00476]	0.239
Fx=beta^2/eta*xc	3051.628	[1162.786, 841.965]	5227.895
Dx =beta*epsilon/eta*xc^2	116.739	[40.387, 30.006]	194.128
Pk=beta*k/epsilon	0.36	[0.143, 0.102]	0.501
Fk=beta^2/eta*k	302776.231	[47004.252, 40687.72]	321637.112
Dk =beta*epsilon/eta*k^2	243202.106	[17683.846, 16485.168]	839627.013
Fk^2/Dk=beta^3/eta*epsilon	180954.756	[9392.858, 8929.36]	140106.559
epsilon/beta^2	0.00063	[4.34e-05, 4.06e-05]	0.000846
k/beta	0.000534	[2.56e-05, 2.44e-05]	0.000325
k^2/epsilon	0.000454	[7.48e-05, 6.42e-05]	0.000119
best fit_MedianLifetime	80.62	0.51	80.62
best fit_MaxLifetime	108.55	0	108.55
data_MedianLifetime	80.0	0.5	80.0
data_MaxLifetime	109.0	0	109.0

	percentile_16 \
xc/eta	[2.545, 2.801]
beta/eta	[113.709, 114.234]
xc^2/epsilon	[0.584, 0.611]
xc	[29.341, 30.845]
ExtH	[6.151, 6.163]
eta	[12.524, 13.183]
beta	[1497.501, 1574.341]
epsilon	[1995.495, 2198.125]
sqrt(xc/eta)	[1.595, 1.674]
s= eta^0.5*xc^1.5/epsilon	[0.462, 0.482]
beta*xc/epsilon	[26.814, 27.199]
eta*xc/epsilon	[0.238, 0.241]
Fx=beta^2/eta*xc	[5087.912, 5371.73]
Dx =beta*epsilon/eta*xc^2	[189.58, 198.785]
Pk=beta*k/epsilon	[0.486, 0.517]
Fk=beta^2/eta*k	[313679.132, 329796.983]
Dk =beta*epsilon/eta*k^2	[800429.724, 880743.806]
Fk^2/Dk=beta^3/eta*epsilon	[135651.576, 144707.85]
epsilon/beta^2	[0.000821, 0.000872]

k/beta	[0.000317, 0.000334]
k ² /epsilon	[0.000114, 0.000125]
best fit_MedianLifetime	[80.13000000000001, 81.13000000000001]
best fit_MaxLifetime	[108.55, 108.55]
data_MedianLifetime	[79.51, 80.5]
data_MaxLifetime	[109.0, 109.0]

	percentile_50 \
xc/eta	[2.425, 2.939]
beta/eta	[113.709, 114.761]
xc ² /epsilon	[0.559, 0.611]
xc	[29.341, 32.426]
ExtH	[6.127, 6.187]
eta	[11.898, 13.183]
beta	[1424.412, 1655.124]
epsilon	[1995.495, 2421.332]
sqrt(xc/eta)	[1.557, 1.714]
s= eta ^{0.5} *xc ^{1.5} /epsilon	[0.443, 0.503]
beta*xc/epsilon	[26.434, 27.199]
eta*xc/epsilon	[0.235, 0.241]
Fx=beta ² /eta*xc	[4819.09, 5371.73]
Dx =beta*epsilon/eta*xc ²	[180.801, 208.437]
Pk=beta*k/epsilon	[0.456, 0.551]
Fk=beta ² /eta*k	[313679.132, 346743.021]
Dk =beta*epsilon/eta*k ²	[800429.724, 969116.498]
Fk ² /Dk=beta ³ /eta*epsilon	[127162.073, 164674.588]
epsilon/beta ²	[0.000773, 0.000984]
k/beta	[0.000302, 0.000351]
k ² /epsilon	[0.000103, 0.000125]
best fit_MedianLifetime	[80.13000000000001, 81.13000000000001]
best fit_MaxLifetime	[108.55, 108.55]
data_MedianLifetime	[79.51, 80.5]
data_MaxLifetime	[109.0, 109.0]

	percentile_95 \
xc/eta	[2.203, 3.561]
beta/eta	[112.666, 115.823]
xc ² /epsilon	[0.534, 0.797]
xc	[24.024, 35.836]
ExtH	[6.021, 6.382]
eta	[9.208, 13.876]
beta	[1003.492, 1740.051]
epsilon	[1644.55, 2667.203]
sqrt(xc/eta)	[1.484, 2.232]
s= eta ^{0.5} *xc ^{1.5} /epsilon	[0.358, 0.514]
beta*xc/epsilon	[25.692, 27.589]
eta*xc/epsilon	[0.235, 0.246]

Fx=beta^2/eta*xc	[3479.508, 6321.757]
Dx =beta*epsilon/eta*xc^2	[129.735, 229.17]
Pk=beta*k/epsilon	[0.402, 0.624]
Fk=beta^2/eta*k	[210086.054, 364559.802]
Dk =beta*epsilon/eta*k^2	[661104.98, 1173353.211]
Fk^2/Dk=beta^3/eta*epsilon	[86288.738, 199907.149]
epsilon/beta^2	[0.000645, 0.00159]
k/beta	[0.000287, 0.000524]
k^2/epsilon	[8.5e-05, 0.000329]
best fit_MedianLifetime	[80.13000000000001, 81.13000000000001]
best fit_MaxLifetime	[108.55, 108.55]
data_MedianLifetime	[79.51, 80.5]
data_MaxLifetime	[109.0, 109.0]

	max_likelihood	mode_overall
xc/eta	2.196	2.196
beta/eta	116.22	116.22
xc^2/epsilon	0.559	0.559
xc	17.429	17.429
ExtH	6.163	6.163
eta	7.936	12.795
beta	922.32	1402.505
epsilon	543.618	2888.779
sqrt(xc/eta)	1.482	1.573
s= eta^0.5*xc^1.5/epsilon	0.377	0.379
beta*xc/epsilon	29.57	27.354
eta*xc/epsilon	0.254	0.232
Fx=beta^2/eta*xc	6150.302	2436.771
Dx =beta*epsilon/eta*xc^2	207.99	95.701
Pk=beta*k/epsilon	0.848	0.4
Fk=beta^2/eta*k	214384.314	355352.646
Dk =beta*epsilon/eta*k^2	252717.388	252717.388
Fk^2/Dk=beta^3/eta*epsilon	181865.738	181865.738
epsilon/beta^2	0.000639	0.000639
k/beta	0.000542	0.000542
k^2/epsilon	0.00046	0.00046
best fit_MedianLifetime	80.62	NaN
best fit_MaxLifetime	108.55	NaN
data_MedianLifetime	80.0	NaN
data_MaxLifetime	109.0	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/η , β/η , x_c^2/ϵ , x_c

