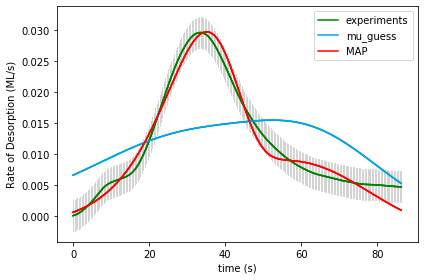
Name of Runfile: runfile\_Example16a\_CPE\_grid 1361367 points

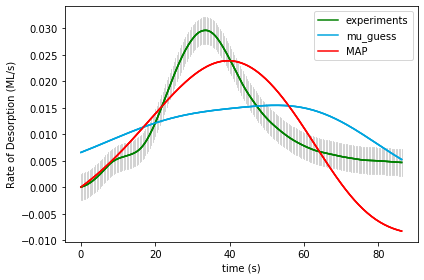
|  |  |  |  |
| --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** |
| Scaling | 1.0 | 0.10 | 1.20211634e+00 |
| Offset | 0.0 | 0.005 | 1.70181657e-03 |
| Site2Ratio | 0.50 | 0.50/3 | 4.94458588e-01 |
| Ea\_1 | 41.5 | 20 | 2.36031461e+01 |
| Ea\_2 | 41.5 | 20 | 5.18978020e+01 |
| log\_A1 | 13.0 | 2 | 1.25026762e+01 |
| log\_A2 | 13.0 | 2 | 3.43682980e+01 |
| gamma1 | 0.1 | 0.1 | 1.81157414e-01 |
| gamma2 | 0.1 | 0.1 | 3.71989231e-01 |
| logP |  | N/A | 832.9235718175272 |



Final results from doOptimizeNegLogP: [1.20211634e+00 1.70181657e-03 4.94458588e-01 2.36031461e+01 5.18978020e+01 1.25026762e+01 3.43682980e+01 1.81157414e-01 3.71989231e-01] final logP: 832.9235718175272

Name of Runfile: runfile\_Example16a\_BPE\_grid 1361367 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.68784163e+00 |  |
| Offset | 0.0 | 0.005 | 5.38353983e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 1.41341920e-01 |  |
| Ea\_1 | 41.5 | 20 | 2.43896706e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.52727839e+01 |  |
| log\_A1 | 13.0 | 2 | 1.36148958e+01 |  |
| log\_A2 | 13.0 | 2 | 1.53103564e+01 |  |
| gamma1 | 0.1 | 0.1 | 2.59078221e-01 |  |
| gamma2 | 0.1 | 0.1 | 2.42100425e-12 |  |
| logP |  | N/A | -474.00154051790724 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

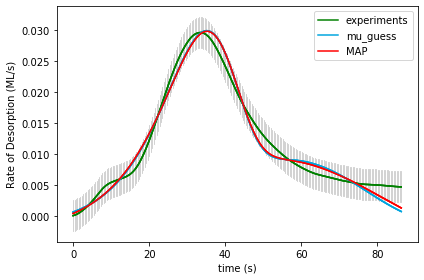
Final map results from gridsearch: (1.1, 0.0, 0.16666666666666669, 21.5, 21.5, 11.0, 13.0, 0.2, 0.1) final logP: -8752.761553714412

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[1,1,3,3,3,3,3,1,1]

Final results from doOptimizeNegLogP: [1.68784163e+00 5.38353983e-03 1.41341920e-01 2.43896706e+01 2.52727839e+01 1.36148958e+01 1.53103564e+01 2.59078221e-01 2.42100425e-12] final logP: -474.00154051790724

Name of Runfile: runfile\_Example16a\_CPE\_grid\_opt 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.31421932e+00 |  |
| Offset | 0.0 | 0.005 | 2.35426700e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 5.83002034e-01 |  |
| Ea\_1 | 41.5 | 20 | 5.13330577e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.45940382e+01 |  |
| log\_A1 | 13.0 | 2 | 3.40421731e+01 |  |
| log\_A2 | 13.0 | 2 | 1.28288185e+01 |  |
| gamma1 | 0.1 | 0.1 | 7.02821337e-08 |  |
| gamma2 | 0.1 | 0.1 | 1.72447219e+00 |  |
| logP |  | N/A | 834.2305768936641 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [1.17855879e+00 1.56599493e-03 4.89378831e-01 5.01380589e+01

2.47742710e+01 3.31859754e+01 1.33279804e+01 1.37736928e-02

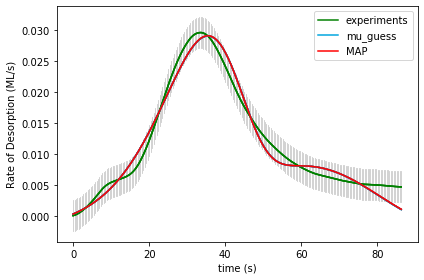
1.18045551e-01] final logP: 831.2464561309017

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.31421932e+00 2.35426700e-03 5.83002034e-01 5.13330577e+01 2.45940382e+01 3.40421731e+01 1.28288185e+01 7.02821337e-08 1.72447219e+00] final logP: 834.2305768936641

Name of Runfile: runfile\_Example16a\_BPE\_grid\_opt 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.24082528e+00 |  |
| Offset | 0.0 | 0.005 | 1.95328330e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 5.60072548e-01 |  |
| Ea\_1 | 41.5 | 20 | 2.60380582e+01 |  |
| Ea\_2 | 41.5 | 20 | 4.47210752e+01 |  |
| log\_A1 | 13.0 | 2 | 1.40087694e+01 |  |
| log\_A2 | 13.0 | 2 | 2.92286114e+01 |  |
| gamma1 | 0.1 | 0.1 | 1.03069701e-01 |  |
| gamma2 | 0.1 | 0.1 | 1.79576929e-09 |  |
| logP |  | N/A | 780.1042889944097 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [1.23943326e+00 1.95055604e-03 5.62199599e-01 2.60209307e+01

4.47401296e+01 1.40086172e+01 2.92348678e+01 4.22570091e-02

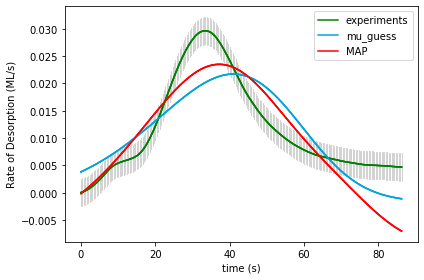
2.22870485e-02] final logP: 779.8462737897203

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.24082528e+00 1.95328330e-03 5.60072548e-01 2.60380582e+01 4.47210752e+01 1.40087694e+01 2.92286114e+01 1.03069701e-01 1.79576929e-09] final logP: 780.1042889944097

Name of Runfile: 16a\_CPE\_grid\_mcmc 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.76790946e+00 |  |
| Offset | 0.0 | 0.005 | 5.49443957e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 4.52973126e-01 |  |
| Ea\_1 | 41.5 | 20 | 2.48833920e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.62763349e+01 |  |
| log\_A1 | 13.0 | 2 | 1.47619158e+01 |  |
| log\_A2 | 13.0 | 2 | 1.44338901e+01 |  |
| gamma1 | 0.1 | 0.1 | 1.44211740e-02 |  |
| gamma2 | 0.1 | 0.1 | 1.26259207e-10 |  |
| logP |  | N/A | -31.361728419116957 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [1.11903275e+00 1.42841706e-03 4.24304405e-01 2.56838078e+01

2.37503902e+01 1.49342760e+01 1.30921583e+01 1.25084700e-01

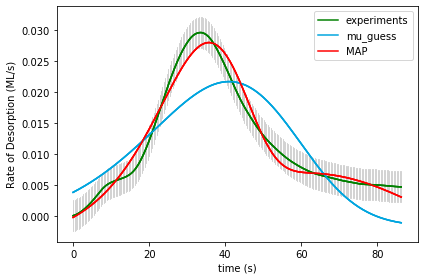
1.39916679e-01] final logP: [-1561.09178969]

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.76790946e+00 5.49443957e-03 4.52973126e-01 2.48833920e+01 2.62763349e+01 1.47619158e+01 1.44338901e+01 1.44211740e-02 1.26259207e-10] final logP: -31.361728419116957

Name of Runfile: 16a\_BPE\_grid\_mcmc 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.61877311e+00 |  |
| Offset | 0.0 | 0.005 | 3.30444982e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 5.59236064e-01 |  |
| Ea\_1 | 41.5 | 20 | 4.32139323e+01 |  |
| Ea\_2 | 41.5 | 20 | 1.66917954e+01 |  |
| log\_A1 | 13.0 | 2 | 2.79693502e+01 |  |
| log\_A2 | 13.0 | 2 | 7.41367471e+00 |  |
| gamma1 | 0.1 | 0.1 | 5.42706331e-01 |  |
| gamma2 | 0.1 | 0.1 | 2.06385225e-11 |  |
| logP |  | N/A | 730.9222455073057 |  |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [1.11903275e+00 1.42841706e-03 4.24304405e-01 2.56838078e+01

2.37503902e+01 1.49342760e+01 1.30921583e+01 1.25084700e-01

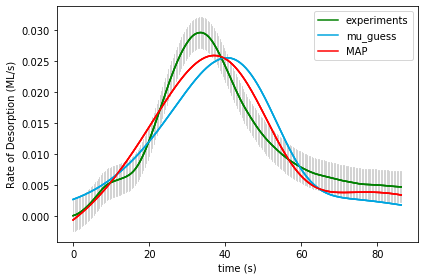
1.39916679e-01] final logP: [-1572.50098997]

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.61877311e+00 3.30444982e-03 5.59236064e-01 4.32139323e+01 1.66917954e+01 2.79693502e+01 7.41367471e+00 5.42706331e-01 2.06385225e-11] final logP: 730.9222455073057

Name of Runfile: runfile\_Example16a\_CPE\_grid\_fine 1361367 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.97414341e+00 |  |
| Offset | 0.0 | 0.005 | 3.97844007e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 4.58532911e-01 |  |
| Ea\_1 | 41.5 | 20 | 2.96667546e+01 |  |
| Ea\_2 | 41.5 | 20 | 1.89905007e+01 |  |
| log\_A1 | 13.0 | 2 | 1.81043133e+01 |  |
| log\_A2 | 13.0 | 2 | 8.32550743e+00 |  |
| gamma1 | 0.1 | 0.1 | 1.22172150e-12 |  |
| gamma2 | 0.1 | 0.1 | 4.38660989e-01 |  |
| logP |  | N/A | 597.3214719404916 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

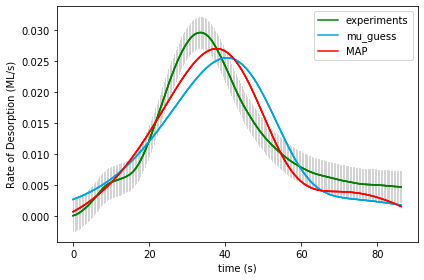
Final map results from gridsearch: (1.0, 0.0, 0.16666666666666669, 35.5, 23.5, 22.0, 12.0, 0.1, 0.1) final logP: -249.1898675955598

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20/10, 20/10, 1, 1, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,3,10,10,10,10,0,0]

Final results from doOptimizeNegLogP: [1.97414341e+00 3.97844007e-03 4.58532911e-01 2.96667546e+01 1.89905007e+01 1.81043133e+01 8.32550743e+00 1.22172150e-12 4.38660989e-01] final logP: 597.3214719404916

Name of Runfile: runfile\_Example16a\_BPE\_grid\_fine 1361367 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.30665226e+00 |  |
| Offset | 0.0 | 0.005 | 2.46317266e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 2.71185420e-01 |  |
| Ea\_1 | 41.5 | 20 | 3.44391842e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.93006130e+01 |  |
| log\_A1 | 13.0 | 2 | 2.15180409e+01 |  |
| log\_A2 | 13.0 | 2 | 1.56903543e+01 |  |
| gamma1 | 0.1 | 0.1 | 3.90324451e-12 |  |
| gamma2 | 0.1 | 0.1 | 1.98063053e-01 |  |
| logP |  | N/A | 532.5838500139719 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

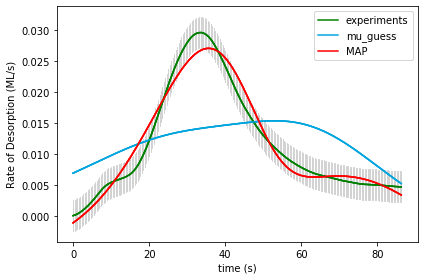
Final map results from gridsearch: (1.0, 0.0, 0.16666666666666669, 35.5, 23.5, 22.0, 12.0, 0.1, 0.1) final logP: -271.1603143422478

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20/10, 20/10, 1, 1, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,3,10,10,10,10,0,0]

Final results from doOptimizeNegLogP: [1.30665226e+00 2.46317266e-03 2.71185420e-01 3.44391842e+01 2.93006130e+01 2.15180409e+01 1.56903543e+01 3.90324451e-12 1.98063053e-01] final logP: 532.5838500139719

Name of Runfile: 17a\_CPE\_grid 1361367 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.74369653e+00 |  |
| Offset | 0.0 | 0.005 | 3.85583260e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 4.65236701e-01 |  |
| Ea\_1 | 41.5 | 20 | 3.43843984e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.33926769e+01 |  |
| log\_A1 | 13.0 | 2 | 2.16637499e+01 |  |
| log\_A2 | 13.0 | 2 | 1.16939088e+01 |  |
| gamma1 | 0.1 | 0.1 | 2.98832055e-02 |  |
| gamma2 | 0.1 | 0.1 | 2.03512673e-01 |  |
| logP |  | N/A | 750.1823861877374 |  |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

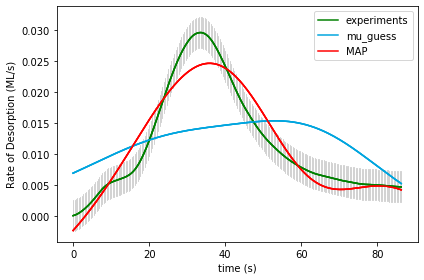
Final map results from gridsearch: (1.1, 0.0, 0.8333333333333333, 21.5, 21.5, 13.0, 11.0, 0.1, 0.2) final logP: -9054.061365650756 Final map results from gridsearch: (1.1, 0.0, 0.8333333333333333, 21.5, 21.5, 13.0, 11.0, 0.1, 0.2) final logP: -9054.061365650756

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[1,1,3,3,3,3,3,1,1]

Final results from doOptimizeNegLogP: [1.74369653e+00 3.85583260e-03 4.65236701e-01 3.43843984e+01 2.33926769e+01 2.16637499e+01 1.16939088e+01 2.98832055e-02 2.03512673e-01] final logP: 750.1823861877374

Name of Runfile: 17a\_BPE\_grid 1361367 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 2.58835610e+00 |  |
| Offset | 0.0 | 0.005 | 5.55838469e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 5.93048816e-01 |  |
| Ea\_1 | 41.5 | 20 | 2.77248776e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.59244984e+01 |  |
| log\_A1 | 13.0 | 2 | 1.41188897e+01 |  |
| log\_A2 | 13.0 | 2 | 1.51686366e+01 |  |
| gamma1 | 0.1 | 0.1 | 9.52300561e-11 |  |
| gamma2 | 0.1 | 0.1 | 4.13615104e-01 |  |
| logP |  | N/A | 383.1917838785625 |  |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

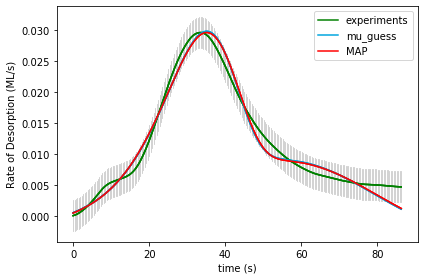
Final map results from gridsearch: (1.1, 0.0, 0.8333333333333333, 21.5, 21.5, 13.0, 11.0, 0.1, 0.2) final logP: -9067.831812397444

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[1,1,3,3,3,3,3,1,1]

Final results from doOptimizeNegLogP: [2.58835610e+00 5.55838469e-03 5.93048816e-01 2.77248776e+01 2.59244984e+01 1.41188897e+01 1.51686366e+01 9.52300561e-11 4.13615104e-01] final logP: 383.1917838785625

Name of Runfile: 17a\_CPE\_grid\_opt 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.31895963e+00 |  |
| Offset | 0.0 | 0.005 | 2.38174246e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 5.68716783e-01 |  |
| Ea\_1 | 41.5 | 20 | 5.49538416e+01 |  |
| Ea\_2 | 41.5 | 20 | 1.95200967e+01 |  |
| log\_A1 | 13.0 | 2 | 3.63140352e+01 |  |
| log\_A2 | 13.0 | 2 | 9.71309790e+00 |  |
| gamma1 | 0.1 | 0.1 | 6.21532524e-01 |  |
| gamma2 | 0.1 | 0.1 | 2.53615019e-09 |  |
| logP |  | N/A | 834.5316718252357 |  |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [1.31850027e+00 2.39650171e-03 5.76140992e-01 5.48880289e+01

1.94775168e+01 3.63448101e+01 9.70069391e+00 4.86434241e-01

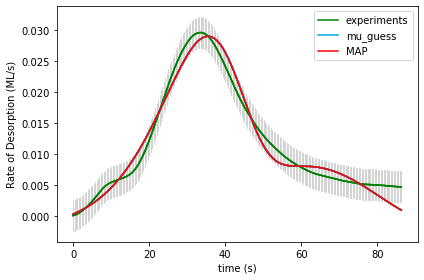
8.92942906e-04] final logP: 834.3528120580175

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.31895963e+00 2.38174246e-03 5.68716783e-01 5.49538416e+01 1.95200967e+01 3.63140352e+01 9.71309790e+00 6.21532524e-01 2.53615019e-09] final logP: 834.5316718252357

Name of Runfile: 17a\_BPE\_grid\_opt 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.23988793e+00 |  |
| Offset | 0.0 | 0.005 | 1.96983437e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 5.70178180e-01 |  |
| Ea\_1 | 41.5 | 20 | 2.68896317e+01 |  |
| Ea\_2 | 41.5 | 20 | 4.42408853e+01 |  |
| log\_A1 | 13.0 | 2 | 1.45785811e+01 |  |
| log\_A2 | 13.0 | 2 | 2.88760608e+01 |  |
| gamma1 | 0.1 | 0.1 | 7.15839421e-02 |  |
| gamma2 | 0.1 | 0.1 | 1.73719278e-08 |  |
| logP |  | N/A | 779.952102479041 |  |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [1.24054728e+00 1.97315172e-03 5.70160486e-01 2.68941949e+01

4.42378634e+01 1.45793537e+01 2.88717211e+01 7.62517142e-02

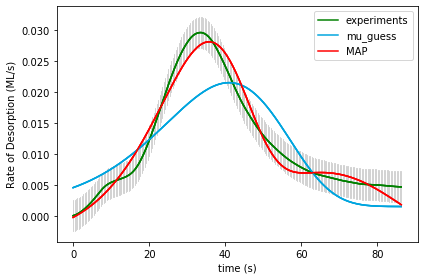
3.18229310e-03] final logP: 779.9344100773503

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.23988793e+00 1.96983437e-03 5.70178180e-01 2.68896317e+01 4.42408853e+01 1.45785811e+01 2.88760608e+01 7.15839421e-02 1.73719278e-08] final logP: 779.952102479041

Name of Runfile: 17a\_CPE\_grid\_mcmc 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.39603735e+00 |  |
| Offset | 0.0 | 0.005 | 2.77496348e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 4.21606751e-01 |  |
| Ea\_1 | 41.5 | 20 | 3.92761524e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.79373537e+01 |  |
| log\_A1 | 13.0 | 2 | 2.52280353e+01 |  |
| log\_A2 | 13.0 | 2 | 1.49492243e+01 |  |
| gamma1 | 0.1 | 0.1 | 7.35775644e-12 |  |
| gamma2 | 0.1 | 0.1 | 5.44236063e-01 |  |
| logP |  | N/A | 802.1342928174244 |  |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [ 1.02795809e+00 -1.47194475e-03 2.06950152e-01 3.01093572e+01

4.79243481e+01 1.79804764e+01 1.24238115e+01 1.37345490e-01

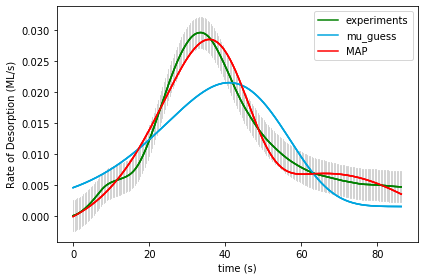
1.94422092e-01] final logP: [-2177.48537425]

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.39603735e+00 2.77496348e-03 4.21606751e-01 3.92761524e+01 2.79373537e+01 2.52280353e+01 1.49492243e+01 7.35775644e-12 5.44236063e-01] final logP: 802.1342928174244

Name of Runfile: 17a\_BPE\_grid\_mcmc 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.44966733e+00 |  |
| Offset | 0.0 | 0.005 | 2.64194593e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 4.67683589e-01 |  |
| Ea\_1 | 41.5 | 20 | 4.08711199e+01 |  |
| Ea\_2 | 41.5 | 20 | 2.19278705e+01 |  |
| log\_A1 | 13.0 | 2 | 2.63776806e+01 |  |
| log\_A2 | 13.0 | 2 | 1.08551706e+01 |  |
| gamma1 | 0.1 | 0.1 | 6.10610118e-12 |  |
| gamma2 | 0.1 | 0.1 | 1.66079425e-01 |  |
| logP |  | N/A | 761.3830078436066 |  |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

Final map results from gridsearch: [ 1.02795809e+00 -1.47194475e-03 2.06950152e-01 3.01093572e+01

4.79243481e+01 1.79804764e+01 1.24238115e+01 1.37345490e-01

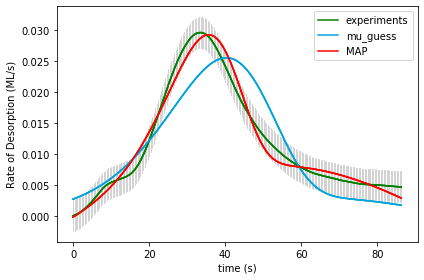
1.94422092e-01] final logP: [-2192.25547096]

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20, 20, 2, 2, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,1,1,1,1,1,0,0]

Final results from doOptimizeNegLogP: [1.44966733e+00 2.64194593e-03 4.67683589e-01 4.08711199e+01 2.19278705e+01 2.63776806e+01 1.08551706e+01 6.10610118e-12 1.66079425e-01] final logP: 761.3830078436066

Name of Runfile: runfile\_Example17a\_CPE\_grid\_fine 1361367 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 3.05906353e+00 |  |
| Offset | 0.0 | 0.005 | 5.28243686e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 1.81917087e-01 |  |
| Ea\_1 | 41.5 | 20 | 9.18307078e+00 |  |
| Ea\_2 | 41.5 | 20 | 5.43232363e+01 |  |
| log\_A1 | 13.0 | 2 | 2.10504512e+00 |  |
| log\_A2 | 13.0 | 2 | 3.55820328e+01 |  |
| gamma1 | 0.1 | 0.1 | 1.36765638e-11 |  |
| gamma2 | 0.1 | 0.1 | 9.55367229e-01 |  |
| logP |  | N/A | 823.0684450136623 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

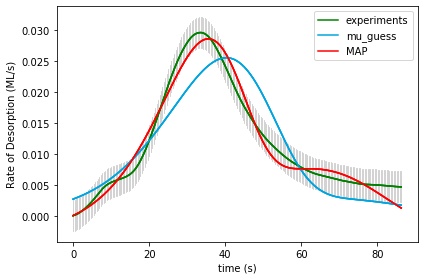
Final map results from gridsearch: (1.0, 0.0, 0.8333333333333333, 23.5, 35.5, 12.0, 22.0, 0.1, 0.1) final logP: -203.37919742701536

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20/10, 20/10, 1, 1, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,3,10,10,10,10,0,0]

Final results from doOptimizeNegLogP: [3.05906353e+00 5.28243686e-03 1.81917087e-01 9.18307078e+00 5.43232363e+01 2.10504512e+00 3.55820328e+01 1.36765638e-11 9.55367229e-01] final logP: 823.0684450136623

Name of Runfile: runfile\_Example17a\_BPE\_grid\_fine 1361367 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1.0 | 0.10 | 1.30268084e+00 |  |
| Offset | 0.0 | 0.005 | 2.32063837e-03 |  |
| Site2Ratio | 0.50 | 0.50/3 | 5.74915803e-01 |  |
| Ea\_1 | 41.5 | 20 | 2.68178886e+01 |  |
| Ea\_2 | 41.5 | 20 | 4.20019418e+01 |  |
| log\_A1 | 13.0 | 2 | 1.44178209e+01 |  |
| log\_A2 | 13.0 | 2 | 2.72364247e+01 |  |
| gamma1 | 0.1 | 0.1 | 1.37800501e-01 |  |
| gamma2 | 0.1 | 0.1 | 4.97558094e-12 |  |
| logP |  | N/A | 777.1862272402608 | N/A |



UserInput.model['InputParameterPriorValues'] = [ 1.0, 0.0, 0.50, 41.5, 41.5, 13.0, 13.0, 0.1, 0.1]

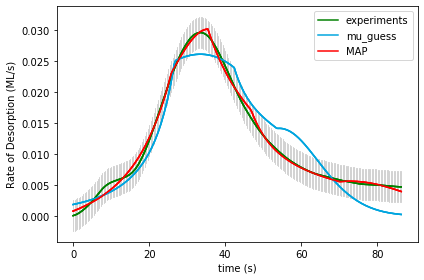
Final map results from gridsearch: (1.0, 0.0, 0.8333333333333333, 23.5, 35.5, 12.0, 22.0, 0.1, 0.1) final logP: -225.34964417370335

gridSamplingAbsoluteIntervalSize=[ 0.10, 0.005, 0.50/3, 20/10, 20/10, 1, 1, 0.1, 0.1], gridSamplingNumOfIntervals=[0,0,3,10,10,10,10,0,0]

Final results from doOptimizeNegLogP: [1.30268084e+00 2.32063837e-03 5.74915803e-01 2.68178886e+01 4.20019418e+01 1.44178209e+01 2.72364247e+01 1.37800501e-01 4.97558094e-12] final logP: 777.1862272402608

Name of Runfile: 18a\_CPE\_grid 59535 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 1.49475745e+00 |  |
| Offset | 0 | .005 | 3.69922267e-03 |  |
| Ea\_1 | 40 | 20 | 1.17403976e+01 |  |
| Log\_A1 | 13 | 2 | 4.12858389e+00 |  |
| gamma\_1 | 0.1 | 0.3 | -1.61526492e+00 |  |
| gamma\_mod1 | 0 | 0.1 | 1.83629589e+00 |  |
| gamma\_mod2 | 0 | 0.1 | -2.83504285e-01 |  |
| gamma\_mod3 | 0 | 0.1 | 2.25140058e-01 |  |
| gamma\_mod4 | 0 | 0.1 | 1.25845442e-02 |  |
| gamma\_mod5 | 0 | 0.1 | -8.90996289e-02 |  |
| gamma\_mod6 | 0 | 0.1 | -1.62914152e-01 |  |
| logP |  |  | 854.35964687082 |  |



UserInput.model['InputParameterPriorValues'] = [1.0, 0.0, 40.0, 13.0, 0.1,

0.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Final map results from gridsearch: (1.0, 0.0, 20.0, 11.0, -0.3, 0.3, -0.1, 0.1, 0.0, 0.0, -0.1) final logP: -1527.5171602395776

gridSamplingAbsoluteIntervalSize= [.1, 0.005, 20, 2, 0.3,

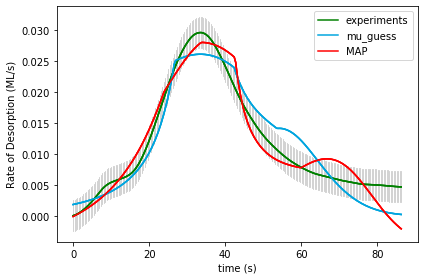
0.1, 0.1, 0.1, 0.1, 0.1, 0.1]

gridSamplingNumOfIntervals=[0,0,3,3,2, 0,1,1,1,1,1]

Final results from doOptimizeNegLogP: [ 1.49475745e+00 3.69922267e-03 1.17403976e+01 4.12858389e+00 -1.61526492e+00 1.83629589e+00 -2.83504285e-01 2.25140058e-01 1.25845442e-02 -8.90996289e-02 -1.62914152e-01] final logP: 854.35964687082

Name of Runfile: 18a\_BPE\_grid 59535 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 1.43414583e+00 |  |
| Offset | 0 | .005 | 4.86048308e-03 |  |
| Ea\_1 | 40 | 20 | 1.99681345e+01 |  |
| Log\_A1 | 13 | 2 | 1.07325667e+01 |  |
| gamma\_1 | 0.1 | 0.3 | -4.01086022e-01 |  |
| gamma\_mod1 | 0 | 0.1 | 1.50429067e-01 |  |
| gamma\_mod2 | 0 | 0.1 | -2.57624879e-02 |  |
| gamma\_mod3 | 0 | 0.1 | 2.96729175e-01 |  |
| gamma\_mod4 | 0 | 0.1 | -2.82641509e-03 |  |
| gamma\_mod5 | 0 | 0.1 | -1.73812373e-02 |  |
| gamma\_mod6 | 0 | 0.1 | -4.71442808e-02 |  |
| logP |  |  | 773.6082687145074 |  |



UserInput.model['InputParameterPriorValues'] = [1.0, 0.0, 40.0, 13.0, 0.1,

0.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Final map results from gridsearch: (1.0, 0.0, 20.0, 11.0, -0.3, 0.3, -0.1, 0.1, 0.0, 0.0, -0.1) final logP: -1527.5828666259995

gridSamplingAbsoluteIntervalSize= [.1, 0.005, 20, 2, 0.3,

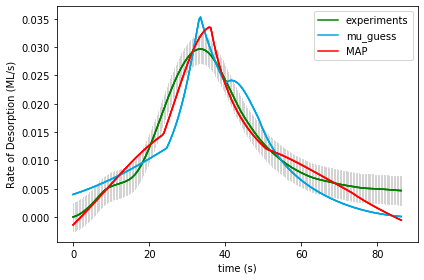
0.1, 0.1, 0.1, 0.1, 0.1, 0.1]

gridSamplingNumOfIntervals=[0,0,3,3,2, 0,1,1,1,1,1]

Final results from doOptimizeNegLogP: [ 1.43414583e+00 4.86048308e-03 1.99681345e+01 1.07325667e+01 -4.01086022e-01 1.50429067e-01 -2.57624879e-02 2.96729175e-01 -2.82641509e-03 -1.73812373e-02 -4.71442808e-02] final logP: 773.6082687145074

Name of Runfile: 18a\_CPE\_grid\_opt 243 points

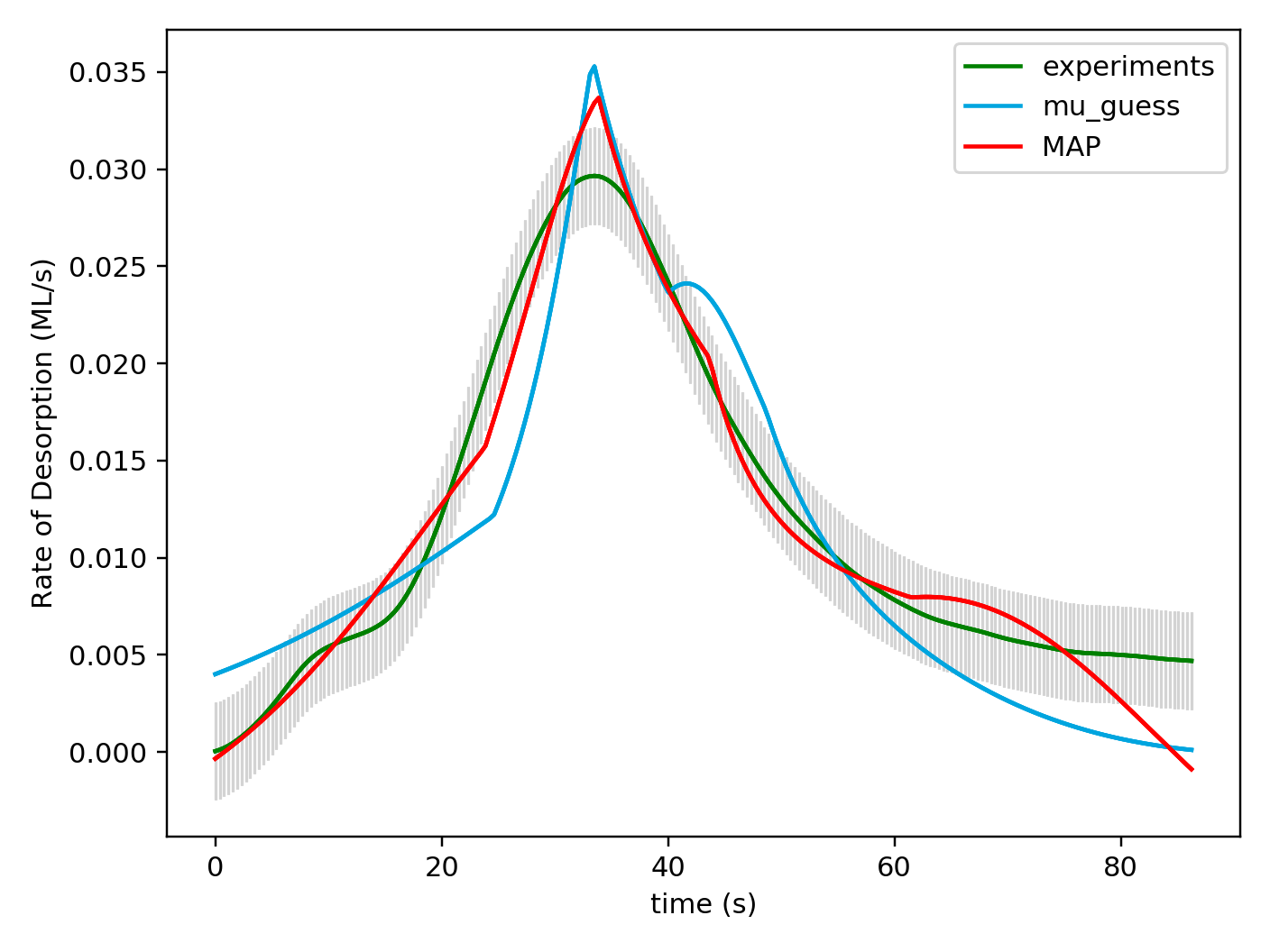
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 2.44625048e+00 |  |
| Offset | 0 | .005 | 1.36001729e-02 |  |
| Ea\_1 | 40 | 20 | 3.20197080e+01 |  |
| Log\_A1 | 13 | 2 | 1.59517899e+01 |  |
| gamma\_1 | 0.1 | 0.3 | -8.29328212e-05 |  |
| gamma\_mod1 | 0 | 0.1 | 2.60325814e-01 |  |
| gamma\_mod2 | 0 | 0.1 | 3.06755700e-03 |  |
| gamma\_mod3 | 0 | 0.1 | -3.24064073e-02 |  |
| gamma\_mod4 | 0 | 0.1 | 6.91923394e-04 |  |
| gamma\_mod5 | 0 | 0.1 | -6.18787420e-02 |  |
| gamma\_mod6 | 0 | 0.1 | -1.37050830e-02 |  |
| logP |  |  | 769.9356555408942 |  |



Final results from doOptimizeNegLogP: [ 2.44625048e+00 1.36001729e-02 3.20197080e+01 1.59517899e+01 -8.29328212e-05 2.60325814e-01 3.06755700e-03 -3.24064073e-02 6.91923394e-04 -6.18787420e-02 -1.37050830e-02] final logP: 769.9356555408942

Name of Runfile: 18a\_BPE\_grid\_opt 243 points

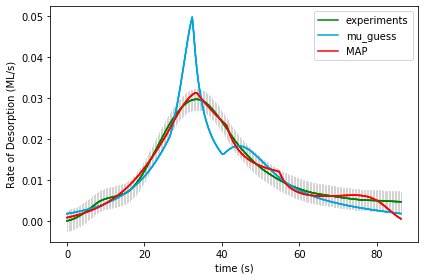
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 1.58853467e+00 |  |
| Offset | 0 | .005 | 6.40000998e-03 |  |
| Ea\_1 | 40 | 20 | 3.24028984e+01 |  |
| Log\_A1 | 13 | 2 | 1.79355074e+01 |  |
| gamma\_1 | 0.1 | 0.3 | 1.28983927e-04 |  |
| gamma\_mod1 | 0 | 0.1 | 4.01718356e-02 |  |
| gamma\_mod2 | 0 | 0.1 | 2.60069952e-03 |  |
| gamma\_mod3 | 0 | 0.1 | 9.01528933e-02 |  |
| gamma\_mod4 | 0 | 0.1 | 4.79247559e-04 |  |
| gamma\_mod5 | 0 | 0.1 | -4.63215312e-02 |  |
| gamma\_mod6 | 0 | 0.1 | -9.75774757e-03 |  |
| logP |  |  | 810.007264514069 |  |



Final results from doOptimizeNegLogP: [ 1.58853467e+00 6.40000998e-03 3.24028984e+01 1.79355074e+01 1.28983927e-04 4.01718356e-02 2.60069952e-03 9.01528933e-02 4.79247559e-04 -4.63215312e-02 -9.75774757e-03] final logP: 810.007264514069

Name of Runfile: 18a\_CPE\_grid\_mcmc 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 |  |  |
| Offset | 0 | .005 |  |  |
| Ea\_1 | 40 | 20 |  |  |
| Log\_A1 | 13 | 2 |  |  |
| gamma\_1 | 0.1 | 0.3 |  |  |
| gamma\_mod1 | 0 | 0.1 |  |  |
| gamma\_mod2 | 0 | 0.1 |  |  |
| gamma\_mod3 | 0 | 0.1 |  |  |
| gamma\_mod4 | 0 | 0.1 |  |  |
| gamma\_mod5 | 0 | 0.1 |  |  |
| gamma\_mod6 | 0 | 0.1 |  |  |
| logP |  |  |  |  |



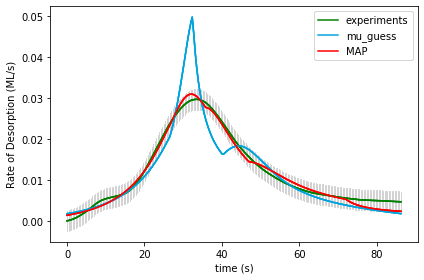
Final results from doOptimizeNegLogP: [ 1.10673982e+00 1.05226065e-03 4.37396522e+01 2.60669398e+01

-1.24408477e-01 -4.15894197e-01 5.86536431e-01 6.40531764e-02

-7.06873256e-03 -2.55324325e-02 -2.09629127e-02] final logP: 850.2019371264747

Name of Runfile: 18a\_BPE\_grid\_mcmc 243 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 |  |  |
| Offset | 0 | .005 |  |  |
| Ea\_1 | 40 | 20 |  |  |
| Log\_A1 | 13 | 2 |  |  |
| gamma\_1 | 0.1 | 0.3 |  |  |
| gamma\_mod1 | 0 | 0.1 |  |  |
| gamma\_mod2 | 0 | 0.1 |  |  |
| gamma\_mod3 | 0 | 0.1 |  |  |
| gamma\_mod4 | 0 | 0.1 |  |  |
| gamma\_mod5 | 0 | 0.1 |  |  |
| gamma\_mod6 | 0 | 0.1 |  |  |
| logP |  |  |  |  |



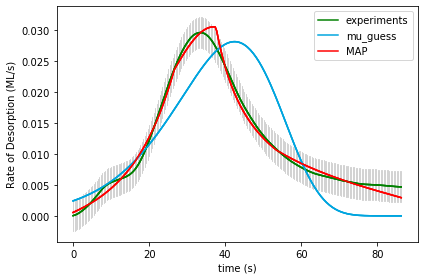
Final results from doOptimizeNegLogP: [ 1.23918816e+00 4.93693911e-04 3.95939918e+01 1.76179285e+01

8.59732026e-02 1.22848945e-01 5.51072557e-01 -2.15900670e-01

-1.26220213e-01 -9.87022786e-02 -9.32804591e-02] final logP: 812.907926143687

Name of Runfile: 18a\_CPE\_grid\_fine 68921 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 1.85410831e+00 |  |
| Offset | 0 | .005 | 5.67533771e-03 |  |
| Ea\_1 | 40 | 20 | 6.17874804e+00 |  |
| Log\_A1 | 13 | 2 | 3.67574450e-05 |  |
| gamma\_1 | 0.1 | 0.3 | 8.89034823e-02 |  |
| gamma\_mod1 | 0 | 0.1 | -1.83535985e-01 |  |
| gamma\_mod2 | 0 | 0.1 | 2.17463994e-01 |  |
| gamma\_mod3 | 0 | 0.1 | 6.68894279e-02 |  |
| gamma\_mod4 | 0 | 0.1 | 1.57936323e-01 |  |
| gamma\_mod5 | 0 | 0.1 | -1.94729854e-01 |  |
| gamma\_mod6 | 0 | 0.1 | -3.25183095e-01 |  |
| logP |  |  | 850.7205494709239 |  |



UserInput.model['InputParameterPriorValues'] = [1.0, 0.0, 40.0, 13.0, 0.1,

0.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Final map results from gridsearch: (1.0, 0.0, 35.0, 21.5, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0) final logP: -1170.3915981999953

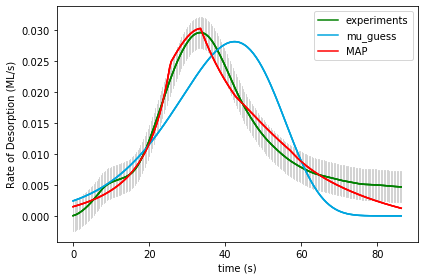
(1.0, 0.0, 35.0, 21.5, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0) -1170.3915981999953

gridSamplingAbsoluteIntervalSize=[0,0,1.0,0.5,0.05, 0,0,0,0,0,0], gridSamplingNumOfIntervals=[0,0,20,20,20, 0,0,0,0,0,0]

Final results from doOptimizeNegLogP: [ 1.85410831e+00 5.67533771e-03 6.17874804e+00 3.67574450e-05 8.89034823e-02 -1.83535985e-01 2.17463994e-01 6.68894279e-02 1.57936323e-01 -1.94729854e-01 -3.25183095e-01] final logP: 850.7205494709239

Name of Runfile: 18a\_BPE\_grid\_fine 68921 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 1.19200915e+00 |  |
| Offset | 0 | .005 | 1.76854660e-03 |  |
| Ea\_1 | 40 | 20 | 7.14123472e+00 |  |
| Log\_A1 | 13 | 2 | 1.65495923e+00 |  |
| gamma\_1 | 0.1 | 0.3 | 5.22706037e-02 |  |
| gamma\_mod1 | 0 | 0.1 | -1.79773045e-01 |  |
| gamma\_mod2 | 0 | 0.1 | 2.51029341e-01 |  |
| gamma\_mod3 | 0 | 0.1 | -4.53617877e-02 |  |
| gamma\_mod4 | 0 | 0.1 | 2.10860832e-02 |  |
| gamma\_mod5 | 0 | 0.1 | -1.12693530e-01 |  |
| gamma\_mod6 | 0 | 0.1 | -3.32170973e-01 |  |
| logP |  |  | 773.0533384344002 |  |



UserInput.model['InputParameterPriorValues'] = [1.0, 0.0, 40.0, 13.0, 0.1,

0.0, 0.0, 0.0, 0.0, 0.0, 0.0]

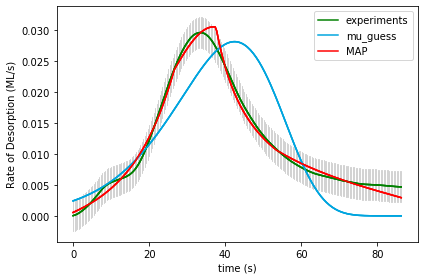
Final map results from gridsearch: (1.0, 0.0, 35.0, 21.5, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0) final logP: -1171.686471253084

gridSamplingAbsoluteIntervalSize=[0,0,1.0,0.5,0.05, 0,0,0,0,0,0], gridSamplingNumOfIntervals=[0,0,20,20,20, 0,0,0,0,0,0]

Final results from doOptimizeNegLogP: [ 1.19200915e+00 1.76854660e-03 7.14123472e+00 1.65495923e+00 5.22706037e-02 -1.79773045e-01 2.51029341e-01 -4.53617877e-02 2.10860832e-02 -1.12693530e-01 -3.32170973e-01] final logP: 773.0533384344002

Name of Runfile: 18a\_CPE\_grid\_fine\_10kJ 68921 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 1.85410831e+00 |  |
| Offset | 0 | .005 | 5.67533771e-03 |  |
| Ea\_1 | 40 | 10 | 6.17874804e+00 |  |
| Log\_A1 | 13 | 2 | 3.67574450e-05 |  |
| gamma\_1 | 0.1 | 0.3 | 8.89034823e-02 |  |
| gamma\_mod1 | 0 | 0.1 | -1.83535985e-01 |  |
| gamma\_mod2 | 0 | 0.1 | 2.17463994e-01 |  |
| gamma\_mod3 | 0 | 0.1 | 6.68894279e-02 |  |
| gamma\_mod4 | 0 | 0.1 | 1.57936323e-01 |  |
| gamma\_mod5 | 0 | 0.1 | -1.94729854e-01 |  |
| gamma\_mod6 | 0 | 0.1 | -3.25183095e-01 |  |
| logP |  |  | 850.7205494709239 |  |



UserInput.model['InputParameterPriorValues'] = [1.0, 0.0, 40.0, 13.0, 0.1,

0.0, 0.0, 0.0, 0.0, 0.0, 0.0]

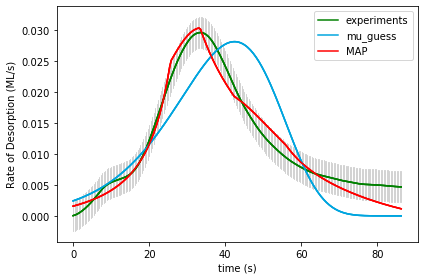
Final map results from gridsearch: (1.0, 0.0, 35.0, 21.5, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0) final logP: -1170.3915981999953

gridSamplingAbsoluteIntervalSize=[0,0,1.0,0.5,0.05, 0,0,0,0,0,0], gridSamplingNumOfIntervals=[0,0,20,20,20, 0,0,0,0,0,0]

Final results from doOptimizeNegLogP: [ 1.85410831e+00 5.67533771e-03 6.17874804e+00 3.67574450e-05 8.89034823e-02 -1.83535985e-01 2.17463994e-01 6.68894279e-02 1.57936323e-01 -1.94729854e-01 -3.25183095e-01] final logP: 850.7205494709239

Name of Runfile: 18a\_BPE\_grid\_fine\_10kJ 68921 points

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Parameter Name** | **Initial Value** | **Uncertainty** | **Final Value** | **Uncertainty** |
| Scaling | 1 | .1 | 1.16045824e+00 |  |
| Offset | 0 | .005 | 1.51879429e-03 |  |
| Ea\_1 | 40 | 10 | 7.60168673e+00 |  |
| Log\_A1 | 13 | 2 | 1.99725708e+00 |  |
| gamma\_1 | 0.1 | 0.3 | 6.87164798e-02 |  |
| gamma\_mod1 | 0 | 0.1 | -1.87802288e-01 |  |
| gamma\_mod2 | 0 | 0.1 | 2.84705258e-01 |  |
| gamma\_mod3 | 0 | 0.1 | -9.56262297e-02 |  |
| gamma\_mod4 | 0 | 0.1 | 2.57323455e-02 |  |
| gamma\_mod5 | 0 | 0.1 | -1.04636970e-01 |  |
| gamma\_mod6 | 0 | 0.1 | -3.16851085e-01 |  |
| logP |  |  | 755.6085439637255 |  |



UserInput.model['InputParameterPriorValues'] = [1.0, 0.0, 40.0, 13.0, 0.1,

0.0, 0.0, 0.0, 0.0, 0.0, 0.0]

Final map results from gridsearch: (1.0, 0.0, 35.0, 21.5, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0, 0.0) final logP: -1171.087074072524

gridSamplingAbsoluteIntervalSize=[0,0,1.0,0.5,0.05, 0,0,0,0,0,0], gridSamplingNumOfIntervals=[0,0,20,20,20, 0,0,0,0,0,0]

Final results from doOptimizeNegLogP: [ 1.16045824e+00 1.51879429e-03 7.60168673e+00 1.99725708e+00 6.87164798e-02 -1.87802288e-01 2.84705258e-01 -9.56262297e-02 2.57323455e-02 -1.04636970e-01 -3.16851085e-01] final logP: 755.6085439637255//