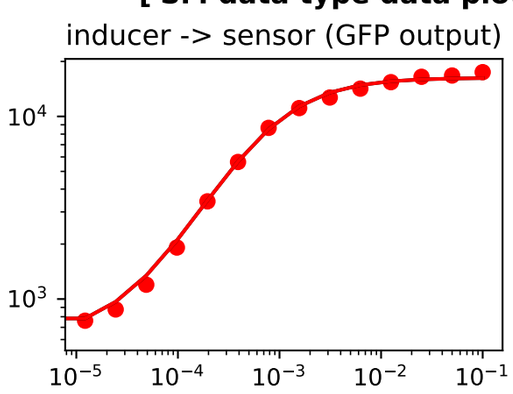
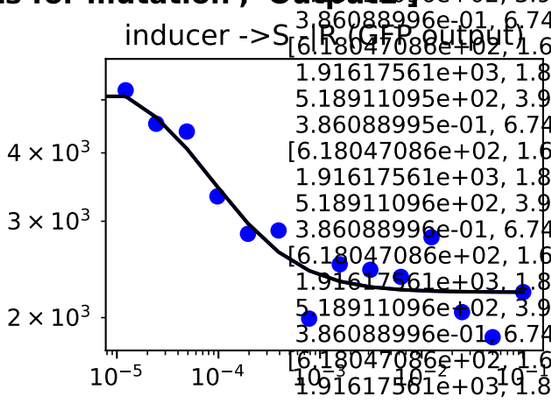
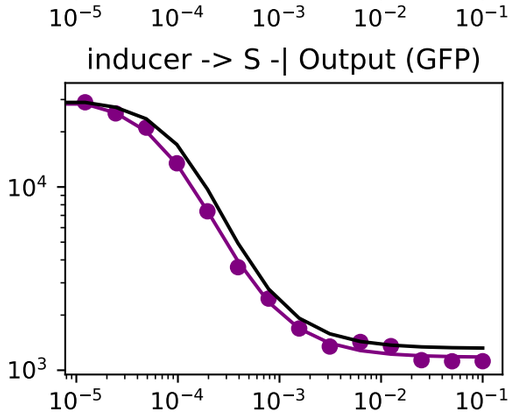
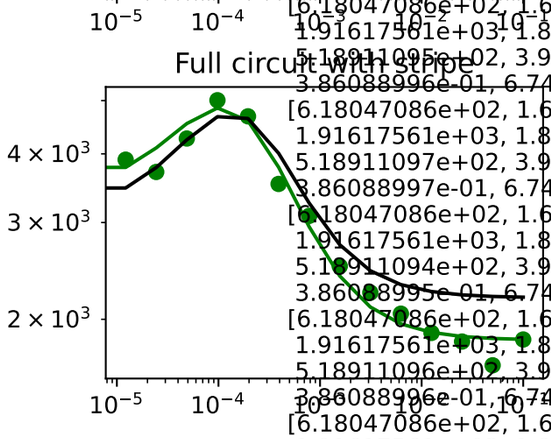
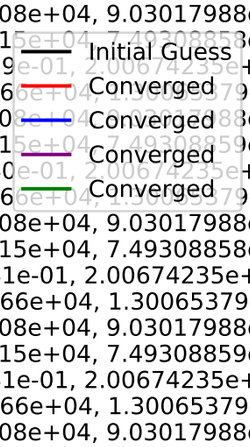
['SM data type data plots for mutation', 'Output1']











Across all four plots:

RSS (converged)=0.063

RSS (initial)=0.17

RSS (% reduction)=0.731

	epsilon	Initial_guesses	Converged
A_s	0.000000	618.047086	618.047086
B_s	0.000000	16278.856600	16278.856600
C_s	0.000000	1300.653790	1300.653790
N_s	0.000000	1.096541	1.096541
A_r	0.000000	1916.175610	1916.175610
B_r	0.000000	18874.240800	18874.240800
C_r	0.000000	0.009030	0.009030
N_r	0.000000	0.820433	0.820433
A_h	-164.924542	683.835638	518.911096
B_h	7053.431282	32464.380200	39517.811482
C_h	0.000276	0.000473	0.000749
F_o	0.840271	2.821352	3.661622
A_o	-0.246059	0.632148	0.386089
B_o	-0.298402	0.972768	0.674366
C_o	-0.633432	2.640174	2.006742
N_o	-0.288333	1.919339	1.631007

final_simplex: (array([[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308858e-04, 3.66162241e+00,
3.86088997e-01, 6.74366441e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911094e+02, 3.95178116e+04, 7.49308860e-04, 3.66162242e+00,
3.86088996e-01, 6.74366438e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308859e-04, 3.66162241e+00,
3.86088996e-01, 6.74366440e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911095e+02, 3.95178115e+04, 7.49308859e-04, 3.66162242e+00,
3.86088996e-01, 6.74366439e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308859e-04, 3.66162240e+00,
3.86088996e-01, 6.74366442e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308859e-04, 3.66162241e+00,
3.86088996e-01, 6.74366441e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308858e-04, 3.66162242e+00,
3.86088995e-01, 6.74366440e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308858e-04, 3.66162241e+00,
3.86088996e-01, 6.74366441e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911095e+02, 3.95178115e+04, 7.49308860e-04, 3.66162241e+00,
3.86088995e-01, 6.74366441e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308859e-04, 3.66162241e+00,
3.86088996e-01, 6.74366440e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911097e+02, 3.95178115e+04, 7.49308858e-04, 3.66162240e+00,
3.86088997e-01, 6.74366443e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911097e+02, 3.95178115e+04, 7.49308858e-04, 3.66162240e+00,
3.86088998e-01, 6.74366441e-01, 2.00674235e+00, 1.63100665e+00],
[6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308858e-04, 3.66162241e+00,
3.86088995e-01, 6.74366441e-01, 2.00674235e+00, 1.63100665e+00]]), array([0.06278018, 0.06278018, 0.06278018, 0.06278018, 0.06278018,
0.06278018, 0.06278018, 0.06278018, 0.06278018, 0.06278018,
0.06278018, 0.06278018, 0.06278018, 0.06278018, 0.06278018,
0.06278018, 0.06278018]))
fun: 0.06278017594184845
message: 'Optimization terminated successfully.'
nfev: 1842
nit: 1195
status: 0
success: True
x: array([6.18047086e+02, 1.62788566e+04, 1.30065379e+03, 1.09654125e+00,
1.91617561e+03, 1.88742408e+04, 9.03017988e-03, 8.20433340e-01,
5.18911096e+02, 3.95178115e+04, 7.49308858e-04, 3.66162241e+00,
3.86088997e-01, 6.74366441e-01, 2.00674235e+00, 1.63100665e+00])