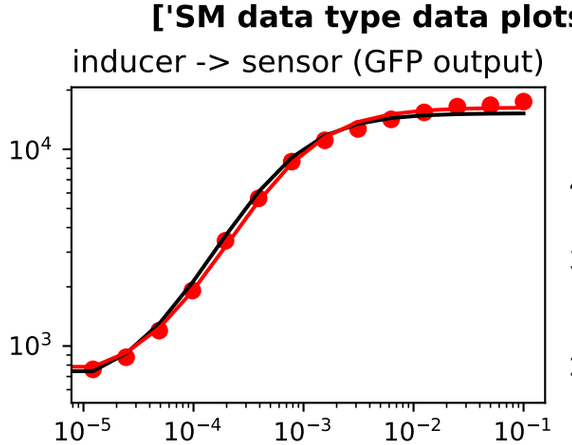
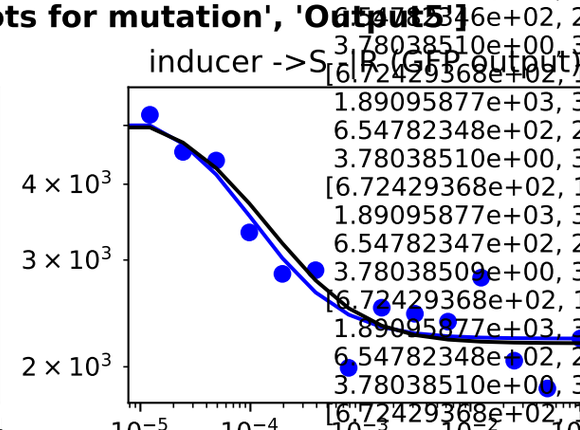
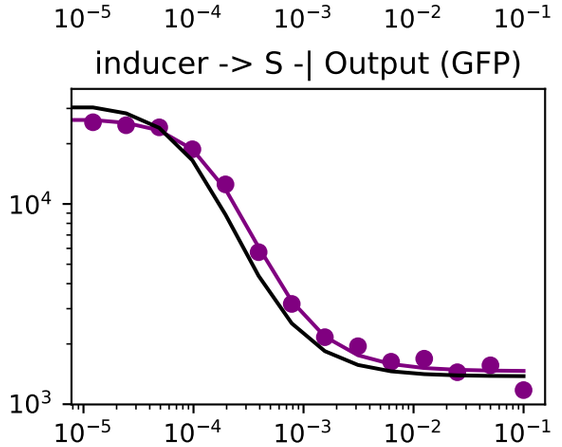
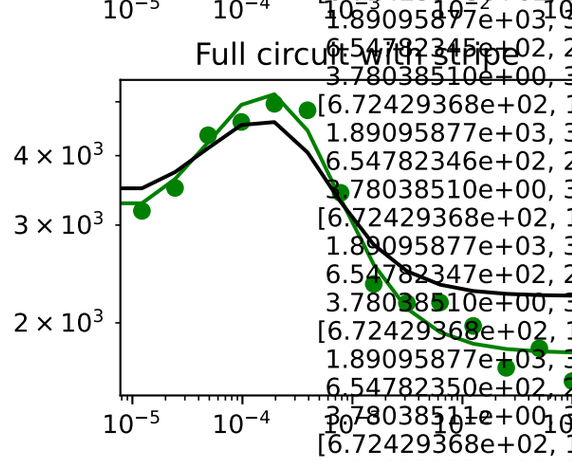
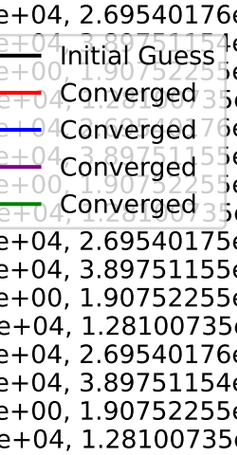
['SM data type data plots for mutation', 'Outputs']











Across all four plots:

RSS (converged)=0.068

RSS (initial)=0.222

RSS (% reduction)=0.764

	epsilon	Initial_guesses	Converged
A_s	64.032265	608.397103	672.429368
B_s	1058.008559	15250.457700	16308.466259
C_s	-387.051699	1668.059050	1281.007351
N_s	-0.012874	1.198934	1.186060
A_r	1202.994076	687.964693	1890.958769
B_r	11432.085002	23497.611400	34929.696402
C_r	-0.035413	0.062367	0.026954
N_r	0.370401	0.391731	0.762132
A_h	64.175801	590.606548	654.782349
B_h	-6999.433665	35287.125700	28287.692035
C_h	-0.000140	0.000530	0.000390
A_o	-0.559921	0.829830	0.269909
B_o	-0.507785	4.288170	3.780385
C_o	-0.060677	3.133222	3.072545
N_o	0.098504	1.809018	1.907523

final_simplex: (array([[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540175e-02, 7.62132205e-01,
6.54782349e+02, 2.82876920e+04, 3.89751154e-04, 2.69908514e-01,
3.78038511e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296963e+04, 2.69540176e-02, 7.62132203e-01,
6.54782347e+02, 2.82876920e+04, 3.89751154e-04, 2.69908508e-01,
3.78038511e+00, 3.07254490e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132203e-01,
6.54782345e+02, 2.82876921e+04, 3.89751154e-04, 2.69908505e-01,
3.78038510e+00, 3.07254490e+00, 1.90752254e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132203e-01,
6.54782349e+02, 2.82876920e+04, 3.89751154e-04, 2.69908512e-01,
3.78038510e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782346e+02, 2.82876920e+04, 3.89751154e-04, 2.69908510e-01,
3.78038510e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782346e+02, 2.8287692[illegible] 3.89751154e-04, 2.69908510e-01,
3.78038510e+00, 3.0725448[illegible] 1.90752255e+00],
[6.72429368e+02, 1.6308466[illegible] 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.4929696[illegible] 2.69540176e-02, 7.62132205e-01,
6.54782348e+02, 2.8287692[illegible] 3.89751155e-04, 2.69908513e-01,
3.78038510e+00, 3.0725448[illegible] 1.90752255e+00],
[6.72429368e+02, 1.6308466[illegible] 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296965e+04, 2.69540175e-02, 7.62132206e-01,
6.54782347e+02, 2.82876921e+04, 3.89751155e-04, 2.69908516e-01,
3.78038509e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782348e+02, 2.82876920e+04, 3.89751154e-04, 2.69908512e-01,
3.78038510e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782345e+02, 2.82876921e+04, 3.89751154e-04, 2.69908506e-01,
3.78038510e+00, 3.07254490e+00, 1.90752254e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782346e+02, 2.82876921e+04, 3.89751155e-04, 2.69908509e-01,
3.78038510e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296963e+04, 2.69540176e-02, 7.62132203e-01,
6.54782347e+02, 2.82876920e+04, 3.89751154e-04, 2.69908510e-01,
3.78038510e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18605999e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782350e+02, 2.82876920e+04, 3.89751154e-04, 2.69908515e-01,
3.78038511e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782346e+02, 2.82876921e+04, 3.89751155e-04, 2.69908508e-01,
3.78038510e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296963e+04, 2.69540176e-02, 7.62132203e-01,
6.54782349e+02, 2.82876920e+04, 3.89751154e-04, 2.69908509e-01,
3.78038511e+00, 3.07254489e+00, 1.90752255e+00],
[6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540176e-02, 7.62132204e-01,
6.54782346e+02, 2.82876921e+04, 3.89751155e-04, 2.69908512e-01,
3.78038509e+00, 3.07254489e+00, 1.90752255e+00]]), array([0.06847142, 0.06847142, 0.06847142, 0.06847142, 0.06847142,
0.06847142, 0.06847142, 0.06847142, 0.06847142, 0.06847142,
0.06847142, 0.06847142, 0.06847142, 0.06847142, 0.06847142,
0.06847142]))
fun: 0.06847141810010335
message: 'Optimization terminated successfully.'
nfev: 12153
nit: 9214
status: 0
success: True
x: array([6.72429368e+02, 1.63084663e+04, 1.28100735e+03, 1.18606000e+00,
1.89095877e+03, 3.49296964e+04, 2.69540175e-02, 7.62132205e-01,
6.54782349e+02, 2.82876920e+04, 3.89751154e-04, 2.69908514e-01,
3.78038511e+00, 3.07254489e+00, 1.90752255e+00])