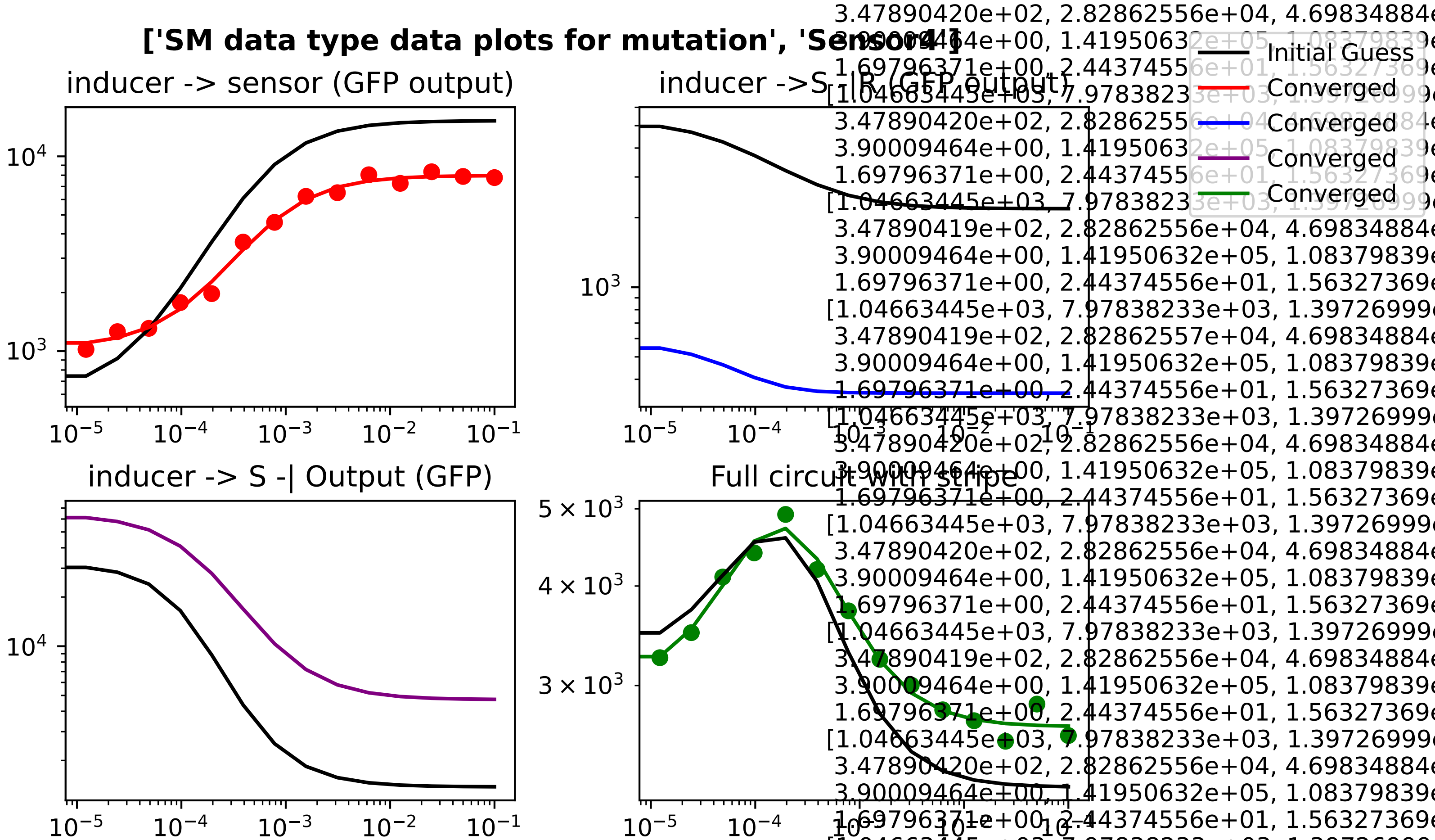

Across all four plots:

RSS (converged)=0.014

RSS (initial)=0.926

RSS (% reduction)=0.985

	epsilon	Initial_guesses	Converged
A_s	438.237352	608.397103	1046.634455
B_s	-7272.075368	15250.457700	7978.382332
C_s	-270.789063	1668.059050	1397.269987
N_s	-0.013879	1.198934	1.185054
A_r	-340.074273	687.964693	347.890420
B_r	4788.644209	23497.611400	28286.255609
C_r	-0.057669	0.062367	0.004698
N_r	2.622084	0.391731	3.013815
A_h	-586.706453	590.606548	3.900095
B_h	106663.506101	35287.125700	141950.631801
C_h	0.000554	0.000530	0.001084
A_o	7.925765	0.829830	8.755594
B_o	-2.590206	4.288170	1.697964
C_o	21.304234	3.133222	24.437456
N_o	-0.245745	1.809018	1.563274

final_simplex: (array([[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559450e+00,
1.69796372e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890419e+02, 2.82862557e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890419e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559450e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890419e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890419e+02, 2.82862557e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890419e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00],
[1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559450e+00,
1.69796372e+00, 2.44374556e+01, 1.56327369e+00]]), array([0.01441366, 0.01441366, 0.01441366, 0.01441366, 0.01441366,
0.01441366, 0.01441366, 0.01441366, 0.01441366, 0.01441366,
0.01441366, 0.01441366, 0.01441366, 0.01441366, 0.01441366,
0.01441366]))
fun: 0.014413660223838751
message: 'Optimization terminated successfully.'
nfev: 34513
nit: 26239
status: 0
success: True
x: array([1.04663445e+03, 7.97838233e+03, 1.39726999e+03, 1.18505414e+00,
3.47890420e+02, 2.82862556e+04, 4.69834884e-03, 3.01381452e+00,
3.90009464e+00, 1.41950632e+05, 1.08379839e-03, 8.75559449e+00,
1.69796371e+00, 2.44374556e+01, 1.56327369e+00])