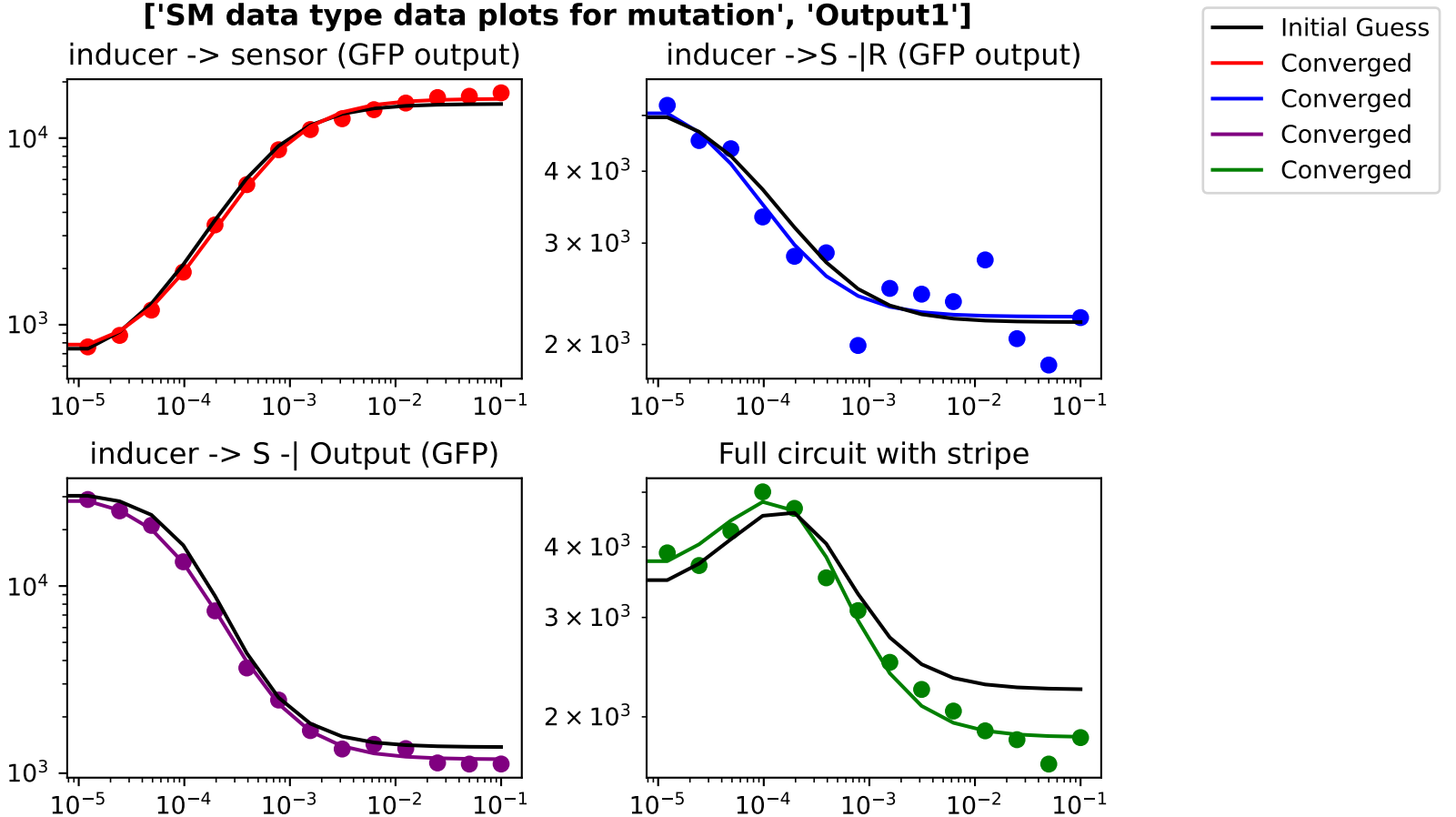


Across all four plots:

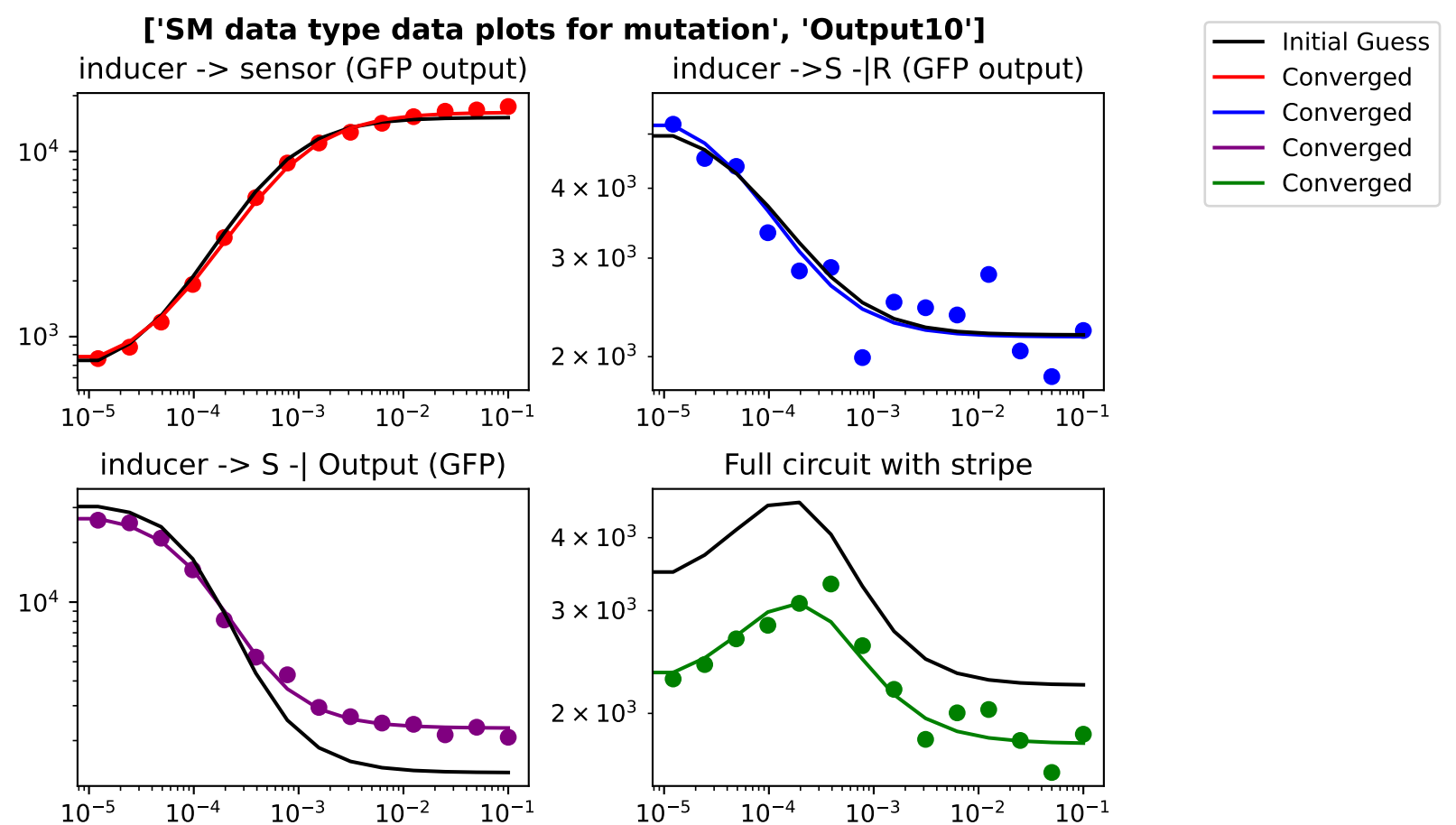
RSS (converged)=0.056

RSS (initial)=0.174

RSS (% reduction)=0.757

	epsilon	Initial_guesses	Converged
A_s	61.603354	608.397103	670.000457
B_s	1006.256836	15250.457700	16256.714536
C_s	-371.823786	1668.059050	1296.235264
N_s	-0.012177	1.198934	1.186756
A_r	1249.339054	687.964693	1937.303747
B_r	240449.396804	23497.611400	263947.008204
C_r	0.321830	0.062367	0.384198
N_r	0.384786	0.391731	0.776517
A_h	-201.353640	590.606548	389.252908
B_h	16394.433511	35287.125700	51681.559211
C_h	0.000603	0.000530	0.001133
A_o	0.495095	0.829830	1.324924
B_o	-1.944938	4.288170	2.343233
C_o	-1.124918	3.133222	2.008303
N_o	-0.382204	1.809018	1.426815

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.05582860264303042
      x: [ 6.700e+02  1.626e+04 ...  2.008e+00  1.427e+00]
    nit: 17489
   nfev: 22978
final_simplex: (array([[ 6.700e+02,  1.626e+04, ...,  2.008e+00,
                         1.427e+00],
                       [ 6.700e+02,  1.626e+04, ...,  2.008e+00,
                         1.427e+00],
                       ...,
                       [ 6.700e+02,  1.626e+04, ...,  2.008e+00,
                         1.427e+00],
                       [ 6.700e+02,  1.626e+04, ...,  2.008e+00,
                         1.427e+00]]), array([ 5.583e-02,  5.583e-02, ...,  5.583e-02,  5.583e-02]))
```



Across all four plots:

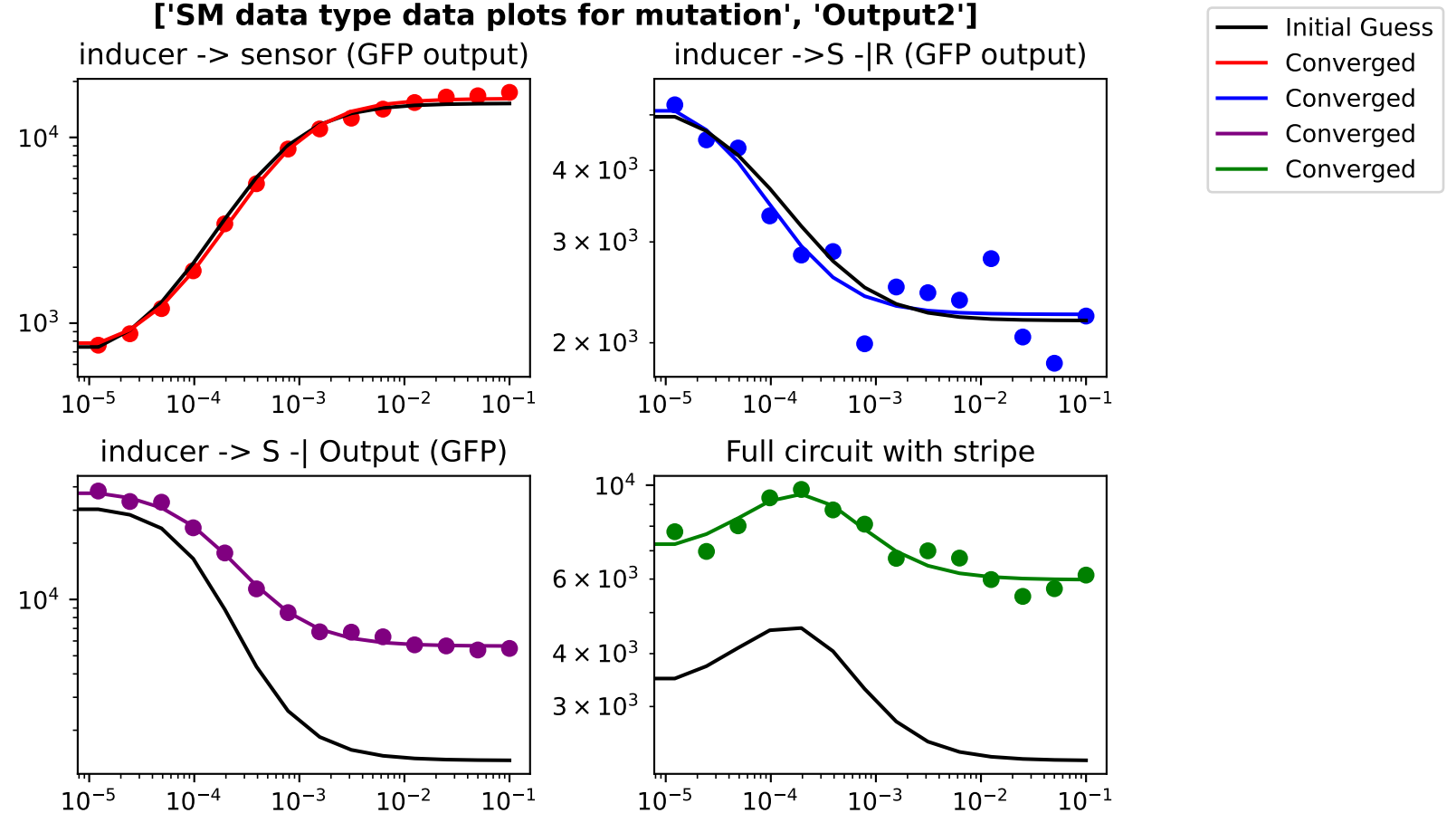
RSS (converged)=0.07

RSS (initial)=0.767

RSS (% reduction)=0.916

	epsilon	Initial_guesses	Converged
A_s	33.149055	608.397103	641.546158
B_s	1020.221275	15250.457700	16270.678975
C_s	-455.047871	1668.059050	1213.011179
N_s	-0.078908	1.198934	1.120026
A_r	1111.893866	687.964693	1799.858559
B_r	-10196.706378	23497.611400	13300.905022
C_r	-0.057573	0.062367	0.004795
N_r	0.423969	0.391731	0.815699
A_h	979.663143	590.606548	1570.269691
B_h	-883.932575	35287.125700	34403.193125
C_h	0.000171	0.000530	0.000701
A_o	-0.256962	0.829830	0.572868
B_o	-2.297348	4.288170	1.990822
C_o	-0.109638	3.133222	3.023584
N_o	-0.241389	1.809018	1.567629

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.07015664446818658
      x: [ 6.415e+02  1.627e+04 ...  3.024e+00  1.568e+00]
    nit: 12051
   nfev: 15928
final_simplex: (array([[ 6.415e+02,  1.627e+04, ...,  3.024e+00,
                         1.568e+00],
                       [ 6.415e+02,  1.627e+04, ...,  3.024e+00,
                         1.568e+00],
                       ...,
                       [ 6.415e+02,  1.627e+04, ...,  3.024e+00,
                         1.568e+00],
                       [ 6.415e+02,  1.627e+04, ...,  3.024e+00,
                         1.568e+00]]), array([ 7.016e-02,  7.016e-02, ...,  7.016e-02,  7.016e-02]))
```



Across all four plots:

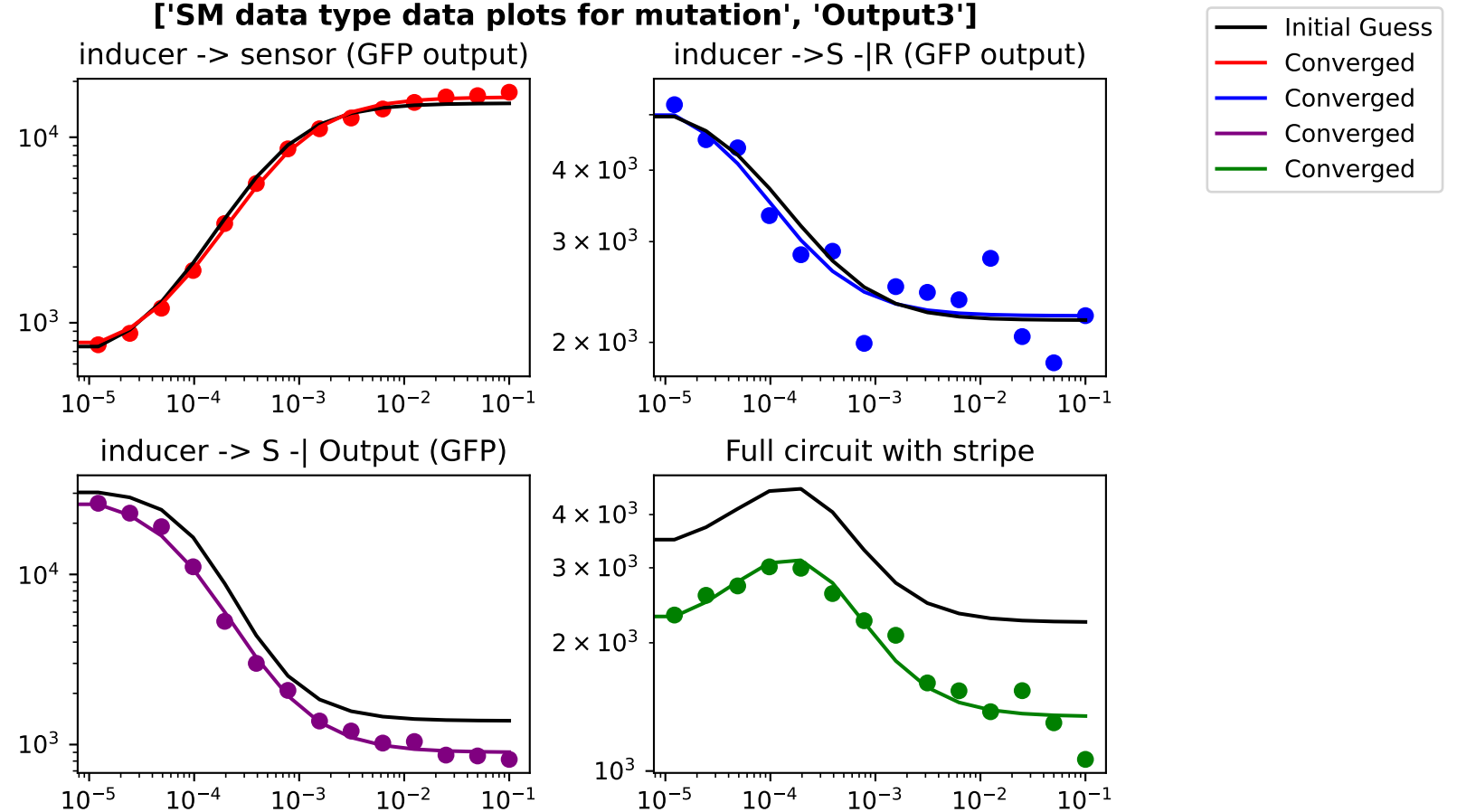
RSS (converged)=0.051

RSS (initial)=5.32

RSS (% reduction)=0.99

	epsilon	Initial_guesses	Converged
A_s	63.580568	608.397103	671.977671
B_s	940.959694	15250.457700	16191.417394
C_s	-344.883371	1668.059050	1323.175679
N_s	0.000163	1.198934	1.199097
A_r	1329.675376	687.964693	2017.640069
B_r	2160.134974	23497.611400	25657.746374
C_r	-0.050636	0.062367	0.011731
N_r	0.509978	0.391731	0.901709
A_h	2094.704687	590.606548	2685.311235
B_h	13656.952705	35287.125700	48944.078405
C_h	0.000096	0.000530	0.000626
A_o	-0.102558	0.829830	0.727272
B_o	-2.136646	4.288170	2.151525
C_o	0.448727	3.133222	3.581949
N_o	-0.622466	1.809018	1.186552

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.051022420256299696
      x: [ 6.720e+02  1.619e+04 ...  3.582e+00  1.187e+00]
    nit: 20536
   nfev: 27038
final_simplex: (array([[ 6.720e+02,  1.619e+04, ...,  3.582e+00,
                         1.187e+00],
                       [ 6.720e+02,  1.619e+04, ...,  3.582e+00,
                         1.187e+00],
                       ...,
                       [ 6.720e+02,  1.619e+04, ...,  3.582e+00,
                         1.187e+00],
                       [ 6.720e+02,  1.619e+04, ...,  3.582e+00,
                         1.187e+00]]), array([ 5.102e-02,  5.102e-02, ...,  5.102e-02,  5.102e-02]))
```



Across all four plots:

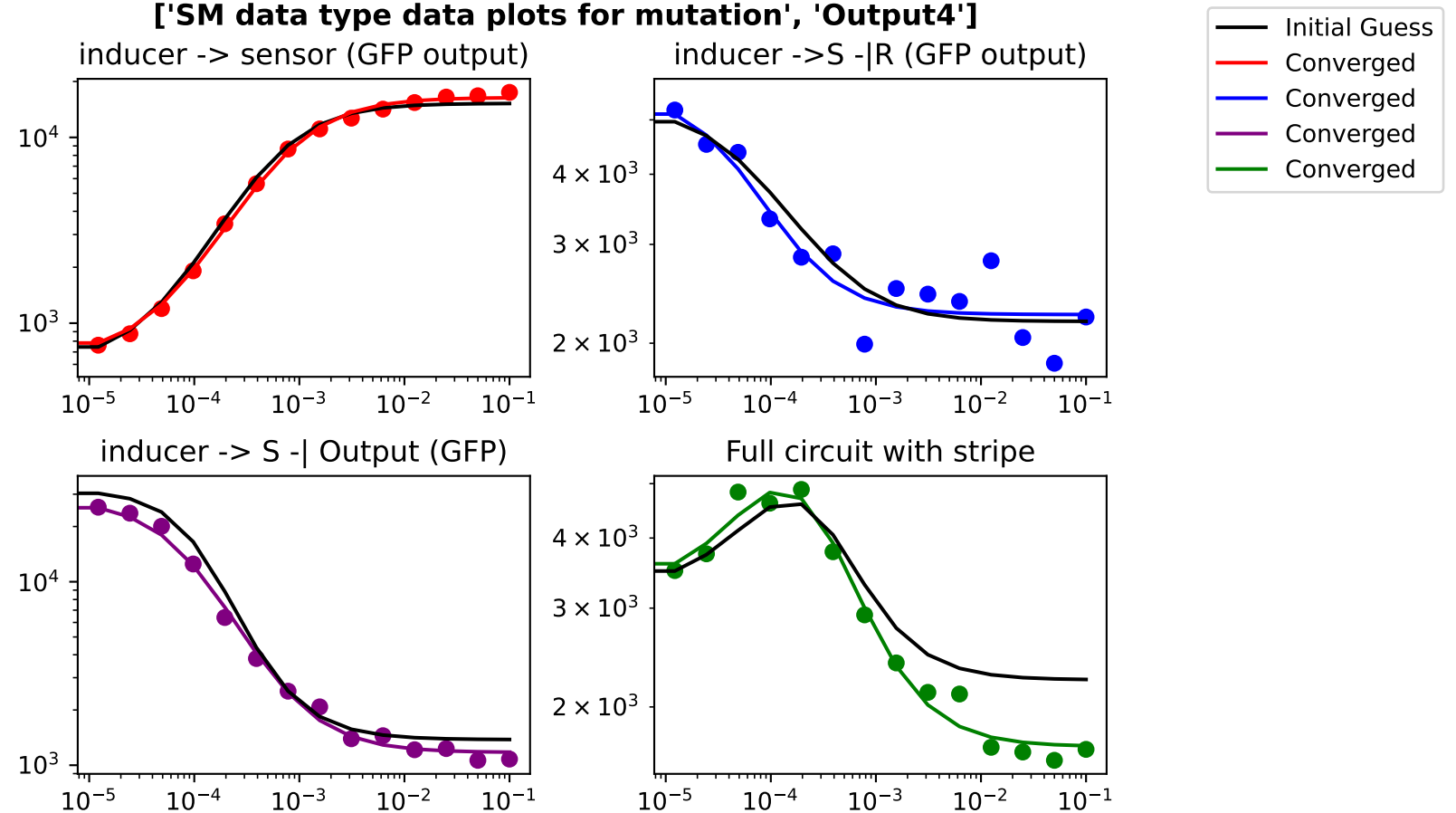
RSS (converged)=0.075

RSS (initial)=0.975

RSS (% reduction)=0.929

	epsilon	Initial_guesses	Converged
A_s	47.511887	608.397103	655.908990
B_s	1216.351315	15250.457700	16466.809015
C_s	-446.643749	1668.059050	1221.415301
N_s	-0.054290	1.198934	1.144643
A_r	1175.935523	687.964693	1863.900216
B_r	98555.283386	23497.611400	122052.894786
C_r	0.142962	0.062367	0.205329
N_r	0.324423	0.391731	0.716154
A_h	-413.834660	590.606548	176.771888
B_h	30286.907305	35287.125700	65574.033005
C_h	0.001249	0.000530	0.001779
A_o	-0.522004	0.829830	0.307826
B_o	-1.558929	4.288170	2.729241
C_o	-0.307089	3.133222	2.826133
N_o	-0.477506	1.809018	1.331512

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.07493248308571682
      x: [ 6.559e+02  1.647e+04 ...  2.826e+00  1.332e+00]
    nit: 14281
   nfev: 18848
final_simplex: (array([[ 6.559e+02,  1.647e+04, ...,  2.826e+00,
                         1.332e+00],
                       [ 6.559e+02,  1.647e+04, ...,  2.826e+00,
                         1.332e+00],
                       ...,
                       [ 6.559e+02,  1.647e+04, ...,  2.826e+00,
                         1.332e+00],
                       [ 6.559e+02,  1.647e+04, ...,  2.826e+00,
                         1.332e+00]]), array([ 7.493e-02,  7.493e-02, ...,  7.493e-02,  7.493e-02]))
```



Across all four plots:

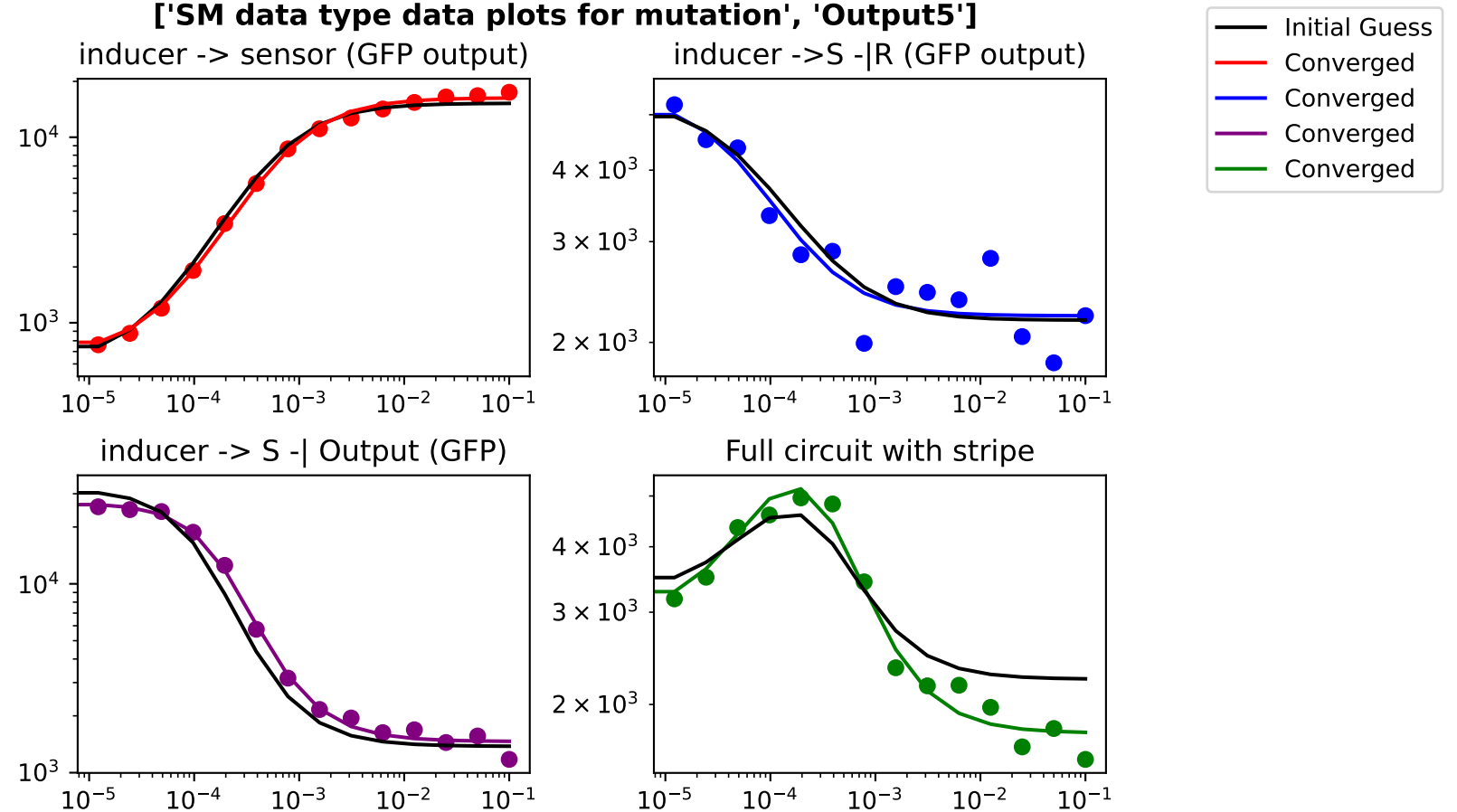
RSS (converged)=0.067

RSS (initial)=0.248

RSS (% reduction)=0.788

	epsilon	Initial_guesses	Converged
A_s	47.061613	608.397103	655.458716
B_s	1144.939154	15250.457700	16395.396854
C_s	-426.242540	1668.059050	1241.816510
N_s	-0.049737	1.198934	1.149197
A_r	1398.436440	687.964693	2086.401133
B_r	-6460.981807	23497.611400	17036.629593
C_r	-0.056662	0.062367	0.005705
N_r	0.630887	0.391731	1.022618
A_h	-412.579621	590.606548	178.026927
B_h	13314.847561	35287.125700	48601.973261
C_h	0.000683	0.000530	0.001212
A_o	-0.825197	0.829830	0.004633
B_o	-1.924189	4.288170	2.363981
C_o	-0.999403	3.133222	2.133819
N_o	-0.515449	1.809018	1.293570

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.06668933030516234
      x: [ 6.555e+02  1.640e+04 ...  2.134e+00  1.294e+00]
    nit: 21892
   nfev: 28557
final_simplex: (array([[ 6.555e+02,  1.640e+04, ...,  2.134e+00,
                         1.294e+00],
                       [ 6.555e+02,  1.640e+04, ...,  2.134e+00,
                         1.294e+00],
                       ...,
                       [ 6.555e+02,  1.640e+04, ...,  2.134e+00,
                         1.294e+00],
                       [ 6.555e+02,  1.640e+04, ...,  2.134e+00,
                         1.294e+00]]), array([ 6.669e-02,  6.669e-02, ...,  6.669e-02,  6.669e-02]))
```



Across all four plots:

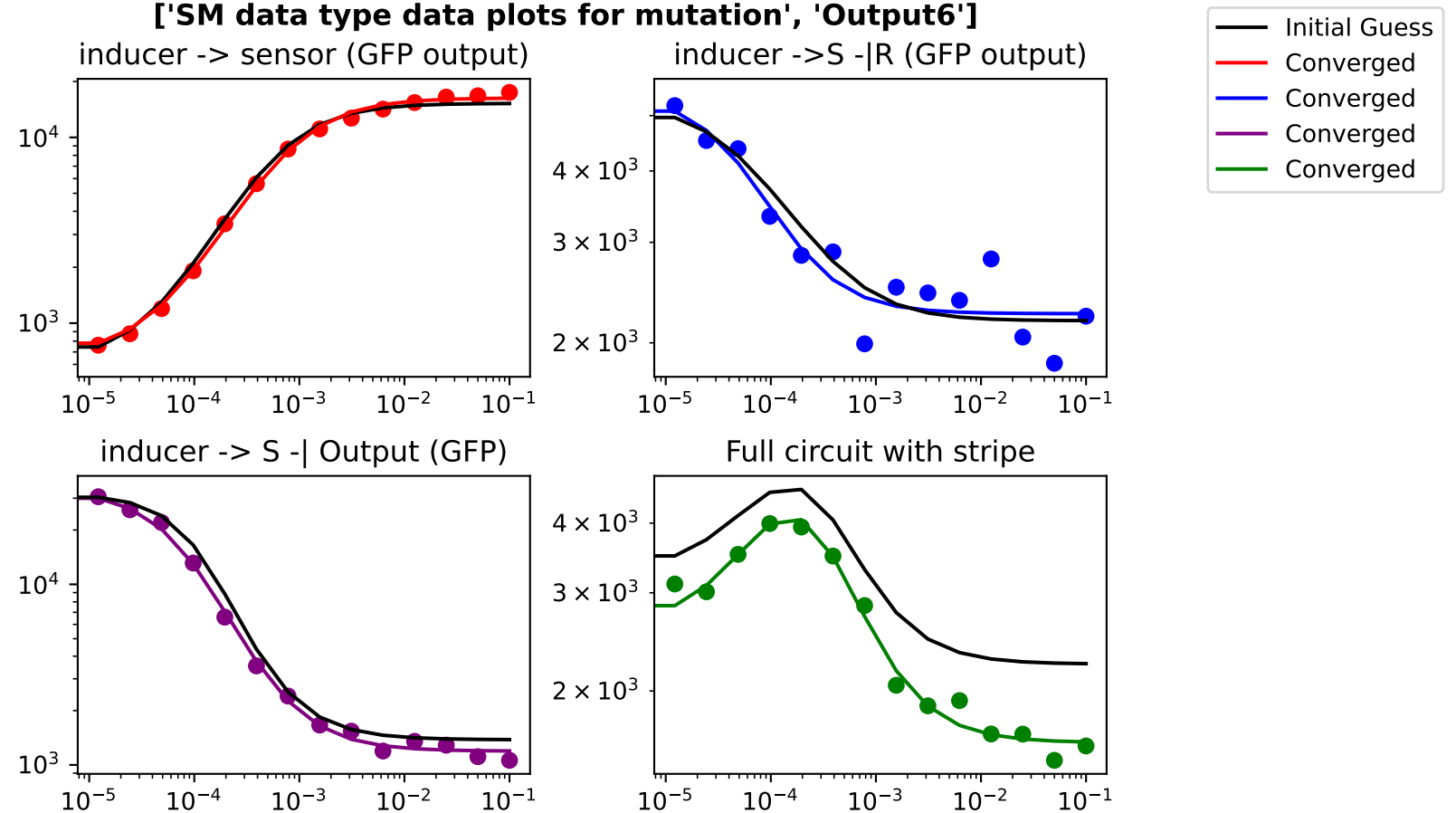
RSS (converged)=0.068

RSS (initial)=0.222

RSS (% reduction)=0.764

	epsilon	Initial_guesses	Converged
A_s	64.032263	608.397103	672.429366
B_s	1058.008562	15250.457700	16308.466262
C_s	-387.051698	1668.059050	1281.007352
N_s	-0.012874	1.198934	1.186060
A_r	1202.994053	687.964693	1890.958746
B_r	11432.084918	23497.611400	34929.696318
C_r	-0.035413	0.062367	0.026954
N_r	0.370401	0.391731	0.762132
A_h	64.175823	590.606548	654.782371
B_h	-6999.434004	35287.125700	28287.691696
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


```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.06847141810010358
      x: [ 6.724e+02  1.631e+04 ...  3.073e+00  1.908e+00]
    nit: 9222
   nfev: 12164
final_simplex: (array([[ 6.724e+02,  1.631e+04, ...,  3.073e+00,
                         1.908e+00],
                       [ 6.724e+02,  1.631e+04, ...,  3.073e+00,
                         1.908e+00],
                       ...,
                       [ 6.724e+02,  1.631e+04, ...,  3.073e+00,
                         1.908e+00],
                       [ 6.724e+02,  1.631e+04, ...,  3.073e+00,
                         1.908e+00]]), array([ 6.847e-02,  6.847e-02, ...,  6.847e-02,  6.847e-02]))
```



Across all four plots:

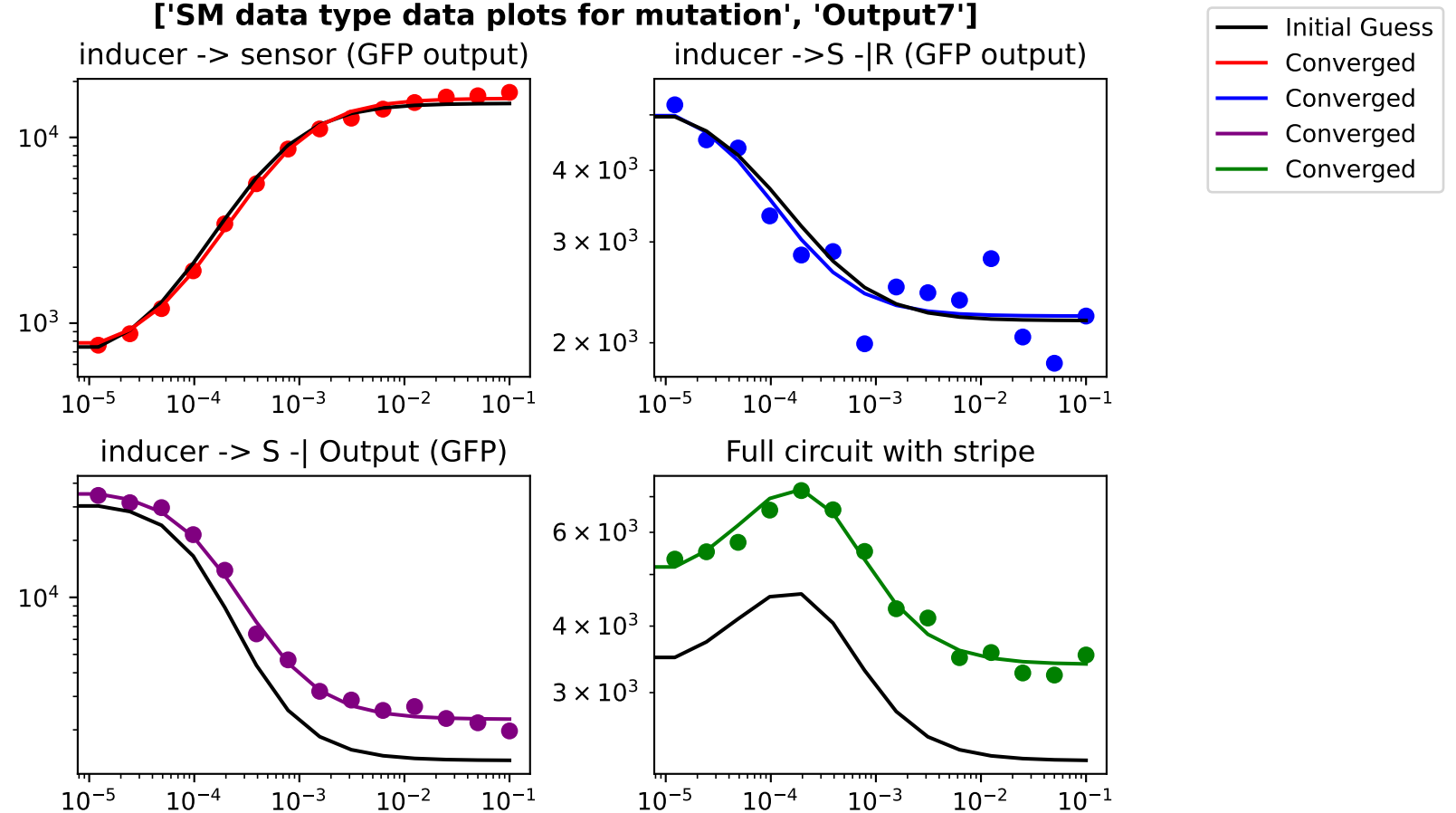
RSS (converged)=0.057

RSS (initial)=0.3

RSS (% reduction)=0.839

	epsilon	Initial_guesses	Converged
A_s	50.718998	608.397103	659.116101
B_s	1046.185962	15250.457700	16296.643662
C_s	-389.949501	1668.059050	1278.109549
N_s	-0.033004	1.198934	1.165930
A_r	1412.692454	687.964693	2100.657147
B_r	-13725.296315	23497.611400	9772.315085
C_r	-0.059674	0.062367	0.002693
N_r	0.710686	0.391731	1.102417
A_h	-77.940508	590.606548	512.666040
B_h	22411.756250	35287.125700	57698.881950
C_h	0.000715	0.000530	0.001245
A_o	-0.364830	0.829830	0.465000
B_o	-1.079836	4.288170	3.208334
C_o	-0.457468	3.133222	2.675754
N_o	-0.336931	1.809018	1.472088

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.05746558834382853
      x: [ 6.591e+02  1.630e+04 ...  2.676e+00  1.472e+00]
    nit: 20523
   nfev: 26877
final_simplex: (array([[ 6.591e+02,  1.630e+04, ...,  2.676e+00,
                         1.472e+00],
                       [ 6.591e+02,  1.630e+04, ...,  2.676e+00,
                         1.472e+00],
                       ...,
                       [ 6.591e+02,  1.630e+04, ...,  2.676e+00,
                         1.472e+00],
                       [ 6.591e+02,  1.630e+04, ...,  2.676e+00,
                         1.472e+00]]), array([ 5.747e-02,  5.747e-02, ...,  5.747e-02,  5.747e-02]))
```



Across all four plots:

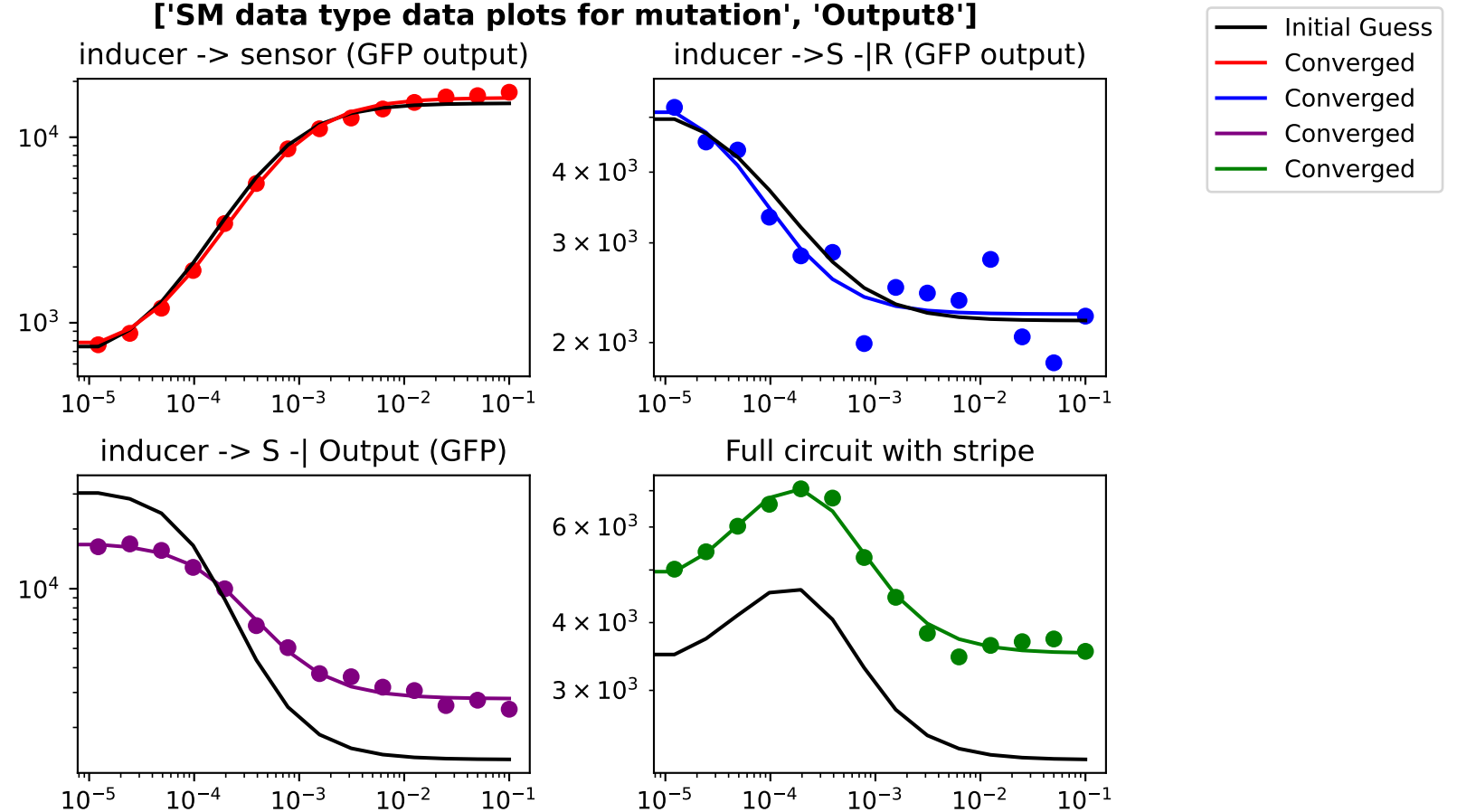
RSS (converged)=0.058

RSS (initial)=1.118

RSS (% reduction)=0.951

	epsilon	Initial_guesses	Converged
A_s	66.448690	608.397103	674.845793
B_s	980.957605	15250.457700	16231.415305
C_s	-359.681756	1668.059050	1308.377294
N_s	-0.000619	1.198934	1.198315
A_r	1200.682314	687.964693	1888.647007
B_r	-58.329368	23497.611400	23439.282032
C_r	-0.047757	0.062367	0.014610
N_r	0.380769	0.391731	0.772500
A_h	10.219415	590.606548	600.825963
B_h	13089.987288	35287.125700	48377.112988
C_h	0.000135	0.000530	0.000665
A_o	-0.390863	0.829830	0.438967
B_o	-1.213258	4.288170	3.074913
C_o	0.082435	3.133222	3.215657
N_o	-0.409363	1.809018	1.399655

```
     message: Optimization terminated successfully.
     success: True
      status: 0
         fun: 0.0582109931631608
           x: [ 6.748e+02  1.623e+04 ...  3.216e+00  1.400e+00]
         nit: 9468
        nfev: 12477
final_simplex: (array([[ 6.748e+02,  1.623e+04, ...,  3.216e+00,
                         1.400e+00],
                       [ 6.748e+02,  1.623e+04, ...,  3.216e+00,
                         1.400e+00],
                       ...,
                       [ 6.748e+02,  1.623e+04, ...,  3.216e+00,
                         1.400e+00],
                       [ 6.748e+02,  1.623e+04, ...,  3.216e+00,
                         1.400e+00]]), array([ 5.821e-02,  5.821e-02, ...,  5.821e-02,  5.821e-02]))
```



Across all four plots:

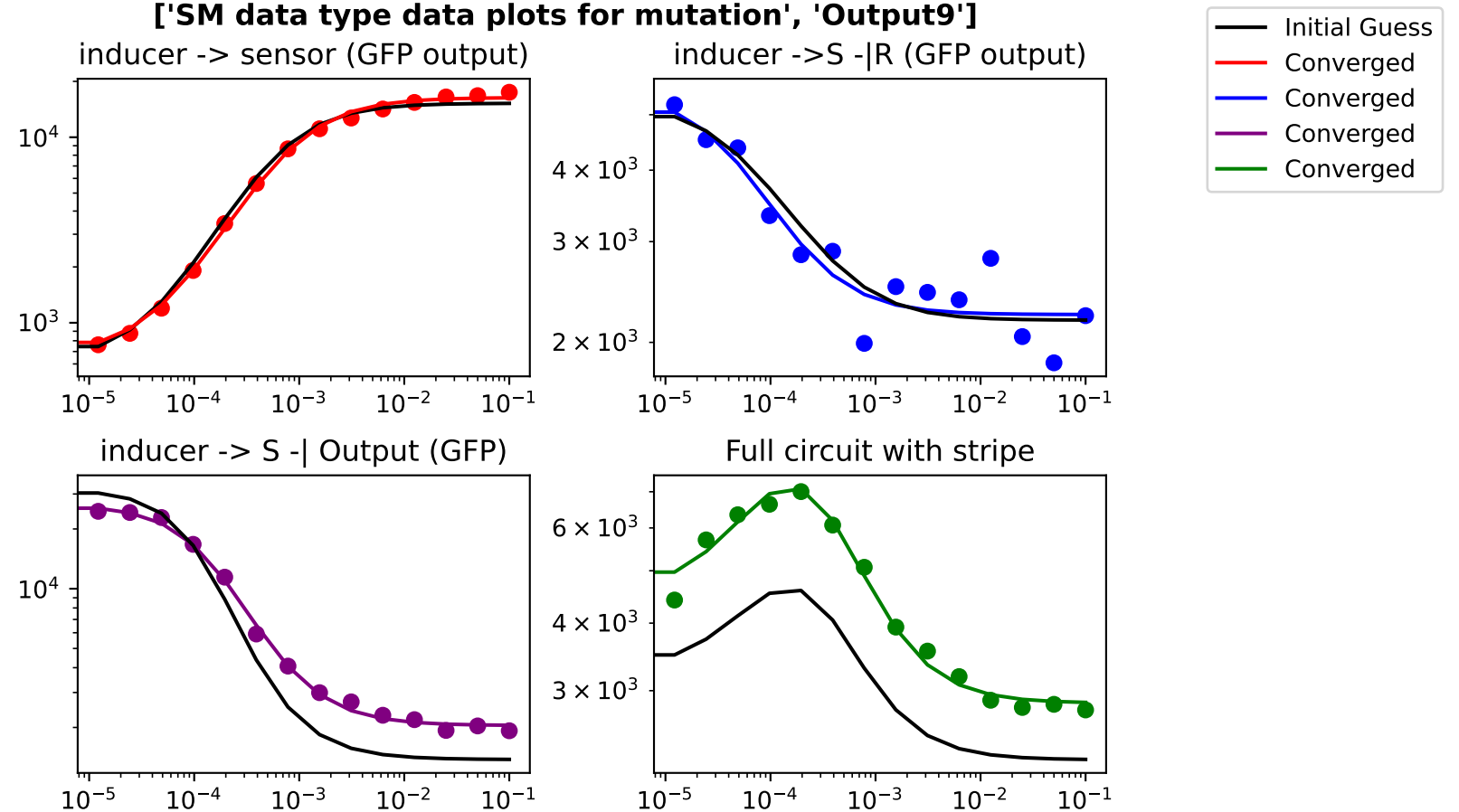
RSS (converged)=0.051

RSS (initial)=1.634

RSS (% reduction)=0.97

	epsilon	Initial_guesses	Converged
A_s	56.188515	608.397103	664.585618
B_s	1078.144579	15250.457700	16328.602279
C_s	-399.844145	1668.059050	1268.214905
N_s	-0.029121	1.198934	1.169812
A_r	1375.387627	687.964693	2063.352320
B_r	-5031.637891	23497.611400	18465.973509
C_r	-0.055703	0.062367	0.006664
N_r	0.591274	0.391731	0.983005
A_h	392.798780	590.606548	983.405328
B_h	-17297.918511	35287.125700	17989.207189
C_h	-0.000222	0.000530	0.000308
A_o	-0.443437	0.829830	0.386392
B_o	-1.536683	4.288170	2.751488
C_o	0.131424	3.133222	3.264646
N_o	-0.452311	1.809018	1.356708

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.05125226276095191
      x: [ 6.646e+02  1.633e+04 ...  3.265e+00  1.357e+00]
    nit: 7899
   nfev: 10515
final_simplex: (array([[ 6.646e+02,  1.633e+04, ...,  3.265e+00,
                         1.357e+00],
                       [ 6.646e+02,  1.633e+04, ...,  3.265e+00,
                         1.357e+00],
                       ...,
                       [ 6.646e+02,  1.633e+04, ...,  3.265e+00,
                         1.357e+00],
                       [ 6.646e+02,  1.633e+04, ...,  3.265e+00,
                         1.357e+00]]), array([ 5.125e-02,  5.125e-02, ...,  5.125e-02,  5.125e-02]))
```



Across all four plots:

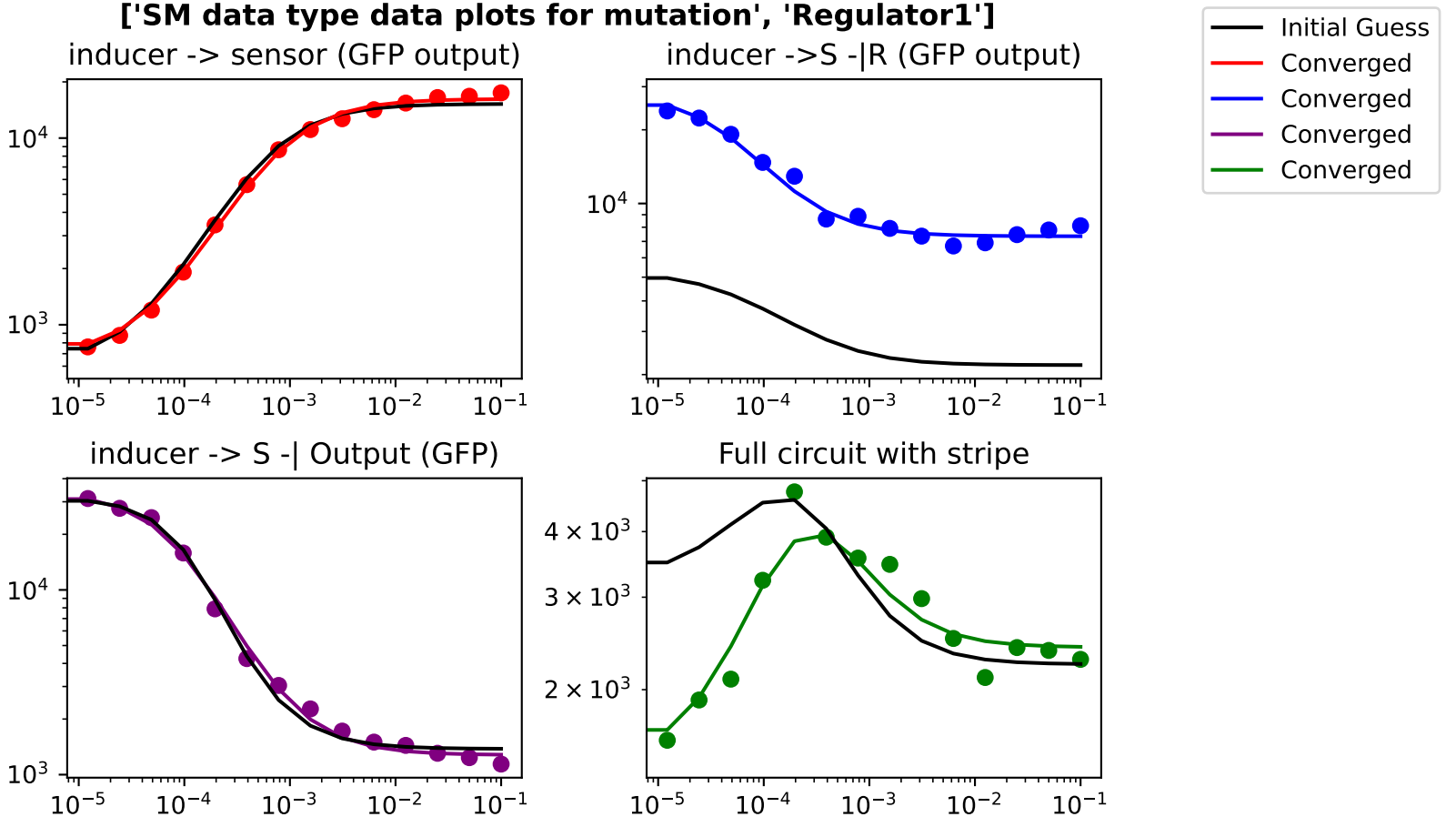
RSS (converged)=0.052

RSS (initial)=0.732

RSS (% reduction)=0.933

	epsilon	Initial_guesses	Converged
A_s	56.327471	608.397103	664.724574
B_s	1109.993001	15250.457700	16360.450701
C_s	-408.784843	1668.059050	1259.274207
N_s	-0.030920	1.198934	1.168013
A_r	1293.011491	687.964693	1980.976184
B_r	14087.229550	23497.611400	37584.840950
C_r	-0.039919	0.062367	0.022448
N_r	0.452042	0.391731	0.843773
A_h	45.263622	590.606548	635.870170
B_h	-4073.974221	35287.125700	31213.151479
C_h	-0.000028	0.000530	0.000502
A_o	-0.774788	0.829830	0.055042
B_o	-1.132495	4.288170	3.155675
C_o	-0.285453	3.133222	2.847769
N_o	-0.359585	1.809018	1.449433

```
      message: Optimization terminated successfully.
      success: True
       status: 0
          fun: 0.052223095733309244
            x: [ 6.647e+02  1.636e+04 ...  2.848e+00  1.449e+00]
          nit: 10551
         nfev: 13978
final_simplex: (array([[ 6.647e+02,  1.636e+04, ...,  2.848e+00,
                         1.449e+00],
                       [ 6.647e+02,  1.636e+04, ...,  2.848e+00,
                         1.449e+00],
                       ...,
                       [ 6.647e+02,  1.636e+04, ...,  2.848e+00,
                         1.449e+00],
                       [ 6.647e+02,  1.636e+04, ...,  2.848e+00,
                         1.449e+00]]), array([ 5.222e-02,  5.222e-02, ...,  5.222e-02,  5.222e-02]))
```



Across all four plots:

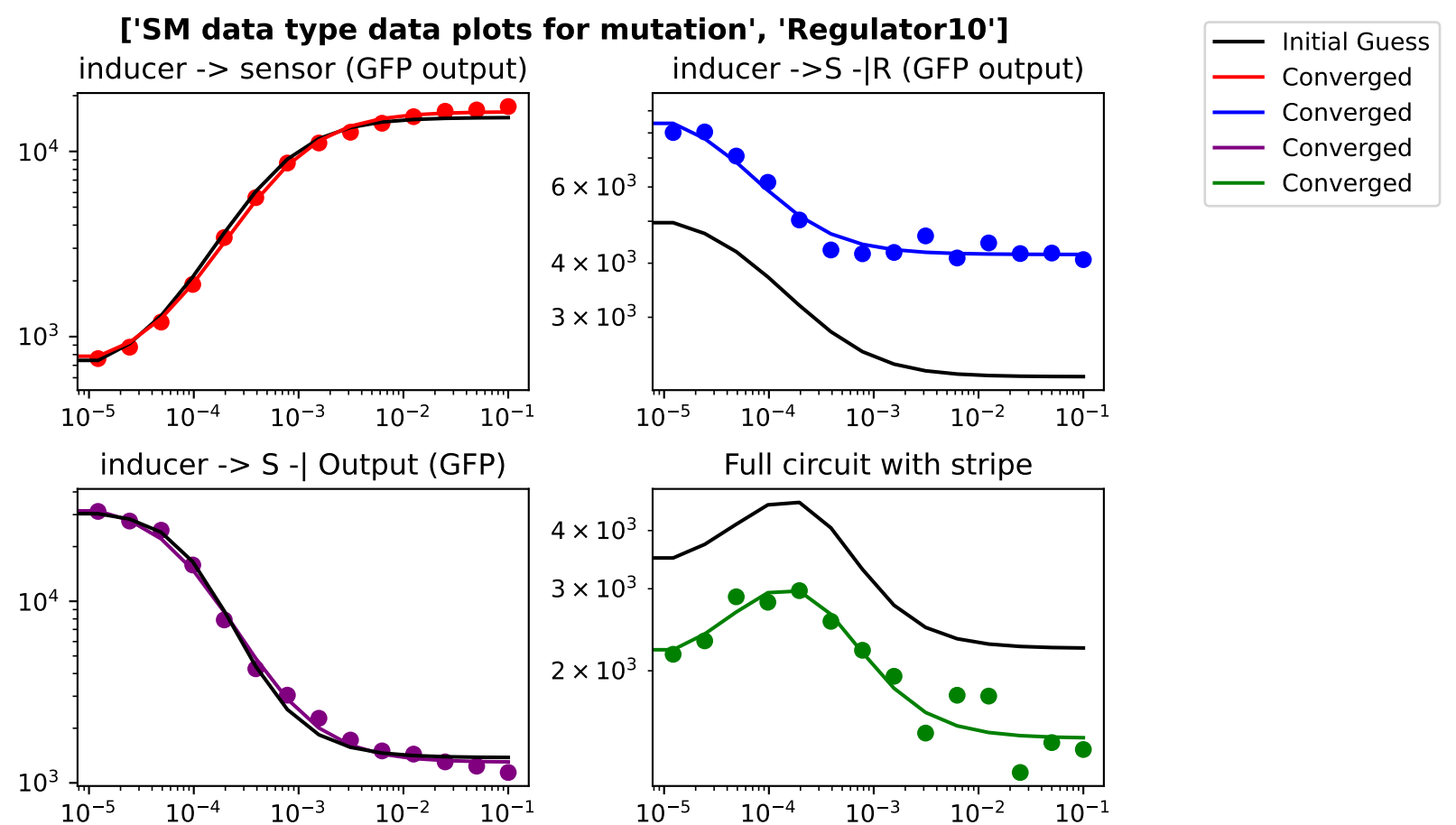
RSS (converged)=0.065

RSS (initial)=5.514

RSS (% reduction)=0.988

	epsilon	Initial_guesses	Converged
A_s	63.301515	608.397103	671.698618
B_s	964.389117	15250.457700	16214.846817
C_s	-390.153183	1668.059050	1277.905867
N_s	-0.028353	1.198934	1.170580
A_r	5670.371299	687.964693	6358.335992
B_r	306933.826816	23497.611400	330431.438216
C_r	-0.041173	0.062367	0.021194
N_r	0.603247	0.391731	0.994978
A_h	-571.091656	590.606548	19.514892
B_h	20633.934534	35287.125700	55921.060234
C_h	0.000542	0.000530	0.001072
A_o	-0.256272	0.829830	0.573558
B_o	-0.775794	4.288170	3.512376
C_o	-1.804703	3.133222	1.328519
N_o	-0.488197	1.809018	1.320821

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.06499120143682907
      x: [ 6.717e+02  1.621e+04 ...  1.329e+00  1.321e+00]
    nit: 13075
   nfev: 17367
final_simplex: (array([[ 6.717e+02,  1.621e+04, ...,  1.329e+00,
                         1.321e+00],
                       [ 6.717e+02,  1.621e+04, ...,  1.329e+00,
                         1.321e+00],
                       ...,
                       [ 6.717e+02,  1.621e+04, ...,  1.329e+00,
                         1.321e+00],
                       [ 6.717e+02,  1.621e+04, ...,  1.329e+00,
                         1.321e+00]]), array([ 6.499e-02,  6.499e-02, ...,  6.499e-02,  6.499e-02]))
```



Across all four plots:

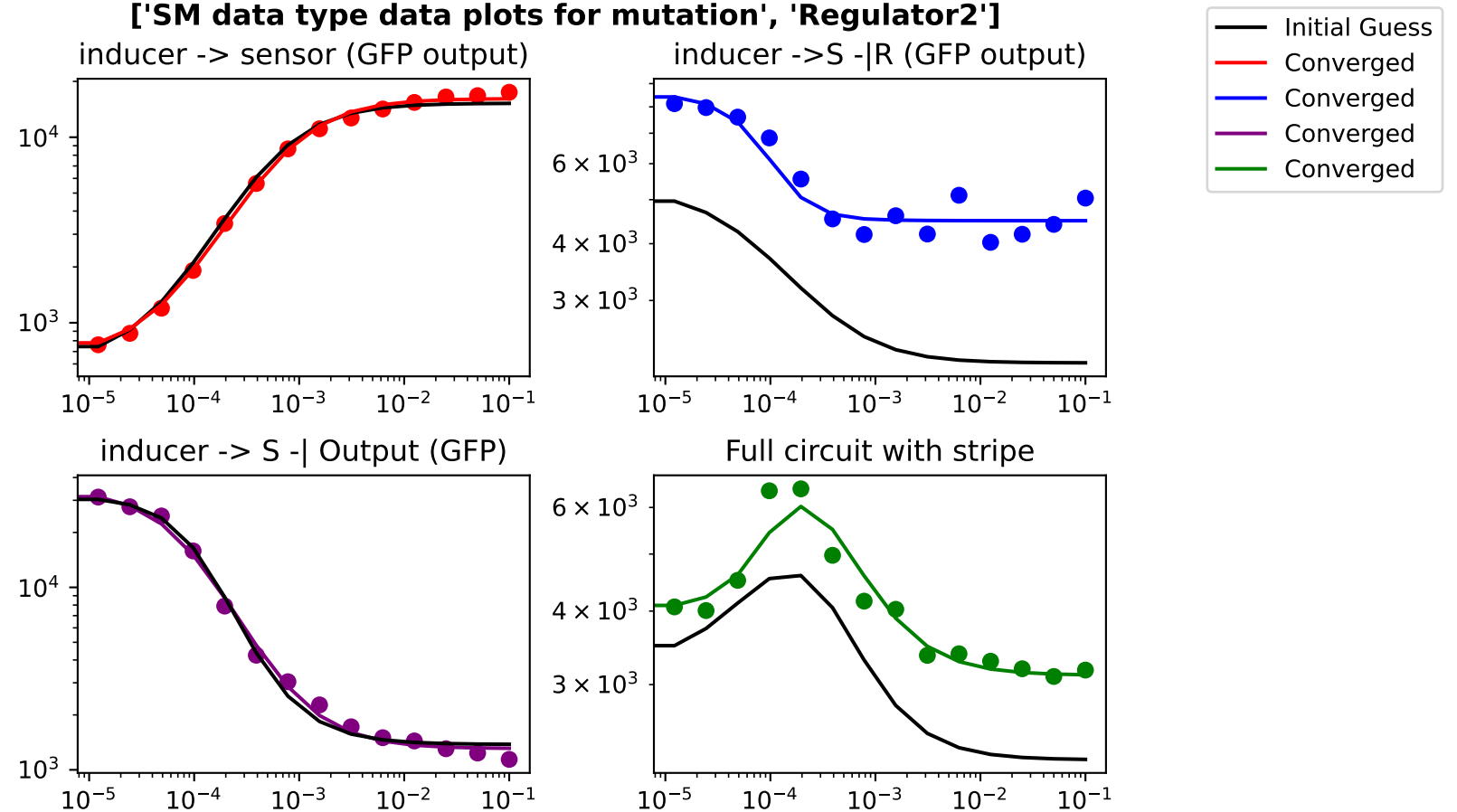
RSS (converged)=0.052

RSS (initial)=1.554

RSS (% reduction)=0.968

	epsilon	Initial_guesses	Converged
A_s	52.804356	608.397103	661.201459
B_s	1135.714862	15250.457700	16386.172562
C_s	-421.456967	1668.059050	1246.602083
N_s	-0.040809	1.198934	1.158125
A_r	3230.998344	687.964693	3918.963037
B_r	202234.738694	23497.611400	225732.350094
C_r	0.021623	0.062367	0.083990
N_r	0.538667	0.391731	0.930398
A_h	-549.205902	590.606548	41.400646
B_h	31261.977873	35287.125700	66549.103573
C_h	0.000865	0.000530	0.001395
A_o	2.992352	0.829830	3.822181
B_o	-2.645459	4.288170	1.642711
C_o	-1.275151	3.133222	1.858071
N_o	-0.546888	1.809018	1.262131

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.052151872722334236
      x: [ 6.612e+02  1.639e+04 ...  1.858e+00  1.262e+00]
    nit: 16002
   nfev: 21105
final_simplex: (array([[ 6.612e+02,  1.639e+04, ...,  1.858e+00,
                         1.262e+00],
                       [ 6.612e+02,  1.639e+04, ...,  1.858e+00,
                         1.262e+00],
                       ...,
                       [ 6.612e+02,  1.639e+04, ...,  1.858e+00,
                         1.262e+00],
                       [ 6.612e+02,  1.639e+04, ...,  1.858e+00,
                         1.262e+00]]), array([ 5.215e-02,  5.215e-02, ...,  5.215e-02,  5.215e-02]))
```



Across all four plots:

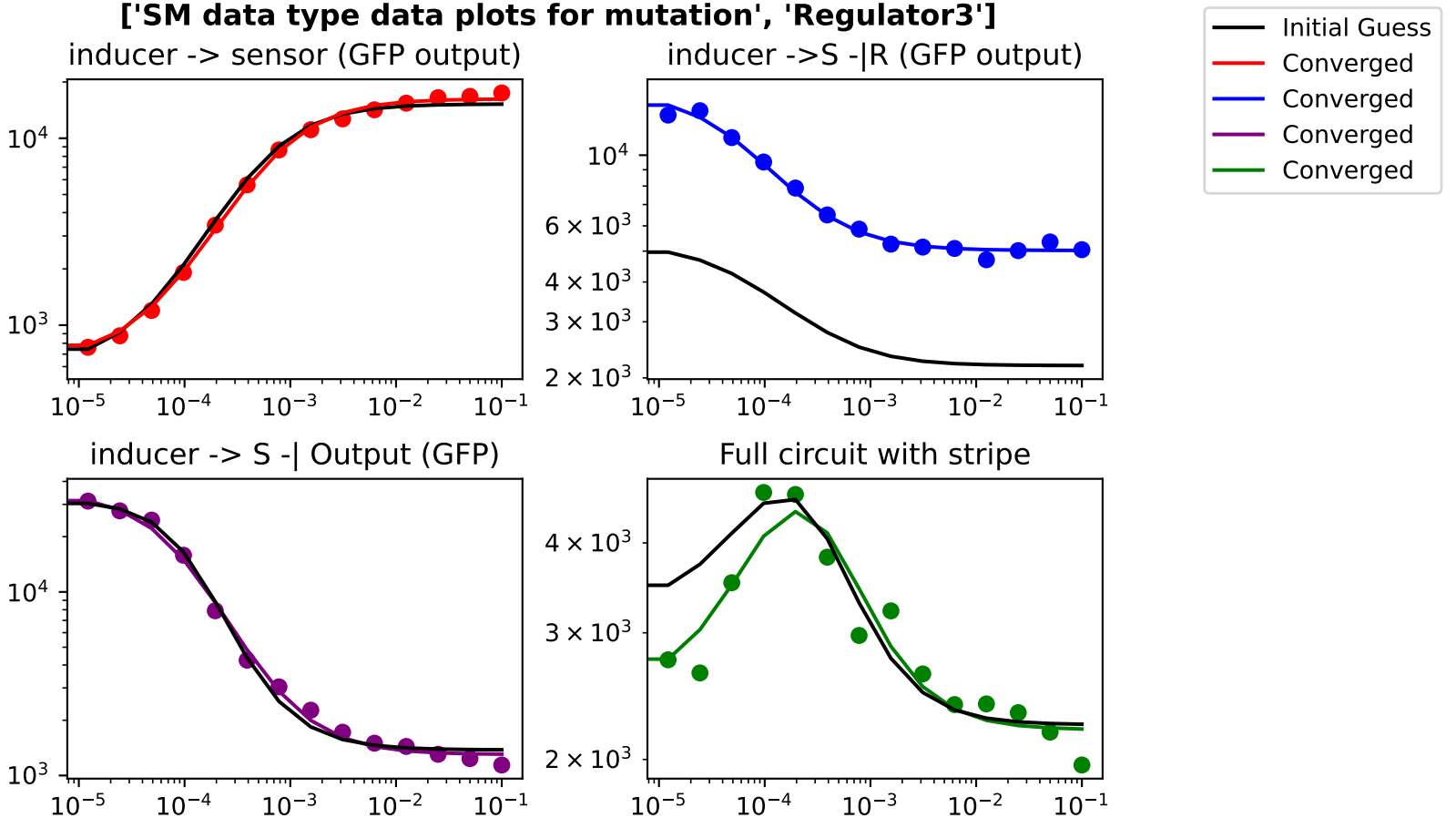
RSS (converged)=0.052

RSS (initial)=1.367

RSS (% reduction)=0.963

	epsilon	Initial_guesses	Converged
A_s	51.612374	608.397103	660.009477
B_s	907.892616	15250.457700	16158.350316
C_s	-347.005932	1668.059050	1321.053118
N_s	-0.020893	1.198934	1.178040
A_r	3796.069616	687.964693	4484.034309
B_r	-18938.981731	23497.611400	4558.629669
C_r	-0.061728	0.062367	0.000640
N_r	2.234300	0.391731	2.626031
A_h	-581.563830	590.606548	9.042718
B_h	26739.004835	35287.125700	62026.130535
C_h	0.000729	0.000530	0.001259
A_o	11.905867	0.829830	12.735696
B_o	0.205689	4.288170	4.493859
C_o	-0.616731	3.133222	2.516491
N_o	-0.532762	1.809018	1.276256

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.05215983576504552
      x: [ 6.600e+02  1.616e+04 ...  2.516e+00  1.276e+00]
    nit: 25796
   nfev: 33803
final_simplex: (array([[ 6.600e+02,  1.616e+04, ...,  2.516e+00,
                         1.276e+00],
                       [ 6.600e+02,  1.616e+04, ...,  2.516e+00,
                         1.276e+00],
                       ...,
                       [ 6.600e+02,  1.616e+04, ...,  2.516e+00,
                         1.276e+00],
                       [ 6.600e+02,  1.616e+04, ...,  2.516e+00,
                         1.276e+00]]), array([ 5.216e-02,  5.216e-02, ...,  5.216e-02,  5.216e-02]))
```



Across all four plots:

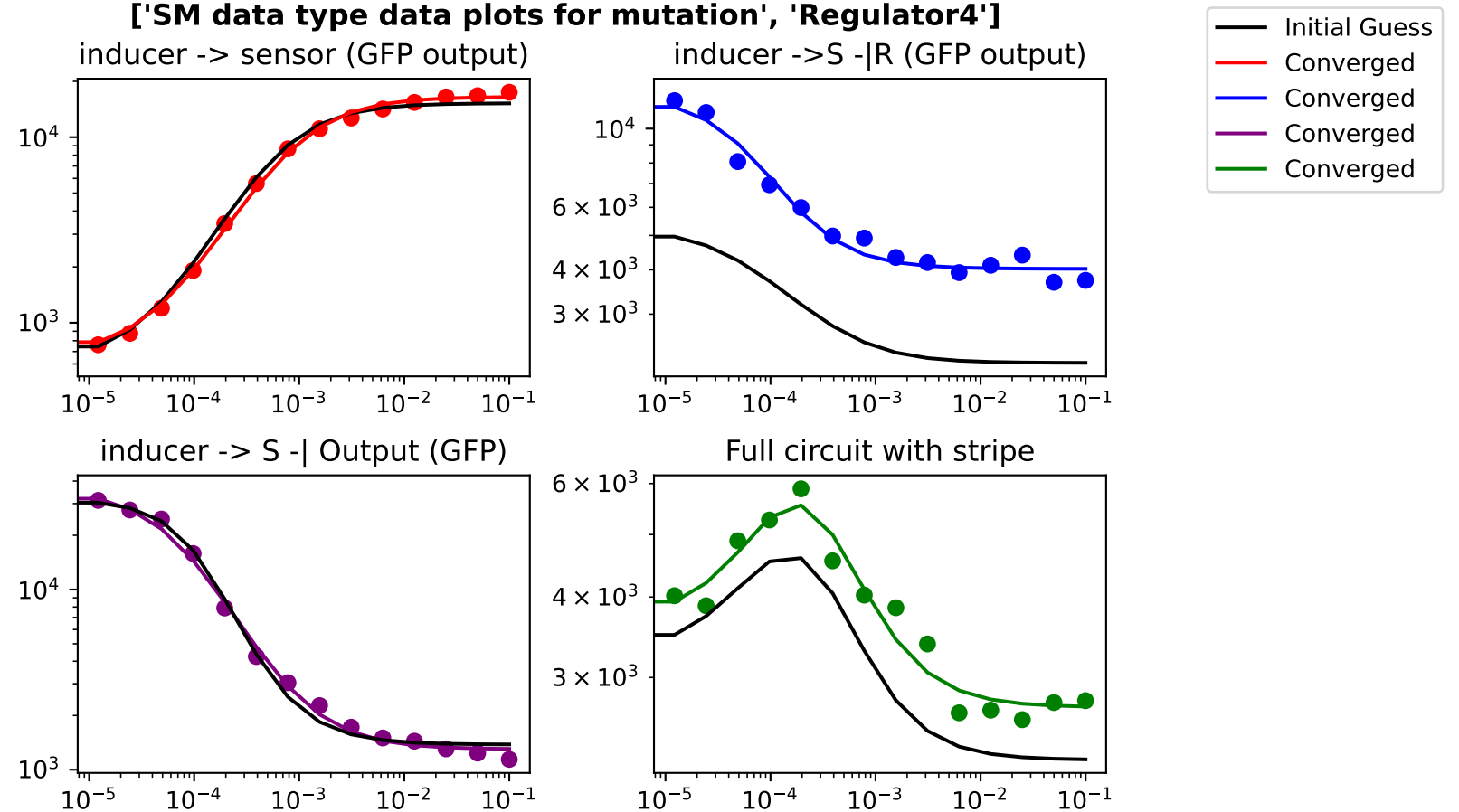
RSS (converged)=0.047

RSS (initial)=2.415

RSS (% reduction)=0.981

	epsilon	Initial_guesses	Converged
A_s	49.914936	608.397103	658.312039
B_s	990.928094	15250.457700	16241.385794
C_s	-376.617172	1668.059050	1291.441878
N_s	-0.032188	1.198934	1.166746
A_r	3132.666288	687.964693	3820.630981
B_r	195727.667939	23497.611400	219225.279339
C_r	0.014205	0.062367	0.076572
N_r	0.338259	0.391731	0.729989
A_h	-579.028019	590.606548	11.578529
B_h	27895.940958	35287.125700	63183.066658
C_h	0.000763	0.000530	0.001293
A_o	-0.815025	0.829830	0.014805
B_o	-1.720434	4.288170	2.567737
C_o	-1.877271	3.133222	1.255951
N_o	-0.537762	1.809018	1.271256

message: Optimization terminated successfully.
success: True
status: 0
fun: 0.04744040665408673
x: [6.583e+02 1.624e+04 ... 1.256e+00 1.271e+00]
nit: 25712
nfev: 33659
final_simplex: (array([[6.583e+02, 1.624e+04, ..., 1.256e+00, 1.271e+00],
[6.583e+02, 1.624e+04, ..., 1.256e+00, 1.271e+00],
...,
[6.583e+02, 1.624e+04, ..., 1.256e+00, 1.271e+00],
[6.583e+02, 1.624e+04, ..., 1.256e+00, 1.271e+00]]), array([4.744e-02, 4.744e-02, ..., 4.744e-02, 4.744e-02]))



Across all four plots:

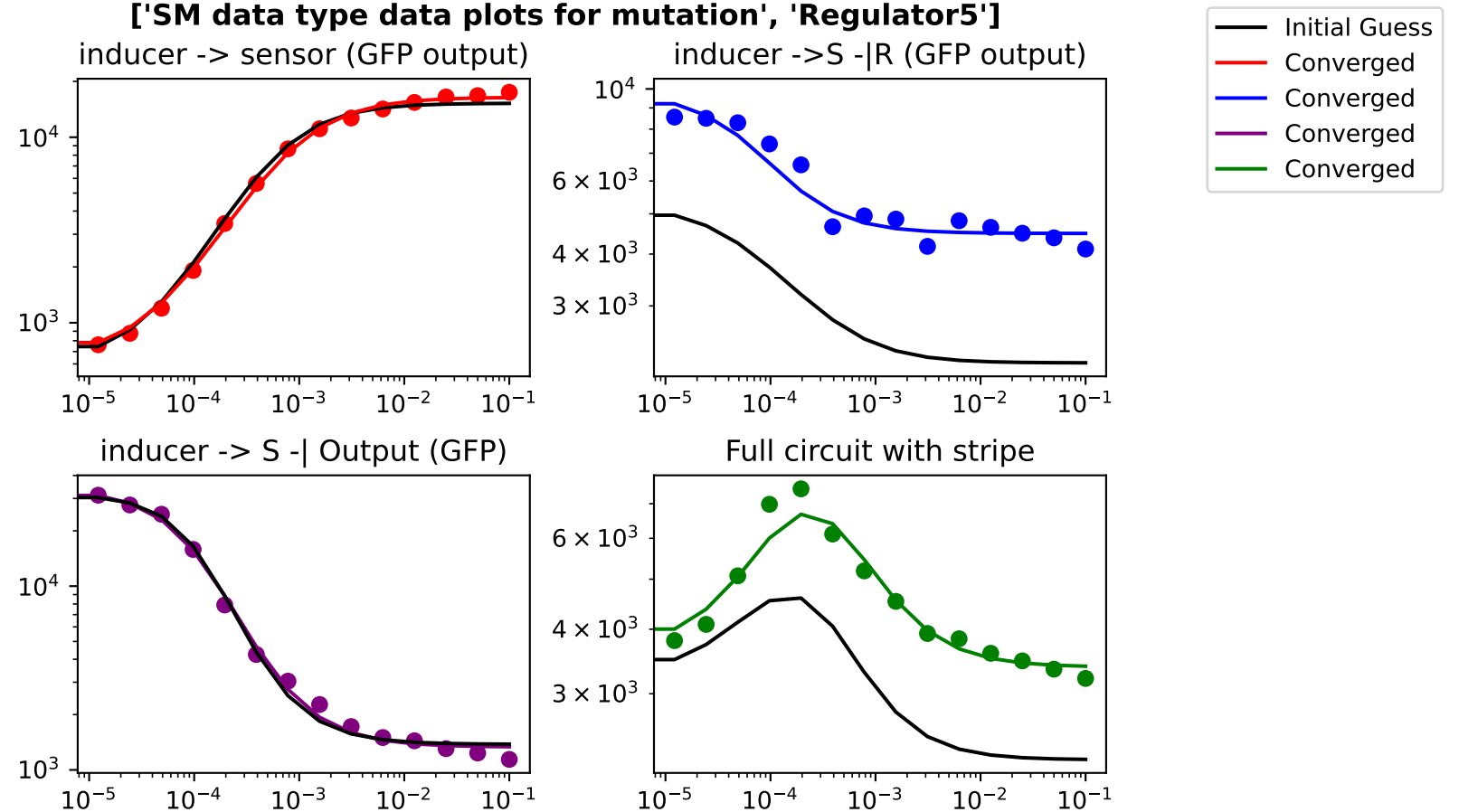
RSS (converged)=0.047

RSS (initial)=1.441

RSS (% reduction)=0.969

	epsilon	Initial_guesses	Converged
A_s	51.302058	608.397103	659.699161
B_s	1273.773301	15250.457700	16524.231001
C_s	-472.450442	1668.059050	1195.608608
N_s	-0.057658	1.198934	1.141276
A_r	3044.042291	687.964693	3732.006984
B_r	-5576.758961	23497.611400	17920.852439
C_r	-0.060799	0.062367	0.001569
N_r	0.867137	0.391731	1.258867
A_h	-572.163349	590.606548	18.443199
B_h	48803.339441	35287.125700	84090.465141
C_h	0.001381	0.000530	0.001911
A_o	40.267327	0.829830	41.097157
B_o	-2.257714	4.288170	2.030457
C_o	-1.989616	3.133222	1.143605
N_o	-0.601260	1.809018	1.207758

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.046741443416243034
      x: [ 6.597e+02  1.652e+04 ...  1.144e+00  1.208e+00]
    nit: 14531
   nfev: 19207
final_simplex: (array([[ 6.597e+02,  1.652e+04, ...,  1.144e+00,
                         1.208e+00],
                       [ 6.597e+02,  1.652e+04, ...,  1.144e+00,
                         1.208e+00],
                       ...,
                       [ 6.597e+02,  1.652e+04, ...,  1.144e+00,
                         1.208e+00],
                       [ 6.597e+02,  1.652e+04, ...,  1.144e+00,
                         1.208e+00]]), array([ 4.674e-02,  4.674e-02, ...,  4.674e-02,  4.674e-02]))
```



Across all four plots:

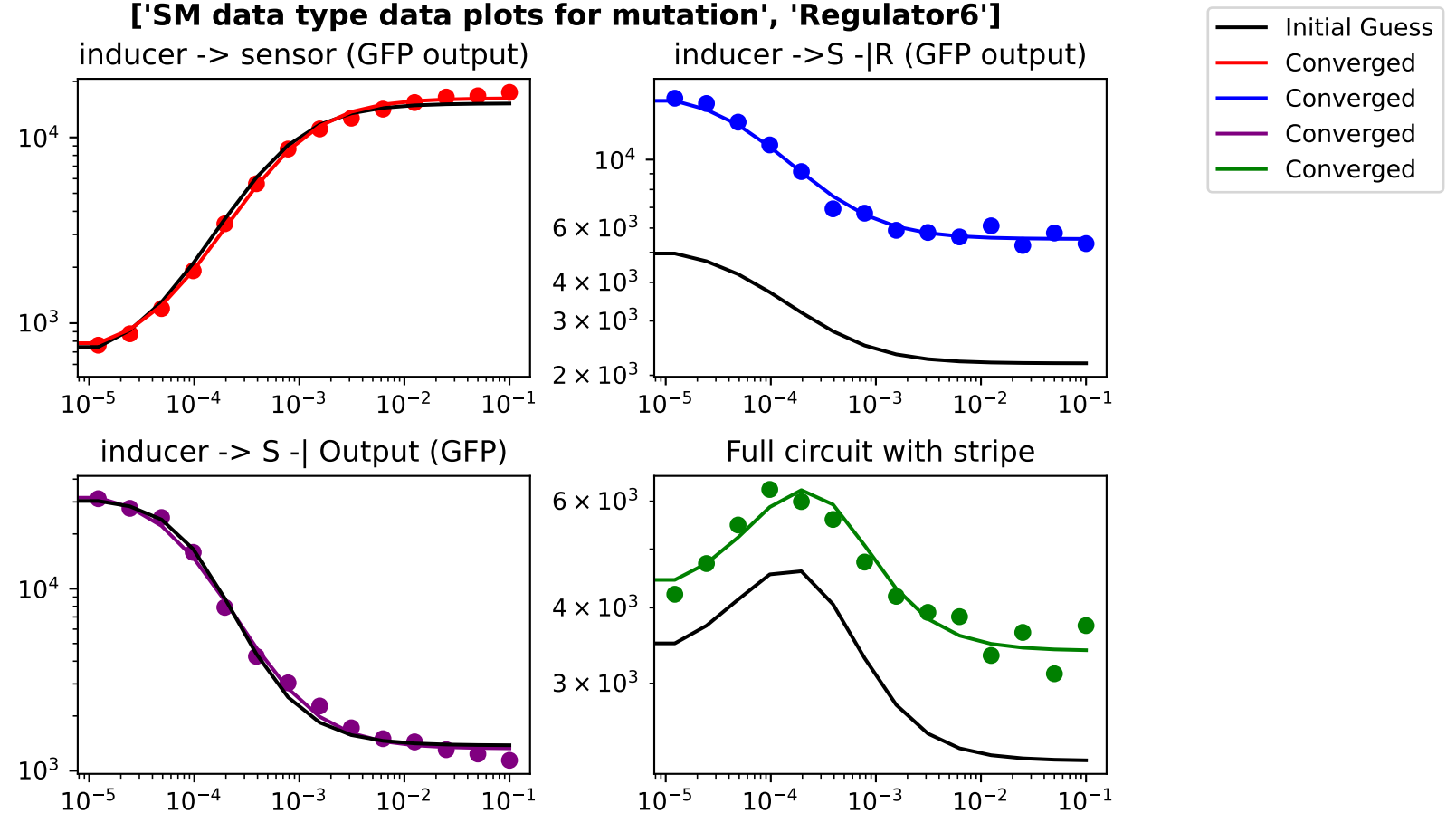
RSS (converged)=0.058

RSS (initial)=1.693

RSS (% reduction)=0.967

	epsilon	Initial_guesses	Converged
A_s	33.679866	608.397103	642.076969
B_s	1179.740530	15250.457700	16430.198230
C_s	-465.900883	1668.059050	1202.158167
N_s	-0.081342	1.198934	1.117591
A_r	3594.422612	687.964693	4282.387305
B_r	-13754.374196	23497.611400	9743.237204
C_r	-0.061111	0.062367	0.001256
N_r	0.881565	0.391731	1.273295
A_h	19.145143	590.606548	609.751691
B_h	8093.229376	35287.125700	43380.355076
C_h	0.000220	0.000530	0.000750
A_o	-0.721622	0.829830	0.108208
B_o	6.847836	4.288170	11.136006
C_o	-0.434691	3.133222	2.698530
N_o	-0.185005	1.809018	1.624014

message: Optimization terminated successfully.
success: True
status: 0
fun: 0.05830029110957925
x: [6.421e+02 1.643e+04 ... 2.699e+00 1.624e+00]
nit: 42121
nfev: 55061
final_simplex: (array([[6.421e+02, 1.643e+04, ..., 2.699e+00,
1.624e+00],
[6.421e+02, 1.643e+04, ..., 2.699e+00,
1.624e+00],
...,
[6.421e+02, 1.643e+04, ..., 2.699e+00,
1.624e+00],
[6.421e+02, 1.643e+04, ..., 2.699e+00,
1.624e+00]]), array([5.830e-02, 5.830e-02, ..., 5.830e-02, 5.830e-02]))



Across all four plots:

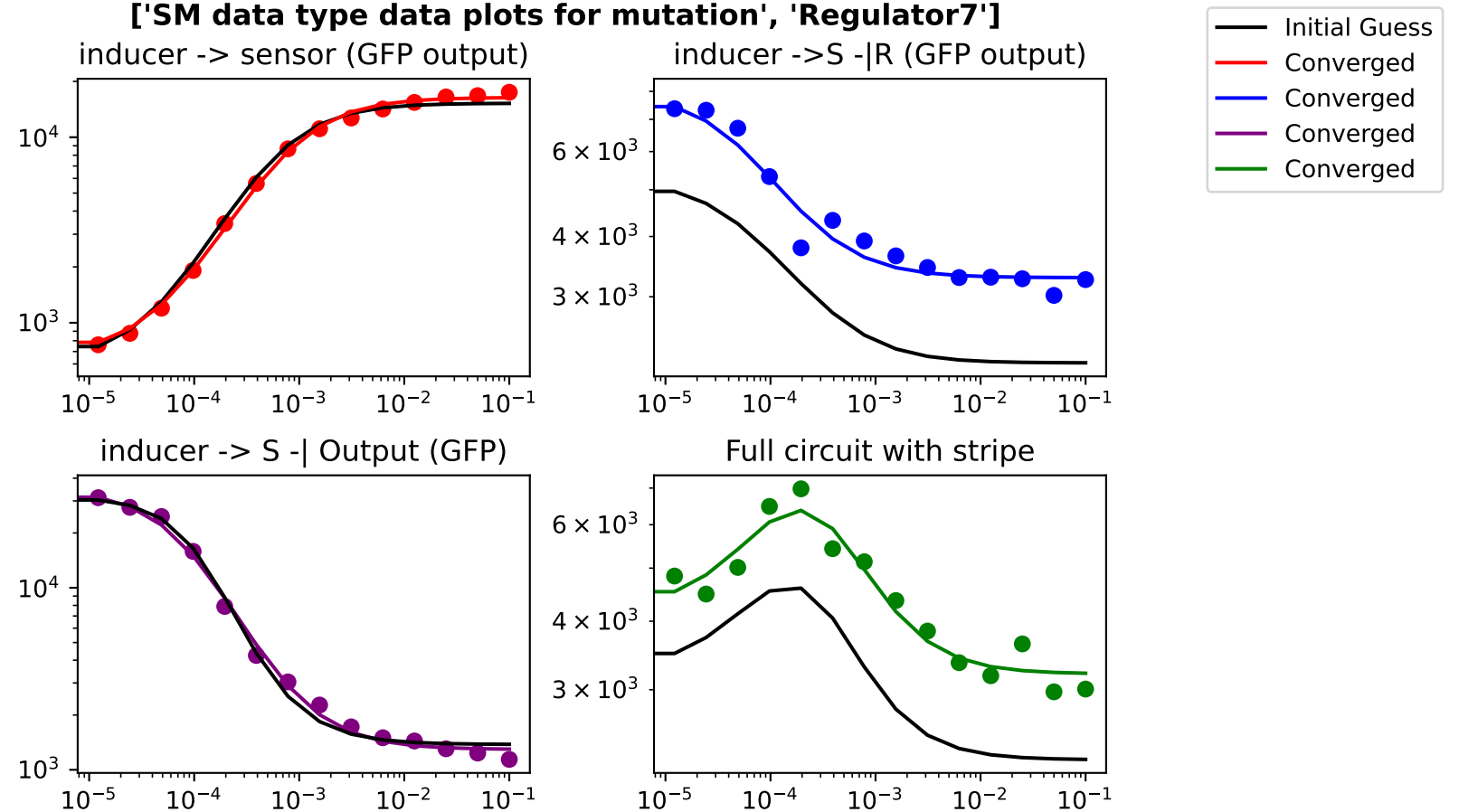
RSS (converged)=0.039

RSS (initial)=3.364

RSS (% reduction)=0.988

	epsilon	Initial_guesses	Converged
A_s	55.247146	608.397103	663.644249
B_s	1019.502234	15250.457700	16269.959934
C_s	-379.616280	1668.059050	1288.442770
N_s	-0.022410	1.198934	1.176524
A_r	2222.063640	687.964693	2910.028333
B_r	60743.198995	23497.611400	84240.810395
C_r	-0.033839	0.062367	0.028528
N_r	0.168362	0.391731	0.560093
A_h	-491.321672	590.606548	99.284876
B_h	32373.662215	35287.125700	67660.787915
C_h	0.000896	0.000530	0.001426
A_o	2.773110	0.829830	3.602940
B_o	-0.614368	4.288170	3.673803
C_o	-2.052228	3.133222	1.080994
N_o	-0.538549	1.809018	1.270469

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.03923996247462923
      x: [ 6.636e+02  1.627e+04 ...  1.081e+00  1.270e+00]
    nit: 9129
   nfev: 12176
final_simplex: (array([[ 6.636e+02,  1.627e+04, ...,  1.081e+00,
                         1.270e+00],
                       [ 6.636e+02,  1.627e+04, ...,  1.081e+00,
                         1.270e+00],
                       ...,
                       [ 6.636e+02,  1.627e+04, ...,  1.081e+00,
                         1.270e+00],
                       [ 6.636e+02,  1.627e+04, ...,  1.081e+00,
                         1.270e+00]]), array([ 3.924e-02,  3.924e-02, ...,  3.924e-02,  3.924e-02]))
```



Across all four plots:

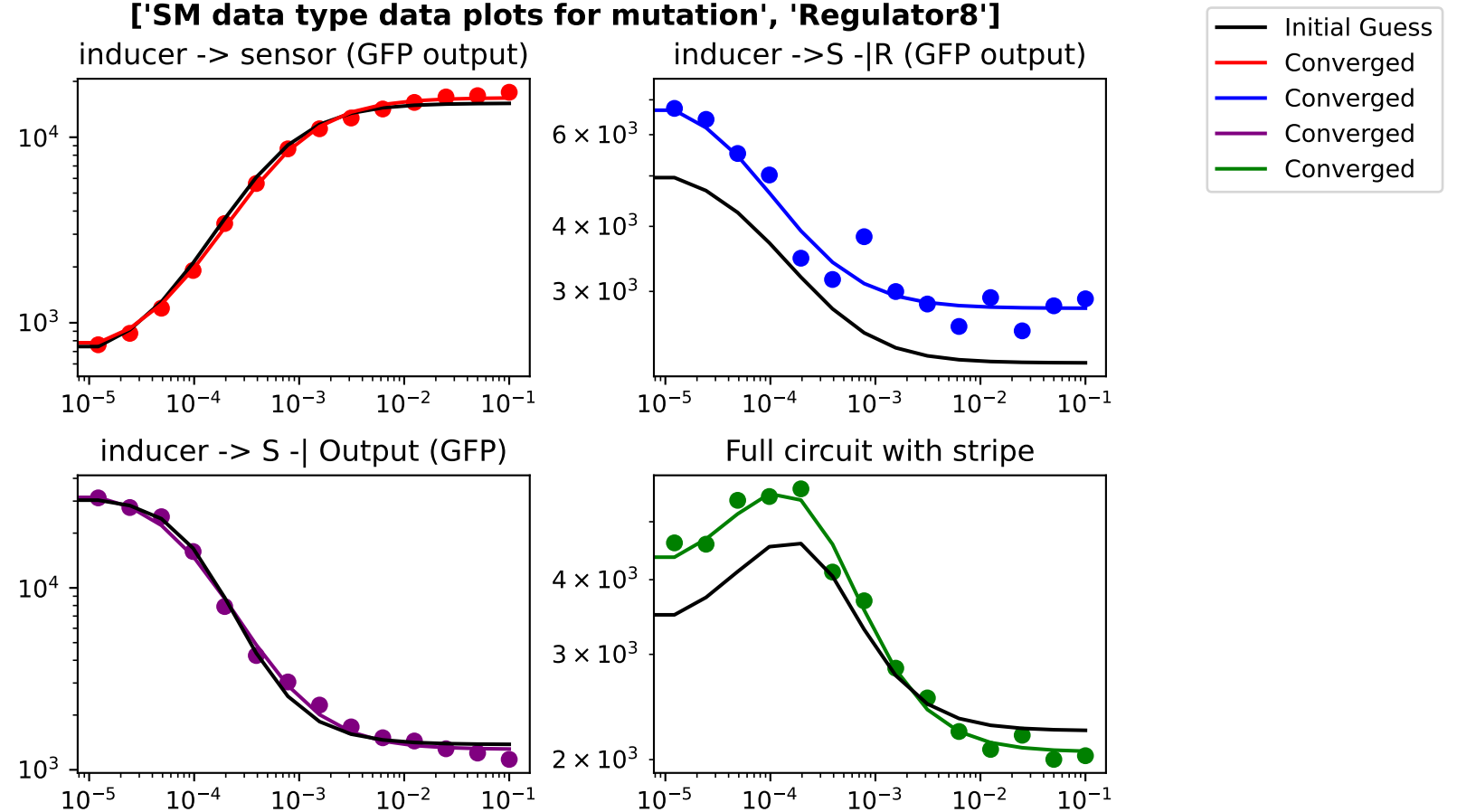
RSS (converged)=0.051

RSS (initial)=0.84

RSS (% reduction)=0.943

	epsilon	Initial_guesses	Converged
A_s	53.382796	608.397103	661.779899
B_s	1140.826235	15250.457700	16391.283935
C_s	-423.485941	1668.059050	1244.573109
N_s	-0.040907	1.198934	1.158027
A_r	2112.346119	687.964693	2800.310812
B_r	-818.155104	23497.611400	22679.456296
C_r	-0.055551	0.062367	0.006816
N_r	0.418752	0.391731	0.810483
A_h	-561.873562	590.606548	28.732986
B_h	30209.232851	35287.125700	65496.358551
C_h	0.000831	0.000530	0.001361
A_o	0.412824	0.829830	1.242654
B_o	-0.240121	4.288170	4.048049
C_o	-0.790459	3.133222	2.342763
N_o	-0.544139	1.809018	1.264879

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.05056482176175281
      x: [ 6.618e+02  1.639e+04 ...  2.343e+00  1.265e+00]
    nit: 12777
   nfev: 16947
final_simplex: (array([[ 6.618e+02,  1.639e+04, ...,  2.343e+00,
                         1.265e+00],
                       [ 6.618e+02,  1.639e+04, ...,  2.343e+00,
                         1.265e+00],
                       ...,
                       [ 6.618e+02,  1.639e+04, ...,  2.343e+00,
                         1.265e+00],
                       [ 6.618e+02,  1.639e+04, ...,  2.343e+00,
                         1.265e+00]]), array([ 5.056e-02,  5.056e-02, ...,  5.056e-02,  5.056e-02]))
```



Across all four plots:

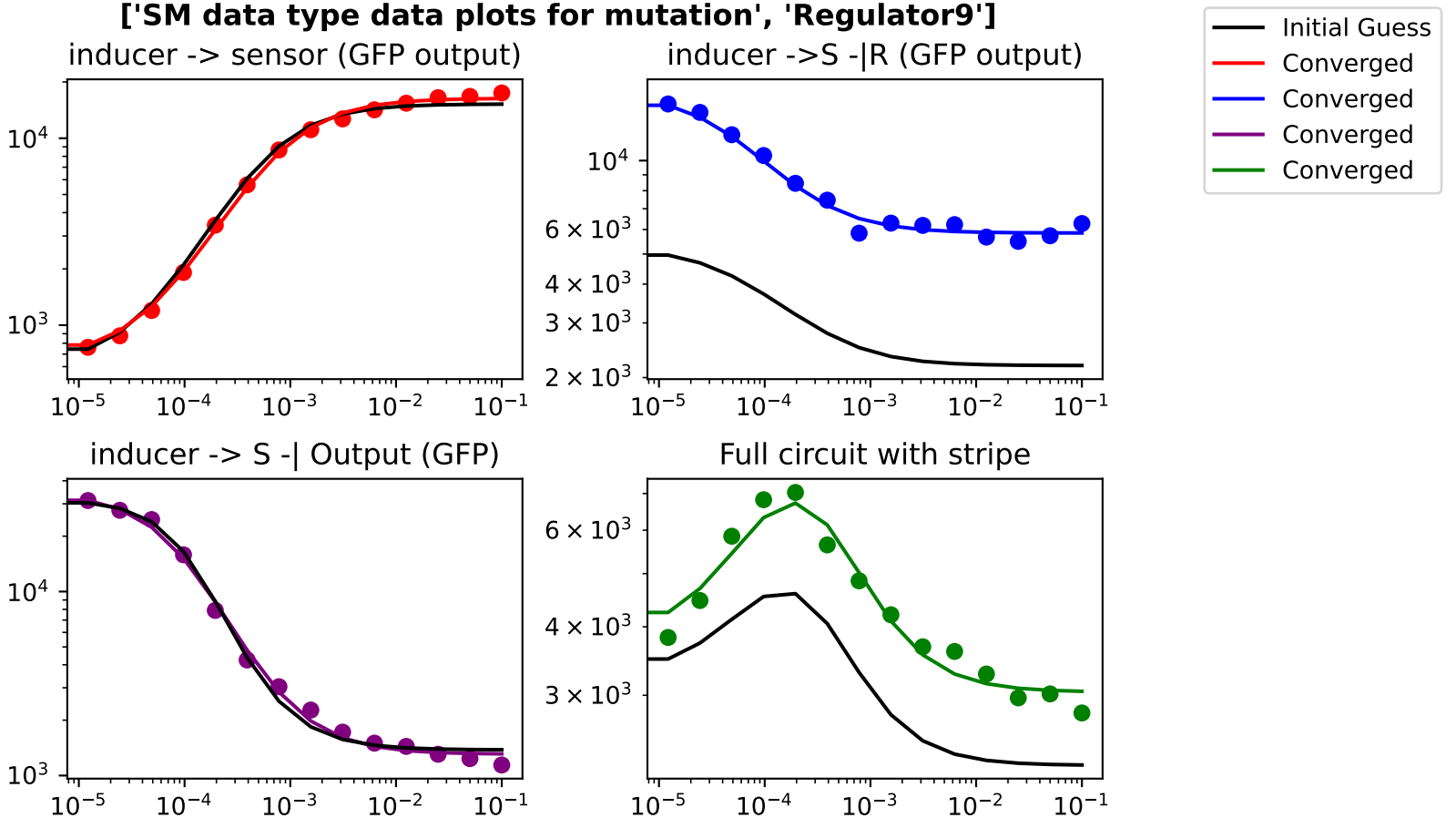
RSS (converged)=0.049

RSS (initial)=0.303

RSS (% reduction)=0.862

	epsilon	Initial_guesses	Converged
A_s	45.944785	608.397103	654.341888
B_s	1083.034533	15250.457700	16333.492233
C_s	-407.148490	1668.059050	1260.910560
N_s	-0.045819	1.198934	1.153115
A_r	1551.198390	687.964693	2239.163083
B_r	51940.484937	23497.611400	75438.096337
C_r	0.001801	0.062367	0.064168
N_r	0.316168	0.391731	0.707899
A_h	-577.334532	590.606548	13.272016
B_h	29032.620959	35287.125700	64319.746659
C_h	0.000798	0.000530	0.001328
A_o	-0.080106	0.829830	0.749724
B_o	-2.143320	4.288170	2.144850
C_o	-1.565405	3.133222	1.567817
N_o	-0.543131	1.809018	1.265887


```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.04866253478992506
      x: [ 6.543e+02  1.633e+04 ...  1.568e+00  1.266e+00]
    nit: 16091
   nfev: 21140
final_simplex: (array([[ 6.543e+02,  1.633e+04, ...,  1.568e+00,
                         1.266e+00],
                       [ 6.543e+02,  1.633e+04, ...,  1.568e+00,
                         1.266e+00],
                       ...,
                       [ 6.543e+02,  1.633e+04, ...,  1.568e+00,
                         1.266e+00],
                       [ 6.543e+02,  1.633e+04, ...,  1.568e+00,
                         1.266e+00]]), array([ 4.866e-02,  4.866e-02, ...,  4.866e-02,  4.866e-02]))
```



Across all four plots:

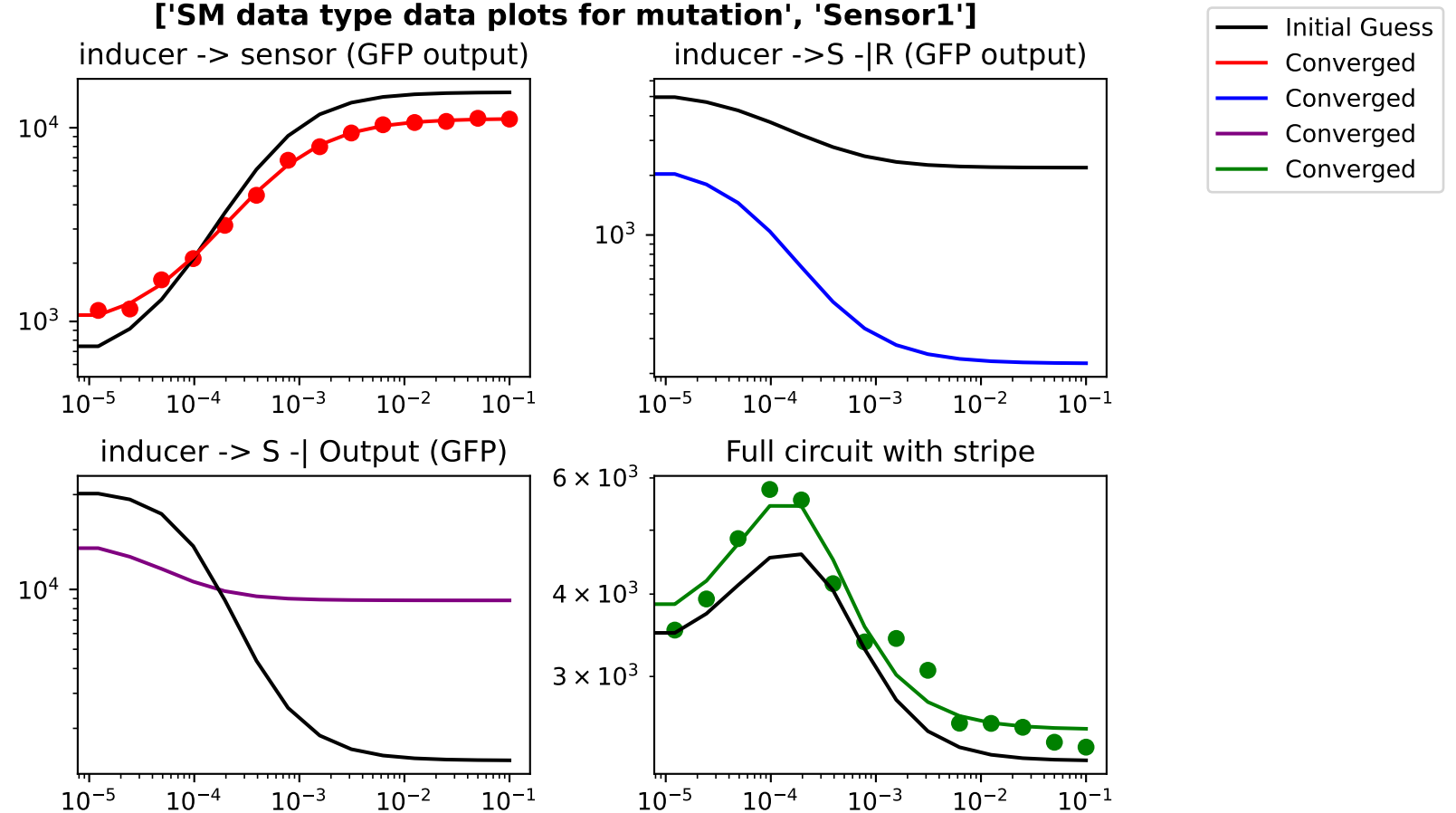
RSS (converged)=0.043

RSS (initial)=3.233

RSS (% reduction)=0.987

	epsilon	Initial_guesses	Converged
A_s	48.661442	608.397103	657.058545
B_s	1111.980258	15250.457700	16362.437958
C_s	-419.012218	1668.059050	1249.046832
N_s	-0.047208	1.198934	1.151726
A_r	4185.400326	687.964693	4873.365019
B_r	283894.062001	23497.611400	307391.673401
C_r	0.031862	0.062367	0.094230
N_r	0.392305	0.391731	0.784036
A_h	-371.275575	590.606548	219.330973
B_h	20464.644313	35287.125700	55751.770013
C_h	0.000547	0.000530	0.001076
A_o	-0.688468	0.829830	0.141362
B_o	0.086868	4.288170	4.375038
C_o	-1.997610	3.133222	1.135612
N_o	-0.443318	1.809018	1.365700

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.04344376701879156
      x: [ 6.571e+02  1.636e+04 ...  1.136e+00  1.366e+00]
    nit: 13558
   nfev: 17901
final_simplex: (array([[ 6.571e+02,  1.636e+04, ...,  1.136e+00,
                         1.366e+00],
                       [ 6.571e+02,  1.636e+04, ...,  1.136e+00,
                         1.366e+00],
                       ...,
                       [ 6.571e+02,  1.636e+04, ...,  1.136e+00,
                         1.366e+00],
                       [ 6.571e+02,  1.636e+04, ...,  1.136e+00,
                         1.366e+00]]), array([ 4.344e-02,  4.344e-02, ...,  4.344e-02,  4.344e-02]))
```



Across all four plots:

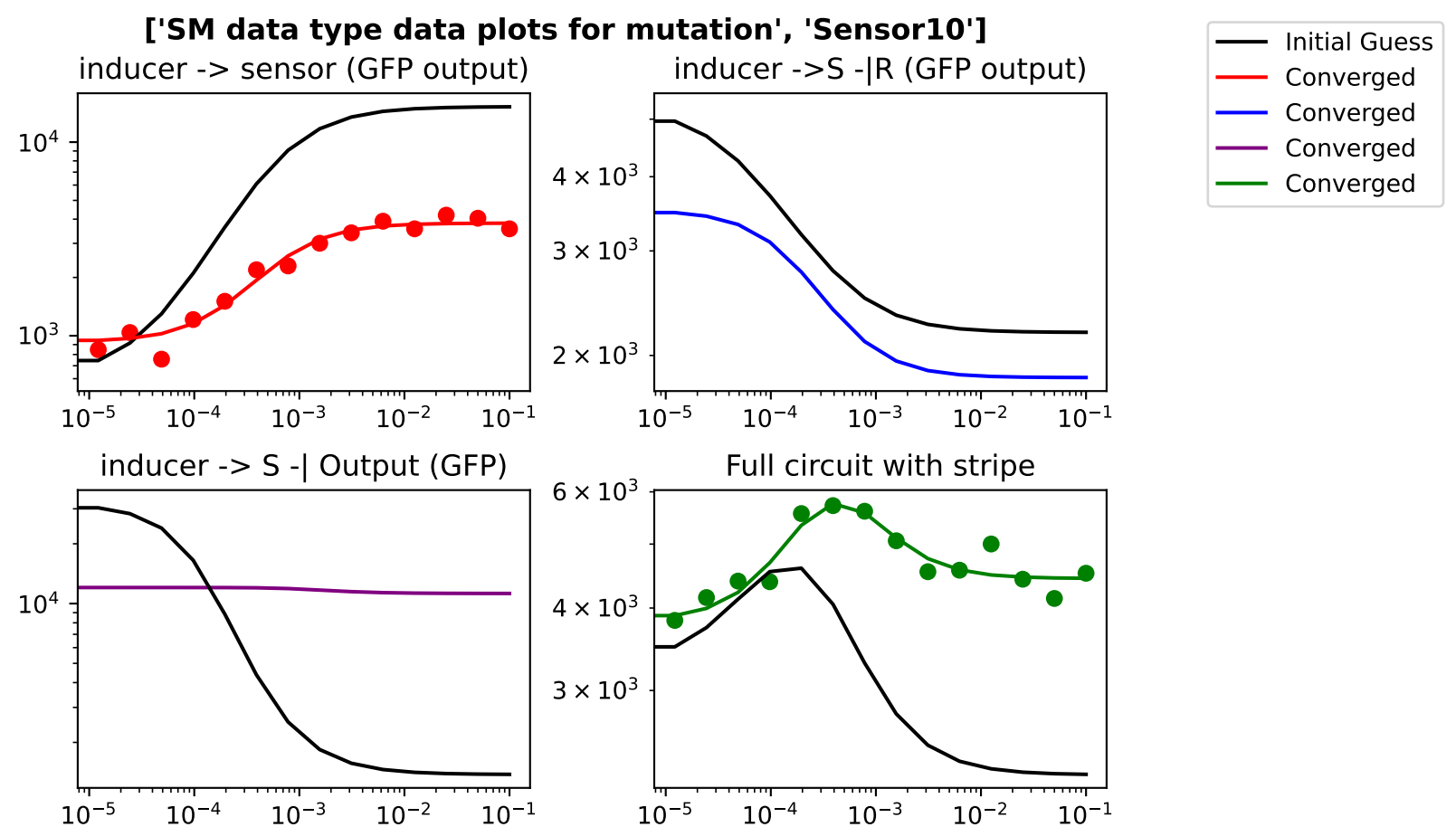
RSS (converged)=0.017

RSS (initial)=0.328

RSS (% reduction)=0.952

	epsilon	Initial_guesses	Converged
A_s	310.567241	608.397103	918.964344
B_s	-4098.119547	15250.457700	11152.338153
C_s	-172.930455	1668.059050	1495.128595
N_s	-0.163651	1.198934	1.035283
A_r	-554.325667	687.964693	133.639026
B_r	-18908.785067	23497.611400	4588.826333
C_r	-0.061201	0.062367	0.001166
N_r	1.129248	0.391731	1.520979
A_h	8114.484200	590.606548	8705.090748
B_h	11833.011211	35287.125700	47120.136911
C_h	0.001694	0.000530	0.002223
A_o	-0.629855	0.829830	0.199975
B_o	4.085116	4.288170	8.373286
C_o	-0.292472	3.133222	2.840750
N_o	0.107872	1.809018	1.916891

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.016609473686805182
      x: [ 9.190e+02  1.115e+04 ...  2.841e+00  1.917e+00]
    nit: 12897
   nfev: 17125
final_simplex: (array([[ 9.190e+02,  1.115e+04, ...,  2.841e+00,
                         1.917e+00],
                       [ 9.190e+02,  1.115e+04, ...,  2.841e+00,
                         1.917e+00],
                       ...,
                       [ 9.190e+02,  1.115e+04, ...,  2.841e+00,
                         1.917e+00],
                       [ 9.190e+02,  1.115e+04, ...,  2.841e+00,
                         1.917e+00]]), array([ 1.661e-02,  1.661e-02, ...,  1.661e-02,  1.661e-02]))
```



Across all four plots:

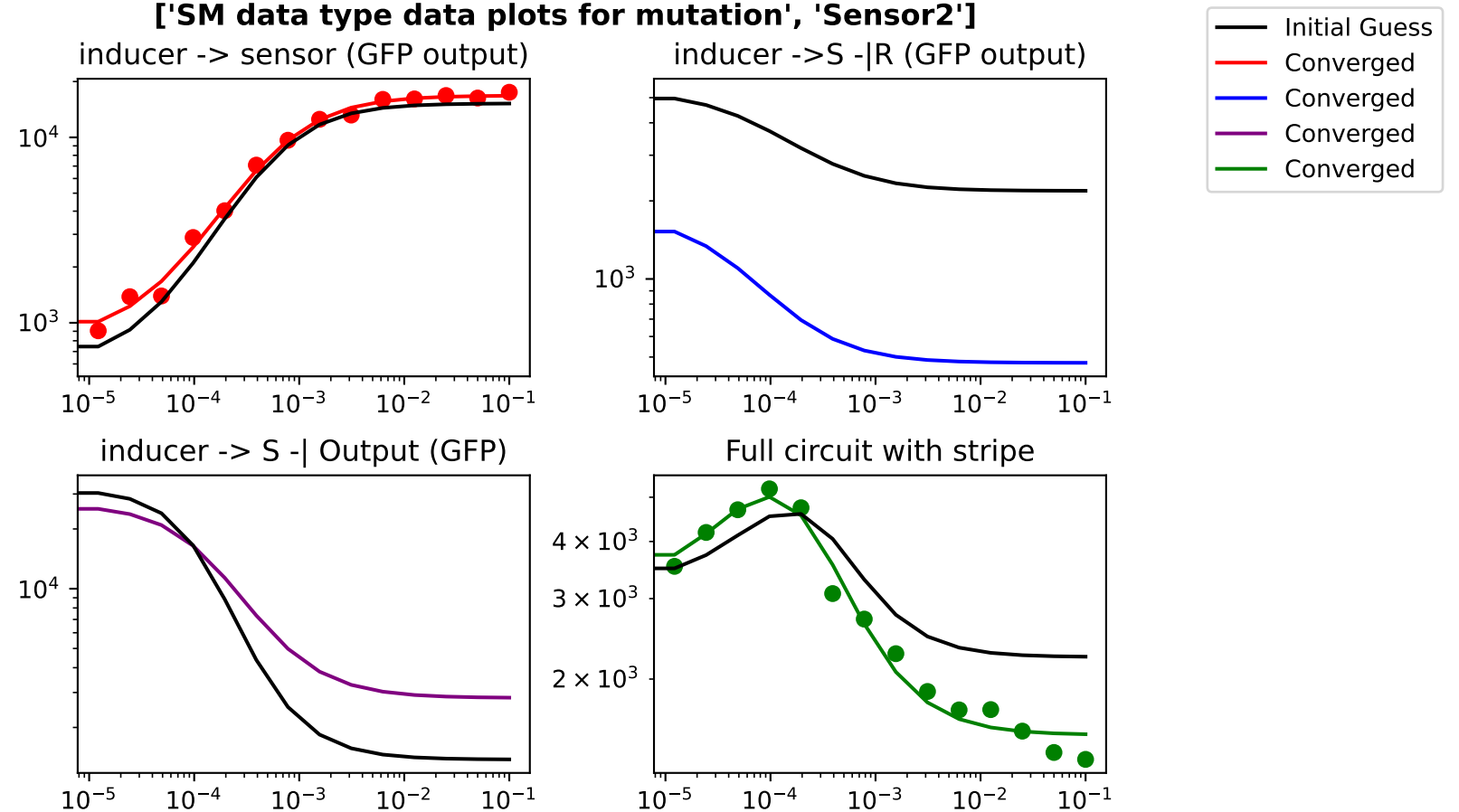
RSS (converged)=0.048

RSS (initial)=4.027

RSS (% reduction)=0.988

	epsilon	Initial_guesses	Converged
A_s	322.889725	608.397103	931.286828
B_s	-11433.810426	15250.457700	3816.647274
C_s	-69.491136	1668.059050	1598.567914
N_s	0.134382	1.198934	1.333315
A_r	509.003871	687.964693	1196.968564
B_r	32591.924464	23497.611400	56089.535864
C_r	-0.031416	0.062367	0.030952
N_r	0.543791	0.391731	0.935522
A_h	-153.735683	590.606548	436.870865
B_h	-23679.576268	35287.125700	11607.549432
C_h	-0.000382	0.000530	0.000148
A_o	-0.057275	0.829830	0.772554
B_o	-3.384600	4.288170	0.903571
C_o	-1.163866	3.133222	1.969356
N_o	2.755299	1.809018	4.564317

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.0478282530572967
      x: [ 9.313e+02  3.817e+03 ...  1.969e+00  4.564e+00]
    nit: 6296
   nfev: 8501
final_simplex: (array([[ 9.313e+02,  3.817e+03, ...,  1.969e+00,
                         4.564e+00],
                       [ 9.313e+02,  3.817e+03, ...,  1.969e+00,
                         4.564e+00],
                       ...,
                       [ 9.313e+02,  3.817e+03, ...,  1.969e+00,
                         4.564e+00],
                       [ 9.313e+02,  3.817e+03, ...,  1.969e+00,
                         4.564e+00]]), array([ 4.783e-02,  4.783e-02, ...,  4.783e-02,  4.783e-02]))
```



Across all four plots:

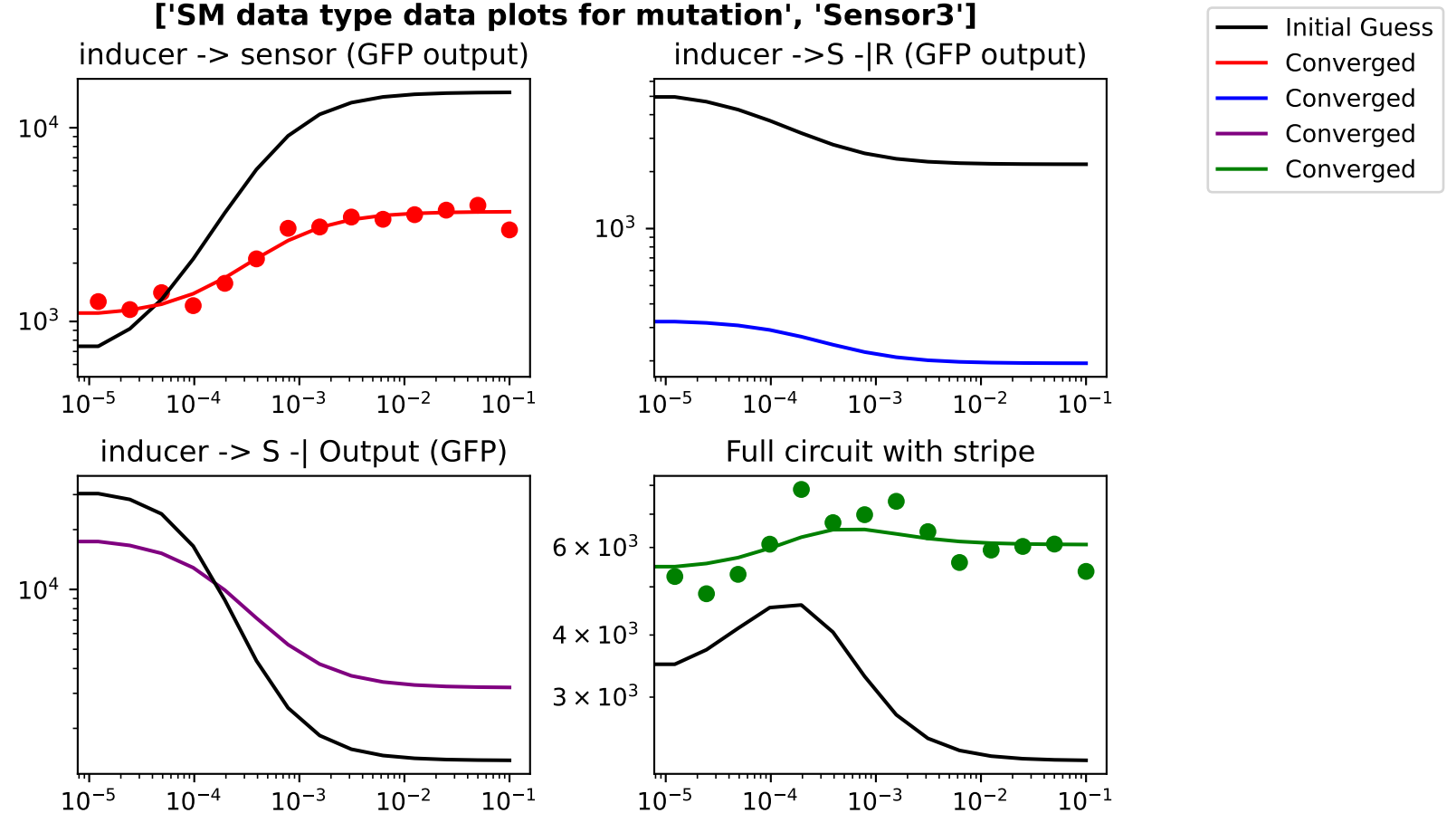
RSS (converged)=0.033

RSS (initial)=0.312

RSS (% reduction)=0.906

	epsilon	Initial_guesses	Converged
A_s	216.487435	608.397103	824.884538
B_s	1570.137550	15250.457700	16820.595250
C_s	-122.003682	1668.059050	1546.055368
N_s	-0.084200	1.198934	1.114733
A_r	-292.364203	687.964693	395.600490
B_r	24294.950900	23497.611400	47792.562300
C_r	-0.013504	0.062367	0.048863
N_r	0.562106	0.391731	0.953837
A_h	75.912449	590.606548	666.518997
B_h	-4134.360070	35287.125700	31152.765630
C_h	-0.000147	0.000530	0.000383
A_o	-0.829749	0.829830	0.000081
B_o	-3.438343	4.288170	0.849828
C_o	2.439040	3.133222	5.572262
N_o	-0.412616	1.809018	1.396403

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.032529027027081193
      x: [ 8.249e+02  1.682e+04 ...  5.572e+00  1.396e+00]
    nit: 12157
   nfev: 16117
final_simplex: (array([[ 8.249e+02,  1.682e+04, ...,  5.572e+00,
                         1.396e+00],
                       [ 8.249e+02,  1.682e+04, ...,  5.572e+00,
                         1.396e+00],
                       ...,
                       [ 8.249e+02,  1.682e+04, ...,  5.572e+00,
                         1.396e+00],
                       [ 8.249e+02,  1.682e+04, ...,  5.572e+00,
                         1.396e+00]]), array([ 3.253e-02,  3.253e-02, ...,  3.253e-02,  3.253e-02]))
```



Across all four plots:

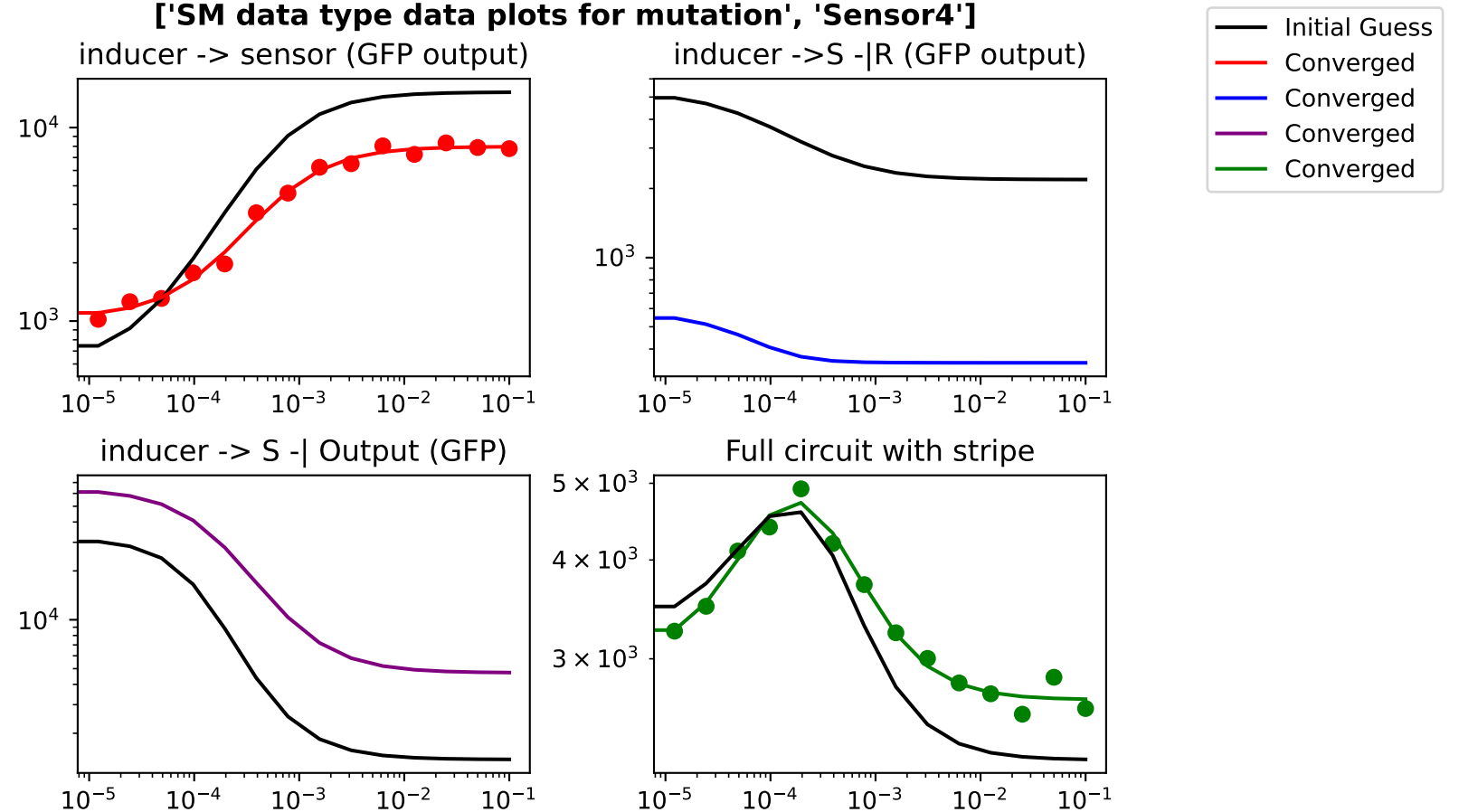
RSS (converged)=0.051

RSS (initial)=4.949

RSS (% reduction)=0.99

	epsilon	Initial_guesses	Converged
A_s	461.884631	608.397103	1.070282e+03
B_s	-11560.094693	15250.457700	3.690363e+03
C_s	100.897468	1668.059050	1.768957e+03
N_s	-0.075193	1.198934	1.123740e+00
A_r	-618.413288	687.964693	6.955141e+01
B_r	-21316.028442	23497.611400	2.181583e+03
C_r	-0.040821	0.062367	2.154611e-02
N_r	0.249168	0.391731	6.408994e-01
A_h	-423.191891	590.606548	1.674147e+02
B_h	61787.080184	35287.125700	9.707421e+04
C_h	0.001861	0.000530	2.391297e-03
A_o	-0.829829	0.829830	3.852010e-07
B_o	2.947748	4.288170	7.235918e+00
C_o	21.440992	3.133222	2.457421e+01
N_o	-0.232399	1.809018	1.576620e+00

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.05139578671925756
      x: [ 1.070e+03  3.690e+03 ...  2.457e+01  1.577e+00]
    nit: 22600
   nfev: 29623
final_simplex: (array([[ 1.070e+03,  3.690e+03, ...,  2.457e+01,
                         1.577e+00],
                       [ 1.070e+03,  3.690e+03, ...,  2.457e+01,
                         1.577e+00],
                       ...,
                       [ 1.070e+03,  3.690e+03, ...,  2.457e+01,
                         1.577e+00],
                       [ 1.070e+03,  3.690e+03, ...,  2.457e+01,
                         1.577e+00]]), array([ 5.140e-02,  5.140e-02, ...,  5.140e-02,  5.140e-02]))
```



Across all four plots:

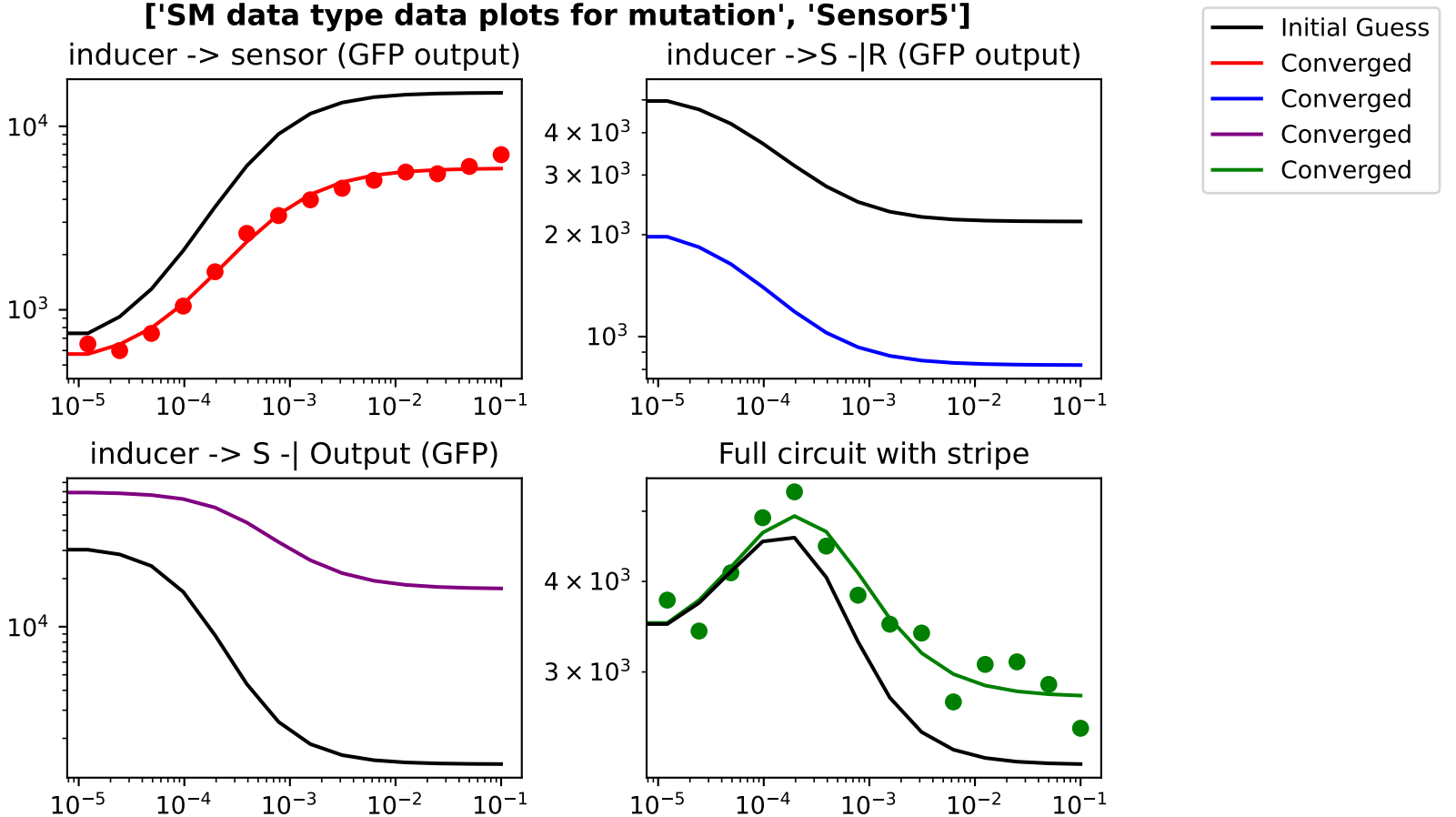
RSS (converged)=0.014

RSS (initial)=0.926

RSS (% reduction)=0.985

	epsilon	Initial_guesses	Converged
A_s	438.237343	608.397103	1046.634446
B_s	-7272.075377	15250.457700	7978.382323
C_s	-270.789055	1668.059050	1397.269995
N_s	-0.013879	1.198934	1.185054
A_r	-340.074260	687.964693	347.890433
B_r	4788.644372	23497.611400	28286.255772
C_r	-0.057669	0.062367	0.004698
N_r	2.622083	0.391731	3.013814
A_h	-586.706453	590.606548	3.900095
B_h	106663.500329	35287.125700	141950.626029
C_h	0.000554	0.000530	0.001084
A_o	7.925764	0.829830	8.755594
B_o	-2.590206	4.288170	1.697964
C_o	21.304233	3.133222	24.437454
N_o	-0.245745	1.809018	1.563274

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.014413660223838734
      x: [ 1.047e+03  7.978e+03 ...  2.444e+01  1.563e+00]
    nit: 26229
   nfev: 34538
final_simplex: (array([[ 1.047e+03,  7.978e+03, ...,  2.444e+01,
                         1.563e+00],
                       [ 1.047e+03,  7.978e+03, ...,  2.444e+01,
                         1.563e+00],
                       ...,
                       [ 1.047e+03,  7.978e+03, ...,  2.444e+01,
                         1.563e+00],
                       [ 1.047e+03,  7.978e+03, ...,  2.444e+01,
                         1.563e+00]]), array([ 1.441e-02,  1.441e-02, ...,  1.441e-02,  1.441e-02]))
```



Across all four plots:

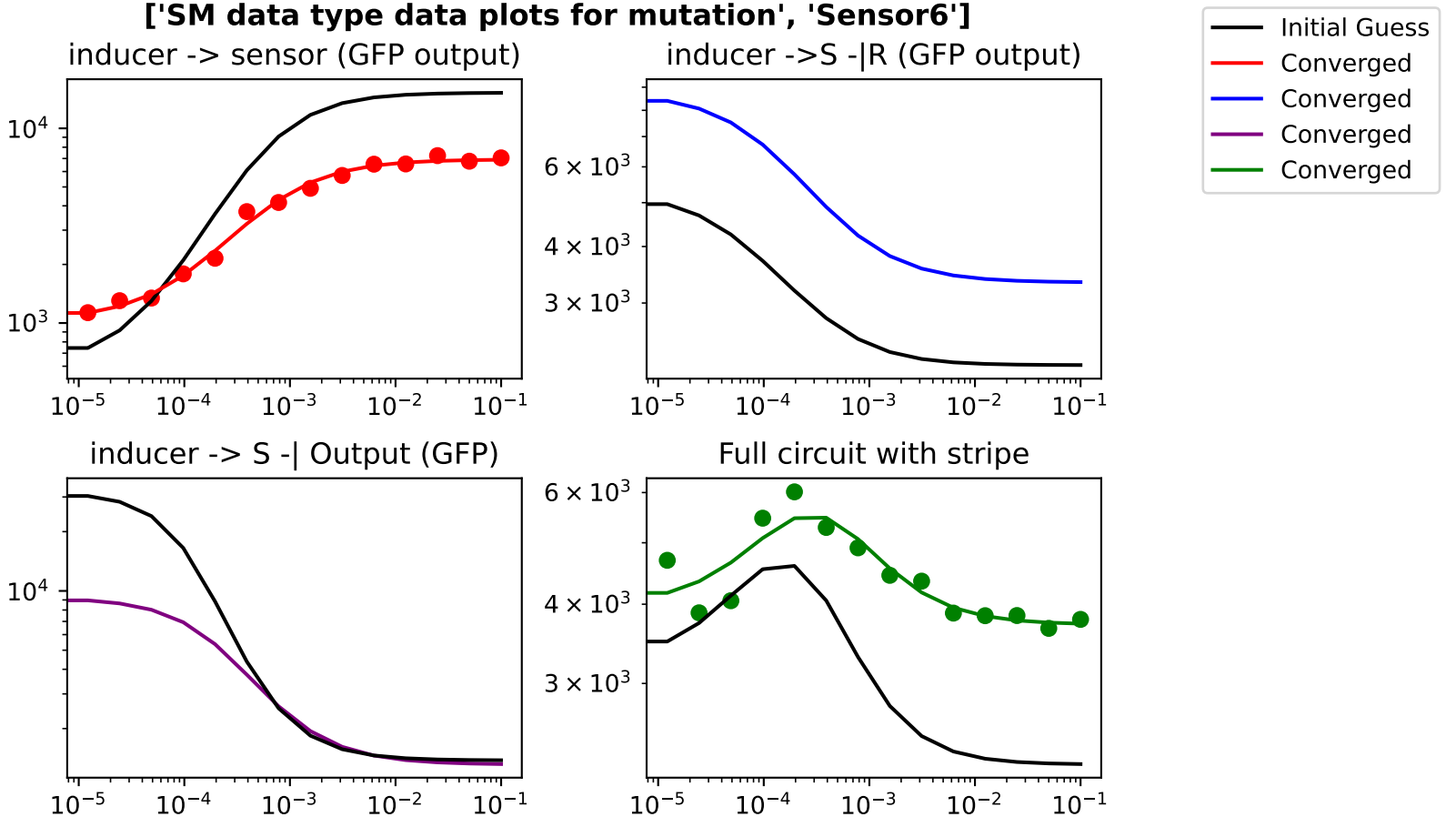
RSS (converged)=0.029

RSS (initial)=2.036

RSS (% reduction)=0.986

	epsilon	Initial_guesses	Converged
A_s	-104.203890	608.397103	504.193213
B_s	-9337.782653	15250.457700	5912.675047
C_s	-291.942202	1668.059050	1376.116848
N_s	-0.137878	1.198934	1.061055
A_r	-10.221435	687.964693	677.743258
B_r	2877.440749	23497.611400	26375.052149
C_r	-0.023563	0.062367	0.038804
N_r	0.563410	0.391731	0.955141
A_h	-160.668472	590.606548	429.938076
B_h	36825.500200	35287.125700	72112.625900
C_h	-0.000203	0.000530	0.000327
A_o	0.059794	0.829830	0.889624
B_o	-4.034720	4.288170	0.253450
C_o	0.295232	3.133222	3.428454
N_o	-0.005697	1.809018	1.803321

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.02932676547424991
      x: [ 5.042e+02  5.913e+03 ...  3.428e+00  1.803e+00]
    nit: 7976
   nfev: 10705
final_simplex: (array([[ 5.042e+02,  5.913e+03, ...,  3.428e+00,
                         1.803e+00],
                       [ 5.042e+02,  5.913e+03, ...,  3.428e+00,
                         1.803e+00],
                       ...,
                       [ 5.042e+02,  5.913e+03, ...,  3.428e+00,
                         1.803e+00],
                       [ 5.042e+02,  5.913e+03, ...,  3.428e+00,
                         1.803e+00]]), array([ 2.933e-02,  2.933e-02, ...,  2.933e-02,  2.933e-02]))
```



Across all four plots:

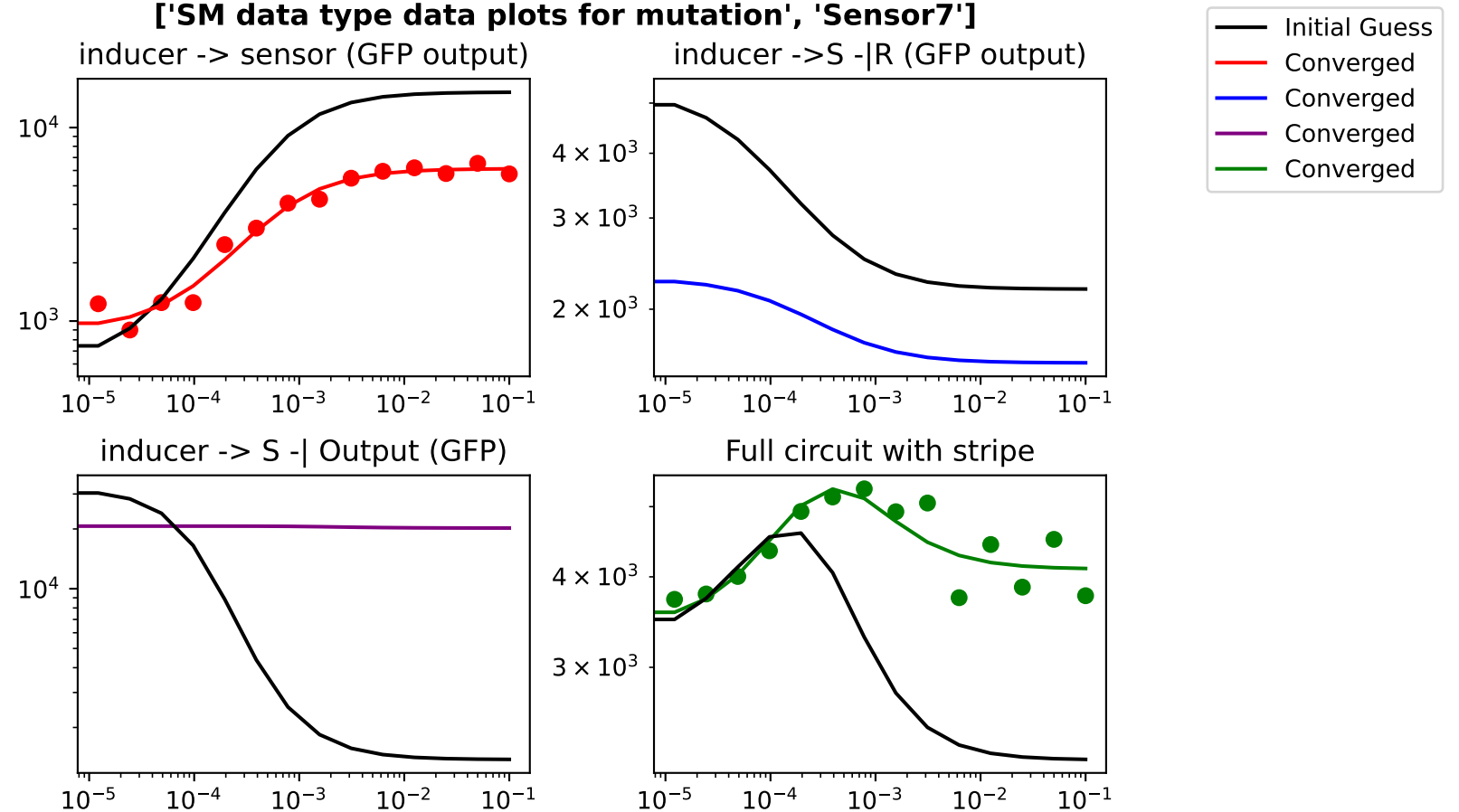
RSS (converged)=0.022

RSS (initial)=1.623

RSS (% reduction)=0.987

	epsilon	Initial_guesses	Converged
A_s	427.928881	608.397103	1036.325984
B_s	-8324.374439	15250.457700	6926.083261
C_s	-105.241932	1668.059050	1562.817118
N_s	-0.147679	1.198934	1.051254
A_r	363.137611	687.964693	1051.102304
B_r	3519.053296	23497.611400	27016.664696
C_r	-0.059178	0.062367	0.003189
N_r	0.378657	0.391731	0.770388
A_h	-359.325877	590.606548	231.280671
B_h	-24003.413792	35287.125700	11283.711908
C_h	-0.000062	0.000530	0.000467
A_o	0.344365	0.829830	1.174194
B_o	2.151702	4.288170	6.439872
C_o	-2.122366	3.133222	1.010856
N_o	0.101499	1.809018	1.910518

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.021798546005671444
      x: [ 1.036e+03  6.926e+03 ...  1.011e+00  1.911e+00]
    nit: 10129
   nfev: 13496
final_simplex: (array([[ 1.036e+03,  6.926e+03, ...,  1.011e+00,
                         1.911e+00],
                       [ 1.036e+03,  6.926e+03, ...,  1.011e+00,
                         1.911e+00],
                       ...,
                       [ 1.036e+03,  6.926e+03, ...,  1.011e+00,
                         1.911e+00],
                       [ 1.036e+03,  6.926e+03, ...,  1.011e+00,
                         1.911e+00]]), array([ 2.180e-02,  2.180e-02, ...,  2.180e-02,  2.180e-02]))
```



Across all four plots:

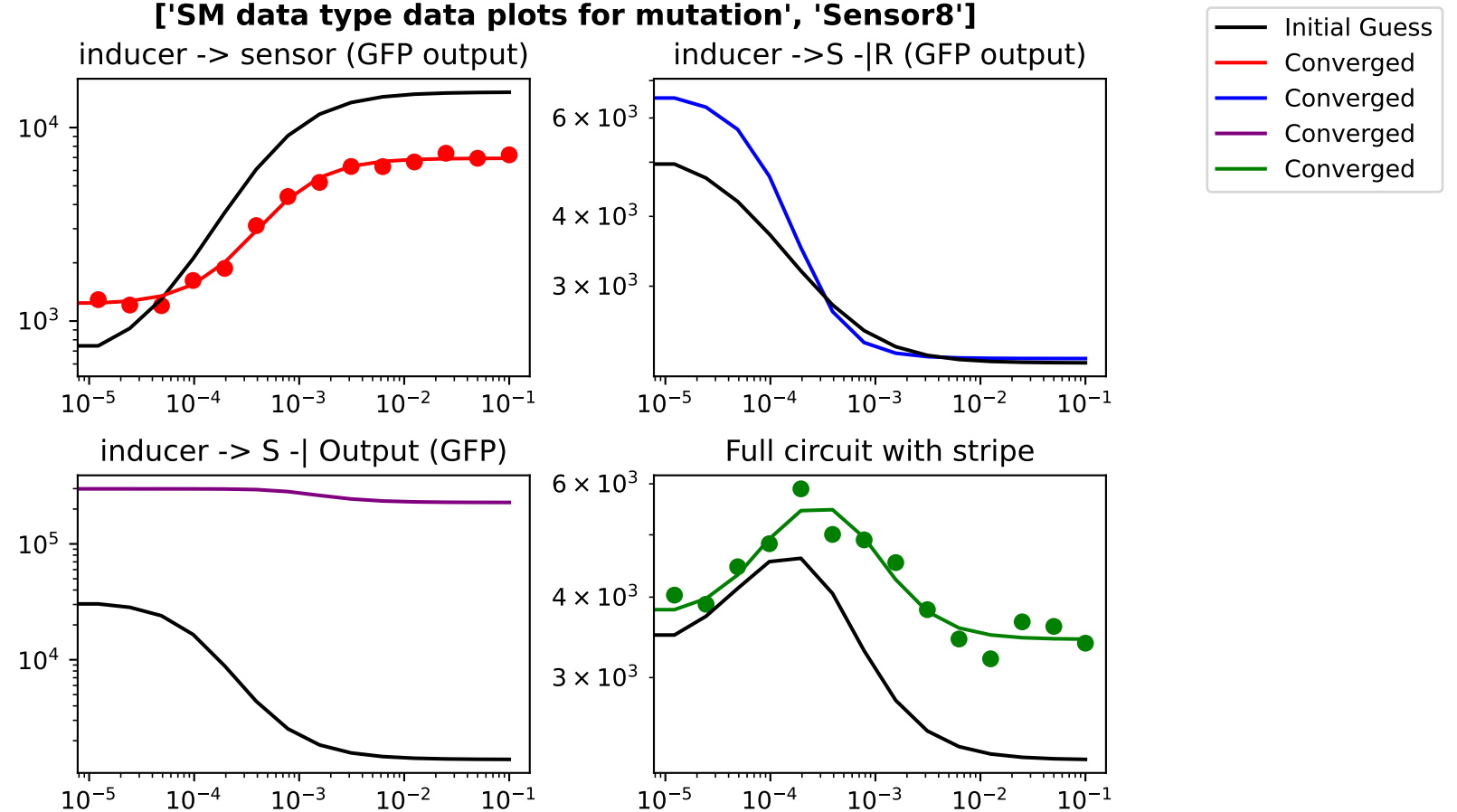
RSS (converged)=0.047

RSS (initial)=2.022

RSS (% reduction)=0.977

	epsilon	Initial_guesses	Converged
A_s	300.405481	608.397103	908.802584
B_s	-9115.534766	15250.457700	6134.922934
C_s	18.679785	1668.059050	1686.738835
N_s	-0.074800	1.198934	1.124133
A_r	-540.132732	687.964693	147.831961
B_r	-14293.449889	23497.611400	9204.161511
C_r	0.038689	0.062367	0.101056
N_r	-0.128065	0.391731	0.263666
A_h	797.086150	590.606548	1387.692698
B_h	-16010.782570	35287.125700	19276.343130
C_h	-0.000451	0.000530	0.000079
A_o	-0.694480	0.829830	0.135350
B_o	-2.242443	4.288170	2.045727
C_o	5.268670	3.133222	8.401892
N_o	3.337715	1.809018	5.146734

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.04689118149955576
      x: [ 9.088e+02  6.135e+03 ...  8.402e+00  5.147e+00]
    nit: 27936
   nfev: 36679
final_simplex: (array([[ 9.088e+02,  6.135e+03, ...,  8.402e+00,
                         5.147e+00],
                       [ 9.088e+02,  6.135e+03, ...,  8.402e+00,
                         5.147e+00],
                       ...,
                       [ 9.088e+02,  6.135e+03, ...,  8.402e+00,
                         5.147e+00],
                       [ 9.088e+02,  6.135e+03, ...,  8.402e+00,
                         5.147e+00]]), array([ 4.689e-02,  4.689e-02, ...,  4.689e-02,  4.689e-02]))
```



Across all four plots:

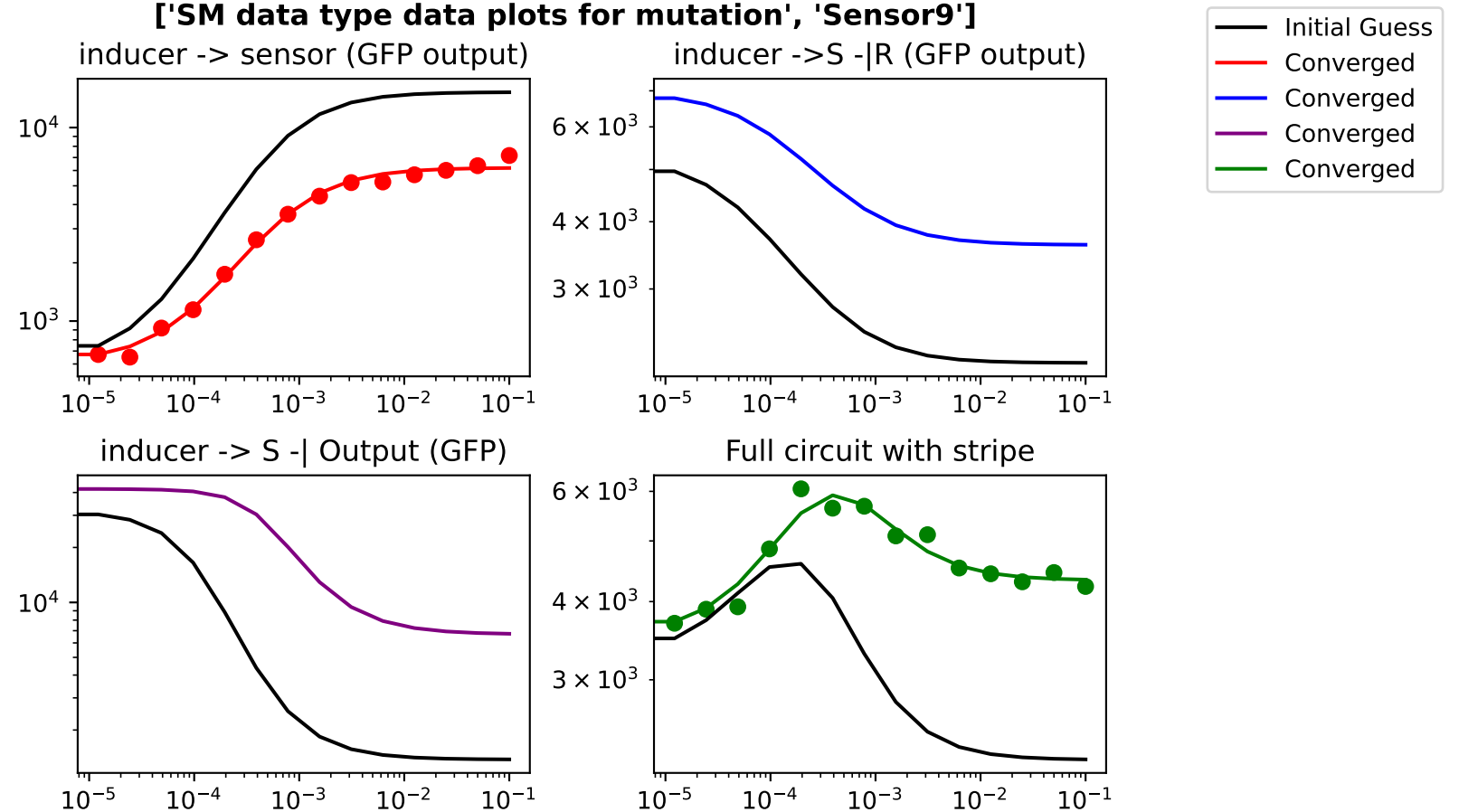
RSS (converged)=0.017

RSS (initial)=1.583

RSS (% reduction)=0.989

	epsilon	Initial_guesses	Converged
A_s	613.068092	608.397103	1221.465195
B_s	-8311.177828	15250.457700	6939.279872
C_s	-266.042792	1668.059050	1402.016258
N_s	0.215862	1.198934	1.414796
A_r	1471.820551	687.964693	2159.785244
B_r	320268.088528	23497.611400	343765.699928
C_r	-0.057531	0.062367	0.004836
N_r	2.040711	0.391731	2.432442
A_h	-560.376362	590.606548	30.230186
B_h	263565.492914	35287.125700	298852.618614
C_h	-0.000427	0.000530	0.000103
A_o	6.126547	0.829830	6.956377
B_o	-4.267046	4.288170	0.021124
C_o	-1.955813	3.133222	1.177409
N_o	1.682872	1.809018	3.491890

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.017455529399947035
      x: [ 1.221e+03  6.939e+03 ...  1.177e+00  3.492e+00]
    nit: 25030
   nfev: 33004
final_simplex: (array([[ 1.221e+03,  6.939e+03, ...,  1.177e+00,
                         3.492e+00],
                       [ 1.221e+03,  6.939e+03, ...,  1.177e+00,
                         3.492e+00],
                       ...,
                       [ 1.221e+03,  6.939e+03, ...,  1.177e+00,
                         3.492e+00],
                       [ 1.221e+03,  6.939e+03, ...,  1.177e+00,
                         3.492e+00]]), array([ 1.746e-02,  1.746e-02, ...,  1.746e-02,  1.746e-02]))
```



Across all four plots:

RSS (converged)=0.017

RSS (initial)=2.318

RSS (% reduction)=0.993

	epsilon	Initial_guesses	Converged
A_s	5.170337	608.397103	613.567440
B_s	-9049.925105	15250.457700	6200.532595
C_s	-242.422845	1668.059050	1425.636205
N_s	-0.075481	1.198934	1.123452
A_r	80.590339	687.964693	768.555032
B_r	7644.494741	23497.611400	31142.106141
C_r	-0.003626	0.062367	0.058741
N_r	-0.002731	0.391731	0.389000
A_h	64.317328	590.606548	654.923876
B_h	6184.088941	35287.125700	41471.214641
C_h	-0.000238	0.000530	0.000291
A_o	0.194597	0.829830	1.024427
B_o	1.152582	4.288170	5.440752
C_o	-1.111884	3.133222	2.021338
N_o	1.186104	1.809018	2.995123

```
      message: Optimization terminated successfully.
      success: True
       status: 0
          fun: 0.016670191983899553
            x: [ 6.136e+02  6.201e+03 ...  2.021e+00  2.995e+00]
          nit: 7354
         nfev: 9933
final_simplex: (array([[ 6.136e+02,  6.201e+03, ...,  2.021e+00,
                         2.995e+00],
                       [ 6.136e+02,  6.201e+03, ...,  2.021e+00,
                         2.995e+00],
                       ...,
                       [ 6.136e+02,  6.201e+03, ...,  2.021e+00,
                         2.995e+00],
                       [ 6.136e+02,  6.201e+03, ...,  2.021e+00,
                         2.995e+00]]), array([ 1.667e-02,  1.667e-02, ...,  1.667e-02,  1.667e-02]))
```