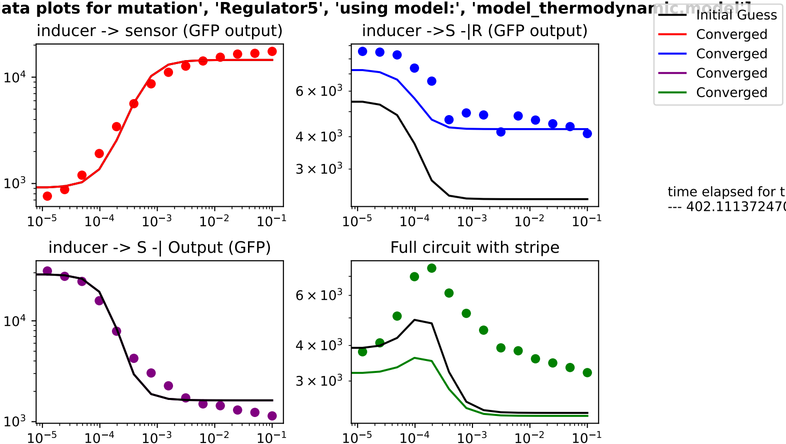
['SM data type data plots for mutation', 'Regulator5', 'using model:', 'model_thermodynamic_model']



time elapsed for this fit
--- 402.1113724708557 seconds ---

((0.06710423073817094, 0.067104230738

Across all four plots:

RSS (converged)=1.096

RSS (initial)=1.965

RSS (% reduction)=0.642

```
            epsilon  Initial_guesses     Converged
P_b   0.000000e+00     6.710423e-02  6.710423e-02
P_u   0.000000e+00     2.189588e-06  2.189588e-06
K_12  0.000000e+00     1.065381e+03  1.065381e+03
C_pa  0.000000e+00     1.634913e+09  1.634913e+09
A_s   0.000000e+00     1.452100e+04  1.452100e+04
P_r   9.287453e-02     1.285766e+00  1.378640e+00
C_pt -1.101648e-02     1.101671e-02  2.306098e-07
K_t   7.355522e+00     7.228939e-05  7.355595e+00
A_r   1.342851e+10     1.633549e+05  1.342867e+10
P_o   0.000000e+00     1.229728e+00  1.229728e+00
C_pl  0.000000e+00     1.247659e-02  1.247659e-02
K_l   0.000000e+00     2.018275e-06  2.018275e-06
A_o   0.000000e+00     9.109492e+04  9.109492e+04
F_o   0.000000e+00     1.482604e+00  1.482604e+00
```

```
      message: Maximum number of iterations has been exceeded.
      success: False
       status: 2
          fun: 1.0956743885535993
            x: [ 6.710e-02  2.190e-06 ...  9.109e+04  1.483e+00]
          nit: 100000
         nfev: 134606
final_simplex: (array([[ 6.710e-02,  2.190e-06, ...,  9.109e+04,
                         1.483e+00],
                       [ 6.710e-02,  2.190e-06, ...,  9.109e+04,
                         1.483e+00],
                       ...,
                       [ 6.710e-02,  2.190e-06, ...,  9.109e+04,
                         1.483e+00],
                       [ 6.710e-02,  2.190e-06, ...,  9.109e+04,
                         1.483e+00]]), array([ 1.096e+00,  1.096e+00, ...,  1.096e+00,
```

```
17094), (2.1895876615348227e-06, 2.1895876615348227e-06), (1065.381191469127, 1065.381191469127), (1634912744.490322, 1634912744.490322),
```

```
1.096e+00]))
```

```
(14520.998594483866, 14520.998594483866), (0, None), (0, None), (0, None), (0, None), (1.2297278821229507, 1.2297278821229507), (0.012476585206976027,
```

```
0.012476585206976027), (2.018274680476458e-06, 2.018274680476458e-06), (91094.91689184132, 91094.91689184132), (1.4826039143168819, 1.4826039143168819))
```