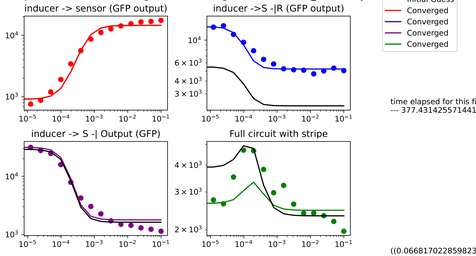
['SM data type data plots for mutation', 'Regulator3', 'using model:', 'model_thermodynamic']



time elapsed for this fit
--- 377.43142557144165 seconds ---

((0.06681702285982363, 0.06681702285982363), (5.466972031538808e-07, 5.466972031538808e-07), (18145.27457406776, 18145.27457406776), (381988244.4333938, 381988244.4333938), (14589.087744354982, 14589.087744354982), (0, None), (0, None), (0, None), (0, None), (2011833990057.0366, 2011833990057.0366), (0.019680354296355312, 0.019680354296355312), (1.2819864660412365e-06, 1.2819864660412365e-06), (176014.34482799913, 176014.34482799913), (1.4826334558626444, 1.4826334558626444))

Across all four plots:

RSS (converged)=0.401

RSS (initial)=2.604

RSS (% reduction)=0.867

```
             epsilon  Initial_guesses     Converged
P_b   0.000000e+00     6.681702e-02  6.681702e-02
P_u   0.000000e+00     5.466972e-07  5.466972e-07
K_12  0.000000e+00     1.814527e+04  1.814527e+04
C_pa  0.000000e+00     3.819882e+08  3.819882e+08
A_s   0.000000e+00     1.458909e+04  1.458909e+04
P_r   3.949270e-02     4.006687e-01  4.401614e-01
C_pt -9.732210e-03     9.732437e-03  2.272095e-07
K_t   3.268408e+00     8.404184e-05  3.268492e+00
A_r   5.201842e+10     5.876297e+05  5.201900e+10
P_o   0.000000e+00     2.011834e+12  2.011834e+12
C_pl  0.000000e+00     1.968035e-02  1.968035e-02
K_l   0.000000e+00     1.281986e-06  1.281986e-06
A_o   0.000000e+00     1.760143e+05  1.760143e+05
F_o   0.000000e+00     1.482633e+00  1.482633e+00
```

```
message: Maximum number of iterations has been exceeded.
success: False
 status: 2
    fun: 0.4010297772045624
      x: [ 6.682e-02  5.467e-07 ...  1.760e+05  1.483e+00]
    nit: 100000
   nfev: 134035
final_simplex: (array([[ 6.682e-02,  5.467e-07, ...,  1.760e+05,
                         1.483e+00],
                       [ 6.682e-02,  5.467e-07, ...,  1.760e+05,
                         1.483e+00],
                       ...,
                       [ 6.682e-02,  5.467e-07, ...,  1.760e+05,
                         1.483e+00],
                       [ 6.682e-02,  5.467e-07, ...,  1.760e+05,
                         1.483e+00]]), array([ 4.010e-01,  4.010e-01, ...,  4.010e-01,  4.010e-01]))
```