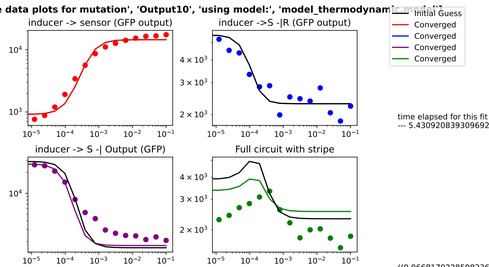
['SM data type data plots for mutation', 'Output10', 'using model:', 'model_thermodynam



time elapsed for this fit
--- 5.430920839309692 seconds ---

((0.06681702285982363, 0.06681702285982363), (5.466972031538808e-07, 5.466972031538808e-07), (18145.27457406776, 18145.27457406776), (381988244.4333938, 381988244.4333938), (14589.087744354982, 14589.087744354982), (0.40066868978976133, 0.40066868978976133), (0.009732436968536 63, 0.009732436968536 63), (8.404183514288889e-05, 8.404183514288889e-05), (587629.7486661357, 587629.7486661357), (0, None), (0, None), (0, None), (0, None), (1.4826334558626444, 1.4826334558626444))

Across all four plots:

RSS (converged)=0.836

RSS (initial)=0.966

RSS (% reduction)=0.536

	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	0.000000e+00	4.006687e-01	4.006687e-01
C_pt	0.000000e+00	9.732437e-03	9.732437e-03
K_t	0.000000e+00	8.404184e-05	8.404184e-05
A_r	0.000000e+00	5.876297e+05	5.876297e+05
P_o	8.868474e+11	2.011834e+12	2.898681e+12
C_pi	-1.0098921e-02	1.968035e-02	9.582141e-03
K_I	5.001693e-06	1.281986e-06	6.283679e-06
A_o	2.492876e+05	1.760143e+05	4.253020e+05
F_o	0.000000e+00	1.482633e+00	1.482633e+00

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.836268783868572 6
      x: [ 6.682e-02  5.467e-07 ...  4.253e+05  1.483e+00]
    nit: 860
   nfev: 1711
 final_simplex: (array([[ 6.682e-02,  5.467e-07, ...,  4.253e+05,
                          1.483e+00],
                       [ 6.682e-02,  5.467e-07, ...,  4.253e+05,
                          1.483e+00],
                       ...,
                       [ 6.682e-02,  5.467e-07, ...,  4.253e+05,
                          1.483e+00],
                       [ 6.682e-02,  5.467e-07, ...,  4.253e+05,
                          1.483e+00]]), array([ 8.363e-01,  8.363e-01, ...,  8.363e-01,  8.363e-01]))
```