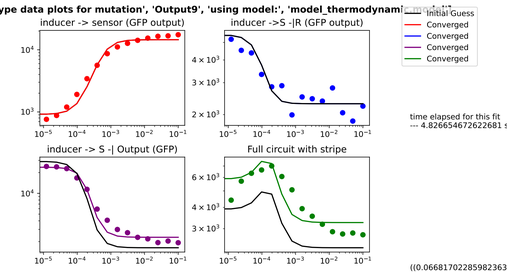
['SM data type data plots for mutation', 'Output9', 'using model:', 'model_thermodynam



time elapsed for this fit
--- 4.826654672622681 seconds ---

((0.06681702285982363, 0.06681702285982363), (5.466972031538808e-07, 5.466972031538808e-07), (18145.274574067 76, 18145.274574067 76), (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)=0.293

RSS (initial)=0.948

RSS (% reduction)=0.764

	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	-1.725505e+10	2.011834e+12	1.994579e+12
C_pl	2.666172e-02	1.968035e-02	4.634207e-02
K_l	-8.759039e-07	1.281986e-06	4.060826e-07
A_o	-7.327359e+04	1.760143e+05	1.027408e+05
F_o	0.000000e+00	1.482633e+00	1.482633e+00

```
message: Optimization terminated successfully.
success: True
 status: 0
    fun: 0.29260260242500924
      x: [ 6.682e-02  5.467e-07 ...  1.027e+05  1.483e+00]
   nit: 795
  nfev: 1675
final_simplex: (array([[ 6.682e-02,  5.467e-07, ...,  1.027e+05,
                         1.483e+00],
                       [ 6.682e-02,  5.467e-07, ...,  1.027e+05,
                         1.483e+00],
                       ...,
                       [ 6.682e-02,  5.467e-07, ...,  1.027e+05,
                         1.483e+00],
                       [ 6.682e-02,  5.467e-07, ...,  1.027e+05,
                         1.483e+00]]), array([ 2.926e-01,  2.926e-01, ...,  2.926e-01,  2.926e-01]))
```