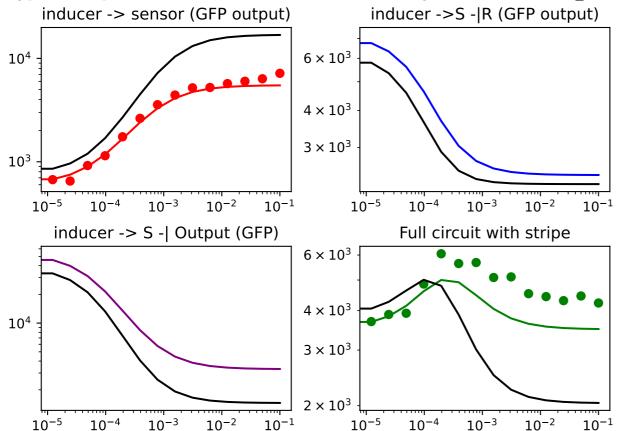
## ['SM data type data plots for mutation', 'Sensor9', 'using model:', 'model\_hill.mode



time elapsed for this fit
--- 2.286790132522583 seconds ---

Converged Converged

Converged Converged

Across all four plots:

RSS (converged)=0.125

RSS (initial)=2.365

RSS (% reduction)=0.95

```
epsilon Initial guesses Converged
A s -159.188101
                 7.671584e+02 6.079703e+02
B s -11438.182130
                 1.694202e+04 5.503837e+03
Сs
    641.316139
                8.969736e+02 1.538290e+03
     -0.082694
                1.151182e+00 1.068488e+00
Νs
     0.000000
                2.229804e+03 2.229804e+03
Αr
     0.000000
Βr
                8.961652e+03 8.961652e+03
C_r
                1.461384e-03 1.461384e-03
     0.000000
N_r
     0.000000
                1.841235e+00 1.841235e+00
A_o
     0.000000
                9.859837e+02 9.859837e+02
B_o
      0.000000
                1.801530e+07 1.801530e+07
C_0
      0.000000
                1.010522e-01 1.010522e-01
      0.000000
                1.417996e+00 1.417996e+00
Νo
      0.000000
                1.477611e+00 1.477611e+00
```

```
\begin{array}{l} \text{message: Optimization terminated successfully.} \\ \text{success: True} \\ \text{status: 0} \\ \text{fun: 0.1250224476433861} \\ \text{x: [ 6.080e+02 5.504e+03 ... 1.418e+00 1.478e+00]} \\ \text{nit: 761} \\ \text{nfev: 1192} \\ \text{final\_simplex: (array([[ 6.080e+02, 5.504e+03, ..., 1.418e+00, \\ 1.478e+00], \\ [ 6.080e+02, 5.504e+03, ..., 1.418e+00, \\ 1.478e+00], \\ ..., \\ [ 6.080e+02, 5.504e+03, ..., 1.418e+00, \\ 1.478e+00], \\ [ 6.080e+02, 5.504e+03, ..., 1.418e+00, \\ 1.478e+00]], \\ \text{array([ 1.250e-01, 1.250e-01, ..., 1.250e-01, 1.250e-01]))} \end{array}
```