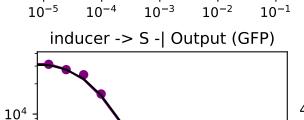
['SM data type data plots for mutation', 'Regulator8', 'using model:', 'model'] **Initial Guess** inducer -> sensor (GFP output) inducer -> S - IR (GFP output) Converged Converged 6×10^3 Converged 10^{4} Converged 4×10^{3} 3×10^{3} 10^{3} time elapsed for this fit

 10^{-5}

 2×10^{3}

10⁻⁵

 10^{-1}





 10^{-4}

 10^{-4}

10⁻³

10⁻³

Full circuit with stripe

 10^{-2}

 10^{-2}

 10^{-1}

 10^{-1}

Across all four plots:

 10^{-4}

 10^{3}

 10^{-5}

RSS (converged)=0.213

 10^{-2}

RSS (initial)=0.285

10⁻³

RSS (% reduction)=0.572

```
epsilon Initial guesses
                                 Converged
                                                     message: Optimization terminated successfully.
A_s -60.046104
                   650.714912
                                590.668808
                                                     success: True
    -226.494489
                   16259.979950 16033.485460
                                                     status: 0
    -79.960576
                   1296.448889 1216.488313
                                                       fun: 0.21322404164162714
      0.017557
                    1.154067
                                1.171624
                                                        x: [5.907e+02 1.603e+04 ... 1.209e+00 1.750e+01]
Αr
      0.000000
                  2020.019216 2020.019216
                                                       nit: 56015
Βr
      0.000000
                 23688.809187 23688.809187
                                                      nfev: 72480
C^{-}r
      0.000000
                    0.010358
                                0.010358
                                                 final simplex: (array([[ 5.907e+02, 1.603e+04, ..., 1.209e+00,
Νr
      0.000000
                    0.910072
                                0.910072
                                                               1.750e+011,
                    143.802212
A h -143.540316
                                  0.261896
                                                             [5.907e+02, 1.603e+04, ..., 1.209e+00,
B h 18367.598016
                    50238.271408 68605.869424
                                                               1.750e+01],
C h
      0.000706
                    0.000929
                                0.001635
                                                             [5.907e+02, 1.603e+04, ..., 1.209e+00.
      31.743119
                     1.673894
                                33.417013
Αо
     -0.785143
                    0.895342
                                0.110199
                                                               1.750e+01],
                                                             [5.907e+02, 1.603e+04, ..., 1.209e+00,
C_0
     -0.856985
                    2.657699
                                1.800713
      -0.171316
                    1.379953
                                1.208637
                                                               1.750e+01]]), array([ 2.132e-01, 2.132e-01, ..., 2.132e-01, 2.132e-01]))
Νo
     15.136410
                    2.361284
                                17.497693
```

--- 149.82780051231384 seconds ---