Converged 4×10^{3} 3×10^{3} 10^{3} 2×10^{3} time elapsed for this fit --- 23.700912952423096 seconds ---10⁻³ 10^{-1} 10^{-2} 10^{-2} 10⁻⁵ 10^{-1} 10^{-4} 10^{-4} 10^{-3} inducer -> S -| Output (GFP) Full circuit with stripe 6×10^{3} 10^{4} 4×10^{3} 3×10^{3} 10⁻⁵ 10⁻³ 10^{-2} 10^{-1} 10⁻⁵ 10^{-3} 10^{-2} 10^{-4} 10^{-4} 10^{-1} Across all four plots: RSS (converged)=0.052RSS (initial)=0.711 RSS (% reduction)=0.932 epsilon Initial guesses Converged message: Optimization terminated successfully. 16.762155 650.714912 6.674771e+02 A_s success: True 88.856512 16259.979950 1.634884e+04 status: 0 -34.334679 1296.448889 1.262114e+03 fun: 0.05219452289808844 N_s 0.016359 1.154067 1.170426e+00 x: [6.675e+02 1.635e+04 ... 1.422e+00 1.038e+00] A r 0.000000 2020.019216 2.020019e+03 nit: 8640 Βr 0.000000 23688.809187 2.368881e+04 nfev: 11340 Cr0.000000 0.010358 1.035760e-02 final simplex: (array([[6.675e+02, 1.635e+04, ..., 1.422e+00, 0.000000 0.910072 9.100723e-01 1.038e + 001, 428.925078 143.802212 5.727273e+02 [6.675e+02, 1.635e+04, ..., 1.422e+00, 50238.271408 3.172223e+04 B h -18516.041632 1.038e+00], Ch -0.000416 0.000929 5.128883e-04 [6.675e+02, 1.635e+04, ..., 1.422e+00, Αо -1.673894 1.673894 8.563796e-12 2.017619 0.895342 2.912961e+00 Во 1.038e+00], [6.675e+02, 1.635e+04, ..., 1.422e+00, Со 0.149913 2.657699 2.807612e+00 0.042333 1.379953 1.422285e+00 1.038e+00]]), array([5.219e-02, 5.219e-02, ..., 5.219e-02, 5.219e-02])) Nο -1.323642 2.361284 1.037641e+00

inducer -> S - IR (GFP output)

Initial Guess

ConvergedConvergedConverged

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

inducer -> sensor (GFP output)

 10^{4}