4×10^{3} Converged 3×10^{3} 10^{3} 2×10^{3} time elapsed for this fit --- 49.16168665885925 seconds --- 10^{-3} 10^{-1} 10^{-2} 10^{-2} 10^{-4} 10^{-5} 10^{-4} 10^{-3} 10^{-1} inducer -> S -| Output (GFP) Full circuit with stripe 10^{4} 6×10^{3} 10^{4} 4×10^{3} 3×10^{3} 10^{-3} 10^{-3} 10^{-2} 10⁻⁵ 10^{-2} 10⁻⁵ 10^{-4} 10^{-1} 10^{-4} 10^{-1} Across all four plots: RSS (converged)=0.051RSS (initial)=5.327 RSS (% reduction)=0.991epsilon Initial guesses Converged message: Optimization terminated successfully. A_s 20.879424 650.714912 671.594336 success: True -20.247126 16259.979950 16239.732824 status: 0 7.373916 1296.448889 1303.822805 fun: 0.05091438704560596 N_s 0.036723 1.154067 1.190790 x: [6.716e+02 1.624e+04 ... 1.285e+00 1.553e+00] Αr 0.000000 2020.019216 2020.019216 nit: 17984 Βr 0.000000 23688.809187 23688.809187 nfev: 23526 0.000000 0.010358 0.010358 final simplex: (array([[6.716e+02, 1.624e+04, ..., 1.285e+00, 0.000000 0.910072 0.910072 1.553e + 001, 143.802212 3199.131505 A h 3055.329293 [6.716e+02, 1.624e+04, ..., 1.285e+00, 50238.271408 45804.138768 B h -4434.132640 1.553e+00], Сh -0.000355 0.000929 0.000574 -1.191400 1.673894 0.482494 Αо [6.716e+02, 1.624e+04, ..., 1.285e+00, 0.639275 0.895342 1.534617 1.553e+00], [6.716e+02, 1.624e+04, ..., 1.285e+00, 2.657699 Со 0.917751 3.575450 -0.094522 1.379953 1.285431 1.553e+00]]), array([5.091e-02, 5.091e-02, ..., 5.091e-02, 5.091e-02])) -0.807871 2.361284 1.553412

inducer -> S - IR (GFP output)

Initial Guess

ConvergedConvergedConverged

['SM data type data plots for mutation', 'Output2', 'using model:', 'model']

inducer -> sensor (GFP output)

 10^{4}