

 10^{-4}

 10^{-4}

 10^{-5}

10⁻⁵

 6×10^{3}

 4×10^{3}

 3×10^{3}

10⁻³

Full circuit with stripe

10⁻³

 10^{-2}

 10^{-2}

 10^{-1}

 10^{-1}

Across all four plots:

 10^{-4}

 10^{3}

 10^{5}

 10^{4}

10⁻⁵

 10^{-5}

RSS (converged)=0.017

 10^{-3}

10⁻³

inducer -> S -| Output (GFP)

 10^{-4}

 10^{-2}

 10^{-2}

 10^{-1}

 10^{-1}

RSS (initial)=1.583

RSS (% reduction)=0.989

```
message: Optimization terminated successfully.
        epsilon Initial guesses
                                Converged
                                                    success: True
     613.068092
                     608.397103 1221.465195
Αs
                                                     status: 0
Bs -8311.177828
                    15250.457700 6939.279872
                                                       fun: 0.017455529399947035
C_s
    -266.042792
                    1668.059050 1402.016258
                                                        x: [ 1.221e+03 6.939e+03 ... 1.177e+00 3.492e+00]
Ns
       0.215862
                     1.198934
                                 1.414796
                                                       nit: 25030
    1471.820551
                     687.964693 2159.785244
                                                      nfev: 33004
Br 320268.088528
                     23497.611400 343765.699928final simplex: (array([[ 1.221e+03, 6.939e+03, ..., 1.177e+00,
      -0.057531
                    0.062367
                                 0.004836
Cr
                                                               3.492e+001
      2.040711
                    0.391731
                                 2.432442
                                                             [ 1.221e+03, 6.939e+03, ..., 1.177e+00,
Νr
     -560.376362
                     590.606548
                                   30.230186
                                                               3.492e + 001
    263565.492914
                     35287.125700 298852.618614
Βh
C h
      -0.000427
                     0.000530
                                 0.000103
                                                             [1.221e+03, 6.939e+03, ..., 1.177e+00,
                     0.829830
       6.126547
                                 6.956377
Αо
                                                               3.492e+001
                                                             [ 1.221e+03, 6.939e+03, ..., 1.177e+00,
      -4.267046
                     4.288170
Βо
                                 0.021124
      -1.955813
                     3.133222
                                                               3.492e+00]), array([ 1.746e-02, 1.746e-02, ..., 1.746e-02, 1.746e-02]))
Со
                                 1.177409
                     1.809018
N_o
       1.682872
                                 3.491890
```