

 10^{-4}

 10^{-4}

 10^{-5}

10⁻⁵

 6×10^3

 4×10^3

 3×10^{3}

 2×10^{3}

 10^{-3}

Full circuit with stripe

10⁻³

 10^{-2}

 10^{-2}

 10^{-1}

 10^{-1}

message: Optimization terminated successfully.

Across all four plots:

 10^{-4}

 10^{-4}

 10^{4}

 10^{3}

 10^{-5}

10⁻³

inducer -> S -| Output (GFP)

 10^{-2}

 10^{-2}

 10^{-1}

 10^{-1}

RSS (converged)=2.148

 10^{-3}

RSS (initial)=3.4

RSS (% reduction)=0.613

```
epsilon Initial guesses
                              Converged
                                                   success: True
A s 0.000000e+00
                   6.599635e+02 6.599635e+02
                                                   status: 0
B s 0.000000e+00
                   1.634714e+04 1.634714e+04
                                                     fun: 2.147649872437454
C s 0.000000e+00
                    1.259256e+03 1.259256e+03
                                                      x: [ 6.600e+02 1.635e+04 ... 2.721e+00 1.250e+00]
N s 0.000000e+00
                    1.160440e+00 1.160440e+00
                                                     nit: 1703
A r 1.927240e+03
                   1.998310e+03 3.925550e+03
                                                     nfev: 2920
                   2.040009e+11 3.945281e+11 final simplex: (array([[ 6.600e+02, 1.635e+04, ..., 2.721e+00,
Br 1.905272e+11
                   2.771808e+06 2.534310e+05
C r -2.518377e+06
                                                             1.250e+001,
N r 1.291415e-01
                   8.375226e-01 9.666640e-01
                                                            [6.600e+02, 1.635e+04, ..., 2.721e+00,
A h 0.000000e+00
                    5.477878e-06 5.477878e-06
                                                             1.250e+00],
B h 0.000000e+00
                    6.710814e+04 6.710814e+04
C h 0.000000e+00
                    1.412943e-03 1.412943e-03
                                                            [6.600e+02, 1.635e+04, ..., 2.721e+00,
                    5.414338e+07 5.414338e+07
A o 0.000000e+00
                                                             1.250e+00],
B o 0.000000e+00
                    2.126439e+00 2.126439e+00
                                                            [6.600e+02, 1.635e+04, ..., 2.721e+00,
C o 0.000000e+00
                    2.720605e+00 2.720605e+00
                                                             1.250e+00]), array([ 2.148e+00, 2.148e+00, ..., 2.148e+00, 2.148e+00]))
N_o 0.000000e+00
                    1.250443e+00 1.250443e+00
```