

10⁻⁵

 10^{-4}

Across all four plots:

 10^{-4}

10⁻⁵

RSS (converged)=0.052

 10^{-3}

 10^{-2}

 10^{-1}

RSS (initial)=1.554

RSS (% reduction)=0.968

```
message: Optimization terminated successfully.
        epsilon Initial guesses
                                Converged
                                                     success: True
      52.804356
                    608.397103
                                  661.201459
Αs
                                                     status: 0
     1135.714862
                    15250.457700 16386.172562
                                                       fun: 0.052151872722334236
C_s
     -421.456967
                    1668.059050 1246.602083
                                                        x: [ 6.612e+02 1.639e+04 ... 1.858e+00 1.262e+00]
      -0.040809
                     1.198934
                                 1.158125
                                                       nit: 16002
     3230.998344
                     687.964693 3918.963037
                                                      nfev: 21105
   202234.738694
                     23497.611400 225732.350094final simplex: (array([[ 6.612e+02, 1.639e+04, ..., 1.858e+00,
       0.021623
                    0.062367
                                 0.083990
Cr
                                                               1.262e+001,
       0.538667
                     0.391731
                                 0.930398
                                                              [6.612e+02, 1.639e+04, ..., 1.858e+00,
Νr
     -549.205902
                     590.606548
                                   41.400646
                                                               1.262e+00],
     31261.977873
                     35287.125700 66549.103573
Βh
C h
       0.000865
                     0.000530
                                 0.001395
                                                              [6.612e+02, 1.639e+04, ..., 1.858e+00,
                     0.829830
       2.992352
                                 3.822181
Αо
                                                               1.262e+00],
                                                              [6.612e+02, 1.639e+04, ..., 1.858e+00,
      -2.645459
                     4.288170
Βо
                                 1.642711
      -1.275151
                     3.133222
                                 1.858071
                                                               1.262e+00]]), array([5.215e-02, 5.215e-02, ..., 5.215e-02, 5.215e-02]))
Со
                     1.809018
                                 1.262131
Νo
      -0.546888
```

10⁻³

 10^{-2}

 10^{-1}

Initial Guess

Converged Converged

Converged