```
>> SIS(2.18,0.5, 100, 1, 4)
Infected sensitivity matrix:
    0.0083   -0.7870
    0.0133   -1.2652
    0.0164   -1.5556
    0.0182   -1.7320

Column 1 norm =
    0.0291

Column 2 norm =
    2.7640

SI Eigenvectors Matrix:
   -0.9999   -0.0105
   -0.0105    0.9999

SI Eigenvalues Matrix:
    0.0000         0
         0    7.6406

SI Correlation Matrix:
     1    -1
    -1     1

Mixed sensitivity matrix:
    0.0083   -0.7870
   -0.0083    0.7870
    0.0133   -1.2652
   -0.0133    1.2652
    0.0164   -1.5556
   -0.0164    1.5556
    0.0182   -1.7320
   -0.0182    1.7320

Column 1 norm =
    0.0411

Column 2 norm =
    3.9089

SIS Eigenvectors Matrix:
   -0.9999   -0.0105
   -0.0105    0.9999

SIS Eigenvalues Matrix:
    0.0000         0
         0   15.2812

SIS Correlation Matrix:
     1    -1
    -1     1
```

```
>> SIR(0.2, 1, 0.4, 0.1, 1, 5)
Infected sensivity matrix:
    0.1092   -0.2963
    0.1328   -0.3884
    0.1301   -0.4155
    0.1202   -0.4222

Column 1 norm = 0.2468296
Column 2 norm = 0.7678233
SI Eigenvectors Matrix:
   -0.9523   -0.3051
   -0.3051    0.9523

SI Eigenvalues Matrix:
    0.0005         0
         0    0.6500

SI Correlation Matrix:
     1    -1
    -1     1

Recovered sensivity matrix:
    0.0831    0.2797
    0.2389    0.3406
    0.4046    0.3346
    0.5614    0.3099

Column 1 norm = 0.7367994
Column 2 norm = 0.6342198
SR Eigenvectors Matrix:
    0.6452   -0.7640
   -0.7640   -0.6452

SR Eigenvalues Matrix:
    0.0526         0
         0    0.8925

SR Correlation Matrix:
     1     1
     1     1

Infected and recovered sensitivity matrix:
    0.1092   -0.2963
    0.0831    0.2797
    0.1328   -0.3884
    0.2389    0.3406
    0.1301   -0.4155
    0.4046    0.3346
    0.1202   -0.4222
    0.5614    0.3099

Column 1 norm = 0.7770445
Column 2 norm = 0.9958852
```

```
SIR Eigenvectors Matrix:
   -0.9090    0.4168
    0.4168    0.9090

SIR Eigenvalues Matrix:
    0.5005         0
         0    1.0951

SIR Correlation Matrix:
     1    -1
    -1     1

Complete sensitivity matrix:
    0.1092   -0.2963
    0.0831    0.2797
   -0.1923    0.0166
    0.1328   -0.3884
    0.2389    0.3406
   -0.3717    0.0478
    0.1301   -0.4155
    0.4046    0.3346
   -0.5347    0.0809
    0.1202   -0.4222
    0.5614    0.3099
   -0.6816    0.1123

Column 1 norm = 1.2367091
Column 2 norm = 1.0067284
SIRS Eigenvectors Matrix:
    0.1577   -0.9875
   -0.9875   -0.1577

SIRS Eigenvalues Matrix:
    1.0000         0
         0    1.5429

SIRS Correlation Matrix:
     1    -1
    -1     1

>> Influenza
Uninfected cells sensivity matrix:
   -0.7941    0.0002   -0.0023    0.0025
   -1.5808    0.0010   -0.0054    0.0063
   -2.3599    0.0021   -0.0082    0.0102
   -3.1315    0.0034   -0.0107    0.0141

ST Eigenvectors Matrix:
    0.0000    0.0031   -0.0047   -1.0000
    0.5769   -0.5736   -0.5816    0.0009
   -0.5771   -0.7901    0.2068   -0.0034
   -0.5781    0.2163   -0.7868    0.0043
```

```
ST Eigenvalues Matrix:
   -0.0000         0         0         0
         0    0.0000         0         0
         0         0    0.0000         0
         0         0         0   18.5059

Column 1 norm = 4.3017864
Column 2 norm = 0.0041446
Column 3 norm = 0.0146868
Column 4 norm = 0.0187286
ST Correlation Matrix:
    1.0000   -1.0000    1.0000   -1.0000
   -1.0000    1.0000   -1.0000    1.0000
    1.0000   -1.0000    1.0000   -1.0000
   -1.0000    1.0000   -1.0000    1.0000

Infected cells sensivity matrix:
    0.5899   -0.7431   -0.7411   -0.0020
    0.8995   -1.1414   -1.1374   -0.0039
    1.0592   -1.3549   -1.3498   -0.0050
    1.1388   -1.4693   -1.4638   -0.0056

SI Eigenvectors Matrix:
    0.0042    0.0533   -0.8732   -0.4845
    0.5554   -0.4161   -0.3666    0.6197
   -0.5519    0.4622   -0.3170    0.6175
   -0.6220   -0.7813   -0.0520    0.0022

SI Eigenvalues Matrix:
    0.0000         0         0         0
         0    0.0000         0         0
         0         0    0.0002         0
         0         0         0   15.2329

Column 1 norm = 1.8909659
Column 2 norm = 2.4186075
Column 3 norm = 2.4098986
Column 4 norm = 0.0086714
SI Correlation Matrix:
    1.0000   -1.0000   -1.0000   -1.0000
   -1.0000    1.0000    1.0000    1.0000
   -1.0000    1.0000    1.0000    1.0000
   -1.0000    1.0000    1.0000    1.0000

Virus sensivity matrix:
    0.0399   -0.0502    0.3168   -0.3662
    0.0784   -0.0992    0.2981   -0.3966
    0.0998   -0.1273    0.2727   -0.3992
    0.1108   -0.1425    0.2577   -0.3995

SV Eigenvectors Matrix:
   -0.0011    0.8464   -0.5065   -0.1647
   -0.5776    0.4342    0.6586    0.2099
```

```
    0.5766    0.2160    0.5448   -0.5693
    0.5778    0.2201    0.1137    0.7777

SV Eigenvalues Matrix:
    0.0000         0         0         0
         0    0.0000         0         0
         0         0    0.0102         0
         0         0         0    1.0090

Column 1 norm = 0.1731610
Column 2 norm = 0.2211055
Column 3 norm = 0.5744438
Column 4 norm = 0.7812183
SV Correlation Matrix:
    1.0000   -1.0000    0.9993   -0.9996
   -1.0000    1.0000   -0.9993    0.9996
    0.9993   -0.9993    1.0000   -0.9999
   -0.9996    0.9996   -0.9999    1.0000

Uninfected + Infected sensivity matrix:
   -0.7941    0.0002   -0.0023    0.0025
    0.5899   -0.7431   -0.7411   -0.0020
   -1.5808    0.0010   -0.0054    0.0063
    0.8995   -1.1414   -1.1374   -0.0039
   -2.3599    0.0021   -0.0082    0.0102
    1.0592   -1.3549   -1.3498   -0.0050
   -3.1315    0.0034   -0.0107    0.0141
    1.1388   -1.4693   -1.4638   -0.0056

STI Eigenvectors Matrix:
   -0.0000    0.0053   -0.4301   -0.9028
   -0.5775    0.4080   -0.6375    0.3061
    0.5775   -0.4082   -0.6392    0.3021
    0.5771    0.8167    0.0018    0.0040

STI Eigenvalues Matrix:
    0.0000         0         0         0
         0    0.0000         0         0
         0         0    8.5971         0
         0         0         0   25.1419

Column 1 norm = 4.6990550
Column 2 norm = 2.4186110
Column 3 norm = 2.4099433
Column 4 norm = 0.0206387
STI Correlation Matrix:
    1.0000   -0.9178   -0.9160   -1.0000
   -0.9178    1.0000    1.0000    0.9202
   -0.9160    1.0000    1.0000    0.9185
   -1.0000    0.9202    0.9185    1.0000

Uninfected + Virus sensivity matrix:
   -0.7941    0.0002   -0.0023    0.0025
```

```
    0.0399   -0.0502    0.3168   -0.3662
   -1.5808    0.0010   -0.0054    0.0063
    0.0784   -0.0992    0.2981   -0.3966
   -2.3599    0.0021   -0.0082    0.0102
    0.0998   -0.1273    0.2727   -0.3992
   -3.1315    0.0034   -0.0107    0.0141
    0.1108   -0.1425    0.2577   -0.3995

STV Eigenvectors Matrix:
    0.0000    0.0001    0.0152   -0.9999
   -0.5770   -0.7887    0.2122    0.0032
    0.5769   -0.5775   -0.5775   -0.0088
    0.5781   -0.2109    0.7882    0.0120

STV Eigenvalues Matrix:
    0.0000         0         0         0
         0    0.0075         0         0
         0         0    0.9782         0
         0         0         0   18.5394

Column 1 norm = 4.3052701
Column 2 norm = 0.2211444
Column 3 norm = 0.5746315
Column 4 norm = 0.7814427
STI Correlation Matrix:
    1.0000   -0.3705    0.3584   -0.3617
   -0.3705    1.0000   -0.9998    0.9999
    0.3584   -0.9998    1.0000   -1.0000
   -0.3617    0.9999   -1.0000    1.0000

Infected + Virus sensivity matrix:
    0.5899   -0.7431   -0.7411   -0.0020
    0.0399   -0.0502    0.3168   -0.3662
    0.8995   -1.1414   -1.1374   -0.0039
    0.0784   -0.0992    0.2981   -0.3966
    1.0592   -1.3549   -1.3498   -0.0050
    0.0998   -0.1273    0.2727   -0.3992
    1.1388   -1.4693   -1.4638   -0.0056
    0.1108   -0.1425    0.2577   -0.3995

SIV Eigenvectors Matrix:
   -0.0013    0.8427   -0.2395    0.4822
   -0.5776    0.4389    0.3055   -0.6168
    0.5766    0.2200   -0.4817   -0.6222
    0.5778    0.2211    0.7857    0.0054

SIV Eigenvalues Matrix:
    0.0000         0         0         0
         0    0.0002         0         0
         0         0    0.9881         0
         0         0         0   15.2640

Column 1 norm = 1.8988778
```

```
Column 2 norm = 2.4286930
Column 3 norm = 2.4774174
Column 4 norm = 0.7812664
SIV Correlation Matrix:
    1.0000   -1.0000   -0.9962    0.1406
   -1.0000    1.0000    0.9962   -0.1407
   -0.9962    0.9962    1.0000   -0.2259
    0.1406   -0.1407   -0.2259    1.0000

Mixed sensivity matrix:
   -0.7941    0.0002   -0.0023    0.0025
    0.5899   -0.7431   -0.7411   -0.0020
    0.0399   -0.0502    0.3168   -0.3662
   -1.5808    0.0010   -0.0054    0.0063
    0.8995   -1.1414   -1.1374   -0.0039
    0.0784   -0.0992    0.2981   -0.3966
   -2.3599    0.0021   -0.0082    0.0102
    1.0592   -1.3549   -1.3498   -0.0050
    0.0998   -0.1273    0.2727   -0.3992
   -3.1315    0.0034   -0.0107    0.0141
    1.1388   -1.4693   -1.4638   -0.0056
    0.1108   -0.1425    0.2577   -0.3995

STIV Eigenvectors Matrix:
    0.0000   -0.0229    0.4290   -0.9030
   -0.5770   -0.4315    0.6221    0.3065
    0.5770    0.3854    0.6542    0.3010
    0.5781   -0.8153   -0.0321    0.0054

STIV Eigenvalues Matrix:
    0.0000         0         0         0
         0    0.9042         0         0
         0         0    8.7031         0
         0         0         0   25.1509

Column 1 norm = 4.7022444
Column 2 norm = 2.4286966
Column 3 norm = 2.4774609
Column 4 norm = 0.7814909
STIV Correlation Matrix:
    1.0000   -0.9230   -0.8903   -0.2614
   -0.9230    1.0000    0.9959   -0.0616
   -0.8903    0.9959    1.0000   -0.1517
   -0.2614   -0.0616   -0.1517    1.0000

>> HIV
Uninfected cells sensivity matrix:
    0.7419   -0.0009   -0.0012   -0.0090   -0.3711   -0.3709   -0.3725   -0.0041 ↙
-0.0039
    1.4676   -0.0036   -0.0048   -0.0452   -0.7350   -0.7350   -0.7442   -0.0208 ↙
-0.0202
    2.1772   -0.0084   -0.0114   -0.1312   -1.0919   -1.0924   -1.1210   -0.0614 ↙
-0.0599
```

```
    2.8701   -0.0158   -0.0216   -0.3082   -1.4418   -1.4434   -1.5130   -0.1462 ↙
-0.1433

Column 1 norm = 3.9600432
Column 2 norm = 0.0182803
Column 3 norm = 0.0248769
Column 4 norm = 0.3381145
Column 5 norm = 1.9871603
Column 6 norm = 1.9885893
Column 7 norm = 2.0587281
Column 8 norm = 0.1600097
Column 9 norm = 0.1567259
ST Eigenvectors Matrix:
    0.2456    0.0571    0.3126    0.2616    0.3760    0.0303   -0.2263    0.1267 ↙
-0.7488
   -0.2076    0.2731   -0.3432    0.4520   -0.2809    0.4758   -0.5038    0.0325 ↙
0.0033
   -0.0975    0.1626    0.1146   -0.3815   -0.1737   -0.5352   -0.6977    0.0444 ↙
0.0045
    0.0360   -0.3967   -0.0831   -0.2782    0.0433    0.2784   -0.1313    0.8105 ↙
0.0595
    0.5856    0.1431    0.5709   -0.0074   -0.2187    0.3162   -0.1393   -0.0470 ↙
0.3758
    0.4511   -0.0153   -0.4372    0.1825    0.5800   -0.1909   -0.2364   -0.0410 ↙
0.3760
   -0.5458   -0.0136    0.4925    0.3493    0.3926   -0.0651   -0.0728    0.1490 ↙
0.3893
    0.2037   -0.0454   -0.0113    0.5625   -0.4324   -0.5177    0.1812    0.3890 ↙
0.0281
   -0.0027    0.8458   -0.0685   -0.1804    0.1496   -0.0080    0.2783    0.3830 ↙
0.0275

ST Eigenvalues Matrix:
   -0.0000         0         0         0         0         0         0         0 ↙
0
         0   -0.0000         0         0         0         0         0         0 ↙
0
         0         0   -0.0000         0         0         0         0         0 ↙
0
         0         0         0    0.0000         0         0         0         0 ↙
0
         0         0         0         0    0.0000         0         0         0 ↙
0
         0         0         0         0         0    0.0000         0         0 ↙
0
         0         0         0         0         0         0    0.0000         0 ↙
0
         0         0         0         0         0         0         0    0.0234 ↙
0
         0         0         0         0         0         0         0         0 ↙
27.9656

ST Correlation Matrix:
```

```
    1.0000   -1.0000   -1.0000   -1.0000   -1.0000   -1.0000   -1.0000   -1.0000 ↙
-1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000    1.0000 ↙
1.0000

Mutant-infected cells sensivity matrix:
    0.0027    0.7503   -0.0009    0.0022    0.3738   -0.0018    0.0928   -0.3734 ↙
0.0015
    0.0106    1.5027   -0.0034    0.0113    0.7460   -0.0070    0.1846   -0.7444 ↙
0.0073
    0.0238    2.2570   -0.0078    0.0326    1.1166   -0.0157    0.2769   -1.1103 ↙
0.0202
    0.0422    3.0136   -0.0138    0.0764    1.4857   -0.0280    0.3723   -1.4660 ↙
0.0451

Column 1 norm = 0.0496531
Column 2 norm = 4.1227265
Column 3 norm = 0.0162707
Column 4 norm = 0.0838673
Column 5 norm = 2.0372901
Column 6 norm = 0.0329205
Column 7 norm = 0.5079545
Column 8 norm = 2.0187955
Column 9 norm = 0.0500059
STm Eigenvectors Matrix:
   -0.0797   -0.0140    0.2609    0.4255    0.3361    0.3807    0.6327   -0.2936 ↙
0.0095
    0.3183    0.3573   -0.0513   -0.0141   -0.2555    0.0764    0.0856   -0.1517 ↙
0.8165
   -0.2997    0.2399    0.0089   -0.4285    0.0782    0.7796   -0.2136    0.0968 ↙
-0.0031
    0.0442   -0.4956   -0.1981   -0.0147   -0.1453    0.1895   -0.2998   -0.7522 ↙
0.0155
   -0.0831   -0.1606   -0.1768    0.0099    0.8210   -0.1394   -0.2732    0.0708 ↙
0.4035
   -0.1137    0.1421   -0.2104    0.7942   -0.1544    0.2270   -0.4225    0.1949 ↙
-0.0063
    0.0457   -0.0529    0.9008    0.0643   -0.0008   -0.0459   -0.4061   -0.0485 ↙
0.1006
```

```
    0.5659    0.5417   -0.0546   -0.0023    0.3104    0.0020   -0.1922   -0.3004 ↙
-0.3998
   -0.6771    0.4761    0.0006   -0.0002   -0.0193   -0.3640   -0.0427   -0.4244 ↙
0.0093

STm Eigenvalues Matrix:
   -0.0000         0         0         0         0         0         0         0 ↙
0
         0   -0.0000         0         0         0         0         0         0 ↙
0
         0         0   -0.0000         0         0         0         0         0 ↙
0
         0         0         0    0.0000         0         0         0         0 ↙
0
         0         0         0         0    0.0000         0         0         0 ↙
0
         0         0         0         0         0    0.0000         0         0 ↙
0
         0         0         0         0         0         0    0.0000         0 ↙
0
         0         0         0         0         0         0         0    0.0016 ↙
0
         0         0         0         0         0         0         0         0 ↙
25.4927

STm Correlation Matrix:
    1.0000    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000   -1.0000 ↙
1.0000
    1.0000    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000   -1.0000 ↙
1.0000
   -1.0000   -1.0000    1.0000   -1.0000   -1.0000    1.0000   -1.0000    1.0000 ↙
-1.0000
    1.0000    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000   -1.0000 ↙
1.0000
    1.0000    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000   -1.0000 ↙
1.0000
   -1.0000   -1.0000    1.0000   -1.0000   -1.0000    1.0000   -1.0000    1.0000 ↙
-1.0000
    1.0000    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000   -1.0000 ↙
1.0000
   -1.0000   -1.0000    1.0000   -1.0000   -1.0000    1.0000   -1.0000    1.0000 ↙
-1.0000
    1.0000    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000   -1.0000 ↙
1.0000

Wild type infected cells sensivity matrix:
    0.0030   -0.0026    0.7667    0.0023   -0.0028    0.3819    0.0945    0.0024 ↙
-0.3819
    0.0120   -0.0104    1.5706    0.0115   -0.0112    0.7793    0.1917    0.0109 ↙
-0.7789
    0.0273   -0.0237    2.4134    0.0336   -0.0255    1.1931    0.2932    0.0287 ↙
-1.1889
    0.0493   -0.0426    3.2973    0.0795   -0.0459    1.6241    0.4018    0.0610 ↙
```

```
-1.6076

Column 1 norm = 0.0576769
Column 2 norm = 0.0499370
Column 3 norm = 4.4442795
Column 4 norm = 0.0871162
Column 5 norm = 0.0537846
Column 6 norm = 2.1941294
Column 7 norm = 0.5413811
Column 8 norm = 0.0683499
Column 9 norm = 2.1795017
STw Eigenvectors Matrix:
    0.0857    0.4464    0.3794   -0.2328    0.0820   -0.5432   -0.4546   -0.2944 ↙
-0.0103
   -0.1711    0.2118   -0.4386    0.1053    0.2986   -0.6361    0.4047    0.2544 ↙
0.0089
   -0.3577   -0.2521   -0.0023    0.0222   -0.2833   -0.2016   -0.0294   -0.1400 ↙
-0.8165
    0.4939   -0.2486    0.0002    0.0987    0.0538   -0.1636    0.4427   -0.6773 ↙
-0.0150
   -0.1357   -0.1036    0.8145    0.1524    0.1265   -0.0920    0.4294    0.2743 ↙
0.0096
    0.3172    0.7127    0.0104    0.2770   -0.1207    0.2943    0.2124    0.0772 ↙
-0.4031
   -0.0585    0.1364   -0.0080   -0.8903    0.0154    0.1661    0.3840   -0.0082 ↙
-0.0995
   -0.5463    0.1853    0.0003    0.1485    0.5676    0.3251    0.0190   -0.4656 ↙
-0.0120
   -0.4131    0.2427    0.0038    0.0991   -0.6841   -0.0675    0.2354   -0.2689 ↙
0.4004

STw Eigenvalues Matrix:
   -0.0000         0         0         0         0         0         0         0 ↙
0
         0   -0.0000         0         0         0         0         0         0 ↙
0
         0         0    0.0000         0         0         0         0         0 ↙
0
         0         0         0    0.0000         0         0         0         0 ↙
0
         0         0         0         0    0.0000         0         0         0 ↙
0
         0         0         0         0         0    0.0000         0         0 ↙
0
         0         0         0         0         0         0    0.0000         0 ↙
0
         0         0         0         0         0         0         0    0.0020 ↙
0
         0         0         0         0         0         0         0         0 ↙
29.6281

STw Correlation Matrix:
    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000    1.0000    1.0000 ↙
```

```
-1.0000
   -1.0000    1.0000   -1.0000   -1.0000    1.0000   -1.0000   -1.0000   -1.0000 ↙
1.0000
    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000    1.0000    1.0000 ↙
-1.0000
    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000    1.0000    1.0000 ↙
-1.0000
   -1.0000    1.0000   -1.0000   -1.0000    1.0000   -1.0000   -1.0000   -1.0000 ↙
1.0000
    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000    1.0000    1.0000 ↙
-1.0000
    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000    1.0000    1.0000 ↙
-1.0000
    1.0000   -1.0000    1.0000    1.0000   -1.0000    1.0000    1.0000    1.0000 ↙
-1.0000
   -1.0000    1.0000   -1.0000   -1.0000    1.0000   -1.0000   -1.0000   -1.0000 ↙
1.0000

Mutant and wt infected cells sensivity matrix:
    0.0045    0.0042    0.0042    1.0308   -0.0002   -0.0001    0.2566    0.5135 ↙
0.5135
    0.0228    0.0210    0.0217    2.9269   -0.0009   -0.0005    0.7258    1.4534 ↙
1.4531
    0.0663    0.0612    0.0638    6.4154   -0.0025   -0.0012    1.5866    3.1779 ↙
3.1766
    0.1561    0.1442    0.1518   12.8309   -0.0059   -0.0020    3.1668    6.3441 ↙
6.3403

Column 1 norm = 0.1712046
Column 2 norm = 0.1581518
Column 3 norm = 0.1661242
Column 4 norm = 14.6771019
Column 5 norm = 0.0064560
Column 6 norm = 0.0024251
Column 7 norm = 3.6247377
Column 8 norm = 7.2610618
Column 9 norm = 7.2570681
STmw Eigenvectors Matrix:
   -0.1046    0.0916   -0.5411   -0.1046    0.4606    0.0812    0.3890    0.5539 ↙
0.0093
   -0.0999    0.1029    0.7560    0.0649   -0.0743    0.0692    0.3625    0.5117 ↙
0.0086
    0.2237   -0.1723   -0.1568    0.0081   -0.3945   -0.5640   -0.3284    0.5603 ↙
0.0090
    0.0007    0.0016    0.0027   -0.0008   -0.0007    0.4212   -0.3756    0.1914 ↙
0.8031
    0.0043   -0.0060    0.1013   -0.9923   -0.0665   -0.0050   -0.0139   -0.0208 ↙
-0.0004
    0.1669   -0.1300    0.3172   -0.0124    0.7888   -0.3218   -0.3586    0.0037 ↙
-0.0001
    0.1008    0.9104   -0.0142   -0.0028   -0.0002   -0.3334    0.0022   -0.1018 ↙
0.1983
   -0.6928   -0.2115   -0.0007    0.0012    0.0025   -0.4961    0.2022   -0.1743 ↙
```

```
0.3973
    0.6411   -0.2467    0.0023    0.0019   -0.0010   -0.1796    0.5466   -0.1987 ↙
0.3971

STmw Eigenvalues Matrix:
   -0.0000         0         0         0         0         0         0         0 ↙
0
         0   -0.0000         0         0         0         0         0         0 ↙
0
         0         0   -0.0000         0         0         0         0         0 ↙
0
         0         0         0    0.0000         0         0         0         0 ↙
0
         0         0         0         0    0.0000         0         0         0 ↙
0
         0         0         0         0         0    0.0000         0         0 ↙
0
         0         0         0         0         0         0    0.0000         0 ↙
0
         0         0         0         0         0         0         0    0.0010 ↙
0
         0         0         0         0         0         0         0         0 ↙
334.0251

STmw Correlation Matrix:
    1.0000    1.0000    1.0000    1.0000   -1.0000   -1.0000    1.0000    1.0000 ↙
1.0000
    1.0000    1.0000    1.0000    1.0000   -1.0000   -1.0000    1.0000    1.0000 ↙
1.0000
    1.0000    1.0000    1.0000    1.0000   -1.0000   -1.0000    1.0000    1.0000 ↙
1.0000
    1.0000    1.0000    1.0000    1.0000   -1.0000   -1.0000    1.0000    1.0000 ↙
1.0000
   -1.0000   -1.0000   -1.0000   -1.0000    1.0000    1.0000   -1.0000   -1.0000 ↙
-1.0000
   -1.0000   -1.0000   -1.0000   -1.0000    1.0000    1.0000   -1.0000   -1.0000 ↙
-1.0000
    1.0000    1.0000    1.0000    1.0000   -1.0000   -1.0000    1.0000    1.0000 ↙
1.0000
    1.0000    1.0000    1.0000    1.0000   -1.0000   -1.0000    1.0000    1.0000 ↙
1.0000
    1.0000    1.0000    1.0000    1.0000   -1.0000   -1.0000    1.0000    1.0000 ↙
1.0000

Mixed sensitivity matrix:
    0.7419   -0.0009   -0.0012   -0.0090   -0.3711   -0.3709   -0.3725   -0.0041 ↙
-0.0039
    0.0027    0.7503   -0.0009    0.0022    0.3738   -0.0018    0.0928   -0.3734 ↙
0.0015
    0.0030   -0.0026    0.7667    0.0023   -0.0028    0.3819    0.0945    0.0024 ↙
-0.3819
    0.0045    0.0042    0.0042    1.0308   -0.0002   -0.0001    0.2566    0.5135 ↙
0.5135
```

```
    1.4676   -0.0036   -0.0048   -0.0452   -0.7350   -0.7350   -0.7442   -0.0208 ↙
-0.0202
    0.0106    1.5027   -0.0034    0.0113    0.7460   -0.0070    0.1846   -0.7444 ↙
0.0073
    0.0120   -0.0104    1.5706    0.0115   -0.0112    0.7793    0.1917    0.0109 ↙
-0.7789
    0.0228    0.0210    0.0217    2.9269   -0.0009   -0.0005    0.7258    1.4534 ↙
1.4531
    2.1772   -0.0084   -0.0114   -0.1312   -1.0919   -1.0924   -1.1210   -0.0614 ↙
-0.0599
    0.0238    2.2570   -0.0078    0.0326    1.1166   -0.0157    0.2769   -1.1103 ↙
0.0202
    0.0273   -0.0237    2.4134    0.0336   -0.0255    1.1931    0.2932    0.0287 ↙
-1.1889
    0.0663    0.0612    0.0638    6.4154   -0.0025   -0.0012    1.5866    3.1779 ↙
3.1766
    2.8701   -0.0158   -0.0216   -0.3082   -1.4418   -1.4434   -1.5130   -0.1462 ↙
-0.1433
    0.0422    3.0136   -0.0138    0.0764    1.4857   -0.0280    0.3723   -1.4660 ↙
0.0451
    0.0493   -0.0426    3.2973    0.0795   -0.0459    1.6241    0.4018    0.0610 ↙
-1.6076
    0.1561    0.1442    0.1518   12.8309   -0.0059   -0.0020    3.1668    6.3441 ↙
6.3403

Column 1 norm = 3.9644729
Column 2 norm = 4.1261015
Column 3 norm = 4.4474825
Column 4 norm = 14.6814939
Column 5 norm = 2.8464525
Column 6 norm = 2.9613815
Column 7 norm = 4.2341701
Column 8 norm = 7.5384898
Column 9 norm = 7.5790718
SS Eigenvectors Matrix:
   -0.0144   -0.0148   -0.5412    0.2297    0.1578    0.6133   -0.2042    0.4596 ↙
-0.0002
    0.0188    0.0055    0.4299    0.2603    0.2039    0.5819    0.5648   -0.2187 ↙
0.0011
   -0.0047    0.0087    0.1114   -0.4907    0.2036    0.4128   -0.5458   -0.4867 ↙
0.0002
    0.0003    0.0007    0.0005    0.0001   -0.5663    0.1875   -0.0144   -0.0613 ↙
0.8001
   -0.6306   -0.1863   -0.5106   -0.2085    0.0217   -0.0154    0.3844   -0.3389 ↙
0.0006
    0.3200   -0.5614   -0.2148    0.5226    0.0221   -0.0997   -0.1710   -0.4728 ↙
0.0002
    0.2826    0.7188   -0.3588    0.1463    0.2726   -0.1348    0.1005   -0.3326 ↙
0.2003
   -0.5233    0.0040    0.2600    0.3493    0.4984   -0.1967   -0.2892    0.0785 ↙
0.3996
    0.3815   -0.3648   -0.0817   -0.4226    0.4978   -0.1125    0.2654    0.2125 ↙
0.4000
```

```
SS Eigenvalues Matrix:
   -0.0000         0         0         0         0         0         0         0 ↙
0
         0   -0.0000         0         0         0         0         0         0 ↙
0
         0         0    0.0000         0         0         0         0         0 ↙
0
         0         0         0    0.0000         0         0         0         0 ↙
0
         0         0         0         0    0.0000         0         0         0 ↙
0
         0         0         0         0         0   19.1945         0         0 ↙
0
         0         0         0         0         0         0   27.7819         0 ↙
0
         0         0         0         0         0         0         0   34.7506 ↙
0
         0         0         0         0         0         0         0         0 ↙
335.4125

SS Correlation Matrix:
    1.0000   -0.1696   -0.1677    0.0562   -0.7857   -0.7432   -0.1555    0.0692 ↙
0.0710
   -0.1696    1.0000   -0.2335   -0.2959    0.7429   -0.0517   -0.2347   -0.3738 ↙
-0.2620
   -0.1677   -0.2335    1.0000   -0.3068   -0.0326    0.7842   -0.2368   -0.2777 ↙
-0.3963
    0.0562   -0.2959   -0.3068    1.0000   -0.2239   -0.2436    0.9762    0.9966 ↙
0.9954
   -0.7857    0.7429   -0.0326   -0.2239    1.0000    0.4724   -0.0417   -0.2817 ↙
-0.2127
   -0.7432   -0.0517    0.7842   -0.2436    0.4724    1.0000   -0.0628   -0.2320 ↙
-0.3136
   -0.1555   -0.2347   -0.2368    0.9762   -0.0417   -0.0628    1.0000    0.9682 ↙
0.9655
    0.0692   -0.3738   -0.2777    0.9966   -0.2817   -0.2320    0.9682    1.0000 ↙
0.9892
    0.0710   -0.2620   -0.3963    0.9954   -0.2127   -0.3136    0.9655    0.9892 ↙
1.0000

>>
```