eclipse1.mat

mean of all points:

-0.0570

0.0206

dxd covariance matrix:

977.3512 -7.6502

-7.6502 953.0263

eigen values:

950.8203

979.5571

dxd eigen vectors matrix:(each column is an eigen vector)

-0.2771 -0.9609

-0.9609 0.2771

eclipse2.mat

mean of all points:

  0.0233

  -0.0488

dxd covariance matrix:

 982.3563 -39.5758

 -39.5758 952.8430

eigen values:

  0.9254

  1.0098

dxd eigen vectors matrix:(each column is an eigen vector)

  -0.5704 -0.8214

  -0.8214 0.5704

eclipse3.mat

mean of all points:

  -0.0073

   0.0233

dxd covariance matrix:

   1.0138   -0.0696

  -0.0696   1.0740

eigen values:

   0.9680

   1.1198

dxd eigen vectors matrix:(each column is an eigen vector)

  -0.8358   -0.5491

  -0.5491   0.8358

3d_sphere.mat

mean of all points:

  0.0121

 -0.0579

  0.0961

dxd covariance matrix:

  1.0468   0.0042 -0.0219

  0.0042   1.0775   0.0151

 -0.0219   0.0151   2.1243

eigen values:

  1.0457

  1.0779

  2.1249

dxd eigen vectors matrix:(each column is an eigen vector)

 -0.9897   0.1414 -0.0203

  0.1412   0.9899   0.0144

 -0.0221 -0.0113   0.9997

bun_zipper.mat

mean of all points:

 -0.0268

 0.0952

 0.0089

dxd covariance matrix:

 60.3912 -20.7503   1.6682

 -20.7503 62.0023 -9.3233

 1.6682 -9.3233 28.5141

eigen values:

 25.5539

 42.2413

 83.1124

dxd eigen vectors matrix:(each column is an eigen vector)

 0.1478   0.7247 -0.6730

 0.3232   0.6078   0.7254

 0.9347 -0.3247 -0.1444

teapot.mat

mean of all points:

  0.0372

  0.0000

  1.7251

dxd covariance matrix:

  1.0108 -0.0000   0.0650

  -0.0000   0.2809 -0.0000

  0.0650 -0.0000   0.4195

eigen values:

  0.2809

  0.4125

  1.0179

dxd eigen vectors matrix:(each column is an eigen vector)

  0.0000   0.1080 -0.9942

  1.0000 -0.0000   0.0000

  -0.0000 -0.9942 -0.1080