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