

## SUPPLEMENTARY INFORMATION

**TABLE 1**

Lmk.	Axis 1 (x)	Axis 2 (y)
1	-0.03783670	-0.52091266
2	-0.04428246	-0.41284693
3	0.06166390	-0.25188701
4	0.03923549	-0.14270075
5	0.09041284	0.15760119
6	0.06302491	0.27264832
7	-0.02150815	0.44504998
8	-0.09129240	0.37025556
9	-0.05941743	0.08279231

## Table 2

[Analysis Information]

Results File : C:\Users\pc\Desktop\CT Scan\H.pcr

Analyzed NEF File : C:\Users\pc\Desktop\CT Scan\H.nef

Title of NEF File Data :

Analyzed Date : Thu Oct 31 12:23:58 2019

Method of Analysis : Covariance

Number of Data : 15

Number of Harmonics : 13

Number of Analyzed Harmonics : 13

Constant Coefficient(s) : a1 b1 c1 d1

Number of Principal Components : 48

( = Number of Analyzed Coefficients (NAC) )

Number of Effective Principal Components : 3

( = Number of Principal Components whose proportion is larger than 1 / NAC )

Analyzed Coefficients : a2 b2 c2 d2 a3 b3 c3 d3 a4 b4 c4 d4 a5 b5 c5 d5 a6 b6 c6 d6 a7 b7 c7 d7 a8 b8 c8 d8 a9 b9 c9 d9 a10 b10 c10 d10 a11 b11 c11 d11 a12 b12 c12 d12 a13 b13 c13 d13

[Mean of Coefficients]

	a	b	c	d
1	1.000000E+000	1.476536E-015	-2.997019E-017	2.786920E-001
2	3.568164E-002	1.690342E-002	-6.924509E-002	-5.726937E-002
3	1.052443E-001	-6.551792E-004	-4.084182E-002	4.458091E-002
4	-7.610641E-003	2.017766E-004	-8.298173E-004	-9.230250E-003
5	3.584668E-002	-8.191792E-003	-1.226705E-002	1.578718E-002
6	-1.055084E-003	8.025541E-003	-2.604191E-003	1.837856E-003
7	9.472845E-003	-4.512973E-003	-6.855071E-005	-7.853716E-004
8	3.293356E-003	1.254415E-003	-3.677300E-003	4.381545E-003
9	5.814094E-003	-8.761646E-004	-9.488359E-004	3.637572E-003
10	5.947916E-004	-1.495663E-003	-3.587736E-004	-1.936014E-003
11	5.087691E-003	-6.027908E-005	-1.218744E-004	5.459388E-003
12	1.573445E-003	-3.656690E-004	-9.472935E-004	1.303021E-004
13	9.893059E-005	-3.005114E-003	8.583969E-004	1.523688E-003

[Std of Coefficients]

	a	b	c	d
1				
2	2.616256E-002	4.669371E-002	2.921225E-002	4.814136E-002
3	1.817503E-002	1.958414E-002	1.402837E-002	1.094414E-002
4	9.088057E-003	1.710740E-002	1.266816E-002	3.774900E-003
5	1.171662E-002	6.432894E-003	5.501503E-003	2.660918E-003

6	8.977702E-003	7.368068E-003	4.665490E-003	7.916463E-003
7	5.384833E-003	4.761012E-003	2.880050E-003	5.651488E-003
8	4.890797E-003	4.738130E-003	4.036766E-003	3.870971E-003
9	2.350457E-003	5.760467E-003	1.231251E-003	3.737654E-003
10	2.945837E-003	4.516463E-003	5.330071E-003	3.565556E-003
11	4.233147E-003	3.008601E-003	6.842823E-003	4.805550E-003
12	3.008682E-003	1.557370E-003	2.557136E-003	3.454455E-003
13	1.156032E-003	3.705262E-003	2.630985E-003	3.548263E-003

[Variance-Covariance Matrix]

	a2	b2	c2	d2	a3
a2	6.844796E-004	3.958140E-004	-6.360802E-004	-1.112986E-003	7.664260E-005
b2	3.958140E-004	2.180303E-003	-7.299316E-004	-6.007287E-005	-2.535845E-004
c2	-6.360802E-004	-7.299316E-004	8.533555E-004	1.140922E-003	-2.130391E-004
d2	-1.112986E-003	-6.007287E-005	1.140922E-003	2.317591E-003	-3.975322E-004
a3	7.664260E-005	-2.535845E-004	-2.130391E-004	-3.975322E-004	3.303318E-004
b3	-1.509125E-004	-6.344240E-004	3.929860E-004	1.771359E-004	-1.086204E-004
c3	-2.167902E-004	2.464576E-004	1.878956E-004	5.694999E-004	-1.295064E-004
d3	3.406852E-005	-3.040674E-004	-7.203148E-005	-2.573616E-004	1.831438E-004
a4	1.573691E-004	3.392518E-004	-2.180056E-004	-2.134115E-004	-1.137174E-005
b4	-2.006261E-005	6.828019E-004	-1.757145E-004	1.967661E-004	-3.868849E-005
c4	-9.396793E-006	-5.464760E-004	1.179919E-004	-1.608175E-004	7.367115E-005
d4	9.859607E-007	-5.700715E-005	-2.854152E-005	-6.596154E-005	3.619505E-005
a5	-4.241453E-005	-5.003506E-004	8.184895E-005	-1.264772E-004	1.334100E-004
b5	-1.227781E-004	-1.699169E-004	1.734885E-004	1.988228E-004	-4.625596E-005
c5	-2.621265E-005	-9.650600E-005	1.021746E-004	7.789027E-005	-6.199589E-005
d5	3.160650E-005	-9.444273E-006	-3.296773E-005	-6.501550E-005	2.286175E-005
a6	8.855359E-005	3.139273E-004	-9.330539E-005	-1.811001E-005	-1.024691E-004

b6 1.041864E-004 2.549422E-004 -1.672815E-004 -1.552914E-004 3.756799E-005  
c6 1.095070E-005 -1.454860E-004 -1.227181E-005 -7.992502E-005 6.474043E-005  
d6 1.803164E-004 7.611788E-005 -1.813715E-004 -3.290016E-004 2.696384E-005  
a7 -3.810038E-005 -1.466524E-004 1.256650E-005 -2.306514E-005 8.022729E-005  
b7 -7.928784E-005 5.196348E-005 7.217437E-005 1.747012E-004 -3.697747E-005  
c7 -2.067711E-005 -7.196750E-005 1.811192E-005 -1.314248E-005 2.469930E-005  
d7 -1.228284E-004 -1.076149E-004 9.356073E-005 1.705396E-004 3.549930E-005  
a8 4.806008E-005 6.319965E-005 1.149207E-006 -1.916957E-005 -6.322650E-005  
b8 -4.355701E-005 1.395212E-004 -9.308112E-006 9.473084E-005 -1.013721E-005  
c8 -2.142235E-005 -1.284839E-004 7.795903E-005 4.409162E-005 -1.493438E-005  
d8 5.432678E-005 7.643125E-005 -9.787471E-005 -1.233578E-004 3.946942E-005  
a9 1.051170E-005 -4.717687E-005 -4.670916E-006 -3.673790E-005 8.033726E-007  
b9 -7.983166E-005 -9.381273E-005 1.424448E-004 1.747457E-004 -5.995340E-005  
c9 -2.175991E-005 -3.044848E-005 1.400195E-005 1.969806E-005 8.593775E-006  
d9 2.269202E-005 -7.604639E-005 2.098383E-005 -4.696199E-005 -2.595825E-005  
a10 -2.931477E-005 7.831470E-006 -5.460896E-006 2.367797E-005 3.439226E-005  
b10 5.925650E-006 1.765099E-004 -6.569643E-005 7.589919E-006 -1.396469E-006  
c10 3.713038E-006 -2.078583E-004 4.930760E-005 -6.132373E-005 2.706631E-005  
d10 -3.906693E-005 3.167979E-005 2.842532E-005 9.534502E-005 -6.661373E-007  
a11 -5.707317E-005 -1.593264E-004 5.686151E-005 3.658368E-005 4.545968E-005  
b11 5.074703E-006 -9.943116E-006 -1.134075E-005 -2.023798E-005 2.562657E-005  
c11 1.592269E-004 4.554755E-005 -1.596881E-004 -3.041659E-004 2.806627E-005  
d11 -3.635026E-005 -1.746685E-004 7.879518E-005 2.132591E-005 2.098492E-006  
a12 1.803835E-005 1.037933E-004 -3.887431E-005 -1.742530E-006 -1.171723E-005  
b12 2.521433E-005 4.195894E-005 -2.601256E-005 -3.255943E-005 -9.991775E-006  
c12 1.071622E-005 -6.720620E-005 -1.283345E-006 -4.104131E-005 2.448644E-005  
d12 3.140017E-005 1.052961E-004 -2.011010E-005 1.463880E-006 -4.681267E-005  
a13 5.697111E-006 -1.122832E-005 -1.189077E-005 -3.061361E-005 1.026224E-005  
b13 6.115529E-005 1.120012E-004 -6.678540E-005 -7.743372E-005 -1.993595E-005

c13 -2.964875E-006 -7.944354E-005 -2.917786E-006 -4.343596E-005 3.967086E-005  
d13 -6.109546E-005 -7.140859E-005 3.601424E-005 6.458559E-005 3.812010E-005

b3 c3 d3 a4 b4

a2 -1.509125E-004 -2.167902E-004 3.406852E-005 1.573691E-004 -2.006261E-005  
b2 -6.344240E-004 2.464576E-004 -3.040674E-004 3.392518E-004 6.828019E-004  
c2 3.929860E-004 1.878956E-004 -7.203148E-005 -2.180056E-004 -1.757145E-004  
d2 1.771359E-004 5.694999E-004 -2.573616E-004 -2.134115E-004 1.967661E-004  
a3 -1.086204E-004 -1.295064E-004 1.831438E-004 -1.137174E-005 -3.868849E-005  
b3 3.835384E-004 -6.569827E-005 -3.422446E-006 -1.246247E-004 -2.532477E-004  
c3 -6.569827E-005 1.967952E-004 -9.681960E-005 -3.617186E-006 1.201141E-004  
d3 -3.422446E-006 -9.681960E-005 1.197743E-004 -2.636905E-005 -8.578250E-005  
a4 -1.246247E-004 -3.617186E-006 -2.636905E-005 8.259278E-005 8.555647E-005  
b4 -2.532477E-004 1.201141E-004 -8.578250E-005 8.555647E-005 2.926631E-004  
c4 1.864052E-004 -1.164346E-004 8.562111E-005 -7.577324E-005 -1.988264E-004  
d4 -1.749520E-005 -1.660160E-005 2.638705E-005 4.180315E-006 -1.364428E-005  
a5 1.118042E-004 -9.506179E-005 1.085885E-004 -6.985416E-005 -1.537187E-004  
b5 9.659260E-005 2.402754E-005 -1.112316E-005 -4.954445E-005 -4.752174E-005  
c5 9.295269E-005 -2.411970E-006 -2.467613E-005 -2.624220E-005 -4.461834E-005  
d5 -1.780740E-005 -7.357205E-006 1.482986E-005 6.705288E-006 -1.387342E-005  
a6 -6.690536E-005 3.896458E-005 -7.446562E-005 6.214430E-005 8.065707E-005  
b6 -8.899446E-005 -2.042840E-005 -2.772896E-006 4.592244E-005 7.942303E-005  
c6 -7.560454E-008 -3.004351E-005 4.511680E-005 -1.575356E-005 -4.123878E-005  
d6 -5.212240E-005 -5.705733E-005 1.931773E-005 5.060334E-005 -2.022600E-005  
a7 7.620984E-007 -1.888354E-005 5.106640E-005 -1.913719E-005 -3.485089E-005  
b7 1.489245E-005 3.585084E-005 -2.961542E-005 -1.339069E-005 3.926757E-005  
c7 2.174600E-005 -1.671087E-005 1.930012E-005 -1.426539E-005 -2.056293E-005  
d7 2.493680E-006 3.374222E-005 2.084165E-005 -3.008391E-005 -1.857031E-006  
a8 2.823071E-005 4.999571E-006 -3.421311E-005 1.580155E-005 -1.286201E-005

b8 -4.938881E-005 3.638909E-005 -1.828095E-005 8.752826E-006 6.879174E-005  
c8 6.552649E-005 -6.967730E-006 1.490853E-006 -2.847617E-005 -4.895754E-005  
d8 -5.589962E-005 -1.834676E-005 1.756549E-005 2.288999E-005 2.379003E-005  
a9 7.211218E-006 -1.173954E-005 5.976547E-006 1.438808E-006 -1.734636E-005  
b9 9.034090E-005 2.111662E-005 -2.755504E-005 -3.572078E-005 -3.092915E-005  
c9 2.240708E-006 6.422886E-007 6.301367E-006 -6.577893E-006 -1.503996E-006  
d9 4.835994E-005 -1.875212E-005 -3.198795E-006 -2.645589E-006 -4.692285E-005  
a10 -1.934725E-005 2.335010E-006 1.390769E-005 -3.464080E-006 1.922450E-005  
b10 -6.591602E-005 1.909402E-005 -1.618250E-005 2.830297E-005 7.138245E-005  
c10 7.085256E-005 -4.111331E-005 3.304972E-005 -3.296999E-005 -8.119634E-005  
d10 -2.530954E-005 3.726226E-005 -4.617281E-006 -5.150828E-006 1.828096E-005  
a11 2.986884E-005 -9.534398E-006 3.317354E-005 -2.711353E-005 -3.947762E-005  
b11 -1.152587E-006 -1.424078E-005 1.193655E-005 -8.620483E-006 5.207973E-006  
c11 -2.491752E-005 -7.185700E-005 1.811591E-005 3.858853E-005 -1.449811E-005  
d11 6.465942E-005 -8.546937E-006 1.741503E-005 -2.447245E-005 -7.114844E-005  
a12 -3.577164E-005 1.438572E-005 -1.496058E-005 2.226562E-005 3.348226E-005  
b12 -6.798823E-006 -5.507065E-006 -7.761038E-006 1.019526E-005 9.561657E-006  
c12 1.091700E-005 -1.985538E-005 1.807678E-005 -1.206349E-005 -2.026351E-005  
d12 -5.521512E-006 9.320390E-006 -3.183457E-005 1.656616E-005 2.566808E-005  
a13 2.251498E-006 -1.198756E-005 6.918510E-006 -3.192420E-007 -3.013175E-006  
b13 -1.938246E-005 -1.343380E-005 -1.785128E-005 2.279895E-005 2.906324E-005  
c13 7.486028E-006 -2.080975E-005 2.707019E-005 -9.647487E-006 -2.258955E-005  
d13 -5.595594E-006 8.984552E-006 2.226915E-005 -1.831246E-005 -1.635786E-006

c4 d4 a5 b5 c5

a2 -9.396793E-006 9.859607E-007 -4.241453E-005 -1.227781E-004 -2.621265E-005  
b2 -5.464760E-004 -5.700715E-005 -5.003506E-004 -1.699169E-004 -9.650600E-005  
c2 1.179919E-004 -2.854152E-005 8.184895E-005 1.734885E-004 1.021746E-004  
d2 -1.608175E-004 -6.596154E-005 -1.264772E-004 1.988228E-004 7.789027E-005

a3 7.367115E-005 3.619505E-005 1.334100E-004 -4.625596E-005 -6.199589E-005  
b3 1.864052E-004 -1.749520E-005 1.118042E-004 9.659260E-005 9.295269E-005  
c3 -1.164346E-004 -1.660160E-005 -9.506179E-005 2.402754E-005 -2.411970E-006  
d3 8.562111E-005 2.638705E-005 1.085885E-004 -1.112316E-005 -2.467613E-005  
a4 -7.577324E-005 4.180315E-006 -6.985416E-005 -4.954445E-005 -2.624220E-005  
b4 -1.988264E-004 -1.364428E-005 -1.537187E-004 -4.752174E-005 -4.461834E-005  
c4 1.604824E-004 1.129358E-005 1.347972E-004 3.529470E-005 3.064669E-005  
d4 1.129358E-005 1.424987E-005 1.918540E-005 -5.748679E-006 -1.215499E-005  
a5 1.347972E-004 1.918540E-005 1.372792E-004 2.304860E-005 6.383224E-006  
b5 3.529470E-005 -5.748679E-006 2.304860E-005 4.138213E-005 2.408868E-005  
c5 3.064669E-005 -1.215499E-005 6.383224E-006 2.408868E-005 3.026653E-005  
d5 3.267877E-006 5.084056E-006 7.278446E-006 -7.337759E-006 -7.981010E-006  
a6 -7.948770E-005 -7.962692E-006 -9.093172E-005 -2.578135E-005 -4.549395E-007  
b6 -4.891421E-005 -5.056131E-006 -3.802738E-005 -3.532630E-005 -1.998983E-005  
c6 3.590961E-005 9.429622E-006 4.384090E-005 -1.852361E-006 -7.371965E-006  
d6 -2.816370E-007 1.249316E-005 -5.556215E-006 -3.601422E-005 -1.613473E-005  
a7 3.249111E-005 1.270664E-005 4.798904E-005 1.390226E-006 -1.305384E-005  
b7 -2.028181E-005 -1.119277E-005 -2.075644E-005 1.392836E-005 9.573957E-006  
c7 2.170158E-005 2.968080E-006 2.311000E-005 7.904333E-006 2.763878E-007  
d7 7.409690E-006 6.075942E-006 2.607829E-005 1.544512E-005 -7.185756E-006  
a8 -7.510655E-006 -7.746982E-006 -2.590677E-005 -9.380395E-007 1.370564E-005  
b8 -4.389369E-005 -3.005582E-006 -3.085711E-005 -7.955531E-007 -1.008228E-005  
c8 3.532380E-005 -6.649851E-006 2.325157E-005 1.802060E-005 1.835671E-005  
d8 -1.463262E-005 7.414713E-006 -3.908132E-006 -1.837204E-005 -1.799549E-005  
a9 1.152464E-005 5.501083E-006 8.719442E-006 -1.585911E-006 6.018426E-007  
b9 2.210886E-005 -1.379524E-005 4.211643E-006 3.042213E-005 2.848876E-005  
c9 4.753628E-006 2.205171E-006 7.790158E-006 3.372861E-006 -1.144786E-006  
d9 2.590122E-005 1.672069E-006 1.031022E-005 5.734027E-006 1.185018E-005  
a10 -4.968654E-006 2.044925E-006 7.043489E-006 -1.915174E-006 -8.879790E-006

b10 -4.806359E-005 5.636349E-007 -3.654259E-005 -1.593134E-005 -1.474424E-005  
c10 6.197090E-005 1.673530E-006 5.139704E-005 1.639801E-005 1.274666E-005  
d10 -1.927614E-005 -1.953306E-006 -9.346697E-006 4.248116E-006 -6.034241E-006  
a11 3.497916E-005 6.951835E-006 4.203857E-005 1.053985E-005 -1.123330E-006  
b11 7.182992E-006 -3.720799E-006 1.019235E-005 4.626105E-007 -7.893122E-008  
c11 1.145902E-005 7.412174E-006 2.406895E-006 -3.076807E-005 -6.915178E-006  
d11 4.354436E-005 5.482797E-006 3.642450E-005 1.722455E-005 9.245585E-006  
a12 -2.885250E-005 3.928617E-007 -2.494524E-005 -1.267443E-005 -6.760767E-006  
b12 -7.141882E-006 -9.939195E-007 -1.055032E-005 -5.478652E-006 5.760911E-007  
c12 2.061008E-005 3.320091E-007 2.027886E-005 2.687165E-006 1.506071E-006  
d12 -2.290821E-005 -7.480195E-006 -3.209460E-005 -4.681351E-006 6.641446E-006  
a13 5.923657E-006 1.695660E-006 5.764199E-006 -6.311746E-007 -1.175234E-006  
b13 -1.886743E-005 -4.470960E-006 -2.561045E-005 -1.269504E-005 9.427887E-007  
c13 2.224276E-005 5.486935E-006 2.712324E-005 8.557700E-007 -3.889709E-006  
d13 8.608800E-006 4.997582E-006 2.170724E-005 6.957787E-006 -7.353254E-006

d5 a6 b6 c6 d6

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b9 8.317824E-008 6.292496E-006 -4.160001E-006 -1.239969E-005 9.822712E-006  
c9 1.515978E-006 -1.296018E-006 1.844837E-006 -4.083747E-007 1.217704E-006  
d9 -1.296018E-006 1.397006E-005 -8.513318E-006 -1.002740E-005 8.434584E-006  
a10 1.844837E-006 -8.513318E-006 8.677954E-006 5.742744E-006 -2.667734E-006  
b10 -4.083747E-007 -1.002740E-005 5.742744E-006 2.039844E-005 -2.168295E-005  
c10 1.217704E-006 8.434584E-006 -2.667734E-006 -2.168295E-005 2.840966E-005  
d10 5.559472E-007 -7.640297E-006 2.994898E-006 1.362638E-006 -2.904858E-006

a11	3.405371E-006	-2.451199E-008	5.793138E-006	-9.325606E-006	1.262520E-005
b11	7.651668E-007	-6.328043E-006	4.419736E-006	-4.564702E-007	5.133190E-006
c11	-3.566874E-006	9.730731E-006	-6.825688E-006	2.370198E-006	5.655533E-007
d11	1.150293E-006	1.141488E-005	-2.961337E-006	-1.659109E-005	1.723775E-005
a12	-1.558463E-006	-1.421319E-006	-8.544421E-008	1.009380E-005	-1.421812E-005
b12	-1.134610E-006	1.310628E-006	-1.943946E-006	3.155857E-006	-3.860034E-006
c12	9.409969E-007	-7.887225E-007	5.591558E-007	-6.657015E-006	1.054899E-005
d12	-2.718719E-006	2.381742E-006	-5.581895E-006	5.711092E-006	-9.835272E-006
a13	4.888767E-007	-6.513215E-008	1.126472E-006	3.672756E-007	1.779373E-006
b13	-2.476121E-006	5.344432E-007	-3.283127E-006	8.337837E-006	-9.038728E-006
c13	1.638951E-006	-7.023283E-007	3.942611E-006	-4.402507E-006	8.917291E-006
d13	3.551155E-006	-7.176014E-006	7.744541E-006	-1.132402E-006	3.900401E-006

d10	a11	b11	c11	d11
-----	-----	-----	-----	-----

a2	-3.906693E-005	-5.707317E-005	5.074703E-006	1.592269E-004	-3.635026E-005
b2	3.167979E-005	-1.593264E-004	-9.943116E-006	4.554755E-005	-1.746685E-004
c2	2.842532E-005	5.686151E-005	-1.134075E-005	-1.596881E-004	7.879518E-005
d2	9.534502E-005	3.658368E-005	-2.023798E-005	-3.041659E-004	2.132591E-005
a3	-6.661373E-007	4.545968E-005	2.562657E-005	2.806627E-005	2.098492E-006
b3	-2.530954E-005	2.986884E-005	-1.152587E-006	-2.491752E-005	6.465942E-005
c3	3.726226E-005	-9.534398E-006	-1.424078E-005	-7.185700E-005	-8.546937E-006
d3	-4.617281E-006	3.317354E-005	1.193655E-005	1.811591E-005	1.741503E-005
a4	-5.150828E-006	-2.711353E-005	-8.620483E-006	3.858853E-005	-2.447245E-005
b4	1.828096E-005	-3.947762E-005	5.207973E-006	-1.449811E-005	-7.114844E-005
c4	-1.927614E-005	3.497916E-005	7.182992E-006	1.145902E-005	4.354436E-005
d4	-1.953306E-006	6.951835E-006	-3.720799E-006	7.412174E-006	5.482797E-006
a5	-9.346697E-006	4.203857E-005	1.019235E-005	2.406895E-006	3.642450E-005
b5	4.248116E-006	1.053985E-005	4.626105E-007	-3.076807E-005	1.722455E-005
c5	-6.034241E-006	-1.123330E-006	-7.893122E-008	-6.915178E-006	9.245585E-006

d5 2.422514E-006 2.151709E-006 -1.823414E-006 5.726668E-006 4.131009E-006  
a6 -4.883222E-006 -3.259118E-005 -1.429479E-005 2.053419E-005 -2.172613E-005  
b6 -2.770490E-006 -1.466871E-005 8.467300E-006 2.105544E-005 -2.612095E-005  
c6 5.839029E-007 1.278925E-005 3.960320E-006 4.890620E-006 7.623944E-006  
d6 -1.043368E-005 -1.182063E-005 -7.370768E-006 4.727610E-005 -1.417409E-006  
a7 3.487965E-006 2.045978E-005 2.664617E-006 -5.953133E-006 1.257104E-005  
b7 3.434884E-006 -2.258904E-006 3.741708E-006 -2.143775E-005 -7.881854E-006  
c7 -2.691075E-007 7.715196E-006 4.088271E-006 -3.933010E-006 5.988319E-006  
d7 1.120485E-005 1.866937E-005 8.712914E-007 -2.941878E-005 9.445723E-006  
a8 -5.034945E-006 -1.141609E-005 -7.935939E-006 9.283152E-006 3.491999E-006  
b8 7.824126E-006 -6.409079E-006 3.406551E-006 -1.370202E-005 -1.443469E-005  
c8 -7.657416E-007 5.737278E-006 2.710212E-006 -7.728771E-006 1.069318E-005  
d8 -1.771066E-007 -3.217293E-006 1.925647E-006 1.400354E-005 -7.650897E-006  
a9 -4.576140E-006 1.341966E-006 -3.938363E-006 7.855226E-006 3.837793E-006  
b9 -1.007538E-008 3.289472E-006 8.570821E-007 -2.219569E-005 9.464770E-006  
c9 5.559472E-007 3.405371E-006 7.651668E-007 -3.566874E-006 1.150293E-006  
d9 -7.640297E-006 -2.451199E-008 -6.328043E-006 9.730731E-006 1.141488E-005  
a10 2.994898E-006 5.793138E-006 4.419736E-006 -6.825688E-006 -2.961337E-006  
b10 1.362638E-006 -9.325606E-006 -4.564702E-007 2.370198E-006 -1.659109E-005  
c10 -2.904858E-006 1.262520E-005 5.133190E-006 5.655533E-007 1.723775E-005  
d10 1.271319E-005 1.628728E-006 5.213928E-007 -1.754249E-005 -4.344681E-007  
a11 1.628728E-006 1.791953E-005 1.622827E-006 -1.056827E-005 1.350061E-005  
b11 5.213928E-007 1.622827E-006 9.051679E-006 -1.288365E-006 -5.301631E-006  
c11 -1.754249E-005 -1.056827E-005 -1.288365E-006 4.682422E-005 -6.556222E-006  
d11 -4.344681E-007 1.350061E-005 -5.301631E-006 -6.556222E-006 2.309331E-005  
a12 -5.772909E-007 -6.520995E-006 -4.719911E-006 5.355798E-006 -6.725420E-006  
b12 -3.369031E-006 -5.160401E-006 -8.497264E-007 7.273307E-006 -4.291910E-006  
c12 -2.810089E-007 4.059032E-006 5.551599E-006 1.590914E-006 1.393544E-006  
d12 -3.563418E-006 -1.318389E-005 -2.343461E-006 6.598141E-006 -8.923995E-006



a13 -2.131234E-006 8.544567E-007 1.526619E-006 3.260181E-006 -3.595089E-007  
b13 -7.047504E-006 -1.317840E-005 8.653421E-007 1.618065E-005 -1.287198E-005  
c13 -6.990335E-007 8.815812E-006 3.107675E-006 1.217498E-006 5.769952E-006  
d13 6.473255E-006 1.180943E-005 3.459089E-006 -1.458101E-005 3.782730E-006

a12 b12 c12 d12 a13

a2 1.803835E-005 2.521433E-005 1.071622E-005 3.140017E-005 5.697111E-006  
b2 1.037933E-004 4.195894E-005 -6.720620E-005 1.052961E-004 -1.122832E-005  
c2 -3.887431E-005 -2.601256E-005 -1.283345E-006 -2.011010E-005 -1.189077E-005  
d2 -1.742530E-006 -3.255943E-005 -4.104131E-005 1.463880E-006 -3.061361E-005  
a3 -1.171723E-005 -9.991775E-006 2.448644E-005 -4.681267E-005 1.026224E-005  
b3 -3.577164E-005 -6.798823E-006 1.091700E-005 -5.521512E-006 2.251498E-006  
c3 1.438572E-005 -5.507065E-006 -1.985538E-005 9.320390E-006 -1.198756E-005  
d3 -1.496058E-005 -7.761038E-006 1.807678E-005 -3.183457E-005 6.918510E-006  
a4 2.226562E-005 1.019526E-005 -1.206349E-005 1.656616E-005 -3.192420E-007  
b4 3.348226E-005 9.561657E-006 -2.026351E-005 2.566808E-005 -3.013175E-006  
c4 -2.885250E-005 -7.141882E-006 2.061008E-005 -2.290821E-005 5.923657E-006  
d4 3.928617E-007 -9.939195E-007 3.320091E-007 -7.480195E-006 1.695660E-006  
a5 -2.494524E-005 -1.055032E-005 2.027886E-005 -3.209460E-005 5.764199E-006  
b5 -1.267443E-005 -5.478652E-006 2.687165E-006 -4.681351E-006 -6.311746E-007  
c5 -6.760767E-006 5.760911E-007 1.506071E-006 6.641446E-006 -1.175234E-006  
d5 1.824221E-007 -1.015666E-006 1.065169E-006 -4.129995E-006 -1.845755E-007  
a6 2.150797E-005 1.118278E-005 -1.576226E-005 2.730013E-005 -4.216227E-006  
b6 1.060526E-005 5.821608E-006 -2.523911E-006 7.665089E-006 2.326191E-006  
c6 -7.497644E-006 -3.680174E-006 8.887687E-006 -1.225522E-005 1.588631E-006  
d6 7.510039E-006 6.031978E-006 -4.899432E-007 4.168313E-006 1.708237E-006  
a7 -5.844594E-006 -5.923827E-006 5.083274E-006 -1.800115E-005 1.975588E-006  
b7 3.728544E-007 -1.248813E-007 -2.990625E-006 5.057273E-006 -9.453517E-007  
c7 -5.980879E-006 -2.487950E-006 3.665647E-006 -6.993302E-006 2.039286E-006

d7 -3.996838E-006 -7.367389E-006 5.683530E-007 -1.439085E-005 -8.199827E-007  
a8 5.382809E-006 3.930233E-006 -6.303163E-006 1.175049E-005 -2.428165E-006  
b8 3.931645E-006 -1.134396E-007 -3.700204E-006 2.659714E-006 1.227513E-007  
c8 -8.741346E-006 -2.318163E-006 5.213781E-006 -1.709021E-006 -8.113750E-007  
d8 3.297861E-006 1.200764E-006 5.183564E-007 -2.147502E-006 2.107468E-006  
a9 5.731124E-007 8.510329E-007 -1.071434E-007 -2.128117E-007 2.413334E-007  
b9 -7.106353E-006 -1.737714E-006 2.756249E-007 3.548248E-006 -1.878117E-006  
c9 -1.558463E-006 -1.134610E-006 9.409969E-007 -2.718719E-006 4.888767E-007  
d9 -1.421319E-006 1.310628E-006 -7.887225E-007 2.381742E-006 -6.513215E-008  
a10 -8.544421E-008 -1.943946E-006 5.591558E-007 -5.581895E-006 1.126472E-006  
b10 1.009380E-005 3.155857E-006 -6.657015E-006 5.711092E-006 3.672756E-007  
c10 -1.421812E-005 -3.860034E-006 1.054899E-005 -9.835272E-006 1.779373E-006  
d10 -5.772909E-007 -3.369031E-006 -2.810089E-007 -3.563418E-006 -2.131234E-006  
a11 -6.520995E-006 -5.160401E-006 4.059032E-006 -1.318389E-005 8.544567E-007  
b11 -4.719911E-006 -8.497264E-007 5.551599E-006 -2.343461E-006 1.526619E-006  
c11 5.355798E-006 7.273307E-006 1.590914E-006 6.598141E-006 3.260181E-006  
d11 -6.725420E-006 -4.291910E-006 1.393544E-006 -8.923995E-006 -3.595089E-007  
a12 9.052170E-006 2.692812E-006 -6.347690E-006 5.518362E-006 -1.262976E-006  
b12 2.692812E-006 2.425402E-006 -1.377001E-006 4.426030E-006 1.718117E-007  
c12 -6.347690E-006 -1.377001E-006 6.538945E-006 -4.245003E-006 1.217324E-006  
d12 5.518362E-006 4.426030E-006 -4.245003E-006 1.193326E-005 -1.168160E-006  
a13 -1.262976E-006 1.718117E-007 1.217324E-006 -1.168160E-006 1.336410E-006  
b13 5.200468E-006 5.434472E-006 -1.982448E-006 1.056873E-005 8.502893E-007  
c13 -4.248557E-006 -2.349795E-006 4.024707E-006 -7.999289E-006 1.565421E-006  
d13 -4.339901E-006 -4.596700E-006 3.015667E-006 -1.048268E-005 6.499612E-007

b13 c13 d13

a2 6.115529E-005 -2.964875E-006 -6.109546E-005

b2 1.120012E-004 -7.944354E-005 -7.140859E-005

c2 -6.678540E-005 -2.917786E-006 3.601424E-005  
d2 -7.743372E-005 -4.343596E-005 6.458559E-005  
a3 -1.993595E-005 3.967086E-005 3.812010E-005  
b3 -1.938246E-005 7.486028E-006 -5.595594E-006  
c3 -1.343380E-005 -2.080975E-005 8.984552E-006  
d3 -1.785128E-005 2.707019E-005 2.226915E-005  
a4 2.279895E-005 -9.647487E-006 -1.831246E-005  
b4 2.906324E-005 -2.258955E-005 -1.635786E-006  
c4 -1.886743E-005 2.224276E-005 8.608800E-006  
d4 -4.470960E-006 5.486935E-006 4.997582E-006  
a5 -2.561045E-005 2.712324E-005 2.170724E-005  
b5 -1.269504E-005 8.557700E-007 6.957787E-006  
c5 9.427887E-007 -3.889709E-006 -7.353254E-006  
d5 -3.173445E-006 2.778931E-006 8.807870E-007  
a6 2.365457E-005 -2.023850E-005 -2.460581E-005  
b6 1.728449E-005 -1.938310E-006 -6.438963E-006  
c6 -8.468382E-006 9.154030E-006 8.916889E-006  
d6 1.175292E-005 9.036155E-007 -1.478496E-005  
a7 -1.477579E-005 1.238879E-005 1.536218E-005  
b7 1.522210E-006 -5.306772E-006 2.379176E-006  
c7 -5.150611E-006 6.089334E-006 5.727584E-006  
d7 -1.774583E-005 6.553854E-006 1.850195E-005  
a8 7.201573E-006 -7.583302E-006 -1.504039E-005  
b8 2.737612E-006 -3.588275E-006 4.488010E-006  
c8 -5.194609E-006 1.538467E-006 8.323154E-008  
d8 3.879412E-006 3.051427E-006 7.220810E-007  
a9 1.724133E-007 5.478782E-007 -1.635274E-006  
b9 -4.144368E-006 -3.841313E-006 -1.174279E-006  
c9 -2.476121E-006 1.638951E-006 3.551155E-006

d9 5.344432E-007 -7.023283E-007 -7.176014E-006  
a10 -3.283127E-006 3.942611E-006 7.744541E-006  
b10 8.337837E-006 -4.402507E-006 -1.132402E-006  
c10 -9.038728E-006 8.917291E-006 3.900401E-006  
d10 -7.047504E-006 -6.990335E-007 6.473255E-006  
a11 -1.317840E-005 8.815812E-006 1.180943E-005  
b11 8.653421E-007 3.107675E-006 3.459089E-006  
c11 1.618065E-005 1.217498E-006 -1.458101E-005  
d11 -1.287198E-005 5.769952E-006 3.782730E-006  
a12 5.200468E-006 -4.248557E-006 -4.339901E-006  
b12 5.434472E-006 -2.349795E-006 -4.596700E-006  
c12 -1.982448E-006 4.024707E-006 3.015667E-006  
d12 1.056873E-005 -7.999289E-006 -1.048268E-005  
a13 8.502893E-007 1.565421E-006 6.499612E-007  
b13 1.372897E-005 -5.428410E-006 -1.012563E-005  
c13 -5.428410E-006 6.922081E-006 5.833927E-006  
d13 -1.012563E-005 5.833927E-006 1.259017E-005

[Eigenvalue and Proportion]

	Eigenvalue	Proportion(%)	Cumulative(%)	> 1/48
Prin1	4.255567E-003	50.0252	50.0252	*
Prin2	3.234551E-003	38.0229	88.0481	*
Prin3	6.776270E-004	7.9657	96.0138	*
Prin4	1.490994E-004	1.7527	97.7665	
Prin5	8.346677E-005	0.9812	98.7477	
Prin6	6.029648E-005	0.7088	99.4565	
Prin7	3.643179E-005	0.4283	99.8847	
Prin8	4.328583E-006	0.0509	99.9356	

Prin9	3.562860E-006	0.0419	99.9775
Prin10	1.550367E-006	0.0182	99.9957
Prin11	3.644837E-007	0.0043	100.0000
Prin12	6.392273E-019	0.0000	100.0000
Prin13	2.347725E-019	0.0000	100.0000
Prin14	1.936656E-019	0.0000	100.0000
Prin15	1.796672E-019	0.0000	100.0000
Prin16	1.293409E-019	0.0000	100.0000
Prin17	5.996986E-020	0.0000	100.0000
Prin18	3.307493E-020	0.0000	100.0000
Prin19	2.549286E-020	0.0000	100.0000
Prin20	1.749567E-020	0.0000	100.0000
Prin21	1.425483E-020	0.0000	100.0000
Prin22	1.176414E-020	0.0000	100.0000
Prin23	8.222182E-021	0.0000	100.0000
Prin24	7.203010E-021	0.0000	100.0000
Prin25	5.663147E-021	0.0000	100.0000
Prin26	3.932221E-021	0.0000	100.0000
Prin27	3.216641E-021	0.0000	100.0000
Prin28	2.074291E-021	0.0000	100.0000
Prin29	8.121990E-022	0.0000	100.0000
Prin30	-2.675028E-022	0.0000	100.0000
Prin31	-5.298497E-022	0.0000	100.0000
Prin32	-1.295187E-021	0.0000	100.0000
Prin33	-2.155463E-021	0.0000	100.0000
Prin34	-3.629328E-021	0.0000	100.0000
Prin35	-4.764233E-021	0.0000	100.0000
Prin36	-5.166001E-021	0.0000	100.0000
Prin37	-7.483024E-021	0.0000	100.0000

Prin38	-1.112258E-020	0.0000	100.0000
Prin39	-1.473995E-020	0.0000	100.0000
Prin40	-2.011256E-020	0.0000	100.0000
Prin41	-2.327609E-020	0.0000	100.0000
Prin42	-3.193379E-020	0.0000	100.0000
Prin43	-6.312680E-020	0.0000	100.0000
Prin44	-8.761201E-020	0.0000	100.0000
Prin45	-1.175085E-019	0.0000	100.0000
Prin46	-1.969681E-019	0.0000	100.0000
Prin47	-5.001293E-019	0.0000	100.0000
Prin48	-1.201318E-018	0.0000	100.0000

Total Variance : 8.506846E-003

[Eigenvectors]

	a2	b2	c2	d2	a3
Prin1	3.597658E-001	4.117374E-001	-4.397081E-001	-6.090601E-001	7.268509E-002
Prin2	1.140980E-001	-6.662519E-001	-1.105019E-002	-4.724818E-001	1.671098E-001
Prin3	2.857398E-001	8.263482E-002	1.992790E-001	-1.113070E-001	-5.464595E-001
Prin4	1.522859E-001	-2.466349E-001	-2.359305E-002	8.525957E-002	-1.653977E-001
Prin5	5.734311E-001	1.426484E-001	1.199857E-001	1.923513E-001	2.500661E-001
Prin6	-2.760119E-001	3.558388E-001	1.526235E-001	-1.919128E-001	2.335581E-002
Prin7	1.221813E-001	9.141786E-003	-3.988182E-002	2.367304E-001	3.929655E-001
Prin8	-1.842166E-001	3.966676E-002	3.952974E-002	-6.216105E-002	1.317146E-001
Prin9	-9.348803E-002	4.329897E-002	-3.620242E-001	9.470359E-002	6.995836E-002
Prin10	1.118674E-001	1.369756E-001	1.473191E-001	5.775543E-002	2.623668E-001
Prin11	-7.734012E-002	-4.025326E-002	-1.724032E-001	1.536793E-001	-1.975917E-001
Prin12	0.000000E+000	7.226767E-002	4.791851E-001	-2.082254E-001	1.842111E-001

Prin13 0.000000E+000-1.646116E-001-2.809857E-002-1.255960E-001 1.480307E-001  
Prin14 5.211586E-001 -9.583524E-002 5.357701E-002 1.966425E-001 -1.202580E-001  
Prin15 0.000000E+000 9.326853E-002 1.762334E-001 1.459943E-001 -7.011116E-002  
Prin16 0.000000E+000 1.856611E-002 1.456862E-001 -3.332051E-002 1.447858E-001  
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Prin20 0.000000E+000 4.137627E-002 -4.280500E-003 -2.404852E-002 -3.362892E-002  
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Prin27 0.000000E+000 1.237401E-002 1.895221E-002 -2.080377E-003 -6.370069E-004  
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Prin31 0.000000E+000 2.121910E-002 4.795556E-003 -2.426533E-005 -5.681477E-003  
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Prin46 0.000000E+000 8.677207E-002 -3.783952E-002 -1.558509E-002 -1.747306E-001  
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Prin1 -1.817120E-001 -9.864343E-002 1.789106E-002 1.186139E-001 8.124172E-002  
Prin2 1.669286E-001 -1.995308E-001 1.504389E-001 -6.298276E-002 -2.578326E-001  
Prin3 4.200390E-001 -4.008349E-002 -2.559573E-001 2.483914E-002 -2.077681E-001  
Prin4 -4.261492E-001 3.688287E-001 -1.552046E-002 1.605917E-001 -2.062171E-001  
Prin5 -6.108544E-002 2.033311E-001 5.262486E-002 -1.788749E-001 -2.250498E-001  
Prin6 2.384176E-001 1.278011E-001 9.088972E-002 1.124276E-001 -3.891667E-001  
Prin7 2.277623E-001 -8.504833E-002 -6.470694E-004 2.111641E-001 -7.271179E-002  
Prin8 -5.882876E-002 -1.957295E-001 -9.693950E-002 -1.410384E-001 -2.463475E-001  
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Prin14 1.608516E-001 -1.158270E-001 8.121646E-002 1.036723E-001 8.316123E-002  
Prin15 -4.823882E-002 -8.803207E-002 2.106468E-002 1.862138E-001 -6.484414E-002  
Prin16 3.796951E-002 -8.068840E-002 -1.902404E-001 -2.309007E-001 2.170658E-001  
Prin17 6.676127E-002 5.812018E-002 7.158580E-002 -3.081492E-001 1.226161E-001  
Prin18 2.669673E-002 -4.517544E-002 -4.927293E-002 -9.631236E-002 -3.362347E-001  
Prin19 -1.294200E-001 -6.855947E-002 -7.128003E-003 -1.191451E-001 1.811946E-002  
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Prin26 1.489313E-005 5.367640E-003 -1.471301E-002 1.326079E-002 1.760301E-002  
Prin27 -2.564610E-002 -3.468594E-003 -1.258744E-002 3.931020E-003 5.898318E-002  
Prin28 -7.993270E-003 -1.010705E-002 -2.117846E-002 1.088758E-002 6.763759E-002  
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Prin30 4.622846E-002 -1.095796E-002 -4.102899E-003 4.034089E-002 3.183475E-002  
Prin31 7.335016E-002 2.275224E-002 1.647117E-002 -3.505299E-002 3.798646E-003  
Prin32 2.997081E-002 6.284328E-003 1.954740E-002 1.375820E-002 -5.552079E-002  
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Prin34 -8.167249E-002 8.823909E-003 -2.422216E-002 1.742730E-002 -9.346578E-002  
Prin35 1.271702E-002 2.092038E-002 -7.076116E-003 1.160112E-002 2.121583E-002  
Prin36 -4.074188E-002 -1.442219E-002 -3.173221E-002 1.626429E-002 -7.813873E-003  
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Prin42 -4.318652E-002 -1.091197E-002 6.403927E-002 -3.908926E-002 -6.794954E-002  
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Prin1	-6.227993E-002	8.832175E-003	-5.627581E-002	-8.749855E-002	-4.312594E-002
Prin2	2.069467E-001	2.931262E-002	1.846667E-001	1.181938E-002	1.485633E-002
Prin3	6.181029E-002	-7.041029E-002	-1.291226E-001	6.302467E-002	1.638759E-001
Prin4	-1.372393E-001	1.328246E-001	-7.382653E-002	-9.104750E-002	-1.134626E-001
Prin5	1.220727E-002	-2.262744E-001	3.882593E-002	-6.236804E-003	5.640714E-002
Prin6	-1.126022E-003	1.037732E-001	1.416049E-002	9.904861E-002	-1.357779E-001
Prin7	2.494826E-002	-4.281585E-002	5.307344E-002	-3.203608E-001	2.079051E-002
Prin8	-3.923080E-002	7.282646E-002	-5.070807E-001	-2.573352E-002	-8.794166E-002
Prin9	3.167445E-002	-1.851689E-001	4.865836E-002	1.492169E-002	-1.588377E-001
Prin10	-5.610356E-002	6.503245E-002	1.281872E-001	2.102741E-001	-9.247567E-003
Prin11	-8.441156E-002	1.434856E-001	-7.464071E-003	-2.097850E-001	-1.064997E-001
Prin12	-4.318786E-002	6.644971E-002	-9.532923E-002	-1.258587E-002	3.251738E-002
Prin13	1.161236E-001	2.132464E-001	-8.507995E-002	2.265330E-001	4.576058E-002
Prin14	-2.464726E-002	3.011048E-001	-1.560117E-001	1.016023E-001	-2.424234E-001
Prin15	2.806633E-001	2.098111E-001	1.010019E-001	-2.199071E-001	-5.895844E-002
Prin16	2.227112E-001	1.491742E-002	-2.667194E-001	-1.177544E-001	-5.530114E-001
Prin17	6.387544E-002	2.030484E-001	-5.057584E-002	-2.671218E-001	3.673212E-001
Prin18	-7.234236E-002	7.218399E-002	-5.732541E-004	-6.874260E-002	6.896950E-002
Prin19	-1.090369E-001	3.303399E-001	-5.924011E-002	8.775714E-002	1.610803E-001
Prin20	1.047998E-001	2.137193E-001	3.176952E-002	1.553395E-001	2.010563E-002
Prin21	-1.361634E-001	-4.946825E-002	-2.656344E-002	-3.851267E-002	-1.147472E-001
Prin22	-1.883574E-001	-1.871335E-001	-2.424702E-002	2.494286E-001	5.226378E-002
Prin23	1.895280E-001	-4.806729E-003	-8.821664E-002	-1.914526E-001	1.757412E-001
Prin24	1.628563E-002	6.559126E-002	-7.187536E-003	3.858469E-002	-1.545018E-001
Prin25	-2.205736E-002	-6.391007E-003	-2.708725E-002	1.022290E-001	-6.911249E-002
Prin26	1.388718E-001	1.633272E-001	3.683782E-002	-8.819279E-002	-1.012776E-001
Prin27	2.690439E-002	3.411175E-003	3.913056E-002	5.866675E-003	-1.365651E-001
Prin28	4.778174E-002	-1.836102E-002	1.423630E-002	-4.139236E-002	1.060518E-002

Prin29 1.570244E-002 -7.075744E-002 5.515070E-003 -3.535990E-002 4.383973E-002  
Prin30 1.851094E-002 -1.186680E-002 -2.804787E-002 -5.509865E-002 -6.231672E-003  
Prin31 5.596203E-003 -7.477204E-002 -9.807515E-003 1.747234E-003 3.885557E-002  
Prin32 9.034668E-003 8.777443E-002 -7.550530E-003 7.509354E-003 -8.599366E-003  
Prin33 -7.955135E-002 6.326803E-002 4.357656E-002 1.089589E-002 2.603568E-002  
Prin34 -1.502300E-001 -1.184474E-001 6.177818E-003 1.787325E-001 -1.328773E-002  
Prin35 3.489947E-002 3.805022E-002 3.830227E-002 1.108641E-001 -1.032811E-001  
Prin36 -3.696746E-002 -5.705246E-002 -3.523245E-002 7.514845E-002 -4.496164E-002  
Prin37 -9.119317E-002 1.568199E-001 -1.663712E-003 2.813143E-002 -1.025375E-002  
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Prin39 9.778447E-002 -1.837133E-001 4.393698E-002 3.557483E-002 -1.204586E-001  
Prin40 -1.516531E-001 1.224965E-001 -2.862604E-002 -1.137992E-001 -1.962699E-001  
Prin41 -3.805878E-002 -2.137928E-001 5.682088E-002 2.092493E-002 -2.190237E-001  
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Prin1 1.645682E-002 6.128030E-002 8.704461E-002 -1.550312E-003 9.982745E-002  
Prin2 1.686825E-002 -9.816237E-002 -4.344659E-002 6.162624E-002 4.384702E-002  
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Prin8 7.534348E-002 1.366644E-001 9.324091E-002 1.432586E-001 5.082764E-002  
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Prin10 1.741584E-001 3.183612E-001 -6.512712E-002 2.809623E-002 1.208804E-002  
Prin11 -9.692647E-002 -7.325328E-002 1.212942E-001 -1.422431E-001 1.884503E-002  
Prin12 3.308874E-002 5.524718E-002 -1.254081E-001 -9.375370E-002 -2.610723E-003  
Prin13 1.477894E-001 4.454596E-002 3.079189E-001 -1.990055E-001 1.561737E-002  
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Prin15 2.794935E-001 -1.309572E-001 3.439632E-001 2.214784E-001 1.932666E-001  
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Prin21 9.799743E-002 1.583298E-002 -1.172201E-001 1.805627E-001 -2.167935E-001  
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Prin23 4.793542E-002 -2.395905E-001 2.311115E-003 1.893748E-001 -1.808128E-002  
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Prin11 -2.496991E-001 -5.426523E-002 2.169120E-001 6.127188E-002 -2.283813E-001  
Prin12 -1.504211E-001 -2.228208E-001 5.016194E-002 9.117019E-002 -2.457370E-001  
Prin13 -1.251075E-001 8.252446E-002 3.547688E-002 9.924333E-002 -2.382158E-001  
Prin14 -6.321331E-002 3.644446E-002 -8.029352E-002 -5.454538E-002 -3.791643E-002  
Prin15 2.453814E-002 -4.893131E-002 2.415598E-002 2.578457E-001 1.123969E-002  
Prin16 7.804192E-002 -1.531602E-001 -3.393968E-002 1.311481E-001 -3.427318E-002  
Prin17 -1.310384E-001 1.576283E-001 2.622766E-002 2.116614E-001 1.201016E-001  
Prin18 9.125947E-002 -1.685373E-001 -4.433542E-002 -1.597169E-001 -3.690573E-001  
Prin19 1.164173E-001 -3.391398E-001 -9.871425E-002 1.100535E-001 2.144389E-001  
Prin20 -7.152266E-002 1.448253E-001 2.007858E-001 -1.186933E-001 1.045706E-001  
Prin21 9.667803E-002 1.836116E-001 5.960064E-002 3.965774E-001 -1.373592E-001  
Prin22 -1.885540E-001 1.843994E-002 8.992246E-002 9.898009E-002 2.478631E-002  
Prin23 5.646431E-002 1.351797E-001 -1.058468E-001 -3.470766E-001 -2.875888E-001  
Prin24 -4.934262E-001 4.004097E-002 2.093965E-001 -2.007862E-001 7.611725E-002  
Prin25 -1.651197E-001 8.980034E-003 -1.671311E-001 -2.862715E-001 9.816287E-002  
Prin26 3.085682E-002 -1.629481E-002 1.101739E-001 -1.806360E-001 2.751360E-001  
Prin27 2.743934E-002 2.298794E-001 2.307608E-002 -1.521548E-002 -7.185360E-002  
Prin28 -7.506892E-002 -2.082530E-002 -4.798329E-002 7.159800E-002 -2.735698E-002  
Prin29 -1.626298E-001 -9.986970E-002 -8.490386E-002 -7.576917E-002 1.799645E-002  
Prin30 -1.064908E-001 -5.830569E-002 -6.109588E-003 -1.859971E-002 1.249453E-002  
Prin31 -4.401607E-002 5.594224E-002 -7.793562E-002 9.389362E-002 -1.627890E-002  
Prin32 2.405047E-001 1.023941E-001 6.520171E-001 -4.864613E-002 1.565818E-001  
Prin33 -3.426049E-002 -5.718545E-002 6.129474E-002 3.321270E-003 2.222067E-003  
Prin34 -2.799119E-001 -2.186457E-001 -1.091625E-001 1.290504E-001 1.200695E-001  
Prin35 5.536922E-003 5.169020E-002 -1.353594E-001 -4.452698E-002 -6.208405E-003  
Prin36 -1.071476E-001 -5.689922E-002 3.486614E-001 3.457863E-002 -1.038290E-001  
Prin37 1.932744E-001 5.602217E-002 -4.810033E-002 3.274544E-001 5.439772E-002  
Prin38 4.532528E-003 -1.311538E-001 2.166841E-001 4.126554E-002 -1.728953E-001  
Prin39 2.116245E-001 -3.263029E-001 2.606573E-002 7.094517E-004 2.556327E-001

Prin40 -2.142688E-001 -1.025586E-001 7.679625E-002 5.768541E-002 1.409489E-001  
Prin41 -4.327084E-003 3.560710E-001 -2.360202E-002 3.254775E-002 2.749163E-002  
Prin42 -2.219790E-003 -3.468606E-001 9.803486E-002 -5.626519E-002 -5.009225E-002  
Prin43 1.824949E-001 1.378072E-001 -3.136662E-002 -3.750944E-002 -1.526119E-001  
Prin44 -6.070353E-002 -5.101664E-002 3.149678E-002 -2.093860E-001 1.492230E-001  
Prin45 -7.015153E-002 1.329660E-002 -6.190946E-002 7.811007E-002 -6.769759E-002  
Prin46 3.976568E-002 -1.149636E-001 -1.008884E-001 -1.144153E-001 -2.199925E-001  
Prin47 4.662920E-003 3.214812E-002 -7.107160E-002 -7.128698E-002 4.302975E-002  
Prin48 9.037171E-002 -2.243144E-001 2.358203E-002 -7.563206E-002 -5.571502E-002

a12 b12 c12 d12 a13

Prin1 2.068831E-002 1.561232E-002 -1.042217E-003 1.708935E-002 5.332838E-003  
Prin2 -3.296266E-002 -6.686775E-003 3.018216E-002 -3.379799E-002 1.008351E-002  
Prin3 2.029054E-004 2.944311E-002 -2.027793E-002 9.134165E-002 -9.542660E-003  
Prin4 7.169710E-002 -1.346293E-002 -5.097990E-002 -1.976778E-002 -5.308405E-002  
Prin5 -8.879841E-002 -5.741792E-002 1.105005E-001 -4.073722E-002 -5.324291E-002  
Prin6 6.967192E-003 -5.964688E-002 -1.098525E-001 -1.332182E-001 1.680389E-002  
Prin7 2.439734E-001 4.320299E-002 -1.745311E-001 3.808413E-002 -4.602605E-002  
Prin8 -1.510768E-001 9.811326E-002 1.198991E-001 -5.360769E-002 7.842183E-002  
Prin9 -6.888535E-002 -8.602816E-002 -2.097769E-002 4.431805E-002 1.133215E-001  
Prin10 -2.282540E-002 -2.904248E-002 2.798549E-002 3.639228E-002 -5.615169E-003  
Prin11 -1.009826E-001 -7.423574E-002 -1.440640E-002 -4.563387E-002 6.221591E-002  
Prin12 -3.736601E-002 4.280222E-002 -5.574438E-002 7.567295E-002 7.121785E-002  
Prin13 4.792721E-002 3.629856E-002 -1.489662E-002 -5.400290E-003 -9.006967E-003  
Prin14 -5.977449E-002 1.440192E-002 -8.824619E-002 -1.089440E-001 1.516143E-001  
Prin15 -2.384421E-002 3.377588E-002 1.277539E-001 -2.763925E-002 4.695232E-002  
Prin16 1.437131E-001 -2.193880E-002 -1.522264E-001 8.595950E-002 -9.483534E-002  
Prin17 1.244363E-002 5.661006E-002 3.547255E-002 5.119194E-002 8.733984E-002  
Prin18 2.574160E-001 7.275505E-002 -2.751214E-002 7.330923E-002 -1.456833E-001

Prin19 -2.067301E-002 -3.301369E-003 -1.528998E-001 5.921124E-002 3.757372E-002  
Prin20 4.540419E-002 4.768342E-002 -8.648998E-002 1.396460E-001 1.155253E-001  
Prin21 -1.040486E-001 3.149452E-002 1.299765E-001 2.710647E-001 -1.116327E-001  
Prin22 -2.089953E-001 1.422055E-001 -1.094462E-001 1.951316E-001 7.318896E-002  
Prin23 6.887025E-002 -2.024794E-002 -2.029610E-001 3.049060E-001 3.130343E-002  
Prin24 3.726377E-002 -2.171288E-001 1.650653E-001 8.334210E-002 9.715821E-002  
Prin25 -1.808063E-001 -5.589823E-002 -7.391380E-002 9.379217E-003 -1.509467E-001  
Prin26 2.526950E-002 2.465960E-001 1.978757E-001 3.171891E-001 -1.494218E-001  
Prin27 -1.281250E-001 1.946638E-001 -2.640656E-001 -4.019496E-001 4.792205E-002  
Prin28 -5.429668E-001 -3.462067E-001 -1.965601E-001 1.035967E-001 -2.680998E-001  
Prin29 1.953350E-001 -6.193354E-002 -3.556304E-004 -2.514504E-001 -5.597375E-001  
Prin30 -3.168607E-001 6.941186E-001 -9.498286E-003 -1.632225E-002 -1.206229E-001  
Prin31 -1.614286E-001 1.731140E-001 4.790248E-002 -1.882079E-001 -3.334392E-001  
Prin32 9.551405E-002 7.287770E-002 -1.637814E-001 2.556542E-002 -2.756521E-001  
Prin33 -1.293402E-002 -4.785378E-002 -6.380341E-001 2.518998E-001 -1.388286E-001  
Prin34 3.562776E-001 2.556652E-001 -7.300713E-002 6.046632E-002 -2.996071E-003  
Prin35 -4.981828E-002 -7.076008E-002 3.181370E-001 3.589251E-001 -2.802089E-001  
Prin36 6.664972E-002 -7.308646E-002 -6.352417E-003 -2.206982E-001 -1.733543E-002  
Prin37 -3.228472E-002 -1.060595E-001 2.489944E-002 2.879132E-002 -1.018862E-001  
Prin38 1.490694E-002 5.667530E-002 1.041133E-001 -1.064042E-003 -3.924181E-002  
Prin39 -6.456890E-002 -2.870033E-002 -5.192022E-002 2.009183E-002 2.143207E-001  
Prin40 -3.528169E-002 -7.766425E-002 8.030528E-002 -9.802669E-003 -1.080674E-001  
Prin41 2.994907E-002 1.304449E-001 -9.341117E-002 2.270388E-001 1.710713E-001  
Prin42 -6.054025E-002 3.642948E-002 6.533274E-002 1.112544E-001 2.540908E-002  
Prin43 9.132282E-002 1.388037E-003 9.946063E-002 2.000755E-002 -7.364979E-002  
Prin44 -1.553830E-001 2.448833E-002 5.662401E-002 -4.430983E-002 8.598614E-002  
Prin45 -3.326733E-002 1.098753E-002 -1.570425E-002 -7.503185E-002 -2.578752E-002  
Prin46 -4.255698E-002 1.199452E-001 -3.532509E-002 2.406208E-002 3.076455E-002  
Prin47 4.801762E-002 5.872870E-002 1.117017E-002 3.320123E-002 -8.058984E-002

Prin48 -1.682221E-001 5.662074E-002 2.358315E-002 1.868624E-002 6.978440E-002

b13 c13 d13

Prin1 3.920624E-002 -2.513583E-003 -2.724041E-002

Prin2 -1.909238E-002 3.471397E-002 8.825448E-003

Prin3 6.016346E-002 -5.607115E-002 -1.135974E-001

Prin4 -8.986025E-002 -3.283247E-002 -1.405013E-002

Prin5 -8.660761E-002 1.505566E-002 1.782066E-002

Prin6 -1.641067E-001 7.457549E-002 4.640120E-002

Prin7 1.925083E-002 -8.639057E-003 -7.638583E-002

Prin8 8.127556E-002 -2.113770E-001 5.705560E-002

Prin9 1.234113E-001 -2.084419E-001 5.202623E-002

Prin10 -8.849418E-003 -2.445102E-002 -7.971008E-002

Prin11 -1.220586E-001 1.618642E-002 -1.067886E-001

Prin12 5.598807E-002 -9.068724E-002 -4.847121E-002

Prin13 -7.181182E-002 1.278721E-003 -7.559308E-002

Prin14 8.907885E-003 -4.503004E-002 1.368984E-001

Prin15 1.731375E-001 9.048676E-002 -1.962871E-002

Prin16 -1.411931E-001 5.808677E-002 -7.773607E-002

Prin17 4.503561E-003 4.889006E-002 -6.400754E-002

Prin18 1.473619E-001 2.244830E-001 3.723983E-002

Prin19 3.319741E-002 -8.336569E-002 5.257894E-003

Prin20 1.177708E-001 -2.165801E-002 5.371159E-002

Prin21 -2.498544E-001 -3.830602E-002 -1.355488E-001

Prin22 1.657405E-003 -2.930980E-002 -3.710691E-002

Prin23 -1.443245E-001 -1.400826E-001 -2.122796E-001

Prin24 -9.723888E-003 -3.530376E-001 -1.157801E-001

Prin25 1.049950E-001 1.424432E-001 -4.953888E-001

Prin26 2.351027E-002 -1.873795E-002 1.584743E-001

Prin27 4.378296E-001 7.746959E-002 -1.268577E-001  
Prin28 -1.118851E-001 2.224223E-001 1.209044E-001  
Prin29 2.771136E-002 -4.262383E-001 1.341051E-001  
Prin30 -2.205431E-001 -1.361480E-001 1.545846E-001  
Prin31 6.257263E-002 -1.794366E-002 -2.299339E-001  
Prin32 -5.055875E-002 -1.670797E-002 -2.589284E-001  
Prin33 1.499972E-001 -5.964535E-002 2.504617E-001  
Prin34 -2.989969E-002 2.227638E-001 -1.023567E-001  
Prin35 3.507367E-001 1.277320E-001 1.895645E-001  
Prin36 -2.350241E-002 4.941779E-002 3.711895E-001  
Prin37 2.938422E-001 -3.990658E-001 -1.449070E-001  
Prin38 2.082448E-001 1.998473E-001 -1.471615E-001  
Prin39 -4.039579E-002 -1.496396E-001 -2.147057E-001  
Prin40 -7.638880E-003 2.196053E-001 -3.095936E-002  
Prin41 2.386403E-001 -5.786915E-002 1.122530E-001  
Prin42 2.814496E-001 -6.706686E-002 -8.836648E-002  
Prin43 -8.394377E-002 -2.522067E-002 -9.766111E-002  
Prin44 1.715901E-001 7.669007E-002 1.410129E-002  
Prin45 -4.074698E-002 -1.482239E-002 -1.292886E-003  
Prin46 -1.085644E-001 -1.524148E-001 -5.048179E-002  
Prin47 -1.370428E-002 1.199565E-001 -3.829993E-002  
Prin48 -1.127580E-002 -1.513111E-002 -1.944216E-002

### **TABLE 3**

[Analysis Information]

Results File : C:\Users\pc\Desktop\CT Scan\T.pcr

Analyzed NEF File : C:\Users\pc\Desktop\CT Scan\T.nef

Title of NEF File Data :

Analyzed Date : Sun Aug 18 14:27:51 2019

Method of Analysis : Covariance

Number of Data : 8

Number of Harmonics : 13

Number of Analyzed Harmonics : 13

Constant Coefficient(s) : a1 b1 c1 d1

Number of Principal Components : 48

( = Number of Analyzed Coefficients (NAC) )

Number of Effective Principal Components : 4

( = Number of Principal Components whose proportion is larger than 1 / NAC )

Analyzed Coefficients : a2 b2 c2 d2 a3 b3 c3 d3 a4 b4 c4 d4 a5 b5 c5 d5 a6 b6 c6 d6 a7 b7 c7 d7 a8 b8 c8 d8 a9 b9 c9 d9 a10 b10 c10 d10 a11 b11 c11 d11 a12 b12 c12 d12 a13 b13 c13 d13

[Mean of Coefficients]

	a	b	c	d
1	1.000000E+000	1.723709E-016	3.482126E-017	7.303535E-001
2	-7.331301E-003	-4.031957E-002	-4.836783E-002	8.135575E-002
3	3.045786E-002	2.884379E-002	1.185474E-002	3.252530E-002
4	-1.683358E-002	-1.626164E-002	1.492131E-002	-5.715260E-003
5	1.409246E-003	4.104437E-003	3.431667E-003	1.030945E-002
6	-7.438090E-003	-1.069848E-004	6.377594E-003	-3.162661E-003
7	-5.125204E-003	4.755758E-003	2.668176E-004	7.845141E-004
8	-3.368321E-003	-4.486437E-004	-2.625864E-003	-7.376670E-003
9	2.333408E-003	1.694813E-003	1.830871E-004	-1.105551E-003
10	1.908485E-003	-2.475274E-003	3.549908E-003	1.012532E-003



11	1.210999E-003	6.268494E-004	-2.672261E-003	7.186830E-004
12	1.202315E-003	-2.435737E-003	2.839407E-003	6.425675E-004
13	-1.003878E-003	6.797253E-004	-9.308695E-004	1.954419E-003

[Std of Coefficients]

	a	b	c	d
1				
2	8.527004E-002	1.156579E-001	1.631913E-001	1.279761E-001
3	2.074342E-002	3.761839E-002	3.266478E-002	3.060236E-002
4	4.980821E-002	4.419813E-002	4.182084E-002	3.143205E-002
5	4.036715E-003	1.270190E-002	1.879217E-002	2.086053E-002
6	1.174197E-002	8.752421E-003	1.329809E-002	1.635857E-002
7	1.088594E-002	1.324593E-002	1.151568E-002	1.189703E-002
8	4.261605E-003	5.520820E-003	9.694979E-003	7.572224E-003
9	4.717067E-003	7.215605E-003	7.647170E-003	7.582163E-003
10	4.210869E-003	4.546690E-003	3.383550E-003	6.614238E-003
11	2.372385E-003	3.346846E-003	3.593113E-003	4.993836E-003
12	2.170494E-003	2.327365E-003	2.580891E-003	2.340184E-003
13	1.930736E-003	2.460193E-003	4.067750E-003	3.308850E-003

[Variance-Covariance Matrix]

	a2	b2	c2	d2	a3
a2	7.270979E-003	-7.694694E-004	-4.048585E-003	-8.834248E-003	-1.469135E-003
b2	-7.694694E-004	1.337675E-002	1.673317E-002	-5.703577E-003	-8.964041E-004
c2	-4.048585E-003	1.673317E-002	2.663141E-002	-4.095583E-003	-2.278440E-004
d2	-8.834248E-003	-5.703577E-003	-4.095583E-003	1.637789E-002	2.282054E-003
a3	-1.469135E-003	-8.964041E-004	-2.278440E-004	2.282054E-003	4.302895E-004

b3 -1.153990E-003 1.160807E-003 3.878373E-003 9.606289E-004 2.553249E-004  
c3 6.551010E-004 -1.616737E-003 -2.189530E-003 1.027099E-003 -6.860676E-005  
d3 8.573607E-004 1.102995E-003 1.770832E-003 -1.727399E-003 -2.406302E-004  
a4 3.473962E-003 2.553621E-003 1.436761E-003 -6.173403E-003 -9.242619E-004  
b4 -4.705593E-004 4.997604E-003 6.823021E-003 -2.039830E-003 -2.435116E-004  
c4 1.614963E-003 -4.108104E-003 -6.032138E-003 -2.029830E-004 3.352313E-005  
d4 1.650435E-003 -1.330885E-003 -1.126380E-003 -1.859609E-003 -2.126112E-004  
a5 -2.448909E-004 2.638407E-006 1.873620E-004 3.072219E-004 5.145458E-005  
b5 -1.868802E-004 -6.533767E-004 -2.361294E-004 4.812157E-004 8.098894E-005  
c5 -6.868641E-004 -7.335539E-004 -1.157479E-003 1.454748E-003 2.142081E-004  
d5 -7.901861E-004 7.412052E-004 5.195277E-004 9.255709E-004 3.999566E-005  
a6 9.208729E-004 8.765771E-005 -4.492746E-004 -1.227442E-003 -1.999599E-004  
b6 1.304780E-004 6.044816E-004 8.381607E-004 -2.622570E-004 -5.892754E-005  
c6 2.193264E-004 -7.837172E-004 -8.251066E-004 1.003122E-004 -2.639055E-005  
d6 6.123053E-004 3.345656E-004 9.749532E-005 -1.533822E-003 -1.707178E-004  
a7 5.221992E-004 -4.184950E-004 -1.109261E-003 -4.157884E-004 -1.057196E-004  
b7 -6.920619E-004 -1.049372E-003 -7.844413E-004 1.300964E-003 2.357775E-004  
c7 5.310670E-004 8.429084E-004 8.324841E-004 -1.264623E-003 -1.614258E-004  
d7 4.981421E-005 -7.679927E-004 -1.008812E-003 7.360686E-004 2.497700E-005  
a8 1.336390E-004 1.931602E-004 1.915968E-004 -2.425496E-004 -5.050867E-005  
b8 2.358843E-004 2.913201E-004 9.376215E-005 -3.879653E-004 -8.222269E-005  
c8 -1.177611E-004 -5.984038E-004 -1.131381E-003 5.178743E-004 3.923891E-005  
d8 3.762009E-004 3.220151E-004 9.032517E-005 -7.660091E-004 -9.762131E-005  
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b9 -3.433227E-004 -3.781776E-004 -7.077119E-005 5.068699E-004 1.015983E-004  
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c13 1.495269E-005 3.676336E-006 -7.164509E-006 -1.140910E-005 -9.142279E-006  
d13 1.105288E-005 -2.266013E-006 -8.738067E-007 -4.153894E-006 8.548499E-007

a12 b12 c12 d12 a13

a2 -2.352240E-005 3.731662E-005 -2.886440E-005 -1.160446E-004 -7.186879E-006  
b2 -4.635631E-005 -2.841665E-005 -5.289748E-005 -1.531859E-005 1.997829E-004  
c2 -4.824456E-005 -1.360294E-004 7.596532E-005 1.965969E-006 2.275767E-004  
d2 8.552852E-005 -3.568455E-005 7.473959E-005 2.133636E-004 -1.047986E-004  
a3 5.537024E-006 -1.640804E-005 2.248698E-005 2.618431E-005 -1.662372E-005  
b3 2.564356E-005 -6.432412E-005 6.170611E-005 -3.128984E-006 8.004534E-006  
c3 7.003338E-006 2.172582E-005 2.917836E-005 1.328040E-005 -3.923032E-005  
d3 -5.346595E-007 -1.615542E-005 2.761187E-005 -5.118514E-005 9.210315E-006  
a4 -2.427632E-005 1.088940E-005 -4.238390E-005 -7.451461E-005 4.788946E-005  
b4 -1.533569E-005 -2.839073E-005 -4.879655E-006 -6.012052E-006 7.365377E-005  
c4 -1.111631E-006 1.368406E-005 1.046660E-006 -1.093406E-005 -5.731351E-005

d4 -9.809433E-006 9.166540E-007 3.690179E-005 -4.731288E-005 -2.726083E-005  
a5 1.919410E-006 -2.360976E-006 1.215800E-006 6.345880E-006 2.373345E-007  
b5 3.242214E-006 -1.053270E-006 1.836081E-005 -5.287317E-006 -1.355516E-005  
c5 1.471122E-006 3.277539E-006 -9.304511E-006 3.458826E-005 -8.975047E-006  
d5 2.368040E-005 -2.161925E-006 -3.651377E-005 2.156141E-005 2.166535E-005  
a6 -3.291978E-006 4.541625E-006 -7.833897E-006 -1.880587E-005 2.784287E-006  
b6 -5.233322E-006 -1.858989E-006 7.208927E-006 6.565521E-006 4.957508E-006  
c6 8.843674E-006 5.203571E-006 5.523439E-006 -1.225559E-005 -1.222258E-005  
d6 -6.569537E-006 5.337530E-006 -1.586616E-005 -3.363988E-005 1.143550E-005  
a7 -1.095050E-005 2.114270E-005 -9.455515E-006 4.044141E-007 -6.806479E-006  
b7 8.099646E-006 -6.155152E-006 1.007872E-005 1.098878E-005 -1.541672E-005  
c7 -1.528294E-005 4.424115E-006 -3.677999E-006 -9.900699E-006 1.194525E-005  
d7 9.682194E-006 4.375809E-006 5.674549E-006 1.095195E-005 -1.434484E-005  
a8 -3.115624E-006 3.366795E-006 1.686636E-006 -4.634836E-006 1.264075E-006  
b8 -3.848780E-006 5.832252E-006 -7.411594E-006 1.426905E-006 4.901251E-006  
c8 4.999978E-006 9.487633E-006 -1.496116E-005 9.360204E-006 -5.039494E-006  
d8 -2.344354E-006 -4.034350E-007 -9.756213E-006 -1.036346E-005 7.936247E-006  
a9 -5.255966E-006 8.261559E-006 -1.208351E-006 -6.841679E-007 -4.930830E-006  
b9 2.110543E-006 -2.345490E-006 6.822363E-006 4.262703E-006 -5.983174E-006  
c9 -9.356543E-006 -7.526360E-007 6.787257E-006 -1.235831E-005 1.867717E-006  
d9 -4.683284E-006 3.789605E-006 -2.188694E-006 4.920605E-006 -2.148676E-006  
a10 4.495834E-006 -6.494469E-006 3.650781E-006 4.513589E-006 -2.565074E-006  
b10 -1.095802E-006 5.703252E-006 -4.491335E-006 3.528805E-007 -4.253800E-006  
c10 -2.173382E-006 -1.514583E-006 1.360487E-006 2.962483E-006 1.998334E-006  
d10 4.811236E-006 -1.007980E-005 8.786027E-006 1.400438E-006 3.100591E-006  
a11 1.184487E-006 2.483623E-006 -7.826529E-007 -1.791965E-006 -1.863079E-006  
b11 -7.195940E-007 4.546129E-007 -2.743846E-006 3.588136E-006 -2.755951E-007  
c11 -4.415686E-006 2.369837E-006 -1.242027E-006 4.614921E-007 9.766833E-007  
d11 -9.267217E-006 7.303029E-006 1.288946E-006 3.113231E-006 -1.598464E-006



a12 4.711046E-006 -2.727037E-006 -1.355847E-006 -2.676829E-007 3.447040E-007  
b12 -2.727037E-006 5.416629E-006 -2.286405E-006 4.867889E-007 -6.487227E-007  
c12 -1.355847E-006 -2.286405E-006 6.661000E-006 7.034136E-007 -2.595662E-006  
d12 -2.676829E-007 4.867889E-007 7.034136E-007 5.476460E-006 -8.437782E-007  
a13 3.447040E-007 -6.487227E-007 -2.595662E-006 -8.437782E-007 3.727742E-006  
b13 -1.996839E-006 1.023596E-006 -1.462901E-006 1.781930E-006 2.620903E-006  
c13 1.856793E-006 -9.786361E-007 4.133294E-006 -2.870512E-006 -1.413205E-006  
d13 -3.194240E-006 5.356484E-008 5.014967E-006 1.321918E-006 -6.611467E-007

b13 c13 d13

a2 -1.386313E-005 5.284632E-005 -1.420331E-004  
b2 2.016732E-004 -4.672880E-005 5.369548E-005  
c2 1.727844E-004 1.071841E-004 2.627090E-004  
d2 -4.095975E-005 -5.575777E-005 9.169525E-005  
a3 -1.188609E-005 -1.317685E-005 2.939611E-005  
b3 -2.078863E-005 8.741594E-005 6.498632E-005  
c3 -1.790257E-005 6.203009E-005 -6.744223E-006  
d3 -3.090621E-006 5.900032E-005 1.196281E-005  
a4 3.589925E-005 -1.079011E-005 -6.703859E-005  
b4 6.823873E-005 -1.047575E-005 3.292071E-005  
c4 -4.938217E-005 -2.673606E-005 -5.559342E-005  
d4 -4.828642E-005 8.730868E-005 1.810621E-005  
a5 -1.798953E-006 2.404277E-006 6.569862E-006  
b5 -2.331486E-005 4.146730E-005 2.394035E-005  
c5 8.123582E-006 -4.989562E-005 -1.204632E-005  
d5 1.676634E-005 -2.887111E-005 -2.277398E-005  
a6 4.094679E-006 -4.407590E-006 -2.404303E-005  
b6 1.197192E-005 4.276456E-006 4.197252E-006  
c6 -2.473244E-005 4.235836E-005 5.201292E-006

d6 -4.661818E-006 3.087747E-007 -5.912435E-006  
a7 2.605110E-006 -9.443132E-006 -1.220431E-005  
b7 -2.136304E-005 7.625857E-006 1.570458E-005  
c7 1.477816E-005 -8.365333E-006 -6.507971E-007  
d7 -9.217299E-006 1.722414E-005 -7.304117E-006  
a8 2.581777E-006 6.362970E-006 1.897508E-006  
b8 8.506516E-006 -7.291650E-006 -7.393398E-006  
c8 -2.442612E-006 -1.714315E-005 -1.463244E-005  
d8 6.572710E-006 -1.376578E-005 -1.342968E-005  
a9 5.485364E-007 -5.376361E-006 -3.975622E-006  
b9 -1.263240E-005 1.386439E-005 1.592516E-005  
c9 1.694595E-006 3.374049E-006 6.278475E-006  
d9 1.076253E-005 -2.139514E-005 -1.502909E-005  
a10 -2.494319E-006 -3.082100E-006 7.029342E-007  
b10 -4.377059E-007 -9.027543E-006 -9.002700E-006  
c10 3.122905E-006 -1.158711E-006 1.571970E-006  
d10 -1.571812E-006 1.495269E-005 1.105288E-005  
a11 -1.994099E-006 3.676336E-006 -2.266013E-006  
b11 -8.650371E-008 -7.164509E-006 -8.738067E-007  
c11 6.889651E-006 -1.140910E-005 -4.153894E-006  
d11 7.324832E-006 -9.142279E-006 8.548499E-007  
a12 -1.996839E-006 1.856793E-006 -3.194240E-006  
b12 1.023596E-006 -9.786361E-007 5.356484E-008  
c12 -1.462901E-006 4.133294E-006 5.014967E-006  
d12 1.781930E-006 -2.870512E-006 1.321918E-006  
a13 2.620903E-006 -1.413205E-006 -6.611467E-007  
b13 6.052548E-006 -6.345827E-006 -1.496581E-006  
c13 -6.345827E-006 1.654659E-005 5.878481E-006  
d13 -1.496581E-006 5.878481E-006 1.094849E-005

[Eigenvalue and Proportion]

	Eigenvalue	Proportion(%)	Cumulative(%)	> 1/48
Prin1	4.469067E-002	57.6890	57.6890	*
Prin2	2.543918E-002	32.8382	90.5272	*
Prin3	3.844097E-003	4.9622	95.4893	*
Prin4	1.830516E-003	2.3629	97.8522	*
Prin5	8.433008E-004	1.0886	98.9408	
Prin6	4.388835E-004	0.5665	99.5074	
Prin7	3.816428E-004	0.4926	100.0000	
Prin8	6.878551E-018	0.0000	100.0000	
Prin9	1.919903E-018	0.0000	100.0000	
Prin10	3.921028E-019	0.0000	100.0000	
Prin11	3.536635E-019	0.0000	100.0000	
Prin12	1.748619E-019	0.0000	100.0000	
Prin13	8.301444E-020	0.0000	100.0000	
Prin14	6.754053E-020	0.0000	100.0000	
Prin15	4.911251E-020	0.0000	100.0000	
Prin16	4.539314E-020	0.0000	100.0000	
Prin17	2.290904E-020	0.0000	100.0000	
Prin18	1.941902E-020	0.0000	100.0000	
Prin19	1.713091E-020	0.0000	100.0000	
Prin20	1.608491E-020	0.0000	100.0000	
Prin21	8.742760E-021	0.0000	100.0000	
Prin22	8.347896E-021	0.0000	100.0000	
Prin23	5.423647E-021	0.0000	100.0000	
Prin24	4.329247E-021	0.0000	100.0000	
Prin25	3.252723E-021	0.0000	100.0000	

Prin26	2.217677E-021	0.0000	100.0000
Prin27	1.559416E-021	0.0000	100.0000
Prin28	4.107301E-022	0.0000	100.0000
Prin29	-7.075850E-023	0.0000	100.0000
Prin30	-1.719124E-021	0.0000	100.0000
Prin31	-2.585890E-021	0.0000	100.0000
Prin32	-3.327141E-021	0.0000	100.0000
Prin33	-3.939640E-021	0.0000	100.0000
Prin34	-5.863309E-021	0.0000	100.0000
Prin35	-1.083738E-020	0.0000	100.0000
Prin36	-1.197521E-020	0.0000	100.0000
Prin37	-1.362875E-020	0.0000	100.0000
Prin38	-2.061204E-020	0.0000	100.0000
Prin39	-2.668043E-020	0.0000	100.0000
Prin40	-3.253592E-020	0.0000	100.0000
Prin41	-5.244773E-020	0.0000	100.0000
Prin42	-6.410520E-020	0.0000	100.0000
Prin43	-7.749008E-020	0.0000	100.0000
Prin44	-9.085423E-020	0.0000	100.0000
Prin45	-1.970776E-019	0.0000	100.0000
Prin46	-4.165221E-019	0.0000	100.0000
Prin47	-6.894015E-019	0.0000	100.0000
Prin48	-1.103566E-018	0.0000	100.0000

Total Variance : 7.746829E-002

[Eigenvectors]

a2    b2    c2    d2    a3

Prin1 -3.360418E-002 5.253255E-001 7.436447E-001 -2.502408E-001 -2.984098E-002  
Prin2 5.144473E-001 4.586977E-003 -2.350814E-001 -7.242182E-001 -1.101622E-001  
Prin3 1.267461E-001 -4.516232E-001 3.217463E-001 -3.188338E-002 4.560558E-002  
Prin4 -3.859715E-001 -3.465616E-001 1.376236E-001 -3.286784E-001 1.654702E-001  
Prin5 -4.006102E-001 2.017736E-001 -2.883463E-001 -1.031964E-001 -5.257498E-002  
Prin6 -2.006151E-001 -4.617180E-002 1.394504E-001 -2.056193E-001 -8.469547E-002  
Prin7 3.330160E-002 -1.009632E-001 7.240757E-003 -1.402378E-001 -2.182308E-001  
Prin8 6.060794E-001 2.261087E-002 1.162975E-001 2.696377E-001 1.368971E-001  
Prin9 0.000000E+000 5.232168E-001 -3.134966E-001 -2.112190E-002 1.669463E-001  
Prin10 0.000000E+000 -3.566457E-002 5.085007E-003 1.592704E-001 -3.032347E-001  
Prin11 0.000000E+000 -1.199835E-001 -4.481167E-003 -1.068336E-001 9.937457E-002  
Prin12 0.000000E+000 4.201651E-002 -1.481460E-002 7.741504E-002 -2.605936E-001  
Prin13 0.000000E+000 -1.703014E-002 -9.926174E-003 5.556297E-002 5.672078E-002  
Prin14 0.000000E+000 -8.239746E-003 -2.460268E-002 3.487624E-002 7.614551E-002  
Prin15 0.000000E+000 -1.248600E-002 -2.402470E-002 2.645835E-002 -5.274371E-002  
Prin16 0.000000E+000 -1.354920E-002 6.341669E-003 -2.572658E-003 1.255900E-001  
Prin17 0.000000E+000 -4.480845E-003 -2.699114E-003 1.279518E-002 -1.545630E-002  
Prin18 0.000000E+000 3.722015E-003 1.714356E-003 -1.757993E-003 -5.143636E-002  
Prin19 0.000000E+000 -1.113167E-002 -8.732573E-003 -1.864846E-002 2.318097E-002  
Prin20 0.000000E+000 -6.982211E-003 -3.622131E-003 1.321875E-002 1.270808E-002  
Prin21 0.000000E+000 -5.256625E-003 3.890665E-003 -1.445141E-002 2.426869E-002  
Prin22 0.000000E+000 -1.117371E-002 6.641495E-003 1.723847E-003 -2.614278E-002  
Prin23 0.000000E+000 -6.935133E-003 -4.465648E-003 -2.006224E-003 4.122934E-004  
Prin24 0.000000E+000 -4.232551E-003 -2.449584E-003 -5.628198E-003 5.513004E-002  
Prin25 0.000000E+000 7.102652E-003 -7.478843E-004 1.270750E-002 -1.289163E-002  
Prin26 0.000000E+000 2.438401E-003 1.927078E-003 7.155015E-004 8.335422E-004  
Prin27 0.000000E+000 -7.007883E-003 1.382822E-003 -5.500413E-003 -1.020786E-002  
Prin28 0.000000E+000 5.591083E-004 -5.735026E-003 4.819499E-003 -1.458910E-002  
Prin29 0.000000E+000 6.322349E-003 -3.133248E-003 3.304499E-003 -5.859178E-003

Prin30 0.000000E+000-3.796351E-003-4.609007E-003 1.439256E-003 -3.002236E-004  
Prin31 0.000000E+000-4.704379E-003 -2.425103E-003 -3.405948E-003 -2.324002E-002  
Prin32 0.000000E+000-6.468366E-003 -7.198455E-003 -8.364529E-003 -1.347398E-002  
Prin33 0.000000E+000 6.415894E-003 -3.288505E-003 4.452088E-003 5.080294E-005  
Prin34 0.000000E+000-1.329475E-002 9.198915E-004 -1.483769E-002 1.981581E-002  
Prin35 0.000000E+000-9.899202E-003 2.456853E-003 -3.591918E-003 -3.410986E-002  
Prin36 0.000000E+000 1.363508E-002 -4.346473E-003 -3.863316E-003 1.175032E-002  
Prin37 0.000000E+000-1.052175E-003 -1.130365E-003 -1.725271E-002 4.545150E-002  
Prin38 0.000000E+000 4.380123E-003 -2.585981E-003 8.861310E-003 2.911013E-003  
Prin39 0.000000E+000 2.648545E-002 -1.619447E-002 8.453154E-003 6.041632E-002  
Prin40 0.000000E+000-1.021623E-002 1.880141E-003 -2.373971E-002 -5.612107E-002  
Prin41 0.000000E+000-3.878426E-002 2.071495E-002 4.278401E-004 7.325048E-002  
Prin42 0.000000E+000-2.275850E-002 -2.819110E-003 2.826788E-003 -1.257606E-001  
Prin43 0.000000E+000 8.164750E-003 -9.819661E-003 -1.388136E-002 -4.186656E-002  
Prin44 0.000000E+000 4.988066E-002 1.205819E-003 6.894635E-002 -1.325219E-002  
Prin45 0.000000E+000-1.054792E-001 1.189971E-002 -5.700313E-002 3.016826E-001  
Prin46 0.000000E+000 1.057335E-001 3.358297E-002 -6.904914E-002 6.802487E-001  
Prin47 0.000000E+000-8.378180E-002 2.212055E-002 2.726646E-001 1.711140E-001  
Prin48 0.000000E+000-1.364872E-001 -2.243152E-001 -1.430672E-001 1.737521E-001

b3 c3 d3 a4 b4

Prin1 8.231768E-002 -6.935259E-002 5.914776E-002 9.812932E-002 2.062993E-001  
Prin2 -1.021152E-001 3.162373E-003 6.210722E-002 2.781535E-001 -1.222669E-002  
Prin3 4.338124E-001 2.012769E-001 2.939854E-001 -1.182586E-001 -8.814555E-002  
Prin4 -1.616213E-002 -5.939882E-001 -1.823414E-001 -1.498542E-002 -1.091395E-002  
Prin5 -1.155752E-001 -6.173229E-002 4.897153E-001 -1.827841E-002 -6.388119E-002  
Prin6 -4.759521E-001 3.265822E-001 -3.469461E-001 -2.515267E-001 -1.595352E-001  
Prin7 1.805842E-001 -2.159603E-002 -2.978698E-001 -1.469449E-002 -8.817577E-002  
Prin8 -2.536310E-001 -3.584103E-001 -1.817494E-003 -3.100025E-001 -5.688707E-002

Prin9 4.205105E-001 -1.176652E-001 -2.798935E-001 -1.225159E-001 -2.008055E-001  
Prin10 -2.724554E-002 2.086733E-002 -3.731642E-001 3.152871E-001 8.428070E-002  
Prin11 4.631994E-002 -8.470174E-002 -1.026557E-001 6.387778E-002 -2.533288E-001  
Prin12 -4.838597E-002 -4.345874E-001 4.411532E-002 7.041149E-002 2.169247E-002  
Prin13 -2.443926E-001 2.716042E-002 1.389279E-001 3.118927E-001 -8.332923E-002  
Prin14 6.291110E-002 -4.332591E-002 1.200524E-001 2.125087E-001 7.282905E-002  
Prin15 1.162196E-002 -8.183657E-002 -6.015401E-003 -1.213672E-001 -4.653653E-002  
Prin16 2.325504E-002 2.068546E-002 9.204846E-002 6.710308E-002 -1.233119E-001  
Prin17 4.281091E-002 4.169098E-002 3.325613E-002 4.862225E-002 2.654573E-002  
Prin18 -9.208420E-002 -9.359414E-003 3.811088E-002 -5.048086E-002 -1.154351E-002  
Prin19 1.683348E-002 -2.530468E-002 -4.270037E-003 -4.256542E-002 4.117129E-002  
Prin20 2.120923E-002 5.860494E-002 -3.772064E-002 5.384359E-002 2.418484E-002  
Prin21 2.309012E-002 2.282492E-002 -1.220551E-001 -7.555122E-002 -6.373831E-002  
Prin22 4.355163E-002 5.041188E-003 -6.924958E-002 2.149048E-002 -2.870669E-002  
Prin23 3.080841E-002 -1.072374E-002 -3.893809E-004 -7.265700E-003 -2.305745E-002  
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Prin4 -3.666510E-002 7.244043E-003 4.962953E-002 -1.827176E-002 7.129355E-002  
Prin5 -6.283401E-002 -8.363129E-003 2.287940E-002 3.144553E-002 -1.190784E-002  
Prin6 6.809697E-002 3.920554E-002 -1.235766E-001 8.399079E-002 1.115919E-001  
Prin7 1.637554E-002 1.449934E-001 -3.974173E-002 -1.079514E-001 1.148475E-001  
Prin8 -4.636151E-002 3.023557E-002 -9.960044E-003 3.507804E-002 7.741747E-002  
Prin9 -5.588818E-002 -8.254220E-002 -7.539508E-002 -6.026076E-002 1.449359E-001  
Prin10 -4.936531E-002 -1.026924E-001 2.029818E-001 -8.153202E-002 -9.806773E-002  
Prin11 -4.562784E-002 -4.115771E-002 -7.248632E-003 -1.444178E-002 -1.279415E-001

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Prin13 -5.256514E-003 -1.144710E-001 -6.750121E-002 1.052845E-001 1.949283E-001  
Prin14 2.516210E-001 -2.214729E-001 -3.808998E-001 3.544854E-002 6.608809E-002  
Prin15 1.324661E-001 -1.913342E-001 3.871051E-001 -1.839708E-001 -2.475325E-001  
Prin16 2.834306E-001 2.594429E-001 2.298615E-001 -2.089138E-004 2.956295E-001  
Prin17 2.457343E-001 -1.851585E-001 4.587509E-001 -1.408298E-001 2.845077E-002  
Prin18 4.827394E-002 -1.955303E-001 6.898600E-002 -1.100103E-001 -1.764454E-001  
Prin19 1.326490E-001 1.254479E-001 2.985775E-003 -7.683143E-002 1.910168E-001  
Prin20 -8.260255E-002 4.759052E-002 3.162582E-002 -5.576904E-002 -3.550704E-001  
Prin21 1.162277E-001 1.465190E-001 -1.896481E-002 2.594875E-001 -2.572627E-001  
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Prin23 -2.177610E-001 1.187340E-001 2.010800E-001 -5.283488E-002 -6.031183E-002  
Prin24 1.234747E-001 1.690280E-002 -1.815282E-001 -4.980806E-001 -1.122783E-002  
Prin25 -3.065652E-001 4.175166E-002 1.786057E-001 4.804581E-002 1.749575E-001  
Prin26 -8.338515E-002 6.367369E-002 9.402771E-002 3.517653E-001 -3.911047E-002  
Prin27 -1.514299E-001 2.273357E-002 3.384316E-002 1.228332E-001 -2.500790E-003  
Prin28 1.035732E-001 -1.132787E-001 1.221316E-002 -2.177356E-001 9.260529E-002  
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Prin31 2.210597E-002 -1.931251E-001 8.132180E-002 -1.988726E-002 -3.119782E-002  
Prin32 -1.016604E-001 9.205508E-002 -3.109767E-002 -1.929835E-001 -4.036140E-002  
Prin33 1.847233E-001 -1.431327E-001 -1.754626E-001 4.221017E-002 -6.261089E-002  
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Prin35 2.512089E-001 5.036775E-002 2.508158E-001 1.394848E-001 1.063164E-001  
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Prin41 -3.493867E-001 -1.393332E-001 -2.974541E-002 -1.676218E-001 -2.113801E-001  
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Prin45 -1.982146E-002 -1.545825E-002 -1.943135E-002 4.200591E-002 -3.696703E-002  
Prin46 -5.650071E-002 -2.732398E-002 1.555188E-001 -5.666804E-002 -9.870472E-002  
Prin47 6.321094E-002 4.343579E-002 -4.833407E-002 -2.324867E-002 6.485893E-002  
Prin48 -5.052403E-003 -3.897843E-002 -2.078187E-002 4.093975E-002 4.383737E-002

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Prin1 1.470081E-002 -8.547118E-003 -6.076886E-003 -1.694582E-002 7.705257E-003  
Prin2 2.580737E-002 1.462027E-002 -1.883995E-002 9.907266E-003 2.113697E-003  
Prin3 4.588545E-002 -6.530972E-002 8.442770E-003 -3.419186E-002 -6.151308E-003  
Prin4 4.414297E-002 -5.411019E-002 2.183640E-002 -4.682482E-003 5.824927E-003  
Prin5 6.884348E-002 -1.009017E-001 -3.932868E-002 9.622061E-003 -9.811337E-002  
Prin6 9.393648E-003 -5.549899E-002 -1.019236E-001 8.908722E-003 2.784755E-002  
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Prin8 5.735349E-002 -1.071218E-001 -3.136782E-002 6.472931E-003 -5.165254E-002  
Prin9 1.216878E-002 -1.106861E-001 -4.954611E-003 -4.010553E-002 2.358412E-002  
Prin10 7.564844E-003 2.318875E-002 1.278433E-001 5.143818E-003 -1.340391E-002  
Prin11 6.504826E-002 1.607671E-001 2.751748E-002 1.661386E-002 2.781890E-004  
Prin12 -5.318041E-002 6.886425E-002 4.671947E-002 3.487506E-002 -9.397171E-002  
Prin13 1.696323E-001 1.103577E-001 1.434797E-001 -1.581579E-001 1.595950E-001  
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Prin18 -3.653771E-002 -2.450810E-001 -4.027302E-001 6.446852E-002 3.395083E-002  
Prin19 2.722732E-001 1.069117E-001 2.931869E-001 1.878194E-001 -2.692517E-001

Prin20 4.454640E-001 -3.194932E-001 2.622743E-001 -6.494109E-002 -7.819812E-002  
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Prin47 -8.398469E-002 -1.157503E-001 -1.332368E-001 9.973636E-003 4.694073E-004  
Prin48 -1.070192E-002 -1.658773E-002 -3.719663E-002 -2.369915E-002 3.357556E-002



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Prin2	-2.027617E-002	3.694433E-003	-2.734206E-003	6.689529E-003	6.920391E-003
Prin3	6.227606E-002	7.747457E-003	-2.868793E-002	-3.296193E-002	-2.824179E-002
Prin4	-2.056227E-002	-3.117120E-002	4.691160E-002	-9.079726E-003	-2.352231E-002
Prin5	-2.947649E-002	4.382043E-002	-5.584847E-002	-2.558429E-003	-2.049381E-002
Prin6	-5.942174E-002	8.991548E-003	2.153915E-002	-1.130836E-002	1.197341E-001
Prin7	6.792263E-002	2.156868E-002	1.888686E-002	-1.377160E-001	-1.844896E-001
Prin8	-5.082612E-002	5.834267E-003	7.130105E-003	-2.334739E-003	2.125640E-002
Prin9	5.601618E-002	-3.476940E-002	5.548518E-002	-3.506656E-002	-2.463323E-002
Prin10	6.665255E-002	-2.016564E-002	-1.313203E-002	1.545014E-002	7.767079E-003
Prin11	-6.882765E-003	9.371333E-003	-4.469539E-002	4.901125E-002	-1.377104E-002
Prin12	7.761722E-002	3.050768E-002	-1.413341E-001	4.711345E-002	1.572129E-001
Prin13	6.336750E-002	-5.384904E-002	1.650044E-002	-3.031746E-003	2.601657E-002
Prin14	-1.093703E-002	-8.965132E-003	7.797074E-003	-7.774236E-002	1.322543E-002
Prin15	2.340600E-001	-6.297609E-002	1.290344E-002	-6.626699E-002	-1.259817E-001
Prin16	1.982281E-001	1.394422E-002	6.020501E-002	-3.323600E-002	-7.892416E-002
Prin17	-2.490223E-001	-8.469517E-004	-3.526290E-002	3.066618E-001	-9.155653E-003
Prin18	-1.870746E-001	-8.773248E-002	3.263118E-002	-3.999507E-001	1.105418E-003
Prin19	-2.710386E-001	-5.750236E-003	-2.338356E-001	2.188868E-002	-4.221988E-001
Prin20	-1.696809E-001	-2.240379E-002	3.969969E-001	1.689709E-001	-5.835883E-002
Prin21	2.325708E-001	-2.333727E-002	-7.888786E-002	1.582656E-001	-2.240855E-001
Prin22	-5.172932E-002	1.442189E-001	-1.483247E-001	2.462330E-001	-2.099040E-001
Prin23	5.748493E-002	1.316344E-001	-3.764201E-001	-2.576840E-001	2.588024E-001
Prin24	4.433523E-002	3.003304E-001	-8.475378E-002	4.351116E-001	2.990161E-001
Prin25	7.951399E-003	-9.052460E-002	-2.141653E-001	3.243009E-001	-9.738960E-002
Prin26	-1.257266E-001	-3.296318E-001	-1.448235E-002	1.924706E-001	2.374035E-001
Prin27	1.539421E-003	2.094457E-001	-4.301402E-002	-1.001820E-001	6.081827E-002

Prin28 -1.682878E-001 -5.935307E-001 8.401073E-002 -3.854060E-002 5.129108E-004  
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Prin30 -8.341902E-002 -2.122676E-002 -1.995645E-001 -6.287337E-002 1.621639E-001  
Prin31 -2.237932E-001 2.977660E-001 -1.736556E-001 -1.421162E-001 -1.875260E-001  
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Prin35 2.488164E-001 2.385396E-002 3.013258E-002 1.020540E-001 2.748650E-001  
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Prin1 -1.921481E-003 -2.773275E-003 1.818774E-004 -1.551294E-003 7.587644E-003  
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Prin7 7.284699E-002 -6.948602E-003 -6.612167E-002 -1.028590E-002 2.782191E-002  
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Prin16 1.229225E-002 5.374933E-002 3.842752E-002 8.312082E-002 8.333369E-002  
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Prin28 -1.715691E-001 -2.655567E-002 -2.159394E-001 3.666621E-001 1.993408E-001  
Prin29 -2.351854E-001 1.268683E-001 1.712531E-001 -1.112437E-001 -1.962625E-001  
Prin30 -6.212745E-001 -5.490021E-001 -7.142661E-002 -1.909221E-001 -1.043074E-001  
Prin31 -1.498428E-001 -1.384071E-001 2.708080E-001 6.145889E-001 1.311141E-001  
Prin32 7.856409E-002 8.273250E-002 5.586374E-001 -1.861619E-001 1.001715E-001  
Prin33 -3.729415E-001 3.257433E-001 -1.159085E-001 -1.375760E-001 2.908808E-001  
Prin34 -3.712425E-002 1.266509E-001 -3.179441E-001 -4.123008E-002 -2.638410E-001  
Prin35 -2.166750E-002 7.148380E-002 -8.893419E-002 2.307924E-001 -1.574152E-002

Prin36 -9.944922E-002 8.782669E-002 3.801691E-001 3.035402E-002 -3.526638E-002  
Prin37 -4.519741E-002 -4.034894E-002 1.004196E-001 1.251800E-001 -9.427772E-002  
Prin38 5.263831E-002 -3.699113E-002 6.855548E-002 -6.441244E-002 8.277602E-003  
Prin39 7.565019E-002 1.540040E-002 1.376738E-001 -4.079695E-002 -1.413335E-001  
Prin40 5.615151E-002 -4.235997E-002 2.574527E-002 2.607250E-003 -3.400557E-002  
Prin41 -1.267624E-002 -6.069896E-002 -8.630446E-002 1.139839E-001 2.279585E-002  
Prin42 6.562106E-003 -1.064844E-001 -1.506009E-001 -8.694451E-002 7.644539E-002  
Prin43 1.157218E-002 -4.032520E-002 -4.121249E-003 4.810412E-002 2.920547E-002  
Prin44 6.144093E-002 -1.614444E-002 -2.704846E-002 -2.502693E-002 1.052920E-001  
Prin45 -8.792388E-002 6.292581E-002 2.293148E-002 1.869529E-002 -3.282074E-002  
Prin46 3.064318E-002 -2.444314E-002 7.410407E-003 -2.993832E-002 -2.568419E-002  
Prin47 -1.314473E-002 2.813388E-002 -7.542898E-002 -9.355869E-003 5.713384E-002  
Prin48 -3.249806E-002 2.118056E-002 2.767704E-002 2.889267E-002 -2.058957E-002

b13 c13 d13

Prin1 6.155265E-003 1.631272E-003 4.932073E-003  
Prin2 -5.330030E-004 1.707134E-003 -9.292166E-003  
Prin3 -2.547019E-002 5.380278E-002 2.683534E-002  
Prin4 -1.873723E-002 -1.799278E-002 2.262126E-002  
Prin5 -6.198131E-003 8.573115E-003 5.040738E-003  
Prin6 -1.600735E-003 4.880234E-002 9.199211E-002  
Prin7 -5.565529E-002 9.611977E-002 -2.424621E-002  
Prin8 -7.381048E-003 -7.529356E-003 5.206871E-002  
Prin9 -3.977366E-002 2.644303E-002 5.065070E-002  
Prin10 7.067017E-003 2.910522E-002 -2.470408E-002  
Prin11 2.716115E-002 -2.006850E-002 -7.151405E-002  
Prin12 7.418972E-002 4.463667E-002 3.230246E-003  
Prin13 6.055480E-002 9.187274E-002 4.515355E-002  
Prin14 -3.368141E-002 1.378578E-001 5.196489E-005

Prin15 -3.202255E-002 1.877693E-001 -1.192931E-001  
Prin16 -5.059901E-003 9.987216E-002 1.216138E-001  
Prin17 5.082887E-002 1.041840E-002 -6.808879E-002  
Prin18 5.625883E-002 1.502973E-001 8.942213E-003  
Prin19 8.715852E-002 5.349407E-002 -4.993668E-002  
Prin20 -4.974596E-002 5.983226E-002 3.131970E-001  
Prin21 7.253544E-002 -7.336597E-002 1.594572E-002  
Prin22 -9.987071E-002 -4.980413E-002 4.062748E-001  
Prin23 -2.302842E-002 1.250858E-001 4.766077E-001  
Prin24 4.465405E-002 1.544884E-001 1.031414E-002  
Prin25 -1.001371E-002 2.344391E-001 -1.607634E-001  
Prin26 -5.186346E-001 2.152636E-001 -1.018238E-001  
Prin27 1.222111E-001 -4.028245E-002 -4.109395E-001  
Prin28 7.427500E-002 -7.824198E-002 1.782919E-001  
Prin29 -6.930319E-001 -1.434097E-001 3.673935E-002  
Prin30 1.279129E-001 1.003669E-001 1.207359E-002  
Prin31 -1.998102E-001 -1.177159E-001 6.987505E-002  
Prin32 8.654066E-002 -3.537970E-001 8.005535E-002  
Prin33 6.902029E-002 4.851712E-002 2.124943E-001  
Prin34 -1.287752E-001 -1.091393E-001 -2.569731E-001  
Prin35 1.555354E-001 -4.369300E-001 8.149008E-002  
Prin36 1.774571E-001 3.589215E-001 8.829411E-002  
Prin37 1.495638E-002 4.595419E-001 3.189152E-002  
Prin38 -1.891062E-002 2.243768E-002 -2.265798E-002  
Prin39 2.266390E-002 -3.521249E-002 1.649040E-001  
Prin40 2.393220E-002 3.435389E-002 1.409750E-001  
Prin41 -7.175522E-002 -4.403982E-003 -6.767734E-002  
Prin42 -1.602333E-001 1.998762E-002 4.188396E-002  
Prin43 -3.690817E-002 1.578786E-002 -2.594720E-002

Prin44 -4.180529E-002 -2.896259E-002 7.096821E-002  
 Prin45 3.125765E-002 -5.932910E-002 6.487238E-002  
 Prin46 -1.784694E-002 6.014115E-003 -7.745644E-002  
 Prin47 -2.729896E-002 1.926069E-003 -3.588511E-003  
 Prin48 1.376243E-002 3.185770E-003 5.904382E-002

**TABLE 4**

Eigenvalue	Proportion (%)	Cumulative (%)	> 1/48	
PC1	4.255567E-003	50.0252	50.0252	*
PC2	3.234551E-003	38.0229	88.0481	*
PC3	6.776270E-004	7.9657	96.0138	*
PC4	1.490994E-004	1.7527	97.7665	
PC5	8.346677E-005	0.9812	98.7477	
PC6	6.029648E-005	0.7088	99.4565	
PC7	3.643179E-005	0.4283	99.8847	
PC8	4.328583E-006	0.0509	99.9356	
PC9	3.562860E-006	0.0419	99.9775	

  

Eigenvalue	Proportion (%)	Cumulative (%)	> 1/48	
PC1	4.469067E-002	57.6890	57.6890	*
PC2	2.543918E-002	32.8382	90.5272	*
PC3	3.844097E-003	4.9622	95.4893	*
PC4	1.830516E-003	2.3629	97.8522	*
PC5	8.433008E-004	1.0886	98.9408	
PC6	4.388835E-004	0.5665	99.5074	
PC7	3.816428E-004	0.4926	100.0000	
PC8	6.878551E-018	0.0000	100.0000	

  

Eigenvalue	Proportion (%)	Cumulative (%)	> 1/60
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PC1	3.221513E-002	49.1555	49.1555	*
PC2	2.311771E-002	35.2742	84.4296	*
PC3	5.043656E-003	7.6959	92.1255	*
PC4	2.604112E-003	3.9735	96.0990	*
PC5	1.322258E-003	2.0176	98.1165	*
PC6	4.704037E-004	0.7178	98.8343	
PC7	3.344517E-004	0.5103	99.3446	
PC8	2.582016E-004	0.3940	99.7386	
PC9	1.713067E-004	0.2614	100.0000	

Total Variance: 6.553723E-002