```
Simplex Optimization, Trial 0. Function Calls: 22
Old Function = -13218.820127    New Function = -12284.779921
New Coefficients:
      0.057256      -0.015866       0.085210       0.000000       0.000000
      0.020902       0.017254      -0.019366       0.000000       0.000000
      0.023839       0.250000       0.000000       0.630922       0.000000
      0.250000       0.000000       0.000000       0.800000       0.720000
      0.000000

Simplex Optimization, Trial 16. Function Calls: 60
Old Function = -12284.779921    New Function = -11778.995725
New Coefficients:
      0.056659      -0.015700       0.084321       0.001043       0.001043
      0.020684       0.017074      -0.019164       0.001043       0.001043
      0.023590       0.247392       0.001043       0.624341       0.001043
      0.252381       0.001043       0.001043       0.879274       0.648345
      0.001043

Simplex Optimization, Trial 32. Function Calls: 98
Old Function = -11778.995725    New Function = -11614.926556
New Coefficients:
      0.057256      -0.015866       0.085210       0.000000       0.000000
      0.020902       0.017254      -0.019366       0.000000       0.000000
      0.023839       0.250000       0.000000       0.630922       0.000000
      0.250000       0.000000       0.000000       0.800000       0.576689
      0.000000

Simplex Optimization, Trial 37. Function Calls: 104
Old Function = -11614.926556    New Function = -11365.956646
New Coefficients:
      0.057275      -0.016179       0.088096      -0.002599       0.005178
      0.021045       0.017447      -0.019802      -0.002855       0.001659
      0.024361       0.241218       0.018458       0.506490      -0.004921
      0.247288       0.001139      -0.000293       0.878006       0.603296
      0.003983

Simplex Optimization, Trial 50. Function Calls: 118
Old Function = -11365.956646    New Function = -11233.040645
New Coefficients:
      0.059979      -0.015321       0.087792      -0.000560       0.003591
      0.020852       0.017200      -0.018354       0.002436       0.001922
      0.024127       0.244098       0.005247       0.609888      -0.006899
      0.249164       0.002816       0.001697       0.923328       0.415358
      0.008786

Simplex Optimization, Trial 58. Function Calls: 127
Old Function = -11233.040645    New Function = -11175.601211
New Coefficients:
      0.056202      -0.016079       0.090818      -0.004320       0.005298
      0.020810       0.017269      -0.019702      -0.003524       0.002846
      0.023794       0.245600       0.009716       0.532939      -0.004980
      0.255434       0.002643       0.001675       0.973098       0.502597
      0.018231

Simplex Optimization, Trial 66. Function Calls: 246
Old Function = -11175.601211    New Function = -11168.435590
New Coefficients:
      0.056187      -0.016080       0.090971      -0.004428       0.006409
      0.020831       0.017266      -0.019696      -0.003541       0.002552
      0.023870       0.246664       0.009906       0.534866      -0.005131
      0.255450       0.002548       0.001696       0.973147       0.492107
      0.018032

Simplex Optimization, Trial 74. Function Calls: 255
Old Function = -11168.435590    New Function = -11158.991309
New Coefficients:
      0.056148      -0.016086       0.091156      -0.004563       0.005667
      0.020917       0.017095      -0.019656      -0.003673       0.002860
      0.023869       0.245822       0.009933       0.532145      -0.005604
      0.254889       0.002705       0.001472       0.976393       0.485412
      0.018626

Simplex Optimization, Trial 85. Function Calls: 267
Old Function = -11158.991309    New Function = -11150.188099
New Coefficients:
      0.056114      -0.016054       0.091290      -0.004638       0.006518
      0.020858       0.017255      -0.019641      -0.003497       0.002824
      0.023669       0.243991       0.009658       0.532519      -0.006390
```

```
      0.254986       0.002481       0.001481       0.979047       0.474683
      0.018917

Non-Linear Optimization, Iteration 1. Function Calls 299.
 Cosine of Angle between Direction and Gradient  0.7784889. Alpha used was 0.000000
 Adjusted squared norm of gradient 204.6634
 Diagnostic measure (0=perfect) 0.0000
 Subiterations 1. Distance scale  1.000000000
Old Function = -11150.205810    New Function = -11002.320832
New Coefficients:
      0.050342      -0.021985       0.069227      -0.002501       0.003983
      0.016423       0.015248      -0.023772      -0.004530       0.004673
      0.021042       0.239933       0.008798       0.460299       0.006027
      0.303880      -0.017839      -0.019659       0.978422       0.414672
      0.059081

Non-Linear Optimization, Iteration 2. Function Calls 351.
 Cosine of Angle between Direction and Gradient  0.0667847. Alpha used was 0.000000
 Adjusted squared norm of gradient 37389.33
 Diagnostic measure (0=perfect) 1.3000
 Subiterations 31. Distance scale  0.000000000
Old Function = -11002.320832    New Function = -11002.320832
New Coefficients:
      0.050342      -0.021985       0.069227      -0.002501       0.003983
      0.016423       0.015248      -0.023772      -0.004530       0.004673
      0.021042       0.239933       0.008798       0.460299       0.006027
      0.303880      -0.017839      -0.019659       0.978422       0.414672
      0.059081

Non-Linear Optimization, Iteration 3. Function Calls 405.
 Cosine of Angle between Direction and Gradient  0.5953324. Alpha used was 0.000010
 BFGS update adjusted.
 Adjusted squared norm of gradient 8.320948
 Diagnostic measure (0=perfect) 1.3800
 Exact Line Search. Distance scale 1.862645149e-015
Old Function = -11002.320832    New Function = NA
New Coefficients:
      0.050342      -0.021985       0.069227      -0.002501       0.003983
      0.016423       0.015248      -0.023772      -0.004530       0.004673
      0.021042       0.239933       0.008798       0.460299       0.006027
      0.303880      -0.017839      -0.019659       0.978422       0.414672
      0.059081

Non-Linear Optimization, Iteration 4. Function Calls 459.
 Cosine of Angle between Direction and Gradient  0.5429090. Alpha used was 0.000010
 BFGS update adjusted.
 Adjusted squared norm of gradient 7.794858
 Diagnostic measure (0=perfect) 2.1280
 Exact Line Search. Distance scale 1.862645149e-015
Old Function = NA               New Function = NA
New Coefficients:
      0.050342      -0.021985       0.069227      -0.002501       0.003983
      0.016423       0.015248      -0.023772      -0.004530       0.004673
      0.021042       0.239933       0.008798       0.460299       0.006027
      0.303880      -0.017839      -0.019659       0.978422       0.414672
      0.059081

Non-Linear Optimization, Iteration 5. Function Calls 513.
 Cosine of Angle between Direction and Gradient  0.4028654. Alpha used was 0.000000
 BFGS update adjusted.
 Adjusted squared norm of gradient 8.894258
 Diagnostic measure (0=perfect) 2.5768
 Exact Line Search. Distance scale 1.862645149e-015
Old Function = NA               New Function = NA
New Coefficients:
      0.050342      -0.021985       0.069227      -0.002501       0.003983
      0.016423       0.015248      -0.023772      -0.004530       0.004673
      0.021042       0.239933       0.008798       0.460299       0.006027
      0.303880      -0.017839      -0.019659       0.978422       0.414672
      0.059081

MAXIMIZE - Estimation by BFGS
NO CONVERGENCE IN 5 ITERATIONS
LAST CRITERION WAS  0.0000000
ESTIMATION POSSIBLY HAS STALLED OR MACHINE ROUNDOFF IS MAKING FURTHER PROGRESS DIFFICULT
TRY HIGHER SUBITERATIONS LIMIT, TIGHTER CVCRIT, DIFFERENT SETTING FOR EXACTLINE OR ALPHA ON NLPAR
RESTARTING ESTIMATION FROM LAST ESTIMATES OR DIFFERENT INITIAL GUESSES MIGHT ALSO WORK
Usable Observations                      3722
Skipped/Missing (from 3724)                 2
```

Function Value NA

	Variable	Coeff	Std Error	T-Stat	Signif
1.	B(1)(1)	0.050342154	0.008239804	6.10963	0.00000000
2.	B(1)(2)	-0.021984680	0.008091897	-2.71688	0.00659013
3.	B(1)(3)	0.069226563	0.007392813	9.36404	0.00000000
4.	B(1)(4)	-0.002501053	0.008361869	-0.29910	0.76486207
5.	B(1)(5)	0.003983164	0.004398108	0.90565	0.36511902
6.	B(2)(1)	0.016423319	0.010054911	1.63336	0.10239268
7.	B(2)(2)	0.015247503	0.009668959	1.57695	0.11480614
8.	B(2)(3)	-0.023771704	0.009913282	-2.39797	0.01648644
9.	B(2)(4)	-0.004530395	0.005751562	-0.78768	0.43088344
10.	B(2)(5)	0.004673047	0.007184143	0.65047	0.51539069
11.	A(1)(1)	0.021042008	0.001380014	15.24767	0.00000000
12.	A(1)(2)	0.239932875	0.004651125	51.58599	0.00000000
13.	A(1)(3)	0.008798430	0.003153847	2.78975	0.00527495
14.	A(2)(1)	0.460299003	0.006612090	69.61475	0.00000000
15.	A(2)(2)	0.006027269	0.007292633	0.82649	0.40852770
16.	A(2)(3)	0.303879860	0.009853081	30.84110	0.00000000
17.	D(1)	-0.017838716	0.009618135	-1.85470	0.06363965
18.	D(2)	-0.019659455	0.011071896	-1.77562	0.07579595
19.	G(1)	0.978421960	0.001936445	505.26722	0.00000000
20.	G(2)	0.414672020	0.007817166	53.04634	0.00000000
21.	RR(1,1)	0.059081491	0.007035032	8.39818	0.00000000