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add working path of tools and functions

```
%addpath(genpath('e:\research\Tools\spot-slim'))
% addpath(genpath('e:\research\Tools\pSPOT'))
cd ../../../../../../pqnl1;
addpath(genpath(pwd))
cd ../experiments/help_spgl1/modifying/task16bpdn/
addpath(genpath(pwd))
cd ./seismic/deconvolution
rmpath('/Volumes/Users/linamiao/Dropbox/PQN/pqnl1/minConF/')
```

problem setting

time axis

```
t = [0:.001:2]';
N = length(t);

% true signal g has approx k spikes with random amplitudes
k = 20;
g = zeros(N,1);
g(randi(N,k,1)) = randn(k,1);

% filter
w = (1-2*1e3*(t-.2).^2).*exp(-1e3*(t-.2).^2);

% plot
figure;
plot(t,g);
xlabel('t [s]');ylabel('g(t)');
title('true sparse signal')

figure;
plot(t,w);
xlabel('t [s]');ylabel('w(t)');
title('band pass filter')


% fourier transform of w
wf = fft(w);
```
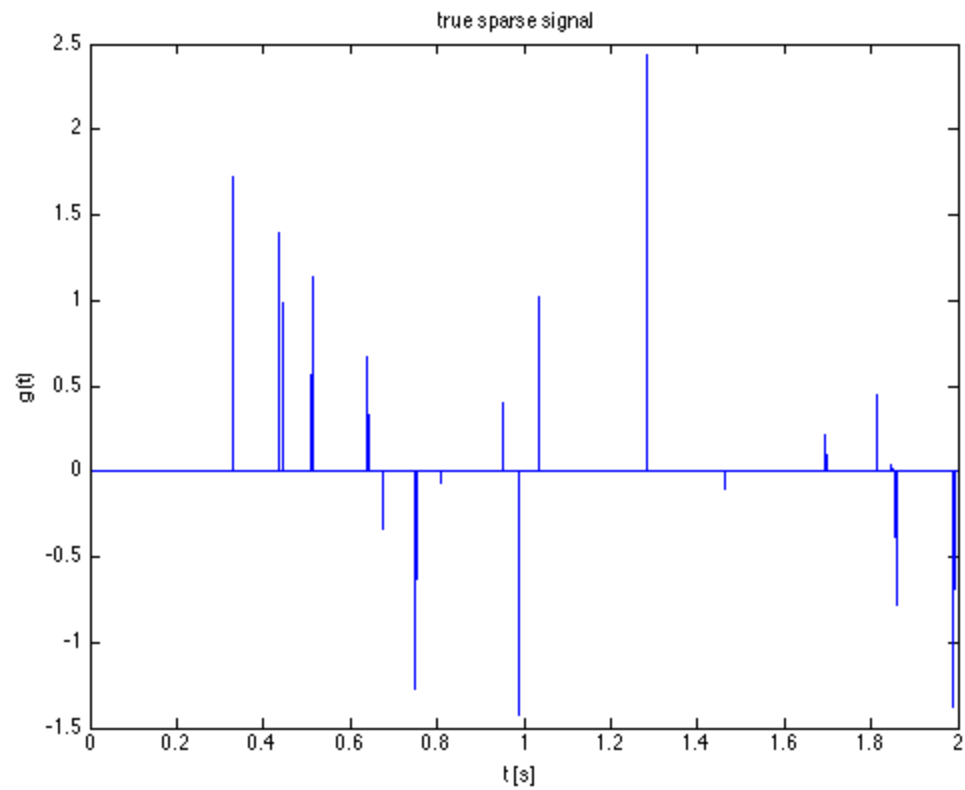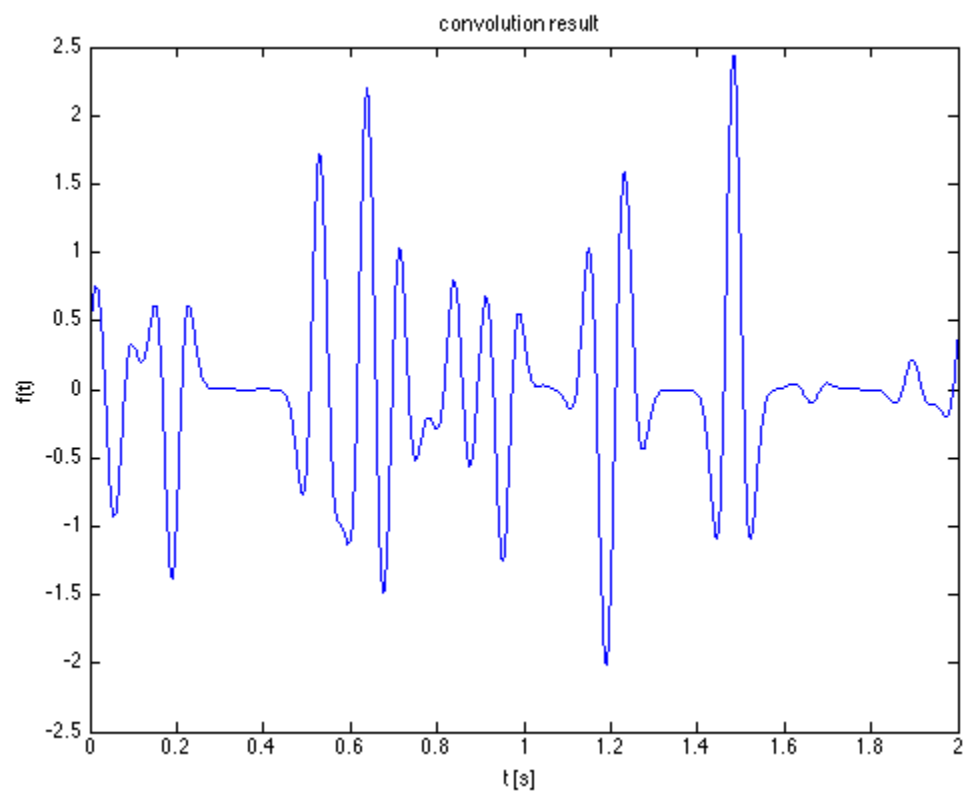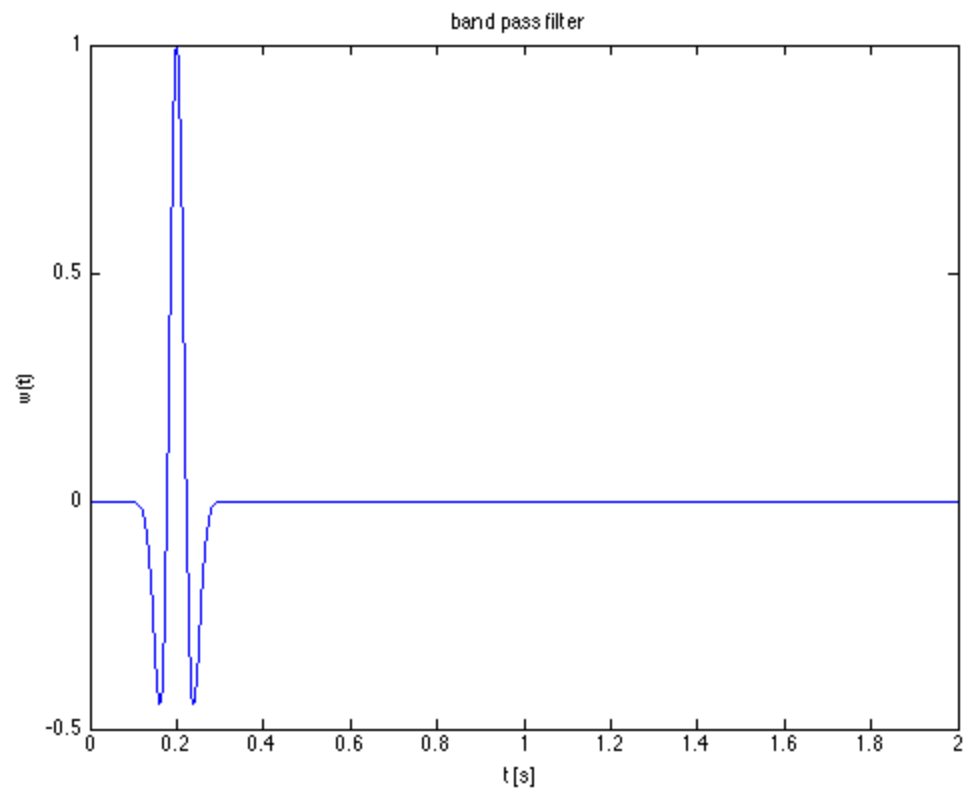
```
% SPOT operator to perform convolution.
C = opDFT(N)'*opDiag(wf)*opDFT(N);
f = C*g;

% plot
figure;
plot(t,f);
xlabel('t [s]');ylabel('f(t)');
title('convolution result')
```

true sparse signal

band pass filter

convolution result

spgl1 and pqnl1

lasso

```
opts.iterations = 100;
tau = norm(g,1);

[x_spg,r_spg,g_spg,info_spg] = spgl1(C, f, tau, [], zeros(size(g)), opts);
opts.iterations = 50;
[x_pqn,r_pqn,g_pqn,info_pqn] = pqnl1_2(C, f, tau, [], zeros(size(g)), opts);

figure;
subplot(3,1,1); plot(g); title('original sparse signal')
subplot(3,1,2); plot(x_spg);title('x_spg')
subplot(3,1,3); plot(x_pqn);title('x_pqn')
```

```
==============================================================================
SPGL1_SLIM v. 46  (Tue, 14 Jun 2011) based on v.1017
==============================================================================
No. rows              :      2001    No. columns             :      2001
Initial tau           : 1.58e+01    Two-norm of b           : 2.83e+01
Optimality tol        : 1.00e-04    Target one-norm of x    : 1.58e+01
Basis pursuit tol     : 1.00e-06    Maximum iterations      :       100

 Iter      Objective    Relative Gap        gNorm     stepG     nnzX      nnzG
    0  2.8278369e+01  2.8689113e+00    7.25e+01       0.0        0         0
    1  2.3282567e+01  4.6879931e+00    6.76e+01      -0.3       17         0
    2  2.4563434e+01  6.5916821e+00    9.40e+01       0.0      272         0
    3  1.8027757e+01  8.0092039e+00    7.68e+01       0.0      644         0
    4  5.4004372e+00  5.7049610e+00    9.44e+00       0.0      807         0
    5  3.7174423e+00  5.9012474e+00    6.39e+00       0.0      805         0
    6  3.1243141e+00  4.9486312e+00    4.84e+00       0.0      715         0
    7  2.3973445e+00  1.8068681e+01    6.16e+00       0.0      596         0
    8  2.6884304e+00  2.1812518e+01    6.07e+00       0.0      511         0
    9  2.7055267e+00  3.6460792e+01    1.14e+01       0.0      541         0
   10  1.7476212e+00  7.0477562e+00    2.64e+00       0.0      490         0
   11  1.6780524e+00  8.9098407e+00    2.75e+00       0.0      475         0
   12  1.5910595e+00  8.3050367e+00    2.53e+00       0.0      456         0
   13  1.3481016e+00  2.0632293e+01    2.41e+00       0.0      364         0
   14  1.2051406e+00  1.0366119e+01    1.99e+00      -0.3      360         0
   15  1.1718058e+00  1.2871473e+01    2.16e+00       0.0      359         0
   16  1.1470981e+00  4.6618241e+00    1.59e+00       0.0      354         0
   17  1.1320641e+00  3.3816770e+00    1.51e+00       0.0      353         0
   18  1.0908627e+00  3.8230406e+00    1.44e+00       0.0      344         0
   19  1.0777277e+00  9.0951403e+00    1.80e+00      -0.3      345         0
   20  1.0624897e+00  3.6513743e+00    1.39e+00       0.0      343         0
   21  1.0491340e+00  5.6630276e+00    1.54e+00       0.0      342         0
   22  1.0371020e+00  2.9082979e+00    1.33e+00       0.0      340         0
   23  1.0214804e+00  7.1609254e+00    1.61e+00       0.0      336         0
   24  1.0270567e+00  7.7318289e+00    1.52e+00       0.0      332         0
   25  1.0101090e+00  1.7152366e+01    2.24e+00       0.0      332         0
```

26	9.8000730e-01	2.6205563e+00	1.25e+00	0.0	329	0
27	9.7324336e-01	2.0952305e+00	1.22e+00	0.0	329	0
28	9.5443546e-01	2.5546152e+00	1.21e+00	0.0	329	0
29	9.4296469e-01	1.0290922e+01	1.72e+00	-0.3	330	0
30	9.3745329e-01	4.3180332e+00	1.25e+00	-0.3	327	0
31	9.2032743e-01	3.6855830e+00	1.26e+00	0.0	326	0
32	9.1480618e-01	1.8740660e+00	1.13e+00	0.0	325	0
33	8.9926067e-01	2.1179399e+00	1.13e+00	0.0	324	0
34	8.7512133e-01	6.4170113e+00	1.27e+00	-0.3	320	0
35	8.6890162e-01	1.4427268e+01	1.90e+00	-0.3	322	0
36	8.4438955e-01	2.0362232e+00	1.05e+00	0.0	322	0
37	8.3882137e-01	1.7606111e+00	1.04e+00	0.0	322	0
38	8.3001197e-01	1.7745402e+00	1.02e+00	0.0	317	0
39	8.3694961e-01	2.5360250e+01	2.54e+00	0.0	303	0
40	7.6765638e-01	2.7662303e+00	1.00e+00	-0.3	302	0
41	7.5776457e-01	2.5587214e+00	1.00e+00	0.0	302	0
42	7.5330056e-01	1.4806021e+00	9.21e-01	0.0	302	0
43	7.3085921e-01	2.5668941e+00	9.48e-01	0.0	290	0
44	7.5443439e-01	1.6194116e+01	1.88e+00	-0.3	289	0
45	7.2104873e-01	2.5619920e+00	9.22e-01	-0.3	288	0
46	7.1073036e-01	2.0169677e+00	9.08e-01	0.0	288	0
47	7.0804583e-01	1.1401799e+00	8.43e-01	0.0	288	0
48	6.9650365e-01	1.9184537e+00	8.74e-01	0.0	284	0
49	6.9079060e-01	5.6714023e+00	1.13e+00	-0.3	284	0
50	6.9653007e-01	4.3730881e+00	9.69e-01	-0.3	280	0
51	6.7979622e-01	3.1417025e+00	9.47e-01	0.0	283	0
52	6.7695703e-01	1.2699943e+00	8.15e-01	0.0	281	0
53	6.7395579e-01	1.1435433e+00	8.04e-01	0.0	281	0
54	5.7282810e-01	1.3366794e+01	1.28e+00	0.0	238	0
55	5.3952098e-01	4.7257180e+00	8.51e-01	-0.3	243	0
56	5.1354705e-01	4.9598743e+00	8.13e-01	0.0	240	0
57	5.0776800e-01	7.9951687e-01	5.68e-01	0.0	240	0
58	5.0619679e-01	7.1419580e-01	5.60e-01	0.0	240	0
59	4.9981307e-01	2.3415911e+00	6.73e-01	0.0	239	0
60	4.9756879e-01	1.5817349e+00	6.15e-01	-0.3	239	0
61	4.9600626e-01	9.1705703e-01	5.76e-01	0.0	238	0
62	4.9450276e-01	9.3179702e-01	5.70e-01	0.0	238	0
63	4.9279130e-01	2.3120426e+00	6.68e-01	0.0	237	0
64	4.9123952e-01	1.5790528e+00	6.02e-01	-0.3	235	0
65	4.8974420e-01	1.0459077e+00	5.79e-01	0.0	235	0
66	4.8883822e-01	7.3862795e-01	5.55e-01	0.0	236	0
67	4.8605592e-01	1.4000126e+00	5.98e-01	0.0	236	0
68	4.8488786e-01	1.0572977e+00	5.63e-01	-0.3	236	0
69	4.8421768e-01	3.0072013e+00	7.03e-01	0.0	236	0
70	4.8231643e-01	9.3936787e-01	5.56e-01	0.0	236	0
71	4.8131984e-01	7.0325557e-01	5.46e-01	0.0	236	0
72	4.8027082e-01	7.2372417e-01	5.44e-01	0.0	236	0
73	4.7252624e-01	4.5913842e+00	7.95e-01	0.0	238	0
74	4.7328508e-01	1.9042625e+00	5.87e-01	-0.3	237	0
75	4.6730612e-01	9.3133722e-01	5.47e-01	0.0	238	0
76	4.6667033e-01	6.4485766e-01	5.26e-01	0.0	238	0
77	4.6435016e-01	6.9583509e-01	5.25e-01	0.0	238	0
78	4.6503464e-01	1.0194544e+01	1.08e+00	-0.3	231	0
79	4.2825276e-01	2.2700973e+00	5.61e-01	-0.3	230	0

```
 80   4.1670992e-01   2.2228875e+00    5.72e-01    0.0      231       0
 81   4.1393138e-01   5.3435778e-01    4.59e-01    0.0      231       0
 82   4.1282801e-01   4.7330408e-01    4.52e-01    0.0      231       0
 83   4.0889462e-01   2.3810698e+00    5.48e-01    0.0      227       0
 84   4.0712658e-01   1.1984996e+00    4.90e-01   -0.3      228       0
 85   4.0622372e-01   8.3833792e-01    4.60e-01    0.0      228       0
 86   4.0556837e-01   5.0955992e-01    4.42e-01    0.0      228       0
 87   4.0416131e-01   7.0779671e-01    4.49e-01    0.0      227       0
 88   4.0592799e-01   4.0559717e+00    6.78e-01   -0.3      227       0
 89   4.0218326e-01   6.8770191e-01    4.45e-01   -0.3      225       0
 90   4.0121646e-01   5.9959677e-01    4.43e-01    0.0      225       0
 91   4.0076560e-01   4.2843538e-01    4.31e-01    0.0      225       0
 92   3.9799381e-01   3.9351737e-01    4.26e-01    0.0      224       0
 93   3.9942720e-01   4.1167371e+00    6.04e-01   -0.3      224       0
 94   3.8697142e-01   4.3152489e+00    6.53e-01   -0.3      225       0
 95   3.8142325e-01   1.1009478e+00    4.46e-01    0.0      225       0
 96   3.8019548e-01   6.5688910e-01    4.21e-01    0.0      225       0
 97   3.7960167e-01   4.4029718e-01    4.06e-01    0.0      225       0
 98   3.7660678e-01   8.3917712e-01    4.29e-01    0.0      224       0
 99   3.7566837e-01   8.9819196e-01    4.31e-01   -0.3      224       0
100   3.7494104e-01   9.5651382e-01    4.31e-01    0.0      224       0
```

ERROR EXIT -- Too many iterations

```
Products with A     :     144     Total time   (secs) :     1.4
Products with A'    :     101     Project time (secs) :     0.1
Newton iterations   :       0     Mat-vec time (secs) :     0.9
Line search its     :      65     Subspace iterations :       0
```

```
=============================================================================
PQNL1_SLIM v. 46  (Tue, 14 Jun 2011) based on v.1017
=============================================================================
No. rows            :     2001     No. columns          :     2001
Initial tau         : 1.58e+01     Two-norm of b        : 2.83e+01
Optimality tol      : 1.00e-04     Target one-norm of x : 1.58e+01
Basis pursuit tol   : 1.00e-06     Maximum iterations   :       50
```

```
 Iter      Objective    Relative Gap      gNorm    stepG    nnzX    nnzG
    0   2.8278369e+01   2.8689113e+00    7.25e+01    0.0       0       0
Inside of minConf_PQN
 Iteration   FunEvals  Projections    Step Length         rNorm2        O
         1         1           4    2.50000e-01     2.30923e+01    1.978
         2         1          14    1.00000e+00     7.54036e+00    3.080
         3         1          21    1.00000e+00     5.81726e+00    2.939
         4         1          29    1.00000e+00     4.45455e+00    3.002
         5         1          38    1.00000e+00     3.49241e+00    2.768
         6         1          48    1.00000e+00     2.71244e+00    2.409
         7         1          58    1.00000e+00     2.35279e+00    2.350
         8         1          69    1.00000e+00     2.09572e+00    2.399
         9         1          80    1.00000e+00     1.90348e+00    2.329
        10         1          89    1.00000e+00     1.71418e+00    2.174
        11         1         105    1.00000e+00     1.53884e+00    1.858
        12         1         117    1.00000e+00     1.39244e+00    1.620
```
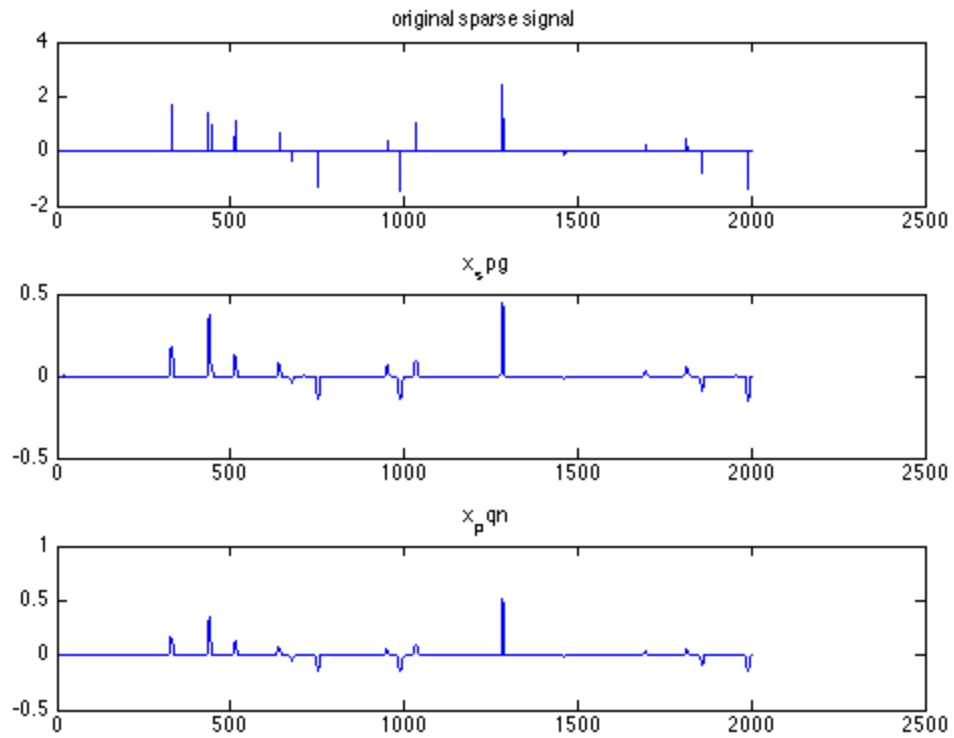
13	1	128	1.00000e+00	1.25550e+00	1.404
14	1	140	1.00000e+00	1.15678e+00	1.238
15	1	152	1.00000e+00	1.07753e+00	1.236
16	1	170	1.00000e+00	1.01104e+00	1.110
17	1	185	1.00000e+00	9.53084e-01	1.041
18	1	203	1.00000e+00	8.89166e-01	1.215
19	1	218	1.00000e+00	8.62745e-01	1.038
20	1	237	1.00000e+00	8.16578e-01	1.164
21	1	249	1.00000e+00	7.88877e-01	1.101
22	1	269	1.00000e+00	7.52380e-01	9.709
23	1	290	1.00000e+00	7.20476e-01	1.194
24	1	302	1.00000e+00	7.04155e-01	9.870
25	1	329	1.00000e+00	6.81465e-01	8.690
26	1	363	1.00000e+00	6.54126e-01	1.121
27	1	383	1.00000e+00	6.28414e-01	1.351
28	1	400	1.00000e+00	6.06094e-01	9.624
29	1	434	1.00000e+00	5.87695e-01	8.232
30	1	460	1.00000e+00	5.65855e-01	1.063
31	1	479	1.00000e+00	5.52739e-01	1.055
32	1	499	1.00000e+00	5.44294e-01	8.703
33	1	525	1.00000e+00	5.34085e-01	6.479
34	1	557	1.00000e+00	5.20984e-01	8.336
35	1	582	1.00000e+00	5.11877e-01	1.135
36	1	610	1.00000e+00	5.01349e-01	1.184
37	1	653	1.00000e+00	4.73598e-01	9.194
38	1	675	1.00000e+00	4.68386e-01	6.009
39	1	710	1.00000e+00	4.54346e-01	9.714
40	1	743	1.00000e+00	4.47774e-01	1.049
41	1	772	1.00000e+00	4.33472e-01	7.418
42	1	807	1.00000e+00	4.24640e-01	5.771
43	1	830	1.00000e+00	4.16552e-01	5.964
44	1	858	1.00000e+00	4.08558e-01	4.749
45	1	881	1.00000e+00	4.03293e-01	4.747
46	1	904	1.00000e+00	3.97279e-01	4.483
47	1	926	1.00000e+00	3.92632e-01	4.292
48	1	945	1.00000e+00	3.89086e-01	4.250
49	1	973	1.00000e+00	3.79011e-01	5.766
50	1	1001	1.00000e+00	3.72670e-01	5.898

```
   50   3.7266979e-01  1.3213958e+00   4.43e-01   0.0     213      0
ERROR EXIT -- Too many iterations


Products with A     :     54      Total time  (secs) :    13.2
Products with A'    :     54      Project time (secs) :    12.6
Newton iterations   :      0      Mat-vec time (secs) :     0.3
```

original sparse signal

x_spg

x_pqn

BPDN

noisy signal

```
f = C*g+ 1e-3*randn(N,1);

% plot
figure;
plot(t,f);
xlabel('t [s]');ylabel('f(t)');
title('convolution result')

opts.iterations = 400;


[x_spg,r_spg,g_spg,info_spg] = spgl1(C, f, 0, 1e-3, zeros(size(g)), opts);
%opts.decTol = 1e-4;
%opts.iterations = 50;
[x_pqn,r_pqn,g_pqn,info_pqn] = pqnl1_2(C, f, 0, 1-3, zeros(size(g)), opts);

figure;
subplot(3,1,1); plot(g); title('original sparse signal');axis tight;
subplot(3,1,2); plot(x_spg);title('x_spg');axis tight;
subplot(3,1,3); plot(x_pqn);title('x_pqn');axis tight;

figure('Name','Solution paths')
```

```
plot(info_spg.xNorm1,info_spg.rNorm2,info_pqn.xNorm1,info_pqn.rNorm2);hold on
scatter(info_spg.xNorm1,info_spg.rNorm2);
scatter(info_pqn.xNorm1,info_pqn.rNorm2);hold off
legend('spg','pqn')
axis tight
```

```
=============================================================================
SPGL1_SLIM v. 46  (Tue, 14 Jun 2011) based on v.1017
=============================================================================
No. rows            :      2001    No. columns          :      2001
Initial tau         : 0.00e+00    Two-norm of b        : 2.83e+01
Optimality tol      : 1.00e-04    Target objective     : 1.00e-03
Basis pursuit tol   : 1.00e-06    Maximum iterations   :       400

 Iter      Objective   Relative Gap   Rel Error       gNorm   stepG     nnzX
    0   2.8278331e+01  0.0000000e+00    1.00e+00   7.248e+01     0.0        0
    1   2.5019494e+01  2.5888210e+00    1.00e+00   7.107e+01    -0.3        1
    2   2.0942194e+01  4.8084181e+00    1.00e+00   6.279e+01    -0.3       82
    3   2.1425118e+01  4.1947477e+00    1.00e+00   9.019e+01     0.0      368
    4   1.1849769e+01  3.0959138e+00    1.00e+00   2.411e+01     0.0      343
    5   8.9634025e+00  1.2211707e+00    1.00e+00   1.747e+01     0.0      512
    6   8.5086227e+00  9.0471304e-01    1.00e+00   1.568e+01     0.0      402
    7   8.1228912e+00  2.7412455e+00    1.00e+00   2.119e+01     0.0      252
    8   8.2770479e+00  2.3141748e+00    1.00e+00   1.814e+01     0.0      246
    9   7.8250397e+00  1.0745234e+00    1.00e+00   1.584e+01     0.0      249
   10   7.7647195e+00  3.8998834e-01    1.00e+00   1.363e+01     0.0      230
   11   7.7220041e+00  3.5923218e-01    1.00e+00   1.350e+01     0.0      209
   12   7.4961903e+00  9.9286241e-01    1.00e+00   1.435e+01     0.0      135
   13   7.5335060e+00  1.0253309e+00    1.00e+00   1.556e+01    -0.3      152
   14   7.4563404e+00  4.7541228e-01    1.00e+00   1.331e+01     0.0      153
   15   7.4408789e+00  2.4268230e-01    1.00e+00   1.291e+01     0.0      146
   16   7.4341918e+00  1.6266492e-01    1.00e+00   1.269e+01     0.0      142
   17   7.3760171e+00  3.0627109e-01    1.00e+00   1.300e+01     0.0      124
   18   7.4066693e+00  7.7186792e-01    1.00e+00   1.404e+01    -0.3      123
   19   7.3919486e+00  1.0500706e+00    1.00e+00   1.476e+01     0.0      130
   20   7.3563866e+00  3.5205497e-01    1.00e+00   1.305e+01     0.0      127
   21   7.3475404e+00  1.6385715e-01    1.00e+00   1.257e+01     0.0      119
   22   7.3432322e+00  1.2958629e-01    1.00e+00   1.250e+01     0.0      116
   23   7.3118617e+00  2.2650426e-01    1.00e+00   1.258e+01     0.0      108
   24   7.3120478e+00  5.7719915e-01    1.00e+00   1.363e+01    -0.3      109
   25   2.9807664e+00  1.9304135e+01    1.00e+00   6.575e+00     0.0      393
   26   2.2021572e+00  1.0662335e+01    1.00e+00   4.560e+00     0.0      615
   27   1.9442277e+00  7.8170140e+00    9.99e-01   3.183e+00     0.0      530
   28   1.8541848e+00  5.3872430e+00    9.99e-01   2.887e+00     0.0      499
   29   1.7181159e+00  6.2176557e+00    9.99e-01   2.786e+00     0.0      425
   30   1.6533170e+00  2.2598551e+01    9.99e-01   4.144e+00     0.0      328
   31   1.5533986e+00  5.2605227e+00    9.99e-01   2.400e+00    -0.3      345
   32   1.5320115e+00  4.2393860e+00    9.99e-01   2.329e+00     0.0      327
   33   1.5123650e+00  3.8155794e+00    9.99e-01   2.253e+00     0.0      319
   34   1.4622257e+00  1.1318891e+01    9.99e-01   2.767e+00     0.0      287
   35   1.4469405e+00  2.9426022e+00    9.99e-01   2.094e+00    -0.3      286
   36   1.4380458e+00  3.1527216e+00    9.99e-01   2.123e+00     0.0      280
   37   1.4275640e+00  2.7290348e+00    9.99e-01   2.068e+00     0.0      275
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38	*1.3981186e+00*	*1.8712600e+01*	*9.99e-01*	*3.170e+00*	*0.0*	*239*
39	*1.3928667e+00*	*6.3945376e+00*	*9.99e-01*	*2.192e+00*	*-0.3*	*248*
40	*1.3623931e+00*	*2.6120857e+00*	*9.99e-01*	*2.021e+00*	*0.0*	*242*
41	*1.3593421e+00*	*1.4769247e+00*	*9.99e-01*	*1.931e+00*	*0.0*	*238*
42	*1.3492873e+00*	*1.6639992e+00*	*9.99e-01*	*1.932e+00*	*0.0*	*234*
43	*1.3560969e+00*	*3.0173026e+01*	*9.99e-01*	*3.864e+00*	*-0.3*	*186*
44	*1.3092229e+00*	*7.9015305e+00*	*9.99e-01*	*2.224e+00*	*-0.3*	*208*
45	*1.2701556e+00*	*7.3703176e+00*	*9.99e-01*	*2.292e+00*	*0.0*	*192*
46	*1.2637720e+00*	*1.8131207e+00*	*9.99e-01*	*1.895e+00*	*0.0*	*195*
47	*1.2614008e+00*	*1.7340022e+00*	*9.99e-01*	*1.883e+00*	*0.0*	*192*
48	*1.2578592e+00*	*8.8438805e+00*	*9.99e-01*	*2.242e+00*	*0.0*	*176*
49	*1.2445876e+00*	*4.3369912e+00*	*9.99e-01*	*2.020e+00*	*-0.3*	*180*
50	*1.2412742e+00*	*2.0604251e+00*	*9.99e-01*	*1.841e+00*	*0.0*	*177*
51	*1.2398385e+00*	*1.4434283e+00*	*9.99e-01*	*1.808e+00*	*0.0*	*178*
52	*1.2373414e+00*	*9.8240576e-01*	*9.99e-01*	*1.771e+00*	*0.0*	*176*
53	*1.2396614e+00*	*1.1799512e+01*	*9.99e-01*	*2.544e+00*	*0.0*	*171*
54	*1.2277644e+00*	*1.5195511e+00*	*9.99e-01*	*1.798e+00*	*-0.3*	*168*
55	*1.2256138e+00*	*1.6183046e+00*	*9.99e-01*	*1.812e+00*	*0.0*	*170*
56	*1.2242474e+00*	*8.6497005e-01*	*9.99e-01*	*1.755e+00*	*0.0*	*168*
57	*1.2207948e+00*	*1.1949141e+00*	*9.99e-01*	*1.776e+00*	*0.0*	*164*
58	*1.2190350e+00*	*2.6118609e+00*	*9.99e-01*	*1.844e+00*	*-0.3*	*164*
59	*1.2206875e+00*	*7.1559202e+00*	*9.99e-01*	*2.199e+00*	*-0.3*	*163*
60	*1.2164845e+00*	*1.2054712e+00*	*9.99e-01*	*1.756e+00*	*0.0*	*163*
61	*1.2148738e+00*	*1.0505483e+00*	*9.99e-01*	*1.759e+00*	*0.0*	*163*
62	*1.2142644e+00*	*7.9364668e-01*	*9.99e-01*	*1.738e+00*	*0.0*	*163*
63	*1.2097660e+00*	*9.5177596e-01*	*9.99e-01*	*1.743e+00*	*0.0*	*162*
64	*1.2113956e+00*	*9.7921967e+00*	*9.99e-01*	*2.352e+00*	*-0.3*	*162*
65	*1.2034525e+00*	*1.6737127e+00*	*9.99e-01*	*1.780e+00*	*-0.3*	*163*
66	*1.2015542e+00*	*1.8138693e+00*	*9.99e-01*	*1.804e+00*	*0.0*	*163*
67	*1.2006943e+00*	*6.1873773e-01*	*9.99e-01*	*1.718e+00*	*0.0*	*163*
68	*1.1987616e+00*	*9.0731429e-01*	*9.99e-01*	*1.735e+00*	*0.0*	*162*
69	*1.1948230e+00*	*3.9498328e+00*	*9.99e-01*	*1.894e+00*	*-0.3*	*158*
70	*1.1958789e+00*	*6.6910266e+00*	*9.99e-01*	*2.149e+00*	*-0.3*	*159*
71	*1.1903758e+00*	*1.3920082e+00*	*9.99e-01*	*1.740e+00*	*0.0*	*158*
72	*1.1886813e+00*	*9.2873205e-01*	*9.99e-01*	*1.723e+00*	*0.0*	*158*
73	*1.1881863e+00*	*6.5317849e-01*	*9.99e-01*	*1.703e+00*	*0.0*	*158*
74	*1.1840473e+00*	*1.1504929e+00*	*9.99e-01*	*1.727e+00*	*0.0*	*157*
75	*1.1844166e+00*	*5.1035256e+00*	*9.99e-01*	*2.004e+00*	*-0.3*	*157*
76	*1.1862527e+00*	*2.8240745e+00*	*9.99e-01*	*1.817e+00*	*0.0*	*155*
77	*1.1810216e+00*	*1.2369571e+00*	*9.99e-01*	*1.739e+00*	*0.0*	*157*
78	*1.1804838e+00*	*5.7507098e-01*	*9.99e-01*	*1.690e+00*	*0.0*	*156*
79	*1.1793573e+00*	*6.4678972e-01*	*9.99e-01*	*1.691e+00*	*0.0*	*155*
80	*1.1779034e+00*	*1.3440769e+01*	*9.99e-01*	*2.563e+00*	*0.0*	*127*
81	*1.1727340e+00*	*6.7270824e+00*	*9.99e-01*	*1.984e+00*	*-0.3*	*159*
82	*1.1507066e+00*	*7.4681197e+00*	*9.99e-01*	*2.164e+00*	*0.0*	*130*
83	*1.1435575e+00*	*1.2385137e+00*	*9.99e-01*	*1.703e+00*	*0.0*	*132*
84	*1.1423685e+00*	*1.7040497e+00*	*9.99e-01*	*1.735e+00*	*0.0*	*132*
85	*1.1405202e+00*	*1.4859938e+00*	*9.99e-01*	*1.707e+00*	*0.0*	*131*
86	*1.1423244e+00*	*5.3655589e+00*	*9.99e-01*	*1.974e+00*	*0.0*	*130*
87	*1.1417592e+00*	*3.7949236e+00*	*9.99e-01*	*1.858e+00*	*0.0*	*130*
88	*1.1386074e+00*	*1.3956649e+00*	*9.99e-01*	*1.704e+00*	*0.0*	*129*
89	*1.1382199e+00*	*7.5310092e-01*	*9.99e-01*	*1.661e+00*	*0.0*	*129*
90	*1.1377443e+00*	*4.6275284e-01*	*9.99e-01*	*1.636e+00*	*0.0*	*129*
91	*1.1352863e+00*	*2.1479028e+00*	*9.99e-01*	*1.751e+00*	*0.0*	*127*

92	1.1353828e+00	1.6489173e+00	9.99e-01	1.695e+00	-0.3	127
93	1.1343166e+00	1.1158857e+00	9.99e-01	1.675e+00	0.0	127
94	1.1340522e+00	4.0560428e-01	9.99e-01	1.624e+00	0.0	127
95	1.1337117e+00	4.2897129e-01	9.99e-01	1.626e+00	0.0	127
96	1.1280935e+00	4.4155119e+00	9.99e-01	1.831e+00	0.0	120
97	1.1282278e+00	7.2867079e+00	9.99e-01	2.093e+00	-0.3	120
98	1.1242940e+00	3.2857986e+00	9.99e-01	1.770e+00	0.0	121
99	1.1202663e+00	1.0772989e+00	9.99e-01	1.649e+00	0.0	120
100	1.1198915e+00	5.3664291e-01	9.99e-01	1.610e+00	0.0	120
101	1.1192646e+00	5.2262700e-01	9.99e-01	1.607e+00	0.0	120
102	1.1181991e+00	1.6920847e+00	9.99e-01	1.686e+00	0.0	118
103	1.1175140e+00	6.2356192e-01	9.99e-01	1.612e+00	-0.3	117
104	1.1172653e+00	4.1112266e-01	9.99e-01	1.597e+00	0.0	118
105	1.1170132e+00	3.8351992e-01	9.99e-01	1.596e+00	0.0	118
106	1.1155979e+00	1.8451316e+00	9.99e-01	1.686e+00	0.0	119
107	1.1152785e+00	1.1359808e+00	9.99e-01	1.648e+00	-0.3	119
108	1.1147781e+00	5.1595517e-01	9.99e-01	1.602e+00	0.0	119
109	1.1146106e+00	3.6265540e-01	9.99e-01	1.593e+00	0.0	119
110	1.1140850e+00	3.4614292e-01	9.99e-01	1.590e+00	0.0	119
111	1.1144541e+00	4.9303696e+00	9.99e-01	1.888e+00	-0.3	114
112	1.1089237e+00	8.4726776e-01	9.99e-01	1.613e+00	-0.3	115
113	1.1077765e+00	1.2609429e+00	9.99e-01	1.651e+00	0.0	115
114	1.1075494e+00	6.4379183e-01	9.99e-01	1.607e+00	0.0	115
115	1.1072734e+00	3.7543448e-01	9.99e-01	1.586e+00	0.0	115
116	1.1057635e+00	6.7406236e-01	9.99e-01	1.598e+00	0.0	115
117	1.1060339e+00	2.5397694e+00	9.99e-01	1.745e+00	-0.3	115
118	1.1051286e+00	5.9878934e-01	9.99e-01	1.593e+00	-0.3	116
119	1.1048322e+00	7.5603884e-01	9.99e-01	1.609e+00	0.0	116
120	1.1046882e+00	2.9944231e-01	9.99e-01	1.577e+00	0.0	116
121	1.1042552e+00	3.3844567e-01	9.99e-01	1.579e+00	0.0	116
122	1.1032613e+00	3.0802081e+00	9.99e-01	1.758e+00	-0.3	117
123	1.1024918e+00	6.4404385e-01	9.99e-01	1.592e+00	-0.3	117
124	1.1020545e+00	6.3663931e-01	9.99e-01	1.599e+00	0.0	117
125	1.1019341e+00	3.0779577e-01	9.99e-01	1.575e+00	0.0	117
126	1.1015076e+00	3.1491536e-01	9.99e-01	1.574e+00	0.0	116
127	1.0934524e+00	3.9448877e+00	9.99e-01	1.822e+00	0.0	110
128	1.0992171e+00	3.5916678e+00	9.99e-01	1.741e+00	-0.3	112
129	1.0915736e+00	2.6546417e+00	9.99e-01	1.726e+00	0.0	111
130	1.0905181e+00	4.0385414e-01	9.99e-01	1.567e+00	0.0	111
131	1.0902967e+00	4.8143411e-01	9.99e-01	1.572e+00	0.0	111
132	1.0899099e+00	1.6621452e+00	9.99e-01	1.649e+00	0.0	111
133	1.0890912e+00	7.2334722e-01	9.99e-01	1.587e+00	-0.3	111
134	1.0889184e+00	3.5032208e-01	9.99e-01	1.562e+00	0.0	111
135	1.0887534e+00	2.9595169e-01	9.99e-01	1.557e+00	0.0	110
136	1.0877771e+00	1.1575099e+00	9.99e-01	1.616e+00	0.0	108
137	1.0876960e+00	1.6605305e+00	9.99e-01	1.647e+00	-0.3	108
138	1.0873022e+00	5.0706626e-01	9.99e-01	1.570e+00	0.0	108
139	1.0871902e+00	2.9052458e-01	9.99e-01	1.556e+00	0.0	108
140	1.0869451e+00	3.1093410e-01	9.99e-01	1.556e+00	0.0	108
141	1.0867269e+00	4.6425049e+00	9.99e-01	1.858e+00	-0.3	107
142	1.0851481e+00	7.1460122e-01	9.99e-01	1.576e+00	-0.3	107
143	1.0846273e+00	7.8384933e-01	9.99e-01	1.587e+00	0.0	107
144	1.0844906e+00	4.0230395e-01	9.99e-01	1.560e+00	0.0	107
145	1.0841646e+00	3.7682097e-01	9.99e-01	1.556e+00	0.0	107

146	1.0840239e+00	2.4645703e+00	9.99e-01	1.704e+00	-0.3	107
147	1.0834810e+00	3.9415460e-01	9.99e-01	1.557e+00	-0.3	107
148	1.0833409e+00	4.4765934e-01	9.99e-01	1.561e+00	0.0	107
149	1.0831486e+00	3.3305286e-01	9.99e-01	1.551e+00	0.0	107
150	1.0830394e+00	2.3892436e+00	9.99e-01	1.696e+00	0.0	107
151	1.0825374e+00	2.9763589e-01	9.99e-01	1.549e+00	-0.3	107
152	1.0824133e+00	4.2573977e-01	9.99e-01	1.559e+00	0.0	107
153	1.0821541e+00	4.1017300e-01	9.99e-01	1.554e+00	0.0	107
154	1.0821929e+00	2.1889313e+00	9.99e-01	1.681e+00	-0.3	107
155	5.7654292e-01	2.6233817e+01	5.76e-01	1.507e+00	0.0	304
156	4.5259919e-01	6.3079632e+00	4.52e-01	9.180e-01	0.0	271
157	3.4598572e-01	4.3670534e+00	3.45e-01	4.669e-01	0.0	284
158	3.3149925e-01	2.2940189e+00	3.30e-01	3.668e-01	0.0	289
159	3.1978916e-01	1.4010805e+00	3.19e-01	3.156e-01	0.0	289
160	3.0473568e-01	1.0996321e+00	3.04e-01	2.780e-01	0.0	291
161	3.0610477e-01	3.3345645e+00	3.05e-01	4.375e-01	-0.3	289
162	3.1290822e-01	4.7603615e+00	3.12e-01	4.846e-01	0.0	290
163	2.9681644e-01	1.9445082e+00	2.96e-01	3.448e-01	0.0	288
164	2.9281004e-01	8.0626505e-01	2.92e-01	2.543e-01	0.0	284
165	2.9174692e-01	6.6939788e-01	2.91e-01	2.455e-01	0.0	284
166	2.8599807e-01	9.7051670e-01	2.85e-01	2.691e-01	0.0	283
167	2.9129501e-01	3.1674408e+00	2.90e-01	3.811e-01	-0.3	272
168	2.9112684e-01	3.1384303e+00	2.90e-01	4.203e-01	0.0	276
169	2.8242900e-01	8.3465152e-01	2.81e-01	2.501e-01	0.0	273
170	2.8125639e-01	4.3862624e-01	2.80e-01	2.299e-01	0.0	273
171	2.8063794e-01	4.2360286e-01	2.80e-01	2.277e-01	0.0	274
172	2.7490787e-01	6.3670587e-01	2.74e-01	2.391e-01	0.0	261
173	2.7739432e-01	1.7924805e+00	2.76e-01	3.095e-01	-0.3	251
174	2.8060026e-01	3.4167325e+00	2.80e-01	4.246e-01	0.0	253
175	2.7378256e-01	1.2130596e+00	2.73e-01	2.720e-01	0.0	248
176	2.7208409e-01	2.9789512e-01	2.71e-01	2.198e-01	0.0	249
177	2.7177702e-01	2.6513728e-01	2.71e-01	2.165e-01	0.0	249
178	2.7038473e-01	3.7500920e-01	2.69e-01	2.197e-01	0.0	250
179	2.6975896e-01	8.2539752e-01	2.69e-01	2.612e-01	-0.3	241
180	2.7056316e-01	1.2619758e+00	2.70e-01	2.609e-01	-0.3	242
181	2.6851492e-01	4.9999526e-01	2.68e-01	2.346e-01	0.0	241
182	2.6808185e-01	2.8883732e-01	2.67e-01	2.158e-01	0.0	242
183	2.6779370e-01	2.7943670e-01	2.67e-01	2.159e-01	0.0	242
184	2.6462459e-01	4.3584501e-01	2.64e-01	2.214e-01	0.0	236
185	2.6563746e-01	1.6092554e+00	2.65e-01	3.126e-01	-0.3	236
186	2.6392404e-01	6.3182564e-01	2.63e-01	2.382e-01	-0.3	233
187	2.6344206e-01	3.0990539e-01	2.62e-01	2.207e-01	0.0	234
188	2.6327246e-01	2.6017655e-01	2.62e-01	2.165e-01	0.0	233
189	2.6258133e-01	2.0162988e-01	2.62e-01	2.110e-01	0.0	230
190	2.6298168e-01	1.7026463e+00	2.62e-01	3.114e-01	-0.3	225
191	2.6064205e-01	7.4581041e-01	2.60e-01	2.462e-01	-0.3	224
192	2.6009180e-01	4.5068266e-01	2.59e-01	2.283e-01	0.0	223
193	2.5989604e-01	2.6715867e-01	2.59e-01	2.161e-01	0.0	223
194	2.5966026e-01	2.9070380e-01	2.59e-01	2.167e-01	0.0	224
195	2.5911427e-01	8.7864072e-01	2.58e-01	2.555e-01	0.0	219
196	2.5863808e-01	3.9709211e-01	2.58e-01	2.222e-01	-0.3	220
197	2.5850206e-01	2.2037103e-01	2.58e-01	2.122e-01	0.0	220
198	2.5835591e-01	2.6111616e-01	2.57e-01	2.144e-01	0.0	219
199	2.5666055e-01	8.4619930e-01	2.56e-01	2.541e-01	0.0	218

200	2.5643929e-01	6.2750760e-01	2.55e-01	2.361e-01	-0.3	217
201	2.5608640e-01	2.2114997e-01	2.55e-01	2.132e-01	0.0	216
202	2.5600725e-01	2.2203812e-01	2.55e-01	2.127e-01	0.0	216
203	2.5575466e-01	1.5998567e-01	2.55e-01	2.084e-01	0.0	215
204	2.5590078e-01	3.4737688e+00	2.55e-01	4.322e-01	0.0	206
205	2.5209557e-01	5.5646084e-01	2.51e-01	2.343e-01	-0.3	207
206	2.5130510e-01	6.6430861e-01	2.50e-01	2.439e-01	0.0	206
207	2.5109160e-01	3.5726143e-01	2.50e-01	2.237e-01	0.0	206
208	2.5086066e-01	2.9890870e-01	2.50e-01	2.187e-01	0.0	205
209	2.5048493e-01	4.5557008e-01	2.49e-01	2.263e-01	0.0	202
210	2.5027040e-01	3.1021102e-01	2.49e-01	2.174e-01	-0.3	203
211	2.5018406e-01	1.5443555e-01	2.49e-01	2.085e-01	0.0	203
212	2.5009896e-01	2.2099506e-01	2.49e-01	2.124e-01	0.0	203
213	2.4961508e-01	4.0895021e-01	2.49e-01	2.262e-01	0.0	201
214	2.4954315e-01	4.9909267e-01	2.49e-01	2.288e-01	-0.3	202
215	2.4938405e-01	1.6105901e-01	2.48e-01	2.092e-01	0.0	201
216	2.4932507e-01	2.2619777e-01	2.48e-01	2.129e-01	0.0	201
217	2.4915953e-01	1.4473971e-01	2.48e-01	2.075e-01	0.0	201
218	2.4869043e-01	9.9298052e-01	2.48e-01	2.623e-01	-0.3	200
219	2.4838398e-01	4.0736591e-01	2.47e-01	2.254e-01	-0.3	199
220	2.4814037e-01	2.7799948e-01	2.47e-01	2.166e-01	0.0	199
221	2.4808415e-01	1.7598779e-01	2.47e-01	2.103e-01	0.0	199
222	2.4796734e-01	1.7377790e-01	2.47e-01	2.095e-01	0.0	199
223	2.4645956e-01	1.8172762e+00	2.45e-01	3.336e-01	0.0	192
224	2.4450837e-01	6.7785054e-01	2.44e-01	2.468e-01	-0.3	192
225	2.4419789e-01	2.4222618e-01	2.43e-01	2.187e-01	0.0	192
226	2.4408555e-01	2.4142861e-01	2.43e-01	2.166e-01	0.0	192
227	2.4392412e-01	1.5600229e-01	2.43e-01	2.088e-01	0.0	192
228	2.4382533e-01	7.0829413e-01	2.43e-01	2.433e-01	0.0	190
229	2.4354697e-01	1.8018748e-01	2.43e-01	2.106e-01	-0.3	191
230	2.4348779e-01	1.9259340e-01	2.42e-01	2.111e-01	0.0	190
231	2.4339735e-01	1.1883415e-01	2.42e-01	2.063e-01	0.0	190
232	2.4322370e-01	9.5062060e-01	2.42e-01	2.572e-01	0.0	190
233	2.4272580e-01	2.3286925e-01	2.42e-01	2.135e-01	-0.3	190
234	2.4263097e-01	2.3920319e-01	2.42e-01	2.139e-01	0.0	190
235	2.4258176e-01	1.6087076e-01	2.42e-01	2.089e-01	0.0	190
236	2.4230800e-01	2.1460442e-01	2.41e-01	2.116e-01	0.0	188
237	2.4232041e-01	6.8361209e-01	2.41e-01	2.456e-01	-0.3	187
238	2.4236298e-01	6.2866245e-01	2.41e-01	2.353e-01	-0.3	188
239	2.4194946e-01	1.4674807e-01	2.41e-01	2.086e-01	0.0	187
240	2.4189966e-01	1.7140358e-01	2.41e-01	2.097e-01	0.0	187
241	2.4181729e-01	1.2751383e-01	2.41e-01	2.067e-01	0.0	187
242	2.4071628e-01	1.4036673e+00	2.40e-01	2.866e-01	0.0	186
243	2.4009497e-01	9.9527468e-01	2.39e-01	2.633e-01	-0.3	185
244	2.3925191e-01	4.1946255e-01	2.38e-01	2.274e-01	0.0	186
245	2.3911546e-01	1.5192798e-01	2.38e-01	2.111e-01	0.0	186
246	2.3906559e-01	1.3612783e-01	2.38e-01	2.095e-01	0.0	185
247	2.3872388e-01	2.9894486e-01	2.38e-01	2.167e-01	0.0	182
248	2.3860823e-01	3.0725041e-01	2.38e-01	2.202e-01	-0.3	182
249	2.3852345e-01	1.9294081e-01	2.38e-01	2.108e-01	0.0	181
250	2.3845046e-01	2.8369351e-01	2.37e-01	2.176e-01	0.0	181
251	2.3838683e-01	1.4854410e-01	2.37e-01	2.088e-01	0.0	181
252	2.3832431e-01	2.7128138e-01	2.37e-01	2.161e-01	0.0	181
253	2.3827067e-01	2.7263348e-01	2.37e-01	2.173e-01	0.0	181

254	*2.3821799e-01*	*3.1660928e-01*	*2.37e-01*	*2.184e-01*	*0.0*	*181*
255	*2.3814406e-01*	*1.3381981e-01*	*2.37e-01*	*2.081e-01*	*0.0*	*181*
256	*2.3810253e-01*	*1.5612529e-01*	*2.37e-01*	*2.090e-01*	*0.0*	*181*
257	*2.3800821e-01*	*1.0756147e-01*	*2.37e-01*	*2.062e-01*	*0.0*	*181*
258	*2.3811423e-01*	*8.2835780e-01*	*2.37e-01*	*2.481e-01*	*−0.3*	*180*
259	*2.3752902e-01*	*1.5545694e-01*	*2.37e-01*	*2.091e-01*	*−0.3*	*180*
260	*2.3746186e-01*	*1.9384811e-01*	*2.36e-01*	*2.115e-01*	*0.0*	*180*
261	*2.3741630e-01*	*1.2264445e-01*	*2.36e-01*	*2.069e-01*	*0.0*	*180*
262	*2.3714383e-01*	*2.5288245e-01*	*2.36e-01*	*2.141e-01*	*0.0*	*179*
263	*2.3712377e-01*	*4.0409309e-01*	*2.36e-01*	*2.266e-01*	*−0.3*	*178*
264	*2.3706930e-01*	*3.5982546e-01*	*2.36e-01*	*2.203e-01*	*0.0*	*179*
265	*2.3695483e-01*	*1.1287291e-01*	*2.36e-01*	*2.065e-01*	*0.0*	*178*
266	*2.3692263e-01*	*1.4364242e-01*	*2.36e-01*	*2.081e-01*	*0.0*	*178*
267	*2.3677996e-01*	*1.0772948e-01*	*2.36e-01*	*2.058e-01*	*0.0*	*178*
268	*2.3666945e-01*	*1.1648051e+00*	*2.36e-01*	*2.736e-01*	*−0.3*	*176*
269	*2.3649017e-01*	*8.7420088e-01*	*2.35e-01*	*2.570e-01*	*−0.3*	*176*
270	*2.3577688e-01*	*3.5644781e-01*	*2.35e-01*	*2.225e-01*	*0.0*	*176*
271	*2.3567721e-01*	*1.5221142e-01*	*2.35e-01*	*2.101e-01*	*0.0*	*176*
272	*2.3564145e-01*	*1.3154981e-01*	*2.35e-01*	*2.084e-01*	*0.0*	*176*
273	*2.3502901e-01*	*4.6934105e-01*	*2.34e-01*	*2.215e-01*	*0.0*	*174*
274	*2.3520757e-01*	*7.1776193e-01*	*2.34e-01*	*2.537e-01*	*−0.3*	*174*
275	*2.3482156e-01*	*2.9354326e-01*	*2.34e-01*	*2.154e-01*	*0.0*	*174*
276	*2.3467392e-01*	*1.3243411e-01*	*2.34e-01*	*2.078e-01*	*0.0*	*174*
277	*2.3464266e-01*	*1.3003605e-01*	*2.34e-01*	*2.072e-01*	*0.0*	*174*
278	*2.3452264e-01*	*1.3701727e-01*	*2.34e-01*	*2.076e-01*	*0.0*	*174*
279	*2.3331029e-01*	*9.8937394e-01*	*2.32e-01*	*2.628e-01*	*−0.3*	*170*
280	*2.3354555e-01*	*1.3826501e+00*	*2.33e-01*	*3.007e-01*	*−0.3*	*171*
281	*2.3216993e-01*	*5.6029411e-01*	*2.31e-01*	*2.339e-01*	*0.0*	*172*
282	*2.3174443e-01*	*1.6068151e-01*	*2.31e-01*	*2.131e-01*	*0.0*	*172*
283	*2.3168163e-01*	*1.3394900e-01*	*2.31e-01*	*2.103e-01*	*0.0*	*172*
284	*2.3159633e-01*	*1.2648108e-01*	*2.31e-01*	*2.094e-01*	*0.0*	*172*
285	*2.3122688e-01*	*3.3432297e-01*	*2.30e-01*	*2.186e-01*	*0.0*	*171*
286	*2.3118462e-01*	*3.1089343e-01*	*2.30e-01*	*2.230e-01*	*−0.3*	*171*
287	*2.3106952e-01*	*1.8230334e-01*	*2.30e-01*	*2.104e-01*	*0.0*	*171*
288	*2.3102647e-01*	*9.2568534e-02*	*2.30e-01*	*2.060e-01*	*0.0*	*171*
289	*2.3098860e-01*	*1.2634572e-01*	*2.30e-01*	*2.078e-01*	*0.0*	*171*
290	*2.3084367e-01*	*2.7088799e-01*	*2.30e-01*	*2.185e-01*	*0.0*	*171*
291	*2.3081109e-01*	*2.6961465e-01*	*2.30e-01*	*2.160e-01*	*−0.3*	*171*
292	*2.3073971e-01*	*1.0059156e-01*	*2.30e-01*	*2.068e-01*	*0.0*	*171*
293	*2.3071158e-01*	*1.1089546e-01*	*2.30e-01*	*2.070e-01*	*0.0*	*171*
294	*2.3063123e-01*	*9.1051407e-02*	*2.30e-01*	*2.059e-01*	*0.0*	*171*
295	*2.3043655e-01*	*4.8606673e-01*	*2.29e-01*	*2.289e-01*	*−0.3*	*171*
296	*2.3065781e-01*	*9.1660922e-01*	*2.30e-01*	*2.620e-01*	*−0.3*	*171*
297	*2.3020819e-01*	*2.1690308e-01*	*2.29e-01*	*2.130e-01*	*0.0*	*171*
298	*2.3013524e-01*	*9.6933110e-02*	*2.29e-01*	*2.065e-01*	*0.0*	*171*
299	*2.3010708e-01*	*9.8236089e-02*	*2.29e-01*	*2.064e-01*	*0.0*	*171*
300	*2.2963773e-01*	*1.8587472e-01*	*2.29e-01*	*2.105e-01*	*0.0*	*171*
301	*2.2983874e-01*	*7.3072350e-01*	*2.29e-01*	*2.508e-01*	*−0.3*	*171*
302	*2.2976721e-01*	*4.4685349e-01*	*2.29e-01*	*2.255e-01*	*0.0*	*171*
303	*2.2946642e-01*	*1.3962078e-01*	*2.28e-01*	*2.095e-01*	*0.0*	*171*
304	*2.2943534e-01*	*1.0398085e-01*	*2.28e-01*	*2.067e-01*	*0.0*	*171*
305	*2.2937392e-01*	*8.9361293e-02*	*2.28e-01*	*2.057e-01*	*0.0*	*171*
306	*2.2865559e-01*	*1.0106925e+00*	*2.28e-01*	*2.628e-01*	*−0.3*	*170*
307	*2.2862773e-01*	*9.8514249e-01*	*2.28e-01*	*2.642e-01*	*−0.3*	*170*

308	*2.2789455e-01*	*3.3612547e-01*	*2.27e-01*	*2.221e-01*	*0.0*	*170*
309	*2.2778758e-01*	*1.2281583e-01*	*2.27e-01*	*2.094e-01*	*0.0*	*170*
310	*2.2775868e-01*	*1.1332394e-01*	*2.27e-01*	*2.084e-01*	*0.0*	*170*
311	*2.2752424e-01*	*2.5914947e-01*	*2.27e-01*	*2.147e-01*	*0.0*	*170*
312	*2.2748198e-01*	*4.0205196e-01*	*2.26e-01*	*2.290e-01*	*-0.3*	*170*
313	*2.2741280e-01*	*2.0033587e-01*	*2.26e-01*	*2.113e-01*	*0.0*	*170*
314	*2.2734090e-01*	*9.6420374e-02*	*2.26e-01*	*2.068e-01*	*0.0*	*170*
315	*2.2731573e-01*	*9.1056221e-02*	*2.26e-01*	*2.061e-01*	*0.0*	*170*
316	*2.2725260e-01*	*7.9219545e-02*	*2.26e-01*	*2.055e-01*	*0.0*	*170*
317	*2.2705575e-01*	*3.7179051e-01*	*2.26e-01*	*2.215e-01*	*-0.3*	*169*
318	*2.2688430e-01*	*2.6454142e-01*	*2.26e-01*	*2.184e-01*	*-0.3*	*168*
319	*2.2682276e-01*	*1.1678007e-01*	*2.26e-01*	*2.075e-01*	*0.0*	*169*
320	*2.2679948e-01*	*8.5631138e-02*	*2.26e-01*	*2.058e-01*	*0.0*	*169*
321	*2.2669324e-01*	*1.3938585e-01*	*2.26e-01*	*2.087e-01*	*0.0*	*169*
322	*2.2673806e-01*	*6.1296151e-01*	*2.26e-01*	*2.421e-01*	*-0.3*	*166*
323	*2.2650233e-01*	*9.3873282e-02*	*2.26e-01*	*2.063e-01*	*-0.3*	*167*
324	*2.2647481e-01*	*1.0004765e-01*	*2.25e-01*	*2.068e-01*	*0.0*	*167*
325	*2.2639682e-01*	*1.4123153e-01*	*2.25e-01*	*2.087e-01*	*0.0*	*166*
326	*2.2635052e-01*	*2.3015190e-01*	*2.25e-01*	*2.158e-01*	*-0.3*	*166*
327	*2.2631459e-01*	*2.2933725e-01*	*2.25e-01*	*2.139e-01*	*-0.3*	*166*
328	*2.2626438e-01*	*9.5487515e-02*	*2.25e-01*	*2.065e-01*	*0.0*	*166*
329	*2.2623994e-01*	*9.9957481e-02*	*2.25e-01*	*2.064e-01*	*0.0*	*166*
330	*2.2616046e-01*	*8.0916182e-02*	*2.25e-01*	*2.055e-01*	*0.0*	*166*
331	*2.2609803e-01*	*2.9992773e-01*	*2.25e-01*	*2.179e-01*	*-0.3*	*166*
332	*2.2601349e-01*	*8.9913394e-02*	*2.25e-01*	*2.061e-01*	*-0.3*	*166*
333	*2.2599007e-01*	*9.6555405e-02*	*2.25e-01*	*2.062e-01*	*0.0*	*166*
334	*2.2592212e-01*	*7.7694849e-02*	*2.25e-01*	*2.051e-01*	*0.0*	*165*
335	*2.2578084e-01*	*4.2775246e-01*	*2.25e-01*	*2.252e-01*	*-0.3*	*164*
336	*2.2577137e-01*	*5.5002492e-01*	*2.25e-01*	*2.372e-01*	*-0.3*	*164*
337	*1.8671432e-01*	*6.3053370e+00*	*1.86e-01*	*2.868e-01*	*0.0*	*169*
338	*1.5634539e-01*	*1.2059217e+00*	*1.55e-01*	*1.331e-01*	*0.0*	*166*
339	*1.4724576e-01*	*1.4858450e+00*	*1.46e-01*	*9.864e-02*	*0.0*	*167*
340	*1.4335706e-01*	*1.1694444e+00*	*1.42e-01*	*8.252e-02*	*0.0*	*168*
341	*1.3366021e-01*	*8.1675795e-01*	*1.33e-01*	*8.068e-02*	*0.0*	*168*
342	*1.4672503e-01*	*3.0819402e+00*	*1.46e-01*	*2.016e-01*	*0.0*	*168*
343	*1.2887584e-01*	*8.8352597e-01*	*1.28e-01*	*7.875e-02*	*-0.3*	*169*
344	*1.2612185e-01*	*7.7901876e-01*	*1.25e-01*	*6.971e-02*	*0.0*	*171*
345	*1.2468894e-01*	*5.8968598e-01*	*1.24e-01*	*5.710e-02*	*0.0*	*173*
346	*1.2189854e-01*	*5.3364614e-01*	*1.21e-01*	*5.961e-02*	*0.0*	*181*
347	*1.2200102e-01*	*1.3964704e+00*	*1.21e-01*	*1.036e-01*	*-0.3*	*187*
348	*1.1989727e-01*	*8.6658833e-01*	*1.19e-01*	*8.396e-02*	*-0.3*	*190*
349	*1.1887554e-01*	*4.8470469e-01*	*1.18e-01*	*5.363e-02*	*0.0*	*189*
350	*1.1850285e-01*	*4.0695136e-01*	*1.18e-01*	*5.037e-02*	*0.0*	*190*
351	*1.1742915e-01*	*3.8949913e-01*	*1.16e-01*	*5.002e-02*	*0.0*	*192*
352	*1.1584531e-01*	*1.8895332e+00*	*1.15e-01*	*1.571e-01*	*-0.3*	*194*
353	*1.1548617e-01*	*1.6291992e+00*	*1.14e-01*	*1.253e-01*	*-0.3*	*193*
354	*1.1211440e-01*	*4.6444530e-01*	*1.11e-01*	*6.031e-02*	*0.0*	*194*
355	*1.1182801e-01*	*2.7136054e-01*	*1.11e-01*	*4.676e-02*	*0.0*	*194*
356	*1.1145707e-01*	*2.5278665e-01*	*1.10e-01*	*4.516e-02*	*0.0*	*194*
357	*1.0699084e-01*	*3.2290724e-01*	*1.06e-01*	*5.022e-02*	*0.0*	*204*
358	*1.1098476e-01*	*1.7200359e+00*	*1.10e-01*	*1.400e-01*	*-0.3*	*215*
359	*1.0912136e-01*	*1.4319041e+00*	*1.08e-01*	*1.306e-01*	*-0.3*	*206*
360	*1.0577139e-01*	*4.0808393e-01*	*1.05e-01*	*5.547e-02*	*0.0*	*208*
361	*1.0537235e-01*	*2.4576143e-01*	*1.04e-01*	*4.671e-02*	*0.0*	*207*

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362  1.0510344e-01  2.2061925e-01    1.04e-01  4.484e-02    0.0      207
363  1.0353882e-01  5.4633175e-01    1.03e-01  6.416e-02    0.0      213
364  1.0295419e-01  4.4605535e-01    1.02e-01  5.915e-02   -0.3      217
365  1.0271040e-01  4.9329103e-01    1.02e-01  5.981e-02    0.0      215
366  1.0245684e-01  3.5848475e-01    1.01e-01  5.265e-02    0.0      216
367  1.0228843e-01  2.5090406e-01    1.01e-01  4.553e-02    0.0      216
368  1.0205242e-01  2.6983964e-01    1.01e-01  4.695e-02    0.0      217
369  1.0182332e-01  1.0725078e+00    1.01e-01  9.752e-02    0.0      219
370  1.0098259e-01  2.5783471e-01    1.00e-01  4.710e-02   -0.3      219
371  1.0081481e-01  2.3520815e-01    9.98e-02  4.520e-02    0.0      219
372  1.0062757e-01  2.1541388e-01    9.96e-02  4.403e-02    0.0      219
373  1.0002003e-01  8.3024160e-01    9.90e-02  8.306e-02    0.0      219
374  9.9840380e-02  5.5837769e-01    9.88e-02  6.615e-02   -0.3      219
375  9.9470645e-02  2.6837046e-01    9.85e-02  4.834e-02    0.0      219
376  9.9366397e-02  1.7297378e-01    9.84e-02  4.187e-02    0.0      219
377  9.9190128e-02  1.8940050e-01    9.82e-02  4.303e-02    0.0      219
378  9.7452199e-02  1.4241552e+00    9.65e-02  1.224e-01    0.0      218
379  9.6223948e-02  8.0922372e-01    9.52e-02  8.952e-02   -0.3      217
380  9.5196488e-02  2.6983308e-01    9.42e-02  5.153e-02    0.0      217
381  9.5053120e-02  1.4374748e-01    9.41e-02  4.388e-02    0.0      217
382  9.4927989e-02  1.0079197e-01    9.39e-02  4.066e-02    0.0      218
383  9.4168786e-02  2.5430338e-01    9.32e-02  4.922e-02    0.0      218
384  9.4155236e-02  5.4035133e-01    9.32e-02  6.363e-02   -0.3      219
385  9.4362481e-02  8.2293927e-01    9.34e-02  8.782e-02    0.0      218
386  9.3824942e-02  2.1080600e-01    9.28e-02  4.505e-02    0.0      219
387  9.3706799e-02  1.5408196e-01    9.27e-02  4.241e-02    0.0      218
388  9.3643407e-02  1.2216996e-01    9.26e-02  4.019e-02    0.0      218
389  9.2447022e-02  1.1751770e-01    9.14e-02  3.876e-02    0.0      218
390  9.2647086e-02  5.6892877e-01    9.16e-02  7.690e-02   -0.3      218
391  9.2758927e-02  5.5322895e-01    9.18e-02  6.096e-02   -0.3      218
392  9.2046443e-02  2.1921386e-01    9.10e-02  4.815e-02    0.0      218
393  9.1918944e-02  1.1836309e-01    9.09e-02  3.998e-02    0.0      218
394  9.1865441e-02  1.0602818e-01    9.09e-02  3.931e-02    0.0      218
395  9.0848895e-02  2.6712499e-01    8.98e-02  5.010e-02    0.0      217
396  9.1000156e-02  4.5162080e-01    9.00e-02  5.982e-02   -0.3      215
397  9.0705496e-02  2.0998773e-01    8.97e-02  4.449e-02    0.0      217
398  9.0564037e-02  1.2655960e-01    8.96e-02  4.075e-02    0.0      217
399  9.0525696e-02  1.0027479e-01    8.95e-02  3.875e-02    0.0      217
400  9.0334100e-02  1.0984110e-01    8.93e-02  3.911e-02    0.0      216
```

ERROR EXIT -- Too many iterations

```
Products with A      :      583      Total time   (secs) :       5.2
Products with A'     :      401      Project time (secs) :       0.7
Newton iterations    :        4      Mat-vec time (secs) :       3.4
Line search its      :      329      Subspace iterations :         0
```

==
PQNL1_SLIM v. 46 (Tue, 14 Jun 2011) based on v.1017
==
```
No. rows              :     2001      No. columns           :      2001
Initial tau           : 0.00e+00      Two-norm of b         : 2.83e+01
Optimality tol        : 1.00e-04      Target objective      : -2.00e+00
```

```
    Basis pursuit tol     : 1.00e-06     Maximum iterations    :      400

      0   2.8278331e+01   0.0000000e+00    1.07e+00   7.248e+01      0.0          0

    Inside of minConf_PQN
     Iteration    FunEvals Projections      Step Length        rNorm2        O
             1           1           4     5.00000e-01     2.62355e+01     1.771
             2           1          16     1.00000e+00     1.03473e+01     2.291
             3           1          25     1.00000e+00     9.27622e+00     2.220
             4           1          32     1.00000e+00     8.29451e+00     2.178
             5           1          41     1.00000e+00     7.51895e+00     2.040
             6           1          50     1.00000e+00     7.13052e+00     2.013
             7           1          59     1.00000e+00     6.90437e+00     1.909
             8           1          70     1.00000e+00     6.76904e+00     1.809
             9           1          81     1.00000e+00     6.66229e+00     1.904
            10           1          91     1.00000e+00     6.56583e+00     1.707
            11           1         101     1.00000e+00     6.49195e+00     1.477
            12           1         113     1.00000e+00     6.43997e+00     1.398
            13           1         127     1.00000e+00     6.38822e+00     1.398
            14           1         140     1.00000e+00     6.34414e+00     1.342
            15           1         153     1.00000e+00     6.30507e+00     1.326
            16           1         166     1.00000e+00     6.27170e+00     1.131
            17           1         174     1.00000e+00     6.24253e+00     1.036
            18           1         185     1.00000e+00     6.21805e+00     1.075
            19           1         199     1.00000e+00     6.19786e+00     1.012
            20           1         213     1.00000e+00     6.18344e+00     8.908
            21           1         223     1.00000e+00     6.15217e+00     1.033
            22           1         240     1.00000e+00     6.14184e+00     9.881
            23           1         255     1.00000e+00     6.11964e+00     8.419
            24           1         270     1.00000e+00     6.11003e+00     8.025
            25           1         278     1.00000e+00     6.10202e+00     8.595
            26           1         294     1.00000e+00     6.09254e+00     8.955
            27           1         315     1.00000e+00     6.07192e+00     9.558
            28           1         331     1.00000e+00     6.06420e+00     9.148
            29           1         352     1.00000e+00     6.05568e+00     7.838
            30           1         369     1.00000e+00     6.04847e+00     8.398
            31           1         386     1.00000e+00     6.03801e+00     9.406
            32           1         408     1.00000e+00     6.03065e+00     8.909
            33           1         423     1.00000e+00     6.02788e+00     8.233
    break of testUpdateTau   33   6.0278753e+00   2.2275093e-01    1.33e+00   1.0

    Inside of minConf_PQN
     Iteration    FunEvals Projections      Step Length        rNorm2        O
            34           1           4     2.50000e-01     5.74285e+00     2.590
            35           1          14     1.00000e+00     2.07830e+00     3.315
            36           1          26     1.00000e+00     1.38086e+00     3.142
            37           1          34     1.00000e+00     1.04645e+00     2.030
            38           1          43     1.00000e+00     8.90084e-01     1.753
            39           1          54     1.00000e+00     6.99894e-01     1.917
            40           1          69     1.00000e+00     5.90647e-01     1.784
            41           1          85     1.00000e+00     5.38338e-01     1.638
            42           1         105     1.00000e+00     4.69948e-01     1.524
            43           1         122     1.00000e+00     4.12089e-01     1.498
            44           1         139     1.00000e+00     3.54421e-01     1.176
```

45	1	158	1.00000e+00	3.16036e-01	8.676
46	1	185	1.00000e+00	2.90100e-01	7.803
47	1	209	1.00000e+00	2.64332e-01	7.896
48	1	236	1.00000e+00	2.36303e-01	8.433
49	1	269	1.00000e+00	2.17915e-01	7.488
50	1	290	1.00000e+00	2.02861e-01	6.888
51	1	317	1.00000e+00	1.88805e-01	7.783
52	1	349	1.00000e+00	1.74792e-01	5.776
53	1	388	1.00000e+00	1.64822e-01	4.963
54	1	417	1.00000e+00	1.54522e-01	4.595
55	1	452	1.00000e+00	1.44650e-01	4.672
56	1	487	1.00000e+00	1.36134e-01	4.862
57	1	513	1.00000e+00	1.29969e-01	4.265
58	1	549	1.00000e+00	1.24634e-01	4.241
59	1	579	1.00000e+00	1.18482e-01	4.051
60	1	607	1.00000e+00	1.12646e-01	3.050
61	1	630	1.00000e+00	1.09534e-01	2.880
62	1	672	1.00000e+00	1.06087e-01	3.517
63	1	715	1.00000e+00	1.01423e-01	3.828
64	1	754	1.00000e+00	9.69637e-02	3.437
65	1	785	1.00000e+00	9.30960e-02	3.220
66	1	835	1.00000e+00	8.99761e-02	2.769
67	1	891	1.00000e+00	8.60728e-02	2.608
68	1	924	1.00000e+00	8.33924e-02	2.083
69	1	956	1.00000e+00	8.09409e-02	1.917
70	1	998	1.00000e+00	7.89048e-02	2.434
71	1	1037	1.00000e+00	7.65267e-02	2.771
72	1	1070	1.00000e+00	7.48224e-02	2.827
73	1	1084	1.00000e+00	7.38653e-02	1.876
74	1	1136	1.00000e+00	7.26032e-02	2.073
75	1	1190	1.00000e+00	7.09041e-02	1.930
76	1	1210	1.00000e+00	6.97505e-02	1.380
77	1	1261	1.00000e+00	6.85039e-02	1.604
78	1	1312	1.00000e+00	6.73597e-02	2.056
79	1	1354	1.00000e+00	6.60789e-02	1.877
80	1	1386	1.00000e+00	6.49936e-02	1.947
81	1	1432	1.00000e+00	6.40592e-02	1.867
82	1	1493	1.00000e+00	6.29036e-02	1.831
83	1	1551	1.00000e+00	6.20185e-02	1.311
84	1	1603	1.00000e+00	6.13088e-02	1.423
85	1	1636	1.00000e+00	6.08287e-02	1.453
86	1	1665	1.00000e+00	6.03124e-02	1.495
87	1	1685	1.00000e+00	5.99488e-02	1.150
88	1	1721	1.00000e+00	5.93317e-02	1.131
89	1	1789	1.00000e+00	5.86308e-02	1.182
90	1	1864	1.00000e+00	5.78885e-02	1.136
91	1	1918	1.00000e+00	5.72443e-02	1.026
92	1	1973	1.00000e+00	5.68335e-02	1.394
93	1	2041	1.00000e+00	5.64717e-02	1.423
94	1	2059	1.00000e+00	5.61422e-02	9.281
95	1	2134	1.00000e+00	5.57100e-02	1.067
96	1	2211	1.00000e+00	5.52644e-02	1.204
97	1	2245	1.00000e+00	5.48863e-02	1.038
98	1	2308	1.00000e+00	5.43676e-02	8.018

99	1	2376	1.00000e+00	5.39499e-02	9.964
100	1	2493	1.00000e+00	5.35967e-02	1.143
101	1	2545	1.00000e+00	5.31935e-02	1.115
102	1	2614	1.00000e+00	5.27996e-02	9.192
103	1	2634	1.00000e+00	5.26224e-02	9.426
104	1	2705	1.00000e+00	5.24025e-02	9.783
105	1	2800	1.00000e+00	5.21005e-02	9.134
106	1	2867	1.00000e+00	5.18276e-02	8.689
107	1	2925	1.00000e+00	5.16067e-02	8.126
108	1	3006	1.00000e+00	5.14338e-02	9.064
109	1	3089	1.00000e+00	5.11249e-02	9.857
110	1	3166	1.00000e+00	5.08873e-02	8.704
111	1	3210	1.00000e+00	5.07426e-02	1.015
112	1	3286	1.00000e+00	5.05880e-02	1.077
113	1	3412	1.00000e+00	5.02917e-02	1.075
114	1	3436	1.00000e+00	5.01162e-02	7.204
115	1	3508	1.00000e+00	4.99123e-02	7.050
116	1	3577	1.00000e+00	4.97267e-02	7.871
117	1	3655	1.00000e+00	4.95356e-02	7.290
118	1	3736	1.00000e+00	4.93516e-02	8.023
119	1	3794	1.00000e+00	4.92114e-02	8.567
120	1	3862	1.00000e+00	4.90695e-02	7.473
121	1	3923	1.00000e+00	4.89045e-02	6.358
122	1	3973	1.00000e+00	4.87961e-02	6.174
123	1	4032	1.00000e+00	4.86902e-02	6.171
124	1	4100	1.00000e+00	4.85823e-02	6.231
125	1	4135	1.00000e+00	4.84910e-02	5.725
126	1	4218	1.00000e+00	4.83772e-02	6.376
127	1	4277	1.00000e+00	4.82839e-02	6.795
128	1	4324	1.00000e+00	4.81809e-02	6.817
129	1	4352	1.00000e+00	4.81156e-02	4.194
130	1	4413	1.00000e+00	4.80205e-02	4.768
131	1	4504	1.00000e+00	4.79284e-02	5.415
132	1	4562	1.00000e+00	4.78203e-02	5.450
133	1	4655	1.00000e+00	4.76606e-02	6.397
134	1	4760	1.00000e+00	4.75241e-02	5.084
135	1	4841	1.00000e+00	4.74268e-02	5.175
136	1	4874	1.00000e+00	4.73591e-02	6.131
137	1	4908	1.00000e+00	4.73099e-02	4.595
138	1	4996	1.00000e+00	4.72031e-02	4.614
139	1	5037	1.00000e+00	4.71498e-02	4.506
140	1	5112	1.00000e+00	4.70726e-02	4.220
141	1	5189	1.00000e+00	4.69811e-02	3.974
142	1	5244	1.00000e+00	4.68925e-02	4.108
143	1	5269	1.00000e+00	4.68625e-02	5.422
144	1	5356	1.00000e+00	4.67983e-02	6.576
145	1	5393	1.00000e+00	4.67567e-02	7.239
146	1	5472	1.00000e+00	4.66751e-02	6.215
147	1	5491	1.00000e+00	4.66432e-02	3.879
148	1	5580	1.00000e+00	4.65796e-02	3.255
149	1	5661	1.00000e+00	4.65353e-02	3.941
150	1	5767	1.00000e+00	4.64732e-02	4.185
151	1	5863	1.00000e+00	4.64087e-02	3.567
152	1	5909	1.00000e+00	4.63531e-02	4.487

```
          153          1        6021      1.00000e+00      4.63071e-02      5.147
          154          1        6082      1.00000e+00      4.62715e-02      4.854
          155          1        6166      1.00000e+00      4.62032e-02      4.569
          156          1        6232      1.00000e+00      4.61200e-02      3.757
          157          1        6295      1.00000e+00      4.60667e-02      3.833
          158          1        6374      1.00000e+00      4.60080e-02      3.902
          159          1        6425      1.00000e+00      4.59539e-02      2.853
          160          1        6498      1.00000e+00      4.58964e-02      2.446
          161          1        6539      1.00000e+00      4.58701e-02      3.384
          162          1        6630      1.00000e+00      4.58278e-02      4.341
          163          1        6689      1.00000e+00      4.57926e-02      4.845
          164          1        6739      1.00000e+00      4.57494e-02      4.397
          165          1        6786      1.00000e+00      4.57085e-02      3.320
          166          1        6875      1.00000e+00      4.56672e-02      2.121
          167          1        6961      1.00000e+00      4.56353e-02      2.235
          168          1        7023      1.00000e+00      4.55802e-02      2.734
          169          1        7097      1.00000e+00      4.55298e-02      2.525
          170          1        7200      1.00000e+00      4.54895e-02      2.161
          171          1        7291      1.00000e+00      4.54588e-02      2.454
          172          1        7324      1.00000e+00      4.54392e-02      2.185
break of testUpdateTau   172   4.5439221e-02   1.2045058e-02   2.05e+00   1.3


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
          173          1          4      3.90625e-03      4.54177e-02      1.744
break of testUpdateTau   173   4.5417723e-02   2.6723486e-01   2.05e+00   3.2


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
          174          1          4      9.76562e-04      4.53985e-02      1.124
break of testUpdateTau   174   4.5398528e-02   2.2149632e-01   2.05e+00   2.0


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
          175          1          4      1.95312e-03      4.53982e-02      2.013
break of testUpdateTau   175   4.5398229e-02   5.5759895e-01   2.05e+00   3.5


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
          176          1          4      9.76562e-04      4.53791e-02      1.331
break of testUpdateTau   176   4.5379073e-02   4.2419410e-01   2.05e+00   2.4


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
          177          1          4      9.76562e-04      4.53676e-02      9.820
break of testUpdateTau   177   4.5367637e-02   3.7396183e-01   2.05e+00   1.7


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
          178          1          4      1.95312e-03      4.53644e-02      1.716
break of testUpdateTau   178   4.5364449e-02   8.2843146e-01   2.05e+00   3.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
```

```
         179            1            4       9.76562e-04      4.53494e-02      1.208
break of testUpdateTau   179   4.5349447e-02   6.2932641e-01   2.05e+00   2.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         180            1            4       9.76562e-04      4.53395e-02      9.049
break of testUpdateTau   180   4.5339510e-02   5.6992745e-01   2.05e+00   1.6


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         181            1            4       1.95312e-03      4.53351e-02      1.592
break of testUpdateTau   181   4.5335115e-02   1.0888695e+00   2.05e+00   2.6


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         182            1            4       9.76562e-04      4.53221e-02      1.112
break of testUpdateTau   182   4.5322102e-02   8.8894775e-01   2.05e+00   2.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         183            1            4       9.76562e-04      4.53131e-02      8.560
break of testUpdateTau   183   4.5313058e-02   7.2293845e-01   2.05e+00   1.5


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         184            1            4       1.95312e-03      4.53082e-02      1.493
break of testUpdateTau   184   4.5308156e-02   1.4189076e+00   2.05e+00   2.6


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         185            1            4       9.76562e-04      4.52964e-02      1.067
break of testUpdateTau   185   4.5296368e-02   1.0827609e+00   2.05e+00   1.8


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         186            1            4       9.76562e-04      4.52879e-02      8.294
break of testUpdateTau   186   4.5287935e-02   9.3259022e-01   2.05e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         187            1            4       1.95312e-03      4.52829e-02      1.456
break of testUpdateTau   187   4.5282896e-02   1.6656684e+00   2.05e+00   2.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         188            1            4       9.76562e-04      4.52719e-02      1.038
break of testUpdateTau   188   4.5271920e-02   1.3362245e+00   2.05e+00   1.8


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length         rNorm2           O
         189            1            4       9.76562e-04      4.52639e-02      8.035
break of testUpdateTau   189   4.5263932e-02   1.0897275e+00   2.05e+00   1.3


Inside of minConf_PQN
```

```
Iteration    FunEvals Projections     Step Length         rNorm2         O
     190           1          4      1.95312e-03      4.52590e-02      1.435
break of testUpdateTau  190  4.5258971e-02  1.9901462e+00   2.05e+00   2.3

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     191           1          4      9.76562e-04      4.52486e-02      1.014
break of testUpdateTau  191  4.5248555e-02  1.5320531e+00   2.05e+00   1.7

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     192           1          4      9.76562e-04      4.52409e-02      7.942
break of testUpdateTau  192  4.5240906e-02  1.2987554e+00   2.05e+00   1.3

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     193           1          4      1.95312e-03      4.52361e-02      1.413
break of testUpdateTau  193  4.5236149e-02  2.2383478e+00   2.05e+00   2.2

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     194           1          4      9.76562e-04      4.52261e-02      1.013
break of testUpdateTau  194  4.5226130e-02  1.7885273e+00   2.05e+00   1.7

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     195           1          4      9.76562e-04      4.52187e-02      7.788
break of testUpdateTau  195  4.5218747e-02  1.4618328e+00   2.05e+00   1.3

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     196           1          4      1.95312e-03      4.52143e-02      1.423
break of testUpdateTau  196  4.5214270e-02  2.5724836e+00   2.05e+00   2.2

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     197           1          4      9.76562e-04      4.52045e-02      9.991
break of testUpdateTau  197  4.5204539e-02  1.9873283e+00   2.05e+00   1.6

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     198           1          4      9.76562e-04      4.51974e-02      7.775
break of testUpdateTau  198  4.5197371e-02  1.6745079e+00   2.05e+00   1.3

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     199           1          4      1.95312e-03      4.51932e-02      1.412
break of testUpdateTau  199  4.5193216e-02  2.8209294e+00   2.05e+00   2.1

Inside of minConf_PQN
Iteration    FunEvals Projections     Step Length         rNorm2         O
     200           1          4      9.76562e-04      4.51837e-02      1.008
break of testUpdateTau  200  4.5183696e-02  2.2542363e+00   2.05e+00   1.6
```

```
Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      201          1         4      9.76562e-04    4.51767e-02      7.678
break of testUpdateTau  201  4.5176706e-02  1.8397633e+00  2.05e+00  1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      202          1         4      1.95312e-03    4.51729e-02      1.431
break of testUpdateTau  202  4.5172897e-02  3.1764608e+00  2.05e+00  2.1


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      203          1         4      9.76562e-04    4.51635e-02      9.985
break of testUpdateTau  203  4.5163534e-02  2.4516427e+00  2.05e+00  1.5


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      204          1         4      9.76562e-04    4.51567e-02      7.695
break of testUpdateTau  204  4.5156694e-02  2.0621002e+00  2.05e+00  1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      205          1         4      1.95312e-03    4.51532e-02      1.427
break of testUpdateTau  205  4.5153242e-02  3.4189806e+00  2.05e+00  2.0


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      206          1         4      9.76562e-04    4.51440e-02      1.011
break of testUpdateTau  206  4.5143995e-02  2.7348106e+00  2.05e+00  1.5


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      207          1         4      9.76562e-04    4.51373e-02      7.638
break of testUpdateTau  207  4.5137282e-02  2.2225947e+00  2.05e+00  1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      208          1         4      1.95312e-03    4.51342e-02      1.448
break of testUpdateTau  208  4.5134192e-02  3.8045333e+00  2.05e+00  2.0


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      209          1         4      9.76562e-04    4.51250e-02      1.005
break of testUpdateTau  209  4.5125032e-02  2.9253408e+00  2.05e+00  1.5


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      210          1         4      9.76562e-04    4.51184e-02      7.658
break of testUpdateTau  210  4.5118429e-02  2.4592547e+00  2.05e+00  1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O;
      211          1         4      1.95312e-03    4.51157e-02      1.448
break of testUpdateTau  211  4.5115700e-02  4.0385853e+00  2.05e+00  1.9
```

```
Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       212         1        4       9.76562e-04     4.51066e-02      1.018
break of testUpdateTau  212  4.5106602e-02  3.2295086e+00   2.05e+00  1.5

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       213         1        4       9.76562e-04     4.51001e-02      7.626
break of testUpdateTau  213  4.5100095e-02  2.6092127e+00   2.05e+00  1.2

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       214         1        4       1.95312e-03     4.50977e-02      1.470
break of testUpdateTau  214  4.5097724e-02  4.4563186e+00   2.05e+00  2.0

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       215         1        4       9.76562e-04     4.50887e-02      1.016
break of testUpdateTau  215  4.5088671e-02  3.4078995e+00   2.05e+00  1.4

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       216         1        4       9.76562e-04     4.50822e-02      7.649
break of testUpdateTau  216  4.5082246e-02  2.8636841e+00   2.05e+00  1.2

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       217         1        4       1.95312e-03     4.50802e-02      1.473
break of testUpdateTau  217  4.5080231e-02  4.6779794e+00   2.05e+00  1.9

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       218         1        4       9.76562e-04     4.50712e-02      1.029
break of testUpdateTau  218  4.5071205e-02  3.7384167e+00   2.05e+00  1.5

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       219         1        4       9.76562e-04     4.50649e-02      7.635
break of testUpdateTau  219  4.5064853e-02  2.9986337e+00   2.05e+00  1.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       220         1        4       1.95312e-03     4.50632e-02      1.495
break of testUpdateTau  220  4.5063189e-02  5.1305291e+00   2.05e+00  1.9

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       221         1        4       9.76562e-04     4.50542e-02      1.030
break of testUpdateTau  221  4.5054178e-02  3.8985679e+00   2.05e+00  1.4

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2         O
       222         1        4       9.76562e-04     4.50479e-02      7.658
```

break of testUpdateTau   222   4.5047890e-02   3.2738184e+00   2.05e+00   1.2

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       223   1   4   1.95312e-03   4.50466e-02   1.501
break of testUpdateTau   223   4.5046573e-02   5.3350591e+00   2.05e+00   1.9

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       224   1   4   9.76562e-04   4.50376e-02   1.042
break of testUpdateTau   224   4.5037564e-02   4.2606081e+00   2.05e+00   1.5

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       225   1   4   9.76562e-04   4.50313e-02   7.663
break of testUpdateTau   225   4.5031332e-02   3.3900569e+00   2.05e+00   1.1

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       226   1   4   1.95312e-03   4.50304e-02   1.523
break of testUpdateTau   226   4.5030358e-02   5.8256987e+00   2.05e+00   1.9

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       227   1   4   9.76562e-04   4.50213e-02   1.045
break of testUpdateTau   227   4.5021341e-02   4.3999466e+00   2.05e+00   1.4

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       228   1   4   9.76562e-04   4.50152e-02   7.686
break of testUpdateTau   228   4.5015158e-02   3.6883691e+00   2.05e+00   1.2

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       229   1   4   1.95312e-03   4.50145e-02   1.530
break of testUpdateTau   229   4.5014524e-02   6.0088281e+00   2.05e+00   1.9

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       230   1   4   9.76562e-04   4.50055e-02   1.058
break of testUpdateTau   230   4.5005490e-02   4.7931847e+00   2.05e+00   1.4

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       231   1   4   9.76562e-04   4.49993e-02   7.710
break of testUpdateTau   231   4.4999349e-02   3.7828461e+00   2.04e+00   1.1

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O
       232   1   4   1.95312e-03   4.49991e-02   1.552
break of testUpdateTau   232   4.4999052e-02   6.5404578e+00   2.04e+00   1.9

Inside of minConf_PQN
 Iteration   FunEvals Projections   Step Length   rNorm2   O

```
             233          1          4      9.76562e-04      4.49900e-02      1.062
break of testUpdateTau  233  4.4989993e-02  4.9105262e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             234          1          4      9.76562e-04      4.49839e-02      7.730
break of testUpdateTau  234  4.4983887e-02  4.1064408e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             235          1          4      9.76562e-04      4.49791e-02      6.250
break of testUpdateTau  235  4.4979079e-02  3.3877347e+00   2.04e+00   9.5


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             236          1          4      1.95312e-03      4.49748e-02      1.075
break of testUpdateTau  236  4.4974832e-02  5.4057722e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             237          1          4      9.76562e-04      4.49688e-02      7.771
break of testUpdateTau  237  4.4968756e-02  4.2308443e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             238          1          4      9.76562e-04      4.49640e-02      6.184
break of testUpdateTau  238  4.4964007e-02  3.7239222e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             239          1          4      1.95312e-03      4.49600e-02      1.080
break of testUpdateTau  239  4.4959994e-02  5.5623666e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             240          1          4      9.76562e-04      4.49539e-02      7.792
break of testUpdateTau  240  4.4953943e-02  4.6377385e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             241          1          4      9.76562e-04      4.49492e-02      6.234
break of testUpdateTau  241  4.4949247e-02  3.7925542e+00   2.04e+00   9.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             242          1          4      1.95312e-03      4.49455e-02      1.094
break of testUpdateTau  242  4.4945464e-02  6.0968640e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
             243          1          4      9.76562e-04      4.49394e-02      7.845
break of testUpdateTau  243  4.4939433e-02  4.7321397e+00   2.04e+00   1.1


Inside of minConf_PQN
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```
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        244         1          4       9.76562e-04       4.49348e-02       6.167
break of testUpdateTau   244  4.4934786e-02  4.1841027e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        245         1          4       1.95312e-03       4.49312e-02       1.100
break of testUpdateTau   245  4.4931230e-02  6.2219028e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        246         1          4       9.76562e-04       4.49252e-02       7.871
break of testUpdateTau   246  4.4925214e-02  5.1721228e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        247         1          4       9.76562e-04       4.49206e-02       6.226
break of testUpdateTau   247  4.4920614e-02  4.1938573e+00   2.04e+00   9.3


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        248         1          4       1.95312e-03       4.49173e-02       1.114
break of testUpdateTau   248  4.4917281e-02  6.7983033e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        249         1          4       9.76562e-04       4.49113e-02       7.932
break of testUpdateTau   249  4.4911275e-02  5.2373485e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        250         1          4       9.76562e-04       4.49067e-02       6.160
break of testUpdateTau   250  4.4906718e-02  4.6460459e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        251         1          4       1.95312e-03       4.49036e-02       1.120
break of testUpdateTau   251  4.4903606e-02  6.8896919e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        252         1          4       9.76562e-04       4.48976e-02       7.963
break of testUpdateTau   252  4.4897606e-02  5.7114171e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        253         1          4       9.76562e-04       4.48931e-02       6.227
break of testUpdateTau   253  4.4893088e-02  4.6066176e+00   2.04e+00   9.2


Inside of minConf_PQN
 Iteration   FunEvals Projections      Step Length            rNorm2           O
        254         1          4       1.95312e-03       4.48902e-02       1.135
break of testUpdateTau   254  4.4890195e-02  7.5100478e+00   2.04e+00   1.4
```

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Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       255          1         4      9.76562e-04      4.48842e-02      8.033
break of testUpdateTau   255  4.4884197e-02  5.7459087e+00   2.04e+00  1.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       256          1         4      9.76562e-04      4.48797e-02      6.164
break of testUpdateTau   256  4.4879715e-02  5.1096188e+00   2.04e+00  9.8

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       257          1         4      1.95312e-03      4.48770e-02      1.142
break of testUpdateTau   257  4.4877039e-02  7.5658981e+00   2.04e+00  1.4

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       258          1         4      9.76562e-04      4.48710e-02      8.068
break of testUpdateTau   258  4.4871039e-02  6.2889833e+00   2.04e+00  1.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       259          1         4      9.76562e-04      4.48666e-02      6.237
break of testUpdateTau   259  4.4866590e-02  5.0352923e+00   2.04e+00  9.2

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       260          1         4      1.95312e-03      4.48641e-02      1.157
break of testUpdateTau   260  4.4864129e-02  8.2315484e+00   2.04e+00  1.4

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       261          1         4      9.76562e-04      4.48581e-02      8.148
break of testUpdateTau   261  4.4858124e-02  6.2557368e+00   2.04e+00  1.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       262          1         4      9.76562e-04      4.48537e-02      6.179
break of testUpdateTau   262  4.4853705e-02  5.5743387e+00   2.04e+00  9.8

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       263          1         4      1.95312e-03      4.48515e-02      1.166
break of testUpdateTau   263  4.4851458e-02  8.2501889e+00   2.04e+00  1.4

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       264          1         4      9.76562e-04      4.48454e-02      8.184
break of testUpdateTau   264  4.4845443e-02  6.8726613e+00   2.04e+00  1.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length          rNorm2           O
       265          1         4      9.76562e-04      4.48411e-02      6.257
break of testUpdateTau   265  4.4841052e-02  5.4678665e+00   2.04e+00  9.2
```

```
Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       266         1         4       1.95312e-03     4.48390e-02     1.181
break of testUpdateTau   266   4.4839019e-02   8.9635417e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       267         1         4       9.76562e-04     4.48330e-02     8.271
break of testUpdateTau   267   4.4832990e-02   6.7964761e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       268         1         4       9.76562e-04     4.48286e-02     6.205
break of testUpdateTau   268   4.4828624e-02   6.0401636e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       269         1         4       1.95312e-03     4.48268e-02     1.190
break of testUpdateTau   269   4.4826803e-02   8.9987180e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       270         1         4       9.76562e-04     4.48208e-02     8.313
break of testUpdateTau   270   4.4820757e-02   7.4620201e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       271         1         4       9.76562e-04     4.48164e-02     6.286
break of testUpdateTau   271   4.4816414e-02   5.9088356e+00   2.04e+00   9.2


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       272         1         4       1.95312e-03     4.48148e-02     1.205
break of testUpdateTau   272   4.4814805e-02   9.7056164e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       273         1         4       9.76562e-04     4.48087e-02     8.403
break of testUpdateTau   273   4.4808739e-02   7.3633228e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       274         1         4       9.76562e-04     4.48044e-02     6.242
break of testUpdateTau   274   4.4804416e-02   6.5067326e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       275         1         4       1.95312e-03     4.48030e-02     1.216
break of testUpdateTau   275   4.4803018e-02   9.7695962e+00   2.04e+00   1.4


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length        rNorm2        O
       276         1         4       9.76562e-04     4.47969e-02     8.452
```

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break of testUpdateTau  276  4.4796928e-02  8.0571337e+00   2.04e+00   1.1

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       277         1         4     9.76562e-04   4.47926e-02    6.326
break of testUpdateTau  277  4.4792623e-02  6.3587473e+00   2.04e+00   9.2

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       278         1         4     1.95312e-03   4.47914e-02    1.231
break of testUpdateTau  278  4.4791437e-02  1.0485351e+01   2.04e+00   1.5

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       279         1         4     9.76562e-04   4.47853e-02    8.543
break of testUpdateTau  279  4.4785319e-02  7.9480380e+00   2.04e+00   1.1

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       280         1         4     9.76562e-04   4.47810e-02    6.287
break of testUpdateTau  280  4.4781029e-02  6.9740546e+00   2.04e+00   9.8

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       281         1         4     1.95312e-03   4.47801e-02    1.242
break of testUpdateTau  281  4.4780057e-02  1.0555745e+01   2.04e+00   1.4

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       282         1         4     9.76562e-04   4.47739e-02    8.600
break of testUpdateTau  282  4.4773907e-02  8.6581366e+00   2.04e+00   1.1

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       283         1         4     9.76562e-04   4.47696e-02    6.373
break of testUpdateTau  283  4.4769631e-02  6.8136002e+00   2.04e+00   9.2

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       284         1         4     1.95312e-03   4.47689e-02    1.258
break of testUpdateTau  284  4.4768871e-02  1.1299160e+01   2.04e+00   1.5

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       285         1         4     9.76562e-04   4.47627e-02    8.693
break of testUpdateTau  285  4.4762687e-02  8.5431942e+00   2.04e+00   1.1

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
       286         1         4     9.76562e-04   4.47584e-02    6.340
break of testUpdateTau  286  4.4758421e-02  7.4424301e+00   2.04e+00   9.8

Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length        rNorm2        O
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        287            1            4      1.95312e-03      4.47579e-02      1.269
break of testUpdateTau   287   4.4757874e-02   1.1357627e+01   2.04e+00   1.4


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        288            1            4      9.76562e-04      4.47517e-02      8.757
break of testUpdateTau   288   4.4751652e-02   9.2654420e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        289            1            4      9.76562e-04      4.47474e-02      6.429
break of testUpdateTau   289   4.4747395e-02   7.2737259e+00   2.04e+00   9.3


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        290            1            4      1.95312e-03      4.47471e-02      1.285
break of testUpdateTau   290   4.4747063e-02   1.2127767e+01   2.04e+00   1.5


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        291            1            4      9.76562e-04      4.47408e-02      8.850
break of testUpdateTau   291   4.4740800e-02   9.1493312e+00   2.04e+00   1.1


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        292            1            4      9.76562e-04      4.47365e-02      6.403
break of testUpdateTau   292   4.4736550e-02   7.9122917e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        293            1            4      1.95312e-03      4.47364e-02      1.298
break of testUpdateTau   293   4.4736433e-02   1.2175930e+01   2.04e+00   1.4


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        294            1            4      9.76562e-04      4.47301e-02      8.923
break of testUpdateTau   294   4.4730124e-02   9.8796200e+00   2.04e+00   1.2


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        295            1            4      9.76562e-04      4.47259e-02      6.494
break of testUpdateTau   295   4.4725879e-02   7.7395250e+00   2.04e+00   9.3


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        296            1            4      9.76562e-04      4.47225e-02      5.157
break of testUpdateTau   296   4.4722539e-02   7.0176882e+00   2.04e+00   8.3


Inside of minConf_PQN
 Iteration   FunEvals Projections     Step Length           rNorm2          O
        297            1            4      1.95312e-03      4.47196e-02      9.016
break of testUpdateTau   297   4.4719622e-02   9.8249001e+00   2.04e+00   1.1


Inside of minConf_PQN
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 Iteration  FunEvals Projections    Step Length         rNorm2          O
       298         1        4     9.76562e-04     4.47154e-02      6.474
break of testUpdateTau  298  4.4715379e-02  8.4333994e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       299         1        4     9.76562e-04     4.47121e-02      5.210
break of testUpdateTau  299  4.4712064e-02  6.8454722e+00   2.04e+00   7.9


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       300         1        4     1.95312e-03     4.47093e-02      9.096
break of testUpdateTau  300  4.4709288e-02  1.0628707e+01   2.04e+00   1.2


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       301         1        4     9.76562e-04     4.47050e-02      6.569
break of testUpdateTau  301  4.4705046e-02  8.3101244e+00   2.04e+00   9.3


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       302         1        4     9.76562e-04     4.47018e-02      5.160
break of testUpdateTau  302  4.4701753e-02  7.4800916e+00   2.04e+00   8.3


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       303         1        4     1.95312e-03     4.46991e-02      9.190
break of testUpdateTau  303  4.4699119e-02  1.0578749e+01   2.04e+00   1.1


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       304         1        4     9.76562e-04     4.46949e-02      6.554
break of testUpdateTau  304  4.4694875e-02  9.0122652e+00   2.04e+00   9.8


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       305         1        4     9.76562e-04     4.46916e-02      5.217
break of testUpdateTau  305  4.4691605e-02  7.3018334e+00   2.04e+00   7.9


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       306         1        4     1.95312e-03     4.46891e-02      9.277
break of testUpdateTau  306  4.4689111e-02  1.1389072e+01   2.04e+00   1.2


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       307         1        4     9.76562e-04     4.46849e-02      6.654
break of testUpdateTau  307  4.4684863e-02  8.8893883e+00   2.04e+00   9.4


Inside of minConf_PQN
 Iteration  FunEvals Projections    Step Length         rNorm2          O
       308         1        4     9.76562e-04     4.46816e-02      5.169
break of testUpdateTau  308  4.4681613e-02  7.9423620e+00   2.04e+00   8.3
```

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Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       309          1          4      1.95312e-03     4.46793e-02      9.373
break of testUpdateTau  309  4.4679261e-02  1.1348931e+01  2.04e+00  1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       310          1          4      9.76562e-04     4.46750e-02      6.642
break of testUpdateTau  310  4.4675007e-02  9.5958091e+00  2.04e+00  9.9


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       311          1          4      9.76562e-04     4.46718e-02      5.231
break of testUpdateTau  311  4.4671776e-02  7.7621899e+00  2.04e+00  7.9


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       312          1          4      1.95312e-03     4.46696e-02      9.466
break of testUpdateTau  312  4.4669564e-02  1.2161435e+01  2.04e+00  1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       313          1          4      9.76562e-04     4.46653e-02      6.746
break of testUpdateTau  313  4.4665303e-02  9.4777616e+00  2.04e+00  9.5


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       314          1          4      9.76562e-04     4.46621e-02      5.186
break of testUpdateTau  314  4.4662089e-02  8.4049106e+00  2.04e+00  8.3


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       315          1          4      1.95312e-03     4.46600e-02      9.565
break of testUpdateTau  315  4.4660018e-02  1.2136049e+01  2.04e+00  1.1


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       316          1          4      9.76562e-04     4.46557e-02      6.740
break of testUpdateTau  316  4.4655747e-02  1.0184569e+01  2.04e+00  9.9


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       317          1          4      9.76562e-04     4.46525e-02      5.249
break of testUpdateTau  317  4.4652549e-02  8.2268651e+00  2.04e+00  7.9


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       318          1          4      1.95312e-03     4.46506e-02      9.662
break of testUpdateTau  318  4.4650619e-02  1.2946529e+01  2.04e+00  1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2          O
       319          1          4      9.76562e-04     4.46463e-02      6.846
break of testUpdateTau  319  4.4646336e-02  1.0075671e+01  2.04e+00  9.5
```

```
Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        320         1          4      9.76562e-04      4.46432e-02      5.208
break of testUpdateTau   320  4.4643154e-02  8.8681591e+00   2.04e+00   8.3


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        321         1          4      1.95312e-03      4.46414e-02      9.764
break of testUpdateTau   321  4.4641364e-02  1.2940688e+01   2.04e+00   1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        322         1          4      9.76562e-04      4.46371e-02      6.847
break of testUpdateTau   322  4.4637068e-02  1.0779096e+01   2.04e+00   9.9


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        323         1          4      9.76562e-04      4.46339e-02      5.274
break of testUpdateTau   323  4.4633899e-02  8.6961658e+00   2.04e+00   7.9


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        324         1          4      1.95312e-03      4.46323e-02      9.866
break of testUpdateTau   324  4.4632250e-02  1.3749453e+01   2.04e+00   1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        325         1          4      9.76562e-04      4.46279e-02      6.952
break of testUpdateTau   325  4.4627938e-02  1.0683509e+01   2.04e+00   9.6


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        326         1          4      9.76562e-04      4.46248e-02      5.237
break of testUpdateTau   326  4.4624781e-02  9.3325186e+00   2.04e+00   8.3


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        327         1          4      1.95312e-03      4.46233e-02      9.972
break of testUpdateTau   327  4.4623275e-02  1.3763404e+01   2.04e+00   1.2


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        328         1          4      9.76562e-04      4.46189e-02      6.962
break of testUpdateTau   328  4.4618945e-02  1.1379926e+01   2.04e+00   1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        329         1          4      9.76562e-04      4.46158e-02      5.305
break of testUpdateTau   329  4.4615799e-02  9.1703679e+00   2.04e+00   7.9


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
        330         1          4      1.95312e-03      4.46144e-02      1.007
```

```
break of testUpdateTau   330  4.4614434e-02  1.4568744e+01   2.04e+00  1.2

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       331         1         4    9.76562e-04    4.46101e-02    7.066
break of testUpdateTau   331  4.4610085e-02  1.1301674e+01   2.04e+00  9.6

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       332         1         4    9.76562e-04    4.46069e-02    5.272
break of testUpdateTau   332  4.4606949e-02  9.7984206e+00   2.04e+00  8.3

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       333         1         4    1.95312e-03    4.46057e-02    1.018
break of testUpdateTau   333  4.4605727e-02  1.4604769e+01   2.04e+00  1.2

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       334         1         4    9.76562e-04    4.46014e-02    7.085
break of testUpdateTau   334  4.4601356e-02  1.1987622e+01   2.04e+00  1.0

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       335         1         4    9.76562e-04    4.45982e-02    5.343
break of testUpdateTau   335  4.4598228e-02  9.6497519e+00   2.04e+00  8.0

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       336         1         4    1.95312e-03    4.45971e-02    1.029
break of testUpdateTau   336  4.4597149e-02  1.5403533e+01   2.04e+00  1.2

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       337         1         4    9.76562e-04    4.45928e-02    7.186
break of testUpdateTau   337  4.4592754e-02  1.1930573e+01   2.04e+00  9.7

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       338         1         4    9.76562e-04    4.45896e-02    5.315
break of testUpdateTau   338  4.4589634e-02  1.0266311e+01   2.04e+00  8.3

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       339         1         4    1.95312e-03    4.45887e-02    1.041
break of testUpdateTau   339  4.4588699e-02  1.5465366e+01   2.04e+00  1.2

Inside of minConf_PQN
 Iteration   FunEvals Projections    Step Length        rNorm2        O
       340         1         4    9.76562e-04    4.45843e-02    7.213
break of testUpdateTau   340  4.4584278e-02  1.2602762e+01   2.04e+00  1.0

Inside of minConf_PQN
 Iteration   FunEvals Projections       Step Length        rNorm2        O
```

```
                341            1            4       9.76562e-04      4.45812e-02      5.388
break of testUpdateTau   341  4.4581163e-02  1.0134602e+01   2.04e+00  8.0


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                342            1            4       1.95312e-03      4.45804e-02      1.052
break of testUpdateTau   342  4.4580373e-02  1.6254597e+01   2.04e+00  1.2


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                343            1            4       9.76562e-04      4.45759e-02      7.313
break of testUpdateTau   343  4.4575925e-02  1.2570609e+01   2.04e+00  9.8


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                344            1            4       9.76562e-04      4.45728e-02      5.364
break of testUpdateTau   344  4.4572815e-02  1.0736641e+01   2.04e+00  8.3


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                345            1            4       1.95312e-03      4.45722e-02      1.064
break of testUpdateTau   345  4.4572170e-02  1.6345789e+01   2.04e+00  1.2


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                346            1            4       9.76562e-04      4.45677e-02      7.347
break of testUpdateTau   346  4.4567692e-02  1.3225933e+01   2.04e+00  1.0


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                347            1            4       9.76562e-04      4.45646e-02      5.439
break of testUpdateTau   347  4.4564585e-02  1.0625200e+01   2.04e+00  8.0


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                348            1            4       1.95312e-03      4.45641e-02      1.075
break of testUpdateTau   348  4.4564088e-02  1.7122727e+01   2.04e+00  1.2


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                349            1            4       9.76562e-04      4.45596e-02      7.446
break of testUpdateTau   349  4.4559577e-02  1.3222191e+01   2.04e+00  9.9


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                350            1            4       9.76562e-04      4.45565e-02      5.418
break of testUpdateTau   350  4.4556473e-02  1.1209867e+01   2.04e+00  8.3


Inside of minConf_PQN
 Iteration     FunEvals Projections      Step Length         rNorm2          O
                351            1            4       1.95312e-03      4.45561e-02      1.087
break of testUpdateTau   351  4.4556123e-02  1.7246636e+01   2.04e+00  1.2


Inside of minConf_PQN
```

```
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      352           1          4     9.76562e-04     4.45516e-02      7.487
break of testUpdateTau   352  4.4551578e-02  1.3857727e+01   2.04e+00  1.0

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      353           1          4     9.76562e-04     4.45485e-02      5.496
break of testUpdateTau   353  4.4548475e-02  1.1121830e+01   2.04e+00  8.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      354           1          4     1.95312e-03     4.45483e-02      1.099
break of testUpdateTau   354  4.4548274e-02  1.8008722e+01   2.04e+00  1.3

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      355           1          4     9.76562e-04     4.45437e-02      7.586
break of testUpdateTau   355  4.4543693e-02  1.3885733e+01   2.04e+00  1.0

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      356           1          4     9.76562e-04     4.45406e-02      5.478
break of testUpdateTau   356  4.4540589e-02  1.1686448e+01   2.04e+00  8.3

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      357           1          4     1.95312e-03     4.45405e-02      1.112
break of testUpdateTau   357  4.4540539e-02  1.8168520e+01   2.04e+00  1.2

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      358           1          4     9.76562e-04     4.45359e-02      7.632
break of testUpdateTau   358  4.4535919e-02  1.4498744e+01   2.04e+00  1.0

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      359           1          4     9.76562e-04     4.45328e-02      5.560
break of testUpdateTau   359  4.4532814e-02  1.1624779e+01   2.04e+00  8.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      360           1          4     9.76562e-04     4.45304e-02      4.414
break of testUpdateTau   360  4.4530373e-02  1.0240085e+01   2.04e+00  7.1

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      361           1          4     1.95312e-03     4.45283e-02      7.732
break of testUpdateTau   361  4.4528254e-02  1.4620705e+01   2.04e+00  1.0

Inside of minConf_PQN
 Iteration    FunEvals Projections    Step Length         rNorm2         O,
      362           1          4     9.76562e-04     4.45251e-02      5.545
break of testUpdateTau   362  4.4525146e-02  1.2215901e+01   2.04e+00  8.4
```

```
Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       363        1         4      9.76562e-04    4.45227e-02    4.445
break of testUpdateTau   363  4.4522719e-02  1.0169123e+01   2.04e+00  6.9


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       364        1         4      1.95312e-03    4.45207e-02    7.783
break of testUpdateTau   364  4.4520697e-02  1.5274100e+01   2.04e+00  1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       365        1         4      9.76562e-04    4.45176e-02    5.630
break of testUpdateTau   365  4.4517585e-02  1.2235235e+01   2.04e+00  8.2


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       366        1         4      9.76562e-04    4.45152e-02    4.423
break of testUpdateTau   366  4.4515171e-02  1.0696755e+01   2.04e+00  7.1


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       367        1         4      1.95312e-03    4.45132e-02    7.885
break of testUpdateTau   367  4.4513245e-02  1.5433446e+01   2.04e+00  1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       368        1         4      9.76562e-04    4.45101e-02    5.618
break of testUpdateTau   368  4.4510128e-02  1.2802558e+01   2.04e+00  8.4


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       369        1         4      9.76562e-04    4.45077e-02    4.455
break of testUpdateTau   369  4.4507725e-02  1.0655723e+01   2.04e+00  6.9


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       370        1         4      1.95312e-03    4.45059e-02    7.941
break of testUpdateTau   370  4.4505896e-02  1.6069695e+01   2.04e+00  1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       371        1         4      9.76562e-04    4.45028e-02    5.706
break of testUpdateTau   371  4.4502772e-02  1.2858418e+01   2.04e+00  8.2


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       372        1         4      9.76562e-04    4.45004e-02    4.438
break of testUpdateTau   372  4.4500381e-02  1.1154845e+01   2.04e+00  7.1


Inside of minConf_PQN
 Iteration    FunEvals Projections     Step Length          rNorm2          O
       373        1         4      1.95312e-03    4.44986e-02    8.044
break of testUpdateTau   373  4.4498649e-02  1.6263263e+01   2.04e+00  1.0
```

```
Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       374           1          4      9.76562e-04      4.44955e-02      5.698
break of testUpdateTau   374   4.4495518e-02   1.3395733e+01   2.04e+00   8.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       375           1          4      9.76562e-04      4.44931e-02      4.471
break of testUpdateTau   375   4.4493137e-02   1.1146717e+01   2.04e+00   6.9


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       376           1          4      1.95312e-03      4.44915e-02      8.106
break of testUpdateTau   376   4.4491502e-02   1.6880083e+01   2.04e+00   1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       377           1          4      9.76562e-04      4.44884e-02      5.789
break of testUpdateTau   377   4.4488361e-02   1.3491235e+01   2.04e+00   8.3


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       378           1          4      9.76562e-04      4.44860e-02      4.457
break of testUpdateTau   378   4.4485990e-02   1.1614795e+01   2.04e+00   7.1


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       379           1          4      1.95312e-03      4.44845e-02      8.209
break of testUpdateTau   379   4.4484453e-02   1.7113606e+01   2.04e+00   1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       380           1          4      9.76562e-04      4.44813e-02      5.784
break of testUpdateTau   380   4.4481301e-02   1.3995980e+01   2.04e+00   8.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       381           1          4      9.76562e-04      4.44789e-02      4.494
break of testUpdateTau   381   4.4478939e-02   1.1642347e+01   2.04e+00   7.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       382           1          4      1.95312e-03      4.44775e-02      8.277
break of testUpdateTau   382   4.4477499e-02   1.7706013e+01   2.04e+00   1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       383           1          4      9.76562e-04      4.44743e-02      5.877
break of testUpdateTau   383   4.4474336e-02   1.4134056e+01   2.04e+00   8.4


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length           rNorm2         O
       384           1          4      9.76562e-04      4.44720e-02      4.479
```

break of testUpdateTau   384   4.4471982e-02   1.2077032e+01   2.04e+00   7.1

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   385   1   4   1.95312e-03   4.44706e-02   8.381*
break of testUpdateTau   385   4.4470640e-02   1.7984599e+01   2.04e+00   1.0

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   386   1   4   9.76562e-04   4.44675e-02   5.877*
break of testUpdateTau   386   4.4467464e-02   1.4603863e+01   2.04e+00   8.5

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   387   1   4   9.76562e-04   4.44651e-02   4.520*
break of testUpdateTau   387   4.4465117e-02   1.2142864e+01   2.04e+00   7.0

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   388   1   4   1.95312e-03   4.44639e-02   8.454*
break of testUpdateTau   388   4.4463874e-02   1.8548242e+01   2.04e+00   1.0

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   389   1   4   9.76562e-04   4.44607e-02   5.970*
break of testUpdateTau   389   4.4460684e-02   1.4787264e+01   2.04e+00   8.4

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   390   1   4   9.76562e-04   4.44583e-02   4.506*
break of testUpdateTau   390   4.4458343e-02   1.2541991e+01   2.04e+00   7.1

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   391   1   4   1.95312e-03   4.44572e-02   8.559*
break of testUpdateTau   391   4.4457200e-02   1.8874406e+01   2.04e+00   1.0

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   392   1   4   9.76562e-04   4.44540e-02   5.976*
break of testUpdateTau   392   4.4453993e-02   1.5219961e+01   2.04e+00   8.5

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   393   1   4   9.76562e-04   4.44517e-02   4.552*
break of testUpdateTau   393   4.4451658e-02   1.2648536e+01   2.04e+00   7.0

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*
*   394   1   4   1.95312e-03   4.44506e-02   8.637*
break of testUpdateTau   394   4.4450614e-02   1.9407552e+01   2.04e+00   1.0

Inside of minConf_PQN
* Iteration   FunEvals Projections   Step Length   rNorm2   O*

```
              395            1            4      9.76562e-04      4.44474e-02      6.070
break of testUpdateTau   395  4.4447391e-02  1.5451260e+01   2.04e+00   8.5


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
              396            1            4      9.76562e-04      4.44451e-02      4.539
break of testUpdateTau   396  4.4445060e-02  1.3010116e+01   2.04e+00   7.1


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
              397            1            4      1.95312e-03      4.44441e-02      8.744
break of testUpdateTau   397  4.4444117e-02  1.9783637e+01   2.04e+00   1.0


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
              398            1            4      9.76562e-04      4.44409e-02      6.081
break of testUpdateTau   398  4.4440875e-02  1.5844856e+01   2.04e+00   8.6


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
              399            1            4      9.76562e-04      4.44385e-02      4.588
break of testUpdateTau   399  4.4438548e-02  1.3159636e+01   2.04e+00   7.1


Inside of minConf_PQN
 Iteration    FunEvals Projections      Step Length          rNorm2          O
              400            1            4      1.95312e-03      4.44377e-02      8.826
break of testUpdateTau   400  4.4437707e-02  2.0284730e+01   2.04e+00   1.0


 ERROR EXIT -- Too many iterations

 Products with A      :     2837        Total time   (secs) :    116.2
 Products with A'     :     2837        Project time (secs) :    102.9
 Newton iterations    :      231        Mat-vec time (secs) :     19.9
```
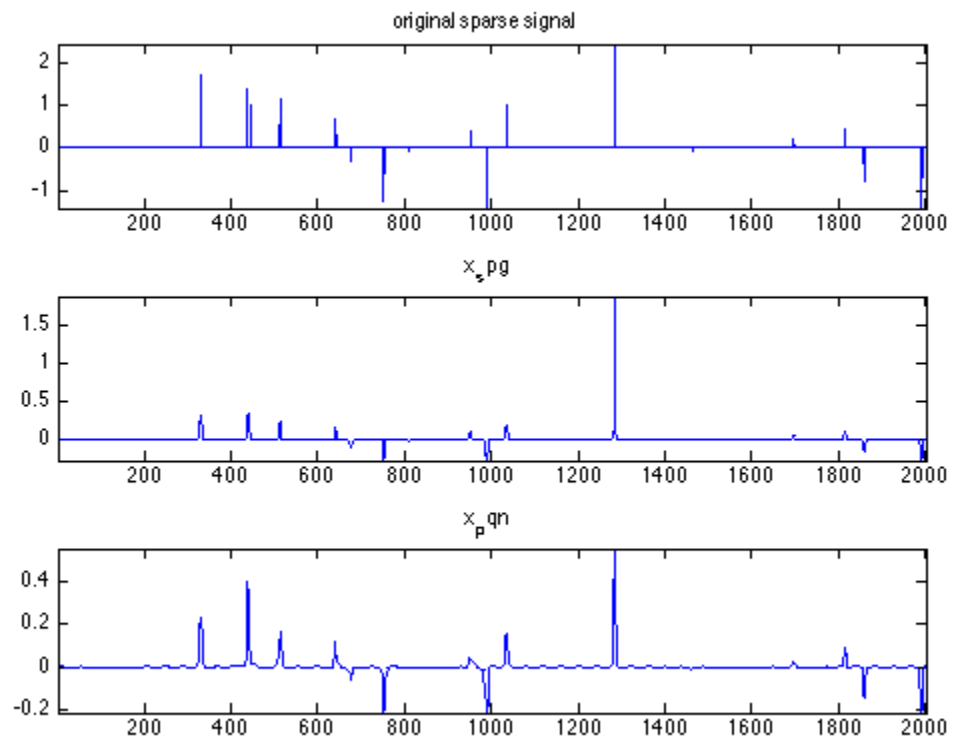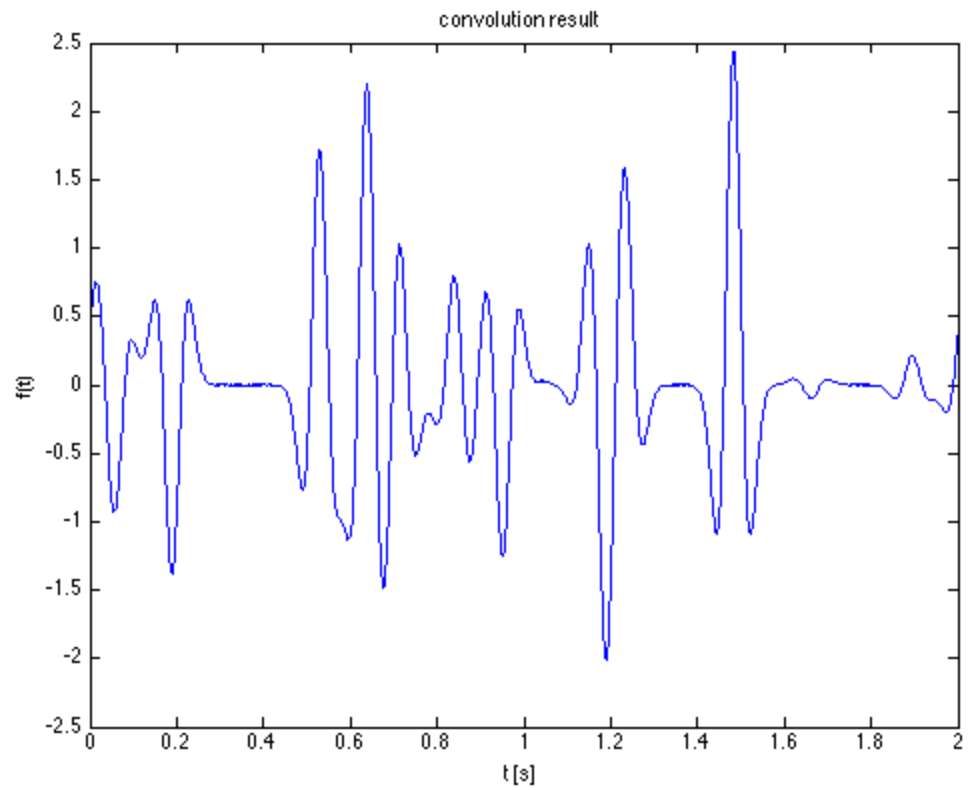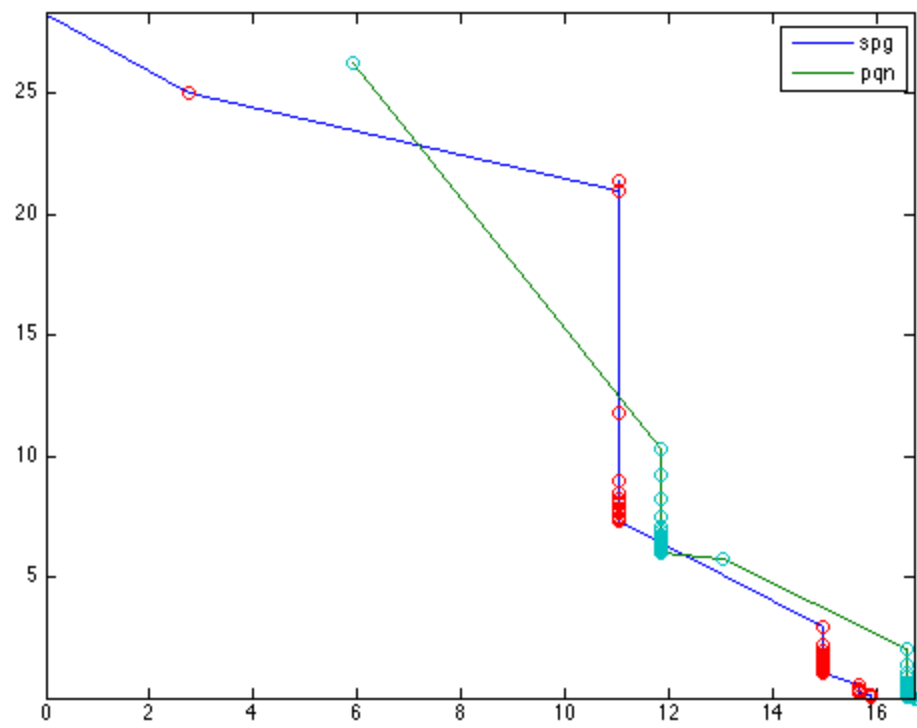
convolution result

original sparse signal

$x_s$pg

$x_p$qn

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