

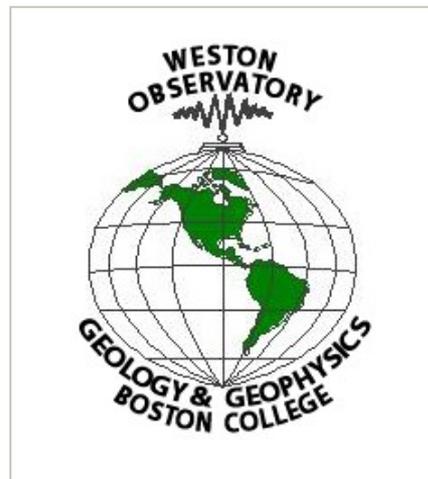
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NESN

A STUDY OF NEW ENGLAND SEISMICITY

Quarterly Earthquake Report

July-September, 2007



Weston Observatory
New England Seismic Network
381 Concord Road
Weston, MA 02493

NEW ENGLAND SEISMIC NETWORK

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for
United States Geological Survey
905 National Center

Notice

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Quarterly Earthquake Report
July-September, 2007

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Introduction

The New England Seismic Network (NESN) is operated by the Weston Observatory (WES) of Boston College. The mission of the NESN is to operate and maintain a regional seismic network with digital recording of seismic ground motions for the following purposes: 1) to determine the location and magnitude of earthquakes in and adjacent to New England and report felt events to public safety agencies, 2) to define the crust and upper mantle structure of the northeastern United States, 3) to derive the source parameters of New England earthquakes, and 4) to estimate the seismic hazard in the area.

This report summarizes the work of the NESN for the period July-September, 2007. It includes a brief summary of the network's equipment and operation, and a short discussion of data management procedures. A list of participating personnel is given in Table 1. There were 15 earthquakes that occurred within or near the network during this reporting period. Phase information for these earthquakes is included in this report.

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Current Network Operation and Status

The New England Seismic Network of Weston Observatory of Boston College currently consists of 12 broadband three-component and 8 analog strong-motion stations. The coordinates of the stations are given in Table 2, and maps of the weak- and strong-motion networks are shown in Figures 1 and 2, respectively. The 12 stations consist of Guralp CMG-40T three-component sensors. Ground motions recorded by these sensors are digitized at 100 sps with 16-bit resolution. Additional gain-ranging provides 126 dB dynamic range. These stations are operated in dialup mode with waveform segments of suspected events transmitted in digital mode to Weston Observatory for analysis and archiving. Weston Observatory also maintains 8 SMA-1 strong-motion instruments in New England.

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Seismicity

There were 15 earthquakes that occurred in or adjacent to the NESN during this reporting period. A summary of the location data is given in Table 3. Figure 3 shows the locations of these events. Figure 4 shows the locations of all events since the beginning of network operation in October, 1975.

Table 4 gives the station phase data and detailed hypocenter data for each event listed in Table 3. In addition to NESN data, arrival time and magnitude data sometimes are contributed for seismic stations operated by the [Geological Survey of Canada \(GSC\)](#), the [Lamont-Doherty Cooperative Seismographic Network](#), and the [US National Seismic Network](#). Final locations for this section were computed using the program HYPO78. For regional events (those too far from the NESN to obtain accurate locations and magnitudes) phase data are given for NESN stations, but the entry in Table 3 lists the

hypocenter and geographic location information adopted from the authoritative network. Accordingly, the epicenter is plotted on the maps using the entry from Table 3.

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Data Management

Recent event locations are available at http://aki.bc.edu/cgi-bin/NESN/recent_events.pl. Waveform data are saved in Nanometrics, ASCII, and SEED formats and are available by contacting, Anastasia Macherides Moulis, via email. Earthquake lists can be found at www.bc.edu/research/westonobservatory/northeast/eqcatalogs/. Currently available on the Weston Observatory web page is the full catalog of northeastern U.S. earthquake activity to the present time. This will be updated as new Northeastern U.S. Seismic Network Quarterly Earthquake Reports are produced. For more information on matters discussed in this report or general earthquake information (reports, maps, catalogs, etc.) consult our web site www.bc.edu/westonobservatory or contact:

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Explanation of Tables

Table 1: List of personnel operating the NESN

Table 2: List of Seismic and Strong Motion Stations

1. Code = station name
2. Lat = station latitude, degrees north
3. Long = station longitude, degrees west
4. Elev = station elevation in meters
5. Location = geographic location
6. Operator = network operator

Table 3: Earthquake Hypocenter List

1. Date = date event occurred, Yr (year)/Mo (month)/Dy (day)
2. Time = origin time of event, Hr (hour):Mn (minute):Sec (second)
in UCT (Universal Coordinated Time, same as Greenwich Mean Time)
3. Lat = event location, latitude north in degrees
4. Long = event location, longitude west in degrees
5. Depth = event depth in kilometers
6. Mn = Nuttli Magnitude
7. Mc = Coda Magnitude
8. Int = event epicentral intensity
9. Location = event geographic location

Table 4: Earthquake detailed hypocenter and phase data list

1. Geographic location

2. DATE = date event occurred, yr/mo/dy (year/month/day)
3. ORIGIN = event origin time (UCT) in hours, minutes, and seconds
4. LAT N = latitude north in degrees and minutes
5. LONG W = longitude west in degrees and minutes
6. DEPTH = event depth in kilometers
7. MN = Nuttli Lg phase magnitude with amplitude divided by period
8. MC = signal duration (coda) magnitude

WES: $2.23 \text{ Log(FMP)} + 0.12 \text{ Log(Dist)} - 2.36$ (Rosario, 1979)
 MIT: $2.21 \text{ Log(FMP)} - 1.7$ (Chaplin *et al.*, 1980)

9. ML = local magnitude

WES: calculated from Wood-Anderson seismograms (Ebel, 1982)
 GSC (Geological Survey of Canada): Richter Lg magnitude

10. GAP = largest azimuthal separation, in degrees, between stations
11. RMS = root mean square error of travel time residual in seconds
12. ERH = standard error of epicenter in kilometers
13. ERZ = standard error of event depth in kilometers
14. Q = solution quality of hypocenter

A = excellent
 B = good
 C = fair
 D = poor

Table Body: earthquake phase data

1. STN = station name
2. DIST = epicentral distance in kilometers
3. AZM = azimuthal angle in degrees measured clockwise between true north and vector pointing from epicenter to station
4. Description of onset of phase arrival

I = impulsive
 E = emergent

5. R = phase

P = first P arrival
 S = first S arrival

6. M = first motion direction of phase arrival

U = up or compression
 D = down or dilatation

7. K = weight of arrival

0 = full weight (1.0)
 1 = 0.75 weight
 2 = 0.50 weight
 3 = 0.25 weight
 4 = no weight (0.0)

8. HRMN = hour and minute of phase arrival
9. SEC = second of phase arrival
10. TCAL = calculated travel time of phase in seconds
11. RES = travel time residual (error) of phase arrival
12. WT = weight of phase used in hypocentral solution
13. AMX = peak-to-peak ground motion, in millimicrons, of the maximum envelope amplitude of vertical-component signal, corrected for system response
14. PRX = period in seconds of the signal from which amplitude was measured
15. XMAG = Nuttli magnitude recorded at station
16. FMP = signal duration (coda), in seconds, measured from first P arrival
17. FMAG = coda magnitude recorded at station

Table 5: Microearthquakes and other non-locatable events

1. Date = date event occurred, Yr (year)/Mo (month)/Dy (day)
2. Sta = nearest station recording event
3. Arrival Time = phase arrival time, Hr (hour):Mn (minute):Sec (second)

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TABLE 1

WESTON OBSERVATORY PERSONNEL

Name	Position	voice phone	email address
John E. Ebel	Observatory Director, Seismologist, Principal Investigator	617-552-8319	ebel@bc.edu
Alan Kafka	Research Seismologist	617-552-8300	kafka@bc.edu
Anastasia Macherides Moulis	Seismologist, Analyst	617-552-8325	macherid@bc.edu
Dina Smith	Associate Director of Operations, Seismologist	617-552-8335	dina.smith.1@bc.edu
Michael Hagerty	New England Seismic Network Manager, Seismologist	617-552-8337	hagertmb@bc.edu

Weston Observatory		617-552-8300 617-552-8388 (FAX)	
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TABLE 2

SEISMIC STATIONS OF THE NEW ENGLAND SEISMIC NETWORK

Code	Lat	Long	Elev (m)	Location	Operator
BCX *	42.3350	-71.1705	61.0	Chestnut Hill, MA	WES
BRYW	41.9199	-71.5342	107	Smithfield, RI	WES
FFD	43.4700	-71.6539	131	Franklin Falls Dam, NH	WES
HNH	43.7051	-72.2865	180	Hanover, NH	WES
QUA2	42.2790	-72.3521	168	Belchertown, MA	WES
TRY	42.7305	-73.6658	131	Troy, NY	WES
EMMW	44.7101	-67.4580	34	Machias, ME	WES
VT1	44.3317	-72.7536	125	Waterbury, VT	WES
WES	42.3848	-71.3218	60	Weston, MA	WES
WVL	44.5648	-69.6575	85	Waterville, ME	WES
YLE	41.3165	-72.9209	10	New Haven, CT	WES
PQI	46.6701	-68.0133	175	Presque Isle, ME	WES

* = not in operation during this quarter

STRONG MOTION STATIONS OF THE NEW ENGLAND SEISMIC NETWORK

Code	Lat	Long	Location	Operator
SM1	44.90	-67.25	Dennysville, ME	WES
SM2	44.49	-73.10	Essex Junction, VT	WES
SM3	41.45	-71.33	Newport, RI	WES
SM4	42.38	-71.32	Weston, MA	WES
SM5	42.66	-71.30	Lowell, MA	WES
SM6	42.30	-71.34	Natick, MA	WES
SM7	42.39	-71.54	Hudson, MA	WES
SM8	44.48	-69.61	North Vassalboro, ME	WES

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TABLE 3

NEW ENGLAND AND ADJACENT REGIONS
July-September, 2007

Date M/D/Y	Time (UTC) Hr:Mn:Sec	Lat	Long	Depth (km)	Mn	Mc	Int	Location
07/01/2007	03:12:55.68	42.59	-74.14	14.34	1.2	1.8		NY, 21.6KM WSW OF DELMAR
07/02/2007	06:02:43.88	43.10	-72.02	02.53	1.9	2.6		NH, 23.8KM NE OF KEENE
07/13/2007	02:20:36.69	45.16	-69.10			1.2		ME, 12.2KM SW OF MILO
07/14/2007	15:14:53.32	45.17	-69.12			1.2		ME, 12.2KM SW OF MILO
07/16/2007	15:27:13.38	44.34	-64.68	04.25	2.6	3.0		NS, 11.8KM WSW OF BRIDGEWATER
07/16/2007	17:00:25.52	44.11	-70.21	00.07		2.4		ME, LEWISTON
07/24/2007	00:48:57.88	42.61	-74.14	16.73	2.0	2.6		NY, 17.7KM SW OF WESTMERE
07/24/2007	01:56:49.40	42.60	-74.14	16.48	2.7	3.0		NY, 18.1KM SW OF WESTMERE
07/29/2007	17:17:14.33	46.80	-70.94	24.75	2.6	3.1		PQ, 19.7KM E OF QUEBEC
08/01/2007	04:38:35.85	46.52	-70.41	20.99	2.4	2.9		PQ, 10.2KM NNW OF SAINT-JUSTINE

08/25/2007	01:18:06.93	46.62	-65.93	37.58	2.3	2.8			NB, 36KM WSW OF ROGERSVILLE
08/30/2007	03:47:46.41	44.33	-74.36	00.08	2.8	3.0			NY, 15.4KM W OF SARANAC LAKE
09/13/2007	23:24:01.12	44.61	-70.83	02.23	1.8	2.1			ME, 18.5KM WNW OF RUMFORD
09/27/2007	11:31:08.20	47.41	-70.37	15.35	2.7	3.5			PQ, 10.4KM ESE OF BAIE-ST-PAUL
09/30/2007	17:35:35.97	46.90	-76.50	06.39	3.2	3.6			PQ, 58.5KM NW OF MANIWAKI

* indicates magnitude as calculated by Lamont Doherty Earth Observatory
 ^ indicates magnitude as calculated by Earthquakes Canada (Natural Resources Canada)

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TABLE 4
 EARTHQUAKE PHASE DATA LIST
 NEW ENGLAND AND ADJACENT REGIONS
 July-September, 2006

Run Hyp2000: Phase File: [35.X] Vel Mod: [3] ==> XX-File: 35.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Tue Jul 3 13:05:49 2007 RUN LABEL=
 CRUST MODEL 1: 3. SE OF NEW YORK, HUGHES & LU

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200707010312 55.68 42-35.20 74- 8.22 14.34 1.2 1.8 79 0.19 0.5 0.8
 NY, 21.6KM WSW OF DELMAR

NSTA NPHS DMIN N.XMG N.FMG
 8 16 24.70 1 2

STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
 HCNY 24.7 300 P 0 313 0.05 4.37 4.37 -0.05 1.31 119
 S 0 313 3.61 7.93 7.78 0.06 1.31
 ACCN 96.5 23 P 0 313 10.65 14.97 14.93 -0.02 1.22 98
 S 0 313 21.57 25.89 26.58 -0.79 0.17
 BRNY 130.7 175 P 0 313 15.98 20.30 20.04 0.21 1.15 74
 S 0 313 31.34 35.66 35.67 -0.10 1.15
 QUA2 150.8 102 EPC0 313 18.58 22.90 23.00 -0.13 1.09 0.1 .10 1.2 22 1.6 74
 S 0 313 36.95 41.27 40.94 0.28 1.09
 BINY 158.3 255 P 0 313 19.85 24.17 24.11 -0.02 1.07 74
 S 0 313 38.87 43.19 42.92 0.13 1.07
 ODNJ 171.5 194 P 0 313 21.67 25.99 26.05 -0.09 1.03 74
 S 0 313 41.55 45.87 46.37 -0.55 0.91
 WCNY 197.9 323 P 0 313 25.59 29.91 29.81 0.06 0.94 53
 S 0 313 48.94 53.26 53.06 0.13 0.94
 LONY 228.7 352 EPC1 313 10.68 15.00 33.61 18.68 0.00 59 2.1 53
 S 1 313 55.06 59.38 59.83 -0.57 0.53

TRY IS DOWN

Run Hyp2000: Phase File: [33.X] Vel Mod: [2] ==> XX-File: 33.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Jul 2 12:27:27 2007 RUN LABEL=
 CRUST MODEL 1: 2. HUGHES AND LUETGERT NH

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200707020602 43.88 43- 6.03 72- 1.35 2.53 1.9 2.6 102 0.32 0.8 1.7
 NH, 23.8KM NE OF KEENE

NSTA NPHS DMIN N.XMG N.FMG
 15 29 50.80 5 11

STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
 FFD 50.8 35 EPC1 602 52.76 8.88 8.68 0.18 1.37 8.0 .10 2.7 92 2.3 91

S 1 602 58.06 14.18 15.45 -1.31 0.00
 HNH 70.5 343 EPC1 602 56.16 12.28 11.95 0.30 1.34 0.5 .10 1.7 70 2.1 73
 S 2 603 4.86 20.98 21.27 -0.34 0.89
 HRV 76.1 149 EPC0 602 56.73 12.85 12.86 -0.04 1.78 97 2.4 73
 QUA2 95.2 197 EPC2 602 59.89 16.01 15.96 0.02 0.86 0.3 .15 1.7 103 2.5 73
 S 2 603 13.03 29.15 28.41 0.69 0.86
 WES 98.0 143 EPC0 603 0.36 16.48 16.42 0.05 1.72 0.3 .15 1.6 104 2.5 73
 S 2 603 12.87 28.99 29.23 -0.26 0.86
 LBNH 126.8 3 EPC0 603 4.87 20.99 21.02 -0.09 1.63 103 2.6 66
 S 2 603 20.56 36.68 37.42 -0.84 0.66
 BRYW 137.1 162 EPC2 603 6.83 22.95 22.62 0.27 0.80 0.3 .10 1.9 105 2.6 66
 S 1 603 23.92 40.04 40.26 -0.33 1.19
 ACCN 137.3 284 P 0 603 6.10 22.22 22.65 -0.49 1.59 66
 S 0 603 22.38 38.50 40.32 -1.92 0.00
 UCCT 146.0 187 EPC1 603 7.94 24.06 24.00 0.03 1.17 86 2.5 66
 S 2 603 26.68 42.80 42.72 0.03 0.78
 FRNY 230.1 328 P 0 603 19.98 36.10 35.40 0.66 1.17 46
 S 0 603 47.15 63.27 63.01 0.19 1.17
 LONY 266.2 311 EPC1 603 24.09 40.21 39.86 0.28 0.73 145 3.0 46
 S 3 603 53.92 70.04 70.95 -1.04 0.09
 PKME 324.8 41 EPC2 603 31.09 47.21 47.09 0.10 0.34 157 3.1 46
 S 4 604 12.78 88.90 83.82 5.04 0.00
 MRHQ 355.3 332 EPC4 603 39.52 55.64 50.86 4.71 0.00 46
 S 4 604 14.34 90.46 90.53 -0.20 0.00
 EMMW 408.1 62 EPC4 603 50.86 66.98 57.38 9.59 0.00 46
 S 4 604 35.14 111.26 102.14 9.11 0.00
 GGN 473.0 59 EPC4 603 44.55 60.67 65.39 -4.73 0.00 145 3.1 46
 S 4 604 36.22 112.34 116.39 -4.07 0.00

2007/07/13 00:20:36.69 45.16 69.10 1.2 ME, 12.2KM SW OF MILO
 *ONLY VISIBLE ON PKME
 PKME EP 0 020 36.47
 ES 0 020 37.43

2007/07/14 15:14:53.32 45.17 69.12 1.6 ME, 12.6KM SW OF MILO
 *ONLY VISIBLE ON PKME
 PKME EP 0 1514 53.32
 ES 0 1514 55.62

Run Hyp2000: Phase File: [52.X] Vel Mod: [11] ==> XX-File: 52.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Jul 16 15:31:11 2007 RUN LABEL=
 CRUST MODEL 1: 11. SOUTHEAST MAINE CRUSTAL MO

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200707161527 13.38 44-20.53 64-40.89 4.25 2.6 3.0 214 0.28 2.1 3.1
 CANADA, NOVA SCOTIA, 11.8KM WSW OF BRIDGEWATER

NSTA NPHS DMIN N.XMG N.FMG
 18 33 92.70 1 5

STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
 HAL 92.7 68 EPC0 1527 28.16 14.78 14.97 -0.20 2.32 72
 S 1 1527 39.08 25.70 26.65 -0.96 0.83
 LMN 168.1 357 EPC0 1527 40.32 26.94 26.59 0.29 1.96 146 2.9 47
 S 0 1528 0.82 47.44 47.33 0.00 1.96
 GGN 190.2 298 EPC0 1527 42.61 29.23 29.32 -0.10 1.82 177 3.1 47
 S 0 1528 5.34 51.96 52.19 -0.25 1.82
 MALG 193.1 33 EPC0 1527 44.54 31.16 29.67 1.49 0.00 47
 S 4 1528 28.64 75.26 52.81 22.45 0.00
 EMMW 224.5 282 EPC0 1527 47.11 33.73 33.55 0.17 1.60 0.6 .09 2.6 102 2.7 47

S 4 1528 11.18 57.80 59.72 -1.94 0.00
 GBN 277.0 63 EPC0 1527 53.83 40.45 40.03 0.41 1.23 47
 S 4 1528 28.67 75.29 71.25 4.02 0.00
 BATG 343.3 343 EPC0 1528 1.68 48.30 48.22 0.02 0.77 125 2.9 47
 S 0 1528 38.42 85.04 85.83 -0.90 0.49
 PKME 379.0 288 EPC0 1528 5.71 52.33 52.63 -0.32 0.55 182 3.2 47
 S 2 1528 45.41 92.03 93.68 -1.69 0.00
 MADG 400.4 34 EPC1 1528 9.39 56.01 55.27 0.73 0.31 47
 S 1 1528 52.28 98.90 98.38 0.50 0.32
 GASG 523.5 349 EPC0 1528 24.41 71.03 70.46 0.53 0.01 47
 S 0 1529 19.19 125.81 125.42 0.32 0.01
 GSQ 541.2 341 EPC0 1528 26.18 72.80 72.65 0.14 0.00 47
 S 4 1529 19.99 126.61 129.32 -2.72 0.00
 A64 559.0 316 EPC4 1528 24.85 71.47 74.85 -3.40 0.00 47
 S 4 1529 22.10 128.72 133.23 -4.55 0.00
 LMQ 564.6 312 EPC0 1528 29.10 75.72 75.54 0.11 0.00 47
 S 3 1529 26.03 132.65 134.46 -1.94 0.00
 LBNH 578.9 272 EPC0 1528 30.70 77.32 77.31 -0.05 0.00 47
 S 4 1529 25.92 132.54 137.61 -5.18 0.00
 CNQ 609.1 337 EPC0 1528 34.68 81.30 81.04 0.23 0.00 47
 S 3 1529 36.20 142.82 144.25 -1.48 0.00
 DAQ 647.5 311 EPC3 1528 37.74 84.36 85.78 -1.58 0.00 47
 SMQ 671.4 348 EPC0 1528 41.57 88.19 88.72 -0.59 0.00 47
 MNQ 754.4 338 EPC3 1528 51.23 97.85 98.97 -1.21 0.00 47

Run Hyp2000: Phase File: [53.X] Vel Mod: [12] ==> XX-File: 53.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Tue Jul 17 13:12:39 2007 RUN LABEL=
 CRUST MODEL 1: 12. NORTHWEST MAINE CRUSTAL ST

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200707161700 25.52 44- 6.81 70-12.47 0.07 2.4 248 0.30 9.3 8.2
 ME, LEWISTON

NSTA NPHS DMIN N.XMG N.FMG
 3 6 138.10 0 1

STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
 LBNH 138.1 277 EPC0 1700 48.05 22.53 22.52 -0.05 1.09 64
 S 0 1701 5.66 40.14 40.09 -0.05 1.09
 PKME 147.1 29 EPC0 1700 49.86 24.34 23.94 0.38 1.07 79 2.4 64
 S 0 1701 7.89 42.37 42.61 -0.28 1.07
 MOQ 209.8 311 EP 0 1700 58.07 32.55 32.93 -0.52 0.80 44
 S 0 1701 24.78 59.26 58.62 0.40 0.88

Run Hyp2000: Phase File: [67.X] Vel Mod: [3] ==> XX-File: 67.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Aug 13 12:22:13 2007 RUN LABEL=
 CRUST MODEL 1: 3. SE OF NEW YORK, HUGHES & LU

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200707240048 57.88 42-36.40 74- 8.27 16.73 2.0 2.6 64 0.27 0.4 0.6
 NY, 17.7KM SW OF WESTMERE

NSTA NPHS DMIN N.XMG N.FMG
 19 38 23.60 4 8

STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
 HCNV 23.6 296 EP 0 49 2.31 4.43 4.43 -0.05 1.36 125
 S 0 49 5.93 8.05 7.89 0.08 1.36
 TRY 41.1 70 EPC0 49 4.81 6.93 6.79 0.09 1.35 1.2 .10 1.7 74 2.1 111
 S 0 49 10.09 12.21 12.09 0.03 1.35
 ACCN 94.5 23 EP 0 49 12.96 15.08 14.63 0.39 1.27 74
 S 0 49 23.73 25.85 26.04 -0.30 1.27

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BRNY 132.9 175 EP 0 49 18.42 20.54 20.27 0.22 1.18 74
S 0 49 33.66 35.78 36.08 -0.39 1.18
QUA2 151.4 103 EPC0 49 20.79 22.91 22.99 -0.11 1.13 0.6 .15 2.3 73 2.3 74
S 0 49 39.10 41.22 40.92 0.24 1.13
NCB 152.0 358 EPC0 49 20.80 22.92 23.08 -0.26 1.13 242 3.3 74
S 0 49 38.77 40.89 41.08 -0.37 1.13
BINY 158.9 254 EPC0 49 21.95 24.07 24.09 -0.10 1.10 105 2.6 74
S 0 49 40.67 42.79 42.88 -0.23 1.10
MDV 173.1 26 EPC0 49 24.05 26.17 26.18 -0.03 1.06 74
S 0 49 44.35 46.47 46.60 -0.17 1.06
PAL 178.8 173 EP 0 49 25.35 27.47 27.03 0.43 1.04 74
S 0 49 45.60 47.72 48.11 -0.41 1.04
UCCT 181.9 119 EPC0 49 25.81 27.93 27.48 0.42 1.03 74
S 0 49 46.13 48.25 48.91 -0.72 0.41
HNH 193.8 50 EPC0 49 27.95 30.07 29.09 0.95 0.00 0.2 .15 2.0 72 2.4 53
S 0 49 49.62 51.74 51.78 -0.09 0.99
WCNY 196.1 322 EP 0 49 27.39 29.51 29.37 0.10 0.98 53
S 0 49 50.58 52.70 52.28 0.35 0.98
BRNJ 216.6 190 EP 0 49 29.77 31.89 31.90 -0.02 0.91 53
S 0 49 55.10 57.22 56.78 0.42 0.91
FFD 224.0 63 EPC0 49 31.38 33.50 32.81 0.67 0.53 53
S 0 49 58.02 60.14 58.40 1.70 0.00
LONY 226.5 352 EPC0 49 30.95 33.07 33.12 -0.12 0.87 132 2.9 53
S 0 49 57.03 59.15 58.95 0.07 0.87
PTN 228.5 343 EP 0 49 31.30 33.42 33.37 0.02 0.86 53
S 0 49 57.78 59.90 59.40 0.45 0.86
WES 232.8 95 EPC0 49 31.40 33.52 33.90 -0.39 0.85 0.1 .10 1.8 79 2.5 53
S 0 49 57.15 59.27 60.34 -1.09 0.00
FRNY 251.5 9 EP 0 49 34.28 36.40 36.21 0.15 0.78 53
S 0 50 2.64 64.76 64.45 0.23 0.78
LBNH 255.0 43 EPC0 49 33.90 36.02 36.64 -0.68 0.41 130 2.9 53
S 0 50 3.06 65.18 65.22 -0.15 0.76
    
```

Run Hyp2000: Phase File: [68.X] Vel Mod: [3] ==> XX-File: 68.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Aug 13 14:01:53 2007 RUN LABEL=
 CRUST MODEL 1: 3. SE OF NEW YORK, HUGHES & LU

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200707240156 49.40 42-36.16 74- 8.45 16.48 2.7 3.0 64 0.25 0.4 0.6
 NY, 18.1KM SW OF WESTMERE

NSTA NPHS DMIN N.XMG N.FMG
 24 48 23.60 3 8

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STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
HCNY 23.6 297 EP 0 156 53.97 4.57 4.40 0.12 1.43 124
S 0 156 57.22 7.82 7.83 -0.10 1.43
TRY 41.5 69 EPC0 156 56.45 7.05 6.83 0.17 1.41 111
S 0 157 1.76 12.36 12.16 0.11 1.41
ACCN 95.0 23 EP 0 157 4.42 15.02 14.71 0.25 1.33 74
S 0 157 15.32 25.92 26.18 -0.37 1.33
BRNY 132.5 175 EP 0 157 9.93 20.53 20.22 0.26 1.24 74
S 0 157 25.18 35.78 35.99 -0.30 1.24
QUA2 151.5 103 EPC0 157 13.36 23.96 23.02 0.91 0.15 2.2 .21 2.9 173 3.0 74
S 0 157 30.63 41.23 40.98 0.20 1.18
NCB 152.4 358 EPC0 157 12.39 22.99 23.15 -0.26 1.18 181 3.1 74
S 0 157 30.31 40.91 41.21 -0.48 1.18
BINY 158.5 254 EP 0 157 13.49 24.09 24.05 -0.04 1.16 74
S 0 157 32.53 43.13 42.81 0.18 1.16
MIV 170.8 16 EP 0 157 15.12 25.72 25.85 -0.18 1.12 74
S 0 157 35.49 46.09 46.01 -0.01 1.12
MDV 173.6 26 EPC0 157 15.68 26.28 26.27 -0.01 1.11 121 2.7 74
S 0 157 35.91 46.51 46.76 -0.29 1.11
    
```

EP 0 157 15.68 26.28 26.27 -0.01 1.11
 S 0 157 35.93 46.53 46.76 -0.27 1.11
 PAL 178.4 173 EP 0 157 16.44 27.04 26.98 0.05 1.09 74
 S 0 157 37.14 47.74 48.02 -0.30 1.09
 UCCT 181.9 118 EP 0 157 17.08 27.68 27.49 0.16 1.08 74
 S 0 157 37.65 48.25 48.93 -0.74 0.67
 HNH 194.3 50 EPC0 157 18.89 29.49 29.17 0.29 1.04 0.8 .15 2.6 144 2.9 53
 S 0 157 41.52 52.12 51.92 0.14 1.04
 FOR 194.4 173 EP 0 157 18.37 28.97 29.17 -0.20 1.04 53
 S 0 157 40.54 51.14 51.92 -0.78 0.49
 WCNY 196.3 322 EP 0 157 18.70 29.30 29.42 -0.16 1.03 53
 S 0 157 42.12 52.72 52.37 0.28 1.03
 CPNY 201.8 175 EP 0 157 19.37 29.97 30.09 -0.12 1.01 53
 S 0 157 41.86 52.46 53.56 -1.10 0.00
 BRNJ 216.1 190 EP 0 157 21.61 32.21 31.86 0.34 0.96 53
 S 0 157 45.97 56.57 56.71 -0.16 0.96
 FFD 224.4 63 EPC0 157 22.43 33.03 32.89 0.12 0.92 142 2.9 53
 S 0 157 49.81 60.41 58.54 1.83 0.00
 LONY 226.9 352 EPC0 157 22.51 33.11 33.19 -0.15 0.91 167 3.1 53
 S 0 157 48.79 59.39 59.08 0.19 0.91
 PTN 228.9 344 EP 0 157 22.75 33.35 33.44 -0.12 0.91 53
 S 0 157 49.69 60.29 59.52 0.71 0.62
 WES 233.1 95 EPC0 157 23.64 34.24 33.95 0.28 0.89 0.3 .21 2.4 140 2.9 53
 S 0 157 48.89 59.49 60.43 -0.96 0.04
 FRNY 252.0 9 EP 0 157 25.74 36.34 36.29 0.01 0.81 53
 S 0 157 54.50 65.10 64.60 0.43 0.81
 LBNH 255.5 43 EPC0 157 26.79 37.39 36.72 0.61 0.74 147 3.0 53
 S 0 157 57.51 68.11 65.36 2.64 0.00
 WBO 281.6 342 EP 0 157 29.63 40.23 39.94 0.28 0.69 53
 S 0 158 0.76 71.36 71.09 0.25 0.69

Run Hyp2000: Phase File: [72.X] Vel Mod: [12] ==> XX-File: 72.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Aug 13 11:06:31 2007 RUN LABEL=
 CRUST MODEL 1: 12. NORTHWEST MAINE CRUSTAL ST

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200707291717 14.33 46-47.85 70-56.21 24.75 2.6 3.1 82 0.26 0.6 0.5
 CANADA, PQ, 19.7KM E OF QUEBEC

NSTA NPHS DMIN N.XMG N.FMG
 39 68 26.00 1 9

STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
 QCQ 26.0 266 EPC0 1717 20.49 6.16 5.71 0.43 2.08 92 2.3 129
 A11 74.9 48 EPC0 1717 27.03 12.70 12.48 0.21 2.00 266 3.3 98
 A54 83.4 28 EP 0 1717 28.21 13.88 13.74 0.08 1.97 96
 S 0 1717 38.80 24.47 24.46 -0.09 1.97
 LMQ 95.4 28 EPC0 1717 29.80 15.47 15.53 -0.13 1.94 240 3.2 94
 S 2 1717 41.53 27.20 27.64 -0.57 0.97
 EP 0 1717 29.85 15.52 15.53 -0.08 1.94
 S 0 1717 41.87 27.54 27.64 -0.23 1.94
 A16 102.9 42 EP 0 1717 31.04 16.71 16.64 0.07 1.92 94
 S 0 1717 43.77 29.44 29.62 -0.18 1.92
 A61 118.4 32 EP 0 1717 33.26 18.93 18.95 -0.08 1.86 93
 S 0 1717 47.98 33.65 33.73 -0.19 1.86
 DAQ 131.8 351 EP 0 1717 35.29 20.96 20.81 -0.01 1.81 55
 S 0 1717 51.94 37.61 37.04 0.28 1.81
 A21 138.1 42 EP 0 1717 36.31 21.98 21.58 0.39 1.78 55
 S 0 1717 53.41 39.08 38.41 0.65 1.64
 A64 139.0 34 EP 0 1717 36.09 21.76 21.70 0.04 1.78 55
 S 0 1717 53.03 38.70 38.63 0.04 1.78
 DPQ 141.3 266 EP 0 1717 36.30 21.97 21.98 -0.04 1.77 55
 S 0 1717 53.11 38.78 39.12 -0.40 1.77

MOQ	194.1	213	EPC2	1717	42.90	28.57	28.50	-0.07	0.76	177	3.1	55	
PKME	212.8	142	EPC1	1717	45.00	30.67	30.81	-0.16	1.06	204	3.2	55	
PQI	223.9	92	EP 0	1717	46.00	31.67	32.19	-0.55	1.35	55			
			S 0	1718	11.67	57.34	57.30	-0.01	1.35				
MNT	252.6	237	EP 0	1717	49.70	35.37	35.72	-0.37	1.18	55			
			S 0	1718	16.72	62.39	63.58	-1.23	0.00				
MRHQ	271.8	250	EPC1	1717	52.51	38.18	38.09	0.02	0.80	218	3.3	55	
			S 2	1718	25.67	71.34	67.80	3.42	0.00				
TRQ	285.1	259	EP 0	1717	54.14	39.81	39.73	0.08	0.99	55			
			S 0	1718	24.77	70.44	70.72	-0.28	0.99				
LBNH	294.6	196	EPC2	1717	55.78	41.45	40.91	0.48	0.47	220	3.3	55	
ALFO	331.3	249	EP 0	1718	0.16	45.83	45.43	0.40	0.72	55			
			S 0	1718	34.37	80.04	80.87	-0.83	0.36				
CNQ	350.9	36	EP 0	1718	3.18	48.85	47.86	0.96	0.09	55			
			S 0	1718	39.55	85.22	85.19	-0.02	0.61				
EMMW	356.5	129	EPC2	1718	1.98	47.65	48.56	-0.92	0.07	0.2	.10	2.6	55
MDV	357.2	211	EPC2	1718	3.28	48.95	48.64	0.29	0.29	55			
GGN	369.8	118	EPC1	1718	4.42	50.09	50.19	-0.11	0.38	177	3.2	55	
			S 2	1718	42.19	87.86	89.34	-1.50	0.00				
GSQ	370.7	49	EP 0	1718	5.71	51.38	50.30	1.07	0.00	55			
			S 0	1718	43.10	88.77	89.53	-0.78	0.31				
GAC	370.9	253	EP 0	1718	4.69	50.36	50.32	0.03	0.50	55			
			S 0	1718	42.50	88.17	89.57	-1.42	0.00				
LONY	373.2	231	EPC1	1718	3.98	49.65	50.61	-1.03	0.01	55			
BATG	374.6	80	EPC1	1718	4.91	50.58	50.79	-0.27	0.36	199	3.3	55	
			S 2	1718	42.84	88.51	90.41	-2.00	0.00				
GRQ	377.3	269	EP 0	1718	5.49	51.16	51.12	-0.01	0.47	55			
			S 0	1718	43.42	89.09	90.99	-1.99	0.00				
WBO	391.6	241	EP 0	1718	7.08	52.75	52.88	-0.14	0.40	55			
			S 0	1718	45.99	91.66	94.13	-2.48	0.00				
ICQ	407.6	40	EP 0	1718	9.60	55.27	54.86	0.40	0.33	55			
			S 0	1718	51.40	97.07	97.65	-0.60	0.32				
GASG	432.7	54	EP 0	1718	57.44	103.11	57.96	45.11	0.00	55			
MNQ	444.9	20	EP 0	1718	13.99	59.66	59.47	0.10	0.18	55			
			S 0	1718	57.42	103.09	105.86	-2.93	0.00				
LMN	484.0	100	EPC2	1718	18.44	64.11	64.29	-0.24	0.04	55			
			S 2	1719	6.83	112.50	114.44	-2.04	0.00				
SMQ	492.9	37	EP 0	1718	20.11	65.78	65.39	0.33	0.06	55			
			S 0	1719	9.42	115.09	116.39	-1.41	0.00				
CRLO	502.9	263	EP 0	1718	21.59	67.26	66.62	0.61	0.04	55			
			S 0	1719	10.63	116.30	118.58	-2.34	0.00				
VLDQ	513.0	289	EP 0	1718	22.85	68.52	67.88	0.62	0.02	55			
			S 0	1719	18.07	123.74	120.83	2.88	0.00				
PLVO	515.1	250	EP 0	1718	21.86	67.53	68.13	-0.60	0.02	55			
			S 0	1719	12.97	118.64	121.27	-2.63	0.00				
EEO	623.0	272	EP 0	1718	35.39	81.06	81.46	-0.47	0.00	55			
			S 0	1719	35.84	141.51	145.00	-3.61	0.00				
GBN	746.1	98	EP 0	1718	50.67	96.34	96.64	-0.31	0.00	55			

Run Hyp2000: Phase File: [74.X] Vel Mod: [12] ==> XX-File: 74.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Aug 13 10:37:01 2007 RUN LABEL=
 CRUST MODEL 1: 12. NORTHWEST MAINE CRUSTAL ST

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200708010438 35.85 46-31.28 70-24.62 20.99 2.4 2.9 64 0.29 0.5 0.9
 CANADA, PQ, 10.2KM NNW OF SAINT-JUSTINE

NSTA NPHS DMIN N.XMG N.FMG
 54 83 72.20 3 5

STN DIST AZM RMK HRMN SEC TOBS TCAL RES WT AMX PRX XMAG FMP FMAG ANG
 QCQ 72.2 294 EPC1 438 47.64 11.79 12.03 -0.26 1.59 70
 A11 81.8 11 EPC0 438 49.54 13.69 13.47 0.21 2.09 70

BANO 608.7 257 EP 0 439 56.64 80.79 80.00 0.73 0.00	51
GBN 701.7 96 EP 0 440 7.04 91.19 91.48 -0.30 0.00	51
S 0 441 14.64 158.79 162.83 -4.06 0.00	
BUKO 707.8 264 EP 0 440 7.64 91.79 92.24 -0.50 0.00	51
S 0 441 16.23 160.38 164.19 -3.90 0.00	
SADO 708.9 258 EP 0 440 8.27 92.42 92.38 0.00 0.00	51
S 0 441 15.70 159.85 164.44 -4.66 0.00	
RSPO 723.2 270 EP 0 440 11.52 95.67 94.14 1.49 0.00	51
S 0 441 22.87 167.02 167.57 -0.62 0.00	
KILO 736.0 291 EP 0 440 13.39 97.54 95.72 1.77 0.00	51
KLBO 772.5 264 EP 0 440 16.77 100.92 100.22 0.67 0.00	51
MALO 796.8 303 EP 0 440 16.99 101.14 103.22 -2.13 0.00	51
S 0 441 35.21 179.36 183.73 -4.46 0.00	
LG4Q 833.2 343 EP 0 440 22.97 107.12 107.72 -0.63 0.00	51
TOBO 876.7 265 EP 0 440 30.21 114.36 113.09 1.24 0.00	51
SCHQ 958.4 13 EP 0 440 37.75 121.90 123.17 -1.35 0.00	51
SILO 0.0 317 EP 0 441 25.33 169.48 172.45 -3.00 0.00	51

Run Hyp2000: Phase File: [82.X] Vel Mod: [12] ==> XX-File: 82.XX
HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Aug 27 12:18:30 2007 RUN LABEL=
CRUST MODEL 1: 12. NORTHWEST MAINE CRUSTAL ST

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
200708250118 6.93 46-36.94 65-55.79 37.58 2.3 2.8 140 0.44 0.9 36.1
CANADA, NB, 36km WSW OF Rogersville
FELT

NSTA NPHS DMIN N.XMG N.FMG
16 32 74.10 1 4

STN	DIST	AZM	RMK	HRMN	SEC	TOBS	TCAL	RES	WT	AMX	PRX	XMAG	FMP	FMAG	ANG
BATG	74.1	353	EPC0	118	19.73	12.80	12.67	0.07	2.40			131	2.7	91	
S 0	118	29.19	22.26	22.55	-0.40	2.40									
LMN	121.3	133	EPC0	118	25.90	18.97	18.49	0.42	2.22			93	2.5	90	
S 0	118	39.69	32.76	32.91	-0.26	2.22									
GGN	180.4	203	EPC0	118	33.44	26.51	25.78	0.72	1.90			154	2.9	90	
S 0	118	52.14	45.21	45.89	-0.70	1.90									
EMMW	243.0	210	EPC4	118	43.46	36.53	33.51	3.01	0.00	0.2	.10	2.3		90	
S 0	119	6.41	59.48	59.65	-0.19	1.49									
GSQ	270.5	342	EPC2	118	46.23	39.30	36.90	2.39	0.00					90	
S 2	119	16.83	69.90	65.68	4.20	0.00									
PKME	300.9	242	EPC0	118	47.27	40.34	40.66	-0.34	1.07			167	3.1	90	
S 3	119	18.10	71.17	72.37	-1.24	0.07									
A21	309.8	295	EPC0	118	48.45	41.52	41.76	-0.25	1.01					90	
S 1	119	22.11	75.18	74.33	0.83	0.74									
ICQ	338.2	344	EPC0	118	54.70	47.77	45.27	2.49	0.00					90	
S 1	119	31.42	84.49	80.58	3.89	0.00									
CNQ	338.9	333	EPC0	118	54.89	47.96	45.36	2.57	0.00					90	
S 1	119	30.89	83.96	80.74	3.17	0.00									
LMQ	349.7	289	EPC4	118	51.35	44.42	46.69	-2.34	0.00					90	
S 3	119	29.92	82.99	83.11	-0.24	0.18									
GBN	367.6	109	EPC0	118	57.52	50.59	48.90	1.68	0.00					90	
S 3	119	35.46	88.53	87.04	1.47	0.00									
SMQ	405.1	353	EPC0	119	2.65	55.72	53.53	2.13	0.00					90	
S 1	119	45.20	98.27	95.28	2.88	0.00									
DAQ	429.1	293	EPC0	119	4.06	57.13	56.49	0.48	0.29					90	
S 3	119	48.31	101.38	100.55	0.54	0.07									
MNQ	483.6	336	EPC0	119	11.62	64.69	63.21	1.39	0.00					90	
S 4	119	59.43	112.50	112.51	-0.17	0.00									
DPQ	524.7	274	EPC0	119	15.31	68.38	68.29	0.06	0.01					90	
S 3	120	7.76	120.83	121.56	-0.78	0.00									
LBNH	538.7	243	EPC4	119	27.71	80.78	70.02	10.70	0.00					90	
S 4	120	31.66	144.73	124.64	19.99	0.00									

Run Hyp2000: Phase File: [88.X] Vel Mod: [6] ==> XX-File: 88.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Fri Aug 31 10:59:53 2007 RUN LABEL=
 CRUST MODEL 1: 6. NORTHERN NY AND ADIRONDACKS

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200708300347 46.41 44-19.57 74-21.35 0.08 2.8 3.0 53 0.35 0.4 1.5
 NY, 15.4KM W OF SARANAC LAKE

NSTA NPHS DMIN N.XMG N.FMG
 22 42 37.30 1 4

STN	DIST	AZM	RMK	HRMN	SEC	TOBS	TCAL	RES	WT	AMX	PRX	XMAG	FMP	FMAG	ANG
LONY	37.3	332	EPC0	347	52.23	5.82	6.11	-0.36	1.61			216	3.1	90	
	S 0	347	57.08	10.67	10.88	-0.33	1.61								
NCB	40.6	164	EPC0	347	52.70	6.29	6.65	-0.46	1.60			207	3.0	67	
	S 0	347	57.71	11.30	11.84	-0.71	1.49								
MIV	71.4	112	EPC0	347	57.34	10.93	11.31	-0.43	1.56					67	
	S 0	348	6.84	20.43	20.13	0.21	1.56								
FRNY	83.2	46	EPC0	347	59.32	12.91	13.09	-0.22	1.54					67	
	S 0	348	9.37	22.96	23.30	-0.41	1.54								
MDV	100.7	110	EPC4	348	14.21	27.80	15.76	12.02	0.00			200	3.1	67	
WBO	104.5	317	EPC0	348	2.78	16.37	16.33	0.03	1.49					67	
	S 0	348	15.69	29.28	29.07	0.19	1.49								
WCNY	110.8	251	EPC0	348	3.54	17.13	17.27	-0.18	1.47					67	
	S 0	348	17.27	30.86	30.74	0.05	1.47								
ACCN	118.4	151	EPC0	348	6.30	19.89	18.42	1.41	0.00					67	
	S 0	348	20.25	33.84	32.79	0.95	0.59								
MNT	143.0	23	EPC1	348	8.04	21.63	22.15	-0.54	1.03			151	2.9	67	
	S 3	348	25.89	39.48	39.43	0.02	0.34								
MRHQ	173.8	3	EPC1	348	13.12	26.71	26.83	-0.19	0.94					67	
	S 1	348	34.69	48.28	47.76	0.40	0.94								
GAC	176.8	331	EPC0	348	13.83	27.42	27.28	0.13	1.25					67	
	S 0	348	35.91	49.50	48.56	0.92	0.58								
HNH	179.7	111	EPC1	348	14.59	28.18	27.72	0.43	0.93					67	
	S 1	348	35.61	49.20	49.34	-0.19	0.93								
HCNY	181.0	182	EPC0	348	14.25	27.84	27.92	-0.13	1.23					67	
	S 0	348	36.30	49.89	49.70	0.10	1.23								
TRY	185.8	162	EPC2	348	14.93	28.52	28.65	-0.18	0.61	1.1	.24	2.8		67	
	S 2	348	36.74	50.33	51.00	-0.76	0.53								
LBNH	194.2	91	EPC2	348	16.88	30.47	29.92	0.49	0.59					67	
	S 3	348	39.48	53.07	53.26	-0.29	0.29								
MOQ	199.1	55	EPC2	348	17.26	30.85	30.66	0.05	0.58					67	
	S 3	348	42.01	55.60	54.57	0.78	0.25								
PECO	215.6	260	EPC0	348	19.28	32.87	32.91	-0.06	1.09					48	
	S 0	348	44.85	58.44	58.58	-0.18	1.09								
FFD	237.1	112	EPC2	348	23.76	37.35	35.56	1.77	0.00					48	
BINY	271.4	210	EPC3	348	26.45	40.04	39.80	0.16	0.21					48	
	S 3	348	59.17	72.76	70.84	1.77	0.00								
QUA2	279.6	143	EPC3	348	27.67	41.26	40.81	0.42	0.20					48	
	S 4	349	0.87	74.46	72.64	1.76	0.00								
HRV	303.7	130	EPC4	348	30.90	44.49	43.79	0.67	0.00					48	
	S 4	349	8.17	81.76	77.95	3.76	0.00								
WLVO	326.6	264	EPC0	348	32.60	46.19	46.62	-0.44	0.58					48	
	S 0	349	9.20	82.79	82.98	-0.21	0.58								

Run Hyp2000: Phase File: [98.X] Vel Mod: [11] ==> XX-File: 98.XX
 HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Wed Sep 19 11:54:12 2007 RUN LABEL=
 CRUST MODEL 1: 11. SOUTHEAST MAINE CRUSTAL MO

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
 200709132324 1.12 44-36.38 70-49.76 2.23 1.8 2.1 112 0.49 1.2 2.5
 ME, 18.5KM WNW OF RUMFORD

NSTA NPHS DMIN N.XMG N.FMG
8 16 96.40 1 1

STN	DIST	AZM	RMK	HRMN	SEC	TOBS	TCAL	RES	WT	AMX	PRX	XMAG	FMP	FMAG	ANG
LBNH	96.4	246	EPC0	2324	17.17	16.05	15.66	0.33	1.84			59	2.1	72	
			S 0	2324	28.55	27.43	27.87	-0.55	1.84						
MOQ	137.1	306	EPC2	2324	24.63	23.51	22.12	1.25	0.14					72	
			S 1	2324	40.59	39.47	39.37	-0.15	1.28						
PKME	141.7	58	EPC1	2324	24.75	23.63	22.86	0.75	1.26					72	
			S 1	2324	41.22	40.10	40.69	-0.63	1.26						
FRNY	220.1	278	EPC3	2324	36.02	34.90	33.23	1.63	0.00					47	
			S 1	2325	1.20	60.08	59.15	0.86	0.94						
HRV	240.6	195	EPC3	2324	35.85	34.73	35.77	-1.07	0.17					47	
			S 0	2325	5.10	63.98	63.67	0.26	1.19						
EMMW	267.7	86	EPC0	2324	39.99	38.87	39.11	-0.25	1.04	0.0	.05	1.8		47	
			S 0	2325	10.56	69.44	69.62	-0.19	1.04						
NCB	279.9	257	EPC4	2324	45.40	44.28	40.62	3.56	0.00					47	
			S 3	2325	15.12	74.00	72.30	1.52	0.00						
GGN	321.9	78	EPC4	2325	33.08	91.96	45.80	46.15	0.00					47	
			S 4	2325	44.51	103.39	81.52	21.85	0.00						

Run Hyp2000: Phase File: [04.X] Vel Mod: [12] ==> XX-File: 04.XX
HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Thu Sep 27 14:38:33 2007 RUN LABEL=
CRUST MODEL 1: 12. NORTHWEST MAINE CRUSTAL ST

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
200709271131 8.20 47-24.89 70-22.40 15.35 2.7 3.5 54 0.39 0.3 0.4
CANADA, PQ, 10.4KM ESE OF BAIE-ST-PAUL
CHARLEVOIX SEISMIC ZONE
FELT

NSTA NPHS DMIN N.XMG N.FMG
58 104 5.50 2 7

STN	DIST	AZM	RMK	HRMN	SEC	TOBS	TCAL	RES	WT	AMX	PRX	XMAG	FMP	FMAG	ANG
A54	5.5	328	EPC0	1131	11.18	2.98	2.64	0.28	2.19					159	
			S 0	1131	13.01	4.81	4.70	0.00	2.19						
A11	23.3	145	EPC0	1131	12.91	4.71	4.52	0.18	2.18			313	3.4	121	
			S 0	1131	15.89	7.69	8.05	-0.37	2.18						
A16	28.4	77	EPC0	1131	13.73	5.53	5.22	0.31	2.17					116	
			S 0	1131	17.41	9.21	9.29	-0.08	2.17						
A61	37.6	34	EPC0	1131	15.06	6.86	6.56	0.24	2.16					110	
			S 0	1131	19.85	11.65	11.68	-0.13	2.16						
A64	58.3	38	EPC0	1131	18.08	9.88	9.73	0.13	2.13					102	
			S 0	1131	25.12	16.92	17.32	-0.44	2.13						
A21	60.6	57	EPC0	1131	18.70	10.50	10.09	0.40	2.12					101	
			S 0	1131	26.13	17.93	17.96	-0.05	2.12						
DAQ	89.4	314	EPC0	1131	22.83	14.63	14.59	-0.12	2.05					97	
			S 0	1131	34.11	25.91	25.97	-0.34	2.05						
QCQ	98.5	225	EPC0	1131	24.05	15.85	16.02	-0.19	2.02					96	
			S 0	1131	36.25	28.05	28.52	-0.50	2.02						
PQI	197.6	113	EPC0	1131	38.99	30.79	29.81	0.95	1.28	0.7	.14	2.5		51	
			S 0	1132	1.05	52.85	53.06	-0.27	1.57						
DPQ	200.1	247	EPC0	1131	39.01	30.81	30.12	0.66	1.55					51	
			S 0	1132	2.08	53.88	53.61	0.21	1.55						
PKME	253.1	160	EPC0	1131	45.85	37.65	36.67	0.96	0.99			326	3.6	51	
			S 0	1132	12.80	64.60	65.27	-0.71	1.23						
CNQ	270.3	38	EPC0	1131	47.49	39.29	38.79	0.47	1.13					51	
			S 0	1132	16.51	68.31	69.05	-0.79	1.12						
MOQ	274.9	213	EPC0	1131	48.64	40.44	39.36	0.94	0.92			265	3.5	51	
			S 0	1132	21.46	73.26	70.06	2.95	0.00						
GSQ	294.5	54	EPC0	1131	51.30	43.10	41.77	1.32	0.12					51	
			S 0	1132	21.78	73.58	74.35	-0.79	0.97						

BATG 326.4	91	EPC0 1131	52.22	44.02	45.72	-1.76	0.00	211	3.3	51
	S 0	1132	28.49	80.29	81.38	-1.20	0.27			
ICQ 327.9	43	EPC0 1131	54.52	46.32	45.90	0.41	0.77	51		
	S 0	1132	28.60	80.40	81.70	-1.32	0.10			
MNT 327.9	231	EPC0 1131	58.86	50.66	45.90	4.74	0.00	51		
	S 0	1132	35.38	87.18	81.70	5.44	0.00			
MRHQ 339.5	242	EPC0 1131	56.65	48.45	47.33	1.05	0.45	237	3.4	51
	S 0	1132	34.43	86.23	84.25	1.86	0.00			
TRQ 345.7	249	EPC0 1131	56.35	48.15	48.10	0.05	0.67	51		
	S 0	1132	32.43	84.23	85.62	-1.39	0.03			
GASG 359.6	60	EPC0 1131	59.39	51.19	49.81	1.34	0.06	51		
	S 0	1132	35.70	87.50	88.66	-1.23	0.16			
MNQ 366.0	18	EPC0 1131	59.18	50.98	50.61	0.28	0.55	51		
	S 0	1132	37.66	89.46	90.09	-0.79	0.55			
LBNH 372.9	200	EPC0 1132	0.91	52.71	51.46	1.19	0.18	295	3.6	51
	S 0	1132	48.90	100.70	91.60	8.99	0.00			
GGN 374.5	131	EPC0 1132	0.00	51.80	51.65	0.14	0.51	248	3.5	51
	S 0	1132	39.16	90.96	91.94	-0.99	0.38			
EMMW 375.9	142	EPC0 1131	59.96	51.76	51.82	-0.07	0.50	0.4	.18	2.9
	S 0	1132	39.70	91.50	92.24	-0.76	0.50			51
FRNY 379.5	223	EPC0 1132	0.92	52.72	52.27	0.41	0.48	51		
	S 0	1132	40.37	92.17	93.04	-0.94	0.41			
ALFO 399.2	242	EPC0 1132	3.71	55.51	54.70	0.81	0.37	51		
	S 0	1132	44.96	96.76	97.37	-0.61	0.38			
SMQ 412.5	39	EPC0 1132	5.06	56.86	56.35	0.45	0.32	51		
	S 0	1132	46.93	98.73	100.30	-1.68	0.00			
GRQ 427.0	260	EPC0 1132	6.01	57.81	58.13	-0.37	0.26	51		
	S 0	1132	49.61	101.41	103.47	-2.15	0.00			
GAC 435.4	246	EPC0 1132	7.98	59.78	59.17	0.60	0.23	51		
	S 0	1132	51.60	103.40	105.32	-1.94	0.00			
MIV 445.4	215	EPC0 1132	9.12	60.92	60.40	0.47	0.19	51		
LMN 460.6	110	EPC0 1132	10.37	62.17	62.28	-0.17	0.14	51		
	S 0	1132	57.05	108.85	110.86	-2.12	0.00			
WBO 464.0	237	EPC0 1132	12.28	64.08	62.70	1.37	0.01	51		
	S 0	1132	58.44	110.24	111.61	-1.38	0.01			
NCB 486.1	220	EPC0 1132	14.05	65.85	65.43	0.32	0.07	51		
	S 0	1133	3.25	115.05	116.47	-1.59	0.00			
VLDQ 536.8	281	EPC0 1132	21.65	73.45	71.69	1.74	0.00	51		
	S 0	1133	18.22	130.02	127.61	2.38	0.00			
MPPO 542.5	240	EPC0 1132	20.66	72.46	72.39	0.05	0.00	51		
	S 0	1133	14.73	126.53	128.85	-2.36	0.00			
HRV 553.4	191	EPC0 1132	25.60	77.40	73.74	3.63	0.00	51		
	S 0	1133	18.60	130.40	131.26	-0.91	0.00			
CRLO 557.5	257	EPC0 1132	21.59	73.39	74.25	-0.89	0.00	51		
	S 0	1133	15.68	127.48	132.16	-4.74	0.00			
PEMO 561.9	253	EPC0 1132	22.07	73.87	74.78	-0.94	0.00	51		
	S 0	1133	18.05	129.85	133.11	-3.31	0.00			
MALG 569.7	105	EPC0 1132	24.32	76.12	75.76	0.36	0.00	51		
	S 0	1133	20.29	132.09	134.85	-2.76	0.00			
PLVO 580.9	246	EPC0 1132	25.45	77.25	77.14	0.11	0.00	51		
	S 0	1133	22.40	134.20	137.31	-3.11	0.00			
ALGO 610.0	258	EPC0 1132	28.01	79.81	80.72	-0.95	0.00	51		
	S 0	1133	28.56	140.36	143.68	-3.39	0.00			
BANO 641.4	249	EPC0 1132	32.11	83.91	84.60	-0.75	0.00	51		
	S 0	1133	34.88	146.68	150.59	-4.01	0.00			
PECO 645.2	236	EPC0 1132	33.64	85.44	85.07	0.35	0.00	51		
	S 0	1133	36.86	148.66	151.42	-2.80	0.00			
DELO 647.9	243	EPC0 1132	35.24	87.04	85.40	1.60	0.00	51		
	S 0	1133	37.29	149.09	152.01	-2.99	0.00			
MADG 657.2	88	EPC0 1132	36.22	88.02	86.56	1.45	0.00	51		
	S 0	1133	38.87	150.67	154.08	-3.42	0.00			
KILO 709.6	284	EPC0 1132	39.47	91.27	93.02	-1.80	0.00	51		
GBN 717.8	104	EPC0 1132	42.07	93.87	94.04	-0.18	0.00	51		
BUKO 728.6	256	EPC0 1132	43.50	95.30	95.36	-0.11	0.00	51		

RSPO 733.8 262 EPC0 1132 42.63 94.43 96.01 -1.62 0.00	51
WLVO 736.6 242 EPC0 1132 45.99 97.79 96.35 1.43 0.00	51
LG4Q 739.7 341 EPC0 1132 44.55 96.35 96.74 -0.42 0.00	51
SADO 740.0 250 EPC0 1132 44.50 96.30 96.78 -0.52 0.00	51
MALO 750.1 297 EPC0 1132 44.98 96.78 98.03 -1.30 0.00	51
SCHQ 861.5 15 EPC0 1132 59.35 111.15 111.78 -0.71 0.00	51
TOBO 894.5 259 EPC0 1133 4.67 116.47 115.84 0.60 0.00	51
S 0 1134 29.41 201.21 206.20 -5.04 0.00	
KAPO 927.8 289 EPC0 1133 6.32 118.12 119.97 -1.89 0.00	51
S 0 1134 35.15 206.95 213.55 -6.67 0.00	
VIMO 0.0 308 EPC0 1133 30.58 142.38 144.99 -2.62 0.00	51
SILO 0.0 314 EPC0 1133 47.97 159.77 164.62 -4.88 0.00	51

Run Hyp2000: Phase File: [08.X] Vel Mod: [6] ==> XX-File: 08.XX
HYPOINVERSE 2000 (10/2006 VERSION) RUN ON Mon Oct 1 13:27:06 2007 RUN LABEL=
CRUST MODEL 1: 6. NORTHERN NY AND ADIRONDACKS

DATE ORIGIN LAT N LONG W DEPTH MN MC ML GAP RMS ERH ERZ Q
200709301735 35.97 46-53.90 76-30.26 6.39 3.2 3.6 219 0.21 0.6 0.5
CANADA, PQ, 58.5KM NW OF MANIWAKI

NSTA NPHS DMIN N.XMG N.FMG
41 82 58.90 5 10

STN	DIST	AZM	RMK	HRMN	SEC	TOBS	TCAL	RES	WT	AMX	PRX	XMAG	FMP	FMAG	ANG
GRQ	58.9	123	PC00	1735	45.11	9.14	9.19	-0.10	1.88						92
S 0	1735	52.34	16.37	16.36	-0.08	1.88									
CRLO	117.0	216	PC00	1735	53.85	17.88	17.99	-0.14	1.73						91
S 0	1736	8.30	32.33	32.02	0.25	1.73									
PEMO	147.3	204	PC00	1735	58.26	22.29	22.60	-0.34	1.61						90
S 0	1736	16.33	40.36	40.23	0.08	1.61									
VLDQ	152.8	333	PC00	1736	2.50	26.53	23.43	3.08	0.00						90
S 0	1736	22.06	46.09	41.71	4.35	0.00									
GAC	154.6	148	PC00	1735	59.73	23.76	23.70	0.05	1.58						90
S 0	1736	18.28	42.31	42.19	0.11	1.58									
ALGO	158.6	230	PC00	1736	0.10	24.13	24.31	-0.22	1.56						90
S 0	1736	19.99	44.02	43.27	0.68	0.97									
TRQ	167.3	115	PC00	1736	1.75	25.78	25.64	0.14	1.53						90
S 0	1736	21.73	45.76	45.64	0.12	1.53									
OTT	177.9	159	PC00	1736	3.42	27.45	27.26	0.18	1.48						90
S 0	1736	24.18	48.21	48.52	-0.33	1.48									
ALFO	188.5	137	PC00	1736	5.04	29.07	28.80	0.27	1.43						90
S 0	1736	27.20	51.23	51.26	-0.03	1.43									
MRHQ	209.1	121	EPC0	1736	7.35	31.38	31.47	-0.16	1.32			310	3.6	54	
S 0	1736	32.22	56.25	56.02	0.11	1.32									
PLVO	211.3	193	PC00	1736	7.53	31.56	31.75	-0.19	1.31						54
S 0	1736	32.53	56.56	56.51	0.04	1.31									
WBO	231.5	155	PC00	1736	10.21	34.24	34.24	-0.01	1.21						54
S 0	1736	36.64	60.67	60.95	-0.29	1.21									
MPPO	237.3	175	PC00	1736	10.66	34.69	34.96	-0.29	1.18						54
S 0	1736	38.64	62.67	62.23	0.41	1.18									
MNT	271.2	123	EPC0	1736	15.46	39.49	39.14	0.33	0.99			165	3.1	54	
S 0	1736	45.77	69.80	69.67	0.10	0.99									
PTN	284.6	154	PC00	1736	16.83	40.86	40.80	0.03	0.92						54
S 0	1736	48.50	72.53	72.62	-0.15	0.92									
DPQ	285.7	93	PC00	1736	15.69	39.72	40.93	-1.24	0.00						54
S 0	1736	49.38	73.41	72.86	0.50	0.90									
LONY	294.1	148	EPC0	1736	17.67	41.70	41.97	-0.34	0.86			336	3.7	54	
S 0	1736	50.72	74.75	74.71	-0.08	0.86									
KGNO	296.9	179	PC00	1736	19.72	43.75	42.32	1.42	0.00						54
S 0	1736	51.19	75.22	75.33	-0.13	0.85									
SADO	313.0	222	PC00	1736	20.27	44.30	44.31	-0.05	0.76						54
S 0	1736	54.89	78.92	78.87	-0.02	0.76									

FRNY 322.3	134	PC00	1736	21.68	45.71	45.45	0.22	0.71										54
S 0 1736 57.00 81.03 80.90 0.06 0.71																		
WCNY 331.0	168	PC00	1736	22.59	46.62	46.52	0.06	0.66										54
S 0 1736 58.55 82.58 82.81 -0.30 0.66																		
PECO 331.7	187	PC00	1736	22.49	46.52	46.61	-0.11	0.66										54
S 0 1736 58.85 82.88 82.97 -0.12 0.66																		
NCB 370.9	150	EPC0	1736	27.35	51.38	51.45	-0.17	0.46		348	3.8							54
S 0 1737 7.73 91.76 91.58 0.00 0.46																		
MOQ 373.0	116	PC00	1736	27.85	51.88	51.71	0.03	0.45		236	3.4							54
S 0 1737 9.03 93.06 92.04 0.77 0.15																		
QCQ 399.3	89	EPC0	1736	31.71	55.74	54.95	0.77	0.11										54
S 0 1737 21.73 105.76 97.81 7.91 0.00																		
MDV 414.0	139	EPC0	1736	32.02	56.05	56.78	-0.75	0.10		297	3.6							54
S 1 1737 18.63 102.66 101.07 1.56 0.00																		
ACCN 449.8	149	PC00	1736	37.49	61.52	61.19	0.27	0.15										54
S 0 1737 25.24 109.27 108.92 0.24 0.15																		
LBNH 463.8	127	EPC0	1736	40.71	64.74	62.92	1.76	0.00		370	3.8							54
S 0 1737 30.98 115.01 112.00 2.91 0.00																		
LMQ 473.7	78	EPC0	1736	37.66	61.69	64.15	-2.53	0.00		302	3.7							54
S 0 1737 41.40 125.43 114.19 11.12 0.00																		
HNH 485.2	135	EPC1	1736	46.83	70.86	65.57	5.26	0.00	0.4	.26	3.2							54
S 2 1737 32.92 116.95 116.71 0.18 0.03																		
TRY 514.7	153	EPC2	1736	53.82	77.85	69.21	8.59	0.00	0.5	.37	3.4							54
S 2 1737 35.66 119.69 123.19 -3.59 0.00																		
BINY 524.5	175	EPC0	1736	47.31	71.34	70.41	0.85	0.00		287	3.7							54
S 0 1737 42.70 126.73 125.33 1.26 0.00																		
FFD 539.1	133	EPC2	1737	0.24	84.27	72.22	12.03	0.00										54
S 2 1737 46.54 130.57 128.55 1.98 0.00																		
PKME 587.2	105	EPC0	1736	54.30	78.33	78.16	0.15	0.00		335	3.8							54
S 0 1738 5.70 149.73 139.12 10.57 0.00																		
QUA2 610.2	145	EPC2	1737	8.98	93.01	80.99	11.99	0.00	0.3	.34	3.3							54
S 2 1738 3.17 147.20 144.16 2.98 0.00																		
HRV 626.1	139	EPC1	1737	3.17	87.20	82.96	4.21	0.00										54
S 3 1738 0.95 144.98 147.67 -2.74 0.00																		
WES 648.7	138	EPC2	1736	57.77	81.80	85.75	-3.96	0.00	0.1	.24	3.1							54
S 2 1738 16.60 160.63 152.63 7.98 0.00																		
UCCT 662.0	147	EPC4	1737	20.37	104.40	87.39	16.98	0.00										54
S 2 1738 19.14 163.17 155.55 7.56 0.00																		
BRYW 680.4	142	EPC4	1737	15.88	99.91	89.66	10.19	0.00	0.1	.34	3.1							54
S 1 1738 28.10 172.13 159.59 12.43 0.00																		
EMMW 745.1	105	EPC2	1737	15.45	99.48	97.66	1.81	0.00										54
S 2 1738 27.46 171.49 173.83 -2.36 0.00																		
GGN 776.9	101	EPC0	1737	15.23	99.26	101.58	-2.33	0.00										54
S 1 1738 53.10 197.13 180.81 16.30 0.00																		

TABLE 5

MICROEARTHQUAKES AND OTHER NON-LOCATABLE EVENTS

Date Yr/Mo/Dy	Sta	Arrival Time Hr:Mn:Sec
None recorded this period.		

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NESN Station Map

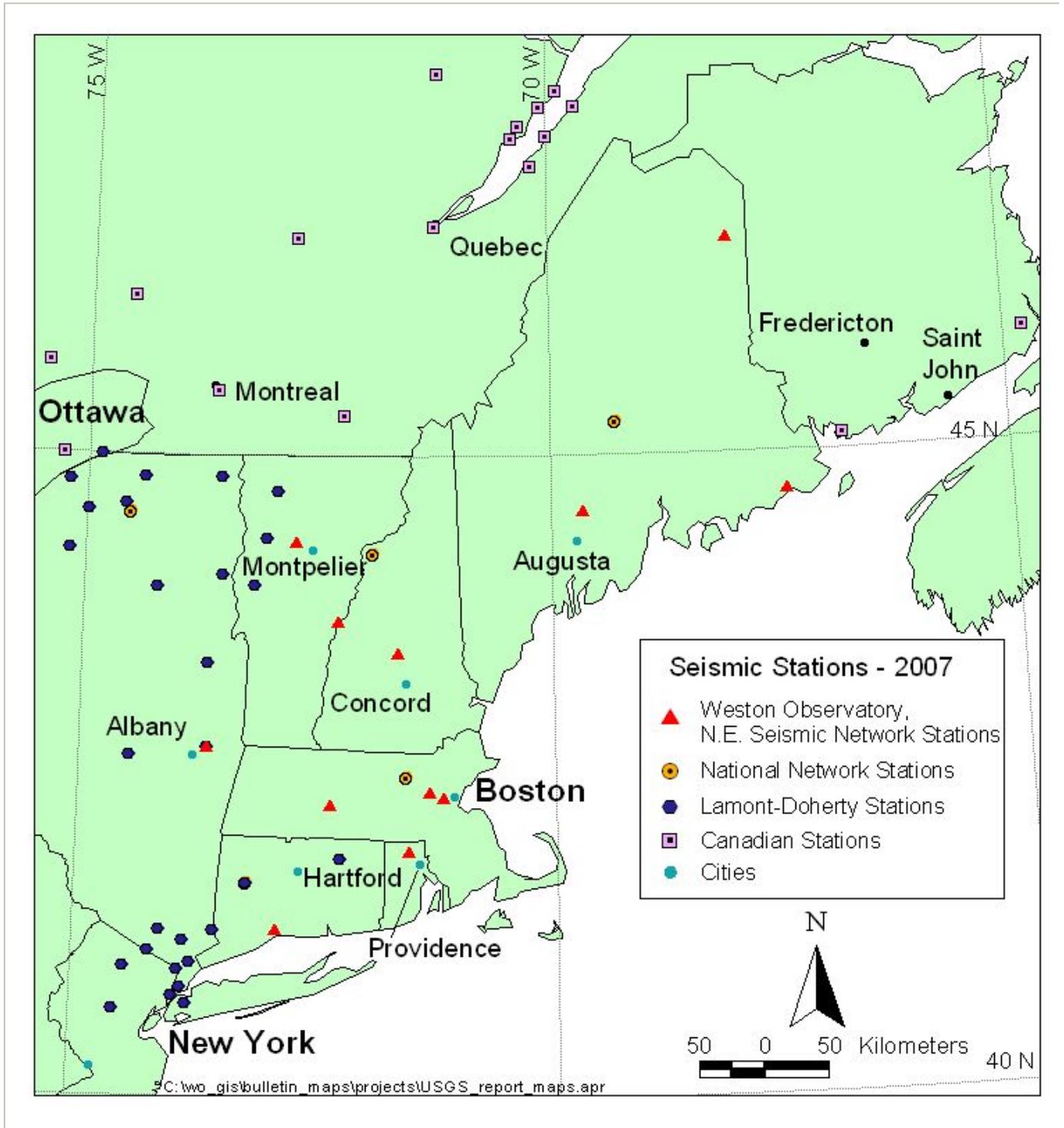


Figure 1: Map of stations of the New England Seismic Network (NESN) in operation during the period of this report. Also included are other Northeast U.S. and Canadian seismic stations in operation during this period.

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NESN Strong-Motion Station Map

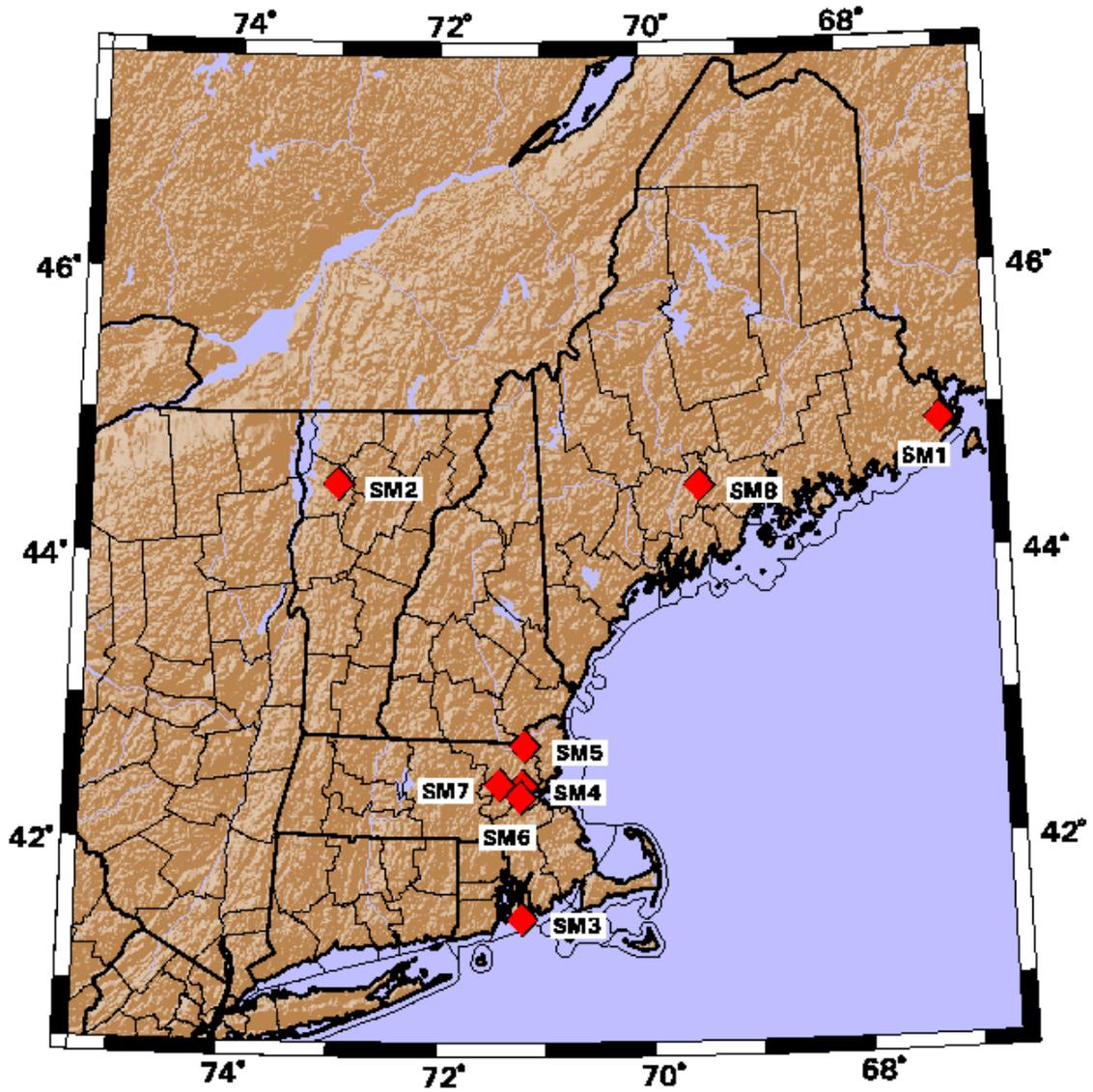


Figure 2: Map of strong-motion stations of the New England Seismic Network (NESN) in operation during the period of this report.

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NESN Quarterly Seismicity Map

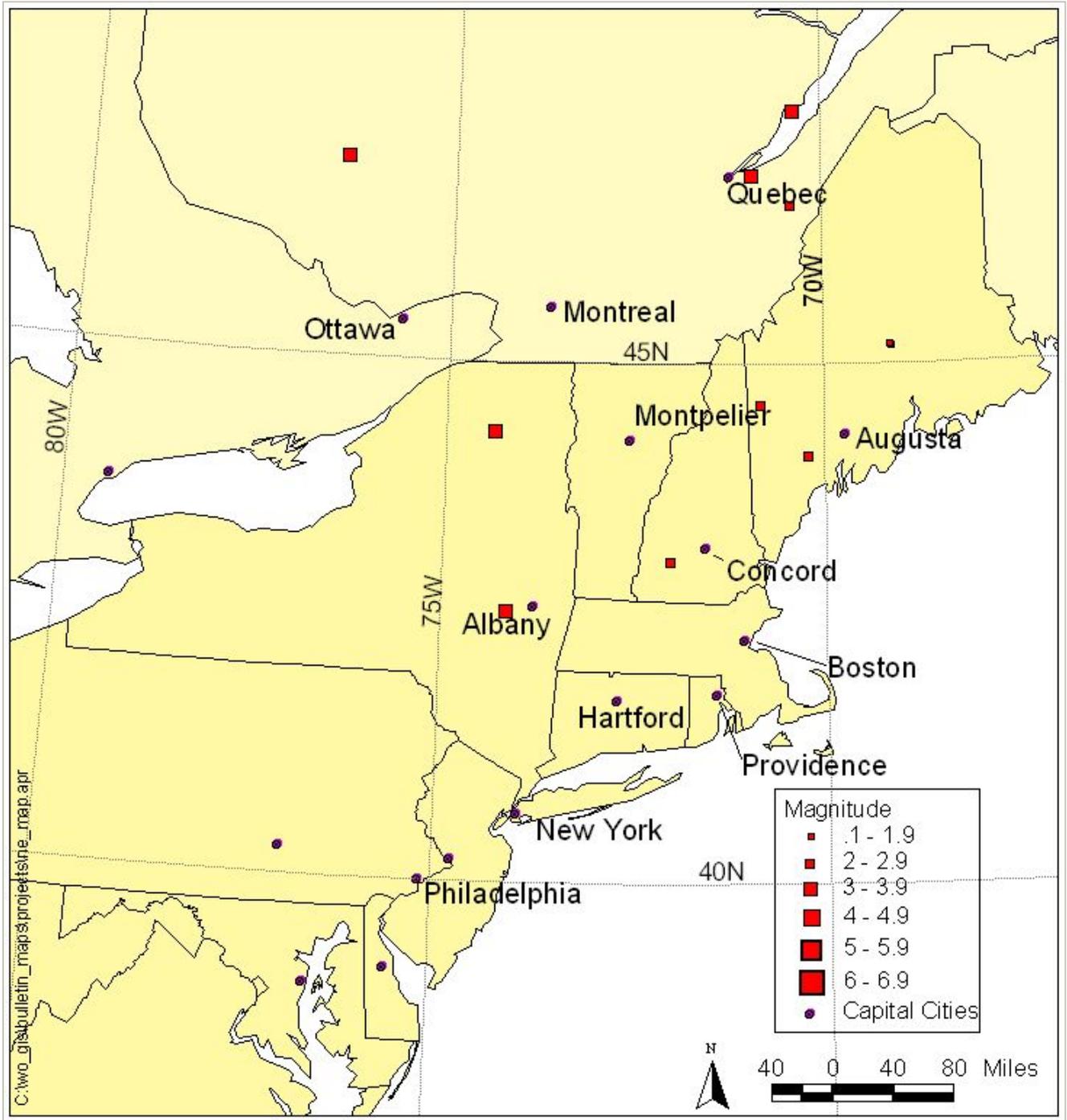


Figure 3: Earthquake epicenters located by the NESN during the period of this report.

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NESN Cumulative Seismicity Map

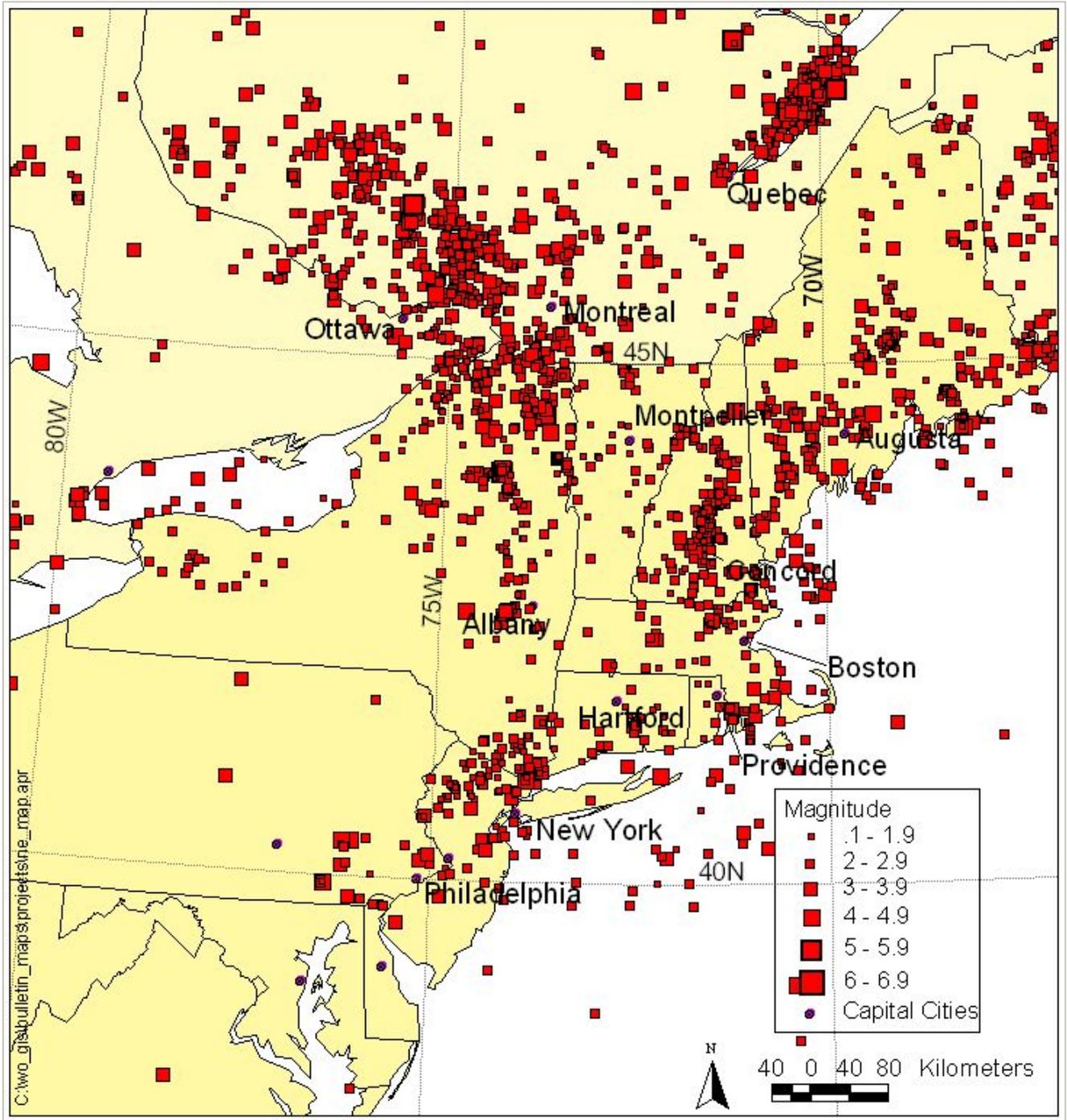


Figure 4: Seismicity for period October, 1975 - June, 2007.

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Acknowledgments

Our map database has been developed in-house using ArcView and in part basemap data provided by ESRI, Inc., USGS GTOPO30 Elevation Data, and TIGER/Line '94, '95, and '97 (US Census Bureau) spatial data.

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