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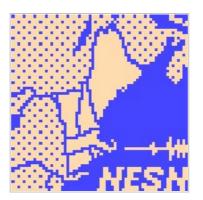
A STUDY OF NEW ENGLAND SEISMICITY

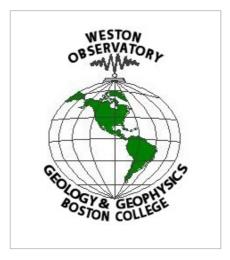
Quarterly Earthquake Report

October-December, 2004

NEW ENGLAND

SEISMIC NETWORK





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NEW ENGLAND SEISMIC NETWORK

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Award # 04HQAG0020

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for

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Notice

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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 October-December, 2004. 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 5 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 11 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 11 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. WES also maintains 8 SMA-1 strong-motion instruments in New England.

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Seismicity

There were 5 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 <u>Geological Survey of Canada (GSC)</u>, the <u>Lamont-Doherty Cooperative Seismographic Network</u>, and the <u>US National Seismic Network</u>. 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/cqi-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 = st ation name
- 2. Lat = station latitude, degrees north
- 3. Long = station longitude, degrees west4. Elev = station elevation in meters
- 5. Location = geographic location 6. Operator = network operator

Table 3: Earthquake Hypocenter List

- D ate = date event occurred, Yr (year)/Mo (month)/Dy (day)
 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. Mag = event magnitude
- 7. Int = event epicentral intensity
- 8. Location = event geographic location

Table 4: Earthquake detailed hypocenter and phase data list

Table Header: detailed hypocenter data

- 1. Geographic location
- Geographic location
 DATE = date event occurred, yr/mo/dy (year/month/day)
 ORIGIN = event origin time (UCT) in hours, minutes, and seconds
 LAT N = latitude north in degrees and minutes
 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: $2.23 \log(\text{FMP}) + 0.12 \log(\text{Dist}) - 2.36$ (Rosario, 1979) MIT: $2.21 \log(\text{FMP}) - 1.7$ (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 se paration, 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 arr ival

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 arriva I
 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 = sign al 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 = neares t 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	Network Position	voice phone	email address
John E. Ebel	Principal Investigator	617-552-8319	ebel@bc.edu
Alan Kafka	Research Seismologist	617-552-8300	kafka@bc.edu
Anastasia Macherides Moulis	Seismic Analyst	617-552-8325	macherid@bc.edu
vacant	NESN Operator	617-552-8332	@bc.edu
Dina Smith	Associate Director of Scientific and Technical Operations	617-552-8335	dina.smith.1@bc.edu
Weston Observatory		617-552-8300	
Weston Observatory		617-552-8388 (FAX)

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TABLE 2

SEISMIC STATIONS OF THE NEW ENGLAND SEISMIC NETWORK WES43.7050-72.3525Belchertown, MATroy, NYWESUMMWES42.3850WESYLEPQI46.6710

Code	Lat	Long	Elev (m)	Location	Operator
BCX	42.3350	-71.1705	61.0	Chestnut Hill, MA	WES
BRYW	41.9178	-71.5388	380.0	Smithfield, RI	WES
FFD	43.4702	-71.6533	131.0	Franklin Falls Dam, NH	
HNH	-72.2860	180.0	Hanover, NH	WES	
QUA2	42.2789	168.0	WES		
TRY *	42.7311	-73.6669	131.0		
44.7100	-67.4583	35.0	Machias, ME	WES	
VT1	44.3317	-72.7536	410.0	Waterbury, VT	WES
-71.3220	60.0	Weston, MA	WES		
WVL	44.5648	-69.6575	85.0	Waterville, ME	
41.3100	-72.9269	10.0	New Haven, CT	WES	
-68.0168	175.0	Presque Isle, ME	WES		

^{* =} not in operation during this quarter

STRONG MOTION STATIONS OF THE NEW ENGLAND SEISMIC NETWORK SM2-73.10Newport, RISM4-71.30WESSM742.39-71.54WES

Code	Lat	Long	Location	Operator
SM1	44.90	-67.25	Dennysville, ME	WES
44.49	Essex Junction, VT	WES		
SM3	41.45	-71.33	WES	
42.38	-71.32	Weston, MA	WES	
SM5	42.66	Lowell, MA		
SM6	42.30	-71.34	Natick, MA	WES
Huds on, MA	WES			
SM8	44.48	-69.61	North Vassalboro, ME	

TABLE 3

EVENTS IN NEW ENGLAND AND ADJACENT REGIONS

Date	Time (UTC)			Depth		
M/D/Y	Hr:Mn:Sec	Lat	Long	(km)	Mag Int	Location
10/06/2004	16:20:18.25	42.94	-71.96	26.26	2.0	NH, 26.2KM (16.3MI) E OF KEENE
10/08/2004	02:25:45.92	42.51	-71.47	5.00	2.4	MA, 4.25KM (2.64MI) SSE OF LITTLETON COMMON
10/08/2004	03:21:02.12	42.51	-71.47	0.9	-0.2	MA, 4.25KM (2.64MI) SSE OF LITTLETON COMMON
10/08/2004	12:38:13.04	42.51	-71.47	2.01	1.2	MA, 4.25KM (2.64MI) SSE OF LITTLETON COMMON
10/14/2004	09:36:03.58	41.39	-73.99	9.17	2.8	NY, 12.5 KM (7.77 MI) SOUTH OF NEWBURGH
			k	' indicat	es Mc rath	er than Mn.

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TABLE 4

EARTHQUAKE PHASE DATA LIST FOR EVENTS IN NEW ENGLAND AND ADJACENT REGIONS

D4A06A SOUTHE 04OCTO DATE													
SOUTHE 040CT0 DATE													
040CT0 DATE	AST MAT	NE CE	RIIST	ГАТ. МО	ODET.								
DATE						OF REENE							
DATE								WW W	a w.	0 3 D	DVC	E D 11	ED7 0
		.IGIN		LAT		LONG W	DEPTH	MN M	C ML	GAP	KMS	EKH.	EKZ Q
4100	6 1620	18.25	, 42	2-56.	34 /1	L-57.80	26.26	1.6 2.	U	15/	.43	3.2	7.5 C
STN	DIST A	ZM F	MK	HRMN	SEC	TOBS 9.60	TCAL	RES	WT	AMX P	RX XMAG	FMP	FMAG
HRV	58.4 1	.45 EF	, 1	1620	27.85	9.60	10.24	67	1.22				
		ES	, 1	1620	36.56	18.31	18.22	.04	1.24				
QUA2	80.0 2	04 EF	, 0	1620	32.08	3 13.83	13.32	.48	1.55	13 .	10 1.3	61	2.0
-		ES	3	1620	40.70	22.45	23.70	-1.31	.30				
WES	81 A 1	40 FE		1620	31 76	13 51	13 45	0.5	1 5 8	34.	08 1.8	3 59	2.0
WES	01.0 1	40 Er	, 1	1620	42 50	13.51 24.25 14.73	23.95	.28	1 17	J = .	00 1.0	, ,,	2.0
	00 1 3	42 ==	, 1	1620	42.50	14.23	23.93						
HNH	89.1 3	43 EF		1620	32.98								
		ES	3	1620	42.04	23.79	26.01		.02				
BRY	118.7 1	.63 ES	3	1620	50.67	32.42	32.58	26	.36				
D4A08A	.xx												
SOUTH	& COAST	AL NE	W F	ENGLAI	ID. CF	HIBURIS,	1979						
						OF LIT		COMMON					
040010	O MA, 1	TOTAL	. (2		., 555	. 01 111	DETON (COMMON			2112		
DATE	. OR	IGIN		LAT	A	LONG W L-28.08	DEPTH	MN M	C ML	GAP	RMS	EKH	ERZ Q
4100	8 225	45.92	4 2	2-30.6	71 71	L-28.08	2.00	.0 2.	0	148	.50	2.2	5.0 D
STN	DIST A	ZM F	tΜK	HRMN	SEC	: TOBS	TCAL	RES	WT	AMX P	RX XMAG	FMP	FMAG
HRV	7.4 2	66 EF	, 1	225	47.11	1.19	1.33	17	1.43				
						2.12							
WES	18.5 1					3.34						68	1.9
11 12 2	10.5			225	E1 1	5 5.23	2.14	20	1 20			00	1.9
			1	225	21.15	3.23	5.59	38	1.39				
QUA2	77.3 2					15.70						56	2.0
		ES	3			24.98							
FFD	107.6 3				4.95	19.03	17.84	1.17	.37				
			0			31.53							
нин	148.4 3					25.32							
	110.1					42.95							
		ES	, 0	226	20.0/	42.95	42.95	06	1.41				
D4A08B													
SOUTH	& COAST	AL NE	W E	ENGLAI	ID, CH	HIBURIS,	1979						
040CT0	8 MA, 4	. 25KM	1 (2	2.64M	() SSF	OF LIT	TLETON (COMMON					
DATE	OR	IGIN		LAT	a i	LONG W	DEPTH	MN M	C ML	GAP	RMS	ERH	ERZ O
4100	8 321	2 12	4:	2-28 (54 71	-29 96	9.0	0 -	2	181	14	. 0	0 2
	DIST A	7M E	ME	HDMN	SEC	TORG	TCAL	DEC	_ wm	AMY D	RX XMAG	. FMD	FMAG
214	DISI A		·	221	3.09	TOBS	1 04	10	1 0 4	AMA F	KA AMAG		
HRV	5.8 3			321	3.09	.91	1.04 1.85 3.03 5.39	.03	1.04			4	7
			0		4.06	1.94	1.85	.03	1.05				
WES	17.9 1	.25 EF	, 0	321	5.39	3.27	3.03	. 23				10	. 3
		S	0 د	321	7.39	5.27	5.39	14	.99				
D4A08C	.xx												
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						LONG W			C ML	GAP	KMS	EKH	EKZ Q
						L-48.84		.0 1.	2		1.78	5.9	**** D
					CPC								
		ZM F	MK	HKMN	350	: TOBS	TCAL	RES		AMX P	RX XMAG		
		ZM F	, 0	1238	20.00) 6.96	TCAL 5.32	RES 1.61		AMX P	RX XMAG		FMAG
		ZM F 42 EF	, 0	1238 1238	20.00	6.96	TCAL 5.32 9.47	RES 1.61 -1.73	WT 1.02	AMX P	RX XMAG	FMP	FMAG
STN HRV	DIST A	ES	80	1238	20.83	3 7.79	9.47	-1.73	WT 1.02 1.01	AMX P	RX XMAG	FMP 16	FMAG .9
STN HRV	DIST A	76 EF	0	1238 1238	20.83	7.79 9.73	9.47 6.99	-1.73 2.73	WT 1.02 1.01 .94	АМХ Р	RX XMAG	FMP	FMAG
STN HRV WES	DIST A 31.7	76 EF	0	1238 1238 1238	20.83 22.77 24.05	7.79 7.73 5.11.01	9.47 6.99 12.45	-1.73 2.73 -1.45	WT 1.02 1.01 .94 1.01	AMX P	RX XMAG	FMP 16	FMAG .9
STN HRV WES	DIST A 31.7 41.8 44.4 2	76 EF	0	1238 1238 1238	20.83 22.77 24.05	7.79 9.73	9.47 6.99 12.45	-1.73 2.73 -1.45	WT 1.02 1.01 .94 1.01	AMX P	RX XMAG	FMP 16	FMAG .9
STN HRV WES QUA2 D4A14A	DIST A 31.7 41.8 44.4 2	76 ES ES 268 ES	5 0 9 0 5 0 5 0	1238 1238 1238 1238	20.83 22.77 24.05 25.31	7.79 9.73 11.01 12.27	9.47 6.99 12.45	-1.73 2.73 -1.45	WT 1.02 1.01 .94 1.01	AMX P	RX XMAG	FMP 16	FMAG .9
STN HRV WES QUA2 D4A14A	DIST A 31.7 41.8 44.4 2	76 ES ES 268 ES	5 0 9 0 5 0 5 0	1238 1238 1238 1238	20.83 22.77 24.05 25.31	7.79 9.73 11.01 12.27	9.47 6.99 12.45	-1.73 2.73 -1.45	WT 1.02 1.01 .94 1.01	AMX P	RX XMAG	FMP 16	FMAG .9
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STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE	DIST A 31.7 41.8 44.4 2 NEW YOR 4 NY, 1	76 ES 76 ES 868 ES 8K, HU 2.5 K	5 0 5 0 5 0 5 0 JGHE	1238 1238 1238 1238 1238 ES & 1	20.83 22.77 24.05 25.31 LUETGE MI) S	7.79 9.73 11.01 12.27 ERT SOUTH OF	9.47 6.99 12.45 13.21 NEWBURG	-1.73 2.73 -1.45 98	WT 1.02 1.01 .94 1.01 1.01	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101	DIST A 31.7 41.8 44.4 2 XX NEW YOR 4 NY, 1 OR 4 936	ES 76 EF ES 68 ES RK, HU 2.5 F GIGIN 3.58	5 0 5 0 5 0 5 0 JGHE KM (1238 1238 1238 1238 1238 ES & 1 (7.77 LAT 1	20.83 22.77 24.05 25.31 LUETGE MI) S N I	3 7.79 7 9.73 5 11.01 1 12.27 ERT SOUTH OF LONG W 3-59.41	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17	-1.73 2.73 -1.45 98	WT 1.02 1.01 .94 1.01 1.01	GAP	RMS	FMP 16 33	FMAG .9 1.5
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STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101	DIST A 31.7 41.8 44.4 2 XX NEW YOR 4 NY, 1 OR 4 936	ES 76 EF 268 ES 268 ES 2161N 3.58 22M F	5 0 5 0 5 0 5 0 JGHE KM (1238 1238 1238 1238 1238 ES & 1 (7.77 LAT 1 1-23.3 HRMN 936	20.83 22.77 24.05 25.31 LUETGE MI) S N I 33 73 SEC 6.57	7.79 7.9.73 5.11.01 1.2.27 ERT GOUTH OF LONG W 3-59.41 C. TOBS	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48	GAP	DMC	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY	DIST A 31.7 41.8 44.4 2xx NEW YOR 4 NY, 1 OR 6 DIST A 21.1 1	ES 76 EF 268 ES 268 ES 21GIN 3.58 22M F 251 EF	6 0 6 0 6 0 1GHE KM (8 4 1 RMK	1238 1238 1238 1238 1238 ES & I (7.77 LAT I 1-23.3 HRMN 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N I 33 73 SEC 6.57	7.79 7.9.73 5.11.01 1.2.27 ERT GOUTH OF LONG W 3-59.41 C. TOBS	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN	DIST A 31.7 41.8 44.4 2xx NEW YOR 4 NY, 1 OR 6 DIST A 21.1 1	ES 76 ES 268 ES 2.5 F 2.5 F 3.58 2.5 ES 2.5 ES	5 0 5 0 6 0 1GHE KM (8 4 1 RMK 9 3 5 1	1238 1238 1238 1238 1238 (7.77 LAT 1 1-23.3 HRMN 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N I 33 73 SEC 6.57 9.74	3 7.79 7 9.73 5 11.01 1 12.27 ERT SOUTH OF LONG W 3-59.41 C TOBS 7 2.99 1 6.16	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY	DIST A 31.7 41.8 44.4 2 XX NEW YOR 4 NY, 1 OR 4 936	ES 76 ES 268 ES 2.5 F 2.5 F 3.58 2.5 ES 2.5 ES	5 0 5 0 6 0 1GHE KM (8 4 1 RMK 9 3 5 1	1238 1238 1238 1238 1238 (7.77 LAT 1 1-23.3 HRMN 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N I 33 73 SEC 6.57 9.74	7 7.79 7 9.73 5 11.01 1 12.27 ERT GOUTH OF LONG W 3-59.41 C TOBS 7 2.99 1 6.16 4 4.98	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY	DIST A 31.7 41.8 44.4 2x NEW YOR 4 NY, 1 OR 4 936 DIST A 21.1 1 33.6 2	ES 76 EF ES 868	5 0 5 0 6 0 JGHE KM (3 4 1 RMK 7 3 5 1 7 1	1238 1238 1238 1238 1238 ES & 1 (7.77 LAT 1 1-23.3 HRMN 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N I 33 73 SEC 6.57 9.74 8.56	7 7 9 7 9 7 3 5 1 1 0 1 1 2 . 2 7 ERT SOUTH OF LONG W 3 - 59 . 41 C TOBS 7 2 . 99 4 6 . 16 4 . 98 6 9 9 . 6 1	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47 1.42 1.91	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY	DIST A 31.7 41.8 44.4 2xx NEW YOR 4 NY, 1 OR 6 DIST A 21.1 1	ES 76 EF ES 268 ES 25 F ES 27	5 0 5 0 6 0 1 GHE KM (3 4 1 RMK 7 3 5 1 7 1 8 0 9 0	1238 1238 1238 1238 1238 ES & 1 (7.77 LAT 1 1-23.3 HRMN 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S SEC 6.57 9.74 8.19 10.38	7 7.79 7 9.73 5 11.01 1 12.27 ERT GOUTH OF JONG W 3-59.41 7 2.89 1 6.16 5 4.98 9 9.61 3 6.80	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47 1.42 1.91	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY TBR	DIST A 31.7 41.8 44.4 2 2.xx NEW YOR 4 NY, 1 1 33.6 2 43.3 1	ES 76 EF ES 268 ES 25 F ES 25 F ES 25 F ES 25 F ES 27 E ES 27	5 0 0 5 0 0 1 GHE KM (1238 1238 1238 1238 1238 ES & I (7.77 LAT I 1-23.3 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N I 33 73 5EC 6.57 9.74 8.56 110.38 115.79	7 7.79 7 9.73 5 11.01 1 12.27 ERT SOUTH OF LONG W 3-59.41 2 TOBS 7 2.99 1 6.16 6 4.98 9 9.61 8 6.80	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47 1.42 1.91	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY	DIST A 31.7 41.8 44.4 2x NEW YOR 4 NY, 1 OR 4 936 DIST A 21.1 1 33.6 2	ES 76 EF 85 868 ES 868	5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1238 1238 1238 1238 1238 ES & 1 (7.77 LAT 1 1-23.3 HRMN 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N I 33 73 SEC 6.57 9.74 8.56 13.19 10.38 115.79 12.35	7 7.79 7 9.73 5 11.01 12.27 ERT SOUTH OF 2-59.41 C TOBS 7 2.99 1 6.16 4.98 5 9.61 8 6.80 9 12.21	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 01	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT 1.42 1.91 1.88 1.88 1.83	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY TBR PAL GPD	DIST A 31.7 41.8 44.4 2 2.1.1 NEW YOR 4 NY, 1 2 21.1 1 33.6 2 43.3 1 57.1 2	ES 24 ES 224 ES 25 ES 224 ES 25 ES 2	3 41 1 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1238 1238 1238 1238 1238 ES & I (7.77 LAT I 1-23.3 HRMN 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N SEC 6.57 9.74 10.38 15.79 10.38 15.79	7 7.79 7 9.73 5 11.01 1 12.27 ERT SOUTH OF 3-59.41 2 TOBS 7 2.99 4 6.16 5 4.98 9 9.61 3 6.80 9 12.21 5 8.77 5 16.03	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 8.86 15.78	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 01 15	WT 1.02 1.01 1.01 1.01 C ML 8 WT .48 1.47 1.42 1.91 1.88 1.88 1.83	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY TBR	DIST A 31.7 41.8 44.4 2 2.xx NEW YOR 4 NY, 1 1 33.6 2 43.3 1	ES 24 ES 224 ES 25 ES 224 ES 25 ES 2	3 41 1 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1238 1238 1238 1238 1238 ES & I (7.77 LAT I 1-23.3 HRMN 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N SEC 6.57 9.74 10.38 15.79 10.38 15.79	7 7.79 7 9.73 5 11.01 12.27 ERT SOUTH OF 2-59.41 C TOBS 7 2.99 1 6.16 4.98 5 9.61 8 6.80 9 12.21	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 8.86 15.78	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 01 15	WT 1.02 1.01 1.01 1.01 C ML 8 WT .48 1.47 1.42 1.91 1.88 1.88 1.83	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY TBR PAL GPD	DIST A 31.7 41.8 44.4 2 2.1.1 NEW YOR 4 NY, 1 2 21.1 1 33.6 2 43.3 1 57.1 2	ES 76 EF 868 ES	3 41 1 3 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1238 1238 1238 1238 1238 ES & 1 (7.77 LAT I 1-23.3 HRMN 936 936 936 936 936 936 936 936	20.83 22.77 24.05 25.31 MI) S SN I 33 73 SEC 9.74 8.56 110.35 115.79 112.35 119.61	7 7.79 7 9.73 5 11.01 1 12.27 ERT SOUTH OF 3-59.41 2 TOBS 7 2.99 4 6.16 5 4.98 9 9.61 3 6.80 9 12.21 8 8.77 1 16.03	9.47 6.99 12.45 13.21 NEWBURC DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 8.86 15.78	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 01	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47 1.42 1.91 1.88 1.88 1.83 1.79	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY TBR PAL GPD	DIST A 31.7 41.8 44.4 2 XX NEW YOR 4 936 DIST A 21.1 1 33.6 2 43.3 1 57.1 2 66.4 1	ES 76 EF ES 8 E	S 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1238 1238 1238 1238 1238 1238 127 127 127 127 127 127 127 127 127 127	20.83 22.77 24.05 25.31 LUETGE MI) S SN 1 33 SEC 6.57 9.74 8.56 13.19 10.38 15.79 12.35 19.61 13.82	7 7.79 7 9.73 5 11.01 12.27 ERT GOUTH OF 2-599 1 6.16 4 .98 5 9.61 8 6.80 9 12.21 1 16.03 1 16.03	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 8.86 15.78 10.28	-1.73 2.73 -1.45 98 GH MN M.0 2. RES57 18 41 .01 01 .15 01	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .487 1.42 1.91 1.88 1.83 1.83 1.79	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY TBR PAL GPD	DIST A 31.7 41.8 44.4 2 2.1.1 NEW YOR 4 NY, 1 2 21.1 1 33.6 2 43.3 1 57.1 2	ES 76 EF ES 2.5 EF ES 2.5 EF ES 2.5 EF ES 2.4 EF ES 2.12 EF ES 2.12 EF	3 41 3 41 5 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6 1 6	1238 1238 1238 1238 1238 ES & 1 (7.77 LAT I 1-23.3 HRMN 936 936 936 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S S 6.57 9.74 8.56 13.19 10.38 15.79 112.35 113.82 12.30 113.82	7 7.79 7 9.73 5 11.01 12.27 ERT SOUTH OF 3-59.41 C TOBS 7 2.99 4 6.16 5 4.98 9 9.61 8 6.80 9 12.21 1 16.03 2 10.24 1 14.73	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 8.86 15.78 10.28 18.29	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 .10 15 04	WT 1.02 1.01 .94 1.01 1.01 C ML 8 WT .48 1.47 1.42 1.91 1.88 1.83 1.83 1.79 1.79	GAP	RMS	FMP 16 33	FMAG .9 1.5
STN HRV WES QUA2 D4A14A SE OF 04OCTI DATE 4101 STN MANY TBR PAL GPD CPNY BRNJ	DIST A 31.7 41.8 44.4 2 2.1XX NEW YOR 4 936 DIST A 21.1 1 33.6 2 43.3 1 57.1 2 66.4 1 92.2 2	ES 76 EF ES 2.5 EF ES 2.5 EF ES 2.5 EF ES 2.5 EF ES 2.2	3 41 3 41 3 41 3 5 1 5 0 6 0 7 0 7 0 7 0 7 0 7 0 7 0 7 0 7	1238 1238 1238 1238 1238 ES & I (7.77 LAT I 1-23.3 HRMN 936 936 936 936 936 936 936 936 936 936	20.83 22.77 22.77 25.31 LUETGE MI) S SN 33 73 6.57 9.74 8.56 13.19 10.38 115.35 112.35 113.82 22.00 129.63	7 7.99 7 9.73 5 11.01 1 12.27 ERT SOUTH OF CONG W 3-59.41 7 2.99 1 6.16 5 4.98 9 9.61 8 6.80 9 12.21 5 8.77 1 16.03 2 10.24 0 18.42 1 14.73 2 26.05	9.47 6.99 12.45 13.21 NEWBURC DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 8.86 15.78 10.28 10.28 14.18 25.25	-1.73 2.73 -1.4598 GH MN M. M. 0.0 2. RESS5718010110151504135378	WT 1.02 1.94 1.01 1.01 8 WT 48 1.47 1.42 1.91 1.88 1.88 1.83 1.79 1.79 1.26	GAP	RMS .40 RX XMAG	FMP 16 33 ERH 1.5 FMP	FMAG .9 1.5 ERZ Q 2.7 C FMAG
STN HRV WES QUA2 D4A14A SE OF 04OCTI DATE 4101 STN MANY TBR PAL GPD CPNY BRNJ	DIST A 31.7 41.8 44.4 2 XX NEW YOR 4 936 DIST A 21.1 1 33.6 2 43.3 1 57.1 2 66.4 1	ES	3 41 3 41 3 41 3 5 1 5 0 6 0 7 0 8 0 8 0 8 1 8 1 9 1 9 0 9 0 9 0 9 0 9 0 9 0 9 0 9 0	1238 1238 1238 1238 1238 ES & 1 (7.77 LAT 1 1-23.5 936 936 936 936 936 936 936 936 936 936	22.77 24.77 24.77 25.31 LUETGE MI) S SEC 6.57 9.74 8.56 13.19 12.35 19.61 13.82 22.00 18.31 32.56	7 7.79 7 9.73 5 11.01 12.27 ERT GOUTH OF 3-59.41 C TOBS 7 2.99 1 6.16 4.98 6.9 9.61 8.6 8.0 9 9.61 8.77 1 16.03 9 12.21 1 16.03	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 10.28 10.28 10.28 18.29 14.18 25.25	-1.73 2.73 -1.45 98 GH MN M.0 2. RES57 18 41 .01 01 .15 01 .15 04 .13	WT 1.02 1.94 1.01 1.01 8 WT .48 1.47 1.91 1.88 1.83 1.83 1.79 1.26 .41	GAP	RMS .40 RX XMAG	FMP 16 33	FMAG .9 1.5 ERZ Q 2.7 C FMAG
STN HRV WES QUA2 D4A14A SE OF 040CT1 DATE 4101 STN MANY TBR PAL GPD CPNY BRNJ QUA2	DIST A 31.7 41.8 44.4 2xx	ES 76 EF 868 ES 8K, HU 2.5 F 81 GIN 3.5 8 ZM 551 EF 82 4 EF 82 4 EF 82 4 EF 82 54 EF 85 54 EF	S 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1238 1238 1238 1238 1238 ES & 1 (7.77 11-23 HRMN 936 936 936 936 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N S 6.57 8.56 10.38 15.79 112.36 113.19 112.36 113.62 113.62 113.63 113.63 113.63 113.63 113.63	7 7.79 7 9.73 5 11.01 12.27 ERT GOUTH OF 3-59.41 C TOBS 7 2.99 4 6.16 5 4.98 9 9.61 8 6.80 9 12.21 5 8.77 1 16.03 2 10.24 18.42 1 18.42 2 1 18.42 2 1 18.42	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 8.86 8.86 8.5.78 10.28 18.29 14.18 25.25 25.77	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 .10 15 04 .13 .78 3.12	WT 1.02 1.94 1.01 1.01 8 WT .48 1.47 1.42 1.88 1.83 1.83 1.79 1.26 .40 .018	GAP	RMS .40 RX XMAG	FMP 16 33 ERH 1.5 FMP	FMAG .9 1.5 ERZ Q 2.7 C FMAG
STN HRV WES QUA2 D4A14A SE OF 040CT1 DATE 4101 STN MANY TBR PAL GPD CPNY BRNJ QUA2	DIST A 31.7 41.8 44.4 2 2.1XX NEW YOR 4 936 DIST A 21.1 1 33.6 2 43.3 1 57.1 2 66.4 1 92.2 2	ES 76 EF 868 ES 8K, HU 2.5 F 81 GIN 3.5 8 ZM 551 EF 82 4 EF 82 4 EF 82 4 EF 82 54 EF 85 54 EF	S 0 0 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	1238 1238 1238 1238 1238 ES & 1 (7.77 11-23 HRMN 936 936 936 936 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N S 6.57 8.56 10.38 15.79 112.36 113.19 112.36 113.62 113.62 113.63 113.63 113.63 113.63 113.63	7 7.79 7 9.73 5 11.01 12.27 ERT GOUTH OF 3-59.41 C TOBS 7 2.99 1 6.16 4.98 6.9 9.61 8.6 8.0 9 9.61 8.77 1 16.03 9 12.21 1 16.03	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 8.86 8.86 8.5.78 10.28 18.29 14.18 25.25 25.77	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 .10 15 04 .13 .78 3.12	WT 1.02 1.94 1.01 1.01 8 WT .48 1.47 1.42 1.88 1.83 1.83 1.79 1.26 .40 .018	GAP	RMS .40 RX XMAG	FMP 16 33 ERH 1.5 FMP	FMAG .9 1.5 ERZ Q 2.7 C FMAG
STN HRV WES QUA2 D4A14A SE OF 04OCT1 DATE 4101 STN MANY TBR PAL GPD CPNY BRNJ QUA2 BINY	DIST A 31.7 41.8 44.4 2 2.1 XX OR 4 NY, 1 2 21.1 1 33.6 2 43.3 1 57.1 2 66.4 1 92.2 2 168.2 188.3 2	FE ES	3 41 1 3 4 1	1238 1238 1238 1238 1238 ES & 1 (7.77 I 1-23 HRMN 936 936 936 936 936 936 936 936 936 936	20.83 22.77 24.05 25.31 LUETGE MI) S N 33 SEC 6.57 9.74 813.19 10.38 15.79 113.82 22.00 18.31 29.63 32.49	7 7.79 7 9.73 5 11.01 12.27 ERT GOUTH OF 3-59.41 C TOBS 7 2.99 4 6.16 5 4.98 9 9.61 8 6.80 9 12.21 5 8.77 1 16.03 2 10.24 18.42 1 18.42 2 1 18.42 2 1 18.42	9.47 6.99 12.45 13.21 NEWBURG DEPTH 9.17 TCAL 3.54 6.30 5.35 9.53 6.78 12.08 12.08 12.08 12.08 14.18 25.25 25.77 45.87 28.74	-1.73 2.73 -1.45 98 GH MN M .0 2. RES 57 18 41 .01 .10 15 04 .13 .78 3.12	WT 1.02 1.94 1.01 1.01 8 WT .48 1.47 1.42 1.88 1.83 1.83 1.79 1.26 .40 .018	GAP	RMS .40 RX XMAG	FMP 16 33 ERH 1.5 FMP	FMAG .9 1.5 ERZ Q 2.7 C FMAG

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BRY 212.4 74 EP 1 936 35.41 31.83 32.06 -.29 .94 ES 2 936 60.19 56.61 57.06 -.56 .61 ACCN 223.2 7 EP 2 936 36.54 32.96 33.39 -.50 .60 ES 3 936 61.99 58.41 59.44 -1.14 .26 ES 2 936 96.19 58.41 59.44 -1.14 .26 ES 1 936 65.90 62.32 62.46 -.20 .87 ES 1 936 65.90 62.32 62.46 -.20 .87 ES 0 936 97.37 33.79 36.40 -2.62 .00 92 2.6 ES 0 936 98.75 65.17 64.79 .36 1.12 ES 4 936 80.99 77.41 74.79 2.56 .01 ES 3 936 79.02 75.44 75.77 -.36 .46 ES 2 936 79.02 75.44 75.77 -.36 .46 ES 3 936 79.65 76.07 76.47 -.50 .23 ES 3 936 84.20 80.62 76.49 4.09 .00
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TABLE 5

MICROEARTHQUAKES AND OTHER NON-LOCATABLE EVENTS

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

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NESN Station Map

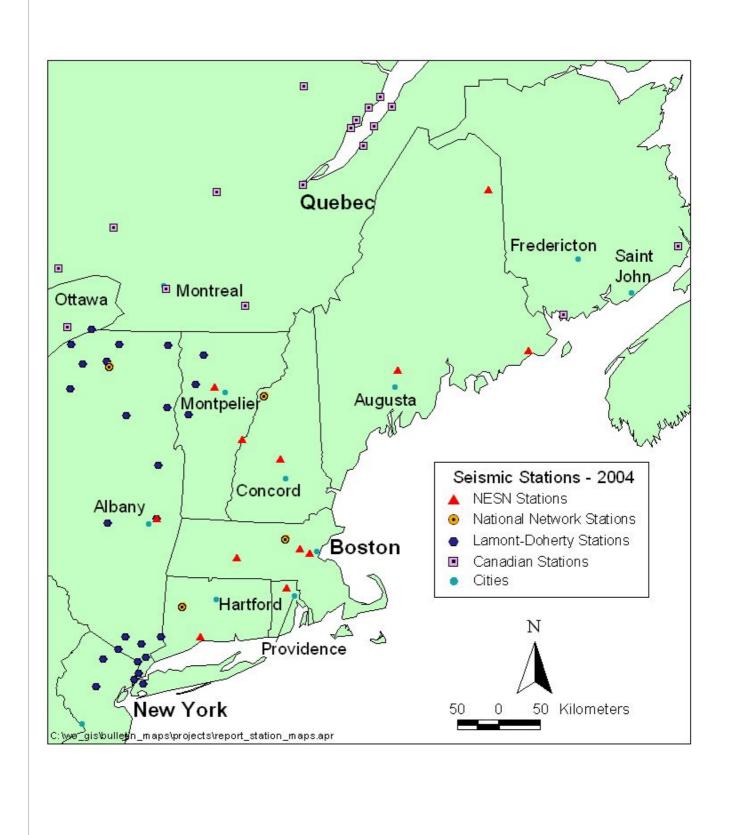


Figure 1: Map of stations of the New England Seismic Network (NESN) in operation during the period of this report. Also included are other Northeast U.S. and Canadian seismic stations in operation during this period.

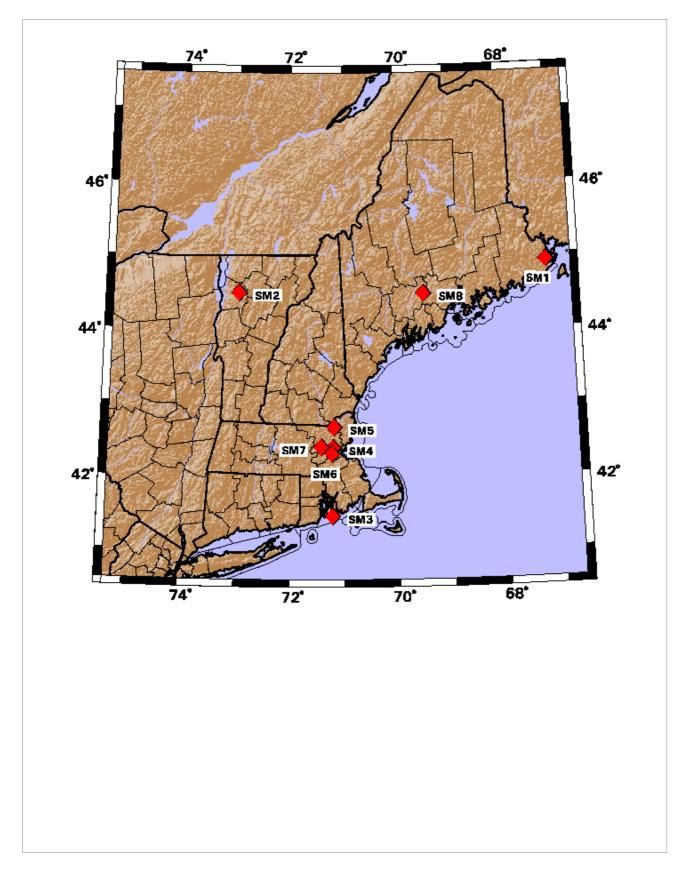


Figure 2: Map of strong-motion stations of the New England Seismic Network (NESN) in operation during the period of this report.

NESN Quarterly Seismicity Map

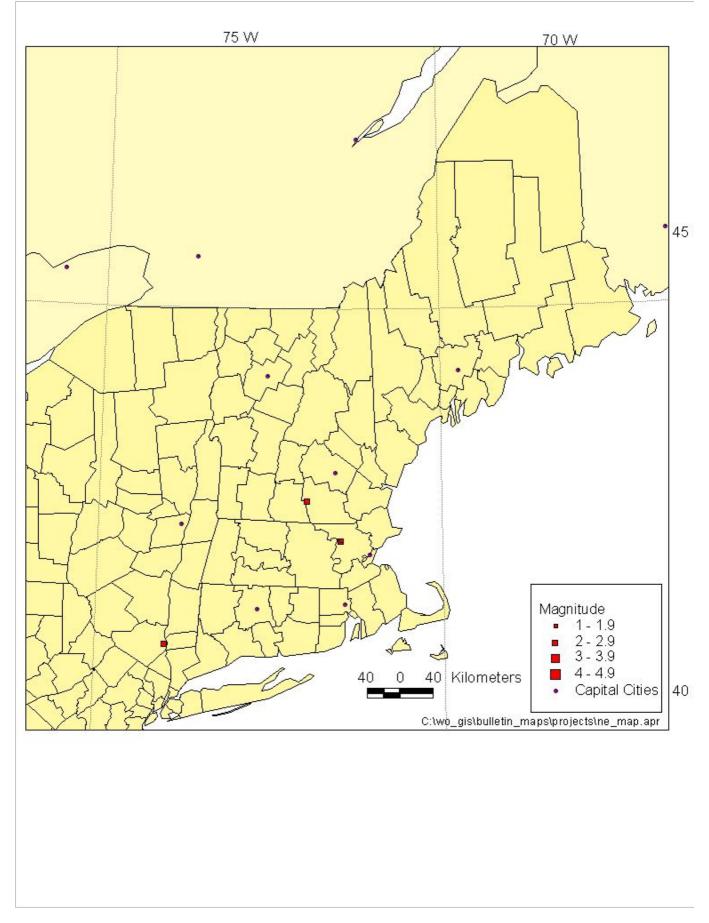


Figure 3: Earthquake epicenters located by the NESN during the period of this report.

NESN Cumulative Seismicity Map

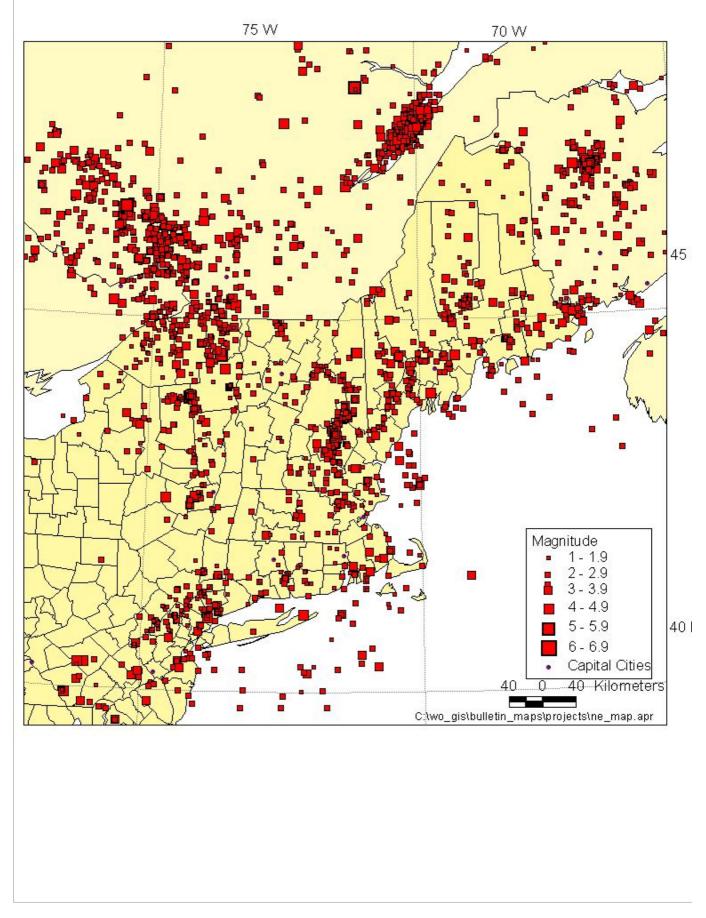


Figure 4: Seismicity for period October, 1975 - December, 2004.

Acknowledgments

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

References

Chaplin, M.P., Taylor, S.R., and Toksöz, M.N. (1980), A coda lengthmagnitude scale for New England, *Earthquake Notes*, *51*, 15-22.

Ebel, J.E. (1982), M_L measurements for northeastern UnitedStates earthquakes, Bull. Seism. Soc. Am., 72, 1367-1378.

Rosario, M. (1979), A coda duration magnitude scale for the New EnglandSeismic Network, *Master's Thesis*, Boston College, 82 pp.

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