



Empirical Modified Mercalli Intensity Site Corrections for Towns in Eastern North America

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Abstract

Modified Mercalli intensity (*MMI*) assignments for earthquakes in eastern North America (ENA) were used by Bakun *et al.* (2003) and Bakun and Hopper (*in press*) to develop models for estimating the location and moment magnitude **M** of earthquakes in ENA from MMI observations. The MMI empirical site corrections developed and used by Bakun *et al.* (2003) and Bakun and Hopper (*in press*) are listed in this Open-file Report.

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Table 1. Empirical MMI Site Corrections for towns and cities in eastern North America

Explanation of Table 1: Modified Mercalli Intensity Site Corrections

Bakun and Hopper (*in press*) used Bakun *et al.*'s (2003) Modified Mercalli intensity (MMI) assignments to develop an alternate MMI attenuation model for earthquakes in eastern North America (ENA). The MMI scale was developed by Wood and Neumann (1931). The two MMI attenuation models were designed for use in estimating moment magnitude M (Hanks and Kanamori, 1979) and epicenter location for historical earthquakes in ENA, and each uses empirical MMI site corrections. Bakun *et al.*'s (2003) MMI site corrections, listed in Table 7 of Bakun *et al.* (2002), are repeated here for easy comparison with those calculated for Bakun and Hopper's (*in press*) MMI model. Site corrections calculated for Bakun and Hopper's (*in press*) model tend to be only marginally different from those for Bakun *et al.*'s (2003) model for sites with several MMI assignments; site corrections differ significantly at some sites, particularly at sites with few MMI assignments.

Bakun *et al.* (2003) and Bakun and Hopper (*in press*) calculated site corrections for communities in ENA with MMI assignments for more than one recent earthquake with independent estimates of M and epicenter location. The site corrections can account for amplification due to local geologic conditions and also to regional variations in crustal properties. Following Bakun and Wentworth (1997), the site correction is the mean {observed MMI - calculated MMI} at the site. The calculation of the ENA site corrections is described in detail in Bakun *et al.* (2003). The 1,535 site corrections are based on 9,574 MMI assignments, 5,811 of which were not used because they were the only MMI assignment available for that site. The site corrections reflect the consistent intensity anomalies of the past 75 or so years of earthquakes in ENA. However, the empirical site corrections for many communities are estimated from MMI for only a few events and are uncertain. The numbers of earthquakes used to calculate that site correction, and the uncertainties of the site corrections are listed.

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**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
New Market	AL	34.91	86.43	1.21 ± 0.30	1.06 ± 0.28	2
Augusta	AR	35.28	91.36	0.14 ± 0.29	0.15 ± 0.28	3
Bassett	AR	35.54	90.13	-0.90 ± 0.59	-0.84 ± 0.57	2
Batesville	AR	35.77	93.92	0.73 ± 0.52	0.67 ± 0.49	3
Beebe	AR	35.07	91.88	-0.83 ± 0.03	-0.80 ± 0.03	2
Bexar	AR	36.29	92.01	0.36 ± 0.03	0.35 ± 0.04	2
Biggers	AR	36.33	90.81	0.44 ± 0.41	0.46 ± 0.41	3
Black Oak	AR	35.84	90.37	-0.53 ± 1.60	-0.49 ± 1.56	2
Blytheville	AR	35.93	89.92	-0.39 ± 0.58	-0.37 ± 0.56	4
Bradford	AR	35.42	91.46	-0.66 ± 0.69	-0.63 ± 0.67	2
Brickeys	AR	34.86	90.59	-0.22 ± 0.26	-0.20 ± 0.23	2
Brinkley	AR	34.89	91.19	0.28 ± 0.53	0.29 ± 0.51	3
Brookland	AR	35.90	90.58	0.39 ± 0.77	0.42 ± 0.73	2
Burdette	AR	35.82	89.94	0.00 ± 0.92	0.03 ± 0.89	2
Caldwell	AR	35.07	90.82	-0.17 ± 0.56	-0.16 ± 0.52	2
Cash	AR	35.80	90.93	-0.25 ± 0.15	-0.21 ± 0.18	2
Cave City	AR	35.94	91.55	0.17 ± 0.19	0.17 ± 0.17	3
Chatfield	AR	35.01	90.40	-0.48 ± 0.27	-0.45 ± 0.24	2
Choctaw	AR	35.53	92.44	-0.47 ± 0.03	-0.47 ± 0.02	2
Clarendon	AR	34.69	91.31	0.09 ± 0.26	0.08 ± 0.25	3
Clarkedale	AR	35.31	90.24	-0.34 ± 0.39	-0.33 ± 0.38	2
Clinton	AR	35.60	92.46	-0.38 ± 0.05	-0.38 ± 0.06	2
Concord	AR	35.66	91.85	-0.04 ± 0.09	-0.02 ± 0.10	2
Conway	AR	35.09	92.44	-1.70 ± 0.50	-1.65 ± 0.48	2
Cord	AR	35.81	91.34	-0.22 ± 0.26	-0.20 ± 0.23	2
Corning	AR	36.41	90.58	0.17 ± 0.22	0.17 ± 0.21	5
Cotter	AR	36.27	92.54	0.72 ± 0.02	0.70 ± 0.02	2
Cotton Plant	AR	35.00	91.25	-0.24 ± 0.52	-0.23 ± 0.50	3
Crawfordsville	AR	35.23	90.33	-0.21 ± 0.51	-0.18 ± 0.49	3
Cushman	AR	35.88	91.75	0.14 ± 0.14	0.14 ± 0.12	2
Damascus	AR	33.26	93.00	1.65 ± 0.91	1.55 ± 0.92	2
Datto	AR	36.39	90.73	0.12 ± 0.30	0.15 ± 0.31	3
De Valls Bluff	AR	34.78	91.46	0.82 ± 0.75	0.81 ± 0.72	2
De Witt	AR	34.29	91.34	0.32 ± 0.48	0.32 ± 0.48	2
Delaplaine	AR	36.23	90.72	-0.23 ± 0.27	-0.20 ± 0.28	4
Dell	AR	35.85	90.04	-1.44 ± 0.39	-1.38 ± 0.40	2
Drasco	AR	35.63	91.95	-0.06 ± 0.79	-0.04 ± 0.79	2
Earle	AR	35.27	90.47	-0.45 ± 0.94	-0.40 ± 0.91	2
Edgemont	AR	35.60	92.19	-0.14 ± 0.41	-0.14 ± 0.39	3
Edmondson	AR	35.11	90.31	0.17 ± 1.09	0.19 ± 1.04	2
Egypt	AR	35.87	90.95	0.33 ± 0.30	0.36 ± 0.27	2
Etowah	AR	35.73	90.24	-0.60 ± 0.62	-0.57 ± 0.58	3
Fisher	AR	35.78	90.98	-0.68 ± 0.35	-0.64 ± 0.32	2
Forrest City	AR	35.01	90.78	0.46 ± 0.56	0.48 ± 0.54	3
Gilmore	AR	35.41	90.28	-0.78 ± 0.89	-0.72 ± 0.87	2
Glencoe	AR	36.29	91.75	0.16 ± 0.03	0.16 ± 0.05	2
Greenway	AR	36.34	90.22	-1.01 ± 0.60	-0.95 ± 0.59	2
Grubbs	AR	35.65	91.07	-0.48 ± 0.47	-0.45 ± 0.44	2
Harrisburg	AR	35.56	90.72	-0.51 ± 0.22	-0.47 ± 0.20	3
Harrison	AR	36.23	93.11	0.32 ± 0.32	0.30 ± 0.31	3
Haynes	AR	34.89	90.79	-0.68 ± 0.79	-0.66 ± 0.76	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Heber Springs	AR	35.49	92.04	-0.72 ± 0.05	-0.70 ± 0.06	2
Helena	AR	34.53	90.59	0.42 ± 0.23	0.40 ± 0.22	4
Higden	AR	35.57	92.20	-0.08 ± 0.44	-0.06 ± 0.43	2
Hughes	AR	34.95	90.47	0.20 ± 0.36	0.19 ± 0.34	4
Huntsville	AR	36.09	93.74	1.01 ± 0.13	0.99 ± 0.11	2
Joiner	AR	35.51	90.15	-0.87 ± 0.65	-0.81 ± 0.63	2
Jonesboro	AR	35.85	90.70	0.10 ± 0.22	0.10 ± 0.20	5
Keiser	AR	35.68	90.10	-0.34 ± 0.52	-0.30 ± 0.50	3
Kensett	AR	35.23	91.67	-0.23 ± 0.18	-0.20 ± 0.18	2
Knobel	AR	36.32	90.60	0.16 ± 0.41	0.18 ± 0.41	5
Lake City	AR	35.82	90.43	-0.28 ± 0.43	-0.25 ± 0.38	2
Lake Village	AR	33.33	91.28	-0.23 ± 0.70	-0.25 ± 0.66	2
Leachville	AR	35.94	90.26	-0.84 ± 0.17	-0.79 ± 0.16	3
Lepanto	AR	35.61	90.33	-0.05 ± 0.41	-0.04 ± 0.39	5
Leslie	AR	35.83	92.56	-0.11 ± 0.24	-0.11 ± 0.25	2
Little Rock	AR	34.75	92.29	0.03 ± 0.37	0.05 ± 0.41	2
Lonoke	AR	34.78	91.90	-0.83 ± 0.20	-0.80 ± 0.19	2
Luxora	AR	35.76	89.93	-0.49 ± 0.52	-0.46 ± 0.51	3
Madison	AR	35.01	90.72	-0.37 ± 1.32	-0.34 ± 1.29	2
Mammoth Spring	AR	36.49	91.54	-0.24 ± 0.30	-0.22 ± 0.30	3
Manila	AR	35.88	90.17	-0.62 ± 0.35	-0.57 ± 0.35	3
Marianna	AR	34.77	90.76	0.08 ± 0.13	0.07 ± 0.12	4
Marked Tree	AR	35.53	90.42	0.00 ± 0.52	0.01 ± 0.50	5
Marmaduke	AR	36.19	90.38	-0.02 ± 0.68	0.01 ± 0.66	2
Marshall	AR	35.91	92.63	-0.19 ± 0.48	-0.18 ± 0.46	2
Marvell	AR	34.56	90.91	0.04 ± 0.03	0.04 ± 0.01	2
Maynard	AR	36.42	90.90	0.26 ± 0.46	0.28 ± 0.44	4
Mcrae	AR	35.11	91.82	-0.30 ± 0.44	-0.27 ± 0.43	2
Minturn	AR	35.98	91.03	0.43 ± 0.16	0.44 ± 0.10	2
Morrilton	AR	35.15	92.74	-0.97 ± 0.54	-0.93 ± 0.52	2
Mountain View	AR	35.87	92.12	0.35 ± 0.09	0.35 ± 0.09	4
Naylor	AR	35.15	92.18	-1.95 ± 1.00	-1.92 ± 1.00	2
Newark	AR	35.70	91.44	0.27 ± 0.38	0.27 ± 0.35	3
Newport	AR	33.43	92.69	1.77 ± 0.18	1.68 ± 0.17	6
Nimmons	AR	36.31	90.09	-0.21 ± 0.19	-0.17 ± 0.18	2
Okean	AR	36.17	90.82	-0.15 ± 0.51	-0.10 ± 0.52	2
Osceola	AR	35.70	89.97	-0.47 ± 0.34	-0.44 ± 0.32	3
Palestine	AR	34.97	90.90	0.29 ± 0.81	0.31 ± 0.78	2
Pangburn	AR	35.43	91.84	-0.24 ± 0.71	-0.21 ± 0.71	2
Paragould	AR	36.05	90.49	0.16 ± 0.37	0.17 ± 0.36	4
Parkin	AR	35.27	90.56	-0.15 ± 0.29	-0.15 ± 0.28	2
Peach Orchard	AR	36.28	90.66	-0.18 ± 0.25	-0.17 ± 0.25	5
Piggott	AR	36.38	90.19	0.33 ± 0.42	0.35 ± 0.41	6
Pocahontas	AR	36.26	90.97	-0.01 ± 0.31	-0.01 ± 0.28	3
Ravenden Springs	AR	36.32	91.23	-0.25 ± 0.09	-0.22 ± 0.10	2
Rector	AR	36.26	90.29	-0.32 ± 0.32	-0.29 ± 0.33	4
Reyno	AR	36.36	90.75	0.43 ± 0.44	0.43 ± 0.43	5
Rosie	AR	35.67	91.54	-0.06 ± 0.22	-0.03 ± 0.20	2
Saint Francis	AR	36.46	90.14	-0.65 ± 0.44	-0.62 ± 0.44	2
Salem	AR	36.37	91.82	-0.27 ± 0.44	-0.27 ± 0.42	2
Sedgwick	AR	35.98	90.86	-0.20 ± 0.28	-0.16 ± 0.30	2
Smithville	AR	36.08	91.30	0.36 ± 0.35	0.38 ± 0.34	3
Stonewall	AR	36.24	90.55	-0.82 ± 0.20	-0.77 ± 0.21	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Stuttgart	AR	34.51	91.55	-0.57 ± 0.08	-0.56 ± 0.08	2
Success	AR	36.45	90.72	-1.14 ± 0.12	-1.09 ± 0.12	2
Sulphur Rock	AR	35.75	91.50	-0.56 ± 0.75	-0.55 ± 0.72	2
Swifton	AR	35.82	91.13	-0.46 ± 0.29	-0.43 ± 0.26	2
Trumann	AR	35.67	90.51	-0.40 ± 0.45	-0.37 ± 0.43	4
Tuckerman	AR	35.73	91.20	-0.40 ± 0.31	-0.37 ± 0.28	2
Tupelo	AR	35.39	91.23	-0.29 ± 1.35	-0.26 ± 1.31	2
Tyronza	AR	35.49	90.36	-0.62 ± 0.81	-0.60 ± 0.78	3
Vanndale	AR	35.31	90.77	-0.13 ± 0.58	-0.10 ± 0.56	3
Walnut Ridge	AR	36.07	90.96	0.32 ± 0.26	0.32 ± 0.25	4
Ward	AR	34.67	92.30	0.21 ± 0.52	0.21 ± 0.53	2
Weiner	AR	35.62	90.90	-0.35 ± 0.97	-0.30 ± 0.94	2
West Helena	AR	34.54	90.64	0.17 ± 0.20	0.17 ± 0.17	2
West Memphis	AR	35.15	90.18	-0.07 ± 0.43	-0.07 ± 0.39	3
West Ridge	AR	35.68	90.26	-0.67 ± 1.18	-0.66 ± 1.12	2
Wilburn	AR	35.51	91.89	-0.68 ± 0.23	-0.66 ± 0.23	2
Wilson	AR	35.21	92.93	1.49 ± 0.41	1.41 ± 0.40	3
Wynne	AR	35.22	90.79	-0.66 ± 0.70	-0.64 ± 0.67	3
Bethel	CT	41.41	73.41	1.18 ± 0.73	1.06 ± 0.66	2
Danbury	CT	41.38	73.43	1.24 ± 0.67	1.10 ± 0.63	2
Hartford	CT	41.75	72.70	1.43 ± 0.44	1.31 ± 0.44	5
Melrose	CT	41.93	72.52	0.38 ± 0.09	0.34 ± 0.09	2
New Hartford	CT	41.88	72.98	1.01 ± 0.36	0.91 ± 0.32	2
New Haven	CT	41.30	72.92	1.25 ± 0.56	1.17 ± 0.59	2
New Milford	CT	41.58	73.42	1.20 ± 0.74	1.12 ± 0.74	2
Torrington	CT	41.80	73.12	0.55 ± 0.19	0.49 ± 0.19	2
Winsted	CT	41.93	73.07	1.23 ± 0.57	1.16 ± 0.57	4
Woodbury	CT	41.55	73.20	1.13 ± 0.74	1.08 ± 0.73	2
Cleveland	GE	34.60	83.76	2.18 ± 0.04	2.00 ± 0.10	2
Hiawasse	GE	34.95	83.76	0.26 ± 0.79	0.22 ± 0.72	2
Akin	IL	37.99	88.75	-0.50 ± 1.00	-0.50 ± 0.91	2
Anna	IL	37.47	89.23	0.12 ± 0.35	0.16 ± 0.35	3
Ashley	IL	38.33	89.19	-0.62 ± 0.73	-0.59 ± 0.69	2
Ava	IL	37.89	89.50	-0.05 ± 0.08	-0.02 ± 0.04	2
Belle Rive	IL	38.23	88.74	0.22 ± 0.68	0.23 ± 0.64	3
Belleville	IL	38.51	89.99	0.56 ± 0.06	0.52 ± 0.00	2
Bonnie	IL	38.20	88.90	-0.69 ± 1.19	-0.67 ± 1.13	2
Brookport	IL	37.12	88.63	-0.80 ± 0.29	-0.77 ± 0.26	2
Broughton	IL	37.93	88.46	-1.17 ± 1.26	-1.13 ± 1.20	2
Cairo	IL	37.00	89.18	0.12 ± 0.17	0.13 ± 0.17	5
Cambria	IL	37.78	89.12	-0.57 ± 0.03	-0.52 ± 0.01	2
Campbell Hill	IL	37.93	89.55	0.39 ± 0.15	0.39 ± 0.15	2
Carbondale	IL	37.73	89.22	0.34 ± 0.41	0.36 ± 0.38	3
Carriers Mills	IL	37.69	88.68	-0.71 ± 0.46	-0.66 ± 0.42	2
Carterville	IL	37.77	89.08	-0.60 ± 0.04	-0.56 ± 0.01	2
Cave In Rock	IL	37.47	88.17	-0.27 ± 1.35	-0.24 ± 1.30	2
Centralia	IL	38.58	89.13	-0.18 ± 0.96	-0.21 ± 0.87	2
Chester	IL	37.92	89.80	0.25 ± 0.29	0.25 ± 0.30	2
Chicago	IL	41.88	87.63	2.48 ± 0.99	2.19 ± 0.79	3
Cobden	IL	37.53	89.25	-0.23 ± 0.54	-0.21 ± 0.53	3
Colp	IL	37.81	89.08	-0.59 ± 0.09	-0.54 ± 0.05	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Creal Springs	IL	37.62	88.84	-0.20 ± 0.29	-0.20 ± 0.28	2
Crossville	IL	38.16	88.07	-0.27 ± 0.76	-0.25 ± 0.69	2
Dahlgren	IL	38.20	88.69	-0.54 ± 0.70	-0.50 ± 0.65	2
Dale	IL	38.00	88.49	-1.15 ± 0.88	-1.10 ± 0.83	2
Danville	IL	40.13	87.63	0.81 ± 0.47	0.72 ± 0.42	2
De Soto	IL	37.82	89.23	-0.65 ± 0.44	-0.62 ± 0.41	3
Des Plaines	IL	42.04	87.89	1.09 ± 0.49	1.00 ± 0.40	2
Dongola	IL	37.36	89.16	-0.31 ± 0.35	-0.28 ± 0.34	4
Edwardsville	IL	38.81	89.96	0.75 ± 0.64	0.69 ± 0.59	3
Elco	IL	37.30	89.27	-0.51 ± 0.04	-0.48 ± 0.03	2
Elizabethtown	IL	37.45	88.30	-0.85 ± 0.80	-0.82 ± 0.75	2
Elkville	IL	37.92	89.24	-0.13 ± 0.28	-0.14 ± 0.27	2
Emma	IL	37.97	88.12	-0.10 ± 0.63	-0.10 ± 0.58	3
Energy	IL	37.78	89.02	-0.18 ± 0.29	-0.18 ± 0.28	2
Enfield	IL	38.10	88.34	-0.26 ± 1.55	-0.23 ± 1.48	2
Eureka	IL	40.72	89.27	0.02 ± 0.73	0.00 ± 0.68	2
Fairfield	IL	42.22	88.06	2.18 ± 0.50	2.00 ± 0.50	2
Frankfort Heights	IL	37.91	88.90	0.33 ± 0.41	0.38 ± 0.37	2
Galatia	IL	37.84	88.61	-0.22 ± 0.59	-0.19 ± 0.53	2
Gale	IL	37.25	89.45	-0.11 ± 0.45	-0.07 ± 0.45	2
Geneseo	IL	41.45	90.16	0.08 ± 1.26	0.03 ± 1.17	2
Golconda	IL	37.36	88.49	-0.17 ± 0.33	-0.14 ± 0.28	2
Goreville	IL	37.55	88.97	0.37 ± 0.08	0.42 ± 0.11	2
Grand Chain	IL	37.25	89.02	-1.08 ± 0.03	-1.03 ± 0.02	2
Hillsboro	IL	39.16	89.49	0.66 ± 0.43	0.57 ± 0.36	2
Ina	IL	38.15	88.90	-0.75 ± 1.21	-0.72 ± 1.15	2
Jacob	IL	37.75	89.53	-0.32 ± 0.38	-0.29 ± 0.36	3
Jerseyville	IL	39.12	90.33	0.48 ± 0.47	0.48 ± 0.47	2
Jonesboro	IL	37.42	89.32	-0.16 ± 0.39	-0.13 ± 0.38	4
Joppa	IL	37.20	88.84	-0.96 ± 0.18	-0.91 ± 0.16	2
Junction	IL	37.72	88.24	-0.07 ± 1.19	-0.03 ± 1.13	2
Karnak	IL	37.30	88.97	-0.46 ± 0.38	-0.42 ± 0.36	3
Lawrenceville	IL	38.73	87.68	0.53 ± 0.44	0.50 ± 0.36	2
Louisville	IL	38.77	88.50	0.12 ± 1.27	0.07 ± 1.16	2
Macedonia	IL	38.05	88.71	-1.27 ± 1.29	-1.23 ± 1.24	2
Maeystown	IL	38.22	90.23	0.11 ± 0.04	0.10 ± 0.04	2
Makanda	IL	37.62	89.21	-0.22 ± 0.65	-0.22 ± 0.63	2
Marion	IL	38.65	88.92	0.17 ± 0.63	0.21 ± 0.66	2
Mascoutah	IL	38.47	89.78	0.72 ± 0.49	0.66 ± 0.46	2
Montgomery	IL	39.26	89.42	1.20 ± 0.50	1.12 ± 0.50	2
Mound City	IL	37.09	89.16	-0.26 ± 0.21	-0.22 ± 0.22	3
Mount Vernon	IL	38.32	88.90	-0.06 ± 0.65	-0.04 ± 0.58	2
Muddy	IL	37.76	88.52	0.14 ± 0.22	0.12 ± 0.21	2
Murphysboro	IL	37.76	89.34	0.37 ± 0.24	0.39 ± 0.24	5
New Haven	IL	37.90	88.12	-0.02 ± 0.31	0.02 ± 0.25	2
Norris City	IL	37.98	88.33	-0.53 ± 1.74	-0.49 ± 1.67	2
Oak Lawn	IL	41.72	87.75	1.02 ± 0.37	0.95 ± 0.30	2
Oblong	IL	39.00	87.91	0.18 ± 0.91	0.15 ± 0.84	2
Olive Branch	IL	37.17	89.35	-0.82 ± 0.15	-0.78 ± 0.15	2
Olney	IL	38.75	88.10	0.36 ± 1.49	0.36 ± 1.42	2
Oquawka	IL	40.93	90.95	0.53 ± 0.70	0.46 ± 0.64	2
Oraville	IL	37.87	89.38	-0.61 ± 0.66	-0.58 ± 0.62	2
Ozark	IL	37.54	88.76	-0.11 ± 0.63	-0.06 ± 0.59	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Pomona	IL	37.63	89.34	-0.20 ± 0.53	-0.17 ± 0.52	3
Quincy	IL	39.92	91.41	1.23 ± 0.34	1.16 ± 0.36	2
Radom	IL	38.28	89.20	-0.66 ± 0.72	-0.63 ± 0.67	2
Renault	IL	38.15	90.13	0.15 ± 0.07	0.14 ± 0.06	2
Ridgway	IL	37.80	88.26	0.38 ± 0.61	0.39 ± 0.57	3
Robbs	IL	37.46	88.70	-0.78 ± 0.85	-0.74 ± 0.80	2
Rockwood	IL	37.84	89.70	-0.26 ± 0.36	-0.22 ± 0.38	2
Rosiclare	IL	37.43	88.34	-0.48 ± 0.58	-0.46 ± 0.55	3
Royalton	IL	37.88	89.11	0.62 ± 0.29	0.68 ± 0.26	2
Salem	IL	38.63	88.95	0.73 ± 0.52	0.67 ± 0.45	3
Shawneetown	IL	37.67	88.19	0.21 ± 0.66	0.22 ± 0.63	3
Shelbyville	IL	39.41	88.79	0.63 ± 0.99	0.61 ± 0.94	2
Sims	IL	38.36	88.53	-0.78 ± 1.16	-0.75 ± 1.10	2
Springerton	IL	38.18	88.35	-1.07 ± 1.41	-1.04 ± 1.34	2
Springfield	IL	39.80	89.65	0.39 ± 0.22	0.36 ± 0.20	2
Stonefort	IL	37.62	88.71	-1.16 ± 0.80	-1.11 ± 0.76	2
Streator	IL	41.12	88.83	0.44 ± 0.55	0.41 ± 0.48	2
Tamaroa	IL	38.14	89.23	-0.05 ± 0.39	-0.02 ± 0.34	2
Texico	IL	38.44	88.90	-0.11 ± 0.41	-0.08 ± 0.35	2
Thebes	IL	37.22	89.46	-0.36 ± 0.59	-0.33 ± 0.58	3
Ullin	IL	37.28	89.18	-0.39 ± 0.02	-0.36 ± 0.03	2
Unity	IL	37.15	89.27	-0.63 ± 0.03	-0.60 ± 0.03	2
Urbana	IL	40.11	88.21	0.22 ± 0.03	0.19 ± 0.03	2
Varna	IL	41.04	89.23	0.38 ± 0.58	0.36 ± 0.51	2
Villa Ridge	IL	37.17	89.20	0.21 ± 0.69	0.20 ± 0.63	2
Walsh	IL	38.09	89.85	-0.48 ± 0.27	-0.46 ± 0.25	2
Waltonville	IL	38.21	89.04	-0.10 ± 0.56	-0.08 ± 0.50	2
Whittington	IL	38.09	88.90	-1.04 ± 0.98	-1.00 ± 0.93	2
Wolf Lake	IL	37.50	89.44	-0.51 ± 0.43	-0.49 ± 0.42	3
Zeigler	IL	37.90	89.05	-0.56 ± 0.21	-0.51 ± 0.17	2
Bloomfield	IN	38.02	87.10	-0.08 ± 0.71	-0.10 ± 0.65	2
Crawfordsville	IN	40.04	86.90	0.69 ± 0.25	0.62 ± 0.22	2
Crown Point	IN	41.42	87.36	0.61 ± 0.64	0.53 ± 0.58	2
Evansville	IN	37.97	87.57	0.79 ± 0.60	0.77 ± 0.55	3
Fort Branch	IN	38.25	87.58	0.79 ± 0.03	0.79 ± 0.04	2
Gary	IN	41.60	87.34	0.66 ± 0.69	0.58 ± 0.63	2
Goshen	IN	41.58	85.83	1.25 ± 0.35	1.12 ± 0.31	2
Griffin	IN	38.21	87.92	-0.06 ± 0.66	-0.04 ± 0.59	2
Indianapolis	IN	39.77	86.15	1.02 ± 0.47	0.97 ± 0.47	2
Jasper	IN	38.39	86.93	0.48 ± 1.04	0.47 ± 0.99	2
Lafayette	IN	40.42	86.90	0.84 ± 0.26	0.75 ± 0.23	2
Little York	IN	38.70	85.91	1.00 ± 0.76	0.89 ± 0.68	2
New Albany	IN	38.29	85.81	0.99 ± 0.77	0.98 ± 0.78	2
Petersburg	IN	38.49	87.28	0.96 ± 0.24	0.95 ± 0.30	2
South Bend	IN	41.68	86.26	1.59 ± 0.03	1.45 ± 0.07	3
Terre Haute	IN	39.47	87.40	0.92 ± 0.04	0.87 ± 0.01	2
Wadesville	IN	38.10	87.79	0.51 ± 1.11	0.52 ± 1.05	2
Burlington	IO	40.80	91.11	0.79 ± 0.39	0.71 ± 0.36	3
Cedar Rapids	IO	41.98	91.67	1.04 ± 0.87	0.93 ± 0.78	2
Clinton	IO	41.84	90.19	1.08 ± 0.62	0.98 ± 0.55	3
Elkader	IO	42.85	91.40	1.32 ± 0.99	1.17 ± 0.88	2
Farmington	IO	40.64	91.74	0.77 ± 0.33	0.69 ± 0.30	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Muscataine	IO	41.47	91.08	1.14 ± 0.41	1.06 ± 0.32	2
Kansas City	KA	39.12	94.63	1.73 ± 0.56	1.56 ± 0.50	2
Arlington	KY	36.79	89.01	-0.57 ± 0.11	### ± 0.10	3
Bandana	KY	37.14	88.95	0.38 ± 0.29	0.40 ± 0.29	2
Bardwell	KY	36.87	89.01	0.11 ± 0.16	0.12 ± 0.17	4
Barlow	KY	37.05	89.05	-0.26 ± 0.12	-0.25 ± 0.12	3
Benton	KY	36.86	88.35	0.08 ± 0.16	0.10 ± 0.19	2
Boaz	KY	36.88	88.63	-0.21 ± 0.09	-0.22 ± 0.08	3
Burna	KY	37.25	88.37	-0.23 ± 1.06	-0.19 ± 1.02	2
Cadiz	KY	36.86	87.83	0.34 ± 0.02	0.32 ± 0.05	3
Calvert City	KY	37.03	88.35	0.00 ± 0.14	-0.01 ± 0.13	2
Canton	KY	36.80	87.96	0.74 ± 0.47	0.69 ± 0.45	2
Carrsville	KY	37.40	88.42	0.25 ± 0.02	0.20 ± 0.00	2
Clay	KY	37.09	83.74	1.39 ± 1.03	1.30 ± 0.98	2
Clinton	KY	36.76	85.14	1.65 ± 0.35	1.54 ± 0.31	6
Cobb	KY	36.99	87.78	-0.10 ± 0.65	-0.10 ± 0.60	2
Corydon	KY	37.74	87.70	0.04 ± 0.47	0.06 ± 0.41	2
Crofton	KY	37.05	87.49	0.47 ± 0.13	0.47 ± 0.08	2
Cunningham	KY	36.91	88.89	-0.47 ± 0.24	-0.47 ± 0.22	2
Dixon	KY	37.52	87.69	-0.38 ± 0.86	-0.37 ± 0.80	2
Earlington	KY	37.27	87.51	-0.15 ± 0.71	-0.15 ± 0.66	2
Elkton	KY	36.83	87.17	0.78 ± 1.07	0.75 ± 1.02	2
Fancy Farm	KY	36.80	88.79	1.13 ± 0.63	1.12 ± 0.62	2
Farmers	KY	38.14	83.55	-1.26 ± 0.00	-1.18 ± 0.00	2
Farmington	KY	36.67	88.53	0.84 ± 0.00	0.82 ± 0.02	2
Frakes	KY	36.64	83.93	-0.01 ± 0.19	0.00 ± 0.21	2
Frenchburg	KY	37.95	83.63	-0.43 ± 0.68	-0.41 ± 0.63	2
Fulton	KY	36.50	88.88	-0.07 ± 0.30	-0.05 ± 0.30	3
Germantown	KY	38.66	83.97	0.22 ± 0.91	0.20 ± 0.82	2
Grand Rivers	KY	37.00	88.24	0.57 ± 0.58	0.53 ± 0.56	2
Green Hall	KY	37.40	83.83	-0.50 ± 0.60	-0.48 ± 0.57	2
Greenup	KY	38.58	82.84	0.63 ± 0.55	0.59 ± 0.48	2
Hamlin	KY	36.65	88.07	0.54 ± 0.36	0.50 ± 0.36	3
Hampton	KY	37.28	88.37	-0.26 ± 0.10	-0.22 ± 0.06	2
Hazard	KY	37.25	83.19	0.11 ± 0.80	0.12 ± 0.79	2
Hazel	KY	36.50	88.33	-0.05 ± 0.16	-0.05 ± 0.15	3
Henderson	KY	37.79	87.59	0.68 ± 0.02	0.68 ± 0.08	2
Hickman	KY	36.57	89.19	0.13 ± 0.17	0.14 ± 0.17	7
Hickory	KY	36.82	88.65	-0.25 ± 0.10	-0.26 ± 0.08	2
Hodgenville	KY	37.57	85.74	0.06 ± 0.22	0.04 ± 0.21	2
Hopkinsville	KY	36.86	87.49	0.68 ± 0.04	0.62 ± 0.04	2
Irvine	KY	37.70	83.98	0.39 ± 1.03	0.40 ± 0.98	2
Kenton	KY	38.95	84.52	0.05 ± 0.99	0.02 ± 0.91	2
Kevil	KY	37.08	89.00	-0.14 ± 0.08	-0.14 ± 0.09	3
Kirksey	KY	36.70	88.40	-0.07 ± 0.01	-0.09 ± 0.02	2
Kuttawa	KY	37.07	88.10	0.06 ± 1.04	0.08 ± 1.00	2
La Center	KY	37.07	88.97	-0.67 ± 0.28	-0.64 ± 0.27	2
Lovellaceville	KY	36.97	88.83	-0.05 ± 0.46	-0.05 ± 0.44	3
Lynn Grove	KY	36.59	88.44	-0.07 ± 0.08	-0.09 ± 0.09	2
Lynnville	KY	36.57	88.57	0.32 ± 0.56	0.31 ± 0.57	2
Marion	KY	37.33	88.08	0.84 ± 0.28	0.80 ± 0.30	2
Mayfield	KY	36.74	88.64	-0.22 ± 0.05	-0.22 ± 0.05	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Maysville	KY	38.64	83.76	0.90 ± 0.39	0.90 ± 0.45	2
Melber	KY	36.95	88.73	0.13 ± 0.66	0.14 ± 0.65	2
Milburn	KY	36.80	88.90	-0.53 ± 0.11	-0.51 ± 0.11	2
Murray	KY	36.61	88.30	-0.22 ± 0.26	-0.21 ± 0.24	2
Newport	KY	39.09	84.50	0.65 ± 0.43	0.61 ± 0.36	2
Owensboro	KY	37.77	87.11	0.44 ± 1.22	0.42 ± 1.15	2
Owenton	KY	38.54	84.84	0.98 ± 0.03	0.96 ± 0.04	2
Owingsville	KY	38.14	83.76	-0.37 ± 0.74	-0.35 ± 0.68	2
Paducah	KY	37.08	88.60	0.19 ± 0.20	0.20 ± 0.20	3
Pathfork	KY	36.76	83.46	-0.40 ± 0.11	-0.38 ± 0.10	2
Pineville	KY	36.76	83.70	0.50 ± 0.82	0.49 ± 0.80	2
Poole	KY	37.64	87.64	0.63 ± 0.09	0.64 ± 0.15	2
Revelo	KY	36.68	84.47	-0.40 ± 0.23	-0.39 ± 0.21	2
Salem	KY	37.26	88.25	-0.67 ± 0.62	-0.64 ± 0.58	2
Sandy Hook	KY	38.09	83.13	-0.22 ± 0.19	-0.19 ± 0.16	2
Sheridan	KY	37.35	88.20	-0.54 ± 0.89	-0.51 ± 0.83	2
Smith Mills	KY	37.80	87.76	0.98 ± 0.52	1.00 ± 0.46	2
Smithland	KY	37.14	88.40	-0.07 ± 0.10	-0.05 ± 0.09	3
Stanton	KY	37.85	83.86	-0.33 ± 0.70	-0.31 ± 0.65	2
Strunk	KY	36.63	84.44	-0.42 ± 0.29	-0.41 ± 0.27	2
Sturgis	KY	37.55	87.98	-0.16 ± 0.42	-0.13 ± 0.37	2
Tolu	KY	37.43	88.25	0.18 ± 0.17	0.16 ± 0.17	2
Uniontown	KY	37.77	87.94	0.44 ± 0.25	0.46 ± 0.18	2
Vanceburg	KY	38.60	83.32	0.09 ± 0.50	0.15 ± 0.50	2
Waco	KY	37.74	84.14	0.38 ± 0.03	0.40 ± 0.02	2
Washington	KY	38.61	83.81	-0.80 ± 1.00	-0.73 ± 1.00	2
Wendover	KY	37.13	83.36	-0.36 ± 0.28	-0.34 ± 0.27	2
West Liberty	KY	37.92	83.26	0.26 ± 0.25	0.29 ± 0.28	2
Wheatcroft	KY	37.48	87.87	-0.02 ± 1.35	0.00 ± 1.30	2
Wheelwright	KY	37.34	82.72	-0.08 ± 0.42	-0.09 ± 0.40	2
Wickliffe	KY	36.97	89.08	-0.37 ± 0.20	-0.35 ± 0.19	3
Wingo	KY	36.64	88.74	0.21 ± 0.49	0.21 ± 0.47	2
Winston	KY	37.71	84.08	-0.62 ± 1.00	-0.60 ± 0.95	2
Amesbury	MA	42.85	70.93	0.71 ± 1.24	0.76 ± 1.28	2
Amherst	MA	42.38	72.52	0.60 ± 0.25	0.57 ± 0.26	4
Ashfield	MA	42.53	72.80	-0.07 ± 0.14	-0.08 ± 0.13	2
Athol	MA	42.60	72.23	0.61 ± 0.48	0.59 ± 0.49	5
Ayer	MA	42.56	71.59	0.47 ± 0.17	0.46 ± 0.20	2
Baldwinville	MA	42.60	72.08	-0.14 ± 0.20	-0.15 ± 0.19	2
Bernardston	MA	42.67	72.55	0.31 ± 0.51	0.27 ± 0.46	2
Brimfield	MA	42.12	72.20	0.75 ± 0.47	0.72 ± 0.48	2
Cambridge	MA	42.37	71.10	0.51 ± 0.56	0.54 ± 0.60	2
Charlemont	MA	42.63	72.87	0.36 ± 0.33	0.35 ± 0.34	2
Charlton	MA	42.13	71.97	0.26 ± 0.10	0.23 ± 0.08	2
Cheshire	MA	42.56	73.16	1.29 ± 0.40	1.25 ± 0.36	3
Chester	MA	42.28	72.98	0.13 ± 0.22	0.11 ± 0.20	2
Chicopee	MA	42.15	72.60	0.21 ± 0.09	0.18 ± 0.09	2
Danvers	MA	42.57	70.94	0.77 ± 0.97	0.73 ± 0.93	2
Dedham	MA	42.25	71.17	0.59 ± 0.52	0.61 ± 0.55	2
Dover	MA	42.25	71.28	0.32 ± 0.25	0.28 ± 0.23	2
Dracut	MA	42.65	71.32	-0.04 ± 0.43	-0.06 ± 0.39	2
Dunstable	MA	42.67	71.48	-0.10 ± 0.40	-0.11 ± 0.37	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
East Princeton	MA	42.47	71.83	0.50 ± 0.27	0.49 ± 0.29	2
Easton	MA	42.03	71.10	0.52 ± 0.22	0.46 ± 0.19	2
Erving	MA	42.60	72.40	0.85 ± 0.06	0.85 ± 0.06	2
Great Barrington	MA	42.19	73.36	0.47 ± 0.61	0.45 ± 0.59	2
Greenfield	MA	42.60	72.62	0.45 ± 0.55	0.44 ± 0.55	3
Groton	MA	42.62	71.58	-0.07 ± 0.35	-0.09 ± 0.32	2
Hatfield	MA	42.38	72.60	0.99 ± 0.02	0.93 ± 0.03	2
Holliston	MA	42.22	71.42	0.30 ± 0.23	0.27 ± 0.20	2
Holyoke	MA	42.20	72.60	1.26 ± 0.81	1.21 ± 0.81	4
Hyannis	MA	41.65	70.27	1.64 ± 0.27	1.61 ± 0.39	2
Lake Pleasant	MA	42.56	72.52	0.39 ± 0.49	0.34 ± 0.45	2
Lawrence	MA	42.72	71.15	-0.02 ± 0.46	-0.04 ± 0.42	2
Leeds	MA	42.35	72.70	0.56 ± 0.39	0.54 ± 0.40	2
Leominster	MA	42.53	71.76	0.47 ± 0.22	0.45 ± 0.24	2
Lowell	MA	42.63	71.32	1.36 ± 1.02	1.37 ± 1.03	3
Lynn	MA	42.48	70.95	0.95 ± 1.05	0.99 ± 1.09	2
Malden	MA	42.42	71.07	1.94 ± 0.11	1.93 ± 0.19	2
Millers Falls	MA	42.57	72.48	0.37 ± 0.49	0.37 ± 0.49	2
Montague	MA	42.53	72.53	-0.09 ± 0.02	-0.10 ± 0.02	2
Nantucket	MA	41.28	70.10	0.77 ± 0.15	0.74 ± 0.26	2
New Bedford	MA	41.62	70.92	0.89 ± 0.23	0.89 ± 0.29	2
North Adams	MA	42.70	73.11	0.15 ± 0.49	0.15 ± 0.48	3
North Chelmsford	MA	42.63	71.38	0.88 ± 0.25	0.84 ± 0.24	3
North Hatfield	MA	42.40	72.62	1.01 ± 0.08	1.00 ± 0.07	2
Northampton	MA	42.32	72.63	0.08 ± 0.08	0.06 ± 0.08	2
Orange	MA	42.58	72.30	-0.13 ± 0.10	-0.14 ± 0.09	2
Palmer	MA	42.17	72.32	0.64 ± 0.43	0.62 ± 0.44	3
Pepperell	MA	42.67	71.58	-0.11 ± 0.37	-0.12 ± 0.34	2
Plymouth	MA	41.97	70.67	0.91 ± 0.07	0.89 ± 0.17	2
Revere	MA	42.40	71.00	0.45 ± 0.50	0.44 ± 0.50	2
Rowe	MA	42.68	72.90	-0.19 ± 0.19	-0.18 ± 0.18	2
Russell	MA	42.18	72.85	0.70 ± 0.33	0.67 ± 0.34	2
Shelburne Falls	MA	42.61	72.74	0.93 ± 0.04	0.88 ± 0.08	2
Shirley	MA	42.55	71.65	0.98 ± 0.30	0.96 ± 0.27	2
Shutesbury	MA	42.45	72.42	0.47 ± 0.52	0.46 ± 0.52	2
South Barre	MA	42.38	72.09	0.68 ± 0.25	0.63 ± 0.25	3
South Hadley	MA	42.27	72.58	0.63 ± 0.42	0.61 ± 0.43	2
South Hamilton	MA	42.62	70.88	0.19 ± 0.41	0.15 ± 0.37	2
South Lee	MA	42.26	73.26	0.15 ± 0.33	0.13 ± 0.31	2
Springfield	MA	42.12	72.58	1.34 ± 0.60	1.25 ± 0.59	4
Sudbury	MA	42.38	71.42	0.17 ± 0.29	0.14 ± 0.26	2
Taunton	MA	41.90	71.10	1.28 ± 0.86	1.29 ± 0.91	2
Templeton	MA	42.55	72.07	0.41 ± 0.32	0.40 ± 0.33	2
Wales	MA	42.07	72.22	0.29 ± 0.02	0.25 ± 0.01	2
West Brookfield	MA	42.24	72.14	1.16 ± 0.07	1.14 ± 0.06	2
West Roxbury	MA	42.33	71.08	1.05 ± 1.02	1.08 ± 1.06	2
Westford	MA	42.57	71.43	0.88 ± 0.39	0.87 ± 0.40	3
Whately	MA	42.43	72.63	0.50 ± 0.43	0.48 ± 0.43	2
Wheelwright	MA	42.35	72.13	0.07 ± 0.10	0.05 ± 0.09	2
Williamsburg	MA	42.38	72.73	0.53 ± 0.39	0.52 ± 0.39	2
Williamstown	MA	42.71	73.20	-0.19 ± 0.33	-0.22 ± 0.28	2
Windsor	MA	42.50	73.05	-0.04 ± 0.26	-0.05 ± 0.24	2
Worcester	MA	42.27	71.80	1.15 ± 0.15	1.17 ± 0.17	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Worthington	MA	42.40	72.93	0.03 ± 0.20	0.02 ± 0.18	2
Alfred	ME	43.48	70.72	1.43 ± 1.38	1.48 ± 1.44	2
Andover	ME	44.63	70.75	-0.23 ± 0.51	-0.23 ± 0.47	3
Anson	ME	44.80	69.88	-0.23 ± 0.67	-0.12 ± 0.73	2
Auburn	ME	44.09	70.24	0.61 ± 0.59	0.64 ± 0.62	3
Bangor	ME	44.78	68.78	0.46 ± 0.60	0.58 ± 0.72	2
Bethel	ME	44.40	70.78	0.09 ± 0.51	0.13 ± 0.51	3
Brownfield	ME	43.94	70.91	-0.08 ± 0.69	-0.05 ± 0.69	2
Bryant Pond	ME	44.38	70.65	0.82 ± 0.66	0.82 ± 0.61	2
Buckfield	ME	44.29	70.37	0.30 ± 0.19	0.29 ± 0.18	3
Caribou	ME	46.86	68.01	0.21 ± 0.35	0.31 ± 0.19	2
Cherryfield	ME	44.60	67.93	0.58 ± 0.20	0.70 ± 0.35	2
Cornish	ME	43.80	70.80	-0.21 ± 0.34	-0.22 ± 0.31	3
Denmark	ME	43.97	70.81	-0.03 ± 0.38	-0.01 ± 0.38	2
Dixfield	ME	44.53	70.46	0.32 ± 0.28	0.31 ± 0.22	2
East Peru	ME	44.49	70.38	0.11 ± 0.99	0.12 ± 0.96	2
East Sebago	ME	43.85	70.65	-0.05 ± 0.52	-0.07 ± 0.48	2
Eastport	ME	44.92	66.98	0.17 ± 1.27	0.37 ± 1.39	2
Farmington	ME	44.67	70.15	-0.33 ± 0.63	-0.34 ± 0.57	2
Fryeburg	ME	44.02	70.98	-0.31 ± 0.31	-0.30 ± 0.29	3
Gorham	ME	43.68	70.44	-0.27 ± 0.18	-0.27 ± 0.17	2
Greenville	ME	45.46	69.59	-0.89 ± 1.02	-0.79 ± 0.96	2
Harrison	ME	44.11	70.68	0.03 ± 0.57	0.05 ± 0.56	2
Hiram	ME	43.88	70.81	0.11 ± 0.43	0.11 ± 0.42	3
Jackman	ME	45.63	70.27	0.02 ± 1.54	0.13 ± 1.58	2
Kezar Falls	ME	43.82	70.88	-0.26 ± 0.35	-0.27 ± 0.33	3
Lewiston	ME	44.10	70.21	0.46 ± 0.12	0.44 ± 0.16	2
Limington	ME	43.73	70.71	0.18 ± 0.18	0.17 ± 0.17	3
Lisbon Center	ME	44.02	70.09	-0.17 ± 0.15	-0.16 ± 0.14	2
Lovell	ME	44.13	70.88	-0.26 ± 0.30	-0.26 ± 0.28	3
Mexico	ME	44.57	70.55	-0.24 ± 0.80	-0.24 ± 0.73	2
Millinocket	ME	45.66	68.71	0.42 ± 0.39	0.54 ± 0.27	2
Milo	ME	45.25	68.98	0.37 ± 0.76	0.49 ± 0.86	2
Moody	ME	43.27	70.60	0.39 ± 0.17	0.34 ± 0.15	2
Newry	ME	44.49	70.79	-0.06 ± 0.05	-0.03 ± 0.08	2
North Waterboro	ME	43.62	70.73	-0.18 ± 0.62	-0.19 ± 0.58	2
Norway	ME	44.22	70.55	0.04 ± 0.66	0.12 ± 0.71	2
Portland	ME	43.65	70.28	0.65 ± 0.48	0.70 ± 0.51	4
Raymond	ME	43.90	70.47	0.63 ± 0.07	0.60 ± 0.11	2
Rumford Center	ME	44.51	70.62	0.00 ± 0.01	0.02 ± 0.04	2
Sanford	ME	43.44	70.78	-0.39 ± 0.47	-0.39 ± 0.45	2
Scarborough	ME	43.58	70.35	0.33 ± 0.31	0.28 ± 0.28	2
Skowhegan	ME	44.76	69.72	0.37 ± 0.12	0.35 ± 0.06	2
South Paris	ME	44.23	70.52	0.74 ± 0.06	0.81 ± 0.00	2
South Portland	ME	43.64	70.25	0.35 ± 0.63	0.35 ± 0.62	2
Waterville	ME	44.57	69.62	0.79 ± 0.29	0.83 ± 0.36	3
Weld	ME	44.70	70.42	0.44 ± 0.20	0.39 ± 0.18	2
West Buxton	ME	43.67	70.60	-0.36 ± 0.26	-0.35 ± 0.25	2
West Poland	ME	44.04	70.45	0.14 ± 0.57	0.16 ± 0.56	2
West Sumner	ME	44.37	70.46	0.09 ± 0.14	0.11 ± 0.16	2
Westbrook	ME	43.68	70.37	0.39 ± 0.62	0.37 ± 0.60	3
Wilton	ME	44.58	70.23	0.00 ± 0.48	-0.02 ± 0.45	3

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Abbeville	MI	34.50	89.50	1.33 ± 0.02	1.32 ± 0.00	2
Batesville	MI	34.31	89.95	0.40 ± 0.09	0.38 ± 0.07	2
Byhalia	MI	34.87	89.69	-0.62 ± 0.52	-0.60 ± 0.50	2
Cleveland	MI	33.75	90.72	0.09 ± 0.69	0.09 ± 0.66	2
Coffeerville	MI	33.98	89.67	0.41 ± 0.28	0.39 ± 0.28	2
Coldwater	MI	32.72	89.22	1.30 ± 0.31	1.19 ± 0.28	3
Detroit	MI	42.33	83.05	1.82 ± 0.90	1.60 ± 0.80	3
Grenada	MI	33.54	90.17	-0.34 ± 0.30	-0.35 ± 0.27	2
Hernando	MI	34.82	89.99	0.07 ± 0.25	0.07 ± 0.23	3
Indianola	MI	33.45	90.65	-0.37 ± 0.40	-0.38 ± 0.36	2
Lake Cormorant	MI	34.90	90.22	0.02 ± 0.52	0.03 ± 0.48	2
Lamar	MI	31.21	89.51	2.62 ± 0.05	2.38 ± 0.03	2
Lambert	MI	34.20	90.28	-0.02 ± 0.63	-0.04 ± 0.60	2
Lansing	MI	42.73	84.55	2.02 ± 1.06	1.72 ± 0.85	2
Marks	MI	34.26	90.27	0.07 ± 0.22	0.08 ± 0.23	2
Minter City	MI	33.75	90.29	0.00 ± 0.77	0.00 ± 0.75	2
Moorhead	MI	33.45	90.50	0.36 ± 0.66	0.35 ± 0.62	2
Mount Clemens	MI	42.58	82.88	1.45 ± 0.43	1.34 ± 0.32	2
Mount Pleasant	MI	43.60	84.77	0.67 ± 1.76	0.54 ± 1.60	2
New Albany	MI	34.49	89.00	0.05 ± 0.46	0.03 ± 0.45	2
Port Huron	MI	42.97	82.43	1.23 ± 1.18	1.02 ± 0.98	2
Potts Camp	MI	34.65	89.31	0.28 ± 0.02	0.27 ± 0.04	2
Ripley	MI	34.73	88.95	0.28 ± 0.45	0.24 ± 0.43	3
Robinsonville	MI	34.82	90.32	-0.21 ± 0.20	-0.19 ± 0.17	2
Senatobia	MI	34.62	89.96	-0.15 ± 0.44	-0.16 ± 0.42	3
Shelby	MI	33.95	90.77	-0.20 ± 0.20	-0.19 ± 0.21	2
Taylor	MI	34.27	89.59	0.28 ± 0.18	0.27 ± 0.19	2
Tunica	MI	34.69	90.38	0.40 ± 0.45	0.36 ± 0.40	3
Walls	MI	34.96	90.15	-0.40 ± 0.17	-0.37 ± 0.14	2
Water Valley	MI	34.16	89.63	1.10 ± 0.55	1.07 ± 0.53	2
Waterford	MI	34.65	89.46	0.29 ± 0.08	0.28 ± 0.05	2
Advance	MO	37.10	89.92	-0.44 ± 0.07	-0.43 ± 0.07	3
Altenburg	MO	37.63	89.59	-0.56 ± 0.25	-0.54 ± 0.24	4
Alton	MO	36.69	91.40	0.66 ± 0.16	0.63 ± 0.15	5
Annapolis	MO	37.36	90.70	-0.86 ± 0.36	-0.83 ± 0.36	2
Anniston	MO	36.83	89.33	-0.55 ± 0.21	-0.53 ± 0.21	3
Arab	MO	37.09	90.08	0.24 ± 0.56	0.27 ± 0.55	4
Arbyrd	MO	36.05	90.24	0.17 ± 0.39	0.19 ± 0.37	3
Arcadia	MO	37.59	90.63	-0.76 ± 0.51	-0.72 ± 0.48	4
Augusta	MO	38.57	90.88	0.71 ± 0.34	0.70 ± 0.36	3
Ava	MO	36.95	92.67	0.78 ± 0.63	0.73 ± 0.60	4
Bakersfield	MO	36.52	92.14	0.49 ± 0.10	0.47 ± 0.11	2
Belgique	MO	37.84	89.78	-0.33 ± 0.25	-0.31 ± 0.23	3
Bell City	MO	37.02	89.82	-0.62 ± 0.05	-0.60 ± 0.04	3
Belleview	MO	37.68	90.73	-0.82 ± 0.52	-0.79 ± 0.50	4
Benton	MO	37.10	89.57	-0.82 ± 0.10	-0.77 ± 0.10	3
Bernie	MO	36.67	89.98	-1.11 ± 0.49	-1.06 ± 0.48	3
Bertrand	MO	36.91	89.45	-0.56 ± 0.56	-0.56 ± 0.55	3
Beulah	MO	37.63	91.92	-0.31 ± 0.79	-0.29 ± 0.74	2
Birch Tree	MO	36.99	91.49	-0.26 ± 0.17	-0.26 ± 0.17	2
Black	MO	37.53	90.93	0.20 ± 0.84	0.21 ± 0.82	2
Bloomfield	MO	36.88	89.93	-0.39 ± 0.36	-0.36 ± 0.35	4

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Bloomsdale	MO	38.02	90.22	-0.63 ± 0.49	-0.60 ± 0.45	2
Bonne Terre	MO	37.92	90.56	0.13 ± 0.36	0.14 ± 0.36	3
Bowling Green	MO	39.34	91.20	0.32 ± 0.23	0.29 ± 0.21	2
Bragg City	MO	36.27	89.91	-0.89 ± 0.55	-0.84 ± 0.54	2
Braggadocio	MO	36.18	89.83	-0.21 ± 0.18	-0.18 ± 0.18	3
Brandsville	MO	36.65	91.70	0.59 ± 0.42	0.57 ± 0.43	3
Brazeau	MO	37.66	89.65	-0.16 ± 0.10	-0.15 ± 0.10	2
Broseley	MO	36.67	90.25	-0.13 ± 0.29	-0.10 ± 0.28	6
Brownwood	MO	37.08	89.96	-0.48 ± 0.98	-0.46 ± 0.96	2
Burfordville	MO	37.37	89.80	-0.66 ± 0.04	-0.62 ± 0.04	2
Caledonia	MO	37.76	90.77	-1.08 ± 1.05	-1.04 ± 1.00	2
Campbell	MO	36.49	90.08	-0.22 ± 0.19	-0.19 ± 0.18	6
Canalou	MO	36.75	89.69	-0.73 ± 0.47	-0.69 ± 0.46	4
Cape Girardeau	MO	37.37	89.65	-0.25 ± 0.24	-0.22 ± 0.24	6
Caruthersville	MO	36.19	89.65	-0.87 ± 0.20	-0.84 ± 0.20	5
Catron	MO	36.61	89.71	-0.76 ± 0.68	-0.72 ± 0.68	3
Centerville	MO	37.43	90.96	-1.83 ± 2.00	-1.79 ± 1.94	2
Chaffee	MO	37.18	89.67	-0.50 ± 0.30	-0.46 ± 0.30	3
Charleston	MO	36.92	89.35	0.16 ± 0.22	0.19 ± 0.21	4
Clarkton	MO	36.45	89.97	-0.81 ± 0.34	-0.78 ± 0.33	5
Commerce	MO	37.16	89.45	-0.40 ± 0.41	-0.37 ± 0.40	4
Conran	MO	36.48	89.64	0.46 ± 0.11	0.48 ± 0.11	5
Conway	MO	37.50	92.82	0.70 ± 0.26	0.62 ± 0.27	2
Cooter	MO	36.05	89.81	-0.94 ± 0.42	-0.90 ± 0.42	3
Crystal City	MO	38.18	90.37	0.31 ± 0.29	0.30 ± 0.28	4
Cuba	MO	38.06	91.40	-0.13 ± 0.57	-0.12 ± 0.54	3
De Soto	MO	38.13	90.56	0.99 ± 0.16	0.99 ± 0.15	2
Deering	MO	36.19	89.89	-0.65 ± 0.23	-0.62 ± 0.24	2
Delta	MO	37.20	89.74	-1.64 ± 0.70	-1.59 ± 0.70	2
Des Arc	MO	37.28	90.64	-0.78 ± 0.42	-0.77 ± 0.40	2
Desloge	MO	37.88	90.53	-0.31 ± 0.23	-0.30 ± 0.21	2
Dexter	MO	36.79	89.96	-0.30 ± 0.19	-0.27 ± 0.19	7
Doniphan	MO	36.65	90.85	0.53 ± 0.54	0.54 ± 0.52	2
Dudley	MO	36.79	90.09	-0.59 ± 0.78	-0.55 ± 0.75	2
Dutchtown	MO	37.25	89.65	-1.05 ± 0.27	-1.00 ± 0.27	3
East Prairie	MO	36.78	89.39	-0.24 ± 0.43	-0.21 ± 0.44	4
Ellington	MO	37.24	90.97	0.22 ± 0.34	0.21 ± 0.33	3
Elsberry	MO	39.17	90.78	1.20 ± 0.07	1.14 ± 0.11	2
Eminence	MO	37.15	91.37	0.01 ± 0.35	-0.02 ± 0.34	2
Essex	MO	36.81	89.86	-1.13 ± 0.42	-1.09 ± 0.41	3
Fairdealing	MO	36.67	90.62	0.20 ± 0.29	0.21 ± 0.29	3
Farmington	MO	37.78	90.42	0.24 ± 0.43	0.24 ± 0.42	5
Farrar	MO	37.70	89.69	-0.48 ± 0.39	-0.46 ± 0.38	2
Festus	MO	38.22	90.39	0.55 ± 0.20	0.53 ± 0.19	4
Fisk	MO	36.78	90.20	-0.73 ± 0.51	-0.70 ± 0.50	4
Florissant	MO	38.79	90.33	-0.25 ± 0.10	-0.24 ± 0.09	2
Fredericktown	MO	37.56	90.29	-0.45 ± 0.05	-0.43 ± 0.05	4
Friedheim	MO	37.57	89.82	-0.66 ± 0.29	-0.62 ± 0.27	2
Frohna	MO	37.64	89.62	-0.60 ± 0.30	-0.57 ± 0.29	3
Fruitland	MO	37.39	93.23	0.61 ± 0.56	0.56 ± 0.51	2
Gainesville	MO	36.60	92.43	0.14 ± 0.25	0.13 ± 0.23	3
Gibson	MO	36.44	90.03	-0.76 ± 0.56	-0.73 ± 0.57	2
Gideon	MO	36.55	89.92	-0.67 ± 0.24	-0.64 ± 0.23	5

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Gipsy	MO	37.15	90.18	-0.29 ± 0.83	-0.27 ± 0.80	2
Glenallen	MO	37.32	90.03	-0.52 ± 0.30	-0.48 ± 0.30	2
Gordonville	MO	37.31	89.68	-1.10 ± 0.96	-1.08 ± 0.94	2
Grandin	MO	36.83	90.83	-0.56 ± 0.26	-0.54 ± 0.26	3
Gray Summit	MO	38.49	90.82	-0.09 ± 0.71	-0.08 ± 0.66	2
Grayridge	MO	36.82	89.78	-0.30 ± 0.32	-0.28 ± 0.31	4
Greenville	MO	37.13	90.45	-0.26 ± 0.30	-0.25 ± 0.30	4
Harviell	MO	36.67	90.47	-0.46 ± 0.39	-0.42 ± 0.38	5
Hayti	MO	36.23	89.75	-0.41 ± 0.26	-0.38 ± 0.26	4
Hendrickson	MO	36.90	90.47	0.16 ± 0.10	0.16 ± 0.12	2
Holcomb	MO	36.40	90.03	-0.82 ± 0.55	-0.77 ± 0.54	3
Holland	MO	36.06	89.87	-0.97 ± 0.30	-0.93 ± 0.30	4
Hornersville	MO	36.04	90.11	-0.47 ± 0.22	-0.45 ± 0.20	4
Hunter	MO	36.89	90.85	0.02 ± 0.79	0.06 ± 0.77	3
Illmo	MO	37.22	89.51	0.51 ± 0.30	0.54 ± 0.30	4
Iron Mountain	MO	37.70	90.64	-0.53 ± 0.38	-0.51 ± 0.37	2
Ironton	MO	37.60	90.63	-0.53 ± 0.36	-0.51 ± 0.35	3
Jackson	MO	37.38	89.67	-0.90 ± 0.47	-0.88 ± 0.45	3
Kennett	MO	36.25	90.07	-0.24 ± 0.11	-0.21 ± 0.11	5
Kewanee	MO	36.67	89.57	-0.44 ± 0.40	-0.41 ± 0.40	5
Knob Lick	MO	37.68	90.37	-0.78 ± 0.38	-0.76 ± 0.37	2
Leopold	MO	37.26	89.92	-1.15 ± 0.18	-1.10 ± 0.19	3
Lilbourn	MO	36.59	89.61	0.29 ± 0.44	0.31 ± 0.44	5
Lodi	MO	37.26	90.45	-0.90 ± 0.52	-0.90 ± 0.50	2
Malden	MO	36.56	89.97	-0.36 ± 0.23	-0.34 ± 0.22	5
Marble Hill	MO	37.30	89.97	-0.73 ± 0.15	-0.69 ± 0.15	4
Marquand	MO	37.43	90.17	-0.75 ± 0.12	-0.72 ± 0.12	2
Marston	MO	36.52	89.61	-0.11 ± 0.55	-0.08 ± 0.55	4
Matthews	MO	36.77	89.58	-0.01 ± 0.44	0.01 ± 0.44	3
Mill Spring	MO	37.06	90.68	-0.63 ± 1.07	-0.59 ± 1.03	2
Millersville	MO	37.43	89.80	-0.99 ± 0.24	-0.95 ± 0.24	3
Montier	MO	36.98	91.57	-0.32 ± 0.91	-0.29 ± 0.87	2
Morehouse	MO	36.85	89.69	-1.01 ± 0.38	-0.99 ± 0.36	2
Morley	MO	37.05	89.62	-0.77 ± 0.46	-0.75 ± 0.44	3
Mountain View	MO	36.00	91.70	1.52 ± 0.43	1.47 ± 0.41	3
Naylor	MO	36.58	90.60	-0.40 ± 0.21	-0.38 ± 0.20	6
Neelyville	MO	36.56	90.51	-0.80 ± 0.66	-0.75 ± 0.65	2
New Haven	MO	38.61	91.21	0.54 ± 0.17	0.51 ± 0.09	2
New London	MO	39.59	91.40	0.53 ± 0.22	0.48 ± 0.19	2
New Madrid	MO	36.57	89.53	-0.74 ± 0.16	-0.71 ± 0.16	4
Old Appleton	MO	37.60	89.71	-0.65 ± 0.47	-0.63 ± 0.46	2
Oran	MO	37.08	89.66	-0.84 ± 0.42	-0.80 ± 0.41	5
Oxly	MO	36.60	90.69	-0.38 ± 0.28	-0.33 ± 0.27	3
Painton	MO	37.08	89.80	-0.94 ± 0.49	-0.92 ± 0.48	3
Parma	MO	36.61	89.82	-0.92 ± 0.41	-0.90 ± 0.40	6
Pascoia	MO	36.27	89.83	-0.50 ± 0.31	-0.47 ± 0.31	3
Patterson	MO	37.19	90.55	-0.33 ± 0.29	-0.32 ± 0.29	5
Patton	MO	37.50	90.01	-0.39 ± 0.62	-0.37 ± 0.62	2
Perkins	MO	38.90	90.37	0.11 ± 0.90	0.09 ± 0.84	3
Perryville	MO	37.72	89.87	-0.86 ± 0.10	-0.82 ± 0.08	2
Piedmont	MO	37.15	90.70	-0.31 ± 0.30	-0.29 ± 0.29	4
Pocahontas	MO	37.50	89.63	-0.31 ± 0.11	-0.29 ± 0.10	3
Pomona	MO	36.87	91.91	-0.08 ± 0.75	-0.06 ± 0.71	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Poplar Bluff	MO	36.76	90.40	0.28 ± 0.35	0.29 ± 0.35	7
Portageville	MO	36.43	89.70	-0.46 ± 0.48	-0.43 ± 0.48	4
Potosi	MO	37.89	90.79	-0.17 ± 0.16	-0.16 ± 0.15	2
Puxico	MO	36.95	90.16	0.72 ± 0.28	0.73 ± 0.28	4
Qulin	MO	36.60	90.25	0.18 ± 0.25	0.19 ± 0.23	2
Reynolds	MO	37.33	91.03	-0.31 ± 0.44	-0.27 ± 0.38	2
Risco	MO	36.55	89.82	-1.08 ± 0.47	-1.05 ± 0.47	5
Rives	MO	36.10	90.02	-0.29 ± 0.36	-0.27 ± 0.33	2
Saint Clair	MO	38.03	93.78	1.80 ± 0.20	1.66 ± 0.20	2
Saint Marys	MO	37.88	89.95	-0.56 ± 0.11	-0.53 ± 0.09	2
Sainte Genevieve	MO	37.90	90.20	-0.36 ± 0.09	-0.35 ± 0.08	2
Salem	MO	37.65	91.54	0.33 ± 0.94	0.36 ± 0.89	2
Scott City	MO	37.22	89.55	-0.53 ± 0.62	-0.51 ± 0.60	2
Seaton	MO	37.81	91.61	-0.48 ± 0.89	-0.46 ± 0.84	2
Seedgewickville	MO	37.52	89.91	-0.80 ± 0.16	-0.77 ± 0.16	4
Senath	MO	36.13	90.16	-0.44 ± 0.12	-0.40 ± 0.12	4
Sikeston	MO	36.88	89.59	0.08 ± 0.39	0.10 ± 0.39	6
Silva	MO	37.18	90.47	0.14 ± 0.62	0.15 ± 0.61	3
St Louis	MO	38.65	90.25	1.16 ± 0.28	1.15 ± 0.30	4
Steele	MO	36.12	89.83	-1.12 ± 0.30	-1.08 ± 0.30	3
Sturdivant	MO	37.05	90.01	-0.54 ± 0.39	-0.51 ± 0.38	4
Sturgeon	MO	39.23	92.28	0.87 ± 0.63	0.79 ± 0.58	2
Tallapoosa	MO	36.51	89.82	-0.31 ± 0.31	-0.27 ± 0.32	3
Thayer	MO	36.52	91.54	-0.04 ± 0.34	-0.03 ± 0.32	3
Thomasville	MO	36.79	91.53	0.54 ± 0.00	0.51 ± 0.02	2
Troy	MO	38.98	90.98	0.53 ± 0.78	0.52 ± 0.75	2
Van Buren	MO	37.00	91.01	-0.12 ± 0.25	-0.12 ± 0.23	3
Vanduser	MO	36.98	89.68	0.06 ± 0.20	0.08 ± 0.19	4
Versailles	MO	38.43	92.84	1.16 ± 1.15	1.10 ± 1.09	2
Vulcan	MO	37.32	90.67	0.60 ± 0.10	0.59 ± 0.13	2
Wardell	MO	36.35	89.82	-1.03 ± 0.31	-0.99 ± 0.31	4
Washington	MO	38.56	91.01	0.82 ± 0.30	0.76 ± 0.29	4
Weingarten	MO	37.89	90.21	-0.43 ± 0.01	-0.41 ± 0.01	2
West Plains	MO	36.73	91.85	0.52 ± 0.20	0.49 ± 0.18	3
Whiteoak	MO	36.33	90.03	-0.26 ± 0.89	-0.26 ± 0.86	2
Williamsville	MO	36.97	90.55	-0.32 ± 0.24	-0.32 ± 0.23	3
Wittenberg	MO	37.65	89.52	-0.37 ± 0.32	-0.36 ± 0.31	3
Wolf Island	MO	36.74	89.21	-0.71 ± 0.11	-0.69 ± 0.10	3
Wyatt	MO	36.92	89.22	-0.49 ± 0.26	-0.45 ± 0.26	2
Zalma	MO	37.14	90.08	-0.59 ± 0.40	-0.56 ± 0.39	4
Bathurst	N.B.	47.63	65.63	-0.67 ± 0.85	-0.43 ± 0.97	2
Edmundston	N.B.	47.37	68.33	-0.52 ± 0.53	-0.28 ± 0.52	2
Moncton	N.B.	46.10	64.78	-1.09 ± 0.22	-0.84 ± 0.04	2
Amherst	N.S.	45.83	64.20	-0.56 ± 0.01	-0.32 ± 0.23	2
New Glasgow	N.S.	45.58	62.65	-0.56 ± 0.61	-0.32 ± 0.30	2
Asheville	NC	35.60	82.55	0.53 ± 0.28	0.47 ± 0.25	2
Bryson City	NC	35.43	83.44	-0.10 ± 0.90	-0.13 ± 0.83	2
Fletcher	NC	35.43	82.50	0.11 ± 0.23	0.10 ± 0.21	2
Franklin	NC	35.18	83.38	0.66 ± 0.31	0.62 ± 0.24	2
Morganton	NC	35.75	81.69	0.41 ± 0.55	0.36 ± 0.49	2
Murphy	NC	35.09	84.03	0.63 ± 0.38	0.59 ± 0.31	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Robbinsville	NC	35.32	83.81	0.38 ± 0.48	0.35 ± 0.41	2
Rutherfordton	NC	35.37	81.96	0.77 ± 0.46	0.74 ± 0.46	2
Statesville	NC	35.79	80.89	0.46 ± 0.75	0.40 ± 0.67	2
Sylva	NC	35.37	83.22	-0.04 ± 0.68	-0.06 ± 0.63	2
Waynesville	NC	35.49	82.99	-0.05 ± 0.54	-0.06 ± 0.50	2
Acworth	NH	43.22	72.29	-0.29 ± 0.69	-0.30 ± 0.65	2
Alstead	NH	43.15	72.37	-0.60 ± 0.23	-0.58 ± 0.22	2
Alton	NH	43.45	71.22	-0.12 ± 0.80	-0.12 ± 0.77	3
Alton Bay	NH	43.47	71.23	-0.48 ± 0.61	-0.48 ± 0.58	3
Andover	NH	43.44	71.82	-0.72 ± 0.58	-0.70 ± 0.55	2
Ashland	NH	43.69	71.63	-0.12 ± 0.04	-0.09 ± 0.01	2
Bartlett	NH	44.08	71.28	-0.43 ± 0.29	-0.42 ± 0.27	3
Bath	NH	44.17	71.97	-0.16 ± 0.44	-0.14 ± 0.43	3
Bennington	NH	43.00	71.93	-0.53 ± 0.47	-0.51 ± 0.44	2
Berlin	NH	44.45	71.18	0.23 ± 0.51	0.26 ± 0.50	4
Bethlehem	NH	44.28	71.68	-0.46 ± 0.18	-0.44 ± 0.16	3
Bristol	NH	43.59	71.74	0.09 ± 0.48	0.11 ± 0.46	3
Canterbury	NH	43.33	71.57	-1.07 ± 1.10	-1.05 ± 1.06	2
Center Barnstead	NH	43.35	71.27	-0.41 ± 0.59	-0.41 ± 0.56	3
Center Conway	NH	44.00	71.06	-0.10 ± 0.34	-0.11 ± 0.32	2
Chesterfield	NH	42.88	72.47	0.12 ± 0.59	0.14 ± 0.58	2
Claremont	NH	43.37	72.34	0.34 ± 0.62	0.30 ± 0.56	4
Colebrook	NH	44.90	71.50	0.10 ± 0.38	0.11 ± 0.36	4
Concord	NH	43.21	71.54	-0.79 ± 0.83	-0.79 ± 0.79	2
Contoocook	NH	43.22	71.72	-0.84 ± 0.82	-0.83 ± 0.79	2
Conway	NH	43.98	71.12	-0.48 ± 0.43	-0.48 ± 0.40	2
Cornish Flat	NH	43.50	72.28	-0.15 ± 0.70	-0.14 ± 0.68	3
Danbury	NH	43.53	71.86	-0.11 ± 0.09	-0.10 ± 0.08	3
Dover	NH	43.20	70.87	0.29 ± 0.06	0.26 ± 0.04	4
Drewsville	NH	43.13	72.40	0.11 ± 0.69	0.11 ± 0.67	3
Dublin	NH	42.91	72.06	0.07 ± 0.16	0.08 ± 0.18	2
East Andover	NH	43.46	71.75	-0.91 ± 0.80	-0.88 ± 0.77	2
East Hebron	NH	43.69	71.77	-1.05 ± 0.97	-1.02 ± 0.94	2
East Sullivan	NH	42.99	72.20	-0.50 ± 0.29	-0.48 ± 0.28	2
East Swanzey	NH	42.85	72.25	0.14 ± 0.29	0.15 ± 0.31	2
Elkins	NH	43.42	71.93	-0.55 ± 0.34	-0.52 ± 0.31	2
Enfield	NH	43.64	72.15	-0.15 ± 0.20	-0.14 ± 0.17	2
Etna	NH	43.70	72.22	-0.21 ± 0.14	-0.19 ± 0.14	3
Exeter	NH	42.98	70.93	0.65 ± 0.28	0.66 ± 0.37	2
Franconia	NH	44.23	71.75	0.13 ± 0.29	0.15 ± 0.30	2
Franklin	NH	43.43	71.63	-0.31 ± 0.89	-0.30 ± 0.86	3
Freedom	NH	43.82	71.03	-0.40 ± 0.66	-0.40 ± 0.62	2
Georges Mills	NH	43.43	72.07	-0.55 ± 0.52	-0.54 ± 0.50	3
Gilmanton Iron Work	NH	43.42	71.30	0.15 ± 0.95	0.16 ± 0.92	2
Gilsum	NH	43.05	72.26	0.85 ± 0.66	0.83 ± 0.62	2
Glencliff	NH	43.98	71.90	-0.69 ± 0.40	-0.67 ± 0.38	2
Goffstown	NH	43.03	71.60	-0.51 ± 0.62	-0.51 ± 0.59	2
Gorham	NH	44.39	71.17	-0.05 ± 0.13	-0.05 ± 0.13	4
Goshen	NH	43.28	72.13	-0.78 ± 0.49	-0.75 ± 0.47	2
Grafton	NH	43.97	71.84	-0.23 ± 0.08	-0.20 ± 0.09	2
Groveton	NH	44.60	71.52	0.10 ± 0.51	0.11 ± 0.49	4
Hanover	NH	43.70	72.29	-0.52 ± 0.18	-0.50 ± 0.17	5

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Haverhill	NH	44.03	72.07	0.15 ± 0.52	0.17 ± 0.51	3
Henniker	NH	43.18	71.82	-0.77 ± 0.70	-0.75 ± 0.67	2
Hill	NH	43.53	71.71	-1.13 ± 1.04	-1.11 ± 1.01	2
Hillsboro	NH	43.12	71.89	-0.18 ± 0.09	-0.16 ± 0.06	2
Hinsdale	NH	42.79	72.49	0.70 ± 0.06	0.71 ± 0.05	2
Hooksett	NH	43.10	71.46	0.04 ± 0.32	0.04 ± 0.28	2
Hudson	NH	42.73	71.43	-0.17 ± 0.47	-0.18 ± 0.44	2
Intervale	NH	44.08	71.13	-0.29 ± 0.49	-0.29 ± 0.46	2
Jackson	NH	44.15	71.18	-0.38 ± 0.28	-0.37 ± 0.26	3
Jaffrey	NH	42.81	72.02	0.16 ± 0.20	0.17 ± 0.22	2
Jefferson	NH	44.42	71.47	-0.64 ± 0.23	-0.61 ± 0.22	2
Kearsarge	NH	44.07	71.12	-0.29 ± 0.49	-0.29 ± 0.46	2
Keene	NH	42.93	72.28	0.36 ± 0.36	0.36 ± 0.37	4
Laconia	NH	43.53	71.47	0.12 ± 0.34	0.14 ± 0.35	4
Lakeport	NH	43.55	71.46	-0.21 ± 1.26	-0.14 ± 1.27	2
Lancaster	NH	44.49	71.57	0.26 ± 0.40	0.30 ± 0.42	3
Lincoln	NH	44.05	71.67	-0.19 ± 0.46	-0.17 ± 0.46	3
Lisbon	NH	44.22	71.92	-0.48 ± 0.12	-0.46 ± 0.12	3
Littleton	NH	44.30	71.77	-0.46 ± 0.11	-0.44 ± 0.10	4
Lyme	NH	43.81	72.16	-0.22 ± 0.60	-0.20 ± 0.59	3
Lyme Center	NH	43.80	72.13	-0.56 ± 0.33	-0.54 ± 0.32	3
Madison	NH	43.90	71.15	0.30 ± 0.36	0.32 ± 0.35	2
Manchester	NH	42.97	71.47	-0.22 ± 0.41	-0.24 ± 0.38	3
Meadows	NH	44.37	71.47	-0.64 ± 0.17	-0.61 ± 0.16	2
Melvin Village	NH	43.69	71.31	-0.23 ± 0.23	-0.22 ± 0.21	3
Meriden	NH	43.54	72.25	-0.53 ± 0.69	-0.53 ± 0.65	2
Milan	NH	44.57	71.18	0.55 ± 0.68	0.56 ± 0.64	2
Milford	NH	42.83	71.65	0.33 ± 0.13	0.31 ± 0.11	3
Monroe	NH	44.26	72.04	-0.13 ± 0.29	-0.12 ± 0.29	3
Moultonboro	NH	43.75	71.40	-0.81 ± 0.87	-0.79 ± 0.83	2
Mount Sunapee	NH	43.35	72.07	-0.86 ± 0.58	-0.83 ± 0.56	2
Nashua	NH	42.77	71.47	0.85 ± 0.81	0.84 ± 0.82	4
New Boston	NH	42.98	71.70	0.51 ± 0.56	0.52 ± 0.53	2
New Durham	NH	43.43	71.17	-0.07 ± 0.22	-0.08 ± 0.19	3
New Ipswich	NH	42.75	71.85	0.74 ± 0.36	0.73 ± 0.33	2
Newport	NH	43.37	72.17	-0.13 ± 0.20	-0.14 ± 0.19	3
Newton	NH	42.87	71.03	-0.08 ± 0.53	-0.10 ± 0.49	2
North Conway	NH	44.07	71.12	-0.15 ± 0.35	-0.15 ± 0.32	2
North Haverhill	NH	44.08	72.03	-0.17 ± 0.43	-0.16 ± 0.43	3
North Salem	NH	42.83	71.22	0.35 ± 0.01	0.34 ± 0.02	2
North Stratford	NH	44.75	71.63	0.71 ± 0.68	0.74 ± 0.67	4
North Sutton	NH	43.36	71.94	-0.76 ± 0.99	-0.75 ± 0.95	2
Orford	NH	43.91	72.14	0.13 ± 0.37	0.15 ± 0.36	3
Ossipee	NH	43.68	71.12	-0.55 ± 0.77	-0.54 ± 0.73	2
Peterborough	NH	42.88	71.95	0.10 ± 0.88	0.11 ± 0.86	2
Piermont	NH	43.97	72.08	-0.53 ± 0.23	-0.51 ± 0.22	3
Pike	NH	44.03	71.97	-0.18 ± 0.47	-0.17 ± 0.46	3
Pittsburg	NH	45.05	71.39	-0.31 ± 0.58	-0.28 ± 0.52	2
Pittsfield	NH	43.31	71.33	-0.43 ± 0.61	-0.44 ± 0.59	3
Plainfield	NH	43.53	72.36	-0.16 ± 0.35	-0.17 ± 0.33	2
Plymouth	NH	43.75	71.72	-0.18 ± 0.03	-0.18 ± 0.04	3
Raymond	NH	43.03	71.18	-0.32 ± 0.64	-0.32 ± 0.60	2
Rumney	NH	43.80	71.82	-0.39 ± 0.19	-0.37 ± 0.16	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Rye	NH	43.01	70.77	0.43 ± 0.99	0.41 ± 0.96	2
Salem	NH	42.79	71.20	0.49 ± 0.09	0.47 ± 0.04	2
Salisbury	NH	43.38	71.72	-1.22 ± 1.15	-1.19 ± 1.11	2
Sanbornton	NH	43.49	71.59	-1.31 ± 1.37	-1.29 ± 1.34	2
South Lyndeboro	NH	42.88	71.78	-0.38 ± 0.45	-0.38 ± 0.43	2
Spofford	NH	42.91	72.42	0.12 ± 0.36	0.13 ± 0.36	2
Sunapee	NH	43.39	72.09	-0.38 ± 0.09	-0.35 ± 0.07	2
Tamworth	NH	43.87	71.27	-0.47 ± 0.41	-0.46 ± 0.39	3
Tilton	NH	43.44	71.59	-0.63 ± 0.67	-0.63 ± 0.65	3
Troy	NH	42.82	72.18	-0.01 ± 0.36	-0.03 ± 0.33	3
Twin Mountain	NH	44.27	71.55	-0.11 ± 0.54	-0.10 ± 0.53	3
Walpole	NH	43.08	72.43	0.87 ± 0.43	0.82 ± 0.39	5
Warner	NH	43.28	71.82	-0.53 ± 0.62	-0.53 ± 0.60	3
Warren	NH	43.92	71.90	0.09 ± 0.33	0.11 ± 0.33	3
Washington	NH	43.18	72.10	0.30 ± 0.47	0.32 ± 0.45	2
West Lebanon	NH	43.65	72.31	0.28 ± 0.81	0.28 ± 0.78	2
West Ossipee	NH	43.82	71.20	-0.45 ± 0.42	-0.44 ± 0.40	3
West Springfield	NH	43.50	72.05	-0.25 ± 1.38	-0.23 ± 1.35	2
West Stewartstown	NH	44.99	71.53	-0.24 ± 0.41	-0.21 ± 0.35	2
Westmoreland	NH	42.96	72.44	0.06 ± 0.39	0.07 ± 0.39	2
Whitefield	NH	44.38	71.62	0.26 ± 0.39	0.28 ± 0.38	3
Wilmot Flat	NH	43.42	71.90	-0.40 ± 0.57	-0.39 ± 0.53	2
Windham	NH	42.80	71.30	-0.15 ± 0.49	-0.17 ± 0.46	2
Wolfeboro	NH	43.58	71.23	0.17 ± 1.05	0.20 ± 1.06	3
Wonalancet	NH	43.91	71.35	-0.78 ± 0.44	-0.76 ± 0.43	2
Woodstock	NH	43.98	71.68	-0.25 ± 0.07	-0.23 ± 0.09	2
Woodsville	NH	44.13	72.03	0.93 ± 0.79	0.96 ± 0.79	4
Englewood	NJ	40.90	73.97	0.95 ± 0.18	0.80 ± 0.12	2
Trenton	NJ	40.22	74.76	1.38 ± 0.18	1.15 ± 0.13	2
Akron	NY	43.03	78.50	-0.35 ± 1.24	-0.37 ± 1.15	2
Alabama	NY	43.10	78.38	-0.10 ± 0.91	-0.13 ± 0.85	2
Albany	NY	42.65	73.76	1.08 ± 0.29	1.02 ± 0.28	6
Alden	NY	42.90	78.50	-0.64 ± 1.56	-0.66 ± 1.47	2
Alfred	NY	42.26	77.78	0.50 ± 0.28	0.48 ± 0.22	2
Altona	NY	44.89	73.66	-0.12 ± 0.85	-0.13 ± 0.79	2
Amsterdam	NY	42.94	74.19	-0.79 ± 0.21	-0.75 ± 0.20	2
Arcade	NY	42.53	78.41	-0.12 ± 0.70	-0.14 ± 0.66	2
Argyle	NY	43.23	73.50	-0.01 ± 0.15	0.02 ± 0.11	2
Attica	NY	42.86	78.26	0.35 ± 0.65	0.36 ± 0.65	3
Au Sable Forks	NY	44.44	73.68	0.40 ± 0.59	0.45 ± 0.55	3
Auburn	NY	42.93	76.57	0.19 ± 0.26	0.19 ± 0.26	3
Bakers Mills	NY	43.60	74.02	-0.84 ± 1.33	-0.82 ± 1.26	2
Baldwinsville	NY	43.16	76.33	0.71 ± 0.22	0.69 ± 0.18	2
Ballston Lake	NY	42.91	73.87	0.04 ± 0.96	0.01 ± 0.89	2
Batavia	NY	42.00	78.18	0.71 ± 1.16	0.71 ± 1.16	3
Bath	NY	42.33	77.32	0.38 ± 0.90	0.36 ± 0.86	2
Belfast	NY	42.34	78.11	-0.23 ± 0.86	-0.20 ± 0.84	2
Belmont	NY	40.73	73.35	0.05 ± 0.92	0.01 ± 0.82	2
Berlin	NY	42.70	73.38	0.36 ± 0.07	0.36 ± 0.10	2
Binghamton	NY	42.10	75.91	0.69 ± 0.22	0.61 ± 0.20	4
Bloomington	NY	44.42	74.08	-0.21 ± 0.63	-0.19 ± 0.56	2
Bolton Landing	NY	43.55	73.65	-0.71 ± 0.94	-0.68 ± 0.89	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Boonville	NY	43.47	75.33	-0.59 ± 0.45	-0.53 ± 0.45	2
Brainardsville	NY	44.86	74.03	-0.41 ± 0.68	-0.40 ± 0.63	2
Brant Lake	NY	43.68	73.75	-0.32 ± 0.63	-0.29 ± 0.57	2
Broadalbin	NY	43.07	74.22	0.42 ± 0.62	0.40 ± 0.53	2
Brockport	NY	43.21	77.93	-0.09 ± 0.55	-0.11 ± 0.52	4
Buffalo	NY	42.89	78.88	0.20 ± 0.66	0.14 ± 0.60	4
Canastota	NY	43.08	75.75	-0.05 ± 0.53	-0.06 ± 0.49	2
Canton	NY	44.59	75.17	-0.29 ± 0.65	-0.23 ± 0.60	3
Cape Vincent	NY	44.13	76.33	0.19 ± 0.35	0.24 ± 0.33	2
Caroga Lake	NY	43.13	74.48	0.27 ± 0.53	0.27 ± 0.46	2
Carthage	NY	43.98	75.61	-0.24 ± 0.80	-0.17 ± 0.82	2
Castile	NY	42.63	78.05	-0.30 ± 0.56	-0.30 ± 0.52	3
Cato	NY	43.17	76.57	-0.10 ± 0.03	-0.11 ± 0.04	2
Cattaraugus	NY	42.28	78.87	0.63 ± 0.46	0.55 ± 0.37	3
Central Bridge	NY	42.70	74.33	0.04 ± 0.79	0.02 ± 0.74	2
Central Square	NY	43.29	76.15	0.62 ± 1.05	0.55 ± 0.97	2
Chateaugay	NY	44.93	74.08	-0.30 ± 0.26	-0.20 ± 0.22	2
Chatham	NY	42.36	73.60	0.30 ± 0.63	0.29 ± 0.61	2
Chestertown	NY	43.65	73.80	-0.81 ± 1.16	-0.78 ± 1.10	2
Childwold	NY	44.23	74.60	-0.20 ± 0.93	-0.19 ± 0.85	2
Churubusco	NY	44.96	73.93	-0.39 ± 0.58	-0.38 ± 0.54	2
Cincinnatus	NY	42.54	75.90	0.13 ± 0.28	0.11 ± 0.27	2
Clayton	NY	44.24	76.08	0.00 ± 0.61	0.06 ± 0.64	2
Clemons	NY	43.64	73.45	-0.32 ± 0.61	-0.31 ± 0.57	3
Cleverdale	NY	43.47	73.65	-0.16 ± 0.39	-0.13 ± 0.34	2
Clifton Park	NY	42.86	73.77	-0.20 ± 0.65	-0.20 ± 0.61	2
Clinton	NY	43.07	75.38	0.76 ± 0.55	0.72 ± 0.47	2
Cobleskill	NY	42.68	74.48	-0.55 ± 0.15	-0.53 ± 0.14	2
Cold Brook	NY	43.25	75.05	0.48 ± 0.63	0.46 ± 0.55	2
Colton	NY	44.55	74.93	-0.25 ± 0.81	-0.22 ± 0.74	3
Cortland	NY	42.60	76.18	0.87 ± 0.07	0.78 ± 0.15	2
Cossayuna	NY	43.18	73.42	-0.47 ± 0.58	-0.45 ± 0.55	2
Crown Point	NY	43.95	73.42	-0.24 ± 0.38	-0.21 ± 0.33	2
Cuba	NY	42.21	78.26	-0.17 ± 0.75	-0.17 ± 0.70	2
Dale	NY	42.82	78.17	0.74 ± 0.04	0.73 ± 0.04	2
Dannemora	NY	44.72	73.73	-0.10 ± 0.35	-0.08 ± 0.31	4
Dansville	NY	42.63	77.70	-0.08 ± 0.53	-0.10 ± 0.49	3
Delmar	NY	42.62	73.83	0.77 ± 0.38	0.72 ± 0.30	2
Deposit	NY	42.06	75.42	0.94 ± 0.14	0.89 ± 0.15	2
Diamond Point	NY	43.47	73.68	0.33 ± 0.92	0.36 ± 0.87	2
Dolgeville	NY	43.10	74.77	0.69 ± 0.41	0.64 ± 0.36	3
Dundee	NY	42.53	76.98	0.00 ± 0.34	-0.02 ± 0.31	2
East Aurora	NY	42.75	78.60	0.78 ± 0.22	0.69 ± 0.19	2
East Chatham	NY	42.42	73.53	0.58 ± 0.06	0.57 ± 0.09	2
East Greenwich	NY	43.15	73.40	0.86 ± 0.87	0.85 ± 0.80	2
East Nassau	NY	42.51	73.51	0.35 ± 0.77	0.30 ± 0.70	2
Elizabethtown	NY	44.22	73.60	-0.16 ± 0.64	-0.13 ± 0.61	4
Ellenburg	NY	44.90	73.85	-0.23 ± 1.97	-0.19 ± 1.89	2
Ellenville	NY	41.72	74.40	1.70 ± 0.53	1.63 ± 0.49	2
Elma	NY	42.85	78.63	-0.19 ± 1.17	-0.21 ± 1.08	2
Elmira	NY	42.09	76.81	0.59 ± 0.37	0.55 ± 0.36	3
Elnora	NY	42.88	73.82	-0.22 ± 0.69	-0.21 ± 0.65	2
Fillmore	NY	42.47	78.11	-0.51 ± 0.83	-0.47 ± 0.81	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Fonda	NY	42.95	74.40	0.56 ± 0.58	0.52 ± 0.49	2
Forestport	NY	43.45	75.20	0.48 ± 0.71	0.46 ± 0.63	2
Fort Ann	NY	43.40	73.48	-0.12 ± 1.23	-0.09 ± 1.19	2
Fort Covington	NY	44.99	74.50	0.49 ± 1.11	0.48 ± 0.96	2
Fort Edward	NY	43.27	73.58	-0.49 ± 0.76	-0.44 ± 0.74	2
Fort Hunter	NY	42.74	73.93	0.78 ± 0.81	0.78 ± 0.76	2
Fulton	NY	43.33	76.40	-0.27 ± 0.20	-0.26 ± 0.19	3
Gansevoort	NY	43.18	73.65	0.54 ± 0.74	0.55 ± 0.69	2
Geneva	NY	42.88	76.98	0.03 ± 0.16	0.01 ± 0.15	2
Glens Falls	NY	43.31	73.65	1.01 ± 0.38	0.96 ± 0.36	5
Gloversville	NY	43.05	74.35	0.89 ± 0.56	0.85 ± 0.52	3
Gouverneur	NY	44.33	75.47	0.34 ± 0.31	0.37 ± 0.26	3
Gowanda	NY	42.46	78.94	1.22 ± 0.35	1.08 ± 0.20	2
Granville	NY	43.41	73.26	0.38 ± 0.55	0.41 ± 0.52	2
Greene	NY	42.33	75.76	0.25 ± 0.30	0.22 ± 0.28	2
Greenwich	NY	43.09	73.50	0.99 ± 0.54	0.97 ± 0.50	3
Groton	NY	42.60	76.37	0.66 ± 0.29	0.59 ± 0.27	3
Groveland	NY	42.70	77.75	0.19 ± 0.45	0.18 ± 0.39	2
Guilderland	NY	42.70	73.90	-0.06 ± 0.65	-0.07 ± 0.60	2
Hadley	NY	43.32	73.85	0.46 ± 0.07	0.48 ± 0.12	2
Hague	NY	43.75	73.50	0.30 ± 0.53	0.31 ± 0.50	3
Hamilton	NY	42.83	75.55	0.02 ± 0.48	0.04 ± 0.48	2
Hancock	NY	41.95	75.28	0.50 ± 0.41	0.45 ± 0.38	2
Hartwick	NY	42.65	75.03	0.82 ± 1.39	0.78 ± 1.32	2
Hogansburg	NY	44.97	74.67	-0.95 ± 0.04	-0.86 ± 0.01	2
Hoosick	NY	42.86	73.33	-0.27 ± 0.44	-0.26 ± 0.41	2
Hoosick Falls	NY	42.90	73.35	-0.33 ± 0.27	-0.32 ± 0.25	3
Hornell	NY	42.32	77.66	0.90 ± 0.47	0.82 ± 0.42	4
Hudson	NY	42.25	73.78	0.37 ± 0.39	0.35 ± 0.40	2
Hudson Falls	NY	43.28	73.60	-0.04 ± 0.24	-0.01 ± 0.19	2
Ilion	NY	43.02	75.07	0.62 ± 0.52	0.59 ± 0.44	2
Inlet	NY	43.75	74.80	-0.01 ± 0.98	-0.01 ± 0.89	2
Ithaca	NY	42.44	76.50	0.79 ± 0.47	0.73 ± 0.44	4
Jay	NY	44.37	73.73	0.41 ± 1.08	0.43 ± 1.02	2
Johnsburg	NY	43.62	73.97	0.77 ± 1.89	0.68 ± 1.71	2
Johnsonville	NY	42.90	73.50	-0.28 ± 0.55	-0.28 ± 0.51	2
Johnstown	NY	43.01	74.37	0.33 ± 0.74	0.34 ± 0.70	3
Keene	NY	44.25	73.92	-0.30 ± 0.79	-0.28 ± 0.72	2
Keene Valley	NY	44.20	73.78	-0.06 ± 0.47	-0.06 ± 0.42	3
Keeseville	NY	44.50	73.48	0.39 ± 0.59	0.42 ± 0.59	4
Kingston	NY	41.92	74.00	0.59 ± 0.42	0.56 ± 0.44	2
Lake George	NY	43.42	73.71	-0.63 ± 0.92	-0.61 ± 0.86	2
Lake Hill	NY	42.07	74.20	0.70 ± 0.82	0.62 ± 0.74	2
Lake Luzerne	NY	43.32	73.83	0.24 ± 0.37	0.22 ± 0.32	3
Lake Placid	NY	44.29	73.99	-0.44 ± 1.05	-0.39 ± 1.00	3
Le Roy	NY	42.98	78.00	-0.59 ± 1.25	-0.59 ± 1.18	2
Little Falls	NY	43.05	74.87	-0.36 ± 0.33	-0.32 ± 0.35	2
Lockport	NY	43.17	78.69	-0.69 ± 1.06	-0.69 ± 0.99	2
Lyon Mountain	NY	44.72	73.92	-0.02 ± 0.25	0.00 ± 0.20	2
Lyons	NY	43.06	76.98	0.35 ± 0.22	0.35 ± 0.25	2
Lyons Falls	NY	43.62	75.36	-0.21 ± 0.99	-0.21 ± 0.93	2
Mallory	NY	43.32	76.12	0.40 ± 0.13	0.40 ± 0.15	2
Malone	NY	44.85	74.29	-0.03 ± 0.11	0.07 ± 0.15	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Maplecrest	NY	42.28	74.19	0.31 ± 0.61	0.27 ± 0.57	2
Marcellus	NY	42.98	76.34	0.35 ± 0.54	0.32 ± 0.52	2
Marion	NY	43.13	77.18	-0.20 ± 0.41	-0.20 ± 0.37	2
Massena	NY	44.93	74.89	0.31 ± 0.20	0.35 ± 0.14	3
Mayfield	NY	43.10	74.27	-0.27 ± 0.97	-0.27 ± 0.90	2
Medina	NY	43.23	78.38	-0.72 ± 0.06	-0.68 ± 0.04	2
Middle Falls	NY	43.10	73.52	-0.42 ± 0.63	-0.41 ± 0.59	2
Middle Granville	NY	43.43	73.28	-0.12 ± 0.07	-0.09 ± 0.04	2
Middle Grove	NY	43.08	73.58	0.05 ± 1.21	0.06 ± 1.16	2
Minerva	NY	43.78	73.98	-0.02 ± 0.50	0.01 ± 0.43	2
Minetto	NY	43.40	76.48	0.65 ± 0.08	0.58 ± 0.15	2
Mineville	NY	44.09	73.52	-0.28 ± 0.29	-0.24 ± 0.25	3
Mooers	NY	44.96	73.58	-0.43 ± 0.42	-0.41 ± 0.39	2
Moriah	NY	44.05	73.50	0.79 ± 0.50	0.81 ± 0.44	2
Moriah Center	NY	44.07	73.50	-0.06 ± 0.32	-0.05 ± 0.28	3
Morrisonville	NY	44.70	73.57	-0.05 ± 0.10	-0.02 ± 0.06	2
Naples	NY	42.62	77.42	-0.14 ± 0.64	-0.15 ± 0.59	2
New Lebanon Center	NY	42.47	73.42	0.38 ± 0.75	0.32 ± 0.68	2
Newark	NY	43.05	77.09	-0.36 ± 0.18	-0.36 ± 0.15	2
Newport	NY	43.18	75.00	0.00 ± 1.10	-0.02 ± 1.02	2
Niagara Falls	NY	43.10	79.06	0.13 ± 0.40	0.12 ± 0.33	2
Norfolk	NY	44.80	74.99	0.58 ± 0.76	0.59 ± 0.63	2
North Hudson	NY	43.98	73.72	-0.37 ± 0.72	-0.34 ± 0.66	2
North River	NY	43.73	74.08	0.48 ± 1.05	0.50 ± 0.97	2
North Syracuse	NY	43.13	76.12	0.67 ± 0.99	0.60 ± 0.91	2
Northville	NY	43.22	74.18	0.10 ± 0.51	0.11 ± 0.45	2
Norwich	NY	42.55	75.55	0.37 ± 0.63	0.35 ± 0.61	3
Norwood	NY	44.75	75.00	-0.55 ± 0.48	-0.45 ± 0.44	2
Nunda	NY	42.58	77.94	0.41 ± 0.39	0.37 ± 0.34	3
Ogdensburg	NY	44.69	75.50	-0.02 ± 0.80	0.06 ± 0.84	2
Olean	NY	42.08	78.43	0.85 ± 0.79	0.74 ± 0.72	3
Oneida	NY	43.10	75.67	0.45 ± 0.09	0.44 ± 0.05	2
Oneonta	NY	42.45	75.06	0.34 ± 0.36	0.30 ± 0.33	3
Oswego	NY	43.45	76.52	0.38 ± 0.20	0.39 ± 0.20	3
Owego	NY	42.11	76.26	0.50 ± 0.26	0.41 ± 0.21	3
Oxford	NY	41.35	74.22	0.68 ± 0.86	0.63 ± 0.81	2
Painted Post	NY	42.17	77.12	0.16 ± 0.40	0.13 ± 0.36	2
Palmyra	NY	43.07	77.25	0.79 ± 0.48	0.79 ± 0.44	2
Paradox	NY	43.90	73.65	-0.27 ± 0.70	-0.25 ± 0.63	2
Parishville	NY	44.63	74.81	-0.68 ± 0.93	-0.64 ± 0.86	3
Pavilion	NY	42.88	78.02	-1.70 ± 0.22	-1.65 ± 0.20	2
Penn Yan	NY	42.58	77.03	0.96 ± 0.38	0.95 ± 0.34	2
Pennellville	NY	43.28	76.27	1.17 ± 0.53	1.08 ± 0.43	2
Peru	NY	44.58	73.53	0.78 ± 1.03	0.71 ± 0.90	2
Phelps	NY	42.95	77.05	0.34 ± 0.86	0.34 ± 0.83	2
Pittsford	NY	43.11	77.55	0.20 ± 0.21	0.20 ± 0.16	2
Plattsburgh	NY	44.70	73.45	-0.07 ± 0.49	-0.05 ± 0.47	4
Port Henry	NY	44.05	73.47	-0.57 ± 0.46	-0.52 ± 0.42	3
Port Leyden	NY	43.58	75.35	0.53 ± 0.72	0.49 ± 0.62	2
Portageville	NY	42.57	78.03	0.79 ± 0.00	0.71 ± 0.01	2
Porter Corners	NY	43.13	73.88	0.10 ± 1.34	0.11 ± 1.29	2
Potsdam	NY	44.67	74.99	1.04 ± 1.20	1.02 ± 1.12	2
Prattsburg	NY	42.53	77.28	0.43 ± 1.05	0.41 ± 1.00	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Prospect	NY	43.30	75.15	0.01 ± 1.15	-0.01 ± 1.07	2
Pulaski	NY	43.57	76.12	0.30 ± 0.09	0.32 ± 0.08	3
Raquette Lake	NY	43.82	74.67	-0.62 ± 0.76	-0.59 ± 0.70	3
Redford	NY	44.62	73.80	0.16 ± 0.29	0.16 ± 0.25	3
Rensselaer	NY	42.65	73.73	0.46 ± 0.07	0.45 ± 0.03	2
Richfield Springs	NY	42.85	74.98	1.19 ± 0.95	1.16 ± 0.88	2
Richmondville	NY	42.63	74.57	0.17 ± 0.81	0.15 ± 0.75	2
Riparius	NY	43.67	73.90	-0.37 ± 0.77	-0.34 ± 0.71	2
Ripley	NY	42.26	79.71	0.19 ± 0.48	0.20 ± 0.48	2
Rochester	NY	43.16	77.61	0.41 ± 0.25	0.36 ± 0.22	5
Rome	NY	43.22	75.47	0.74 ± 0.59	0.70 ± 0.51	2
Rouses Point	NY	44.99	73.37	-0.54 ± 0.20	-0.49 ± 0.18	3
Sackets Harbor	NY	43.95	76.12	-0.89 ± 0.27	-0.84 ± 0.25	2
Saint Johnsville	NY	43.00	74.67	0.59 ± 0.63	0.56 ± 0.54	2
Saint Regis Falls	NY	44.67	74.55	-1.15 ± 0.21	-1.05 ± 0.24	2
Salamanca	NY	42.16	78.71	0.70 ± 0.34	0.58 ± 0.27	4
Salem	NY	43.18	73.33	0.35 ± 0.35	0.34 ± 0.28	2
Saranac	NY	44.65	73.75	0.17 ± 0.47	0.18 ± 0.41	2
Saranac Lake	NY	44.33	74.12	-0.18 ± 0.89	-0.17 ± 0.81	2
Saratoga Springs	NY	43.08	73.78	0.55 ± 0.45	0.54 ± 0.43	4
Schenectady	NY	42.80	73.92	-0.15 ± 0.34	-0.12 ± 0.35	2
Schuylerville	NY	43.10	73.57	0.59 ± 0.65	0.61 ± 0.61	2
Sherburne	NY	42.68	75.50	0.12 ± 0.53	0.13 ± 0.52	2
Sherman	NY	42.16	79.60	-0.30 ± 0.00	-0.28 ± 0.00	2
Shushan	NY	43.08	73.33	0.08 ± 0.99	0.10 ± 0.96	2
Sodus Point	NY	43.27	76.98	0.34 ± 0.72	0.34 ± 0.70	2
South Colton	NY	44.52	74.88	0.37 ± 0.77	0.36 ± 0.69	2
South Schroon	NY	43.80	73.92	-0.54 ± 0.90	-0.51 ± 0.83	2
Speculator	NY	43.50	74.36	-0.53 ± 0.43	-0.45 ± 0.42	2
Spencerport	NY	43.20	77.80	0.13 ± 0.38	0.13 ± 0.32	2
Springfield Center	NY	42.83	74.88	0.66 ± 0.43	0.63 ± 0.37	2
Springville	NY	42.51	78.67	0.62 ± 0.34	0.52 ± 0.29	5
Stockton	NY	42.32	79.36	1.33 ± 1.39	1.18 ± 1.24	2
Stony Creek	NY	43.42	73.93	-0.13 ± 0.56	-0.10 ± 0.50	2
Syracuse	NY	43.05	76.15	0.76 ± 0.46	0.72 ± 0.43	4
Thousand Island	NY	44.28	76.03	-0.65 ± 0.00	-0.61 ± 0.00	2
Ticonderoga	NY	43.85	73.43	-0.32 ± 0.34	-0.30 ± 0.31	4
Tonawanda	NY	43.02	78.87	-0.52 ± 1.10	-0.48 ± 1.08	2
Tribes Hill	NY	42.95	74.28	0.35 ± 0.38	0.34 ± 0.32	2
Troy	NY	42.73	73.72	0.32 ± 0.07	0.29 ± 0.08	3
Tupper Lake	NY	44.23	74.45	0.19 ± 0.85	0.24 ± 0.79	3
Upper Jay	NY	44.33	73.78	-0.15 ± 0.65	-0.12 ± 0.58	2
Utica	NY	43.10	75.23	-0.31 ± 0.59	-0.27 ± 0.58	2
Varysburg	NY	42.76	78.31	0.23 ± 0.32	0.28 ± 0.34	2
Vernon Center	NY	43.05	75.50	0.39 ± 1.10	0.33 ± 1.00	2
Voorheesville	NY	42.65	73.92	-0.01 ± 0.63	-0.02 ± 0.58	2
Waddington	NY	44.86	75.20	-0.33 ± 0.51	-0.24 ± 0.55	2
Wadhams	NY	44.22	73.45	0.35 ± 0.91	0.38 ± 0.86	2
Warrensburg	NY	43.47	73.78	-0.17 ± 0.49	-0.15 ± 0.44	2
Warsaw	NY	42.75	78.13	0.13 ± 0.86	0.18 ± 0.88	2
Watertown	NY	43.97	75.91	0.76 ± 0.33	0.75 ± 0.28	3
Wells	NY	43.38	74.28	-0.54 ± 1.21	-0.53 ± 1.14	2
West Bloomfield	NY	42.90	77.53	0.20 ± 1.25	0.20 ± 1.20	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Whallonsburg	NY	44.25	73.40	-0.60 ± 0.85	-0.58 ± 0.80	2
Whippleville	NY	44.81	74.26	-0.39 ± 0.79	-0.38 ± 0.74	2
Whitehall	NY	43.55	73.40	0.25 ± 0.42	0.29 ± 0.40	3
Wilmington	NY	44.38	73.82	0.03 ± 0.40	0.03 ± 0.36	3
Winthrop	NY	44.79	74.79	-0.81 ± 0.71	-0.71 ± 0.67	2
Witherbee	NY	44.08	73.53	-0.24 ± 0.50	-0.21 ± 0.44	2
Wyoming	NY	42.83	78.09	0.84 ± 0.06	0.81 ± 0.10	3
York	NY	42.87	77.89	0.01 ± 0.62	0.01 ± 0.55	2
Yorkshire	NY	42.53	78.47	-0.02 ± 0.57	-0.02 ± 0.51	2
Akron	OH	41.08	81.50	0.52 ± 0.71	0.48 ± 0.61	2
Albany	OH	39.23	82.20	0.37 ± 0.45	0.32 ± 0.42	2
Ashland	OH	40.82	82.28	0.24 ± 0.65	0.20 ± 0.59	2
Ashtabula	OH	41.90	80.78	-0.09 ± 0.64	-0.08 ± 0.58	2
Bay Village	OH	41.49	81.92	-0.74 ± 0.50	-0.69 ± 0.50	2
Bethel	OH	38.96	84.08	-0.11 ± 1.00	-0.06 ± 1.00	2
Botkins	OH	40.47	84.18	1.14 ± 0.71	1.01 ± 0.63	2
Bridgeport	OH	40.08	80.74	0.53 ± 0.48	0.47 ± 0.43	2
Bucyrus	OH	40.81	82.98	0.34 ± 0.41	0.29 ± 0.37	2
Cambridge	OH	40.03	81.58	0.86 ± 0.22	0.82 ± 0.25	2
Canton	OH	40.83	81.36	1.34 ± 0.76	1.16 ± 0.61	3
Chillicothe	OH	39.33	82.97	1.71 ± 0.11	1.61 ± 0.01	2
Cincinnati	OH	39.11	84.51	0.63 ± 0.39	0.59 ± 0.32	2
Cleveland	OH	41.49	81.69	1.48 ± 1.21	1.30 ± 1.07	3
Columbus	OH	39.96	83.00	1.76 ± 0.62	1.54 ± 0.50	4
Crestline	OH	40.79	82.73	0.34 ± 0.44	0.29 ± 0.39	2
Dayton	OH	39.75	84.18	1.81 ± 1.99	1.49 ± 1.68	2
Defiance	OH	41.28	84.36	0.88 ± 0.15	0.78 ± 0.12	2
Dover	OH	40.52	81.48	1.24 ± 1.70	1.20 ± 1.63	2
Eaton	OH	39.75	84.63	1.14 ± 0.12	1.05 ± 0.09	3
Elyria	OH	41.36	82.11	0.66 ± 0.59	0.61 ± 0.50	2
Fremont	OH	41.35	83.11	1.01 ± 1.08	0.95 ± 1.02	2
Galion	OH	40.73	82.78	0.35 ± 0.38	0.30 ± 0.34	2
Gallipolis	OH	38.81	82.20	-0.23 ± 0.06	-0.22 ± 0.06	2
Glouster	OH	39.16	82.08	0.49 ± 0.36	0.44 ± 0.33	2
Greenwich	OH	41.03	82.52	0.30 ± 0.67	0.25 ± 0.61	2
Jackson	OH	39.52	82.62	0.18 ± 0.28	0.15 ± 0.26	2
Kenton	OH	40.65	83.61	1.02 ± 0.55	0.96 ± 0.54	2
Langsville	OH	39.05	82.18	0.39 ± 0.55	0.34 ± 0.51	2
Mansfield	OH	40.78	82.53	0.79 ± 0.00	0.75 ± 0.05	2
Marietta	OH	39.40	81.50	0.51 ± 0.10	0.45 ± 0.09	2
Massillon	OH	40.79	81.53	0.67 ± 0.41	0.62 ± 0.33	2
Mount Gilead	OH	40.56	82.83	0.85 ± 0.26	0.80 ± 0.28	2
Napoleon	OH	41.39	84.12	0.85 ± 0.24	0.76 ± 0.21	2
Nelsonville	OH	39.50	82.23	0.33 ± 0.30	0.29 ± 0.28	2
New Lexington	OH	39.75	82.20	0.32 ± 0.12	0.28 ± 0.12	2
New Philadelphia	OH	40.49	81.45	2.13 ± 0.95	1.94 ± 0.80	3
Newark	OH	40.06	82.41	0.31 ± 0.05	0.27 ± 0.04	2
Painesville	OH	41.73	81.26	-0.05 ± 0.90	-0.05 ± 0.83	2
Paulding	OH	41.14	84.58	1.19 ± 0.27	1.07 ± 0.24	3
Portsmouth	OH	38.75	83.00	0.61 ± 0.44	0.62 ± 0.47	2
Rockbridge	OH	39.58	82.53	0.32 ± 0.33	0.28 ± 0.31	2
Sherrodsville	OH	40.49	81.24	0.29 ± 0.72	0.24 ± 0.65	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Sidney	OH	40.28	84.16	1.07 ± 0.22	1.00 ± 0.24	2
Springfield	OH	39.92	83.81	1.23 ± 0.73	1.20 ± 0.75	2
Steubenville	OH	40.37	80.62	0.46 ± 0.72	0.40 ± 0.65	2
Toledo	OH	41.65	83.53	1.24 ± 1.02	1.15 ± 0.96	2
Upper Sandusky	OH	40.83	83.28	0.50 ± 0.23	0.44 ± 0.20	2
Wapakoneta	OH	40.57	84.20	1.16 ± 0.35	1.09 ± 0.35	2
Waterford	OH	40.55	82.62	1.07 ± 0.57	1.00 ± 0.55	2
Waverly	OH	39.13	82.98	1.24 ± 0.17	1.20 ± 0.23	2
Wilmington	OH	39.45	83.82	1.32 ± 0.18	1.27 ± 0.24	2
Wooster	OH	40.81	81.93	0.68 ± 0.27	0.64 ± 0.20	2
Youngstown	OH	41.09	80.65	0.70 ± 0.79	0.64 ± 0.68	2
Zanesville	OH	39.94	82.00	0.84 ± 0.59	0.80 ± 0.58	2
Apsley	ONT.	44.75	78.10	0.63 ± 0.02	0.53 ± 0.05	2
Aylmer	ONT.	42.77	80.98	0.79 ± 1.25	0.62 ± 1.06	2
Bancroft	ONT.	45.08	77.87	0.58 ± 0.07	0.50 ± 0.08	3
Barrie	ONT.	44.40	79.67	0.87 ± 0.29	0.75 ± 0.24	3
Belleville	ONT.	44.17	77.37	0.62 ± 0.51	0.55 ± 0.46	3
Blenheim	ONT.	42.33	82.00	0.87 ± 1.58	0.68 ± 1.36	2
Bracebridge	ONT.	45.03	79.31	1.38 ± 0.19	1.23 ± 0.18	2
Brampton	ONT.	43.68	79.81	0.73 ± 0.11	0.70 ± 0.15	2
Brantford	ONT.	46.80	80.27	0.33 ± 0.32	0.26 ± 0.26	3
Burlington	ONT.	43.32	79.78	0.89 ± 0.53	0.79 ± 0.47	2
Chatham	ONT.	42.40	82.18	1.03 ± 0.87	0.87 ± 0.75	3
Cornwall	ONT.	45.03	74.73	-0.20 ± 0.64	-0.17 ± 0.63	2
Dundas	ONT.	43.27	79.97	1.70 ± 0.90	1.53 ± 0.78	2
Eganville	ONT.	45.55	77.10	0.27 ± 0.18	0.20 ± 0.19	2
Elgin	ONT.	44.60	76.22	-0.17 ± 0.24	-0.19 ± 0.20	2
Etobicoke	ONT.	43.70	79.53	0.98 ± 0.29	0.88 ± 0.25	2
Gravenhurst	ONT.	44.92	79.37	1.12 ± 0.13	0.95 ± 0.16	2
Haliburton	ONT.	45.05	78.52	0.65 ± 0.02	0.55 ± 0.03	2
Hamilton	ONT.	43.25	79.83	0.83 ± 0.38	0.73 ± 0.30	3
Hanover	ONT.	44.15	81.03	1.35 ± 0.56	1.20 ± 0.48	2
Kingston	ONT.	44.23	76.50	0.06 ± 0.38	0.04 ± 0.36	2
Kitchener	ONT.	43.45	80.55	1.96 ± 0.26	1.80 ± 0.40	2
Lindsay	ONT.	44.35	78.73	0.61 ± 0.30	0.51 ± 0.26	3
London	ONT.	42.98	81.23	0.87 ± 0.66	0.73 ± 0.55	3
Midland	ONT.	44.75	79.88	1.32 ± 0.13	1.12 ± 0.16	2
Millbrook	ONT.	44.15	78.45	0.34 ± 0.55	0.26 ± 0.46	2
Minden	ONT.	44.92	78.72	0.87 ± 0.10	0.73 ± 0.12	2
Niagara Falls	ONT.	43.10	79.07	0.07 ± 1.32	-0.03 ± 1.17	2
North Bay	ONT.	46.32	79.47	1.61 ± 0.01	1.44 ± 0.01	2
Norwood	ONT.	44.38	77.98	0.61 ± 0.07	0.50 ± 0.03	2
Oakville	ONT.	43.45	79.68	0.05 ± 0.43	0.04 ± 0.39	2
Omeme	ONT.	44.30	78.55	0.85 ± 0.03	0.71 ± 0.01	2
Orangeville	ONT.	43.92	80.10	0.83 ± 0.68	0.74 ± 0.60	2
Orillia	ONT.	44.62	79.42	0.72 ± 0.35	0.60 ± 0.26	2
Oshawa	ONT.	43.90	78.85	0.29 ± 0.44	0.23 ± 0.38	4
Ottawa	ONT.	45.42	75.70	2.03 ± 1.82	1.78 ± 1.58	3
Owen Sound	ONT.	44.57	80.93	1.51 ± 0.23	1.31 ± 0.19	3
Pakenham	ONT.	45.33	76.28	-0.08 ± 0.07	-0.10 ± 0.08	2
Peterborough	ONT.	44.30	78.32	0.88 ± 0.06	0.77 ± 0.12	2
Port Dover	ONT.	42.78	80.20	0.79 ± 1.02	0.64 ± 0.85	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Port Hope	ONT.	43.95	78.30	0.28 ± 0.35	0.25 ± 0.32	3
Port Perry	ONT.	44.10	78.95	0.92 ± 0.08	0.84 ± 0.05	2
Port Stanley	ONT.	42.66	81.23	0.50 ± 0.10	0.49 ± 0.06	2
Saint Catharines	ONT.	43.17	79.25	0.79 ± 0.33	0.76 ± 0.31	3
Saint Thomas	ONT.	42.77	81.20	0.06 ± 0.51	0.04 ± 0.48	2
Sarnia	ONT.	42.97	82.38	1.26 ± 0.72	1.11 ± 0.63	3
Scarborough	ONT.	43.78	79.25	0.98 ± 0.16	0.88 ± 0.13	2
Simcoe	ONT.	42.83	80.30	0.80 ± 1.02	0.65 ± 0.86	2
St Catharines	ONT.	43.17	79.25	1.31 ± 0.11	1.12 ± 0.05	2
Toronto	ONT.	43.67	79.38	0.71 ± 0.39	0.61 ± 0.34	4
Warkworth	ONT.	44.20	77.88	0.59 ± 0.12	0.48 ± 0.07	2
Welland	ONT.	42.98	79.25	0.06 ± 0.28	0.05 ± 0.26	2
Woodstock	ONT.	43.12	80.77	0.18 ± 0.12	0.17 ± 0.11	3
Butler	PA	40.84	79.90	0.24 ± 0.56	0.21 ± 0.52	2
Corry	PA	41.93	79.65	0.25 ± 0.34	0.26 ± 0.34	2
Cowanesque	PA	41.93	77.49	0.90 ± 0.08	0.80 ± 0.08	2
Erie	PA	42.13	80.08	1.34 ± 0.33	1.19 ± 0.27	5
Lake City	PA	42.08	80.35	0.42 ± 1.46	0.33 ± 1.32	2
Lock Haven	PA	41.13	77.44	0.75 ± 0.29	0.68 ± 0.26	2
Meadville	PA	41.63	80.15	0.77 ± 0.58	0.70 ± 0.50	3
Mercer	PA	41.23	80.23	-0.11 ± 0.76	-0.12 ± 0.71	2
New Castle	PA	41.00	80.35	1.59 ± 0.88	1.48 ± 0.84	4
Oil City	PA	41.43	79.71	0.65 ± 0.77	0.53 ± 0.65	3
Pittsburgh	PA	40.44	80.00	1.31 ± 0.75	1.11 ± 0.63	3
Sayre	PA	41.98	76.53	0.83 ± 0.39	0.79 ± 0.41	2
Smethport	PA	41.80	78.43	0.53 ± 0.90	0.52 ± 0.87	2
Tionesta	PA	41.50	79.45	0.45 ± 0.28	0.45 ± 0.29	2
Titusville	PA	41.61	79.66	0.35 ± 0.19	0.35 ± 0.21	2
Union City	PA	41.90	79.85	-0.28 ± 0.32	-0.27 ± 0.30	2
Warren	PA	41.81	79.26	0.25 ± 0.49	0.24 ± 0.47	2
Williamsport	PA	41.23	77.03	0.74 ± 0.26	0.67 ± 0.22	2
Berthierville	QUÉ.	46.08	73.17	-0.16 ± 0.37	-0.11 ± 0.29	2
Buckingham	QUÉ.	45.58	75.42	-0.33 ± 0.18	-0.33 ± 0.18	2
Chambly	QUÉ.	45.45	73.30	-0.58 ± 0.31	-0.55 ± 0.28	3
Chicoutimi	QUÉ.	48.43	71.07	-2.59 ± 0.50	-2.34 ± 0.50	2
Coaticook	QUÉ.	45.13	71.80	-0.17 ± 0.26	-0.12 ± 0.19	2
Daveluyville	QUÉ.	46.20	72.13	-0.72 ± 1.26	-0.67 ± 1.15	2
Disraeli	QUÉ.	45.90	71.35	-1.82 ± 0.23	-1.70 ± 0.18	2
Drummondville	QUÉ.	45.88	72.48	-0.72 ± 0.96	-0.67 ± 0.87	2
Gaspe	QUÉ.	48.83	64.48	-0.91 ± 0.01	-0.70 ± 0.17	2
Gracefield	QUÉ.	46.10	76.05	0.48 ± 0.09	0.46 ± 0.12	2
Grenville	QUÉ.	45.63	74.60	-0.04 ± 0.22	-0.02 ± 0.24	2
Joliette	QUÉ.	46.02	73.45	0.36 ± 0.24	0.41 ± 0.31	2
Knowlton	QUÉ.	45.25	72.67	0.74 ± 0.02	0.79 ± 0.03	2
La Tuque	QUÉ.	47.43	72.78	0.81 ± 0.49	0.84 ± 0.41	3
Lachine	QUÉ.	45.43	73.68	-0.74 ± 0.32	-0.69 ± 0.29	2
Lachute	QUÉ.	45.65	74.33	-0.59 ± 0.33	-0.56 ± 0.30	2
Matane	QUÉ.	48.85	67.53	-1.13 ± 1.12	-0.91 ± 1.14	2
Montreal	QUÉ.	45.50	73.60	-0.15 ± 0.03	-0.11 ± 0.08	2
Nicolet	QUÉ.	46.22	72.62	-0.62 ± 0.18	-0.54 ± 0.11	2
Portneuf	QUÉ.	46.70	71.88	0.76 ± 0.14	0.81 ± 0.02	2
Rigaud	QUÉ.	45.48	74.30	-0.65 ± 0.23	-0.61 ± 0.21	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Scotstown	QUÉ.	45.53	71.28	-0.19 ± 1.38	-0.06 ± 1.41	2
Shawinigan	QUÉ.	46.55	72.75	0.86 ± 0.24	0.90 ± 0.36	2
Sherbrooke	QUÉ.	45.42	71.90	-0.63 ± 0.48	-0.57 ± 0.46	3
Sorel	QUÉ.	46.03	73.12	-0.17 ± 0.35	-0.12 ± 0.27	2
Stratford Centre	QUÉ.	45.78	71.27	0.06 ± 0.95	0.19 ± 0.99	2
Terrebonne	QUÉ.	45.70	73.63	0.32 ± 1.51	0.37 ± 1.47	2
Waterloo	QUÉ.	45.35	72.52	-0.25 ± 0.14	-0.19 ± 0.08	2
Yamachiche	QUÉ.	46.27	72.83	0.84 ± 0.42	0.88 ± 0.52	2
Charlestown	RI	41.38	71.64	1.08 ± 0.45	0.93 ± 0.43	2
Hope	RI	41.73	71.57	0.62 ± 0.10	0.55 ± 0.08	2
North Scituate	RI	41.83	71.58	0.54 ± 0.13	0.48 ± 0.11	2
Oakland	RI	41.97	71.65	0.44 ± 0.13	0.39 ± 0.11	2
Providence	RI	41.83	71.42	1.20 ± 0.40	1.15 ± 0.42	4
Gaffney	SC	35.07	81.65	2.07 ± 0.69	1.89 ± 0.54	2
Pickens	SC	34.85	82.71	0.91 ± 0.85	0.87 ± 0.82	2
Union	SC	34.71	81.63	1.19 ± 0.44	1.13 ± 0.44	2
Alamo	TN	35.79	89.12	0.23 ± 0.18	0.26 ± 0.17	2
Alcoa	TN	35.80	83.98	-0.24 ± 0.75	-0.24 ± 0.68	2
Bath Springs	TN	35.44	88.09	0.59 ± 0.07	0.54 ± 0.06	2
Beech Bluff	TN	35.60	88.63	0.36 ± 0.10	0.35 ± 0.11	2
Bemis	TN	35.58	88.82	0.00 ± 0.17	-0.01 ± 0.16	2
Big Rock	TN	36.58	87.76	0.51 ± 0.02	0.47 ± 0.02	2
Blountville	TN	36.53	82.33	-0.10 ± 0.36	-0.10 ± 0.32	2
Braden	TN	35.38	89.57	-0.60 ± 0.18	-0.57 ± 0.20	2
Brighton	TN	35.49	89.73	-0.32 ± 0.18	-0.28 ± 0.17	3
Brownsville	TN	35.59	89.26	0.10 ± 0.21	0.13 ± 0.20	2
Brunswick	TN	35.27	89.77	-0.16 ± 0.56	-0.12 ± 0.57	2
Buchanan	TN	36.43	88.20	0.09 ± 0.16	0.06 ± 0.17	2
Bumpus Mills	TN	36.60	87.83	0.32 ± 0.12	0.27 ± 0.13	2
Burlison	TN	35.56	89.77	-0.56 ± 0.19	-0.51 ± 0.18	2
Camden	TN	36.06	88.10	0.14 ± 0.16	0.11 ± 0.16	3
Chattanooga	TN	35.05	85.31	1.36 ± 0.09	1.19 ± 0.08	3
Clarksville	TN	36.53	87.36	0.32 ± 0.48	0.29 ± 0.45	2
Clinton	TN	36.10	84.13	0.21 ± 1.27	0.17 ± 1.15	2
Collierville	TN	35.05	89.66	0.69 ± 0.98	0.72 ± 0.96	2
Como	TN	36.29	88.51	-0.16 ± 0.15	-0.17 ± 0.16	2
Cookeville	TN	36.16	85.50	0.69 ± 0.17	0.61 ± 0.16	2
Covington	TN	35.56	89.65	0.09 ± 0.30	0.11 ± 0.29	4
Dresden	TN	36.29	88.71	-0.31 ± 0.13	-0.31 ± 0.14	2
Drummonds	TN	35.46	89.91	-0.06 ± 0.11	-0.01 ± 0.12	2
Dukedom	TN	36.50	88.72	0.20 ± 0.44	0.20 ± 0.43	2
Dyer	TN	36.05	89.44	-0.41 ± 0.26	-0.38 ± 0.26	2
Dyersburg	TN	36.03	89.39	0.12 ± 0.53	0.14 ± 0.53	4
Elbridge	TN	36.26	89.32	-0.44 ± 0.34	-0.42 ± 0.34	3
Elizabethton	TN	36.35	82.21	0.01 ± 0.42	-0.01 ± 0.37	2
Ellendale	TN	35.24	89.82	0.34 ± 0.02	0.38 ± 0.04	2
Enville	TN	35.39	88.43	-0.05 ± 0.31	-0.07 ± 0.31	2
Finger	TN	35.36	88.60	-0.18 ± 0.31	-0.19 ± 0.31	2
Finley	TN	36.04	89.48	-0.25 ± 0.31	-0.22 ± 0.30	4
Fort Pillow	TN	35.66	89.74	-0.52 ± 0.18	-0.48 ± 0.16	2
Friendship	TN	35.92	89.23	-0.38 ± 0.37	-0.35 ± 0.37	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Gadsden	TN	35.78	88.99	0.02 ± 0.22	0.02 ± 0.21	3
Galloway	TN	35.33	89.62	-0.10 ± 0.36	-0.06 ± 0.34	2
Gates	TN	35.84	89.41	-0.65 ± 0.43	-0.61 ± 0.43	2
Gibson	TN	36.01	88.95	-0.29 ± 0.06	-0.28 ± 0.06	2
Greeneville	TN	36.16	82.83	-0.03 ± 0.25	-0.04 ± 0.23	3
Greenfield	TN	36.15	88.80	0.12 ± 0.32	0.13 ± 0.31	2
Halls	TN	35.88	89.40	-0.23 ± 0.11	-0.20 ± 0.12	3
Harriman	TN	35.93	84.55	0.04 ± 0.42	0.03 ± 0.36	2
Henderson	TN	35.62	88.40	0.43 ± 0.21	0.42 ± 0.22	2
Henry	TN	36.20	88.42	0.18 ± 0.09	0.17 ± 0.08	2
Hornbeak	TN	36.33	89.30	0.04 ± 0.10	0.05 ± 0.10	5
Humboldt	TN	35.82	88.91	-0.38 ± 0.20	-0.37 ± 0.19	3
Jacks Creek	TN	35.47	88.52	-0.14 ± 0.30	-0.15 ± 0.29	2
Jackson	TN	36.37	85.68	2.03 ± 0.26	1.86 ± 0.25	2
Jefferson City	TN	36.12	83.49	-0.54 ± 0.82	-0.54 ± 0.77	2
Johnson City	TN	36.32	82.35	0.54 ± 0.15	0.52 ± 0.19	2
Jonesboro	TN	36.29	82.48	0.12 ± 0.25	0.10 ± 0.22	2
Kenton	TN	36.18	89.00	-0.37 ± 0.14	-0.36 ± 0.14	4
Kingsport	TN	36.54	82.55	0.26 ± 0.22	0.25 ± 0.23	3
Knoxville	TN	35.98	83.92	-0.23 ± 0.60	-0.22 ± 0.54	2
La Fayette	TN	36.52	86.03	1.32 ± 0.19	1.21 ± 0.23	2
La Follette	TN	36.38	84.12	-0.12 ± 0.16	-0.10 ± 0.13	2
Lavinia	TN	35.85	88.66	0.27 ± 0.19	0.27 ± 0.19	2
Lenoir City	TN	35.79	84.27	-0.24 ± 0.77	-0.24 ± 0.71	2
Loudon	TN	35.74	84.34	-0.09 ± 0.66	-0.09 ± 0.60	2
Martin	TN	36.34	88.85	0.66 ± 1.09	0.55 ± 0.97	3
Maryville	TN	35.75	83.97	-0.01 ± 0.56	-0.01 ± 0.49	2
Mason	TN	35.41	89.53	-0.40 ± 0.40	-0.38 ± 0.39	2
Mckenzie	TN	36.13	88.52	1.42 ± 1.30	1.25 ± 1.15	2
Medina	TN	35.80	88.77	0.10 ± 0.27	0.10 ± 0.27	2
Memphis	TN	35.14	89.98	1.20 ± 0.50	1.12 ± 0.43	6
Mercer	TN	35.48	89.04	-0.11 ± 0.24	-0.11 ± 0.23	2
Milan	TN	35.92	88.76	-0.26 ± 0.17	-0.26 ± 0.17	3
Millington	TN	35.34	89.90	-0.37 ± 0.48	-0.32 ± 0.46	2
Mountain City	TN	36.47	81.81	-0.11 ± 0.62	-0.12 ± 0.57	2
Munford	TN	35.45	89.82	-0.96 ± 0.16	-0.91 ± 0.17	2
Newbern	TN	36.12	89.26	-0.32 ± 0.38	-0.30 ± 0.38	2
Newport	TN	35.96	83.19	-0.07 ± 0.46	-0.09 ± 0.43	3
Oak Ridge	TN	36.01	84.27	-0.81 ± 1.17	-0.80 ± 1.11	2
Oakfield	TN	35.71	88.79	0.09 ± 0.15	0.09 ± 0.15	3
Oakland	TN	36.05	83.47	0.51 ± 1.78	0.37 ± 1.60	2
Obion	TN	36.36	89.15	-0.20 ± 0.15	-0.19 ± 0.15	5
Oneida	TN	36.50	84.51	-0.42 ± 0.42	-0.41 ± 0.39	2
Parsons	TN	35.65	88.13	0.41 ± 0.03	0.37 ± 0.03	2
Pinson	TN	35.49	88.72	0.18 ± 0.22	0.18 ± 0.22	2
Ridgely	TN	36.26	89.48	0.00 ± 0.03	0.01 ± 0.01	2
Ripley	TN	35.75	89.53	-0.68 ± 0.30	-0.65 ± 0.30	3
Selmer	TN	35.16	88.59	0.40 ± 0.16	0.39 ± 0.16	2
Sharon	TN	36.23	88.83	0.09 ± 0.65	0.10 ± 0.65	2
Sneedville	TN	36.53	83.22	0.02 ± 0.04	0.00 ± 0.04	3
Somerville	TN	35.24	89.35	0.24 ± 0.35	0.26 ± 0.34	2
Sparta	TN	35.93	85.46	0.80 ± 0.55	0.74 ± 0.52	3
Springfield	TN	36.50	86.88	1.08 ± 1.02	1.02 ± 0.98	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Stanton	TN	35.46	89.40	-0.62 ± 0.62	-0.60 ± 0.60	2
Sweetwater	TN	35.50	87.63	1.45 ± 0.16	1.30 ± 0.13	2
Tigrett	TN	35.95	89.24	-0.71 ± 0.30	-0.68 ± 0.29	2
Tipton	TN	35.51	89.83	0.00 ± 0.17	0.03 ± 0.19	2
Tiptonville	TN	36.38	89.48	-0.23 ± 0.39	-0.21 ± 0.39	3
Trezevant	TN	36.01	88.62	-0.24 ± 0.23	-0.24 ± 0.23	2
Trimble	TN	36.21	89.19	-0.22 ± 0.38	-0.19 ± 0.38	2
Troy	TN	36.34	89.16	0.07 ± 0.14	0.07 ± 0.14	6
Union City	TN	36.42	89.06	-0.05 ± 0.30	-0.04 ± 0.30	6
Woodland Mills	TN	36.49	89.11	-0.05 ± 0.38	-0.03 ± 0.39	2
Yorkville	TN	36.10	89.12	-0.18 ± 0.35	-0.16 ± 0.35	2
Abingdon	VA	36.71	81.98	0.28 ± 0.11	0.29 ± 0.06	2
Big Stone Gap	VA	36.87	82.78	-0.10 ± 0.07	-0.10 ± 0.07	2
Dungannon	VA	36.83	82.47	0.07 ± 0.07	0.05 ± 0.07	2
Ewing	VA	36.65	83.43	-0.40 ± 0.23	-0.39 ± 0.21	2
Grundy	VA	37.28	82.10	-0.54 ± 0.47	-0.51 ± 0.43	2
Marion	VA	36.83	81.52	0.20 ± 1.51	0.21 ± 1.44	2
Rose Hill	VA	38.72	78.13	2.35 ± 0.43	2.09 ± 0.39	2
Wytheville	VA	36.95	81.09	-0.10 ± 0.73	-0.09 ± 0.64	2
Adamant	VT	44.33	72.50	0.00 ± 0.65	0.02 ± 0.64	2
Arlington	VT	43.07	73.15	0.28 ± 0.55	0.27 ± 0.52	3
Ascutney	VT	43.35	72.40	0.28 ± 0.24	0.30 ± 0.23	2
Bakersfield	VT	44.78	72.80	0.07 ± 0.26	0.08 ± 0.26	3
Barnet	VT	44.30	72.05	-0.42 ± 0.08	-0.40 ± 0.08	2
Beecher Falls	VT	45.01	71.51	-0.25 ± 0.44	-0.23 ± 0.38	2
Bellows Falls	VT	43.13	72.45	0.43 ± 0.62	0.45 ± 0.62	3
Belmont	VT	43.41	72.82	-0.29 ± 0.36	-0.29 ± 0.33	3
Benson	VT	43.70	73.30	-0.72 ± 0.70	-0.69 ± 0.66	2
Bethel	VT	43.83	72.58	0.29 ± 0.08	0.32 ± 0.07	2
Bomoseen	VT	43.64	73.20	0.81 ± 1.08	0.84 ± 1.04	2
Bradford	VT	43.98	72.15	0.14 ± 0.23	0.16 ± 0.23	3
Brandon	VT	43.80	73.09	-0.44 ± 0.25	-0.40 ± 0.24	3
Brattleboro	VT	42.85	72.57	0.39 ± 0.27	0.39 ± 0.28	3
Bridgewater	VT	43.59	72.62	-0.71 ± 0.02	-0.68 ± 0.02	2
Bridgewater Corners	VT	43.58	72.65	-0.71 ± 0.06	-0.68 ± 0.05	2
Bristol	VT	44.14	73.08	0.28 ± 0.35	0.30 ± 0.34	3
Brownsville	VT	43.47	72.47	0.27 ± 0.09	0.27 ± 0.09	3
Burlington	VT	44.48	73.21	0.38 ± 0.36	0.41 ± 0.35	5
Cabot	VT	44.40	72.31	-0.09 ± 0.41	-0.07 ± 0.40	3
Calais	VT	44.37	72.50	-0.40 ± 0.12	-0.39 ± 0.11	3
Cambridge	VT	44.65	72.88	-0.04 ± 0.29	-0.02 ± 0.30	2
Canaan	VT	45.00	71.54	0.26 ± 0.09	0.28 ± 0.15	2
Castleton	VT	43.61	73.18	-0.68 ± 0.55	-0.65 ± 0.52	2
Cavendish	VT	43.38	72.62	0.34 ± 0.01	0.35 ± 0.02	3
Center Rutland	VT	43.60	73.01	-0.18 ± 0.89	-0.14 ± 0.87	2
Charlotte	VT	44.32	73.25	-0.48 ± 0.46	-0.44 ± 0.43	3
Chelsea	VT	43.99	72.45	0.36 ± 1.02	0.39 ± 1.01	2
Chester	VT	43.26	72.60	-0.12 ± 0.47	-0.09 ± 0.46	2
Chittenden	VT	43.71	72.95	-0.37 ± 0.38	-0.36 ± 0.35	3
Concord	VT	44.40	71.85	-0.43 ± 0.16	-0.41 ± 0.15	3
Corinth	VT	44.02	72.29	-0.47 ± 0.26	-0.45 ± 0.25	2
Craftsbury Common	VT	44.65	72.38	-0.54 ± 0.10	-0.51 ± 0.10	2

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Cuttingsville	VT	43.48	72.87	-0.66 ± 0.24	-0.63 ± 0.22	2
Danby	VT	43.33	72.98	0.40 ± 0.31	0.43 ± 0.29	2
Danville	VT	44.41	72.14	-0.46 ± 0.13	-0.44 ± 0.12	2
Derby Line	VT	45.01	72.10	-0.31 ± 0.42	-0.30 ± 0.39	3
Dorset	VT	43.25	73.10	-0.54 ± 0.37	-0.51 ± 0.35	2
East Arlington	VT	43.07	73.15	0.07 ± 0.14	0.09 ± 0.16	2
East Barre	VT	44.15	72.45	-0.55 ± 0.09	-0.53 ± 0.08	2
East Corinth	VT	44.07	72.22	-0.11 ± 0.63	-0.08 ± 0.62	2
East Dorset	VT	43.23	73.02	-0.04 ± 0.20	-0.02 ± 0.22	2
East Middlebury	VT	43.97	73.10	-0.54 ± 0.70	-0.52 ± 0.65	2
East Montpelier	VT	44.27	72.49	0.51 ± 0.17	0.54 ± 0.16	2
East Ryegate	VT	44.20	72.07	-0.15 ± 0.39	-0.13 ± 0.39	3
East Saint Johnsbury	VT	44.43	71.95	-0.30 ± 0.06	-0.30 ± 0.06	2
East Thetford	VT	43.81	72.19	-0.28 ± 0.18	-0.25 ± 0.19	2
East Wallingford	VT	43.45	72.87	-0.14 ± 0.27	-0.11 ± 0.29	2
Eden	VT	44.71	72.54	-0.32 ± 0.23	-0.31 ± 0.21	3
Ely	VT	43.88	72.18	0.13 ± 0.21	0.15 ± 0.21	3
Essex	VT	44.68	71.70	0.47 ± 0.45	0.49 ± 0.42	2
Fair Haven	VT	43.59	73.27	-0.31 ± 0.52	-0.30 ± 0.48	3
Fairfax	VT	44.66	73.01	-0.27 ± 0.32	-0.26 ± 0.30	3
Fairfield	VT	44.80	72.93	0.33 ± 1.03	0.33 ± 0.99	2
Florence	VT	43.72	73.07	-0.03 ± 0.16	-0.02 ± 0.14	3
Forest Dale	VT	43.83	73.05	-0.19 ± 0.01	-0.15 ± 0.04	2
Gaysville	VT	43.78	72.70	-0.42 ± 0.28	-0.41 ± 0.26	3
Grafton	VT	43.17	72.61	0.46 ± 0.60	0.46 ± 0.58	3
Grand Isle	VT	44.72	73.30	0.27 ± 0.24	0.27 ± 0.19	2
Granville	VT	43.98	72.85	-0.64 ± 0.35	-0.61 ± 0.33	2
Greensboro	VT	44.58	72.30	-0.53 ± 0.11	-0.50 ± 0.10	2
Greensboro Bend	VT	44.55	72.26	-0.02 ± 0.38	0.00 ± 0.39	2
Groton	VT	44.22	72.20	0.20 ± 0.30	0.22 ± 0.30	3
Guildhall	VT	44.57	71.57	0.26 ± 0.38	0.27 ± 0.37	3
Hancock	VT	43.93	72.84	-0.08 ± 0.49	-0.07 ± 0.47	3
Hardwick	VT	44.52	72.37	-0.51 ± 0.03	-0.49 ± 0.03	2
Hartford	VT	43.66	72.34	-0.29 ± 0.26	-0.26 ± 0.27	2
Hartland	VT	43.53	72.40	0.23 ± 0.22	0.26 ± 0.21	2
Highgate Center	VT	44.94	73.05	0.01 ± 0.66	0.03 ± 0.65	2
Highgate Springs	VT	44.97	73.10	-0.02 ± 0.57	-0.03 ± 0.53	2
Hinesburg	VT	44.33	73.12	-0.09 ± 0.05	-0.06 ± 0.02	2
Huntington Center	VT	44.28	72.97	-0.02 ± 1.01	0.00 ± 0.98	2
Hyde Park	VT	44.59	72.62	-0.34 ± 0.20	-0.32 ± 0.19	3
Hydeville	VT	43.60	73.22	0.32 ± 0.58	0.35 ± 0.55	2
Island Pond	VT	44.82	71.88	-0.19 ± 0.15	-0.17 ± 0.14	4
Jacksonville	VT	42.78	72.82	-0.27 ± 0.15	-0.26 ± 0.14	2
Jamaica	VT	43.10	72.77	-0.49 ± 0.10	-0.47 ± 0.10	2
Jericho	VT	44.50	73.00	-0.39 ± 0.55	-0.37 ± 0.52	2
Johnson	VT	44.64	72.68	0.46 ± 0.09	0.48 ± 0.09	2
Jonesville	VT	44.38	72.93	0.54 ± 0.49	0.56 ± 0.46	2
Lake Elmore	VT	44.53	72.52	0.24 ± 0.28	0.25 ± 0.30	2
Londonderry	VT	43.23	72.81	-0.06 ± 0.64	-0.04 ± 0.63	2
Lower Waterford	VT	44.36	71.91	-0.12 ± 0.25	-0.10 ± 0.25	3
Ludlow	VT	43.37	72.70	0.03 ± 0.31	0.03 ± 0.30	3
Lyndon	VT	44.51	72.01	-0.08 ± 0.17	-0.07 ± 0.18	3
Lyndon Center	VT	44.54	72.01	-0.08 ± 0.46	-0.06 ± 0.45	3

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Manchester Center	VT	43.18	73.06	0.00 ± 0.83	0.02 ± 0.80	2
Marshfield	VT	44.35	72.35	-0.42 ± 0.06	-0.41 ± 0.06	3
Mcindoe Falls	VT	44.27	72.07	-0.02 ± 0.52	0.01 ± 0.52	2
Middlebury	VT	44.03	73.17	-0.48 ± 0.33	-0.44 ± 0.31	3
Middletown Springs	VT	43.48	73.12	-0.14 ± 0.05	-0.11 ± 0.08	2
Milton	VT	44.63	73.12	0.07 ± 0.15	0.07 ± 0.14	3
Monkton	VT	44.23	73.15	-0.07 ± 0.15	-0.05 ± 0.11	2
Montgomery Center	VT	44.88	72.62	-0.54 ± 0.08	-0.51 ± 0.08	2
Montpelier	VT	44.27	72.57	-0.31 ± 0.60	-0.26 ± 0.59	2
Moretown	VT	44.25	72.76	0.48 ± 0.35	0.50 ± 0.33	2
Morrisville	VT	44.57	72.60	-0.03 ± 0.42	-0.01 ± 0.42	2
Mount Holly	VT	43.45	72.82	-0.65 ± 0.18	-0.62 ± 0.17	2
New Haven	VT	44.12	73.15	-0.13 ± 0.14	-0.10 ± 0.10	2
Newbury	VT	44.08	72.06	-0.51 ± 0.15	-0.49 ± 0.15	3
Newfane	VT	42.98	72.66	0.27 ± 0.36	0.25 ± 0.34	3
Newport	VT	44.94	72.21	0.30 ± 0.41	0.32 ± 0.40	5
Newport Center	VT	44.95	72.31	0.02 ± 0.27	0.00 ± 0.25	2
North Bennington	VT	42.92	73.23	-0.33 ± 0.40	-0.31 ± 0.37	2
North Concord	VT	44.47	71.86	-0.55 ± 0.23	-0.53 ± 0.21	2
North Hartland	VT	43.59	72.36	-0.14 ± 0.20	-0.13 ± 0.19	3
North Montpelier	VT	44.30	72.45	-0.46 ± 0.15	-0.44 ± 0.14	2
North Pomfret	VT	43.72	72.48	-0.24 ± 0.58	-0.21 ± 0.58	2
North Thetford	VT	43.84	72.19	0.42 ± 0.48	0.44 ± 0.46	2
North Troy	VT	44.99	72.40	0.08 ± 0.18	0.09 ± 0.18	3
Northfield	VT	44.13	72.67	0.78 ± 0.34	0.80 ± 0.35	4
Northfield Falls	VT	44.17	72.65	0.58 ± 0.19	0.59 ± 0.18	3
Norwich	VT	43.71	72.31	-0.51 ± 0.31	-0.50 ± 0.30	3
Orleans	VT	44.81	72.20	-0.38 ± 0.50	-0.36 ± 0.47	2
Orwell	VT	43.80	73.30	-0.23 ± 0.21	-0.20 ± 0.17	2
Passumpsic	VT	44.38	72.03	-0.45 ± 0.09	-0.43 ± 0.08	3
Peacham	VT	44.33	72.17	-0.46 ± 0.05	-0.44 ± 0.05	2
Perkinsville	VT	43.37	72.52	-0.70 ± 0.12	-0.67 ± 0.12	2
Pittsford	VT	43.71	73.03	0.02 ± 0.26	0.00 ± 0.24	2
Post Mills	VT	43.88	72.26	-0.52 ± 0.24	-0.50 ± 0.23	3
Pownal	VT	42.75	73.23	-0.21 ± 0.37	-0.20 ± 0.34	2
Proctor	VT	43.66	73.04	-0.02 ± 0.57	-0.01 ± 0.55	3
Proctorsville	VT	43.38	72.64	0.35 ± 0.58	0.36 ± 0.56	3
Randolph	VT	43.92	72.67	0.09 ± 0.92	0.10 ± 0.89	2
Randolph Center	VT	43.94	72.61	-0.44 ± 0.22	-0.43 ± 0.21	3
Richford	VT	44.98	72.68	-0.06 ± 0.54	-0.02 ± 0.52	3
Richmond	VT	44.40	72.99	0.43 ± 0.43	0.46 ± 0.40	2
Ripton	VT	43.97	73.04	-0.06 ± 0.66	-0.05 ± 0.64	3
Rochester	VT	43.87	72.81	-0.02 ± 0.30	0.00 ± 0.30	4
Roxbury	VT	44.10	72.73	-0.09 ± 0.13	-0.07 ± 0.14	3
Rutland	VT	43.61	72.98	0.29 ± 0.21	0.33 ± 0.20	3
Saint Albans	VT	44.81	73.08	-0.38 ± 0.34	-0.31 ± 0.33	3
Saint Albans Bay	VT	44.82	73.13	0.14 ± 0.21	0.14 ± 0.20	3
Saint Johnsbury	VT	44.42	72.03	0.00 ± 0.30	0.02 ± 0.31	6
Salisbury	VT	43.90	73.10	-0.19 ± 0.05	-0.15 ± 0.02	2
Saxtons River	VT	43.13	72.52	-0.56 ± 0.10	-0.54 ± 0.10	2
Shaftsbury	VT	43.01	73.19	0.62 ± 1.38	0.64 ± 1.35	2
Sharon	VT	43.78	72.45	-0.14 ± 0.34	-0.12 ± 0.34	3
Shelburne	VT	44.38	73.23	0.00 ± 0.12	0.01 ± 0.10	3

**Table 1. Empirical MMI Site Corrections
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Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Sheldon	VT	44.88	72.94	-0.20 ± 0.32	-0.20 ± 0.30	3
Shoreham	VT	43.89	73.31	-0.73 ± 0.76	-0.70 ± 0.72	2
South Barre	VT	44.18	72.51	-0.44 ± 0.13	-0.42 ± 0.12	3
South Hero	VT	44.65	73.32	-1.30 ± 0.26	-1.23 ± 0.24	2
South Londonderry	VT	43.19	72.82	-0.54 ± 0.15	-0.51 ± 0.14	2
South Newbury	VT	44.05	72.08	-0.58 ± 0.27	-0.56 ± 0.26	2
South Pomfret	VT	43.67	72.53	-0.73 ± 0.05	-0.70 ± 0.05	2
South Royalton	VT	43.82	72.52	-0.13 ± 0.30	-0.11 ± 0.30	3
South Ryegate	VT	44.19	72.14	-0.14 ± 0.27	-0.13 ± 0.27	3
South Strafford	VT	43.83	72.37	-0.73 ± 0.14	-0.70 ± 0.14	2
South Woodstock	VT	43.57	72.53	-0.23 ± 0.43	-0.20 ± 0.43	2
Springfield	VT	43.30	72.48	-0.66 ± 0.15	-0.64 ± 0.14	2
Starksboro	VT	44.23	73.06	-0.56 ± 0.58	-0.54 ± 0.54	2
Stockbridge	VT	43.78	72.76	-0.68 ± 0.21	-0.65 ± 0.19	2
Stowe	VT	44.47	72.68	-0.03 ± 0.18	-0.01 ± 0.19	3
Strafford	VT	43.86	72.38	-0.49 ± 0.23	-0.47 ± 0.22	3
Taftsville	VT	43.63	72.47	0.22 ± 0.59	0.23 ± 0.57	3
Thetford	VT	43.80	72.19	-0.22 ± 0.13	-0.20 ± 0.13	3
Thetford Center	VT	43.82	72.23	-0.27 ± 0.23	-0.24 ± 0.24	2
Troy	VT	44.90	72.40	0.45 ± 0.23	0.47 ± 0.21	2
Tunbridge	VT	43.88	72.50	-0.03 ± 0.33	0.00 ± 0.34	3
Underhill	VT	44.53	72.95	-0.06 ± 0.17	-0.03 ± 0.20	2
Underhill Center	VT	44.51	72.90	-0.33 ± 0.29	-0.32 ± 0.27	3
Vergennes	VT	44.18	73.25	-0.04 ± 0.15	-0.03 ± 0.12	3
Vernon	VT	42.77	72.52	0.22 ± 0.54	0.22 ± 0.53	2
Vershire	VT	43.97	72.32	-0.16 ± 0.40	-0.13 ± 0.40	2
Waitsfield	VT	44.19	72.82	-0.56 ± 0.39	-0.53 ± 0.36	2
Wallingford	VT	43.47	72.98	-0.64 ± 0.33	-0.61 ± 0.30	2
Wardsboro	VT	43.03	72.78	0.61 ± 0.93	0.61 ± 0.92	2
Warren	VT	44.12	72.86	-0.40 ± 0.29	-0.39 ± 0.27	3
Washington	VT	44.11	72.43	-0.37 ± 0.15	-0.36 ± 0.14	2
Waterbury Center	VT	44.38	72.72	0.29 ± 0.24	0.30 ± 0.24	3
Websterville	VT	44.16	72.46	-0.55 ± 0.10	-0.53 ± 0.09	2
Wells	VT	43.42	73.20	-0.11 ± 1.00	-0.08 ± 0.97	2
Wells River	VT	44.16	72.05	-0.03 ± 0.33	-0.01 ± 0.33	2
West Barnet	VT	44.31	72.14	-0.48 ± 0.03	-0.46 ± 0.02	2
West Burke	VT	44.63	71.97	0.46 ± 0.34	0.48 ± 0.32	2
West Charleston	VT	44.90	72.06	-0.34 ± 0.37	-0.33 ± 0.35	3
West Danville	VT	44.41	72.19	-0.36 ± 0.05	-0.34 ± 0.04	2
West Fairlee	VT	43.91	72.26	-0.18 ± 0.18	-0.16 ± 0.18	3
West Rupert	VT	43.24	73.24	1.29 ± 0.66	1.26 ± 0.69	2
West Rutland	VT	43.59	73.05	0.67 ± 0.42	0.68 ± 0.39	3
West Topsham	VT	44.12	72.31	-0.07 ± 0.48	-0.05 ± 0.47	2
Westfield	VT	44.89	72.43	-0.25 ± 0.51	-0.24 ± 0.48	2
Westford	VT	44.61	73.01	-0.55 ± 0.32	-0.53 ± 0.30	2
Westminster	VT	43.07	72.47	-0.52 ± 0.13	-0.50 ± 0.12	2
Weston	VT	43.29	72.79	-0.59 ± 0.13	-0.57 ± 0.12	2
White River Junction	VT	43.65	72.32	0.37 ± 0.46	0.37 ± 0.45	3
Whiting	VT	43.86	73.20	-0.54 ± 0.80	-0.52 ± 0.75	2
Wilder	VT	43.67	72.31	-0.30 ± 0.23	-0.27 ± 0.24	2
Williamstown	VT	44.12	72.54	-0.11 ± 0.47	-0.09 ± 0.46	3
Wilmington	VT	42.87	72.87	0.18 ± 0.67	0.19 ± 0.65	2
Windsor	VT	43.59	72.59	-0.02 ± 0.26	-0.01 ± 0.25	3

**Table 1. Empirical MMI Site Corrections
for Eastern North America**

Location Name	St/ Pr	Lat (°N)	Long (°W)	Site Correction [†]	Site Correction [§]	# of events (N)
Winooski	VT	44.49	73.19	-0.86 ± 0.40	-0.82 ± 0.38	3
Wolcott	VT	44.55	72.45	-0.52 ± 0.00	-0.50 ± 0.00	2
Woodbury	VT	44.44	72.42	-0.32 ± 0.14	-0.31 ± 0.13	2
Woodstock	VT	43.63	72.52	-0.25 ± 0.44	-0.21 ± 0.44	2
Worcester	VT	44.37	72.55	-0.42 ± 0.24	-0.41 ± 0.22	2
Jefferson	WI	43.02	88.77	1.51 ± 0.63	1.38 ± 0.51	2
Kenosha	WI	42.59	87.83	0.91 ± 0.99	0.80 ± 0.89	2
Buckhannon	WV	38.99	80.23	0.36 ± 0.58	0.31 ± 0.52	2
Charleston	WV	38.35	81.64	-0.40 ± 0.41	-0.38 ± 0.37	2
Huntington	WV	38.42	82.45	-0.46 ± 0.16	-0.44 ± 0.16	2
Logan	WV	37.85	81.99	-0.10 ± 0.11	-0.07 ± 0.15	2
Point Pleasant	WV	38.85	82.14	0.31 ± 0.53	0.31 ± 0.54	2
Switzer	WV	37.79	81.99	0.86 ± 0.06	0.82 ± 0.02	2
Washington	WV	39.26	81.66	0.98 ± 0.74	0.93 ± 0.73	2
Wayne	WV	38.23	82.45	-0.03 ± 0.39	0.00 ± 0.38	2
Williamson	WV	37.67	82.25	0.41 ± 0.23	0.44 ± 0.21	2

† Bakun *et al.* (2003); $\pm(1\sigma) = (\text{std. dev.})/N^{1/2}$.

§ Bakun and Hopper (*in press*); $\pm(1\sigma) = (\text{std. dev.})/N^{1/2}$.