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**SEISMIC HISTORY AND SEISMICITY OF THE
SOUTHEASTERN REGION OF THE UNITED STATES**

**W. C. McClain
O. H. Myers**

OAK RIDGE NATIONAL LABORATORY

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OF THE UNITED STATES

W. C. McClain and O. H. Myers

JUNE 1970

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SEISMIC HISTORY AND SEISMICITY OF THE SOUTHEASTERN REGION OF THE UNITED STATES

W. C. McClain and O. H. Myers

ABSTRACT

A complete seismic history of the southeast region of the United States has been compiled for possible use in the evaluation of the seismic hazard at proposed nuclear installation sites. Examination of the seismicity of the area, based on this history, indicates that the highest seismic risk exists in two small areas around New Madrid, Missouri, and Charleston, South Carolina, but that the general level of seismicity in the southeast region is about two orders of magnitude less than in California. Various types of special seismic histories for smaller areas of the southeast region are available for evaluations of particular sites.

INTRODUCTION

The southeast region of the United States exhibits only a low-to-moderate seismic activity. Because of this, it has not received the detailed study and investigation which seismologists have devoted to more seismically active portions of the country. However, it is anticipated that a large number of nuclear facilities (power reactors, ¹ reprocessing plants, etc.) will be located in this region in the future, and one of the requirements² in the evaluation of sites for these installations is an estimate of the potential for damage from earthquakes or, more technically, the seismic risk. Since estimates of seismic risk are based largely on the seismic history of the area, the main objective of this study was the compilation of a complete seismic history of the southeast region in a form suitable for use in site evaluations. A second objective was the examination of the general seismicity of the entire region, especially by comparison with more active areas such as California and Nevada, in an effort to provide some background and insight into the implications and validity of seismic risk estimates in the region.

In the compilation, the southeast region was arbitrarily defined as the portion of the continental United States south of the 37° N latitude line and east of the 95° W longitude line (Fig. 1). This area includes all of Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee, plus a strip approximately 50 miles wide beyond the borders of these states. The information concerning the individual earthquakes in the history was obtained almost entirely from previously published material. The principal source was the annual summaries of United States earthquakes published by the U. S. Coast and Geodetic Survey. These were supplemented by various other more specialized seismic histories, usually covering small portions of the southeast region. The information for each event was placed on IBM punch cards which makes it possible to easily and continually update the seismic history, both to correct possible errors or omissions and to add the information on future earthquakes as they occur.

DESCRIPTION OF THE SEISMIC HISTORY

Appendix A is a chronological listing of the complete seismic history of the southeast region plus all of the earthquakes with epicenters outside the defined region but which were felt in any part of it. The first three columns give the year, date (month and day), and time (hour, minute, and second) of the event. All dates and times are given as Greenwich mean time. Zeros in the time column, especially for those events prior to 1928, do not mean that the time of occurrence is known to that accuracy; in fact, they mean the contrary. For example, if the minutes and seconds are both zero, the time of occurrence is known only to the nearest hour; if the entire time column is made up of zeros, the time of occurrence is unknown. The geodetic coordinates of the epicenter of the earthquake are given in the next column. Parentheses around these coordinates indicate that the epicenter location was estimated from the approximate center of the felt area or is the location of an isolated felt report.

The column headed "Locality and Notes" indicates the specific location name of the epicentral area or the name which has come to be

associated with a particular earthquake. In a few cases, an earthquake was considered to be significant enough to require additional description and this is included in the "Locality and Notes" column. The next column contains the extent of the felt area where this information was available. The column headed "Mag/Int" contains either the Richter magnitude of the earthquake, in Arabic numbers with a decimal point, or the maximum intensity, as measured on the Modified Mercalli scale in Roman numerals. If neither of these indications of the earthquake size was available in the literature, the column is blank. No attempt was made to establish an intensity from the published description.

The last column contains a series of letter codes. These codes represent additional descriptive information concerning the earthquake and are explained in the notes at the end of the listing. The notes also contain a brief summary of the explanations. Following the letter codes are the references for each earthquake. The first reference cited is considered to be the best and most complete description of the extent and effects of the earthquake. A list of references accompanies the seismic history in Appendix A.

This history includes 695 individual seismic events, of which 597 had epicenters within the defined southeast region. In addition, the history includes approximately 200 events which were reported in the literature only in nonspecific terms, such as "several shocks felt." These latter events are identified in the listing. If a particular earthquake was followed by an aftershock sequence, this fact is noted by the code letter "A" in the References column, but the individual events of the aftershock sequence are not included in the history. In a few cases, an aftershock sequence contained a few individual events which were significant in their own right. These events are included in the seismic history and noted as aftershocks.

DISTRIBUTION OF EPICENTERS

The epicenters of the 597 earthquakes in the seismic history of the southeast region are plotted in Fig. 1 according to their equivalent Richter magnitudes (using the usually accepted but approximate

conversion from intensity of $M = 2/3 I + 1$). The seismic history contains a number of cases where several earthquake epicenters are located at the same geodetic coordinates. In order to avoid superpositioning of the symbols in these cases, all subsequent events at a given location were displaced along a square pattern to an unoccupied position closest to its true location. In this way, it was possible to show the 597 individual events of the history in Fig. 1. This displacement causes a slight distortion in the epicenter plot, but the distortion is not considered serious, since the precise location of the epicenter is not known in over 90% of the events.

An epicenter location map of this type is one representation of the seismicity of the area. Examination of the textural qualities of this map, especially as emphasized by the displacement of superimposed epicenters, reveals two major centers of seismic activity: (1) in southeast Missouri in the New Madrid area and (2) on the coast of South Carolina in the Charleston area. These areas are also the locations of the two largest seismic events in the history of the southeast region: the 1811-1812 series of three very large shocks at New Madrid, Missouri, all of intensity XII; and the strong shocks of intensity X in 1886 at Charleston, South Carolina. Another important observation from Fig. 1 is the indication of a zone of relatively high seismicity in the Southern Appalachian Mountain areas of Virginia, East Tennessee, the western Carolinas, northern Georgia, and Alabama. This zone coincides with the southern portion of the Appalachian Mountain geologic province and its seismicity probably represents minor adjustments of the highly disturbed rocks.

Large-scale determinations of seismic risk³ usually include a high risk zone around both New Madrid and Charleston but with statements explaining that these high risk zones are based almost entirely on the evidence of their one large damaging event. It is therefore interesting to see if the gross picture of seismicity in the southeast region is changed by ignoring these events. Figure 2 shows an epicenter plot of 270 earthquakes which occurred during the 40-year period from 1930 to 1969; that is, during a interval beginning nearly 120 years after the major New Madrid earthquakes and 50 years after the large Charleston

Fig. 1. Epicenter Locations for All Events in the Seismic History of the Southeast Region.

Fig. 2. Epicenter Locations for Southeast Region Earthquakes in the Period 1930 Through 1969.

earthquakes. As can be seen, the general pattern of seismicity is essentially the same as for the complete seismic history. This means that if the historical record only extended back to 1930 and did not include the large events of 1811-1812 and 1886, it would be possible to identify the areas of relatively high seismicity around New Madrid and Charleston and the lesser diffuse zone in the Southern Appalachian Mountain area. Since there are no other centers of high seismicity in the southeast region (Fig. 2), this implies that only these two areas in the southeast qualify as high risk zones and that there is no indication of any other area which might experience a Charleston type event in the future.

FREQUENCY OF EARTHQUAKES

For a more detailed analysis of the seismicity of the southeast region, including comparisons with other areas of the United States, it is necessary first to reduce the seismic history data to unit-rate values; that is, the number of events per unit area and per unit of time. Of the 597 seismic events having epicenters in the southeast region, only 44 were located with instruments. The remainder were located on the basis of felt reports, and the history would therefore be expected to reflect the population density of the region. The first entry in the history, for example, is an event in 1699, based on a trapper's report. Obviously, such data should not be averaged over the entire 270-year period of seismic history.

Figure 3 is a plot of the annual frequency of earthquakes in the southeast (smoothed by averaging over 5-year period) and the average population density in the nine states making up most of the region. Only three events were recorded prior to 1810, and this information is not included. There is an obvious change in the historical record about 1870; the record prior to that time is grossly deficient. After 1870, however, the annual frequency suggests that the record is sufficiently complete to permit averaging over the most recent 100-year period. The difference in the record before and after 1870 is probably a function of population density, improvements in communications, and improvements in documentation. The following analysis is therefore based on the 100-year period from 1870 through 1969.

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Fig. 3. Smoothed Annual Frequency of Earthquakes in the Southeast Region Compared with the Average Population Density.

In Fig. 3 there is a slight suggestion of an approximate 35- to 40-year periodicity in the seismicity of the southeast region, with peaks of activity at about 1885, 1915, and 1955. This periodicity is not statistically significant, but it is an interesting observation.

GENERAL SEISMICITY

A general impression of the relative seismicity of two areas such as the southeast region and the western parts of the United States can be obtained by comparing the average frequency of earthquakes per unit area. This approach ignores the size of the event and treats a major damaging earthquake as though it were no more important than one which is barely perceptible. However, this is not as serious an oversight as it might first appear, since (as will be seen in the next section) the relation between the magnitude or intensity of earthquakes and their relative frequency does not vary greatly from one area to the next.

With this as the basis, Table 1 shows a comparison of seismicities of a large but extremely seismically active portion of southern California,⁴ the entire state of Nevada,⁵ the southeast region of the United States, and various sub-areas within the southeast region. These sub-areas are (1) the centers of seismicity in the Mississippi Valley area near New Madrid, Missouri, (2) around Charleston, South Carolina, and (3) the Southern Appalachian Mountain geologic province. The boundaries of these sub-areas are shown in Fig. 2.

This analysis, which admittedly is quite approximate, indicates that the average seismicity of the southeast region is less than one-tenth of the average seismicity of the state of Nevada and about one-three hundredths of the average seismicity of the southern California area. Even the centers of relatively high seismic activity in the southeast region are only one-third the average seismicity of Nevada and about one-sixtieth the seismicity of southern California.

This comparison serves to emphasize the low-to-moderate seismicity of the southeast region and provides, in numerical terms, an estimate of how much less earthquake-prone this region is than California and Nevada.

Table 1. Comparison of Unit Frequencies of Earthquakes

Region	Area (km ²)	Sample Period	Total Number of Earthquakes in Sample	Number of Earth- quakes per Year per 10 ⁵ km ²
Southern California ^a	296,100	1934-1963	10,126	114.0
Nevada ^b	286,300	1892-1961	1,100	5.5
Total southeast region	1,306,000	1870-1969	570	0.4
Mississippi Valley	129,800	1870-1969	225	1.7
Southern Appalachian Mountains	209,600	1870-1969	184	0.9
Charleston, South Carolina, Area	41,800	1870-1969	81	1.9
Remainder of southeast region	924,800	1870-1969	79	0.08

^aC. R. Allen et al., Bull. Seis. Soc. Am. 55(4), 753-797 (August 1965).

^bD. B. Slemmons et al., Bull. Seis. Soc. Am. 55(2), 537-583 (April 1965).

RECURRENCE CURVES

A more rigorous evaluation of the seismicity of the southeast region can be obtained from an analysis of recurrence curves of the type shown in Fig. 4. Here the unit frequency of the various earthquakes is plotted against earthquake size as measured on the intensity scale. The straight lines represent least squares fits of the relationship $\log N = a + bI$ (where N is the number of earthquakes per 100 years and per $100,000 \text{ km}^2$ of intensity I) to the data excluding those points enclosed in parentheses.

As can be seen, the fit of these data is not good, and extrapolations of seismicity based on these relationships are probably not justified for the following reasons:

1. The sample size (570 events in the total southeast region from 1870 through 1969, 226 in the Mississippi Valley area, and 184 in the Southern Appalachian Mountain zone) is too small to be considered representative of the general seismicity of the area. The small sample also makes it impossible to construct a recurrence curve for the Charleston area, which includes only 81 reported earthquakes.
2. The quality of the sample data is quite poor; over 90% of the events were not recorded instrumentally. This feature probably influences the data for the smaller sized events most dramatically, since they are most likely to go unnoticed. This is part of the reason for excluding low-intensity data points from the curve fitting process.
3. The intensity scale of earthquake "size" is very subjective and depends upon an evaluation of the effects of the earthquake. These effects and their evaluation will vary from one area to another and with time, even within a given area because of changes in constructional methods and materials and in the judgment and experience of individuals conducting the surveys. Thus, intensity must be considered only a very crude measurement at best. Furthermore, observed intensity is also a function of focal depth and seismic transmission properties of the area.

Fig. 4. Recurrence Curves for (a) Total Southeast Region (b) Mississippi Valley Area, and (c) Southern Appalachian Mountain Zone.

Table 2. Extrapolations from Recurrence Curves.

Region	Area (km ²)	Coefficients in log N = a + bI ⁵ per 100 years and 10 ⁵ km ²		Number of Shocks per Year of Int ≥ III	"Once per 40 Years" Earthquake (Int-Mag)	"Once per 100 Years" Earthquake (Int-Mag)	Interval Between Destructive Shocks (year)
Total southeast region	1,306,000	2.69	-0.38	6.8	IX-7.0	X-7.7	63
Mississippi Valley	129,800	3.43	-0.41	3.0	VII-6.4	IX-6.8	207
Southern Appalachian Mountains	209,800	3.61	-0.42	1.6	VIII-6.6	IX-7.3	106
Entire East Coast ^a	1,030,000	4.11	-0.58		VIII-6.3	IX-6.8	300
California and Nevada ^a	765,000	5.23	-0.55		X-8.0	XI-8.2	13
Southern California ^b	296,100		-0.57	444		8.2	

^aS. T. Algersmissen, "Seismic Risk Studies in the United States," presented at Fourth World Conference on Earthquake Engineering, January 14, 1969, Santiago, Chile.

^bC. R. Allen et al., Bull. Seis. Soc. Am. 55(4), 753-797 (August 1965).

4. The grouping of the events into single units of intensity introduces a bias towards smaller earthquakes.

In areas where adequate data are available, especially when they are based on instrumental records, the data usually fit a straight line extremely well.^{4,6} It is therefore interesting to extrapolate the recurrence plots shown in Fig. 4, in spite of deficiencies in the data. These extrapolations are shown in Table 2. For the southeast region and the two sub-areas, the slope of the recurrence curves (the coefficient b in Table 2) ranges from -0.38 to -0.42. This is equivalent to "b" values of 0.57 to 0.63 for earthquakes expressed in terms of Richter magnitude in the expression $\log N = a + b (8.0 - M)$. On a worldwide basis, "b" values have been found to vary from 0.4 in Australia to 1.8 for the East Pacific Ocean.⁴ Values for California and other areas of the western United States are in the range of 0.85 to 0.90, which is also typical of other active circum-Pacific areas such as Japan.⁴ Recurrence curves for the southeast region would therefore appear to be well within the observed range; in fact, their slopes are not greatly different from those for California.

The last four columns of Table 2 give extrapolations of the recurrence curves for the southeast region and the two sub-areas in the following terms: (1) the annual number of shocks of intensity III or greater to be expected in each area; (2) the largest earthquake (intensity and Richter magnitude) to be expected once in 40 years; (3) the largest earthquake (intensity and magnitude) to be expected in each area once every 100 years; and (4) the expected recurrence interval between major destructive earthquakes, i.e., those having an intensity of IX to X. For comparison, Table 2 includes some of the same extrapolations for: (1) the entire east coast area of the United States³ which includes a portion of the southeast region; (2) the combined areas of California and Nevada;³ and (3) the active area of southern California.⁴ Again, it should be emphasized that these extrapolations of seismicity in the southeast region are subject to considerable error due to the inadequacy of the data. They should be considered only as very crude estimates. Also, it should be mentioned that all extrapolations of recurrence data are not "earthquake predictions" but merely expressions of statistical expectations based on past records.

SEISMICITY AND SEISMIC RISK

In January 1969, S. T. Algermissen³ of the U. S. Coast and Geodetic Survey presented a "Seismic Risk Map" of the United States which is reproduced here as Fig. 5. This map was intended for use in establishing the design requirements of structures in various parts of the country; it is a revision and extension of a previous "Seismic Probability Map." Seismic risks were evaluated from the distribution of earthquake intensities associated with known historical events, the distribution of strain release in the United States since 1900, and from the patterns of strain release in relation to large-scale geologic features. These measures tend to strongly emphasize occasional or even rare large earthquakes in a region. Analysis of frequency of occurrence data, of the type presented earlier in this report, were specifically not considered in the construction of this Seismic Risk Map. Therefore, a discussion of seismic risk zones assigned to the southeast region on Fig. 5 provides a convenient summary of the preceding analysis of the seismicity of this region.

First, the only zones of highest risk (zone 3) in the southeast region are those around the centers of seismic activity in the Mississippi Valley and at Charleston, South Carolina. Although these zones were defined primarily on the bases of only one major series of earthquakes each, in 1811-1812 and 1886, respectively, the seismic history during the last 40 years (Fig. 2) was found to be sufficient to identify these two areas as the most prominent earthquake zones in the southeast region. Perhaps more important was the observation that there does not appear to be any other areas of equally high seismicity which might not have been assigned a zone 3 risk because of the absence of a large earthquake during historical times.

Second, the diffuse area of lesser seismic activity in the Southern Appalachian Mountains is assigned a zone 2 risk, indicating the potential of only moderate damage. The boundaries of this zone in Fig. 5 are almost exactly coincident with the boundaries of the southern Appalachian area in Fig. 2 except where they dip down to enclose the zone 3 Charleston area. All other portions of the southeast region are assigned to either zone 1 or zone 0, indicating the potential of either minor damage from distant earthquakes, or no damage.

Fig. 5. Seismic Risk Map of the United States (after Algermissen).

The frequency of occurrence analysis suggested that the general level of seismicity in the Mississippi Valley area, Charleston area, and Southern Appalachian Mountains area is less than the seismicity of the California-Nevada regions by at least one order of magnitude. This conclusion could lead to questions concerning the legitimacy of assigning all of these areas to the same risk zones (3 and 2), although the relative risks within the southeast region appear to be confirmed by the seismicity analysis. In this respect, the seismic risk map should be treated as though it were an accurate reflection of the potential of damage due to earthquakes rather than the probability of that damage.

SEISMIC HISTORY SORTING OPTIONS

The listing of the complete seismic history of the southeast region (Appendix A) is somewhat cumbersome for use in the consideration of seismic hazard at specific sites. Since one of the primary purposes of compiling the seismic history was to provide information in a form suitable for just this purpose, a computer program was written to sort the cards of the complete history in a number of ways and print selected, smaller, special purpose sublists. This sorting of the seismic history can be carried out in a number of ways as described below. As a part of its information service,⁷ the ORNL seismograph station will provide any (and any number) of these sublists upon request.

Sorting by Geologic Province.-- The southeast region was first divided into three general areas based on the large geologic provinces considered in the seismicity analysis. These area categories are (Fig 2):

1. The Southern Mississippi Valley is a zone about 150 to 200 miles wide centered on the Mississippi River. This area has been the most seismically active area within the southeast region.
2. The Southern Appalachian Mountains is a zone embracing the southern end of the Appalachian Mountains chain and the Blue Ridge Plateau.

3. This area category is the remainder of the southeast region of the United States (defined by 37° latitude and 95° longitude) exclusive of area categories 1 and 2 above.
4. This area category includes all of the earthquakes outside the southeast region which were felt in any part of it.

Chronological lists of the seismic history for each of these area categories and most (but not all) of the possible combinations of area categories can be produced. The combination of all four area categories is, of course, the complete listing in Appendix A.

Sorting by States.-- Nine states lie within the area defined as the southeast region of the United States. The seismic history can be sorted to produce a chronological list of those earthquakes having epicenters within the boundaries of any of the nine states, or any combination thereof.

Sorting by Geodetic Coordinates.-- A chronological listing can be produced of all of the earthquakes having epicenters within any rectangular area lying within the southeast region and defined by specified geodetic coordinates (to the nearest tenth of a degree). The total number of events in any listing obtained by this sorting method can be reduced further by specifying an equivalent Richter magnitude which must be exceeded in order to include the event in the listing.

It is felt that a judicious selection of three or four of these sublists, centered on a particular site and evaluated by comparison with regional seismicity, will provide a fairly reasonable assessment of the potential seismic hazard at given sites.

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APPENDIX A

SEISMIC HISTORY OF THE SOUTHEAST REGION OF THE UNITED STATES

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SEISMIC HISTORY OF THE SOUTHEAST REGION OF THE UNITED STATES

THIS IS A CHRONOLOGICAL LISTING OF ALL EARTHQUAKES HAVING EPICENTERS IN THE AREA OF THE CONTINENTAL UNITED STATES BOUNDED BY THE 37-DEGREE NORTH LATITUDE LINE AND THE 95-DEGREE WEST LONGITUDE LINE AND THOSE EARTHQUAKES OUTSIDE THIS AREA WHICH WERE REPORTED FELT IN ANY PART OF THE AREA

<u>YEAR</u>	<u>DATE</u>	<u>TIME-HR-MIN-SEC</u>	<u>LAT - LONG</u>	<u>LOCALITY AND NOTES</u>	<u>FELT-SQ.MI.</u>	<u>MAG/INT</u>	<u>REFERENCES</u>
1699	DEC 25	19 0 0.0	(35.0 90.0)	MEMPHIS, TENN. AREA		IV	B-6,9
1727	OCT 29	0 0 0.0	(29.9 81.3)	ST. AUGUSTINE, FLA			D-9
1776	NOV 6	0 0 0.0	(35.0 83.0)	JACKSON CO., WEST NC		IV-V	-6
1795	JAN 8	9 0 0.0	(30.0 90.0)	KASKASKIA, RANDOLPH CO ILLINOIS		III-V	B-6
1811	DEC 16	8 0 0.0	(36.6 89.6)	NEW MADRID, MO-FELT EXTENSIVELY EASTWARD. PERHAPS THE STRONGEST EVER IN U.S., LIMITED DAMAGE BECAUSE POP. SPARSE, INTENSITY-XII	2000000		ABCD -5,6
1812	JAN 23	15 0 0.0	(36.6 89.6)	NEW MADRID, MO-SECOND MAIN SHOCK OF SERIES, INTENSITY-XII	2000000		ABCD-5,6
1812	FEB 7	9 45 0.0	(36.6 89.6)	NEW MADRID, MO-THIRD MAIN SHOCK OF SERIES, INTENSITY-XII			ABCD-5,6
1816	JUL 25	15 0 0.0	(36.6 89.5)	NEW MADRID, MO		III-IV	-6
1816	JUL 25	21 0 0.0	(36.6 89.5)	NEW MADRID, MO		III-IV	-6
1816	DEC 31	18 0 0.0	(36.8 76.3)	NORFOLK, VA			-9
1817	JAN 8	9 34 0.0	(37.0 81.0)	VA-NC-SC-MO AREA			B-9
1819	SEP 2	0 30 0.0	(37.0 90.0)	SOUTHEASTERN MISSOURI		III-IV	B-6
1819	SEP 16	16 30 0.0	(37.3 89.5)	CAPE GIRARDEAU, MO		III-IV	-6
1820	NOV 9	22 0 0.0	(37.3 89.5)	CAPE GIRARDEAU, MO		IV	AD-6
1826	OCT 15	0 0 0.0	(32.0 81.0)	SAVANNAH, GA-VIOLENT			-7
1828	MAR 10	3 0 0.0	(37.7 78.5)	VIRGINIA	190000	V	B-5,9,10
1829	MAY 0	0 0 0.0	(35.0 88.9)	JACKSON, TENN-STRONG			-7
1833	JUG 27	11 0 0.0	(37.5 77.5)	CENTRAL VIRGINIA	52000	VI	C-5,9
1834	SEP 5	0 0 0.0	(36.7 68.5)	MAYFIELD, KY		III-IV	D-6
1842	MAY 28	5 0 0.0	(36.6 89.2)	HICKMAN, KY		III	B-6
1843	JAN 5	1 0 0.0	(35.2 90.0)	W TENN-FELT TO EAST	400000	VII	BCD-5,6
1843	FEB 8	15 40 0.0	(16.0 62.0)	GUADELOUPE, WEST INDIES-FELT ALONG EAST COAST OF US, ESPECIALLY IN NC			C-5
1843	FEB 17	5 0 0.0	(38.5 90.3)	ST. LOUIS, MO-AFFECTED A WIDE AREA		III-IV	-5,6
1843	JUN 13	15 0 0.0	(36.6 89.2)	HICKMAN, KY		III	-6
1843	AUG 7	0 0 0.0	(35.6 87.0)	COLUMBIA AND SOMERVILLE, TENN		III-IV	-6
1844	NOV 28	12 0 0.0	(36.0 84.0)	KNOXVILLE, TENN		VI	BD-5,6
1846	MAR 26	17 25 0.0	(36.6 89.5)	NEW MADRID, MO		II-III	B-6

1852	APR 29	18 0 0.0	(36.6 81.6)	VA-NC-TENN REGION	150000	VI	BO-5,6,10
1854	NOV 22	21 0 0.0	(37.1 81.5)	TAZEWELL CITY,VA			-9
1855	MAY 3	3 33 0.0	(37.0 89.2)	CAIRO,ILL		IV-V	AD-6
1855	MAY 3	10 0 0.0	(37.0 89.2)	CAIRO,ILL-AFTERSHOCK		III-IV	AB-6
1855	MAY 3	10 5 0.0	(37.0 89.2)	CAIRO,ILL-AFTERSHOCK		III-IV	B-6
1856	NOV 9	0 0 0.0	(37.0 89.2)	CAIRO,ILL-WIDELY FELT		IV-V	D-6
1857	OCT 8	10 0 0.0	(38.5 90.3)	ST. LOUIS,MO	7500	VI-VII	ACD-6,5
1857	OCT 8	10 7 0.0	(38.5 90.3)	ST. LOUIS-SECOND SHOCK	7500	VI-VII	ACD-6,5
1857	DEC 19	14 4 0.0	(32.8 79.8)	CHARLESTON,SC			B-5
1859	MAR 22	0 0 0.0	(37.2 81.5)	TAZEWELL CITY,VA			B-9
1861	AUG 21	10 22 0.0	(36.6 78.5)	VIRGINIA	300000	VI	D-5,9,6,10
1865	AUG 17	15 0 0.0	(36.5 89.5)	NEW MADRID,MO-FELT WIDELY OVER MISS VAL.	24000	VII	D-6,5
1865	SEP 7	14 15 0.0	(37.0 90.0)	MISSISSIPPI VALLEY		III-IV	B-6
1867	APR 24	20 22 0.0	(39.5 96.7)	NEAR LAWRENCE,KANSAS	300000	VII	BO-5,6
1871	JUL 24	0 0 0.0	(37.0 89.2)	CAIRO,ILL		III	-6
1872	FEB 8	0 0 0.0	(36.8 79.4)	CHATHAM,VA			B-9
1872	FEB 8	11 0 0.0	(37.0 89.2)	CAIRO,ILL		IV	BO-6
1872	MAR 26	0 0 0.0	(37.1 88.6)	PADUCAH,KY		III	-6
1872	APR 20	8 0 0.0	(35.2 90.0)	MEMPHIS, TENN		III	-6
1872	JUN 17	29 0 0.0	(33.1 83.3)	MILLEDGEVILLE,GA		V	D-5
1872	AUG 20	0 0 0.0	(35.2 90.0)	MEMPHIS, TENN		II-III	-6
1873	MAY 3	21 0 0.0	(35.2 90.0)	MEMPHIS, TENN-2 SEVERE SHOCKS, WIDELY FELT		III-IV	-6
1873	AUG 22	19 0 0.0	(35.2 90.0)	MEMPHIS, TENN		III	-6
1873	OCT 3	0 0 0.0	(37.2 78.2)	BURKESVILLE,VA			B-9
1874	FEB 10	0 0 0.0	(35.7 82.1)	MCDONELL COUNTY, NC- 50-100 SHOCKS FROM FEB 10 TO APR 17		II-VII	ADF-6,5
1874	FEB 22	0 0 0.0	(35.7 82.1)	MCDONELL CO. NC-MOST SEVERE OF SERIES		II-VII	ADF-6,5
1874	MAR 17	0 0 0.0	(35.7 82.1)	MCDONELL-AFTERSHOCK		II-VII	BF-6,5
1874	MAR 26	0 0 0.0	(35.7 82.1)	MCDONELL-AFTERSHOCK		II-VII	BF-6,5
1874	APR 14	0 0 0.0	(35.7 82.1)	MCDONELL-AFTERSHOCK		II-VII	BF-6,5
1874	APR 17	0 0 0.0	(35.7 82.1)	MCDONELL-AFTERSHOCK		II-VII	BF-6,5
1874	JUL 5	22 0 0.0	(37.0 89.2)	CAIRO,ILL		III	-6
1875	MAR 10	0 0 0.0	(37.7 78.0)	GOODLAND CITY,VA			B-9
1875	MAR 10	5 0 0.0	(37.7 78.0)	ISSEQUENA,GOODLAND COUNTY,VA			B-9,7
1875	JUN 18	12 43 0.0	(40.3 86.2)	SINNEY,OHIO	40000	VII	D-6
1875	JUL 29	23 5 0.0	(33.1 83.3)	MILLEDGEVILLE,GA			B-7
1875	OCT 7	0 0 0.0	(35.2 90.0)	MEMPHIS, TN AND CAIRO, ILL-LIGHT SHOCK		III-IV	-6
1875	OCT 28	3 0 0.0	(35.2 90.0)	MEMPHIS, TENN-3 SHOCKS		III-IV	-6
1875	NOV 2	2 55 0.0	(33.8 92.5)	NORTHERN GEORGIA	25000	VI	AA-5,6
1875	NOV 12	7 0 0.0	(35.9 83.9)	KNOXVILLE, TENN		III-IV	B-6
1875	DEC 23	4 45 0.0	(36.5 78.5)	ARVONIA, VA-5 SHOCKS IN QUICK SUCCESSION	50000	VII	ADD-5,9
1876	SEP 25	6 0 0.0	(38.0 88.0)	S ILL-S IND-N KY AREA		VI	A-6
1876	SEP 25	6 15 0.0	(38.0 88.0)	S ILL-S IND-N KY-2ND AND STRONGEST SHOCK		VI	-6

1876	DEC 12	0 0 0.0	(32.9	88.0)	CHARLESTON, SC		-7
1876	DEC 21	15 30 0.0	(36.9	81.1)	WYTHEVILLE, VA		-9
1877	APR 26	22 0 0.0	(35.2	83.4)	FRANKLIN, NC	III-IV	-6
1877	MAY 25	0 0 0.0	(35.9	83.9)	KNOXVILLE, TENN	III-IV	-6
1877	JUL 15	0 40 0.0	(35.2	90.0)	MEMPHIS, TENN-2 SHOCKS	III-IV	D-6
1877	NOV 16	7 20 0.0	(35.5	84.0)	W NC AND E TN- FELT AT KNOXVILLE, TN AND MURPHY, NC	5000 IV-V	D-9.5
1878	JAN 9	3 30 0.0	(37.5	89.2)	CAIRO, ILL-2 SHOCKS	III-IV	-6
1878	MAR 12	10 0 0.0	(36.8	89.2)	COLUMBUS, KY	V	CF-5.6
1878	NOV 19	5 52 0.0	(36.7	90.4)	TENN-MO-KY-ILL AREA	150000 VI-VIII	AD-6.5
1878	NOV 19	11 10 0.0	(36.7	90.4)	COLUMBUS, KY-2ND SHOCK		-6
1878	NOV 24	3 0 0.0	(35.1	84.0)	MURPHY, NC	III-IV	B-6.7
1879	JAN 13	4 45 0.0	(29.5	82.0)	NORTHERN FLA	25000 VI	A90-5.8
1879	JAN 13	4 55 0.0	(29.5	82.0)	NORTH FLA-AFTERSHOCK	VI	D-5.8
1879	JUL 25	17 45 0.0	(37.0	89.0)	CAIRO AND HOUND CITY, ILLINOIS	II-III	-6
1879	SEP 26	3 10 0.0	(35.2	90.0)	MEMPHIS, TENN	III-IV	-6
1879	OCT 26	0 0 0.0	(34.5	81.1)	WINDSBORO, SC		-7
1879	DEC 12	24 0 0.0	(35.2	89.0)	CHARLOTTE, NC	V-VI	A-5
1879	DEC 13	7 0 0.0	(35.2	80.0)	CHARLOTTE-AFTERSHOCK		-5
1880	JAN 23	3 23 0.0	(22.8	80.0)	CUBA-FELT IN FLA KEYS	5000 VIII	AD-5.8
1880	JAN 23	9 0 0.0	(22.8	80.0)	CUBA-AFTERSHOCK, FELT IN FLA		B-5
1880	JAN 28	0 0 0.0	(36.0	82.7)	BALD MOUNTAIN, NC		A9-6
1880	JAN 29	0 0 0.0	(36.0	82.7)	BALD MTH-AFTERSHOCK	II-III	B-6
1880	FEB 10	0 0 0.0	(36.0	82.7)	BALD MTH-AFTERSHOCK	II-III	B-6
1880	JUL 14	2 30 0.0	(35.2	90.0)	MEMPHIS, TENN AND CAVISO, MO	III-IV	A-6.7
1880	JUL 14	2 31 0.0	(35.2	90.0)	MEMPHIS, TENN AND CAVISO, MO-AFTERSHOCK	III-IV	-7.5
1881	OCT 7	16 52 0.0	(35.2	90.0)	MEMPHIS, TENN	III-IV	-6
1882	JAN 9	22 10 0.0	(34.6	76.5)	CAPE LOOKOUT, NC		-7
1882	JUL 20	10 0 0.0	(38.0	90.0)	SOUTHERN ILL	3000 V	-5.6
1882	SEP 27	10 20 0.0	(39.0	90.0)	SOUTHERN ILL	40000 VI-VII	AD-5.6
1882	OCT 15	5 40 0.0	(39.0	90.0)	SOUTHERN ILL	40000 V	AD-5.5
1882	OCT 15	6 30 0.0	(39.0	90.0)	S ILL-AFTERSHOCK	40000 V	B-6
1882	OCT 15	17 30 0.0	(35.1	84.0)	MURPHY, NC	III-IV	-6
1882	OCT 22	22 15 0.0	(35.0	84.0)	WESTERN ARKANSAS	135000 VI-VII	D-5
1883	JAN 10	10 0 0.0	(36.5	92.9)	PROTER, TANEY CO., MO		-7
1883	JAN 10	20 25 0.0	(37.0	89.2)	NEAR CAIRO, ILL		A-7
1883	JAN 11	7 12 0.0	(37.0	99.2)	CAIRO, ILL-MAIN SHOCK	80000 V-VI	AD-6.5
1883	APR 12	8 30 0.0	(37.0	89.2)	CAIRO, ILL-AFTERSHOCK	VI-VII	CF-5.6
1883	JUN 11	0 0 0.0	(35.2	90.0)	MEMPHIS, TENN	VI-VII	-7
1883	JUL 6	17 15 0.0	(37.0	89.2)	CAIRO, ILL	III	-6
1883	JUL 14	7 30 0.0	(37.0	89.2)	CAIRO, ILL AND WICKLIFFE, KY	IV-V	C-6
1883	SEP 21	11 54 0.0	(36.1	79.0)	GREENSBORO, NC		-7
1883	DEC 5	15 20 0.0	(36.3	91.0)	MELBOURNE, ARK	V	BCD-5
1883	DEC 6	0 0 0.0	(38.7	90.3)	ST. LOUIS, MO-7 SHOCKS, FELT AT MEMPHIS AND KANSAS CITY	VII	-7

1884	JAN 18	13 0 0.0	(34.3	78.0)	WILMINGTON, NC		V	D-5
1884	MAR 31	10 0 0.0	(33.1	83.3)	MILLEDGEVILLE, GA		III	-7
1884	APR 30	11 46 0.0	(35.2	84.0)	OGREETA, CHEROKEE CO., NC-LOW RUMBLING SOUND OF EARTHQUAKE HEARD. NO TREMOR REPORTED			B-6
1884	AUG 25	0 45 0.0	(35.9	83.9)	KNOXVILLE, TENN		IV	480-6
1884	NOV 30	4 0 0.0	(35.2	90.0)	MEMPHIS, COVINGTON, AND DYERSBURG, TENN		IV	B-6
1885	FEB 2	12 10 0.0	(36.9	81.1)	MYTNEVILLE, VA		IV	B-9
1885	AUG 6	13 0 0.0	(36.2	81.6)	BLUE RIDGE MTS., WATAUGA CO., WEST NC		IV-V	80-5
1885	AUG 13	0 0 0.0	(36.2	81.6)	BLUE RIDGE MTS., WATAUGA CO., WEST NC		IV	-7
1885	JCT 10	4 35 0.0	(37.7	78.8)	NE OF LYNCHBURG, VA	20000	VI	AD-5
1885	OCT 10	5 35 0.0	(37.7	78.8)	NE OF LYNCHBURG, VA- AFTERSHOCK			-5
1885	OCT 17	22 30 0.0	(33.0	82.8)	SANDERSVILLE, GA		IV	-7
1886	JAN 8	18 34 0.0	(30.4	81.7)	JACKSONVILLE, FLA			-7
1886	FEB 5	1 0 0.0	(32.8	88.0)	SUNTER CO., ALA	1400	V	-5
1886	FEB 13	0 0 0.0	(32.8	88.0)	SUNTER CO., ALA			-5
1886	MAR 18	17 15 0.0	(37.0	89.2)	CAIRO, ILL		III-IV	B-6,7
1886	SEP 1	2 51 0.0	(32.9	80.0)	FIFTEEN MILES NW OF CHARLESTON, SC-TWICE OF STRONGEST EVER TO OCCUR IN U.S., EXTEN- SIVE DAMAGE, INTEN- SITY X	2000000		ABCD-5,6,8
1886	SEP 1	2 59 0.0	(32.9	80.0)	CHARLESTON, SC-2ND MAIN SHOCK, INT-X	2000000		ABCD-5,6,8
1886	SEP 3	0 0 0.0	(32.9	80.0)	CHARLESTON-AFTERSHOCK			-8
1886	SEP 3	5 0 0.0	(36.9	81.1)	MYTNEVILLE, VA			-9
1886	SEP 3	21 0 0.0	(29.1	82.5)	CEDAR KEYS, FLA			-7
1886	SEP 4	9 0 0.0	(30.4	81.7)	JACKSONVILLE, FLA			-7
1886	SEP 5	0 0 0.0	(32.9	80.0)	CHARLESTON-AFTERSHOCK			-8
1886	SEP 8	0 0 0.0	(32.9	80.0)	CHARLESTON-AFTERSHOCK			-8
1886	SEP 9	0 0 0.0	(32.9	80.0)	CHARLESTON-AFTERSHOCK			-8
1886	SEP 9	18 47 0.0	(30.4	81.7)	JACKSONVILLE, FLA			-7
1886	SEP 23	3 0 0.0	(29.5	82.5)	ARCHER, FLA			-7
1886	SEP 25	2 56 0.0	(36.9	81.1)	MYTNEVILLE, VA			A-9
1886	SEP 25	3 10 0.0	(36.9	81.1)	MYTNEVILLE-AFTERSHOCK			A-9
1886	OCT 22	14 45 0.0	(32.9	80.0)	CHARLESTON-AFTERSHOCK	30000	VII	-5,8
1886	NOV 5	17 20 0.0	(32.9	80.0)	CHARLESTON-AFTERSHOCK	30000	VI	-5
1887	FEB 5	22 15 0.0	(30.7	87.5)	VIN. ENNES, IND	75000	V-VI	-5,6
1887	AUG 2	18 36 0.0	(37.0	89.2)	CAIRO, ILL		V	D-5,6
1888	MAR 17	0 0 0.0	(36.4	92.5)	JONESBORO, TENN			F-6
1889	NOV 3	0 0 0.0	(35.2	90.0)	MEMPHIS, TENN		IV	-6
1889	JAN 5	0 0 0.0	(35.2	90.0)	MEMPHIS, TENN		III	-6
1889	JUN 6	4 28 0.0	(35.2	90.0)	MEMPHIS, TENN		III	-6
1889	JUL 20	1 32 0.0	(35.2	90.0)	MEMPHIS, TENN		V-VII	D-6,5
1889	SEP 28	0 0 0.0	(35.2	84.5)	PARKSVILLE, POLK CO., TN-NIGHT, LIGHT SHOCK		III-IV	-5
1891	JAN 8	6 0 0.0	(31.7	95.2)	RUSK, TEX		VII	80-5
1891	JAN 14	0 0 0.0	(35.2	90.0)	MEMPHIS, TENN		III-IV	-6

1891	JUL 27	2 28	0.0	(37.9	87.51	EVANSVILLE, IND		VI	D-5
1891	SEP 27	4 55	0.0	(37.0	89.2)	CAIRO, ILL		V	D-5,6
1892	JAN 14	9 5	0.0	(35.2	90.0)	MEMPHIS, TN-TWO LIGHT SHOCKS SHOOK BLDGS		III	-6
1893	JUN 21	0 0	0.0	(30.4	81.7)	JACKSONVILLE, FLA		IV	-8
1894	JUL 18	0 0	0.0	(35.2	90.0)	MEMPHIS, TENN		III	-6
1895	JUL 27	0 0	0.0	(35.2	88.2)	SAVANNAH, TENN		III-IV	-6
1895	OCT 3	0 0	0.0	(35.2	88.2)	MEMPHIS, TENN-LT SHOCK		III	-6
1895	OCT 18	6 10	0.0	(36.5	89.6)	NEW MADRID, MO		III	A-6
1895	OCT 18	9 0	0.0	(36.5	89.6)	NEW MADRID, MO-SECOND SHOCK		III	-6
1895	OCT 30	14 30	0.0	(36.4	90.6)	CORNING, ARK		III	A-6
1895	OCT 30	20 0	0.0	(36.4	90.6)	CORNING, ARK-2ND SHOCK		III	A-6
1895	OCT 30	22 30	0.0	(36.4	90.6)	CORNING, ARK-3RD SHOCK		III	-6
1895	OCT 31	11 8	0.0	(37.0	89.4)	NEAR CHARLESTON, MO-4 ACRES OF GROUND SANK FORMING A LAKE. CONSIDERABLE DAMAGE AT CAIRO, ILL, FELT EXTENSIVELY EASTWARD	1000000	VIII-IX	ACD-6,5
1895	NOV 2	2 16	0.0	(37.0	89.4)	CHARLESTON, MO-FELT AT MEMPHIS, TN, AFTERSHOCK OF OCT 31 QUAKE		IV	A-5
1895	NOV 2	8 0	0.0	(37.0	89.4)	CHARLESTON, MO-AFTERSHOCK		III-IV	A-5
1895	NOV 2	17 0	0.0	(37.0	(.4)	CHARLESTON, MO-AFTERSHOCK		III-IV	A-6
1895	NOV 17	0 0	0.0	(37.0	89.4)	CHARLESTON, MO-AFTERSHOCK		III-IV	-6
1897	APR 26	4 0	0.0	(35.7	90.0)	OSCEOLA, ARK AND CAIRO ILL-TALL BLDGS SWAYED		III	-6
1897	MAY 1	4 0	0.0	(37.0	89.0)	ILL-M TN-M KY-S IND		IV-V	-5,6
1897	MAY 3	17 18	0.0	(37.1	80.7)	NEAR ROANOKE, VA	150000	VI-VII	BD-5,5,5
1897	MAY 31	18 58	0.0	(37.3	80.7)	GILES COUNTY, VA	200000	VIII	ABCD-5,6,9
1897	JUN 28	0 0	0.0	(37.3	79.9)	ROANOKE, VA			B-9
1897	SEP 4	0 0	0.0	(36.9	81.1)	WYTHEVILLE, VA			-9
1897	OCT 22	3 20	0.0	(36.9	81.1)	WYTHEVILLE, VA	20000	V	F-5,9,6
1897	DEC 18	23 45	0.0	(37.7	77.5)	ASHLAND, VA	7500	V	BF-5,9
1898	JAN 27	3 35	0.0	(36.5	90.6)	HELena, ARK		III	-6
1898	FEB 5	20 0	0.0	(37.5	81.0)	PULASKI-WYTHEVILLE, VA		IV	B-9
1899	MAR 30	0 30	0.0	(36.7	85.8)	MT. HERMON, MONROE CO., KENTUCKY		III	-5
1898	JUN 14	3 20	0.0	(36.5	99.6)	NEW MADRID, MO-WIDELY FELT OVER SEVERAL STATES		III-IV	-6
1898	NOV 25	20 0	0.0	(37.0	81.0)	PULASKI-WYTHEVILLE, VA		IV-V	B-9
1899	FEB 13	9 30	0.0	(37.0	81.0)	WESTERN VA- 4 SHOCKS. STRONGLY FELT IN E TN	30000	V	AF-5,6,9
1899	MAR 3	0 0	0.0	(36.8	76.3)	NORFOLK, VA			-9
1899	APR 30	2 5	0.0	(38.5	87.0)	SOUTHWESTERN, IND	40000	VI-VII	D-5,6
1900	OCT 13	4 15	0.0	(30.4	81.7)	JACKSONVILLE, FLA-8 DISTINCT SHOCKS FELT		V	AF-5
1901	SEP 14	0 0	0.0	(35.2	90.0)	MEMPHIS, TENN-LIGHT		III	-6
1902	JAN 24	10 48	0.0	(38.6	90.3)	NEAR ST. LOUIS, MO	40000	VI	-6,5
1902	MAR 17	0 0	0.0	(37.3	80.7)	PEARISBURG, VA			-9

1902	MAY 21	0 0 0.0	(29.9	81.3)	ST.AUGUSTINE,FLA- REPORTS HEARD LIKE CANNONADING AT SEA AT INTERVALS OF ABOUT 3 MINUTES, FELT SHOCKS THOUGHT TO COME FROM EARTH, OCCURRED FROM MIDNIGHT TO 0900 GMT		I-II	AB-7
1902	MAY 21	0 0 0.0	(29.9	81.3)	ST.AUGUSTINE,FLA- OCCURRING AFTER SERIES EARLIER IN DAY			-7
1902	MAY 29	7 30 0.0	(35.1	85.3)	CHATTANOOGA,TENN		V	BD-5,6
1902	OCT 18	18 0 0.0	(35.0	85.3)	SE TENN-WN GEORGIA	1500	III-V	AF-6
1902	OCT 18	22 0 0.0	(35.0	85.3)	TN-GA AREA-RAIN SHOCK	1500	V-VI	AF-6,5
1903	JAN 24	1 11 0.0	(32.8	80.0)	CHARLESTON,SC		IV	-7
1903	JAN 24	1 15 0.0	(32.1	81.1)	NEAR SAVANNAH,GA	13000	VI	BD-5
1903	FEB 9	0 21 0.0	(30.5	90.3)	NEAR ST.LOUIS,MO	70000	VI	B-5,6
1903	OCT 5	2 56 0.0	(35.2	90.0)	MEMPHIS,TENN AND ST.LOUIS,MO-FORESHOCK OF NOV 4 QUAKE		III	A-6,5
1903	NOV 4	18 11 0.0	(30.5	90.3)	NEAR ST.LOUIS,MO	70000	VI-VII	AD-5,6
1903	NOV 4	19 14 0.0	(30.5	90.3)	NEAR ST.LOUIS,MO-2ND SHOCK	70000	VI-VII	AD-5,6
1903	NOV 24	15 21 0.0	(36.5	89.6)	NEW MADRID,MO- AFTERSHOCK		III	A-6,5
1903	NOV 25	0 0 0.0	(36.5	89.6)	NEW MADRID,MO- AFTERSHOCK TREMORS		III	-6,5
1903	NOV 27	7 0 0.0	(36.5	89.5)	NEW MADRID,MO- AFTERSHOCK	70000	III-IV	-6,5
1903	NOV 27	8 20 0.0	(36.5	89.5)	NEW MADRID,MO- AFTERSHOCK	70000	IV-V	-5,6
1904	MAR 5	0 20 0.0	(35.7	83.5)	MARYVILLE,TENN	5000	V	BF-5,6
1905	JAN 27	0 0 0.0	(34.0	86.0)	NEAR GADSDEN,ALA	250000	VIII	ACD-6,5
1905	JAN 28	0 0 0.0	(34.0	86.0)	GADSDEN-SECOND SHOCK	250000	VIII	ACD-6,5
1905	AUG 22	5 8 0.0	(36.9	89.6)	NEAR ST.KESTON,MO-FELT OVER WIDE AREA	40000	IV VI	BD-6,7
1905	SEP 4	9 0 0.0	(27.5	32.6)	BRAIDENTON,FLA		III	B-7
1906	MAY 21	17 0 0.0	(30.6	80.5)	S ILL-WATER MAINS BROKEN AT FLORA,ILL		IV	-7
1906	AUG 5	6 2 0.0	(33.0	80.2)	SUMMERVILLE,SC			-7
1907	FEB 11	13 22 0.0	(37.7	78.3)	ARVONIA,VA	2000	VI	BD-5,9
1907	APR 19	8 30 0.0	(32.9	80.0)	CHARLESTON,SC	10000	V	D-5
1907	JUL 4	9 0 0.0	(37.7	90.5)	ST.FRANCIS CO.,MO- 2 SHOCKS,20 SEC APART		IV-V	-7
1908	JAN 15	19 0 0.0	(33.0	80.2)	SUMMERVILLE,SC		III-IV	B-7
1908	JAN 15	19 1 0.0	(33.0	80.2)	SUMMERVILLE,SC- AFTERSHOCK			-7
1908	MAR 3	21 6 0.0	(33.1	80.2)	SUMMERVILLE,SC		III-IV	-7
1908	MAR 7	6 50 0.0	(33.1	80.2)	SUMMERVILLE,SC		III-IV	-7
1908	AUG 23	8 30 0.0	(37.5	77.9)	NEAR POMPATAN,VA			A-
1908	AUG 23	9 30 0.0	(37.5	77.9)	POMPATAN-MAIN SHOCK	500	V	AMP-5,9,7
1908	AUG 24	1 0 0.0	(37.5	77.9)	NEAR POMPATAN,VA- AFTERSHOCK			-7
1908	SEP 28	19 34 0.0	(36.6	89.6)	NEW MADRID,MO	5000	IV-V	-5,6
1908	OCT 26	1 10 0.0	(33.1	80.2)	SUMMERVILLE,SC		III	A-7
1908	OCT 28	0 27 0.0	(37.0	89.2)	CAIRO,ILL	5000	V	B-6,5
1908	OCT 28	11 24 0.0	(33.1	80.2)	SUMMERVILLE,SC- AFTERSHOCK		III-IV	-7

1908	DEC 28	0 0 0.0	(35.2	90.01	MEMPHIS, TENN		III	-6
1908	DEC 31	0 0 0.0	(36.4	89.01	BLANDVILLE, KY-SEVERAL LIGHT SHOCKS			
1909	SEP 27	9 45 0.0	(39.0	87.71	SOUTHWESTERN, IND	30000	VII	AD-6,5
1909	SEP 27	9 50 0.0	(39.0	87.71	SW IND-SECOND SHOCK	30000	VII	D-6,5
1909	OCT 8	10 0 0.0	(34.8	85.01	NW GA-FELT AT DALTON AND RINGGOLD, GA	800	IV-V	-7
1909	OCT 22	22 0 0.0	(37.6	90.71	IRONTON, MO- 3 SHOCKS		IV	-7
1909	OCT 23	7 10 0.0	(37.0	89.51	SOUTHEASTERN, MO	40000	V-VI	-5,6
1911	FEB 10	10 22 0.0	(36.4	79.41	DANVILLE, VA			-9
1911	MAR 31	16 57 0.0	(33.8	92.21	RISON, ARK	18000	V	A-5,6
1911	MAR 31	18 10 0.0	(33.8	92.21	RISON, ARK-AFTERSHOCK	18000	V	-5
1911	APR 22	3 0 0.0	(35.2	82.71	CAESAR'S HEAD, SC, BLUE RIDGE AT NC-SC BORDER	600	V	C-6,5,7
1912	JUN 12	10 30 0.0	(32.9	80.01	SUMMERVILLE, SC	35000	VII	D-5
1912	JUN 20	0 0 0.0	(32.0	81.01	SAVANNAH, GA		V	F-5
1912	OCT 23	1 15 0.0	(32.7	83.51	DUBLIN, MACON AND PERRY, GA	1500	IV	-7
1912	DEC 7	19 10 0.0	(34.7	81.71	UNION COUNTY, SC		III-IV	-6,5
1913	JAN 1	18 28 0.0	(34.7	81.71	UNION COUNTY, SC	43000	VII-VIII	BD-5,5
1913	MAR 13	5 0 0.0	(34.5	85.01	CALHOUN AND GORDON COUNTIES, GA		IV	-7
1913	MAR 28	21 50 0.0	(36.2	83.71	KNOXVILLE, TENN	2700	VII	AD-6,5
1913	APR 17	16 30 0.0	(35.3	84.21	NEAR DUCKETTOWN, TN	3500	V-VI	BD-6,5
1913	MAY 2	6 0 0.0	(35.5	84.41	NEAR MADISONVILLE, TN		III	B-6
1913	JUN 9	15 30 0.0	(35.8	88.91	HUMBOLDT, TENN		III	BF-6
1913	AUG 3	16 45 0.0	(35.9	83.91	KNOXVILLE, TENN		IV	B-6
1914	JAN 24	3 24 0.0	(35.6	84.51	NIOTA AND SWEETWATER IN SE TENN		IV-V	AF-6,5
1914	JAN 24	3 41 0.0	(35.6	84.51	NIOTA AND SWEETWATER IN SE TENN-AFTERSHOCK		IV-V	AF-6,5
1914	MAR 5	20 5 0.0	(33.5	83.51	NEAR ATLANTA, GA	100000	VI	-6,5
1914	MAR 7	1 20 0.0	(34.3	79.01	DARLINGTON AND FLORENCE, SC		III-IV	F-7
1914	APR 1	4 23 0.0	(33.1	80.31	WALTERBORO, SC-30 MI. W. OF SUMMERVILLE, SC		III	-7
1914	APR 14	1 53 0.0	(33.1	80.21	SUMMERVILLE, SC		III	A-7
1914	JUL 14	8 0 0.0	(33.1	80.21	SUMMERVILLE, SC- AFTERSHOCK		II	-7
1914	SEP 22	7 4 0.0	(33.0	80.31	NEAR SUMMERVILLE, SC	30000	V	B-5
1914	DEC 23	11 55 0.0	(33.2	80.21	SUMMERVILLE, SC		II	-7
1915	JAN 14	9 20 0.0	(34.6	82.11	BRISTOL, TENN-VA		III-IV	-6
1915	FEB 5	6 55 0.0	(37.6	38.71	MARRISBURG, ILL		IV-V	-7
1915	FEB 19	4 35 0.0	(37.0	89.21	CAIRO AND HOUND CITY, ILLINOIS		II-III	-6
1915	APR 28	22 40 0.0	(34.4	89.51	NEW MADRID, MO	200	IV-V	A-6,5
1915	OCT 26	7 40 0.0	(34.7	88.61	MAYFIELD, KY		V	DF-5,5
1915	OCT 29	6 0 0.0	(35.8	82.71	NEAR MARSHALL, NC	1200	V	B-5,6
1915	DEC 7	18 40 0.0	(34.7	85.11	CAIRO, ILL	40000	V-VI	D-4,5
1915	DEC 20	8 55 0.0	(32.8	79.91	CHARLESTON, SC		III-IV	A-7
1916	FEB .	22 39 0.0	(35.5	82.51	NEAR WAYNESVILLE, NC	500000	VI-VII	AGD-6,5
1916	MAR 2	5 2 0.0	(34.5	92.71	ANDERSON, SC-6 SHOCKS		IV-V	-7

1916	APR 16	11 56 0.0	(33.1 80.2)	SUMMERVILLE, SC		I	-7
1916	APR 30	6 45 0.0	(33.1 80.2)	SUMMERVILLE, SC		II	B-7
1916	MAY 21	16 24 0.0	(36.5 89.6)	NEW MADRID AND CAIRO, ILLINOIS		IV	B-6
1916	JUN 25	12 5 0.0	(33.1 80.2)	SUMMERVILLE, SC		III	-7
1916	JUL 14	18 18 0.0	(33.1 80.2)	SUMMERVILLE, SC			-7
1916	AUG 24	9 0 0.0	(36.5 89.6)	NEW MADRID, MO AND CAIRO, ILL		III	-6
1916	AUG 26	18 35 0.0	(36.0 81.0)	STATESVILLE AND TAYLORSVILLE, NC-STRONG, LINCOLN, NC REPORTED THREE SHOCKS	3800	V	AB-6
1916	AUG 26	17 36 0.0	(36.0 81.0)	STATESVILLE AND TAYLORSVILLE, NC-AFTERSHOCK	3800	V	AB-5,6
1916	SEP 24	9 42 0.0	(33.1 80.2)	SUMMERVILLE, SC		II	-7
1916	OCT 18	22 4 0.0	(33.5 86.2)	BIRMINGHAM, ALA	170000	VII	ACD-6,5,7
1916	OCT 19	3 52 0.0	(33.5 86.2)	BIRMINGHAM-AFTERSHOCK			A-6
1916	OCT 19	8 0 0.0	(36.7 88.7)	MAYFIELD, KY		III	-6
1916	OCT 22	0 0 0.0	(33.5 86.2)	BIRMINGHAM-AFTERSHOCK			A-6
1916	NOV 4	12 15 0.0	(33.5 85.2)	BIRMINGHAM-AFTERSHOCK			A-6
1916	DEC 19	5 42 0.0	(36.6 89.3)	HICKMAN, KY-TWO SHOCKS		V-VII	BD-6,5
1917	JAN 2	9 30 0.0	(36.1 83.9)	NEAR MCILLAN, KNOX CO., TN-THOUGHT BY SOME TO BE EXPLOSION			F-6
1917	JAN 25	21 15 0.0	(36.1 83.5)	JEFFERSON CITY, TENN		III	A-6
1917	JAN 26	12 15 0.0	(36.1 83.5)	TALBOTT, JEFFERSON CO. TENN-AFTERSHOCK		III	A-6
1917	JAN 27	20 0 0.0	(36.1 83.)	JEFFERSON CITY, TENN-AFTERSHOCK		III	-6
1917	MAR 5	2 7 0.0	(35.9 83.9)	KNOXVILLE, TENN-ACCOUNT SUGGESTS ANOTHER UNREPORTED SHOCK A FEW DAYS EARLIER		III	D-6
1917	MAR 25	21 15 0.0	(36.1 83.5)	JEFFERSON CITY AND TALBOTT, TENN		III-IV	AB-6,7
1917	MAR 26	12 50 0.0	(36.1 83.5)	TALBOTT, TENN-AFTERSHOCK		III	B-6
1917	MAR 27	20 0 0.0	(36.1 83.5)	JEFFERSON CITY, TENN-TALBOTT AFTERSHOCK		III-IV	D-6
1917	APR 9	20 52 0.0	(38.1 90.6)	BETWEEN ST. LOUIS AND NEW MADRID, MO	200000	VI	AD-6,5
1917	APR 9	23 38 0.0	(38.1 90.6)	EASTERN MO-AFTERSHOCK		IV	-5,6
1917	APR 11	10 1 0.0	(33.1 80.2)	SUMMERVILLE, SC		I-II	-7
1917	APR 15	0 0 0.0	(37.0 82.0)	SW VIRGINIA		III	-9,6
1917	MAY 8	15 6 0.0	(36.8 90.5)	HENDRICKSON, MO		IV	A-6
1917	MAY 9	9 0 0.0	(36.8 90.5)	HENDRICKSON-2ND SHOCK		III	A-6
1917	MAY 9	15 0 0.0	(36.8 90.5)	HENDRICKSON-3RD SHOCK		III	-6
1917	JUN 9	13 14 0.0	(36.5 89.6)	NEW MADRID, MO-ALSO FELT IN CAIRO, ILL AND SPRINGVILLE, TENN		IV	-6
1917	JUN 21	0 0 0.0	(43.0 36.0)	EASTERN TENNESSEE		IV	-6
1917	JUN 30	2 23 0.0	(32.7 87.5)	ROSEMARY, ALA		V	AB-6,5,7
1917	JUN 30	2 50 0.0	(32.7 87.5)	ROSEMARY-AFTERSHOCK		V	B-6,7
1918	JAN 16	15 45 0.0	(35.9 83.9)	KNOXVILLE, TENN		V	BD-6
1918	FEB 17	8 10 0.0	(37.0 89.2)	CAIRO, ILL		IV	B-6

1918	APR 10	2 9 0.0	(138.7	78.4)	LURAY, VA-MAIN SHOCK	100000	VI	AGD-5,9,7
1918	APR 19	0 0 0.0	(136.8	76.3)	NORFOLK-SUFFOLK, VA			-0
1918	JUN 22	0 59 0.0	(136.1	84.1)	NEAR LENOIR CITY, TENN	3000	IV-V	AB-6,5,7
1918	OCT 4	9 21 0.0	(134.7	92.3)	LONGKE COUNTY, ARK	30000	V	B-6,5
1918	OCT 13	21 38 0.0	(136.1	91.1)	BLACK ROCK, ARK		V	AB-5,6
1918	OCT 16	2 15 0.0	(135.2	89.2)	NEAR NEW MADRID, MO	50000	IV-V	D-6,5
1919	APR 8	0 40 0.0	(135.0	92.8)	RAVENSBURG, SC-SEISMIC EVIDENCE QUESTIONED		IV	-6
1919	MAY 23	12 38 0.0	(134.5	89.2)	HICKMAN, KY		III	AB-6
1919	MAY 24	13 35 0.0	(136.6	89.2)	HICKMAN, KY-AFTERSHOCK		III	A-6
1919	MAY 26	13 25 0.0	(137.0	89.2)	CAIRO, ILL-NEW MADRID, MO-BARDWELL AND HICKMAN, KY-AFTERSHOCK		III	B-6
1919	MAY 28	11 36 0.0	(136.6	89.2)	HICKMAN, KY-AFTERSHOCK		III	-6
1919	MAY 28	13 43 0.0	(136.4	89.5)	TIPTONVILLE, TENN		III	-6
1919	SEP 6	2 46 0.0	(135.8	78.2)	NEAR FRONT ROYAL, VA		VI	ABCD-5,9
1919	NOV 3	26 40 0.0	(136.2	90.9)	NEAR POCAHONTAS, ARK		IV-V	B-5
1920	FEB 29	3 1 0.0	(137.2	93.2)	SPRINGFIELD, MO	400	IV	-7
1920	APR 7	20 43 0.0	(136.4	88.1)	SPRINGVILLE, TENN-ONE SHOCK, A HEAVY JAR, QUAKE QUESTIONABLE		III	-6
1920	MAY 1	15 15 0.0	(139.0	92.4)	COLUMBIA, MO-FELT AT POPULAR BLUFF, MO AND IN SOUTHERN ILL		V	A-6
1920	MAY 1	17 0 0.0	(139.0	92.4)	COLUMBIA-AFTERSHOCK		V	-6
1920	AUG 1	11 53 0.0	(133.1	80.2)	SUMMERVILLE, SC		II-VII	-7
1920	DEC 24	7 0 0.0	(136.0	85.0)	ROCKWOOD, TENN		V	B-6,5
1921	JAN 9	21 19 0.0	(136.4	89.5)	HICKMAN, KY			A-7
1921	JAN 9	21 34 0.0	(136.4	89.5)	TIPTONVILLE, TENN AND NEW MADRID, MO- AFTERSHOCK		IV	-6,7
1921	FEB 27	10 16 0.0	(137.0	89.2)	CAIRO, ILL		III	B-6
1921	APR 19	23 45 0.0	(133.1	80.2)	SUMMERVILLE, SC		III	A-7
1921	APR 23	23 48 0.0	(133.1	80.2)	SUMMERVILLE, SC- AFTERSHOCK		III	-7
1921	JUL 15	0 0 0.0	(136.4	82.3)	WENDOTA, VA		V-VI	D-6,5,9
1921	AUG 7	6 30 0.0	(137.8	78.4)	NEW CANTON, VA-METEOR POSSIBLE		V	-9,5
1921	SEP 2	14 0 0.0	(136.2	86.3)	STATESVILLE, TENN- SEVERAL SHOCKS FELT		III	B-6
1921	DEC 15	13 20 0.0	(135.8	84.6)	NEAR KINGSTON, TENN- FELT FROM KINGSTON TO DAYTON, EAST TO ATHENS		V	BD-6
1922	MAR 22	22 30 0.0	(137.3	88.6)	SOUTHERN ILL	25000	V	AD-6,5
1922	MAR 23	2 20 0.0	(137.3	88.6)	S ILL-SECOND SHOCK	25000	V	D-6,5
1922	MAR 23	21 45 0.0	(137.0	88.0)	WESTERN KENTUCKY		V	-6,5
1922	MAR 28	16 42 0.0	(136.8	90.4)	POPULAR BLUFF, MO		III	B-6
1922	MAR 30	2 20 0.0	(135.5	86.7)	FARMINGTON, MARSHALL CO., TENN		V	B-6
1922	MAR 30	2 21 0.0	(136.5	82.2)	ARCADIA, SULLIVAN CO., TENN		IV	A-6
1922	MAR 30	4 53 0.0	(135.2	90.0)	MEMPHIS, TN-FELT IN TN, KY, MO AND ILL		V	-6
1922	MAR 30	22 20 0.0	(136.5	82.2)	ARCADIA-AFTERSHOCK		IV	-6
1922	AUG 8	9 25 0.0	(133.1	80.2)	SUMMERVILLE, SC		II-III	-7

1922	NOV 27	3 31 0.0	(138.5 90.3)	ST. LOUIS, MO-HALLS SWAYED, FELT IN NASH- VILLE, TN, KY AND IND		V	D-6
1923	MAR 23	4 25 0.0	(132.9 88.0)	CHARLESTON AND SUMMERVILLE, SC		III	-7
1923	MAR 27	8 0 0.0	(134.6 89.5)	WYATTE, MARSHALL CO., MISS		IV	-6
1923	MAY 4	10 55 0.0	(133.1 80.2)	WEST OF CHARLESTON AND SUMMERVILLE, SC		III	-7
1923	MAY 6	7 50 0.0	(137.0 89.2)	CAIRO, ILL		III	-6
1923	MAY 15	23 42 0.0	(137.0 89.2)	CAIRO, ILL		III	-6
1923	OCT 18	19 30 0.0	(135.3 82.5)	HENDERSONVILLE AND SALUDA, NC			-7
1923	OCT 28	17 10 0.0	(135.5 90.3)	MARKED TREE, ARK	40000	VII	CD-5, 6, 7
1923	OCT 29	17 15 0.0	(134.9 68.1)	RIVERTON, ALA		III	-7
1923	NOV 26	23 25 0.0	(135.2 90.2)	E ARK AND W TENN-FELT STRONGLY AT MEMPHIS		VI	-6
1923	NOV 29	23 20 0.0	(137.0 89.2)	CAIRO, ILL AND WICK- LIFFE KY-LIGHT TREMOR		III	-6
1924	JAN 1	1 6 0.0	(134.8 82.5)	GREENVILLE, SC		IV	-7
1924	JAN 1	3 5 0.0	(135.4 90.3)	NEAR MEMPHIS, TENN	30000	V	-6, 5
1924	FEB 14	16 6 0.0	(133.1 80.2)	SUMMERVILLE, SC		III	-7
1924	MAR 2	11 18 0.0	(136.9 99.1)	E KY NEAR CAIRO, ILL	25000	V	-5, 6
1924	APR 2	11 15 0.0	(137.1 88.6)	PADUCAN, KY		IV	-6
1924	JUN 3	15 43 0.0	(133.1 80.2)	SUMMERVILLE, SC		III	-7
1924	JUN 7	5 42 0.0	(136.4 89.5)	TIPTONVILLE, TENN		IV	B-6
1924	OCT 20	8 30 0.0	(135.0 92.6)	PICKENS COUNTY, SC	56000	V	BD-5, 6
1924	NOV 13	5 30 0.0	(136.6 82.1)	BRISTOL, TENN-VA		IV-V	AD-6, 7
1924	DEC 25	0 0 0.0	(137.3 79.9)	ROANOKE, VA			B-9
1925	APR 27	4 5 0.0	(138.0 87.5)	SOUTHWESTERN, IND	100000	V-VI	BD-5, 6
1925	MAY 13	12 0 0.0	(136.7 98.6)	MAYFIELD, KY	3000	V	-5, 6
1925	MAY 15	0 0 0.0	(137.0 81.0)	SHIFT CREEK, VA			A-9
1925	SEP 2	11 55 0.0	(137.8 87.6)	NEAR HENDERSON, KY	75000	V-VI	ACD-5, 6
1926	MAR 22	14 30 0.0	(137.6 88.7)	HARRISBURG, ILL		IV	-7
1926	APR 28	2 16 0.0	(136.5 89.2)	KENTON, OBION CO., TENN		III	B-6
1926	JUN 20	14 25 0.0	(135.8 95.3)	MUSKOGEE, OKLA		IV	B-7
1926	JUL 8	9 50 0.0	(135.9 82.1)	SOUTH MITCHELL CO., NC		VI-VII	BCDF-6, 5
1926	OCT 27	16 22 0.0	(136.3 90.4)	POPLAR BLUFF, MO		IV	A-5
1926	OCT 27	16 25 0.0	(136.8 90.4)	POPLAR BLUFF-SECOND SHOCK		IV	A-6
1926	DEC 13	23 3 0.0	(136.6 89.8)	PARMA, NC		IV	F-6
1926	DEC 17	0 0 0.0	(136.4 89.5)	TIPTONVILLE, TENN- 2 SHOCKS, 1 MIN APART		IV	F-6
1927	FEB 1	1 30 0.0	(137.3 99.7)	JACKSON, MO		IV	D-6
1927	FEB 3	8 0 0.0	(136.8 90.4)	POPLAR BLUFF, MO		IV	D-6
1927	APR 18	10 30 0.0	(136.3 87.5)	RIDGLEY, LAKE CO., TENN		IV	A-6
1927	APR 18	12 30 0.0	(136.3 89.5)	RIDGLEY, LAKE CO., TN- TWO AFTERSHOCKS IN QUICK SUCCESSION		IV	-6
1927	MAY 7	8 28 0.0	(136.5 89.0)	NEAR NEW MADRID, MO	130000	VII	BD-6, 5
1927	JUN 10	7 16 0.0	(138.0 79.0)	AUGUSTA CITY, VA	2500	V	B-9, 5
1927	JUN 16	12 0 0.0	(134.7 96.0)	NEAR SCOTTSBORO, ALA	2500	V	BCDF-6, 5
1927	JUL 20	8 58 0.0	(135.9 83.9)	KNOXVILLE, TENN-QUAKE QUESTIONABLE			BCDF-6

1927	AUG 13	16 0 0.0	(36.4	99.5)	TIPTONVILLE, TENN	V	0-6
1927	OCT 8	12 36 0.0	(35.0	85.3)	CHATTANOOGA, TENN	V	AG-6
1928	MAR 7	2 45 0.0	(35.5	86.9)	REPORTED AT FRANKLIN, LYNNVILLE, COLUMBIA IN MIDDLE TENN	II-III	0-1,6
1928	APR 15	11 0 0.0	(36.6	89.5)	NEW MADRID, MO	III	-6,1
1928	APR 23	11 0 0.0	(36.6	89.3)	NICKMAN, KY	III	-6,1
1928	MAY 23	10 5 0.0	(36.8	83.3)	VALDOSTA, GA		-1
1928	MAY 31	22 40 0.0	(36.6	89.5)	NEW MADRID, MO-SOME UNCERTAINTY ABOUT THE DATE, POSSIBLY EARLIER	IV	-6,1
1928	NOV 3	4 3 0.0	(36.0	82.6)	NE TENN-M NC BORDER REGION-FELT IN ALA, GA, VA, KY AND SC	VI-VII	CO-5,6,1,9
1928	NOV 10	6 20 0.0	(36.2	91.1)	BLACK ROCK, ARK		F-1
1929	NOV 20	3 45 0.0	(35.9	82.8)	M NC-E TENN BOR. AREA- FELT AT ASHVILLE AND HOT SPRINGS, NC, JOHNSON CITY AND GREENVILLE, TENN	IV	-6
1928	DEC 26	3 25 0.0	(36.2	91.1)	BLACK ROCK, ARK		F-1
1929	JAN 3	12 5 0.0	(35.9	88.3)	SUMTER, SC		-1
1929	MAY 13	3 50 0.0	(36.4	89.5)	TIPTONVILLE, TENN	III	0-1,6
1929	JUN 13	14 44 0.0	(36.7	88.0)	MOBILE, ALA		-1
1929	JUL 28	17 0 0.0	(29.0	89.4)	BURRWOOD, LA		-1
1929	OCT 28	2 15 0.0	(36.3	82.4)	DUE WEST, SC		B-1
1930	JAN 2	16 30 0.0	(35.8	89.6)	RIPLEY, TN-LIGHT SHOCK	II	-1,6
1930	JAN 26	21 0 0.0	(36.1	91.2)	BLACK ROCK, ARK		F-1
1930	FEB 19	17 0 0.0	(35.5	90.4)	MARKED TREE, ARK	III	0-1,6
1930	FEB 25	12 45 0.0	(37.0	85.2)	CAIRO, ILL	III	F-6
1930	MAR 27	8 56 0.0	(35.3	90.0)	MEMPHIS, TENN-FELT ALSO AT RALEIGH, TN, VARIOUSLY REPORTED AS EITHER MAR 26 OR 27	II-III	-1,6
1930	APR 2	9 39 0.0	(36.2	89.7)	CARUTHERSVILLE, MO- FELT IN TENN	IV	-1,6
1930	JUL 19	18 53 0.0	(25.8	81.4)	EVERGLADES, FLA-FELT ALSO AT LA BELLE, FT. MYERS AND MARCO IS., SEISMIC ORIGIN HAS BEEN QUESTIONED	V	0-9,1
1930	AUG 13	20 0 0.0	(36.6	89.5)	NEW MADRID, MO	II	-6
1930	AUG 29	6 27 0.0	(37.0	89.1)	NEAR CAIRO, ILL-FELT AT BLANDVILLE AND BARLOW, KY		AG-1,6
1930	AUG 30	9 28 0.0	(35.9	86.4)	E TENN NEAR KINGSTON- FELT ALSO AT LENOIR CITY, OLIVER SPRINGS, AND LAMMVILLE, TENN	V	0-1,6
1930	SEP 1	20 30 0.0	(36.5	89.5)	NEW MADRID, MO	IV	R-1,6
1930	SEP 3	1 30 0.0	(33.0	80.2)	SUMNERVILLE, SC		F-1
1930	SEP 3	12 0 0.0	(37.0	89.1)	BLANDVILLE, KY	II	A-1,6
1930	SEP 4	5 30 0.0	(37.0	89.1)	BLANDVILLE-AFTERSHOCK	III	-1,6
1930	OCT 16	21 50 0.0	(36.0	86.0)	KNOXVILLE, TENN	III-IV	AG-1,6
1930	OCT 17	2 15 0.0	(36.0	86.0)	KNOXVILLE-AFTERSHOCK		-6
1930	OCT 19	12 17 0.0	(30.0	91.0)	NEAR NEW ORLEANS, LA	15000	D-1,5
1930	NOV 16	12 30 0.0	(34.3	92.7)	MALVERN, ARK-FELT AT MUSKEY CREEK, PERLA, DAMASCUS AND LEOLA		D-1

1930	DEC 10	0 2 0.0	(34.3	82.4)	DUE WEST, SC	300		A-1
1930	DEC 26	4 0 0.0	(34.5	80.7)	CHESTERFIELD CO., SC- FELT AT PATRICK, MCBEE AND SOCIETY HILL, SC			-1
1931	APR 1	23 30 0.0	(36.8	87.5)	HOPKINSVILLE AND LOVELACEVILLE, KY-FELT AT CAIRO, ILL		III	-1.6
1931	APR 6	15 40 0.0	(36.7	89.1)	BERKLEY, BARDWELL AND LOVELACEVILLE, KY		III	-1.6
1931	MAY 5	12 18 0.0	(33.7	86.6)	NORTHERN ALA-FELT IN GA AND POSSIBLY SC	6500	V-VI	BD-1, 6, 5
1931	MAY 6	12 18 0.0	(34.3	82.4)	DUE WEST, SC (POSSIBLE DATE MAY 5 TO CORRES- POND TO N ALA SHOCK)			B-1
1931	JUL 18	14 40 0.0	(36.4	89.5)	TIPTONVILLE, TENN-FELT AT NEW MADRID, MO		IV	-6.2
1931	NOV 27	9 23 0.0	(36.2	86.7)	NASHVILLE, TENN		III	-6.1
1931	DEC 10	2 12 0.0	(35.9	89.9)	BLYTNEVILLE, ARK-ALSO FELT IN MO AND TENN		IV	-6.7
1931	DEC 17	2 36 0.0	(34.0	89.7)	BATESVILLE, MISS	65000	VI-VII	D-5, 6, 1
1932	JAN 6	12 35 0.0	(33.0	80.2)	SUMNERVILLE, SC-SLIGHT			-1
1932	JAN 13	12 40 0.0	(33.0	80.2)	SUMNERVILLE, SC-FEEDLE			-1
1932	NOV 22	7 57 0.0	(35.9	89.9)	BLYTNEVILLE AND PARAGOULD, ARK		III	-6
1933	JAN 27	3 0 0.0	(37.3	77.4)	NEAR PETERSBURG, VA		III	-9.1
1933	MAR 11	12 48 0.0	(36.8	90.4)	POPLAR BLUFF, MO-1ST		III	A-6.1
1933	MAR 11	13 4 0.0	(36.8	90.4)	POPLAR BLUFF, MO-2ND		III	-1.6
1933	JUL 26	2 34 0.0	(33.0	80.2)	SUMNERVILLE, SC		III	-1
1933	DEC 9	8 40 0.0	(35.8	90.2)	MANILA, ARK		V	DF-5, 6, 1
1933	DEC 19	14 12 0.0	(33.0	80.2)	SUMNERVILLE, SC		IV-V	AD-1, 5
1933	DEC 23	9 40 0.0	(33.0	80.2)	SUMNERVILLE, SC- AFTERSHOCK			F-1
1933	DEC 23	9 55 0.0	(33.0	80.2)	SUMNERVILLE, SC- AFTERSHOCK			F-1
1934	APR 11	17 40 0.0	(33.9	95.5)	NEAR TROUT SWITCH, TEX	3000	V	B-1, 5
1934	JUL 3	3 16 0.0	(35.1	90.1)	MEMPHIS, TENN-SHOCK FELT AT PENISCOLT CO., MO AT THE SAME TIME		IV	-6.1
1934	AUG 20	0 47 0.0	(37.0	89.2)	NEAR RODNEY, SE MO	30000	V-VI	AD-6, 1, 5
1934	AUG 20	3 37 0.0	(37.0	89.2)	NEAR CAIRO, ILL-RODNEY AFTERSHOCK, FELT CAIRO AND AT WICKLIFFE, KY			-6.1
1934	OCT 30	2 26 0.0	(37.5	89.5)	NEAR HARTSVILLE, POPE COUNTY, ILL-ON HEROD FAULT	1500	IV	-1
1934	DEC 9	10 0 0.0	(33.0	80.2)	SUMNERVILLE, SC		IV	B-1
1935	JAN 1	8 15 0.0	(35.1	83.6)	GA-NC BORDER-DAMAGE AT DAWSON, GA, AND ALBANY AND GAY, NC. CENTERED NEAR HAYES- VILLE, NC, FELT IN TENN	7000	V	BD-6, 5, 1
1935	FEB 6	12 36 0.0	(33.0	80.2)	SUMNERVILLE, SC			DF-1
1935	JUL 24	1 28 0.0	(36.4	89.5)	TIPTONVILLE, TENN-TWO ABRUPT BUMPING SHOCKS		IV	F-1
1935	OCT 20	16 20 0.0	(33.0	80.2)	SUMNERVILLE, SC			B-1
1935	NOV 14	3 10 0.0	(29.9	81.3)	ST. AUGUSTINE, FLA			A-1, 8
1935	NOV 14	3 30 0.0	(29.9	81.3)	ST. AUGUSTINE-2ND AND STRONGEST SHOCK, FELT ALSO IN PALATKA AND ON NEARBY ANASTASIA I		IV-V	-1, 8

1935	NOV 15	4 10 0.0	(29.6	81.6)	PALATKA, FLA-2 SHOCKS, THE 2ND WAS STRONGEST		-1
1936	JAN 1	8 9 0.0	(35.0	84.2)	GA-NC BDR. BETWEEN BLUE RIDGE, GA AND MURPHY, NC-FELT ALSO IN DUCKTOWN BASIN OF TENN	III	-6,2
1936	FEB 17	3 5 0.0	(36.3	89.8)	NAVY, NC	IV	F-6,2
1936	MAR 14	17 20 0.0	(34.0	95.2)	SE OKLA NEAR VALLANT AND WRIGHT CITY, OKLA- FELT ALSO IN TEX	V	-5,2
1936	AUG 2	22 15 0.0	(36.4	89.5)	TIPTONVILLE, TENN-FELT AT WIDELY SEPARATED POINTS IN TENN AND AT CAIRO, ILL	III	-6,2
1936	OCT 20	21 17 0.0	(36.6	89.5)	NEW MADRID, MO AREA	I	-6
1936	OCT 31	16 11 0.0	(36.5	89.5)	SE MO AREA	I	-6
1936	DEC 30	3 50 0.0	(33.0	88.2)	SUNNYSVILLE, SC-NEAR		-2
1937	JAN 30	8 57 0.0	36.2	89.7	NEAR CARTHAGESVILLE, MO-FELT IN TN AND ARK	III	D-6,2
1937	MAY 17	0 50 0.0	(36.1	90.4)	NE ARK-FELT IN TENN, MO, KY, ILL AND MISS	25000 III-IV	-6,2,5
1937	JUN 23	15 44 0.0	(36.4	89.5)	TIPTONVILLE, TENN	III	F-6,2
1937	OCT 5	22 50 0.0	(36.6	89.5)	NEW MADRID, MO	III	-2,6
1937	OCT 25	19 1 0.0	(33.0	88.2)	SUNNYSVILLE, SC		B-2
1938	MAR 16	10 12 0.0	(36.6	89.5)	PROBABLY IN THE NEW MADRID AREA	II	-6
1938	MAR 31	10 10 0.0	(35.6	83.6)	NC-TENN BORDER AREA- FELT FROM ASHVILLE AND MURPHY, NC TO KNOXVILLE, TENN	III-IV	-6,2
1938	APR 26	5 42 0.0	(34.3	93.3)	NEAR FENDLEY AND LEWIS, ARK-FELT AT POINT CEDAR, FENDLEY, ARITY AND ALPINE, ARK		-2
1938	JUN 17	0 0 0.0	(35.8	89.9)	NE ARK-FELT AT LUDORA AND BURDETTE, ARK AND LAUDERDALE CO., TN	II-III	-2,6
1938	AUG 5	0 14 0.0	(32.8	79.9)	NEAR CHARLESTON, SC- FELT AT ISLE OF PALMS		-2
1938	SEP 17	22 57 0.0	(35.5	90.3)	NE ARK-FORESHOCK		A-6,2
1938	SEP 18	3 34 0.0	(35.5	90.3)	NEAR MARKED TREE, ARK- FELT IN ARK, MO, TENN, KY, ILL, OKLA AND MISS	90000 IV	A-6,2
1938	SEP 18	7 20 0.0	(35.5	90.3)	NE ARK-AFTERSHOCK		-6,2
1938	SEP 19	0 0 0.0	(36.4	89.5)	NEAR TIPTONVILLE, TENN	III	-6
1938	SEP 18	23 32 0.0	(36.6	90.8)	MALDEN, MO	III	-6
1939	APR 15	17 30 0.0	(36.6	89.5)	NEAR NEW MADRID, MO	III-IV	-6,2
1939	MAY 5	3 45 0.0	(33.7	85.8)	ANNISTON, ALA-FELT ALSO AT OXFORD LAKE, BLUE MTN., TALLEDEGA, CHOCOLOCCO, JENIFER	V	D-5,6,2
1939	JUN 1	7 30 0.0	(36.1	94.5)	SW ARK OR OKLA	IV	-2
1939	JUN 19	21 43 0.0	(36.1	93.1)	ARKADELPHIA, ARK	V	C-2
1939	JUN 24	10 0 0.0	(36.7	86.6)	HUNTSVILLE, ALA		A8-2,5
1939	JUN 24	11 27 0.0	(36.7	86.6)	HUNTSVILLE-2ND AND STRONGEST SHOCK, FELT AT PULASKI, TENN	III-IV	A8-2,6
1939	JUN 24	12 45 0.0	(36.7	86.6)	HUNTSVILLE-AFTERSHOCK		B-2,6
1939	NOV 23	15 15 0.0	(38.2	90.1)	NEAR GRIGGS IN S ILL- WIDELY FELT FOR INT-V	150000 V	-2,5

1940	JAN 5	13 45 0.0	(133.0	00.2)	SUMNERVILLE, SC TWO JOLTS ABOUT 1 MIN APART			F-2
1940	FEB 14	11 10 0.0	(135.9	09.9)	BLYTNEVILLE, ARK		III	-6.2
1940	MAY 31	19 3 0.0	(137.1	00.6)	PADUCAH, KY-FELT AT CAIRO, ILL	1000	IV-V	0-6.2
1940	OCT 8	3 20 0.0	(133.0	00.2)	SUMNERVILLE, SC			-2
1940	OCT 19	5 55 0.0	(135.0	05.0)	S. TERRY, GA FOR AREA- FELT IN CHATTANOOGA, CLEVELAND, CHARLESTON, TENN. AND DALTON AND RINGGOLD, GA	500	IV	80-6.2
1940	NOV 23	21 15 0.0	30.2	00.1	NEAR WATERLOO, S ILL- FELT OVER WIDE AREA		VI	0-5.2, 6
1940	DEC 2	16 16 0.0	(133.0	04.0)	RODESSA, LA			-2
1940	DEC 25	1 50 0.0	(135.9	02.9)	ASHEVILLE, NC-GREEN- VILLE, TENN BORDER REG		III	4-2, 6
1940	DEC 25	6 49 0.0	(135.9	02.9)	NC-TENN MAIN SHOCK	7000	V	ABO-6.2
1940	DEC 26	5 0 0.0	(135.7	02.7)	NC-TENN AFTERSHOCK, FELT AT ASHEVILLE, NC		III	0-6
1940	DEC 27	9 32 0.0	(133.0	00.2)	SUMNERVILLE, SC-SLIGHT			-2
1941	MAR 4	6 15 0.0	(135.9	03.9)	KNOXVILLE, TENN-FELT AT ROCKFORD, BLOUNT COUNTY, TENN		III	0-3, 6
1941	MAY 10	11 12 0.0	(135.6	02.6)	ASHEVILLE, NC		III	-6.2
1941	JUN 28	10 30 0.0	(132.4	09.9)	VICKSBURG, MISS		III-IV	-6.3
1941	SEP 8	9 45 0.0	(135.0	05.3)	CHATTANOOGA, TENN	100	III-IV	0-3, 6
1941	OCT 8	7 51 0.0	(136.5	09.5)	FELT BLYTHEVILLE, ARK AND TIPTONVILLE, TENN		IV	0-3, 6
1941	OCT 21	16 53 0.0	(137.0	09.2)	CAIRO, ILL-WICKLIFFE, KY AREA		IV	0-6, 3
1941	NOV 15	3 7 0.0	(135.1	00.1)	MEMPHIS, TENN		III	-3, 6
1941	NOV 17	3 9 0.0	(135.5	09.7)	NEAR COVINGTON, TENN		V	90-6, 3, 5
1942	JAN 19	19 5 0.0	(125.7	00.2)	NEAR MIAMI, FLA-FELT IN THE EVERGLADES, FT. MYERS, HOLLYWOOD, LA BELLE AND DELRAY BEACH, SEVERAL DIS- TINCT SHOCKS			0-0, 3
1942	AUG 31	10 20 0.0	(137.0	09.2)	CAIRO, ILL		IV	-0, 3
1942	NOV 1	3 20 0.0	(134.5	01.1)	WINDYBORG, SC			F-3
1943	JUL 29	4 30 0.0	(133.5	02.0)	AUGUSTA, GA-SEISMIC ORIGIN QUESTIONED			-3
1943	DEC 28	15 25 0.0	(133.0	00.2)	SUMNERVILLE, SC		IV	-3
1944	JAN 28	10 30 0.0	(133.0	00.2)	SUMNERVILLE, SC			-3
1944	SEP 25	12 37 0.0	(130.7	00.3)	NEAR ST. LOUIS AND WEBSTER, MO-FELT AT CAIRO, ILL		III-IV	-6, 3
1945	JAN 30	21 20 0.0	(133.0	00.2)	SUMNERVILLE, SC			-3
1945	MAY 10	13 20 0.0	(132.8	00.0)	NEAR CHARLESTON, SC			AF-3
1945	MAY 10	13 40 0.0	(132.8	00.0)	CHARLESTON-AFTER SHOCK			F-3
1945	JUN 9	13 10 0.0	(132.8	00.0)	HAPPOLD HEIGHTS, SC- NEAR CHARLESTON			0-3
1945	JUN 14	3 25 0.0	(135.0	04.5)	CLEVELAND, TENN-FELT TO BLUE RIDGE, GA	4000	V	0-6, 3, 5
1945	JUL 26	11 32 29.0	34.3	01.4	MURRAY LAKE, SC-NEAR COLUMBIA	25000	IV-V	80-6, 3, 5
1945	SEP 23	7 22 0.0	(137.0	09.2)	CAIRO, ILL		III-IV	-6, 3
1945	NOV 13	9 21 0.0	(137.0	09.2)	NEAR CAIRO, ILL-FELT AT PERRYVILLE, MO		IV	-6

1945	DEC 22	14 25 0.0	(25.4 90.1)	NEAR MIAMI BEACH AND MELLYWOOD, FLA			-3
1946	FEB 8	18 9 0.0	(33.0 80.2)	SUMMERVILLE, SC-LIGHT			-3
1946	APR 7	5 0 0.0	(35.2 84.9)	CLEVELAND, TENN		III-IV	0-3
1946	MAY 15	6 10 0.0	(36.6 90.9)	SE MO-FELT AT MARSTON AND BENTON, MO		IV	-6,3
1946	OCT 8	1 12 2.5	37.5 90.8	ABRUPT HIGHWAY BETWEEN CHLOMIE AND FRENCH HILLS, MO-FELT WIDELY IN MO AND ILL INCLUD- ING CARB. ILL	3000		0-3
1947	JUN 6	12 55 0.0	(35.9 83.9)	KNOXVILLE, TENN		III	0-6
1947	NOV 2	4 30 0.0	(33.0 80.2)	SUMMERVILLE, SC			-3
1947	DEC 1	8 47 33.0	(36.7 90.5)	NEAR POPLAR BLUFF, MO- FELT AT NEW MADRID, MO		III-IV	0-6,3
1947	DEC 16	3 27 0.0	(35.7 90.0)	NEAR DECELA, ARK-IN THE MEMPHIS AREA	10000	V	0-6,3
1947	DEC 28	8 5 0.0	(35.0 85.3)	SE TENN-IN GA AREA- FELT STRONGLY IN MISSISSIPPI RIDGE AND CHATTANOOGA AREA OF TENN AND ROSSVILLE, GA	300	IV	0-6,3
1948	FEB 10	8 4 0.0	(36.4 84.1)	LAPOLLETTE, TENN		V-VI	0-6,3
1948	NOV 8	17 44 0.0	(26.5 82.2)	CAPTIVA, FLA			0-3
1948	JAN 14	3 45 0.0	(36.5 89.5)	N TENN-E ARK-SE MO AREA-FELT STRONGLY AT TIPTONVILLE, MEMPHIS	7000	V	0-6,3
1949	FEB 2	10 52 0.0	(33.0 80.2)	SUMMERVILLE, SC			2-3
1949	JUN 27	6 53 0.0	(35.0 80.2)	SUMMERVILLE, SC-TWO ABRUPT SHOCKS, 2ND FOLLOWING CLOSE			0-3
1949	AUG 13	21 45 0.0	(36.2 89.7)	CANTONVILLE, MO- FELT IN TENN		III	-6,3
1949	SEP 16	21 30 0.0	(36.7 83.0)	NEAR PENNINGTON CAP, LEE CO., VA		II-III	A-6
1949	SEP 17	9 30 0.0	(36.7 87.0)	LEE CO., VA-MAIN SHOCK, WIDELY FELT		IV-V	0-9,3,6
1950	MAY 2	3 30 0.0	(36.5 89.9)	GIDEON, MO			-3
1950	JUN 19	4 19 0.0	(35.7 84.0)	ALCOA, TENN-FELT AT KNOXVILLE, TENN AND IN N CAROLINA		IV	00-6,3,11
1950	SEP 17	5 40 0.0	(35.0 90.0)	MISSISSIPPI COUNTY, ARK-FELT WIDELY IN TENN AND ARK		III-IV	-6,3
1951	MAR 4	2 55 0.0	(33.0 80.2)	SUMMERVILLE, SC			0-3
1951	MAR 8	0 20 0.0	(33.0 80.2)	SUMMERVILLE, SC- AFTERSHOCK			A-3
1951	MAR 10	0 10 0.0	(33.0 80.2)	SUMMERVILLE, SC- AFTERSHOCK			-3
1951	DEC 10	2 2 21.5	(36.6 89.5)	NEW MADRID, MO-FELT ALSO IN ARK			A-3
1951	DEC 18	0 0 0.0	(36.6 89.5)	NEW MADRID-AFTERSHOCK			-3
1951	DEC 30	7 55 0.0	(32.0 80.2)	SUMMERVILLE, SC			0-3
1952	FEB 6	16 12 0.0	(33.5 86.0)	BIRMINGHAM, ALA	100	IV	0-3
1952	FEB 20	22 34 39.0	36.4 89.5	TENN-MO BORDER NEAR TIPTONVILLE, TENN-FELT ALSO IN ARK AND KY		V	0-3,5
1952	APR 9	16 29 15.0	35.4 97.8	NEAR EL RENO, OKLA	40000	VII	0-3,5
1952	MAY 20	9 54 14.0	36.7 89.2	NEW MADRID COUNTY, MO- FELT IN TENN AND KY			0-3
1952	JUN 11	22 20 0.0	(36.6 82.4)	JOHNSON CITY, TENN			-3

1952	JUL 16	23 40 10.0	36.2	89.6	DYERSBURG, TENN	VI	AD-3,5
1952	SEP 27	12 32 0.0	(33.0	80.2)	SUMMERVILLE, SC		-3
1952	OCT 17	15 40 0.0	(34.1	93.8)	BRIDGE, TEX	IV	-3
1952	OCT 18	4 16 10.0	(36.2	89.6)	DYERSBURG, TENN	IV	A-3
1952	OCT 18	4 30 0.0	(36.2	89.6)	DYERSBURG-AFTERSHOCK		A-3
1952	OCT 18	4 35 0.0	(34.2	89.6)	DYERSBURG-AFTERSHOCK		A-3
1952	OCT 18	4 46 3.0	(36.2	89.6)	DYERSBURG-AFTERSHOCK		-3
1952	NOV 18	20 12 0.0	(30.6	84.6)	ORLANDO, FLA	IV	-3
1952	NOV 19	0 0 0.0	(32.0	80.0)	CHARLESTON, SC	V	D-3,5
1952	DEC 25	4 23 24.0	36.1	90.0	NEAR BLYTHEVILLE, ARK- FELT AT MEMPHIS, TENN	IV	D-3
1952	DEC 28	0 0 0.0	(36.0	90.0)	MISSISSIPPI COUNTY, MO FELT IN SE MO AND KY, TN		-3
1953	JAN 26	23 18 0.0	(36.0	89.5)	NEAR FINLEY, TENN-ALSO FELT AT BOWNSPOINT AND LANE, TENN		A-3
1953	FEB 11	10 50 54.0	36.5	99.5	NEW MADRID, MO-FELT IN KY AND TENN		-3
1953	FEB 17	10 45 0.0	(36.0	89.5)	FINLEY, TN-AFTERSHOCK	IV	A-3
1953	FEB 18	0 17 0.0	(36.0	89.5)	FINLEY, TN-AFTERSHOCK	IV	A-3
1953	FEB 19	5 5 0.0	(36.0	89.5)	FINLEY, TN-AFTERSHOCK	IV	-3
1953	MAR 21	0 0 0.0	(20.6	81.4)	ORLANDO, FLA-2 TREMORS		-11
1953	MAY 12	10 50 0.0	(35.6	90.4)	LEPANTO, ARK		-3
1953	NOV 10	14 53 0.0	(35.9	83.9)	KNOXVILLE, TENN		D-3,11
1953	DEC 5	13 45 0.0	(35.9	83.9)	KNOXVILLE, TENN		D-11
1954	JAN 2	2 25 0.0	(36.6	83.7)	MIDDLEBORO, KY-FELT IN KY, TN, VA AND NC	VI	D-3,5
1954	JAN 17	7 15 0.0	(36.0	89.4)	DYERSBURG, TENN	IV	-3
1954	JAN 22	0 0 0.0	(35.3	84.4)	NEAR ETOWAH AND ATHENS, TENN	V	BD-3,5
1954	FEB 2	4 53 0.0	(36.7	90.3)	POPLAR BLUFF, MO-FELT IN PARTS OF MO, ARK, ILL, AND TENN	VI	D-3,5,11
1954	APR 27	2 9 27.0	(35.2	90.0)	MEMPHIS, TENN-FELT ALONG NEW MADRID FAULT FROM BLYTHEVILLE, ARK AND JACKSON, TENN TO CORINTH, MISS		BD-3,5,11
1955	JAN 6	20 30 0.0	(36.6	82.2)	BRISTOL, TENN-VA-FELT BY FEW ON UPPER FLOOR OF TALL BLDGS IN KNOXVILLE, TENN	IV	-9,3
1955	JAN 12	17 25 0.0	(35.0	84.0)	BLOUNT AND KNOX CTYS. TN-FELT AT BLUE GRASS AND MARYVILLE, TENN	IV	-3
1955	JAN 17	12 37 0.0	(37.3	78.5)	FARMVILLE, VA	IV	BD-9,3
1955	JAN 25	7 24 30.0	35.6	90.3	TENN-ARK-MO BOR. ALSO FELT FROM LEPANTO, ARK TO FARMVILLE, KY AND BIRMINGHAM, ALA	VI	D-3,5
1955	JAN 25	19 34 0.0	(35.9	83.9)	KNOXVILLE, TENN	IV	-3
1955	FEB 1	14 45 0.0	(30.4	89.1)	GULFPORT, MISS	V	BD-3,5
1955	MAR 29	9 2 40.0	(36.0	89.5)	FINLEY, TENN-FELT AT CAROTHERSVILLE, MO	VI	BD-3,5,11
1955	APR 9	13 1 24.0	38.1	89.8	WEST OF SPARTA, ILL	5.0	D-3,5
1955	SEP 5	1 45 0.0	(36.0	89.5)	NEAR FINLEY AND DYERSBURG, TENN	V	BD-3,11
1955	SEP 20	7 1 42.0	(36.0	81.4)	NC-VA BORDER AREA	V	BD-3,5

1955	DEC 13	7 43 0.0	(36.0	89.5)	WESTERN OYER CO. TENN- FELT AT FINLEY, TENN		V	A-3,5
1955	DEC 13	7 56 0.0	(36.0	89.5)	OYER CO.-AFTERSHOCK		V	-3,5
1956	JAN 5	8 0 0.0	(34.3	82.4)	DUE WEST, SC		IV	A-3
1956	JAN 5	8 30 0.0	(34.3	82.4)	DUE WEST-AFTERSHOCK		IV	-3
1956	JAN 24	5 0 0.0	(36.2	89.7)	CARUTHERSVILLE, MO			-3
1956	JAN 24	4 14 15.0	35.6	85.6	TENN-ARK BORDER NEAR COVINGTON, TENN		VI	D-3,5
1956	APR 2	16 3 10.0	(34.2	95.4)	SE OKLA-FELT AT ANTLERS AND BROKEN BOW, OKLA		V	80-3,5,11
1956	MAY 19	19 0 0.0	(34.3	82.4)	DUE WEST, SC		IV	A-3
1956	MAY 27	23 25 0.0	(34.3	82.4)	DUE WEST-AFTERSHOCK		IV	B-3
1956	SEP 7	13 36 1.0	35.5	84.0	NEAR KIRKVILLE, TENN- FELT IN TN, KY AND MO	8300	VI	AND-3,5,11
1956	SEP 7	13 49 20.0	35.5	84.0	EAST TENN-AFTERSHOCK	8300	VI	80-3,5,11
1956	SEP 9	22 45 0.0	(35.7	86.6)	COLLEGE GROVE, TENN		IV	B-3
1956	OCT 29	9 23 44.0	(36.1	89.4)	CARUTHERSVILLE, MO		V	B-5,3,11
1956	NOV 26	4 13 0.0	(37.1	90.6)	WAYNE CO., MO-FELT IN ARK, ILL, KY, MO, AND TN	21500	VI	80-3,5,11
1957	JAN 25	18 15 0.0	(36.6	83.7)	MOETOWN, KY-A SUBURB OF MIDDLESBORO, KY		VI	-3
1957	MAR 19	16 37 38.0	(32.0	95.0)	NE TEXAS-FELT IN ARK AND LA	10100	V	A80-3,5
1957	MAR 19	17 41 17.0	(32.0	95.0)	NE TEXAS-AFTERSHOCK	10100	V	A80-3
1957	MAR 19	22 36 0.0	(32.0	95.0)	NE TEXAS-AFTERSHOCK	10100	V	A80-3
1957	MAR 19	22 45 0.0	(32.0	95.0)	NE TEXAS-AFTERSHOCK	10100	V	B0-3
1957	MAR 26	8 27 6.0	(27.0	88.4)	PADUCAH, KY-FELT AT SMITHLAND, KY		V	B0F-3,5
1957	APR 23	9 23 39.0	(34.5	86.8)	N ALA-FELT ALSO IN GA	11500	VI	80-5,3,11
1957	MAY 14	14 24 58.0	(35.7	82.0)	N NC-FELT SC AND TN	8100	VI	80-5,3,11
1957	JUN 27	6 34 18.0	36.5	84.5	E-CENTRAL TENN-FELT IN HARTIN VALLEY AND CLINCH R. VALLEY AND AT CONCORD, DIXIE LEE JUNCTION, OAK RIDGE, TN		V	-5,3,11
1957	JUL 2	9 33 1.0	(35.5	82.5)	N NC-FELT STRONGLY IN MADISON AND BURKHOPE COUNTY, NC AND DAMAGE AT FLAG POND, TENN		VI	D-5,3
1957	AUG 17	0 0 0.0	(36.2	89.4)	BOGOTO, TENN		IV	-3
1957	NOV 24	20 6 17.0	35.0	83.5	NC-TENN BOR. RGN.-FELT IN SC, NC, GA AND TENN	4100	VI	80-5,3
1958	JAN 26	16 56 0.0	(35.1	90.0)	MEMPHIS, TENN-FELT IN SE MO		V	D-3,5
1958	JAN 28	4 57 0.0	(37.0	89.0)	ILL-KY-MO BORDER AREA	300	V	D-3,5
1958	MAR 5	11 53 43.0	(34.3	77.8)	WILMINGTON, NC-FELT ALONG COAST FROM KURE BEACH TO HAMPSTEAD AND 20 MILES INLAND. OTHER DISTURBANCES FELT FROM FEB. 10 TO MARCH 15 WERE PROB- ABLY OF ARTIFICIAL ORIGIN		V	-3,5
1958	APR 8	17 0 0.0	(31.4	83.5)	TIFT COUNTY, GA			-3
1958	APR 8	22 25 33.0	(36.2	89.1)	OBION CO., TENN	400	V	B-3,5
1958	APR 26	7 30 0.0	(36.3	89.5)	LAKE CO., TENN-FELT AT CARUTHERSVILLE, MO		V	B-3,5
1958	MAY 16	22 30 0.0	(35.6	82.6)	ASHEVILLE, NC		IV	-3

1958	MAY 10	1 25 0.0	(35.6	90.4)	MARKED TREE, ARK		IV	-3
1958	OCT 20	6 16 0.0	(34.5	82.8)	ANDERSON, SC		V	BF-5,3
1958	NOV 6	23 8 0.0	(39.0	90.0)	NEW ORLEANS, LA		IV	-3
1958	NOV 8	2 41 43.0	30.4	87.9	ILL-IND BORDER-FELT IN ILL, IND, MO AND KY	33000	VI	D-3,5,11
1958	NOV 19	10 15 5.0	(30.3	91.1)	BATON ROUGE, LA		V	F-3,5
1959	JAN 21	15 25 0.0	(36.3	89.5)	RIOGELY, TENN		IV	B-3
1959	FEB 13	8 37 0.0	(36.2	89.5)	BOGOTO, TENN-2 SHOCKS	200	V	B-3,5
1959	JUN 13	1 15 0.0	(35.4	84.3)	TELLICO PLAINS, TENN- FELT IN SEVERAL CTYS OF E TENN AND CHERO- KEE CTY, NC	900	IV	B-3,5
1959	JUL 20	8 15 26.0	(35.9	89.9)	OLYTHEVILLE, ARK			B-3
1959	AUG 3	6 8 30.0	33.0	79.5	SE S CAROLINA-FELT IN LARGE AREA OF E GA	25000	VI	BD-3,5,11
1959	AUG 12	10 6 7.9	35.0	87.0	ALA-TN BORDER AREA	2000	VI	BD-3,5,11
1959	OCT 15	15 45 0.0	(29.8	93.1)	SW LA-FELT AT CREOLE		IV	B-3
1959	OCT 27	2 7 28.0	(34.5	80.3)	NE S CAROLINA-FELT IN NC, STRONG AT NCBEE, SC	4000	VI	BD-3,5
1959	DEC 21	15 25 0.0	(36.0	89.5)	FINLEY, TENN-FELT IN SE MO	400	V	D-3,5,11
1960	JAN 28	21 38 0.0	(36.0	89.5)	OVER COUNTY, TENN		V	B-5,3
1960	FEB 9	14 0 6.0	(35.3	82.5)	HENDERSON COUNTY, NC			-3
1960	MAR 12	12 47 40.0	33.0	79.0	NEAR COAST OF SC-FELT AT CHARLESTON	3500	V	-5,3
1960	APR 15	10 10 10.0	(35.8	84.0)	NEAR KNOXVILLE, TENN	1300	V	BD-3,5
1960	APR 21	10 45 0.0	(36.3	89.5)	LAKE COUNTY, TENN		V	BF-5,3
1960	MAY 4	16 31 32.0	(34.2	92.0)	PINE BLUFF, ARK		IV	-3
1960	JUL 24	3 37 30.0	(33.0	80.0)	CHARLESTON, SC		V	D-3,5
1961	APR 27	0 0 0.0	(35.0	95.0)	SE OKLA			A-3
1961	APR 27	5 0 0.0	(35.0	95.0)	SE OKLA-AFTERSHOCK			A-3
1961	APR 27	7 30 0.0	(35.0	95.0)	SE OKLA-AFTERSHOCK		V	BD-3,5
1961	MAY 20	15 43 0.0	(33.0	80.2)	SUMMERVILLE, SC		III	-3
1961	SEP 9	22 43 2.3	36.4	91.3	ARK-MO BORDER-FELT AT BENEFMAN, MO AND POCAHONTAS, ARK		IV	BD-3
1961	OCT 18	0 35 0.0	(33.0	80.2)	SUMMERVILLE, SC		III	F-3
1962	FEB 2	6 43 34.0	36.5	89.6	NEW MADRID, MO-FELT IN ARK, ILL, KY, MO AND TN	35000	VI	BD-3,5,11
1962	JUN 27	1 28 55.7	37.7	88.5	S ILL-FELT IN PADUCAH AND NICKLIFFE, KY AND IN MO		5.5	BD-3,5,11
1962	JUL 23	6 5 18.4	36.1	89.8	SOUTHERN MO-FELT ALSO IN ARK AND TENN		VI	BD-3,5
1963	JAN 17	11 40 26.8	(37.3	80.1)	SALEM, VA		IV	AB-3
1963	JAN 17	15 26 50.8	(37.3	80.1)	SALEM, VA-SECOND SHOCK		IV	B-3
1963	MAR 3	17 30 13.0	36.7	90.1	SE MO	100000	4.5	BD-5,3,11
1963	APR 11	17 45 0.0	(34.8	82.4)	GREENVILLE, SC		IV	B-3
1963	MAY 4	21 1 36.0	32.2	79.7	SC-CHARLESTON, SUMMER- VILLE, SC FELT AREAS		IV	BD-3
1963	AUG 3	0 37 50.3	37.0	88.8	ILL-KY BORDER AREA- DEPTH ABOUT 13 KM		3.6	BD-3,5
1963	OCT 28	22 38 35.0	36.7	81.0	NEAR GALAX, VA-FELT IN VA AND NC	1300	V	ABD-3,5,9
1963	OCT 29	1 57 0.0	36.7	81.0	GALAX, VA-AFTERSHOCK	1300	V	BD-3,9

1964	JAN 20	13 37 52.8	135.9	92.21	CANE IVER, NC AREA		IV	-3
1964	FEB 18	10 31 11.5	34.8	85.5	DE KALO CO., NE ALA - FELT IN GA, DEPTH 15CM		4.4	B-3
1964	MAR 13	1 20 10.1	32.3	83.4	CENTRAL GA-FELT IN BALDWIN, DIBB, JONES AND WILKINSON COUNTY	40.	4.4	B-3
1964	MAR 17	2 15 0.0	134.2	89.71	CANNONERSVILLE, MO		IV	-3
1964	APR 20	20 4 46.0	134.0	81.01	NEAR COLUMBIA, SC		V	B-3
1964	APR 24	1 20 55.0	31.5	93.8	W LOUISIANA-FELT AT PINELAND, NEWHILL AND WILMAR, TEX		3.7	A-3
1964	APR 24	7 33 53.0	31.6	93.8	W LA-AFTERSHOCK		3.7	A-3
1964	APR 28	0 30 45.6	31.5	93.8	W LA-AFTERSHOCK, FELT AT ZIMMER AND SHREVEPORT, LA		3.6	A-3
1964	APR 28	21 18 40.1	31.7	93.6	W LA-AFTERSHOCK		4.4	AD-3
1964	JUN 2	23 0 0.0	31.3	94.0	TEX-LA BORDER REGION		4.2	AB-3
1964	JUN 3	1 30 0.0	31.3	94.0	TEX-LA BOR-AFTERSHOCK		4.2	AB-3
1964	JUN 3	2 27 24.2	31.3	94.0	TEX-LA BOR-AFTERSHOCK		4.2	-3
1964	JUL 28	0 0 0.0	135.0	83.91	KNOXVILLE, TENN			-3
1964	AUG 16	11 36 7.0	131.4	93.81	NEWHILL, TEX		V	D-3
1964	GCT 13	16 30 0.0	135.9	83.91	KNOXVILLE, TENN			-3
1965	MAR 6	21 8 50.5	37.8	91.2	S CENTRAL MO		5.3	-3, 11
1965	MAR 25	12 59 20.0	36.4	89.5	NEW MADRID, MO REG - FELT TO ST. LOUIS, MO			-3
1965	AUG 14	5 46 17.3	37.3	89.5	SW ILL-FELT AT TAMPAS AND UNITY, ILL		5.0	AB-3
1965	AUG 14	13 13 54.1	37.1	89.2	SW ILL-AFTERSHOCK		5.0	ABD-3
1965	AUG 15	6 7 20.0	37.4	89.5	SW ILL-AFTERSHOCK		5.1	ABD-3
1965	AUG 16	4 19 0.3	37.4	89.5	SW ILL-AFTERSHOCK		5.1	BD-3
1965	SEP 9	4 37 16.0	134.7	81.21	CHESTER, SC			A-3
1965	SEP 9	14 42 20.0	134.7	81.21	CHESTER, SC-AFTERSHOCK			A-3
1965	SEP 10	7 32 0.0	134.7	81.21	CHESTER, SC-AFTERSHOCK			A-3
1965	SEP 12	17 25 2.0	134.7	81.21	CHESTER, SC-AFTERSHOCK			A-3
1965	OCT 21	2 4 39.3	37.9	91.1	E MO-FELT IN STATES OF ARK, ILL, IOWA, KAN, KY, MO, NEB, OKLA, AND TN	410000	5.2	BD-3, 11
1966	FEB 12	4 32 14.7	35.9	90.0	NE ARK-FELT AT DEL-BRIDGE, SLYTHEVILLE, MANILA, LEACHVILLE AND STEEL, ARK		4.3	-3
1966	FEB 14	0 9 0.0	135.6	99.61	NEAR COVINGTON, TENN		IV	B-3
1966	MAY 31	6 19 2.0	37.6	70.0	PONNATAN, VA	60000	4.7	BD-3, 9, 11
1966	AUG 24	6 0 0.0	135.9	83.91	KNOXVILLE, TENN		IV	B-3
1967	JUN 4	16 14 13.6	33.6	90.9	NEAR GREENVILLE, MISS - FELT IN ARK, MISS, LA AND TENN	25000	3.8	CD-3
1967	JUN 29	13 57 7.0	33.6	90.9	NEAR GREENVILLE, MISS		3.4	D-3
1967	JUL 21	9 14 42.9	37.5	90.4	SE MO-ALSO FELT IN ILL, DAMAGE REPORTED IN POPLAR BLUFF, FREDERICKTOWN AND ELVINS, MO		3.9	D-3
1967	OCT 23	9 4 10.0	33.4	80.7	S CENTRAL SC-FELT AT GOOSE CREEK, COLUMBIA COTTAGEVILLE, AND CHARLESTON		3.8	-3
1968	FEB 10	1 34 32.0	36.6	89.5	NEW MADRID, MO REGION		4.5	-4, 11

1968	MAR 8	5 38 15.0	37.3	80.0	NEAR NARROWS, VA		3.9	-4.9.11
1968	SEP 22	21 42 10.8	34.0	81.5	CENTRAL SC-FELT AT COLUMBIA	400	3.7	0-4.11
1968	MAY 9	17 1 41.6	30.0	88.5	SOUTHERN ILL-FELT IN 23 STATES AND CANADA	400000	5.3	0-4.11
1969	JAN 1	23 35 36.0	34.0	92.6	CENTRAL ARK-FELT OVER MOST OF ARK, MO AND AT MEMPHIS, TENN	24000	4.2	0-4.11
1969	JUL 13	21 42 9.4	36.1	83.7	E TENN-FELT IN PARTS OF KY, NC, TENN, AND VA		3.5	4-4
1969	JUL 14	9 13 14.5	36.1	83.7	E TENN-AFTERSHOCK		2.8	-12
1969	NOV 20	1 0 9.0	37.4	91.0	SOUTHERN PART W VA-FELT IN VA, GA, ONT, KY, MO, NC, SC, N VA, AND TN. DEPTH ABOUT 3 KM		4.3	0-4
1969	DEC 13	10 19 34.3	35.1	93.0	E NC-FELT AT SYLVIA AND COLUMBUS, NC, AND GREENVILLE, PICKENS, SC			-4

THE FOLLOWING NOTES APPLY TO VARIOUS SYMBOLS AND CODE LETTERS USED IN THE EARTHQUAKE LIST

ALL DATES AND TIMES ARE GIVEN IN GREENWICH MEAN TIME.

FOR THE EVENTS PRIOR TO 1920, ZEROS IN THE SEC, MIN, OR HOUR COLUMNS MEANS THAT THE TIME OF THE EVENT IS NOT ACCURATELY KNOWN.

PARENTHESES AROUND THE COORDINATES OF THE EPICENTER INDICATES THE LOCATION OF AN ISOLATED FELT REPORT OR THE APPROXIMATE CENTER OF THE REPORTED FELT AREA AND THAT THE EVENT WAS NOT INSTRUMENTALLY LOCATED.

IN THE -MAG/INT- COLUMN, THE RICHTER MAGNITUDE OF THE EARTHQUAKE IS GIVEN IN ARABIC NUMBERS WITH A DECIMAL POINT. IF THE MAGNITUDE IS NOT AVAILABLE, THE ESTIMATED INTENSITY, ON THE MODIFIED MERCALLI SCALE, IS GIVEN IN ROMAN NUMERALS. IF NEITHER OF THESE MEASURES OF THE SIZE OF THE EARTHQUAKE ARE AVAILABLE, THIS COLUMN IS LEFT BLANK.

THE FIRST NUMBERED REFERENCE CITED IN THE REFERENCE LIST CONTAINS THE BEST DESCRIPTION AND MOST COMPLETE DISCUSSION OF THE VARIOUS EFFECTS OF THAT EARTHQUAKE. SOME OF THE EFFECTS AND CHARACTERISTICS ARE SUMMARIZED USING THE LETTER CODES BELOW.

- A- INDICATES THAT THIS EARTHQUAKE WAS FOLLOWED BY AN AFTERSHOCK SEQUENCE, THE INDIVIDUAL EVENTS OF WHICH ARE NOT INCLUDED IN THE LISTING UNLESS THEY ARE IDENTIFIED AS SUCH.
- B- INDICATES THAT VARIOUS RUMBLINGS, GROANS, AND OTHER EARTH NOISES WERE REPORTED ACCOMPANYING THE EARTHQUAKE.
- C- INDICATES THAT VISIBLE TOPOGRAPHIC CHANGES OCCURRED AS A RESULT OF THE EARTHQUAKE.
- D- INDICATES DAMAGE OR CHANGES TO STRUCTURES SUCH AS CHIMNEYS THROWN DOWN, CONCRETE OR PLASTER CRACKED, MOVEMENT OF FURNITURE OR FIXTURES, ETC.
- F- INDICATES A SHARPLY FELT LOCAL SHOCK.

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