OBSERVATIONS

OF THE

NEW ENGLAND WEATHER SERVICE

IN THE YEAR 1892.

For the first two months of the year the voluntary weather service work for New England was carried on under the direction of the New England Meteorological Society at Cambridge, Massachusetts; but in March, 1892, it was formally transferred to the care of the National Weather Bureau, and Mr. J. Warren Smith, Observer, was appointed its Director. The office was moved to Boston and located with the Boston office of the Weather Bureau, where the work has been carried on since.

The efforts to establish volunteer stations in the uncovered districts of New England have been very successful; until now the only sections where stations are badly needed are in western Maine and northeastern Vermont. Of course more can be placed to good advantage in other places, but here they would be especially valuable.

The number of voluntary observers reporting to the Society at the first of the year was 162, besides 11 regular Weather Bureau stations. Thirteen of these have discontinued during the year from various causes, and forty-two have been added; making a total of 191 besides 12 reports from regular Weather Bureau stations.

The additions have been made as follows: Maine, 7; New Hampshire, 10; Vermont 8; Massachusetts, 13; Rhode Island, 0; Connecticut, 4; New York, 1. Those discontinued by states are: Maine, 0; New Hampshire, 2; Vermont, 4; Massachusetts, 5; Rhode Island, 0; Connecticut, 1; New York, 1. Every New England state shows an increase except Rhode Island, which has had no change. New Hampshire and Massachusetts lead with an increase of 8 each; and Maine next with an increase of 7. In Maine part of the new stations have been established along the eastern edge, and one, Ft. Kent, is in the extreme northern part of the state. Great Barrington, in Massachusetts, is in a desirable location.

The greatest number of reports received in season to be used in making up the monthly bulletin was 170 in December and the least was 151 in February; the average number was 159. The voluntary observers deserve great credit for their promptness and care in making observations and in rendering reports.

FIRST QUARTER OF 1892.

January was slightly above normal in both temperature and precipitation. The general maximum temperature occurred on January 14, and ranged from 64° in southern portions to 58° in the north; the minimum for the month occurred on several dates, the morning of January 27, however, averaged colder than any other during the month. The excess in precipitation was 0.88 of an inch. Ten cyclones and eight anticyclones determined the weather changes of the month. The highest pressure occurred generally on January 17 during the passage of the fifth anticyclone and the lowest, over most of New England, on January 6, when the second cyclone of the month passed directly across New England from south to north. Rain or snow fell in some portion of New England on twenty-seven days.

February was 1°.8 above normal in temperature. Maximum temperatures of from 42° to 54° occurred at various points on several days. The minimum temperatures occurred generally on February 13 or 17 in the south and on February 7 or 17 in northern districts, ranging from 10° above to 26° below zero. Few strongly marked The precipitation was 1.66 inch below the or rapid temperature changes occurred. average, the greatest deficiency being in southeastern portions. The snowfall was Six cyclones from 8 to 49 inches in the north and from 1 to 8 inches in the south. and seven anticyclones governed the weather during the month. Both the highest and lowest pressures were reported from Eastport, Maine, the former being 30.85 on February 27, and the latter 28.63 on February 12, giving the very remarkable monthly range of 2.22 inches. Rain or snow fell in some portion of New England on twenty-three days.

March was below the average in both temperature and precipitation. The greatest temperature departure was on the southern coast, where the deficiency was four degrees, while in northern sections the mean was slightly above normal. The general deficiency in temperature extended from New England southward and westward over the entire southern portion of the United States; the greatest departure

was —6° on the Atlantic Coast and in the lower Mississippi Valley. The precipitation was above normal on the extreme southern coasts of Rhode Island and Massachusetts, but in all other sections there was a general deficiency. The amount of snowfall was above normal near the coast; but a small amount fell in northwestern portions. Seven cyclones and six anticyclones controlled the weather for the month. The cyclones had a general southerly trend, thus giving us a prevalence of north winds and low temperatures. Rain or snow fell in some section of New England on twenty days. The temperature for the first quarter of the year 1892 averaged 0.8° above the normal, while the precipitation was 0.50 of an inch below the average.

SECOND QUARTER OF 1892.

April was above normal in temperature and below in precipitation. The cyclonic control of temperature was well marked on several days, particularly the rise through the night of April 3 and 4, when a very high maximum was registered throughout New England. The maximum ranged from 53° to 81°, and was generally recorded on April 3; the minimum, from 4° to 32°, occurred on several dates. The departure in precipitation was —2.10 inches. No snow remained on the ground at the end of the month and none on April 15 with the exception of drifts in northern portions. Eight cyclones and eight anticyclones influenced the weather during the month. The highest barometer observed was 30.61 at Mansfield, on April 1, and the lowest 29.32 at Eastport, on April 10. Rain fell in some portion of New England on twenty days.

May was below normal in temperature. Maximum temperatures of from 60° to 89° occurred generally on May 31. The minimum temperatures were almost universally reported on May 1, and ranged from 17° to 43°. The precipitation was everywhere above normal, except in Maine, where the deficiency was well marked. The most remarkable meteorological feature of the month was the snow storm of May 20 and 21, in northern and western New England. This storm began in western districts on the afternoon of May 20, 4 inches falling at Adams, Mass., and 10 inches at Stratford, Vermont, on that date; it continued through the greater part of the next day. It was accompanied by high winds, and although the snow was generally too damp to drift, it was in some places considered the most severe storm of the season. The fall was greatest over an area extending from northwestern Massachusetts in a northeasterly direction to northwestern Maine, covering the most mountainous portions of New

England. In eastern Vermont, although considerable snow melted as it fell, a depth of 28 inches was accurately measured. Concord and Peterboro, N. H., mark the southern limit of the snow, and Burlington and Enosburg Falls, Vt., the northern. Our records fail to show any snow-fall of appreciable amount on so late a date. Much suffering was caused among stock and many sheep perished. Six cyclonic and six anticyclonic areas influenced the weather during the month. The highest barometer reported was 30.46, at Nantucket on May 1; the lowest reading was also observed at Nantucket on May 23, with a pressure of 29.43. Rain to the amount of 0.01 of an inch fell in some portion of New England on all but three days.

June was above the average in both temperature and precipitation. The temperature ranges were strong and rapid. A sudden fall was noted at Boston, on the afternoon of June 17, as a thunderstorm approached from the west. The temperature fell 25° from 3 to 4 o'clock, changed little from that time until 6 o'clock, when a rapid fall of several more degrees occurred. The precipitation was above normal in northern districts, in the southern Merrimack Valley, in part of the southern Connecticut Valley and in eastern Massachusetts; in eastern Maine a deficiency was noted. The thunderstorms were unusually severe and frequent; much damage was done by wind and hail in various localities. Twelve cyclones and six anticyclones, most of them poorly defined, governed New England weather during June. The barometric range was small and no sudden changes took place. Rain fell to an appreciable amount on twenty-nine days, in some portion of New England.

The temperature for the second quarter of the year 1892 averaged 0°.5 above normal; the precipitation was normal.

THIRD QUARTER OF 1892.

July was very nearly normal in temperature. On the southern coast and in portions of Vermont and New Hampshire a slight deficiency was noted but elsewhere the temperature was in excess. The maximum occurred on July 25, 26 and 27 in most sections, and ranged from 75° to 102°; the minimum was reported on several dates, principally July 17; the lowest at Nantucket was 58° while at West Milan, N. H., 34° was reported on the morning of July 5. Precipitation was generally below normal, in all sections where stations are established having records for more than ten years, but in Connecticut, central Massachusetts and northwestern Vermont an excess was reported. Seven cyclones and five anticyclones influenced the weather conditions during the month. The highest barometer observed was 30.55 at Northfield, Vermont, on July 7;

the lowest, 29.48 at Eastport, Maine, on July 4. Rain fell in some portion of New England on twenty-five days. Thunderstorms were frequent but moderate in severity. The general lack of heavy or moderate rainfall from July 4 to 29 caused a sharp and severe drought in all central and southern portions of New England, although it was most severely felt in southeastern Massachusetts.

August was very nearly normal in temperature, the greatest departure being a deficiency in central and northwestern sections. The highest temperatures occurred on August 10, and the lowest on August 23, both being somewhat below the usual record at most stations. A slight frost was reported from eastern Maine on the last named date although no damage was done. Rainfall was above normal and the local storms were very severe; several fatalities were reported and much damage done by lightning. The weather for the month was controlled by eight cyclonic and six anticyclonic areas. Rain fell in some part of New England on twenty-one days.

September. The mean temperature was slightly above the normal along the eastern coast except at Portland, Maine, and below in the interior. The days were generally warm with no extreme heat and the nights were cool although no damaging frosts were reported. The maximum ranged from 68° to 88° and occurred on various dates; the minimum from 27° to 50° on September 30. The precipitation was below the average except on the southern coast and in central Maine; the number of cloudy and rainy days was very small. Thunderstorms occurred on September 19, 22, 24, 25, 26, and 27. In Connecticut the storm of September 24 was one of the most severe and destructive of the season; one person was killed and several were injured. The weather was influenced by four cyclones and five anticyclones. Rain fell in some portion on nineteen days.

The temperature for the third quarter of the year 1892 was near the normal, while the precipitation was 0.33 inch below the average.

FOURTH QUARTER OF 1892.

October. The mean temperature averaged slightly below the normal. The maximum temperature was generally recorded on October 14 while in many places the minimum occurred on the preceding morning making the rise from the minimum of one day to the maximum of the next very great; at Fairfield, Maine, this rise was 49°. The deficiency in precipitation averaged 2.37 inches. The month was characterized by an excess of sunshine and by a small amount of precipitation. At

Springfield, Mass., the rainfall was the least ever recorded for October in 45 years. At most stations from one-half to two-thirds of the total for the month came on October 3, 4, and 5. The weather of the month was influenced by the passage of six cyclones and the same number of anticyclones. Rain fell in some portion of New England on twenty-three days.

November was very slightly below the normal in temperature and the ranges were neither large nor rapid. The minimum for the month occurred generally on November 8 and 18, and ranged from 6° in northern New England to 24° in southern portions; the maximum, between 60° and 70°, occurred generally on November 24. The precipitation for the month was about one inch above normal, with the greatest excess in southern sections. Heavy rains were reported on November 9, 10, 15 and 16, 29 and 30. The snowfall averaged from trace to 16 inches; from trace to 11 inches remained on the ground at the end of the month. Ten cyclones and seven anticyclones influenced the weather during the month. Rain fell on twenty-six days in some portion of New England. The meteoric shower on November 23 was very generally observed and remarkably brilliant; in some places meteors were seen at the rate of 20 per minute.

December was decidedly below normal in all sections except central Massachusetts where a slight excess was noted. The maximum temperature occurred generally on December 8 and 9, and ranged from 37° to 58°; the minimum for the month was reported from nearly all sections on December 24; that day will long be remembered as one of the most uncomfortable and disagreeable in many years; at Lancaster, N. H., the mercury ranged between —6° and —11° all day and the wind blew a gale from the northwest. The precipitation was also considerably below the normal and no excessive snowfall was reported during the month. At the end of the month the ground was well covered in northern sections, but in the south the covering was much less. Six cyclonic and five anticyclonic areas influenced the weather during the month. Rain fell in some portion of New England to the amount of 0.01 or more on twenty-one days.

The temperature for the fourth quarter of the year 1892 averaged 0°.9 below normal. The precipitation was 1.08 inches below the average.

THE YEAR 1892.

The following table indicates briefly the general characteristics of the several months of the year 1892, as compared with the normals for the months in other years. From this it will be seen that the temperature was slightly above normal, while the

precipitation was slightly deficient. The mean annual temperature was 0°.2 above normal, and the mean annual precipitation 0.48 inch below. July, August, September, October, and November departed very little from the established temperature normal; January, February, April, and June were considerably in excess, while March, May, and December were deficient.

The precipitation showed a marked deficiency in February, April, July, September, October, and December; an excess was noted in May, August, and November, while the months of January, March, and June were nearly normal.

	Mon	NTH.		TEMPERATURE.	PRECIPITATION.
May June July August September			 •	Above normal; mild. Above normal. Below normal. Above normal. Below normal. Above normal. Slightly above normal. Normal. Slightly below normal.	Slightly excessive; light snow. Deficient; light snow. Slightly deficient; snowfall normal. Deficient. Excessive. Slightly excessive. Deficient. Excessive. Deficient.
October November December Year				Normal. Normal. Below normal; cold. Slightly above normal.	Deficient. Excessive; snowfall normal. Deficient; light snowfall. Slightly deficient.

The following tables give the departure from the normal for every month of the years 1885 to 1892 inclusive. In 1892 the temperature departures were similar to 1889, 1890 and 1891; but in precipitation it is the second year of the period that shows a deficiency.

DEPARTURE OF MONTHLY TEMPERATURES FROM NORMAL.

						Yı	EAR.			
MONT	Month.			1886.	1887.	1888.	1889.	1890.	1891.	1892.
January February March April May June July August September October November December			-0.3 -0.8 -7.4 $+1.3$ -0.7 -0.3 0.0 -2.5 -2.7 -0.4 $+2.5$ $+2.0$	$\begin{array}{c} +0.1 \\ -1.8 \\ -0.4 \\ +4.2 \\ +0.2 \\ -2.2 \\ -1.1 \\ -1.3 \\ -0.2 \\ +0.2 \\ +1.7 \\ -2.7 \end{array}$	-1.5 -0.1 -2.6 -2.1 $+3.8$ -0.5 $+2.8$ -2.2 -3.0 -1.5 0.0 $+1.6$	$\begin{array}{c} -6.9 \\ -0.1 \\ -2.5 \\ -2.8 \\ -2.5 \\ +0.5 \\ -3.3 \\ -0.7 \\ -2.6 \\ -4.7 \\ +1.8 \\ +3.8 \end{array}$	$egin{array}{c} +8.2 \\ -3.5 \\ +4.5 \\ +3.5 \\ +3.0 \\ +1.0 \\ -1.8 \\ -1.8 \\ +1.0 \\ -3.0 \\ +4.2 \\ +6.3 \\ \end{array}$	+5.6 $+5.8$ $+0.2$ $+0.8$ -0.1 -1.7 -1.1 -0.9 $+0.2$ -1.1 0.0 -6.1	+3.8 +3.8 +0.4 +2.5 -1.2 -0.7 -3.1 +0.6 +3.6 -0.7 +0.3 +8.3	+2.0 +1.8 -1.3 +1.3 -1.4 +1.7 +0.6 +0.1 -0.7 -0.3 -0.3 -2.2
Year	•	•	-1.3	-0.4	-0.5	-1.8	+1.7	+0.1	+1.4	+0.2

DEPARTURE OF MONTHLY PRECIPITATION FROM NORMAL.

	Month.			YEAR.											
Mont				1886.	1887.	1888.	1889.	1890.	1891.	1892.					
January February March April May June July August September October November December			$ \begin{array}{c} in. \\ +1.16 \\ +0.07 \\ -2.21 \\ -0.53 \\ -0.70 \\ -0.19 \\ -0.86 \\ +2.06 \\ -1.62 \\ +1.16 \\ +0.96 \\ -0.16 \end{array} $	$\begin{array}{c} in. \\ +2.02 \\ +2.37 \\ -0.52 \\ -1.03 \\ -0.05 \\ -1.39 \\ -0.69 \\ -0.89 \\ +0.03 \\ -0.73 \\ +0.82 \\ +1.05 \end{array}$	$\begin{array}{c} in. \\ +1.81 \\ +1.76 \\ +0.41 \\ +0.26 \\ -2.00 \\ +0.87 \\ +1.75 \\ +0.70 \\ -1.68 \\ -1.10 \\ -0.95 \\ +0.90 \end{array}$	$\begin{array}{c} in. \\ +0.78 \\ +0.20 \\ +1.77 \\ -0.72 \\ +0.95 \\ -0.75 \\ -1.55 \\ +1.19 \\ +4.78 \\ +1.71 \\ +2.23 \\ +1.04 \end{array}$	$\begin{array}{c} in. \\ +0.96 \\ -1.51 \\ -1.48 \\ -0.22 \\ +3.35 \\ +0.32 \\ +0.59 \\ +0.77 \\ +0.49 \\ +2.00 \\ -0.47 \end{array}$	$\begin{array}{c} in.\\ -1.17\\ -0.27\\ +2.54\\ -0.69\\ +2.01\\ -0.33\\ -0.71\\ +0.14\\ +1.80\\ +3.20\\ -2.60\\ +0.67 \end{array}$	$\begin{array}{c} in. \\ +2.90 \\ +0.92 \\ +0.56 \\ -0.39 \\ -1.40 \\ -0.19 \\ -0.03 \\ -0.45 \\ -0.90 \\ +0.19 \\ -1.32 \\ +0.31 \end{array}$	$\begin{array}{c} in. \\ +0.88 \\ -1.64 \\ -0.75 \\ -2.13 \\ +1.79 \\ +0.42 \\ -1.03 \\ +1.22 \\ -1.17 \\ -2.38 \\ +1.19 \\ -2.15 \end{array}$					
Year	•	•	-1.20	+0.93	+2.69	+11.76	+4.25	+4.59	+0.20	-0.48					

THE CYCLONES OF 1892 IN NEW ENGLAND.

In the following lists the cyclones for each month of the year 1892 are classified as in previous annual summaries of the New England Meteorological Society. The whole number for the year is less than in 1890 or 1891 but more than in 1888 or 1889. The general path of the cyclones was about the same as in former years, though the paths for any particular month show great variation from year to year. In the tables showing the special data for each cyclone, the date is given when they passed over or were nearest to New England, the lowest pressure noted on that date as given on the daily weather maps of the Weather Bureau, and the change of pressure during its passage; the letter "d" indicates a decrease in pressure at the centre or increase in energy, and the letter "i" an increase in pressure or decrease in energy.

Монтн.	Total Number.	Number passing North of New England.	Number crossing New England from West.	Number crossing New England from South.	Number passing East of New England.	Number passing South of New England.	Number originating over or near New England.	Number dissolving over or near New England.
January	10	3	2 3	2	1	1		1
February	6	2		• •		1		
March	7		1	1	3	1		1
f April	$\frac{8}{6}$	4	• •	1	1			2
May		4	1		1	• •	• •	
June	12	8	3		• •		1	• •
July	7	6	1		• •	• •		• •
August	8	4	2	• •	i	1	• •	
September	$rac{4}{6}$	2	2	• •		• •		
October		$\frac{2}{5}$	$\begin{array}{c}4\\2\\2\end{array}$	• •	• • •			
November	10		2	1	2	• •	• •	
December	6	2			1	1	• •	
Total 1892	90	42	23	5	10	5	1	4
Total 1891	100	44	25	4	14	5	0	8
Total 1890	108	59	24	3	9	5	5	3
Total 1889	87	43	12	12	7	8	1	4
Total 1888	88	34	23	8	8	4	6	5

A. CYCLONES PASSING NORTH OF NEW ENGLAND.

January 9	30.0 i 29.8 d 29.7 d 29.7 i 30.0 29.6 29.4 i 29.6 29.6 i 29.7	June July	6	29.7 29.7 29.6 i 29.7 d 29.9 i 29.4 i 29.7 29.7 29.4 d 29.7 29.7	August 5-6 .	29.4 <i>i</i> 29.9 29.7 29.4 <i>i</i> 29.9 29.8 29.6 29.4 <i>i</i> 30.0 <i>i</i> 30.0 <i>i</i> 29.3 <i>i</i>
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$29.7 \ d$ $29.5 \ i$		$\begin{array}{c} 22 \ . \ . \\ 26 \ . \end{array}$	$\frac{29.7}{29.7}$	" 18–19 . " 21	$egin{array}{c} 29.3 \ \emph{i} \ 29.8 \ \emph{d} \end{array}$
June 25-27.	$29.4 \ d$ $29.9 \ i$	f August	29 4	$\begin{array}{c} 29.9 \\ 29.8 \end{array}$	December 8-9	$29.5\ i \ 29.7$

B. CYCLONES CROSSING NEW ENGLAND FROM THE WEST.

January 3	$29.3 \ i \ 29.3 \ d \ 29.7 \ 28.9 \ d \ 29.7 \ i$	June 22	$29.6 \\ 29.6 \\ 29.6 \\ d \\ 29.9 \\ 29.8$	October 8	$29.5 \ i \ 29.7 \ d \ 29.3 \ i \ 29.8 \ d \ 29.4 \ d$
March 23 May 11 June 20	$29.7\ d\ 29.7\ 29.5\ i$	September $5 cdot .$ $26 cdot .$ October $3-4 cdot .$	$29.8\ d \ 29.2\ d \ 29.5\ d$	December 6	29.9 $29.8 i$

C. CYCLONES CROSSING NEW ENGLAND FROM THE SOUTH.

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	29.0 d November 16 29.7 29.3 d
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D. CYCLONES PASSING EAST OF NEW ENGLAND.

E. CYCLONES PASSING SOUTH OF NEW ENGLAND.

January 30 February 22		March 27 . August 26 .	•	$\begin{array}{ c c } 29.5 \\ 29.8 \ i \end{array}$	December 17	30.0
	00.10	Triguot 20.	•	20.00		

F. CYCLONES ORIGINATING OVER OR NEAR NEW ENGLAND.

1_		
June 9-28.	29.8 i	

The most noticeable cyclones and local storms, during 1892, selected with special reference to their violence in New England, occurred on the following dates.

January 2-3: This cyclone passed across northern New England giving heavy rains and high winds throughout our district.

February 11: A cyclone passed across New England and then up our coast with rapidly decreasing pressure and heavy snow changing to rain on the southern New England coast.

March 1-2: This cyclone passed off the Middle Atlantic coast on March 1. It moved easterly out to sea, then northerly and northwesterly to the Nova Scotia peninsular; it then turned to the west, then southwest and southeast and east, recurving across its former track on March 4. It gave one of the worst storms of the season on the coast. A description of this storm is given in the Bulletin for April, 1892.

March 11: An evident secondary depression formed over Virginia on March 10, and then moved northeasterly across western New England increasing in energy. It gave heavy snow in that section followed by a sharp and severe cold wave.

March 18-19: This cyclone came from the Gulf of Mexico on March 17, and passed up our seaboard on March 18-19, increasing in energy and causing high gales and heavy snow along our coast.

May 19-20: On this date a cyclone passed over the Lakes into Canada decreasing very much in energy. It generated an evident secondary which moved up our coast during the night giving a heavy and unseasonable snow storm over central New England. The depth of fall was from one to two feet and great suffering prevailed among stock that had been turned to pasture. (See Bulletin for May, 1892.)

- June 2: A thunderstorm occurred in central Massachusetts, during which a man was killed by lightning at Gilbertville.
- June 13: A thunderstorm occurred at Patten and Benedicta, Maine, in the evening, unroofing buildings and doing other damage.
- June 14: Heavy and destructive thunderstorms occurred in the northern part of New England in the late afternoon. The rain front progressed steadily from northwest to southeast but the reports of the thunderstorms indicated a northeasterly movement. Much damage was done to crops, trees and buildings by the high wind and heavy rain and hail.
- June 17: Heavy thunderstorms and rain prevailed in Maine, New Hampshire and eastern Massachusetts, doing considerable damage.

July 3: Heavy rain and thunderstorms in Hartford, No. Buckfield and Paris, Maine. An apparent tornado did much damage at Orford, N. H.

July 28: A woman was killed by lightning near Princeton, Massachusetts.

July 29: A tornado-like storm passed through Stratford, N. H., doing considerable damage to trees, etc.

August 5: During a thunderstorm at Eastport, Me., four houses were struck by lightning and several people stunned. Two men were killed near Boston.

August 6: One of the most severe hail storms on record in New England occurred in the northern part of Sullivan and Merrimack counties, New Hampshire.

August 9-12: A cyclone passed slowly across New England from the upper Lakes to the Atlantic coast causing severe thunderstorms and heavy rain throughout New England on each day.

September 24: Destructive local storms occurred in Connecticut. Several people were struck by lightning and seriously injured.

September 26: A cyclone came from the Northwest increasing very much in energy as it crossed the St. Lawrence Valley into northern New England. It generated destructive local storms with high southerly gales. Many farm buildings were struck by lightning and burned both north and south. During the night the wind veered to the west and northwest and at Mt. Washington it reached a velocity of 100 miles an hour; snow fell on the summits of the mountains.

October 16: Severe thunderstorm in Connecticut and southern Massachusetts; one man was killed in Connecticut.

November 10: This cyclone came from the Gulf of Mexico to the Middle Atlantic coast and then ran quickly up our coast on October 10, with high wind and heavy precipitation, which came as snow in the north.

November 16: A storm moved from the Middle Atlantic coast, where it had formed on November 14, northerly up the coast on the next day. It then passed directly to the north across New England with heavy rain and high gales.

November 18: A storm moved slowly from the Southwest to the Lakes on November 15 to 18, and then to the north into Canada on November 19. It caused widespread tornadoes throughout the central states on November 17, and severe local storms in New England and other north Atlantic states on the following day.

November 28-30: This storm came from the Southwest to the lower Lakes on November 28, then re-formed over the Middle coast and passed slowly up our coast. Several hundred feet of breakwater were washed away at the head of Plymouth

Beach. The dredger "Rhode Island" of the U. S. Eng. Dept. was sunk off Newport, R. I., having foundered in the high seas. A bark went ashore at Highland Light; the crew was saved.

TABLES.

The tables of this report are described below in detail.

Table I contains geographical data for all stations reporting during 1892. An asterisk in the column of elevation indicates that the value there given is only approximate. The observers themselves are in most cases the authority for these data. The distribution of the stations is illustrated in Plate I where the numbers correspond to those in the first column of this table.

Table II is the annual summary for 1892 for such stations as have reported continuously through the year. The daily means from which the monthly and annual means are computed are taken from the maximum and minimum records wherever self-registering thermometers are used; where a single thermometer is in use and the readings were taken at other hours than 7 A.M., 2 and 9 P.M., they are corrected to the true daily mean by tables in the Chief Signal Officer's report "Mean Temperatures and their Corrections" by Alexander McAdie, M. A. 1891. In determining the number of rainy days, those were counted in which 0.01 inch or more of precipitation was recorded.

Tables III, IV and V contain barometric records reduced to sea level, with the addition of the monthly relative humidity in Table III. The values of the highest and lowest readings at Nashua, Blue Hill, Providence and New York(a) are taken from self-recording barometers.

Tables VI and VII exhibit the departures of the mean monthly temperature and precipitation of 1892 for those stations having a record of ten years or more. The general departure of temperature and precipitation from the normal in New England for the several months and the year have been considered on pages 7 and 8.

Table VIII contains the maximum velocity of the wind in miles per hour and the total movement of the wind in each month for all the stations where anemometers are used. The maximum wind velocity is not determined by the same method at all the stations: at Providence the greatest number of miles for the hour preceding the hour of regular observation is taken as the maximum; at St. John and Brattleboro the greatest movement in any hour since the preceding observation is taken as the maximum; at Amherst and Leicester the greatest pressure of the wind at any time

is recorded as the maximum velocity, while at the remaining stations the greatest number of miles in any five minutes is taken as the maximum. The latter is the method in use by the Weather Bureau.

Plate I gives the distribution of stations, with numbers corresponding to the first column of Table I, and also the mean annual isotherms. The latter are drawn from values of Table II without reduction to sea level. They are necessarily only approximate, and their curvature is determined in many points by a knowledge of the topography, when the records are wanting.

TABLE I.
LIST OF STATIONS AND OBSERVERS.

No.	STATION.	County and State.	Lat.	N.	Long	. w.	Elevation.	Observer.
							ft.	
1	St. John	St. John, N.B.	45°	17'	66°	31'	140	Gilbert Murdoch, C. E.
2	Bar Harbor	Hancock, Me.	44	23	68	13	50	Joseph Wood.
3	Belfast	Waldo	44	25	69	00	178	L. H. Murch.
20	Bethel	Oxford	44	25	70	45		C. C. Lovejoy.
14	Calais	Washington .	45	11	67	15	120	Dr. D. E. Seymour.
28	Cornish	York	43	47	70	49	778	Silas West.
19	East Machias	Washington	44	40	67	27	100	F. W. Kingsley.
25	Easton	Aroostook	46	35	68	00		N. M. Colbroth.
4	Eastport	Washington	44	55	66	54	53	U. S. Weather Bureau.
5	Fairfield	Somerset	44	35	69	35	90	H. M. Mansfield.
18	Farmington	Franklin	44	42	70	06	600	J. M. S. Hunter.
27	Ft. Kent	Aroostook	47	10	68	40	• • •	Vetal Cyr.
26	Gardiner	Kennebec	44	12	69	47	163	Miss M. Moore.
22	Houlton	Aroostook	46	10	67	50	265	Geo. Ingraham.
21	Indian Stream .	Piscataquis	45	30	69	45	100	V. P. Hall.
23	Kennebec Arsenal		44	19	69	49		Post Surgeon.
7	Kent's Hill	Kennebec	44	05	70	05	500*	Prof. S. N. Taylor.
8	Lewiston	Androscoggin .	44	06	70	10	185*	Union Water Power Co.
9	Mayfield	Somerset	45	08	69	45	1000*	V. P. Hall.
10	Orono	Penobscot	44	54	68	40	129	Prof. C. M. Fernald.
11	Petit Menan	Washington	44	22	$\frac{67}{50}$	52	16*	George L. Upton.
12	Portland	Cumberland	43	40	70	16	99	U. S. Weather Bureau.
16	Sorrento	Hancock	44	29	6 8	11	60	W. L. Jackson. M.D.
15	West Jonesport	Washington	44	32	67	38	22	C. Hopkins.
32	Belmont	Belknap N.H.	43	30	71	35	1.50	Winnepissiogee Lake Co.
66	Bethlehem	Grafton	44	14	71	45	1470	Benjamin Tucker.
33	Berlin Falls	Coos	44	26	71	15	1040*	Owen F. Cole.
34	Berlin Mills	((44	27	71	14	1100*	Q. A. Bridges.
$\frac{62}{27}$	Brookline	Hillsboro	42	44	71	41	009*	G. W. Bridges.
$\begin{array}{c} 37 \\ 64 \end{array}$	Concord	Merrimack	$\begin{array}{c} 43 \\ 45 \end{array}$	$\frac{13}{54}$	$\begin{array}{c} 71 \\ 72 \end{array}$	$\begin{vmatrix} 30 \\ 03 \end{vmatrix}$	283*	Hon. W. L. Foster. H. D. Allison.
67	Dublin	Cheshire	43	09	71	1	1493	
68	Durham	Strafford	43	-		00 30	88	Agric'l Exper't Station.
38	East Canterbury Grafton	Merrimack	43	$\begin{vmatrix} 21 \\ 35 \end{vmatrix}$	$\frac{71}{72}$	01	800	N. A. Briggs. P. R. Kimball.
69	Granton Graveton	Grafton	44	30	71	$\frac{01}{32}$	1000	J. M. Wilson.
39	Hanover (a)	Coos	43	42	$\frac{71}{72}$	17	603	Dartmouth College Observat'y.
58	(a)	Grandin	43	42	$7\overline{2}$	17	502	N. H. Agr. Exp't Station
40	Lake Village	Belknap	43	35	71	34	502	Winnepissiogee Lake Co.
65	Lancaster :		$\frac{40}{44}$	30	71	35	1385	J. D. Howe.
59	Littleton	Grafton	44	19	71	46	1032	Charles Nurse
42	Manchester (b)	Hillsboro	$\frac{44}{42}$	59	71.	28	$\begin{array}{c} 1032 \\ 225 \end{array}$	William Little.
43	" (c)	,,	$\frac{42}{42}$	59	71	$\frac{28}{28}$	$\begin{array}{c} 223 \\ 247 \end{array}$	U. S. Weather Bureau.
44	Mine Falls	"	$\frac{42}{42}$	49	71	31		Nashua Manufactuing Co.
45	Nashua		$\frac{42}{42}$	46	71	29	$\frac{125}{125}$	Jackson Co.
57	Newton	Rockingham	$\frac{42}{42}$	50	71	$\begin{bmatrix} 23 \\ 08 \end{bmatrix}$	120	W. C. Gale.
47	North Conway .	Carroll	44	$\frac{30}{02}$	71	10	 575	J. L. Binford.
	Pennichuck Stn.	Hillsboro	42	48	71	30		Pennichuck Water Works.
61		"	$\frac{42}{42}$	50	71	56	• •	D. L. Crosby.
49		Grafton	43	47	71	47	500	Miss Helen M. Clark.
63		Belknap	43	30	71	41		Geo. C. Ward.
51		Coos	44	40	71	35	870*	N. B. Waters.
52	Walpole	Cheshire	43	04	72	$\frac{35}{21}$	1128	E. A. Knowlton.
	Weir's Bridge .	Belknap	43	36	71	$\frac{21}{34}$		Winnepissiogee Lake Co.
	West Milan	Coos	$\frac{40}{44}$	34	71	20	1016	A. A. Higgins.
55	Wolfboro	Carroll	43	35	71	15	1010	Winnepissiogee Lake Co.
71	Brattleboro' (a)	Windham, Vt.	42	51	72	33	335	W. H. Childs.
72	" (b)	" · · · · · · · · · · · · · · · · · · ·	42	51	$7\overline{2}$	33	160*	H. B. Chamberlain.
$7\overline{3}$	Burlington	Chittenden	44	29	73	15	220*	W. B. Gates.
74	Chelsea	Orange	44	00	72	$\frac{10}{32}$	1300*	H. L. Bixby.
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LIST OF STATIONS AND OBSERVERS.

No.	STATION.	County and State.	Lat.	N.	Long	. w.	Elevation.	Observer.
	G 11						ft.	
75	Cornwall	Addison	43°	57'	73°	12'		C. H. Lane.
90	Enosburg Falls	Franklin	44	56	72	40	• • •	J. H. Mears.
88	Hartland	Windsor	43	30	72	21	665	E. A. English.
95	Hyde Park	Lamoile	44	40	72	35		Geo. E. Stratton.
96	Irasburg	Orleans	44	48	72	25	1050*	O. W. Locke.
$\begin{array}{c c} 77 \\ 97 \end{array}$	Jacksonville (a) .	Addison	$\frac{42}{42}$	48	$\begin{array}{c} 72 \\ 72 \end{array}$	50	1250*	J. W. Hatch. Miss M. French.
78	T		$\frac{42}{44}$	$\begin{array}{c} 48 \\ 27 \end{array}$	72	50 41	$\begin{array}{c} 1000 \\ 1210 \end{array}$	H. A. Cutting, Ph.D.
82	37 11 0 1 3	Essex	$\frac{44}{44}$	10	$\frac{71}{72}$	44	871	U. S. Weather Bureau.
94	Northfield Norwich	Windsor	43	45	72	18		Chas. W. Brown.
87	Saxton's River .	Windham	43	09	72	35		Vermont Academy.
92	Simonsville	Windsor	43	15	$7\overline{2}$	45	1800	Mrs. J. J. Allbee.
93	So. Royalston .	17 Inds01	43	50	$7\overline{2}$	30		G. H. Manchester.
83	Strafford	Orange	43	52	$7\overline{2}$	24	500	H. F. J. Scribner.
85	Vernon	Windham	$f{42}$	47	$7\overline{2}$	$\overline{32}$	310	A. Whithed.
89	Weathersfi'd Ctr.	Windsor	43	25	72	31	1800	B. H. Allbee.
91	Wells	Rutland	43	47	73	07	750	R. E. Pember.
86	Woodstock	Windsor	43	36	72	34	700	H. F. Dunham.
192	Adams (a)	Berkshire, Mass.	42	43	73	12		F. W. Green.
198	" (b)		42	43	73	12		F. R. Harrington.
187	Ashland	Middlesex	42	15	71	28	214	Boston Water Works.
101	Amherst (a)	Hampshire	42	22	72	31	267	Miss S. C. Snell.
102	(b)	• • •	42	20	72	30	250	Mass. Agr. Exp't Station.
177	" (c)		42	23	72	31	260	Hatch Experiment Station.
180	Andover	Essex	42	39	71	06	300	A. B. Wiggin.
103	Beverly Farms .		42	34	70	49	78	T. K. Lothrop, Jr.
104	Blue Hill (sum't)	Norfolk	42	13	71	07	640	Blue Hill Observatory.
174	" " (valley)	· · · · · · · · · · · · · · · · · · ·	42	14	71	07	50	(((()
106	Boston (a)	Suffolk	42	21	71	04	$\frac{124}{7}$	U. S. Weather Bureau.
107	(b)	M: Jallanam	42	20	71	05	7	Boston Water Works.
$\begin{bmatrix} 108 \\ 109 \end{bmatrix}$	Cambridge (a) .	Middlesex	$\begin{array}{ c c }\hline 42\\ 42\\ \end{array}$	$\frac{23}{23}$	71 71	08	74 8	Harvard College Observatory.
$\frac{109}{110}$	(b) . Chestnut Hill		42	$\frac{23}{20}$	71	$\frac{06}{12}$	124	E. C. Brooks, C. E. Boston Water Works.
111	Chicopee	Hampden	42	$\frac{20}{12}$	72	$\frac{12}{35}$	86	F. H. Norton.
111	Clinton	Worcester	42	$\frac{12}{25}$	71	$\frac{33}{41}$	297	Geo. W. Weeks.
182	Concord (a)	Middlesex	42	$\frac{25}{27}$	71	$\frac{1}{2}$	139	Fred A. Tower.
382	(b)	"	42	$\tilde{27}$	71	$\frac{22}{22}$	100	M. H. Houghton.
114	Cotuit	Barnstable	41	$\frac{1}{37}$	70	$\overline{26}$	60*	Gen. J. H. Reed.
116	Deerfield	Franklin	$\overline{42}$	30	72	$\frac{1}{37}$	175*	James Childs.
117	Dudley	Worcester	42	03	71	56	705	Nichols Academy.
193	Egg Rock, Nahant		42	26	70	54	72	G. L. Lyon.
386	Fall River	Bristol	41	42	71	09	200	C. V. S. Remington.
119	Fiskdale	Worcester	42	05	72	09	1150*	O. B. Truesdell.
120	Fitchburg (a)		42	36	71	50	700*	Dr. J. Fisher.
121	(b).		42	35	71	47	550*	Dr. A. P. Mason.
186	Florida (a)	Berkshire	42	40	73	02	1328	Nelson Dupuy.
188	$(b) \dots$	"	42	42	73	02	2160	J. E. Baker.
122	Framingham	Middlesex	42	17	71	27	160	Boston Water Works.
123	Gilbertville	Worcester	42	17	72	13	560	Dr. W. E. Brown.
385	Great Barrington	Berkshire	42	15	73	25		J. C. Wheeler.
124	Groton (a)	Middlesex	42	36	71	34	333	Chas. Woolley.
125	$(b) \dots$	M	42	36	71	34		Groton School.
160	Hingham	Plymouth	42	13	70	53	63	H. W. Cushing.
195	Hyannis	Barnstable	41	39	70	17	31	C. F. Sleeper.
178	Kendal Green.	Middlesex	42	$\frac{22}{17}$	71	20	135	Cambridge Water Works.
127	Lake Cochituate		42	17	71	$\frac{25}{13}$	140	Boston Water Works.
$\begin{array}{c} 128 \\ 129 \end{array}$	Lawrence	Essex	42 42	$\frac{42}{15}$	71 71	15 55	51* 1058*	Essex Company.
130	Leicester Leominster	Worcester	42	$\frac{10}{30}$	71	35 49	1035*	Leicester Academy. W. B. Hosmer.
100	Leominster	• • • •	42	90	11	4 J	900	W. D. Hosmer.
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LIST OF STATIONS AND OBSERVERS.

No.	STATION.	County and State.	Lat	. N.	Long	g. W.	Elevation.	Observer.
					-		ft.	
131	Long Plain	Bristol Mass.	41°		70°		55	New Bedford Water Works.
133	Lowell (b)	Middlesex	42	39	71	2 0	100*	Prop's Locks and Canals.
136	(c)		42	39	71	$\frac{20}{20}$	97	
176	$(\alpha) \cdot \cdot \cdot$	• • • •	42	39	71	20	84	F. E. Saunders.
134 135	Ludlow Lynn (a)	Hampden Essex	$\begin{array}{ c c }\hline 42\\ 42\\ \end{array}$	$\begin{array}{c} 12 \\ 28 \end{array}$	72	29 5.c	381	M. W. Graves.
$\frac{133}{384}$	$\begin{array}{cccc} \text{Lynn} & (a) & \dots & \\ & & (b) & \dots & \end{array}$	Essex	42	28	70	$\frac{56}{56}$	40 39	John C. Haskell. J. W. Darcy.
183	Mansfield	Bristol	42	01	71	15	168	W. C. Winter.
138	Medford	Middlesex	42	$2\overline{5}$	71	07	7	R. M. Gow.
139	Middleboro'	Plymouth	41	$\overline{53}$	70	55		Middleboro' Water Works.
140	Milton	Norfolk	42	15	71	06	100	Rev. A. K. Teele.
194	Monroe	Berkshire	42	43	72	5 9	1860	Wm. H. Allen.
141	Monson	Hampden	42	05	72	20	420	Dr. G. E. Fuller.
142	Mt. Nonotuck	Hampshire	42	15	72	40	880	Wm. Street.
143	Mystic Lake	Middlesex	42	26	71	09	12	Boston Water Works.
144	" Pump. Sta.		42	25	71	08	10	" " " " " " " " " " " " " " " " " " " "
173	Nahant	Essex	42	26	70	54	90	Dr. W. D. Hodges.
$\begin{array}{c c} 146 \\ 147 \end{array}$	Nantucket	Nantucket	41	14	70	07	14	U. S. Weather Bureau.
148	New Bedford (a)	Bristol	$\frac{41}{41}$	39 39	70 70	56	88	T. R. Rodman.
149	Newburyport (a)	Essex	$\frac{41}{42}$	49	70	$\begin{bmatrix} 56 \\ 51 \end{bmatrix}$	$egin{array}{c} 48 \ 73 \end{array}$	New Bedford Water Works. F. V. Pike.
150	" (b)	"	$\frac{42}{42}$	49	70	51	12*	Newburyport Water Co.
152	Northampton	Hampshire	$\frac{12}{42}$	19	72	38	125	J. M. Clark.
387	No. Billerica	Middlesex	$\frac{12}{42}$	36	$7\overline{1}$	18	115	C. H. Kohlrausch, Jr.
153	Plymouth	Plymouth	$\overline{41}$	57	70	40	40*	Miss L. B. Knapp.
154	Princeton	Worcester	$\overline{42}$	25	71	55	$11\overline{25}$	Mrs. E. M. West.
155	Provincetown	Barnstable	42	03	70	11	15	John R. Smith.
156	Randolph	Norfolk	42	10	71	03	170	Mrs. I. D. Page.
179	Robert's Dam	Middlesex	42	21	71	2 0	90	Cambridge Water Works.
196	Roxbury	Suffolk	42	21	71	04	107	J. S. Cheever.
200	Royalston	Worcester	42	40	72	15	• . •	Miss L. W. Chase.
159	Salem	Essex	42	31	70	54	46	A. A. Smith.
190	Savoy	Berkshire	42	41	73	02	2400	M. C. Cain.
$\begin{bmatrix} 161 \\ 163 \end{bmatrix}$	Springfield Taunton (a)	Hampden	42	$\frac{06}{54}$	$\begin{array}{c} 72 \\ 71 \end{array}$	35	204	National Armory.
164		Bristol	$\begin{array}{c} 41 \\ 41 \end{array}$	$\frac{54}{54}$	71	$\begin{array}{c} 05 \\ 06 \end{array}$	41 40*	Dr. E. U. Jones.
165	(c)	"	41	54	7.1	06	40* 14	A. F. Sprague. Taunton Water Works.
184	" (d)		41	54	71	06	40	C. H. Wilmarth.
197	Turner's Falls .	Franklin	42	37	$7\overline{2}$	33	200	Turner's Falls Co.
181	Wakefield	Middlesex	$\frac{12}{42}$	30	71	04	107	S. W. Abbott.
166	Waltham	"	42	22	$7\overline{2}$	17	40	Boston Manufacturing Co.
381	Webster	Worcester	$\overline{42}$	03	$7\overline{2}$	53	480	E. P. Morton.
168	Wellesley	Norfolk	42	17	71	20		Prof. Sarah F. Whiting.
169	Westboro'	Worcester	42	16	71	38		G. S. Newcomb.
170	Williamstown	Berkshire	42	43	73	13	690	Williams College Observatory.
171	Winchester	Middlesex	42	27	71	08	90*	L. R. Symmes.
	Woods Holl	Barnstable	41	33	70	40		U. S. Weather Bureau.
185	Worcester (a) .	Worcester	42	16	71	46		Worcester Academy.
$\begin{array}{c c} 199 \\ 201 \end{array}$	Worcester (b) . Block Island	Nowyout D. I	42	16	$\frac{71}{71}$	48	514	Geo. W. Swan.
	Bristol	Newport, R. I. Bristol	41	$\begin{vmatrix} 10 \\ 40 \end{vmatrix}$	$\begin{array}{c} 71 \\ 71 \end{array}$	35	27	U. S. Weather Bureau.
202 210	Kingston (a)	Washington	41 41	$\frac{40}{29}$	71 71	$\begin{vmatrix} 16 \\ 31 \end{vmatrix}$	$egin{array}{c} 53 \ 250 \end{array}$	N. G. Herreshoff. Nathaniel Helme.
211	(b)	washington	41	29	71	$\frac{31}{32}$	166	R. I. Agr. Exp't Station.
	Lonsdale	Providence	41	55	71	$\frac{32}{24}$	116	G. W. Pratt.
204	Newport	Newport	41	$\frac{33}{32}$	71	13	75	Thomas Dunn.
205	Olneyville	Providence	41	48	71	29	25	C. H. Cannon.
206	Pawtucket	"	41	54	71	23	56	J. H. Walker.
207	Providence (a).		41	50	71	25	74	City Engineer's Office.
208	" (b) .	"	41	50	71	25	70	D. W. Hoyt.
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LIST OF STATIONS AND OBSERVERS.

No.	STATION.	County and State.	Lat	. N.	Long	. w.	Elevation.	Observer.
212 221 222 247 224 225 249 452 227 454 228 229 453 250 451 248 237 238 231 233 234 235 245	Providence (c) . Canton Colchester Falls Village Hartford (b) Lake Konomoc . Lebanon Middletown Middletown New Hartford (a) New Haven New London . No. Franklin . N. Gros'nr Dale Norwalk South Manchester Storrs Stevenson Thompson Voluntown Wallingford Waterbury West Simsbury .	Providence R.I. Hartford, Conn. New London Litchfield Hartford New London " " Middlesex Litchfield " New Haven New London " " Windham Fairfield Hartford Tolland New Haven " New Haven " New London New Haven " Hartford " Hartford	41° 41 41 41 41 41 41 41 41 41 41 41 41 41	50' 50 33 55 45 26 38 33 50 17 22 05 54 48 23 57 36 26 31 52	71° 72 73 72 72 72 72 72 73 73 73 72 72 72 71 73 72 72 73 71 71 72 73 72 73 72	25' 55 20 20 42 10 15 39 01 02 54 33 29 10 12 51 50 05 54	ft. 165 900* 370* 600* 145 185 70 410 600 107 47 375 640 58 600 260 133 450 200*	Winslow Upton. G. J. Case. Samuel P. Willard. M. H. Dean. Prof. Samuel Hart, D.D. New London Water Works. J. H. Tucker. C. W. Hubbard. R. R. Smith. Rev. W. Goodwin. U. S. Weather Bureau. U. S. Weather Bureau. C. H. Lathrop. Grosvenor Dale Co. Geo. C. Comstock. K. B. Loomis. Storrs School Exp't Station. H. R. Stevens. Miss E. D. Larned. Rev. E. Dewhurst. Mrs. B. F. Harrison. N. J. Welton. S. T. Stockwell.
	No. Franklin					02		
	New Haven	New Haven						
		Windham						
451			41	08	73	33		Geo. C. Comstock.
							(Storrs School Exp't Station.
		New London						
	West Simshury		1					(=:
251	Albany	Albany, N. Y.	42	39	73	$4\overline{5}$	83	U. S. Weather Bureau.
252	Boyd's Corners .	Putnam	41	29	73	43	546	Thomas Manning.
253	Carmel	"	41	$\frac{20}{26}$	73	40	510	((((
259	Lebanon Springs	Columbia	42	$\frac{20}{29}$	73	22	900	A. K. Harrison.
$\begin{array}{c} 253 \\ 254 \end{array}$	New York (a) .	New York	40	$\frac{25}{46}$	73	58	97	Dr. D. Draper.
255	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	" "	40	43	74	00	185	U. S. Weather Bureau.
258	Poughkeepsie	Dutchess	41	41	73	55		Vassar College Observatory.
256	Setauket	Suffolk	40	58	73	05	40*	S. B. Strong.
$\frac{250}{257}$	S. E. Reservoir	Putnam	41	$\frac{30}{23}$	73	38	300	Thomas Manning.
	D. 12. Heselvoll	i dyllalli • · · · ·	T.	20				

TABLE II. SUMMARY OF OBSERVATIONS FOR YEAR 1892.

		<u> </u>		Темре	CRATURE.			Ркесірі	ration.	RAINY	Days.
No.	STATION.	Mean	1			ME	AN.	p.:	Un-		
140.	STATION.	Daily Range.	High- est.	Lowest.	Absolute Range.	Max. and Min.	Tri. Daily.	Rain and Snow.	melted Snow.	Total.	Monthly Average.
		1	2	3	4 .	5	6	7 in.	8 in.	9	10
1	St. John, N. B	12.2	84	_ 6	90	42.0	41.7	48.21	53	137	11
3	Belfast, Me		89	— 6	95		44.5	36.69	69	104	9
14	Calais	17.5	89	— <u>6</u>	95	44.1		45.27	119	$\begin{array}{c} 107 \\ 116 \end{array}$	$\begin{vmatrix} 9\\10 \end{vmatrix}$
19	East Machias	18.1	89	$\begin{vmatrix} -7 \\ -7 \end{vmatrix}$	$\begin{array}{c c} 96 \\ 95 \end{array}$	$\frac{42.9}{49.7}$.		36.74	61	148	12
$\begin{bmatrix} 4 \\ 5 \end{bmatrix}$	Eastport	$\begin{array}{c} 12.6 \\ 21.7 \end{array}$	$\begin{array}{c} 88 \\ 93 \end{array}$	-15	108	$\begin{array}{c} 42.7 \\ 43.2 \end{array}$		$32.20 \\ 32.96$	$\begin{array}{c} 49 \\ 52 \end{array}$	117	10
18	Farmington		98	-17	115	45.5		40.10	$\frac{32}{77}$	127	11
8	Lewiston	18.0	92	- 8	100	42.1	44.0	46.66	70	128	11
10	Orono	18.0	90	- 8	98	43.8	43.9	38.96	75	123	10
11	Petit Menan		75	- 3	78		42.7				
12	Portland	14.6	95	— 5	100	45.1		39.15	55	128	11
34	Berlin Mills, N. H	24.2	94	-24	118	40.6		41.96	94	143	$\begin{array}{c c} 12 \\ 9 \end{array}$
37	Concord	18.3	93	-8	101	45.5		37.82	55	110	_
$\begin{array}{c c} 68 \\ 59 \end{array}$	East Canterbury Littleton		$\begin{array}{c c} 92 \\ 89 \end{array}$	-10 -16	$\begin{vmatrix} 102 \\ 105 \end{vmatrix}$	$\begin{array}{c} 44.1 \\ 41.0 \end{array}$	• •	$37.78 \\ 42.46$	$\begin{array}{ c c }\hline 44\\ 75\end{array}$	$\frac{122}{122}$	10
$\begin{vmatrix} 39 \\ 42 \end{vmatrix}$	Manchester (a)	18.1	98	-6	103	$\frac{41.0}{47.3}$	$\frac{\cdot \cdot \cdot}{46.6}$	36.69	64	127	11
43	" (b)	18.4	95	_ 3	98	$\frac{46.5}{46.5}$		34.02		126	10
45	Nashua	20.8	96	_ 7	103	47.2	47.6	36.40	63	100	8
57	Newton	20.2	94	- 6	100	46.1					
47	North Conway	23.6	98	13	111	43.1		37.66		84	7
49	Plymouth	22.6	98	-12	110	43.0	42.1	42.69	47	116	10
51	Stratford	23.9	98	-20	118	44.1		39.42	63	109	$\begin{vmatrix} 9 \\ 8 \end{vmatrix}$
52	Walpole	21.2	94	-22	116	44.4	• •	34.48	48	$\begin{array}{c} 99 \\ 128 \end{array}$	11
54 71	West Milan Brattleboro' Vt	$\begin{array}{c} 22.5 \\ 21.1 \end{array}$	$\begin{array}{c} 94 \\ 98 \end{array}$	—28 —12	122 110	$\begin{array}{c} 39.7 \\ 46.7 \end{array}$	16.0	$44.62 \\ 31.58$	$\begin{array}{c c} 84 \\ 62 \end{array}$	120	
73	Burlington	15.1	92	-12	102	45.8	$\begin{array}{c} \textbf{46.0} \\ \textbf{45.4} \end{array}$	$\frac{51.56}{42.24}$	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	145	12
74	Chelsea		86	—16 —16	102	• •	38.7	38.85	100	161	13
88	Hartland	23.2	90	-17	107	42.4		38.84	46	139	12
82	Northfield	18.8	92	19	111	41.4		32.67	51	159	13
83	Strafford		88	13	101		42.1	36.87	97	89	7
85	Vernon		96	-12	108		46.5	39.49	47	75	6
91	Wells		90	-14	104	42.2		42.82	53	117	10
192	Adams, Mass	19.9	91	5	96	43.7		0.04		• •	
$\begin{bmatrix} 101 \\ 102 \end{bmatrix}$	Amherst $(a), \ldots$	91.0	$\frac{92}{94}$	- 8 -10	$\begin{array}{c c} 100 \\ 104 \end{array}$	16 1	47.3	35.34	$\frac{35}{40}$	93	8
$\begin{vmatrix} 102 \\ 177 \end{vmatrix}$	$(b) \cdot \cdot$	$\begin{array}{c} 21.0 \\ 22.7 \end{array}$	95	—10 —10	104	$\begin{array}{c} 46.4 \\ 46.8 \end{array}$	$\begin{array}{c} 46.7 \\ 48.5 \end{array}$	$37.01 \\ 40.34$	$\frac{40}{42}$	108	9
104	Blue Hill (sum't)	16.3	92	— 3	95	46.7	46.1	39.73	58	119	10
105	" (base)	20.4	$9\overline{5}$	_ 2	97	47.2					
106	Boston	14.6	96	0	96	49.4	48.0	37.02		123	10
108	Cambridge (a)	19.2	96	— 4	100	48.9		36.51		107	9
109	$(b) \dots$	17.3	94	0	94	48.4		39.30		118	10
110	Chestnut Hill	19.7	95	0	95	48.7		42.27	45	95	8 9
$\begin{array}{c} 182 \\ 117 \end{array}$	Concord Dudley	$\begin{array}{c} 19.9 \\ 18.2 \end{array}$	$\begin{array}{c} 95 \\ 95 \end{array}$	$-6 \\ -4$	$\begin{array}{ c c }\hline 101 \\ 99 \\ \end{array}$	$\begin{array}{c} 46.7 \\ 47.1 \end{array}$	45.6	$38.68 \\ 38.29$	52 48	112 119	10
193	Egg Rock, Nahant.	18.2 12.5	89	— 4 0	89	$\frac{47.1}{46.9}$	• •	38.29	40		
120	Fitchburg (a)	12.0	92	2	94	• •	46.4	41.63	61	108	9
121	(b)	18.7	95	_ 4	99	46.6		38.35	53	106	9
122	Framingham	22.8	96	_ 3	99	47.5		41.90	35	113	9
123	Gilbertville	21.9	94	— 1	95	46.0		45.17	63	109	9
124	Groton	18.7	94	- 4	98	47.6		37.85	69	106	9
195	Hyannis		98	2	96		51.8	39.98	39	106	9 7
$\begin{array}{c} 178 \\ 127 \end{array}$	Kendal Green Lake Cochituate	13.7	93	-8	93	48.5		42.92	$\begin{array}{c} 65 \\ 29 \end{array}$	$\begin{array}{c} 87 \\ 115 \end{array}$	10
127	Lawrence	$\begin{array}{c} 26.6 \\ 20.9 \end{array}$	$\begin{array}{c} 97 \\ 102 \end{array}$	$-8 \\ -2$	$\begin{array}{c c} 105 \\ 104 \end{array}$	$\begin{array}{c} 47.8 \\ 48.3 \end{array}$	• •	$39.04 \\ 34.90$	50	$113 \\ 107$	9
	Zamionoc	20.0	102		101	±0.0	• •	07.00	00	l -~'	
سيد سيد			·								

SUMMARY OF OBSERVATIONS FOR YEAR 1892.

No.	STATION.	1 1		Темре	RATURE.			Ркесірі	TATION.	RAINY	Days.
		1 .	2.0	3	4 .	5	6	7 ·in.	8 <i>in</i> .	9	10
129 131 133 136 176 134 135 183 139 194 141 146 147 148 153 164 165 184 197 181 168 169 170 201 201 211 205 207 208 221 222 454 228 229 250 451 233 235 255 258 256	Leicester Long Plain	17.4 17.5 20.5 20.6 22.3 17.0 20.3 19.8 18.2 16.0 17.0 13.8 15.9 16.6 21.6 22.3 21.6 16.9 18.0 17.5 21.7 16.5 10.1 13.2 17.8 14.2 16.0 15.8 19.8 19.3 16.1 14.3 19.5 20.5 20.0 15.8 19.8 14.1 21.5	92 92 94 95 97 91 99 95 94 99 95 94 95 97 96 96 97 96 97 98 98 99 97 98 99 97 98 99 97 98 99 99 99 99 99 99 99 99 99 99 99 99	$\begin{array}{c} -6 \\ -4 \\ -4 \\ -6 \\ -2 \\ -10 \\ 1 \\ 0 \\ 2 \\ -9 \\ -5 \\ 0 \\ -13 \\ -2 \\ 1 \\ -1 \\ -2 \\ -4 \\ -8 \\ 3 \\ -1 \\ -2 \\ -4 \\ -8 \\ 3 \\ -1 \\ -2 \\ -4 \\ -8 \\ 3 \\ -1 \\ -2 \\ 0 \\ 0 \\ -2 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ $	98 96 98 96 98 101 99 93 101 103 82 95 90 107 92 97 98 96 97 102 99 96 96 101 98 85 87 93 94 94 94 101 97 105 98 98 98 85 85 87 98 98 85 86 87 87 88 88 88 88 88 88 88 88	44.8 49.0 47.6 47.3 47.7 44.2 48.4 48.2 43.1 47.3 48.9 47.2 48.6 49.4 48.8 49.3 48.6 49.3 48.6 49.3 48.8 49.0 47.8 47.9 51.3 50.7 48.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 6.0 47.5 47.5 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	44.9 47.4 48.5 49.4 48.5 47.8 45.2 48.5 50.0 46.5 50.4	34.44 45.13 39.22 45.56 39.86 40.15 37.57 50.25 40.29 32.38 42.89 43.31 33.04 41.26 45.29 39.91 37.06 45.29 39.91 37.06 45.29 39.91 37.76 42.63 40.18 38.43 38.77 43.06 35.76 42.63 40.83 37.39 36.81 44.99 44.1 37.78 34.75 40.38 38.83 40.44 34.83 45.53 46.02 38.89 37.05 39.39	43 18 57 60 44 105 45 43 30 43 30 43 39 42 39 42 43 43 29 38 24 44 44 45 31 60 60 60 60 60 60 60 60 60 60	97 107 105 120 122 130 115 120 119 94 118 104 100 127 112 109 105 110 98 111 101 111 90 126 116 104 118 114 88 87 129 133 110 105 110 120 135 110 113 124 95	8 8 8 8 8 10 10 10 10 10 10 10 9 8 11 9 9 8 10 10 10 10 10 10 10 10 10 10
	*										

APPENDIX TO TABLE II.

STATIONS REPORTING PRECIPITATION ONLY.

[Total Precipitation and Unmelted Snow in Year 1892.]

No.	Station.	Total Precip.	Snow- fall.	No.	Station.	Total Precip.	Snow- fall.
		in.	in.			in.	$\overline{in.}$
23	Kenebec Ar'nal, Me	33.70		143	Mystic Lake, Mass	40.83	
7	Kent's Hill	38.22	77	144	Mystic P'p'g Sta	38.85	
32	Belmont, N. H	43.07		149	Newburyport (a)	37.26	58
39	Hanover	35.72	31	150	(b)	30.92	
40	Lakeport	41.99		156	Randolph	36.29	42
44	Mine Falls	36.71		179	Robert's Dam	38.80	42
53	Weir's Bridge	40.29		159	Salem	42.33	56
55	Wolfboro'	35.22		166	Waltham	39.74	
75	Cornwall, Vt	30.38	28	171	Winchester	37.08	
180	Andover, Mass	31.15	49	203	Lonsdale, R. I.	38.93	
187	Ashland	41.76		247	Falls Village, Conn	44.59	49
107	Boston (b)	35.45	38	224	Hartford	39.10	44
112	Clinton	30.55		249	Lebanon	35.67	45
119	Fiskdale	36.56		227	New Hartford	43.18	
160	Hingham	40.37	51	248	So. Manchester	37.04	
130	Leominster	40.17	57	238	Stevenson	38.61	43
138	Medford	37.39		234	Wallingford	37.88	53
139	Middleboro'	38.92	44	245	West Simsbury	41.20	54
142	Mt. Nonotuck	36.91	56	257	S. E. Reservoir, N. Y	44.24	

TABLE III.

MONTHLY MEAN PRESSURE AND RELATIVE HUMIDITY FOR 1892.

		Janua	RY.	Febru?	ARY.	Marc	н.	Apri	L.	Ma	Υ.	Juni	E.
No.	STATION.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressurę.	Rel. Hum.
1 4 12 43 45 71 82 177 104 106 129 176 146 161 196 201 207 228 229 237 251 255 256	St. John, N. B Eastport, Me Portland Manchester, N. H. Nashua Brattleboro, Vt Northfield Amherst, Mass Blue Hill Boston Leicester Lowell (d) Nantucket Springfield Roxbury Block Island, R. I. Providence New Haven, Conn. New London Storrs Albany, N. Y. New York Setauket	29.96 30.02 30.01 30.01 30.04 30.05 30.05	90 78 80 75 76 86 75 74 69 73 75 77 78 74 75 76 82 76	$\begin{array}{c} in.\\ 30.08\\ 30.08\\ 30.12\\ 30.15\\ 30.12\\ 30.14\\ 30.12\\ 30.14\\ 30.12\\ 30.10\\ 30.10\\ 30.10\\ 30.13\\ 30.14\\ 30.13\\ 30.14\\ 30.13\\ 30.14\\ 30.13\\ 30.14\\ 30.13\\ 30.14\\ 30.16\\ \end{array}$	88 73 74 78 84 73 75 78 85 79 74 74 72 82 74 	in. 29.79 29.81 29.88 29.91 29.90 29.94 29.92 29.99 29.87 29.94 29.94 29.94 29.94 29.94 29.94 29.94 29.94 29.98 29.94 29.98 29.99 29.98	87 68 62 59 67 78 72 64 65 62 83 70 68 67 65 64 65 64 	in. 29.89 29.90 29.96 30.00 29.98 30.00 30.01 29.97 29.99 30.02 30.09 29.99 30.04 30.01 30.05 29.97 30.04 30.03 30.03 30.04 30.06 30.09	87 62 60 47 55 73 66 54 58 54 61 64 48 79 59 71 67 68 63 	in. 29.95 29.95 29.95 29.98 29.96 29.99 29.98 29.94 29.97 29.95 29.95 29.96 29.96 29.96 29.96 29.96 29.96 29.98	85 75 72 64 67 82 72 60 72 68 75 77 64 86 64 83 79 79 74	in. 29.93 29.93 29.94 29.97 29.96 29.96 29.96 29.96 30.01 29.97 29.98 30.01 29.97 29.98 30.01	86 80 75 68 68 80 75 69 78 70 78 81 69 90 73 83 84 80 78
	Mean	30.00	78	30.12	77	29.92	70	30.01	63	29.96	74	29.96	77

The changes in atmospheric pressure from January 17 to February 28 of this year were among the greatest on record in New England. On the former date a high pressure area spread off our eastern coast, giving a barometer reading of 30.70 inches at Boston and 30.68 inches at Eastport, Maine. Other areas followed, till on February 11 a low pressure reached the Eastern Lakes from the northwest and passed across New England with steadily falling barometer; at Boston the record was 29.03 inches and at Eastport 28.63 inches. Again other areas moved across our district, but on February 27 a high pressure spread easterly over the northern States that gave a barometer reading of over 31.1 inches in Canada and 30.85 inches at Eastport. Thus making the highest and lowest barometer readings for the year, within half a month at that station and the difference between those readings 2.22 inches; a very unusual change.

TABLE III.

MONTHLY MEAN PRESSURE AND RELATIVE HUMIDITY FOR 1892.

	July		Augu	ST.	SEPTEM	BER.	Остов	ER.	Novemi	BER.	Dесеми	BER.	Үел 1	R.
No.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.	Pressure.	Rel. Hum.
	\overline{in} .		in.											
1	29.96	84	29.99	89	30.07	89	29.80	84	30.00	92	29.86	92	29.94	88
4	29.97	78	29.99	88	30.08	80	29.82	74	30.01	76	29.87	68	29.95	75
12	29.98	70	29.99	83	30.10	70	29.88	73	30.03	78	29.93	74	30.98	73
43	30.01	66	30.00	77	30.14	75	29.93	69	30.05	74	29.98	71	30.01	68
45	30.00	65	29.98	77	30.11	71	29.90	72	30.02	76	29.96	72	29.99	70
71	30.03	81	30.02	89	30.15	82	29.96	75	30.06	79	30.02	73	30.02	80
82	30.01	75	30.01	86	30.12	81	29.95	83	30.07	86	30.02	76	30.02	77
177	29.99	66	30.02	75	30.10	71	29.90	66	29.99	71	30.01	70	29.98	68
104	30.01	72	29.98	82	30.12	76	29.91	71	30.02	76	29.96	67	29.99	72
106	30.03	64	30.01	78	30.15	74	29.94	67	30.05	74	29.98	68	30.02	69
129	29.98	• •	29.97		30.12	• •	29.91	• • •	30.02		29.98		30.01	
176	29.98	78	29.99	87	30.17	85	29.95	83	30.03	81	29.95	80	29.99	80
146	30.05	81	30.00	83	30.17	81	29.94	80	30.03	83	29.98	76	30.02	78
161	30.02	66	29.98	74	30.13	69	29.94	64	30.04	73	30.00	75	30.01	69
196	30.05		30.01	• •	30.14		29.93	-:-	30.04		29.98		30.02	• •
201	30.06	85	30.02	89	30.18	82	29.97	78	30.05	79	30.01	72	30.04	81
207	30.02	68	29.98	78	30.13	73	29.91	70	30.00	77	29.94	72	29.98	71
228	30.03	81	29.99	83	30.15	81	29.96	75	30.04	80	30.02	76	30.02	76
22 9	30.03	82	30.00	84	30.15	79	29.95	73	30.04	77	30.00	75	30.02	76
237	30.04	-:	30.00	• •	30.16		29.98		30.05	• • •	30.02		30.02	• •
251	30.03	74	30.00	78	30.14	78	29.97	78	30.07	78	30.05	83	30.04	78
255	30.06	70	30.02	74	30.18	69	30.01	66	30.07	74	30.06	71	30.05	72
256	30.10		30.00	• •	30.21		30.02		30.09	• •	30.06	• •	30.07	• •
M	30.02	74	30.00	82	30.14	77	29.93	74	30.04	78	29.98	74	30.01	75

TABLE IV.

MAXIMUM PRESSURE AND DATE FOR 1892.

N.		Janu	ARY.	FEBRU	ARY.	Marc	сн.	APRI	L.	MAY	r.	Juni	E.
No.	STATION.	Highest.	Date.	Highest.	Date.	Highest.	Date.	Highest.	Date.	Highest.	Date.	Highest.	Date.
		in.		in.		in.		in.		in.		in.	
1	St. John, N. B.	30.83	11	30.86	27	30.49	2	30.41	1	30.34	14	30.38	4
4	Eastport, Me	30.72	11	30.85	27	30.46	29	30.44	1	30.34	1	30.39	4
12	Portland	30.70	11	30.82	28	30.44	31	30.49	1	30.41	1	30.40	4
43	Manchester, N. H.	30.70	17	30.79	27	30.46	31	30.53	1	30.39	1	30.43	4
45	Nashua	30.68	17	30.77	28	30.48	22	30.54	1	30.44	1	30.45	4
82	Northfield, Vt	30.73	10	30.82	27	30.47	22	30.52	1	30.33	1	30.38	4
177	Amherst, Mass.	30.67	17	30.72	27	30.45	22	30.53	1	30.43	1	30.39	4
104	Blue Hill	30.71	17	30.73	27	30.48	31	30.53	1	30.44	1	30.41	4
106	Boston	30.70	17	30.75	27	30.48	31	30.54	1	30.44	1	30.43	4
182	Concord	30.70	17	30.76	27	30.48	22	30.55	1	30.44	1	30.42	4
129	Leicester	30.59	1 0	30.70	27	30.42	22	30.60	1	30.36	1	30.35	4
176	Lowell	30.66	11, 17	30.71	28	30.42	23	30.56	1	30.39	1	30.44	4
146	Nantucket	30.65	17	30.62	28	30.50	31	30.58	1	30.46	1	30.42	4
163	Taunton	30.67	17	30.69	-28	30.45	22	30.55	1	30.44	1	30.42	4
196	Roxbury	30.71	17	30.76	27	30.48	31	30.55	1	30.44	1	30.44	4
201	Block Island, R. I.	30.68	17	30.64	27	30.49	22	30.57	1	30.44	1	30.41	4
207	Providence	30.64	17	30.65	27	30.46	31	30.54	1	30.42	1	30.41	4
228	New Haven, Conn	30.66	17	30.67	28	30.49	22	30.54	1	30.41	1	30.33	4
229	New London	30.66	17	30.66	27	30.48	22	30.55	1	30.42	1	30.39	4
237	Storrs	30.68	17	30.70	27	30.49	22	30.61	1	30.44	1	30.40	4
251	Albany, N. Y.	30.67	10	30.77	27	30.53	22	30.57	25	30.35	14	30.34	4
255	New York	30.66	17	30.67	27	30.51	22	30.52	25	30.38	14	30.36	4
256	Setauket	30.66	17	30.69	28	30.52	22	30.57	1	30.46	1	30.42	5

TABLE V. MINIMUM PRESSURE AND DATE FOR 1892.

No.	G	Janua	RY.	Feb RU	ARY.	MARG	ен.	\mathbf{A}_{PR}	IL.	May	Υ.	Juz	NE.
No.	STATION.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.
		$\overline{in.}$		in.		in.		in.		in.		in.	
1	St. John, N. B	29.26	26	28.78	12	29.11	19	29.27	10	29.68	23	29.54	20
4	Eastport, Me	29.20	26	28.63	12	29.13	19	29.32	·10	29.48.	23	29.58	20
12	Portland	29.29	26	28.99	12	29.06	19	29.39	10	29.49	27	29.49	20
43	Manchester	29.33	6	29.06	12	29.18	19	29.48	10	29.49	27	29.54	20
45	Nashua	29.28	7	29.06	12	29.19	19	29.45	9	29.46	27	29.53	20
82	Northfield, Vt	29.36	25	29.14	12	29.17	11	29.50	9	29.46	27	29.51	20
177	Amherst, Mass	29.29	6	29.07	12	29.29	19	29.51	9	29.47	27	29.55	20
104	Blue Hill	29.29	7	29.00	11	29.23	19	29.44	7	29.45	23	29.53	20
106	Boston	29.29	6	29.03	11	29.24	19	29.48	10	29.49	27	29.59	22
182	Concord	29.34	6	29.06	11	29.23	19	29.51	9, 10	29.53	23	29.60	28, 29
129	Leicester	29.32	6	29.12	11	29.40	-8	29.60	9	29.49	27	29.58	20
176	Lowell	29.34	6	28.95	12	29.27	19	29.46	10	29.49	27	29.52	20
146	Nantucket	29.28	6	29.00	11	29.30	9	29.54	10	29.43	23	29.66	22
163	Taunton	29.22	6	29.04	11	29.26	19	29.46	9	29.38	23	29.55	20
196	Roxbury	29.30	6	29.07	11	29.32	9	29.49	9	29.51	27	29.58	20
201	Block Island, R. I.	29.27	6	29.12	11	29.30	8	29.58	15	29.48	23	29.65	22
207	Providence	29.27	6	28.99	11	29.22	19	29.47	9	29.44	23	29.57	20
228	New Haven, Conn	29.24	6	29.18	11	29.28	8	29.59	8	29.52	27	29.62	23
229	New London	29.24	6	29.14	11	29.31	9	29.58	9,10	29.46	23	29.64	28
237	Storrs	29.27	6	29.15	11	29.28	9	29.56	9	29.53	27	29.61	20
251	Albany, N. Y	29.26	6	29.23	11	29.34	10	29.59	8	29.53	27	29.57	28
255	New York	29.29	6	29.26	11	29.30	8	29.57	8	29.56	27	29.65	28
256	Setauket	29.26	6	29.23	11	29.35	9	29.65	9	29.60	27	29.69	28

TABLE IV.

MAXIMUM PRESSURE AND DATE FOR 1892.

	Jur	Υ.	Augu	ST.	SEPTE	IBER.	Осто	BER.	Novem	BER.	DECEM	IBER.		YEAR.
No.	Highest.	Date.	Highest.	Date.	Highest.	Date.	Highest.	Date.	Highest.	Date.	${ m Highest.}$	Date.	Highest.	Date.
	in.		in.		in.		in.		in.		in.		in.	
1	30.45	7	30.28	23	30.44	11	30.42	13	30.47	2	30.30	12	30.86	Feb. 27
4	30.44	7	30.28	23	30.44	11	30.40	12	30.46	2	30.34	12	30.85	Feb. 27
12	30.48	7	30.29	23	30.43	8	30.44	12	30.46	27	30.42	12	30.82	Feb. 28
43	30.51	7	30.30	23	30.44	8	30.46	12	30.47	27	30.47	12	30.79	Feb. 27
45	30.52	7	30.29	23	30.45	8	30.49	13	30.47	27	30.50	12	30.77	Feb. 28
82	30.55	7	30.30	23	30.45	9	30.47	12	30.49	27	30.51	30	30.82	Feb. 27
177	30.50	7	30.24	23	30.42	8	30.43	13	30.44	27	30.53	12	30.72	Feb. 27
104	30.50	7	30.27	23	30.43	8	30.44	13	30.45	27	30.51	12	30.73	Feb. 27
106	30.51	7	30.26	23	30.44	8	30.46	12	30.46	27	30.52	12	30.75	Feb. 27
182	30.51	7		$22,\!23$	30.43	8, 11			30.47	27	30.50	12		
129	30.44	7	30.22	23	30.38	8	30.41	12	30.39	27	30.47	12	30.70	Feb. 27
176	30.53	1	30.28	23	30.42	8	30.42	12	30.43	27	30.48	12	30.71	Feb. 28
146	30.51	7	30.24	23	30.45	9	30.44	13	30.45	13	30.52	12	30.65	Jan. 17
163	30.48	6	30.23	23	30.42	8	30.46	13					٠. ا	
196	30.52	7	30.28	23	30.43	9, 11	30.46	12	30.47	27	30.52	12	30.76	Feb. 27
201	30.52	7	30.24	23	30.44	9	30.46	13	30.42	13	30.55	12	30.68	Jan. 17
207	30.49	7	30.24	23	30.42	8	30.44	13	30.41	27	30.49	12	30.65	Feb. 27
228	30.51	7	30.24	23	30.41	8	30.46	13	30.43	27	30.55	12	30.67	Feb. 28
229	30.49	7	30.24	23	30.42	8	30.45	13	30.42	27	30.53	12	30.66	J.17, F.27
237	30.50	7	30.23	23	30.44	8	30.45	12,13	30.46	27	30.56	12	30.70	Feb. 27
251	30.55	7	30.27	23	30.45	8	30.44	12	30.49	27	30.55	12	30.77	Feb. 27
255	30.51	7	30.24	23	30.44	9	30.46	13	30.44	27	30.59	12	30.67	Feb. 27
256	30.55	7	30.29	23	30.48	8	30.47	13	30.47	27	30.58	12	30.69	Feb. 28

 $\begin{tabular}{llll} TABLE & V. \\ \\ MINIMUM & PRESSURE & AND & DATE & FOR & 1892. \\ \end{tabular}$

	Jur	Y. ·	Augu	JST.	SEPTEM	IBER.	Осто	BER.	Nove	MBER.	DECEM	BER.		Year.
No.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.	Lowest.	Date.
	in.		in.		in.		in.		in.		in.		in.	
1	29.39	4	29.74	6	29.37	26	29.37	5	29.51	23	29.27	24	28.78	Feb. 12
4	29.48	4	29.75	6	29.32	26	29.39	5	29.48	10	29.32	25	28.63	Feb. 12
12	29.57	3	29.79	6, 12	29.42	26	29.46	4	29.41	5	29.31	25	28.99	Feb. 12
43	29.60	3	29.76	25	29.48	26	29.48	4	29.50	5	29.37	25	29.06	Feb. 12
45	29.53	4	29.75	12	29.45	26	29.47	29	29.48	5	29.35	25	29.06	Feb. 12
82	29.64	3	29.80	9	29.43	26	29.54	4	29.40	18	29.46	25	29.14	Feb. 12
177	29.53	3	29.69	25	29.46	26	29.45	29	29.44	18	29.52	25	29.07	Feb. 12
104	29.49	3	29.73	12	29.44	26	29.46	5	29.49	5	29.38	26	29.00	Feb. 11
106	29.65	3	29.79	12	29.53	26	29.50	5	29.51	5	29.41	25	29.03	Feb. 11
182	29.65	3	29.80	$12,\!25$	29.54	26			29.51	5	29.45	25		
129	29.60	3	29.73	12	29.50	26	29.49	5	29.52	5	29.44	25	29.12	Feb. 11
176	29.60	3	29.75	12	29.50	26	29.47	4	29.42	5	29.39	25	28.95	Feb. 12
146	29.75	3	29.81	12	29.64	26	29.45	5	29.48	5	29.44	25	29.00	Feb. 11
163	29.67	3	29.77	12	29.48	26	29.46	29						
196	29.67	3	29.80	25	29.50	26	29.50	29	29.52	5	29.41	25	29.07	Feb. 11
201	29.73	3	29.80	25	29.60	26	29.47	5	29.60	5	29.45	25	29.12	Feb. 11
207	29.58	3	29.73	26	29.47	26	29.43	5	29.47	5	29.37	25	28.99	Feb. 11
228	29.68	3	29.75	25	29.56	26	29.54	4	29.60	16	29.46	25	29.18	Feb. 11
229	29.70	3	29.76	12	29.57	26	29.49	5	29.59	5	29.47	25	29.14	Feb. 11
237	29.70	3	29.78	12,25	29.57	26	29.52	29	29.63	5.	29.49	25	29.15	Feb. 11
251	29.58	3	29.73	25	29.58	26	29.53	4	29.58	18	29.45	25	29.23	Feb. 11
255	29.70	3	29.76	25	29.61	26	29.59	29	29.62	16	29.54	25	29.26	Feb. 11
256	29.78	3	29.82	25	29.67	26	29.60	4	29.66	16	29.55	25	29.23	Feb. 11

TABLE VI.

MONTHLY TEMPERATURE NORMALS AND DEPARTURES FOR 1892.

		No.	Janu	ARY.	FEBR	UARY.	Ма	RCH.	Ar	RIL.	М	AY.
No.	STATION.	Years.	Mean.	Dep.	Mean.	Dep.	Mean.	Dep.	Mean.	Dep.	Mean.	Dep.
			0	0	0	0	0	0	0	0 .	0	٥
1	St. John, N.B	32	18.8	+5.8	20.8	+2.5	27.5	+0.1	37.3	+2.5	46.6	-0.4
3	Belfast, Me	33	19.3	+3.5	23.0	+1.2	30.2	-1.4	42.5	+2.6	53.7	-2.3
4	Eastport	20	20.5	+4.5	22.2	+2.2	28.5	-0.1	38.4	+3.6	47.3	-0.3
10	Orono	24	16.1	+5.9	19.2	+3.6	27.3	+0.8	40.2	+2.6	52.5	+0.2
12	Portland	21	22.9	+0.7	25.6	-0.8	31.6	-2.1	43.3	+0.3	53.9	2.5
37	Concord, N.H	23	21.7	+0.9	19.9	+5.5	30.9	-1.2	44.8	+1.0	57.0	3.2
39	Hanover	22	16.9	+4.6	19.1	+3.9	26.9	+0.9	41.4	+0.9	55.5	2.8
83	Strafford, Vt	17	16.8	+2.3	19.1	+2.0	26.2	-2.1	41.3	0.3	55.9	7.7
191	Amherst, Mass	55	23.6	+1.6	24.9	+2.4	32.6	-1.1	45.3	+1.6	57.0	-0.9
106	Boston	22	27.0	+1.3	28.1	+0.3	33.8	-0.9	44.6	+3.8	56.2	0.3
108	Cambridge	70	25.0	+3.2	26.2	+2.1	33.8	-1.2	44.4	+3.7	56.1	0.5
120	Fitchburg	35	22.6	+1.5	24.3	+0.8	30.4	-1.5	42.7	+2.5	55.6	+2.7
147	New Bedford	80	28.4	+1.2	29.0	+0.3	34.8	-2.5	44.5	-0.4	54.6	-1.9
161	Springfield	25	25.1	+1.3	26.2	+2.6	32.8	+0.2	46.4	+2.1	59.2	-1.4
201	Block Island. R.I	12	31.6	+0.8	32.1	0.0	34.4	-1.1	43.9	+0.3	52.3	-0.5
207	Providence	61	27.0	+2.9	27.8	+2.0	34.0	0.8	45.5	+2.6	56.3	+0.3
228	New Haven, Conn	106	26.8	+0.2	28.3	+2.9	35.7	-2.9	46.8	+0.2	57.3	-1.2
229	New London	22	29.0	-0.2	30.0	+1.2	35.1	-2.1	45.8	+0.2	56.4	1.8
235	Waterbury	17	25.3	-1.1	27.6	-0.2	33.0	-4.0	46.2	-2.5	57.7	1.1
251	Albany, N.Y	19	23.2	+0.3	24.4	+1.6	31.2	1.9	43.5	+2.6	63.2	6.5
255	New York	22	30.5	+0.1	32.2	+0.9	37.0	-2.4	48.6	+1.3	59.9	0.4
	Moon for Now England		23.5	+2.0	25.2	+1.8	31.7	-1.3	43.8	+1.3	55.3	1 /
	Mean for New England. Mean for Maine.		$\frac{23.3}{19.7}$	+3.6	$\begin{array}{c} 23.2 \\ 22.5 \end{array}$	+1.6	29.4	-0.7	41.1	$+1.5 \\ +2.3$	51.8	1.4
	Mean for Massachusetts.		25.3	+1.7	$\frac{22.5}{26.4}$	+1.4	$\frac{29.4}{33.0}$	-0.7 -1.2	$\begin{array}{c} 41.1 \\ 44.6 \end{array}$	$+2.3 \\ +2.2$	56.4	-1.2
	Mean for Connecticut.		25.5 25.6	+0.7	28.0	$+1.4 \\ +1.6$	33.7	$-1.2 \\ -2.7$	44.6 45.8	-0.4	56.8	$-0.4 \\ -1.4$
	Mean for Connecticut.		20.0	1 0.4	20.0	1.0	00.7	-z.1	40.0	0.4	90.0	-1.4

Notes.—(4) Eastport: January, February, March, October and November, mean for 19 years.

⁽⁸³⁾ Strafford: January and February, mean for 17 years.

⁽¹²⁰⁾ Fitchburg (a): January, mean for 35 years.

⁽¹⁴⁷⁾ New Bedford (a): October to December, mean for 81 years.

TABLE VI.

MONTHLY TEMPERATURE NORMALS AND DEPARTURES FOR 1892.

	Ju	Œ.	Ju	LY.	Auc	ust.	SEPTE	EMBER.	Ост	BER.	Nove	MBER.	DEC	EMBER.	YE	AR.
No.	Mean.	Dep.	Mean.	Dep.	Mean.	Dep.	Mean.	Dep.	Mean.	Dep.	Mean.		Mean.		Mean.	Dep.
I	-	- 0	-0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	55.6	+0.5	59.9	+1.2	59.6	+2.1	54.8	+1.4	45.6	0.4	35.4	+2.0	23.1	-0.2	40.4	+0.9
3				+2.4			58.4	+0.1	47.3	0.8	36.2	+0.1	25.1	-2.4	44.3	+0.2
4				+1.8		+1.3	55.8	+1.4	46.6	0.6	36.5	+2.2	25.5	-1.7	41.5	+1.3
10		+0.9		+1.1		+0.8	57.5	0.1	45.8	0.7	34.1	+2.6	21.6	-0.4	42.5	+1.4
$\frac{10}{12}$		+0.1	68.6	+0.2	66.9	0.6	59.9	-0.7	49.2	-1.2	38.1	-0.9	28.6	-3.7	46.0	-0.9
37	65.4	+2.8		-0.5	69.4	-2.0	60.8	-1.8	49.4	1.5	37.6	-2.2			46.1	-0.7
39		+2.7		-1.9	66.1	-0.2	57.6	-0.9	45.8	+0.6	33.0	+2.1	21.6	-1.1	43.2	+0.7
83	65.4	-0.9	68.9	-0.4	67.4	-2.0	59.2	-3.2	46.5	-1.2	34.1	-1.8	21.9	-2.7	43.6	-1.5
101		+2.4	70.5	-0.5	68.2	0.3						+0.4	27.1	+0.5	46. 9	+0.4
106		+3.6		+1.9	69.2	+1.0	62.3	+0.2	51.6	+1.1	4 0.5	+0.7			48.4	+1.0
108		+3.4		+0.9	69.5	0.1	61.8	0.0	50.2	+1.2	39.2	+1.4	29.3	-1.6	47.8	+1.0
120		1			67.7	-0.3	59.7	1.2	47.9	0.3	36.6	0.3	29.0	-3.6	46.0	+0.4
147	64.0	+0.8			68.3	-0.7	59.4	+1.0	51.9	-2.2	41.8			-3.8	48.1	-0.8
161	68.7	+2.8	73.2	+1.0	70.5	+0.9						+0.5	28.4	-0.8	48.6	+0.8
	62.1		68.1	+0.5	68.1	+1.0		0.9				-1.9			49.3	-0.5
207	2		71.5	+2.4	69.5			+0.7				+1.4			48.4	+1.5
228	67.0	+0.1	71.7	-0.1	70.2			-1.0						1	49.1	-0.2
229	65.6	+1.0	70.8	0.0	69.8			-1.7				-0.7		i	49.4	-0.7
235				+1.8	69.5			-1.5			40.0				48.3	0.6
251	68.3	+2.9	72.2			+0.2	63.5	-1.1	51.0	0.0	38.7		9	i .	48.3	-0.3
255	68.3	+3.7	73.8	+1.0	71.7	+2.2	66.1	-0.1	56.0	-0.6	45.7	-3.1	35.8	-4.8	52.1	-0.2
			1								1					
M	64.8	+1.7	69.4								38.5	-0.3	28.2	-2.2	8	+0.2
M'	61.0	+0.4	66.0	+1.4	64.7			+0.2				+1.0			43.6	
\mathbf{M}''	66.2	+2.7	70.8	+0.8		+0.1						+0.2			2	+0.5
\mathbf{M}''	66.4	+1.2			69.2	+0.2	62.6	-1.8	51.3	0.2	40.2	0.5	30.2	-2.5	48.3	-0.5
					<u> </u>							1		1		

⁽¹⁶¹⁾ Springfield: mean for 25 years.

⁽²⁰¹⁾ Block Island: September to December, mean for 13 years.

TABLE VII.

MONTHLY PRECIPITATION NORMALS AND DEPARTURES FOR 1892.

$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	N	Sminton	No.	Jan	UARY.	Fев	RUARY.	M.	ARCH.	A	PRIL,	Ŋ	IAY.
St. John, N.B.	Ne	STATION.	1	Mean.	Dep.	Mean.	Dep.	I	Dep.	Mean.	Dep.	Mean.	Dep.
Mean for New England.	101 122 127 138 134 101 106 108 1100 122 127 133 134 147 149 161 166 201 203 207 221 224 228 229 234 251 252	St. John, N.B. Eastport, Me. Lewiston Orono Portland Concord, N.H. Hanover Strafford, Vt. Amherst, Mass. Boston Cambridge Chestnut Hill Framingham Lake Cochituate Lowell Ludlow Lynn Mystic Lake New Bedford Newburyport Springfield Waltham Block Island, R.I. Lonsdale Providence Canton, Conn. Hartford New Haven New London Wallingford Albany, N.Y. Boyd's Corner New York Mean for New England. Mean for New England.	of Years. 32 19 18 24 21 35 22 17 57 22 51 20 18 41 38 16 20 17 79 13 45 67 12 12 61 31 21 20 22 34 19 26 20	Mean. in. 5.12 4.21 4.33 4.18 3.77 3.22 2.73 3.66 4.16 4.17 4.46 4.39 4.05 4.28 4.29 3.86 5.16 3.57 3.17 4.62 5.41 4.02 3.92 4.56 4.39 4.45 4.65 3.07 4.17 3.89 4.11 4.12 -	$ \begin{array}{ c c c } \hline \text{Dep.} \\ \hline in. \\ +3.24 \\ +1.55 \\ +1.19 \\ +0.62 \\ +0.45 \\ +0.76 \\ +0.64 \\ +0.60 \\ +1.95 \\ +0.46 \\ +0.13 \\ -0.01 \\ +1.61 \\ +0.88 \\ +1.19 \\ +2.55 \\ +0.62 \\ -0.46 \\ +1.42 \\ +1.95 \\ -0.43 \\ -0.44 \\ +1.13 \\ +1.14 \\ +2.11 \\ +1.00 \\ +0.37 \\ +1.76 \\ +1.01 \\ +1.78 \\ +1.72 \\ +0.88 \\ +0.95 \\ \end{array} $	Mean. in. 4.74 3.97 4.29 4.02 3.59 2.76 2.11 3.00 3.16 3.50 3.52 3.67 3.95 3.80 3.89 3.81 4.38 3.50 2.74 4.58 4.65 3.78 3.18 3.86 3.76 3.97	$\begin{array}{ c c c c }\hline \text{Dep.}\\\hline in.\\ -3.57\\ -2.09\\ -2.08\\ -2.06\\ -1.41\\ -1.06\\ -0.70\\ -1.35\\ -1.35\\ -1.35\\ -0.89\\ -0.75\\ -0.80\\ -0.85\\ -1.42\\ -1.37\\ -0.89\\ -1.47\\ -1.71\\ -1.36\\ -0.03\\ -3.23\\ -3.38\\ -1.90\\ -2.27\\ -2.51\\ -2.60\\ -2.29\\ -2.51\\ -1.05\\ -2.49\\ -1.64\\ -1.91\\ \end{array}$	Mean. in. 4.92 5.00 4.70 4.23 3.40 3.16 2.24 3.86 4.26 4.27 3.95 4.28 4.21 3.67 3.55 3.97 4.28 4.06 4.15 4.18 4.66 4.86 4.72 2.81 3.96 4.10 4.09 4.33 -4	$ \begin{array}{ c c c c } \hline \text{Dep.} \\ \hline in. \\ +1.44 \\ -1.40 \\ -2.27 \\ -1.71 \\ -1.13 \\ -1.16 \\ -0.84 \\ -1.11 \\ -0.45 \\ -0.95 \\ -0.31 \\ -0.65 \\ -0.13 \\ -1.02 \\ -1.10 \\ -1.13 \\ -0.23 \\ +1.55 \\ -0.56 \\ -1.38 \\ +0.04 \\ +0.96 \\ -0.22 \\ +0.39 \\ -1.42 \\ -0.30 \\ -1.59 \\ -0.53 \\ -1.13 \\ -1.17 \\ -0.04 \\ +0.52 \\ -0.75 \\ -1.63 \\ \end{array} $	Mean. in. 3.56 3.13 3.20 2.83 2.89 2.81 1.60 2.23 3.09 3.59 3.54 3.19 3.63 2.53 3.40 3.63 2.83 3.93 3.93 3.93 3.93 3.93 3.93 3.93 3	$ \begin{array}{ c c c c c } \hline \text{Dep.} \\ \hline in. \\ -1.30 \\ -1.62 \\ -2.15 \\ -1.71 \\ -1.85 \\ -2.05 \\ -0.67 \\ -1.18 \\ -2.46 \\ -2.46 \\ -2.79 \\ -2.34 \\ -3.00 \\ -1.68 \\ -2.75 \\ -2.24 \\ -1.62 \\ -2.23 \\ -2.56 \\ -2.24 \\ -1.62 \\ -2.23 \\ -2.56 \\ -2.24 \\ -1.80 \\ -2.25 \\ -2.26 \\ -1.84 \\ -2.47 \\ -1.80 \\ -2.28 \\ -1.04 \\ -2.13 \\ -1.83 \\ -1.83 \\ \end{array} $	Mean. in. 4.28 4.00 3.44 3.51 3.28 2.71 3.54 3.93 3.56 3.54 3.26 3.54 3.26 3.34 3.40 3.42 4.01 3.91 4.14 3.63 3.84 4.08 3.66 4.40 3.42 3.54 3.50 4.43 3.07 3.72 3.05 3.65 3.56	$\begin{array}{ c c c c c }\hline \text{Dep.}\\\hline in.\\\hline -1.21\\\hline -1.83\\\hline +1.18\\\hline -0.59\\\hline +1.13\\\hline +3.02\\\hline +3.55\\\hline +3.46\\\hline +2.03\\\hline +1.59\\\hline +1.69\\\hline +2.54\\\hline +2.54\\\hline +2.31\\\hline +1.55\\\hline +2.20\\\hline +3.39\\\hline +2.13\\\hline +2.13\\\hline +2.13\\\hline +2.13\\\hline +2.13\\\hline +2.13\\\hline +2.13\\\hline +2.13\\\hline +1.55\\\hline +1.57\\\hline +0.57\\\hline +0.14\\\hline +2.23\\\hline +1.57\\\hline +0.57\\\hline +0.14\\\hline +2.23\\\hline +1.79\\\hline -0.03\\\hline \end{array}$

Notes. — (4) Eastport: January, February, March, October, November, mean for 19 years.

- (37) Concord: June and August, mean for 37 years; September to December, 35 years.
- (39) Hanover: January, mean for 44 years; February to April, 46 years; May to July, 49 years; August, 45 years; September to December, 22 years.
- (83) Strafford: January and February, mean for 17 years.
- (101) Amherst (a): August to December, mean for 58 years.
- (108) Cambridge (a): October to December, mean for 52 years.
- (134) Ludlow: January, mean for 15 years.

TABLE VII.

MONTHLY PRECIPITATION NORMALS AND DEPARTURES FOR 1892.

$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	Jī	JNE-	J.	ULY.	Au	GUST.	SEPT	EMBER.	Ост	OBER.	Nov	EMBER.	DEC	EMBER.	Y	EAR.
$\begin{array}{c} 3.33 + 1.70 \\ 3.78 - 0.19 \\ 4.18 - 2.92 \\ 3.50 + 1.44 \\ 3.39 - 2.18 \\ 4.65 + 4.64 \\ 3.64 + 0.84 \\ 4.08 - 2.22 \\ 4.65 - 0.11 \\ 4.39 - 1.22 \\ 4.08 - 2.01 \\ 4.79 - 5 - 15 \\ 3.88 + 3.84 \\ -0.66 \\ 3.65 + 4.46 \\ 3.46 + 1.84 \\ -0.84 \\ 3.47 + 1.18 \\ 3.72 - 1.04 \\ 3.67 + 4.47 \\ 3.17 - 0.28 \\ 3.90 - 0.29 \\ 3.90 - 1.40 \\ 3.75 - 0.140 \\ 3.75 - 1.82 \\ 3.50 + 2.46 \\ 3.34 - 1.35 \\ 3.68 + 2.73 \\ 3.69 + 4.47 \\ 3.17 - 0.28 \\ 3.90 - 0.29 \\ 3.90 - 1.40 \\ 3.75 - 0.140 \\ 3.75 - 1.82 \\ 3.50 + 2.75 \\ 2.72 - 1.00 \\ 2.87 - 0.22 \\ 3.87 + 0.53 \\ 3.69 + 4.17 \\ 4.17 - 3.26 \\ 3.87 + 0.63 \\ 3.44 + 0.44 \\ 3.90 - 0.75 \\ 3.69 + 4.17 \\ 4.17 - 3.26 \\ 3.87 + 0.00 \\ 4.38 + 0.44 \\ 3.84 + 0.44 \\ 3.96 - 1.16 \\ 4.11 - 1.80 \\ 3.16 - 0.22 \\ 3.53 - 0.97 \\ 4.43 + 0.44 \\ 3.96 - 1.16 \\ 4.11 - 1.80 \\ 4.11 - 1.80 \\ 4.59 - 0.14 \\ 3.35 - 2.23 \\ 45.41 - 3.06 \\ 4.08 - 0.32 \\ 3.50 - 0.33 \\ 3.50 - 0.83 \\ 3.61 + 0.61 \\ 4.20 + 0.28 \\ 3.07 - 0.42 \\ 3.61 + 0.12 \\ 3.61 + 0.61 \\ 4.20 + 0.28 \\ 3.07 - 0.42 \\ 3.61 + 0.61 \\ 4.20 + 0.28 \\ 3.07 - 0.42 \\ 2.80 + 0.44 \\ 4.11 - 1.80 \\ 4.59 - 0.14 \\ 3.35 - 2.23 \\ 45.41 - 3.06 \\ 4.21 - 0.74 \\ 4.91 - 1.12 \\ 3.57 - 0.70 \\ 4.22 - 2.80 \\ 4.46 + 0.68 \\ 3.53 - 2.39 \\ 45.50 - 3.3 \\ 3.10 - 0.08 \\ 4.71 + 1.21 \\ 4.03 + 2.19 \\ 3.41 - 1.61 \\ 3.45 - 2.80 \\ 3.85 - 0.83 \\ 3.86 + 0.87 \\ 3.86 + 0.63 \\ 3$	Mean	Dep.	Mean	Dep.	Mean	Dep.	Mean	Dep.	Mean	Dep.	Mean	Dep.	Mean	Dep.	Total	Dep.
$\begin{array}{c} 3.73 \\ 3.88 \\ + 3.34 \\ 3.84 \\ - 0.66 \\ 3.65 \\ + 4.46 \\ 3.64 \\ + 0.84 \\ 4.08 \\ - 2.18 \\ 4.44 \\ - 2.95 \\ 4.65 \\ - 0.11 \\ 4.39 \\ - 2.22 \\ 4.65 \\ - 0.11 \\ 4.39 \\ - 2.00 \\ 4.80 \\ - 2.01 \\ 4.70 \\ - 2.01 \\ 4.80 \\ - 2.22 \\ 4.65 \\ - 0.11 \\ 4.39 \\ - 2.00 \\ 4.80 \\ - 2.01 \\ 4.80 \\ - 2.01 \\ 4.80 \\ - 2.01 \\ - 2.22 \\ 4.65 \\ - 0.011 \\ 4.39 \\ - 2.02 \\ 4.60 \\ - 0.011 \\ 4.39 \\ - 2.02 \\ 4.80 \\ - 0.02 \\ - 0.22 \\ 3.52 \\ - 0.22 \\ - 0.22 \\ 3.52 \\ - 0.22 \\ -$																in.
$\begin{array}{c} 3.88 + 3.34 & 3.84 - 0.66 & 3.65 + 4.46 & 3.64 + 0.84 & 4.03 - 2.22 & 4.65 - 0.11 & 4.99 - 2.90 & 48.04 & -1 \\ 3.50 + 2.46 & 3.34 - 1.35 & 3.68 + 2.73 & 3.45 + 0.31 & 4.31 - 2.52 & 4.39 + 0.08 & 3.99 - 1.73 & 45.43 & -6 \\ 3.29 - 0.29 & 3.90 - 1.40 & 3.70 + 5.80 & 3.48 - 1.50 & 3.87 - 1.58 & 3.50 + 0.83 & 2.91 - 1.87 & 39.72 & -1 \\ 3.37 + 4.05 & 3.75 - 1.82 & 3.50 + 2.75 & 2.72 - 1.00 & 2.58 & -1.04 & 2.88 & -0.35 & 2.38 & -1.42 & 32.57 & -3 \\ 3.69 + 4.17 & 4.17 & -3.26 & 3.87 + 0.63 & 3.44 - 1.89 & 3.16 - 1.26 & 3.65 - 0.30 & 3.08 - 1.53 & 40.61 & -3 \\ 3.27 - 0.22 & 3.53 - 0.97 & 4.43 + 0.44 & 3.06 - 1.16 & 4.11 - 1.80 & 4.59 - 0.14 & 3.55 - 2.28 & 44.26 & -8 \\ 3.27 - 0.22 & 3.53 - 0.97 & 4.43 + 0.44 & 3.06 - 1.16 & 4.11 - 1.80 & 4.59 - 0.14 & 3.55 - 2.23 & 45.41 & -3.35 & 2.23 & 45.41 & -3.35 & 2.23 & 45.41 & -3.35 & 2.23 & 45.41 & -3.35 & 2.35 & -3.$						1						+1.44				4.49
$\begin{array}{c} 3.50 + 2.46 \\ 3.34 - 1.35 \\ 3.68 + 2.73 \\ 3.47 + 1.13 \\ 3.72 - 1.04 \\ 3.67 + 4.47 \\ 3.17 - 0.28 \\ 3.90 - 0.226 \\ 4.08 - 0.88 \\ 3.90 - 2.26 \\ 4.08 - 0.82 \\ 3.52 - 1.20 \\ 4.246 - 3.3 \\ 3.73 + 4.05 \\ 3.75 - 1.82 \\ 3.50 + 2.75 \\ 2.72 - 1.00 \\ 2.58 - 1.04 \\ 2.88 - 0.35 \\ 2.38 - 1.42 \\ 32.57 + 3.3 \\ 3.69 + 4.17 \\ 4.17 - 3.26 \\ 3.67 - 0.22 \\ 3.53 - 0.97 \\ 4.43 + 0.44 \\ 3.66 - 1.64 \\ 4.18 + 3.16 - 1.26 \\ 3.65 - 0.30 \\ 3.84 - 1.50 \\ 3.66 + 0.66 \\ 3.42 - 2.18 \\ 4.65 + 2.00 \\ 3.56 - 0.31 \\ 4.38 + 1.54 \\ 3.17 - 1.01 \\ 4.03 - 1.01 \\ 4.04 - 0.68 \\ 3.53 - 2.35 \\ 47.77 - 8.3 \\ 3.64 + 1.03 \\ 3.86 + 0.63 \\ 3.55 - 1.39 \\ 4.26 - 0.31 \\ 4.38 + 1.54 \\ 3.17 - 1.01 \\ 4.03 - 1.24 \\ 3.07 - 0.48 \\ 4.11 - 1.80 \\ 4.06 + 0.68 \\ 3.53 - 2.39 \\ 45.05 - 3.3 \\ 3.01 - 0.08 \\ 4.21 - 0.74 \\ 4.91 - 1.12 \\ 3.57 - 0.70 \\ 4.22 - 2.80 \\ 4.46 + 0.68 \\ 3.53 - 2.35 \\ 47.77 - 8.3 \\ 3.64 + 1.03 \\ 3.84 - 1.52 \\ 4.64 - 0.33 \\ 3.21 - 1.24 \\ 3.73 - 0.70 \\ 4.22 - 2.80 \\ 4.46 + 0.68 \\ 3.53 - 2.35 \\ 47.77 - 8.3 \\ 3.66 - 0.31 \\ 4.38 + 1.54 \\ 3.75 - 0.08 \\ 4.71 + 1.21 \\ 4.03 + 2.19 \\ 3.41 - 1.61 \\ 3.57 - 0.70 \\ 4.22 - 2.80 \\ 4.46 + 0.68 \\ 3.53 - 2.35 \\ 47.77 - 8.3 \\ 3.66 - 1.04 \\ 3.97 - 1.43 \\ 3.99 + 1.06 \\ 3.09 + 1.77 \\ 3.48 - 2.11 \\ 3.60 + 0.41 \\ 3.09 + 1.77 \\ 3.48 - 2.11 \\ 3.60 + 0.41 \\ 3.09 + 1.77 \\ 3.48 - 2.11 \\ 3.60 + 0.41 \\ 3.00 + 0.41 \\ 3.01 - 0.03 \\ 3.11 - 0.03 \\ 4.21 + 0.04 \\ 4.21 - 0.04 \\ 4$																-15.75 -1.38
$ \begin{array}{c} 3.47 + 1.13 & 3.72 & -1.04 & 3.67 + 4.47 & 3.17 & -0.28 & 3.90 & -2.26 & 4.08 & -0.32 & 3.52 & -1.20 & 42.46 & -3 \\ 3.29 & -0.29 & 3.90 & -1.40 & 3.70 + 5.30 & 3.88 & -1.50 & 3.87 & -1.58 & 3.50 + 0.83 & 2.91 & -1.87 & 39.72 \\ 3.69 & +4.17 & 4.17 & -3.26 & 3.87 + 0.63 & 3.44 & -1.89 & 3.16 & -1.26 & 3.65 & -0.30 & 3.08 & -1.53 & 40.61 & -3 \\ 3.75 & -0.93 & 4.56 & 0.00 & 4.39 + 0.75 & 3.42 & -2.60 & 3.77 & -3.31 & 3.81 + 0.87 & 3.52 & -2.82 & 44.26 & -8 \\ 3.27 & -0.22 & 3.53 & -0.97 & 4.43 + 0.44 & 3.06 & -1.16 & 4.11 & -1.80 & 4.59 & -0.14 & 3.35 & -2.23 & 45.41 & -3 \\ 3.06 & +0.66 & 3.42 & -2.18 & 4.65 & +2.00 & 3.56 & -1.38 & 3.51 & -1.75 & 3.91 + 0.77 & 3.64 & -2.41 & 44.55 & -8 \\ 3.06 & +0.83 & 3.66 & -0.31 & 4.38 + 1.54 & 3.17 & -1.01 & 4.03 & -1.64 & 4.46 + 0.80 & 3.27 & -1.98 & 45.50 & -3 \\ 3.81 & -0.08 & 4.21 & -0.74 & 4.91 & -1.12 & 3.57 & -0.70 & 4.22 & -2.80 & 4.46 + 0.68 & 3.53 & -2.39 & 45.05 & -3 \\ 3.75 & -0.08 & 4.71 & +1.21 & 4.03 & +2.11 & 3.60 & -0.44 & 3.45 & -2.65 & 3.86 & +1.97 & 3.69 & -2.58 & 45.72 & -6 \\ 3.75 & -0.08 & 4.71 & +1.21 & 4.03 & +2.11 & 3.60 & -0.90 & 3.91 & -1.80 & 4.06 & +1.10 & 3.24 & -2.03 & 44.47 & -3 \\ 3.06 & +1.04 & 3.97 & -1.43 & 3.99 & +1.06 & 3.03 & -0.90 & 3.91 & -1.80 & 4.06 & +1.10 & 3.24 & -2.03 & 44.47 & -3 \\ 3.09 & +1.77 & 3.48 & -1.52 & 4.60 & +2.35 & 3.17 & -1.52 & 4.01 & -1.59 & 4.21 & -0.87 & 3.24 & -1.62 & 45.24 & -5 \\ 3.06 & +1.04 & 3.97 & -1.43 & 3.99 & +1.06 & 3.03 & -0.90 & 3.91 & -1.80 & 4.06 & +1.10 & 3.24 & -2.03 & 44.47 & -3 \\ 3.09 & +1.77 & 3.48 & -2.11 & 3.60 & +0.41 & 3.01 & -1.07 & 3.73 & -2.41 & 3.45 & -2.65 & 3.58 & +2.24 & 3.40 & -1.25 & 4.62 & -5.24 & 3.40 & -1.25 & -2.82 & 45.10 & -2.82 & -2.8$																-6.57
$\begin{array}{c} 3.29 - 0.29 \\ 3.37 + 4.05 \\ 3.75 - 1.82 \\ 3.50 + 2.75 \\ 2.72 - 1.00 \\ 2.58 - 1.04 \\ 2.88 - 0.55 \\ 2.89 - 1.42 \\ 3.50 + 2.75 \\ 2.72 - 1.00 \\ 2.58 - 1.04 \\ 2.88 - 0.55 \\ 3.60 + 0.83 \\ 3.69 + 4.17 \\ 3.17 - 3.26 \\ 3.87 + 0.63 \\ 3.44 - 1.83 \\ 3.44 - 1.83 \\ 3.16 - 1.26 \\ 3.67 - 0.93 \\ 4.56 + 0.60 \\ 3.27 - 0.22 \\ 3.53 - 0.97 \\ 4.43 + 0.44 \\ 3.67 - 1.82 \\ 3.57 - 0.22 \\ 3.53 - 0.97 \\ 4.43 + 0.44 \\ 3.66 - 1.16 \\ 4.11 - 1.80 \\ 4.59 - 0.14 \\ 3.57 - 0.22 \\ 3.53 - 0.97 \\ 4.43 + 0.44 \\ 3.66 - 1.36 \\ 4.11 - 1.80 \\ 4.59 - 0.14 \\ 3.57 - 0.12 \\ 3.61 + 0.61 \\ 4.20 + 0.28 \\ 3.07 - 0.48 \\ 4.17 - 1.01 \\ 4.03 - 1.61 \\ 4.11 - 1.80 \\ 4.59 - 0.14 \\ 4.03 + 0.44 \\ 3.57 - 0.10 \\ 4.03 - 1.64 \\ 4.46 + 0.80 \\ 3.27 - 0.23 \\ 3.51 - 0.08 \\ 4.21 - 0.74 \\ 4.91 - 1.12 \\ 3.57 - 0.70 \\ 4.22 - 2.80 \\ 4.60 + 0.83 \\ 3.50 - 0.98 \\ 3.17 - 0.08 \\ 4.21 + 1.01 \\ 4.03 + 2.19 \\ 3.41 - 1.61 \\ 3.69 - 0.48 \\ 4.19 - 2.91 \\ 4.13 + 1.68 \\ 3.53 - 2.39 \\ 45.05 - 38 \\ 3.64 - 1.62 \\ 4.03 3 \\ 3.21 - 1.24 \\ 3.73 - 2.85 \\ 3.86 + 1.97 \\ 3.69 + 0.57 \\ 3$			3									1				-3.31
$\begin{array}{c} 3.37 + 4.05 & 3.75 - 1.82 & 3.50 + 2.75 & 2.72 - 1.00 & 2.58 - 1.04 & 2.88 - 0.35 & 2.38 - 1.42 & 32.57 & +33.69 + 4.17 & 4.17 - 3.26 & 3.87 + 0.63 & 3.44 - 1.89 & 3.16 - 1.26 & 3.65 - 0.30 & 3.08 - 1.53 & 40.61 & -33.75 - 0.93 & 4.56 & 0.00 & 4.39 + 0.75 & 3.42 - 2.60 & 3.77 - 3.31 & 3.81 + 0.87 & 3.52 - 2.82 & 44.26 & -83.27 - 0.22 & 3.53 - 0.97 & 4.43 + 0.44 & 3.06 - 1.16 & 4.11 - 1.80 & 4.59 - 0.14 & 3.35 - 2.23 & 45.41 & -33.06 + 0.66 & 3.42 - 2.18 & 4.65 + 2.00 & 3.56 - 1.38 & 3.51 - 1.75 & 3.91 + 0.77 & 3.64 - 2.41 & 44.55 & -83.06 + 0.83 & 3.66 - 0.31 & 4.38 + 1.54 & 3.17 - 1.01 & 4.03 - 1.64 & 4.46 + 0.80 & 3.27 - 1.98 & 45.50 & -33.31 - 0.68 & 4.21 - 0.74 & 4.91 - 1.12 & 3.57 - 0.70 & 4.22 - 2.80 & 4.46 + 0.68 & 3.53 - 2.35 & 47.77 & -83.41 + 1.03 & 3.84 - 1.52 & 4.64 - 0.33 & 3.21 - 1.24 & 3.73 - 2.35 & 3.86 + 1.97 & 3.69 - 2.58 & 45.72 & -63.75 - 0.08 & 4.71 + 1.21 & 4.03 + 2.19 & 3.41 - 1.61 & 3.45 - 2.65 & 3.58 + 2.24 & 3.40 - 1.25 & 43.77 + 1.29 + 0.57 & 3.662 - 2.00 & 4.60 + 2.35 & 3.17 - 1.52 & 4.01 - 1.59 & 4.21 + 0.87 & 3.24 - 1.62 & 45.24 & -63.33 & 3.99 + 1.06 & 3.03 - 0.90 & 3.91 - 1.80 & 4.06 + 1.10 & 3.24 - 1.62 & 45.24 & -2.43 & 4.00 + 1.25 & 4.56 & -2.65 & 3.58 + 2.246 & 4.07 - 2.37 & 46.39 & -33.09 + 1.77 & 3.48 - 2.11 & 3.60 + 0.41 & 3.01 - 1.07 & 3.73 & -2.41 & 3.95 + 1.55 & 3.75 - 2.82 & 45.10 & -73.80 + 0.63 & 4.56 + 2.61 & 4.56 + 2.02 & 3.51 - 1.62 & 4.13 & 3.16 & 3.86 + 2.28 & 3.50 - 2.41 & 46.00 & -33.17 + 0.81 & 3.75 - 1.06 & 4.50 - 0.38 & 3.35 - 1.03 & 3.77 - 2.19 & 4.07 + 1.87 & 3.03 - 2.10 & 42.34 & -22.00 & 4.66 & -2.61 & 4.56 + 2.02 & 3.51 - 1.62 & 4.13 & 3.16 & 3.86 + 2.28 & 3.50 - 2.41 & 4.60 & -0.63 & 3.56 + 2.26 & 3.51 - 1.62 & 4.13 & 3.16 & 3.86 + 2.28 & 3.50 - 2.41 & 4.60 & -0.63 & 5.56 + 2.61 & 4.56 + 2.00 & 3.51 - 1.62 & 4.13 & 3.16 & 3.86 + 2.28 & 3.50 - 2.41 & 4.64 & 0.00 & -0.59 & 3.25 - 1.39 & 4.43 & 0.58 & 3.27 - 1.44 & 4.28 & -2.79 & 3.84 + 1.17 & 3.93 - 2.38 & 4.93 & 3.25 - 1.39 & 4.26 & 1.19 & 3.25 & 3.25 & 3.25 & 3.25 & 3.25 & 3.25 & 3.25 & 3.25 & $				1				ľ								-1.90
$\begin{array}{c} 3.69 + 4.17 \\ 3.75 - 0.93 \\ 4.56 \\ 0.00 \\ 4.39 + 0.75 \\ 3.42 - 2.60 \\ 3.77 - 3.31 \\ 3.81 + 0.87 \\ 3.52 - 0.22 \\ 3.53 - 0.97 \\ 4.48 + 0.44 \\ 3.06 - 1.16 \\ 4.11 - 1.80 \\ 4.59 - 0.14 \\ 3.35 - 2.28 \\ 44.26 \\ - 8 \\ 3.06 + 0.66 \\ 3.42 - 2.18 \\ 4.65 + 2.00 \\ 3.56 - 1.38 \\ 3.51 - 1.01 \\ 4.03 - 1.15 \\ 3.01 - 1.01 \\ 4.03 - 1.64 \\ 4.46 + 0.80 \\ 3.27 - 1.98 \\ 4.55 - 0.30 \\ 3.27 - 1.98 \\ 45.50 \\ - 3 \\ 3.31 - 0.08 \\ 4.21 - 0.74 \\ 4.91 - 1.12 \\ 4.03 - 0.70 \\ 4.22 - 2.80 \\ 4.46 + 0.66 \\ 3.53 - 2.39 \\ 45.05 \\ - 3 \\ 3.41 + 1.03 \\ 3.84 - 1.52 \\ 4.64 - 0.33 \\ 3.21 - 1.24 \\ 3.75 - 0.70 \\ 4.22 - 2.80 \\ 4.46 + 0.66 \\ 3.53 - 2.39 \\ 45.05 \\ - 3 \\ 3.80 + 0.63 \\ 4.71 + 1.21 \\ 4.03 + 2.19 \\ 3.41 - 1.61 \\ 3.45 - 2.65 \\ 3.58 + 2.24 \\ 3.40 - 1.25 \\ 4.01 - 1.59 \\ 4.21 + 0.87 \\ 3.24 + 0.87 \\ 3.24 + 0.25 \\ 4.07 - 2.37 \\ 46.39 \\ - 3 \\ 3.09 + 1.77 \\ 3.80 + 0.63 \\ 4.56 + 2.61 \\ 4.56 + 2.02 \\ 3.51 - 1.07 \\ 3.51 - 0.08 \\ 4.21 - 0.43 \\ 3.77 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 0.32 \\ 3.51 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 0.32 \\ 3.27 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 0.01 \\ 3.17 + 0.81 \\ 3.75 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 0.02 \\ 3.27 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 0.01 \\ 3.27 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 0.01 \\ 3.27 - 0.05 \\ 3.25 - 0.94 \\ 5.00 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 0.05 \\ 3.27 - 0.94 \\ 5.00 - 0.05 \\ 3.27 - 0.$																+3.15
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$									3.16		3.65	-0.30	3.08			-3.74
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$						+0.75				-3.31	3.81	+0.87				-8.92
$\begin{array}{c} 3.06 + 0.83 & 3.66 & -0.31 & 4.38 + 1.54 & 3.17 & -1.01 & 4.03 & -1.64 & 4.46 & +0.80 & 3.27 & -1.98 & 45.50 & -3 \\ 2.87 & -0.12 & 3.61 & +0.61 & 4.20 & +0.28 & 3.07 & -0.48 & 4.19 & -2.91 & 4.13 & +1.68 & 3.53 & -2.35 & 45.05 & -3 \\ 3.31 & -0.08 & 4.21 & -0.74 & 4.91 & -1.12 & 3.57 & -0.70 & 4.22 & -2.80 & 4.46 & +0.68 & 3.53 & -2.35 & 47.77 & -8 \\ 3.41 & +1.03 & 3.84 & -1.52 & 4.64 & -0.33 & 3.21 & -1.24 & 3.73 & -2.25 & 3.58 & +2.24 & 3.40 & -1.25 & 45.72 & -6 \\ 3.75 & -0.08 & 4.71 & +1.21 & 4.03 & +2.19 & 3.41 & -1.61 & 3.45 & -2.65 & 3.58 & +2.24 & 3.40 & -1.25 & 43.77 & +1 \\ 2.99 & +0.57 & 3.62 & -2.00 & 4.60 & +2.35 & 3.17 & -1.52 & 4.01 & -1.59 & 4.21 & +0.87 & 3.24 & -1.62 & 45.24 & -5 \\ 3.06 & +1.04 & 3.97 & -1.48 & 3.99 & +1.06 & 3.03 & -0.90 & 3.91 & -1.80 & 4.06 & +1.01 & 3.24 & -2.03 & 44.47 & -3 \\ 3.16 & -0.93 & 3.33 & -1.61 & 4.26 & +0.32 & 3.52 & +0.13 & 3.89 & -2.03 & 4.32 & +2.46 & 4.07 & -2.37 & 46.39 & -3 \\ 3.09 & +1.77 & 3.48 & -2.11 & 3.60 & +0.41 & 3.01 & -1.07 & 3.73 & -2.41 & 3.95 & +1.55 & 3.75 & -2.82 & 45.10 & -7 \\ 3.80 & +0.63 & 4.56 & +2.61 & 4.56 & +2.02 & 3.51 & -1.62 & 4.13 & -3.16 & 3.86 & +2.28 & 3.50 & -2.41 & 46.00 & -0 \\ 3.17 & +0.81 & 3.75 & -1.06 & 4.50 & -0.38 & 3.35 & -1.03 & 3.77 & -2.19 & 4.07 & +1.87 & 3.03 & -2.10 & 42.34 & -2 \\ 2.90 & -1.47 & 3.04 & -0.59 & 3.22 & +2.49 & 3.12 & -1.31 & 4.41 & -2.29 & 4.18 & +4.13 & 3.57 & -1.83 & 44.40 & -0 \\ 3.27 & -0.05 & 3.25 & -1.39 & 4.26 & -1.19 & 3.12 & -1.31 & 4.41 & -2.29 & 4.18 & +4.13 & 3.57 & -1.83 & 44.40 & -0 \\ 3.28 & -0.39 & 3.25 & -1.39 & 4.26 & -1.19 & 3.12 & -1.31 & 3.65 & -2.29 & 4.18 & +4.13 & 3.57 & -1.83 & 44.40 & -0 \\ 3.29 & -1.17 & 0.26 & 5.12 & 3.01 & 3.79 & -1.26 & 4.84 & -3.74 & 3.86 & +2.63 & 3.70 & -2.22 & 50.29 & -3.6 \\ 2.91 & -1.13 & 4.64 & -1.25 & 4.65 & +0.86 & 3.20 & -1.30 & 3.60 & -2.32 & 3.69 & +2.02 & 3.78 & -2.56 & 45.46 & -6.6 \\ 3.15 & -0.79 & 5.27 & -0.94 & 5.50 & -0.51 & 3.91 & -2.37 & 3.90 & -2.95 & 3.95 & +1.51 & 3.52 & -1.80 & 49.52 & -11 \\ 3.35 & -0.89 & 4.19 & -1.62 & 4.92 & -1$	3.27	0.22	3.53	-0.97	4.43	+0.44	3 06	-1.16	4.11	-1.80	4.59	0.14				- `.38
$\begin{array}{c} 2.87 - 0.12 \\ 3.31 - 0.08 \\ 4.21 - 0.74 \\ 4.91 - 1.12 \\ 3.57 - 0.70 \\ 4.22 - 2.80 \\ 4.46 + 0.68 \\ 3.53 - 2.35 \\ 4.66 + 0.68 \\ 3.53 - 2.35 \\ 4.70 - 70 \\ 4.22 - 2.80 \\ 4.46 + 0.68 \\ 3.53 - 2.35 \\ 3.86 - 1.97 \\ 3.69 - 2.58 \\ 4.57 - 0.6 \\ 3.75 - 0.08 \\ 4.71 + 1.21 \\ 4.03 + 2.19 \\ 4.04 - 2.35 \\ 3.17 - 1.52 \\ 4.01 - 1.59 \\ 4.01 - 1.59 \\ 4.21 - 0.67 \\ 3.68 + 2.24 \\ 3.40 - 1.25 \\ 4.56 + 2.02 \\ 3.51 - 0.70 \\ 3.80 + 0.63 \\ 4.56 + 2.61 \\ 4.56 + 2.02 \\ 3.51 - 1.62 \\ 4.50 + 2.03 \\ 3.25 - 1.39 \\ 4.26 - 1.13 \\ 3.27 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 1.19 \\ 3.22 + 2.49 \\ 3.12 - 1.31 \\ 4.41 - 2.29 \\ 4.18 + 4.13 \\ 3.65 - 2.29 \\ 4.18 + 4.13 \\ 3.57 - 1.83 \\ 4.44 - 0.0 \\ 3.27 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 1.19 \\ 3.25 - 1.39 \\ 4.26 - 1.19 \\ 3.25 - 1.30 \\ 3.25 - 1.30 \\ 3.25 - 1.30 \\ 4.68 - 1.20 \\ 4.71 + 0.26 \\ 5.12 + 3.01 \\ 3.79 + 0.62 \\ 3.87 + 0.36 \\ 3.88 + 0.42 \\ 3.87 + 0.35 \\ 3.88 + 0.42 \\ 3.92 - 1.03 \\ 3.88 + 0.42 \\ 3.92 - 1.03 \\ 4.27 + 1.22 \\ 3.34 - 1.12 \\ 3.34 - 0.85 \\ 3.27 + 1.16 \\ 3.34 - 0.85 \\ 3.27 + 0.86 \\ 3.27 + 0.36 \\ 3.88 + 0.42 \\ 3.92 - 1.03 \\ 3.25 - 1.20 \\ 4.27 + 1.22 \\ 3.34 - 1.17 \\ 3.93 - 2.31 \\ 4.09 + 1.16 \\ 3.89 - 2.31 \\ 4.09 + 1.36 \\ 3.89 - 2.31 \\ 4.09 + 1.36 \\ 3.88 - 2.21 \\ 4.55 - 2.15 \\ 4.55 - 0.85 \\ 3.79 + 0.36 \\ 3.88 + 0.42 \\ 3.92 - 1.03 \\ 4.27 + 1.22 \\ 3.34 - 1.17 \\ 3.93 - 2.38 \\ 4.17 - 2.49 \\ 4.38 - 0.39 \\ 3.94 - 1.19 \\ 3.55 - 2.15 \\ 45.16 - 0.50 \\ 3.27 + 0.36 \\ 3.88 - 0.68 \\ 4.37 + 0.82 \\ 3.29 - 1.16 \\ 3.89 - 2.31 \\ 4.09 + 1.36 \\ 3.89 - 2.31 \\ 4.09 + 1.36 \\ 3.48 - 2.24 \\ 45.12 - 45 \\ 45.24 - 55 \\ 45.25 - 1.20 \\ 45.24 - 55 \\ 45.24 - 55 \\ 45.24 - 55 \\ 45.24 - 55 \\ 3.56 - 2.29 \\ 4.18 + 4.13 \\ 3.57 - 2.82 \\ 45.10 - 0.70 \\ 42.34 - 0.20 \\ 42.3$	3.06	+0.66									3.91				44.55	-8.04
$\begin{array}{c} 3.31 & -0.08 & 4.21 & -0.74 & 4.91 & -1.12 & 3.57 & -0.70 & 4.22 & -2.80 & 4.46 & +0.68 & 3.53 & -2.35 & 47.77 & -88 \\ 3.41 & +1.03 & 3.84 & -1.52 & 4.64 & -0.33 & 3.21 & -1.24 & 3.73 & -2.35 & 3.86 & +1.97 & 3.69 & -2.58 & 45.72 & -68 \\ 3.75 & -0.08 & 4.71 & +1.21 & 4.03 & +2.19 & 3.41 & -1.61 & 3.45 & -2.65 & 3.58 & +2.24 & 3.40 & -1.25 & 43.77 & +12.99 & +0.57 & 3.62 & -2.00 & 4.60 & +2.35 & 3.17 & -1.52 & 4.01 & -1.59 & 4.21 & +0.87 & 3.24 & -1.62 & 45.24 & -58 \\ 3.06 & +1.04 & 3.97 & -1.43 & 3.99 & +1.06 & 3.03 & -0.92 & 4.09 & +1.80 & 4.06 & +1.10 & 3.24 & -2.03 & 44.47 & -38 \\ 3.16 & -0.93 & 3.33 & -1.61 & 4.26 & +0.32 & 3.52 & +0.13 & 3.89 & -2.03 & 4.32 & +2.46 & 4.07 & -2.37 & 46.39 & -38 \\ 3.09 & +1.77 & 3.48 & -2.11 & 3.60 & +0.41 & 3.01 & -1.07 & 3.73 & -2.41 & 3.95 & +1.55 & 3.75 & -2.82 & 45.10 & -7 \\ 3.80 & +0.63 & 4.56 & +2.61 & 4.56 & +2.02 & 3.51 & -1.62 & 4.13 & -3.16 & 3.86 & +2.28 & 3.50 & -2.41 & 46.00 & -0 \\ 3.17 & +0.81 & 3.75 & -1.06 & 4.50 & -0.38 & 3.35 & -1.03 & 3.77 & -2.19 & 4.07 & +1.87 & 3.03 & -2.10 & 42.34 & -2 \\ 2.90 & -1.47 & 3.04 & -0.59 & 3.22 & +2.49 & 3.12 & -1.31 & 4.42 & -2.29 & 4.18 & +4.13 & 3.57 & -1.83 & 44.40 & -0 \\ 3.28 & -0.39 & 3.25 & -1.39 & 4.43 & +0.58 & 3.27 & -1.44 & 4.28 & -2.79 & 3.84 & +1.78 & 3.82 & -2.51 & 47.71 & -8 \\ 3.28 & -0.39 & 3.25 & -1.39 & 4.26 & -1.19 & 3.12 & -1.31 & 3.65 & -2.29 & 4.16 & +1.96 & 3.86 & -2.36 & 44.58 & -7 \\ 4.68 & -1.20 & 4.71 & +0.26 & 5.12 & +3.01 & 3.79 & -1.26 & 4.84 & -3.74 & 3.86 & +2.63 & 3.70 & -2.22 & 50.29 & -5 \\ 2.91 & -1.13 & 4.64 & -1.25 & 4.65 & +0.86 & 3.20 & -1.30 & 3.60 & -2.32 & 3.69 & +2.02 & 3.78 & -2.56 & 45.46 & -6 \\ 3.15 & -0.79 & 5.27 & -0.94 & 5.50 & -0.51 & 3.91 & -2.37 & 3.90 & -2.95 & 3.95 & +1.51 & 3.52 & -1.80 & 49.52 & -11 \\ 3.35 & -0.89 & 4.19 & -1.62 & 4.92 & -1.47 & 3.50 & -1.46 & 4.86 & -3.38 & 4.13 & +0.66 & 3.44 & -1.77 & 48.40 & -13 \\ 3.79 & +0.62 & 3.87 & +0.35 & 3.86 & +2.84 & 3.21 & -1.13 & 3.27 & -2.67 & 3.05 & -0.76 & 2.83 & -2.01 & 38.87 & -3 \\ 3.74 & +0.10 & 4.64 & +0.41 &$										-1.64					. .	-3.23
$\begin{array}{c} 3.41 + 1.03 \\ 3.75 - 0.08 \\ 4.71 + 1.21 \\ 4.03 + 2.19 \\ 3.62 - 2.00 \\ 4.60 + 2.35 \\ 3.17 - 1.52 \\ 4.01 - 1.61 \\ 3.45 - 2.65 \\ 3.58 + 2.24 \\ 3.40 - 1.25 \\ 4.51 + 0.87 \\ 3.24 - 1.62 \\ 4.52 + 0.57 \\ 3.66 + 1.04 \\ 3.97 - 1.43 \\ 3.99 + 1.06 \\ 3.03 - 0.90 \\ 3.91 - 1.80 \\ 4.01 - 1.59 \\ 4.01 - 1.59 \\ 4.21 + 0.87 \\ 3.24 - 1.62 \\ 4.55 + 0.86 \\ 3.27 - 0.05 \\ 3.25 - 1.39 \\ 4.26 - 1.19 \\ 3.28 - 0.39 \\ 3.25 - 1.39 \\ 4.26 - 1.19 \\ 3.29 - 1.13 \\ 4.64 - 1.25 \\ 4.65 + 0.86 \\ 3.27 - 0.05 \\ 3.25 - 0.89 \\ 4.19 - 1.62 \\ 4.92 - 1.47 \\ 3.08 - 2.81 \\ 3.86 + 2.84 \\ 3.21 - 1.13 \\ 3.67 - 1.66 \\ 4.36 - 0.51 \\ 3.15 - 0.89 \\ 4.19 - 1.62 \\ 4.92 - 1.47 \\ 3.86 + 2.84 \\ 3.21 - 1.13 \\ 3.66 - 1.49 \\ 3.86 + 2.84 \\ 3.21 - 1.13 \\ 3.67 - 2.87 \\ 4.68 - 3.28 \\ 3.64 + 1.68 \\ 3.76 - 1.49 \\ 3.62 + 3.20 \\ 3.88 + 0.42 \\ 3.92 - 1.03 \\ 3.88 - 0.68 \\ 4.37 + 0.82 \\ 3.29 - 1.16 \\ 3.88 - 0.68 \\ 4.37 + 0.82 \\ 3.29 - 1.16 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.16 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.16 \\ 3.29 - 1.03 \\ 3.29 - 1.03 \\ 3.29 - 1.16 \\ 3.29 - 1.21 \\ 4.75 - 0.85 \\ 3.76 - 2.89 \\ 3.41 - 0.45 \\ 4.57 - 2.12 \\ 4.75 - 0.85 \\ 3.76 - 2.89 \\ 3.41 - 0.33 \\ 3.41 - 0.45 \\ 4.57 - 2.12 \\ 4.75 - 0.85 \\ 3.76 - 2.89 \\ 3.44 - 1.77 \\ 3.93 - 2.38 \\ 4.02 + 1.19 \\ 3.55 - 2.15 \\ 45.16 - 5 \\ 3.27 + 0.36 \\ 3.88 - 0.68 \\ 4.37 + 0.82 \\ 3.29 - 1.16 \\ 3.89 - 2.31 \\ 4.09 + 1.36 \\ 3.49 - 2.31 \\ 4.09 + 1.36 \\ 3.48 - 2.24 \\ 45.12 - 44 \\ 45.12 - 44 \\ 45.12 - 44 \\ 45.12 - 2.24 \\ 45.12 - 44 \\ 45.12 - 2.25 \\ 44.14 - 2.25 \\ 3.15 - 0.25 \\ 3.29 - 1.39 \\ 3.29 - 1.30 $																-3.15
$\begin{array}{c} 3.75 - 0.08 & 4.71 + 1.21 & 4.03 + 2.19 & 3.41 - 1.61 & 3.45 - 2.65 & 3.58 + 2.24 & 3.40 - 1.25 & 43.77 & +1 \\ 2.99 + 0.57 & 3.62 - 2.00 & 4.60 + 2.35 & 3.17 - 1.52 & 4.01 - 1.59 & 4.21 + 0.87 & 3.24 - 1.62 & 45.24 & -5 \\ 3.06 + 1.04 & 3.97 - 1.43 & 3.99 + 1.06 & 3.03 - 0.90 & 3.91 - 1.80 & 4.06 + 1.10 & 3.24 - 2.03 & 44.47 & -3 \\ 3.16 - 0.93 & 3.33 - 1.61 & 4.26 + 0.32 & 3.52 + 0.13 & 3.89 - 2.03 & 4.32 + 2.46 & 4.07 - 2.37 & 46.39 & -3 \\ 3.09 + 1.77 & 3.48 - 2.11 & 3.60 + 0.41 & 3.01 - 1.07 & 3.73 - 2.41 & 3.95 + 1.55 & 3.75 - 2.82 & 45.10 & -7 \\ 3.80 + 0.63 & 4.56 + 2.61 & 4.56 + 2.02 & 3.51 - 1.62 & 4.13 - 3.16 & 3.86 + 2.28 & 3.50 - 2.41 & 46.00 & -0 \\ 3.17 + 0.81 & 3.75 - 1.06 & 4.50 - 0.38 & 3.35 - 1.03 & 3.77 - 2.19 & 4.07 + 1.87 & 3.03 - 2.10 & 42.34 & -2 \\ 2.90 - 1.47 & 3.04 - 0.59 & 3.22 + 2.49 & 3.12 - 1.31 & 4.41 - 2.29 & 4.18 + 4.13 & 3.57 - 1.83 & 44.40 & -0 \\ 3.27 - 0.05 & 3.25 - 1.39 & 4.43 + 0.58 & 3.27 - 1.44 & 4.28 - 2.79 & 3.84 + 1.78 & 3.82 - 2.51 & 47.71 & -8 \\ 3.28 - 0.39 & 3.25 - 1.39 & 4.26 - 1.19 & 3.12 - 1.31 & 3.65 - 2.29 & 4.16 + 1.96 & 3.86 - 2.36 & 44.58 & -7 \\ 4.68 - 1.20 & 4.71 + 0.26 & 5.12 + 3.01 & 3.79 - 1.26 & 4.84 - 3.74 & 3.86 + 2.63 & 3.70 - 2.22 & 50.29 & -5 \\ 3.15 - 0.79 & 5.27 - 0.94 & 5.50 - 0.51 & 3.91 - 2.37 & 3.90 - 2.95 & 3.69 & +2.02 & 3.78 - 2.56 & 45.46 & -6 \\ 3.15 - 0.79 & 5.27 - 0.94 & 5.50 - 0.51 & 3.91 - 2.37 & 3.90 - 2.95 & 3.69 & +2.02 & 3.78 - 2.56 & 45.46 & -6 \\ 3.59 - 0.89 & 4.19 - 1.62 & 4.92 - 1.47 & 3.50 - 1.46 & 4.36 - 3.38 & 4.13 + 0.66 & 3.44 - 1.77 & 48.40 - 13 & 3.79 + 0.62 & 3.87 + 0.35 & 3.86 + 2.84 & 3.21 - 1.13 & 3.27 - 2.67 & 3.05 - 0.76 & 2.83 - 2.01 & 38.87 & -3 \\ 3.79 + 0.62 & 3.87 + 0.35 & 3.86 + 2.84 & 3.21 - 1.13 & 3.27 - 2.67 & 3.05 - 0.76 & 2.83 - 2.01 & 38.87 & -3 \\ 3.64 + 1.68 & 3.76 - 1.49 & 3.62 + 3.20 & 3.41 - 0.33 & 4.17 - 2.49 & 4.38 - 0.39 & 3.98 - 2.21 & 45.16 & -5 \\ 3.64 + 1.68 & 3.76 - 1.49 & 3.62 + 3.20 & 3.41 - 0.33 & 4.17 - 2.49 & 4.38 - 0.39 & 3.98 - 2.21 & 45.16 & -4 \\ 3.64 + 1.68 & 3.76 - 1.49 & 3.62 + 3.20$	3.31	-0.08	4.21	-0.74	4.91	-1.12										-8.73
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$							3.21	-1.24							2	-6.50
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			4.71	+1.21												+1.79
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			$\frac{0.02}{2.07}$	1.49	2.00	± 1.06	3.17	0.90								-5.38 -3.64
$\begin{array}{cccccccccccccccccccccccccccccccccccc$			2 22	1 61	1 96	±0.00										-3.50
$\begin{array}{cccccccccccccccccccccccccccccccccccc$							8									-7.84
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$											3.86	+2.28	3.50			-0.71
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	•									-2.19						-2.60
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2															-0.34
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$																-8.78
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3.28	-0.39	3.25	-1.39	4.26	-1.19			3.65	-2.29	4.16	+1.96	3.86	-2.36	44.58	— 7.19
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	4.68	-1.20	4.71	+0.26	5.12	+3.01	[3.79]	-1.26								-5.30
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	2.91	—1. 13	4.64	-1.25	4.65	+0.86	3.20	—1.30	a a						2	-6.36
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3.15	0.79														-11.74
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	a															-13.65
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$													3	1	2	-12.74
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$										-2.67	3.05	-0.76				-3.54
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	3.74	+0.10	4.64	+0.41	4.97	+1.16	4.16	-1.51							E	-3.05
$\begin{bmatrix} 3.64 & +1.68 & 3.76 & -1.49 & 3.62 & +3.20 & 3.41 & -0.33 & 4.17 & -2.49 & 4.38 & -0.39 & 3.98 & -2.21 & 45.85 & -68.27 & +0.36 & 3.88 & -0.68 & 4.37 & +0.82 & 3.29 & -1.16 & 3.89 & -2.31 & 4.09 & +1.36 & 3.48 & -2.24 & 45.12 & -48.28 & -48.2$	3.41	0.45	4.57	-2.12	4.75	0.85	3.76	z.89	5.40	-2.05	5.69	+4.59	5.25	-1.59	45.07	6.18
$\begin{bmatrix} 3.64 & +1.68 & 3.76 & -1.49 & 3.62 & +3.20 & 3.41 & -0.33 & 4.17 & -2.49 & 4.38 & -0.39 & 3.98 & -2.21 & 45.85 & -68.27 & +0.36 & 3.88 & -0.68 & 4.37 & +0.82 & 3.29 & -1.16 & 3.89 & -2.31 & 4.09 & +1.36 & 3.48 & -2.24 & 45.12 & -48.28 & -48.2$	0 90	±0.45	2 00	1.09	1 27	±1 99	2 24	1 17	3 03	9 38	4 09	+1 10	2 55	9 15	45 16	-5.75
3.27 + 0.36 3.88 - 0.68 4.37 + 0.82 3.29 - 1.16 3.89 - 2.31 4.09 + 1.36 3.48 - 2.24 45.12 -4	2.20	+1 69	3.76	1.05	3.69	+3 90										-6.48
$\begin{bmatrix} 3.55 \\ -1.14 \end{bmatrix} = \begin{bmatrix} 3.65 \\ -1.14 \end{bmatrix} = \begin{bmatrix} 3.65 \\ -1.14 \end{bmatrix} = \begin{bmatrix} 3.65 \\ -1.18 \end{bmatrix} = \begin{bmatrix} 3.65 \\ -1.18 \end{bmatrix} = \begin{bmatrix} 3.72 \\ -1.18 \end{bmatrix} = \begin{bmatrix} 3.72 \\ -2.13 \end{bmatrix} = \begin{bmatrix} 3.88 \\ -1.18 \end{bmatrix} = \begin{bmatrix} 3.72 \\ -1$	3.04	+0.36	3.88	-0.68	4.37	+0.82	3.29	-1.16							6	-4.87
	3.55	<u>-1.14</u>	4.63	-0.88	5.05	+0.11	3.61	-1.58	4.16							-9.97
	5.00	****	1	1.00	1						1					
													•		1	
													1			
															1	

- (135) Lynn: July to December, mean for 21 years.
- (147) New Bedford (a): October to December, mean for 80 years.
- (149) Newburyport (a): January to May, mean for 13 years.
- (166) Waltham: January, mean for 66 years; February, 63 years; August and December, 67 years.
- (201) Block Island: September to December, mean for 13 years.
- (234) Wallingford: April to July, mean for 35 years.

TABLE VIII.

MAXIMUM WIND VELOCITY AND TOTAL WIND MOVEMENT FOR 1892.

		JA	NUARY.	FEI	BRUARY.	М	IARCH.	A	PRIL.		May.		June.
No.	STATION.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov m't.
1 4 12 43 45 71 82 177 104 106 146 201 207 228 229 251 255	St. John, N.B Eastport, Me Portland	m. 31 48 44 29 29 38 40 46 66 40 47 65 38 39 46 36 49	m. 6931 9227 6706 4315 3676 7468 6209 5059 16048 9928 10795 15485 7260 7300 6795 5063 9621 8111	m. 42 60 45 24 22 38 32 48 47 32 49 64 23 30 36	m. 5968 9821 5521 3537 1781 6198 5117 3438 13815 8090 10228 14235 6122 6644 5878 4935 9571 7112	m. 41 42 38 32 33 50 40 64 61 48 52 77 28 42 40	m. 8355 10179 8092 6702 6050 11693 7338 2273 18115 11803 12491 16175 8673 8687 7705 7551 10861 9573	m. 24 30 30 30 32 48 48 58 48 54 36 31 39	m. 5962 6235 6237 4911 4596 10131 8023 5370 13680 8970 8632 11652 6568 6356 5672 6702 8107 7518	m. 26 38 38 25 28 36 40 56 42 40 58 28 32 42 35	m. 6502 7957 7183 4552 4148 8923 7168 5056 13620 9242 9301 11885 6526 6100 6071 6197 7864 7547	m. 23 39 28 28 26 36 34 45 38 46 19 27 32 28 30	m. 4763 4940 5910 3179 2936 6657 6181 4500 12125 8608 7915 11212 5701 5633 5202 6036 7011 6383

TABLE VIII.

MAXIMUM WIND VELOCITY AND TOTAL WIND MOVEMENT FOR 1892.

	J	ULY.	August.		SEP	TEMBER.	Oc	TOBER.	Nov	EMBER.	DEC	EMBER.	Y	EAR.
No.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm't.	Max. Vel.	Total Mov'm t.	Max. Vel.	Total Mov'm't.
1 4 12 43 45 71 82 177 104 106 146 201 207 228 229 251 255 M	m. 24 29 30 27 23 30 45 48 43 34 28 44 23 36 30 27 40	m. 4997 5076 5621 2695 2334 7467 5507 3365 10561 7117 6751 9582 4623 4923 4405 4726 5461 5601	m. 16 36 28 17 35 48 39 44 36 38 48 20 36 23 26 28	m. 3878 4911 5351 2750 2829 5898 4798 3390 10696 7427 7171 9177 4868 4889 4255 4516 5164	m. 23 28 30 27 28 35 33 56 49 36 48 24 36 41 35 36	m. 5171 5442 5762 3078 3397 7121 5754 3672 11897 7723 7176 9628 4776 5124 4956 4613 6300 5976	m. 24 30 28 26 20 32 42 50 43 31 36 42 23 29 28 30 34	m. 6340 6778 5805 3733 3850 7689 6068 4071 13757 8273 8683 11788 5243 5603 5162 4985 7826	m. 28 42 44 24 26 35 52 56 63 42 48 70 36 36 42 40	m. 6417 9508 6546 4763 4126 8005 6581 5231 14516 9049 10144 14157 6562 6227 6325 5933 8997 7776	m. 22 28 24 25 24 51 42 52 48 50 23 28 40 40 38	m. 5772 8101 5395 4616 4174 7928 6011 4522 13930 8958 9607 12920 5738 5818 5171 5016 8273	m. 42 60 45 32 33 50 48 64 66 48 52 77 38 42 46 52 49	m. 71056 88175 74129 48831 43897 95178 74755 49947 162760 105188 108894 147896 72660 73304 67597 66273 95056 85035

