A general abstract of meteorological observations made at Philadelphia, Pa., for 30½ years from July 1st, 1851, to December 31st, 1881, by James A. Kirkpatrick, A. M. Latitude 39° 57½′ N., longitude 75° 11¼′ W. from Greenwich. Barometer cistern 55½ feet above mean tide in the Delaware river.

Monthly averages for 30½ years.	Thermometer. Maximum. Degree.	Day.	Year.	Minimum. Degree.	Day.	Year.	Warmest day. Mean.	Day.	Year.	Coldest day. Mean.	Day.	Year.	Mean daily range.	Mean daily oscillation.	Means. 7 a. m.	2 p. m.	9 p. m.	Monthly.
							°			°			°	°	°	°	°	°
January	69	2	1876	−9	8	1866	60.67	4	1874	−1.00	9	1856	6.58	12.32	29.38	36.38	32.69	32.78
February	74	23	1874	−1	7, 8	1855, 1861	61.67	13	1880	+5.70	7	1855	6.96	13.71	30.30	39.02	34.56	34.63
March	78⅔	3	1861	+4	10	1856	66.00	3	1861	10.83	3	1868	6.24	14.63	36.41	46.32	40.80	41.18
April	88	24	1861	20	7	1857	74.30	29	1856	27.70	2	1857	6.03	16.26	46.79	58.04	50.69	51.84
May	86⅔	26	1859	35	7	1854	87.83	26	1880	40.00	3	1861	5.34	16.39	58.86	70.20	62.32	63.33
June	98	29, 29	1856, 1874	42	5	1859	90.50	5	1856	53.50	9	1867	4.55	16.23	69.62	79.59	72.39	73.86
July	102	9	1876	53	3, 2 & 3	1857, 1862	93.33	9	1876	59.70	3	1857	3.62	14.23	74.78	84.18	77.59	78.85
August	98	21, 13	1869, 1881	47	24	1856	89.67	21	1869	59.00	26	1856	3.49	13.85	72.12	81.61	75.30	76.34
September	102	7	1881	39	25	1856	90.67	7	1881	48.30	30	1860	4.43	14.34	64.29	74.90	68.10	69.10
October	90	4	1868	28	25	1856	82.33	1	1881	35.80	27	1859	5.45	14.56	52.54	63.33	56.43	57.43
November	80	1	1869	15	30	1875	72.30	9	1867	18.00	30	1875	5.73	12.90	42.16	50.32	45.42	45.97
December	71	2	1859	0	30	1880	62.80	2	1859	4.00	30	1880	6.38	12.13	32.81	39.33	35.62	35.92
Seasons.		m. d.			m. d.			m. d.			m. d.							
Winter	74	2 23	1874	−9	1 8	1866	62.80	12 2	1859	−1.00	1 9	1856	6.63	12.72	30.70	38.15	34.16	34.34
Spring	91⅔	5 26	1880	+4	3 10	1856	87.83	5 26	1880	+10.83	3 3	1868	5.87	15.72	47.39	58.18	51.27	52.28
Summer	102	7 9	1876	42	6 5	1859	93.33	7 9	1876	53.50	6 9	1867	3.89	14.45	72.20	81.84	75.11	76.38
Autumn	102	9 7	1881	15	11 30	1875	90.67	9 7	1881	18.00	11 30	1875	5.20	13.94	53.00	62.84	56.64	57.49
Means for 30½ years.	102	7 9, 9 7	1876, 1881	−9	1 8	1866	93.33	7 9	1876	−1.00	1 9	1856	5.40	14.23	50.88	60.30	54.34	55.17

Monthly averages for 30½ years.	Barometer reduced to 32° Fahrenheit. Maximum. Height.	Day.	Year.	Minimum. Height.	Day.	Year.	Mean daily pressure. Greatest. Height.	Day.	Year.	Least. Height.	Day.	Year.	Mean daily range.	Means. 7 a. m.	2 p. m.	9 p. m.	Monthly.
	Inch.			Inch.			Inch.			Inch.			Inch.	Inch.	Inch.	Inch.	Inch.
January	30.757	8	1866	28.911	23	1853	30.665	8	1866	29.078	6	1852	0.230	30.013	29.974	30.002	29.996
February	30.970	11	1867	28.984	4	1869	30.862	11	1867	29.227	16	1856	0.238	29.980	29.936	29.964	29.960
March	30.666	6	1873	29.003	30	1881	30.625	6	1873	29.098	30	1881	0.215	29.911	29.880	29.890	29.887
April	30.565	13	1874	28.820	23	1866	30.495	13	1874	28.959	21	1852	0.170	29.879	29.831	29.857	29.855
May	30.445	12	1874	28.778	8	1867	30.396	9	1879	29.013	8	1867	0.128	29.871	29.829	29.850	29.850
June	30.309	11	1867	29.182	11	1857	30.208	25	1873	29.262	11	1857	0.106	29.876	29.840	29.853	29.856
July	30.303	31	1869	29.443	19	1851	30.269	31	1869	29.012	21	1857	0.096	29.883	29.853	29.865	29.867
August	30.382	17	1880	29.356	20	1856	30.322	1	1869	29.388	20	1856	0.095	29.917	29.885	29.901	29.901
September	30.466	24	1867	29.281	18	1863	30.392	24	1867	29.403	16	1858	0.122	30.002	29.958	29.982	29.981
October	30.748	26	1879	29.012	26	1857	30.691	25	1879	29.059	26	1857	0.160	29.978	29.931	29.958	29.956
November	30.697	6	1880	28.822	18	1873	30.616	22	1880	29.032	22	1878	0.201	29.970	29.928	29.957	29.952
December	30.727	31	1874	28.648	10	1878	30.682	31	1874	28.923	10	1878	0.226	30.000	29.955	29.989	29.985
Seasons.		m. d.			m. d.			m. d.			m. d.						
Winter	30.970	2 11	1867	28.648	12 10	1878	30.862	2 11	1867	28.923	12 10	1878	0.230	29.997	29.957	29.984	29.979
Spring	30.666	3 6	1873	28.778	5 8	1867	30.625	3 6	1873	28.959	4 21	1852	0.171	29.887	29.839	29.866	29.864
Summer	30.382	8 17	1880	29.182	6 11	1857	30.322	8 1	1869	29.127	8 1	1864	0.099	29.893	29.861	29.874	29.876
Autumn	30.697	11 6	1880	28.822	11 18	1873	30.651	10 25	1879	29.032	11 22	1878	0.161	29.983	29.939	29.965	29.962
Means for 30½ years.	30.970	2 11	1867	28.648	12 10	1878	30.862	2 11	1867	28.923	12 10	1878	0.165	29.939	29.899	29.922	29.920

Monthly averages for 30½ years.	Relative humidity. Maximum.	Minimum.	Means. 7 a. m.	2 p. m.	9 p. m.	Monthly.	Force of vapor. Maximum.	Minimum.	Means. 7 a. m.	2 p. m.	9 p. m.	Monthly.	Clouds. Clear days. Sky ¼ or less covered.	Cloudy days. More than ¾ covered.	Means of sky covered. 7 a. m.	2 p. m.	9 p. m.	Monthly.	Rain or melted snow. No. of days it fell.	Amount.	Winds. Resultant.	No. of times in 1000.
																				Inches.	Direction from	
January	p. c. 100	p. c. 17	p. c. 76.1	p. c. 62.9	p. c. 72.7	p. c. 70.6	Inch. .528	Inch. .020	Inch. .135	Inch. .146	Inch. .145	Inch. .142	Days. 8.6	Days. 22.4	Tenths. 6.29	Tenths. 6.19	Tenths. 5.09	Tenths. 5.86	10.6	3.331	N. 63° 55′ W.	286
February	100	13	74.4	59.1	71.2	68.2	.549	.012	.136	.150	.155	.147	8.9	19.3	6.02	5.91	4.84	5.59	9.6	3.180	N. 66° 33′ W.	264
March	100	11	70.6	51.9	65.9	62.8	.574	.023	.162	.171	.179	.170	9.3	21.7	6.09	6.28	4.92	5.76	12.0	3.860	N. 61° 28′ W.	246
April	100	7	66.6	47.4	63.5	59.2	.689	.031	.225	.234	.246	.235	8.6	21.4	6.12	6.52	5.12	5.92	11.9	3.294	N. 62° 57′ W.	165
May	100	11	68.2	48.4	65.5	60.7	.829	.066	.351	.359	.377	.362	9.4	21.6	5.81	6.30	4.72	5.61	11.3	4.100	N. 89° 28′ W.	141
June	100	18	70.8	51.8	68.4	63.7	1.059	.142	.521	.525	.553	.533	8.4	21.6	5.89	6.23	4.42	5.52	11.2	4.281	S. 69° 28′ W.	204
July	97	26	70.9	51.7	68.1	63.6	.994	.255	.618	.606	.647	.624	7.9	23.1	5.73	6.21	4.23	5.39	10.9	4.122	S. 65° 49′ W.	193
August	100	22	74.2	54.8	70.5	66.5	1.024	.188	.593	.590	.621	.601	9.2	21.8	5.82	6.27	4.21	5.43	10.1	4.765	S. 72° 34′ W.	144
September	100	22	75.9	55.0	72.1	67.6	.991	.125	.478	.489	.515	.494	10.4	19.6	6.07	5.53	3.96	5.19	8.3	3.822	S. 88° 09′ W.	127
October	100	18	74.7	53.5	70.5	66.2	.742	.060	.315	.329	.333	.325	10.8	20.2	5.64	5.27	4.10	5.00	8.8	3.223	N. 78° 44′ W.	227
November	100	17	72.8	55.5	68.8	65.7	.832	.036	.214	.216	.224	.218	9.2	20.8	5.88	5.97	4.94	5.59	10.1	3.614	N. 73° 34′ W.	266
December	100	11	74.3	61.5	71.9	69.2	.551	.023	.147	.159	.158	.155	8.1	22.9	6.44	6.40	5.18	6.01	10.6	3.522	N. 67° 06′ W.	268
Seasons.													Quar	ter.								
Winter	100	11	74.9	61.1	71.9	69.3	.551	.012	.139	.150	.151	.147	25.8	64.5	6.26	6.15	5.03	5.81	30.7	10.036	N. 66° 55′ W.	275
Spring	100	7	68.5	49.2	65.0	60.9	.829	.023	.246	.255	.267	.256	27.2	64.8	6.01	6.36	4.92	5.76	35.2	11.954	N. 69° 36′ W.	178
Summer	100	18	71.7	52.7	68.9	64.5	1.059	.142	.577	.573	.607	.586	25.9	66.1	5.85	6.26	4.29	5.47	32.3	13.205	S. 68° 24′ W.	174
Autumn	100	17	74.5	54.7	70.4	66.5	.991	.036	.336	.345	.357	.346	30.4	66.6	5.85	5.59	4.34	5.26	27.1	10.658	N. 78° 15′ W.	206
Means for 30½ years.	100	7	72.5	54.4	69.0	65.3	1.059	.012	.325	.331	.346	.334	Ann 109	ual. 256	5.99	6.11	4.65	5.58	125	45.939	N. 77° 22′ W.	194