W. B. No. 658

Received May 31, 1918
Issued Oct. 1, 1918

U. S. DEPARTMENT OF AGRICULTURE

WEATHER BUREAU

CHARLES F. MARVIN, Chief

MONTHLY WEATHER REVIEW

SUPPLEMENT No. 11

STATISTICIANS
DEPARTMENT
OCT 15 1918
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AEROLOGY No.

FREE-AIR DATA AT DREXEL AEROLOGICAL STATION JULY, AUGUST, SEPTEMBER, OCTOBER, NOVEMBER, AND DECEMBER, 1917

BY

THE AEROLOGICAL DIVISION, WILLIS RAY GREGG, in Charge

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983
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no.11
1918

WASHINGTON
GOVERNMENT PRINTING OFFICE
1918

National Oceanic and Atmospheric Administration

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SUPPLEMENTS TO THE MONTHLY WEATHER REVIEW.

During the summer of 1913 the issue of the system of publications of the Department of Agriculture was changed and simplified so as to eliminate numerous independent series of Bureau bulletins. In accordance with this plan, among other changes, the series of quarto bulletins—lettered from A to Z—and the octavo bulletins—numbered from 1 to 44—formerly issued by the U. S. Weather Bureau have come to their close.

Contributions to meteorology such as would have formed bulletins are authorized to appear hereafter as Supplements of the MONTHLY WEATHER REVIEW. (Memorandum from the Office of the Assistant Secretary, May 18, 1914.)

These Supplements comprise those more voluminous studies which appear to form permanent contributions to the science of meteorology and of weather forecasting, as well as important communications relating to the other activities of the U. S. Weather Bureau. They appear at irregular intervals as occasion may demand, and contain approximately 100 pages of text, charts, and other illustrations. Subscribers to the MONTHLY WEATHER REVIEW receive the SUPPLEMENTS without extra charge. Copies may be procured at the prices indicated below by addressing the Superintendent of Documents, Government Printing Office, Washington, D. C.

SUPPLEMENTS PUBLISHED.

No. 1. Types of storms of the United States and their average movements. By E. H. Bowie and R. H. Weightman, Washington, 1914. 37 p. 114 ch. 4°. Price 25 cents. (W. B. No. 538.)

No. 2. I. Calendar of the leafing, etc., of the common trees of the eastern United States. By G. N. Lamb. 19 p. 4 figs. II. Phenological dates, etc., recorded by T. Mikesell at Wauseon, Ohio. By J. Warren Smith. 73 p. 2 figs. Washington, 1915. 4°. Price 25 cents. (W. B. No. 558.)

No. 3. (*Aerology No. 1.*) Sounding balloon ascensions at Fort Omaha, Nebr., May 8, 1915, etc. By W. R. Blair and others. 67 p. 23 figs. Washington, 1916. 4°. Price 25 cents. (W. B. No. 592.)

No. 4. Types of anticyclones of the United States and their average movements. By E. H. Bowie and R. H. Weightman. Washington, 1917. 25 p. 7 figs. 73 ch. 4°. Price 25 cents. (W. B. No. 600.)

No. 5. (*Aerology No. 2.*) Free-air data at Drexel Aerological Station: January, February, and March, 1916. By W. R. Blair and others. Washington, 1917. 59 p. 6 figs. 4°. Price 25 cents. (W. B. No. 603.)

No. 6. Relative humidities and vapor pressures over the United States, including a discussion of data from recording hair hygrometers for a period of about 5 years. By P. C. Day. Washington, 1917. 61 p. 7 figs. 34 charts. 4°. Price 25 cents. (W. B. No. 609.)

No. 7. (*Aerology No. 3.*) Free-air data at Drexel Aerological Station: April, May, and June, 1916. By W. R. Blair and others. Washington, 1917. 51 p. 4 figs. 4°. Price 25 cents. (W. B. No. 619.)

No. 8. (*Aerology No. 4.*) Free-air data at Drexel Aerological Station: July, August, September, October, November, and December, 1916. By W. R. Gregg and others. Washington, 1918. 111 p. 12 figs. 4°. Price 25 cents. (W. B. No. 642.)

No. 9. Periodical events and Natural Law as guides to agricultural research and practice. By A. D. Hopkins. Washington, 1918. 42 p. 22 figs. 4°. Price 25 cents. (W. B. No. 643.)

No. 10. (*Aerology No. 5.*) Free-air data at Drexel Aerological Station: January, February, March, April, May, and June, 1917. By W. R. Gregg and others. Washington, 1918. 101 p. 11 figs. 4°. Price 25 cents. (W. B. No. 651.)

No. 11. (*Aerology No. 6.*) Free-air data at Drexel Aerological Station: July, August, September, October, November, and December, 1917. By W. R. Gregg and others. Washington, 1918. —p. 11 figs. 4°. Price 25 cents. (W. B. No. 658.)

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FREE-AIR DATA AT DREXEL AEROLOGICAL STATION, JULY TO DECEMBER, 1917, INCLUSIVE,

By the AEROLOGICAL DIVISION, WILLIS RAY GREGG, Meteorologist, in Charge.

GENERAL STATEMENT.

During the six months July to December, 1917, inclusive, kite flights were made on all but 16 days, failures on those days being due in all cases to light winds. In all, 256 observations were obtained, and the average altitude reached was 2,991 meters. The number of flights and their mean altitudes for the different months are given in Table 1.

TABLE 1.—*Monthly distribution and mean altitudes attained in kite flights during the period July to December, 1917, inclusive.*

	July.	August.	September.	October.	November.	December.
Number of flights	40	37	45	47	44	43
Mean altitude, meters	3,268	2,350	3,252	2,956	3,023	3,015

SPECIAL NOTES ON KITE FLIGHTS.

By the official in charge and others at Drexel, with comments thereon.

July 9.—"At 9 a. m. a patch of thin 'cirrus' clouds was observed in a southerly direction from the kite reel house. At 9:15 a. m. there suddenly appeared a clear, blue streak, apparently a rift in these clouds, directly in line with the kite wire but evidently beyond it. This streak extended in a vertical line from 30° to 45° above the horizon and was about ¾° in width. At 9:16 a. m. it became less well defined, changed gradually into a zigzag path, and at 9:17 a. m. disappeared. At 9:18 a. m. the patch of clouds had also disappeared."—*B. J. S.*

A fuller description of this phenomenon has been published elsewhere.[1] It is believed to be due, as there pointed out, to the effect of the electrically charged kite wire on the surface tension of the water particles forming the cloud layer. The cloud was probably not cirrus, but low-lying "scud" in an air layer whose temperature and humidity were such that a very slight change in either, or the introduction of some external influence, was sufficient to produce evaporation. It is interesting to note that the relative humidity of this layer, 1,500 to 1,800 meters, was high, whereas very low humidity prevailed in the layer above it. During the descent, about 5 hours later, the lowest humidity observed in the entire flight was found between 1,500 and 1,800 meters.

November 8–9, series No. 8.—"At 3:04 p. m., while the kites were being reeled in, lightning struck the swivel by means of which the head kite is attached to the wire The entire amount of wire out, 3,535 meters, was vaporized, with the exception of that portion nearest the reel, about 20 to 30 meters, which was fused, and the parts to which were attached the 'splice' or galvanized-iron wires for secondary kites. These latter portions were uninjured. The wire on the kite reel itself was not affected, the mass of the latter evidently being large enough to prevent heating. The charge coming down the kite wire rendered it incandescent and made it appear slightly larger than 1 centimeter in diameter. At the reel a cannon-like report was heard, and melted pieces of the wire were scattered in every direction, liberally spraying the men on duty. None of the men was injured, although the one operating the kite reel received a slight shock. Those outside the reel house stated that the building had the appearance of being in flames. Considerable heat and a dazzling white glare accompanied the phenomenon. The vaporized wire left a rocket-like trail of yellowish brown smoke which remained visible for 15 minutes throughout the entire length of the line."—*H. W. B.*

This thunderstorm occurred during the approach of a moderate low from western Nebraska. The first thunder was heard in the west at 12:31 p. m., and the last in the northeast at 3:35 p. m. Rain fell from 12:57 to 1:37 p. m., and hail from 1:18 to 1:25 p. m. The surface pressure showed no effects as a result of this storm, but the temperature fell and the humidity rose rather abruptly at about 1 p. m.

The altitude of the base of the St. Cu. cloud layer was approximately 2,800 meters. Reference to the records of previous flights on the same day shows that in this layer and for some distance above and below it high humidity and a large temperature gradient had pervailed for some time before the storm itself appeared—conditions most favorable for thunderstorm development. All of the kites and the kite wire were in a region of relatively low humidity and very high electric potential, the latter for some time having exceeded the limit of the voltmeter. Hence the kite wire formed a ready path for the discharge. On one other occasion at Drexel,[2] and once at Mount Weather, Va.,[3] the kite wire has been struck and destroyed by lightning. In all three cases no one was injured, not even those who were touching the reel or wire at the time; neither was any damage done to the reel house or to the apparatus in it. The reel is well grounded by heavy copper wire which, together with the kite wire, forms a very effective "lightning conductor," and there is little danger of injury to observers inside the reel house. The danger would be great, however, to one who might at the time be out in the field, endeavoring to land one of the secondary kites. These should always be brought in close to the reel house under such conditions.

[1] Peculiar Streak in Line with Kite Wire, by Bertram J. Sherry, Monthly Weather Review, Vol. 45, pp. 269–270.

[2] MONTHLY WEATHER REVIEW SUPPLEMENT No. 10, pp. 5–6.

[3] Bulletin of the Mount Weather Observatory, Vol. 6, p. 247.

TABLE 2.—*Mean monthly temperatures at Drexel for July to December, 1917; July to December, 1915, 1916, and 1917; and comparison of latter with 5-year means at Mount Weather, Va.*

Altitude, sea level.	July.				August.				September.			
	Drexel.		Mount Weather.		Drexel.		Mount Weather.		Drexel.		Mount Weather.	
	1917	2-year mean.	5-year mean.	Departures.	1917	2-year mean.	5-year mean.	Departures.	1917	2-year mean.	5-year mean.	Departures.
meters.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.
396	[a] 26.6	27.7	.....	.....	[b] 21.1	22.8	.....	.....	[c] 18.4	19.0	.....	.....
500	26.0	27.0	[g] 22.8	+4.2	21.0	22.4	[g] 21.5	+0.9	18.2	18.4	[g] 19.0	−0.6
750	24.4	25.4	21.1	+4.3	19.7	21.0	19.9	+1.1	17.3	16.7	17.5	−0.8
1,000	22.5	23.4	19.3	+4.1	18.2	19.8	18.3	+1.5	16.3	15.3	16.1	−0.8
1,250	20.7	21.5	17.6	+3.9	16.9	18.5	16.8	+1.7	15.3	14.2	14.8	−0.6
1,500	19.1	19.7	15.9	+3.8	15.4	17.1	15.3	+1.8	14.3	13.1	13.5	−0.4
1,750	17.5	17.9	14.3	+3.6	14.0	15.6	13.9	+1.7	13.4	12.0	12.5	−0.5
2,000	15.8	16.0	12.7	+3.3	12.6	14.0	12.5	+1.5	12.1	10.5	11.4	−0.9
2,250	14.0	14.2	11.2	+3.0	11.2	12.4	11.2	+1.2	10.7	9.0	10.3	−1.3
2,500	12.2	12.4	9.7	+2.7	9.6	10.6	9.8	+0.8	9.4	7.6	9.0	−1.4
2,750	10.4	10.6	8.3	+2.3	8.2	8.9	8.4	+0.5	8.0	6.0	7.6	−1.6
3,000	8.7	8.7	6.8	+1.9	6.6	7.1	6.8	+0.3	6.6	4.6	6.2	−1.6
3,250	6.9	6.8	5.1	+1.7	5.1	5.4	5.2	+0.2	5.2	3.2	4.6	−1.4
3,500	5.2	5.0	3.5	+1.5	3.6	3.7	3.8	−0.1	4.0	1.9	3.1	−1.2
3,750	3.5	3.4	1.8	+1.6	2.0	2.0	2.3	−0.3	2.7	0.5	1.5	−1.0
4,000	1.7	1.7	0.1	+1.6	0.6	0.6	0.7	−0.1	1.3	− 1.2	−0.2	−1.0
4,250	−0.2	−0.2	−1.6	+1.4	−0.7	−0.9	−0.9	0.0	0.0	− 3.0	−1.9	−1.1
4,500	−1.9	−1.8	−3.2	+1.4	.....	−2.6	−2.7	+0.1	−1.3	− 4.8	−3.7	−1.1
4,750	−3.5	−3.5	−4.8	+1.3	.....	−4.5	−4.8	+0.3	−2.8	− 6.3	−5.8	−0.5
5,000	.....	.....	.....	.....	.....	.....	.....	.....	−4.0	− 7.5	−6.6	−0.9
5,250	.....	.....	.....	.....	.....	.....	.....	.....	−5.3	− 8.8	−7.2	−1.6
5,500	.....	.....	.....	.....	.....	.....	.....	.....	−6.5	−10.0	−8.1	−1.9
5,750	.....	.....	.....	.....	.....	.....	.....	.....	−7.8	−11.3	−8.9	−2.4

Altitude, sea level.	October.				November.				December.			
	Drexel.		Mount Weather.		Drexel.		Mount Weather.		Drexel.		Mount Weather.	
	1917	2-year mean.	5-year mean.	Departures.	1917	3-year mean.	5-year mean.	Departures.	1917	3-year mean.	5-year mean.	Departures.
meters.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.	° C.
396	[d] 8.4	10.2	.....	.....	[e] 7.5	6.2	.....	.....	[f] − 8.0	− 5.4	.....	.....
500	8.0	9.6	[g] 11.7	−2.1	7.5	6.1	[g] 5.1	+1.0	− 8.0	− 5.5	[g] − 0.3	−5.2
750	6.4	8.2	10.3	−2.1	8.1	5.9	3.9	+2.0	− 7.8	− 5.2	− 1.2	−4.0
1,000	5.0	7.0	9.0	−2.0	8.0	5.6	2.8	+2.8	− 6.4	− 4.4	− 1.9	−2.5
1,250	3.8	6.2	8.0	−1.8	7.4	5.2	1.7	+3.5	− 5.1	− 3.7	− 2.3	−1.4
1,500	2.6	5.4	7.1	−1.7	6.3	4.6	0.7	+3.9	− 4.0	− 3.8	− 2.6	−1.2
1,750	1.6	4.4	6.3	−1.9	5.1	3.7	− 0.2	+3.9	− 3.9	− 4.3	− 3.0	−1.3
2,000	0.6	3.4	5.5	−2.1	3.7	2.5	− 0.9	+3.4	− 4.0	− 4.9	− 3.7	−1.2
2,250	−0.6	2.2	4.6	−2.4	2.3	1.3	− 1.8	+3.1	− 4.6	− 5.8	− 4.6	−1.2
2,500	−1.7	1.0	3.5	−2.5	0.8	− 0.1	− 2.9	+3.0	− 5.7	− 6.9	− 5.6	−1.3
2,750	−2.8	−0.2	2.3	−2.5	− 0.6	− 1.5	− 4.2	+2.7	− 7.1	− 8.2	− 6.8	−1.4
3,000	−3.9	−1.6	1.0	−2.6	− 2.2	− 3.0	− 5.5	+2.5	− 8.5	− 9.4	− 8.1	−1.3
3,250	−4.8	−2.8	−0.4	−2.4	− 3.9	− 4.4	− 6.8	+2.4	− 9.9	−10.5	− 9.5	−1.0
3,500	−5.8	−4.2	−1.9	−2.3	− 5.5	− 5.9	− 8.3	+2.4	−11.3	−11.7	−10.9	−0.8
3,750	−6.6	−5.4	−3.4	−2.0	− 7.3	− 7.5	− 9.9	+2.2	−12.6	−12.8	−12.3	−0.5
4,000	−7.7	−6.4	−4.7	−1.9	− 9.1	− 8.8	−11.4	+2.6	−14.1	−14.1	−13.6	−0.5
4,250	−9.2	−7.8	−6.1	−1.7	−10.7	−10.0	−12.9	+2.9	−15.6	−15.6	−15.1	−0.5
4,500	−9.9	−8.6	−7.5	−1.1	−12.6	−11.5	−14.5	+3.0	−16.8	−16.9	−16.7	−0.2
4,750	.....	−9.9	−9.1	−0.8	−14.5	−13.0	−16.1	+3.1	−17.9	−17.9	−18.2	+0.3
5,000	.....	.....	.....	.....	.....	−14.3	−17.5	+3.2	−19.2	−19.3	−19.4	+0.1
5,250	.....	.....	.....	.....	.....	−15.4	−18.7	+3.3	.....	.....	.....	.....
5,500	.....	.....	.....	.....	.....	−16.5	−20.1	+3.6	.....	.....	.....	.....
5,750	.....	.....	.....	.....	.....	−17.6	−21.5	+3.9	.....	.....	.....	.....

[a] Actual 24-hour mean temperature, 24.6° C.
[b] Actual 24-hour mean temperature, 20.8° C.
[c] Actual 24-hour mean temperature, 18.1° C.
[d] Actual 24-hour mean temperature, 6.9° C.
[e] Actual 24-hour mean temperature, 6.4° C.
[f] Actual 24-hour mean temperature, −8.9° C.
[g] At surface, 526 meters above sea level.

FREE-AIR TEMPERATURES.

Table 2 contains mean monthly temperatures at different levels, as observed at Drexel during the period July to December, 1917, inclusive; also, 2-year means, 1916 and 1917, for July, August, September, and October, and 3-year means, 1915 to 1917, for November and December; the 5-year means, as observed at Mount Weather, Va.; and the differences between the Drexel and Mount Weather means. The figures in the first two columns for each month clearly indicate that more observations are needed at Drexel before reliable normals or standard mean values, can be determined. This is strikingly shown in the values for October, November, and December, during which months departures from normal temperatures at the surface for this part of the country were unusually large. (See data under "Missouri Valley," MONTHLY WEATHER REVIEW, Vol. *45*, pp. 524, 567, and 632.) The departures from normal temperatures in these months were respectively −3.7, +4.1, and −4.4 °C. The effect of these large departures on the two and three

year means in Table 2 is readily apparent; it tends to diminish, however, in the upper levels. In December, indeed, a reversal occurs at altitudes above 1,500 meters. This is of special interest in view of the fact that, although temperatures in the Missouri Valley were much below the normal, temperatures in the region west of the Rocky Mountains were abnormally high. The mean free air temperatures in Table 2 show a marked inversion from the surface to 2,000 meters above sea level, and the temperature did not return to the surface value until nearly 3,000 meters. In 1915 and 1916, on the other hand,[4] the inversion extended only to 1,250 meters, and the temperature had returned to the surface value at about 1,500 meters.

As compared with Mount Weather normals, little variation is noted in August, September, and at the higher altitudes in July and December. At low altitudes in July, and at all levels in November, temperatures are considerably higher at Drexel; at low altitudes in December, and at all levels in October, they are considerably lower.

DIURNAL SERIES OBSERVATIONS.

During the six months 11 series of observations of diurnal variations were made. The number of observations and the average altitudes reached in each series are shown in Table 3.

TABLE 3.—*Number of observations and average altitudes reached in diurnal series, July to December, 1917, inclusive.*

Date.	Number of flights.	Mean altitude attained.
1917.		*Meters.*
July 27–28	9	3,531
August 30–31	7	2,699
September 11–12	8	3,477
September 27–28	7	3,875
October 16–17	8	2,908
October 26–27	7	3,747
November 8–9	8	3,592
November 16–17	5	3,784
November 28–29	8	3,121
December 11–12	7	3,611
December 26–27	8	3,650

The duration of each series and the temperatures observed are shown in figures 1 to 11. Weather conditions, except pressure distribution, and all other observed data may be found in Tables 4 to 9.

PRESSURES AND WINDS DURING THE SERIES FLIGHTS.

The series of July 27–28 consisted of 9 excellent flights, all of which reached an altitude greater than 3,000 meters. It has the additional special interest and value of having been made in practically cloudless weather and during the approach of the hottest wave of the season. At its beginning low pressure (1,002 mb.) was central north of Montana and a ridge of relatively high pressure (about 1,020 mb.) extended from the upper Lakes southward to the Gulf States. The low pressure diminished somewhat (994 mb.), but the LOW itself remained practically stationary in position, the high pressure meanwhile moving southeastward to the southern Atlantic States. Winds at the surface, under the influence of the receding HIGH, veered from southeasterly to south-southwesterly; aloft they veered from south-southeasterly to west-southwesterly and later backed to south-southwesterly.

During the latter part of the series of August 30–31, winds of high velocity prevailed a short distance above the surface, and at higher levels the winds were relatively light. This condition makes kite flying difficult, as it is dangerous to use large kites in the strong winds at low altitudes and on the other hand small kites have insufficient lifting surface for the light winds at greater altitudes. It is a condition, moreover, that seems to be characteristic of southerly winds during the night. (See SUPPLEMENT No. 8, page 7, and SUPPLEMENT No. 10, page 8). Fuller discussion and an attempted explanation will be given in the three-year summary of Drexel free-air data. In the series under consideration a moderate LOW (1,008 mb.) moved from slightly north of North Dakota to eastern South Dakota, and high pressure from the upper Lakes eastward to New England, the HIGH increasing in pressure from 1,024 to 1,029 mb. Due to this pressure distribution surface winds were south-southwesterly and southerly; upper winds, southwesterly.

At the beginning of the series of September 11–12, high pressure (1,030 mb.) was central over Illinois and low pressure (1,002 mb.) north of Montana. The HIGH diminished slightly in intensity and moved eastward to the middle Atlantic States. The LOW meanwhile, with undiminished energy, moved eastward until the morning of September 12, after which it moved southeastward to eastern North Dakota and greatly decreased in intensity. Winds at the surface were southerly; aloft, southwesterly.

The series of September 27–28 is of special interest in that it was made during the occurrence of a severe tropical cyclone in the Gulf of Mexico. This storm[5] first appeared on the 22d south of Haiti, whence it moved northwestward, reaching on the 28th a position just south of Mississippi and Alabama where a pressure as low as 964 mb. was observed. During the series and especially during the latter part of it, when the storm reached its greatest intensity, winds in the upper levels had a strong northerly component due, it is believed, to this storm. This seems to indicate that the influence of such disturbances is of far greater extent at considerable altitudes than at the surface. To what height this influence reaches is uncertain, but in this case it was still apparent at about 5,000 meters, although the storm itself was approximately 1,500 kilometers distant. Until early in the morning of the 28th surface winds were southwesterly, under the influence of a LOW (994 mb.) north of Montana and relatively high pressure (1,024 mb.) over northern Texas. Both diminished in intensity and during the last flight of the series the pressure gradient was small and the surface winds light and variable.

[4] MONTHLY WEATHER REVIEW, SUPPLEMENT No. 8 (Aerology No. 4) p. 6.

[5] For detailed descriptions see MONTHLY WEATHER REVIEW, Vol. 45, pp. 457–459, 506–508 and 613.

At the beginning of the series of October 16–17, high pressure 1,023 mb.) was central over southwestern Wisconsin and low pressure (1,003 mb.) over northwestern Wyoming, with a secondary depression (1,008 mb.) over Oklahoma. The HIGH moved eastward to eastern Ontario and slightly increased in intensity (1,030 mb.). The low pressure developed into a depression of great vigor and moved eastward, during the series, to eastern Nebraska. Surface winds early in the series were easterly, under the influence of the secondary LOW, veering to southerly and south-southwesterly with the approach of the western LOW. Aloft they were southerly, veering to southwesterly.

When the series of October 26–27 was begun a well-developed LOW (993 mb.) was central over northern Illinois. This diminished in energy (1,000 mb.) and moved northward to western Ontario. In the meantime relatively high pressure (1,025 mb.) moved rapidly east-southeastward from Washington to the Ohio Valley and was followed by a LOW (1,000 mb.) which, at the end of the series, was central over Colorado and Wyoming. Under the influence of the first LOW, in its course northward, winds, both surface and aloft, backed from northwesterly to westerly. With the approach and passing of the HIGH, during the latter part of the series, these winds backed still farther to west-southwesterly.

Throughout the series of November 8–9, an extensive HIGH (about 1,030 mb.) with no well-defined center, covered the eastern half of the country. A trough of relatively low pressure (about 1,018 mb.) extended from Montana southward to New Mexico. During the 9th this became most active in western Nebraska and moved eastward, causing at Drexel increased cloudiness and a thunderstorm in which the kite wire was struck by lightning. This storm is more fully described on page 5. Under the influence of the eastern high pressure and of the low pressure west of the station, surface winds were south-southeasterly; those aloft, southerly and south-southwesterly.

The series of November 16–17 consisted of 5 excellent flights, with a break, however, from 10 p. m. of the 16th to 8 a. m. of the 17th, owing to threatening weather conditions. At the beginning of this series a HIGH (1,029 mb.) was central over Arkansas and a trough of relatively low pressure (1,020 mb.) extended from Montana southward to New Mexico. The HIGH diminished somewhat in energy (1,025 mb.) and moved northeastward to Tennessee; the low pressure deepened and by the morning of the 17th was central over eastern Nebraska (1,015 mb.). Winds, both surface and aloft, were southerly for the most part. A marked rise in humidity at the higher levels accompanied the approach of the low pressure area.

During the series of November 28–29 an area of low pressure (998 mb.) moved from north of Montana eastward to western Ontario and diminished somewhat in intensity. Under the influence of this eastward movement, winds at the surface veered from south-southeasterly to south-southwesterly; those aloft, from south-southwesterly to westerly.

At the beginning of the series of December 11–12 high pressure was central over the middle Atlantic States (1,040 mb.) and north of Montana (1,032 mb.); and low pressure (999 mb.) over British Columbia, a strong pressure gradient prevailing between the latter two. The eastern HIGH diminished slightly in intensity (1,036 mb.) and passed northeastward to Nova Scotia. The northwestern HIGH increased in extent (1,042 mb.) and near the close of the series was central over the Dakotas. The LOW meanwhile moved southeastward to Colorado, thence eastward to Missouri. By this time it had decreased greatly in energy (1,021 mb.) but there was still a strong pressure gradient between it and the northwestern high. Surface winds at Drexel were southerly under the influence of the LOW and the eastern HIGH, variable and light as the latter moved northeastward, and northerly to north-northeasterly with the near approach of the northwestern high and low pressure areas. For about four hours between these two conditions surface winds were too light for kite flying. Aloft, the winds were westerly throughout the series, veering with altitude when surface winds were southerly and backing when the latter changed to northerly. This is of special interest in that it provides additional evidence that wind changes occur considerably later at great altitudes than at the earth's surface.

Abnormally high pressure prevailed over the entire country during the series of December 26–27, the principal centers on the morning of the 26th being north of Montana (1,042 mb.) and north of the Upper Lakes (1,042 mb.). There was a region of relatively low pressure (about 1,015 mb.) between them. The eastern HIGH moved eastward to Nova Scotia, the northwestern HIGH, southeastward to North Dakota, the latter increasing in energy to 1,050 mb. With the movement of these HIGHS and the relatively low pressure between them, surface winds veered late in the series from southerly to north-northwesterly; those aloft, from southwesterly to northwesterly.

Complete data for the six months are given in Tables 4 to 9.

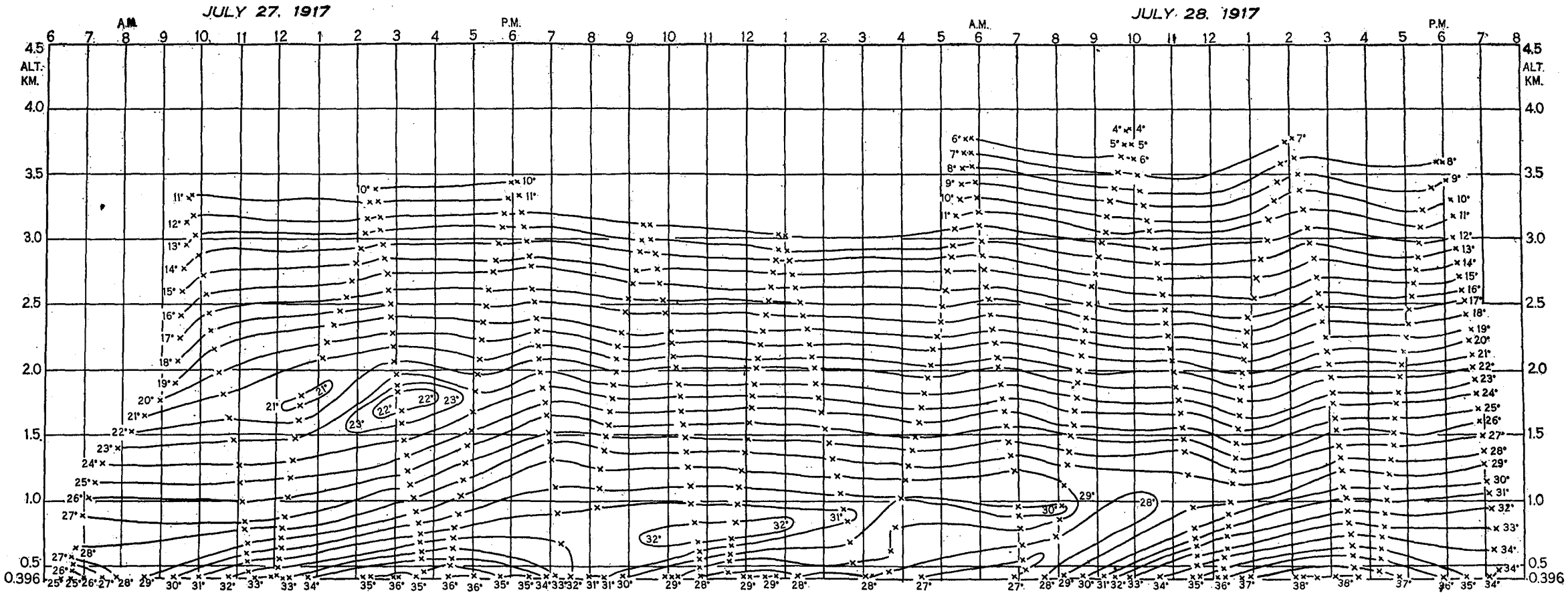

FIG. 1.—Free-air temperatures, °C., above Drexel Aerological Station; observed July 27-28, 1917.

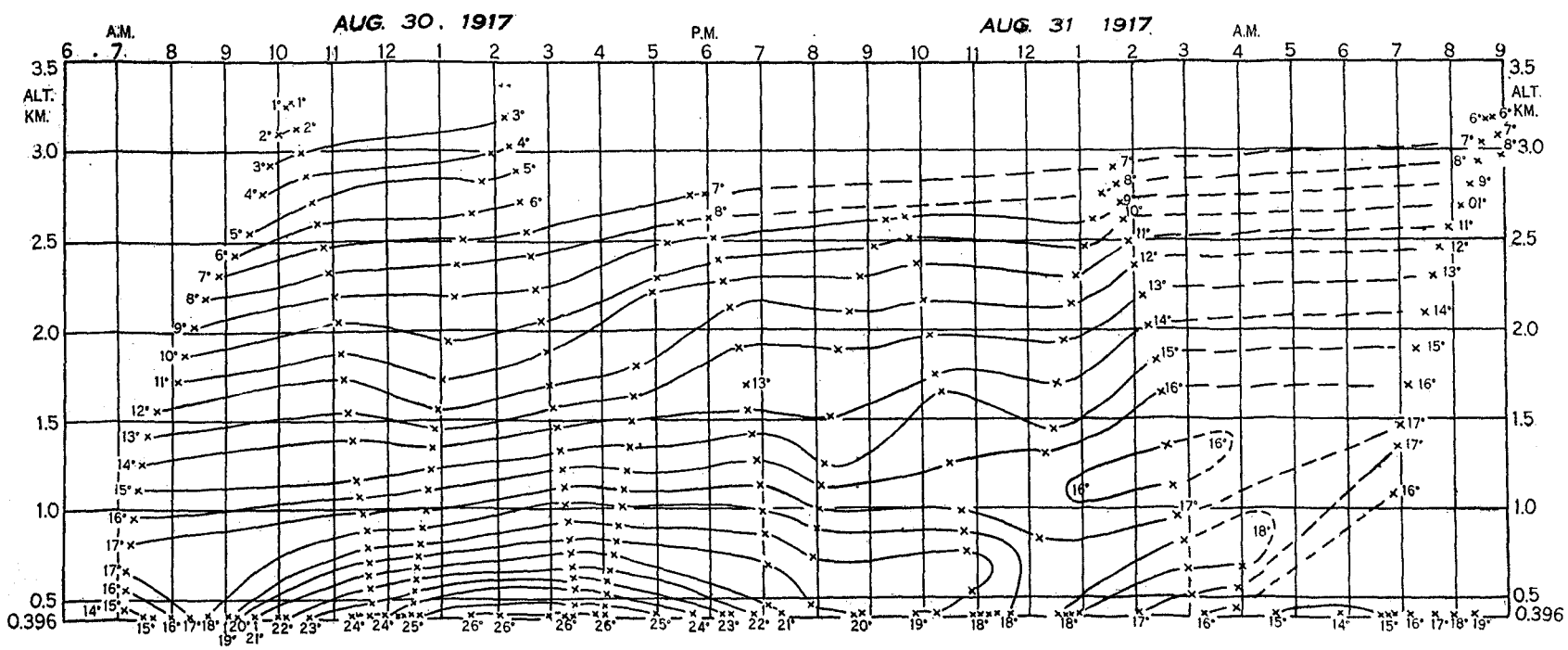

FIG. 2.—Free-air temperatures, °C., above Drexel Aerological Station; observed August 30-31, 1917.

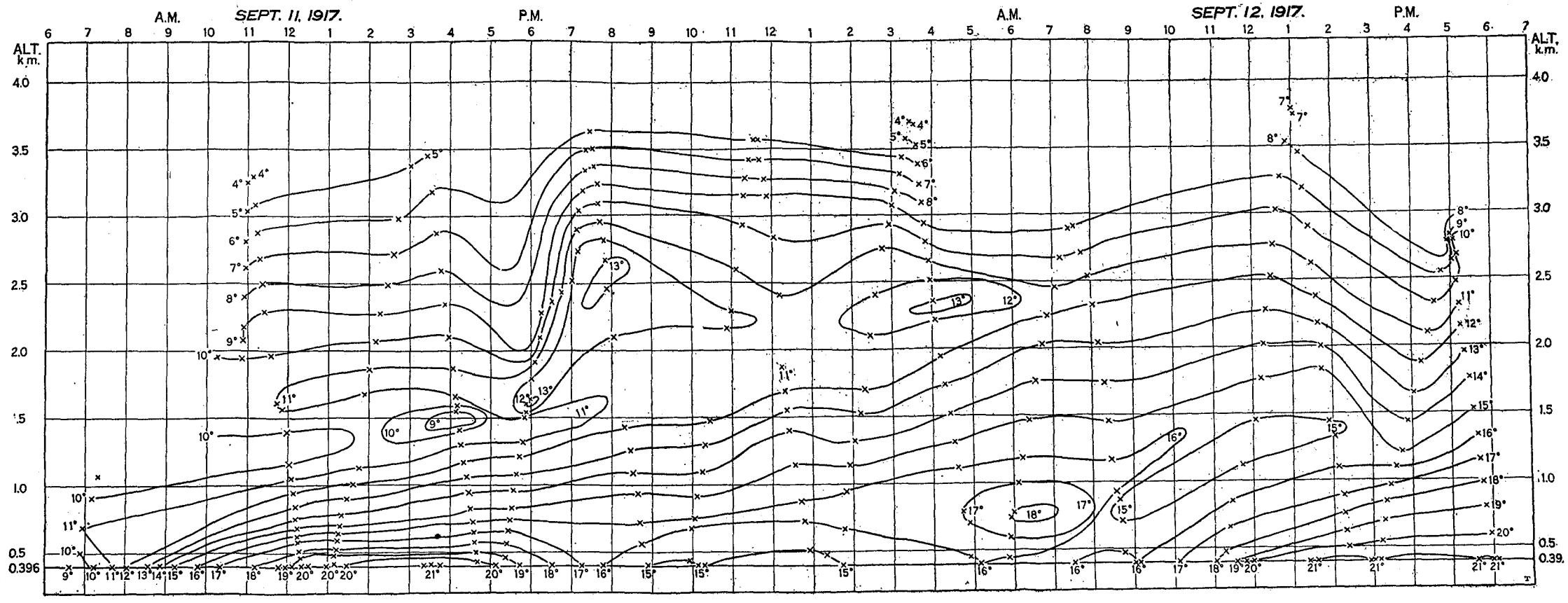

FIG. 3.—Free-air temperatures, °C., above Drexel Aerological Station; observed September 11–12, 1917.

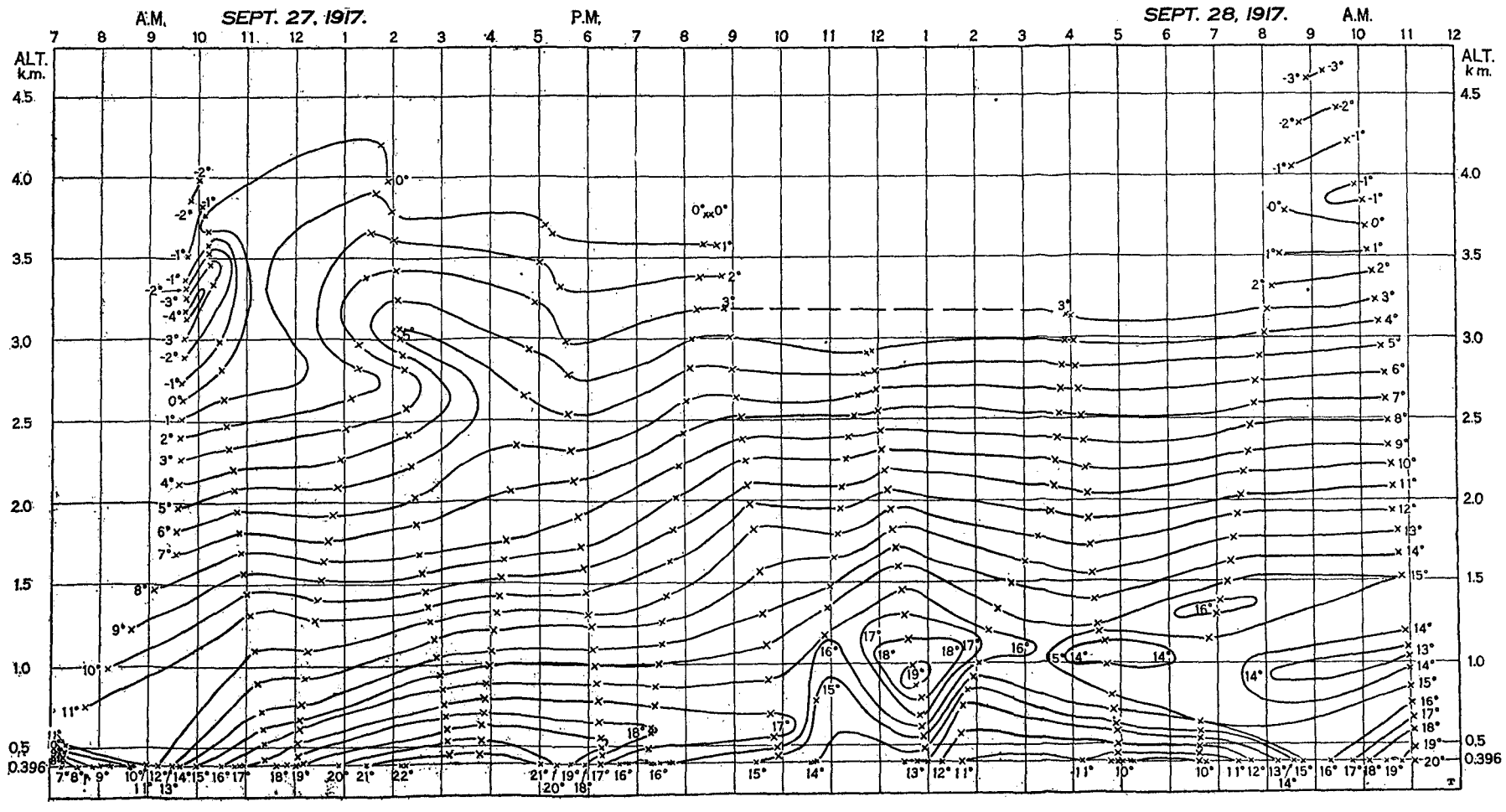

FIG. 4.—Free-air temperatures, °C., above Drexel Aerological Station; observed September 27–28, 1917.

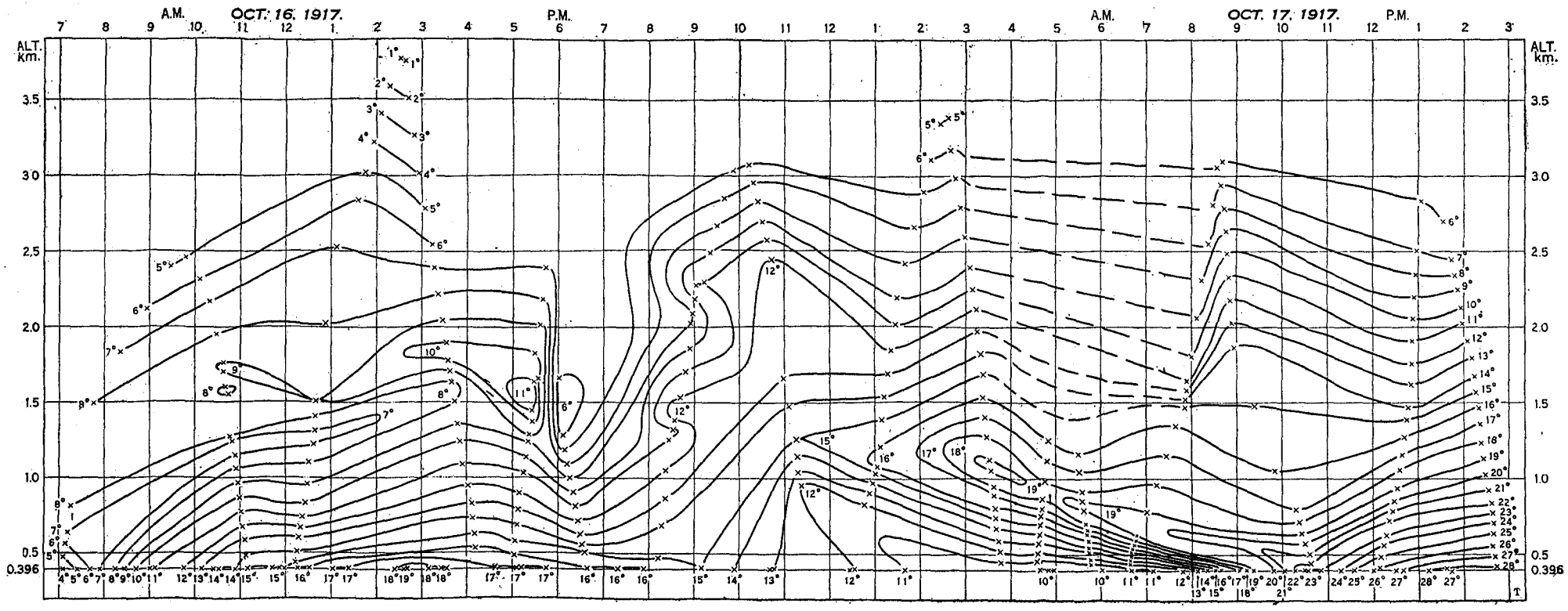

FIG. 5.—Free-air temperatures, °C., above Drexel Aerological Station; observed October 16–17, 1917.

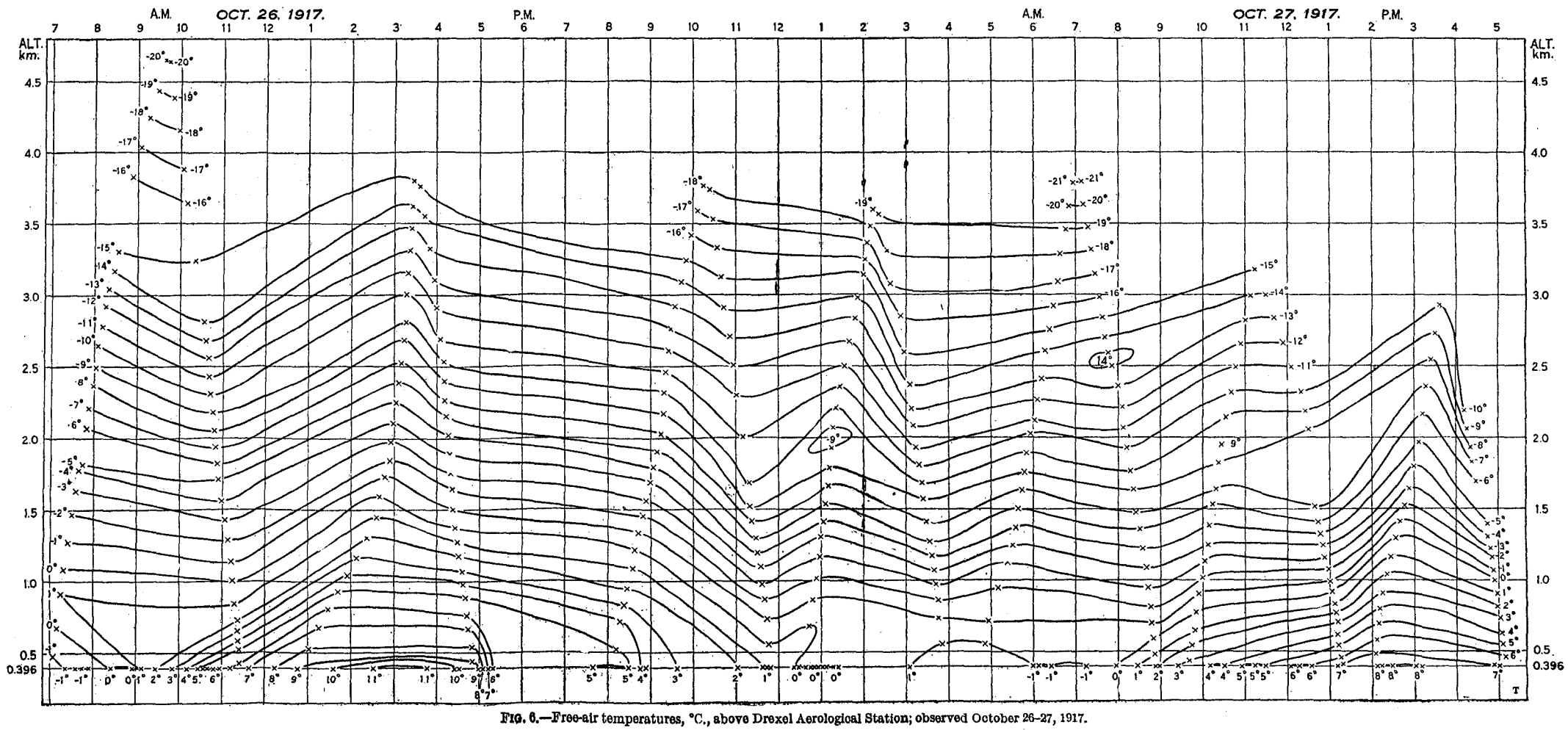

FIG. 6.—Free-air temperatures, °C., above Drexel Aerological Station; observed October 26–27, 1917.

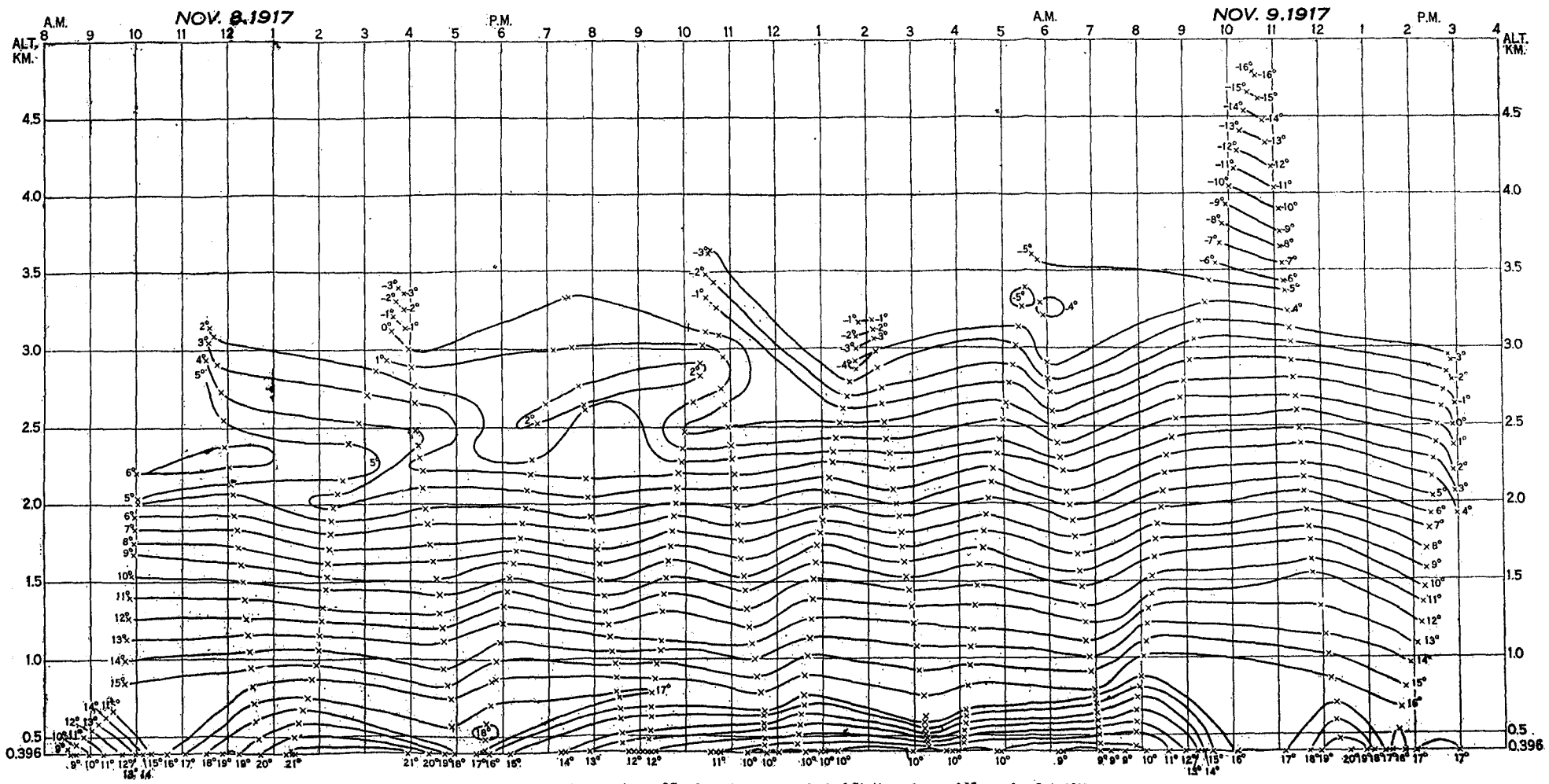

FIG. 7.—Free-air temperatures, °C., above Drexel Aerological Station; observed November 8–9, 1917.

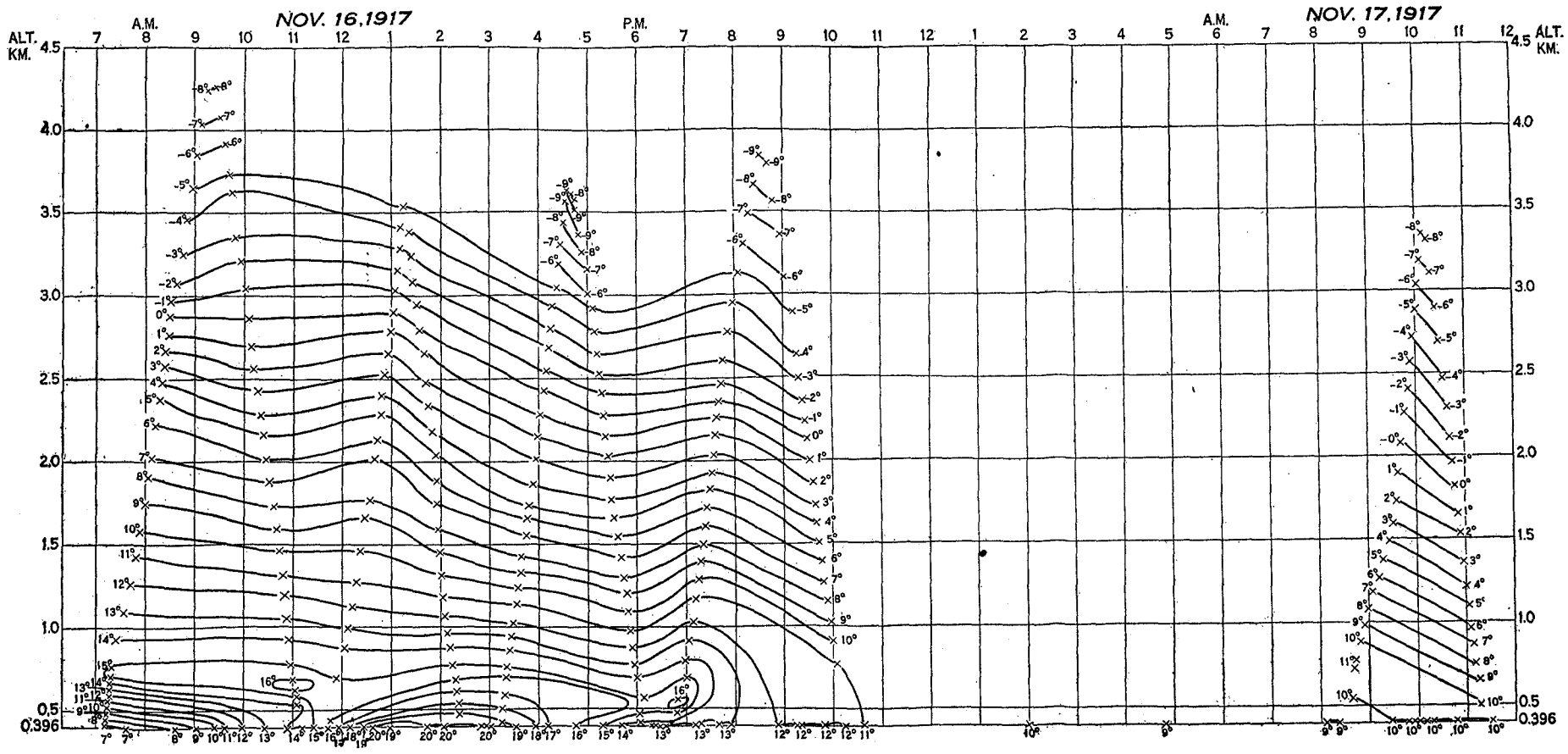

FIG. 8.—Free-air temperatures, °C., above Drexel Aerological Station; observed November 16–17, 1917.

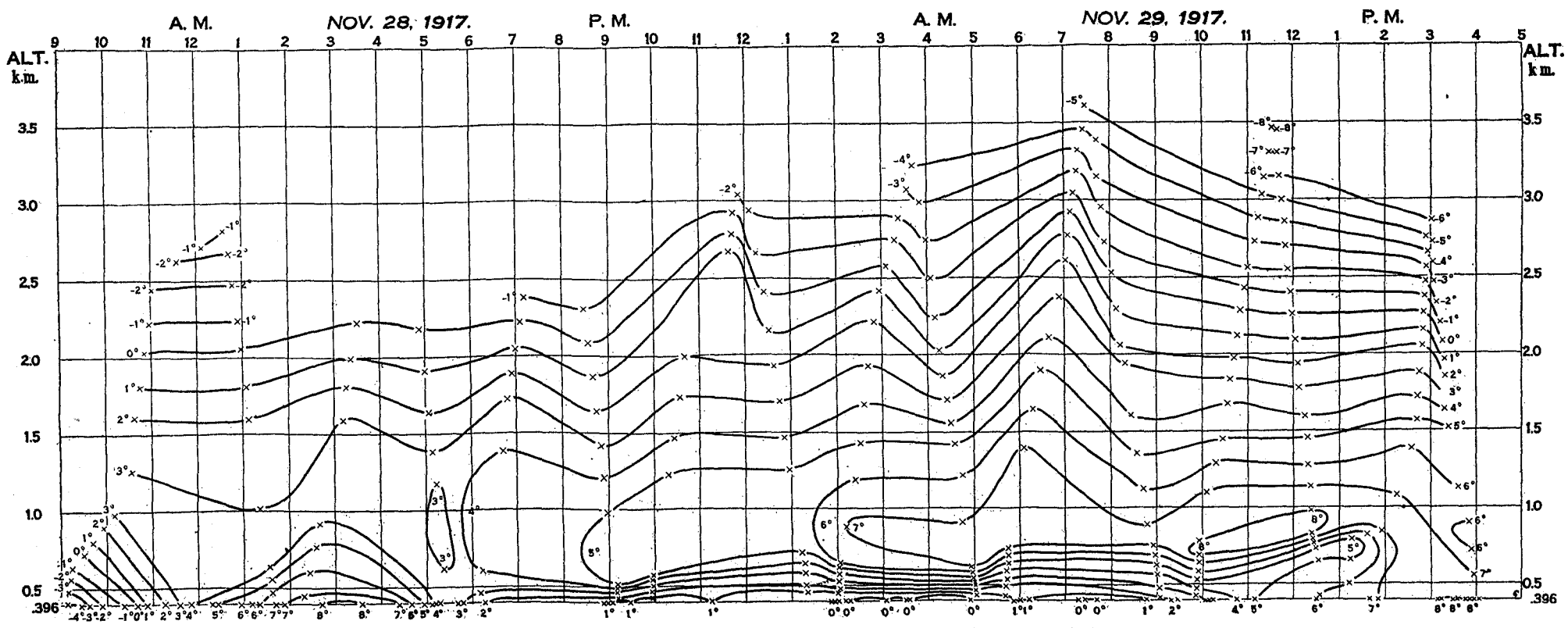

FIG. 9.—Free-air temperatures, °C., above Drexel Aerological Station; observed November 28–29, 1917.

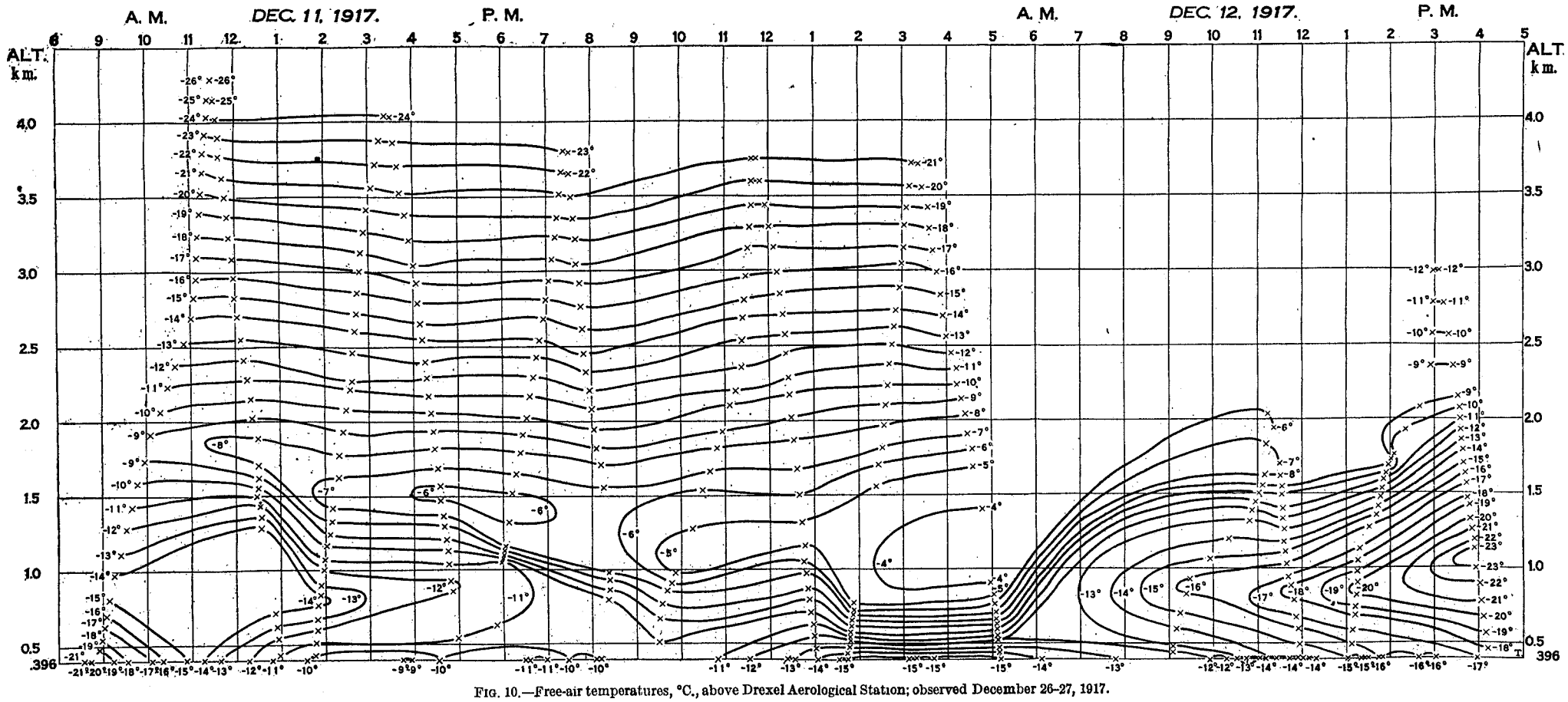

FIG. 10.—Free-air temperatures, °C., above Drexel Aerological Station; observed December 26-27, 1917.

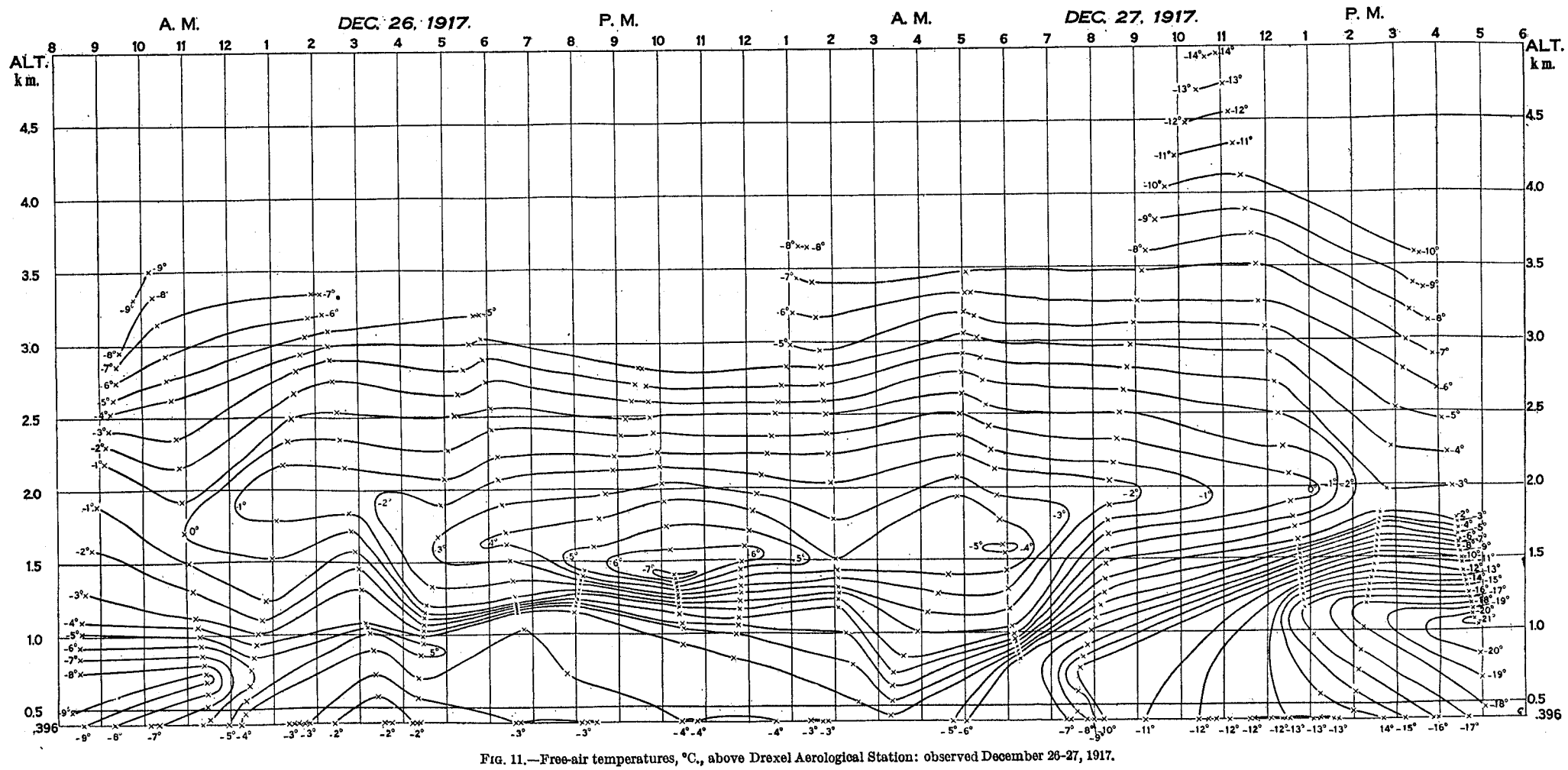

FIG. 11.—Free-air temperatures, °C., above Drexel Aerological Station: observed December 26-27, 1917.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917.*

July 1, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\,m}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁸ ergs.*	*volts.*	
7:39	972.4	18.9	68	wnw.	3.6	396	972.4	18.9	.....	68	14.85	wnw.	3.6	388	.....	4/10 Ci.St., wsw.; 5/10 A.St., wsw.
						500	960.5	18.5	.....	65	14.48	nw.	6.9	490	0	
						750	913.2	17.6	.....	58	11.68	nw.	14.7	735	0	
7:52	972.5	19.1	66	wnw.	4.0	885	918.6	17.1	0.37	54	10.53	nnw.	18.2	868	0	
						1,000	906.1	16.5	.....	54	10.14	nnw.	18.0	980	0	
						1,250	880.0	15.2	.....	54	9.33	nnw.	17.5	1,225	0	
8:02	972.6	19.5	66	wnw.	4.0	1,261	879.1	15.1	0.53	54	9.27	nnw.	17.4	1,236	0	4/10 Ci.St., wsw.; 3/10 A.St., wsw.
						1,500	854.5	15.0	.....	43	7.33	nw.	17.1	1,470	370	
8:15	972.6	19.7	65	wnw.	4.0	1,680	836.6	14.9	0.05	35	5.93	nw.	16.8	1,647	640	
						1,750	830.0	14.7	.....	36	6.02	nw.	17.0	1,715	690	
						2,000	805.0	12.7	.....	37	5.44	nw.	17.6	1,960	890	
						2,250	781.2	11.0	.....	39	5.12	wnw.	18.2	2,205	1,050	
						2,500	758.1	9.3	.....	41	4.81	wnw.	18.9	2,450	1,380	
						2,750	736.0	7.6	.....	43	4.49	w.	19.5	2,694	1,620	
8:54	972.6	20.7	59	nw.	4.0	2,833	728.8	7.0	0.69	44	4.41	w.	19.7	2,776	1,700	4/10 Ci.St., wsw.; 1/10 A.St., wsw.
						3,000	714.2	6.1	.....	39	3.67	w.	18.9	2,939	1,840	
						3,250	693.2	4.8	.....	32	2.75	w.	17.8	3,184	2,060	
						3,500	672.2	3.5	.....	25	1.96	w.	16.7	3,429	2,250	
						3,750	652.0	2.2	.....	19	1.36	w.	15.5	3,673	2,420	
9:43	973.1	22.8	56	nw.	3.6	3,914	638.8	1.3	0.52	14	0.94	w.	14.8	3,833	.....	
						3,750	652.0	2.2	.....	15	1.07	w.	15.0	3,673	2,370	Few Ci.St., wsw.
						3,500	672.2	3.5	.....	17	1.33	w.	15.2	3,429	2,110	
						3,250	693.3	4.8	.....	19	1.63	wnw.	15.4	3,184	1,840	
						3,000	714.4	6.1	.....	20	1.88	wnw.	15.7	2,939	1,570	
						2,750	736.5	7.4	.....	22	2.27	nw.	15.9	2,694	1,290	
						2,500	759.0	8.7	.....	24	2.70	nw.	16.2	2,450	1,000	
10:20	973.3	24.0	48	nnw.	4.0	2,452	763.9	8.9	0.52	24	2.74	nw.	16.2	2,403	950	
						2,250	782.2	10.0	.....	31	3.81	nw.	15.9	2,205	720	
						2,000	806.1	11.3	.....	40	5.36	nnw.	15.6	1,960	420	
						1,750	831.0	12.6	.....	49	7.15	nnw.	15.3	1,715	130	
10:40	973.3	24.5	43	nnw.	4.5	1,671	838.9	13.0	0.92	52	7.79	nnw.	15.1	1,638	40	
						1,500	855.6	14.6	.....	52	8.64	nnw.	14.5	1,470	0	
						1,250	881.0	16.9	.....	51	9.82	nnw.	13.6	1,225	0	
						1,000	907.2	18.1	.....	50	10.38	nnw.	12.7	980	0	
11:03	973.3	24.8	40	nnw.	5.8	874	921.2	20.3	0.98	50	11.91	nnw.	12.2	857	0	Few Ci.St., wsw.
						750	914.0	21.4	.....	47	11.98	nnw.	10.5	735	0	
						500	961.3	24.0	.....	42	12.53	nnw.	6.9	490	0	
11:10	973.3	25.0	40	nnw.	5.4	396	973.3	25.0	.....	40	12.67	nnw.	5.4	388	.....	

July 2, 1917.

P. M.																
12:41	972.2	24.3	38	nnw.	3.6	396	972.2	24.3	.....	38	11.55	nnw.	3.6	388	.....	1/10 Cu., nw.
						500	958.9	23.1	.....	37	10.46	nnw.	4.9	490	0	
1:45	971.7	24.5	35	wnw.	4.9	714	936.7	20.5	1.19	35	8.44	nw.	7.5	700	0	
						750	932.5	20.1	.....	36	8.47	nw.	7.5	735	0	
						1,000	905.6	17.7	.....	41	8.30	nw.	7.7	980	40	
						1,250	879.1	15.3	.....	47	8.17	nw.	7.9	1,225	120	Few Cu., nw.
						1,500	853.2	12.9	.....	53	7.89	nw.	8.0	1,470	130	
4:15	970.8	24.8	34	nw.	5.4	1,607	842.6	11.9	0.96	55	7.66	nw.	8.1	1,575	88	
						1,750	828.0	10.8	.....	54	6.99	nw.	10.2	1,715	20	
						2,000	803.5	8.9	.....	53	6.04	nw.	13.9	1,960	530	
						2,250	779.3	7.1	.....	52	5.28	nw.	17.5	2,205	1,210	
4:35	970.7	25.0	34	nnw.	3.6	2,283	776.5	6.8	0.75	52	5.14	nw.	18.0	2,237	1,300	
						2,500	756.2	6.0	.....	42	3.92	nw.	21.3	2,450	1,890	
4.43	970.7	24.7	32	nnw.	5.8	2,650	742.2	5.4	0.26	35	3.14	nw.	27.1	2,597	.....	
						2,500	756.2	5.6	.....	39	3.55	nw.	21.7	2,450	1,560	
						2,250	779.3	5.8	.....	45	4.15	nw.	12.8	2,205	1,260	
5:01	970.6	24.4	32	nnw.	4.5	2,226	782.0	6.0	0.95	46	4.30	nw.	11.9	2,181	1,230	
						2,000	803.5	8.1	.....	48	5.18	nw.	10.9	1,960	960	
						1,750	828.0	10.5	.....	50	6.35	nw.	9.9	1,715	660	
5:18	970.6	24.3	33	nw.	4.0	1,560	847.2	12.3	0.98	51	7.30	nw.	9.1	1,529	220	
						1,500	853.2	12.9	.....	50	7.44	nw.	9.1	1,470	160	
						1,250	879.1	15.3	.....	46	7.99	nw.	9.2	1,225	0	
						1,000	905.4	17.8	.....	42	8.56	nnw.	9.2	980	0	
5:39	970.6	24.2	33	nnw.	3.1	752	932.8	20.2	1.12	38	9.00	nnw.	9.3	737	0	
						500	960.2	23.0	.....	37	10.40	nnw.	4.9	490	0	
5:45	970.6	24.2	36	nnw.	3.1	396	970.6	24.2	.....	36	10.87	nnw.	3.1	388	.....	Cloudless.

July 3, 1917.

P. M.																
6:17	968.8	23.8	41	ese.	4.0	396	968.8	23.8	.....	41	12.09	ese.	4.0	388	.....	Few Ci.St., nnw.; few A.Cu., nw.
						500	957.2	22.6	.....	40	10.97	ese.	5.1	490	0	
6:45	968.7	23.1	42	ese.	4.0	714	933.8	20.2	1.13	39	9.24	ese.	7.4	700	0	
						750	929.8	19.9	.....	40	9.30	ese.	7.2	735	0	
						1,000	903.2	18.1	.....	44	9.14	ese.	5.8	980	0	1/10 Ci., nnw.; 2/10 Ci.St., nnw.
						1,250	877.3	16.3	.....	48	8.89	se.	4.4	1,225	.....	
8:20	968.7	19.6	53	ese.	3.1	1,471	854.5	14.7	0.72	52	8.70	se.	3.2	1,442	.....	
						1,250	877.3	16.3	.....	49	9.08	se.	5.6	1,225	.....	
						1,000	903.2	18.0	.....	45	9.29	ese.	8.3	980	0	
8:53	968.9	19.8	51	ese....	4.0	811	923.5	19.4	0.94	42	9.46	ese.	10.4	795	0	
						750	929.8	20.0	.....	42	9.82	ese.	8.8	735	0	
8:57	968.9	19.8	50	ese....	4.0	546	952.2	21.9	−1.40	41	10.77	ese.	3.5	535	0	
						500	957.2	21.2	.....	44	11.12	ese.	3.7	490	0	
8:58	968.9	19.8	50	ese....	4.0	396	968.9	19.8	.....	50	11.55	ese.	4.0	388	.....	1/10 Ci., nnw.; 2/10 Ci.St., nnw.

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TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 4, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
7:25	968.0	18.0	71	sse.	2.2	396	968.0	18.0	.....	71	14.65	sse.	2.2	388	.....	3/10 A.Ci., wsw.; 1/10 St.Cu.' wsw.
						500	956.2	19.8	.....	64	14.78	sse.	3.2	490	0	
7:27	968.0	18.1	71	sse.	5.4	592	946.3	21.4	−1.74	53	13.51	s.	4.0	580	0	
						750	929.2	21.1	.....	50	12.51	s.	9.8	735	0	
7:33	968.1	18.5	71	sse.	6.3	798	924.1	20.9	0.24	48	11.87	s.	11.6	782	0	
						1,000	902.5	19.8	.....	46	10.63	s.	12.0	980	310	
						1,250	876.6	18.4	.....	44	9.31	s..	12.6	1,225	690	
						1,500	851.2	17.0	.....	42	8.14	sw.	13.1	1,470	1,070	
8:00	968.2	19.1	71	sse.	6.3	1,707	831.2	15.8	0.67	40	7.18	sw.	13.6	1,673	1,390	
						1,750	826.8	15.5	.....	40	7.04	sw.	13.6	1,715	1,450	
						2,000	802.9	13.6	.....	43	6.70	sw.	13.5	1,960	1,840	
						2,250	779.8	11.6	.....	45	6.15	sw.	13.4	2,205	2,160	
						2,500	756.8	9.7	.....	47	5.65	sw.	13.3	2,450	2,420	
						2,750	733.5	7.8	.....	50	5.29	sw.	13.2	2,694	2,600	
						3,000	712.3	5.9	.....	52	4.83	sw.	13.0	2,939	2,740	
8:44	968.2	21.4	64	sse.	5.4	3,101	703.6	5.1	0.77	53	4.66	sw.	13.0	3,038	2,800	1/10 Ci.St., w.; 1/10 A.Cu., wsw.
						3,250	691.0	4.0	.....	56	4.55	sw.	13.6	3,184	2,930	
						3,500	670.0	2.0	.....	61	4.31	sw.	14.6	3,429	3,150	
						3,750	649.6	0.1	.....	66	4.06	sw.	15.6	3,673	.....	
						4,000	629.2	−1.8	.....	71	3.73	sw.	16.6	3,918	.....	Few Ci.St., w.
9:52	967.9	23.2	59	sse.	5.4	4,048	625.5	− 2.2	0.79	72	3.66	sw.	16.8	3,965	.....	
						4,000	629.2	− 1.8	.....	71	3.73	sw.	16.7	3,918	.....	
						3,750	649.6	0.2	.....	67	4.15	sw.	16.2	3,673	.....	
						3,500	670.0	2.3	.....	63	4.54	sw.	15.8	3,429	3,180	
						3,250	691.0	4.3	.....	58	4.82	sw.	15.3	3,184	2,820	
						3,000	712.3	6.3	.....	54	5.16	sw.	14.8	2,939	2,540	
10:30	967.8	24.4	57	s.	6.3	2,772	732.9	8.2	0.75	50	5.44	sw.	14.4	2,716	2,300	
						2,750	733.5	8.4	.....	50	5.51	sw.	14.4	2,694	2,270	
						2,500	756.7	10.3	.....	46	5.76	sw.	14.2	2,450	1,960	
						2,250	779.7	12.1	.....	42	5.93	sw.	14.0	2,205	1,650	
						2,000	802.8	14.0	.....	39	6.23	sw.	13.9	1,960	1,330	
10:52	967.6	25.0	58	sse.	4.9	1,765	825.4	15.8	0.52	35	6.28	sw.	13.7	1,730	1,040	
						1,750	826.8	15.9	.....	35	6.32	sw.	13.6	1,715	1,010	
						1,500	851.2	17.2	.....	42	8.24	sw.	12.4	1,470	530	
						1,250	876.5	18.5	.....	49	10.44	s.	11.1	1,225	40	
						1,000	902.3	19.8	.....	56	12.94	s.	9.9	980	0	
						750	929.0	21.1	.....	63	15.77	s.	8.7	735	0	
11:16	967.5	24.8	58	sse.	5.4	736	930.5	21.2	1.06	63	15.86	s.	8.6	722	0	
						500	955.7	23.7	.....	60	17.59	sse.	6.0	490	0	
11:23	967.4	24.8	59	sse.	4.9	396	967.4	24.8	.....	59	18.47	sse.	4.9	388	.....	Few Ci.St., w.

July 5, 1917 (No. 1).

A. M.																
6:56	963.8	19.6	79	s.	7.2	396	963.8	19.6	.....	79	18.02	s.	7.2	388	.....	6/10 A.Cu., wsw.; 3/10 A. St., wsw.; thunder in nw.
						500	952.4	19.0	.....	81	17.80	s.	11.8	490	2,900	
						750	925.0	17.6	.....	86	17.31	s.	23.0	735	9,860	
7:06	963.7	19.7	79	s.	7.2	827	916.6	17.2	0.56	88	17.27	s.	26.4	811	12,000	
						1,000	898.0	20.5	.....	75	17.98	s.	29.4	980	42,860	
7:11	963.6	19.8	78	s.	6.7	1,016	896.4	20.9	−1.96	74	18.29	s	29.7	996	45,720	
						1,250	871.8	19.3	.....	73	16.34	s.	28.2	1,225	44,650	
						1,500	847.5	18.6	.....	73	15.64	s.	26.6	1,470	38,290	
						1,750	822.2	15.9	.....	72	13.01	s.	25.0	1,715	31,930	
						2,000	798.4	14.2	.....	71	11.49	s.	23.3	1,960	25,540	
7:36	963.2	20.0	78	s.	8.5	2,022	796.8	14.1	0.60	71	11.42	s.	23.2	1,982	25,000	3/10 A.St., wsw.; 7/10 St.Cu., sw.
						2,000	798.4	14.2	.....	71	11.49	s.	23.3	1,960	.....	Light rain from 7:36 to 7:52 a. m.
						1,750	822.2	15.4	.....	73	12.78	s.	24.4	1,715	.....	
						1,500	847.5	16.7	.....	74	14.07	s.	25.4	1,470	.....	
						1,250	871.8	18.0	.....	76	15.69	s.	26.5	1,225	.....	
8:03	962.8	20.2	78	s.	8.9	1,035	893.9	19.1	−0.30	77	17.02	s.	27.4	1,015	(*)	
						1,000	897.5	19.0	.....	77	16.92	s.	26.2	980	.....	
						750	923.6	18.2	.....	79	16.51	s.	17.7	735	25,120	
8:24	962.7	20.4	76	s.	8.9	736	925.6	18.2	0.65	79	16.51	s.	17.2	722	22,060	
						500	950.7	19.7	.....	78	17.90	s.	10.5	490	13,290	
8:37	962.6	20.4	77	s.	7.6	396	962.6	20.4	.....	77	18.46	s.	7.6	388	.....	2/10 A.St., wsw.; 8/10 St.Cu., sw; thunder in nw.

July 5, 1917 (No. 2).

P. M.																
12:20	962.7	23.6	77	sse.	4.5	396	962.7	23.6	.....	77	21.66	sse.	4.5	388	.....	10/10 St.Cu., sw.
						500	951.0	23.0	.....	75	21.08	sse.	7.8	490	0	
						750	924.7	22.0	.....	71	18.77	sse.	13.0	735	0	
12:30	962.6	24.2	74	sse.	4.9	807	918.2	21.1	0.61	68	17.02	sse.	17.8	791	0	
						1,000	897.5	19.7	.....	74	16.98	sse.	17.8	980	0	
						1,250	871.8	17.8	.....	82	16.71	s.	17.8	1,225	0	
						1,500	846.8	15.9	.....	90	16.26	ssw.	17.8	1,470	170	
12:53	962.5	24.8	70	s.	6.3	1,708	826.7	14.4	0.74	97	15.91	sw.	17.8	1,674	330	
						1,750	822.2	14.2	.....	97	15.70	sw.	17.9	1,715	380	St.Cu. base about 1,650 m.
						2,000	798.4	13.0	.....	97	14.53	sw.	18.4	1,960	650	
						2,250	775.5	11.9	.....	97	13.51	wsw.	18.9	2,205	920	
						2,500	752.6	10.7	.....	97	12.48	wsw.	19.4	2,450	.....	
1:19	962.4	24.6	73	s.	4.0	2,550	748.3	10.5	0.47	97	12.32	wsw.	19.5	2,499	.....	
						2,500	752.6	10.7	.....	97	12.48	wsw.	19.5	2,450	.....	
						2,250	775.6	11.9	.....	94	13.09	sw.	19.2	2,205	700	
						2,000	798.6	13.1	.....	92	13.87	sw.	19.0	1,960	240	St.Cu. base about 1,800 m.
						1,750	822.6	14.3	.....	90	14.67	ssw.	18.8	1,715	110	

* More than 50,000 volts.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 5, 1917 (No. 2)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
1:54	962.1	24.4	74	s.	3.1	1,531	844.2	15.4	1.09	88	15.40	ssw.	18.6	1,501	0	Light rain began 1:47 p. m. and continued at end of flight.
						1,500	847.1	15.7		87	15.52	ssw.	18.5	1,470	0	
						1,250	872.3	18.5		77	16.40	ssw.	17.7	1,225	0	
						1,000	898.0	21.2		67	16.87	s.	16.8	980	0	
2:20	962.0	24.8	71	s.	3.6	818	916.9	23.2	0.95	59	16.78	s.	16.2	802	0	
						750	924.5	23.8		59	17.40	s.	15.8	735	0	
2:22	962.0	24.8	70	s.	3.6	608	939.0	25.2	−0.14	60	19.24	s.	15.1	596	0	
						500	950.5	25.0		65	20.59	s.	9.2	490	0	
2:24	962.0	24.9	70	s.	3.6	396	962.0	24.9		70	22.05	s.	3.6	388		10/10 St.Cu., sw.

July 7, 1917.

A. M.																
7:42	967.8	22.8	78	se.	4.5	396	967.8	22.8		78	21.65	se.	4.5	388		5/10 Ci.St., w.; 5/10 St.Cu., w.
						500	956.6	23.6		54	15.73	se.	6.8	490	0	
7:58	967.6	23.2	74	se.	5.4	673	937.4	24.8	−0.72	40	12.52	sse.	10.5	660	0	
						750	929.2	24.4		40	12.23	sse.	10.2	735	0	6/10 Ci.St., w.; 4/10 St.Cu., w
						1,000	902.1	23.4		41	11.80	se.	9.0	980	0	
9:30	967.4	25.9	64	se.	4.0	1,249	877.9	21.7	0.54	41	10.64	se.	7.8	1,224	0	7/10 Ci.St., w.; 1/10 St.Cu., w.
						1,500	853.2	20.4		43	10.31	sse.	8.2	1,470	0	
						1,750	828.7	19.0		46	10.11	s.	8.8	1,715	230	
						2,000	805.2	17.6		48	9.66	ssw.	9.2	1,960	640	
10:46	967.8	27.6	62	sse.	4.5	2,080	797.8	17.2	0.54	49	9.61	sw.	9.4	2,038	760	7/10 Ci.St., w.
						2,250	782.0	15.9		50	9.04	sw.	9.5	2,205	1,250	
						2,500	759.8	13.9		52	8.26	wsw.	9.7	2,450	1,520	
						2,750	738.0	11.9		54	7.52	w.	9.8	2,694	1,780	
						3,000	716.5	9.9		56	6.83	w.	10.0	2,939	2,040	
						3,250	695.4	7.9		58	6.18	wnw.	10.2	3,184	2,230	
P. M.																
12:13	968.1	29.1	53	s.	5.8	3,294	691.7	7.6	0.79	58	6.06	wnw.	10.2	3,227	2,260	5/10 Ci. w.
						3,500	674.7	6.4		56	5.38	wnw.	11.4	3,429	2,420	
						3,750	654.7	4.9		54	4.68	wnw.	12.8	3,673	2,620	
						4,000	635.3	3.4		52	4.06	wnw.	14.3	3,918	2,810	
						4,250	616.2	2.0		50	3.53	wnw.	15.7	4,162	2,970	
						4,500	597.3	0.5		47	2.98	wnw.	17.2	4,407		
						4,750	578.8	−1.0		45	2.53	wnw.	18.6	4,651		
12:36	968.0	29.9	52	s.	3.6	4,957	561.6	−2.2	0.63	43	2.19	wnw.	19.8	4,854		
						4,750	578.8	−0.8		45	2.57	wnw.	18.8	4,651		
						4,500	597.3	0.9		47	3.06	wnw.	17.7	4,407		
						4,250	616.2	2.5		49	3.58	wnw.	16.5	4,162	2,603	
						4,000	635.3	4.2		51	4.21	wnw.	15.3	3,918	2,389	
						3,750	654.7	5.9		53	4.92	wnw.	14.2	3,673	2,175	
						3,500	674.7	7.6		56	5.85	wnw.	13.0	3,429	1,960	
1:10	967.9	30.4	50	s.	4.5	3,347	687.4	8.6	0.77	57	6.37	wnw.	12.3	3,279	1,820	3/10 Ci.St., w.
						3,250	695.4	9.3		56	6.56	nnw.	12.2	3,184	1,730	
						3,000	716.5	11.3		54	7.23	w.	11.9	2,939	1,490	
						2,750	738.0	13.2		53	8.04	w.	11.6	2,694	1,260	
						2,500	760.0	15.1		51	8.75	wsw.	11.3	2,450	1,030	
						2,250	782.7	17.1		49	9.56	sw.	11.0	2,205	830	
						2,000	806.1	19.0		47	10.33	ssw.	10.7	1,960	540	
1:36	967.9	30.4	50	s.	5.8	1,976	808.2	19.2	0.63	47	10.46	ssw.	10.7	1,937	520	
						1,750	829.4	20.6		48	11.65	ssw.	9.9	1,715	400	
						1,500	853.4	22.2		49	13.12	ssw.	9.1	1,470	148	
						1,250	878.3	23.8		50	14.74	s.	8.3	1,225	0	
						1,000	903.2	25.3		52	16.78	s.	7.4	980	0	
2:01	967.9	30.2	50	s.	4.0	780	927.0	26.7	0.96	53	18.57	s.	6.7	765	0	Few Ci., w.
						750	930.0	27.0		53	18.90	s.	6.6	735	0	
						500	956.8	29.4		50	20.50	s.	5.4	490	0	
2:03	967.9	30.4	49	s.	4.5	396	967.9	30.4		49	21.28	s.	4.5	388		

July 8, 1917.

A. M.																
7:25	968.2	22.9	80	s.	4.5	396	968.2	22.9		80	22.34	s.	4.5	388		6/10 Ci.St., nw.; 4/10 St.Cu., wsw.
						500	957.0	24.1		68	20.41	ssw.	5.2	490	0	
7:51	968.2	23.2	81	ssw.	4.5	651	940.6	25.9	−1.18	50	16.71	sw.	6.2	638	0	
						750	930.0	25.4		51	16.55	wsw.	6.8	735	0	
						1,000	903.8	24.0		53	15.82	w.	8.2	980	0	
						1,250	878.1	22.6		55	15.09	wnw.	9.6	1,225	0	
						1,500	853.3	21.2		57	14.35	nw.	11.0	1,470	0	
8:15	968.3	24.9	75	sw.	3.6	1,735	830.9	19.9	0.55	59	13.71	nnw.	12.4	1,700	0	
						1,750	829.0	19.8		59	13.63	nnw.	12.4	1,715	0	
						2,000	805.8	18.0		61	12.59	nw.	13.0	1,960	0	
						2,250	782.8	16.3		62	11.49	nw.	13.7	2,205	350	
						2,500	760.0	14.5		64	10.57	wnw.	14.1	2,450	910	
8:36	968.4	25.6	73	w.	3.1	2,633	748.0	13.6	0.70	65	10.13	w.	14.4	2,580	1,200	
						2,750	737.8	12.8		66	9.75	w.	14.2	2,694	1,290	1/10 Ci.St., nw.; 3/10 St.Cu., wsw.
						3,000	716.2	11.1		69	9.11	w.	13.7	2,939	1,480	
						3,250	694.8	9.3		72	8.44	wsw.	13.2	3,184	1,740	Thunder faintly heard to nnw. at 9:00 a. m.
						3,500	674.2	7.6		75	7.83	wsw.	12.7	3,429	1,970	
9:15	968.8	26.8	70	wnw.	2.2	3,515	673.3	7.4	0.70	75	7.72	wsw.	12.6	3,443	2,200	
						3,750	654.4	5.7		79	7.24	wsw.	13.5	3,673	2,930	9:27 a well developed thunder storm to the nnw.
						4,000	635.0	3.8		83	6.66	wsw.	14.4	3,918	3,700	
						4,250	615.5	1.9		89	6.24	wsw.	15.3	4,162		
9:31	968.9	26.8	65	nnw.	3.6	4,335	608.9	1.3	0.72	90	6.04	wsw.	15.6	4,245		
						4,250	615.5	1.9		88	6.17	wsw.	15.6	4,162		
						4,000	635.0	3.7		80	6.37	wsw.	15.7	3,918	4,140	
						3,750	654.1	5.4		73	6.55	wsw.	15.8	3,673	4,040	
9:48	969.1	25.4	70	n.	3.1	3,648	661.8	6.1	0.67	70	6.59	wsw.	15.8	3,573	3,000	
						3,500	673.9	7.1		73	7.37	wsw.	15.8	3,429	2,860	
						3,250	694.5	8.8		79	8.95	wsw.	15.9	3,184	2,620	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 8, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						3,000	716.0	10.4		85	10.72	w.	15.9	2,939	2,380	
						2,750	737.8	12.1		90	12.71	w.	16.0	2,694	2,140	
10:00	969.2	25.1	73	n.	3.6	2,790	740.3	12.3	0.77	91	13.02	w.	16.0	2,665	2,110	
						2,500	760.0	14.0		84	13.42	wnw.	15.2	2,450	2,030	
						2,250	782.8	15.9		76	13.73	nw.	14.3	2,205	2,090	
						2,000	805.7	17.8		68	13.86	nnw.	13.4	1,960	2,150	Last thunder 10:06, —. nne.
10:18	969.1	25.1	78	nne.	4.9	1,832	821.6	19.1	0.40	62	13.71	n.	12.8	1,896	2,200	
						1,750	829.8	19.7		63	14.46	nne.	13.1	1,715	2,170	2/10 Ci.St., nw.; 4/10 A.St. wsw.; 4/10 St.Cu., wsw.
						1,500	854.0	20.5		64	15.44	nne.	13.6	1,470	2,120	
10:35	969.0	25.0	78	ne.	5.4	1,301	873.6	21.2	−0.66	65	16.37	ne.	14.0	1,275	1,890	
						1,250	879.1	20.9		69	17.06	ne.	14.0	1,225	1,810	
10:37	969.0	25.1	78	ne.	5.4	1,118	892.1	20.0	0.61	80	18.70	ne.	14.0	1,096	1,700	
						1,000	904.5	20.7		83	20.27	ene.	13.4	980	1,510	
10:44	969.0	25.3	75	ne.	4.9	889	916.0	21.4	0.83	85	21.67	ene.	12.8	872	1,340	
						750	930.7	22.6		81	22.22	ene.	10.0	735	980	
						500	957.6	24.6		78	24.13	ene.	7.7	490	290	
10:55	968.9	25.5	76	ene.	6.3	396	968.9	25.5		76	24.81	ene.	6.3	388		4/10 A.St., wsw.; 4/10 St.Cu., wsw.

July 9, 1917.

A. M.																
7:22	972.4	22.1	77	ne.	4.0	396	972.4	22.1		77	20.48	ne.	4.0	388		Few St. Cu., nw.
						500	960.8	20.2		76	18.00	ne.	6.3	490	0	
7:29	972.4	22.2	74	ne.	3.6	534	957.1	19.6	1.81	76	17.34	ne.	7.0	524	0	
8:16	972.6	22.8	72	ne.	3.1	608	949.1	22.9	−4.46	43	12.01	ne.	5.1	596	0	
						750	933.7	22.0		49	12.96	ne.	6.2	735	20	
						1,000	906.8	20.5		59	14.23	nne.	8.2	980	200	
						1,250	880.8	18.9		69	15.07	nne.	10.1	1,225	380	
						1,500	855.5	17.3		80	15.80	nne.	12.1	1,470	560	
						1,750	832.0	15.8		90	16.16	ne.	14.0	1,715	740	
9:10	972.7	24.1	63	nne.	3.6	1,799	807.0	15.5	0.62	92	16.20	n.	14.4	1,744	780	3/10 Ci., nw.
						2,000	808.0	17.5		32	6.40	n.	15.1	1,960	920	
9:45	972.9	25.1	57	nne.	4.0	2,039	804.2	17.9	−1.00	21	4.31	n.	15.2	1,998	950	
						2,250	785.2	16.1		26	4.76	n.	14.5	2,205	950	
						2,500	761.7	14.0		32	5.11	n.	13.6	2,450	1,150	
						2,750	739.5	11.9		37	5.15	n.	12.8	2,694	1,350	
10:16	973.1	25.3	54	n.	3.6	2,862	729.7	10.9	0.85	40	5.22	n.	12.4	2,804	1,400	Few Ci., sw.
						3,000	717.6	10.0		41	5.03	n.	12.3	2,939	1,610	
						3,250	696.9	8.5		42	4.66	n.	12.2	3,184	1,840	
						3,500	676.4	7.0		43	4.31	n.	12.0	3,429	1,980	
						3,750	656.5	5.4		44	3.95	n.	11.9	3,673	1,990	Cloudless.
						4,000	636.8	4.0		45	3.66	n.	11.8	3,918		
P. M.																
12:11	972.9	27.3	49	n.	2.7	4,134	626.3	3.1	0.60	46	3.51	n.	11.7	4,049		
						4,000	636.8	3.9		48	3.88	n.	11.6	3,918		
						3,750	656.6	5.3		50	4.46	n.	11.5	3,673	2,010	
						3,500	676.6	6.7		53	5.20	n.	11.4	3,429	1,650	
						3,250	697.2	8.2		56	6.09	n.	11.2	3,184	1,410	
12:50	972.7	27.8	46	n.	2.7	3,161	704.8	8.7	0.90	57	6.41	n,	11.2	3,097	1,350	
						3,000	718.4	10.2		50	6.22	n.	11.3	2,939	1,250	
						2,750	740.2	12.4		38	5.47	n.	11.6	2,694	1,000	
						2,500	762.5	14.7		27	4.52	n.	11.8	2,450	710	
1:20	972.5	27.8	41	nne.	2.7	2,474	764.8	14.9	0.88	26	4.40	n.	11.8	2,424	680	
						2,250	784.8	16.9		22	4.24	n.	12.0	2,205	500	
						2,000	807.8	19.1		17	3.76	nne.	12.3	1,960	300	
1:35	972.4	27.8	43	ne.	2.2	1,863	821.3	20.3	−0.05	15	3.57	ne.	12.4	1,826	180	Cloudless.
						1,750	831.5	20.2		16	3.79	ne.	10.6	1,715	90	
						1,500	856.4	20.1		19	4.47	ne.	6.8	1,470	0	
1:40	972.4	27.9	45	nne.	2.2	1,280	878.8	20.0	0.92	22	5.14	ne.	3.4	1,255	0	
						1,250	881.8	20.2		23	5.45	ne.	3.4	1,225	0	
						1,000	907.0	22.6		30	8.23	ne.	3.2	980	0	
						750	933.8	24.9		37	11.66	ne.	3.0	735	0	
						500	960.8	27.1		44	15.78	nne.	2.8	490	0	
1:51	972.3	28.1	47	nne.	2.7	396	972.3	28.1		47	17.87	nne.	2.7	388		

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P. M.																
7:14	964.0	28.6	55	s.	4.0	396	964.0	28.6		55	21.53	s.	4.0	388		Cloudless.
						500	952.6	28.0		53	20.04	s.	7.1	490	0	
7:20	964.0	28.2	55	s.	3.6	742	927.0	26.7	0.55	49	17.17	s.	14.2	728	0	
						750	926.1	26.7		49	17.17	s.	14.2	735	0	
						1,000	900.1	25.1		49	15.62	ssw.	14.3	980	0	
						1,250	874.9	23.6		49	14.27	ssw.	14.4	1,225	30	
						1,500	850.0	22.0		49	12.96	sw.	14.5	1,470	110	
7:36	963.8	28.2	55	s.	4.0	1,699	830.7	20.8	0.62	49	12.04	sw.	14.6	1,665	260	
						1,750	826.0	20.3		50	11.91	sw.	14.8	1,715	320	
						2,000	802.4	18.0		57	11.76	sw.	15.8	1,960	600	
						2,250	779.0	15.7		64	11.42	wsw.	16.7	2,205	880	
						2,500	756.1	13.2		71	10.77	wsw.	17.7	2,450	1,140	Few A.St., w.
7:52	963.6	27.5	58	s.	4.5	2,630	744.7	12.0	0.95	74	10.38	wsw.	18.2	2,577	1,250	
						2,750	733.8	12.9		56	8.33	wsw.	16.8	2,694	1,340	
7:57	963.5	27.4	57	s.	4.5	2,890	721.8	13.9	−0.73	36	5.72	w.	15.1	2,832	1,460	
						3,000	712.5	13.0		33	4.94	w.	14.9	2,939	1,560	
						3,250	691.6	11.0		26	3.41	w.	14.5	3,184	1,770	
						3,500	671.5	9.1		19	2.20	wnw.	14.1	3,429	1,980	
8:26	963.6	26.6	57	s.	4.5	3,722	653.5	7.3	0.83	13	1.33	wnw.	13.8	3,636		
						3,500	671.6	9.2		12	1.40	wnw.	15.3	3,429	2,010	
						3,250	692.2	11.4		12	1.62	w.	17.1	3,184	1,800	
8:45	963.7	26.2	57	s.	4.5	3,012	712.1	13.5	−0.93	11	1.70	w.	18.7	2,951	1,600	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 10, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						3,000	713.1	13.4	.....	12	1.84	w.	18.7	2,939	1,590	
8:49	963.7	26.1	58	s.	4.0	2,798	730.5	11.5	0.83	37	5.02	w.	18.7	2,741	1,420	
						2,750	734.7	11.9	.....	41	5.71	w.	19.0	2,694	1,380	Lightning in nw.
						2,500	756.8	14.0	.....	60	9.59	w.	20.6	2,450	1,170	
9:00	963.8	25.9	58	s,	4.5	2,304	774.8	15.6	0.98	75	13.29	w.	21.8	2,258	1,010	
						2,250	779.5	16.1	.....	73	13.36	w.	21.5	2,205	960	
						2,000	802.5	18.6	.....	64	13.71	wsw.	20.3	1,960	760	
						1,750	826.0	21.0	.....	56	13.92	wsw.	19.0	1,715	550	
						1,500	849.9	23.5	.....	47	13.61	sw.	17.8	1,470	390	
9:20	963.7	25.6	59	s.	4.9	1,303	869.7	25.4	0.48	40	12.98	sw.	16.8	1,277	260	
						1,250	874.8	25.7	.....	40	13.21	sw.	17.1	1,225	230	
						1,000	899.9	26.8	.....	40	14.10	sw.	18.4	980	100	
						750	925.8	28.0	.....	41	15.50	ssw.	19.8	735	0	
9:35	963.6	25.5	58	s.	4.5	653	936.0	28.5	−1.13	41	15.96	ssw.	20.3	640	0	
						500	952.3	26.8	.....	51	17.97	s.	10.9	490	0	
9:38	963.6	25.6	58	s.	4.5	396	963.6	25.6	.....	58	19.05	s.	4.5	388	.....	1/10 A.St., w. on n. horizon.

July 11, 1917 (No. 1).

A. M.																
7:43	965.0	22.0	78	nnw.	6.3	396	965.0	22.0	.....	78	20.62	nnw.	6.3	388	.....	Few Ci.St., near se. horizon.
						500	953.5	20.8	.....	75	18.43	nnw.	11.0	490	0	
7:50	965.8	21.8	74	nnw.	5.8	720	930.2	18.3	1.14	69	14.51	nnw.	20.8	706	0	
						750	926.9	18.5	.....	64	13.63	nnw.	21.6	735	0	
8:04	965.9	22.0	71	nnw.	7.2	947	905.9	19.9	−0.70	28	6.51	n.	27.0	928	0	
						1,000	900.1	19.6	.....	28	6.61	n.	26.7	980	40	
						1,250	874.0	18.1	.....	26	5.40	n.	25.4	1,225	250	
						1,500	848.6	16.6	.....	24	4.83	n.	24.1	1,470	470	
						1,750	824.2	15.1	.....	22	3.78	nnw.	22.8	1,715	670	
						2,000	800.0	13.6	.....	21	3.27	nnw.	21.4	1,960	900	Cloudless.
8:31	965.9	22.3	71	nnw.	7.2	2,083	792.9	13.1	0.60	20	3.02	nnw.	21.0	2,041	1,040	
						2,250	776.0	12.0	.....	19	2.67	nnw.	21.2	2,205	1,230	
						2,500	754.2	10.3	.....	16	2.00	nnw.	21.7	2,450	1,520	
						2,750	732.0	8.6	.....	14	1.56	nnw.	22.1	2,694	1,800	
						3,000	710.1	6.9	.....	11	1.09	nnw.	22.4	2,939	2,170	
9:00	965.9	23.0	67	nnw.	5.8	3,223	691.3	5.4	0.58	9	0.81	nnw.	22.8	3,158	2,530	
						3,250	689.1	5.4	.....	9	0.81	nnw.	22.8	3,184	2,570	Cloudless.
						3,500	668.0	5.3	.....	5	0.45	nnw.	22.8	3,429	2,860	
						3,750	647.9	5.2	.....	2	0.18	nnw.	22.7	3,673	3,180	
10:06	966.2	23.5	58	nnw.	7.2	3,803	643.8	5.1	0.16	1	0.09	nnw.	22.7	3,725	.....	
						3,750	647.7	5.3	.....	1	0.09	nnw.	22.7	3,673	3,180	
						3,500	667.0	5.9	.....	1	0 09	nnw.	22.6	3,429	2,800	
10:31	966.4	24.0	57	nnw.	7.6	3,313	682.8	6.4	0.42	1	0.10	nnw.	22.6	3,246	2,560	Few Cu., nnw.
						3,250	687.4	6.7	.....	1	0.10	nnw.	22.6	3,184	2,500	
						3,000	708.7	7.7	.....	1	0.11	nnw.	22.8	2,939	2,250	
						2,750	730.7	8.8	.....	1	0.11	nnw.	22.9	2,694	2,010	
						2,500	752.0	9.8	.....	2	0.24	nnw.	23.1	2,450	1,780	
						2,250	775.3	10.9	.....	2	0.26	nnw.	23.2	2,205	1,540	
						2,000	799.6	11.9	.....	2	0.28	nnw.	23.4	1,960	1,230	
10:49	966.4	24.2	56	nnw.	6.3	1,979	801.9	12.0	−0.39	2	0.28	nnw.	23.4	1,940	1,200	
11:17	966.5	24.2	52	nnw.	7.6	1,746	825.1	11.1	0.72	46	6.08	nnw.	23.6	1,711	630	
						1,500	849.6	12.9	.....	65	9.67	nnw.	19.4	1,470	0	1/10 Cu., nnw.
11:46	966.5	24.7	50	nnw.	7.6	1,313	868.8	14.2	1.03	80	12.95	nnw.	16.2	1,287	0	
						1,250	875.0	14.8	.....	77	12.96	nnw.	16.0	1,225	0	
						1,000	901.0	17.4	.....	64	12.72	nnw.	15.1	980	0	
11:59	966.5	24.6	50	n.	5.8	837	918.6	19.1	1.20	56	12.38	nnw.	14.6	821	0	
						750	927.9	20.1	.....	54	12.71	nnw.	13.0	735	0	
						500	954.8	23.1	.....	50	14.39	nnw.	8.6	490	0	
P. M.																
12:05	966.5	24.4	48	nnw.	6.7	396	966.5	24.4	.....	48	14.98	nnw.	6.7	388	.....	1/10 Cu., nnw.

July 11, 1917 (No. 2).

P. M.																
12:43	966.5	24.6	46	nnw.	7.2	396	966.5	24.6	.....	46	14.23	nnw.	7.2	388	.....	1/10 Cu., nnw.
						500	954.7	23.3	.....	48	13.73	nnw.	10.0	490	0	
						750	927.8	20.2	.....	53	12.55	nnw.	16.8	735	0	
12:52	966.5	24.8	48	nnw.	7.2	762	926.7	20.0	1.26	53	12.39	nnw.	17.0	747	0	
						1,000	901.5	17.7	.....	62	12.56	nnw.	16.8	980	0	
						1,250	875.5	15.3	.....	72	12.51	nnw.	16.6	1,225	0	
						1,500	850.2	12.9	.....	81	12.05	nnw.	16.4	1,470	0	
						1,750	825.1	10.5	.....	91	11.56	nnw.	16.2	1,715	610	
1:18	966.5	25.0	44	nnw.	7.6	1,805	819.6	10.0	0.96	93	11.42	nnw.	16.2	1,769	770	
						2,000	800.3	8.9	.....	93	10.60	nnw.	21.0	1,960	1,340	
1:22	966.5	25.0	44	nnw.	7.6	2,098	790.9	8.4	0.55	93	10.25	nnw.	23.4	2,056	1,630	Cu. base estimated 1,750 m.
						2,250	776.5	10.3	.....	43	5.39	nnw.	23.1	2,205	1,820	
1:33	966.5	25.2	46	nnw.	8.5	2,314	770.6	11.1	−1.25	22	2.91	nnw.	23.0	2,268	1,890	
						2,500	753.2	10.3	.....	19	2.38	nnw.	22.4	2,450	2,070	
						2,750	731.1	9.2	.....	15	1.75	nnw.	21.5	2,694	2,310	2/10 Cu., nnw.
						3,000	709.3	8.1	.....	11	1.19	nnw.	20.7	2,939	2,580	
						3,250	688.0	7.0	.....	7	0.70	nnw.	19.8	3,184	2,860	
2:06	966.5	25.2	42	nnw.	7.2	3,376	677.8	6.4	0.42	5	0.48	nnw.	19.4	3,307	3,000	
						3,250	688.0	6.9	.....	5	0.50	nnw.	20.1	3,184	2,700	
						3,000	709.3	7.9	.....	4	0.43	nnw.	21.6	2,939	2,160	
						2,750	731.1	8.9	.....	3	0.34	nnw.	23.1	2,694	1,860	
						2,500	753.2	9.9	.....	3	0.37	nnw.	24.5	2,450	1,570	
2:38	966.3	25.5	42	nnw.	5.8	2,313	770.6	10.6	−2.67	2	0.26	nnw.	25.6	2,267	1,360	
						2,250	776.5	8.9	.....	11	1.25	nnw.	22.7	2,205	1,270	
2:46	966 3	25.6	41	nnw.	7.2	2,193	781.8	7.4	0.85	30	3.09	nnw.	20.1	2,149	1,160	
						2,000	802.2	9.0	.....	47	5.40	nnw.	19.3	1,960	790	
						1,750	824.9	11.2	.....	69	9.18	nnw.	18.2	1,715	390	
2:55	966.2	25.5	40	nnw.	8.5	1,699	830.0	11.6	1.03	73	9.97	nnw.	18.0	1,665	190	1/10 Cu., nnw.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 11, 1917 (No. 2)—Continued.

Surface.						At different heights above sea										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	1,500	849.8	13.7	.....	67	10.51	nnw.	17.8	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	875.5	16.0	.....	60	10.91	n.	17.6	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	901.5	18.8	.....	54	11.65	n.	17.4	980	0	
3:20	966.2	25.6	40	n.	7.2	821	920.2	20.6	1.22	47	11.41	n.	17.2	805	0	
.....	.....	.....	.....	.....	.....	750	927.7	21.5	.....	46	11.80	n.	15.3	735	0	
.....	.....	.....	.....	.....	.....	500	954.5	24.5	.....	42	12.92	n.	8.6	490	0	
3:27	966.2	25.8	41	n.	5.8	396	966.2	25.8	.....	41	13.62	n.	5.8	388	.....	2/10 Cu., nnw.

July 11, 1917 (No. 3).

P. M.																
4:02	966.2	25.8	43	n.	6.3	396	966.2	25.8	.....	43	14.29	n.	6.3	388	.....	2/10 Cu., nnw.
.....	.....	.....	.....	.....	.....	500	955.2	24.3	.....	44	13.37	n.	9.3	490	0	
4:12	966.2	25.6	40	n.	5.4	744	928.4	20.8	1.44	46	11.30	nnw.	16.7	730	0	
.....	.....	.....	.....	.....	.....	750	927.6	20.7	.....	46	11.23	nnw.	16.7	735	0	
.....	.....	.....	.....	.....	.....	1,000	901.0	18.4	.....	52	11.03	nnw.	16.8	980	0	
.....	.....	.....	.....	.....	.....	1,250	875.0	16.0	.....	59	10.73	nnw.	17.0	1,225	60	
4:35	966.2	25.2	40	nnw.	4.9	1,505	849.1	13.6	0.95	65	10.13	nnw.	17.0	1,475	540	
.....	.....	.....	.....	.....	.....	1,750	825.2	11.3	.....	75	10.04	nnw.	17.3	1,715	760	Cu. base about 2,100 m.
.....	.....	.....	.....	.....	.....	2,000	800.1	8.7	.....	85	9.56	nnw.	17.7	1,960	970	
4:55	966.2	25.7	44	n.	6.7	2,214	779.9	6.9	0.94	94	9.35	nnw.	18.0	2,170	1,170	1/10 Cu., nnw.
.....	.....	.....	.....	.....	.....	2,250	776.5	7.6	.....	79	8.25	nnw.	18.0	2,205	1,260	
4:58	966.2	25.6	44	n.	4.9	2,345	767.6	9.5	−1.98	38	4.51	nnw.	18.0	2,298	1,310	
.....	.....	.....	.....	.....	.....	2,500	753.4	8.8	.....	34	3.85	nnw.	18.6	2,450	1,490	
.....	.....	.....	.....	.....	.....	2,750	731.1	7.8	.....	26	2.75	nnw.	19.6	2,694	1,770	
.....	.....	.....	.....	.....	.....	3,000	709.3	6.7	.....	19	1.85	nnw.	20.7	2,939	2,090	
.....	.....	.....	.....	.....	.....	3,250	688.2	5.6	.....	12	1.09	nnw.	21.7	3,184	2,420	
.....	.....	.....	.....	.....	.....	3,500	667.4	4.5	.....	5	0.42	nnw.	22.7	3,429	.....	
5:50	966.0	25.3	45	nnw.	3.6	3,574	661.3	4.2	0.47	3	0.25	nnw.	23.0	3,501	.....	
.....	.....	.....	.....	.....	.....	3,500	667.4	4.6	.....	3	0.25	nnw.	22.9	3,429	.....	
.....	.....	.....	.....	.....	.....	3,250	688.2	5.8	.....	3	0.28	nnw.	22.5	3,184	2,280	
.....	.....	.....	.....	.....	.....	3,000	709.3	7.1	.....	2	0.20	nnw.	22.0	2,939	1,920	
.....	.....	.....	.....	.....	.....	2,750	731.1	8.4	.....	2	0.22	nnw.	21.6	2,694	1,700	
6:13	965.9	25.0	48	n.	3.6	2,686	736.6	8.7	−1.28	2	0.22	nnw.	21.5	2,632	1,520	Few Cu., nnw.
6:15	965.9	25.0	48	n.	3.6	2,506	753.1	6.4	0.76	6	0.58	nnw.	17.6	2,456	1,310	
.....	.....	.....	.....	.....	.....	2,500	753.6	6.4	.....	18	1.73	nnw.	17.6	2,450	1,300	
.....	.....	.....	.....	.....	.....	2,250	776.7	8.3	.....	57	6.24	nnw.	18.6	2,205	960	
6:25	965.9	24.9	49	n.	3.1	2,136	787.9	9.2	0.95	79	9.20	nnw.	19.0	2,093	780	
.....	.....	.....	.....	.....	.....	2,000	800.6	10.5	.....	75	9.52	nnw.	18.5	1,960	560	
.....	.....	.....	.....	.....	.....	1,750	825.0	12.9	.....	67	9.97	nnw.	17.5	1,715	160	
.....	.....	.....	.....	.....	.....	1,500	849.5	15.2	.....	59	10.19	nnw.	16.6	1,470	0	
6:44	965.9	24.6	50	nnw.	2.7	1,294	870.7	17.2	0.90	53	10.40	nnw.	15.8	1,269	0	
.....	.....	.....	.....	.....	.....	1,250	875.0	17.6	.....	52	10.47	nnw.	15.5	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	900.9	19.8	.....	47	10.86	nnw.	13.7	980	0	
6:54	965.9	24.4	50	nnw.	2.7	837	918.1	21.3	0.66	44	11.15	nnw.	12.5	821	0	
.....	.....	.....	.....	.....	.....	750	927.4	21.9	.....	46	12.09	nnw.	10.6	735	0	
.....	.....	.....	.....	.....	.....	500	954.9	23.5	.....	50	14.48	nnw.	5.0	490	0	
7:00	965.9	24.2	52	nnw.	2.7	396	965.9	24.2	.....	52	15.70	nnw.	2.7	388	.....	Cloudless.

July 11, 1917 (No. 4).

P. M.																
7:39	965.9	22.3	62	nnw.	2.2	396	965.9	22.3	.....	62	16.70	nnw.	2.2	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	954.2	21.9	.....	58	16.24	nnw.	4.6	490	0	
.....	.....	.....	.....	.....	.....	750	927.2	21.0	.....	48	11.94	nnw.	10.5	735	0	
7:48	965.9	21.8	64	nnw.	1.8	773	924.7	20.9	0.37	47	11.62	nnw.	11.0	758	0	
.....	.....	.....	.....	.....	.....	1,000	900.7	18.8	.....	51	11.07	nnw.	12.5	980	0	
.....	.....	.....	.....	.....	.....	1,250	874.8	16.5	.....	56	10.51	nnw.	14.1	1,225	0	
8:02	965.9	21.0	69	nnw.	1.8	1,265	873.3	16.4	0.92	56	10.44	nnw.	14.2	1,240	0	
.....	.....	.....	.....	.....	.....	1,500	849.5	14.3	.....	61	9.88	nnw.	16.0	1,470	220	
8:15	966.0	20.6	70	nw.	2.2	1,726	827.1	12.3	0.89	65	9.30	nnw.	17.7	1,692	520	
.....	.....	.....	.....	.....	.....	1,750	824.7	12.1	.....	65	9.18	nnw.	17.7	1,715	530	
.....	.....	.....	.....	.....	.....	2,000	800.3	9.7	.....	68	8.18	nnw.	17.9	1,960	740	
.....	.....	.....	.....	.....	.....	2,250	776.8	7.4	.....	70	7.21	nnw.	18.0	2,205	940	
8:36	966.1	20.2	70	wnw.	2.7	2,502	753.3	5.0	0.94	73	6.37	nnw.	18.2	2,452	1,150	
.....	.....	.....	.....	.....	.....	2,750	730.6	6.5	.....	47	4.55	nnw.	19.3	2,694	1,400	
8:45	966.1	20.2	71	wnw.	2.2	2,916	716.0	7.5	−0.60	29	3.01	nnw.	20.0	2,857	1,560	
.....	.....	.....	.....	.....	.....	3,000	708.8	6.9	.....	28	2.79	nnw.	20.0	2,939	1,650	
.....	.....	.....	.....	.....	.....	3,250	687.4	5.1	.....	27	2.37	nnw.	20.0	3,184	1,950	
.....	.....	.....	.....	.....	.....	3,500	666.8	3.3	.....	25	1.94	nnw.	20.0	3,429	2,080	
9:05	966.2	20.0	71	wnw.	3.1	3,619	657.3	2.4	0.69	24	1.74	nnw.	20.0	3,545	.....	
.....	.....	.....	.....	.....	.....	3,500	666.8	3.2	.....	23	1.75	nnw.	20.0	3,429	2,270	
.....	.....	.....	.....	.....	.....	3,250	687.4	4.8	.....	20	1.72	nnw.	19.9	3,184	1,890	
.....	.....	.....	.....	.....	.....	3,000	708.8	6.4	.....	17	1.63	nnw.	19.8	2,939	1,440	
9:42	966.2	19.0	76	wnw.	3.1	2,818	724.7	7.6	−0.02	14	1.46	nnw.	19.8	2,761	1,300	
.....	.....	.....	.....	.....	.....	2,750	730.6	7.5	.....	17	1.76	nnw.	19.6	2,694	1,210	
.....	.....	.....	.....	.....	.....	2,500	753.3	6.9	.....	28	2.79	nnw.	19.1	2,450	920	
9:57	966.2	19.3	73	nnw.	2.2	2,379	764.5	6.7	0.91	34	3.34	nnw.	18.8	2,331	810	
.....	.....	.....	.....	.....	.....	2,250	776.6	7.9	.....	40	4.26	nnw.	17.6	2,205	700	
.....	.....	.....	.....	.....	.....	2,000	800.1	10.1	.....	51	6.31	nnw.	15.2	1,960	470	
10:09	966.2	19.6	71	n.	2.2	1,762	823.6	12.3	0.78	62	8.87	nnw.	13.0	1,727	260	
.....	.....	.....	.....	.....	.....	1,750	824.4	12.4	.....	62	8.93	nnw.	13.0	1,715	250	
.....	.....	.....	.....	.....	.....	1,500	849.3	14.3	.....	61	9.94	n.	12.3	1,470	120	
.....	.....	.....	.....	.....	.....	1,250	874.8	16.3	.....	60	11.12	n.	11.7	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	901.0	18.2	.....	60	12.54	nne.	11.0	980	0	
10:35	966.4	19.5	70	nne.	1.8	827	919.5	19.6	0.78	59	13.46	nne.	10.6	811	0	
10:40	966.4	19.6	69	nne.	1.8	750	927.7	20.2	.....	58	13.73	nne.	11.2	735	0	
.....	.....	.....	.....	.....	.....	584	945.6	21.5	−1.01	57	14.62	nne.	12.8	573	0	
.....	.....	.....	.....	.....	.....	500	954.7	20.7	.....	62	15.14	nne.	7.9	490	0	
10:42	966.4	19.6	69	nne.	1.8	396	966.4	19.6	.....	69	15.74	nne.	1.8	388	.....	Cloudless.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 12, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
4:17	957.3	33.0	25	sw.	8.9	396	957.3	33.0	.....	25	12.58	sw.	8.9	388	.....	6/10 St.Cu., wnw.
						500	946.5	31.6	.....	26	12.09	sw.	9.4	490	0	
						750	920.1	28.2	.....	27	10.33	ssw.	10.7	735	0	
4:25	957.3	32.8	28	ssw.	14.8	775	917.4	27.9	1.35	27	10.15	ssw.	10.8	760	0	
						1,000	894.2	25.2	.....	29	9.30	ssw.	11.0	980	0	
						1,250	869.0	22.8	.....	32	8.88	sw.	11.3	1,225	0	
						1,500	844.1	20.4	.....	34	8.15	sw.	11.6	1,470	0	
4:44	957.2	30.0	37	sw.	8.9	1,668	828.1	19.3	0.96	36	8.06	sw.	11.8	1,635	0	
						1,750	820.2	18.7	.....	38	8.20	sw.	11.7	1,715	80	
						2,000	797.1	17.1	.....	42	8.19	wsw.	11.3	1,960	320	
						2,250	774.5	15.4	.....	47	8.22	wsw.	10.9	2,205	410	Few A.Cu., wnw.; 2/10 St. Cu. wnw.
5:02	957.1	29.7	38	sw.	8.5	2,336	766.4	14.8	0.67	49	8.25	wsw.	10.8	2,289	540	
						2,500	751.7	13.4	.....	51	7.84	wsw.	11.9	2,450	1,550	
						2,750	730.0	11.2	.....	55	7.32	w.	13.5	2,694	1,630	
						3,000	708.4	9.0	.....	59	6.77	w.	15.2	2,939	1,710	
						3,250	687.5	6.8	.....	62	6.13	wnw.	16.8	3,184	1,790	
						3,500	666.7	4.6	.....	66	5.60	wnw.	18.5	3,429	1,860	
5:31	956.9	29.9	38	sw.	6.7	3,583	659.6	3.9	0.90	67	5.41	wnw.	19.0	3,516	1,900	4/10 St.Cu., wnw.
						3,500	666.7	4.7	.....	66	5.64	wnw.	19.0	3,429	1,810	
						3,250	687.5	7.1	.....	62	6.26	wnw.	18.5	3,184	1,570	
						3,000	708.3	9.4	.....	59	6.96	wnw.	16.4	2,939	1,330	
						2,750	729.8	11.7	.....	55	7.56	wnw.	15.3	2,694	1,270	
						2,500	751.5	14.0	.....	52	8.31	wnw.	14.2	2,450	700	
6:09	956.7	28.4	44	sw.	5.8	2,455	755.1	14.4	0.87	51	8.36	wnw.	14.0	2,406	640	
						2,250	774.2	16.2	.....	48	8.84	wnw.	13.7	2,205	470	
						2,000	796.9	18.3	.....	43	9.04	wnw.	13.2	1,960	260	
						1,750	820.0	20.5	.....	39	9.41	wnw.	12.8	1,715	50	
						1,500	844.0	22.7	.....	35	9.66	wnw.	12.4	1,470	0	1/10 St.Cu., wnw.
6:32	956.7	28.0	48	sw.	5.8	1,313	862.5	24.3	0.87	32	9.72	wnw.	12.1	1,287	0	
						1,250	869.1	24.8	.....	31	9.71	wnw.	11.8	1,225	0	
						1,000	894.2	26.6	.....	29	10.10	w.	10.7	980	0	
						750	919.6	28.4	.....	27	10.45	w.	9.6	735	0	
6:46	956.7	28.1	47	sw.	6.3	731	921.3	28.5	−0.21	27	10.51	w.	9.5	717	0	
						500	946.0	28.0	.....	41	15.50	ssw.	6.7	490	0	
6:50	956.7	27.8	48	sw.	5.4	396	956.7	27.8	.....	48	17.94	sw.	5.4	388	.....	

July 13, 1917.

A. M.																
7:42	960.9	20.6	79	wnw.	5.4	396	960.9	20.6	.....	79	19.17	wnw.	5.4	388	.....	Few St.Cu. wnw. along sw horizon.
						500	949.3	21.9	.....	65	17.08	wnw.	6.6	490	0	
7:58	961.1	21.2	77	wnw.	4.5	699	928.2	24.3	−1.22	38	11.55	wnw.	9.0	685	0	
						750	922.9	23.9	.....	38	11.27	wnw.	9.6	735	0	
						1,000	896.8	22.0	.....	38	10.05	wnw.	12.4	980	0	
						1,250	871.7	20.1	.....	39	9.18	nw.	15.3	1,225	0	
8:15	961.1	22.0	73	wnw.	5.4	1,312	865.0	19.6	0.77	39	8.90	nw.	16.0	1,286	0	
						1,500	846.7	17.9	.....	40	8.20	nw.	15.9	1,470	460	
						1,750	821.9	15.6	.....	40	7.09	nw.	15.7	1,715	1,060	
						2,000	797.6	13.3	.....	41	6.26	nw.	15.6	1,960	1,370	
						2,250	774.4	11.0	.....	42	5.51	nw.	15.5	2,205	1,570	
						2,500	751.7	8.6	.....	43	4.80	nw.	15.3	2,450	1,690	
8:48	961.1	23.3	66	wnw.	4.5	2,516	750.3	8.5	0.92	43	4.77	nw.	15.3	2,466	1,700	
						2,750	729.5	7.0	.....	44	4.41	nw.	17.5	2,694	1,980	
						3,000	708.0	5.3	.....	45	4.01	nw.	19.9	2,939	2,290	
9:03	961.1	23.9	66	wnw.	4.0	3,176	692.3	4.2	0.65	46	3.80	nw.	21.6	3,111	2,500	
						3,250	686.7	4.3	.....	41	3.41	nw.	.....	3,184	2,460	
						3,500	665.8	4.4	.....	23	1.93	nw.	.....	3,429	2,320	
9:16	961.2	24.9	63	wnw.	4.0	3,581	659.0	4.5	0.03	17	1.43	nw.	.....	3,508	.....	
						3,500	665.8	4.6	.....	17	1.44	nw.	.....	3,429	2,270	
						3,250	686.7	4.8	.....	19	1.63	nw.	.....	3,184	2,090	
9:45	961.4	25.8	57	nw.	3.6	3,167	693.4	4.9	0.64	19	1.65	nw.	.....	3,103	2,030	
						3,000	708.0	6.0	.....	32	2.99	nw.	.....	2,939	1,810	
						2,750	729.6	7.5	.....	53	5.50	nw.	.....	2,694	1,450	
10:05	961.5	27.3	46	nw.	4.5	2,695	734.7	7.9	0.82	57	6.07	nw.	17.6	2,641	1,370	
						2,500	751.7	9.5	.....	54	6.41	nw.	17.0	2,450	1,090	
						2,250	774.5	11.6	.....	51	6.97	nw.	16.3	2,205	710	Few St.Cu., wnw.
						2,000	797.7	13.6	.....	48	7.48	nw.	15.5	1,960	330	
						1,750	822.0	15.7	.....	44	7.85	nw.	14.8	1,715	0	
						1,500	846.8	17.7	.....	41	8.30	nw.	14.0	1,470	0	
10:44	961.7	28.2	35	nnw.	5.8	1,368	860.1	18.8	0.88	39	8.46	nw.	13.6	1,341	0	
						1,250	872.1	19.8	.....	39	8.62	nw.	12.9	1,225	0	
						1,000	898.0	22.0	.....	38	10.05	nw.	11.4	980	0	
11:00	961.8	28.4	33	nnw.	7.6	821	916.5	23.6	1.18	38	11.07	nnw.	10.3	805	0	
						750	924.1	24.4	.....	37	11.31	nnw.	9.5	735	0	
						500	950.4	27.4	.....	34	12.41	nnw.	6.9	490	0	
11:08	961.9	28.6	33	nnw.	5.8	396	961.9	28.6	.....	33	12.92	nnw.	5.8	388	.....	1/10 Ci., wnw.; 1/10 St.Cu., nw.

July 14, 1917.

P. M.																
6:24	969.0	16.6	54	nw.	1.8	396	969.0	22.8	.....	54	14.99	nw.	1.8	388	.....	
						500	957.7	21.6	.....	52	13.42	nw.	2.6	490	.....	
						750	930.5	21.4	.....	47	11.98	nnw.	5.5	.....	.....	
6:45	969.1	22.8	55	nnw.	1.8	811	923.9	21.2	0.24	46	11.58	nnw.	5.1	795	.....	
						750	930.5	21.1	.....	49	12.26	nnw.	4.5	.....	.....	
						500	958.0	20.9	.....	61	15.08	n	2.3	490	.....	
7:58	969.6	20.8	66	nne.	1.3	396	969.6	20.8	.....	66	16.22	nne.	1.3	388	.....	Few A.St., w.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 15, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
10::25	971.3	24.5	50	nnw.	4.5	396	971.3	24.5	.....	50	15.38	nnw.	4.5	388	.....	Few Cu., nw.
.....	.....	.....	.....	.....	.....	500	959.8	23.2	.....	52	14.79	nnw.	5.6	490	0	
.....	.....	.....	.....	.....	.....	750	932.7	19.9	.....	56	13.01	nw.	8.2	735	0	
10:40	971.3	25.4	51	nnw.	4.5	807	926.4	19.2	1.29	57	12.68	nw.	8.8	791	0	
.....	.....	.....	.....	.....	.....	1,000	905.7	17.5	.....	60	12.00	nw.	8.9	980	0	
.....	.....	.....	.....	.....	.....	1,250	879.5	15.3	.....	65	11.30	nw.	9.1	1,225	140	
.....	.....	.....	.....	.....	.....	1,500	854.1	13.1	.....	69	10.41	nw.	9.3	1,470	290	
11:05	971.3	24.5	52	nnw.	4.0	1,599	844.1	12.3	0.87	71	10.16	nw.	9.4	1,567	340	2/10 Cu., nw.
.....	.....	.....	.....	.....	.....	1,750	829.2	11.6	.....	68	9.29	nw.	10.4	1,715	780	Cu. base about 1,700 m.
.....	.....	.....	.....	.....	.....	2,000	804.7	9.9	.....	59	7.20	nw.	13.0	1,960	1,020	
11:55	971.3	25.6	48	nw.	3.6	2,114	793.4	8.7	0.70	59	6.08	nw.	14.7	2,072	1,140	1/10 A.Cu., wnw.; 3/10 Cu., nw
.....	.....	.....	.....	.....	.....	2,250	780.1	7.7	.....	57	5.99	nw.	14.9	2,205	1,280	
.....	.....	.....	.....	.....	.....	2,500	757.3	6.1	.....	62	5.84	nw.	15.5	2,450	1,530	
.....	.....	.....	.....	.....	.....	2,750	734.7	4.4	.....	67	5.61	nw.	15.9	2,694	1,780	
.....	.....	.....	.....	.....	.....	3,000	712.8	2.9	.....	71	5.35	wnw.	16.2	2,939	2,040	
.....	.....	.....	.....	.....	.....	3,250	691.2	1.2	.....	76	5.06	wnw.	16.6	3,184	2,290	
.....	.....	.....	.....	.....	.....	3,500	670.2	− 0.5	.....	81	4.75	wnw.	17.0	3,429	2,560	
.....	.....	.....	.....	.....	.....	3,750	649.2	− 2.1	.....	86	4.41	wnw.	17.4	3,673	2,840	
P. M.																
12:35	971.1	25.8	44	wnw.	4.0	3,904	636.4	− 3.2	0.64	89	4.17	wnw.	17.4	3,824	.....	
.....	.....	.....	.....	.....	.....	3,750	649.2	− 2.3	.....	88	4.44	wnw.	17.3	3,673	2,820	
.....	.....	.....	.....	.....	.....	3,500	670.2	− 0.8	.....	86	4.91	wnw.	17.0	3,429	2,440	
.....	.....	.....	.....	.....	.....	3,250	691.2	0.8	.....	85	5.50	nw.	16.8	3,184	2,070	
.....	.....	.....	.....	.....	.....	3,000	712.8	2.3	.....	83	5.98	nw.	16.5	2,939	1,780	
.....	.....	.....	.....	.....	.....	2,750	734.7	3.8	.....	82	6.58	nw.	16.3	2,694	1,500	
1:10	970.8	25.8	45	nw.	5.8	2,656	743.0	4.4	0.84	81	6.78	nw.	16.2	2,602	1,400	
.....	.....	.....	.....	.....	.....	2,500	757.3	5.7	.....	79	7.24	nw.	15.5	2,450	1,270	
.....	.....	.....	.....	.....	.....	2,250	780.1	7.8	.....	76	8.04	nw.	14.4	2,205	1,060	
.....	.....	.....	.....	.....	.....	2,000	804.7	9.9	.....	73	8.91	nw.	13.3	1,960	830	
.....	.....	.....	.....	.....	.....	1,750	829.2	12.1	.....	69	9.74	nw.	12.1	1,715	600	
1:38	970.7	25.8	36	nw.	6.7	1,633	840.6	13.0	1.00	68	10.19	nw.	11.6	1,601	490	Few CiSt., wnw.; 2/10 Cu., nw.
.....	.....	.....	.....	.....	.....	1,500	854.1	14.3	.....	64	10.43	nw.	11.6	1,470	340	
.....	.....	.....	.....	.....	.....	1,250	879.4	16.8	.....	58	11.10	nw.	11.5	1,225	60	
.....	.....	.....	.....	.....	.....	1,000	905.1	19.3	.....	51	11.42	nw.	11.4	980	0	
2:02	970.6	26.2	35	nnw.	5.8	802	926.4	21.3	1.21	46	11.65	nw.	11.4	786	0	
.....	.....	.....	.....	.....	.....	750	931.9	21.9	.....	45	11.83	nw.	10.7	735	0	
.....	.....	.....	.....	.....	.....	500	959.0	24.9	.....	42	13.23	nw.	7.6	490	0	
2:08	970.5	26.2	40	nw.	6.3	396	970.5	26.2	.....	40	13.61	nw.	6.3	388	.....	

July 16, 1917.

A. M.																
8:44	972.9	20.6	74	n.	2.7	396	972.9	20.6	.....	74	17.96	n.	2.7	388	.....	7/10 Cu., nne.
.....	.....	.....	.....	.....	.....	500	961.0	19.3	.....	77	17.24	n.	3.4	490	0	
.....	.....	.....	.....	.....	.....	750	933.5	16.3	.....	85	15.75	nne.	5.1	735	100	Cu. base about 700 m.
9:41	973.0	21.0	66	nne.	4.5	860	921.7	15.0	1.21	88	15.00	nne.	5.9	843	210	
.....	.....	.....	.....	.....	.....	1,000	906.5	14.1	.....	85	13.68	nne.	6.4	980	340	
.....	.....	.....	.....	.....	.....	1,250	880.4	12.5	.....	81	11.74	nne.	7.2	1,225	500	
.....	.....	.....	.....	.....	.....	1,500	854.7	10.8	.....	76	9.84	nne.	8.0	1,470	650	6/10 Cu., nne
10:40	973.2	21.8	59	nne.	4.9	1,681	836.3	9.6	0.66	73	8.72	nne.	8.6	1,648	880	
.....	.....	.....	.....	.....	.....	1,750	829.8	9.2	.....	72	8.38	nne.	8.7	1,715	1,100	
.....	.....	.....	.....	.....	.....	2,000	805.3	7.6	.....	70	7.31	nne.	9.0	1,960	1,400	
.....	.....	.....	.....	.....	.....	2,250	781.3	5.1	.....	68	6.41	nne.	9.4	2,205	1,430	
.....	.....	.....	.....	.....	.....	2,500	757.7	4.6	.....	66	5.60	nne.	9.7	2,450	1,470	
11:56	973.3	23.2	54	ne.	4.5	2,740	735.8	3.1	0.62	64	4.88	nne.	10.0	2,685	.....	
.....	.....	.....	.....	.....	.....	2,500	757.7	4.6	.....	67	5.68	nne.	9.6	2,450	1,290	
.....	.....	.....	.....	.....	.....	2,250	781.3	6.3	.....	75	7.16	nne.	9.2	2,205	1,010	
.....	.....	.....	.....	.....	.....	2,000	805.3	7.9	.....	80	8.53	nne.	8.7	1,960	720	
.....	.....	.....	.....	.....	.....	1,750	829.8	9.5	.....	86	10.21	nne.	8.3	1,715	430	
P. M.																
12:25	973.2	23.0	55	ne.	3.6	1,698	835.2	9.8	0.94	87	10.54	nne.	8.2	1,664	380	
.....	.....	.....	.....	.....	.....	1,500	854.7	11.7	.....	83	11.41	nne.	8.3	1,470	150	
.....	.....	.....	.....	.....	.....	1,250	880.4	14.0	.....	78	12.46	n.	8.5	1,225	0	Cu. base about 1,150 m.
.....	.....	.....	.....	.....	.....	1,000	906.4	16.3	.....	73	13.53	n.	8.7	980	0	
1:37	972.4	23.2	56	n.	3.6	811	926.8	18.1	1.18	69	14.33	n.	8.8	795	0	
.....	.....	.....	.....	.....	.....	750	933.3	18.8	.....	67	14.54	n.	8.1	735	0	
.....	.....	.....	.....	.....	.....	500	960.5	21.8	.....	59	15.41	nnw.	5.2	490	0	
1:46½	972.2	23.0	56	nnw.	4.0	396	972.2	23.0	.....	56	15.74	nnw.	4.0	388	.....	6/10 Cu., nne.

July 18, 1917.

P. M.																
2:26	967.9	29.8	40	ssw.	4.0	396	967.9	29.8	.....	40	16.78	ssw.	4.0	388	.....	2/10 Cu., ssw.
.....	.....	.....	.....	.....	.....	500	956.8	28.3	.....	43	16.55	ssw.	4.9	490	0	
.....	.....	.....	.....	.....	.....	750	930.0	24.7	.....	47	14.63	s.	7.2	735	0	
2:35	967.8	30.0	41	sse.	4.0	797	924.9	24.0	1.45	48	14.32	s.	7.6	781	0	
.....	.....	.....	.....	.....	.....	1,000	903.6	22.2	.....	51	13.65	s.	7.3	980	0	
.....	.....	.....	.....	.....	.....	1,250	877.8	20.0	.....	56	13.09	s.	6.9	1,225	0	
.....	.....	.....	.....	.....	.....	1,500	852.3	17.8	.....	60	12.23	s.	6.6	1,470	0	1/10 A.Cu., w.; 2/10 Cu., ssw.
4:01	967.2	29.8	39	s.	4.0	1,556	846.8	17.3	0.90	61	12.05	s.	6.4	1,525	0	
.....	.....	.....	.....	.....	.....	1,500	852.3	17.8	.....	60	12.23	s.	6.4	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	877.7	20.1	.....	57	13.41	s.	6.5	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	903.3	22.4	.....	53	14.36	s.	6.6	980	0	
.....	.....	.....	.....	.....	.....	750	929.2	24.7	.....	49	15.25	s.	6.8	735	0	
4:22	967.1	29.7	38	s.	4.0	654	939.2	25.6	1.43	48	15.76	s.	6.8	641	0	
.....	.....	.....	.....	.....	.....	500	955.9	27.8	.....	43	15.25	s.	4.4	490	0	
5:04	966.9	29.3	39	s.	2.7	396	966.9	29.3	.....	39	15.90	s.	2.7	388	.....	1/10 A.Cu., wnw.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 19, 1917.

Surface.						At different heights above sea										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
7:41	966.2	27.0	47	se.	2.2	396	966.2	27.0	.....	47	16.76	se.	2.2	388	.....	Few Ci.St., wnw.
						500	954.8	27.4	.....	44	16.06	se.	7.6	490	0	
7:43	966.2	27.1	47	se.	2.2	518	953.0	27.5	−0.40	44	16.16	se.	8.5	508	0	
						750	928.3	25.7	.....	46	15.19	sse.	7.4	735	0	
						1,000	902.4	23.8	.....	49	14.45	s.	6.2	980	0	
8:40	966.7	24.9	53	sse.	2.7	1,045	897.9	23.4	0.78	49	14.10	s.	6.0	1,024	0	
						1,250	877.2	21.5	.....	51	13.08	s.	6.0	1,225	0	
						1,500	852.2	19.3	.....	54	12.09	ssw.	5.9	1,470	0	Cloudless.
						1,750	827.7	17.0	.....	57	11.05	ssw.	5.8	1,715	0	
9:01	966.9	24.5	53	sse.	3.1	1,946	808.8	15.2	0.90	59	10.19	ssw.	5.8	1,907	0	
						1,750	827.7	17.0	.....	58	11.24	ssw.	6.0	1,715	0	
						1,500	852.2	19.2	.....	56	12.46	s.	6.2	1,470	0	
						1,250	877.2	21.4	.....	54	13.76	s.	6.4	1,225	0	
9:21	967.0	24.2	55	sse.	3.1	1,109	891.7	22.7	0.93	53	14.62	s.	6.5	1,087	0	
						1,000	902.6	23.8	.....	51	15.04	s.	7.0	980	0	
						750	928.8	26.0	.....	48	16.14	sse.	8.3	735	0	
9:35	967.1	24.2	55	sse.	3.1	537	951.7	28.0	−2.70	45	17.01	sse.	9.3	526	0	
						500	955.5	27.0	.....	48	17.12	sse.	7.7	490	0	
9:36	967.1	24.2	55	sse.	3.1	396	967.1	24.2	.....	55	16.61	sse.	3.1	388	.....	Cloudless.

July 20, 1917.

A. M.																
6:59	967.6	22.5	74	ssw.	4.5	396	967.6	22.5	.....	74	20.17	ssw.	4.5	388	.....	Cloudless.
						500	956.1	23.6	.....	70	20.39	sw.	8.1	490	0	
7:04	967.6	22.7	73	sw.	4.5	662	938.6	25.3	−1.05	64	20.65	wsw.	13.8	649	0	
						750	929.5	24.8	.....	64	20.04	wsw.	13.2	735	0	
						1,000	903.3	23.4	.....	63	18.13	wsw.	11.3	980	0	
7:25	967.6	23.2	73	wsw.	4.0	1,226	880.2	22.2	0.55	63	16.87	wsw.	9.7	1,202	0	Few Ci.St., wnw.
						1,250	877.6	22.0	.....	63	16.66	wsw.	9.5	1,225	0	
						1,500	853.0	19.7	.....	64	14.69	sw.	7.8	1,470	0	
9:55	967.2	28.6	58	ssw.	5.4	1,694	834.7	18.7	0.75	65	14.02	ssw.	6.5	1,662	440	4/10 Ci., wnw.
						1,750	829.4	18.3	.....	65	13.67	ssw.	6.3	1,715	400	
						2,000	805.7	16.5	.....	63	11.83	ssw.	5.7	1,960	230	
						2,250	782.0	14.7	.....	61	10.21	ssw.	5.0	2,205	60	
						2,500	759.2	12.9	.....	59	8.78	ssw.	4.3	2,450	.....	
10:59	967.2	31.0	50	sw.	5.4	2,549	755.0	12.5	0.75	59	8.55	ssw.	4.2	2,498	.....	2/10 Ci., wnw.; Few Cu., ssw.
						2,500	759.2	12.9	.....	59	8.78	ssw.	4.4	2,450	.....	
						2,250	781.9	14.8	.....	59	9.93	ssw.	5.4	2,205	220	
						2,000	805.3	16.7	.....	60	11.41	ssw.	6.3	1,960	370	
						1,750	828.8	18.6	.....	60	12.86	ssw.	7.3	1,715	260	
11:32	967.0	31.7	49	ssw.	4.0	1,664	837.0	19.3	0.86	60	13.43	ssw.	7.6	1,631	220	1/10 Ci., wnw.; 2/10 Cu., ssw.
						1,500	852.5	20.7	.....	60	14.65	ssw.	7.5	1,470	140	
						1,250	877.6	22.8	.....	60	16.66	ssw.	7.3	1,225	10	
						1,000	903.2	25.0	.....	59	18.69	sw.	7.1	980	0	
11:50	967.0	32.0	47	sw.	4.5	811	923.0	26.6	1.42	59	20.55	sw.	6.9	795	0	
						750	929.4	27.5	.....	57	20.93	sw.	6.6	735	0	
						500	955.5	31.0	.....	48	21.57	ssw.	5.4	490	0	
P. M.																
12:04	966.9	32.5	44	ssw.	4.9	396	966.9	32.5	.....	44	21.53	ssw.	4.9	388	.....	1/10 Ci., wnw.; 3/10 Cu., sw.

July 21, 1917.

A. M.																
7:12	966.3	23.7	69	ssw.	5.4	396	966.3	23.7	.....	69	20.22	ssw.	5.4	388	.....	3/10 St.Cu., sw.
						500	954.9	25.6	.....	58	19.05	sw.	10.3	490	0	
7:14	966.3	24.0	66	sw.	5.4	579	946.4	27.0	−1.80	49	17.47	sw.	14.1	568	0	
						750	928.3	25.7	.....	49	16.18	sw.	12.4	735	0	
						1,000	902.3	23.8	.....	49	14.45	sw.	10.0	980	0	5/10 st.Cu., sw.
7:53	966.5	24.8	63	ssw.	4.5	1,166	885.4	22.6	0.75	49	13.44	sw.	8.4	1,143	0	
						1,250	877.0	22.1	.....	49	13.03	sw.	8.4	1,225	0	
						1,500	852.2	20.8	.....	49	12.04	sw.	8.5	1,470	0	
8:31	966.2	26.4	60	ssw.	5.4	1,700	832.8	19.7	0.54	49	11.25	sw.	8.5	1,666	0	
						1,750	827.6	19.4	.....	50	11.26	sw.	8.4	1,715	80	
						2,000	802.5	17.4	.....	55	10.93	sw.	7.8	1,960	470	
						2,250	778.3	15.4	.....	59	10.32	wsw.	7.2	2,205	860	1/10 St.Cu., sw.
10:10	965.9	29.2	55	ssw.	5.4	2,399	767.8	14.1	0.80	62	9.98	wsw.	6.8	2,351	1,170	
						2,500	755.7	13.4	.....	64	9.84	wsw.	7.0	2,450	1,300	
						2,750	734.7	11.7	.....	68	9.35	wsw.	7.5	2,694	1,410	
						3,000	715.2	10.0	.....	72	8.84	wsw.	8.1	2,939	1,510	
						3,250	696.5	8.2	.....	76	8.26	wsw.	8.6	3,184	1,650	
						3,500	678.5	6.5	.....	78	7.55	wsw.	9.1	3,429	1,880	
						3,750	660.5	4.8	.....	80	6.88	wsw.	9.7	3,673	1,990	
10:31	965.9	30.1	52	ssw.	6.7	3,765	659.5	4.7	0.66	80	6.83	wsw.	9.7	3,688	2,000	
						3,750	660.6	4.9	.....	80	6.93	wsw.	9.7	3,673	1,990	
						3,500	678.8	6.4	.....	79	7.59	wsw.	8.9	3,429	1,820	
						3,250	697.2	8.0	.....	78	8.37	sw.	8.1	3,184	1,640	
						3,000	716.9	9.6	.....	77	9.20	sw.	7.3	2,939	1,470	
						2,750	737.1	11.2	.....	77	10.24	sw.	6.5	2,694	1,300	
11:00	965.9	30.8	53	ssw.	6.0	2,595	749.9	12.2	0.86	76	10.80	sw.	6.0	2,543	1,190	
						2,500	758.2	13.0	.....	75	11.24	sw.	6.7	2,450	1,130	2/10 A.Cu., wsw.; 1/10 St.Cu., sw.
						2,250	780.3	15.2	.....	71	12.19	sw.	8.5	2,205	860	
						2,000	803.8	17.3	.....	67	13.23	ssw.	10.2	1,960	390	
11:38	965.6	31.0	50	ssw.	6.3	1,795	823.5	19.1	0.87	64	14.15	ssw.	11.7	1,759	0	
						1,750	827.6	19.5	.....	63	14.28	ssw.	11.8	1,715	0	
						1,500	852.2	21.7	.....	58	15.06	ssw.	12.0	1,470	0	
11:50	965.6	31.1	48	ssw.	7.2	1,371	864.7	22.8	0.71	56	15.55	ssw.	12.2	1,344	0	
						1,250	877.0	23.7	.....	56	16.41	ssw.	11.8	1,225	0	
						1,000	902.3	25.4	.....	57	18.50	s.	11.0	980	0	
12:00	965.5	31.5	48	ssw.	7.2	834	919.2	26.6	1.42	58	20.20	s.	10.4	818	0	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 21, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
NOON.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	750	928.1	27.8	.....	56	20.93	s.	9.7	735	0	
.....	.....	.....	.....	.....	.....	500	954.3	31.3	.....	49	22.40	s.	7.6	490	0	
P. M.																
12:10	965.4	32.8	46	s.	6.7	396	965.4	32.8	.....	46	22.89	s.	6.7	388	.....	4/10 A.Cu., wsw.

July 22, 1917.

A. M.																
6:39	965.1	22.4	79	ssw.	3.1	396	965.1	22.4	.....	79	21.40	ssw.	3.1	388	.....	Few St.Cu., wnw.
6:40	965.1	22.4	79	ssw.	3.1	504	953.2	23.6	−1.11	69	20.10	ssw.	10.8	490	0	
.....	.....	.....	.....	.....	.....	750	927.3	22.4	.....	71	19.23	sw.	11.2	735	0	
.....	.....	.....	.....	.....	.....	1,000	900.8	21.1	.....	72	18.02	wsw.	11.7	980	0	
7:00	965.2	23.4	76	ssw.	3.6	1,099	890.6	20.6	0.50	73	17.72	w.	11.9	1,077	0	
7:05	965.3	24.4	76	ssw.	3.1	1,220	878.3	21.9	−1.07	62	16.29	w.	10.8	1,196	0	
.....	.....	.....	.....	.....	.....	1,250	875.3	21.7	.....	62	16.10	w.	10.8	1,225	0	
.....	.....	.....	.....	.....	.....	1,500	850.7	20.5	.....	59	14.23	w.	11.2	1,470	0	
7:25	965.5	26.1	71	ssw.	2.7	1,620	839.1	19.9	0.50	58	13.48	w.	11.4	1,588	0	
.....	.....	.....	.....	.....	.....	1,750	826.7	18.9	.....	59	12.89	w.	11.3	1,715	170	
.....	.....	.....	.....	.....	.....	2,000	803.5	17.1	.....	61	11.90	wnw.	11.1	1,960	500	
.....	.....	.....	.....	.....	.....	2,250	780.3	15.3	.....	63	10.95	wnw.	11.0	2,205	800	
.....	.....	.....	.....	.....	.....	2,500	757.5	13.4	.....	65	9.99	nw.	10.8	2,450	1,060	
7:58	965.9	27.6	65	ssw.	2.2	2,628	746.1	12.5	0.73	66	9.56	nw	10.7	2,575	1,200	
.....	.....	.....	.....	.....	.....	2,750	735.4	11.6	.....	65	8.88	nw	10.8	2,694	1,280	
.....	.....	.....	.....	.....	.....	3,000	713.8	9.7	.....	64	7.70	wnw.	11.0	2,939	1,460	
.....	.....	.....	.....	.....	.....	3,250	692.8	7.9	.....	62	6.60	wnw.	11.2	3,184	1,670	
9:30	966.2	29.5	60	sw.	2.2	3,311	687.6	7.4	0.75	62	6.39	wnw.	11.3	3,244	1,720	
.....	.....	.....	.....	.....	.....	3,500	672.5	5.7	.....	61	5.59	wnw.	11.8	3,429	.....	
.....	.....	.....	.....	.....	.....	3,750	652.2	3.5	.....	59	4.63	wnw.	12.5	3,673	.....	
.....	.....	.....	.....	.....	.....	4,000	632.1	1.3	.....	58	3.89	wnw.	13.2	3,918	.....	
9:46	966.2	29.7	59	wsw.	1.8	4,108	623.9	0.4	0.88	57	3.59	wnw.	13.5	4,025	.....	
.....	.....	.....	.....	.....	.....	4,000	632.1	1.4	.....	58	3.92	wbw.	13.5	3,918	.....	
.....	.....	.....	.....	.....	.....	3,750	652.2	3.6	.....	61	4.82	wnw.	13.4	3,673	.....	
.....	.....	.....	.....	.....	.....	3,500	672.6	5.8	.....	63	5.81	wnw.	13.3	3,429	.....	
10:06	966.2	30.0	58	wsw.	2.2	3,316	687.6	7.5	0.90	66	6.84	wnw.	13.2	3,248	1,700	Few St.Cu., wnw.
.....	.....	.....	.....	.....	.....	3,250	693.0	8.1	.....	65	7.02	wnw.	13.5	3,184	1,630	
.....	.....	.....	.....	.....	.....	3,000	714.2	10.3	.....	64	8.02	wnw.	14.5	2,939	1,360	
.....	.....	.....	.....	.....	.....	2,750	736.0	12.6	.....	62	9.05	nw.	15.6	2,694	1,100	
10:33	966.4	30.2	57	s.	2.2	2,659	744.0	13.4	0.75	61	9.38	nw.	16.0	2,605	1,000	
.....	.....	.....	.....	.....	.....	2,500	758.1	14.6	.....	59	9.81	nw.	14.6	2,450	770	
.....	.....	.....	.....	.....	.....	2,250	780.6	16.5	.....	56	10.51	nw.	12.4	2,205	410	
.....	.....	.....	.....	.....	.....	2,000	803.3	18.4	.....	53	11.21	nnw.	10.3	1,960	40	
10:50	966.4	28.8	62	wsw.	2.7	1,810	821.7	19.8	0.03	51	11.78	nnw.	8.6	1,774	0	
.....	.....	.....	.....	.....	.....	1,750	826.3	19.8	.....	53	12.24	nnw.	8.2	1,715	0	
.....	.....	.....	.....	.....	.....	1,500	850.1	19.9	.....	60	13.94	nnw.	6.6	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	876.3	20.0	.....	67	15.66	nnw.	5.1	1,225	0	
10:57	966.5	29.4	62	wsw.	2.7	1,163	885.7	20.0	1.28	69	16.13	nnw.	4.5	1,140	0	
.....	.....	.....	.....	.....	.....	1,000	902.0	22.1	.....	68	18.09	nw.	3.8	980	0	
.....	.....	.....	.....	.....	.....	750	928.6	25.3	.....	65	20.97	w.	2.8	735	0	
.....	.....	.....	.....	.....	.....	500	955.3	28.5	.....	63	24.51	wsw.	1.7	490	0	
11:01	966.5	29.8	62	sw.	1.3	396	966.5	29.8	.....	62	26.02	sw.	1.3	388	.....	Few st.Cu., nnw.; Few cu., nnw.

July 23, 1917.

A. M.																
6:54	968.6	23.5	75	ene.	3.1	396	968.6	23.5	.....	75	21.72	ene.	3.1	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	957.0	21.7	.....	76	19.73	ene.	5.0	490	0	
6:59	968.6	23.6	75	ene.	3.1	531	953.7	21.2	1.70	76	19.14	ene.	5.6	521	0	
7:16	968.8	23.9	74	ene.	4.0	715	933.9	24.2	−1.63	46	13.89	ne.	7.6	701	0	
.....	.....	.....	.....	.....	.....	750	930.2	24.0	.....	46	13.73	ne.	7.6	773	0	
.....	.....	.....	.....	.....	.....	1,000	904.0	22.5	.....	49	13.36	nne.	7.3	980	0	
.....	.....	.....	.....	.....	.....	1,250	878.5	21.0	.....	52	12.93	nne.	7.1	1,225	0	
.....	.....	.....	.....	.....	.....	1,500	854.0	19.5	.....	55	12.47	n.	6.9	1,470	540	
8:02	969.2	25.2	64	ene.	3.6	1,568	847.3	19.1	0.60	56	12.38	n.	6.8	1,537	730	
.....	.....	.....	.....	.....	.....	1,750	829.8	17.9	.....	52	10.67	n.	6.8	1,750	870	
.....	.....	.....	.....	.....	.....	2,000	806.1	16.3	.....	48	8.89	n.	6.7	1,960	1,040	
.....	.....	.....	.....	.....	.....	2,250	782.9	14.7	.....	43	7.19	n.	6.7	2,205	1,040	
.....	.....	.....	.....	.....	.....	2,500	760.2	13.1	.....	38	5.73	n.	6.6	2,450	1,080	
11:05	968.9	29.1	51	ne.	4.0	2,585	752.6	12.5	0.65	36	5.22	n.	6.6	2,533	1,500	
.....	.....	.....	.....	.....	.....	2,750	737.8	11.6	.....	34	4.64	n.	7.7	2,694	.....	
.....	.....	.....	.....	.....	.....	3,000	716.2	10.1	.....	31	3.83	n.	9.4	2,939	.....	
.....	.....	.....	.....	.....	.....	3,250	694.7	8.7	.....	28	3.15	n.	11.0	3,184	.....	
.....	.....	.....	.....	.....	.....	3,500	673.7	7.3	.....	25	2.56	n.	12.7	3,429	.....	
.....	.....	.....	.....	.....	.....	3,750	653.9	5.8	.....	22	2.03	n.	14.4	3,673	.....	
11:23	968.8	29.7	51	nne.	3.6	3,756	653.5	5.8	0.59	22	2.03	n.	14.4	3,679	.....	
.....	.....	.....	.....	.....	.....	3,750	653.9	5.8	.....	22	2.03	n.	14.4	3,673	.....	
.....	.....	.....	.....	.....	.....	3,500	673.7	7.4	.....	25	2.58	n.	12.9	3,429	.....	
.....	.....	.....	.....	.....	.....	3,250	694.6	8.9	.....	28	3.19	nne.	11.4	3,184	.....	
.....	.....	.....	.....	.....	.....	3,000	716.0	10.4	.....	30	3.78	nne.	9.8	2,939	.....	
11:50	968.7	29.6	49	ne.	3.6	2,762	736.1	11.9	0.73	33	4.60	nne.	8.4	2,706	.....	
.....	.....	.....	.....	.....	.....	2,750	737.3	12.0	.....	33	4.63	nne.	8.4	2,694	.....	
.....	.....	.....	.....	.....	.....	2,500	759.0	13.8	.....	34	5.37	nne.	8.5	2,450	1,050	
.....	.....	.....	.....	.....	.....	2,250	781.5	15.6	.....	34	6.02	nne.	8.6	2,205	860	
.....	.....	.....	.....	.....	.....	2,000	804.6	16.4	.....	35	6.53	ne.	8.7	1,960	520	
.....	.....	.....	.....	.....	.....	1,750	828.6	19.3	.....	36	8.06	ne.	8.9	1,715	140	
P. M.																
12:38	968.3	30.6	46	ne.	3.6	1,662	837.9	19.9	0.66	36	8.37	ne.	8.9	1,629	0	
.....	.....	.....	.....	.....	.....	1,500	852.9	21.0	.....	39	9.70	ne.	8.7	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	878.3	22.6	.....	44	12.07	ne.	8.3	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	904.0	24.3	.....	49	14.89	ne.	8.0	980	0	
.....	.....	.....	.....	.....	.....	750	930.2	25.9	.....	54	18.05	ne.	7.6	735	0	
1:10	968.2	31.4	44	ne.	4.5	742	931.3	26.0	1.39	54	18.15	ne.	7.6	728	0	
.....	.....	.....	.....	.....	.....	500	956.6	28.0	.....	51	19.28	ne.	5.8	490	0	
1:18	968.2	30.8	46	ne.	3.1	396	968.2	30.8	.....	46	20.44	ne.	3.1	388	.....	Cloudless.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 24, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
12:27	967.2	30.2	51	ese.	5.8	396	967.2	30.2	.....	51	21.89	ese.	5.8	388	.....	6/10 Cu., ese.
						500	955.8	28.5	.....	54	21.02	ese.	6.5	490	0	
12:33	967.2	30.2	50	e.	3.1	636	941.5	26.2	1.67	58	19.73	e.	7.4	623	0	
						750	929.2	25.1	.....	62	19.76	e.	7.1	735	0	
						1,000	903.1	22.7	.....	71	19.59	ese.	6.6	980	0	
1:08	967.2	30.3	49	e.	4.5	1,031	900.0	22.4	0.96	72	19.50	ese.	6.5	1,011	0	
						1,250	877.8	20.6	.....	76	18.45	ese.	7.3	1,225	.....	6/10 Cu., ese.
						1,500	852.7	18.6	.....	81	17.36	ese.	8.4	1,470	.....	
2:23	967.1	30.0	51	ese.	3.6	1,687	834.2	17.1	0.86	84	16.38	ese.	9.1	1,653	0	
						1,500	852.7	18.8	.....	79	17.14	ese.	8.6	1,470	0	
						1,250	877.8	21.1	.....	73	18.27	ese.	7.9	1,225	0	
2:46	967.0	30.7	50	ese.	3.6	1,005	902.6	23.4	0.95	67	19.28	ese.	7.3	985	0	
						750	928.4	25.7	.....	60	19.82	se.	6.2	735	0	
4:38	966.9	30.8	49	sse.	4.0	596	945.5	27.3	1.70	55	19.96	sse.	5.5	584	0	
						500	955.5	28.9	.....	52	20.72	sse.	4.8	490	0	
4:43	966.9	30.7	49	se.	4.0	396	966.9	30.7	.....	49	21.65	se.	4.0	388	.....	3/10 Cu., ese.

July 25, 1917.

A. M.																
10:28	968.4	29.9	59	se.	4.0	396	968.4	29.9	.....	59	24.90	se.	4.0	388	.....	3/10 Cu., sse.
						500	956.8	28.2	.....	62	23.72	se.	4.1	490	.....	
10 41	968.3	28.1	62	sse.	3.1	634	942.6	26.0	1.64	66	22.19	sse.	4.3	622	.....	
						750	929.8	25.0	.....	68	21.54	sse.	4.8	735	.....	5/10 Cu., sse.
						1,000	903.6	22.9	.....	72	20.11	sse.	5.9	980	.....	
						1,250	878.2	20.8	.....	76	18.67	se.	7.0	1,225	.....	
						1,500	853.3	18.8	.....	80	17.36	se.	8.2	1,470	.....	
P. M.																
12:52	967.7	30.3	51	se.	3.6	1,560	847.4	18.3	0.83	81	17.03	se.	8.4	1,529	.....	
...a						1,750	829.2	17.0	.....	82	15.89	se.	7.6	1,715	.....	
						2,000	805.2	15.2	.....	83	14.33	sse.	6.4	1,960	.....	
						2,250	781.3	13.4	.....	84	12.91	sse.	5.4	2,205	.....	5/10 Cu., sse.
2:57	967.2	30.4	48	sse.	3.6	2,352	771.9	12.7	0.71	84	12.34	sse.	4.9	2,305	.....	
						2,250	781.3	13.4	.....	82	12.60	sse.	5.3	2,205	.....	
						2,000	805.0	15.2	.....	78	13.47	sse.	6.1	1,960	.....	
						1,750	828.8	17.0	.....	74	14.34	sse.	6.9	1,715	.....	
3:16	967.1	31.6	46	s.	4.0	1,654	838.1	18.4	0.95	71	15.02	sse.	7.6	1,621	.....	
						1,500	853.2	19.8	.....	67	15.48	sse.	7.1	1,470	.....	
						1,250	878.2	22.2	.....	62	16.60	sse.	6.2	1,225	.....	
						1,000	903.5	24.6	.....	56	17.33	sse.	5.3	980	.....	
3:28	967.1	30.8	45	sse.	3.1	759	928.4	26.9	1.46	50	17.72	sse.	4.5	744	.....	
						750	929.6	27.0	.....	50	17.83	sse.	4.5	735	.....	
						500	955.6	30.7	.....	45	19.88	sse.	3.5	490	.....	
3:37	967.0	32.2	43	sse.	3.1	396	967.0	32.2	.....	43	20.68	sse.	3.1	388	.....	3/10 Cu., sse.

July 26, 1917.

P. M.																
7:02	968.9	30.6	57	ene.	2.2	396	968.9	30.6	.....	57	24.74	ene.	2.2	388	.....	2/10 A.Cu., n.
						500	958.0	29.8	.....	57	23.92	ene.	3.2	490	.....	
						750	931.4	27.8	.....	58	21.67	ene.	5.5	735	.....	
7:23	968.9	29.8	57	e.	3.1	910	914.5	26.5	0.79	59	20.43	ene.	7.0	892	.....	
						1,000	905.3	25.8	.....	60	19.94	ene.	6.7	980	.....	
						1,250	880.0	23.7	.....	62	18.17	e.	5.9	1,225	.....	
						1,500	855.6	21.7	.....	65	16.87	e.	5.2	1,470	.....	
						1,750	831.5	18.9	.....	68	14.85	ese.	4.1	1,715	.....	
8:22	969.0	28.1	62	e.	2.2	1,912	815.2	18.4	0.79	69	14.60	ese.	3.9	1,874	.....	
						1,750	831.5	19.7	.....	68	15.61	ese.	4.2	1,715	.....	
						1,500	855.5	21.6	.....	66	17.03	ese.	4.5	1,470	.....	1/10 A.St., n.
						1,250	879.8	23.5	.....	64	18.53	ese.	4.9	1,225	.....	
8:40	969.1	28.0	62	e.	2.7	1,083	896.8	24.8	0.82	63	19.73	ese.	5.2	1,062	.....	
						1,000	905.1	25.5	.....	61	19.91	ese.	5.8	980	.....	
						750	931.2	27.5	.....	57	20.93	e.	7.6	735	.....	
9:03	969.2	27.4	64	e.	2.2	540	953.7	29.3	−1.32	53	21.61	e.	9.1	529	.....	
						500	957.8	28.8	.....	56	22.18	e.	7.2	490	.....	
9:05	969.2	27.4	64	e.	2.2	396	969.2	27.4	.....	64	23.37	e.	2.2	388	.....	Cloudless.

July 27, 1917, series (No. 1).

A. M.																
6:41	968.6	25.0	80	ese.	4.0	396	968.6	25.0	.....	80	25.34	ese.	4.0	388	.....	Few A.Cu., sw.
						500	957.2	26.9	.....	68	24.11	ese.	8.1	490	0	
6:42	968.6	25.0	80	ese.	4.0	571	949.7	28.2	−1.83	60	22.95	ese.	10.9	560	0	
						750	930.5	27.7	.....	56	20.80	ese.	9.7	735	0	
6:52	968.6	25.8	77	ese.	4.5	769	928.8	27.7	0.25	56	20.80	ese.	9.6	754	0	Few A.Cu., sw.
						1,000	904.6	26.0	.....	57	19.16	ese.	8.5	980	0	
						1,250	879.4	24.2	.....	59	17.82	ese.	7.2	1,225	170	
7:30	968.6	26.9	73	ese.	4.9	1,298	874.9	23.8	0.74	59	17.40	ese.	7.0	1,272	200	
						1,500	854.5	22.2	.....	63	16.87	ese.	6.4	1,470	1,230	
						1,750	830.3	20.1	.....	67	15.77	ese.	5.6	1,715	1,570	
9:28	968.4	30.2	62	ese.	6.3	1,927	813.7	18.7	0.81	70	15.10	ese.	5.0	1,889	1,700	Cloudless.
						2,000	806.7	18.3	.....	69	14.51	ese.	5.1	1,960	1,750	
						2,250	783.7	16.9	.....	62	11.94	ese.	5.7	2,205	1,900	
						2,500	761.2	15.5	.....	57	10.04	se.	6.2	2,450	2,060	
						2,750	739.5	14.1	.....	51	8.21	se.	6.8	2,694	2,200	
						3,000	718.2	12.7	.....	45	6.61	se.	7.3	2,939	2,380	
						3,250	697.1	11.3	.....	39	5.22	sse.	7.8	3,184	2,530	
9:38	968.3	30.5	61	se.	5.4	3,384	685.4	10.6	0.62	36	4.60	sse.	8.1	3,315	.....	
						3,250	697.1	11.5	.....	38	5.16	sse.	7.8	3,184	2,530	
						3,000	718.2	13.2	.....	42	6.37	sse.	7.4	2,939	2,370	
						2,750	739.4	14.9	.....	46	7.79	sse.	6.9	2,694	2,210	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 27, 1917, series (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	2,500	761.0	16.6	.....	50	9.44	sse.	6.4	2,450	2,050	
.....	.....	.....	.....	.....	.....	2,250	783.2	18.4	.....	55	11.64	sse.	5.9	2,205	1,750	
10:20	968.1	31.4	58	se.	7.2	2,168	790.9	18.9	0.55	56	12.23	sse.	5.8	2,125	1,630	
.....	.....	.....	.....	.....	.....	2,000	805.9	19.8	.....	57	13.17	sse.	7.1	1,960	1,490	
.....	.....	.....	.....	.....	.....	1,750	829.9	21.2	.....	59	14.86	sse.	8.9	1,715	840	
.....	.....	.....	.....	.....	.....	1,500	854.4	22.6	.....	61	16.73	se.	10.8	1,470	670	
10:58	967.9	32.4	54	se.	8.0	1,318	872.5	23.6	0.70	62	18.06	se.	12.2	1,292	560	
.....	.....	.....	.....	.....	.....	1,250	879.4	24.1	.....	62	18.61	se.	12.1	1,225	490	
.....	.....	.....	.....	.....	.....	1,000	904.6	25.8	.....	62	20.60	se.	11.6	980	220	
11:11	967.9	32.6	51	se.	8.5	803	924.9	27.2	1.33	62	22.37	se.	11.3	787	0	
.....	.....	.....	.....	.....	.....	750	930.3	27.9	.....	61	22.93	se.	10.9	735	0	
.....	.....	.....	.....	.....	.....	500	956.6	31.2	.....	54	24.55	se.	9.2	490	0	
11:17	967.9	32.6	51	se.	8.5	396	967.9	32.6	.....	51	25.09	se.	8.5	388	.....	Cloudless.

July 27, 1917, series (No. 2).

A. M.																
11:59	967.6	33.2	50	se.	8.5	396	967.6	33.2	.....	50	25.44	se.	8.5	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	956.4	31.6	.....	52	24.18	se.	9.1	490	0	
.....	.....	.....	.....	.....	.....	750	929.9	27.9	.....	58	21.80	se.	10.4	735	0	
P. M.																
12:08	967.5	33.0	50	se.	7.2	765	928.4	27.7	1.49	58	21.55	se.	10.5	750	0	
.....	.....	.....	.....	.....	.....	1,000	903.8	26.1	.....	58	19.62	se.	10.5	980	290	
.....	.....	.....	.....	.....	.....	1,250	878.7	24.3	.....	59	17.93	se.	10.5	1,225	600	
.....	.....	.....	.....	.....	.....	1,500	854.0	22.6	.....	60	16.46	sse.	10.4	1,470	810	
12:34	967.4	33.7	47	se.	6.3	1,737	831.2	20.9	0.70	60	14.83	sse.	10.4	1,702	950	
.....	.....	.....	.....	.....	.....	1,750	830.0	20.9	.....	59	14.58	sse.	10.3	1,715	980	
.....	.....	.....	.....	.....	.....	2,000	806.1	21.5	.....	46	11.80	sse.	7.8	1,960	1,470	
1:01	967.2	34.4	42	se.	5.8	2,018	804.6	21.5	−0.21	45	11.54	sse.	7.6	1,978	1,500	
.....	.....	.....	.....	.....	.....	2,250	783.0	19.6	.....	47	10.72	s.	8.0	2,205	1,570	
.....	.....	.....	.....	.....	.....	2,500	760.5	17.5	.....	48	9.60	ssw.	8.5	2,450	1,850	
1:55	966.6	34.8	40	sse.	5.4	2,715	741.5	15.7	0.83	50	8.92	sw.	8.9	2,660	2,200	
.....	.....	.....	.....	.....	.....	2,750	738.8	15.4	.....	51	8.92	sw.	9.1	2,694	2,220	
.....	.....	.....	.....	.....	.....	3,000	717.4	13.3	.....	54	8.25	sw.	10.1	2,939	2,390	
.....	.....	.....	.....	.....	.....	3,250	696.2	11.1	.....	58	7.66	wsw.	11.2	3,184	.....	
2:28	966.2	35.4	37	sse.	5.8	3,382	685.0	10.0	0.88	60	7.37	wsw.	11.8	3,313	.....	
.....	.....	.....	.....	.....	.....	3,250	696.2	11.2	.....	58	7.71	wsw.	12.0	3,184	.....	
.....	.....	.....	.....	.....	.....	3,000	717.4	13.5	.....	54	8.35	wsw.	12.4	2,939	2,270	
.....	.....	.....	.....	.....	.....	2,750	738.9	15.8	.....	49	8.80	sw.	12.9	2,694	2,000	
2:50	966.0	35.5	38	sse.	4.5	2,540	757.1	17.7	0.94	46	9.32	sw.	13.2	2,489	2,000	
.....	.....	.....	.....	.....	.....	2,500	760.6	18.1	.....	45	9.35	sw.	13.0	2,450	1,940	
.....	.....	.....	.....	.....	.....	2,250	783.0	20.4	.....	42	10.07	sw.	11.5	2,205	1,570	
.....	.....	.....	.....	.....	.....	2,000	806.0	22.8	.....	39	10.83	ssw.	10.0	1,960	1,200	
3:01	965.9	36.0	40	sse.	4.9	1,901	815.0	23.7	−1.33	38	11.14	ssw.	9.4	1,863	1,050	
.....	.....	.....	.....	.....	.....	1,750	829.2	21.7	.....	62	16.10	s.	11.1	1,715	820	
3:08	965.8	35.8	40	sse.	5.8	1,705	833.6	21.1	1.00	69	17.27	s.	11.6	1,671	760	
.....	.....	.....	.....	.....	.....	1,500	853.3	23.1	.....	64	18.09	s.	10.7	1,470	440	
3:19	965.6	35.2	40	sse.	4.9	1,274	875.5	25.4	0.98	59	19.15	sse.	9.8	1,249	80	
.....	.....	.....	.....	.....	.....	1,250	877.7	25.6	.....	58	19.05	sse.	9.8	1,225	40	
.....	.....	.....	.....	.....	.....	1,000	902.7	28.1	.....	52	19.78	sse.	9.3	980	0	
3:38	965.2	35.2	40	sse.	5.4	796	923.3	30.1	1.38	47	20.06	sse.	9.0	780	0	
.....	.....	.....	.....	.....	.....	750	928.2	30.7	.....	46	20.32	sse.	8.4	735	0	
.....	.....	.....	.....	.....	.....	500	954.1	34.2	.....	43	23.14	sse.	5.3	490	0	
3:45	965.1	35.6	41	sse.	4.0	396	965.1	35.6	.....	41	23.84	sse.	4.0	388	.....	Cloudless.

July 27, 1917, series (No. 3).

P. M.																
4:24	964.6	36.0	39	sse.	4.5	396	964.6	36.0	.....	39	23.18	sse.	4.5	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	953.6	34.6	.....	41	22.56	sse.	5.9	490	0	
.....	.....	.....	.....	.....	.....	750	927.6	31.2	.....	45	20.46	se.	9.3	735	0	
4:35	964.4	35.5	38	se.	4.5	788	923.4	30.7	1.35	46	20.32	se.	9.8	773	0	
.....	.....	.....	.....	.....	.....	1,000	901.5	29.1	.....	48	19.34	se.	10.4	980	90	
.....	.....	.....	.....	.....	.....	1,250	876.6	27.1	.....	49	17.58	s.	11.2	1,225	210	
.....	.....	.....	.....	.....	.....	1,500	852.3	25.2	.....	51	16.35	ssw.	12.0	1,470	470	
.....	.....	.....	.....	.....	.....	1,750	828.5	23.3	.....	53	15.16	ssw.	12.7	1,715	730	
5:03	964.2	36.0	40	se.	4.9	1,774	826.0	23.1	0.24	53	14.98	ssw.	12.8	1,739	760	
.....	.....	.....	.....	.....	.....	2,000	805.1	21.4	.....	51	13.00	ssw.	13.2	1,960	970	
.....	.....	.....	.....	.....	.....	2,250	782.1	19.6	.....	50	11.40	sw.	13.6	2,205	1,200	
5:19	964.1	36.5	40	se.	6.3	2,469	762.2	18.0	0.73	48	9.91	sw.	13.9	2,419	1,400	
.....	.....	.....	.....	.....	.....	2,500	759.4	17.7	.....	48	9.72	sw.	13.8	2,450	1,420	
.....	.....	.....	.....	.....	.....	2,750	737.5	15.7	.....	49	8.74	sw.	12.9	2,694	1,620	
.....	.....	.....	.....	.....	.....	3,000	716.2	13.7	.....	49	7.68	sw.	12.0	2,939	1,820	
.....	.....	.....	.....	.....	.....	3,250	695.3	11.6	.....	50	6.83	wsw.	11.1	3,184	2,050	
.....	.....	.....	.....	.....	.....	3,500	674.3	9.6	.....	51	6.09	wsw.	10.2	3,429	.....	
6:02	963.8	35.7	39	se.	5.8	3,535	671.9	9.3	0.82	51	5.98	wsw.	10.1	3,463	.....	
.....	.....	.....	.....	.....	.....	3,500	674.3	9.7	.....	51	6.14	wsw.	10.2	3,429	.....	
.....	.....	.....	.....	.....	.....	3,250	695.4	11.7	.....	53	7.29	wsw.	11.0	3,184	2,050	
.....	.....	.....	.....	.....	.....	3,000	716.4	13.8	.....	56	8.84	sw.	11.9	2,939	1,790	
.....	.....	.....	.....	.....	.....	2,750	737.8	15.8	.....	57	10.23	sw.	12.7	2,694	1,460	
6:31	963.8	34.9	41	se.	4.9	2,599	751.1	17.1	0.93	58	11.31	sw.	13.2	2,547	1,270	
.....	.....	.....	.....	.....	.....	2,500	759.6	18.0	.....	56	11.56	sw.	13.3	2,450	1,150	
.....	.....	.....	.....	.....	.....	2,250	782.2	20.3	.....	52	12.39	sw.	13.5	2,205	900	
.....	.....	.....	.....	.....	.....	2,000	805.1	22.7	.....	49	13.52	sw.	13.6	1,960	660	
.....	.....	.....	.....	.....	.....	1,750	828.5	25.0	.....	45	14.26	s.	13.7	1,715	450	
.....	.....	.....	.....	.....	.....	1,500	852.3	27.3	.....	41	14.88	s.	13.9	1,470	310	
7:02	963.8	33.5	47	se.	4.5	1,331	868.5	28.9	0.47	38	15.14	s.	14.0	1,305	210	
.....	.....	.....	.....	.....	.....	1,250	876.6	29.3	.....	39	15.90	s.	13.6	1,225	150	
.....	.....	.....	.....	.....	.....	1,000	901.3	30.5	.....	42	18.35	sse.	12.2	980	70	
.....	.....	.....	.....	.....	.....	750	926.9	31.6	.....	45	20.92	se.	10.8	735	0	
7:19	963.8	32.5	51	se.	5.4	567	945.6	32.5	−0.18	47	23.00	se.	9.8	556	0	
.....	.....	.....	.....	.....	.....	500	952.8	32.4	.....	49	23.84	se.	8.6	490	0	
7:22	963.8	32.2	52	sse.	6.7	396	963.8	32.2	.....	52	25.01	sse.	6.7	388	.....	Cloudless.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 27, 1917, series (No. 4).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
8:00	963.8	31.0	56	se.	4.0	396	963.8	31.0	.....	56	25.17	se.	4.0	388	.....	Cloudless.
						500	952.8	31.2	.....	53	24.09	se.	6.7	490	0	
						750	926.8	31.7	.....	46	21.51	sse.	13.3	735	0	
8:11	963.9	31.0	55	sse.	3.6	810	920.4	31.8	−0.19	44	20.69	sse.	14.9	794	0	
						1,000	901.4	30.5	.....	41	17.91	sse.	15.1	980	0	
						1,250	876.7	28.8	.....	38	15.05	sse.	15.3	1,225	0	
8:21	963.9	30.6	56	se.	3.6	1,301	871.3	28.5	0.67	37	14.40	sse.	15.4	1,275	0	
						1,500	852.3	26.6	.....	40	13.93	s.	15.1	1,470	190	
						1,750	828.5	24.1	.....	44	13.21	s.	14.8	1,715	430	
						2,000	805.0	21.6	.....	48	12.38	ssw.	14.4	1,960	540	
						2,250	781.7	19.2	.....	52	11.57	sw.	14.0	2,205	660	
8:47	964.1	30.2	57	sse.	3.6	2,282	778.9	18.9	0.98	52	11.36	sw.	14.0	2,236	680	
						2,500	758.9	17.1	.....	55	10.72	sw.	12.8	2,450	800	
						2,750	737.2	15.0	.....	59	10.06	wsw.	11.4	2,694	980	
						3,000	716.0	12.9	.....	62	9.23	wsw.	10.0	2,939	.....	
9:28	964.2	29.6	60	sse.	4.0	3,188	700.5	11.3	0.86	65	8.70	wsw.	8.9	3,123	.....	
						3,000	716.0	12.9	.....	63	9.37	wsw.	10.0	2,939	.....	
						2,750	737.2	15.1	.....	59	10.12	wsw.	11.6	2,694	1,030	
						2,500	758.9	17.3	.....	56	11.06	sw.	13.1	2,450	870	
10:03	964.2	29.0	60	sse.	3.1	2,284	778.9	19.2	0.95	53	11.79	sw.	14.4	2,238	780	
						2,250	781.7	19.5	.....	52	11.36	sw.	14.6	2,205	760	
						2,000	805.0	21.9	.....	48	12.61	ssw.	15.8	1,960	610	
						1,750	828.5	24.3	.....	44	13.37	ssw.	17.0	1,715	460	
						1,500	852.3	26.7	.....	39	13.67	s.	18.3	1,470	220	
10:31	964.2	28.5	59	s.	3.6	1,266	875.0	28.9	0.67	35	13.94	s.	19.4	1,241	0	
						1,250	876.7	29.0	.....	35	14.02	s.	18.7	1,225	0	
						1,000	901.6	30.7	.....	35	15.46	s.	18.2	980	0	
						750	926.9	32.4	.....	34	16.54	s.	17.2	735	0	
10:45	964.2	28.2	58	sse.	3.6	713	930.7	32.6	−1.52	34	16.73	s.	17.0	699	0	
						500	953.0	29.4	.....	51	20.91	sse.	8.0	490	0	
10:50	964.2	27.8	60	sse.	3.6	396	964.2	27.8	.....	60	22.42	sse.	3.6	388	.....	Cloudless.

July 27-28, 1917, series (No. 5).

P. M.																
11:32	964.2	27.6	58	s.	4.5	396	964.2	27.6	.....	58	21.43	s.	4.5	388	.....	Cloudless.
						500	953.2	29.1	.....	51	20.55	s.	9.6	490	0	
11:40	964.2	27.3	59	s.	4.5	739	927.7	32.6	−1.46	35	17.22	s.	21.6	725	0	
						750	926.8	32.5	.....	35	17.13	s.	21.5	735	0	
						1,000	901.2	30.6	.....	35	15.38	s.	18.7	980	150	
						1,250	876.3	28.7	.....	34	13.39	ssw.	16.0	1,225	320	
						1,500	852.1	26.8	.....	34	11.98	ssw.	13.2	1,470	510	
A. M.																
12:04	964.2	27.0	58	s.	3.6	1,541	848.1	26.5	0.76	34	11.77	ssw.	12.8	1,510	540	
						1,750	828.2	24.4	.....	36	11.01	sw.	12.3	1,715	720	
						2,000	804.7	21.8	.....	39	10.19	wsw.	11.8	1,960	940	
12:22	964.2	26.8	58	s.	4.5	2,182	787.8	20.0	1.01	41	9.59	wsw.	11.4	2,138	1,090	
						2,250	781.7	19.3	.....	43	9.63	wsw.	11.2	2,205	1,140	
						2,500	759.2	17.0	.....	50	9.69	wsw.	10.6	2,450	1,330	
						2,750	737.5	14.6	.....	58	9.64	wsw.	9.9	2,694	1,520	
						3,000	715.6	12.3	.....	65	9.30	wsw.	9.3	2,939	1,780	
12:55	964.2	27.1	56	s.	4.5	3,068	710.0	11.6	0.96	67	9.15	wsw.	9.1	3,006	.....	
						3,000	715.6	12.3	.....	65	9.30	wsw.	9.4	2,939	1,780	
						2,750	737.5	14.7	.....	60	10.04	wsw.	10.6	2,694	1,510	
						2,500	759.1	17.1	.....	55	10.72	wsw.	11.7	2,450	1,220	
1:34	964.2	28.8	51	s.	6.3	2,271	779.8	19.4	0.92	50	11.26	wsw.	12.8	2,226	950	
						2,250	781.5	19.6	.....	49	11.18	wsw.	12.9	2,205	940	
						2,000	804.6	21.9	.....	44	11.56	sw.	14.1	1,960	780	
						1,750	828.1	24.2	.....	39	11.78	ssw.	15.3	1,715	620	
1:55	964.2	28.8	51	s.	7.6	1,664	836.2	25.0	0.80	37	11.72	ssw.	15.7	1,631	560	
						1,500	852.0	26.3	.....	35	11.98	ssw.	15.6	1,470	380	
						1,250	876.3	28.3	.....	33	12.70	ssw.	15.5	1,225	110	
						1,000	901.1	30.3	.....	30	12.95	ssw.	15.4	980	0	
2:33	964.2	28.5	50	s.	7.2	878	913.5	31.3	−0.60	29	13.26	ssw.	15.4	861	0	
						750	926.7	30.5	.....	35	15.29	ssw.	13.2	735	0	
						500	953.2	29.0	.....	46	18.43	s.	8.9	490	0	
2:48	964.2	28.4	51	s.	7.2	396	964.2	28.4	.....	51	19.74	s.	7.2	388	.....	Cloudless.

July 28, 1917, series (No. 6).

A. M.																
3:38	964.2	27.8	51	s.	7.2	396	964.2	27.8	.....	51	19.06	s.	7.2	388	.....	Cloudless.
						500	952.8	28.4	.....	48	18.58	s.	9.9	490	0	
						750	926.6	29.9	.....	39	16.46	ssw.	16.2	735	0	
3:55	964.2	27.7	51	s.	6.7	905	910.6	30.8	−0.59	34	15.11	sw.	20.2	887	0	
						1,000	900.8	30.1	.....	34	14.51	sw.	19.3	980	0	
4:04	964.2	27.5	52	s.	6.7	1,131	887.9	29.1	0.75	34	13.70	sw.	18.1	1,109	0	
						1,250	876.1	28.0	.....	35	13.23	sw.	17.5	1,225	100	
						1,500	851.5	25.7	.....	38	12.55	sw.	16.2	1,470	300	
						1,750	827.4	23.5	.....	41	11.87	sw.	14.9	1,715	370	
						2,000	803.9	21.2	.....	44	11.08	ssw.	13.6	1,960	360	
						2,250	781.3	18.9	.....	46	10.05	ssw.	12.3	2,205	300	
4:59	964.5	26.7	53	s.	6.7	2,387	769.2	17.7	0.91	48	9.72	ssw.	11.6	2,337	0	
						2,500	759.2	16.7	.....	49	9.31	ssw.	11.6	2,450	220	
						2,750	738.2	14.6	.....	50	8.31	ssw.	11.6	2,694	710	
						3,000	717.2	12.5	.....	52	7.53	ssw.	11.6	2,939	1,200	
						3,250	696.7	10.4	.....	54	6.81	sw.	11.6	3,184	1,680	
						3,500	675.8	8.3	.....	56	6.13	sw.	11.6	3,429	2,170	
						3,750	655.2	6.2	.....	57	5.40	sw.	11.6	3,673	2,660	
5:43	964.7	26.3	55	ssw.	6.7	3,849	646.6	5.4	0.86	58	5.20	sw.	11.6	3,770	.....	
						3,750	655.2	6.3	.....	57	5.44	sw.	11.6	3,673	2,500	
						3,500	675.8	8.5	.....	56	6.22	sw.	11.5	3,429	1,990	
						3,250	696.7	10.6	.....	54	6.90	sw.	11.4	3,184	1,740	
						3,000	717.3	12.8	.....	52	7.69	ssw.	11.4	2,939	1,540	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 28, 1817, series (No. 6)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^5 *ergs.*	*volts.*	
						2,750	738.3	15.0	.....	50	8.52	ssw.	11.3	2,694	1,330	
						2,500	759.4	17.2	.....	49	9.61	ssw.	11.2	2,450	1,130	
6:18	964.8	26.5	54	ssw.	6.7	2,364	771.5	18.4	0.94	48	10.16	ssw.	11.2	2,317	920	
						2,250	781.8	19.5	.....	46	10.43	ssw.	11.5	2,205	570	
						2,000	804.0	21.8	.....	43	11.23	ssw.	12.3	1,960	320	
						1,750	827.6	24.2	.....	39	11.78	sw.	13.0	1,715	70	
						1,500	851.6	26.5	.....	35	12.12	sw.	13.8	1,470	0	
						1,250	876.5	28.9	.....	31	12.35	sw.	14.6	1,225	0	
6:54	964.8	27.0	54	ssw.	7.2	1,235	878.0	29.0	0.36	31	12.42	sw.	14.6	1,211	0	
						1,000	901.7	29.8	.....	32	13.27	wsw.	17.0	980	0	
7:00	964.8	27.2	52	ssw.	6.7	898	911.9	30.2	−0.85	32	13.74	wsw.	18.0	880	0	
						750	927.5	28.9	.....	36	14.34	wsw.	17.1	735	0	
7:12	964.8	27.5	52	ssw.	8.5	498	953.8	26.8	0.78	44	15.51	sw.	15.6	488	0	
7:14	964.8	27.6	52	ssw.	7.6	396	964.8	27.6	.....	52	19.21	ssw.	7.6	388	.....	Cloudless.

July 28, 1917, series (No. 7).

A. M.																
7:52	964.8	28.4	51	ssw.	6.7	396	964.8	28.4	.....	51	19.74	ssw.	6.7	388	.....	Cloudless.
						500	953.5	27.7	.....	50	18.58	sw.	14.1	490	0	
7:56	964.8	28.5	52	ssw.	8.0	591	943.8	27.1	0.67	49	17.58	sw.	20.5	579	0	
						750	926.8	28.4	.....	42	16.25	sw.	20.0	735	0	
8:08	964.9	28.8	51	ssw.	7.2	942	907.5	30.0	−0.83	33	14.01	sw.	19.3	924	0	
						1,000	901.0	29.7	.....	33	13.77	sw.	18.7	980	0	
8:16	964.9	29.2	50	ssw.	7.6	1,214	880.1	28.4	0.59	32	12.38	sw.	16.4	1,190	40	
						1,250	876.2	28.1	.....	33	12.55	sw.	16.4	1,225	80	
						1,500	851.8	25.6	.....	36	11.82	sw.	16.5	1,470	340	
						1,750	827.8	23.2	.....	40	11.38	sw.	16.5	1,715	640	
						2,000	804.5	20.8	.....	44	10.81	ssw.	16.6	1,960	1,140	
						2,250	781.7	18.4	.....	47	9.95	ssw.	16.6	2,205	1,260	
						2,500	759.2	16.0	.....	51	9.27	ssw.	16.7	2,450	1,380	
8:47	965.1	30.2	49	ssw.	7.2	2,551	751.7	15.5	0.96	52	9.16	ssw.	16.7	2,503	1,400	
						2,750	737.5	13.8	.....	56	8.84	ssw.	16.2	2,694	1,600	
						3,000	716.4	11.6	.....	61	8.33	ssw.	15.6	2,939	1,860	
						3,250	695.4	9.3	.....	66	7.74	sw.	15.0	3,184	2,340	
						3,500	674.5	7.1	.....	71	7.16	sw.	14.4	3,429	2,730	
						3,750	654.1	4.9	.....	77	6.67	sw.	13.6	3,673	2,780	
9:50	964.9	32.8	40	sw.	5.8	3,864	644.7	3.9	0.88	79	6.38	sw.	13.5	3,785	.....	
						3,750	654.1	4.9	.....	77	6.67	sw.	13.9	3,673	2,710	
						3,500	674.3	7.1	.....	74	7.47	ssw.	14.9	3,429	2,400	
						3,250	695.2	9.3	.....	71	8.32	ssw.	15.8	3,184	2,100	
						3,000	716.1	11.5	.....	67	9.09	ssw.	16.8	2,939	1,890	
						2,750	737.3	13.6	.....	64	9.97	s.	17.7	2,694	1,740	
10.46	964.6	34.1	37	sw.	7.6	2,527	756.9	15.6	0.98	61	10.81	s.	18.6	2,476	1,600	
						2,500	758.9	15.9	.....	60	10.84	s.	.....	2,450	1,580	
						2,250	781.4	18.3	.....	55	11.57	s.	.....	2,205	1,430	
						2,000	804.0	20.8	.....	49	12.04	s.	.....	1,960	1,230	
						1,750	827.5	23.2	.....	43	12.23	ssw.	.....	1,715	1,090	
						1,500	851.6	25.7	.....	37	12.22	ssw.	.....	1,470	810	
11.20	964.4	34.3	35	ssw.	6.3	1,327	869.0	27.4	0.49	33	12.05	ssw.	.....	1,301	620	
						1,250	876.1	27.7	.....	34	12.63	ssw.	.....	1,225	520	
						1,000	901.0	28.7	.....	38	14.96	ssw.	.....	980	220	
11:32	964.3	35.0	35	ssw.	8.0	816	920.3	29.5	1.36	40	16.50	ssw.	12.2	800	0	
						750	926.8	30.4	.....	39	16.94	ssw.	11.5	735	0	
						500	953.0	33.8	.....	35	18.42	ssw.	9.0	490	0	
11:39	964.3	35.2	34	ssw.	8.0	396	964.3	35.2	.....	34	19.34	ssw.	8.0	388	.....	Cloudless.

July 28, 1917, series (No. 8).

P. M.																
12:16	963.9	36.0	32	sw.	8.5	396	964.1	36.0	.....	32	19.02	sw.	8.5	388	.....	Cloudless.
						500	953.0	34.7	.....	33	18.23	sw.	9.6	490	0	
						750	926.8	31.4	.....	34	15.63	s.	12.2	735	0	
12.24	963.8	36.6	30	ssw.	8.9	840	917.5	30.4	1.26	35	15.20	s.	13.0	824	0	
						1,000	900.7	28.9	.....	37	14.74	s.	13.6	980	150	
						1,250	875.3	25.6	.....	40	13.93	s.	14.6	1,225	380	Cloudless.
						1,500	850.5	24.3	.....	43	13.07	ssw.	15.5	1,470	570	
						1,750	823.8	22.0	.....	46	12.16	ssw.	16.5	1,715	740	
12:45	963.4	37.0	29	s.	14.3	1,849	817.9	21.1	0.92	47	11.76	ssw.	16.9	1,812	810	
						2,000	803.7	19.7	.....	50	11.48	ssw.	16.9	1,960	980	
						2,250	780.8	17.4	.....	56	11.13	ssw.	16.8	2,205	1,280	
12:59	963.1	37.5	28	ssw.	10.7	2,431	761.3	15.7	0.93	60	10.70	ssw.	16.8	2,382	1,500	Few Cu., ssw.
						2,500	758.1	15.2	.....	59	10.19	ssw.	16.7	2,450	1,550	
						2,750	736.2	13.6	.....	57	8.88	ssw.	16.3	2,694	1,710	
						3,000	714.8	12.0	.....	55	7.72	ssw.	15.9	2,939	1,880	
						3,250	693.6	10.4	.....	53	6.68	ssw.	15.5	3,184	2,260	
						3,500	673.2	8.7	.....	51	5.74	ssw.	15.1	3,429	2,650	
						3,750	653.1	7.1	.....	49	4.94	ssw.	14.6	3,673	3,050	
1:59	962.8	37.7	26	ssw.	13.0	3,991	641.1	6.1	0.70	48	4.52	ssw.	14.4	3,821	.....	
						3,750	653.1	7.2	.....	49	4.98	ssw.	14.6	3,673	3,020	
						3,500	673.4	9.1	.....	50	5.78	ssw.	14.9	3,429	2,570	Few Cu., ssw.
						3,250	694.2	10.9	.....	52	6.78	ssw.	15.2	3,184	2,120	
						3,000	715.4	12.8	.....	53	7.83	ssw.	15.5	2,939	1,830	
						2,750	737.0	14.6	.....	54	8.97	ssw.	15.8	2,694	1,600	
2:45	962.6	38.0	25	ssw.	9.4	2,602	749.9	15.7	0.94	55	9.81	ssw.	16.0	2,550	1,470	
						2,500	758.6	16.7	.....	54	10.27	ssw.	16.0	2,450	1,370	Cloudless.
						2,250	780.8	19.0	.....	51	11.20	ssw.	16.0	2,205	1,070	
						2,000	803.6	21.3	.....	48	12.16	s.	16.0	1,960	780	
3:05	962.4	37.9	26	ssw.	8.9	1,886	814.4	22.4	0.99	47	12.73	s.	16.0	1,848	640	
						1,750	826.6	23.7	.....	45	13.19	s.	15.6	1,715	530	

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 28, 1917, series (No. 8)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						1,500	850.2	26.2		41	13.95	s.	14.9	1,470	330	
						1,250	874.5	28.7		36	14.18	s.	14.3	1,225	150	
						1,000	899.5	31.2		32	14.55	s.	13.6	980	60	
3:30	962.2	37.6	24	ssw.	11.2	865	913.7	32.5	1.17	30	14.68	s.	13.2	848	10	
						750	925.0	33.8		29	15.26	s.	12.6	735	0	
						500	951.0	36.9		26	16.23	ssw.	11.3	490	0	
3:43	962.0	38.0	25	ssw.	10.7	396	962.0	38.0		25	16.57	ssw.	10.7	388		Cloudless.

July 28, 1917, series (No. 9).

P. M.																
4:16	961.7	37.6	24	ssw.	10.7	396	961.7	37.6		24	15.56	ssw.	10.7	388		Cloudless.
						500	950.8	36.4		24	14.58	ssw.	12.1	490	0	
						750	924.9	33.4		24	12.35	s.	15.6	735	0	
4:24	961.7	37.6	24	ssw.	10.7	839	915.7	32.4	1.17	24	11.68	s.	16.8	823	0	
						1,000	899.3	30.9		26	11.62	s.	16.6	980	60	
						1,250	874.2	28.4		29	11.22	s.	16.4	1,225	150	
						1,500	849.6	26.0		32	10.76	s.	16.1	1,470	280	
						1,750	825.9	23.6		35	10.20	s.	15.9	1,715	420	
4:47	961.6	37.4	24	sw.	8.9	1,826	818.9	22.9	0.96	36	10.05	s.	15.8	1,790	460	
						2,000	802.3	21.2		40	10.07	s.	15.8	1,960	720	
						2,250	779.5	18.8		45	9.76	s.	15.7	2,205	1,090	
						2,500	756.7	16.4		51	9.51	ssw.	15.7	2,450	1,360	
						2,750	734.5	14.0		56	8.95	ssw.	15.6	2,694	1,590	
						3,000	712.8	11.6		62	8.47	ssw.	15.6	2,939	1,810	
5:25	961.3	36.8	25	ssw.	9.8	3,138	702.1	10.3	0.96	65	8.14	ssw.	15.5	3,074	1,930	
						3,250	691.9	9.7		59	7.10	ssw.	14.7	3,184	2,030	
						3,500	671.8	8.5		46	5.11	ssw.	12.9	3,429	2,240	
5.56	961.1	36.2	27	ssw.	6.7	3,608	663.3	7.9	0.58	40	4.26	ssw.	12.1	3,534		
						3,500	672.0	8.6		44	4.91	ssw.	12.4	3,429	2,230	
						3,250	692.6	10.2		54	6.72	ssw.	13.1	3,184	1,900	
6:17	961.1	35.8	29	ssw.	6.3	3,025	711.8	11.7	1.00	63	8.66	ssw.	13.8	2,964	1,600	
						3,000	713.6	12.0		63	8.84	ssw.	13.9	2,939	1,580	
						2,750	735.1	14.5		58	9.58	ssw.	14.8	2,694	1,370	
						2,500	757.1	17.0		53	10.27	ssw.	15.8	2,450	1,160	
						2,250	779.7	19.5		48	10.88	s.	16.7	2,205	950	
						2,000	802.4	22.0		44	11.63	s.	17.7	1,960	740	
6:52	961.1	34.7	30	sse.	5.8	1,800	821.2	24.0	0.91	40	11.94	s.	18.4	1,764	560	
						1,750	825.9	24.5		39	11.99	s.	18.5	1,715	510	
						1,500	849.5	26.7		36	12.61	s.	18.9	1,470	240	
						1,250	873.7	29.0		33	13.22	s.	19.4	1,225	0	
						1,000	898.8	31.3		29	13.26	s.	19.8	980	0	
7:16	961.1	33.8	30	s.	5.8	845	914.4	32.7	0.56	27	13.36	s.	20.1	828	0	
						750	924.4	33.2		27	13.74	s.	19.4	735	0	
7:21	961.1	33.6	30	s.	6.3	526	947.3	34.5	−0.69	26	14.22	s.	17.8	516	0	
						500	950.1	34.4		27	14.69	s.	15.6	490	0	
7:22	961.1	33.6	30	s.	6.7	396	961.1	33.6		30	15.61	s.	6.7	388		Cloudless.

July 29, 1917.

A. M.																
7:39	962.0	28.4	52	ssw.	9.8	396	962.0	28.4		52	20.12	ssw.	9.8	388		Few Cu., sw.
						500	950.5	27.5		53	19.46	ssw.	13.0	490	0	
						750	924.0	25.4		54	17.52	ssw.	20.6	735	0	
7:49	962.0	28.4	51	ssw.	10.7	763	922.9	25.3	0.84	54	17.42	ssw.	21.0	748	0	
						1,000	898.0	24.2		51	15.40	sw.	19.3	980	0	
8:09	962.0	29.0	52	sw.	9.4	1,193	878.8	23.3	0.47	48	13.73	sw.	17.9	1,170	420	
						1,250	872.9	23.7		46	13.48	sw.	18.1	1,225	460	
						1,500	848.2	25.2		39	12.50	sw.	19.0	1,470	630	Cloudless.
8:55	961.6	30.2	45	sw.	9.4	1,681	830.8	26.4	−0.63	34	11.71	sw.	19.7	1,651	750	
						1,750	824.4	25.8		34	11.30	sw.	19.6	1,715	800	
						2,000	800.8	23.7		35	10.26	sw.	19.2	1,960	970	
						2,250	777.1	21.6		35	9.03	sw.	18.7	2,205	1,140	
						2,500	756.4	19.5		36	8.16	sw.	18.3	2,450	1,320	
9:22	961.4	30.8	45	sw.	11.2	2,614	746.7	18.5	0.85	36	7.67	sw.	18.1	2,561	1,400	
						2,750	734.8	17.2		39	7.65	sw.	17.5	2,694	1,570	
						3,000	713.8	14.9		44	7.45	sw.	16.3	2,939	1,890	
						3,250	693.1	12.6		50	7.30	sw.	15.3	3,184	2,190	
						3,500	672.6	10.3		55	6.89	sw.	14.0	3,429	2,490	
10:14	961.0	32.4	41	sw.	10.7	3,508	671.8	10.2	0.94	55	6.85	sw.	14.0	3,436	2,500	
						3,500	672.6	10.3		55	6.89	sw.	14.0	3,429	2,490	
						3,250	693.1	12.7		50	7.34	sw.	15.2	3,181	2,040	
						3,000	713.8	15.0		44	7.50	sw.	16.4	2,939	1,770	
						2,750	734.9	17.4		39	7.75	sw.	17.6	2,694	1,580	
						2,500	756.6	19.8		34	7.85	sw.	18.7	2,450	1,320	
						2,250	778.0	22.1		30	7.98	sw.	19.9	2,205	920	
11:05	960.8	33.6	36	ssw.	10.7	2,234	780.3	22.3	0.85	30	8.08	sw.	20.0	2,189	890	
						2,000	801.2	24.3		29	8.81	sw.	19.6	1,960	670	
						1,750	824.5	26.4		28	9.64	sw.	19.2	1,715	440	
11:25	960.6	34.4	34	sw.	12.5	1,525	846.1	28.3	−2.24	27	10.39	sw.	18.9	1,495	0	
						1,500	8 8.2	27.7		29	10.77	sw.	18.9	1,470	0	
11:29	960.6	34.6	35	ssw.	12.1	1,364	861.7	24.7	0.88	37	11.51	ssw.	19.0	1,337	0	
						1,250	872.9	25.7		38	12.55	ssw.	18.3	1,225	0	
						1,000	897.9	27.9		40	15.04	ssw.	16.6	980	0	
11:46	960.5	34.6	33	ssw.	12.5	793	919.0	29.7	1.28	42	17.52	ssw.	15.3	778	0	
						750	923.3	30.3		41	17.70	ssw.	14.9	735	0	
						500	949.2	33.5		35	18.11	ssw.	12.6	490	0	
11:52	960.5	34.8	33	ssw.	11.6	396	960.5	34.8		33	18.36	ssw.	11.6	388		Cloudless.

TABLE 4.—*Free-air data from kite flights at Drexel Aerological Station, July, 1917*—Continued.

July 30, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
6:49	963.4	25.6	55	sw.	5.4	396	963.4	25.6	.....	55	18.06	sw.	5.4	388	.....	
						500	952.1	26.4	.....	52	17.90	sw.	11.0	490	0	
6:52	963.4	25.6	55	sw.	5.4	590	942.4	27.1	−0.77	49	17.58	sw.	15.6	578	0	
						750	925.8	26.4	.....	48	16.53	sw.	14.4	735	0	
						1,000	900.1	25.3	.....	47	15.16	wsw.	12.5	980	90	
						1,250	875.0	24.1	.....	46	13.81	wsw.	10.7	1,225	260	
7:25	963.9	26.4	56	wsw.	6.7	1,398	860.3	23.5	0.45	45	13.03	wsw.	9.6	1,370	460	Few Ci.St.
						1,500	850.8	23.7	.....	43	12.60	sw.	9.7	1,470	640	
						1,750	827.0	24.4	.....	40	12.23	sw.	10.1	1,715	820	
8:27	964.4	28.3	51	sw.	8.9	1,936	810.9	24.8	−0.25	37	11.58	ssw.	10.3	1,888	900	
						2,000	803.9	24.1	.....	37	11.11	ssw.	10.2	1,960	940	
						2,250	781.3	21.7	.....	35	9.09	ssw.	9.9	2,205	1,060	
						2,500	758.8	19.4	.....	34	7.66	ssw.	9.5	2,450	1,180	
						2,750	737.2	17.1	.....	33	6.44	ssw.	9.2	2,694	2,110	
9:22	964.1	30.3	45	sw.	8.9	2,885	725.5	15.8	0.94	32	5.74	ssw.	9.0	2,827	2,250	Cloudless.
						3,000	715.6	14.9	.....	31	5.25	ssw.	9.4	2,939	2,370	
						3,250	694.5	12.9	.....	28	4.17	ssw.	10.2	3,184	2,650	
						3,500	674.0	10.9	.....	25	3.26	ssw.	11.1	3,429	2,960	
9:45	963.9	31.0	44	wsw.	8.9	3,681	659.8	9.4	0.80	23	2.71	ssw.	11.7	3,606	3,180	
						3,750	654.1	8.9	.....	23	2.62	ssw.	12.4	3,673	3,270	
						4,000	634.5	7.3	.....	22	2.25	ssw.	14.7	3,918	3,580	
						4,250	615.6	5.6	.....	22	2.00	s.	17.1	4,162	3,880	
						4,500	597.2	3.9	.....	21	1.70	s.	19.4	4,407	.....	
10:05	963.8	31.4	43	sw.	8.9	4,563	592.8	3.5	0.72	21	1.65	s.	20.0	4,468	.....	
						4,500	597.2	4.0	.....	21	1.71	s.	19.6	4,407	.....	
						4,250	615.6	5.9	.....	21	1.95	s.	18.0	4,162	3,870	
						4,000	634.5	7.8	.....	20	2.12	ssw.	16.4	3,918	3,380	
						3,750	654.1	9.7	.....	20	2.41	ssw.	14.6	3,673	2,890	
						3,500	673.9	11.7	.....	20	2.75	ssw.	13.3	3,429	2,390	
10:30	963.6	31.6	42	ssw.	7.6	3,453	677.9	12.0	0.79	20	2.81	ssw.	13.0	3,383	2,300	
						3,250	694.5	13.6	.....	22	3.43	ssw.	13.5	3,184	2,050	
						3,000	715.6	15.6	.....	24	4.25	ssw.	13.8	2,939	1,820	
						2,750	737.2	17.5	.....	26	5.20	ssw.	14.3	2,694	1,680	
						2,500	758.8	19.5	.....	29	6.57	ssw.	14.8	2,450	1,560	
11:04	963.5	32.6	40	ssw.	7.2	2,267	780.0	21.4	0.85	31	7.90	ssw.	15.2	2,222	1,450	
						2,250	781.3	21.6	.....	31	8.00	ssw.	15.1	2,205	1,430	
						2,000	803.9	23.7	.....	31	9.09	ssw.	13.3	1,960	1,060	
						1,750	827.0	25.8	.....	30	9.97	ssw.	11.5	1,715	700	
11:20	963.4	32.9	40	sw.	7.6	1,670	834.1	26.5	−0.32	30	10.39	ssw.	11.0	1,637	590	
						1,500	850.8	26.0	.....	36	12.10	ssw.	10.6	1,470	480	
						1,250	875.0	25.2	.....	45	14.43	sw.	10.1	1,225	330	
11:30	963.3	33.0	39	sw.	7.6	1,139	886.0	24.8	1.01	49	15.34	sw.	9.8	1,117	260	
						1,000	900.1	26.2	.....	48	16.67	sw.	9.8	980	150	
11:41	963.2	33.0	38	ssw.	6.3	804	920.2	28.2	1.37	46	17.60	ssw.	9.7	788	0	
						750	925.8	28.9	.....	45	17.93	ssw.	9.2	735	0	
						500	952.0	32.4	.....	40	19.46	ssw.	6.8	490	0	
11:47	963.2	33.8	38	ssw.	5.8	396	963.2	33.8	.....	38	20.00	ssw.	5.8	388	.....	Cloudless.

July 31, 1917.

A. M.																
7:24	959.8	28.2	51	ssw.	7.6	396	959.8	28.2	.....	51	19.51	ssw.	7.6	388	.....	2/10 A.Cu., sw.
						500	948.8	27.4	.....	51	18.62	ssw.	11.3	490	0	
						750	922.6	25.6	.....	52	17.03	ssw.	20.3	735	0	
7:40	959.8	28.6	51	ssw.	7.6	805	916.3	25.2	0.73	52	16.67	ssw.	22.3	789	0	
						1,000	897.0	25.0	.....	49	15.52	sw.	19.4	980	0	
						1,250	871.0	24.7	.....	45	14.00	wsw.	15.8	1,225	0	
8:01	959.8	29.2	49	ssw.	7.6	1,300	865.3	24.6	0.12	44	13.61	wsw.	14.9	1,283	0	
						1,500	846.7	23.8	.....	44	12.98	wsw.	12.8	1,470	510	
						1,750	822.5	22.9	.....	44	12.29	sw.	10.1	1,715	840	
8:15	959.9	29.4	49	sw.	8.0	1,763	821.6	22.8	0.40	44	12.21	sw.	10.0	1,728	850	
8:27	959.9	29.6	48	sw.	7.6	1,987	800.8	22.3	0.22	43	11.58	wsw.	16.8	1,947	1,150	4/10 A.Cu., sw.
						2,000	799.7	21.2	.....	43	10.83	wsw.	16.9	1,960	1,170	
						2,250	777.0	20.1	.....	44	10.35	wsw.	17.2	2,205	1,560	
						2,500	754.7	18.1	.....	44	9.14	sw.	17.6	2,450	1,960	
8:32	960.0	29.6	48	ssw.	8.0	2,592	746.8	17.3	0.83	44	8.69	sw.	17.8	2,540	2,100	
						2,750	733.3	15.8	.....	48	8.62	sw.	18.3	2,694	2,280	
						3,000	712.1	13.3	.....	54	8.25	sw.	19.0	2,939	2,570	
						3,250	691.2	10.9	.....	60	7.82	sw.	19.8	3,184	3,060	
						3,500	670.6	8.4	.....	66	7.27	sw.	20.6	3,429	3,540	
9:20	960.0	30.8	47	sw.	7.6	3,644	659.3	7.0	0.93	69	6.91	sw.	21.0	3,570	3,760	
						3,750	650.5	6.1	.....	70	6.59	sw.	21.0	3,673	3,910	
						4,000	631.0	4.1	.....	73	5.93	sw.	20.9	3,918	4,270	
						4,250	612.1	2.0	.....	76	5.37	sw.	20.8	4,162	.....	1/10 A.Cu., sw.
10:09	959.7	32.2	42	ssw.	8.9	4,446	597.4	0.4	0.86	78	4.91	sw.	20.7	4,354	.....	
						4,250	612.1	2.2	.....	77	5.51	sw.	20.8	4,162	.....	
						4,000	631.0	4.5	.....	76	6.40	sw.	20.9	3,918	3,490	
						3,750	650.3	6.7	.....	75	7.36	sw.	20.9	3,673	3,030	
10:46	959.5	33.6	39	wsw.	8.9	3,576	664.5	8.3	0.95	74	8.10	sw.	21.0	3,503	2,800	
						3,500	670.3	9.0	.....	72	8.27	sw.	20.9	3,429	2,720	
						3,250	691.0	11.4	.....	66	8.90	sw.	20.7	3,184	2,450	
						3,000	712.1	13.7	.....	60	9.41	sw.	20.4	2,939	2,130	
						2,750	733.3	16.1	.....	55	10.07	sw.	20.1	2,694	1,760	1/10 A.St., wsw.; 1/10 A.Cu., sw
						2,500	754.7	18.5	.....	49	10.44	sw.	19.8	2,450	1,400	
11:24	959.4	34.1	36	wsw.	6.7	2,339	769.1	20.0	0.10	45	10.52	sw.	18.7	2,292	1,160	
						2,250	777.0	20.1	.....	46	10.82	sw.	17.0	2,205	1,040	
						2,000	799.7	20.3	.....	48	11.43	sw.	12.1	1,960	670	
11:38	959.4	34.5	36	sw.	7.2	1,829	815.8	20.5	0.75	50	12.06	sw.	8.8	1,793	430	
						1,750	822.8	21.2	.....	50	12.59	sw.	8.8	1,715	310	
						1,500	847.1	23.0	.....	52	14.61	sw.	8.9	1,470	0	
						1,250	871.8	24.9	.....	53	16.70	sw.	9.0	1,225	0	4/10 A.Cu., sw.; 1/10 Cu., sw.
P. M.																
12:01	959.4	34.9	36	sw.	7.2	1,192	877.5	25.3	1.02	53	17.10	sw.	9.0	1,169	0	
						1,000	897.0	27.3	.....	49	17.79	sw.	9.1	980	0	
12:15	959.4	34.6	35	ssw.	7.2	771	920.2	29.6	1.44	44	18.25	ssw.	9.3	756	0	
						750	922.4	29.9	.....	43	18.15	ssw.	9.2	735	0	
						500	948.5	33.5	.....	37	19.15	ssw.	7.8	490	0	
12:21	959.4	35.0	34	ssw.	7.2	396	959.4	35.0	.....	34	19.12	ssw.	7.2	388	.....	4/10 A.Cu., sw.; 2/10 Cu., sw.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917.*

August 1, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
6:54	970.3	19.4	75	nne.	2.7	396	970.3	19.4	.....	75	16.90	nne.	2.7	388	.....	2/10 Ci. Cu., wnw.; 1/10 A.Cu., wnw.
						500	958.4	20.7	.....	46	11.23	nne.	9.2	490	0	
6:56	970.3	19.4	74	nne.	2.7	519	956.5	20.9	−1.22	41	10.14	nne.	10.4	509	0	
						750	931.2	19.8	.....	38	8.78	nne.	9.7	735	0	
7:15	970.6	20.1	70	n.	2.7	885	917.1	19.2	0.46	37	8.23	nne.	9.3	868	230	
						1,000	904.8	18.5	.....	34	7.24	nne.	8.9	980	430	
						1,250	879.0	17.0	.....	28	5.43	n.	8.0	1,225	830	Cloudless.
7:50	971.1	21.1	61	n.	3.1	1,501	853.9	15.6	0.58	21	3.72	nnw.	7.1	1,471	980	
						1,750	829.0	14.4	.....	20	3.28	nnw.	9.5	1,715	1,370	
						2,000	804.8	13.1	.....	18	2.71	nnw.	12.0	1,960	1,750	
						2,250	781.2	11.8	.....	17	2.35	nnw.	14.4	2,205	2,440	
8:19	971.5	22.1	54	ne.	3.6	2,478	760.6	10.7	0.50	16	2.06	nnw.	16.6	2,428	3,100	
						2,500	758.1	10.6	.....	16	2.04	nnw.	16.7	2,450	3,150	
						2,750	736.0	8.9	.....	20	2.28	nnw.	18.3	2,694	3,660	
						3,000	713.9	7.3	.....	24	2.46	nnw.	20.0	2,939	4,170	
						3,250	693.0	5.6	.....	28	2.55	w.	21.6	3,184	4,750	
						3,500	672.4	4.0	.....	32	2.60	w.	23.2	3,429	5,370	
9:21	972.2	24.4	42	nne.	3.1	3,658	659.6	2.9	0.66	35	2.64	*R.*	24.2	3,583	.....	
						3,500	672.7	4.0	.....	33	3.68	w.	22.9	3,429	5,190	
						3,250	693.8	5.6	.....	30	2.73	w.	20.9	3,184	4,360	
						3,000	715.1	7.3	.....	28	2.86	wnw.	18.9	2,939	3,640	
						2,750	737.1	9.0	.....	25	2.87	wnw.	16.9	2,694	3,020	
						2,500	759.8	10.6	.....	22	2.81	wnw.	14.9	2,450	2,390	
10:37	972.4	27.3	35	nnw.	1.8	2,491	760.6	10.7	0.46	22	2.83	wnw.	14.8	2,441	2,360	
						2,250	782.8	11.8	.....	24	3.32	nw.	12.9	2,205	1,790	
						2,000	806.3	13.0	.....	26	3.89	nw.	10.9	1,960	1,200	
						1,750	830.8	14.1	.....	28	4.51	nnw.	8.9	1,715	610	
10:54	972.3	28.0	28	nnw.	2.7	1,602	845.5	14.8	0.85	29	4.88	nnw.	7.7	1,570	260	
						1,500	855.7	15.7	.....	30	5.35	nnw.	7.3	1,470	170	
						1,250	881.4	17.8	.....	34	6.93	n.	6.5	1,225	0	
						1,000	907.3	19.9	.....	37	8.60	n.	5.6	980	0	
11:14	972.3	27.7	26	n.	3.1	992	908.1	20.0	1.41	37	8.65	n.	5.6	973	0	
						750	933.9	23.4	.....	33	9.50	n.	4.6	735	0	
						500	960.7	26.9	.....	29	10.28	n.	3.5	490	0	
11:43	972.3	28.4	27	n.	3.1	396	972.3	28.4	.....	27	10.45	n.	3.1	388	.....	Cloudless.

August 2, 1917.

P. M.																
12:32	972.4	20.1	79	se.	4.5	396	972.4	20.1	.....	79	18.59	se.	4.5	388	.....	1/10 Ci.St., w.; 4/10 A.Cu., wnw.; 3/10 St. Cu., w.
						500	960.6	19.2	.....	80	17.80	sse.	10.5	490	50	
12:34	972.4	20.3	79	se.	3.6	535	956.9	18.9	0.86	81	17.69	sse.	12.5	524	60	
12:36	972.4	20.5	78	se.	3.6	742	934.3	22.4	−1.69	62	16.80	s.	15.3	728	150	
						750	933.7	22.4	.....	62	16.80	s.	15.3	735	150	
						1,000	907.2	21.5	.....	61	15.65	ssw.	15.8	980	970	4/10 Ci.St., w.; 3/10 St.Cu., w.
						1,250	881.2	20.7	.....	61	14.90	ssw.	16.3	1,225	1,910	
						1,500	856.2	19.9	.....	60	13.94	sw.	16.8	1,470	2,240	
1:07	972.3	23.1	68	sse.	3.1	1,698	836.6	19.2	0.33	60	13.35	sw.	17.2	1,664	2,500	
						1,750	831.8	19.2	.....	60	13.35	sw.	17.2	1,715	2,740	
						2,000	807.5	16.4	.....	73	13.61	wsw.	16.8	1,960	3,840	
						2,250	784.0	14.1	.....	83	13.35	wsw.	16.5	2,205	4,870	7/10 Ci.St., w.; 1/10 St.Cu., w.
						2,500	761.1	11.7	.....	94	12.92	w.	16.2	2,450	5,780	Altitude of St.Cu. base about 2,550 m.
1:36	972.5	23.3	69	sse.	4.5	2,653	747.8	10.3	0.93	100	12.53	w.	16.0	2,600	6,310	
						2,750	739.1	11.0	.....	75	9.85	w.	13.4	2,694	7,560	3/10 Ci.St., w.; 2/10 St.Cu., w.
2:32	972.6	24.6	69	s.	3.6	2,890	726.9	12.1	−0.76	38	5.37	w.	9.7	2,832	7,630	
						3,000	717.1	11.2	.....	44	5.85	w.	10.8	2,939	7,680	
						3,250	695.8	9.2	.....	57	6.63	w.	13.2	3,184	7,800	
						3,500	675.2	7.2	.....	71	7.21	w.	15.7	3,429	7,910	
2:43	972.6	25.3	63	se.	3.1	3,686	660.3	5.7	0.78	81	7.42	w.	17.5	3,610	8,000	
						3,500	675.2	7.1	.....	71	7.16	w.	15.5	3,429	7,360	
						3,250	695.9	9.0	.....	57	6.54	w.	12.8	3,184	6,490	
						3,000	717.1	10.9	.....	44	5.74	w.	10.1	2,939	5,620	
2:56	972.6	24.8	65	s.	3.1	2,758	737.8	12.8	−0.61	31	4.58	w.	7.5	2,702	5,080	
						2,750	739.0	12.8	.....	34	5.03	w.	7.5	2,694	5,070	
2:59	972.6	24.6	66	s.	3.1	2,561	755.6	11.6	0.73	97	13.25	w.	7.5	2,509	4,740	
						2,500	761.1	12.0	.....	95	13.33	w.	7.9	2,450	4,620	9/10 St.Cu., w.
						2,250	784.1	13.9	.....	86	13.66	w.	9.7	2,205	3,830	Altitude of St.Cu. base about 2,250 m.
						2,000	807.5	15.7	.....	76	13.56	wsw.	11.4	1,960	2,880	
3:25	972.5	24.2	66	sse.	3.1	1,770	829.6	17.4	0.58	68	13.51	wsw.	13.0	1,735	2,000	
						1,750	831.8	17.5	.....	68	13.60	sw.	13.2	1,715	1,950	
						1,500	856.2	19.0	.....	70	15.38	sw.	15.4	1,470	1,110	
3:32	972.4	23.2	65	sse.	2.7	1,249	881.1	20.4	−0.56	72	17.26	ssw.	17.6	1,224	260	
						1,000	907.1	19.0	.....	76	16.70	s.	11.0	980	190	
3:40	972.4	23.1	68	s.	3.1	912	916.2	18.5	0.99	77	16.40	sse.	8.7	894	160	
						750	933.2	20.1	.....	74	17.41	sse.	6.9	735	110	
						500	960.6	22.6	.....	70	19.20	s.	4.2	490	30	
3:47	972.4	23.6	68	s.	3.1	396	972.4	23.6	.....	68	19.81	s.	3.1	388	.....	7/10 St.Cu., w.

August 3, 1917.

A. M.																
7:24	973.0	20.0	74	e.	3.1	396	973.0	20.0	.....	74	17.30	e.	3.1	388	.....	Cloudless.
						500	961.3	20.2	.....	64	15.16	e.	7.4	490	0	
7:28	973.0	20.3	74	ene.	4.0	651	944.7	20.4	−0.16	59	11.68	ese.	13.7	638	0	
						750	934.0	20.1	.....	55	12.94	ese.	12.5	735	0	
						1,000	907.4	19.2	.....	67	14.91	se.	9.3	980	580	
7:53	973.0	21.6	71	e.	4.0	1,103	896.7	18.9	0.33	72	15.72	se.	8.0	1,081	860	
						1,250	881.2	19.5	.....	60	13.60	se.	7.9	1,225	2,350	
9:12	972.5	23.4	62	sse.	5.8	1,349	871.2	19.9	−0.41	52	12.08	se.	7.9	1,322	2,480	
						1,500	856.0	19.5	.....	54	12.24	se.	5.8	1,470	2,660	
11:23	971.8	23.3	56	se.	4.9	1,670	839.4	19.0	0.28	57	12.52	sse.	3.4	1,637	2,840	
						1,750	831.6	18.8	.....	58	12.59	s.	6.7	1,715	2,920	Cloudless.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 3, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁸ ergs.*	*volts.*	
1:32	970.6	28.2	52	sse.	4.9	1,833	823.2	18.5	0.31	59	12.57	ssw.	10.2	1,797	3,000	Few Ci.St. near nw. horizon.
						2,000	807.5	17.7		56	11.34	ssw.	10.0	1,960	3,310	
1:42	970.5	28.9	51	sse.	4.5	2,220	786.8	16.6	0.49	53	10.01	sw.	9.8	2,176	3,710	
						2,250	784.3	16.4		53	9.88	sw.	9.9	2,205	3,770	
						2,500	761.8	14.4		50	8.20	sw.	11.0	2,450	4,190	
						2,750	739.8	12.4		48	6.91	wsw.	12.0	2,694	3,900	
						3,000	717.6	10.5		46	5.84	wsw.	13.0	2,939		
1:55	970.4	29.9	52	sse.	4.5	3,087	709.9	9.8	0.86	45	5.45	wsw.	13.4	3,024		
						3,000	717.5	10.6		44	5.62	wsw.	13.4	2,939		
						2,750	739.4	12.9		40	5.95	sw.	13.3	2,694	3,460	
						2,500	761.4	15.3		36	6.26	sw.	13.3	2,450	3,080	
2:10	970.2	30.2	51	se.	6.3	2,442	766.8	15.8	0.61	35	6.28	sw.	13.3	2,393	3,000	
						2,250	783.9	17.0		38	7.36	sw.	12.6	2,205	2,260	
						2,000	807.5	18.5		42	8.95	ssw.	11.6	1,960	2,000	
						1,750	830.7	20.0		46	10.75	s.	10.6	1,715	2,000	
						1,500	855.3	21.5		50	12.82	s.	9.6	1,470	1,690	
						1,250	880.3	23.1		54	15.27	sse.	8.6	1,225	1,280	
2:35	969.9	30.0	51	se.	4.9	1,210	884.4	23.3	0.34	55	15.74	sse.	8.5	1,186	1,200	
						1,000	905.8	24.0		57	17.01	se.	9.3	980	910	
2:45	969.8	29.6	52	ese.	4.9	798	926.7	24.7	1.12	58	18.05	se.	10.1	782	610	
						750	931.9	25.2		57	18.27	se.	9.4	735	550	
						500	958.3	28.0		54	20.42	se.	6.0	490	170	
2:51	969.7	29.2	53	se.	4.5	396	969.7	29.2		53	21.48	se.	4.5	388		Few Ci.St. on nw. horizon.

August 4, 1917.

A. M.																
6:34	965.4	23.9	70	ssw.	7.6	396	965.4	23.9		70	20.76	ssw.	7.6	388		Few A.Cu.
						500	954.0	24.3		66	20.06	ssw.	10.6	490	0	
						750	927.4	25.4		56	18.17	ssw.	17.8	735	0	
						1,000	901.6	26.5		46	15.93	ssw.	24.9	980	110	
6:55	965.2	24.3	69	ssw.	7.6	1,010	900.2	26.5	−0.42	46	15.93	ssw.	25.2	990	130	
						1,250	876.2	24.9		45	14.18	ssw.	23.2	1,225	620	
						1,500	851.1	23.3		43	12.30	ssw.	21.1	1,470	1,130	
7:08	965.1	24.5	69	ssw.	7.6	1,553	846.1	22.9	0.66	43	12.01	ssw.	20.6	1,522	1,240	
						1,750	827.3	21.7		43	11.16	ssw.	18.6	1,715	1,440	
						2,000	803.8	20.1		42	9.88	ssw.	16.1	1,960	1,700	
						2,250	780.6	18.5		42	8.95	ssw.	13.6	2,205	1,950	
7:31	965.0	24.7	69	ssw.	10.3	2,395	767.5	17.6	0.63	42	8.45	ssw.	12.2	2,347	2,100	
						2,500	758.0	16.7		44	8.36	ssw.	12.2	2,450	2,390	
						2,750	736.1	14.7		50	8.36	sw.	12.3	2,694	2,820	
						3,000	714.7	12.6		55	8.02	sw.	12.4	2,939	2,880	
8:02	964.8	25.8	64	ssw.	9.4	3,042	711.0	12.3	0.86	56	8.01	sw.	12.4	2,980	2,900	
						3,000	714.7	12.7		55	8.08	sw.	12.6	2,939	3,090	Cloudless.
						2,750	736.1	14.9		51	8.64	sw.	13.6	2,694	3,350	
						2,500	758.0	17.2		46	9.03	sw.	14.6	2,450	2,950	
9:08	964.4	27.6	60	ssw.	10.3	2,342	772.0	18.6	0.77	43	9.21	sw.	15.2	2,295	2,700	
						2,250	780.6	19.3		42	9.40	sw.	16.0	2,205	2,600	
						2,000	803.2	21.2		41	10.32	sw.	18.1	1,960	2,310	
						1,750	826.2	23.2		39	11.09	ssw.	20.3	1,715	2,020	
						1,500	850.2	25.1		37	11.79	ssw.	22.4	1,470	1,730	
9:41	964.0	28.6	58	ssw.	10.3	1,383	861.7	26.0	−0.75	36	12.10	ssw.	23.4	1,356	1,600	
						1,250	874.4	25.0		46	14.57	ssw.	21.2	1,225	1,370	
10:06	963.8	29.4	56	s.	8.9	1,010	898.9	23.2	1.21	64	18.20	s.	17.2	990	670	
						1,000	899.8	23.3		64	18.31	s.	17.1	980	640	
						750	925.9	26.3		59	20.19	s.	13.7	735	0	
						500	952.8	29.3		55	22.42	s.	10.3	490	0	
10:19	963.8	30.6	53	s.	8.9	396	963.8	30.6		53	23.28	s.	8.9	388		Cloudless.

August 5, 1917.

P. M.																
12:45	974.0	24.3	62	ne.	2.7	396	974.0	24.3		62	18.84	ne.	2.7	388		4/10 Ci.St., sw.; 1/10 Cu., ne.
						500	962.1	23.1		58	16.40	ne.	4.2	490	0	
12:58	974.0	25.4	49	ene.	0.9	728	937.6	20.5	1.15	49	11.82	ene.	7.4	714	0	
						750	935.2	20.3		49	11.67	ene.	7.4	735	0	
						1,000	908.3	18.1		53	11.01	ene.	7.0	980	0	
1:11	974.0	25.8	45	ene.	1.8	1,142	893.5	16.9	0.87	55	10.59	ene.	6.8	1,120	0	
						1,250	882.1	15.9		55	9.94	ene.	6.3	1,225	0	
						1,500	856.4	13.7		54	8.47	ne.	5.2	1,470	0	
2:24	973.8	26.1	45	ne.	2.2	1,628	843.4	12.6	0.92	54	7.88	ne.	4.6	1,596	0	2/10 Ci.St., sw.; 2/10 Cu., ne.
						1,500	856.4	13.8		53	8.36	ne.	4.8	1,470	0	
						1,250	882.1	16.2		50	9.21	ne.	5.1	1,225	0	
2:37	973.8	26.1	38	ne.	1.8	1,092	898.5	17.7	0.94	48	9.72	ne.	5.3	1,071	0	
						1,000	908.3	18.6		47	10.07	ne.	5.6	980	0	
						750	935.2	20.9		43	10.63	ne.	6.3	735	0	
2:46	973.7	26.1	36	ene.	1.8	679	942.7	21.6	1.56	42	10.84	ene.	6.5	666	0	
						500	962.1	24.4		41	12.53	ene.	3.5	490	0	
2:56	973.6	26.0	40	ene.	1.8	396	973.6	26.0		40	13.45	ene.	1.8	388		1/10 Ci.St., sw.; 1/10 Cu., ne.

August 6, 1917.

A. M.																
7:34	972.4	17.7	88	ene.	4.0	396	972.4	17.7		88	17.62	ene.	4.0	388		2/10 A.St., wsw.; 8/10 St.Cu., sse.
						500	960.8	17.9		77	15.79	e.	4.5	490	0	
						750	933.1	18.5		51	10.86	se.	11.9	735	140	
7:50	972.4	18.1	87	e.	3.6	816	925.9	18.6	−0.21	44	9.43	se.	13.4	800	220	
						1,000	906.0	17.2		49	9.61	se.	12.5	980	430	
8:00	972.3	18.2	86	e.	3.6	1,252	879.9	15.4	0.73	55	9.62	se.	11.2	1,227	710	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 6, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						1,500	854.1	13.7		65	10.19	se.	10.6	1,470	1,270	
						1,750	828.9	12.1		74	10.45	sse.	10.0	1,715	1,750	
						2,000	804.8	10.4		84	10.59	sse.	9.4	1,960	2,100	
						2,250	781.0	8.7		94	10.58	s.	8.8	2,205	2,100	
9:04	972.0	19.1	77	ese.	5.4	2,402	766.9	7.7	0.67	100	10.51	s.	8.4	2,354	2,100	
						2,500	757.3	7.1		100	10.09	s.	9.1	2,450	2,480	
						2,750	734.8	5.7		100	9.16	s.	10.7	2,694	3,420	
						3,000	712.3	4.3		100	8.31	ssw.	12.4	2,939	4,310	
						3,250	691.4	2.9		100	7.53	ssw.	14.1	3,184		1/10 Ci.St., wsw.; 9/10 St.Cu., sse.
10:10	972.0	20.2	70	ese.	4.5	3,360	682.1	2.3	0.60	100	7.21	ssw.	14.8	3,292		
						3,250	691.4	3.0		100	7.58	ssw.	14.6	3,184		
						3,000	712.3	4.6		100	8.48	ssw.	14.3	2,939	4,500	2/10 A.St., wsw.; 8/10 St.Cu., s.
						2,750	734.5	6.2		100	9.48	ssw.	13.9	2,694	4,040	
						2,500	757.0	7.8		100	10.58	ssw.	13.5	2,450	3,503	
10:44	972.0	20.5	69	se.	4.5	2,438	763.5	8.2	0.51	100	10.87	ssw.	13.4	2,389	3,400	
						2,250	780.4	9.2		99	11.52	ssw.	13.1	2,205	3,050	
						2,000	804.3	10.4		98	12.36	s.	12.7	1,960	2,580	
						1,750	828.9	11.7		96	13.20	s.	12.4	1,715	2,100	
						1,500	854.1	13.0		95	14.23	sse.	12.0	1,470	1,610	
11:21	971.6	21.6	69	ese.	5.8	1,293	875.1	14.0	0.81	94	15.02	sse.	11.7	1,268	1,200	
						1,250	880.0	14.3		92	15.00	sse.	11.5	1,225	1,090	
						1,000	906.0	16.4		83	15.48	sse.	10.3	980	440	
						750	932.9	18.4		73	15.45	se.	9.0	735	0	
11:38	971.3	22.2	67	ese.	4.9	703	937.5	18.8	1.24	71	15.41	se.	8.8	689	0	
						500	959.1	21.3		67	16.97	ese.	6.6	490	0	
11:43	971.2	22.6	65	ese.	5.4	396	971.2	22.6		65	17.83	ese.	5.4	388		3/10 A.St., wsw.; 7/10 St.Cu., s.

August 8, 1917.

A. M.																
6:37	969.6	17.1	89	s.	3.1	396	969.6	17.1		89	17.36	s.	3.1	388		1/10 A.Cu., nw.; 1/10 St.Cu., wsw.
						500	938.0	18.5		75	15.98	s.	5.1	490	0	
6:47	969.6	17.1	90	s.	3.1	741	931.6	21.7	−1.33	44	11.42	ssw.	9.6	727	0	
						750	930.8	21.7		44	11.42	ssw.	9.6	735	0	
6:58	969.6	17.6	88	s.	4.5	984	905.9	22.3	−0.25	46	12.39	sw.	10.8	965	0	
						1,000	904.1	22.2		46	12.31	sw.	10.7	980	0	
						1,250	879.0	20.1		52	12.24	wsw.	9.1	1,225	30	
7:40	970.5	17.8	89	ene.	2.7	1,439	860.3	18.6	0.81	57	12.22	wsw.	7.9	1,411	310	
						1,500	854.1	18.2		58	12.12	wsw.	8.3	1,470	400	
						1,750	830.0	16.4		60	11.19	w.	9.7	1,715	660	1/10 A.Cu., nw.; 3/10 St.Cu., wsw.
8:51	972.1	20.0	81	ne.	3.1	1,967	809.8	14.8	0.72	62	10.43	w.	11.0	1,928	780	
						1,750	830.6	16.4		59	11.00	w.	10.1	1,715		
						1,500	855.2	18.2		55	11.50	w.	9.1	1,470		
9:30	972.3	20.6	78	ene.	3.1	1,415	863.9	18.8	0.37	54	11.72	w.	8.8	1,387		
						1,250	880.6	19.4		56	12.62	wsw.	8.3	1,225		
9:37	972.3	21.0	78	ene.	3.1	1,087	897.2	20.0	−0.92	58	13.56	wsw.	7.9	1,066		
						1,000	906.2	19.2		66	14.68	wsw.	7.9	980		
9:39	972.3	21.1	78	ene.	3.1	849	922.6	17.8	0.79	80	16.30	sw.	7.9	832		
						750	933.1	18.6		79	16.93	s.	6.8	735		
						500	960.6	20.6		76	18.45	ese.	4.2	490		
9:43	972.3	21.4	75	ene.	3.1	396	972.3	21.4		75	19.12	ene.	3.1	388		1/10 St.Cu., wsw.

August 9, 1917 (No. 1).

A. M.																
7:02	978.0	13.2	87	nnw.	5.4	396	978.0	13.2		87	13.20	nnw.	5.4	388		4/10 Ci.St., nw.; 1/10 A.Cu., nw.
						500	965.6	12.7		81	11.90	nnw.	6.8	490	0	
						750	937.5	11.6		67	9.15	nnw.	10.0	735	0	
7:11	978.0	13.8	85	nnw.	7.2	810	931.0	11.3	0.46	64	8.57	nnw.	10.8	794	0	
						1,000	910.0	9.8		68	8.24	nnw.	10.6	980	0	
						1,250	883.4	7.7		74	7.78	n.	10.4	1,225	0	
						1,500	856.9	5.7		80	7.33	n.	10.2	1,470	470	
7:35	978.0	14.3	81	nnw.	8.0	1,665	839.6	4.4	0.81	84	7.03	n.	10.0	1,632	835	
						1,750	831.3	4.9		72	6.24	n.	10.2	1,715	980	
						2,000	806.2	6.3		38	3.63	n.	10.8	1,960	1,400	
7:58	978.0	14.7	77	nnw.	5.8	2,064	793.5	6.9	−0.58	29	2.89	n.	11.0	2,023	1,480	
						2,250	782.0	6.1		31	2.92	n.	11.3	2,205	1,730	3/10 Ci., nw.; Few Cu., nnw.
						2,500	758.1	5.1		34	2.99	nnw.	11.7	2,450	2,260	
8:37	978.0	15.6	72	nnw.	4.0	2,673	742.6	4.4	0.41	36	3.01	nnw.	12.0	2,619	2,680	2/10 Ci., nw.; Few Cu., nnw.
						2,750	735.4	4.3		35	2.91	nnw.	12.9	2,694	2,870	
						3,000	713.6	3.9		33	2.67	nnw.	15.7	2,939	3,480	
8:40	978.0	15.6	72	nnw.	4.0	3,138	701.3	3.7	0.15	32	2.55	nnw.	17.2	3,074	3,820	
						3,250	692.4	3.2		30	2.31	nnw.	18.1	3,184	4,100	
						3,500	671.8	2.0		24	1.69	nnw.	20.0	3,429	4,710	
						3,750	651.6	0.8		19	1.23	nw.	21.9	3,673	5,390	
						4,000	631.5	−0.3		14	0.83	nw.	23.8	3,918	6,080	Few Ci., nw.; Few Cu., nnw.
						4,250	611.7	−1.5		9	0.49	nw.	25.8	4,162	6,770	
9:20	978.0	16.4	67	n.	2.7	4,333	604.8	−1.9	0.54	7	0.37	nw.	26.4	4,243	7,000	
						4,250	611.7	−1.4		8	0.44	nw.	25.5	4,162	6,680	
						4,000	631.5	0.1		10	0.62	nw.	22.7	3,918	5,730	
						3,750	651.6	1.6		12	0.82	nnw.	19.9	3,673	4,770	
						3,500	671.4	3.1		14	1.07	nnw.	17.2	3,429	4,060	
10:21	977.9	17.6	54	n.	2.2	3,321	686.4	4.2	−0.19	16	1.32	nnw.	15.2	3,253	3,590	
						3,250	691.8	4.1		18	1.47	nnw.	13.5	3,184	3,400	Few Cu., nnw.
						3,000	713.0	3.6		23	1.82	nnw.	7.3	2,939	2,820	
10:31	977.8	17.8	51	n.	1.8	2,907	721.9	3.4	0.55	25	1.95	nnw.	5.0	2,848	2,700	
						2,750	735.4	4.3		23	1.91	nnw.	5.4	2,694	2,500	
						2,500	758.1	5.6		19	1.73	nnw.	6.0	2,450	2,180	
						2,250	781.4	7.0		16	1.60	n.	6.5	2,205	1,860	
						2,000	805.5	8.4		12	1.32	n.	7.1	1,960	1,580	
10:45	977.8	17.5	51	nne.	2.2	1,965	809.6	8.6	−0.50	12	1.34	n.	7.2	1,926	1,540	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 9, 1917 (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	1,750	830.8	7.5	.....	16	1.66	n.	8.0	1,715	1,300	
10:48	977.8	17.9	51	nne.	2.2	1,623	844.3	6.9	0.65	19	1.89	n.	8.4	1,591	1,160	
.....	.....	.....	.....	.....	.....	1,500	856.1	7.7	.....	36	3.78	n.	8.8	1,470	1,010	
10:59	977.7	18.8	51	n.	1.8	1,284	879.9	9.1	0.87	65	7.51	n.	9.4	1,259	755	
.....	.....	.....	.....	.....	.....	1,250	882.6	9.4	.....	64	7.55	n.	9.4	1,225	700	
.....	.....	.....	.....	.....	.....	1,000	909.4	11.5	.....	59	8.01	n.	9.4	980	300	
11:08	977.7	18.0	48	n.	1.8	811	931.0	13.2	1.16	55	8.34	n.	9.4	795	0	
.....	.....	.....	.....	.....	.....	750	937.5	13.9	.....	54	8.58	n.	8.3	735	0	
.....	.....	.....	.....	.....	.....	500	965.6	16.8	.....	51	9.76	n.	3.7	490	0	
11:14	977.7	18.0	49	n.	1.8	396	977.7	18.0	.....	49	10.11	n.	1.8	388	.....	Few Cu., nnw.

August 9, 1917 (No. 2).

11 A. M.																
..:56	977.7	18.8	50	nne.	4.9	396	977.7	18.8	.....	50	10.85	nne.	4.9	388	.....	Few Cu., nnw.
.....	.....	.....	.....	.....	.....	500	965.8	17.3	.....	51	11.07	nne.	6.0	490	0	
.....	.....	.....	.....	.....	.....	750	937.3	13.6	.....	53	8.26	n.	8.9	735	0	
P. M.																
12.07	977.7	18.8	50	n.	4.9	786	933.8	13.1	1.46	53	7.99	n.	9.3	771	0	
.....	.....	.....	.....	.....	.....	1,000	909.6	11.2	.....	60	7.98	n.	8.9	980	530	
.....	.....	.....	.....	.....	.....	1,250	883.2	9.0	.....	69	7.92	n.	8.5	1,225	950	
.....	.....	.....	.....	.....	.....	1,500	856.8	6.7	.....	78	7.65	n.	8.1	1,470	1,100	
12:35	977.5	18.8	51	nne.	4.0	1,537	853.1	6.4	0.80	79	7.59	n.	8.0	1,506	1,100	
.....	.....	.....	.....	.....	.....	1,750	831.2	7.5	.....	38	3.94	nnw.	9.1	1,715	1,100	
1:21	977.3	19.1	49	n.	4.9	1,855	820.4	8.0	−0.50	18	1.93	nnw.	9.6	1,818	2,080	Few Cu., n.
.....	.....	.....	.....	.....	.....	2,000	805.9	6.9	.....	13	1.29	nnw.	9.8	1,960	2,160	
2:01	977.0	19.7	51	n.	3.1	2,192	787.2	5.5	0.74	7	0.63	n.	10.0	2,148	2,160	
.....	.....	.....	.....	.....	.....	2,250	781.8	5.4	.....	7	0.45	n.	10.5	2,205	2,150	
.....	.....	.....	.....	.....	.....	2,500	758.4	4.7	.....	7	0.60	n.	12.6	2,450	2,100	
.....	.....	.....	.....	.....	.....	2,750	736.0	4.1	.....	7	0.57	n.	14.7	2,694	2,050	
.....	.....	.....	.....	.....	.....	3,000	713.5	3.5	.....	7	0.55	n.	16.8	2,939	2,000	Altitude of Cu. base about 2,500 m.
2;15	976.9	19.9	52	n.	3.1	3,061	707.7	3.3	0.26	7	0.54	n.	17.3	2,999	.....	
.....	.....	.....	.....	.....	.....	3,000	713.5	3.5	.....	7	0.55	n.	16.5	2,939	2,000	
.....	.....	.....	.....	.....	.....	2,750	736.0	4.1	.....	6	0.49	n.	13.2	2,694	2,000	
2:26	976.9	19.9	52	nw.	3.6	2,564	752.5	4.6	0.49	5	0.42	n.	10.7	2,512	2,000	
.....	.....	.....	.....	.....	.....	2,500	758.4	4.9	.....	5	0.43	n.	10.2	2,450	1,970	
.....	.....	.....	.....	.....	.....	2,250	781.8	6.2	.....	5	0.47	nnw.	8.4	2,205	1,550	
2:32	976.8	19.7	52	n.	3.1	2,018	804.2	7.3	0.08	5	0.51	nnw.	6.7	1,978	1,160	
.....	.....	.....	.....	.....	.....	2,000	805.9	7.3	.....	7	0.72	nnw.	6.7	1,960	1,120	
.....	.....	.....	.....	.....	.....	1,750	831.2	7.5	.....	38	3.94	nnw.	6.9	1,715	740	
2:45	976.8	20.0	52	nnw.	3.6	1,501	856.7	7.7	0.97	68	7.15	nnw.	7.0	1,471	420	
.....	.....	.....	.....	.....	.....	1,250	883.2	10.1	.....	65	8.03	nnw.	7.8	1,225	140	
.....	.....	.....	.....	.....	.....	1,000	909.4	12.6	.....	62	9.05	nnw.	8.7	980	0	
3:06	976.7	20.2	52	nnw.	2.7	779	933.8	14.7	1.44	59	9.87	nnw.	9.4	764	0	
.....	.....	.....	.....	.....	.....	750	936.8	15.1	.....	58	9.95	nnw.	8.9	735	0	
.....	.....	.....	.....	.....	.....	500	964.7	18.7	.....	54	11.65	nnw.	4.5	490	0	
3:13	976.6	20.2	52	nnw.	2.7	396	976.6	20.2	.....	52	12.31	nnw.	2.7	388	.....	Few Cu., n.

August 10, 1917.

P. M.																
8:30	969.6	18.5	72	se.	3.1	396	969.6	18.5	.....	72	15.34	se.	3.1	388	.....	1/10 A.St., wnw.
.....	.....	.....	.....	.....	.....	500	958.5	19.3	.....	60	13.43	se.	8.2	490	0	
8:31	969.6	18.5	72	se.	3.1	538	953.8	19.6	−0.77	56	12.77	se.	10.1	527	0	
8:45	969.7	18.2	73	se.	3.1	731	932.6	18.2	0.73	55	11.50	se.	6.6	717	0	
.....	.....	.....	.....	.....	.....	750	930.9	18.0	.....	55	11.35	se.	6.6	735	0	8/10 A.St., wnw.
.....	.....	.....	.....	.....	.....	1,000	904.5	17.1	.....	60	11.70	se.	7.2	980	0	
.....	.....	.....	.....	.....	.....	1,250	878.3	14.1	.....	64	10.30	sse.	7.8	1,225	0	
.....	.....	.....	.....	.....	.....	1,500	852.2	12.1	.....	69	9.74	sse.	8.4	1,470	0	
9:23	970.1	18.0	73	se.	3.1	1,516	850.5	12.0	0.84	69	9.68	sse.	8.4	1,486	0	
.....	.....	.....	.....	.....	.....	1,500	852.2	12.1	.....	69	9.74	sse.	8.4	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	878.3	14.3	.....	64	10.43	sse.	8.6	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	904.5	16.5	.....	60	11.26	sse.	8.8	980	0	10/10 St., wnw.
9:40	970.2	17.8	75	se.	3.1	831	922.3	18.0	0.68	57	11.76	sse.	8.9	815	0	
.....	.....	.....	.....	.....	.....	750	930.6	18.6	.....	56	12.00	sse.	7.3	735	0	
9:45	970.2	17.8	75	se.	2.7	567	951.1	19.8	−1.17	53	12.24	se.	3.8	556	0	
.....	.....	.....	.....	.....	.....	500	957.5	19.0	.....	62	13.62	se.	3.4	490	0	
9:46	970.2	17.8	75	se.	2.7	396	970.2	17.8	.....	75	15.28	se.	2.7	388	.....	10/10 St., wnw.

August 11, 1917.

A. M.																
7:12	970.1	16.8	78	s.	4.9	396	970.1	16.8	.....	78	14.92	s.	4.9	388	.....	5/10 A.Cu., wnw.; 4/10 St.Cu., wnw.
.....	.....	.....	.....	.....	.....	500	958.5	17.7	.....	62	12.56	s.	10.7	490	0	
7:14	970.1	16.9	78	s.	4.9	554	952.3	18.1	−0.82	53	11.01	s.	13.7	543	0	
.....	.....	.....	.....	.....	.....	750	931.1	17.5	.....	52	10.40	s.	12.2	735	0	
7:21	970.3	17.2	76	sse.	2.7	806	924.9	17.3	0.32	52	10.27	s.	11.8	790	0	
.....	.....	.....	.....	.....	.....	1,000	904.4	15.9	.....	59	10.66	s.	9.9	980	580	
.....	.....	.....	.....	.....	.....	1,250	878.5	14.0	.....	67	10.71	s.	7.5	1,225	110	Sprinkling rain from 7:58 to 8:08 a. m.
8:09	970.8	18.6	69	s.	5.8	1,307	872.6	13.6	0.74	69	10.75	s.	6.9	1,281	0	
.....	.....	.....	.....	.....	.....	1,500	852.9	12.7	.....	71	10.43	s.	7.0	1,470	60	4/10 A.Cu., wnw.; 4/10 St. Cu., wnw.
.....	.....	.....	.....	.....	.....	1,750	828.0	11.6	.....	73	9.97	sse.	7.1	1,715	1,440	3/10 Ci.St., wnw.; 2/10 A. Cu., wnw.
11:25	969.1	23.8	54	s.	5.8	1,879	815.0	11.0	0.45	74	9.72	sse.	7.2	1,842	450	2/10 Ci.St., wnw.
.....	.....	.....	.....	.....	.....	2,000	803.5	10.5	.....	75	9.52	sse.	6.5	1,960	1,430	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 11, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						2,250	780.0	9.6		76	9.08	sse.	5.0	2,205		
						2,500	756.9	8.6		77	8.60	sse.	3.5	2,450		
11:33	969.0	24.5	53	ssw.	5.4	2,638	744.1	8.1	0.38	78	8.42	sse.	2.7	2,585		
						2,500	756.9	8.6		77	8.60	sse.	3.7	2,450		
						2,250	779.4	9.6		75	8.96	sse.	5.5	2,205		
						2,000	802.6	10.6		73	9.33	sse.	7.2	1,960	590	
11:53	968.9	24.6	50	ssw.	5.4	1,979	804.7	10.7	0.60	73	9.40	sse.	7.4	1,940	550	
						1,750	827.0	12.4		69	9.94	sse.	8.0	1,715	60	
P. M.																
12:04	968.8	24.1	52	ssw.	4.9	1,564	845.2	13.2	0.79	65	9.86	sse.	8.4	1,533	0	
						1,500	851.8	13.7		64	10.04	sse.	8.3	1,470	0	
						1,250	877.0	15.7		62	11.06	sse.	8.0	1,225	0	
						1,000	903.3	17.6		59	11.88	s.	7.6	980	0	
						750	930.2	19.6		57	13.00	s.	7.3	735	0	
12:20	968.6	24.8	53	s.	4.0	702	935.2	20.0	1.57	56	13.09	s.	7.2	688	0	
						500	957.1	23.2		52	14.79	s.	5.4	490	0	
12:30	968.4	24.8	50	s.	4.5	396	968.4	24.8		50	15.66	s.	4.5	388		1/10 Ci.St., wnw.; 1/10 Ci. Cu., wnw.

August 12, 1917.

A. M.																
6:50	967.9	16.4	96	nw.	5.4	396	967.9	16.4		96	17.90	nw.	5.4	388		3/10 St., nw.
						500	957.4	15.9		97	17.53	nw.	7.6	490	0	
6:56	967.9	16.6	93	nw.	4.9	621	942.7	15.4	0.45	99	17.32	wnw.	10.2	609	0	
						750	929.4	16.2		66	12.16	wnw.	11.5	735	0	
6:58	967.9	16.6	92	nw.	4.9	773	926.0	16.4	−0.66	60	11.19	wnw.	11.7	758	0	
						1,000	902.0	15.8		56	10.05	wnw.	13.1	980	0	
7:18	968.0	17.0	87	nw.	4.0	1,241	876.6	15.1	0.28	51	8.75	w.	14.6	1,217	0	1/10 Ci.St., wnw.
						1,250	875.9	15.0		51	8.70	w.	14.6	1,225	20	
						1,500	850.2	13.1		52	7.84	w.	14.3	1,470	530	
						1,750	825.0	11.2		52	6.92	w.	14.1	1,715	910	
						2,000	800.7	9.3		53	6.21	w.	13.8	1,960	1,140	
7:50	968.2	17.7	81	nw.	4.0	2,045	796.5	9.0	0.76	53	6.08	w.	13.8	2,004	1,170	
						2,250	777.0	8.0		51	5.47	w.	14.2	2,205	1,570	
						2,500	753.8	6.7		49	4.81	wnw.	14.7	2,450	1,920	
						2,750	731.5	5.5		46	4.15	wnw.	15.2	2,694	2,180	
8:22	968.2	18.4	76	nw.	4.0	2,972	711.6	4.4	0.50	44	3.68	wnw.	15.6	2,912	2,400	1/10 Ci.St., wnw.; 1/10 St.Cu., w.
						3,000	709.3	4.4		43	3.60	wnw.	15.6	2,939	2,490	
						3,250	687.7	4.3		31	2.58	w.	16.0	3,184	3,020	
8:45	968.2	18.6	76	nw.	5.8	3,347	679.6	4.2	0.05	26	2.14	w.	16.1	3,279	3,170	
						3,500	666.8	3.3		24	1.86	w.	17.0	3,429	3,400	
						3,750	646.5	1.9		21	1.47	wsw.	18.4	3,673	3,800	
9:01	968.2	18.7	76	nw.	6.3	3,883	635.9	1.1	0.58	19	1.26	wsw.	19.2	3,803	4,000	
						3,750	646.5	1.9		20	1.40	wsw.	18.8	3,673	3,750	1/10 Ci.St., wnw.; 3/10 Cu., wnw.
						3,500	666.8	3.4		21	1.64	w.	18.0	3,429	3,260	
9:43	968.5	19.4	73	nw.	5.4	3,357	678.5	4.2	0.30	22	1.82	w.	17.6	3,289	3,000	
						3,250	687.7	4.5		24	2.02	w.	17.0	3,184	2,850	
						3,000	709.2	5.3		30	2.67	w.	15.6	2,939	2,520	
						2,750	731.4	6.0		36	3.37	w.	14.3	2,694	2,190	
						2,500	753.8	6.8		42	4.15	w.	12.9	2,450	1,850	
10:08	968.6	19.4	71	wnw.	6.7	2,484	755.1	6.8	0.55	42	4.15	w.	12.8	2,434	1,830	
						2,250	777.0	8.1		48	5.18	w.	13.7	2,205	1,590	
						2,000	800.6	9.5		55	6.53	w.	14.6	1,960	1,330	
						1,750	824.9	10.8		62	8.03	w.	15.6	1,715	1,070	
10:24	968.7	19.8	68	wnw.	6.7	1,740	826.1	10.9	−0.34	62	8.08	w.	15.6	1,705	1,060	
						1,500	850.1	10.1		84	10.38	w.	13.3	1,470	610	
10:35	968.8	20.2	67	nw.	5.8	1,441	856.3	9.9	0.80	89	10.86	w.	12.7	1,413	480	1/10 Ci St., wnw.; 5/10 Cu., wnw.
						1,250	875.9	11.4		82	11.05	w.	12.0	1,225	30	
						1,000	902.0	13.4		74	11.37	wnw.	10.9	980	0	
10:55	968.9	20.8	67	nnw.	5.8	807	923.5	15.0	1.27	67	11.42	wnw.	10.4	791	0	
						750	928.9	15.7		67	11.95	wnw.	9.8	735	0	
						500	956.2	18.9		68	14.85	nw.	7.3	490	0	
11:04	968.9	20.2	68	nnw.	6.3	396	968.9	20.2		68	16.10	nnw.	6.3	388		8/10 Cu., wsw.

August 14, 1917.

A. M.																
7:30	971.6	19.0	86	se.	2.2	396	971.6	19.0		86	18.89	se.	2.2	388		2/10 A.Cu., sw.; 7/10 St.Cu., sw.
7:49	971.9	19.1	86	se.	2.7	493	961.1	21.4	−3.92	48	12.24	s.	6.0	483	0	
						500	960.0	21.4		48	12.24	s.	6.0	490	0	
						750	933.2	19.9		48	11.16	sse.	5.6	735	0	
8:07	972.0	19.4	85	sse.	1.8	756	932.4	19.9	0.62	48	11.16	sse.	5.6	741	0	
						750	933.1	19.9		48	11.16	sse.	5.6	735	0	
8:44	972.0	19.9	84	se.	2.7	517	958.5	21.5	−1.24	53	13.59	s.	5.3	507	0	
						500	960.0	21.3		57	14.44	s.	4.9	490	0	
8:47	972.0	20.0	84	se.	2.7	396	972.0	20.0		84	19.64	se.	2.7	388		6/10 A.St., sw.; 4/10 St.Cu., sw.

August 15, 1917.

A. M.																
6:54	973.0	18.0	90	ssw.	2.2	396	973.0	18.0		90	18.58	ssw.	2.2	388		7/10 Ci., wsw.; solar halo 22° radius, parhelion to right of sun, began 6:05 a. m., ended 7:42 a. m.
						500	961.4	18.9		78	17.04	ssw.	4.5	490		
7:28	973.0	19.1	90	ssw.	1.8	565	954.1	19.4	0.12	71	16.00	ssw.	6.0	554		
						500	961.4	20.1		76	17.88	ssw.	4.2	490		
8:38	973.0	21.2	84	ssw.	1.3	396	973.0	21.2		84	21.15	ssw.	1.3	388		

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 17, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
8:46	971.2	23.2	64	ese.	2.7	396	971.2	23.2	.....	64	18.20	ese.	2.7	388	.....	2/10 Ci., wsw.
8:53	971.3	23.5	62	ese.	2.7	439	966.6	24.2	−2.33	50	15.10	ese.	6.1	430	.....	
.....	.....	.....	.....	.....	.....	500	960.2	23.8	.....	50	14.74	ese.	6.0	490	.....	
.....	.....	.....	.....	.....	.....	750	933.0	21.9	.....	52	13.67	se.	5.7	735	.....	
9:48	751.5	23.2	60	se.	2.2	901	916.7	20.8	0.72	53	13.02	se.	5.5	883	.....	
.....	.....	.....	.....	.....	.....	750	933.0	21.8	.....	53	13.84	se.	5.6	735	.....	
.....	.....	.....	.....	.....	.....	500	960.0	23.6	.....	52	15.15	se.	5.9	490	.....	
9:52	971.6	22.7	63	se.	2.2	478	962.5	23.8	−1.71	52	15.33	se.	5.9	469	.....	
9:53	971.6	22.4	65	se.	2.2	396	971.6	22.4	.....	65	17.61	se.	2.2	388	.....	Few Ci., nw.

August 18, 1917.

A. M.																
6:58	971.3	19.2	81	s.	2.2	396	971.3	19.2	.....	81	18.02	s.	2.2	388	.....	Few Ci., wsw.
.....	.....	.....	.....	.....	.....	500	959.6	22.8	.....	60	16.66	s.	7.3	490	.....	
7:00	971.3	19.4	81	s.	2.2	512	958.4	23.2	−3.45	58	16.50	s.	7.8	502	.....	
.....	.....	.....	.....	.....	.....	750	932.8	21.7	.....	67	17.39	ssw.	7.5	735	0	
.....	.....	.....	.....	.....	.....	1,000	906.4	20.2	.....	77	18.23	sw.	7.1	980	0	
7:50	971.3	22.1	69	s.	1.8	1,110	894.9	19.5	0.62	81	18.36	sw.	7.0	1,088	0	Few A.Cu., sw.
.....	.....	.....	.....	.....	.....	1,250	881.0	18.6	.....	77	16.50	sw.	5.9	1,225	.....	
.....	.....	.....	.....	.....	.....	1,500	855.5	16.9	.....	71	13.67	sw.	4.0	1,470	.....	
8:44	971.3	23.7	62	s.	2.7	1,532	852.1	16.7	0.72	70	13.31	sw.	3.8	1,502	.....	
.....	.....	.....	.....	.....	.....	1,500	855.5	16.9	.....	70	13.48	sw.	3.8	1,470	.....	
.....	.....	.....	.....	.....	.....	1,250	880.9	18.9	.....	70	15.29	sw.	3.5	1,225	.....	
.....	.....	.....	.....	.....	.....	1,000	906.1	20.8	.....	69	16.95	ssw.	3.3	980	.....	
8:51	971.3	23.8	63	s.	3.6	783	929.3	22.5	0.34	69	18.81	ssw.	3.1	768	.....	
.....	.....	.....	.....	.....	.....	750	932.1	22.6	.....	68	18.65	ssw.	3.1	735	.....	
.....	.....	.....	.....	.....	.....	500	959.6	23.4	.....	65	18.71	s.	3.5	490	.....	
8:54	971.3	23.8	63	s.	3.6	396	971.3	23.8	.....	63	18.58	s.	3.6	388	.....	Few Ci.St., wsw.; few A.Cu., sw.

August 19, 1917.

P. M.																
5:10	966.6	25.6	62	s.	5.4	396	966.6	25.6	.....	62	20.36	s.	5.4	388	.....	1/10 Ci.St., sw.; 4/10 Cu., s[illegible] Thunderst.rm se. of station
.....	.....	.....	.....	.....	.....	500	955.0	24.4	.....	64	19.56	s.	6.6	490	.....	
5:23	966.7	24.5	67	se.	5.8	690	934.8	22.3	1.12	68	18.31	sse.	8.6	677	0	
.....	.....	.....	.....	.....	.....	750	924.4	21.7	.....	70	18.17	sse.	8.3	735	0	Thunderstorm divided; part g ing north and part south of station.
.....	.....	.....	.....	.....	.....	1,000	904.2	19.3	.....	80	17.91	sse.	7.3	980	0	
5:35	966.7	23.9	71	se.	8.0	1,062	898.5	18.7	1.06	82	17.69	sse.	7.0	1,041	0	
.....	.....	.....	.....	.....	.....	1,000	904.2	19.4	.....	79	17.80	sse.	6.5	980	0	
.....	.....	.....	.....	.....	.....	750	924.4	22.3	.....	67	18.04	sse.	4.3	735	.....	
6:14	966.8	23.8	70	se.	2.7	725	931.0	22.6	0.30	66	18.10	sse.	4.1	711	.....	4/10 Ci.St., sw.
.....	.....	.....	.....	.....	.....	500	955.0	23.3	.....	69	19.74	ssw.	2.5	490	.....	
6:30	966.7	23.6	71	wsw.	1.8	396	966.7	23.6	.....	71	20.68	wsw.	1.8	388	.....	

August 20, 1917.

P. M.																
7:51	966.4	23.4	73	s.	4.0	396	966.4	23.4	.....	73	21.01	s.	4.0	388	.....	Few A.Cu., nw.; few St.Cu., no apparent movement.
.....	.....	.....	.....	.....	.....	500	956.0	23.2	.....	71	20.19	sse.	5.2	490	0	
8:02	966.5	23.1	76	sse.	3.6	728	930.4	22.7	0.21	66	18.21	se.	7.6	714	0	
.....	.....	.....	.....	.....	.....	750	928.9	22.5	.....	66	17.99	se.	7.5	735	0	
.....	.....	.....	.....	.....	.....	1,000	901.1	20.7	.....	71	17.34	se.	6.3	980	0	Lightning in ne.
.....	.....	.....	.....	.....	.....	1,250	875.5	18.9	.....	75	16.38	se.	5.1	1,225	0	
8:52	967.1	20.8	85	sse.	2.7	1,419	859.4	17.7	0.74	78	15.80	se.	4.3	1,391	0	
.....	.....	.....	.....	.....	.....	1,250	875.5	19.0	.....	72	16.82	se.	5.7	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	900.9	20.9	.....	65	16.07	sse.	7.8	980	0	
.....	.....	.....	.....	.....	.....	750	927.8	22.8	.....	56	15.55	sse.	10.0	735	0	Lightning all around station at short intervals.
9:20	967.3	20.7	84	s.	2.7	734	930.4	22.9	−0.68	56	15.64	sse.	10.1	720	0	
.....	.....	.....	.....	.....	.....	500	954.9	21.3	.....	76	19.25	se.	4.4	490	0	
9:24	967.4	20.6	85	s.	1.8	396	967.4	20.6	.....	85	20.63	s.	1.8	388	.....	

August 21, 1917.

P. M.																
4:01	964.5	22.4	79	se.	4.9	396	964.5	22.4	.....	79	21.40	se.	4.9	388	.....	7/10 Cu., nne.; sprink'ing rain at 3:53 with thunder in sw.
.....	.....	.....	.....	.....	.....	500	952.9	21.2	.....	80	20.14	ese.	7.5	490	.....	
4:05	964.5	22.4	77	se.	4.9	557	946.8	20.6	1.12	80	19.42	ese.	8.9	546	.....	Rain ended 4:15 p. m. Thunder in sw. ended 4:25 p. m.
5:15	964.4	21.6	84	s.	1.8	667	934.9	23.9	−3.00	49	14.53	se.	4.8	654	.....	4/10 Ci.St., w.; 5/10 St.Cu., nnw.
.....	.....	.....	.....	.....	.....	750	926.0	23.3	.....	51	14.59	se.	4.0	735	430	
5:18	964.4	21.6	84	s.	1.8	988	901.1	21.6	0.78	56	14.45	se.	1.6	969	.....	
.....	.....	.....	.....	.....	.....	750	926.0	23.6	.....	49	14.27	sse.	2.7	735	.....	
5:36	964.3	22.0	84	ssw.	1.3	580	944.2	25.0	−1.63	44	13.94	s.	3.5	569	.....	
.....	.....	.....	.....	.....	.....	500	952.9	23.7	.....	62	18.17	s.	2.5	490	.....	
5:38	964.3	22.0	84	ssw.	1.3	396	964.3	22.0	.....	84	22.21	ssw.	1.3	388	.....	9/10 Ci.St., w.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 22, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
1:16	964.1	29.0	61	s.	4.0	396	964.1	29.0	.....	61	24.44	s.	4.0	388	.....	Cloudless.
						500	952.0	27.4	.....	61	22.27	s.	4.8	490	0	
						750	926.0	23.4	.....	62	17.84	s.	6.6	735	0	
1:49	963.9	29.0	59	ssw.	5.4	784	922.5	23.0	1.55	62	17.42	s.	6.8	769	0	
						1,000	899.4	21.8	.....	58	15.15	ssw.	6.6	980	0	
						1,250	873.6	20.5	.....	53	12.78	sw.	6.5	1,225	0	
3:05	963.0	29.4	53	ssw.	5.4	1,356	862.9	19.9	0.54	51	11.85	sw.	6.4	1,329	0	Cloudless.
						1,500	848.5	19.1	.....	51	11.28	wsw.	6.8	1,470	110	
						1,750	824.4	17.8	.....	51	10.39	w.	7.6	1,715	.....	
3:26	962.8	30.2	54	s.	6.3	1,885	811.3	17.1	0.64	51	9.94	wnw.	8.0	1,847	.....	
						1,750	824.4	18.1	.....	51	10.59	w.	8.1	1,715	.....	
						1,500	848.5	20.0	.....	51	11.92	wsw.	8.3	1,470	0	
3:36	962.7	30.3	52	ssw.	6.3	1,416	856.9	20.6	0.57	51	12.38	wsw.	8.4	1,388	0	2/10 Ci.St., w.
						1,250	873.2	21.6	.....	53	13.67	wsw.	8.4	1,225	0	
						1,000	898.5	23.0	.....	56	15.74	sw.	8.4	980	0	
						750	924.8	24.4	.....	59	18.04	ssw.	8.4	735	0	
3:59	962.5	30.0	52	sw.	5.4	710	929.0	24.6	0.50	59	18.25	ssw.	8.4	696	0	
						500	951.3	27.9	.....	54	20.30	ssw.	6.7	490	0	
4:08	962.5	29.5	52	ssw.	5.8	396	962.5	29.5	.....	52	21.44	ssw.	5.8	388	.....	3/10 Ci.St., w.

August 23, 1917 (No. 1).

A. M.																
6:45	968.6	15.7	75	nw.	4.0	396	968.6	15.7	.....	75	13.38	nw.	4.0	388	.....	Cloudless.
						500	956.7	16.3	.....	68	12.60	nw.	10.0	490	0	
6:49	968.6	15.8	74	nw.	4.0	700	934.8	17.4	−0.56	55	10.93	nw.	21.6	686	0	
						750	929.0	17.0	.....	55	10.66	nw.	21.7	735	0	
						1,000	902.0	15.1	.....	56	9.61	nw.	22.1	980	0	
7:04	968.6	16.0	78	wnw.	4.0	1,227	878.3	13.3	0.78	57	8.70	nw.	22.4	1,203	0	
						1,250	875.4	13.1	.....	57	8.60	nw.	22.3	1,225	80	
						1,500	850.0	10.9	.....	58	7.56	nw.	21.7	1,470	930	
						1,750	825.0	8.6	.....	59	6.59	nw.	21.1	1,715	1,410	
7:31	968.4	17.2	72	wnw.	4.9	2,003	799.9	6.4	0.88	60	5.77	nw.	20.5	1,963	.....	
						1,750	825.0	8.6	.....	59	6.59	nw.	20.5	1,715	1,450	
						1,500	850.0	10.8	.....	58	7.51	nw.	20.5	1,470	1,040	
8:02	968.2	18.4	67	wnw.	4.5	1,364	863.9	12.0	0.64	58	8.14	nw.	20.5	1,337	810	
						1,250	875.4	12.7	.....	58	8.52	nw.	20.0	1,225	630	
						1,000	902.0	14.3	.....	57	9.29	nw.	19.5	980	220	
8:20	968.3	19.3	62	nw.	5.8	802	923.3	15.6	0.99	57	10.10	nw.	18.2	786	0	Cloudless.
						750	929.0	16.1	.....	58	10.61	nw.	16.6	735	0	
						500	956.7	18.6	.....	60	12.86	nw.	9.0	490	0	
8:24	968.4	19.6	61	nw.	5.8	396	968.4	19.6	.....	61	13.91	nw.	5.8	388	.....	Few Cu., nw.

August 23, 1917 (No. 2).

A. M.																
8:32	968.4	19.7	61	nw.	9.4	396	968.4	19.7	.....	61	14.00	nw.	9.4	388	.....	Cloudless.
						500	957.0	18.6	.....	59	12.64	nw.	12.2	490	0	
						750	929.5	16.0	.....	55	10.00	nw.	19.0	735	0	
8:41	968.5	19.9	58	nw.	9.4	782	925.8	15.7	1.04	55	9.81	nw.	19.7	767	0	
						1,000	902.7	14.2	.....	54	8.74	nw.	21.8	980	0	
						1,250	876.4	12.4	.....	52	7.49	nw.	24.3	1,225	230	
9:02	968.6	20.0	55	nw.	8.5	1,425	857.9	11.2	0.74	51	6.78	nw.	26.0	1,397	660	
						1,250	876.4	12.6	.....	52	7.59	nw.	23.0	1,225	130	
						1,000	902.7	14.6	.....	53	8.81	nw.	18.7	980	0	
9:45	968.6	21.0	50	nw.	7.6	796	924.5	16.2	1.32	54	9.95	nw.	15.3	770	0	
						750	929.5	16.8	.....	54	10.33	nw.	14.2	735	0	
						500	957.0	20.1	.....	51	12.00	nnw.	8.3	490	0	
9:51	968.6	21.5	50	nnw.	5.8	396	968.6	21.5	.....	50	12.82	nnw.	5.8	388	.....	Cloudless.

August 23, 1917 (No. 3).

P. M.																
1:07	968.2	23.6	44	nw.	8.5	396	968.2	23.6	.....	44	12.82	nw.	8.5	388	.....	1/10 Cu., nw.
						500	956.3	22.2	.....	44	11.78	nw.	10.7	490	0	
						750	929.1	18.8	.....	45	9.76	nw.	16.0	735	0	
1:18	968.2	23.8	44	nw.	9.4	778	926.4	18.4	1.36	45	9.52	nw.	16.6	763	0	
						1,000	902.6	16.4	.....	50	9.32	nw.	16.8	980	0	
						1,250	876.1	14.0	.....	55	8.79	nw.	17.1	1,225	0	
						1,500	851.0	11.7	.....	60	8.25	nw.	17.4	1,470	740	
1:40	968.2	24.2	42	nw.	8.5	1,592	841.6	10.9	0.92	62	8.08	nw.	17.5	1,560	1,010	
						1,750	825.9	9.3	.....	64	7.50	nw.	17.3	1,715	1,280	1/10 Cu., nw.
						2,000	801.0	6.7	.....	68	6.67	nw.	16.9	1,960	1,700	
1:53	968.2	23.9	39	nw.	5.4	2,103	791.0	5.7	1.02	70	6.41	nw.	16.8	2,061	1,880	
						2,250	777.3	6.2	.....	64	6.07	nw.	18.9	2,205	3,010	
2:09	968.2	23.8	39	nw.	5.8	2,390	763.9	6.7	−0.35	58	5.69	nw.	21.0	2,342	2,490	
						2,500	753.9	6.1	.....	50	4.71	nw.	21.6	2,450	2,740	
2:21	968.1	23.9	40	nw.	8.5	2,744	731.9	4.9	0.63	31	2.68	nw.	22.9	2,681	3,000	
2:34	968.0	24.0	39	nw.	7.2	2,610	743.9	5.9	−1.64	27	2.51	nw.	23.8	2,557	2,750	
2:40	968.0	24.1	39	nw.	7.2	2,500	753.9	4.1	2.90	35	2.87	nw.	23.0	2,450	2,550	
2:42	968.0	24.2	39	nw.	6.7	2,393	763.9	7.2	−1.32	39	3.96	nw.	21.4	2,345	2,350	
2:45	968.0	24.2	39	nw.	6.3	2,272	775.1	5.6	0.90	40	3.64	nw.	19.2	2,227	2,130	
						2,250	777.3	5.8	.....	41	3.78	nw.	19.2	2,205	2,090	
						2,000	801.0	8.1	.....	48	5.18	nw.	18.9	1,960	1,690	
						1,750	825.9	10.3	.....	54	6.77	nw.	18.7	1,715	1,310	
3:05	967.9	24.0	38	nw.	8.0	1,615	839.3	11.5	0.98	58	7.87	nw.	18.6	1,583	1,100	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 23, 1917 (No. 3)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	1,500	850.9	12.7	.....	55	8.08	nw.	18.2	1,470	940	
.....	.....	.....	.....	.....	.....	1,250	876.0	15.1	.....	50	8.58	nw.	17.3	1,225	600	
.....	.....	.....	.....	.....	.....	1,000	902.4	17.6	.....	45	9.06	nw.	16.3	980	250	
3:25	967.8	24.6	39	nw.	8.0	823	921.2	19.3	1.19	41	9.18	nw.	15.7	807	0	Few Cu., nw.
.....	.....	.....	.....	.....	.....	750	929.0	20.2	.....	40	9.47	nw.	14.3	735	0	
.....	.....	.....	.....	.....	.....	500	955.8	23.2	.....	39	11.09	nw.	9.2	490	0	
3:31	967.7	24.4	38	nw.	7.2	396	967.7	24.4	.....	38	11.62	nw.	7.2	388	.....	

August 24, 1917.

A. M.																
7:15	970.0	13.0	75	nw.	4.5	396	970.0	13.0	.....	75	11.24	nw.	4.5	388	.....	Cloudless.
7:16	970.0	13.0	75	nw.	4.5	500	958.1	16.5	−3.37	61	11.45	nw.	15.3	490	0	
.....	.....	.....	.....	.....	.....	750	930.5	15.2	.....	57	9.84	nnw.	15.9	735	0	
7:25	970.1	13.4	73	nw.	5.4	773	928.0	15.1	0.51	57	9.78	nnw.	15.9	758	0	
.....	.....	.....	.....	.....	.....	1,000	903.1	13.5	.....	57	8.82	nnw.	16.9	980	540	
.....	.....	.....	.....	.....	.....	1,250	877.9	11.7	.....	58	7.98	nnw.	18.1	1,225	1,130	
.....	.....	.....	.....	.....	.....	1,500	851.8	9.9	.....	58	7.08	nnw.	19.3	1,470	1,600	
.....	.....	.....	.....	.....	.....	1,750	826.2	8.1	.....	59	6.37	nnw.	20.5	1,715	2,230	
7:56	970.3	14.8	71	nw.	4.9	1,831	818.1	7.5	0.72	59	6.12	nnw.	20.9	1,795	2,510	
.....	.....	.....	.....	.....	.....	2,000	801.6	8.2	.....	40	4.35	nw.	21.1	1,960	3,100	
8:02	970.3	15.0	71	nw.	4.5	2,051	796.5	8.4	−0.41	34	3.75	nw.	21.2	2,010	3,250	
.....	.....	.....	.....	.....	.....	2,250	778.0	7.2	.....	37	3.76	nw.	22.0	2,205	3,700	
.....	.....	.....	.....	.....	.....	2,500	755.1	5.8	.....	42	3.87	nw.	23.1	2,450	4,270	
.....	.....	.....	.....	.....	.....	2,750	733.1	4.4	.....	46	3.85	nw.	24.1	2,694	4,980	
8:40	970.3	16.9	68	nw.	3.6	2,824	725.4	3.9	0.58	47	3.80	nw.	24.4	2,767	5,200	
.....	.....	.....	.....	.....	.....	3,000	711.2	2.4	.....	48	3.48	nw.	25.0	2,939	5,580	
.....	.....	.....	.....	.....	.....	3,250	688.8	0.3	.....	49	3.06	nw.	25.9	3,184	.....	
9:38	970.5	18.9	56	nw.	5.4	3,281	685.6	0.0	0.84	49	2.99	nw.	26.0	3,214	.....	Cloudless.
.....	.....	.....	.....	.....	.....	3,250	688.8	0.2	.....	49	3.04	nw.	25.9	3,184	.....	
.....	.....	.....	.....	.....	.....	3,000	711.2	2.4	.....	46	3.34	nw.	24.9	2,939	5,270	
.....	.....	.....	.....	.....	.....	2,750	733.1	4.5	.....	43	3.62	nnw.	23.9	2,694	4,520	
.....	.....	.....	.....	.....	.....	2,500	755.1	6.6	.....	41	4.00	nnw.	23.0	2,450	3,750	
10:26	970.6	21.2	50	nnw.	7.2	2,343	769.4	7.9	−0.45	39	4.15	nnw.	22.4	2,296	3,270	Splotches of cumulus clouds forming in the sky and vanishing.
.....	.....	.....	.....	.....	.....	2,250	778.0	7.5	.....	40	4.15	nnw.	22.6	2,205	2,970	1/10 Cu., nnw.
10:37	970.6	21.5	50	n.	6.7	2,056	796.5	6.6	0.68	42	4.10	nnw.	23.0	2,015	2,320	
.....	.....	.....	.....	.....	.....	2,000	801.6	7.0	.....	44	4.41	nnw.	22.5	1,960	2,130	
.....	.....	.....	.....	.....	.....	1,750	826.2	8.7	.....	53	5.96	nnw.	20.5	1,715	3,010	
.....	.....	.....	.....	.....	.....	1,500	851.3	10.4	.....	62	7.82	nnw.	18.4	1,470	550	
10:57	970.6	21.8	46	n.	7.6	1,273	875.7	11.9	1.00	70	9.75	nnw.	16.5	1,248	0	
.....	.....	.....	.....	.....	.....	1,250	876.9	12.1	.....	69	9.74	nnw.	16.4	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	903.0	14.6	.....	61	10.14	nnw.	15.9	980	0	
11:19	970.4	22.2	47	nnw.	9.8	803	925.5	16.6	1.38	54	10.20	nnw.	15.4	787	0	
.....	.....	.....	.....	.....	.....	750	930.2	17.3	.....	53	10.47	nnw.	14.3	735	0	
.....	.....	.....	.....	.....	.....	500	958.5	20.8	.....	48	11.79	nw.	8.9	490	0	
11:27	970.3	22.2	46	nw.	6.7	396	970.3	22.2	.....	46	12.31	nw.	6.7	388	.....	1/10 Cu., nnw.

August 25, 1917.

A. M.																
8:20	972.6	19.6	65	wsw.	2.7	396	972.6	19.6	.....	65	14.83	wsw.	2.7	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	960.8	19.5	.....	65	14.73	wsw.	4.1	490	0	
8:45	972.6	19.3	64	wsw.	3.1	677	941.5	19.3	0.11	64	14.33	wsw.	6.6	664	0	
.....	.....	.....	.....	.....	.....	750	933.6	19.1	.....	60	13.27	wsw.	6.6	735	0	
.....	.....	.....	.....	.....	.....	1,000	906.5	18.2	.....	42	8.78	wsw.	6.6	980	.....	
12:00	971.6	25.6	39	sw.	2.7	1,225	883.0	17.5	0.33	34	6.80	wsw.	6.6	1,201	.....	
NOON	.....	.....	.....	.....	.....	1,250	880.3	17.3	.....	34	6.72	wsw.	6.5	1,225	.....	
P. M.																
12:40	971.1	26.1	35	s.	4.0	1,481	856.3	15.7	0.74	36	6.42	ssw.	5.5	1,452	.....	
.....	.....	.....	.....	.....	.....	1,250	879.8	17.5	.....	37	7.40	ssw.	6.2	1,225	.....	
.....	.....	.....	.....	.....	.....	1,000	905.7	19.5	.....	38	8.61	s.	7.0	980	.....	
12:56	970.9	26.4	36	s.	4.0	847	922.0	20.7	1.18	38	9.28	s.	7.5	830	.....	
.....	.....	.....	.....	.....	.....	750	932.1	21.9	.....	38	9.99	s.	6.5	735	.....	
.....	.....	.....	.....	.....	.....	500	959.0	24.8	.....	40	12.52	s.	4.1	490	.....	
1:04	970.9	26.0	40	s.	3.1	396	970.9	26.0	.....	40	13.45	s.	3.1	388	.....	Cloudless.

August 26, 1917.

A. M.																
6:37	965.5	18.0	85	s.	5.8	396	965.5	18.0	.....	85	17.54	s.	5.8	388	.....	2/10 Ci.St., nw.; 1/10 Cu., s.
.....	.....	.....	.....	.....	.....	500	954.0	19.8	.....	69	15.94	s.	15.1	490	0	
6:39	965.5	18.2	84	s.	5.8	531	950.6	20.3	−1.70	64	15.24	s.	17.7	521	0	
.....	.....	.....	.....	.....	.....	750	927.0	19.2	.....	64	14.24	ssw.	17.6	735	0	
6:43	965.5	18.5	81	s.	5.8	796	921.8	19.0	0.49	64	14.06	ssw.	17.6	780	0	
.....	.....	.....	.....	.....	.....	1,000	900.0	21.0	.....	48	11.94	sw.	13.4	980	0	
6:55	965.5	19.3	80	s.	5.8	1,146	885.2	22.4	−0.97	37	10.02	sw.	10.4	1,123	0	
.....	.....	.....	.....	.....	.....	1,250	874.6	21.8	.....	36	9.40	sw.	10.4	1,225	150	
.....	.....	.....	.....	.....	.....	1,500	850.0	20.3	.....	34	8.10	sw.	10.5	1,470	660	
.....	.....	.....	.....	.....	.....	1,750	826.1	18.8	.....	33	7.16	sw.	10.5	1,715	900	1/10 Ci.St., nw.
8:11	966.2	21.4	72	s.	5.8	1,833	818.4	18.3	0.60	32	6.73	sw.	10.5	1,797	980	
.....	.....	.....	.....	.....	.....	2,000	802.5	17.0	.....	33	6.40	sw.	10.3	1,960	1,110	
.....	.....	.....	.....	.....	.....	2,250	779.3	15.2	.....	36	6.22	sw.	10.1	2,205	1,320	
.....	.....	.....	.....	.....	.....	2,500	756.5	13.4	.....	38	5.84	wsw.	9.8	2,450	1,520	
8:47	966.2	23.5	65	s.	8.0	2,647	743.7	12.3	0.74	39	5.58	wsw.	9.7	2,593	1,770	
.....	.....	.....	.....	.....	.....	2,750	734.6	11.4	.....	40	5.39	wsw.	9.8	2,694	1,810	
.....	.....	.....	.....	.....	.....	3,000	713.0	9.5	.....	42	4.99	wsw.	10.0	2,939	2,180	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 26, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	10^6 ergs.	volts.	
						3,250	692.0	7.4		43	4.43	w.	10.1	3,184	2,540	
						3,500	671.2	5.3		45	4.01	w.	10.3	3,429		
						3,750	650.5	3.3		47	3.64	w.	10.5	3,673		
9:55	965.9	24.5	64	s.	8.5	3,848	642.8	2.5	0.76	48	3.51	w.	10.6	3,769		Cloudless.
						3,750	650.5	3.2		48	3.69	w.	10.4	3,673		
						3,500	671.2	4.9		49	4.24	w.	10.0	3,429		
						3,250	692.0	6.7		50	4.90	w.	9.6	3,184	2,560	
						3,000	713.0	8.4		51	5.62	w.	9.2	2,939	2,260	
10:16	965.8	25.0	63	ssw.	7.6	2,791	730.6	9.9	0.96	52	6.34	w.	8.9	2,735	2,000	
						2,750	734.6	10.3		52	6.52	w.	8.9	2,694	1,970	
						2,500	756.5	12.2		54	7.67	w.	9.0	2,450	1,780	
						2,250	779.3	15.1		56	9.61	w.	9.2	2,205	1,590	
10:42	965.6	25.6	62	ssw.	7.6	2,197	784.1	15.6	0.75	56	9.92	w.	9.2	2,153	1,550	
						2,000	802.5	17.1		53	10.34	w.	11.9	1,960	1,390	
						1,750	826.1	19.0		49	10.77	wsw.	15.2	1,715	1,180	
						1,500	850.0	20.8		45	11.06	sw.	19.6	1,470	840	
11:03	965.5	25.8	61	sw.	6.3	1,393	860.8	21.6	−1.60	43	11.09	sw.	20.0	1,366	660	
						1,250	874.6	19.3		53	11.87	sw.	20.6	1,225	480	
11:10	965.4	25.9	60	sw.	8.0	1,187	881.5	18.3	1.05	57	11.99	sw.	20.9	1,164	400	
						1,000	900.0	20.3		57	13.58	sw.	17.4	980	160	
						750	927.0	22.9		58	16.20	sw.	12.9	735	0	
						500	953.9	25.5		59	19.26	sw.	8.2	490	0	
11:25	965.2	26.6	59	sw.	6.3	396	965.2	26.6		59	20.55	sw.	6.3	388		Cloudless.

August 27, 1917.

A. M.																
7:04	967.1	17.2	71	ne.	10.7	396	967.1	17.2		71	13.93	ne.	10.7	388		9/10 St.Cu., sw.
						500	955.8	16.4		68	12.68	ne.	11.6	490	0	
						750	928.5	14.6		61	10.14	nne.	13.8	735	0	
7:25	968.4	17.4	68	nne.	8.9	866	916.2	13.7	0.74	57	8.94	nne.	14.8	849	0	
						1,000	902.1	15.7		54	9.63	nne.	13.7	980	0	
7:37	969.2	17.4	68	nne.	5.4	1,220	879.8	19.0	−1.50	48	10.55	nne.	11.8	1,196	0	9/10 St. Cu., sw.
						1,250	876.7	18.7		48	10.35	nne.	11.5	1,225	0	
						1,500	852.0	15.9		50	9.04	nne.	9.3	1,470	0	
8:10	970.8	17.3	69	n.	2.2	1,650	837.6	14.2	1.12	51	8.26	nne.	8.0	1,617	380	
						1,750	827.8	13.4		53	8.15	nne.	7.4	1,715	820	
						2,000	804.0	11.5		58	7.87	n.	5.9	1,960	1,740	
9:16	972.3	17.4	60	nne.	4.9	2,224	783.5	9.8	0.77	63	7.64	n.	4.6	2,180	1,100	2/10 A.Cu., sw.; 6/10 St. Cu., sw.
						2,250	781.1	9.6		62	7.41	n.	4.5	2,205	1,890	4/10 A.Cu., w.; 2/10 St.Cu., w.
						2,500	758.0	7.7		54	5.68	n.	4.0	2,450	2,390	
						2,750	735.0	5.9		47	4.37	n.	3.4	2,694		
P. M.																
12:06	973.3	17.9	54	n.	3.6	2,759	734.4	5.8	0.56	46	4.24	n.	3.4	2,703		
						2,750	735.0	5.8		46	4.24	n.	3.6	2,694		
						2,500	757.4	6.8		49	4.84	n.	8.4	2,450	2,350	
						2,250	780.0	7.7		53	5.57	n.	13.3	2,205	1,850	
12:43	973.5	16.9	57	nne.	5.8	2,226	782.4	7.8	0.57	53	5.61	n.	13.7	2,171	1,800	
						2,000	803.1	9.1		55	6.36	n.	14.4	1,960	1,350	
12:52	973.6	16.1	60	n.	7.2	1,787	824.8	10.3	0.23	56	7.02	n.	15.0	1,751	920	
						1,750	827.8	10.4		55	6.94	n.	15.0	1,715	840	
						1,500	853.0	10.9		50	6.52	n.	15.1	1,470	340	
						1,250	879.1	11.5		45	6.11	nne.	15.2	1,225	0	
1:20	973.7	16.0	61	nne.	6.3	1,038	902.2	12.0	−0.45	41	5.75	nne.	15.3	1,018	0	Rain from 1:20 to 1:50 p. m.
						1,000	906.0	11.8		46	6.37	nne.	15.7	980	0	
1:27	973.8	16.0	61	nne.	5.4	861	921.4	11.2	1.08	62	8.25	nne.	16.9	844	0	
						750	933.6	12.4		62	8.93	nne.	13.9	735	0	
						500	961.5	15.1		62	10.64	nne.	7.2	490	0	
1:33	973.8	16.2	62	nne.	4.5	396	973.8	16.2		62	11.42	nne.	4.5	388		10/10 St.Cu., w.

August 28, 1917 (No. 1).

A. M.																
7:13	974.7	11.5	84	nw.	1.3	396	974.7	11.5		84	11.40	nw.	1.3	388		1/10 Ci.St., nw.
						500	962.4	15.5		47	8.28	nw.	5.0	490	0	
7:49	974.7	13.1	77	nw.	1.3	507	962.0	15.8	−0.39	44	7.90	nw.	5.2	497	0	
7:59	974.7	14.0	75	nw.	1.3	578	954.0	15.7	0.28	42	7.49	nw.	5.2	567	0	
						500	962.4	16.0		54	9.82	nw.	3.7	490	0	
8:44	974.7	16.5	70	nw.	1.8	396	974.7	16.5		70	13.14	nw.	1.8	388		1/10 Ci.St., nw.

August 28, 1917 (No. 2).

P. M.																
8:46	972.3	16.8	55	s.	3.1	396	972.3	16.8		55	10.52	s.	3.1	388		1/10 Ci.St., nw.
8:50	972.3	17.0	54	s.	2.7	410	970.8	19.4	−1.86	51	11.49	s.	6.6	402	0	
8:59	972.3	17.4	51	s.	3.6	503	960.2	19.0	0.43	48	10.55	s.	6.2	493		
						750	932.9	16.8		47	8.99	s.	4.6	735		
9:16	972.3	17.0	51	s.	3.1	868	920.0	16.1	0.49	46	8.42	s.	3.8	851		
						750	932.9	16.3		47	8.71	s.	3.8	735		
						500	960.5	16.8		50	9.56	s.	3.6	490		
9:22	972.3	17.0	51	s.	3.6	396	972.3	17.0		51	9.88	s.	3.6	388		Cloudless.

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 29, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^5 *ergs.*	*volts.*	
5:00	971.6	21.8	55	se.	4.5	396	971.6	21.8	.....	55	14.37	se.	4.5	388	.....	5/10 St.Cu., nw.
						500	960.4	20.4	.....	54	12.94	se.	5.7	490	0	
5:13	971.6	21.6	55	se.	4.5	750	932.4	17.2	1.30	53	10.40	sse.	8.6	735	0	
						1,000	905.0	15.3	.....	54	9.39	s.	9.2	980	220	
						1,250	878.6	13.5	.....	56	8.66	ssw.	9.8	1,225	710	
						1,500	853.0	11.6	.....	57	7.79	sw.	10.4	1,470	880	
6:00	971.6	22.0	51	e.	4.0	1,597	843.4	10.9	0.74	58	7.56	sw.	10.6	1,565	950	
						1,750	828.0	9.8	.....	62	7.51	sw.	10.7	1,715	1,200	2/10 Ci., nw.; 2/10 A.Cu., nw.
						2,000	803.0	7.9	.....	69	7.35	wsw.	10.8	1,960	1,610	
						2,250	779.4	6.1	.....	75	7.06	wsw.	11.0	2,205	2,030	
						2,500	756.0	4.2	.....	82	6.76	wsw.	11.1	2,450	2,540	
						2,750	733.1	2.3	.....	88	6.34	w.	11.3	2,694	3,050	
6:40	971.6	20.2	57	se.	3.6	2,932	716.8	1.0	0.74	93	6.11	w.	11.4	2,873	3,400	
						3,000	710.5	0.6	.....	91	5.81	w.	11.5	2,939	3,359	
						3,250	688.6	− 1.3	.....	86	4.71	wnw.	11.8	3,184	3,200	
						3,500	677.5	− 2.8	.....	80	3.87	wnw.	12.2	3,429	.....	
						3,750	647.3	− 4.2	.....	74	3.18	wnw.	12.5	3,673	.....	
						4,000	627.1	− 5.7	.....	68	2.57	nw.	12.9	3,918	.....	
7:38	971.6	17.4	68	se.	3.1	4,101	619.2	− 5.9	0.59	66	2.45	nw.	13.0	4,017	.....	
						4,000	627.1	− 5.3	.....	69	2.70	nw.	12.4	3,918	.....	
						3,750	647.3	− 3.8	.....	76	3.37	nw.	10.9	3,673	.....	
						3,500	677.5	− 2.3	.....	83	4.18	nw.	9.3	3,429	.....	
7:50	971.6	17.4	70	se.	3.1	3,480	669.9	− 2.2	0.62	84	4.28	nw.	9.2	3,409	.....	
						3,250	688.6	− 0.8	.....	83	4.74	nw.	9.4	3,184	2,850	
						3,000	710.5	0.7	.....	82	5.27	wnw.	9.7	2,939	2,480	
						2,750	733.1	2.3	.....	82	5.91	wnw.	10.0	2,694	2,100	
						2,500	756.0	3.9	.....	80	6.46	w.	10.3	2,450	1,730	
8:11	971.7	16.4	68	se.	3.6	2,468	759.3	4.1	0.88	80	6.55	w.	10.3	2,417	1,680	
						2,250	779.4	6.0	.....	75	7.01	wsw.	10.0	2,205	1,430	
						2,000	803.0	8.2	.....	70	7.61	wsw.	9.7	1,960	1,130	
						1,750	828.0	10.4	.....	64	8.07	sw.	9.4	1,715	830	
8:30	971.8	16.3	71	se.	3.6	1,499	853.8	12.6	0.90	59	8.61	ssw.	9.1	1,469	0	
						1,250	878.6	14.8	.....	54	9.09	s.	9.9	1,225	0	
						1,000	905.0	17.1	.....	50	9.75	s.	10.7	980	0	
8:49	971.9	16.2	74	se.	3.1	751	932.4	19.3	−0.87	45	10.08	sse.	11.5	736	0	
						500	960.6	17.1	.....	66	12.87	se.	5.6	490	0	
8:50	971.9	16.2	74	se.	3.1	396	971.9	16.2	.....	74	13.63	se.	3.1	388	.....	7/10 A.Cu., nw.

August 30, 1917, series (No. 1).

A. M.																
7:06	973.0	14.5	68	ssw.	5.8	396	973.0	14.5	.....	68	11.23	ssw.	5.8	388	.....	Cloudless.
						500	961.6	15.5	.....	63	11.09	ssw.	10.2	490	0	
7:09	973.0	14.6	69	ssw.	5.8	716	937.1	17.6	−0.97	53	10.67	ssw.	19.0	702	0	
						750	934.2	17.4	.....	52	10.33	ssw.	18.8	735	0	
						1,000	907.1	15.7	.....	45	8.03	ssw.	17.6	980	800	
						1,250	880.0	14.0	.....	39	6.23	ssw.	16.3	1,225	1,530	
7:38	973.0	14.9	69	ssw.	5.8	1,487	855.6	12.4	0.67	32	4.61	ssw.	15.1	1,458	2,090	
						1,500	854.1	12.3	.....	32	4.58	ssw.	15.0	1,470	2,120	
						1,750	829.0	10.7	.....	40	5.15	ssw.	13.0	1,715	2,510	Few Ci. near horizon.
						2,000	804.4	9.1	.....	48	5.55	s.	11.0	1,960	2,880	
8:37	973.0	17.7	65	ssw.	6.7	2,239	782.1	7.6	0.64	56	5.85	s.	9.1	2,194	3,360	
						2,250	780.9	7.5	.....	56	5.81	s.	9.1	2,205	3,380	
						2,500	757.4	5.4	.....	61	5.47	s.	8.9	2,450	3,810	
8:53	973.0	18.8	61	ssw.	4.9	2,655	743.3	4.1	0.84	64	5.24	s.	8.8	2,601	4,000	1/10 Ci., nw.
9:32	973.0	20.8	54	sw.	9.8	2,658	743.3	4.7	.....	62	5.29	ssw.	9.8	2,604	4,000	
						2,750	735.0	4.2	.....	62	5.12	ssw.	9.4	2,694	4,110	
						3,000	713.0	2.6	.....	64	4.72	sw.	8.2	2,939	.....	
						3,250	691.2	1.1	.....	65	4.30	sw.	7.1	3,184	.....	
10:11	972.9	22.1	49	ssw.	8.5	3,298	687.1	0.8	0.68	65	4.20	sw.	6.9	3,231	.....	
						3,250	691.2	1.1	.....	64	4.24	sw.	7.3	3,184	.....	
						3,000	713.0	3.0	.....	60	4.55	sw.	9.4	2,939	.....	
						2,750	735.0	5.0	.....	55	4.80	sw.	11.5	2,694	5,610	
						2,500	757.2	6.8	.....	51	5.04	ssw.	13.5	2,450	4,500	
						2,250	781.0	8.7	.....	47	5.29	ssw.	15.6	2,205	3,460	
11:00	972.6	23.4	40	ssw.	11.2	2,194	786.6	9.1	0.63	46	5.32	ssw.	16.1	2,150	2,900	
						2,000	804.4	10.3	.....	38	4.76	ssw.	16.1	1,960	2,550	
						1,750	828.9	11.9	.....	28	3.90	ssw.	16.0	1,715	2,100	
11:13	972.6	23.4	40	ssw.	12.1	1,642	840.4	12.6	0.38	24	3.50	ssw.	16.0	1,609	1,900	
						1,500	854.1	13.1	.....	32	4.83	ssw.	15.6	1,470	1,510	
11:24	972.7	24.2	39	ssw.	12.5	1,250	880.7	14.1	1.06	47	7.56	s.	14.9	1,225	835	
						1,000	906.1	16.7	.....	45	8.55	s.	14.6	980	310	
11:36	972.7	24.2	35	ssw.	9.8	852	922.9	18.3	1.25	44	9.25	s.	14.4	835	0	
						750	933.6	19.6	.....	42	9.58	s.	13.5	735	0	
						500	961.6	22.7	.....	39	10.76	ssw.	11.0	490	0	
11:41	972.7	24.0	37	ssw.	10.3	396	972.7	24.0	.....	37	11.04	ssw.	10.3	388	.....	1/10 Ci., nw.

August 30, 1917, series (No. 2).

P. M.																
12:28	972.0	25.2	36	ssw.	11.6	396	972.0	25.2	.....	36	11.54	ssw.	11.6	388	.....	1/10 Ci., nw.
						500	960.1	23.6	.....	36	10.49	ssw.	12.5	490	0	
						750	932.8	19.7	.....	38	8.72	ssw.	14.6	735	0	
12:38	971.9	25.5	34	ssw.	10.7	821	925.5	18.6	1.55	38	8.14	ssw.	15.2	805	0	
						1,000	906.0	16.9	.....	40	7.70	ssw.	15.4	980	440	
						1,250	879.7	14.7	.....	43	7.19	ssw.	15.7	1,225	1,050	
						1,500	854.1	12.3	.....	45	6.44	sw.	15.9	1,470	1,460	
12:56	971.6	25.2	34	sw.	10.7	1,571	846.8	11.7	0.92	46	6.32	sw.	16.0	1,540	1,560	
						1,750	829.2	10.9	.....	47	6.13	sw.	15.4	1,715	1,810	
						2,000	804.3	9.7	.....	48	5.77	sw.	14.5	1,960	2,280	
						2,250	780.2	8.5	.....	49	5.44	sw.	13.6	2,205	2,760	

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 30, 1917, series (No. 2)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 m}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
1:17	971.4	25.4	33	ssw.	8.9	2,323	773.4	8.2	0.47	49	5.33	sw.	13.3	2,276	2,900	
						2,500	756.7	7.0		52	5.21	sw.	12.4	2,450	3,390	
1:37	971.2	26.0	34	s.	11.6	2,719	736.9	5.6	0.66	55	5.00	sw.	11.3	2,664	4,000	1/10 Ci., nw.
						2,750	734.1	5.4		56	5.02	sw.	11.2	2,694	4,000	
						3,000	711.6	4.3		60	4.99	wsw.	10.3	2,939	4,180	
2:11	970.8	26.0	34	ssw.	11.2	3,228	692.4	2.7	0.60	64	4.75	wsw.	9.4	3,163		Few Ci., nw.; 1/10 A.Cu., nw.
						3,000	711.6	4.2		60	4.95	wsw.	10.9	2,939	4,110	
						2,750	734.1	5.7		57	5.22	sw.	12.4	2,694	3,380	
						2,500	756.7	7.3		53	5.42	sw.	14.0	2,450	2,930	
2:41	970.5	25.8	33	ssw.	11.6	2,370	769.0	8.1	0.58	51	5.51	ssw.	14.8	2,322	2,700	
						2,250	780.0	8.8		50	5.66	ssw.	14.7	2,205	2,540	
						2,000	803.4	10.3		49	6.14	ssw.	14.4	1,960	2,220	
						1,750	827.9	11.7		47	6.46	ssw.	14.1	1,715	1,890	
3:02	970.3	26.0	33	s.	10.3	1,679	835.2	12.1	0.85	47	6.64	ssw.	14.0	1,646	1,800	1/10 Ci., nw.
						1,500	853.0	13.7		47	7.37	ssw.	14.7	1,470	1,410	
3:14	970.1	25.9	34	s.	11.2	1,316	871.9	15.2	0.99	48	8.29	ssw.	15.4	1,290	1,000	
						1,250	878.8	15.9		47	8.49	ssw.	15.4	1,225	860	
						1,000	904.7	18.3		44	9.25	ssw.	15.4	980	340	
3:24	970.0	26.0	35	s.	11.2	840	921.7	19.9	1.33	42	9.76	ssw.	15.4	824	0	
						750	931.2	21.1		40	10.01	ssw.	14.6	735	0	
						500	958.2	24.4		36	11.01	s.	12.5	490	0	
3:31	969.9	25.8	34	s.	11.6	396	969.9	25.8		34	11.33	s.	11.6	388		2/10 Ci., nw.

August 30, 1917, series (No. 3).

P. M.																
4:10	969.5	25.6	36	s.	10.7	396	969.5	25.6		36	11.82	s.	10.7	388		2/10 Ci., nw.
						500	957.8	24.2		37	11.17	s.	12.5	490	0	
						750	931.0	20.7		38	9.28	ssw.	16.9	735	0	
4:18	969.5	25.6	35	s.	10.3	765	929.3	20.5	1.38	38	9.17	ssw.	17.2	750	0	3/10 Ci., nw.
						1,000	904.1	18.1		43	8.93	ssw.	16.6	980	490	
4:30	969.4	25.2	36	s.	11.2	1,246	878.3	15.5	1.04	49	8.63	ssw.	16.0	1,221	980	
						1,500	852.1	13.8		51	8.05	ssw.	17.3	1,470	1,350	
4:39	969.3	25.3	36	ssw.	8.5	1,748	827.6	12.1	0.68	52	7.34	ssw.	18.5	1,713	1,730	
						2,000	803.0	11.1		54	7.13	ssw.	15.1	1,960	2,200	
						2,250	779.2	10.1		56	6.92	ssw.	11.8	2,205	2,660	
5:10	969.2	24.7	38	s.	10.7	2,426	763.1	9.4	0.40	57	6.72	sw.	9.4	2,377	2,960	
						2,500	756.1	8.8		59	6.68	sw.	8.9	2,450	2,840	
						2,750	733.8	7.0		66	6.61	wsw.	7.1	2,694		
5:50	969.0	23.8	42	s.	7.6	2,850	724.8	6.2	0.79	69	6.54	wsw.	6.4	2,792		
						2,750	733.8	7.0		67	6.71	wsw.	7.0	2,694		
						2,500	756.0	9.1		62	7.17	wsw.	8.4	2,450	2,610	
						2,250	779.2	11.2		56	7.45	sw.	9.7	2,205	2,180	
6:23	968.9	23.0	46	ssw.	6.3	2,184	785.4	11.7	0.46	55	7.56	sw.	10.1	2,140	2,000	
						2,000	802.9	12.6		50	7.30	sw.	12.3	1,960	1,780	
6:35	968.9	22.6	47	ssw.	6.7	1,753	826.5	13.7	−0.89	43	6.74	sw.	16.1	1,718	1,490	
6:43	968.9	22.4	48	ssw.	5.4	1,674	834.6	13.0	0.74	44	6.59	ssw.	22.2	1,641	1,400	
						1,500	852.1	14.3		45	7.34	ssw.	21.9	1,470	1,130	
						1,250	877.9	16.1		46	8.42	ssw.	21.5	1,225	740	
						1,000	903.7	18.0		47	9.70	ssw.	21.2	980	340	
7:09	968.9	21.6	50	ssw.	6.7	780	926.8	19.6	0.44	48	10.95	ssw.	20.8	765	0	
						750	930.1	19.7		48	11.02	ssw.	19.6	735	0	
						500	957.0	20.8		49	12.04	s.	9.8	490	0	
7:14	968.9	21.3	50	s.	5.8	396	968.9	21.3		50	12.66	s.	5.8	388		3/10 Ci., nw.

August 30, 1917, series (No. 4).

P. M.																
7:50	968.9	20.2	55	s.	5.8	396	968.9	20.2		55	13.02	s.	5.8	388		Bright moonlight.
						500	957.2	19.8		54	12.47	s.	11.5	490	0	
						750	930.0	19.2		52	11.57	s.	19.8	735	0	
8:00	968.9	20.3	54	s.	5.8	799	924.5	18.7	0.37	50	10.78	s.	27.6	783	0	1/10 Ci., nw.
						1,000	903.2	16.9		50	9.62	s.	26.1	980	340	
						1,250	872.1	14.8		51	8.58	ssw.	24.3	1,225	770	
8:10	969.0	20.4	54	s.	6.7	1,273	874.7	14.6	0.86	51	8.48	ssw.	24.1	1,248	810	
						1,500	851.4	14.0		46	7.35	ssw.	20.6	1,470	1,320	
						1,750	825.8	13.3		40	6.11	ssw.	16.9	1,715	1,670	
8:29	969.2	20.2	53	s.	6.7	1,909	811.3	12.9	0.27	36	5.36	ssw.	14.5	1,871	1,830	1/10 Ci., nw.
						2,000	802.2	12.5		40	5.80	ssw.	13.1	1,960	1,920	
						2,250	778.9	11.2		51	6.78	sw.	9.1	2,205	2,190	
8:50	969.5	20.0	54	s.	7.2	2,257	778.5	11.2	0.49	51	6.78	sw.	9.0	2,212	2,200	
						2,500	756.0	9.2		55	6.40	sw.	8.1	2,450	2,610	
9:32	969.6	19.3	58	s.	6.7	2,722	736.4	7.3	0.98	59	6.04	sw.	7.3	2,667		Few Ci., nw.
						2,500	756.0	9.7		58	6.98	ssw.	10.0	2,450	2,550	
10:06	969.6	18.9	59	s.	6.7	2,406	765.1	10.8	0.50	58	7.51	ssw.	11.2	2,358	2,430	
						2,250	778.9	11.6		54	7.38	ssw.	12.4	2,205	2,200	
						2,000	802.2	12.8		49	7.24	ssw.	14.2	1,960	1,830	
						1,750	825.8	14.1		43	6.92	ssw.	16.1	1,715	1,630	
						1,500	851.4	15.4		37	6.48	ssw.	17.9	1,470	1,360	
10:32	969.4	18.8	58	s.	6.3	1,488	853.1	15.4	0.25	37	6.48	ssw.	18.0	1,459	1,340	Cloudless.
						1,250	872.1	16.0		44	8.00	ssw.	18.2	1,225	920	
10:40	969.9	18.6	60	s.	5.8	1,050	898.0	16.5	0.87	50	9.38	ssw.	18.4	1,029	560	
						1,000	903.2	16.9		50	9.62	ssw.	18.2	980	490	
						750	930.0	19.1		48	10.61	s.	17.2	735	40	
10:53	969.2	18.2	62	s.	5.8	649	941.2	20.0	−0.79	47	10.99	s.	16.8	636	0	Cloudless.
						500	957.2	18.8		55	11.94	s.	10.6	490	0	
10:59	969.2	18.0	63	s.	6.3	396	969.2	18.0		63	13.00	s.	6.3	388		

TABLE 5.—*Free-air data from kite flights at Drexel Aerological Station, August, 1917*—Continued.

August 30-31, 1917, series (No. 5).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%	s.	*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁸ ergs.*	*volts.*	
11:46	969.0	17.8	64	s.	6.7	396	969.0	17.8	.....	64	13.04	s.	6.7	388	.....	Cloudless.
						500	957.4	17.6	.....	62	12.48	s.	8.6	490	0	
						750	929.9	17.2	.....	57	11.18	ssw.	13.0	735	90	
						1,000	902.9	16.7	.....	52	9.89	sw.	17.5	980	.....	
A. M.																
12:17	968.8	17.6	65	s.	5.4	1,054	896.9	16.6	0.18	51	9.63	sw.	18.4	1,033	.....	
						1,250	876.2	15.8	.....	49	8.80	sw.	17.2	1,225	1,230	
						1,500	850.6	14.8	.....	46	7.74	sw.	15.5	1,470	1,680	
						1,750	825.9	13.7	.....	44	6.90	ssw.	14.0	1,715	2,130	
						2,000	801.8	12.7	.....	41	6.02	ssw.	12.3	1,960	2,780	
12:47	968.7	18.0	62	s.	7.2	2,122	790.4	12.2	0.41	40	5.68	ssw.	11.6	2,080	2,800	
						2,250	778.5	11.4	.....	43	5.80	ssw.	11.0	2,205	2,630	
						2,500	755.6	9.7	.....	48	5.77	ssw.	9.7	2,450	3,140	
						2,750	733.1	8.1	.....	53	5.72	ssw.	8.4	2,694	.....	
1:38	968.3	17.3	62	s.	7.6	2,917	718.2	7.0	0.80	56	5.61	ssw.	7.6	2,858	.....	
						2,750	733.1	8.6	.....	52	5.81	ssw.	8.1	2,694	.....	
						2,500	755.6	11.0	.....	46	6.04	ssw.	8.9	2,450	3,110	
1:58	968.2	17.0	67	s.	7.2	2,439	761.1	11.6	0.55	45	6.15	ssw.	9.1	2,390	3,060	
						2,250	778.5	12.6	.....	42	6.13	ssw.	10.8	2,205	2,910	
						2,000	801.8	14.0	.....	38	6.07	ssw.	13.0	1,960	2,450	
						1,750	825.9	15.4	.....	35	6.12	ssw.	15.2	1,715	2,150	
2:28	968.1	16.8	69	s.	7.6	1,500	850.6	16.8	−0.51	31	5.93	ssw.	17.4	1,470	1,760	
						1,250	876.2	15.5	.....	43	7.57	ssw.	21.0	1,225	1,370	
2:44	968.0	16.5	68	s.	7.2	1,203	880.8	15.3	0.69	45	7.82	ssw.	21.7	1,179	1,300	
						1,000	902.0	16.7	.....	47	8.93	ssw.	21.9	980	600	
						750	928.2	18.4	.....	49	10.37	ssw.	22.2	735	30	
2:58	967.9	16.2	68	ssw.	7.2	738	930.0	18.5	−0.67	49	10.44	ssw.	22.2	714	0	
						500	956.0	16.9	.....	62	11.94	ssw.	12.3	490	0	
3:08	967.9	16.2	68	ssw.	8.0	396	967.9	16.2	.....	68	12.53	ssw.	8.0	388	.....	Cloudless.

August 31, 1917, series (No. 6).

A. M.																
3:55	967.9	15.7	70	s.	6.3	396	967.9	15.7	.....	70	12.49	s.	6.3	388	.....	Cloudless.
						500	956.0	16.7	.....	62	11.79	s.	13.4	490	.....	
4:00	967.9	15.8	69	s.	6.7	659	938.5	18.1	−0.91	50	10.38	s.	24.0	616	.....	
																Kites broke away.

August 31, 1917, series (No. 7).

A. M.																
6:39	967.5	15.0	80	s.	6.3	396	967.5	15.0	.....	80	13.64	s.	6.3	388	.....	1/10 Ci., nw.
						500	955.7	15.1	.....	77	13.21	s.	9.1	490	630	
						750	928.0	15.5	.....	70	12.33	s.	15.9	735	790	
						1,000	901.2	15.8	.....	63	11.31	s.	22.6	980	940	
6:51	967.5	15.2	79	s.	5.8	1,056	895.1	15.9	−0.14	62	11.20	s.	24.0	1,035	980	
						1,250	875.1	16.6	.....	46	8.69	ssw.	21.8	1,225	1,100	
7:01	967.6	15.4	77	s.	5.4	1,406	859.1	17.2	−0.37	32	6.28	ssw.	20.0	1,378	1,200	
						1,500	849.8	16.7	.....	33	6.27	ssw.	19.6	1,470	1,380	
						1,750	825.3	15.5	.....	36	6.34	ssw.	18.7	1,715	1,880	
						2,000	801.3	14.4	.....	39	6.40	sw.	17.7	1,960	2,230	
						2,250	778.0	13.2	.....	42	6.37	sw.	16.8	2,205	2,540	
7:41	967.6	17.1	78	ssw.	7.6	2,375	766.4	12.6	0.48	44	6.42	sw.	16.3	2,327	2,700	1/10 Ci., nw.
						2,500	754.9	11.5	.....	46	6.24	sw.	16.2	2,450	2,970	
						2,750	732.5	9.4	.....	50	5.90	sw.	16.0	2,694	3,510	
8:27	967.1	19.2	71	ssw.	10.3	2,839	724.9	8.7	0.84	51	5.74	sw.	15.9	2,782	3,700	
						3,000	710.6	7.4	.....	54	5.56	sw.	15.1	2,939	4,050	
8:42	966.8	19.7	70	ssw.	8.9	3,217	692.0	5.6	0.88	57	5.19	sw.	14.0	3,184	.....	3/10 Ci., nw.
						3,000	710.6	7.6	.....	54	5.64	sw.	15.4	2,939	3,890	
9:00	966.5	20.0	66	ssw.	10.7	2,928	716.3	8.3	.....	53	5.80	sw.	15.9	2,869	3,580	
																Kites broke away.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917.*

September 1, 1917 (No. 1).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Gravity.	Electric.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
8:41	973.3	16.4	66	nne.	4.5	396	973.3	16.4	.....	66	12.31	nne.	4.5	388	.....	9/10 St.Cu., wnw.
						500	961.8	15.5	.....	66	11.62	nne.	5.2	490	0	
						750	933.7	13.3	.....	64	9.77	ne.	6.9	735	0	
9:01	973.3	17.4	61	ne.	3.6	823	925.5	12.7	0.87	64	9.40	ne.	7.4	807	0	
						1,000	906.5	13.7	.....	57	8.94	ne.	8.4	980	0	
9:10	973.3	17.6	60	ne.	4.9	1,228	882.1	15.1	−0.59	49	8.41	ne.	9.8	1,204	0	
10:47	973.5	19.0	57	ene.	2.7	1,026	903.7	11.1	−1.98	59	7.79	ene.	7.1	1,006	.....	2/10 Ci., sw.; 4/10 Ci.St., sw.
						1,250	880.5	11.9	.....	59	8.22	ene.	6.6	1,225	.....	
10:52	973.6	19.9	56	ne.	2.7	1,491	855.6	12.7	0.02	60	8.81	e.	6.1	1,462	.....	
						1,250	880.5	13.5	.....	61	9.44	ene.	6.2	1,225	.....	
						1,000	906.5	14.3	.....	62	10.11	ene.	6.3	980	.....	
						750	933.7	15.1	.....	63	11.09	ene.	6.4	735	.....	2/10 Ci., sw.; 4/10 Ci.St., sw.
11:05	973.6	19.3	58	ne.	2.7	629	947.4	15.5	0.16	63	11.09	ne.	6.4	617	.....	
						500	961.8	17.6	.....	60	12.08	ene.	4.8	490	.....	
11:18	973.4	19.2	57	ene.	3.6	396	973.4	19.2	.....	57	12.68	ene.	3.6	388	.....	2/10 Ci.St., wsw.; 6/10 A.Cu. wsw.

September 1, 1917 (No. 2).

P. M.																
1:22	972.6	20.6	56	ne.	6.3	396	972.6	20.6	.....	56	13.59	ne.	6.3	388	.....	4/10 Ci.St., wsw.; 4/10 A.Cu., wsw.
						500	961.5	19.4	.....	57	12.84	ne.	7.2	490	0	
1:30	972.6	21.1	54	ne.	7.2	738	934.7	16.7	1.14	59	11.22	ene.	9.2	724	170	Solar halo 22° radius from 12:45 to 2:00 p. m.
						750	933.6	16.6	.....	59	11.15	ene.	9.1	735	200	
						1,000	906.6	15.4	.....	63	11.02	e.	7.8	980	810	
1:57	972.6	21.8	52	ne.	5.4	1,239	881.2	14.2	0.50	67	10.85	e.	6.6	1,215	890	
						1,250	880.4	14.1	.....	67	10.78	e.	6.8	1,225	.....	4/10 Ci.St., wsw.; 5/10 A.Cu., wsw.
2:18	972.8	22.0	53	e.	3.1	1,473	857.2	11.8	0.88	73	10.10	ese.	10.2	1,444	.....	
						1,250	880.4	13.4	.....	70	10.76	e.	8.9	1,225	.....	
						1,000	906.6	15.2	.....	66	11.40	e.	7.4	980	.....	
2:23	972.9	21.6	53	ene.	3.1	763	932.2	16.9	1.31	62	11.94	ene.	6.0	748	.....	
						750	933.6	17.1	.....	62	12.09	ene.	5.9	735	.....	
						500	961.5	20.3	.....	53	12.62	e.	3.6	490	.....	
2:31	973.0	21.7	50	e.	2.7	396	973.0	21.7	.....	50	12.98	e.	2.7	388	.....	4/10 Ci.St., wsw.; 5/10 A.Cu., wsw.

September 2, 1917.

A. M.																
7:13	974.8	15.9	69	e.	4.0	396	974.8	15.9	.....	69	12.47	e.	4.0	388	.....	2/10 Ci., nw.
						500	963.0	16.7	.....	72	13.69	e.	6.4	490	0	
7:18	974.8	16.4	68	e.	4.0	619	949.6	17.7	−0.81	75	15.19	ese.	9.1	607	0	
						750	935.2	17.2	.....	77	15.11	ese.	8.8	735	270	
						1,000	908.0	16.2	.....	82	15.10	ese.	8.3	980	800	
						1,250	882.0	15.2	.....	87	15.02	e.	7.7	1,225	1,600	
						1,500	857.0	14.2	.....	91	14.73	e.	7.1	1,470	2,280	
7:57	975.0	18.2	67	ese.	6.3	1,746	831.9	13.2	0.40	96	14.56	e.	6.6	1,711	2,200	2/10 Ci., nw.
						2,000	807.8	12.8	.....	84	12.42	se.	7.7	1,960	1,860	1/10 Ci., nw.; 1/10 A.Cu., sw.
8:54	975.3	20.9	60	ese.	4.0	2,104	797.4	12.7	0.31	79	11.60	se.	8.2	2,062	1,700	
						2,000	807.8	13.2	.....	76	11.53	se.	4.0	1,960	1,660	2/10 A.Cu., ssw.; 7/10 St. ese.
9:42	975.6	21.0	64	e.	4.5	1,978	809.7	13.3	0.17	75	11.45	se.	3.1	1,939	1,650	
						1,750	832.0	13.7	.....	77	12.07	se.	4.4	1,715	1,560	
						1,500	857.0	14.1	.....	79	12.71	se.	5.8	1,470	1,390	
						1,250	883.0	14.6	.....	81	13.46	e.	7.3	1,225	860	
						1,000	909.4	15.0	.....	83	14.15	e.	8.7	980	180	10/10 St., ese.
10:26	975.8	21.2	61	ene.	4.9	935	916.2	15.1	1.13	84	14.41	e.	9.1	917	0	
						750	936.7	17.2	.....	75	14.72	e.	7.5	735	0	Altitude of stratus base about 1,000 m.
						500	964.6	20.0	.....	62	14.50	ene.	5.4	490	0	
10:41	975.9	21.2	57	ene.	4.5	396	975.9	21.2	.....	57	14.35	ene.	4.5	388	.....	10/10 St., ese.

September 3, 1917.

A. M.																
7:05	970.6	19.2	87	ssw.	4.9	396	970.6	19.2	.....	87	19.36	ssw.	4.9	388	.....	3/10 St.Cu., w.
						500	959.5	20.5	.....	75	18.09	sw.	8.4	490	0	
						750	932.6	23.5	.....	48	13.90	wsw.	16.9	735	0	
7:18	970.7	19.5	86	ssw.	5.8	872	919.0	25.0	−1.22	34	10.77	w.	21.1	855	0	
						1,000	906.4	24.5	.....	35	10.76	w.	20.1	980	0	
						1,250	880.4	23.4	.....	37	10.65	w.	18.2	1,225	40	5/10 St.Cu., w.
						1,500	855.6	22.3	.....	38	10.23	w.	16.3	1,470	430	
7:37	970.8	19.6	85	ssw.	6.3	1,623	843.2	21.8	0.43	39	10.19	w.	15.4	1,591	620	
						1,750	831.4	20.9	.....	39	9.64	w.	14.5	1,715	680	
						2,000	807.5	19.0	.....	39	8.57	w.	12.6	1,960	820	
7:50	970.9	20.6	80	ssw.	6.7	2,108	797.3	18.2	0.74	39	8.15	w.	11.8	2,066	920	
						2,250	784.4	17.3	.....	41	8.10	wsw.	11.9	2,205	1,250	
8:07	970.9	21.4	77	ssw.	7.6	2,361	774.0	16.6	0.63	43	8.12	wsw.	12.0	2,314	1,500	
						2,500	761.6	15.6	.....	45	7.97	wsw.	11.8	2,450	1,700	
						2,750	740.0	13.7	.....	48	7.53	wsw.	11.4	2,694	2,060	1/10 Ci., w.; 7/10 St.Cu., w.
						3,000	718.5	11.8	.....	51	7.06	wsw.	11.0	2,939	2,450	Precipitation apparently falling from clouds in distance to nnw., 8:38 a. m.
9:00	970.9	22.8	73	ssw.	5.8	3,209	700.3	10.2	0.75	54	6.72	wsw.	10.7	3,144	2,800	
						3,250	697.4	9.9	.....	55	6.71	wsw.	11.0	3,184	2,890	Thunder heard faintly to nnw. at 8:56 a. m.; last heard to nne. at 9:40 a. m.
						3,500	676.6	7.8	.....	61	6.45	wsw.	12.9	3,429	.....	
9:22	970.9	23.9	70	sw.	4.9	3,745	656.5	5.7	0.84	66	6.05	wsw.	14.7	3,668	.....	
						3,500	676.6	7.7	.....	64	6.73	wsw.	12.2	3,429	.....	
9:38	970.9	25.2	64	sw.	5.4	3,264	695.6	9.7	0.75	62	7.46	wsw.	9.8	3,198	2,850	
						3,250	697.4	9.8	.....	62	7.51	wsw.	9.8	3,184	2,790	
						3,000	718.5	11.7	.....	57	7.84	wsw.	10.7	2,939	2,460	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 3, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A.M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	2,750	740.0	13.5	.....	52	8.04	wsw.	11.5	2,694	2,300	2/10 Ci.St., w.; 3/10 A.Cu., w.; 3/10 St.Cu., w.
.....	.....	.....	.....	.....	.....	2,500	762.0	15.4	.....	47	8.22	wsw.	12.4	2,450	1,940	
.....	.....	.....	.....	.....	.....	2,250	784.9	17.3	.....	42	8.30	wsw.	13.2	2,205	1,310	
10:11	970.8	26.5	59	sw.	3.1	2,126	796.0	18.2	0.95	40	8.36	wsw.	13.6	2,083	1,000	
.....	.....	.....	.....	.....	.....	2,000	807.8	19.4	.....	39	8.79	wsw.	13.8	1,960	860	
10:24	970.8	27.2	59	ssw.	4.0	1,758	830.7	21.7	0.21	36	9.35	wsw.	14.2	1,723	590	
.....	.....	.....	.....	.....	.....	1,750	831.4	21.7	.....	36	9.35	wsw.	14.1	1,715	590	
.....	.....	.....	.....	.....	.....	1,500	855.8	22.2	.....	39	10.44	wsw.	11.5	1,470	500	
.....	.....	.....	.....	.....	.....	1,250	880.7	22.8	.....	42	11.66	sw.	8.9	1,225	420	
.....	.....	.....	.....	.....	.....	1,000	906.4	23.3	.....	44	12.59	sw.	6.2	980	340	
10:36	970.7	27.6	56	ssw.	3.6	951	911.4	23.4	0.81	45	12.95	sw.	5.7	932	.....	3/10 Ci.St., w.; 2/10 St.Cu., w.
.....	.....	.....	.....	.....	.....	750	932.6	25.0	.....	49	15.52	sw.	4.9	735	.....	
.....	.....	.....	.....	.....	.....	500	959.5	27.1	.....	53	19.01	wsw.	4.0	490	.....	
10:43	970.7	27.9	55	wsw.	3.6	396	970.7	27.9	.....	55	20.67	wsw.	3.6	388	.....	Few Ci.St., w.; 3/10 A.Cu., w.

September 4, 1917 No. 1.

A. M.																
10:43	973.1	23.9	78	sse.	4.5	396	973.1	23.9	.....	78	23.13	sse.	4.5	388	.....	7/10 St., s.
.....	.....	.....	.....	.....	.....	500	961.9	22.6	.....	83	22.76	sse.	5.4	490	0	
10:45	973.1	24.1	78	sse.	3.6	677	942.3	20.3	1.28	91	21.55	sse.	7.0	664	0	
.....	.....	.....	.....	.....	.....	750	934.8	19.8	.....	92	21.25	sse.	7.0	735	0	
.....	.....	.....	.....	.....	.....	1,000	908.0	18.1	.....	95	19.73	sse.	7.0	980	0	
11:00	973.0	25.2	73	sse.	4.0	1,024	905.1	17.9	0.70	95	19.48	sse.	7.0	1,004	0	
.....	.....	.....	.....	.....	.....	1,000	908.0	18.1	.....	95	19.73	sse.	6.9	980	0	
11:35	973.2	24.6	73	sse.	3.6	858	932.0	19.1	1.19	93	20.56	sse.	6.6	841	0	
.....	.....	.....	.....	.....	.....	750	934.8	20.4	.....	89	21.33	sse.	5.9	735	0	
.....	.....	.....	.....	.....	.....	500	961.9	23.4	.....	79	22.74	ssw.	4.3	490	0	
11:58	973.3	24.6	75	ssw.	3.6	396	973.3	24.6	.....	75	23.20	ssw.	3.6	388	.....	7/10 St., s.

September 4, 1917 (No. 2).

P. M.																
1:16	972.0	27.1	66	ssw.	5.8	396	972.0	27.1	.....	66	23.67	ssw.	5.8	388	.....	2/10 St., ssw.
.....	.....	.....	.....	.....	.....	500	960.5	25.8	.....	71	23.59	ssw.	7.0	490	0	
.....	.....	.....	.....	.....	.....	750	933.5	22.7	.....	82	22.62	s.	10.0	735	0	
1:24	971.9	27.4	65	ssw.	5.8	827	925.5	21.8	1.23	86	22.46	s.	10.9	811	0	
.....	.....	.....	.....	.....	.....	1,000	906.8	21.0	.....	83	20.64	s.	13.1	980	240	
1:34	971.7	27.6	65	ssw.	5.8	1,228	883.5	20.0	0.45	80	18.70	ssw.	16.0	1,204	560	2/10 Ci.St., w.; 1/10 St.Cu., ssw.
.....	.....	.....	.....	.....	.....	1,250	881.4	19.9	.....	79	18.36	ssw.	16.0	1,225	590	
.....	.....	.....	.....	.....	.....	1,500	855.8	18.9	.....	69	15.07	sw.	15.9	1,470	900	
.....	.....	.....	.....	.....	.....	1,750	830.8	17.9	.....	59	12.10	wsw.	15.8	1,715	1,220	
1:44	971.6	28.6	64	s.	5.4	1,770	829.6	17.8	0.41	58	11.82	wsw.	15.8	1,735	1,240	
.....	.....	.....	.....	.....	.....	2,000	807.0	16.9	.....	52	10.01	wsw.	15.8	1,960	1,590	
.....	.....	.....	.....	.....	.....	2,250	784.0	16.0	.....	46	8.36	w.	15.9	2,205	1,850	
.....	.....	.....	.....	.....	.....	2,500	761.0	15.0	.....	40	6.82	w.	15.9	2,450	1,960	
.....	.....	.....	.....	.....	.....	2,750	739.0	14.0	.....	34	5.43	wnw.	16.0	2,694	2,070	
2:04	971.3	28.9	60	sse.	5.8	2,819	733.0	13.8	0.38	32	5.05	wnw.	16.0	2,762	2,100	2/10 Ci., w.; 4/10 Ci.St., w.; 1/10 St.Cu., ssw.
.....	.....	.....	.....	.....	.....	3,000	717.4	12.4	.....	34	4.90	wnw.	16.7	2,939	2,280	
.....	.....	.....	.....	.....	.....	3,250	696.2	10.5	.....	37	4.70	wnw.	17.6	3,184	2,520	
2:19	971.1	29.4	61	se.	7.6	3,327	690.0	9.9	0.77	38	4.64	wnw.	17.9	3,259	2,600	
.....	.....	.....	.....	.....	.....	3,500	675.3	8.6	.....	41	4.58	wnw.	18.1	3,429	2,740	
.....	.....	.....	.....	.....	.....	3,750	655.0	6.7	.....	44	4.32	wnw.	18.4	3,673	2,940	
.....	.....	.....	.....	.....	.....	4,000	634.8	4.8	.....	48	4.13	wnw.	18.7	3,918	3,210	
.....	.....	.....	.....	.....	.....	4,250	615.7	2.9	.....	51	3.84	nw.	19.1	4,162	3,330	
.....	.....	.....	.....	.....	.....	4,500	597.4	1.1	.....	55	3.64	nw.	19.4	4,407	3,530	
.....	.....	.....	.....	.....	.....	4,750	579.6	−1.0	.....	59	3.32	nw.	19.7	4,651	3,730	
2:48	970.7	29.4	61	se.	6.7	4,838	573.5	−1.5	0.75	60	3.23	nw.	19.8	4,737	3,800	
.....	.....	.....	.....	.....	.....	5,000	562.0	−2.1	.....	63	3.23	nw.	19.7	4,896	3,890	2/10 Ci., w.; 1/10 Ci.St., w.
.....	.....	.....	.....	.....	.....	5,250	544.8	−3.1	.....	67	3.16	nw.	19.6	5,140	4,040	
.....	.....	.....	.....	.....	.....	5,500	528.2	−4.1	.....	71	3.07	nw.	19.4	5,384	4,180	
.....	.....	.....	.....	.....	.....	5,750	511.7	−5.1	.....	76	3.02	nw.	19.3	5,629	.....	
3:37	970.0	29.6	62	sse.	8.0	5,774	510.1	−5.2	0.54	76	2.99	nw.	19.3	5,652	.....	
.....	.....	.....	.....	.....	.....	5,750	512.0	−5.0	.....	76	3.05	nw.	19.2	5,629	.....	
.....	.....	.....	.....	.....	.....	5,500	528.8	−3.3	.....	71	3.29	nw.	18.4	5,384	4,000	
.....	.....	.....	.....	.....	.....	5,250	546.2	−1.7	.....	67	3.55	nw.	17.6	5,140	3,760	
.....	.....	.....	.....	.....	.....	5,000	563.4	0.0	.....	62	3.79	nw.	16.8	4,896	3,520	
.....	.....	.....	.....	.....	.....	4,750	581.0	1.7	.....	58	4.01	nw.	16.1	4,651	3,280	
.....	.....	.....	.....	.....	.....	4,500	598.8	3.4	.....	53	4.13	nw.	15.3	4,407	3,040	
.....	.....	.....	.....	.....	.....	4,250	617.4	5.1	.....	49	4.31	nw.	14.5	4,162	2,800	
.....	.....	.....	.....	.....	.....	4,000	636.5	6.8	.....	45	4.45	nw.	13.7	3,918	2,560	
.....	.....	.....	.....	.....	.....	3,750	656.0	8.5	.....	40	4.44	nw.	12.9	3,673	2,320	
4:09	969.5	29.4	61	se.	7.6	3,631	665.1	9.3	0.65	38	4.45	nw.	12.5	3,557	2,200	Few Ci.St., w.; 4/10 Cu., sw.
.....	.....	.....	.....	.....	.....	3,500	675.8	10.1	.....	37	4.57	nw.	12.1	3,429	2,100	
.....	.....	.....	.....	.....	.....	3,250	697.0	11.8	.....	36	4.98	wnw.	11.8	3,184	1,920	
.....	.....	.....	.....	.....	.....	3,000	717.4	13.4	.....	35	5.38	w.	11.4	2,939	1,730	
.....	.....	.....	.....	.....	.....	2,750	739.0	15.0	.....	33	5.65	wsw.	11.2	2,694	1,540	
4:30	969.4	28.8	62	se.	7.2	2,672	745.0	15.5	−1.25	33	5.85	wsw.	11.2	2,618	1,460	
4:31	969.4	28.8	62	sse.	7.2	2,536	757.2	13.8	0.44	48	7.57	wsw.	12.8	2,485	1,340	
.....	.....	.....	.....	.....	.....	2,500	761.0	14.0	.....	52	8.31	wsw.	12.9	2,450	1,300	
.....	.....	.....	.....	.....	.....	2,250	784.0	15.0	.....	77	13.13	sw.	13.7	2,205	1,070	
4:37	969.4	28.6	64	sse.	6.3	2,035	803.6	16.0	0.85	99	18.00	sw.	14.4	1,994	870	
.....	.....	.....	.....	.....	.....	2,000	807.0	16.3	.....	98	18.16	sw.	14.6	1,960	840	
.....	.....	.....	.....	.....	.....	1,750	830.8	18.4	.....	87	18.41	sw.	16.0	1,715	610	
.....	.....	.....	.....	.....	.....	1,500	855.2	20.5	.....	77	18.57	sw.	17.5	1,470	390	
4:55	969.2	28.5	65	sse.	6.3	1,351	869.6	21.8	0.63	71	18.55	sw.	18.3	1,324	260	
.....	.....	.....	.....	.....	.....	1,250	880.0	22.4	.....	71	19.23	sw.	17.8	1,225	210	
.....	.....	.....	.....	.....	.....	1,000	905.0	24.0	.....	70	20.89	ssw.	16.5	980	90	
5:08	969.2	28.2	65	sse.	7.2	830	922.9	25.1	0.71	69	21.99	ssw.	15.7	814	0	
.....	.....	.....	.....	.....	.....	750	931.1	25.7	.....	68	22.46	ssw.	14.0	735	0	
.....	.....	.....	.....	.....	.....	500	957.8	27.5	.....	67	24.60	s.	8.9	490	0	
5:14	969.1	28.2	66	s.	6.7	396	969.1	28.2	.....	66	25.24	s.	6.7	388	.....	Few Cu., sw.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 5, 1917 (No. 1).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
7:16	968.6	21.7	82	ssw.	6.6	396	968.6	21.7	.....	82	21.29	ssw.	6.6	388	.....	4/10 A.Cu., w.
						500	957.5	22.0	.....	75	19.83	sw.	11.8	490	0	
						750	930.4	22.8	.....	68	18.88	wsw.	24.2	735	0	
7:32	968.6	22.1	82	sw.	7.8	771	927.9	22.9	−0.32	67	18.71	wsw.	25.2	756	0	
						1,000	904.0	22.6	.....	57	15.64	wsw.	24.5	980	0	
						1,250	878.2	22.2	.....	46	12.31	wsw.	23.8	1,225	0	
7:39	968.6	22.3	81	sw.	6.6	1,441	859.1	21.9	0.15	37	9.72	wsw.	23.2	1,413	0	4/10 Ci., w; 2/10 A.Cu., w.
						1,500	853.3	21.6	.....	36	9.29	wsw.	23.1	1,470	60	
						1,750	829.2	20.2	.....	30	7.10	wsw.	22.7	1,715	310	
						2,000	805.2	18.9	.....	24	5.24	wsw.	22.3	1,960	560	
						2,250	782.0	17.6	.....	18	3.62	wsw.	21.9	2,205	810	
8:03	968.6	22.6	79	wsw.	6.2	2,279	779.3	17.4	0.54	17	3.38	wsw.	21.9	2,233	840	2/10 Ci., w.
						2,500	759.4	16.3	.....	16	2.96	wsw.	23.0	2,450	1,060	
						2,750	737.4	14.8	.....	14	2.36	sw.	24.4	2,694	1,310	
						3,000	715.9	13.5	.....	12	1.86	sw.	25.6	2,939	1,560	
8:28	968.4	23.3	78	wsw.	4.9	3,041	712.4	13.3	0.54	12	1.83	sw.	25.8	2,979	1,600	
						3,250	695.0	11.6	.....	14	1.91	sw.	24.0	3,184	1,680	
						3,500	674.6	9.5	.....	16	1.90	sw.	21.8	3,429	1,780	
8:51	968.3	25.0	71	wsw.	4.9	3,561	669.4	8.9	0.85	17	1.94	sw.	21.3	3,488	1,800	1/10 Ci., w.
						3,750	654.8	7.4	.....	21	2.16	sw.	21.2	3,673	1,930	
						4,000	635.4	5.5	.....	26	2.35	sw.	21.1	3,918	.....	
9:22	968.2	26.1	66	wsw.	6.6	4,102	627.0	4.7	0.79	28	2.39	sw.	21.1	4,018	.....	2/10 A.Cu., w.
						4,000	635.4	5.5	.....	27	2.44	sw.	21.3	3,918	.....	
						3,750	654.8	7.5	.....	25	2.59	sw.	21.9	3,673	2,030	
						3,500	674.6	9.5	.....	23	2.73	wsw.	22.5	3,429	1,730	
						3,250	695.0	11.5	.....	20	2.71	wsw.	23.0	3,184	1,560	
9:49	968.2	26.5	64	sw.	5.7	3,094	707.6	12.8	0.53	19	2.81	wsw.	23.4	3,031	1,400	
						3,000	715.9	13.3	.....	19	2.90	wsw.	23.2	2,939	1,310	
						2,750	738.0	14.6	.....	21	3.49	wsw.	22.7	2,694	1,110	1/10 Ci.St., w.; 3/10 A.Cu., w.
						2,500	760.8	16.0	.....	22	4.00	wsw.	22.1	2,450	890	
						2,250	783.6	17.3	.....	23	4.54	wsw.	21.6	2,205	780	
10:35	968.0	28.8	56	sw.	7.8	2,008	805.3	18.6	0.51	24	5.14	wsw.	21.1	1,968	590	
						2,000	806.2	18.6	.....	24	5.14	wsw.	21.1	1,960	580	
						1,750	829.2	19.9	.....	33	7.67	wsw.	19.7	1,715	380	
10:42	968.0	29.0	57	wsw.	7.0	1,595	843.9	20.7	−1.64	39	9.52	wsw.	18.9	1,563	260	
						1,500	853.3	19.1	.....	64	14.15	w.	16.8	1,470	180	7/10 A.Cu., w.
10:52	967.9	29.0	55	wsw.	6.6	1,467	856.5	18.6	0.87	73	15.64	w.	16.1	1,438	160	
						1,250	878.2	20.5	.....	70	16.88	w.	13.9	1,225	0	
						1,000	904.0	22.7	.....	67	18.49	w.	11.3	980	0	
11:13	967.8	28.8	59	w.	11.1	792	925.4	24.5	1.24	65	19.99	w.	9.1	777	0	
						750	930.4	25.0	.....	64	20.28	w.	8.8	735	0	
						500	956.8	28.1	.....	58	22.06	w.	7.3	490	0	
11:19	967.8	29.4	55	w.	6.6	396	967.8	29.4	.....	55	22.55	w.	6.6	388	.....	6/10 A.Cu., w.; Few St.Cu., wsw.

September 5, 1917 (No. 2).

P. M.																
12:22	967.5	30.3	53	w.	5.8	396	967.5	30.3	.....	53	22.89	w.	5.8	388	.....	3/10 A.Cu., w.; 1/10 Cu., wnw.
						500	956.3	28.9	.....	56	22.31	w.	6.5	490	0	
12:34	967.4	30.1	52	wnw.	5.8	742	930.6	25.8	1.30	62	20.60	wnw.	8.2	728	0	
						750	930.0	25.7	.....	62	20.48	wnw.	8.2	735	0	
						1,000	903.5	23.8	.....	67	19.76	wnw.	8.2	980	0	
1:00	967.2	29.8	51	w.	5.8	1,070	896.0	23.2	0.79	68	19.34	wnw.	8.2	1,049	0	
						1,250	877.9	21.6	.....	72	18.58	wnw.	7.2	1,225	0	4/10 Cu., sw.
1:42	967.0	28.8	55	nw.	4.0	1,444	858.1	19.8	0.91	77	17.79	nw.	6.2	1,416	0	
						1,500	852.6	19.5	.....	76	17.23	nw.	6.7	1,470	340	1/10 Cu., sw.
						1,750	828.0	18.2	.....	71	14.84	nw.	8.8	1,715	590	
						2,000	804.2	16.9	.....	66	12.70	wnw.	10.9	1,960	790	
						2,250	780.8	15.7	.....	61	10.88	wnw.	13.1	2,205	1,000	
						2,500	758.0	14.4	.....	56	9.18	w.	15.2	2,450	1,210	
						2,750	736.0	13.1	.....	51	7.69	w.	17.3	2,694	1,410	
						3,000	714.3	11.8	.....	46	6.37	w.	19.4	2,939	1,620	
						3,250	693.5	10.5	.....	41	5.21	wsw.	21.6	3,184	1,830	
2:35	966.9	28.2	55	nnw.	6.3	3,314	688.0	10.2	0.51	40	4.98	wsw.	22.1	3,247	1,880	
						3,500	672.7	9.6	.....	34	4.06	wsw.	19.3	3,429	2,030	
						3,750	652.6	8.8	.....	26	2.95	wsw.	15.6	3,673	2,240	
2:51	966.9	27.8	58	nnw.	4.9	3,826	646.6	8.6	0.31	24	2.68	wsw.	14.5	3,747	2,300	Few Cu.
						3,750	652.6	8.8	.....	28	3.17	wsw.	14.3	3,673	2,240	
						3,500	672.7	9.0	.....	42	4.82	wsw.	13.7	3,429	2,020	
						3,250	693.5	10.4	.....	56	7.06	wsw.	13.2	3,184	1,790	
						3,000	714.3	11.2	.....	70	9.31	sw.	12.6	2,939	1,520	
						2,750	736.0	12.3	.....	89	12.74	sw.	11.8	2,694	1,270	
3:17	967.0	27.7	58	nnw.	4.5	2,533	755.4	12.7	0.32	96	14.10	sw.	11.5	2,482	1,120	
						2,500	758.0	13.0	.....	95	14.23	sw.	11.5	2,450	1,100	
						2,250	780.8	15.0	.....	90	15.34	sw.	11.4	2,205	920	
						2,000	804.2	17.0	.....	85	16.47	sw.	11.3	1,960	480	
3:40	967.1	27.2	59	nnw.	4.5	1,750	828.0	19.0	0.80	80	17.58	sw.	11.2	1,715	0	
						1,500	852.6	21.0	.....	66	16.41	wsw.	13.9	1,470	0	
3:50	967.2	27.1	57	nw.	4.9	1,378	864.4	22.0	−0.81	59	15.60	wsw.	15.2	1,351	0	
						1,250	877.4	21.9	.....	66	17.34	w.	12.3	1,225	0	
3:55	967.2	27.0	55	nw.	5.8	1,163	885.9	20.3	0.79	70	16.67	w.	10.3	1,140	0	
						1,000	902.7	21.3	.....	68	17.22	w.	10.9	980	0	
4:05	967.2	26.6	55	nnw.	4.9	783	922.5	22.6	0.61	66	18.10	nnw.	11.7	768	0	
						750	928.9	23.0	.....	65	18.26	nnw.	11.0	735	0	
						500	956.0	25.7	.....	59	19.49	nnw.	5.6	490	0	
4:12	967.3	26.8	56	nnw.	3.4	396	967.3	26.8	.....	56	19.73	nnw.	3.4	388	.....	2/10 A.St., nw.; 1/10 Cu., n.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 5, 1917 (No. 3).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	10^6 ergs.	volts.	
4:50	967.5	26.2	54	n.	4.9	396	967.5	26.2	.....	54	18.37	n.	4.9	388	.....	2/10 A.St., nw.; 1/10 Cu., n.
						500	956.0	24.6	.....	57	17.64	n.	7.0	490	0	
5:05	967.6	25.6	54	nne.	5.4	728	931.4	21.2	1.51	65	16.37	nne.	11.5	714	0	
						750	929.5	21.0	.....	66	16.41	nne.	11.4	735	0	
						1,000	902.8	19.0	.....	72	15.82	nne.	10.4	980	0	
5:15	967.7	25.2	52	nne.	4.9	1,165	885.5	17.6	0.82	76	15.30	nne.	9.8	1,142	0	
						1,250	876.8	17.2	.....	75	14.72	nnw.	8.4	1,225	70	2/10 A.St., nw.; 1/10 Cu., n.
5:57	967.9	23.7	44	nne.	4.0	1,361	865.3	16.7	0.46	74	14.07	wnw.	6.6	1,334	240	
						1,500	851.5	18.5	.....	73	15.55	w.	3.2	1,470	450	
6:05	967.9	23.5	42	nne.	4.5	1,550	846.5	19.2	−1.32	72	16.02	w.	11.2	1,519	530	
						1,750	827.1	17.9	.....	73	14.97	w.	11.4	1,715	800	Parhelion to right of sun, from 6:15 to 6:30 p. m.
						2,000	803.3	16.3	.....	74	13.71	wnw.	11.7	1,960	1,140	
						2,250	780.3	14.8	.....	75	12.62	wnw.	12.1	2,205	1,480	
						2,500	757.6	13.0	.....	76	11.38	wnw.	12.4	2,450	1,820	
						2,750	735.3	11.6	.....	78	10.65	wnw.	12.7	2,694	2,070	
						3,000	713.2	10.0	.....	79	9.70	nw.	13.0	2,939	2,290	
						3,250	692.0	8.4	.....	80	8.82	nw.	13.3	3,184	2,510	
6:27	968.0	22.8	41	nne.	4.0	3,268	690.5	8.3	0.63	80	8.76	nw.	13.3	3,201	2,530	
						3,500	671.5	6.8	.....	79	7.81	nw.	13.4	3,429	2,740	
						3,750	651.5	5.2	.....	79	6.99	nw.	13.5	3,673	2,960	Thunderstorm east of station.
						4,000	631.8	3.6	.....	78	6.17	nw.	13.7	3,918	.....	
6:50	968.1	22.1	41	n.	3.6	4,058	627.1	3.2	0.64	78	6.00	nw.	13.7	3,974	.....	
						4,000	631.8	3.6	.....	78	6.17	nw.	13.7	3,918	.....	
						3,750	651.5	5.1	.....	77	6.77	nw.	13.8	3,673	2,920	
						3,500	671.5	6.7	.....	76	7.46	nw.	13.9	3,429	2,650	
						3,250	692.0	8.3	.....	75	8.21	wnw.	14.0	3,184	2,380	
						3,000	713.2	9.9	.....	74	9.03	wnw.	14.1	2,939	2,100	
						2,750	735.3	11.4	.....	73	9.84	wnw.	14.2	2,694	1,830	1/10 A.Cu., wnw.; 1/10 Cu., n.
7:11	968.3	21.4	44	n.	6.3	2,631	745.7	12.2	0.67	73	10.37	wnw.	14.2	2,578	1,700	Darkness.
						2,500	757.6	13.1	.....	75	11.31	wnw.	13.6	2,450	1,510	
						2,250	780.3	14.7	.....	78	13.05	w.	12.4	2,205	1,150	
						2,000	803.3	16.8	.....	81	15.50	wsw.	11.2	1,960	790	
7:30	968.4	20.8	46	n.	2.7	1,941	809.2	16.8	0.51	82	15.69	wsw.	10.9	1,902	700	Lightning in east.
						1,750	827.1	17.8	.....	77	15.69	wnw.	9.9	1,715	620	
						1,500	851.5	19.1	.....	70	15.48	nnw.	8.6	1,470	500	
7:40	968.5	20.6	46	nne.	2.2	1,354	866.6	19.8	−0.89	66	15.25	n.	7.8	1,327	390	3/10 A.Cu., wnw.
						1,250	876.8	18.9	.....	57	12.45	n.	10.0	1,225	310	
7:48	968.5	20.3	47	n.	2.2	1,106	891.8	17.6	0.70	44	8.86	nne.	13.0	1,084	210	
						1,000	902.8	18.3	.....	43	9.04	nne.	12.7	980	110	
						750	929.8	20.1	.....	39	9.18	nne.	12.0	735	0	
7:58	968.6	20.1	49	n.	2.2	652	940.4	20.8	−0.31	38	9.34	nne.	11.7	639	0	
						500	957.0	20.3	.....	45	10.72	n.	6.1	490	0	
8:01	968.6	20.0	50	n.	2.2	396	968.6	20.0	.....	50	11.69	n.	2.2	388	.....	2/10 A.Cu., wnw.

September 5, 1917 (No. 4).

P. M.																
8:47	969.4	19.1	54	n.	2.7	396	969.4	19.1	.....	54	11.94	n.	2.7	388	.....	2/10 A.Cu., wnw.; lightning in north and east.
						500	957.6	19.2	.....	51	11.35	nne.	6.4	490	0	
8:51	969.4	18.8	55	n.	2.7	728	932.6	19.3	−0.06	45	10.08	ne.	14.5	714	0	
						750	930.0	19.2	.....	45	10.01	ne.	14.2	735	0	
						1,000	903.4	18.0	.....	41	8.41	ne.	10.6	980	290	1/10 A.Cu., wnw.
9:08	969.6	18.3	57	n.	2.2	1,102	892.9	17.5	0.48	40	8.00	ne.	9.2	1,080	425	Lightning in sw.; 3/10 A.Cu., wnw.
						1,250	877.7	16.9	.....	55	10.59	ne.	6.4	1,225	.....	8/10 St.Cu., wsw.
10:41	969.9	18.4	58	n.	2.7	1,289	873.9	16.7	0.28	59	11.22	ne.	5.6	1,264	.....	
						1,250	877.7	16.8	.....	57	10.90	ne.	6.4	1,225	.....	Thunderstorm began 10:50 p.m. in sw. and continued at end of flight.
10:52	969.9	18.5	58	ne.	3.1	1,057	896.7	17.0	0.22	48	9.30	ene.	10.3	1,046	0	8/10 St.Cu., wsw.
						1,000	903.4	17.2	.....	49	9.61	ene.	9.5	980	0	Rain from 10:53 to 10:59 p. m.
						750	930.0	17.7	.....	52	10.53	ene.	6.7	735	0	
						500	957.6	18.3	.....	56	11.78	ne.	3.9	490	0	
11:31	969.9	18.5	57	ne.	2.7	396	969.9	18.5	.....	57	12.14	ne.	2.7	388	.....	10/10 St.Cu.

September 6, 1917 (No. 1).

A. M.																
9:19	970.5	17.8	74	e.	4.9	396	970.5	17.8	.....	74	14.88	e.	4.9	388	.....	3/10 A.Cu., wsw.
						500	958.2	17.2	.....	75	14.72	e.	4.1	490	0	
9:31	970.4	18.8	72	e.	6.3	737	932.4	15.8	0.59	76	13.64	ese.	7.4	723	0	
						750	930.7	15.9	.....	78	14.09	ese.	7.3	735	230	
10:18	970.1	20.4	69	ene.	4.9	783	927.3	16.1	−0.65	83	15.19	ese.	7.0	768	810	
						1,000	903.7	17.6	.....	83	16.71	e.	5.0	980	.....	
11:05	969.9	21.0	72	e.	3.6	1,054	897.9	18.0	−0.84	83	17.13	e.	4.5	1,033	0	
						1,000	903.7	17.5	.....	83	16.60	e.	4.6	980	0	
11:11	969.5	21.8	64	e.	4.0	827	922.1	15.8	1.44	83	14.90	e.	5.0	811	0	
						750	930.7	16.9	.....	80	15.40	e.	4.8	735	0	
						500	958.2	20.5	.....	71	17.13	e.	4.2	490	0	
11:19	969.5	22.0	67	e.	4.0	396	969.5	22.0	.....	67	17.71	e.	4.0	388	.....	2/10 Cu., e.

September 6, 1917 (No. 2).

P. M.																
6:30	965.7	23.0	81	se.	3.6	396	965.7	23.0	.....	81	22.76	se.	3.6	388	.....	8/10 St.Cu., wsw.
						500	954.2	22.1	.....	79	21.01	sse.	5.7	490	0	
						750	927.0	20.1	.....	75	17.65	s.	10.5	735	0	
6:38	965.6	22.8	80	se.	3.6	763	925.7	20.0	0.82	75	17.54	s.	10.9	748	0	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 6, 1917 (No. 2)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	
P. M.	mb.	°C.	%		m. p. s.	m.	mb.	°C.		%	mb.		m. p. s.	10^5 ergs.	volts.	
						1,000	900.1	20.4	.....	73	17.50	ssw.	11.2	980	0	
6:47	965.6	22.7	80	se.	4.0	1,079	892.4	20.6	−0.19	72	17.47	ssw.	11.5	1,058	0	
6:50	965.6	22.6	81	se.	4.0	1,243	875.9	19.6	0.61	75	17.11	sw.	13.4	1,219	0	
						1,250	875.0	19.6	.....	75	17.11	sw.	13.4	1,225	0	
						1,500	849.7	18.1	.....	77	15.99	sw.	13.3	1,470	290	
7:05	965.5	22.2	85	se.	4.0	1,697	830.6	17.0	0.57	79	15.31	sw.	13.3	1,663	520	
						1,750	825.2	16.7	.....	78	14.83	sw.	13.3	1,715	570	
						2,000	801.2	15.5	.....	75	13.21	sw.	13.0	1,960	810	
						2,250	778.0	14.3	.....	72	11.74	wsw.	12.8	2,205	1,060	
						2,500	755.3	13.1	.....	69	10.41	wsw.	12.6	2,450	1,210	3/10 A.Cu., nw.; 3/10 St.Cu., w.
7:25	965.7	22.4	82	se.	5.4	2,724	735.9	12.0	0.49	66	9.26	wsw.	12.4	2,669	1,520	
						2,750	733.7	11.8	.....	66	9.13	wsw.	12.5	2,694	1,530	
						3,000	712.0	9.9	.....	71	8.66	wsw.	13.6	2,939	1,700	
						3,250	691.3	8.0	.....	76	8.15	w.	14.7	3,184	1,860	
7:42	965.8	22.3	83	se.	4.5	3,471	672.4	6.3	0.76	80	7.64	w.	15.6	3,400	2,000	
						3,500	671.0	6.1	.....	81	7.63	w.	15.4	3,429	2,020	
						3,750	650.8	4.4	.....	87	7.28	w.	13.9	3,673	2,210	
8:08	965.8	22.0	84	ese.	4.5	3,878	640.5	3.6	0.73	90	7.12	w.	13.1	3,798	2,300	1/10 Ci.Cu., nw.; 3/10 St.Cu., w.
						3,750	650.8	4.6	.....	86	7.29	w.	13.1	3,673	2,220	
						3,500	671.0	6.6	.....	79	7.70	w.	13.1	3,429	2,070	
						3,250	691.4	8.6	.....	72	8.04	wsw.	13.1	3,184	1,910	
						3,000	712.6	10.6	.....	64	8.18	wsw.	12.9	2,939	1,760	
8:24	965.5	21.8	86	ese.	5.4	2,910	720.2	11.3	0.57	62	8.30	wsw.	12.9	2,851	1,700	
						2,750	734.3	12.2	.....	65	9.24	wsw.	14.1	2,694	1,500	
						2,500	756.3	13.6	.....	71	11.06	sw.	16.0	2,450	1,350	
						2,250	779.2	15.1	.....	76	13.04	sw.	18.0	2,205	1,140	
						2,000	802.2	16.5	.....	82	15.39	ssw.	19.9	1,960	920	
8:47	965.0	21.6	86	ese.	5.8	1,801	820.6	17.6	0.54	86	17.31	ssw.	22.5	1,765	760	Lightning in west.
						1,750	826.0	17.9	.....	86	17.64	ssw.	22.2	1,715	680	First thunder at 8:50 p. m.
						1,500	849.7	19.2	.....	84	18.69	s.	20.9	1,470	320	
9:09	964.7	21.6	87	se.	6.3	1,285	870.8	20.4	0.40	83	19.90	s.	19.8	1,260	0	
						1,250	875.0	20.5	.....	83	20.02	s.	19.9	1,225	0	
9:15	964.7	21.8	86	sse.	6.3	1,010	898.8	21.5	−0.38	82	21.03	sse.	20.7	990	0	
						1,000	900.0	21.5	.....	82	21.03	sse.	20.6	980	0	
9:21	964.6	21.8	86	se.	6.3	801	920.6	20.7	0.27	89	21.73	sse.	18.2	785	0	
						750	926.2	20.8	.....	88	21.62	sse.	16.6	735	0	
						500	953.1	21.5	.....	86	22.06	sse.	8.7	490	0	
9:27	964.5	21.8	85	sse.	5.4	396	964.5	21.8	.....	85	20.20	sse.	5.4	388	.....	Too dark for cloud observation. Thunderstorm approaching from sw.

September 7, 1917.

A. M.																
8:13	963.1	21.4	82	ssw.	4.6	396	963.1	21.4	.....	82	20.90	ssw.	4.6	388	.....	Few Ci.St., w.
						500	951.5	20.7	.....	85	20.76	ssw.	10.1	490	0	
8:17	963.1	21.4	78	ssw.	4.9	715	928.2	19.2	0.69	92	20.47	sw.	21.4	701	0	
						750	924.6	19.9	.....	90	20.92	sw.	20.0	735	0	
8:20	963.1	21.4	77	sw.	4.9	776	921.7	20.5	−2.13	89	21.44	sw.	18.9	761	0	
						1,000	898.1	20.1	.....	78	18.35	sw.	17.8	980	370	
8:44	963.1	22.4	78	sw.	8.5	1,245	873.2	19.7	0.17	66	15.15	wsw.	16.5	1,220	860	
						1,500	847.1	18.7	.....	62	13.37	wsw.	14.5	1,470	860	
						1,750	823.0	17.7	.....	58	11.74	w.	12.4	1,715	860	Few Cu., sw.
						2,000	799.7	16.7	.....	53	10.08	w.	10.4	1,960	860	
9:31	963.1	24.0	77	wsw.	8.9	2,080	792.0	16.4	0.40	52	9.70	w.	9.8	2,038	860	
						2,250	776.5	15.2	.....	51	8.81	w.	9.7	2,205	830	
						2,500	753.8	13.5	.....	49	7.58	w.	9.6	2,450	780	
9:48	963.1	24.7	77	wsw.	8.0	2,514	752.7	13.4	0.69	49	7.53	w.	9.6	2,464	780	
						2,750	731.7	12.1	.....	47	6.64	w.	10.4	2,694	1,160	
						3,000	710.0	10.7	.....	45	5.79	wnw.	11.3	2,939	1,350	
10:26	963.3	25.7	73	wsw.	7.6	3,157	697.2	9.8	0.56	44	5.33	wnw.	11.9	3,093	1,460	4/10 Cu., w.
						3,250	689.8	9.3	.....	43	5.04	wnw.	12.4	3,184	1,530	
						3,500	669.2	7.9	.....	40	4.26	wnw.	13.6	3,429	1,710	
						3,750	649.6	6.5	.....	38	3.68	wnw.	14.9	3,673	1,900	
						4,000	629.8	5.1	.....	35	3.08	w.	16.1	3,918	2,080	
						4,250	610.5	3.7	.....	32	2.55	w.	17.4	4,162	2,260	
						4,500	592.0	2.3	.....	29	2.09	w.	18.6	4,407	2,450	
11:10	963.6	26.5	68	w.	8.0	4,709	577.5	1.1	0.56	27	1.79	w.	19.7	4,611	2,600	
						4,750	574.5	0.9	.....	26	1.70	w.	19.7	4,651	2,670	
						5,000	557.5	− 0.1	.....	23	1.39	w.	19.4	4,896	.....	
						5,250	540.8	− 1.1	.....	19	1.06	w.	19.1	5,140	.....	
						5,500	524.0	− 2.2	.....	15	0.76	w.	18.9	5,384	.....	
P. M.																
12:52	964.5	26.5	66	nw.	5.8	5,582	518.3	− 2.5	0.45	14	0.69	w.	18.8	5,465	.....	6/10 Cu., nw.
						5,500	524.0	− 2.1	.....	15	0.77	w.	18.7	5,384	.....	
						5,250	540.8	− 0.9	.....	20	1.13	w.	18.2	5,140	.....	
						5,000	557.5	0.4	.....	24	1.51	wnw.	17.8	4,896	.....	
						4,750	574.5	1.6	.....	28	1.92	wnw.	17.3	4,651	2,820	
						4,500	592.0	2.9	.....	32	2.41	wnw.	16.9	4,407	2,590	
						4,250	610.5	4.1	.....	37	3.03	wnw.	16.4	4,162	2,350	
						4,000	629.8	5.3	.....	41	3.65	wnw.	16.0	3,918	2,120	
						3,750	649.8	6.6	.....	45	4.39	nw.	15.5	3,673	1,880	
						3,500	670.0	7.8	.....	49	5.18	nw.	15.1	3,429	1,650	
1:33	964.7	26.6	64	nnw.	4.0	3,341	682.9	8.6	0.67	52	5.81	nw.	14.8	3,273	1,500	
						3,250	690.6	9.2	.....	52	6.05	nw.	14.3	3,184	1,440	4/10 Cu., nw.
						3,000	711.1	10.9	.....	51	6.65	nw.	12.8	2,939	1,260	
1:43	964.7	27.0	62	nnw.	5.4	2,787	729.7	12.3	0.42	51	7.30	nw.	11.6	2,731	1,120	
						2,750	732.8	12.5	.....	51	7.39	nw.	11.6	2,694	1,090	5/10 Cu., nnw.
						2,500	754.7	13.5	.....	55	8.51	nw.	11.3	2,450	990	
						2,250	776.7	14.5	.....	58	9.58	nnw.	11.0	2,205	900	
						2,000	799.7	15.6	.....	61	10.81	nnw.	10.7	1,960	750	6/10 Cu., n.
						1,750	823.0	16.6	.....	64	12.09	nnw.	10.3	1,715	600	
						1,500	847.6	17.7	.....	67	13.67	nnw.	10.0	1,470	440	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 7, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	1,250	873.4	18.9	.....	71	15.51	n.	9.7	1,225	290	
.....	.....	.....	.....	.....	.....	1,000	900.1	19.8	.....	73	16.86	n.	9.4	980	140	
2:33	965.4	25.8	68	n.	5.4	800	921.7	20.6	0.99	76	18.45	n.	9.2	784	0	
.....	.....	.....	.....	.....	.....	750	927.0	21.1	.....	76	19.02	n.	8.9	735	0	
.....	.....	.....	.....	.....	.....	500	954.0	23.6	.....	75	21.85	n.	7.3	490	0	
2:40	965.5	24.6	74	n.	6.7	396	965.5	24.6	.....	74	22.90	n.	6.7	388	.....	8/10 Cu., n.

September 8, 1917.

P. M.																
6:16	970.9	20.4	74	s.	2.2	396	970.9	20.4	.....	74	17.74	s.	2.2	388	.....	2/10 Ci., wnw.
.....	.....	.....	.....	.....	.....	500	959.8	19.2	.....	76	16.69	s.	4.1	490	0	
6:45	970.9	19.3	79	sse.	2.2	677	939.5	17.1	1.17	77	15.02	s.	7.4	664	0	
.....	.....	.....	.....	.....	.....	750	932.0	18.2	.....	58	12.12	s.	7.6	735	0	
6:48	970.9	19.2	81	sse.	2.2	831	922.8	19.4	−1.49	37	8.34	ssw.	7.8	815	0	
6:55	970.9	18.9	82	sse.	2.2	807	925.4	16.8	.....	77	14.73	ssw.	6.6	791	0	
7:08	971.1	18.6	81	sse.	2.7	964	908.8	20.7	−0.98	36	8.79	s.	7.4	945	0	
.....	.....	.....	.....	.....	.....	1,000	905.0	20.5	.....	35	8.44	s.	7.2	980	0	
.....	.....	.....	.....	.....	.....	1,250	879.4	19.2	.....	30	6.68	s.	6.2	1,225	0	
.....	.....	.....	.....	.....	.....	1,500	854.1	17.8	.....	25	5.10	s.	5.1	1,470	0	
.....	.....	.....	.....	.....	.....	1,750	829.7	16.5	.....	20	3.75	s.	4.0	1,715	0	
7:50	972.1	17.4	86	sse.	2.2	1,818	823.3	16.1	0.60	19	3.48	s.	3.7	1,782	0	
.....	.....	.....	.....	.....	.....	1,750	829.7	16.5	.....	19	3.57	s.	4.1	1,715	0	
.....	.....	.....	.....	.....	.....	1,500	854.1	18.2	.....	19	3.97	s.	5.4	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	879.8	19.8	.....	20	4.62	s.	6.7	1,225	0	
8:00	972.3	17.2	87	sse.	2.7	1,106	894.8	20.7	−1.17	20	4.88	s.	7.4	1,084	0	
.....	.....	.....	.....	.....	.....	1,000	905.7	19.5	.....	39	8.84	s.	7.9	980	0	
.....	.....	.....	.....	.....	.....	750	933.0	16.5	.....	85	15.95	s.	9.0	735	0	
8:16	972.5	17.2	88	s.	2.7	738	934.4	16.4	0.18	87	16.23	s.	9.1	724	0	
.....	.....	.....	.....	.....	.....	500	961.0	16.8	.....	88	16.83	s.	4.6	490	0	
8:22	972.6	17.0	88	s.	2.7	396	972.6	17.0	.....	88	17.05	s.	2.7	388	.....	2/10 Ci., wnw.

September 9, 1917.

P. M.																
4:19	977.9	17.0	96	ne.	4.0	396	977.9	17.0	.....	96	18.60	ne.	4.0	388	.....	10/10 St., ne.
.....	.....	.....	.....	.....	.....	500	965.9	16.6	.....	95	17.95	ne.	5.3	490	0	
.....	.....	.....	.....	.....	.....	750	938.2	15.7	.....	94	16.77	ene.	8.6	735	0	Altitude of St. base about 600 m.
4:35	978.2	17.4	94	ene.	4.9	767	936.7	15.6	0.38	94	16.66	ene.	8.8	752	0	
.....	.....	.....	.....	.....	.....	1,000	911.1	18.4	.....	58	12.27	ene.	8.0	980	0	
4:39	978.1	17.3	94	ene.	4.5	1,049	906.1	19.0	−1.21	50	10.98	ene.	7.8	1,028	0	Light rain began 3:25 p. m. and continued at end of flight.
5:14	977.8	16.0	95	ne.	6.3	1,057	904.8	12.4	.....	97	13.97	ne.	5.4	1,036	755	
.....	.....	.....	.....	.....	.....	1,250	884.7	16.7	.....	51	10.27	ne.	4.6	1,225	710	
5:18	977.8	16.0	95	ne.	4.5	1,261	883.3	16.9	−2.19	52	10.01	ne.	4.6	1,236	705	
.....	.....	.....	.....	.....	.....	1,250	884.7	16.9	.....	53	10.20	ne.	4.6	1,225	700	
.....	.....	.....	.....	.....	.....	1,000	911.1	16.9	.....	65	12.51	ne.	4.8	980	.....	
.....	.....	.....	.....	.....	.....	750	938.2	17.0	.....	78	15.12	ne.	5.1	735	.....	Altitude of St. base about 500 m.
.....	.....	.....	.....	.....	.....	500	965.9	17.0	.....	91	17.64	ne.	5.3	490	.....	
5:52	978.0	17.0	96	ne.	5.4	396	978.0	17.0	.....	96	18.60	ne.	5.4	388	.....	10/10 St., ne.

September 10, 1917.

A. M.																
7:14	985.3	9.8	88	ene.	3.6	396	985.3	9.8	.....	88	10.67	ene.	3.6	388	.....	9/10 A.St., nw.; 1/10 St., ene.
.....	.....	.....	.....	.....	.....	500	973.0	8.3	.....	89	9.75	ene.	6.0	490	70	
7:26	985.3	9.8	88	ene.	3.6	611	960.0	6.6	1.49	90	8.78	ene.	8.6	599	140	7/10 A.St., nw.; 1/10 St., ene.
.....	.....	.....	.....	.....	.....	750	944.5	7.6	.....	85	8.87	ne.	8.5	735	230	Altitude of St. base about 800 m.
.....	.....	.....	.....	.....	.....	1,000	916.4	9.4	.....	76	8.96	nne.	8.4	980	370	
7:57	985.5	9.9	87	e.	4.0	1,102	904.9	10.2	−0.73	62	7.72	nne.	8.3	1,080	420	
8:45	986.0	10.2	84	ene.	4.5	1,213	893.4	10.3	0.09	29	3.63	nne.	7.0	1,189	260	8/10 A.St., nw.; 1/10 St., ene.
.....	.....	.....	.....	.....	.....	1,250	889.1	10.2	.....	32	3.98	nne.	6.8	1,225	170	9/10 A.Cu., nw.; Few St., ene.
.....	.....	.....	.....	.....	.....	1,500	862.8	9.3	.....	58	6.80	nne.	5.8	1,470	.....	
.....	.....	.....	.....	.....	.....	1,750	837.5	8.5	.....	77	8.55	n.	4.7	1,715	.....	8/10 A.Cu., nw.; Few St. Cu., ene.
10:33	985.6	12.7	72	e.	3.6	1,804	832.0	8.3	0.36	82	8.98	n.	4.5	1,768	.....	
.....	.....	.....	.....	.....	.....	1,750	837.5	8.5	.....	75	8.32	n.	4.7	1,715	.....	4/10 A.Cu., nw.; Few St.Cu., ene.
.....	.....	.....	.....	.....	.....	1,500	862.8	9.5	.....	43	5.10	nne.	5.8	1,470	.....	
10:55	985.5	13.3	67	e.	4.5	1,343	879.5	10.1	−0.81	23	2.84	ne.	6.4	1,317	750	2/10 A.Cu., nw.; Few St.Cu., ene.
.....	.....	.....	.....	.....	.....	1,250	889.1	9.3	.....	37	4.34	ene.	6.6	1,225	690	
11:18	985.4	14.0	64	e.	4.9	1,095	906.1	8.1	0.84	61	6.59	e.	6.9	1,073	580	Few A.Cu., nw.; Few St.Cu., ene.
.....	.....	.....	.....	.....	.....	1,000	916.4	8.9	.....	61	6.95	e.	6.5	980	50	
.....	.....	.....	.....	.....	.....	750	944.5	11.0	.....	61	8.01	e.	5.3	735	0	
.....	.....	.....	.....	.....	.....	500	973.0	13.1	.....	62	9.35	ese.	4.1	490	0	
11:30	985.4	14.0	62	ese.	3.6	396	985.4	14.0	.....	62	9.91	ese.	3.6	388	.....	Few A.Cu., nw.; Few St.Cu., ene.

September 11, 1917, series (No. 1).

A. M.																
6:49	979.8	9.4	83	sse.	3.1	396	979.8	9.4	.....	83	9.79	sse.	3.1	388	.....	Few Ci., wnw.; 1/10 A.Cu., w.
.....	.....	.....	.....	.....	.....	500	967.6	10.0	.....	78	9.58	sse.	6.2	490	0	
6:55	979.8	9.7	84	sse.	3.1	683	946.6	11.0	−0.56	68	8.93	s.	11.7	670	0	
.....	.....	.....	.....	.....	.....	750	939.0	10.8	.....	70	9.06	s.	10.9	735	0	
7:06	979.7	9.8	84	sse.	3.6	798	933.7	10.7	0.26	72	9.27	s.	10.4	782	0	Few Ci., wnw.; 2/10 A.Cu., w.
.....	.....	.....	.....	.....	.....	1,000	911.0	9.4	.....	85	10.02	ssw.	9.1	980	590	
7:20	979.6	10.2	81	s.	4.0	1,180	891.7	8.3	0.63	96	10.51	ssw.	8.0	1,157	1,100	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 11, 1917, series (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						1,250	884.1	8.3		95	10.40	SSW.	7.8	1,225	1,210	
						1,500	858.0	8.4		92	10.14	SSW.	6.9	1,470	2,300	Few Ci., wnw.; 3/10 A.Cu., w.
						1,750	833.0	8.4		88	9.70	S.	6.4	1,715		
						2,000	808.5	8.5		85	9.44	S.	5.7	1,960		
8:50	979.2	14.0	60	S.	6.3	2,144	794.4	8.5	−0.02	83	9.21	S.	5.3	2,101		
						2,000	808.5	9.5		80	9.50	SSW.	7.8	1,960	2,430	1/10 Ci., nw.; 2/10 A.Cu., w.
10:49	978.8	17.6	54	S.	5.4	1,885	820.3	10.3		77	9.65	SW.	9.8	1,847		
						2,000	808.5	9.8		75	9.09	SW.	9.6	1,960	2,360	
						2,250	784.5	8.6		71	7.93	SW.	9.1	2,205	2,210	
						2,500	761.0	7.5		67	6.95	SW.	8.7	2,450	2,070	
						2,750	738.5	6.4		63	6.05	SW.	8.2	2,694	1,930	
						3,000	716.5	5.2		60	5.31	SW.	7.8	2,939		
						3,250	694.7	4.1		56	4.59	SW.	7.3	3,184		
11:04	978.7	17.6	54	S.	5.8	3,419	680.0	3.3	0.48	53	4.10	SW.	7.0	3,349		
						3,250	694.7	4.1		57	4.67	SW.	6.9	3,184		
						3,000	716.5	5.4		63	5.65	SW.	6.7	2,939		
						2,750	738.5	6.6		69	6.73	SSW.	6.6	2,694	1,890	
						2,500	761.0	7.9		74	7.88	SSW.	6.4	2,450	1,840	
11:25	978.6	18.4	54	S.	5.4	2,257	783.4	9.1	0.29	80	9.25	SSW.	6.3	2,212	1,800	
						2,250	784.5	9.1		80	9.25	SSW.	6.3	2,205	1,800	
						2,000	808.5	9.9		79	9.64	SSW.	6.9	1,960	1,720	
						1,750	833.0	10.6		78	9.97	S.	7.4	1,715	1,640	
11:52	978.4	19.0	53	S.	4.5	1,575	850.2	11.1	−0.61	77	10.17	S.	7.8	1,544	1,600	
						1,500	857.6	10.6		78	9.97	S.	7.9	1,470	1,230	
NOON.																
12:00	978.4	18.8	54	S.	4.9	1,248	884.1	9.1	0.96	83	9.59	S.	8.3	1,223	0	
						1,000	910.7	11.5		74	10.04	S.	8.8	980	0	
P. M.																
12:13	978.2	19.2	52	S.	4.5	757	937.6	13.8	1.75	66	10.41	S.	9.2	742	0	
						750	938.0	13.9		66	10.48	S.	9.1	735	0	
						500	966.0	18.3		60	12.62	S.	6.8	490	0	
12:20	978.1	20.1	57	S.	5.8	396	978.1	20.1		57	13.41	S.	5.8	388		Few Ci., wnw.; Few A.Cu., w.

September 11, 1917, series (No. 2).

P. M.																
1:05	975.9	20.2	51	S.	5.8	396	975.9	20.2		51	12.08	S.	5.8	388		Few A.Cu., w.
						500	964.0	18.3		54	11.36	S.	7.3	490	0	
1:16	975.7	20.4	50	SSE.	6.3	697	941.9	14.7	1.83	61	10.21	SSE.	10.2	683	0	
						750	936.0	14.2		62	10.04	SSE.	10.2	735	110	
						1,000	908.6	12.1		70	9.88	S.	10.0	980	640	
1:27	975.4	20.2	50	S.	6.3	1,212	885.7	10.2	0.87	76	9.46	S.	9.8	1,188	970	
						1,250	881.9	10.3		76	9.52	S.	9.8	1,225	1,030	
						1,500	855.4	10.7		74	9.52	S.	9.5	1,470	1,420	
						1,750	830.0	11.2		71	9.44	S.	9.2	1,715	1,680	
2:04	974.6	20.6	50	S.	5.8	1,792	825.5	11.3	−0.19	71	9.51	S.	9.2	1,756	1,680	
						2,000	805.0	10.3		74	9.27	S.	9.0	1,960	1,630	1/10 Ci., wnw.
						2,250	781.0	9.1		77	8.90	S.	8.8	2,205	1,820	
						2,500	757.5	8.0		80	8.58	SSW.	8.5	2,450	2,220	
						2,750	735.2	6.8		83	8.20	SSW.	8.1	2,694	2,640	
2:40	974.0	20.8	47	S.	6.7	2,850	726.4	6.3	0.47	84	8.02	SSW.	8.2	2,792	2,800	
						3,000	713.3	5.9		76	7.06	SSW.	8.2	2,939	3,310	
						3,250	692.0	5.3		63	5.61	SW.	8.2	3,184		
						3,500	670.9	4.7		49	4.18	WSW.	8.1	3,429		1/10 Ci., wnw.
3:19	973.4	21.0	47	S.	6.7	3,688	655.0	4.2	0.30	39	3.22	WSW.	8.1	3,612		
						3,500	670.9	4.9		42	3.64	WSW.	8.6	3,429		
						3,250	692.0	5.7		45	4.12	SW.	9.3	3,184	3,230	
						3,000	713.3	6.6		49	4.78	SW.	10.0	2,939	2,900	
						2,750	735.2	7.4		53	5.46	SSW.	10.7	2,694	2,590	
3:47	973.1	20.9	49	S.	8.5	2,533	754.2	8.2	0.44	56	6.09	SSW.	11.3	2,482	2,460	
						2,500	757.5	8.3		57	6.24	SSW.	11.4	2,450	2,440	
						2,250	780.5	9.4		62	7.31	SSW.	12.0	2,205	2,300	
						2,000	804.2	10.5		67	8.51	S.	12.7	1,960	2,160	
						1,750	828.7	11.6		72	9.84	S.	13.4	1,715	2,010	
4:07	973.0	20.5	51	S.	5.4	1,731	830.4	11.7	−1.37	72	9.90	S.	13.4	1,697	2,000	
4:10	972.9	20.5	51	S.	5.4	1,534	850.4	9.0	0.85	84	9.64	S.	12.3	1,504	1,400	
						1,500	853.6	9.2		83	9.66	S.	12.3	1,470	1,300	2/10 Ci.St., wnw.
						1,250	879.7	11.4		76	10.24	S.	12.6	1,225	550	
						1,000	906.0	13.5		70	10.83	S.	12.8	980	230	
4:33	972.8	20.3	52	S.	8.0	755	932.9	15.6	1.28	63	11.16	S.	13.1	740	0	
						500	960.9	18.9		55	11.50	S.	8.3	490	0	
4:40	972.7	20.2	52	S.	6.3	396	972.7	20.2		52	12.31	S.	6.3	388		2/10 Ci.St., wnw.

September 11, 1917, series (No. 3).

P. M.																
5:18	972.5	19.8	53	S.	5.8	396	972.5	19.8		53	12.24	S.	5.8	388		2/10 Ci.St., wnw.
						500	960.8	18.6		55	11.79	S.	7.6	490	0	
						750	933.2	15.8		61	10.95	S.	12.0	735	0	
5:29	972.5	19.4	57	S.	6.3	801	927.5	15.2	1.14	62	10.71	S.	12.9	785	0	
						1,000	906.2	13.5		70	10.83	S.	13.1	980	490	
						1,250	879.8	12.2		76	10.80	SSW.	13.2	1,225	860	
5:50	972.4	18.7	60	S.	5.8	1,421	861.5	10.0	0.86	86	10.56	SSW.	13.4	1,393	1,470	1/10 Ci.,wnw.; 2/10 Ci.St.,wnw.
						1,500	853.6	11.4		69	9.30	SSW.	12.0	1,470	1,620	
5:53	972.3	18.7	60	S.	4.5	1,603	842.7	13.1	−1.70	46	6.94	SSW.	10.2	1,571	1,830	
						1,750	828.2	12.2		54	7.67	SSW.	10.4	1,715	1,920	
						2,000	803.5	10.6		69	8.82	SSW.	10.7	1,960	1,960	
6:17	972.1	18.3	59	S.	4.5	2,252	779.6	9.0	0.63	83	9.53	SSW.	11.0	2,207	2,000	4/10 Ci.St., nw.
						2,500	756.0	9.1		46	5.32	SW.	8.7	2,450	2,730	
7:07	971.6	17.1	63	S.	4.0	2,553	751.5	12.8	−1.26	38	5.62	SW.	8.2	2,502	2,820	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 11, 1917, series (No. 3)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	2,750	734.0	11.6	.....	39	5.33	sw.	8.3	2,694	3,190	
.....	.....	.....	.....	.....	.....	3,000	712.3	10.0	.....	40	4.91	sw.	8.4	2,939	3,300	
.....	.....	.....	.....	.....	.....	3,250	691.3	8.4	.....	40	4.41	sw.	8.4	3,184	3,300	
.....	.....	.....	.....	.....	.....	3,500	671.0	6.8	.....	41	4.05	sw.	8.5	3,429	.....	
7:27	971.5	16.7	64	sse.	6.3	3,684	656.0	5.7	0.68	42	3.85	sw.	8.6	3,609	.....	
.....	.....	.....	.....	.....	.....	3,500	671.0	7.0	.....	40	4.01	sw.	9.2	3,429	.....	7/10 Ci. St., nw.
.....	.....	.....	.....	.....	.....	3,250	691.3	8.8	.....	36	4.08	sw.	10.1	3,184	3,270	
.....	.....	.....	.....	.....	.....	3,000	712.3	10.6	.....	33	4.22	ssw.	10.9	2,939	2,870	
.....	.....	.....	.....	.....	.....	2,750	734.0	12.4	.....	30	4.32	ssw.	11.8	2,694	2,580	
7:52	971.3	15.9	67	sse.	4.5	2,596	747.9	13.5	−0.31	28	4.33	ssw.	12.3	2,544	2,410	
.....	.....	.....	.....	.....	.....	2,500	756.0	13.2	.....	35	5.31	ssw.	13.2	2,450	2,300	
.....	.....	.....	.....	.....	.....	2,250	779.4	12.4	.....	54	7.78	s.	15.5	2,205	2,190	
8:05	971.3	15.6	67	sse.	4.5	2,014	801.7	11.7	0.02	72	9.90	s.	17.6	1,974	2,090	
.....	.....	.....	.....	.....	.....	2,000	803.0	11.7	.....	72	9.92	s.	17.6	1,960	2,080	
.....	.....	.....	.....	.....	.....	1,750	827.8	11.7	.....	74	10.18	s.	17.2	1,715	1,920	
.....	.....	.....	.....	.....	.....	1,500	852.7	11.8	.....	76	10.52	sse.	18.4	1,470	1,540	4/10 Ci.St., nw.
8:20	971.4	15.4	67	sse.	4.5	1,462	856.4	11.8	0.59	76	10.52	sse.	18.5	1,433	1,490	
.....	.....	.....	.....	.....	.....	1,250	878.4	12.1	.....	68	9.60	sse.	18.9	1,225	1,170	
.....	.....	.....	.....	.....	.....	1,000	904.8	14.5	.....	59	9.74	sse.	19.5	980	486	
8:39	971.5	15.2	67	sse.	4.5	836	922.4	15.5	0.45	53	9.33	sse.	19.8	820	0	
.....	.....	.....	.....	.....	.....	750	932.0	15.8	.....	54	9.69	sse.	19.4	735	0	
8:42	971.5	15.2	67	sse.	4.5	637	944.2	16.4	−0.58	55	10.26	sse.	18.7	624	0	
.....	.....	.....	.....	.....	.....	500	959.5	15.6	.....	62	10.99	sse.	10.6	490	0	
8:45	971.5	15.0	67	sse.	4.5	396	971.5	15.0	.....	67	11.42	sse.	4.5	388	.....	2/10 Ci.St., nw.

September 11-12, 1917, series (No. 4).

P. M.																
9:54	971.6	14.8	62	sse.	4.9	396	971.6	14.8	.....	62	10.43	sse.	4.9	388	.....	2/10 Ci.St., nw.
.....	.....	.....	.....	.....	.....	500	959.0	15.3	.....	59	10.25	sse.	9.5	490	0	
10:00	971.6	14.7	61	sse.	4.9	714	935.8	16.2	−0.44	54	9.95	s.	18.9	700	0	
.....	.....	.....	.....	.....	.....	750	931.9	16.5	.....	55	10.32	s.	21.6	735	0	
10:07	971.6	15.0	58	sse.	4.9	796	926.8	15.6	0.73	57	10.10	sse.	25.0	780	0	1/10 Ci.St., nw.
.....	.....	.....	.....	.....	.....	1,000	904.5	14.5	.....	63	10.40	sse.	23.9	980	790	
.....	.....	.....	.....	.....	.....	1,250	878.2	13.2	.....	70	10.62	sse.	22.5	1,225	1,690	
10:26	971.8	14.7	59	sse.	4.5	1,485	854.4	11.9	0.54	77	10.73	sse.	21.2	1,456	1,800	
.....	.....	.....	.....	.....	.....	1,500	852.9	11.9	.....	77	10.73	sse.	21.0	1,470	1,820	
.....	.....	.....	.....	.....	.....	1,750	827.9	11.7	.....	78	10.72	s.	17.6	1,715	2,160	
10:37	971.8	14.8	60	sse.	4.5	1,925	810.8	11.6	0.07	78	10.65	s.	15.2	1,887	2,400	
.....	.....	.....	.....	.....	.....	2,000	803.5	11.7	.....	76	10.45	s.	14.8	1,960	2,540	
10:57	972.0	14.6	61	sse.	4.0	2,236	781.3	12.1	−0.16	68	9.60	ssw.	13.5	2,191	2,980	1/10 Ci.St., nw.
.....	.....	.....	.....	.....	.....	2,250	780.0	12.1	.....	67	9.46	ssw.	13.5	2,205	3,010	
.....	.....	.....	.....	.....	.....	2,500	756.8	11.5	.....	58	7.87	ssw.	13.4	2,450	3,480	
.....	.....	.....	.....	.....	.....	2,750	734.2	10.5	.....	49	6.22	sw.	13.3	2,694	3,940	
.....	.....	.....	.....	.....	.....	3,000	712.5	9.7	.....	39	4.69	sw.	13.1	2,939	4,270	
11:20	971.8	14.8	61	sw.	13.1	3,089	705.0	9.4	0.32	36	4.24	sw.	13.1	3,026	4,390	
.....	.....	.....	.....	.....	.....	3,250	691.3	8.1	.....	38	4.24	sw.	13.3	3,184	4,610	
.....	.....	.....	.....	.....	.....	3,500	670.8	6.5	.....	43	4.16	sw.	13.7	3,429	.....	
11:35	971.6	14.7	61	sse.	6.3	3,648	658.7	5.4	0.72	45	4.04	sw.	13.9	3,573	.....	
.....	.....	.....	.....	.....	.....	3,500	670.8	6.5	.....	43	4.16	sw.	14.0	3,429	.....	
.....	.....	.....	.....	.....	.....	3,250	691.3	8.2	.....	40	4.35	ssw.	14.1	3,184	4,430	
11:50	971.4	14.7	60	s.	5.4	3,086	705.0	9.4	0.23	38	4.48	ssw.	14.2	3,023	4,000	
.....	.....	.....	.....	.....	.....	3,000	712.5	9.6	.....	44	5.26	ssw.	14.6	2,939	3,910	
.....	.....	.....	.....	.....	.....	2,750	734.2	10.2	.....	61	8.84	ssw.	15.8	2,694	3,650	
.....	.....	.....	.....	.....	.....	2,500	756.8	10.8	.....	77	9.97	ssw.	16.6	2,450	3,380	
A. M.																
12:10	971.3	14.5	61	s.	5.4	2,357	770.3	11.1	−0.02	87	11.49	ssw.	17.2	2,304	3,230	2/10 Ci.St., nw.
.....	.....	.....	.....	.....	.....	2,250	780.0	11.1	.....	88	11.62	ssw.	17.3	2,205	3,100	
.....	.....	.....	.....	.....	.....	2,000	803.5	11.0	.....	91	11.95	ssw.	17.6	1,960	2,740	
12:21	971.3	14.6	60	s.	5.8	1,872	815.8	11.0	0.62	92	12.08	ssw.	17.8	1,835	2,560	
.....	.....	.....	.....	.....	.....	1,750	827.9	11.8	.....	88	12.18	ssw.	18.1	1,715	2,390	
.....	.....	.....	.....	.....	.....	1,500	852.9	13.3	.....	80	12.22	ssw.	18.6	1,470	2,040	
12:27	971.3	14.6	59	s.	5.8	1,323	870.8	14.4	0.36	75	12.30	ssw.	19.0	1,297	1,790	
.....	.....	.....	.....	.....	.....	1,250	878.2	14.7	.....	72	12.05	ssw.	18.9	1,225	1,690	
.....	.....	.....	.....	.....	.....	1,000	904.5	15.6	.....	60	10.63	s.	18.8	980	1,120	
12:48	971.3	14.6	59	s.	5.4	793	926.8	16.3	−0.43	50	9.26	s.	18.6	778	425	
.....	.....	.....	.....	.....	.....	750	931.9	16.1	.....	51	9.33	s.	17.2	735	380	
.....	.....	.....	.....	.....	.....	500	959.0	15.0	.....	57	9.72	s.	9.2	490	110	
12:54	971.3	14.6	59	s.	5.8	396	971.3	14.6	.....	59	9.81	s.	5.8	388	.....	2/10 Ci.St., nw.

September 12, 1917, series (No. 5).

A. M.																
1:36	971.1	14.7	59	s.	5.8	396	971.1	14.7	.....	59	9.87	s.	5.8	388	.....	2/10 Ci.St., nw.
.....	.....	.....	.....	.....	.....	500	959.6	15.2	.....	64	11.05	s.	12.8	490	0	
.....	.....	.....	.....	.....	.....	750	931.7	16.5	.....	75	14.08	ssw.	29.5	735	0	
1:45	971.0	15.1	58	s.	6.3	800	925.9	16.8	−0.52	77	14.73	ssw.	32.8	784	0	
.....	.....	.....	.....	.....	.....	1,000	904.1	15.7	.....	81	14.45	ssw.	30.2	980	300	
.....	.....	.....	.....	.....	.....	1,250	877.5	14.4	.....	87	14.27	ssw.	26.9	1,225	720	
.....	.....	.....	.....	.....	.....	1,500	852.0	13.1	.....	92	13.87	sw.	23.7	1,470	1,430	
.....	.....	.....	.....	.....	.....	1,750	827.1	11.7	.....	97	13.34	sw.	20.4	1,715	2,260	
2:15	970.8	15.7	58	ssw.	5.4	1,866	816.1	11.1	0.53	100	13.21	sw.	18.9	1,829	2,680	
.....	.....	.....	.....	.....	.....	2,000	803.0	11.6	.....	92	12.57	sw.	19.7	1,960	3,170	
2:31	970.6	15.6	59	ssw.	5.8	2,213	782.8	12.4	−0.37	78	11.23	sw.	21.0	2,169	3,700	
.....	.....	.....	.....	.....	.....	2,250	779.2	12.3	.....	76	10.88	sw.	20.7	2,205	3,740	8/10 St., sw.
.....	.....	.....	.....	.....	.....	2,500	756.1	11.7	.....	67	9.21	sw.	18.8	2,450	4,010	
.....	.....	.....	.....	.....	.....	2,750	734.0	11.0	.....	56	7.35	sw.	16.9	2,694	4,270	
2:53	970.4	15.5	60	ssw.	5.8	2,844	725.7	10.8	0.25	52	6.73	sw.	16.2	2,787	4,370	10/10 St., sw.
.....	.....	.....	.....	.....	.....	3,000	712.3	9.6	.....	59	7.05	sw.	16.6	2,939	4,520	
.....	.....	.....	.....	.....	.....	3,250	691.3	7.6	.....	71	7.41	sw.	17.2	3,184	4,750	
.....	.....	.....	.....	.....	.....	3,500	670.7	5.6	.....	82	7.46	sw.	17.8	3,429	4,970	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 12, 1917, series (No. 5)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						3,750	650.5	3.6	.....	94	7.44	sw.	18.8	3,673	.....	
3:30	970.1	15.4	61	ssw.	5.8	3,758	649.6	3.5	0.74	94	7.38	sw.	18.4	3,681	.....	
						3,750	650.5	3.6	.....	94	7.44	sw.	18.4	3,673	.....	
						3,500	670.7	5.2	.....	89	7.88	sw.	18.6	3,429	4,960	
						3,250	691.3	6.9	.....	84	8.36	sw.	18.8	3,184	4,620	
						3,000	712.3	8.6	.....	79	8.82	sw.	19.0	2,939	4,280	
						2,750	734.0	10.3	.....	74	9.27	sw.	19.3	2,694	3,940	
						2,500	756.1	12.0	.....	69	9.68	sw.	19.5	2,450	3,510	
4:01	969.9	15.2	62	ssw.	5.4	2,355	769.4	13.0	−0.76	66	9.89	sw.	19.6	2,308	3,290	
						2,250	779.0	12.2	.....	81	11.51	sw.	20.7	2,205	3,110	
4:07	969.9	15.3	63	ssw.	5.4	2,118	791.4	11.2	0.47	100	13.30	sw.	22.1	2,076	2,890	
						2,000	802.7	11.8	.....	98	13.56	sw.	22.3	1,960	2,630	
						1,750	826.9	12.9	.....	95	14.14	sw.	22.6	1,715	2,000	
						1,500	851.5	14.1	.....	92	14.80	ssw.	23.0	1,470	1,370	
						1,250	877.0	15.3	.....	88	15.29	ssw.	23.3	1,225	770	
4:34	969.9	15.5	61	ssw.	4.5	1,212	881.3	15.5	0.45	88	15.50	ssw.	23.4	1,188	680	
						1,000	903.2	16.5	.....	82	15.39	ssw.	27.9	980	380	
4:45	969.9	15.7	64	ssw.	5.4	791	925.9	17.4	−0.41	77	15.30	ssw.	32.2	776	90	
						750	930.5	17.2	.....	76	14.91	ssw.	29.5	735	30	
						500	958.1	16.2	.....	68	12.53	ssw.	13.1	490	0	
4:56	969.9	15.8	65	ssw.	6.3	396	969.9	15.8	.....	65	11.67	ssw.	6.3	388	.....	10/10 St., sw.

September 12, 1917, series (No. 6).

A. M.																
5:49	969.3	15.8	68	s.	4.9	396	969.3	15.8	.....	68	12.21	s.	4.9	388	.....	10/10 St., sw.
						500	958.0	16.4	.....	72	13.43	s.	12.7	490	0	
						750	930.4	18.0	.....	80	16.51	ssw.	31.5	735	0	
5:58	969.2	15.8	68	s.	4.9	772	927.5	18.1	−0.61	81	16.82	ssw.	33.2	757	0	
						1,000	903.1	16.9	.....	85	16.36	ssw.	33.6	980	160	
6:11	969.1	15.7	68	s.	6.2	1,193	882.8	15.9	0.52	89	16.08	ssw.	34.0	1,170	450	
						1,250	877.0	15.7	.....	89	15.88	ssw.	32.9	1,225	680	
						1,500	851.0	14.8	.....	89	14.98	ssw.	27.8	1,470	1,680	Altitude of St. base about 1,900 m.
						1,750	826.0	14.0	.....	88	14.06	sw.	22.8	1,715	2,240	
6:44	968.8	15.4	71	s.	4.9	2,035	801.6	13.1	0.34	88	13.27	sw.	17.7	1,965	2,640	
						2,250	779.0	12.0	.....	87	12.21	sw.	16.5	2,205	3,060	
						2,500	756.0	10.8	.....	86	11.14	sw.	15.2	2,450	3,360	3/10 A.Cu., sw.; 7/10 St., sw.
						2,750	733.7	9.7	.....	85	10.23	sw.	14.0	2,694	3,620	
7:28	968.7	15.9	73	s.	5.3	2,985	712.8	8.6	0.49	84	9.38	sw.	12.8	2,924	.....	
						2,750	733.7	9.8	.....	88	10.67	sw.	14.5	2,694	4,330	
						2,500	756.0	11.1	.....	93	12.29	sw.	16.3	2,450	3,300	
8:00	968.9	16.4	76	s.	5.3	2,375	767.2	11.8	0.34	95	13.15	sw.	17.2	2,327	2,700	10/10 St., sw.
						2,250	779.0	12.2	.....	94	13.36	sw.	18.4	2,205	2,210	Altitude of St. base about 1,450 m.
						2,000	802.0	13.1	.....	93	14.02	sw.	20.7	1,960	1,460	
						1,750	826.0	14.0	.....	92	14.70	sw.	23.0	1,715	710	
						1,500	850.5	14.8	.....	91	15.32	ssw.	25.3	1,470	0	Altitude of St. base about 1,550 m.
						1,250	876.0	15.7	.....	90	16.06	ssw.	27.6	1,225	0	
						1,000	902.1	16.5	.....	89	16.71	ssw.	29.9	980	0	
8:35	968.5	16.7	80	s.	9.0	954	907.0	16.7	−2.22	89	16.92	ssw.	30.3	935	0	
8:37	968.5	16.7	81	ssw.	7.4	846	918.5	14.3	0.49	92	15.00	ssw.	20.4	829	0	
						750	929.3	14.8	.....	90	15.15	ssw.	17.8	735	0	
						500	956.8	16.0	.....	84	15.27	ssw.	11.0	490	0	
8:50	968.3	16.5	82	ssw.	8.2	396	968.3	16.5	.....	82	15.39	ssw.	8.2	388	.....	10/10 St., sw.

September 12, 1917, series (No. 7).

A. M.																
11:16	967.1	18.4	82	ssw.	11.9	396	967.1	18.4	.....	82	17.35	ssw.	11.9	388	.....	10/10 St., sw.; sprinkling rain from 9:14 to 10:30 a. m. Thunder first heard at 9:18 a. m. in sw.; last heard at 10:00 a. m., in s.
						500	955.8	17.9	.....	85	17.43	ssw.	13.4	490	0	
						750	928.2	16.6	.....	93	17.57	ssw.	16.9	735	0	
11:28	967.1	18.8	83	ssw.	5.7	898	912.0	15.8	0.52	95	17.05	ssw.	19.0	880	0	
						1,000	901.0	15.5	.....	96	16.91	ssw.	18.3	980	420	Altitude of St. base about 1,050 m.
						1,250	875.0	14.6	.....	98	16.29	sw.	16.4	1,225	1,450	
11:41	967.0	19.7	81	ssw.	7.8	1,312	868.8	14.4	0.34	98	16.07	sw.	16.0	1,286	1,710	
						1,500	850.0	15.3	.....	95	16.51	sw.	11.1	1,470	1,930	
P. M.																
12:03	966.9	20.1	78	sw.	5.3	1,585	841.2	15.7	−0.48	94	16.77	sw.	8.9	1,553	2,000	
						1,750	825.0	15.1	.....	92	15.97	sw.	10.2	1,715	2,210	
						2,000	801.0	14.1	.....	88	14.16	sw.	12.3	1,960	2,530	
						2,250	777.7	13.1	.....	84	12.67	sw.	14.3	2,205	2,850	
						2,500	755.0	12.1	.....	81	11.44	sw.	16.4	2,450	3,160	
						2,750	732.9	11.1	.....	77	10.17	sw.	18.4	2,694	3,510	
						3,000	711.5	10.1	.....	74	9.15	sw.	20.5	2,939	3,860	
						3,250	690.4	9.1	.....	70	8.09	sw.	22.5	3,184	4,210	
12:44	966.9	20.6	77	sw.	8.2	3,312	685.1	8.9	0.39	69	7.87	sw.	23.0	3,245	4,300	
						3,500	670.0	7.8	.....	76	8.04	sw.	20.9	3,429	4,530	
						3,750	650.0	6.4	.....	86	8.26	sw.	18.2	3,673	4,850	
1:02	966.9	20.8	77	sw.	6.2	3,793	646.2	6.1	0.50	88	8.29	sw.	17.7	3,715	4,900	
						3,750	650.0	6.3	.....	88	8.40	sw.	17.6	3,673	4,820	
						3,500	670.0	7.3	.....	89	9.10	sw.	17.3	3,429	4,370	
						3,250	690.4	8.3	.....	90	9.86	sw.	16.9	3,184	3,920	
						3,000	711.5	9.4	.....	91	10.73	sw.	16.6	2,939	3,470	
						2,750	732.9	10.4	.....	93	11.73	sw.	16.2	2,694	3,020	Altitude of St. base about 1,050 m.
						2,500	755.0	11.4	.....	94	12.67	sw.	15.8	2,450	2,600	
1:35	966.7	21.0	84	sw.	6.2	2,410	763.4	11.8	0.57	94	13.01	sw.	15.7	2,362	2,400	
						2,250	777.7	12.7	.....	95	13.96	sw.	13.5	2,205	2,060	
						2,000	801.0	14.2	.....	96	15.54	sw.	10.1	1,960	1,540	
1:45	966.6	20.9	76	ssw.	4.5	1,817	818.7	15.2	−0.06	97	16.75	sw.	7.6	1,781	1,160	
						1,750	825.0	15.2	.....	97	16.75	sw.	8.8	1,715	1,020	
						1,500	849.8	15.0	.....	98	16.71	sw.	13.1	1,470	430	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 12, 1917, series (No. 7)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
2:03	966.5	20.6	80	ssw.	4.1	1,334	866.3	14.9	0.48	98	16.60	sw.	16.0	1,308	0	
						1,250	875.0	15.3		96	16.68	sw.	15.0	1,225	0	
						1,000	901.0	16.5		91	17.08	ssw.	12.2	980	0	
2:15	966.4	20.8	79	ssw.	4.5	871	914.5	17.1	0.78	88	17.16	ssw.	10.7	854	0	
						750	927.7	18.0		86	17.75	ssw.	9.0	735	0	
						500	954.8	20.0		81	18.94	s.	5.5	490	0	
2:23	966.4	20.8	79	s.	4.1	396	966.4	20.8		79	19.41	s.	4.1	388		10/10 St., sw.

September 12, 1917, series (No. 8).

P. M.																
3:07	966.9	21.0	80	s.	3.7	396	966.9	21.0		80	19.90	s.	3.7	388		10/10 St., sw.
						500	955.5	20.3		81	19.29	s.	6.3	490	0	Threatening rain. Altitude of St. base about 1,150 m.
						750	928.4	18.6		85	18.22	ssw.	12.4	735	0	
3:18	966.8	21.1	80	s.	3.7	781	924.6	18.4	0.68	85	17.99	ssw.	13.2	766	0	
						1,000	901.4	16.7		92	17.49	ssw.	12.3	980	130	
3:40	966.6	21.3	79	s.	4.1	1,228	877.5	14.9	0.78	100	16.94	sw.	11.4	1,204	270	
						1,250	875.3	14.9		100	16.94	sw.	11.3	1,225	300	
						1,500	850.0	14.3		100	16.30	wsw.	10.7	1,470	540	
						1,750	825.4	13.7		100	15.68	wsw.	10.0	1,715	30	
4:07	966.5	21.4	78	s.	3.7	1,763	823.7	13.7	0.22	100	15.68	wsw.	10.0	1,728	0	
						2,000	801.0	12.4		100	14.40	wsw.	9.6	1,960	550	
						2,250	777.6	10.9		100	13.04	wsw.	9.1	2,205	1,130	
						2,500	755.0	9.5		100	11.87	wsw.	8.7	2,450	1,640	10/10 St.Cu., sw.
						2,750	732.5	8.1		100	10.80	wsw.	8.2	2,694		Altitude of St.Cu. base about 2,450 m.
4:58	966.5	21.8	79	s.	4.9	2,767	730.7	8.0	0.57	100	10.73	wsw.	8.2	2,711		
5:00	966.5	21.8	79	s.	4.9	2,838	724.7	9.3	−0.18	64	7.50	sw.	12.7	2,781		
						2,750	732.5	10.6		61	7.80	ssw.	13.4	2,694		
5:04	966.5	21.8	78	s.	4.1	2,730	734.3	10.9	−2.02	60	7.82	ssw.	13.5	2,675		
5:06	966.5	21.8	78	s.	4.1	2,636	742.8	9.0	0.61	97	11.14	ssw.	12.5	2,583	950	
						2,500	755.0	9.8		97	11.76	ssw.	13.0	2,450	850	
						2,250	777.6	11.4		96	12.94	sw.	13.8	2,205	660	
5:16	966.4	21.7	78	s.	4.1	2,063	795.2	12.5	0.48	95	13.77	sw.	14.4	2,022	530	
						2,000	801.0	12.8		95	14.04	sw.	14.1	1,960	480	
						1,750	825.4	14.0		95	15.18	sw.	13.1	1,715	290	
						1,500	850.0	15.2		94	16.23	sw.	12.1	1,470	110	
						1,250	875.3	16.4		94	17.53	sw.	11.0	1,225	0	
5:39	966.3	21.4	80	s.	3.7	1,214	878.8	16.6	0.61	94	17.76	sw.	10.9	1,190	0	
						1,000	900.8	17.9		88	18.05	s.	12.7	980	0	5/10 St.Cu., sw.
5:52	966.2	21.4	80	s.	4.1	836	918.2	18.9	0.48	84	18.35	s.	14.0	820	0	
						750	927.1	19.3		83	18.58	s.	12.1	735	0	
						500	954.5	20.5		82	19.78	s.	6.4	490	0	
6:01	966.2	21.0	81	s.	4.1	396	966.2	21.0		81	20.14	s.	4.1	388		Few St. Cu., sw.

September 14, 1917.

A. M.																
7:41	967.6	17.6	95	se.	3.1	396	967.6	17.6		95	19.12	se.	3.1	388		10/10 Ci., wnw.
						500	956.0	19.1		87	19.24	sse.	6.0	490	0	
8:02	967.6	18.4	90	ese.	4.0	598	945.2	20.5	−1.44	79	19.05	sse.	8.8	586	0	
						750	928.6	20.3		69	16.44	sse.	8.4	735	0	
						1,000	902.0	20.1		54	12.71	se.	7.7	980	0	8/10 Ci., wnw.
						1,250	876.6	19.8		38	8.76	se.	7.0	1,225	190	3/10 Ci., wnw.; 5/10 Ci.St., wnw.
8:49	967.6	20.4	84	sse.	3.6	1,382	863.5	19.7	0.10	30	6.88	se.	6.6	1,355	420	
						1,500	851.7	19.2		26	5.78	se.	6.1	1,470	440	
10:25	967.4	24.2	71	sse.	3.6	1,740	828.4	18.2	0.42	17	3.55	ese.	5.2	1,705	810	Solar halo 22° radius began 9:25 a. m. and continued at the end of flight.
						1,750	827.2	18.1		17	3.54	ese.	5.2	1,715	780	
						2,000	803.5	16.4		23	4.29	se.	4.8	1,960		
						2,250	780.4	14.7		29	4.85	se.	4.4	2,205		
						2,500	757.7	13.0		35	5.24	sse.	4.0	2,450		
10:34	967.4	25.0	70	sse.	5.8	2,660	743.5	11.9	0.71	39	5.43	sse.	3.7	2,606		
						2,500	757.7	13.1		36	5.43	sse.	3.6	2,450		
						2,250	780.4	14.9		32	5.42	sse.	3.5	2,205		
						2,000	803.5	16.8		28	5.36	se.	3.3	1,960		
						1,750	827.2	18.6		23	4.93	se.	3.2	1,715	400	
10:47	967.3	25.0	68	se.	5.8	1,739	828.4	18.7	0.05	23	4.96	se.	3.2	1,704	430	
						1,500	851.7	18.8		42	9.11	sse.	7.7	1,470	0	4/10 Ci., wnw.; 4/10 Ci.St., wnw.
11:29	967.1	25.8	67	se.	4.9	1,357	866.0	18.9	0.74	53	11.58	sse.	10.4	1,330	0	
						1,250	876.6	19.7		55	12.62	sse.	9.8	1,225	0	
						1,000	902.0	21.5		60	15.39	sse.	8.5	980	0	
						750	928.4	23.4		62	17.84	sse.	7.2	735	0	
						500	955.5	25.2		65	20.84	sse.	5.9	490	0	
11:48	967.0	26.0	67	sse.	5.4	396	967.0	26.0		67	22.53	sse.	5.4	388		

September 16, 1917.

A. M.																
7:12	977.1	18.9	97	ene.	2.7	396	977.1	18.9		97	21.18	ene.	2.7	388		3/10 A.Cu., wsw.; 1/10 Cu., ene.
						500	965.8	21.2		70	17.63	ene.	4.3	490	0	
8:51	977.7	21.2	88	ese.	3.1	597	955.3	23.3	−2.19	44	12.59	se.	5.7	585		
						750	938.5	22.3		44	11.85	se.	5.7	735		
						1,000	912.0	20.5		44	10.61	sse.	5.6	980		
						1,250	886.5	18.8		44	9.55	sse.	5.5	1,225		
9:55	977.7	23.4	76	se.	2.2	1,261	885.0	18.7	0.73	44	9.49	sse.	5.5	1,236		

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 16, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	1,250	886.5	18.8	.....	44	9.55	sse.	5.5	1,225	.....	
.....	.....	.....	.....	.....	.....	1,000	912.0	20.7	.....	44	10.74	sse.	5.4	980	.....	
.....	.....	.....	.....	.....	.....	750	938.5	22.6	.....	44	12.07	se.	5.3	735	.....	
10:02	977.7	24.0	74	se.	2.2	729	941.1	22.8	0.42	44	12.21	se.	5.3	715	.....	
.....	.....	.....	.....	.....	.....	500	965.8	23.8	.....	65	19.17	sse.	3.2	490	.....	
10:06	977.7	24.2	74	sse.	2.2	396	977.7	24.2	.....	74	22.35	sse.	2.2	388	.....	5/10 Cu., se.

September 17, 1917.

A. M.																
7:18	976.1	17.0	81	sse.	3.1	396	976.1	17.0	.....	84	16.28	sse.	3.1	388	.....	Few A.Cu., ese.
.....	.....	.....	.....	.....	.....	500	964.3	19.0	.....	70	15.38	s.	7.0	490	0	
7:24	976.2	17.0	84	se.	3.1	603	952.9	20.9	−1.88	56	13.84	s.	10.9	591	0	
.....	.....	.....	.....	.....	.....	750	936.5	20.1	.....	54	12.71	s.	9.7	735	0	
.....	.....	.....	.....	.....	.....	1,000	910.0	18.7	.....	51	11.00	s.	7.8	980	0	3/10 A.Cu., ese.
8:04	976.4	17.0	83	se.	3.6	1,152	894.1	17.8	0.56	49	9.99	s.	6.6	1,129	0	
.....	.....	.....	.....	.....	.....	1,250	884.4	17.1	.....	50	9.75	s.	6.6	1,235	0	2/10 St.Cu., sse.
11:06	975.9	23.6	63	sse.	3.1	1,493	860.0	15.4	0.70	52	9.10	sse.	6.6	1,464	0	
.....	.....	.....	.....	.....	.....	1,500	859.0	15.4	.....	52	9.10	sse.	6.6	1,470	70	
.....	.....	.....	.....	.....	.....	1,750	834.5	13.6	.....	54	8.41	sse.	7.4	1,715	260	
.....	.....	.....	.....	.....	.....	2,000	810.1	11.8	.....	55	7.61	se.	8.2	1,960	.....	
.....	.....	.....	.....	.....	.....	2,250	786.0	10.1	.....	57	7.05	se.	9.0	2,205	.....	
11:15	975.8	21.0	63	se.	2.7	2,301	780.8	9.7	0.74	57	6.86	se.	9.2	2,255	.....	
.....	.....	.....	.....	.....	.....	2,250	786.0	10.1	.....	57	7.05	se.	9.1	2,205	.....	
.....	.....	.....	.....	.....	.....	2,000	810.1	12.0	.....	56	7.86	se.	8.8	1,960	.....	
.....	.....	.....	.....	.....	.....	1,750	834.5	13.9	.....	55	8.73	se.	8.5	1,715	260	
.....	.....	.....	.....	.....	.....	1,500	859.0	15.8	.....	54	9.69	sse.	8.2	1,470	110	
.....	.....	.....	.....	.....	.....	1,250	884.0	17.7	.....	53	10.73	sse.	7.9	1,225	0	
11:46	975.5	25.8	54	se.	3.1	1,187	890.3	18.2	0.83	53	11.08	sse.	7.8	1,164	0	
.....	.....	.....	.....	.....	.....	1,000	910.0	19.7	.....	52	11.93	sse.	7.1	980	0	
12:00	975.3	25.8	53	sse.	3.6	776	933.6	21.6	−1.06	50	12.90	sse.	6.3	761	0	
.....	.....	.....	.....	.....	.....	750	936.5	21.3	.....	52	13.17	sse.	5.9	735	0	
P. M.																
12:02	975.3	25.8	53	sse.	2.7	729	938.7	21.1	1.41	53	13.27	sse.	5.6	715	0	
.....	.....	.....	.....	.....	.....	500	963.8	24.3	.....	53	16.11	sse.	3.6	490	0	
12:06	975.3	25.8	53	sse.	2.7	396	975.3	25.8	.....	53	17.61	sse.	2.7	388	.....	Few St.Cu., sse.

September 18, 1917.

A. M.																
6:44	971.0	14.4	76	se.	4.9	396	970.0	14.4	.....	76	12.46	se.	4.9	388	.....	Few Ci.W.; 2/10 A.Cu., sw.
.....	.....	.....	.....	.....	.....	500	958.7	15.7	.....	70	12.49	sse.	7.6	490	0	
7:03	970.9	14.6	76	se.	4.5	749	931.5	18.9	−1.27	55	12.01	s.	13.9	734	0	
.....	.....	.....	.....	.....	.....	1,000	904.1	17.8	.....	59	12.02	ssw.	13.5	980	120	
.....	.....	.....	.....	.....	.....	1,250	878.0	16.8	.....	63	12.05	ssw.	13.2	1,225	250	Few Ci., w.; 1/10 A.Cu., sw.,
.....	.....	.....	.....	.....	.....	1,500	853.0	15.7	.....	67	11.95	sw.	12.8	1,470	400	Few St.Cu., sw.
7:27	970.8	15.2	74	se.	4.9	1,745	828.8	14.7	0.42	71	11.88	sw.	12.5	1,710	560	
.....	.....	.....	.....	.....	.....	2,000	804.5	12.7	.....	75	11.02	sw.	12.9	1,960	820	
.....	.....	.....	.....	.....	.....	2,250	780.8	10.7	.....	79	10.17	sw.	13.2	2,205	1,080	
.....	.....	.....	.....	.....	.....	2,500	757.6	8.7	.....	84	9.45	sw.	13.6	2,450	1,350	
.....	.....	.....	.....	.....	.....	2,750	734.8	6.0	.....	88	8.23	sw.	14.0	2,694	1,700	Altitude of St.Cu. base about
.....	.....	.....	.....	.....	.....	3,000	712.5	4.7	.....	92	7.86	sw.	14.4	2,939	2,050	2,900 m.
.....	.....	.....	.....	.....	.....	3,250	691.0	2.8	.....	96	7.17	sw.	14.7	3,184	2,180	7/10 St.Cu., sw.
8:23	970.5	18.4	63	se.	4.9	3,362	681.5	1.9	0.79	98	6.87	sw.	14.9	3,294	2,190	
.....	.....	.....	.....	.....	.....	3,500	670.0	1.2	.....	98	6.53	sw.	15.2	3,429	2,330	
.....	.....	.....	.....	.....	.....	3,750	650.0	−0.1	.....	98	5.94	sw.	15.8	3,673	2,480	
.....	.....	.....	.....	.....	.....	4,000	630.2	−1.4	.....	99	5.39	sw.	16.4	3,918	2,500	
.....	.....	.....	.....	.....	.....	4,250	611.4	−2.7	.....	99	4.83	sw.	17.0	4,162	.....	
.....	.....	.....	.....	.....	.....	4,500	592.7	−4.0	.....	100	4.37	sw.	17.5	4,407	.....	
.....	.....	.....	.....	.....	.....	4,750	574.3	−5.3	.....	100	3.91	sw.	18.1	4,651	.....	8/10 St.Cu., sw.
9:30	970.3	19.8	59	sse.	5.4	4,920	561.5	−6.2	0.60	100	3.62	sw.	18.5	4,817	.....	
.....	.....	.....	.....	.....	.....	4,750	574.3	−5.0	.....	100	4.01	sw.	18.1	4,651	.....	
.....	.....	.....	.....	.....	.....	4,500	592.7	−3.3	.....	95	4.41	sw.	17.5	4,407	.....	
.....	.....	.....	.....	.....	.....	4,250	611.4	−1.7	.....	93	4.93	sw.	16.9	4,162	.....	
.....	.....	.....	.....	.....	.....	4,000	630.2	0.0	.....	90	5.50	sw.	16.4	3,918	2,110	
.....	.....	.....	.....	.....	.....	3,750	650.0	1.7	.....	87	6.01	sw.	15.8	3,673	1,820	10/10 St.Cu. sw.
.....	.....	.....	.....	.....	.....	3,500	670.0	3.4	.....	84	6.55	sw.	15.2	3,429	1,500	
.....	.....	.....	.....	.....	.....	3,250	691.0	5.1	.....	82	7.21	sw.	14.6	3,184	1,410	
.....	.....	.....	.....	.....	.....	3,000	712.5	6.8	.....	79	7.81	wsw.	14.0	2,939	1,320	
.....	.....	.....	.....	.....	.....	2,750	734.8	8.5	.....	76	8.44	wsw.	13.4	2,694	1,230	
.....	.....	.....	.....	.....	.....	2,500	757.6	10.2	.....	74	9.21	wsw.	12.9	2,450	.....	
.....	.....	.....	.....	.....	.....	2,250	780.8	11.9	.....	71	9.89	wsw.	12.3	2,205	.....	
.....	.....	.....	.....	.....	.....	2,000	804.5	13.6	.....	68	10.59	wsw.	11.7	1,960	.....	
.....	.....	.....	.....	.....	.....	1,750	828.5	15.3	.....	65	11.30	wsw.	11.1	1,715	.....	
.....	.....	.....	.....	.....	.....	1,500	853.0	16.0	.....	63	11.45	wsw.	10.5	1,470	.....	
11:09	970.2	22.0	58	sw.	4.5	1,356	867.7	18.0	−1.27	61	12.59	wsw.	10.2	1,329	.....	
.....	.....	.....	.....	.....	.....	1,250	878.0	16.7	.....	70	13.31	wsw.	11.3	1,225	.....	
11:11	970.2	22.0	58	sw.	4.5	1,198	882.9	16.0	0.76	75	13.64	wsw.	11.8	1,174	.....	
.....	.....	.....	.....	.....	.....	1,000	904.1	17.5	.....	71	14.20	wsw.	9.4	980	.....	
.....	.....	.....	.....	.....	.....	750	931.5	19.4	.....	66	14.87	sw.	6.4	735	.....	
.....	.....	.....	.....	.....	.....	500	958.7	21.3	.....	60	15.20	sw.	3.4	490	.....	
11:29	970.1	22.1	58	sw.	2.2	396	970.1	22.1	.....	58	15.43	sw.	2.2	388	.....	10/10 St.Cu. sw.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 19, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
7:30	967.2	15.4	94	nnw.	3.1	396	967.2	15.4	.....	94	16.45	wnw.	3.1	388	.....	5/10 St.Cu., nw.; 5/10 St., nw.; Altitude of st. base about 450 m.
						450	955.5	14.7	.....	95	15.89	wnw.	4.6	490	110	
						750	928.0	13.2	.....	96	14.56	wnw.	8.3	735	380	
						1,000	901.0	11.6	.....	98	13.39	nw.	11.9	980	860	Rain from 7:12 to 7:43 a. m.
						1,250	874.7	10.0	.....	100	12.28	nw.	15.6	1,225	1,390	
7:54	967.2	15.9	91	nw.	4.5	1,304	868.4	9.7	0.63	100	12.03	nw.	16.4	1,278	1,500	
						1,500	849.0	9.0	.....	99	11.37	nw.	16.2	1,470	1,660	
						1,750	824.0	8.1	.....	98	10.58	nw.	15.7	1,715	1,870	
						2,000	800.0	7.2	.....	98	9.96	nw.	15.3	1,960	2,080	
						2,250	775.9	6.3	.....	97	9.26	nw.	15.0	2,205	2,290	
						2,500	752.3	5.4	.....	96	8.61	nw.	14.6	2,450	2,500	
8:45	967.5	17.5	84	nw.	4.9	2,752	729.0	4.5	0.36	75	6.32	nw.	14.2	2,696	2,740	
						3,000	707.6	3.4	.....	73	5.69	nw.	15.8	2,939	2,980	
						3,250	686.1	2.2	.....	71	5.08	nw.	17.4	3,184	3,190	10/10 St.Cu., nw.
						3,500	665.2	1.1	.....	69	4.57	nw.	19.0	3,429	3,390	
9:25	967.7	17.3	81	nw.	7.6	3,675	650.5	0.3	0.48	67	4.18	nw.	20.1	3,600	.....	
						3,500	665.2	1.1	.....	68	4.50	nw.	19.4	3,429	3,460	
						3,250	686.1	2.4	.....	70	5.08	nw.	18.3	3,184	2,990	
						3,000	707.6	3.6	.....	71	5.62	nw.	17.2	2,939	2,660	
						2,750	729.9	4.8	.....	73	6.28	nw.	16.2	2,694	2,330	
						2,500	752.3	6.0	.....	75	7.01	nw.	15.1	2,450	2,000	
10:08	967.9	18.5	73	nw.	6.3	2,423	759.3	6.4	0.35	75	7.21	nw.	14.8	2,374	1,860	
						2,250	775.9	7.0	.....	76	7.62	nw.	14.7	2,205	1,550	
						2,000	800.0	7.9	.....	79	8.41	nw.	14.5	1,960	1,090	
						1,750	824.5	8.8	.....	81	9.18	nw.	14.3	1,715	640	
						1,500	850.0	9.7	.....	83	9.98	nw.	14.2	1,470	300	Sprinkling rain from 10:35 to 10:38 a. m.
						1,250	875.9	10.5	.....	85	10.80	nw.	14.0	1,225	0	
11:23	968.2	19.5	63	nw.	5.8	1,233	877.2	10.6	0.98	85	10.86	nw.	14.0	1,209	0	
						1,000	902.0	12.9	.....	79	11.76	nw.	12.6	980	0	
						750	929.0	15.3	.....	73	12.69	nw.	11.1	735	0	
						500	956.5	17.8	.....	67	13.65	nw.	9.5	490	0	
11:52	968.2	18.8	64	nw.	8.9	396	968.2	18.8	.....	64	13.89	nw.	8.9	388	.....	10/10 St.Cu., nw.

September 20, 1917.

A. M.																
7:30	972.1	13.4	85	nnw.	4.5	396	972.1	13.4	.....	85	13.06	nnw.	4.5	388	.....	10/10 St., nnw.
						500	960.6	12.4	.....	89	12.82	nnw.	8.0	490	0	Altitude of St. base about 750 m.
						750	932.0	10.1	.....	98	12.11	nnw.	13.1	735	0	
7:36	972.2	13.3	87	nnw.	4.9	820	924.2	9.5	0.92	100	11.87	nnw.	14.8	804	0	
						1,000	904.6	7.9	.....	100	10.65	nnw.	13.9	980	590	
7:44	972.3	13.3	88	n.	4.5	1,006	903.7	7.9	0.86	100	10.65	nnw.	13.9	986	610	
						1,250	878.0	9.2	.....	87	10.13	nnw.	13.3	1,225	1,410	
7:52	972.5	13.2	89	n.	4.0	1,269	875.8	9.3	−0.53	82	9.61	nnw.	13.3	1,244	1,470	
						1,500	852.5	8.5	.....	78	8.66	nnw.	14.0	1,470	1,750	
						1,750	827.3	7.6	.....	73	8.35	nnw.	14.8	1,715	2,020	
						2,000	803.0	6.7	.....	69	6.77	n.	15.6	1,960	2,260	
						2,250	779.0	5.9	.....	65	6.04	n.	16.4	2,205	2,500	
8:32	973.0	13.6	87	n.	4.5	2,413	762.6	5.3	0.35	62	5.52	n.	16.9	2,365	2,680	
						2,500	755.0	4.8	.....	65	5.59	n.	16.6	2,450	2,800	
						2,750	732.0	3.4	.....	72	5.62	n.	15.6	2,694	3,130	
						3,000	710.0	2.1	.....	79	5.62	n.	14.7	2,939	3,310	
9:27	973.3	13.9	84	n.	4.0	3,154	696.2	1.2	0.55	84	5.59	n.	14.1	3,090	3,400	10/10 St., nnw.
						3,250	688.3	0.7	.....	85	5.47	n.	13.1	3,184	3,150	
						3,500	667.8	−0.6	.....	87	5.05	n.	10.5	3,429	.....	
10:00	973.3	14.4	80	n.	4.5	3,513	666.5	−0.7	0.58	87	5.01	n.	10.4	3,441	.....	
						3,500	667.8	−0.6	.....	87	5.05	n.	10.4	3,429	.....	
						3,250	688.3	1.0	.....	85	5.58	n.	10.9	3,184	3,150	
						3,000	710.0	2.6	.....	84	6.19	n.	11.5	2,939	2,210	10/10 St.Cu., nnw.
						2,750	732.1	4.2	.....	82	6.76	n.	12.0	2,694	2,000	
						2,500	755.2	5.8	.....	81	7.47	n.	12.5	2,450	1,790	
						2,250	779.0	7.3	.....	79	8.08	n.	13.0	2,205	1,580	
10:53	973.6	15.0	78	n.	4.9	2,195	784.7	7.7	0.34	79	8.30	n.	13.1	2,151	1,530	
						2,000	803.0	7.8	.....	79	8.36	n.	12.8	1,960	1,320	
						1,750	827.9	9.2	.....	79	9.20	n.	12.5	1,715	1,140	
						1,500	853.1	10.0	.....	80	8.92	n.	12.2	1,470	780	
11:15	973.6	15.4	76	n.	4.9	1,273	877.0	10.8	−3.75	80	10.36	n.	11.9	1,248	560	
						1,250	879.3	9.9	.....	80	9.76	n.	11.7	1,225	560	
11:18	973.6	15.4	76	n.	4.0	1,225	882.1	9.0	0.80	80	9.18	n.	12.3	1,201	550	
						1,000	905.2	10.8	.....	79	10.23	n.	10.3	980	470	Altitude of St.Cu. base about 950 m.
						750	932.5	12.8	.....	78	11.53	n.	8.1	735	310	
						500	961.0	14.8	.....	77	12.96	n.	5.8	490	90	
11:36	973.6	15.6	77	n.	4.9	396	973.6	15.6	.....	77	13.64	n.	4.9	388	.....	10/10 St.Cu., nnw.

September 22, 1917.

A. M.																
7:33	975.3	11.0	98	s.	3.1	396	975.3	11.0	.....	98	12.87	s.	3.1	388	.....	Dense fog sse. at beginning of flight; becoming light 7:45 a. m.; ending at 8:50 a. m.
						500	963.2	12.1	.....	93	13.13	s.	6.2	490	210	
7:36	975.3	11.1	98	s.	3.1	739	936.3	14.6	−1.05	82	13.63	s.	13.3	725	680	
						750	935.2	14.6	.....	82	13.63	s.	13.2	735	690	
						1,000	908.0	14.3	.....	74	12.06	ssw.	10.5	980	890	
						1,250	881.3	14.1	.....	66	10.62	sw.	8.0	1,225	1,190	10/10 St., s.
9:08	974.9	14.9	87	s.	4.5	1,338	872.6	14.0	0.10	63	10.07	sw.	7.1	1,312	1,260	6/10 St., s.
						1,500	855.5	13.5	.....	60	9.28	sw.	6.6	1,470	1,230	Cloudless.
						1,750	830.5	12.7	.....	55	8.08	ssw.	5.7	1,715	1,090	
						2,000	806.2	11.9	.....	50	6.96	ssw.	4.9	1,960	.....	
11:02	973.3	20.3	62	s.	5.8	2,087	797.7	11.6	0.43	48	6.56	ssw.	4.6	2,045	.....	
						2,000	806.2	12.1	.....	48	6.78	ssw.	5.2	1,960	.....	
						1,750	830.5	13.4	.....	49	7.53	ssw.	6.8	1,715	980	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 22, 1917—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						1,500	855.5	14.8		49	8.25	s.	8.5	1,470	1,080	
						1,250	880.8	16.1		50	9.15	s.	10.1	1,225	430	
11:57	973.0	22.3	55	s.	5.8	1,195	886.5	16.4	0.43	50	9.32	s.	10.5	1,171	380	
P. M.																
						1,000	907.0	17.3		56	11.06	sse.	10.7	980	180	
12:10	972.9	22.9	53	s.	8.0	823	926.0	18.0	1.17	62	12.80	sse.	10.8	807	0	
						750	934.0	18.9		60	13.10	sse.	9.9	735	0	
						500	961.0	21.8		54	14.10	s.	7.0	490	0	
12:16	972.8	23.0	52	s.	5.8	396	972.8	23.0		52	14.61	s.	5.8	388		Cloudless.

September 23, 1917.

A. M.																
6:34	972.0	12.6	67	s.	4.0	396	972.0	12.6		67	9.78	s.	4.0	388		Few A.Cu., sse.
						500	960.2	15.6		57	10.10	s.	12.6	490	0	
6:37	972.0	12.6	67	s.	3.6	606	948.2	18.6	−2.86	47	10.07	ssw.	21.4	594	0	
						750	933.0	18.3		46	9.67	ssw.	19.4	735	0	
						1,000	906.0	17.9		45	9.23	ssw.	15.9	980	270	
						1,250	879.9	17.4		44	8.74	ssw.	12.4	1,225	660	Few A.Cu., sse.
						1,500	854.3	17.0		43	8.33	ssw.	8.9	1,470	1,090	
7:31	972.0	14.6	60	sse.	4.5	1,531	851.3	16.9	0.18	43	8.28	ssw.	8.5	1,501	1,170	
						1,750	829.4	15.1		46	7.89	s.	9.4	1,715	1,720	Cloudless.
						2,000	805.2	13.0		50	7.49	s.	10.5	1,960	2,140	
						2,250	782.0	11.0		53	6.96	sse.	11.5	2,205	2,550	
						2,500	758.8	8.9		57	6.50	sse.	12.6	2,450	2,960	
						2,750	736.2	6.9		61	6.07	se.	13.6	2,694	3,240	
8:10	972.0	16.3	56	sse.	4.0	2,772	734.1	6.7	0.82	61	5.98	se.	13.7	2,716	3,270	
						3,000	714.0	5.4		54	4.84	se.	12.5	2,939	3,510	
						3,250	693.1	4.0		47	3.82	se.	11.3	3,184	3,790	
						3,500	672.1	2.7		40	2.97	se.	10.0	3,429	4,110	
						3,750	652.0	1.3		32	2.15	se.	8.7	3,673	4,640	
						4,000	632.0	−0.1		25	1.52	se.	7.5	3,918	4,210	
						4,250	612.5	−1.5		18	0.97	se.	6.2	4,162		
10:10	972.3	23.0	40	s.	7.2	4,267	610.8	−1.6	0.58	17	0.91	se.	6.1	4,179		
						4,250	612.5	−1.5		17	0.92	se.	6.2	4,162		
						4,000	632.0	0.0		24	1.47	se.	7.7	3,918	3,800	
						3,750	652.0	1.6		30	2.06	se.	9.2	3,673	3,530	
						3,500	672.1	3.1		36	2.75	se.	10.7	3,429	3,260	
						3,250	693.1	4.6		42	3.56	se.	12.2	3,184	2,800	
						3,000	714.0	6.1		49	4.62	se.	13.8	2,939	2,560	
						2,750	736.2	7.6		55	5.75	se.	15.3	2,694	2,320	
11:11	971.9	24.4	38	s.	7.2	2,626	747.4	8.4	0.70	58	6.39	se.	16.0	2,573	2,200	
						2,500	758.8	9.3		57	6.68	se.	15.2	2,450	2,020	
						2,250	782.0	11.0		55	7.22	s.	13.8	2,205	1,670	
						2,000	805.2	12.8		54	7.98	s.	12.3	1,960	1,320	
						1,750	829.4	14.5		52	8.59	sse.	10.8	1,715	970	
11:25	971.8	24.7	39	ssw.	5.4	1,736	831.2	14.6	0.52	52	8.64	sse.	10.7	1,701	950	
						1,500	854.3	15.8		52	9.33	sse.	10.6	1,470	700	
						1,250	879.9	17.1		51	9.94	s.	10.4	1,225	520	
						1,000	906.0	18.4		50	10.58	s.	10.2	980	240	
11:45	971.7	24.6	39	s.	6.3	787	928.9	19.5	1.41	50	11.34	s.	10.1	772	0	
						750	933.0	20.0		49	11.46	s.	9.7	735	0	
						500	960.2	23.5		42	12.16	s.	7.9	490	0	
11:52	971.7	25.0	39	s.	6.3	396	971.7	25.0		39	12.36	s.	6.3	388		Cloudless.

September 24, 1917 (No. 1).

A. M.																
7:09	970.2	14.0	84	sse.	4.5	396	970.2	14.0		84	13.42	sse.	4.5	388		1/10 A.Cu., s.
						500	958.8	16.1		71	12.99	sse.	6.3	490	0	
7:12	970.2	14.9	84	s.	4.5	671	939.4	19.5	−2.00	49	11.11	s.	9.4	658	0	
						750	931.0	18.9		49	10.70	s.	10.8	735	0	
						1,000	904.0	17.2		50	9.81	s.	15.2	980	510	
						1,250	878.0	15.4		51	8.92	s.	19.7	1,225	1,250	
7:30	970.1	14.8	80	sse.	4.5	1,296	873.1	15.1	0.70	51	8.75	s.	20.5	1,270	1,390	
						1,500	852.5	14.0		54	8.63	s.	18.5	1,470	1,440	1/10 Ci.St., nw.
						1,750	827.8	12.6		57	8.32	s.	16.0	1,715	1,530	
						2,000	803.8	11.3		60	8.03	s.	13.6	1,960	1,850	
						2,250	780.1	9.9		63	7.69	s.	11.1	2,205	2,250	
8:08	970.0	16.8	73	s.	6.3	2,341	771.3	9.4	0.55	64	7.55	s.	10.2	2,294	2,400	
						2,500	756.6	8.5		62	6.88	s.	10.1	2,450	2,460	
						2,750	734.1	7.1		59	5.95	s.	10.0	2,694	2,820	5/10 Ci.St., nw.
						3,000	712.1	5.7		55	5.04	s.	9.9	2,939	3,230	
						3,250	691.0	4.3		52	4.32	s.	9.7	3,184	3,560	
						3,500	670.4	2.9		49	3.69	s.	9.6	3,429	3,930	
9:11	970.3	20.0	63	s.	5.8	3,545	666.9	2.6	0.56	48	3.54	s.	9.6	3,472	4,000	
						3,750	650.0	1.6		49	3.36	s.	9.9	3,673	4,090	
						4,000	630.4	0.3		50	3.12	s.	10.2	3,918	3,190	
						4,250	611.3	−0.9		51	2.89	ssw.	10.5	4,162	4,300	
						4,500	592.4	−2.2		52	2.65	ssw.	10.8	4,407		5/10 Ci.St., nw.
10:18	970.2	22.6	56	s.	6.7	4,578	586.6	−2.6	0.53	52	2.56	ssw.	10.9	4,483		
						4,500	592.4	−2.2		53	2.70	ssw.	11.1	4,407		
						4,250	611.3	−0.8		55	3.14	ssw.	11.8	4,162	4,300	
						4,000	630.4	0.6		57	3.64	ssw.	12.4	3,918	3,550	
						3,750	650.0	2.0		60	4.24	ssw.	13.1	3,673	2,690	
						3,500	670.4	3.4		62	4.84	ssw.	13.8	3,429	2,640	7/10 Ci.St., w.
11:04	969.9	23.6	49	s.	8.0	3,268	689.4	4.7	0.57	64	5.47	ssw.	14.4	3,201	2,600	Faint solar halo 22° radius began 11:20 a. m. and continued at end of flight.
						3,250	691.0	4.8		64	5.50	ssw.	14.5	3,184	2,570	
						3,000	712.1	6.2		60	5.69	ssw.	15.2	2,939	2,310	
						2,750	734.1	7.7		57	5.99	ssw.	15.9	2,694	2,140	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 24, 1917 (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	2,500	756.6	9.1	.....	53	6.13	ssw.	16.6	2,450	1,780	
.....	.....	.....	.....	.....	.....	2,250	780.1	10.5	.....	49	6.22	ssw.	17.3	2,205	1,380	
.....	.....	.....	.....	.....	.....	2,000	803.8	12.0	.....	46	6.45	sw.	18.0	1,960	1,070	
11:45	969.7	25.4	46	ssw.	8.9	1,944	809.4	12.3	0.71	45	6.44	ssw.	18.2	1,905	1,000	
.....	.....	.....	.....	.....	.....	1,750	827.8	13.7	.....	47	7.37	ssw.	17.5	1,715	790	
.....	.....	.....	.....	.....	.....	1,500	852.5	15.4	.....	50	8.75	ssw.	16.7	1,470	510	
.....	.....	.....	.....	.....	.....	1,250	878.0	17.2	.....	53	10.40	ssw.	15.8	1,225	280	
.....	.....	.....	.....	.....	.....	1,000	904.0	19.0	.....	56	12.30	ssw.	14.9	980	70	
12:15	969.4	25.2	45	s.	8.5	911	913.7	19.6	1.17	57	13.00	ssw.	14.6	893	0	
.....	.....	.....	.....	.....	.....	750	931.0	21.5	.....	54	13.85	ssw.	13.3	735	0	
.....	.....	.....	.....	.....	.....	500	958.2	24.4	.....	48	14.67	s.	11.2	490	0	
12:22	969.3	25.6	46	s.	10.3	396	969.3	25.6	.....	46	15.11	s.	10.3	388	.....	3/10 Ci.St., w.

September 24, 1917 (No. 2).

P. M.																
1:06	968.8	26.2	44	s.	8.9	396	968.8	26.2	.....	44	14.97	s.	8.9	388	.....	7/10 Ci.St., w.
.....	.....	.....	.....	.....	.....	500	957.3	24.6	.....	46	14.23	s.	10.0	490	0	Solar halo 22° radius ended 2:06 p. m.
.....	.....	.....	.....	.....	.....	750	930.0	20.6	.....	51	12.38	ssw.	12.6	735	0	
1:15	968.6	25.8	45	sw.	8.9	800	924.7	19.8	1.58	52	12.01	ssw.	13.1	784	0	
.....	.....	.....	.....	.....	.....	1,000	903.1	18.0	.....	59	12.18	ssw.	13.2	980	0	
.....	.....	.....	.....	.....	.....	1,250	877.0	15.7	.....	68	12.13	ssw.	13.4	1,225	0	
.....	.....	.....	.....	.....	.....	1,500	851.5	13.5	.....	77	11.91	ssw.	13.5	1,470	450	
.....	.....	.....	.....	.....	.....	1,750	826.8	11.2	.....	86	11.44	ssw.	13.7	1,715	910	7/10 Ci.St., w.
1:40	968.2	25.5	44	s.	8.5	1,820	819.8	10.6	0.90	88	11.25	ssw.	13.7	1,784	1,040	2/10 Cu., ssw.
.....	.....	.....	.....	.....	.....	2,000	802.2	9.7	.....	89	10.71	ssw.	14.7	1,960	1,310	Altitude of Cu. base about 2,400 m.
.....	.....	.....	.....	.....	.....	2,250	778.1	8.5	.....	90	9.99	ssw.	16.0	2,205	1,690	4/10 Ci.St., w.; 2/10 A.St., w.; 4/10 Cu., ssw.
.....	.....	.....	.....	.....	.....	2,500	754.4	7.3	.....	92	9.41	ssw.	17.4	2,450	2,070	
.....	.....	.....	.....	.....	.....	2,750	732.0	6.1	.....	93	8.76	ssw.	18.8	2,694	2,370	
.....	.....	.....	.....	.....	.....	3,000	710.1	4.9	.....	95	8.23	ssw.	20.1	2,939	2,560	
2:15	967.7	24.2	45	ssw.	8.9	3,197	693.2	3.9	0.49	96	7.76	ssw.	21.2	3,132	2,700	
.....	.....	.....	.....	.....	.....	3,250	689.0	3.5	.....	96	7.54	ssw.	21.1	3,184	2,790	
.....	.....	.....	.....	.....	.....	3,500	668.1	1.9	.....	95	6.66	ssw.	20.6	3,429	3,250	
.....	.....	.....	.....	.....	.....	3,750	648.0	0.2	.....	93	5.77	ssw.	20.1	3,673	3,700	
2:42	967.4	24.2	45	sse.	7.6	3,832	641.3	−0.5	0.72	93	5.45	ssw.	19.9	3,753	3,840	
.....	.....	.....	.....	.....	.....	3,750	648.0	0.1	.....	92	5.66	ssw.	19.8	3,673	3,720	
.....	.....	.....	.....	.....	.....	3,500	668.1	1.9	.....	87	6.10	ssw.	19.5	3,429	3,310	
.....	.....	.....	.....	.....	.....	3,250	689.0	3.8	.....	83	6.66	ssw.	19.2	3,184	3,290	
3:13	966.9	23.8	45	s.	8.0	3,188	691.4	4.4	0.63	82	6.86	ssw.	19.1	3,123	2,800	6/10 A.St., w.; 4/10 St.Cu., ssw.
.....	.....	.....	.....	.....	.....	3,000	710.1	5.6	.....	80	7.28	ssw.	19.1	2,939	2,640	
.....	.....	.....	.....	.....	.....	2,750	732.0	7.2	.....	75	7.62	ssw.	19.1	2,694	2,430	
.....	.....	.....	.....	.....	.....	2,500	754.4	8.7	.....	72	8.10	ssw.	19.1	2,450	2,220	
.....	.....	.....	.....	.....	.....	2,250	777.3	10.3	.....	68	8.52	s.	19.1	2,205	1,790	
.....	.....	.....	.....	.....	.....	2,000	801.0	11.9	.....	64	8.92	s.	19.1	1,960	1,340	
.....	.....	.....	.....	.....	.....	1,750	825.0	13.4	.....	60	9.22	s.	19.1	1,715	890	
4:21	965.9	24.0	43	s.	7.2	1,675	832.3	13.9	0.83	59	9.37	s.	19.1	1,642	760	
.....	.....	.....	.....	.....	.....	1,500	849.3	15.4	.....	56	9.80	s.	19.1	1,470	430	2/10 A.St., wsw.; 8/10 St.Cu., ssw.
.....	.....	.....	.....	.....	.....	1,250	874.1	17.4	.....	51	10.13	s.	19.1	1,225	0	Sprinkling rain began 4:54 p. m. and continued at end of flight.
.....	.....	.....	.....	.....	.....	1,000	900.3	19.5	.....	46	10.43	s.	19.1	980	0	
4:59	965.9	24.0	44	s.	5.4	859	915.7	20.7	0.67	43	10.50	s.	19.1	842	0	
.....	.....	.....	.....	.....	.....	750	927.1	21.4	.....	43	10.96	s.	16.0	735	0	
.....	.....	.....	.....	.....	.....	500	954.0	23.1	.....	45	12.72	s.	8.8	490	0	
5:06	965.8	23.8	45	s.	5.8	396	965.8	23.8	.....	45	13.27	s.	5.8	388	.....	2/10 A.St., wsw.; 8/10 St.Cu., ssw.

September 25, 1917.

A. M.																
8:25	965.3	17.2	88	s.	5.8	396	965.3	17.2	.....	88	17.27	s.	5.8	388	.....	2/10 A.St., sw.; 8/10 St.Cu., sw.
.....	.....	.....	.....	.....	.....	500	953.8	16.8	.....	88	16.83	s.	11.6	490	430	
9:27	965.3	17.2	88	s.	5.8	652	936.8	16.2	0.39	88	16.21	s.	20.0	639	1,060	
.....	.....	.....	.....	.....	.....	750	926.4	16.9	.....	78	16.12	s.	18.9	735	1,470	
8:29	965.3	17.2	88	s.	5.4	830	917.5	17.4	−0.67	69	13.71	s.	18.0	814	1,800	Sprinkling rain from 8:33 to 8:45 a. m.
.....	.....	.....	.....	.....	.....	1,000	899.0	16.0	.....	75	13.64	s.	17.8	980	1,440	
.....	.....	.....	.....	.....	.....	1,250	873.0	13.9	.....	83	13.18	ssw.	17.6	1,225	910	Altitude of St. base about 1,300 m.
.....	.....	.....	.....	.....	.....	1,500	848.0	11.9	.....	91	12.68	ssw.	17.3	1,470	920	
9:05	965.9	17.8	86	sw.	3.1	1,607	837.6	11.0	0.82	95	12.47	ssw.	17.2	1,575	1,100	3/10 St.Cu., sw.; 7/10 St., s.
.....	.....	.....	.....	.....	.....	1,750	823.5	10.3	.....	95	12.01	ssw.	15.5	1,715	1,910	Altitude of St. base about 900 m.
.....	.....	.....	.....	.....	.....	2,000	799.0	9.0	.....	95	10.91	ssw.	12.5	1,960	5,840	
.....	.....	.....	.....	.....	.....	2,250	775.5	7.6	.....	95	9.98	sw.	9.5	2,205	9,780	Rain began at 9:45 and continued at end of flight.
9:55	965.9	17.8	87	wsw.	2.2	2,470	754.8	6.5	0.52	95	9.20	sw.	6.8	2,420	.....	
.....	.....	.....	.....	.....	.....	2,250	775.5	7.6	.....	96	10.02	sw.	9.5	2,205	3,590	10/10 St.Cu., sw.
.....	.....	.....	.....	.....	.....	2,000	799.0	8.9	.....	97	11.06	sw.	12.6	1,960	0	10/10 St., nnw.
10:20	966.2	17.4	90	w.	2.7	1,811	817.6	9.9	0.49	98	11.96	sw.	14.9	1,775	0	Altitude of St. base about 800 m.
.....	.....	.....	.....	.....	.....	1,750	823.5	10.2	.....	98	12.20	sw.	14.7	1,715	0	
.....	.....	.....	.....	.....	.....	1,500	848.0	11.4	.....	97	13.34	wsw.	13.7	1,470	0	
.....	.....	.....	.....	.....	.....	1,250	873.0	12.6	.....	97	14.15	w.	12.7	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	899.0	13.8	.....	96	15.24	nw.	11.7	980	0	
10:28	966.4	13.2	89	nw.	5.4	904	909.8	14.3	−3.33	96	15.65	w.	11.3	886	0	
10:31	966.4	13.1	89	nnw.	4.9	856	914.9	12.7	0.07	98	14.40	nnw.	11.3	839	0	
.....	.....	.....	.....	.....	.....	750	926.4	12.8	.....	96	14.19	nnw.	9.9	735	0	
.....	.....	.....	.....	.....	.....	500	954.6	12.9	.....	91	13.54	nnw.	6.7	490	0	
10:33	966.4	13.0	89	nnw.	5.4	396	966.4	13.0	.....	89	13.33	nnw.	5.4	388	.....	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 26, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
7:23	971.8	7.1	86	n.	3.1	396	971.8	7.1	.....	86	8.68	n.	3.1	388	.....	10/10 Ci.St., sw.
						500	960.0	9.8	.....	60	7.27	nne.	12.7	490	240	
7:24	971.8	7.1	86	n.	3.1	558	953.0	11.3	−2.60	46	6.16	nne.	18.1	547	380	
						750	931.5	10.3	.....	43	5.39	nne.	17.4	735	830	
						1,000	903.6	9.0	.....	39	4.48	nne.	16.4	980	1,660	
						1,250	877.0	7.7	.....	34	3.57	n.	15.4	1,225	2,600	
						1,500	851.0	6.3	.....	30	2.86	n.	14.4	1,470	3,230	
7:58	972.0	8.9	80	n.	2.7	1,508	850.0	6.3	0.53	30	2.86	n.	14.4	1,478	3,250	
8:02	972.0	9.1	80	n.	2.7	1,728	827.6	7.9	−0.73	18	1.92	n.	10.7	1,694	3,800	
						1,750	825.6	7.8	.....	18	1.90	n.	10.6	1,715	3,870	
						2,000	800.8	6.2	.....	18	1.71	n.	9.4	1,960	4,580	10/10 Ci.St., sw.
						2,250	776.8	4.7	.....	18	1.54	n.	8.3	2,205	4,880	
9:23	972.3	10.6	71	n.	2.7	2,271	774.6	4.6	0.61	18	1.53	n.	8.2	2,226	4,800	4/10 Ci.St., sw.; 6/10 A.St., sw.
						2,500	753.7	3.3	.....	21	1.63	n.	7.3	2,450	5,940	
						2,750	730.8	1.9	.....	24	1.68	nnw.	6.2	2.694	.....	Faint solar halo of 22° radius
						3,000	708.3	0.5	.....	27	1.71	nnw.	5.2	2,939	.....	from 9:50 to 11:37 a. m.
						3,250	686.3	−0.9	.....	30	1.70	nw.	4.2	3,184	.....	
10:43	972.5	12.8	57	n.	3.1	3,366	676.1	−1.6	0.52	31	1.66	nw.	3.7	3,297	.....	
						3,250	686.3	−1.1	.....	30	1.67	nw.	4.3	3,184	.....	
						3,000	708.3	0.1	.....	29	1.78	nnw.	5.5	2,939	.....	
						2,750	730.8	1.3	.....	28	1.88	nnw.	6.7	2,694	.....	
						2,500	753.7	2.5	.....	26	1.90	nnw.	7.9	2,450	4,160	4/10 Ci.St., sw.; 6/10 A.St., sw.
						2,250	776.8	3.7	.....	25	1.99	n.	9.1	2,205	3,840	
						2,000	800.8	4.9	.....	24	2.08	n.	10.3	1,960	3,610	
11:31	972.6	13.2	49	nnw.	2.2	1,886	811.5	5.4	−2.18	23	2.06	n.	10.9	1,848	3,500	
11:35	972.6	13.1	49	nw.	2.2	1,799	820.1	3.5	0.26	22	1.73	n.	16.4	1,763	3,420	
						1,750	825.6	3.6	.....	23	1.82	n.	16.2	1,715	3,300	
						1,500	851.0	4.3	.....	29	2.41	n.	15.1	1,470	2,280	
11:45	972.6	13.4	52	nw.	2.2	1,343	867.6	4.7	0.92	32	2.73	n.	14.4	1,317	1,640	
						1,250	877.8	5.6	.....	34	3.09	n.	13.3	1,225	1,260	10/10 A.St., sw.
						1,000	905.0	7.9	.....	39	4.15	n.	10.3	980	630	
						750	933.0	10.1	.....	43	5.31	n.	7.3	735	250	
						500	961.0	12.4	.....	48	6.91	n.	4.3	490	0	
P. M.																
12:01	972.6	13.4	50	n.	3.1	396	972.6	13.4	.....	50	7.68	n.	3.1	388	.....	

September 27, 1917, series (No. 1).

A. M.																
7:16	972.0	7.2	82	ssw.	6.5	396	972.0	7.2	.....	82	8.33	ssw.	6.5	388	.....	Cloudless.
						500	960.0	10.5	.....	67	8.51	ssw.	10.0	490	0	
7:18	972.0	7.3	82	ssw.	5.4	544	954.9	11.9	−3.18	60	8.36	ssw.	11.5	533	0	
						750	931.0	11.0	.....	58	7.62	sw.	11.0	735	720	
						1,000	903.2	10.0	.....	56	6.88	wsw.	10.5	980	1,450	
						1,250	876.5	9.0	.....	54	6.20	w.	9.9	1,225	2,100	
						1,500	851.0	7.9	.....	51	5.43	w.	9.3	1,470	2,680	
7:48	972.0	8.4	82	ssw.	4.5	1,646	836.4	7.3	0.42	50	5.12	wnw.	9.0	1,613	3,000	
						1,750	826.1	6.6	.....	50	4.88	wnw.	9.0	1,715	3,190	
						2,000	801.9	4.8	.....	49	4.21	nw.	9.0	1,960	3,380	
						2,250	778.1	3.1	.....	48	3.66	nw.	9.0	2,205	3,040	
9:39	971.5	13.9	68	sw.	6.7	2,381	765.8	2.2	0.69	48	3.44	nnw.	9.0	2,333	3,080	
						2,500	754.8	1.2	.....	49	3.26	nnw.	9.6	2,450	3,040	
						2,750	730.5	−0.8	.....	52	2.97	nw.	10.8	2,694	3,170	
						3,000	709.0	−2.9	.....	55	2.64	wnw.	12.0	2,939	3,510	
9:45	971.5	14.3	65	sw.	6.7	3,163	694.5	−4.2	0.82	57	2.45	wnw.	12.8	3,009	3,720	
						3,250	687.0	−2.9	.....	47	2.26	wnw.	12.8	3,184	3,840	
9:46	971.5	14.3	65	sw.	6.7	3,401	674.3	−0.6	−1.51	30	1.74	wnw.	12.8	3,332	4,040	
						3,500	665.5	−1.0	.....	29	1.63	wnw.	12.6	3,429	4,180	
						3,750	645.0	−1.8	.....	25	1.32	nw.	12.0	3,673	4,510	
						4,000	624.8	−2.4	.....	24	1.20	nw.	11.6	3,918	.....	
9:54	971.4	14.6	63	sw.	7.2	4,120	615.5	−2.8	0.46	22	1.06	nw.	11.3	4,035	.....	
						4,000	624.8	−2.1	.....	20	1.03	nw.	11.6	3,918	.....	
						3,750	644.5	−0.5	.....	16	0.94	nw.	12.1	3,673	4,310	
10:12	971.2	15.6	63	ssw.	7.2	3,653	651.8	0.1	−1.61	14	0.86	nw.	12.3	3,578	4,050	
						3,500	664.8	−2.4	.....	22	1.10	nw.	11.1	3,429	3,640	
10:15	971.2	15.4	62	sw.	7.6	3,429	670.7	−3.5	0.58	26	1.19	nw.	9.4	3,359	3,450	
						3,250	686.0	−2.5	.....	28	1.39	nw.	9.8	3,184	2,970	
						3,000	707.9	−1.1	.....	34	1.80	nw.	10.3	2,939	2,660	
						2,750	731.5	1.0	.....	40	2.63	wnw.	11.1	2,694	2,440	
						2,500	753.8	1.9	.....	43	3.01	wnw.	11.4	2,450	2,230	
10:36	971.1	16.5	60	sw.	6.7	2,422	761.0	2.3	0.80	44	3.17	wnw.	11.6	2,373	2,130	
						2,250	777.7	3.7	.....	44	3.50	wnw.	11.7	2,205	1,940	
						2,000	801.9	5.7	.....	43	3.94	wnw.	12.0	1,960	1,490	
						1,750	826.1	7.7	.....	42	4.41	w.	12.2	1,715	1,070	
						1,500	851.0	9.7	.....	41	4.93	w.	12.4	1,470	840	
11:02	970.9	17.2	58	ssw.	7.2	1,353	866.5	10.9	0.48	41	5.35	w.	12.5	1,326	700	
						1,250	876.5	11.4	.....	42	5.66	w.	11.8	1,225	580	
						1,000	903.2	12.6	.....	46	6.71	wsw.	10.1	980	260	
11:17	970.7	17.3	56	ssw.	7.2	791	926.5	13.6	0.98	49	7.63	sw.	8.7	776	0	
						750	931.0	14.0	.....	50	7.99	sw.	8.4	735	0	
						500	958.7	16.4	.....	54	10.07	ssw.	6.9	490	0	
11:22	970.5	17.4	56	ssw.	6.3	396	970.5	17.4	.....	56	11.13	ssw.	6.3	388	.....	Cloudless.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 27, 1917, series (No. 2).

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Gravity.	Electric.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^6 *ergs.*	*volts.*	
12:01	969.9	19.0	51	ssw.	8.0	396	969.9	19.0	.....	51	11.20	ssw.	8.0	388	.....	Cloudless.
						500	958.0	17.6	.....	53	10.67	ssw.	8.5	490	0	
						750	930.2	14.2	.....	56	9.07	ssw.	9.6	735	0	
12:07	969.8	18.9	54	ssw.	6.7	785	926.3	13.7	1.36	57	8.94	ssw.	9.8	770	70	
						1,000	903.0	12.5	.....	52	7.53	sw.	11.5	980	680	
						1,250	876.2	11.2	.....	46	6.11	wsw.	13.5	1,225	1,390	
12:25	969.5	19.6	55	sw.	7.2	1,322	869.0	10.8	0.54	44	5.70	wsw.	14.1	1,296	1,600	
						1,500	850.3	9.2	.....	44	5.12	wsw.	14.0	1,470	1,800	
						1,750	825.0	7.1	.....	45	4.54	wsw.	13.8	1,715	2,080	
12:40	969.2	19.6	55	sw.	8.0	1,772	822.6	6.9	0.87	45	4.48	wsw.	13.8	1,737	2,100	
						2,000	800.0	5.6	.....	46	4.19	wsw.	12.6	1,960	2,310	
						2,250	775.8	4.1	.....	48	3.93	w.	11.2	2,205	2,540	
						2,500	752.3	2.8	.....	50	3.74	w.	9.9	2,450	2,770	Few Cu., wsw.
1:13	968.7	20.1	57	ssw.	8.5	2,711	733.1	1.5	0.58	51	3.47	w.	8.8	2,656	3,540	
						2,750	729.8	1.7	.....	49	3.39	w.	9.4	2,694	3,700	
						3,000	707.3	3.1	.....	33	2.52	w.	13.2	2,939	4,720	
1:20	968.7	20.5	49	ssw.	8.5	3,144	694.7	3.9	−0.55	24	1.94	w.	15.3	3,080	5,230	1/10 Cu., wsw.
						3,250	685.6	3.5	.....	24	1.88	w.	15.6	3,184	5,330	
						3,500	664.4	2.6	.....	25	1.84	wnw.	16.2	3,429	5,570	
						3,750	644.3	1.7	.....	26	1.80	wnw.	16.8	3,673	5,860	
						4,000	624.8	0.8	.....	27	1.75	nw.	17.4	3,918	6,050	
1:47	968.4	21.5	41	ssw.	8.0	4,243	606.6	−0.1	0.04	27	1.64	nw.	18.0	4,155	.....	
1:52	968.3	21.6	40	sw.	9.8	4,093	618.2	−0.5	0.54	29	1.70	nw.	14.7	4,009	6,010	
						4,000	624.8	0.0	.....	28	1.71	nw.	14.7	3,918	5,740	
						3,750	644.3	1.4	.....	25	1.69	nw.	14.7	3,673	5,020	
						3,500	664.4	2.7	.....	23	1.71	wnw.	14.7	3,429	4,390	
						3,250	685.6	4.1	.....	21	1.72	wnw.	14.7	3,184	3,790	
2:07	968.2	21.8	40	sw.	8.0	3,039	704.3	5.2	−1.03	19	1.68	wnw.	14.7	2,977	3,290	
						3,000	707.3	4.8	.....	20	1.72	wnw.	14.5	2,939	3,190	
						2,750	729.8	2.2	.....	29	2.08	w.	13.4	2,694	2,640	
2:16	968.1	22.0	40	sw.	9.4	2,739	730.7	2.1	0.56	29	2.06	w.	13.3	2,684	2,630	Few Cu., wsw.
						2,500	752.3	3.4	.....	35	2.73	w.	13.5	2,450	2,310	
						2,250	775.8	4.8	.....	42	3.61	w.	13.7	2,205	1,980	
						2,000	800.0	6.2	.....	47	4.46	wsw.	13.8	1,960	1,650	
						1,750	825.0	7.7	.....	55	5.78	wsw.	14.0	1,715	1,320	
2:33	968.0	21.5	36	sw.	8.5	1,656	833.8	8.2	0.97	58	6.30	wsw.	14.1	1,623	1,200	
						1,500	850.3	9.7	.....	55	6.61	wsw.	14.3	1,470	940	
						1,250	876.0	12.2	.....	49	6.96	sw.	14.7	1,225	540	
						1,000	902.0	14.6	.....	43	7.15	sw.	15.0	980	260	
3:02	967.9	21.6	36	ssw.	10.3	844	918.6	16.1	1.25	40	7.32	sw.	15.2	828	90	
						750	929.0	17.7	.....	39	7.90	sw.	13.9	735	0	
						500	956.2	20.4	.....	38	9.11	sw.	10.3	490	0	
3:11	967.8	21.7	37	sw.	8.9	396	967.8	21.7	.....	37	9.61	sw.	8.9	388	.....	Few Cu., wsw.

September 27, 1917, series (No. 3).

P. M.																
3:46	967.7	21.6	36	sw.	8.5	396	967.7	21.6	.....	36	9.29	sw.	8.5	388	.....	1/10 A.Cu., wsw.
						500	955.8	20.4	.....	36	8.63	sw.	9.6	490	0	
						750	928.7	17.5	.....	35	7.00	sw.	12.2	735	0	
3:55	967.6	21.6	36	sw.	8.9	831	919.8	16.6	1.15	35	6.61	sw.	13.0	815	0	
						1,000	901.9	15.0	.....	38	6.48	sw.	13.0	980	190	
						1,250	875.7	12.7	.....	42	6.17	sw.	13.0	1,225	470	
						1,500	850.0	10.3	.....	46	5.76	sw.	13.0	1,470	740	
4:20	967.6	21.5	36	sw.	7.2	1,740	825.2	8.1	0.94	50	5.40	sw.	13.0	1,705	1,000	
						1,750	824.5	8.1	.....	50	5.40	sw.	13.0	1,715	1,010	
						2,000	799.8	7.2	.....	48	4.88	sw.	12.9	1,960	1,310	
						2,250	775.8	6.4	.....	47	4.52	wsw.	12.8	2,205	1,620	
						2,500	752.4	5.5	.....	45	4.06	wsw.	12.7	2,450	1,920	
						2,750	729.8	4.7	.....	44	3.76	w.	12.6	2,694	2,220	
						3,000	707.3	3.9	.....	42	3.39	w.	12.4	2,939	2,460	
						3,250	686.2	3.0	.....	41	3.11	wnw.	12.3	3,184	2,710	2/10 Ci., wsw.
4:58	976.6	21.2	40	sw.	5.8	3,341	678.4	2.7	0.34	40	2.97	wnw	12.3	3,273	2,800	
						3,500	665.4	2.0	.....	37	2.61	wnw	13.8	3,429	2,970	
						3,750	645.1	0.9	.....	32	2.09	wnw	16.1	3,673	3,250	
5:12	967.6	20.4	43	sw.	4.9	3,855	636.1	0.4	0.38	30	1.89	wnw.	17.1	3,776	.....	1/10 Ci., wsw.
						3,750	645.1	0.7	.....	31	1.99	wnw.	16.8	3,673	3,230	
						3,500	665.4	1.5	.....	34	2.32	wnw.	16.2	3,429	3,100	
						3,250	686.2	2.2	.....	37	2.65	wnw.	15.6	3,184	2,460	
						3,000	707.3	2.9	.....	39	2.94	wnw.	14.9	2,939	2,080	
5:31	967.6	19.6	44	sw.	3.6	2,947	711.8	3.1	0.46	40	3.05	wnw.	14.8	2,887	2,000	
						2,750	729.2	4.0	.....	42	3.41	wnw.	14.4	2,694	1,750	
						2,500	751.5	5.2	.....	43	3.80	w.	13.9	2,450	1,440	
						2,250	774.8	6.3	.....	46	4.39	wsw.	13.4	2,205	1,130	
						2,000	798.9	7.5	.....	49	5.08	wsw.	13.0	1,960	820	
5:50	967.6	18.6	49	sw.	3.6	1,762	822.7	8.6	0.77	51	5.70	sw.	12.5	1,727	520	
						1,750	824.2	8.7	.....	51	5.74	sw.	12.5	1,715	510	
						1,500	850.0	10.6	.....	50	6.39	sw.	13.2	1,470	200	
6:01	967.6	17.6	52	sw.	3.1	1,333	866.5	11.9	0.93	50	6.96	sw.	13.6	1,307	0	
						1,250	875.7	12.7	.....	48	7.05	sw.	13.5	1,225	0	
						1,000	901.9	15.0	.....	44	7.50	sw.	13.1	980	0	
6:12	967.5	17.4	49	ssw.	4.0	815	921.1	16.7	0.89	40	7.60	sw.	12.8	799	0	
						750	928.7	18.7	.....	40	8.63	ssw.	12.6	735	0	
6:16	967.5	17.1	51	ssw.	4.0	522	953.3	19.3	−1.90	40	8.96	ssw.	12.5	512	0	
						500	955.8	18.9	.....	42	9.17	ssw.	11.1	490	0	
6:18	967.5	16.9	52	ssw.	4.5	396	967.5	16.9	.....	52	10.01	ssw.	4.5	388	.....	1/10 Ci., wsw.

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 27, 1917, series (No. 4).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
7:12	967.2	15.8	54	s.	4.5	396	967.2	15.8	.....	54	9.69	s.	4.5	388	.....	1/10 Ci., wsw.
						500	955.0	17.1	.....	48	9.36	ssw.	9.3	490	0	Bright moonlight.
7:15	967.2	16.0	52	s.	4.9	592	945.2	18.2	−1.22	43	8.99	ssw.	13.6	580	0	
						750	927.5	17.0	.....	44	8.53	ssw.	14.4	735	0	2/10 Ci., wsw.
						1,000	900.5	15.0	.....	45	7.67	sw.	15.6	980	0	
						1,250	874.6	13.1	.....	47	7.09	sw.	16.9	1,225	0	
7:33	967.2	16.2	54	s.	6.3	1,321	867.3	12.5	0.78	47	6.81	sw.	17.2	1,295	0	4/10 Ci., wsw.
						1,500	848.8	11.6	.....	48	6.56	sw.	17.3	1,470	260	
						1,750	823.7	10.4	.....	50	6.30	wsw.	17.6	1,715	630	
						2,000	799.3	9.1	.....	51	5.90	wsw.	17.8	1,960	950	
						2,250	775.8	7.9	.....	51	5.43	w.	17.9	2,205	1,210	
						2,500	752.6	6.7	.....	52	5.10	wnw.	18.1	2,450	1,480	
8:03	967.2	15.6	61	s.	5.8	2,704	734.0	5.6	0.50	53	4.82	wnw.	18.2	2,650	1,800	
						2,750	730.5	5.4	.....	52	4.66	wnw.	18.1	2,694	1,850	
						3,000	708.3	4.1	.....	46	3.77	wnw.	17.7	2,939	2,120	
						3,250	687.0	2.7	.....	40	2.97	wnw.	17.2	3,184	2,390	
						3,500	666.1	1.4	.....	35	2.37	wnw.	16.8	3,429	2,640	3/10 A.Cu., w.
						3,750	645.6	0.0	.....	29	1.77	wnw.	16.3	3,673	2,880	
8:31	967.0	15.4	60	s.	6.3	3,872	635.4	−0.5	0.52	26	1.52	wnw.	16.1	3,793	3,000	
						3,750	645.6	0.1	.....	30	1.84	wnw.	16.8	3,673	2,880	
						3,500	666.1	1.4	.....	38	2.37	wnw.	18.1	3,429	2,620	
						3,250	687.0	2.7	.....	46	3.41	wnw.	19.4	3,184	2,360	
						3,000	708.3	4.0	.....	53	3.74	wnw.	20.8	2,939	2,110	
						2,750	730.5	5.3	.....	61	5.44	wnw.	22.1	2,694	1,860	
9:02	966.9	15.6	61	s.	8.5	2,696	735.2	5.6	0.75	63	5.73	wnw.	22.4	2,642	1,800	Few A.Cu., w.
						2,500	752.6	6.1	.....	62	5.84	w.	21.6	2,450	1,610	
						2,250	775.8	9.0	.....	60	6.89	wsw.	20.6	2,205	1,380	
						2,000	799.3	10.8	.....	58	7.51	wsw.	19.6	1,960	1,140	
9:23	967.0	15.2	63	s.	8.0	1,858	813.6	11.9	0.39	57	7.94	sw.	19.1	1,821	1,000	
						1,750	823.7	12.5	.....	55	7.97	sw.	19.3	1,715	860	
						1,500	848.8	13.3	.....	52	7.94	sw.	19.6	1,470	530	
9:37	967.1	15.0	64	ssw.	8.5	1,295	869.9	14.1	0.49	49	7.88	sw.	19.9	1,270	260	
						1,250	874.6	14.3	.....	49	7.99	sw.	20.3	1,225	240	
						1,000	900.5	15.5	.....	49	8.63	sw.	22.4	980	130	
						750	927.5	16.8	.....	49	9.37	sw.	24.5	735	20	
9:52	967.2	14.7	66	ssw.	8.0	603	943.9	17.5	−1.40	49	9.80	sw.	25.7	591	0	
						500	955.0	16.1	.....	58	10.61	sw.	16.5	490	0	
9:56	967.2	14.6	67	ssw.	7.2	396	967.2	14.6	.....	67	11.14	ssw.	7.2	388	.....	Bright moonlight; 2/10 Ci., w.

September 27-28, 1917, series (No. 5).

P. M.																
10:34	967.2	14.0	70	ssw.	6.3	396	967.2	14.0	.....	70	11.19	ssw.	6.3	388	.....	Bright moonlight.
						500	955.1	14.3	.....	66	10.76	ssw.	8.4	490	0	
						750	927.7	15.0	.....	56	9.55	ssw.	13.6	735	0	
						1,000	901.0	15.6	.....	47	8.33	sw.	18.7	980	0	
10:52	967.2	13.8	72	ssw.	5.8	1,172	882.4	16.1	−0.27	40	7.32	sw.	22.3	1,149	0	
						1,250	874.9	15.6	.....	41	7.27	sw.	21.9	1,225	90	
						1,500	849.0	13.9	.....	44	6.99	sw.	20.7	1,470	360	
						1,750	824.3	12.3	.....	47	6.73	wsw.	19.4	1,715	600	
						2,000	800.0	10.6	.....	49	6.26	wsw.	18.2	1,960	820	
						2,250	776.6	9.0	.....	52	5.97	wsw.	16.9	2,205	1,050	
11:20	967.2	13.2	75	ssw.	5.8	2,310	770.5	8.6	0.66	53	5.92	wsw.	16.6	2,264	1,100	
						2,500	753.7	7.2	.....	53	5.38	wsw.	15.2	2,450	1,330	
						2,750	731.5	5.3	.....	53	4.72	w.	13.3	2,694	1,650	7/10 Ci., w.
11:50	967.2	13.4	72	ssw.	6.3	2,973	711.2	3.6	0.78	53	4.19	w.	11.6	2,913	.....	
						2,750	731.5	5.4	.....	51	4.57	w.	12.0	2,694	1,660	
						2,500	754.2	7.5	.....	49	5.08	wsw.	12.6	2,450	1,330	
						2,250	777.4	9.5	.....	47	5.58	wsw.	13.1	2,205	1,010	2/10 Ci., w.
A. M.																
12:07	967.2	13.3	73	ssw.	5.8	2,230	779.0	9.7	0.84	47	5.65	wsw.	13.1	2,185	980	
						2,000	800.5	11.6	.....	45	6.15	wsw.	13.0	1,960	840	
						1,750	824.6	13.7	.....	43	6.74	wsw.	12.8	1,715	680	
12:25	967.1	13.2	75	ssw.	4.9	1,549	844.7	15.4	0.65	41	7.18	wsw.	12.7	1,518	560	
						1,500	849.0	15.7	.....	41	7.31	wsw.	13.4	1,470	480	
						1,250	874.9	17.3	.....	38	7.50	wsw.	16.7	1,225	40	
						1,000	901.0	19.0	.....	36	7.91	sw.	20.0	980	0	
12:42	967.0	12.9	75	ssw.	4.9	932	907.9	19.4	−0.90	35	7.89	sw.	20.9	914	0	
12:51	966.9	13.2	74	ssw.	4.9	776	924.5	18.0	−1.32	44	9.08	sw.	24.2	761	0	Few Ci., w.
						750	927.7	17.7	.....	46	9.32	sw.	22.9	735	0	
						500	955.0	14.4	.....	67	10.99	sw.	13.0	490	0	
12:57	966.9	13.0	75	sw.	5.4	396	966.9	13.0	.....	75	11.24	sw.	5.4	388	.....	Bright moonlight; cloudless.

September 28, 1917, series (No. 6).

A. M.																
1:39	967.1	11.1	86	wsw.	4.5	396	967.1	11.1	.....	86	11.36	wsw.	4.5	388	.....	Cloudless.
						500	955.4	11.6	.....	81	11.06	wsw.	8.0	490	90	Bright moonlight.
1:42	967.1	10.9	88	wsw.	4.5	730	929.2	12.7	−0.48	71	10.43	wsw.	15.6	716	280	
						750	927.5	12.9	.....	70	10.42	wsw.	15.6	735	297	
						1,000	900.5	16.0	.....	52	9.45	w.	15.0	980	160	
1:54	967.2	11.4	85	wsw.	5.4	1,064	893.4	16.8	−1.23	47	8.99	w.	14.9	1,043	110	
						1,250	874.5	15.6	.....	47	8.33	wnw.	12.7	1,225	70	
						1,500	849.0	13.9	.....	46	7.30	nw.	12.1	1,470	400	
						1,750	824.1	12.2	.....	46	6.54	nnw.	10.5	1,715	770	Few Ci.St.
3:33	967.2	11.4	85	wsw.	3.6	1,861	813.0	11.5	0.66	46	6.24	nnw.	9.8	1,824	930	
						2,000	800.0	10.6	.....	47	6.01	nnw.	11.1	1,960	1,220	
						2,250	776.3	8 9	.....	48	5 47	nnw.	13 5	2,205	1,430	
						2,500	753.2	7.3	.....	49	5.01	nnw.	15.9	2,450	1,640	
						2,750	730.6	5.6	.....	51	4.64	nw.	18.3	2,694	1,850	
						3,000	708.6	4.0	.....	52	4.23	nw.	20.7	2,939	.....	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 28, 1917, series (No. 6)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
3:57	967.2	11.2	86	sw.	4.0	3,236	687.8	2.4	0.66	53	3.85	nw.	23.0	3,170	.....	
						3,000	708.6	3.9	.....	52	4.20	nw.	20.7	2,939	.....	
						2,750	730.6	5.5	.....	50	4.52	nw.	18.2	2,694	1,780	
						2,500	753.2	7.2	.....	48	4.88	nw.	15.8	2,450	1,410	
4:12	967.2	11.0	86	sw.	3.1	2,433	758.8	7.6	0.62	48	5.01	nw.	15.1	2,384	1,320	
						2,250	776.3	8.7	.....	46	5.18	nw.	14.1	2,205	1,040	
						2,000	800.0	10.3	.....	42	5.26	nw.	12.7	1,960	660	Cloudless.
						1,750	824.1	11.8	.....	39	5.40	nw.	11.3	1,715	280	
						1,500	849.0	13.4	.....	36	5.53	nw.	10.0	1,470	0	
						1,250	874.5	14.9	.....	33	5.59	nw.	8.6	1,225	0	
4:34	967.4	10.4	86	sw.	3.1	1,200	879.4	15.2	−1.47	32	5.53	nw.	8.3	1,176	0	
4:43	967.5	10.1	88	sw.	2.7	1,091	890.8	13.6	0.44	36	5.61	nw.	11.9	1,070	0	
						1,000	900.5	14.0	.....	36	5.75	nw.	12.6	980	0	
						750	927.5	15.1	.....	36	6.18	w.	14.4	735	0	
4:54	967.6	9.7	89	sw.	2.2	724	930.5	15.2	−1.52	36	6.22	w.	14.6	710	0	
						500	955.4	11.8	.....	70	9.69	wsw.	5.9	490	0	
4:58	967.6	10.2	86	sw.	1.8	396	967.6	10.2	.....	86	10.71	sw.	1.8	388	.....	Cloudless.

September 28, 1917, series (No. 7).

A. M.																
6:36	968.4	10.0	85	n.	1.8	396	968.4	10.0	.....	85	10.44	n.	1.8	388	.....	Cloudless.
						500	957.0	12.0	.....	65	9.12	n.	9.0	490	0	
6:39	968.5	10.2	81	n.	2.2	638	941.0	15.0	−2.07	38	6.48	nne.	18.5	625	0	
						750	928.8	14.8	.....	33	5.55	n.	15.9	735	0	
						1,000	901.7	14.4	.....	21	3.44	nw.	10.1	980	920	
6:55	968.6	10.5	81	n.	1.8	1,028	898.6	14.3	0.17	20	3.26	nw.	9.4	1,008	1,020	
						1,250	876.0	15.6	.....	17	3.01	nw.	12.7	1,225	1,570	
7:07	968.7	10.6	82	nnw.	2.2	1,347	865.6	16.2	−0.60	15	2.76	nw.	14.1	1,320	1,700	
						1,500	850.8	15.1	.....	19	3.26	nw.	14.2	1,470	1,920	
						1,750	826.1	13.2	.....	25	3.77	nw.	14.4	1,715	2,270	
						2,000	802.0	11.4	.....	32	4.31	nw.	14.5	1,960	2,570	
						2,250	778.5	9.5	.....	38	4.51	nw.	14.7	2,205	2,870	
7:42	969.0	12.1	77	wnw.	1.3	2,443	760.0	8.1	0.74	43	4.64	nw.	14.8	2,394	3,100	
						2,500	755.0	7.7	.....	44	4.62	nw.	15.0	2,450	3,210	
						2,750	732.5	6.0	.....	48	4.49	nw.	16.1	2,694	3,710	
						3,000	710.5	4.3	.....	51	4.24	nw.	17.1	2,939	4,208	
						3,250	689.2	2.5	.....	54	3.95	nw.	18.1	3,184	4,700	
8:12	969.3	12.9	75	nw.	0.9	3,417	674.6	1.4	0.69	56	3.79	nw.	18.8	3,347	4,980	
						3,500	668.0	1.1	.....	56	3.71	nw.	18.8	3,429	5,070	
						3,750	647.7	0.2	.....	54	3.35	nw.	18.8	3,673	5,350	
						4,000	628.0	− 0.8	.....	53	3.03	nw.	18.8	3,918	5,630	
						4,250	609.0	− 1.7	.....	51	2.70	nw.	18.9	4,162	5,910	
						4,500	590.0	− 2.6	.....	50	2.46	nw.	18.9	4,407	6,190	
						4,750	571.8	− 3.5	.....	48	2.19	nw.	18.9	4,651	6,470	
9:00	969.9	15.5	59	nnw.	2.2	4,824	566.1	− 3.8	0.42	48	2.13	nw.	18.9	4,724	.....	
						4,750	571.8	− 3.5	.....	47	2.14	nw.	18.6	4,651	6,430	
						4,500	590.0	− 2.3	.....	45	2.27	nw.	17.5	4,407	5,850	
						4,250	609.0	− 1.2	.....	42	2.36	nw.	16.3	4,162	5,260	
9:53	970.3	17.2	52	nw.	1.8	4,129	618.1	− 0.6	−0.23	41	2.38	nw.	15.8	4,044	4,970	
						4,000	628.0	− 0.9	.....	46	2.61	nw.	18.3	3,918	4,670	
10:02	970.3	17.7	47	nw.	2.2	3,873	638.0	− 1.2	0.66	50	2.76	nw.	20.7	3,794	4,370	
						3,750	647.7	− 0.4	.....	50	2.96	nw.	20.6	3,673	4,090	
						3,500	668.0	1.3	.....	51	3.42	wnw.	20.4	3,429	3,500	
						3,250	689.2	2.9	.....	52	3.92	wnw.	20.2	3,184	3,000	
						3,000	710.5	4.6	.....	53	4.49	wnw.	20.0	2,939	2,550	
						2,750	732.5	6.2	.....	54	5.12	w.	19.8	2,694	2,100	
10:33	970.1	19.3	36	nnw.	2.2	2,584	747.8	7.3	0.75	55	5.63	w.	19.7	2,532	1,800	
						2,500	755.0	7.9	.....	53	5.64	w.	19.2	2,450	1,720	
						2,250	778.5	9.8	.....	48	5.82	w.	17.6	2,205	1,460	
						2,000	802.0	11.6	.....	43	5.87	w.	16.1	1,960	1,210	
10:45	970.0	19.1	36	nnw.	2.7	1,787	822.9	13.2	0.31	39	5.92	w.	14.8	1,751	1,000	
						1,750	827.0	13.3	.....	38	5.80	w.	14.8	1,715	930	
						1,500	852.0	14.1	.....	29	4.67	wnw.	14.8	1,470	460	
10:53	969.9	19.7	34	n.	2.2	1,275	874.4	14.8	−1.02	22	3.70	nw.	14.8	1,250	40	
						1,250	877.0	14.5	.....	22	3.63	nw.	13.3	1,225	0	
10:58	969.9	19.4	33	nnw.	2.2	1,079	894.8	12.8	1.05	23	3.40	nnw.	2.9	1,058	0	
						1,000	903.0	13.6	.....	24	3.74	nnw.	2.8	980	0	
						750	930.2	16.3	.....	26	4.82	n.	2.6	735	0	
						500	958.0	18.9	.....	29	6.33	ne.	2.3	490	0	
11:05	969.8	20.0	30	ne.	2.2	396	969.8	20.0	.....	30	7.01	ne.	2.2	388	.....	Cloudless.

September 29, 1917.

A. M.																
8:11	972.5	14.2	55	nnw.	5.8	396	972.5	14.2	.....	55	8.90	nnw.	5.8	388	.....	Cloudless.
						500	910.8	13.2	.....	56	8.50	nnw.	9.7	490	0	
						750	932.7	10.9	.....	58	7.56	nnw.	18.9	735	0	
8:21	972.6	14.4	56	nnw.	4.9	793	927.8	10.5	0.97	58	7.37	nnw.	20.5	778	0	
						1,000	905.0	9.2	.....	58	6.75	nnw.	20.8	980	730	
8:32	972.8	14.8	55	n.	4.5	1,229	880.6	9.0	0.34	58	6.66	nnw.	21.2	1,206	1,040	
						1,250	878.8	9.0	.....	56	6.43	nnw.	21.4	1,225	1,100	
						1,500	852.8	9.2	.....	33	3.84	nw.	23.9	1,470	1,760	
8:44	973.0	14.8	51	n.	7.6	1,592	842.9	9.3	−0.08	25	2.93	nw.	24.8	1,560	2,000	
						1,750	827.4	9.1	.....	25	2.89	nw.	24.9	1,715	2,160	
						2,000	802.7	8.9	.....	25	2.85	nw.	25.1	1,960	2,400	
						2,250	779.0	8.5	.....	25	2.76	nw.	25.3	2,205	3,030	
9:13	973.5	15.2	52	n.	6.7	2,479	757.7	8.0	0.15	25	2.68	nw.	25.6	2,429	3,400	
						2,500	755.9	7.9	.....	26	2.77	nw.	25.7	2,450	3,430	
						2,750	733.3	6.2	.....	34	3.22	nw.	26.6	2,094	3,750	
						3,000	711.1	5.1	.....	42	3.69	wnw.	27.5	2,939	4,070	

TABLE 6.—*Free-air data from kite flights at Drexel Aerological Station, September, 1917*—Continued.

September 29, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	3,250	689.8	3.7	.....	50	3.98	wnw.	28.4	3,184	4,780	
.....	.....	.....	.....	.....	.....	3,500	668.8	2.3	.....	59	4.25	wnw.	29.4	3,429	.....	
9:30	973.7	15.6	53	n.	5.4	3,539	665.4	2.1	0.60	60	4.27	wnw.	29.5	3,467	.....	
.....	.....	.....	.....	.....	.....	3,500	668.8	2.4	.....	59	4.28	wnw.	29.5	3,429	.....	
.....	.....	.....	.....	.....	.....	3,250	689.8	4.0	.....	52	4.23	wnw.	29.6	3,184	4,950	
.....	.....	.....	.....	.....	.....	3,000	711.1	5.6	.....	45	4.10	wnw.	29.7	2,939	4,320	
.....	.....	.....	.....	.....	.....	2,750	733.3	7.2	.....	38	3.86	wnw.	29.8	2,694	3,670	
9:56	974.0	16.3	44	n.	5.4	2,609	745.5	8.1	−0.34	34	3.67	wnw.	29.8	2,556	3,300	
.....	.....	.....	.....	.....	.....	2,500	755.9	7.7	.....	22	2.31	nw.	27.7	2,450	2,780	
10:30	974.2	16.7	46	n.	5.8	2,400	765.0	7.4	−5.00	11	1.13	nnw.	25.7	2,352	2,560	
10:32	974.2	16.8	46	n.	6.3	2,360	768.7	5.4	0.32	10	0.90	nnw.	21.6	2,313	2,520	
.....	.....	.....	.....	.....	.....	2,250	779.3	5.8	.....	11	1.01	nnw.	21.0	2,205	2,240	
.....	.....	.....	.....	.....	.....	2,000	803.4	6.6	.....	14	1.36	nnw.	19.6	1,960	1,920	
.....	.....	.....	.....	.....	.....	1,750	828.3	7.4	.....	16	1.66	n.	18.3	1,715	1,630	
10:57	974.3	17.1	44	n.	5.4	1,639	839.1	7.7	−1.42	17	1.79	n.	17.7	1,606	1,500	
10:59	974.3	17.1	43	n.	5.4	1,519	851.6	6.0	0.83	20	1.87	n.	19.3	1,489	1,250	
.....	.....	.....	.....	.....	.....	1,500	853.6	7.6	.....	28	2.92	n.	17.7	1,470	1,220	
.....	.....	.....	.....	.....	.....	1,250	880.0	8.2	.....	31	3.37	n.	17.1	1,225	700	
.....	.....	.....	.....	.....	.....	1,000	907.0	10.3	.....	42	5.26	n.	15.1	980	420	
11:22	974.4	16.9	45	n.	6.3	868	921.4	11.4	1.04	47	6.34	n.	14.0	851	0	
.....	.....	.....	.....	.....	.....	750	935.0	13.0	.....	46	6.89	n.	11.8	735	0	
.....	.....	.....	.....	.....	.....	500	912.9	16.4	.....	44	8.21	n.	7.3	490	0	
11:28	974.5	17.6	43	n.	5.4	396	974.5	17.6	.....	43	8.60	n.	5.4	388	.....	Cloudless.

September 30, 1917.

A. M.																
6:48	976.4	6.8	75	wnw.	3.6	396	976.4	6.8	.....	75	4.45	wsw.	3.6	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	964.7	8.8	.....	65	7.36	w.	7.2	490	0	
.....	.....	.....	.....	.....	.....	750	936.7	13.5	.....	40	6.19	wnw.	16.0	735	0	
7:00	976.4	7.4	76	wnw.	3.6	797	931.0	14.4	−1.90	35	5.74	nw.	17.6	781	0	
.....	.....	.....	.....	.....	.....	1,000	909.0	12.8	.....	35	5.17	nw.	17.1	980	0	
7:11	976.5	8.4	70	wnw.	3.6	1,254	881.3	10.9	0.77	35	4.56	nw.	16.4	1,229	0	
.....	.....	.....	.....	.....	.....	1,500	855.7	9.4	.....	37	4.36	nw.	16.3	1,470	720	
.....	.....	.....	.....	.....	.....	1,750	830.0	7.8	.....	39	4.13	nw.	16.2	1,715	1,440	
.....	.....	.....	.....	.....	.....	2,000	805.8	6.3	.....	41	3.92	nw.	16.1	1,960	2,170	
.....	.....	.....	.....	.....	.....	2,250	781.9	4.8	.....	43	3.70	nw.	16.0	2,205	3,260	
7:37	976.6	10.0	63	wnw.	3.1	2,388	768.3	3.9	0.62	44	3.56	nw.	16.0	2,262	3,300	
.....	.....	.....	.....	.....	.....	2,500	758.0	3.3	.....	46	3.56	nw.	17.0	2,450	3,640	
.....	.....	.....	.....	.....	.....	2,750	734.8	2.0	.....	51	3.60	nw.	19.1	2,694	4,380	
.....	.....	.....	.....	.....	.....	3,000	712.2	0.6	.....	56	3.57	nw.	21.3	2,939	5,130	
7:59	976.7	10.7	60	nw.	2.7	3,155	698.5	0.2	0.53	59	3.55	nw.	22.6	3,091	5,470	
8:03	976.7	10.9	59	nnw.	1.8	3,252	690.1	1.9	−2.16	41	2.87	nw.	17.7	3,186	5,660	
.....	.....	.....	.....	.....	.....	3,500	669.8	1.9	.....	37	2.59	nw.	21.8	3,429	6,170	
8:22	976.8	12.1	56	nw.	1.8	3,741	650.0	1.9	0.00	35	2.45	nw.	24.5	3,664	6,710	
.....	.....	.....	.....	.....	.....	3,750	650.0	1.9	.....	35	2.45	nw.	24.5	3,673	6,740	
.....	.....	.....	.....	.....	.....	4,000	630.0	0.7	.....	38	2.44	nw.	24.8	3,918	7,660	
.....	.....	.....	.....	.....	.....	4,250	611.3	− 0.4	.....	40	2.36	nnw.	25.0	4,162	8,190	
.....	.....	.....	.....	.....	.....	4,500	592.5	− 1.5	.....	42	2.26	nnw.	25.4	4,407	8,570	Cloudless.
9:02	977.0	13.4	53	n.	1.3	4,653	580.5	− 2.2	0.24	44	2.24	nnw.	25.6	4,556	8,800	
.....	.....	.....	.....	.....	.....	4,500	592.5	− 1.6	.....	41	2.19	nnw.	24.8	4,407	8,310	Few Ci., ssw.
.....	.....	.....	.....	.....	.....	4,250	611.6	− 0.6	.....	36	2.09	nnw.	23.5	4,162	7,520	
.....	.....	.....	.....	.....	.....	4,000	630.6	0.3	.....	33	2.06	nnw.	22.3	3,918	6,720	
.....	.....	.....	.....	.....	.....	3,750	650.7	1.2	.....	28	1.86	nnw.	21.0	3,673	5,830	
.....	.....	.....	.....	.....	.....	3,500	670.8	2.4	.....	25	1.82	nnw.	19.7	3,429	5,120	
9:39	977.3	15.4	47	ne.	2.2	3,337	684.2	2.9	−1.97	22	1.66	nnw.	18.9	3,269	4,600	
.....	.....	.....	.....	.....	.....	3,250	691.8	1.2	.....	32	2.13	nnw.	19.4	3,184	4,330	
9:44	977.3	15.9	48	ne.	2.2	3,210	694.9	0.4	0.58	36	2.26	nnw.	19.7	3,145	4,200	
.....	.....	.....	.....	.....	.....	3,000	713.2	1.6	.....	37	2.54	nnw.	18.4	2,939	.....	
.....	.....	.....	.....	.....	.....	2,750	735.2	3.0	.....	38	2.88	nnw.	16.8	2,694	.....	
.....	.....	.....	.....	.....	.....	2,500	758.0	4.5	.....	39	3.28	n.	15.2	2,450	.....	
.....	.....	.....	.....	.....	.....	2,250	781.9	5.9	.....	40	3.72	n.	13.6	2,205	.....	
.....	.....	.....	.....	.....	.....	2,000	805.8	7.4	.....	41	4.22	n.	12.0	1,960	.....	
.....	.....	.....	.....	.....	.....	1,750	830.0	8.8	.....	42	4.76	nne.	10.4	1,715	.....	
.....	.....	.....	.....	.....	.....	1,500	855.7	9.2	.....	43	5.01	nne.	8.9	1,470	.....	
.....	.....	.....	.....	.....	.....	1,250	882.0	11.7	.....	44	6.05	nne.	7.2	1,225	.....	
.....	.....	.....	.....	.....	.....	1,000	909.0	12.1	.....	45	6.35	ne.	5.6	980	.....	
.....	.....	.....	.....	.....	.....	750	936.8	14.6	.....	46	7.65	ne.	4.1	735	.....	
.....	.....	.....	.....	.....	.....	500	965.3	15.0	.....	47	8.01	ne.	2.5	490	.....	
10:15	977.4	16.6	47	ne.	1.8	396	977.4	16.6	.....	47	8.88	ne.	1.8	388	.....	Cloudless.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917.*

October 1, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Potential.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Gravity.	Electric.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
6:49	971.0	9.4	69	se.	3.6	396	971.0	9.4	.....	69	8.14	se.	3.6	388	.....	Few Ci., w.; Few A.Cu., w.
						500	958.9	11.5	.....	62	8.25	se.	9.1	490	0	
6:55	970.9	9.5	69	se.	5.4	700	936.2	15.6	−2.04	49	8.68	se.	19.7	686	0	
						750	930.9	15.3	.....	49	8.52	se.	19.8	735	160	
						1,000	903.0	14.0	.....	46	7.35	se.	20.1	980	990	
						1,250	876.8	12.6	.....	44	6.42	sse.	20.4	1,225	1,820	
						1,500	851.3	11.3	.....	41	5.49	sse.	20.7	1,470	2,640	
7:17	970.8	10.1	69	sse.	5.4	1,517	849.6	11.2	0.54	41	5.45	sse.	20.7	1,487	2,700	Few Ci., w.; Few A.Cu., w.
						1,750	826.6	10.6	.....	39	4.98	sse.	19.7	1,715	3,010	
						2,000	802.0	9.9	.....	38	4.64	s.	18.6	1,960	3,340	
7:30	970.8	10.6	68	sse.	3.6	2,125	789.9	9.6	0.26	37	4.42	s.	18.1	2,082	3,500	
						2,250	778.2	8.9	.....	46	5.24	s.	17.8	2,205	3,740	
						2,500	755.2	7.5	.....	63	6.53	s.	17.1	2,450	4,230	
7:42	970.7	11.4	63	se.	4.9	2,742	733.7	6.2	0.55	79	7.49	s.	16.5	2,687	4,700	
						2,750	733.0	6.2	.....	78	7.39	s.	16.4	2,694	4,720	
						3,000	711.1	6.9	.....	63	6.27	ssw.	14.4	2,939	5,640	
8:05	970.6	12.1	60	se.	5.4	3,031	708.4	7.0	−0.28	61	6.11	ssw.	14.1	2,970	5,740	2/10 Ci.Cu., w.; 2/10 A.St., w.
						3,250	690.0	5.2	.....	69	6.11	ssw.	12.2	3,184	6,720	2/10 Ci., w.; 2/10 Ci.Cu., w.; 3/10 A.St., w.
9:21	970.2	16.0	54	s.	5.8	3,470	671.4	3.5	0.72	78	6.12	sw.	10.2	3,399	7,500	3/10 Ci., w.; 5/10 A.St., w.
						3,250	689.8	4.9	.....	76	6.58	sw.	11.4	3,184	6,680	
9:50	970.0	17.4	50	s.	4.5	3,067	704.8	6.2	0.49	74	7.02	sw.	12.4	3,005	6,000	4/10 A.Cu., w.; 4/10 A.St., w.
						3,000	710.4	6.5	.....	73	7.07	sw.	13.0	2,939	6,090	
						2,750	732.0	7.8	.....	70	7.41	sw.	15.1	2,694	5,940	
						2,500	754.5	9.0	.....	66	7.58	ssw.	17.4	2,450	5,600	
						2,250	778.0	10.2	.....	63	7.84	ssw.	19.4	2,205	5,270	
10:20	969.7	18.8	44	s.	5.4	2,126	789.9	10.8	0.38	61	7.90	ssw.	20.5	2,083	5,100	1/10 Ci.St., w.; 8/10 A.St., w.
						2,000	801.8	11.3	.....	60	8.03	ssw.	20.8	1,960	.....	Solar halo 22° radius from 10:30 a. m. to end of flight.
						1,750	825.9	12.2	.....	57	8.10	ssw.	21.4	1,715	.....	
						1,500	850.6	13.2	.....	55	8.34	ssw.	22.0	1,470	.....	
						1,250	876.0	14.2	.....	53	8.58	ssw.	22.6	1,225	.....	
						1,000	902.0	15.1	.....	50	8.58	ssw.	23.2	980	.....	
11:45	968.4	19.5	43	s.	8.9	767	927.2	16.0	1.00	48	8.73	ssw.	23.8	752	.....	
						750	929.0	16.2	.....	48	8.84	ssw.	23.0	735	.....	
						500	956.3	18.7	.....	44	9.49	s.	14.4	490	.....	
P. M.																
12:12	967.9	19.7	42	s.	10.7	396	967.9	19.7	.....	42	9.64	s.	10.7	388	.....	1/10 Ci.St., w.; 8/10 A.St., w.

October 2, 1917.

P. M.																
8:35	967.0	20.1	49	ssw.	4.9	396	967.0	20.1	.....	49	11.53	ssw.	4.9	388	.....	2/10 Ci.St., w.; 7/10 A.St., w.
						500	955.5	20.3	.....	44	10.48	ssw.	6.7	490	0	
						750	928.0	20.7	.....	33	8.06	s.	10.9	735	0	
8:44	967.0	20.2	46	s.	5.4	828	919.8	20.8	−0.16	29	7.13	s.	12.2	812	0	
						1,000	901.0	19.6	.....	29	6.61	ssw.	11.8	980	0	
						1,250	875.0	17.9	.....	28	5.74	ssw.	14.2	1,225	0	
						1,500	850.0	16.2	.....	28	5.16	sw.	10.7	1,470	0	
9:06	966.8	20.0	45	s.	4.9	1,627	837.4	15.3	0.69	28	4.87	sw.	10.4	1,595	0	
						1,750	825.1	14.5	.....	30	4.95	sw.	10.2	1,715	0	
9:19	966.7	20.0	45	s.	4.5	1,984	802.7	13.1	0.62	33	4.98	sw.	9.7	1,945	0	
						2,000	801.0	12.9	.....	33	4.91	sw.	10.0	1,960	0	
						2,250	777.5	10.6	.....	38	4.86	sw.	14.8	2,205	0	
9:23	966.6	20.0	46	s.	4.9	2,269	775.6	10.4	0.82	38	4.79	sw.	15.2	2,224	0	
						2,250	777.5	10.5	.....	38	4.83	sw.	15.1	2,205	0	
						2,000	801.0	12.2	.....	36	5.12	sw.	13.9	1,960	0	
						1,750	825.1	14.0	.....	34	5.43	sw.	12.8	1,715	0	
9:35	966.5	19.8	46	ssw.	5.8	1,672	832.9	14.5	0.76	33	5.45	sw.	12.4	1,639	0	
						1,500	850.0	15.8	.....	31	5.56	sw.	12.9	1,470	0	
						1,250	875.0	17.7	.....	29	5.87	ssw.	13.7	1,225	0	
						1,000	900.5	19.6	.....	27	6.16	s.	14.5	980	0	
9:52	966.3	19.2	47	ssw.	5.8	820	919.8	21.0	−0.45	25	6.22	s.	15.1	804	0	
						750	927.2	20.7	.....	28	6.84	s.	13.5	735	0	
						500	954.8	19.6	.....	41	9.35	ssw.	7.8	490	0	
10:03	966.2	19.1	46	ssw.	5.4	396	966.2	19.1	.....	46	10.17	ssw.	5.4	388	.....	9/10 A.St., sw.

October 3, 1917 (No. 1).

A. M.																
7:11	966.6	14.2	59	nw.	4.5	396	966.6	14.2	.....	59	9.55	nw.	4.5	388	.....	8/10 Ci.St., w.
						500	955.0	15.9	.....	53	9.58	nw.	8.5	490	0	
7:18	966.7	14.2	59	nw.	4.5	693	933.6	18.9	−1.58	43	9.39	nw.	16.0	680	0	
						750	927.5	18.8	.....	43	9.33	nw.	16.1	735	220	
						1,000	900.8	18.2	.....	40	8.36	nw.	16.7	980	1,180	
7:27	966.8	14.3	59	nw.	4.0	1,047	895.7	18.1	0.23	40	8.31	nw.	16.8	1,026	1,360	
						1,250	874.9	16.7	.....	36	6.84	nw.	22.8	1,225	1,790	
7:44	967.0	14.7	58	nw.	4.9	1,375	862.1	15.8	1.13	34	6.10	nw.	28.1	1,348	2,000	10/10 Ci.St., w.
						1,500	849.5	14.9	.....	37	6.27	nw.	28.4	1,470	2,300	
						1,750	825.0	13.0	.....	42	6.29	nw.	28.9	1,715	2,770	
7:56	967.2	15.0	58	n.	4.0	1,774	822.6	12.8	0.75	42	6.21	nw.	28.9	1,739	2,820	
						2,000	801.0	11.4	.....	41	5.53	nw.	27.7	1,960	3,320	
						2,250	777.4	9.9	.....	39	4.76	nw.	26.4	2,205	3,910	
						2,500	754.0	8.4	.....	38	4.19	nw.	25.0	2,450	4,510	
						2,750	731.5	6.9	.....	36	3.58	nw.	23.7	2,694	5,200	
8:30	967.7	15.0	62	nnw.	5.8	2,821	725.2	6.5	0.53	36	3.48	nw.	23.3	2,764	5,400	
						2,750	731.5	6.8	.....	36	3.57	nw.	23.2	2,694	5,240	
						2,500	754.0	7.0	.....	37	3.71	nw.	22.8	2,450	4,680	
						2,250	776.6	9.1	.....	37	4.28	nw.	22.4	2,205	4,110	
						2,000	800.0	10.3	.....	38	4.76	nw.	21.9	1,960	3,490	
8:53	968.1	14.8	65	nnw.	4.9	1,797	819.0	11.2	0.52	38	5.05	nw.	21.6	1,761	2,930	
						1,750	824.0	11.4	.....	40	5.39	nw.	22.2	1,715	2,800	

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 3, 1917 (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
9:12	968.5	14.6	64	nnw.	5.4	1,568	842.3	12.4	0.10	48	6.91	nw.	23.2	1,537	2,300	Altitude of Cu. base about 1,200 m.
						1,500	849.0	12.5		48	6.96	nw.	22.3	1,470	2,040	
9:30	968.9	14.8	66	n.	5.8	1,279	872.0	12.7	−0.92	47	6.90	nw.	19.4	1,254	1,100	4/10 Ci.St., w.; 3/10 Cu., nnw.
						1,250	874.9	12.5		49	7.10	nw.	18.7	1,225	1,030	
						1,000	901.1	10.1		67	8.28	nnw.	12.6	980	420	
9:34	969.0	14.6	66	n.	4.9	984	903.3	10.0	0.82	68	8.35	nnw.	12.2	965	380	
						750	929.0	11.9		67	9.33	nnw.	9.6	735	0	
						500	957.2	14.3		66	10.76	n.	6.9	490	0	
9:47	969.3	14.8	66	n.	5.8	396	969.3	14.8		66	11.11	n.	5.8	388		5/10 Ci.St., w.; 2/10 Cu., nnw.

October 3, 1917 (No. 2).

A. M.																
10:36	969.8	12.6	75	n.	4.5	396	969.8	12.6		75	10.94	n.	4.5	388		9/10 St.Cu., n.
						500	957.5	11.5		81	10.99	n.	5.7	490	0	
						750	929.5	8.9		91	10.37	n.	8.7	735	750	
11:02	969.9	13.8	74	n.	3.6	828	921.0	8.1	1.04	100	10.80	n.	9.6	812	1,050	Altitude of Cu. base about 850 m.
						1,000	902.0	10.5		64	8.13	nnw.	15.5	980	1,730	
11:08	969.9	14.0	72	n.	4.0	1,118	889.5	12.2	−1.41	39	5.54	nnw.	19.5	1,096	2,200	
						1,250	875.1	11.6		42	5.70	nnw.	21.5	1,225	2,260	5/10 Cu., n.
						1,500	849.0	10.4		46	5.80	nnw.	25.4	1,470	2,390	
						1,750	824.2	9.7		49	5.89	nw.	27.8	1,715	2,790	
						2,000	800.0	8.1		53	5.72	nw.	33.2	1,960	3,220	
11:33	969.7	15.0	67	n.	4.0	2,044	795.9	7.9	0.46	57	6.07	nw.	33.9	2,003	3,300	
						2,250	776.2	6.9		57	5.67	nw.	33.0	2,205	3,950	
						2,500	752.8	5.7		57	5.22	nw.	31.8	2,450	4,440	
						2,750	730.2	4.4		57	4.77	nw.	30.7	2,694	4,550	
P. M.																
12:07	969.5	16.2	61	n.	4.5	2,875	719.3	3.8	0.49	57	4.57	nw.	30.1	2,817	4,600	
						3,000	708.2	3.1		59	4.50	nw.	30.5	2,939	4,920	
						3,250	686.7	1.6		64	4.39	nw.	31.2	3,184	5,560	
						3,500	665.7	0.2		68	4.22	nw.	31.9	3,429	6,210	
12:47	969.1	16.7	59	n.	4.0	3,614	656.3	−0.5	0.58	70	4.10	nw.	32.2	3,540	6,500	
						3,750	645.5	0.2		68	4.22	nw.	31.4	3,673		Cloudless.
1:29	968.6	17.4	57	n.	3.1	3,961	628.6	1.2	−0.35	65	4.33	nw.	30.1	3,880		
						3,750	645.5	0.7		60	3.86	nnw.	25.2	3,673		
1:47	968.4	18.1	55	n.	2.7	3,588	658.6	0.4	0.40	57	3.59	nnw.	22.1	3,515	6,390	
						3,500	665.7	0.8		58	3.75	nnw.	22.2	3,429	6,000	
						3,250	686.7	1.8		60	4.18	nnw.	22.4	3,184	4,910	
						3,000	708.2	2.8		61	4.56	nnw.	22.7	2,939	3,790	
						2,750	730.2	3.7		63	5.01	nnw.	22.9	2,694	2,620	
2:09	968.2	18.0	54	nne.	2.7	2,661	738.2	4.1		64	5.24	nnw.	23.0	2,607	2,200	Cloudless: kites broke away at 2:12 p. m.

October 4, 1917.

A. M.																
9:41	969.0	20.0	43	nnw.	4.5	396	969.0	20.0		43	10.05	nnw.	4.5	388		3/10 Cu., wnw.
						500	957.0	19.3		44	9.85	nnw.	7.4	490	0	
						750	929.9	17.4		47	9.34	nw.	14.6	735	0	
9:56	969.2	21.0	41	nnw.	4.5	874	916.5	16.6	0.71	48	9.07	nw.	18.0	857	0	
						1,000	903.0	16.3		49	9.08	nw.	19.1	980	0	
						1,250	877.0	15.7		51	9.10	nw.	21.2	1,225	310	
						1,500	851.7	15.0		55	9.38	wnw.	23.4	1,470	710	
10:30	969.2	22.5	40	nnw.	5.4	1,751	826.9	14.4	0.25	56	9.18	wnw.	25.5	1,716	1,120	
						2,000	802.7	13.1		58	8.75	wnw.	24.6	1,960	1,520	
						2,250	779.0	11.8		60	8.30	w.	23.6	2,205	1,930	
10:43	969.2	22.6	41	nnw.	4.5	2,364	768.7	11.2	0.52	61	8.11	w.	23.2	2,317	2,300	
						2,500	756.0	9.7		65	7.82	w.	23.2	2,450	2,530	
						2,750	733.8	6.9		73	7.26	wnw.	23.3	2,694	2,970	
11:02	969.2	22.3	41	n.	5.4	2,908	719.9	5.1	1.12	78	6.86	wnw.	23.4	2,849	3,260	
						3,000	711.7	4.9		72	6.24	wnw.	24.7	2,939	3,450	
						3,250	689.5	4.4		58	4.85	nw.	28.4	3,184	4,000	
11:35	969.0	23.0	36	nnw.	5.4	3,376	678.9	4.2	0.30	50	4.12	nw.	30.2	3,307	4,300	
						3,250	689.5	4.7		53	4.53	nw.	27.9	3,184	3,980	Few A Cu., wnw.
						3,000	710.8	5.7		60	5.50	nw.	23.2	2,939	3,340	
11:49	969.0	22.5	35	nw.	6.3	2,834	724.6	6.4	0.40	64	6.15	nw.	20.1	2,777	2,970	
						2,750	732.5	6.7		64	6.28	nw.	21.0	2,694	2,820	
						2,500	754.8	7.7		63	6.62	nw.	23.6	2,450	2,380	
						2,250	778.0	8.7		62	6.98	nw.	26.2	2,205	1,930	
P. M.																
12:10	968.9	23.3	32	nw.	4.5	2,079	794.0	9.4	0.11	61	7.19	nw.	28.0	2,037	1,620	
						2,000	801.8	9.5		61	7.24	nw.	25.6	1,960	1,470	
						1,750	826.0	9.8		61	7.39	nw.	18.0	1,715	1,010	
12:23	968.8	23.3	32	nnw.	7.6	1,703	830.6	9.8	0.90	61	7.39	nw.	16.6	1,669	910	
						1,500	850.9	11.6		56	7.65	nw.	15.4	1,470	490	
						1,250	876.9	13.9		50	7.94	nw.	13.9	1,225	0	
						1,000	903.0	16.1		44	8.05	nw.	12.4	980	0	
12:43	968.7	23.3	31	nnw.	6.7	769	927.9	18.2	1.39	38	7.94	nw.	11.0	754	0	
						750	929.9	18.5		38	8.09	nw.	10.8	735	0	
						500	957.0	21.9		33	8.67	nw.	7.6	490	0	
12:53	968.6	23.4	31	nw.	6.3	396	968.6	23.4		31	8.92	nw.	6.3	388		Few A.Cu., wnw.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 5, 1917 (No. 1).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
8:17	978.3	8.2	56	n.	5.8	396	978.3	8.2	.....	56	6.09	n.	5.8	388	.....	3/10 Ci.St., nw.
						500	966.2	7.0	.....	60	6.01	n.	9.8	490	0	
8:24	978.4	8.4	54	n.	7.6	743	937.9	4.2	1.15	68	5.61	n.	20.5	729	0	
						750	937.1	4.2	.....	68	5.61	n.	20.5	735	20	
						1,000	908.7	2.9	.....	64	4.82	n.	23.8	980	620	
8:38	978.7	8.4	54	n.	8.0	1,245	881.8	1.7	0.50	60	4.15	n.	25.0	1,220	1,210	
						1,500	854.7	0.5	.....	59	3.73	n.	24.8	1,470	1,810	
8:55	979.0	8.4	54	n.	5.8	1,681	835.3	− 0.4	0.48	57	3.37	n.	24.6	1,648	2,800	6/10Ci.St., nw.; head kite broke away at 8:56 a. m.

October 5, 1917 (No. 2).

A. M.																
11:08	980.4	10.8	48	nne.	5.4	396	980.4	10.8	.....	48	6.22	nne.	5.4	388	.....	3/10 Ci.St., nw.
						500	938.6	8.8	.....	50	5.67	n.	8.2	490	0	
11:15	980.4	10.6	46	n.	5.8	592	957.4	7.1	1.89	51	5.15	n.	10.7	580	0	
						750	939.5	5.7	.....	54	4.95	n.	11.7	735	220	
						1,000	911.0	3.7	.....	58	4.62	n.	13.2	980	770	
						1,250	883.4	1.4	.....	62	4.19	n.	14.7	1,225	910	Few Ci.St., nw.; Few Cu., n.
11:42	980.4	11.1	45	n.	5.4	1,341	873.2	0.6	0.87	64	4.08	n.	15.2	1,315	890	
						1,500	856.3	0.2	.....	60	3.72	n.	15.0	1,470	1,200	
						1,750	830.0	− 0.4	.....	53	3.13	n.	14.6	1,715	1,670	
P. M.																
12:12	980.3	11.9	43	n.	5.4	1,852	819.5	− 0.6	0.23	51	2.96	n.	14.4	1,815	2,100	
						2,000	804.3	− 0.8	.....	47	2.68	n.	16.2	1,960	3,340	
1:10	980.0	12.4	38	n.	5.4	2,118	792.3	− 1.0	0.15	44	2.47	n.	17.6	2,076	2,800	
						2,250	779.8	− 1.3	.....	40	2.19	n.	19.6	2,205	3,140	
						2,500	755.6	− 1.9	.....	33	1.72	n.	23.3	2,450	.....	
1:52	979.8	13.4	37	n.	4.0	2,587	747.3	− 2.1	0.31	31	1.59	n.	24.6	2,535	.....	
						2,500	755.6	− 2.1	.....	32	1.64	n.	23.3	2,450	.....	
						2,250	779.8	− 2.0	.....	35	1.81	n.	19.8	2,205	3,260	
2:31	979.7	13.0	35	nne.	5.4	2,070	797.3	− 1.9	0.70	37	1.93	n.	17.2	2,029	2,400	
						2,000	804.3	− 1.4	.....	39	2.12	n.	16.6	1,960	2,230	
						1,750	830.0	0.3	.....	45	2.81	n.	14.5	1,715	1,860	
						1,500	856.3	2.1	.....	51	3.63	n.	12.4	1,470	990	
						1,250	883.4	3.9	.....	57	4.61	n.	10.3	1,225	.....	
2:46	979.7	14.0	37	n.	4.5	1,229	885.8	4.0	0.83	57	4.63	n.	10.1	1,205	.....	
						1,000	911.0	5.9	.....	55	5.11	n.	8.4	980	.....	
2:55	979.7	13.3	37	n.	3.6	747	939.3	8.0	1.48	52	5.58	n.	6.5	732	.....	
						500	967.5	11.7	.....	40	5.50	n.	4.7	490	.....	
3:03	979.7	13.2	35	n.	4.0	396	979.7	13.2	.....	35	5.31	n.	4.0	388	.....	Few Cu., n.

October 6, 1917.

A. M.																
7:06	974.6	5.0	72	s.	5.8	396	974.6	5.0	.....	72	2.61	s.	5.8	388	.....	2/10 Ci., w.; 2/10 A.Cu., nnw.
						500	962.1	5.0	.....	69	3.66	s.	11.7	490	0	
7:17	974.4	5.4	71	s.	6.3	691	939.7	5.1	−0.03	64	5.63	s.	22.6	678	0	
						750	932.9	5.6	.....	62	5.64	s.	22.4	735	240	
						1,000	905.4	7.6	.....	51	5.32	ssw.	21.5	980	370	
7:23	974.3	5.6	70	s.	6.3	1,174	886.1	9.0	−0.81	44	5.05	ssw.	20.9	1,151	2,000	
						1,250	879.0	8.9	.....	45	5.13	s.	20.8	1,225	2,510	
						1,500	852.5	8.5	.....	46	5.11	ssw.	20.5	1,470	4,170	6/10 Ci., w.; 1/10 A. Cu., nnw.
7:38	974.0	6.2	67	s.	7.6	1,570	844.6	8.4	0.15	47	5.18	sw.	20.3	1,539	4,580	
						1,750	826.8	10.0	.....	49	6.02	sw.	19.0	1,715	5,380	
7:42	973.9	6.2	67	s.	6.3	1,829	818.5	10.7	−0.89	50	6.44	sw.	18.4	1,792	5,780	
						2,000	801.5	9.8	.....	50	6.06	sw.	18.9	1,960	6,570	
						2,250	778.0	8.6	.....	51	5.70	sw.	19.7	2,205	7,200	
						2,500	755.0	7.2	.....	52	5.28	wsw.	20.5	2,450	8,170	
						2,750	733.0	6.0	.....	52	4.86	wsw.	21.3	2,694	9,140	
8:13	973.5	7.6	62	s.	12.1	2,973	712.6	4.9	0.51	53	4.59	wsw.	22.0	2,913	9,870	
						3,000	710.5	4.9	.....	51	4.42	wsw.	21.7	2,939	9,940	
						3,250	688.8	5.2	.....	31	2.74	wsw.	19.0	3,184	10,650	
8:25	973.4	7.7	60	s.	9.8	3,262	687.6	5.2	−0.10	30	2.66	wsw.	18.9	3,196	10,680	
						3,500	667.9	4.1	.....	28	2.29	wsw.	21.7	3,429	10,580	1/10 Ci., nw.; 3/10 A. Cu., wnw.
8:40	973.2	8.5	57	ssw.	11.6	3,533	665.1	3.9	0.48	28	2.26	wsw.	22.1	3,461	10,800	
9:27	972.6	9.8	53	ssw.	11.2	3,692	652.2	3.4	0.52	25	1.95	wsw.	20.5	3,616	10,600	
						3,500	667.9	4.8	.....	27	2.32	wsw.	22.6	3,429	10,580	8/10 A. Cu., wnw.
						3,250	688.8	6.6	.....	29	2.83	sw.	25.3	3,184	9,160	
9:57	972.1	11.8	47	ssw.	8.9	3,189	693.5	7.0	−1.20	30	3.01	sw.	25.9	3,124	8,960	
10.04	971.9	11.8	46	ssw.	10.7	3,023	707.8	5.0	0.33	63	5.49	sw.	24.2	2,962	8,420	
						3,000	740.0	5.1	.....	63	5.54	sw.	24.3	2,939	8,340	
						2,750	732.0	5.9	.....	61	5.67	sw.	24.9	2,694	7,520	
						2,500	754.0	6.4	.....	60	5.77	sw.	25.2	2,450	6,710	
						2,250	777.2	7.2	.....	59	5.99	sw.	25.8	2,205	5,890	
						2,000	801.0	8.1	.....	57	6.16	sw.	26.4	1,960	5,070	
						1,750	825.8	8.9	.....	55	6.27	sw.	27.0	1,715	4,360	
						1,500	851.3	9.7	.....	54	6.50	sw.	27.7	1,470	3,440	
10:18	971.6	12.0	44	ssw.	9.8	1,333	868.4	10.6	0.51	52	6.65	sw.	28.3	1,307	2,990	
						1,250	877.1	11.1	.....	50	6.60	sw.	26.9	1,225	2,620	
						1,000	903.5	12.3	.....	46	6.58	sw.	21.7	980	0	1/10 Ci., nw.; 7/10 A. St., nnw.
						750	930.5	13.6	.....	41	6.39	ssw.	16.5	735	0	
						500	958.2	14.9	.....	37	6.27	ssw.	13.9	490	0	
11:23	969.6	15.4	35	ssw.	12.5	396	969.6	15.4	.....	35	6.12	ssw.	12.5	388	.....	3/10 C.St., nnw.; Few A. St., nnw.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 7, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^5 *ergs.*	*volts.*	
7:34	975.9	6.0	68	n.	2.2	396	975.9	6.0	.....	68	6.35	n.	2.2	388	.....	4/10 Ci.St., wnw.; 4/10 A.Cu., wnw.
						500	963.8	5.8	.....	69	6.36	n.	5.8	490	0	
7:40	976.0	6.4	68	n.	2.2	659	945.1	5.6	0.15	71	6.46	nne.	11.2	646	0	
						750	934.9	5.4	.....	70	6.28	nne.	12.0	735	390	
						1,000	905.7	4.9	.....	66	5.72	n.	13.1	980	1,440	
8:04	976.4	7.2	66	n.	2.7	1,178	887.3	4.6	0.19	64	5.43	nnw.	15.6	1,155	2,200	
						1,250	879.5	4.3	.....	64	5.32	nnw.	17.2	1,225	2,420	
						1,500	853.0	3.5	.....	62	4.87	nw.	22.7	1,470	3,170	
8:29	976.5	7.3	61	ne.	3.6	1,750	826.9	2.6	0.35	61	4.43	nw.	28.1	1,715	4,040	2/10 Ci.St., wnw.; 6/10 A.Cu., wnw.
8:33	976.6	7.4	60	ne.	3.6	2,000	801.6	3.6	.....	51	4.03	nw.	22.0	1,960	5,010	
						2,018	800.2	3.7	−0.38	39	3.10	nw.	21.6	2,076	5,040	
						2,250	777.0	3.1	.....	40	3.05	nw.	23.8	2,205	5,970	
						2,500	753.5	2.3	.....	42	3.03	wnw.	27.1	2,450	6,950	
8:49	976.6	7.5	58	ne.	3.1	2,722	733.3	2.0	0.24	43	3.04	wnw.	28.3	2,667	7,820	
						2,750	730.7	1.9	.....	43	3.01	wnw.	28.0	2,694	7,930	
						3,000	708.5	1.0	.....	42	2.76	wnw.	24.7	2,939	8,980	
9:16	976.8	8.0	56	n.	3.6	3,245	687.6	0.1	0.34	41	2.52	wnw.	21.6	3,179	10,140	
						3,500	665.6	− 1.9	.....	43	2.24	wnw.	25.9	3,429	11,560	3/10 Ci., wnw.; 5/10 A.Cu., wnw.
9:40	976.9	8.2	50	n.	4.5	3,579	658.7	− 2.5	0.56	44	2.18	wnw.	27.2	3,506	12,000	
						3,500	665.6	− 2.2	.....	45	2.29	wnw.	26.7	3,429	11,380	
						3,250	686.3	− 1.3	.....	47	2.58	wnw.	25.2	3,184	9,400	
10:04	977.0	9.4	47	n.	5.4	3,161	693.5	− 1.0	0.39	48	2.65	wnw.	24.6	3,097	8,700	
						3,000	707.8	− 0.4	.....	48	2.84	wnw.	24.4	2,930	8,140	5/10 Ci.St., wnw; 2/10 A.Cu., wnw.
						2,750	730.3	0.6	.....	47	3.00	wnw.	24.0	2,694	7,280	
10:17	977.0	9.0	42	ne.	4.5	2,574	746.3	1.3	−0.09	46	3.09	wnw.	23.8	2,522	6,670	
						2,500	753.5	1.2	.....	47	3.13	wnw.	23.3	2,450	6,410	
						2,250	777.0	1.0	.....	50	3.28	wnw.	21.5	2,205	5,530	
						2,000	801.6	0.8	.....	52	3.36	nw.	19.8	1,960	4,620	3/10 Ci.St., wnw.; 4/10 A.St., wnw.
						1,750	826.9	0.6	.....	55	3.51	nw.	17.8	1,715	3,690	
10:42	977.0	9.1	44	ne.	3.1	1,678	834.2	0.5	0.38	56	3.54	nw.	17.5	1,645	3,380	
						1,500	853.0	1.2	.....	55	3.66	nw.	15.5	1,470	2,640	Solar halo, 22° radius began 10:58 a. m. and continued at end of flight.
						1,250	880.3	2.1	.....	53	3.77	wnw.	12.8	1,225	1,670	
						1,000	907.3	3.1	.....	51	3.89	n.	10.4	980	780	
11:03	977.0	9.5	40	n.	3.6	779	932.4	3.9	1.57	50	4.04	n.	7.6	764	0	
						750	935.8	4.4	.....	49	4.10	n.	7.3	735	0	
						500	964.5	8.3	.....	42	4.60	n.	4.7	490	0	
11:08	977.0	9.9	39	n.	3.6	396	977.0	9.9	.....	39	4.76	n.	3.6	388	.....	3/10 Ci.St., wnw.; 6/10 A.St., wnw.

October 8, 1917.

Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.																
2:55	978.9	9.8	23	ssw.	5.7	396	978.9	9.8	.....	23	2.79	ssw.	5.7	388	.....	10/10 A.Cu., nnw.
						500	966.6	8.7	.....	22	2.48	ssw.	5.9	490	0	
3:09	978.7	9.9	25	ssw.	5.4	751	937.5	5.9	1.10	18	1.67	ssw.	6.4	736	0	
3:36	978.4	10.4	20	ssw.	5.8	980	911.1	4.5	0.61	25	2.10	ssw.	8.5	961	1,080	
						1,000	908.9	4.4	.....	25	2.01	ssw.	8.6	980	1,140	
						1,250	881.0	3.4	.....	24	1.87	sw.	10.1	1,225	1,910	
						1,500	854.2	2.4	.....	23	1.67	sw.	11.6	1,470	2,690	
						1,750	828.5	1.4	.....	22	1.49	wsw.	13.1	1,715	3,920	
4:03	978.1	10.5	22	ssw.	6.3	1,786	824.7	1.3	0.40	22	1.48	wsw.	13.3	1,750	4,120	
						2,000	803.3	0.8	.....	18	1.16	wsw.	13.2	1,960	5,340	10/10 A.Cu., nw.
						2,250	778.6	0.3	.....	14	0.87	wsw.	13.1	2,205	6,770	
						2,500	754.2	− 0.3	.....	9	0.54	w.	12.9	2,450	7,970	
						2,750	731.0	− 0.9	.....	4	0.23	w.	12.8	2,694	8,760	
4:24	977.8	10.6	24	ssw.	4.0	2,769	729.1	− 0.9	0.22	4	0.23	w.	12.8	2,713	8,820	
						3,000	708.1	− 2.0	.....	4	0.21	w.	13.9	2,939	9,550	
						3,250	686.0	− 3.1	.....	4	0.19	w.	15.1	3,184	10,060	
						3,500	664.5	− 4.3	.....	5	0.21	wnw.	16.4	3,429	10,510	
						3,750	643.7	− 5.4	.....	5	0.19	wnw.	17.6	3,673	10,960	
4:47	977.5	10.6	23	sw.	4.9	3,877	633.1	− 6.0	0.48	5	0.18	wnw.	18.2	3,797	.....	
						3,750	643.7	− 5.5	.....	5	0.19	wnw.	18.2	3,673	.....	
						3,500	664.2	− 4.6	.....	4	0.17	w.	18.1	3,429	9,980	
						3,250	685.0	− 3.7	.....	3	0.13	w.	18.0	3,184	9,140	
						3,000	706.6	− 2.8	.....	2	0.10	w.	17.9	2,939	8,270	
						2,750	729.2	− 2.0	.....	2	0.10	wsw.	17.9	2,694	7,210	
5:12	977.1	10.6	21	sw.	7.6	2,513	750.4	− 1.1	−0.74	1	0.06	wsw.	17.8	2,463	6,200	
						2,500	752.3	− 1.2	.....	1	0.06	wsw.	17.6	2,450	6,150	
						2,250	776.3	− 3.0	.....	2	0.10	wsw.	13.2	2,205	5,090	
5:15	977.1	10.4	21	sw.	6.7	2,214	778.9	− 3.3	0.52	2	0.09	wsw.	12.6	2,170	4,940	
						2,000	801.0	− 2.2	.....	6	0.31	wsw.	11.8	1,960	4,030	
						1,750	826.7	− 0.9	.....	11	0.62	sw.	11.0	1,715	3,200	9/10 A.Cu., nw.
						1,500	853.0	0.4	.....	16	1.01	sw.	11.1	1,470	2,490	
5:28	976.9	10.4	21	sw.	4.9	1,364	867.6	1.1	0.76	19	1.26	sw.	9.6	1,337	2,100	
						1,250	880.0	1.8	.....	19	1.32	sw.	9.5	1,225	1,610	
						1,000	907.6	3.9	.....	20	1.62	sw.	9.4	980	530	
5:37	976.7	10.2	23	sw.	5.8	876	921.2	4.8	1.15	20	1.72	sw.	9.3	859	0	
						750	936.0	6.3	.....	21	2.20	sw.	8.0	735	0	
						500	964.5	9.2	.....	22	2.56	ssw.	5.6	490	0	
5:43	976.7	10.4	31	ssw.	4.5	396	976.7	10.4	.....	22	2.77	ssw.	4.5	388	.....	9/10 A.Cu., nw.

October 9, 1917.

Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.																
7:09	967.2	6.8	52	wsw.	7.2	396	967.2	6.8	.....	52	5.14	wsw.	7.2	388	.....	Few A.Cu., nw.
						500	955.4	10.5	.....	52	6.60	wsw.	9.1	490	0	
7:12	967.2	7.2	52	wsw.	6.7	635	939.9	15.4	−3.60	51	8.92	w.	11.5	622	0	
						750	927.4	14.8	.....	50	8.42	w.	11.9	735	60	
						1,000	900.5	13.6	.....	48	7.48	wnw.	12.7	980	410	
7:32	967.2	8.2	50	sw.	6.7	1,109	888.6	13.1	0.49	47	7.09	nw.	13.1	989	560	
						1,250	874.0	12.0	.....	51	7.16	nw.	13.9	1,225	1,140	
						1,500	848.6	9.9	.....	58	7.08	nw.	15.3	1,470	2,150	1/10 A.Cu., nw.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 9, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						1,750	823.0	7.9		65	6.92	nw.	16.7	1,715	3,160	
						2,000	798.2	4.9		72	6.24	nw.	18.1	1,969	4,180	
						2,250	774.1	2.8		79	5.90	nw.	19.5	2,205	5,190	
8:05	967.2	9.4	51	sw.	6.7	2,449	755.3	2.2	0.81	85	6.09	nw.	20.6	2,400	6,000	
						2,500	750.4	1.8		86	5.99	nw.	21.6	2,450	6,360	
						2,750	727.6	− 0.2		91	5.47	nw.	26.8	2,694		
8:12	967.2	9.7	52	sw.	6.3	2,806	722.6	− 0.6	0.78	92	5.35	nw.	27.9	2,749		
						2,750	727.6	− 0.2		90	5.41	nw.	26.2	2,694		
						2,500	750.4	1.6		83	5.69	nw.	18.7	2,450		
8:22	967.2	11.0	46	wsw.	7.2	2,398	760.2	2.4	0.74	80	5.81	nw.	15.6	2,350		
						2,500	750.4	1.3		79	5.30	nw.	17.3	2,450		
						2,750	727.6	− 1.2		76	4.20	nw.	21.6	2,694	7,850	
						3,000	705.3	− 3.8		74	3.29	nw.	25.9	2,939	8,350	
8:45	967.2	12.0	46	wsw.	5.8	3,156	691.4	− 5.4	1.03	72	2.79	nw.	28.5	3,092	8,660	
						3,250	683.6	− 5.2		75	2.96	nw.	27.8	3,184	8,850	
						3,500	662.3	− 4.6		82	3.40	nw.	26.1	3,429	9,350	
8:47	967.2	11.9	49	wsw.	5.8	3,604	653.5	− 4.3	−0.25	85	3.62	nw.	25.4	3,530	9,560	1/10 A.Cu., nw.
						3,750	641.7	− 4.4		67	2.83	nw.	25.9	3,673	9,850	Altitude of A.Cu. base about 3,600 m.
						4,000	621.6	− 4.6		35	1.45	nw.	27.6	3,918	11,050	
9:19	967.3	13.6	45	w.	6.3	4,204	605.5	− 4.8	0.49	10	0.41	nw.	28.7	4,117		
						4,000	621.6	− 3.0		6	0.28	nw.	28.0	3,918		
						3,750	641.7	− 0.7		1	0.06	nnw.	27.1	3,673		
11:46	967.7	18.3	40	nnw.	6.3	3,736	642.9	− 0.6	0.13	1	0.06	nnw.	27.1	3,659		
						3,500	662.3	− 0.3		1	0.06	nnw.	26.1	3,429		
						3,250	683.6	0.0		1	0.06	nnw.	25.0	3,184		
						3,000	705.3	0.3		1	0.06	nnw.	23.9	2,939		
						2,750	727.6	0.7		1	0.06	nnw.	22.9	2,694		
11:51	967.8	18.2	39	nnw.	8.5	2,571	743.2	0.9	1.01	1	0.07	nnw.	22.1	2,519		
						2,500	750.4	1.6		1	0.07	nnw.	21.8	2,450		
						2,250	773.8	4.1		2	0.16	nw.	20.7	2,205	3,370	Few A.Cu., nw.
P. M.																
12:59	967.9	18.4	34	nnw.	9.8	2,131	784.7	5.3		2	0.18	nw.	20.2	2,091	2,980	
1:01	967.9	18.4	33	nnw.	9.8	2,134	784.7	2.7	0.72	2	0.15	nw.	18.6	2,091		
						2,000	797.5	3.7		7	0.56	nw.	18.5	1,960	2,520	
						1,750	822.0	5.5		17	1.54	nw.	18.2	1,715	1,670	
						1,500	847.4	7.3		27	2.76	nnw.	17.9	1,470	560	
						1,250	874.0	9.1		37	4.28	nnw.	17.7	1,225	0	
						1,000	909.7	10.9		47	6.13	nnw.	17.4	980	0	
1:41	968.1	18.2	31	nw.	10.7	916	910.3	11.5	1.25	50	6.78	nnw.	17.3	898	0	
						750	928.4	13.6		44	6.86	nnw.	14.2	735	0	
						500	956.5	16.7		36	6.84	nnw.	9.5	490	0	
2:08	968.2	18.0	32	nnw.	7.6	396	968.2	18.0		32	6.60	nnw.	7.6	388		Few Cu., nnw.

October 10, 1917.

P. M.																
6:05	967.9	10.2	50	s.	3.6	396	967.9	10.2		50	6.22	s.	3.6	388		4/10 Ci.St., nw.
						500	955.3	9.6		50	5.98	s.	5.3	490	0	
						750	927.0	8.2		48	5.22	ssw.	9.5	735	0	
6:27	967.8	9.6	47	ssw.	3.1	830	918.2	7.7	0.58	48	5.04	ssw.	10.8	814	0	
						1,000	899.2	6.6		48	4.68	ssw.	11.4	980	520	
						1,250	872.5	5.0		47	4.10	sw.	12.2	1,225	1,280	
6:50	967.7	9.5	47	ssw.	4.0	1,355	861.2	4.3	0.65	47	3.91	sw.	12.5	1,328	1,570	
						1,500	846.2	6.2		35	3.32	sw.	11.8	1,470	1,970	
6:56	967.6	9.4	46	s.	4.0	1,619	833.7	7.7	−1.29	25	2.63	sw.	11.2	1,587	2,300	
7:10	967.6	9.2	50	s.	3.1	1,718	823.8	7.5	0.20	22	2.28	wsw.	10.2	1,684	2,440	
						1,750	820.7	7.3		24	2.46	wsw.	10.5	1,715	2,480	
						2,000	796.0	5.4		42	3.77	wsw.	13.1	1,960	2,820	
7:17	967.6	8.6	50	s.	2.7	2,132	783.2	4.4	0.75	51	4.27	wsw.	14.5	2,089	3,000	
						2,250	772.3	4.1		55	4.50	wsw.	14.9	2,205	3,360	
						2,500	749.0	3.5		65	5.10	wsw.	15.7	2,450	4,110	
						2,750	726.3	3.0		75	5.68	wsw.	16.6	2,694		
7:53	967.6	7.9	54	se.	3.6	2,815	720.2	2.8	0.10	77	5.75	wsw.	16.8	2,758		
						2,750	726.3	2.8		76	5.68	wsw.	16.6	2,694		
						2,500	749.0	2.7		72	5.34	sw.	16.0	2,450	4,250	
8:05	967.6	7.7	57	se.	3.1	2,264	770.9	2.6	0.81	68	5.01	sw.	15.4	2,219	3,800	2/10 Ci.St., nw.
						2,250	772.3	2.7		67	4.97	sw.	15.5	2,205	3,760	
						2,000	796.0	4.7		52	4.44	sw.	17.0	1,960	3,120	
						1,750	820.7	6.7		33	3.73	sw.	18.6	1,715	2,470	
8:23	967.4	7.5	56	se.	3.6	1,635	832.5	7.7	−1.16	31	3.26	sw.	19.3	1,603	2,140	
						1,500	846.2	6.1		37	3.49	ssw.	16.7	1,470	1,710	
8:26	967.4	7.4	55	se.	3.6	1,463	850.0	5.7	0.47	38	3.48	ssw.	16.0	1,434	1,600	
						1,250	872.5	6.7		41	4.02	ssw.	15.8	1,225	960	
						1,000	899.2	7.9		44	4.69	ssw.	15.6	980	410	
						750	927.0	9.1		48	5.55	ssw.	15.4	735	0	
8:50	967.3	7.7	56	s.	4.5	509	954.2	10.2	−2.12	51	6.35	ssw.	15.2	499	0	
						500	955.1	10.0		51	6.26	ssw.	14.3	490	0	
8:52	967.3	7.8	56	ssw.	4.5	396	967.3	7.8		56	5.92	ssw.	4.5	388		3/10 Ci.St., nw.

October 11, 1917 (No. 1).

A. M.																
7:16	966.6	10.5	52	n.	5.4	396	966.6	10.5		52	6.60	n.	5.4	388		8/10 St.Cu., nw.
						500	955.0	9.4		55	6.48	n.	7.9	490	0	
						750	926.5	6.7		63	6.18	nnw.	14.0	735	0	
7:27	966.7	10.5	52	nnw.	5.4	899	909.5	5.1	1.07	68	5.98	nnw.	17.6	881	0	
						1,000	898.5	4.3		70	5.82	nnw.	18.3	980	260	
						1,250	871.0	2.4		74	5.37	nnw.	20.2	1,225	910	Altitude of St.Cu. base about 1,500 m.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 11, 1917 (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^5 *ergs.*	*volts.*	
						1,500	844.5	0.4		78	4.91	nnw.	22.0	1,470	1,560	
						1,750	819.0	− 1.6		82	4.39	nnw.	23.8	1,715	2,220	
						2,000	794.0	− 3.5		86	3.92	nw.	25.6	1,960	2,870	
						2,250	769.5	− 5.5		90	3.46	nw.	27.4	2,205	3,520	
						2,500	745.5	− 7.4		94	3.06	nw.	29.3	2,450	4,170	
						2,750	721.1	− 9.4		98	2.69	nw.	31.1	2,694	3,460	
7:58	966.9	10.8	55	nw.	8.5	2,765	719.8	− 9.5	0.80	98	2.66	nw.	31.2	2,709	3,400	8/10 St.Cu., nw.
						2,750	721.1	− 9.4		98	2.69	nw.	31.1	2,694	5,760	
						2,500	745.5	− 7.3		91	2.90	nw.	28.9	2,450	4,970	
						2,250	769.5	− 4.8		83	3.39	nw.	26.1	2,205	4,180	
						2,000	794.0	− 2.8		79	3.82	nw.	24.5	1,960	3,400	
						1,750	819.0	− 1.1		72	4.01	nw.	22.2	1,715	2,290	
						1,500	844.5	0.9		66	4.30	nnw.	20.0	1,470	1,820	
						1,250	871.0	3.0		60	4.55	nnw.	17.8	1,225	720	5/10 St.Cu., nw.
						1,000	898.5	5.0		53	4.62	nnw.	15.6	980	240	Altitude of St.Cu. base about 1,900 m.
						750	927.2	7.1		47	4.74	nnw.	13.4	735		
						500	956.5	9.1		41	4.74	nnw.	11.2	490		
10:10	968.2	10.0	38	nnw.	10.3	396	968.2	10.0		38	4.67	nnw.	10.3	388		8/10 St.Cu., nw.

October 11, 1917 (No. 2).

A. M.																
11:01	968.6	10.1	34	nnw.	8.0	396	968.6	10.1		34	4.20	nnw.	8.0	388		9/10 St.Cu., nw.
						500	956.6	8.8		39	4.42	nnw.	11.4	490	0	
11:07	968.6	9.4	36	nnw.	7.2	686	935.2	6.5	1.24	47	4.55	nnw.	17.6	673	0	
						750	928.0	6.0		50	4.68	nnw.	17.6	735	0	
						1,000	900.0	4.2		61	5.03	nw.	17.7	980	0	
11:17	968.5	10.4	36	nnw.	8.0	1,034	896.1	4.0	0.72	63	5.12	nw.	17.7	1,014	0	
						1,250	872.4	1.4		77	5.21	nw.	18.8	1,225	670	
P. M.																
12:37	968.4	8.6	38	nnw.	10.7	1,489	846.4	− 1.4	1.19	92	5.00	nw.	20.1	1,460	260	
						1,500	844.8	− 1.5		92	4.96	nw.	20.1	1,470	240	
						1,750	818.6	− 3.7		95	4.26	nw.	20.7	1,715	2,330	
						2,000	792.8	− 6.0		98	3.61	nw.	21.3	1,960		6/10 St.Cu., nw.
12:51	968.5	8.6	36	nnw.	11.2	2,170	775.8	− 7.5	0.74	100	3.23	nw.	21.7	2,127		
						2,000	792.8	− 6.6		100	3.50	nw.	20.4	1,960		
						1,750	818.6	− 5.1		100	3.98	nw.	18.6	1,715		
1:10	968.8	8.3	36	nnw.	10.3	1,667	826.8	− 4.6	0.41	100	4.15	nw.	18.0	1,634		
						1,500	844.8	− 3.9		88	3.88	nw.	18.4	1,470		4/10 St.Cu., nnw.
1:56	969.5	7.0	34	nnw.	7.6	1,327	863.7	− 3.2	0.77	75	3.51	nw.	18.8	1,301		
						1,500	844.8	− 4.5		83	3.48	nw.	19.2	1,470		
2:25	969.9	7.1	35	nnw.	10.7	1,639	830.4	− 5.6	0.63	89	3.39	nw.	19.5	1,606		
						1,500	844.8	− 4.7		84	3.46	nw.	19.3	1,470		
						1,250	872.4	− 3.1		75	3.53	nnw.	18.8	1,225		
2:56	970.3	6.6	33	nnw.	10.3	1,107	888.6	− 1.6	1.13	67	3.58	nnw.	18.4	1,085	10,000	
						1,000	900.1	− 0.4		62	3.66	nnw.	17.2	980	8,110	
						750	928.7	2.4		49	3.56	nnw.	14.3	735	3,800	
						500	958.0	5.2		36	3.19	nnw.	11.5	490	2,700	
3:19	970.5	6.4	31	nnw.	10.3	396	970.5	6.4		31	2.98	nnw.	10.3	388		3/10 Cu., nnw.

October 12, 1917 (No. 1).

A. M.																
7:27	974.7	−5.0	65	nnw.	4.0	396	974.7	−5.0		65	2.61	nnw.	4.0	388		Cloudless.
						500	961.9	−4.7		68	2.80	nnw.	9.3	490	700	
7:35	974.7	−4.4	56	nnw.	4.0	692	938.8	−4.2	−0.27	73	3.14	n.	19.2	679	2,000	
						750	931.9	−3.0		59	2.80	n.	20.7	735	2,440	
7:44	974.7	−4.4	58	n.	4.5	810	924.9	−1.8	−2.03	45	2.37	n.	22.2	794	2,900	
						1,000	903.0	−1.8		41	2.16	n.	20.9	980	4,360	
						1,250	875.3	−1.9		35	1.83	nnw.	19.2	1,225	7,010	
8:02	974.7	−3.7	54	nnw.	4.0	1,356	863.7	−1.9	0.02	33	1.72	nnw.	18.4	1,329	8,200	
8:18	974.6	−3.3	52	nnw.	5.4	1,402	858.7	−1.7	−0.43	28	1.48	nnw.	20.8	1,374	8,690	
						1,500	848.7	−1.6		26	1.39	nnw.	20.5	1,470	9,720	
						1,750	822.5	−1.3		23	1.26	nnw.	19.8	1,715	12,360	
						2,000	796.8	−1.0		19	1.07	nnw.	19.0	1,960	14,830	
8:36	974.5	−2.6	44	nnw.	4.0	2,036	792.8	−1.0	−0.11	18	1.01	nnw.	18.9	1,995	15,100	
						2,250	772.0	−1.3		15	0.82	nnw.	20.7	2,205	16,730	
						2,500	748.2	−1.7		11	0.58	n.	22.9	2,450	18,960	
9:21	974.4	−0.3	35	nw.	4.5	2,674	731.9	−2.0	0.16	8	0.41	n.	24.4	2,620	20,300	
						2,750	725.2	−2.3		7	0.35	n.	24.0	2,694	20,840	
						3,000	703.0	−3.1		6	0.28	nnw.	22.5	2,939	22,620	
10:02	974.7	1.2	31	n.	4.9	3,203	685.0	−3.8	0.38	4	0.18	nnw.	21.3	3,138		
						3,000	703.3	−3.0		3	0.14	nnw.	22.3	2,939	20,560	
						2,750	726.0	−1.9		3	0.16	n.	23.6	2,694	16,920	
10:43	974.9	3.4	32	nnw.	4.9	2,518	747.2	−1.0	0.15	2	0.11	n.	24.8	2,467	15,500	
						2,500	749.0	−1.0		2	0.11	n.	24.5	2,450	15,330	
						2,250	772.8	−0.6		2	0.12	n.	20.6	2,205	12,990	
11:00	975.0	3.0	33	nnw.	4.9	2,057	791.6	−0.3	−0.28	2	0.12	n.	17.5	2,016	11,440	
						2,000	797.4	−0.5		2	0.12	n.	17.0	1,960	11,080	
						1,750	823.3	−1.1		5	0.28	n.	14.8	1,715	9,480	
						1,500	849.8	−1.8		7	0.37	nnw.	12.6	1,470	7,880	
						1,250	876.6	−2.5		9	0.45	nnw.	10.5	1,225	5,500	
11:29	974.7	4.2	27	nnw.	4.9	1,116	891.0	−2.9	1.06	10	0.48	nnw.	9.3	1,094	4,200	
						1,000	903.8	−1.7		12	0.64	nnw.	8.7	980	3,180	
						750	931.9	1.0		17	1.12	nnw.	7.3	735	970	
						500	961.9	3.6		21	1.66	nnw.	6.0	490	0	
11:53	974.4	4.7	23	nnw.	5.4	396	974.4	4.7		23	1.96	nnw.	5.4	388		Cloudless.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 12, 1917 (No. 2).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^6 *ergs.*	*volts.*	
12:37	973.9	6.2	22	nw.	4.9	396	973.9	6.2	.....	22	2.09	nw.	4.9	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	961.2	5.7	.....	22	2.02	nw.	5.6	490	840	
.....	.....	.....	.....	.....	.....	750	932.1	4.3	.....	22	1.83	nw.	7.4	735	510	
.....	.....	.....	.....	.....	.....	1,000	903.7	3.0	.....	23	1.74	nnw.	9.1	980	190	
.....	.....	.....	.....	.....	.....	1,250	875.9	1.7	.....	23	1.59	nnw.	10.9	1,225	3,350	
2:03	973.0	7.4	17	nnw.	3.6	1,349	865.5	1.2	-0.52	23	1.53	nnw.	11.6	1,322	6,500	
2:05	972.9	7.7	19	nnw.	3.6	1,298	870.5	−0.6	−3.53	26	1.51	nnw.	7.3	1,272	4,130	
2:17	972.7	8.1	21	n.	3.6	1,345	865.5	−0.4	−0.43	28	1.65	nnw.	9.6	1,318	3,180	
2:32	972.5	8.0	21	n.	3.1	1,458	853.1	3.2	−3.17	18	1.38	nnw.	12.8	1,429	4,130	
.....	.....	.....	.....	.....	.....	1,500	818.7	3.0	.....	18	1.36	nnw.	12.7	1,470	4,480	
.....	.....	.....	.....	.....	.....	1,750	822.3	2.0	.....	16	1.13	nnw.	12.2	1,715	6,570	
.....	.....	.....	.....	.....	.....	2,000	797.0	1.0	.....	14	0.92	nnw.	11.7	1,960	8,660	
2:59	972.0	8.0	19	n.	3.6	2,053	791.9	0.8	0.40	14	0.91	nnw.	11.6	2,012	9,100	
3:08	971.9	8.2	16	n.	2.7	2,226	775.0	1.7	−1.45	11	0.76	nw.	12.4	2,181	9,420	
.....	.....	.....	.....	.....	.....	2,250	772.8	1.6	.....	11	0.75	nw.	12.5	2,205	9,460	
.....	.....	.....	.....	.....	.....	2,500	748.8	0.5	.....	10	0.63	nw.	13.9	2,450	9,920	
.....	.....	.....	.....	.....	.....	2,750	725.8	−0.6	.....	8	0.46	nw.	15.3	2,694	10,390	
3:18	971.9	8.3	14	n.	3.6	2,838	717.9	−1.0	0.44	8	0.45	nw.	15.8	2,780	10,580	
.....	.....	.....	.....	.....	.....	3,000	703.5	−1.7	.....	7	0.37	nw.	14.3	2,939	11,040	
.....	.....	.....	.....	.....	.....	3,250	681.9	−2.8	.....	6	0.29	nw.	12.1	3,184	11,770	
.....	.....	.....	.....	.....	.....	3,500	660.8	−3.8	.....	4	0.18	nw.	9.8	3,429	12,490	
4:10	971.6	8.4	18	nnw.	1.8	3,721	642.2	−4.8	0.83	3	0.12	nw.	7.8	3,645	.....	
.....	.....	.....	.....	.....	.....	3,500	660.8	−3.9	.....	3	0.13	nw.	8.1	3,429	11,910	
.....	.....	.....	.....	.....	.....	3,250	681.9	−2.8	.....	3	0.15	nw.	8.5	3,184	9,270	
.....	.....	.....	.....	.....	.....	3,000	703.5	−1.7	.....	3	0.16	nw.	8.9	2,939	7,700	
.....	.....	.....	.....	.....	.....	2,750	725.8	−0.6	.....	3	0.17	nw.	9.3	2,694	6,140	
.....	.....	.....	.....	.....	.....	2,500	748.8	0.4	.....	3	0.19	nw.	9.6	2,450	.....	
.....	.....	.....	.....	.....	.....	2,250	772.8	1.5	.....	3	0.20	nw.	10.0	2,205	.....	
4:36	971.6	8.6	16	wnw.	1.8	2,185	778.6	1.8	−0.21	3	0.21	nw.	10.1	2,141	.....	
.....	.....	.....	.....	.....	.....	2,000	797.0	1.4	.....	3	0.27	wnw.	8.7	1,960	.....	
.....	.....	.....	.....	.....	.....	1,750	822.3	0.9	.....	4	0.26	wnw.	6.9	1,715	.....	
.....	.....	.....	.....	.....	.....	1,500	848.0	0.4	.....	5	0.31	wnw.	5.1	1,470	.....	
4:44	971.6	8.6	15	wnw.	1.8	1,371	861.8	0.1	0.87	5	0.31	wnw.	4.1	1,344	.....	
.....	.....	.....	.....	.....	.....	1,250	874.9	1.2	.....	6	0.40	wnw.	3.9	1,225	.....	
.....	.....	.....	.....	.....	.....	1,000	902.6	3.3	.....	9	0.70	wnw.	3.6	980	.....	
.....	.....	.....	.....	.....	.....	750	930.9	5.5	.....	11	0.99	wnw.	3.2	735	.....	
.....	.....	.....	.....	.....	.....	500	959.6	7.7	.....	14	1.47	wnw.	2.8	490	.....	
4:54	971.6	8.6	15	wnw.	2.7	396	971.6	8.6	.....	15	1.68	wnw.	2.7	388	.....	Cloudless.

October 13, 1917.

A. M.																
7:11	969.1	−0.2	26	sse.	4.5	396	969.1	−0.2	.....	26	1.56	sse.	4.5	388	.....	Few A.Cu., wnw.
.....	.....	.....	.....	.....	.....	500	956.6	6.0	.....	28	2.62	sse.	15.1	490	420	
7:14	969.1	−0.1	27	sse.	4.5	511	955.5	6.2	−5.91	28	2.65	sse.	16.1	501	460	
.....	.....	.....	.....	.....	.....	750	927.3	6.0	.....	25	2.34	sse.	14.9	735	2,270	
7:36	967.8	0.3	28	sse.	4.5	1,003	898.4	5.7	0.10	21	1.92	sse.	13.6	983	5,780	
.....	.....	.....	.....	.....	.....	1,250	872.3	5.2	.....	25	2.21	s.	12.8	1,225	8,340	
.....	.....	.....	.....	.....	.....	1,500	846.8	4.6	.....	29	2.46	ssw.	11.9	1,470	9,660	
.....	.....	.....	.....	.....	.....	1,750	822.2	4.1	.....	34	2.78	wsw.	11.1	1,715	11,270	Few Ci., w.; Few A.Cu., wnw.
9:38	967.8	10.3	18	s.	8.0	1,833	814.1	3.9	0.22	35	2.83	wsw.	10.8	1,797	11,400	
.....	.....	.....	.....	.....	.....	2,000	797.4	3.9	.....	34	2.75	wsw.	11.2	1,960	12,600	
.....	.....	.....	.....	.....	.....	2,250	773.2	3.9	.....	32	2.59	w.	11.9	2,205	14,390	
.....	.....	.....	.....	.....	.....	2,500	749.7	3.9	.....	30	2.42	w.	12.5	2,450	16,180	
9:46	967.7	10.6	19	s.	6.7	2,615	739.3	3.9	0.00	29	2.34	w.	12.8	2,562	17,000	
.....	.....	.....	.....	.....	.....	2,750	726.8	3.3	.....	32	2.48	w.	13.1	2,694	17,480	
.....	.....	.....	.....	.....	.....	3,000	704.6	2.1	.....	37	2.63	w.	13.8	2,939	18,360	
.....	.....	.....	.....	.....	.....	3,250	683.2	0.9	.....	42	2.74	wnw.	14.4	3,184	19,240	Few Ci., w.; Few A.Cu., wnw.
.....	.....	.....	.....	.....	.....	3,500	662.3	−0.3	.....	47	2.80	wnw.	15.0	3,429	19,280	2/10 Ci., w.; Few A.Cu., wnw.
11:29	966.0	14.2	18	ssw.	9.8	3,745	642.1	−1.4	0.48	52	2.83	wnw.	15.6	3,668	.....	
.....	.....	.....	.....	.....	.....	3,500	661.7	−0.2	.....	50	3.00	wnw.	15.6	3,429	16,750	
.....	.....	.....	.....	.....	.....	3,250	682.5	1.1	.....	47	3.11	w.	15.5	3,184	13,860	
.....	.....	.....	.....	.....	.....	3,000	703.8	2.4	.....	45	3.27	w.	15.5	2,939	12,180	
.....	.....	.....	.....	.....	.....	2,750	726.0	3.6	.....	43	3.40	w.	15.5	2,694	10,760	
.....	.....	.....	.....	.....	.....	2,500	748.5	4.9	.....	41	3.55	w.	15.5	2,450	9,630	
.....	.....	.....	.....	.....	.....	2,250	771.4	6.1	.....	38	3.58	wsw.	15.4	2,205	8,500	
.....	.....	.....	.....	.....	.....	2,000	795.0	7.5	.....	36	3.73	wsw.	15.4	1,960	7,060	
P. M.																
12:38	964.7	16.5	16	ssw.	11.2	1,881	806.8	8.0	−9.46	35	3.76	wsw.	15.4	1,844	6,340	Few Ci.Cu., w.
12:44	964.5	17.0	14	ssw.	9.8	1,844	810.4	4.5	0.88	35	2.95	sw.	16.1	1,807	6,110	
.....	.....	.....	.....	.....	.....	1,750	819.5	5.3	.....	34	3.03	sw.	15.7	1,715	5,540	
.....	.....	.....	.....	.....	.....	1,500	844.1	7.5	.....	31	3.21	sw.	14.8	1,470	4,180	
.....	.....	.....	.....	.....	.....	1,250	870.0	9.7	.....	28	3.37	ssw.	13.9	1,225	3,340	
.....	.....	.....	.....	.....	.....	1,000	896.6	11.9	.....	25	3.48	ssw.	13.0	980	2,490	Few Ci., w.; 1/10 A.Cu., wnw.
.....	.....	.....	.....	.....	.....	750	924.1	14.1	.....	21	3.38	s.	12.0	735	1,490	
.....	.....	.....	.....	.....	.....	500	952.0	16.3	.....	18	3.34	s.	11.1	490	440	
1:18	963.9	17.2	17	s.	10.7	396	963.9	17.2	.....	17	3.34	s.	10.7	388	.....	Few Ci.Cu., w.; 2/10 A.Cu., wnw.

October 14, 1917.

A. M.																
7:17	957.4	12.4	40	n.	4.9	396	957.4	12.4	.....	40	5.76	n.	4.9	388	.....	10/10 A.St., w.
.....	.....	.....	.....	.....	.....	500	945.6	14.4	.....	38	6.23	n.	16.0	490	100	
7:22	957.5	12.6	38	nnw.	4.0	535	941.8	15.1	−1.94	37	6.35	n.	19.8	524	130	
7:32	957.6	12.6	39	nnw.	3.1	710	922.7	15.1	0.00	34	5.83	n.	19.2	696	360	
.....	.....	.....	.....	.....	.....	750	918.0	15.1	.....	33	5.66	n.	19.6	735	480	
.....	.....	.....	.....	.....	.....	1,000	891.5	15.0	.....	28	4.77	nnw.	21.9	980	1,230	4/10 A.St., w.; 5/10 St.Cu., nw.
7:47	957.9	12.1	43	wsw.	2.7	1,125	878.6	14.9	0.05	25	4.24	nnw.	23.0	1,103	1,600	
.....	.....	.....	.....	.....	.....	1,250	865.9	14.2	.....	25	4.05	nnw.	21.6	1,225	2,710	

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 14, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						1,500	840.6	12.9		26	3.87	nnw.	18.7	1,470	3,240	
						1,750	816.1	11.5		27	3.66	nw.	15.8	1,715	3,760	
						2,000	791.8	10.2		28	3.49	nw.	13.0	1,960	4,260	
8:44	958.5	12.5	42	wnw.	1.3	2,074	785.0	9.8	0.54	28	3.39	nw.	12.1	2,033	4,390	
						2,250	768.5	8.3		32	3.50	nw.	12.3	2,205	4,720	
						2,500	745.9	6.1		37	3.49	nw.	12.6	2,450	5,180	
9:08	958.8	13.7	40	nw.	1.3	2,641	733.4	4.9	0.86	40	3.46	nw.	12.8	2,588	5,000	
						2,750	724.0	4.3		47	3.91	nw.	13.1	2,694		3/10 Ci., w.; 2/10 A.Cu., wnw.
10:53	959.4	21.1	27	wnw.	2.7	2,906	710.9	3.4	0.61	57	4.45	nw.	13.6	2,746		4/10 A.Cu., wnw.
						2,750	724.0	4.4		62	5.19	nw.	12.3	2,694		Few A.Cu., wnw.
11:52	958.8	23.1	25	wnw.	4.5	2,566	740.6	5.6	0.64	68	6.19	nw.	10.8	2,514	3,760	
						2,500	746.5	6.0		67	6.26	nw.	10.8	2,450	3,160	
						2,250	769.8	7.6		63	6.58	nw.	10.9	2,205	2,200	
						2,000	793.4	9.2		59	6.87	wnw.	11.0	1,960		
						1,750	817.6	10.8		55	7.12	wnw.	11.1	1,715		
P. M.																
12:07	958.6	23.3	24	w.	6.7	1,596	832.7	11.8	−0.14	52	7.20	wnw.	11.2	1,564		
						1,500	842.0	11.7		49	6.74	w.	9.1	1,470		
12:11	958.6	23.2	25	w.	7.2	1,448	847.5	11.6	1.08	47	6.42	w.	8.0	1,419		
						1,250	867.3	13.7		43	6.74	w.	7.5	1,225		
						1,000	893.3	16.5		38	7.13	w.	6.9	980		
						750	920.0	19.2		32	7.12	w.	6.3	735		
						500	947.2	21.9		27	7.10	w.	5.7	490		
12:22	958.5	23.0	25	w.	5.4	396	958.5	23.0		25	7.02	w.	5.4	388		

October 15, 1917.

A. M.																
7:32	962.5	9.4	58	ne.	3.1	396	962.5	9.4		58	6.84	ne.	3.1	388		Cloudless.
						500	951.1	12.8		44	6.50	ene.	7.0	490	260	
8:02	963.1	11.6	50	ne.	2.2	570	943.5	16.0	−3.79	34	6.18	ene.	9.6	559	440	
						750	924.0	15.0		37	6.31	ene.	9.5	735	980	
						1,000	897.0	13.7		40	6.27	ene.	9.4	980	1,800	
						1,250	870.8	12.3		44	6.30	ne.	9.3	1,225	2,800	
						1,500	845.2	11.0		47	6.17	ne.	9.2	1,470	3,780	
						1,750	820.8	9.6		51	6.09	ne.	9.1	1,715	4,090	
8:47	964.0	13.2	47	ne.	3.6	1,831	812.7	9.2	0.54	52	6.05	ne.	9.1	1,795	4,700	Few Ci.Cu., w.
10:35	965.6	18.5	36	ne.	3.6	1,913	806.6	9.0	0.24	55	6.31	n.	6.8	1,875	5,800	Few Ci.St., w.
						2,000	796.2	8.6		55	6.14	n.	7.2	1,960		
						2,250	772.5	7.5		54	5.60	nnw.	8.5	2,205		
						2,500	749.6	6.5		53	5.13	nnw.	9.8	2,450		
						2,750	728.0	5.4		52	4.66	nw.	11.1	2,694		
						3,000	706.7	4.3		52	4.32	nw.	12.4	2,939		
P. M.																
12:10	966.5	20.5	31	nne.	6.7	3,251	685.2	3.2	0.28	51	3.92	wnw.	13.7	3,185		
12:29	966.4	20.5	33	nne.	5.8	3,016	705.0	3.5	0.42	56	4.40	wnw.	16.2	2,955	5,720	
						3,000	707.2	3.6		56	4.43	wnw.	16.1	2,939	5,670	
						2,750	729.5	4.6		55	4.66	wnw.	13.9	2,694	4,930	
						2,500	751.6	5.7		53	4.85	nw.	11.7	2,450	4,190	
						2,250	774.2	6.8		52	5.14	nw.	9.5	2,205	3,450	
12:47	966.3	20.4	30	n.	5.8	2,098	788.4	7.4	0.35	51	5.25	nw.	8.2	2,056	3,000	
						2,000	797.7	7.7		48	5.04	nw.	9.5	1,960	3,060	
						1,750	822.4	8.6		42	4.69	nw.	12.7	1,715	3,150	
1:02	966.2	20.5	32	ne.	5.4	1,590	838.4	9.2	−1.26	38	4.42	nw.	14.8	1,558	2,580	
1:03	966.2	20.5	32	nne.	5.4	1,495	848.2	8.0	1.15	45	4.83	nnw.	14.8	1,465	2,240	Few Ci.St., w.
						1,250	874.5	10.8		42	5.44	nnw.	12.7	1,225	1,360	
						1,000	900.8	13.6		39	6.08	n.	10.6	980	520	
						750	927.7	16.5		36	6.76	n.	8.4	735	0	
						500	954.6	19.3		32	7.16	nne.	6.3	490	0	
1:32	966.2	20.6	31	nne.	5.4	396	966.2	20.6		31	7.52	nne.	5.4	388		1/10 Ci.St., w.

October 16, 1917, series (No. 1).

A. M.																
7:03	972.0	4.0	60	e.	3.6	396	972.0	4.0		60	4.88	e.	3.6	388		Few Ci., w.; Few A.Cu., w.
						500	959.7	5.0		60	5.23	e.	8.2	490	450	
7:04	972.0	4.0	59	e.	3.6	707	935.8	7.8	−1.22	61	6.45	e.	21.7	693	1,350	
						750	931.0	7.9		56	5.96	e.	20.7	735	1,540	
7:16	972.0	4.5	56	e.	3.6	810	924.2	8.0	−0.19	49	5.26	e.	19.4	794	1,820	
						1,000	903.5	8.1		41	4.43	e.	15.8	980	2,830	
7:32	972.0	5.6	54	e.	3.6	1,221	879.5	8.3	−0.07	32	3.50	ese.	11.6	1,197	4,000	
						1,250	877.0	8.3		32	3.50	ese.	11.3	1,225	4,040	Few Ci., w.; Few A.Cu., w.
						1,500	850.9	8.0		34	3.65	sse.	8.9	1,470	4,380	
7:54	972.0	7.0	48	e.	3.1	1,572	842.9	7.9	0.11	35	3.73	sse.	8.2	1,541	4,480	
						1,750	825.5	7.3		47	4.81	sse.	7.9	1,715	5,210	
8:23	972.0	8.6	43	e.	4.0	1,823	817.9	7.1	0.32	52	5.25	sse.	7.8	1,785	5,520	
						2,000	800.6	6.5		64	6.20	sse.	7.1	1,960	6,200	Few A.Cu., w.
						2,250	776.6	5.6		80	7.28	s.	6.0	2,205	7,290	
						2,500	753.5	4.7		97	8.28	s.	5.0	2,450		Cloudless.
9:45	971.7	12.0	31	e.	11.6	2,546	749.1	4.5	0.51	100	8.42	s.	4.8	2,495		
						2,500	753.5	4.8		100	8.60	s.	5.6	2,450		
						2,250	776.4	6.4		100	9.61	se.	10.3	2,205	7,060	
10:26	970.9	14.0	27	e.	8.9	2,150	785.8	7.1	0.44	100	10.09	ese.	12.1	2,107	6,700	
						2,000	800.0	7.8		82	8.68	ese.	12.1	1,960	6,170	
						1,750	824.1	8.9		52	5.93	se.	12.0	1,715	5,280	
10:35	970.6	13.7	27	e.	9.4	1,675	831.7	9.2	−1.38	43	5.01	se.	12.0	1,642	5,120	Cloudless.
10:40	970.5	13.5	28	e.	12.1	1,588	840.4	8.0	0.22	33	3.54	ese.	15.3	1,556	4,990	
						1,500	849.4	8.2		29	3.15	ese.	15.5	1,470	4,850	
10:50	970.2	13.8	26	e.	9.8	1,270	873.2	8.7	−11.30	19	2.14	e.	16.1	1,245	4,500	

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 16, 1917, series (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
10:53	970.1	14.0	25	e.	8.9	1,247	875.7	6.1	1.05	19	1.79	e.	15.3	1,222	4,360	
						1,000	902.0	8.7		21	2.28	e.	13.6	980	2,860	
						750	929.8	11.3		23	3.08	e.	11.9	735	1,450	
						500	957.5	13.9		25	3.97	e.	10.1	490	430	
11:09	969.9	15.0	26	e.	9.4	396	969.9	15.0		26	4.43	e.	9.4	388		2/10 Ci.St., w.

October 16, 1917, series (No. 2).

P. M.																
12:11	969.4	15.5	20	e.	8.0	396	969.4	15.5		20	3.52	e.	8.0	388		1/10 Ci.St., w.
						500	957.2	14.1		22	3.54	e.	8.9	490	670	
						750	929.0	10.7		28	3.60	ese.	11.1	735	2,270	
12:25	969.2	15.6	22	e.	8.0	770	926.9	10.4	1.36	28	3.53	ese.	11.3	755	2,400	
						1,000	901.5	8.7		28	3.15	ese.	13.6	980	3,660	
						1,250	874.9	6.9		28	2.79	se.	16.1	1,225	5,040	
12:37	969.0	16.8	22	ese.	8.0	1,262	873.4	6.8	0.73	28	2.77	se.	16.2	1,237	5,100	
12:43	968.9	16.7	21	ese.	8.0	1,490	819.5	9.0	−0.96	35	4.02	sse.	17.1	1,461	7,400	Few Ci.St., w.
						1,500	849.0	9.0		35	4.02	sse.	17.0	1,470	7,500	
						1,750	821.0	8.5		41	4.55	sse.	15.6	1,715	9,590	
						2,000	799.4	8.0		47	5.04	sse.	14.1	1,960	9,550	
						2,250	775.0	7.6		53	5.53	s.	12.7	2,205	9,500	
						2,500	751.1	7.0		58	5.81	s.	11.2	2,450	9,660	4/10 St.Cu., sse.
1:28	968.1	17.2	20	ese.	8.0	2,78	728.9	6.6	0.19	64	6.24	s.	9.8	2,692	10,410	Altitude of St.Cu. base about 2,350 m.
						3,000	706.8	4.9		60	5.20	s.	11.6	2,939	11,110	
						3,250	685.5	3.8		55	4.41	s.	13.3	3,184	11,490	8/10 St.Cu., sse.
						3,500	664.8	2.5		51	3.73	ssw.	15.1	3,429	11,260	
						3,750	643.8	1.1		47	3.11	ssw.	17.0	3,673	11,030	
2:36	967.2	18.9	16	e.	8.9	3,785	641.0	0.9	0.48	46	3.00	ssw.	17.1	3,707	11,000	
						3,750	643.8	1.0		47	3.09	ssw.	17.1	3,673	10,920	3/10 St.Cu., s.
						3,500	664.8	2.1		58	4.12	ssw.	16.9	3,429	10,330	
						3,250	685.5	3.1		69	5.26	ssw.	16.8	3,184	9,710	
						3,000	706.8	4.2		79	6.52	s.	16.7	2,939	9,300	
						2,750	728.5	5.2		90	7.96	s.	16.5	2,694	8,920	
3:13	966.7	17.7	18	sse.	8.0	2,515	749.5	6.2	0.61	100	9.48	s.	16.4	2,464	8,530	8/10 St.Cu., s.
						2,500	750.9	6.3		100	9.55	s.	16.4	2,450	8,540	
						2,250	774.3	7.8		100	10.58	s.	16.4	2,205	7,650	
						2,000	798.0	9.4		100	11.79	s.	16.4	1,960	6,710	
3:35	966.3	17.8	19	se.	10.3	1,812	815.8	10.5	−1.37	100	12.70	s.	16.4	1,776	6,000	Altitude of St.Cu. base about 1,750 m.
						1,750	822.2	9.7		86	10.35	s.	16.8	1,715	5,610	
3:40	966.2	17.8	19	se.	10.7	1,585	838.2	7.4	0.72	48	4.94	sse.	17.9	1,553	4,560	
						1,500	847.1	8.0		45	4.83	sse.	17.6	1,470	4,020	
						1,250	872.9	9.8		35	4.24	sse.	16.7	1,225	2,430	
						1,000	899.2	11.6		25	3.42	se.	15.7	980	1,000	
4:06	965.9	17.4	19	ese.	8.9	825	918.0	12.9	1.04	18	2.68	se.	15.1	809	0	
						750	926.3	13.0		18	2.70	se.	15.0	735	0	
						500	954.0	16.3		17	3.15	ese.	9.1	490	0	
4:14	965.8	17.4	17	ese.	7.2	396	965.8	17.4		17	3.38	ese.	7.2	388		10/10 St.Cu., s.

October 16, 1917, series (No. 3).

P. M.																
5:00	965.5	16.8	20	ese.	8.5	396	965.5	16.8		20	3.83	ese.	8.5	388		10/10 St.Cu., s.
						500	953.5	15.8		19	3.41	ese.	9.7	490	150	
						750	925.6	13.3		18	2.75	ese.	12.7	735	520	
5:05	965.5	17.0	17	ese.	6.7	784	922.2	13.0	0.98	18	2.70	ese.	13.1	769	560	
						1,000	898.5	11.2		21	2.79	ese.	15.8	980	1,290	
						1,250	872.0	9.1		24	2.77	se.	19.0	1,225	2,140	
5:20	965.4	16.8	18	ese.	6.7	1,268	870.1	8.9	0.85	24	2.74	se.	19.2	1,243	2,200	
5:24	965.4	16.8	21	ese.	8.0	1,499	846.2	11.8	−1.26	39	5.40	sse.	17.0	1,469	2,940	Altitude of St.Cu. base about 1,600 m.
						1,750	820.8	10.4		56	7.06	sse.	17.3	1,715	3,750	
						2,000	796.2	9.0		73	8.38	sse.	17.7	1,960	4,600	
						2,250	772.5	7.6		91	9.55	sse.	18.0	2,205	5,440	
5:43	965.3	16.9	16	ese.	8.9	2,386	759.8	6.9	0.22	100	9.95	sse.	18.2	2,338	5,900	
						2,250	772.5	6.7		96	9.42			2,205	5,210	
						2,000	796.2	6.4		88	8.46			1,960	3,940	
						1,750	820.8	6.1		81	7.63			1,715		
						1,500	846.0	5.8		73	6.73			1,470		
6:09	965.0	16.3	25	ese.	7.6	1,320	863.8	5.6	1.06	68	6.19			1,294		
						1,250	871.4	6.3		63	6.02			1,225		
						1,000	897.5	8.9		47	5.36			980		
						750	924.6	11.6		30	4.10			735		
6:25	964.8	16.2	29	ese.	8.5	648	936.4	12.7	1.39	23	3.38			635		
						500	952.5	14.8		26	4.38			490		
6:38	964.6	16.2	28	ese.	8.9	396	964.6	16.2		28	5.16	ese.	8.9	388		10/10 St.Cu., s.

October 16, 1917, series (No. 4).

P. M.																
8:11	963.7	15.4	20	se.	7.2	396	963.7	15.4		20	3.50	se.	7.2	388		7/10 St.Cu., s.
						500	951.9	14.9		20	3.39	se.	8.6	490	0	
						750	924.1	13.6		21	3.27	se.	12.0	735	0	
						1,000	897.0	12.3		22	3.15	se.	15.5	980	1,020	
						1,250	870.7	11.0		23	3.02	se.	18.9	1,225	2,280	
8:24	963.7	15.5	22	se.	6.7	1,289	866.5	10.8	0.52	23	2.98	se.	19.4	1,264	2,410	
8:31	963.6	15.6	22	se.	6.3	1,424	852.7	12.6	−1.33	82	11.96	sse.	20.0	1,396	2,880	
						1,500	844.8	12.1		84	11.86	sse.	21.0	1,470	3,150	

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 16, 1917, series (No. 4)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						1,750	820.0	10.6		91	11.63	s.	24.4	1,715	4,020	
						2,000	795.6	9.1		98	11.33	s.	27.8	1,960	4,890	
8:57	963.5	15.2	24	se.	5.8	2,056	790.3	8.8	0.60	100	11.33	s.	28.6	2,015	5,080	
						2,250	772.0	10.9		64	8.35	s.	29.4	2,205	5,760	
9:01	963.5	15.2	23	se.	5.8	2,264	770.6	11.1	−1.11	61	8.06	s.	29.5	2,219	5,810	4/10 St.Cu., s.
						2,500	748.8	9.8		56	6.79	s.	25.8	2,450	6,660	Cloudless.
						2,750	726.4	8.5		51	5.66	s.	21.9	2,694	7,920	
						3,000	704.7	7.2		46	4.67	s.	18.0	2,939	9,380	
10:08	962.7	13.7	27	ese.	6.3	3,166	690.7	6.3	0.66	43	4.11	s.	15.4	3,102		
						3,000	704.7	7.6		40	4.18	s.	15.4	2,939	9,420	
						2,750	726.4	9.6		36	4.30	s.	16.5	2,694	8,220	
						2,500	748.8	11.6		32	4.37	s.	17.4	2,450	7,610	
10:40	962.1	13.0	33	e.	5.8	2,422	755.9	12.2	0.02	31	4.41	s.	17.4	2,373	7,560	
						2,250	771.4	12.2		45	6.39	s.	17.4	2,205	7,170	
						2,000	794.7	12.3		66	9.44	s.	17.4	1,960	6,170	
11:02	961.8	12.8	32	e.	5.8	1,800	813.8	12.3	0.53	82	11.73	s.	17.4	1,764	5,360	
						1,750	818.7	12.6		81	11.82	s.	17.8	1,715	5,160	
						1,500	843.2	13.9		76	12.07	sse.	19.9	1,470	4,150	
11:13	961.5	12.8	32	ese.	5.8	1,270	866.5	15.1	−0.97	71	12.18	sse.	21.8	1,245	3,010	
						1,250	868.7	14.0		69	11.69	sse.	21.9	1,225	2,910	
						1,000	894.9	12.5		50	7.24	se.	23.5	980	1,670	
11:19	961.4	12.8	33	ese.	6.3	952	899.6	12.0	0.11	46	6.45	se.	23.8	933	1,430	
						750	921.8	12.2		42	5.97	se.	17.3	735	300	
						500	949.0	12.5		37	5.36	se.	9.2	490	90	
11:39	960.9	12.6	35	se.	5.8	396	960.9	12.6		35	5.11	se.	5.8	388		Cloudless.

October 17, 1917, series (No. 5).

A. M.																
12:25	960.0	12.0	35	ese.	5.4	396	960.0	12.0		35	4.91	ese.	5.4	388		1/10 St.Cu., ssw.
						500	947.9	11.8		35	4.84	ese.	6.4	490	620	Lightning to south.
12:35	959.8	11.6	37	ese.	4.5	749	920.0	11.3	0.20	35	4.69	se.	8.8	734	2,100	
12:51	959.6	11.7	37	ese.	4.9	912	902.1	13.0	−1.04	42	6.29	sse.	13.6	894	4,100	
						1,000	892.5	14.6		49	8.14	sse.	16.3	980	5,260	
1:03	959.4	11.4	37	ese.	3.6	1,116	880.4	16.6	−1.76	59	11.15	s.	19.7	1,094	6,800	Few St.Cu., ssw.
						1,250	866.4	15.8		61	10.95	s.	18.9	1,225	7,060	
						1,500	841.2	14.2		65	10.52	s.	17.4	1,470	7,530	
						1,750	816.8	12.6		69	10.07	ssw.	15.9	1,715	8,000	
						2,000	793.2	11.0		73	9.58	ssw.	14.4	1,960	8,480	
1:24	959.1	11.4	39	ese.	4.0	2,115	781.7	10.3	0.63	75	9.40	ssw.	13.7	2,073	8,700	
						2,250	769.8	9.7		72	8.66	ssw.	13.8	2,205	8,740	
						2,500	746.3	8.6		67	7.48	ssw.	15.1	2,450	9,020	
						2,750	724.3	7.6		61	6.37	ssw.	16.1	2,694	9,300	
						3,000	702.6	6.5		56	5.42	sw.	17.0	2,939	10,620	
						3,250	681.5	5.4		51	4.57	sw.	17.9	3,184	9,980	
2:32	957.8	10.7	41	se.	4.9	3,462	663.5	4.5	0.47	46	3.87	sw.	18.7	3,391		Lightning continuing in sw. and w.
						3,250	681.5	5.6		45	4.10	sw.	19.5	3,184	9,200	
						3,000	702.6	6.9		44	4.38	sw.	20.4	2,939	8,870	
						2,750	724.3	8.2		43	4.67	sw.	21.4	2,694	8,540	
						2,500	746.3	9.5		41	4.87	sw.	22.3	2,450	7,890	Few St.Cu., ssw.
3:02	957.1	10.4	41	ese.	4.9	2,418	753.5	9.9	0.71	41	5.00	sw.	22.6	2,369	7,590	
						2,250	768.7	11.1		42	5.55	sw.	21.7	2,205	6,980	
						2,000	791.7	12.0		44	6.17	sw.	20.3	1,960	6,080	
						1,750	815.2	14.6		45	7.48	sw.	19.0	1,715	5,160	
						1,500	839.7	16.4		47	8.77	s.	17.6	1,470	4,090	
						1,250	864.7	18.2		50	10.45	s.	16.2	1,225	3,000	
3:35	956.5	10.4	42	ese.	5.4	1,060	884.3	19.5	−1.36	50	11.34	s.	15.2	1,039	2,090	
						1,000	890.5	18.7		49	10.57	s.	14.3	980	1,800	
						750	917.0	15.3		47	8.17	s.	10.4	735	590	
						500	944.6	11.9		44	6.13	se.	6.5	490	170	Few St.Cu., ssw.
3:47	956.2	10.5	43	se.	4.9	396	956.2	10.5		43	5.46	se.	4.9	388		

October 17, 1917, series (No. 6).

A. M.																
4:33	956.0	10.2	46	sse.	4.0	396	956.0	10.2		46	5.73	sse.	4.0	388		4/10 St.Cu., sw.
						500	944.5	11.9		47	6.55	s.	7.2	490	1,180	
						750	917.0	16.0		48	8.73	ssw.	15.0	735	4,000	
4:43	956.0	9.9	45	s.	3.6	900	900.6	18.5	−1.65	49	10.44	sw.	19.6	882	5,700	Thunder in w. and sw. at 4:35 a. m.
						1,000	890.0	17.8		49	9.99	sw.		980	6,380	Storm moved from ssw. to nne.
						1,250	864.5	16.0		48	8.73	sw.		1,225	8,060	
4:52	956.0	10.0	48	sse.	3.1	1,319	857.4	15.5	0.72	48	8.45	sw.		1,293	50,000	
						1,500	839.5	15.3		51	8.86	ssw.		1,470		
5:05	956.0	10.4	48	sse.	4.5	1,584	831.0	15.2	0.06	53	9.15	ssw.		1,553		10/10 St.Cu., sw.
						1,500	839.5	15.2		54	9.33	ssw.		1,470		Rain began 5:17 a. m. and continued.
5:26	956.0	10.6	52	sse.	4.5	1,271	862.4	15.2	0.76	56	9.67	ssw.		1,246	(*)	
						1,250	864.5	15.5		55	9.69	ssw.		1,225	(*)	
						1,000	890.0	17.3		52	10.27	sw.		980	(*)	
5:38	956.0	10.4	61	sse.	5.4	746	917.2	19.2	−2.54	49	10.90	sw.	23.4	731	(*)	
						500	944.5	12.9		60	8.93	s.	10.8	490	(*)	
5:47	956.0	10.3	65	sse.	5.4	396	956.0	10.3		65	8.14	sse.	5.4	388		10/10 St.Cu., ssw.

*Voltage more than 50,000.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 17, 1917, series (No. 7).

Surface.						At different heights above sea.											
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Potential.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Gravity.	Electric.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁸ ergs.*	*volts.*	
6:36	955.6	10.6	68	se.	4.9	396	955.6	10.6	.....	68	8.69	se.	4.9	388	.....	10/10 St.Cu., ssw.
						500	944.3	14.7	.....	59	9.87	sse.	5.6	490	4,390	Thunder ended in c. at 6:26 a.m.
6:47	955.5	10.6	69	sse.	4.9	631	929.3	19.8	−3.91	47	10.86	ssw.	6.4	619	9,930	Rain ended 6:37 a. m.
						750	916.4	19.2	.....	52	11.57	ssw.	9.3	735	(*)	Rain from 6:57 to 7:04 a. m.
						1,000	889.8	17.8	.....	62	12.64	s.	15.5	980	(*)	Rain from 7:10 to 7:23 a. m.
						1,250	864.4	16.5	.....	71	13.33	sse.	21.7	1,225	(*)	8/10 St.Cu., ssw.
7:50	955.1	12.2	68	se.	4.9	1,440	845.1	15.5	0.53	79	13.91	sse.	26.4	1,412	(*)	
						1,500	839.4	14.5	.....	74	12.22	sse.	24.8	1,470	(*)	
7:55	955.0	12.6	68	ese.	4.9	1,679	821.3	11.6	1.63	60	8.20	se.	19.9	1,646	3,600	
						1,750	814.3	11.3	.....	60	8.03	se.	20.1	1,715	3,800	
						2,000	789.7	10.3	.....	59	7.35	sse.	20.6	1,960	4,470	3/10 A.Cu., sw.; 2/10 St.Cu.,ssw.
						2,250	766.1	9.3	.....	58	6.80	sse.	21.1	2,205	5,140	
						2,500	743.5	8.3	.....	58	6.35	s.	21.7	2,450	6,440	
						2,750	721.5	7.3	.....	57	5.83	s.	22.2	2,694	.....	4/10 A.St., sw.; 2/10 St.Cu.,ssw.
						3,000	700.0	6.3	.....	56	5.35	ssw.	22.8	2,939	.....	
8:35	954.0	15.6	59	se.	5.8	3,143	688.0	5.7	0.53	56	5.13	ssw.	23.1	3,079	.....	
						3,000	700.0	6.6	.....	54	5.26	ssw.	24.0	2,939	.....	
						2,750	721.5	8.3	.....	52	5.69	ssw.	25.5	2,694	.....	
						2,500	743.0	9.9	.....	49	5.98	ssw.	27.1	2,450	7,500	
						2,250	765.2	11.6	.....	46	6.28	ssw.	28.6	2,205	7,670	
						2,000	788.8	13.2	.....	44	6.67	ssw.	30.2	1,960	7,840	
8:55	953.4	16.8	59	se.	8.0	1,847	803.8	14.2	0.23	42	6.80	ssw.	31.1	1,810	7,940	
						1,750	813.3	14.4	.....	45	7.38	ssw.	31.1	1,715	8,000	
						1,500	838.4	15.0	.....	51	8.70	ssw.	31.2	1,470	6,650	
						1,250	863.4	15.6	.....	58	10.28	s.	31.2	1,225	5,310	
						1,000	888.4	16.1	.....	64	11.71	s.	31.3	980	3,970	
9:02	953.3	17.0	60	s.	9.8	891	899.7	16.4	0.55	67	12.50	s.	31.3	874	3,390	
10:18	952.2	22.2	53	sse.	8.0	763	912.5	17.1	1.55	66	12.87	se.	22.4	748	0	3/10 Ci.Cu., sw.
						750	914.1	17.3	.....	66	13.04	se.	22.0	735	0	
						500	940.7	21.2	.....	59	14.86	s.	15.3	490	0	
10:39	952.1	22.8	56	ssw.	12.5	396	952.1	22.8	.....	56	15.55	ssw.	12.5	388	.....	4/10 Ci.St., sw.; 2/10 St.Cu.,ssw.

October 17, 1917, series (No. 8).

P. M.																
12:05	951.2	26.2	44	ssw.	7.2	396	951.2	26.2	.....	44	14.97	ssw.	7.2	388	.....	3/10 Ci.St., sw.; 2/10 St.Cu.,ssw.
						500	940.1	24.8	.....	45	14.09	ssw.	11.1	490	0	
						750	913.3	21.4	.....	48	12.24	ssw.	20.6	735	0	1/10 Ci.St., sw.; 2/10 St.Cu.,ssw.
12:28	950.7	27.0	37	ssw.	14.8	872	900.2	19.8	1.34	50	11.55	ssw.	25.2	855	0	
						1,000	887.2	18.7	.....	53	11.43	ssw.	27.0	980	310	
						1,250	861.6	16.7	.....	59	11.22	ssw.	30.4	1,225	920	
						1,500	836.4	14.6	.....	65	10.80	ssw.	33.8	1,470	1,540	
12:49	950.2	27.3	38	ssw.	13.4	1,608	825.5	13.7	0.83	68	10.66	ssw.	35.3	1,576	1,800	
						1,750	811.7	12.7	.....	70	10.28	ssw.	35.2	1,715	1,890	
						2,000	787.5	10.8	.....	72	9.32	ssw.	34.9	1,960	2,050	
						2,250	764.3	9.0	.....	75	8.61	sw.	34.7	2,205	2,210	
						2,500	741.7	7.1	.....	78	7.87	sw.	34.5	2,450	2,370	
12:56	950.0	27.4	37	ssw.	13.4	2,569	735.4	6.6	0.74	79	7.70	sw.	34.4	2,517	2,410	
						2,750	719.8	6.2	.....	69	6.54	sw.	30.6	2,694	3,040	
						3,000	698.0	5.6	.....	55	5.00	sw.	25.4	2,939	6,270	1/10 Ci.St., sw.; 4/10 St.Cu., sw.
1:14	949.9	28.0	35	ssw.	15.2	3,196	681.2	5.2	0.20	44	3.89	sw.	21.3	3,131	.....	
						3,000	698.0	5.5	.....	58	5.24	sw.	22.6	2,939	6,290	
						2,750	719.8	6.0	.....	75	7.01	sw.	24.0	2,694	4,810	7/10 St.Cu., sw.
1:38	949.9	26.8	36	ssw.	14.8	2,546	737.9	6.3	0.89	89	8.50	sw.	25.5	2,495	3,600	Altitude of St.Cu. base about 2,400 m.
						2,500	741.7	6.7	.....	87	8.53	sw.	25.7	2,450	4,230	
						2,250	764.3	8.9	.....	79	9.01	sw.	26.6	2,205	7,680	
						2,000	787.5	11.2	.....	70	9.31	sw.	27.5	1,960	9,130	
						1,750	811.7	13.4	.....	61	9.38	sw.	28.5	1,715	5,800	
2:12	949.9	27.4	34	ssw.	13.4	1,685	818.0	14.0	0.92	59	9.43	sw.	28.7	1,651	4,980	6/10 St.Cu., sw.
						1,500	835.8	15.7	.....	55	9.81	sw.	28.4	1,470	3,490	
						1,250	860.8	18.0	.....	49	10.11	ssw.	27.9	1,225	2,320	
						1,000	886.2	20.3	.....	43	10.24	ssw.	27.5	980	1,140	
2:30	949.9	27.4	34	ssw.	14.3	903	896.3	21.2	1.20	41	10.32	ssw.	27.3	885	690	
						750	912.0	23.0	.....	39	10.96	ssw.	23.4	735	270	
						500	938.7	26.0	.....	36	12.10	ssw.	17.0	490	80	
2:42	949.9	27.3	35	ssw.	14.3	396	949.9	27.3	.....	35	12.70	ssw.	14.3	388	.....	5/10 St.Cu., sw.

October 18, 1917.

A. M.																
8:11	968.3	3.4	64	nnw.	7.6	396	968.3	3.4	.....	64	4.99	nnw.	7.6	388	.....	10/10 St.Cu., nw.
						500	956.0	1.8	.....	71	4.94	nnw.	12.6	450	0	
8:18	968.5	3.2	71	nnw.	11.6	755	926.1	−2.0	1.50	87	4.50	nw.	24.8	740	0	
8:22	968.6	3.2	66	nnw.	8.9	941	904.7	−4.8	1.51	89	3.63	nw.	24.6	923	2,520	
						1,000	898.0	−5.2	.....	90	3.55	nw.	23.7	980	3,310	Altitude of St.Cu. base about 1,200 m.
						1,250	870.0	−6.7	.....	93	3.23	nw.	19.9	1,225	4,440	
						1,500	842.8	−8.2	.....	95	2.89	nw.	16.1	1,470	3,980	
8:43	969.3	3.2	65	nnw.	9.8	1,559	836.4	−8.5	0.51	96	2.84	nw.	15.2	1,528	.....	Altitude of St.Cu. base about 600 m.
						1,500	842.8	−8.3	.....	96	2.90	nw.	(ϕ)	1,470	3,500	
						1,250	871.1	−7.3	.....	95	3.13	nw.	(ϕ)	1,225	1,390	Altitude of St.Cu. base about 950 m.
9:51	970.7	2.6	59	nnw.	10.3	1,063	892.2	−6.5	0.53	95	3.35	nw.	(ϕ)	1,042	140	
						1,000	900.0	−6.2	.....	91	3.29	nw.	(ϕ)	980	0	
10:31	971.5	2.4	62	nnw.	8.5	798	923.6	−5.1	1.97	77	3.06	nw.	(ϕ)	762	0	ϕAnometer coated with ice.
						750	929.0	−4.2	.....	75	3.22	nw.	(ϕ)	735	0	
						500	959.0	0.8	.....	62	4.01	nnw.	(ϕ)	450	0	
10:52	971.9	2.8	57	nnw.	8.0	396	971.9	2.8	.....	57	4.26	nnw.	8.0	388	.....	10/10 St.Cu., nw.

*Voltage more than 50,000.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 19, 1917.

Surface.						At different heights above sea.											Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100 \text{ m.}}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.		
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*		
11:36	972.5	3.4	35	ssw.	4.5	396	972.5	3.4	.....	35	2.73	ssw.	4.5	388	.....		Faint solar halo, 22° radius, observed at 10:04 a. m.
.....	.....	.....	.....	.....	.....	500	960.2	2.9	.....	36	2.71	ssw.	5.4	490	150		8/10 Ci.St., wnw.
.....	.....	.....	.....	.....	.....	750	930.6	1.6	.....	37	2.54	ssw.	7.6	735	2,960		
.....	.....	.....	.....	.....	.....	1,000	901.5	0.3	.....	39	2.43	sw.	9.8	980	5,780		
P. M.																	
1:03	970.8	5.1	33	ssw.	5.4	1,162	882.8	− 0.5	0.51	40	2.34	sw.	11.2	1,139	7,610		
.....	.....	.....	.....	.....	.....	1,250	873.5	− 0.8	.....	41	2.34	sw.	11.6	1,225	8,300		
.....	.....	.....	.....	.....	.....	1,500	846.4	− 1.7	.....	43	2.28	sw.	12.7	1,470	9,740		10/10 A.St., wnw.
.....	.....	.....	.....	.....	.....	1,750	820.2	− 2.5	.....	44	2.18	wsw.	13.8	1,715	11,170		
1:25	970.4	5.8	32	ssw.	6.7	1,953	799.2	− 3.2	0.34	46	2.15	wsw.	14.7	1,914	12,010		
.....	.....	.....	.....	.....	.....	2,000	794.7	− 3.5	.....	48	2.19	wsw.	14.9	1,960	12,210		
.....	.....	.....	.....	.....	.....	2,250	770.0	− 4.8	.....	57	2.33	wsw.	16.1	2,205	13,230		
.....	.....	.....	.....	.....	.....	2,500	745.7	− 6.1	.....	67	2.45	wsw.	17.2	2,450	14,260		
.....	.....	.....	.....	.....	.....	2,750	722.2	− 7.4	.....	76	2.44	wsw.	18.4	2,694	15,240		
.....	.....	.....	.....	.....	.....	3,000	699.2	− 8.8	.....	85	2.46	wsw.	19.5	2,939	16,090		
1:56	969.7	6.6	34	s.	4.9	3,231	678.3	−10.0	0.53	94	2.44	wsw.	20.6	3,165	16,880		Altitude of St.Cu. base about 3,000 m.
.....	.....	.....	.....	.....	.....	3,250	677.0	−10.1	.....	94	2.42	wsw.	20.7	3,181	16,940		5/10 A.Cu., wnw.; 4/10 St.Cu. wnw.
.....	.....	.....	.....	.....	.....	3,500	655.2	−11.2	.....	95	2.21	w.	22.1	3,429	18,950		Altitude of St.Cu. base about 2,500 m.
.....	.....	.....	.....	.....	.....	3,750	634.5	−12.3	.....	95	2.00	w.	23.4	3,673	20,890		
.....	.....	.....	.....	.....	.....	4,000	613.5	−13.5	.....	96	1.81	wnw.	24.8	3,918	.....		Altitude of St.Cu. base about 3,650 m.
2:41	969.6	6.6	36	s.	11.2	4,144	601.4	−14.1	0.39	96	1.72	wnw.	25.6	4,059	.....		
.....	.....	.....	.....	.....	.....	4,000	613.3	−13.6	.....	97	1.82	wnw.	24.3	3,918	.....		
.....	.....	.....	.....	.....	.....	3,750	633.5	−12.8	.....	98	1.98	wnw.	22.0	3,673	21,960		
.....	.....	.....	.....	.....	.....	3,500	653.9	−12.0	.....	99	2.15	wnw.	19.6	3,429	19,450		
.....	.....	.....	.....	.....	.....	3,250	675.0	−11.1	.....	99	2.33	wnw.	17.3	3,184	16,940		
3:18	969.4	7.5	36	ssw.	8.9	3,119	686.5	−10.7	0.32	100	2.44	wnw.	16.1	3,058	15,620		
.....	.....	.....	.....	.....	.....	3,000	697.1	−10.3	.....	99	2.50	wnw.	16.1	2,939	14,430		
.....	.....	.....	.....	.....	.....	2,750	720.0	− 9.3	.....	98	2.70	w.	16.2	2,694	11,910		
.....	.....	.....	.....	.....	.....	2,500	743.4	− 8.4	.....	97	2.90	w.	16.2	2,450	9,400		
3:38	969.2	7.4	32	sw.	7.2	2,397	753.6	− 8.0	0.46	96	2.98	w.	16.2	2,349	8,830		
.....	.....	.....	.....	.....	.....	2,250	767.5	− 7.3	.....	90	2.96	w.	15.7	2,205	8,440		
.....	.....	.....	.....	.....	.....	2,000	792.7	− 6.2	.....	79	2.86	w.	14.9	1,960	7,780		
.....	.....	.....	.....	.....	.....	1,750	818.6	− 5.0	.....	68	2.73	ssw.	14.1	1,715	7,110		
.....	.....	.....	.....	.....	.....	1,500	845.0	− 3.8	.....	57	2.53	ssw.	13.3	1,470	5,300		
4:08	968.9	6.8	35	ssw.	6.2	1,342	861.7	− 3.1	1.01	50	2.36	ssw.	12.8	1,316	4,130		
.....	.....	.....	.....	.....	.....	1,250	872.1	− 2.2	.....	48	2.44	ssw.	12.0	1,225	3,460		
.....	.....	.....	.....	.....	.....	1,000	899.7	0.4	.....	44	2.60	ssw.	10.0	980	1,630		
4:23	968.8	7.0	35	ssw.	5.8	857	915.4	1.8	1.17	41	2.85	ssw.	8.8	840	580		
.....	.....	.....	.....	.....	.....	750	927.8	3.1	.....	40	3.05	ssw.	8.4	735	0		
.....	.....	.....	.....	.....	.....	500	956.7	6.0	.....	36	3.37	s.	7.6	490	0		
4:33	968.7	7.6	35	s.	7.2	396	968.7	7.2	.....	35	3.65	s.	7.2	388	.....		8/10 A.Cu., wnw.

October 20, 1917.

A. M.																	
7:08	974.1	3.0	69	nw.	6.3	396	974.1	3.0	.....	69	5.23	nw.	6.3	388	.....		8/10 A.St., wsw.; 2/10 St.Cu., nnw.
.....	.....	.....	.....	.....	.....	500	961.7	2.8	.....	72	5.38	nw.	9.1	490	460		
.....	.....	.....	.....	.....	.....	750	932.6	0.2	.....	80	4.96	nnw.	17.0	735	1,580		
7:25	974.4	2.6	67	nw.	6.7	868	918.9	− 0.7	0.78	84	4.84	nnw.	19.2	851	2,100		4/10 A.St., wsw.; 1/10 St.Cu., nnw.
.....	.....	.....	.....	.....	.....	1,000	903.5	− 1.9	.....	88	4.63	nnw.	19.2	980	2,950		
7:33	974.6	2.5	68	nw.	6.3	1,156	886.3	− 3.2	0.87	92	4.31	n.	19.2	1,133	3,950		
.....	.....	.....	.....	.....	.....	1,250	875.9	− 1.3	.....	55	3.01	n.	19.8	1,225	4,570		
7:37	974.6	2.5	67	nw.	6.7	1,258	875.2	− 1.1	−2.06	52	2.90	n.	19.9	1,233	4,630		
.....	.....	.....	.....	.....	.....	1,500	848.8	− 2.5	.....	49	2.43	n.	19.3	1,470	6,910		
.....	.....	.....	.....	.....	.....	1,750	822.5	− 4.0	.....	46	2.01	nnw.	18.6	1,715	7,520		
.....	.....	.....	.....	.....	.....	2,000	796.9	− 5.4	.....	44	1.71	nnw.	17.9	1,916	8,480		2/10 A.St., wsw.; 1/10 St.Cu. nnw.
.....	.....	.....	.....	.....	.....	2,250	772.3	− 6.9	.....	41	1.41	nw.	17.2	2,205	9,410		
8:28	975.5	3.8	59	nnw.	7.2	2,493	748.9	− 8.3	0.58	38	1.15	nw.	16.6	2,443	10,000		
.....	.....	.....	.....	.....	.....	2,500	748.3	− 8.4	.....	38	1.14	nw.	16.7	2,450	10,020		
.....	.....	.....	.....	.....	.....	2,750	724.9	−10.4	.....	39	0.98	nw.	19.5	2,694	10,650		2/10 A.St., wsw.; 3/10 St.Cu., nnw.
9:10	976.1	4.6	54	nnw.	8.5	3,003	700.6	−12.5	0.66	39	0.81	nw.	22.4	2,942	(*)		
.....	.....	.....	.....	.....	.....	2,750	724.9	−11.3	.....	40	0.92	nw.	22.1	2,694	(*)		
.....	.....	.....	.....	.....	.....	2,500	749.0	−10.0	.....	41	1.07	nw.	21.8	2,450	(*)		
.....	.....	.....	.....	.....	.....	2,250	773.4	− 8.8	.....	42	1.21	nw.	21.6	2,205	(*)		
.....	.....	.....	.....	.....	.....	2,000	797.2	− 7.6	.....	42	1.35	nw.	21.3	1,960	(*)		
9:43	976.5	4.6	54	nnw.	8.5	1,838	813.7	− 6.8	−1.70	43	1.48	nw.	21.1	1,801	(**)		
.....	.....	.....	.....	.....	.....	1,750	824.0	− 8.3	.....	78	2.36	nw.	17.5	1,715	.....		3/10 St.Cu., nnw.
11:16	977.6	6.4	41	nnw.	7.6	1,720	827.1	− 8.8	0.83	90	2.60	nnw.	16.2	1,686	.....		
.....	.....	.....	.....	.....	.....	1,500	850.8	− 7.0	.....	83	2.81	nnw.	15.2	1,470	.....		
.....	.....	.....	.....	.....	.....	1,250	877.8	− 4.9	.....	74	3.00	nnw.	14.0	1,225	.....		
.....	.....	.....	.....	.....	.....	1,000	905.9	− 2.8	.....	67	3.24	nnw.	12.8	980	.....		
11:44	977.5	6.4	38	nnw.	9.4	839	925.2	− 1.5	1.78	60	3.23	nnw.	12.0	823	.....		
.....	.....	.....	.....	.....	.....	750	935.0	0.1	.....	56	3.44	nnw.	11.6	735	.....		
.....	.....	.....	.....	.....	.....	500	964.8	4.5	.....	45	3.79	nnw.	10.3	490	.....		
NOON.																	
12:00	977.4	6.4	40	nnw.	9.8	396	977.4	6.4	.....	40	3.84	nnw.	9.8	388	.....		3/10 St.Cu., nnw.

* More than 10,000 volts.

** Wire in trees.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 21, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%	s.	*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
7:15	971.1	2.8	47	s.	7.6	396	971.1	2.8	.....	47	3.51	s.	7.6	388	.....	10/10 A.Cu., nw.
						500	958.8	3.2	.....	45	3.46	s.	14.5	490	700	
7:29	971.0	3.3	45	s.	7.2	748	929.7	4.0	−0.34	39	3.17	ssw.	31.0	733	1,040	
7:32	970.9	3.4	44	s.	6.7	892	913.3	4.7	−0.49	38	3.25	sw.	26.8	875	1,390	
						1,000	901.0	4.3	.....	38	3.16	sw.	25.9	980	1,720	10/10 A.Cu., nw.
						1,250	873.3	3.3	.....	33	2.94	sw.	23.9	1,225	2,870	
						1,500	846.6	2.4	.....	38	2.76	sw.	21.9	1,470	3,540	
7:57	970.6	3.6	47	s.	6.7	1,735	822.8	1.5	0.38	38	2.59	sw.	20.0	1,700	3,400	
						1,750	821.0	1.1	.....	38	2.52	sw.	20.0	1,715	3,400	
						2,000	796.0	0.8	.....	42	2.72	sw.	20.2	1,960	3,470	
						2,250	771.7	0.2	.....	45	2.79	wsw.	20.4	2,205	.....	10/10 A.St., nw.
8:23	970.1	4.0	44	s.	5.4	2,499	748.0	−0.4	0.32	49	2.90	wsw.	20.6	2,449	.....	Weather threatening.
						2,250	771.7	0.6	.....	49	3.13	wsw.	23.1	2,205	.....	
						2,000	795.4	1.6	.....	49	3.36	sw.	25.7	1,960	2,580	
9:05	969.1	5.6	42	s.	8.5	1,983	797.2	1.6	0.38	49	3.36	sw.	25.8	1,944	2,540	
						1,750	820.0	2.5	.....	47	3.44	sw.	27.3	1,715	1,990	
						1,500	845.2	3.4	.....	45	3.51	sw.	28.9	1,470	1,400	
						1,250	871.5	4.4	.....	43	3.60	sw.	30.6	1,225	810	
9:35	968.6	6.3	43	s.	10.7	1,147	883.2	4.8	−0.62	42	3.61	sw.	31.3	1,124	570	
						1,000	898.6	3.9	.....	44	3.56	ssw.	21.3	980	220	
10:05	968.1	7.0	40	ssw.	10.7	906	909.5	3.3	0.76	46	3.56	ssw.	15.6	888	0	
						750	926.8	4.5	.....	44	3.70	ssw.	14.6	735	0	
						500	955.0	6.4	.....	41	3.94	s.	13.1	490	0	
10:25	967.4	7.2	40	s.	12.5	396	967.4	7.2	.....	40	4.06	s.	12.5	388	.....	10/10 A.St., nw.

October 22, 1917.

A. M.																
7:14	976.7	3.6	56	nw.	3.6	396	976.7	3.6	.....	56	4.43	nw.	3.6	388	.....	10/10 St.Cu., nnw.
						500	963.9	2.7	.....	59	4.38	nw.	6.6	490	0	
						750	934.5	0.4	.....	65	4.09	nnw.	13.7	735	0	10/10 St., nnw.
7:33	977.1	3.8	56	nnw.	4.0	930	914.2	−1.2	0.90	69	3.82	nnw.	18.8	912	0	
						1,000	906.1	−2.0	.....	76	3.93	nnw.	20.6	980	0	Snow (dry) from 7:32 to 8:00 a. m.
7:48	977.4	3.4	58	nnw.	4.5	1,143	890.4	−3.5	1.08	90	4.10	nnw.	24.3	1,121	640	Altitude of St. base about 1,400 m.
						1,250	878.0	−4.1	.....	91	3.94	nnw.	23.9	1,225	1,520	
						1,500	851.0	−5.6	.....	92	3.50	nnw.	22.9	1,470	3,570	
						1,750	824.0	−7.1	.....	94	3.15	nw.	22.0	1,715	5,620	
						2,000	797.3	−8.5	.....	95	2.81	nw.	21.0	1,960	7,670	
8:07	977.8	1.4	75	nnw.	3.1	2,129	783.6	−9.3	0.27	96	2.65	nw.	20.5	2,086	.....	
						2,000	796.0	−9.7	.....	95	2.54	wnw.	21.3	1,960	.....	
9:05	978.5	0.4	47	nnw.	3.1	1,940	801.8	−9.9	−0.59	95	2.49	wnw.	21.7	1,901	7,200	
						1,750	822.7	−11.0	.....	57	1.35	nw.	22.9	1,715	3,980	7/10 A.St., w.; 2/10 St.Cu., nw.
10:48	979.4	−0.2	40	nnw.	4.0	1,602	838.4	−11.9	0.48	27	0.59	nw.	23.9	1,570	4,030	6/10 A.St., w.; 1/10 St.Cu., nw.
						1,500	849.7	−11.4	.....	31	0.71	nw.	24.2	1,470	3,080	
						1,250	877.6	−10.2	.....	40	1.02	nw.	25.0	1,225	760	
						1,000	906.1	−9.0	.....	49	1.39	nnw.	25.8	980	0	
11:16	979.3	1.2	39	nnw.	3.1	788	931.9	−8.0	2.50	56	1.74	nnw.	26.4	773	0	
						750	936.4	−7.0	.....	54	1.83	nnw.	24.3	735	0	
						500	966.7	−0.8	.....	43	2.46	nnw.	10.3	490	0	
11:37	979.2	1.8	38	nnw.	4.5	396	979.2	1.8	.....	38	2.64	nnw.	4.5	388	.....	8/10 St.Cu., nw.

October 23, 1917.

A. M.																
7:04	985.5	−5.4	86	nnw.	4.0	396	985.5	−5.4	.....	86	3.34	nnw.	4.0	388	.....	Cloudless.
						500	972.0	−5.6	.....	86	3.28	nnw.	5.3	490	480	
						750	942.0	−6.0	.....	85	3.13	n.	8.4	735	1,620	
7:23	985.5	−4.8	81	nnw.	3.1	952	918.0	−6.3	0.16	85	3.05	nne.	11.0	933	2,800	
						1,000	912.0	−6.0	.....	82	3.02	nne.	10.9	980	3,100	
7:26	985.5	−4.8	81	nnw.	4.5	1,147	895.5	−5.0	−0.67	72	2.89	nne.	10.4	1,124	4,000	Cloudless.
7:52	985.5	−4.3	79	nnw.	3.6	1,238	885.5	−4.3	−0.77	56	2.39	nne.	8.0	1,214	4,260	
						1,250	884.0	−4.3	.....	56	2.39	nne.	8.0	1,225	4,290	
						1,500	856.9	−4.5	.....	54	2.26	nne.	7.5	1,470	5,580	
						1,750	830.4	−4.7	.....	52	2.14	n.	7.0	1,715	.....	
8:37	985.3	−2.9	72	nw.	3.6	1,848	820.3	−4.8	0.05	51	2.08	n.	6.8	1,811	.....	
						1,750	830.4	−4.6	.....	50	2.08	n.	6.8	1,715	.....	
						1,500	856.9	−4.2	.....	48	2.06	nne.	6.0	1,470	.....	
						1,250	884.0	−3.7	.....	45	2.02	nne.	5.5	1,225	.....	
9:10	985.2	−1.9	64	nw.	3.6	1,227	886.8	−3.7	−0.56	45	2.02	nne.	5.4	1,203	.....	
						1,000	912.0	−4.0	.....	55	2.40	nne.	5.5	980	.....	
9:27	985.2	−1.6	62	n.	3.6	890	925.6	−5.6	0.89	60	2.29	nne.	5.6	873	.....	
						750	942.0	−4.4	.....	60	2.53	nne.	5.1	735	.....	
						500	972.0	−2.1	.....	61	3.13	n.	4.4	490	.....	
9:33	985.2	−1.2	61	n.	4.0	396	985.2	−1.2	.....	61	3.37	n.	4.0	388	.....	Few St.Cu., n.

October 24, 1917.

A. M.																
7:05	971.5	−0.8	72	sse.	5.4	396	971.5	−0.8	.....	72	4.66	sse.	5.4	388	.....	Few A.Cu., sw.; 8/10 Ci.St., w.
						500	958.7	0.2	.....	68	4.22	sse.	11.8	490	630	
7:14	971.4	−0.2	71	sse.	4.9	727	932.2	2.3	−0.93	59	4.25	s.	25.8	713	2,000	
						750	929.3	2.3	.....	57	4.18	s.	25.6	735	2,300	
						1,000	901.0	2.8	.....	45	3.41	s.	23.8	980	5,540	
						1,250	874.0	3.2	.....	33	2.67	s.	21.9	1,225	7,150	
7:32	971.2	0.3	69	sse.	5.4	1,418	855.8	3.5	−0.17	24	1.88	s.	20.7	1,459	7,330	4/10 Ci.St., w.; Few A.Cu., sw.
						1,500	847.3	3.3	.....	25	1.88	s.	19.9	1,470	7,420	5/10 A.St., w.
						1,750	821.5	2.7	.....	27	1.95	ssw.	17.3	1,715	7,750	

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 24; 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m.p.s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m.p.s.*	*10⁸ ergs.*	*volts.*	
7:51	971.0	0.8	65	sse.	5.4	1,931	803.1	2.3	0.23	28	2.02	ssw.	15.5	1,893	8,000	
						2,000	796.1	2.1		29	2.06	ssw.	15.4	1,960	(*)	
						2,250	772.0	1.3		31	2.08	ssw.	14.8	2,205	(*)	
8:07	970.8	2.0	61	s.	4.9	2,440	753.7	0.7	0.31	33	2.12	ssw.	14.4	2,391	(*)	
						2,500	748.0	1.7		26	1.80	sw.	13.7	2,450	(*)	
8:39	970.5	3.4	55	s.	11.2	2,620	737.1	3.5	−1.56	12	0.94	wsw.	12.2	2,567		
						2,750	725.0	3.1		7	0.53	sw.	11.5	2,694		7/10 Ci.St.; w.; 1/10 A.Cu., w.
9:16	970.0	4.3	50	s.	8.0	2,879	713.5	2.7	0.34	3	0.22	sw.	10.8	2,821		
						2,750	725.0	3.2		2	0.15	sw.	12.7	2,694		
9:27	969.8	5.0	49	s.	8.9	2,601	738.3	3.7	−1.22	1	0.08	ssw.	14.8	2,549		
						2,500	747.5	2.5		8	0.58	ssw.	16.5	2,450	(*)	
9:40	969.6	4.6	49	s.	10.7	2,371	759.7	0.9	0.28	17	1.11	s.	18.7	2,323	(*)	
						2,250	771.0	1.5		17	1.16	s.	19.3	2,205	(*)	
						2,000	795.0	2.0		16	1.15	s.	20.7	1,960	(*)	
						1,750	820.0	2.7		16	1.19	s.	21.9	1,715	(*)	
						1,500	845.8	3.4		15	1.17	s.	23.2	1,470	(*)	
						1,250	872.3	4.1		15	1.23	s.	24.4	1,225	(*)	
10:02	969.2	5.8	45	s.	10.7	1,128	885.7	4.5	−2.34	14	1.18	s.	25.1	1,106	(*)	
10:16	968.9	6.1	46	s.	10.3	1,000	899.4	1.5	0.88	30	2.04	s.	22.8	980	5,760	
						750	927.1	3.7		36	2.87	s.	16.9	735	2,540	
						500	956.0	5.9		42	3.90	s.	11.0	490	750	
10:41	968.5	6.8	44	s.	8.5	396	968.5	6.8		44	4.35	s.	8.5	388		5/10 Ci., w.

October 25, 1917.

A. M.																
7:04	958.4	3.6	64	sse.	3.6	396	958.4	3.6		64	5.06	sse.	3.6	388		10/10 A.St., s.
						500	945.9	4.3		60	4.99	sse.	6.7	490	580	
						750	917.5	5.8		50	4.61	s.	14.3	735	1,980	
7:18	958.4	3.6	64	sse.	3.6	801	912.0	6.2	−0.64	48	4.55	s.	15.8	785	2,380	
						1,000	890.0	5.4		48	4.48	s.	14.2	980	4,950	
						1,250	863.5	4.3		48	3.99	s.	12.2	1,225	0	
						1,500	837.2	3.3		48	3.72	s.	10.2	1,470	0	
						1,750	811.8	2.2		48	3.44	s.	8.2	1,715		
8:34	958.6	4.2	62	sse.	3.6	1,779	808.8	2.1	0.30	48	3.41	s.	8.0	1,744		
						1,750	811.8	2.2		48	3.44	s.	7.8	1,715		
						1,500	837.2	2.6		49	3.61	ssw.	6.2	1,470	440	Threatening.
9:30	958.6	4.8	62	sse.	2.2	1,369	850.6	2.8	0.33	50	3.74	sw.	5.4	1,342	790	
						1,250	863.5	3.2		51	3.92	sw.	5.9	1,225	1,100	
						1,000	890.0	4.0		55	4.47	s.	6.8	980		
10:43	958.4	6.2	55	sse.	1.8	880	903.1	4.4	−0.88	56	4.69	s.	7.3	863		
10:45	958.4	6.2	55	sse.	1.8	767	915.8	3.4	0.75	59	4.60	s.	7.5	752		
						750	917.5	3.5		59	4.63	s.	7.3	735		
						500	945.9	4.2		56	4.62	s.	5.9	490		
10:47	958.4	6.2	55	sse.	1.8	396	958.4	6.2		55	5.21	sse.	1.8	388		10/10 A.St., s.

October 26, 1917, series (No. 1).

A. M.																
7:04	957.4	− 1.6	96	nw.	4.5	396	957.4	− 1.6		96	5.14	nw.	4.5	388		2/10 St.Cu., nw.
7:05	957.4	− 1.6	96	nw.	4.5	502	944.9	− 0.9	−0.66	97	5.50	nw.	18.9	492	0	
						750	916.0	0.3		79	4.93	nw.	18.2	735	0	
7:15	957.4	− 1.3	92	nw.	4.0	899	899.4	1.0	−0.48	68	4.47	nnw.	17.7	881	610	
						1,000	887.5	0.5		64	4.05	nnw.	18.1	980	1,090	
						1,250	860.4	− 0.8		51	3.08	nw.	19.0	1,225	2,360	
						1,500	834.0	− 2.1		44	2.26	nw.	20.0	1,470	3,820	
7:34	957.4	− 1.0	92	nw.	4.0	1,564	827.3	− 2.4	0.51	41	2.05	nw.	20.2	1,533	4,200	2/10 Ci.,wnw.; 1/10 ASt.,wnw.
						1,750	808.7	− 3.7		41	1.84	nw.	20.1	1,715	5,140	
						2,000	783.7	− 5.5		40	1.54	nw.	19.9	1,960	6,410	
						2,250	759.0	− 7.2		40	1.33	nw.	19.7	2,205	7,730	
						2,500	734.9	− 9.0		39	1.11	nw.	19.5	2,450	9,350	
8:09	957.6	− 0.7	88	nw.	5.8	2,754	710.7	−10.8	0.71	39	0.94	nw.	19.3	2,698	11,000	
						3,000	688.1	−12.7		44	0.90	nw.	18.2	2,939	12,260	
						3,250	666.2	−14.6		49	0.84	nw.	17.2	3,184	13,530	
8:37	958.0	0.6	89	nw.	5.8	3,400	653.6	−15.7	0.76	52	0.81	nw.	16.5	3,331	14,300	
						3,500	645.0	−15.5		47	0.74	nw.	17.6	3,429	14,790	
8:44	958.1	0.1	91	nw.	5.4	3,644	632.8	−15.1	− 0.25	39	0.64	nw.	19.2	3,570	15,500	3/10 A.St., wnw.
						3,750	624.0	−15.6		41	0.64	nw.	19.5	3,673	15,980	Altitude of A.St. base about 3,600 m.
						4,000	603.6	−16.8		46	0.64	nw.	20.2	3,918	17,100	
						4,250	584.0	−18.9		51	0.58	wnw.	20.8	4,162	17,820	
						4,500	564.8	−19.2		56	0.62	wnw.	21.5	4,407		
9:40	958.2	2.6	68	wnw.	7.6	4,676	551.1	−20.1	0.44	59	0.60	wnw.	22.0	4,579		
						4,500	564.8	−19.4		58	0.63	wnw.	21.2	4,407		
						4,250	584.0	−18.4		57	0.68	wnw.	20.0	4,162	16,890	Few A.St., wnw.
						4,000	603.0	−17.4		56	0.74	nw.	18.8	3,918	15,420	
						3,750	623.0	−16.4		55	0.80	nw.	17.6	3,673	13,950	
						3,500	643.8	−15.4		54	0.86	nw.	16.4	3,429	12,480	
10:13	958.3	3.9	72	wnw.	8.0	3,453	647.8	−15.2	0.10	54	0.87	nw.	16.2	3,383	12,200	
						3,250	665.5	−15.0		60	0.99	nw.	17.8	3,184	11,420	
						3,000	688.1	−14.7		67	1.14	wnw.	19.7	2,939	10,450	
10:32	958.6	5.7	68	wnw.	8.0	2,870	700.1	−14.6	0.81	71	1.21	wnw.	20.7	2,812	9,830	
						2,750	711.5	−13.6		70	1.32	wnw.	20.1	2,694	9,150	
						2,500	735.5	−11.6		67	1.51	wnw.	18.9	2,450	7,740	
						2,250	760.2	− 9.6		65	1.75	nw.	17.6	2,205	6,630	
						2,000	785.0	− 7.6		62	1.99	nw.	16.4	1,960	5,850	
						1,750	810.0	− 5.5		60	2.30	nw.	15.2	1,715	5,080	
10:54	959.0	6.5	63	wnw.	7.2	1,676	817.5	− 4.9	0.70	59	2.39	nw.	14.8	1,643	4,850	
						1,500	835.7	− 3.7		58	2.60	nw.	13.2	1,470	4,210	
						1,250	862.6	− 1.9		57	2.98	nw.	10.9	1,225	3,080	

*More than 8,000 volts.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 26, 1917, series (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
11:11	959.2	6.1	66	nw.	7.2	1,189	869.4	− 1.5	0.72	57	3.07	nw.	10.3	1,166	2,800	
						1,000	890.2	− 0.1		57	3.45	nw.	9.2	980	2,230	
11:20	959.2	6.4	61	wnw.	7.2	773	915.7	1.5	1.30	57	3.88	nw.	7.8	758	1,540	
						750	918.5	1.8		57	3.97	nw.	7.8	735	1,470	
						500	947.4	5.0		60	5.23	wnw.	7.4	490	430	
11:25	959.2	6.4	61	wnw.	7.2	396	959.2	6.4		61	5.86	wnw.	7.2	388		Few Ci., wnw.

October 26, 1917, series (No. 2).

P. M.																
12:47	959.2	9.1	45	wnw.	3.6	396	959.2	9.1		45	5.20	wnw.	3.6	388		Few Ci., wnw.; Few Cu., n.
						500	946.6	8.3		45	4.93	wnw.	4.3	490		5/10 Ci., w.; Few Cu., w.
						750	918.3	6.4		46	4.42	wnw.	5.9	735		
						1,000	890.7	4.5		47	3.96	w.	7.6	980		
						1,250	864.0	2.6		48	3.54	w.	9.2	1,225		
2:33	959.1	11.0	38	wsw.	5.8	1,384	850.2	1.6	0.76	48	3.29	w.	10.1	1,357		
						1,500	838.0	0.7		49	3.15	w.	11.0	1,470	4,120	
						1,750	812.1	− 1.2		52	2.88	w.	12.9	1,715	5,250	
						2,000	787.0	− 3.0		56	2.66	w.	14.9	1,960	6,390	
						2,250	762.6	− 4.9		59	2.39	w.	16.8	2,205	7,520	
						2,500	738.5	− 6.8		62	2.13	w.	18.8	2,450	8,610	
3:09	959.5	10.6	42	w.	7.2	2,527	736.3	− 7.0	0.75	62	2.10	w.	19.0	2,476	8,690	
						2,750	715.0	− 8.4		63	1.88	w.	19.3	2,694	9,390	8/10 Ci., w.; Few Cu., w.
						3,000	692.1	− 9.9		65	1.70	w.	19.6	2,939	10,160	
						3,250	670.0	−11.5		67	1.52	w.	19.9	3,184	10,940	
						3,500	648.6	−13.1		68	1.33	w.	20.2	3,429	11,670	
						3,750	627.8	−14.6		70	1.20	w.	20.5	3,673	12,400	7/10 Ci., w.; 1/10 St.Cu., w.
3:30	959.6	10.7	43	wsw.	5.8	3,956	610.7	−15.9	0.54	71	1.08	w.	20.8	3,875	13,000	
						3,750	627.8	−14.9		73	1.22	w.	20.9	3,673	12,050	
						3,500	648.6	−13.8		75	1.38	w.	21.0	3,429	10,900	
						3,250	670.0	−12.6		78	1.60	wnw.	21.2	3,184	9,740	
						3,000	692.1	−11.5		80	1.82	wnw.	21.3	2,939	8,590	
						2,750	715.0	−10.3		83	2.10	wnw.	21.4	2,694	7,440	
4:05	959.8	10.5	45	wsw.	6.7	2,594	729.1	− 9.6	0.79	84	2.26	wnw.	21.5	2,542	6,750	
						2,500	738.5	− 8.9		83	2.37	wnw.	20.7	2,450	6,390	
						2,250	762.6	− 6.9		80	2.73	wnw.	18.6	2,205	5,440	
						2,000	787.8	− 4.9		77	3.12	w.	16.5	1,960	4,490	10/10 St.Cu., w.
						1,750	813.7	− 2.9		74	3.55	w.	14.4	1,715	3,660	
						1,500	839.7	− 1.0		71	3.99	wsw.	12.3	1,470	3,150	
4:25	960.0	10.0	47	sw.	5.8	1,352	855.1	0.2	1.01	69	4.28	wsw.	11.0	1,325	2,750	
						1,250	865.4	1.2		66	4.40	wsw.	10.7	1,225	2,100	
						1,000	891.9	3.8		59	4.73	wsw.	10.0	980	490	
						750	916.6	6.3		51	4.87	wsw.	9.3	735	0	
4:46	960.3	9.4	54	wsw.	4.0	680	927.8	7.0	0.88	49	4.91	wsw.	9.1	667	0	
						500	948.3	8.6		52	5.81	w.	5.9	490	0	
4:56	960.4	9.5	53	w.	4.0	396	960.4	9.5		53	6.29	w.	4.0	388		10/10 St.Cu., w.

October 26–27, 1917, series (No. 3).

P. M.																
8:09	964.8	5.8	68	nw.	3.1	396	964.8	5.8		68	6.27	nw.	3.1	388		9/10 St.Cu., nw.
						500	952.8	5.2		67	5.93	nw.	6.0	490	0	
						750	923.9	3.9		63	5.09	nw.	13.1	735	0	
8:21	965.1	5.4	67	nnw.	6.3	817	916.4	3.5	0.55	62	4.87	nw.	15.0	801	0	
						1,000	895.5	1.9		59	4.14	nw.	14.8	980	630	
						1,250	868.0	− 0.2		55	3.31	nw.	14.5	1,225	1,490	8/10 St.Cu., nw.
						1,500	841.3	− 2.3		50	2.52	wnw.	14.2	1,470	2,730	
						1,750	815.8	− 4.5		46	1.93	wnw.	13.9	1,715	3,510	
						2,000	790.1	− 6.6		42	1.47	wnw.	13.6	1,960	4,280	7/10 A.St., wnw.; 1/10 St.Cu., nw.
9:13	966.4	3.5	61	nw.	4.9	2,037	786.6	− 6.9	0.85	41	1.40	wnw.	13.6	1,996	4,430	
						2,250	765.1	− 8.4		47	1.41	wnw.	14.2	2,205	5,280	
						2,500	740.8	−10.2		55	1.40	wnw.	15.0	2,450	6,270	
						2,750	717.0	−11.9		62	1.36	wnw.	15.7	2,694	7,260	
9:28	966.5	3.2	63	nw.	3.1	2,786	713.8	−12.2	0.71	63	1.34	wnw.	15.8	2,730	7,400	
						3,000	693.4	−13.5		55	1.04	wnw.	16.5	2,939	8,190	
						3,250	670.8	−14.9		45	0.75	wnw.	17.3	3,184	9,010	
						3,500	648.6	−16.4		36	0.52	wnw.	18.1	3,429	9,690	6/10 Ci.St., wnw.; 4.10 A.St., wnw.
						3,750	627.3	−17.9		26	0.33	wnw.	19.0	3,673		
10:18	966.9	2.4	71	nw.	4.9	3,856	618.7	−18.5	0.54	22	0.26	wnw.	19.3	3,777		Faint lunar halo, 22° radius, from 9:48 to 11:48 p. m.
						3,750	627.3	−18.0		23	0.29	wnw.	18.9	3,673		
						3,500	648.5	−16.8		27	0.38	wnw.	18.0	3,429	9,240	
						3,250	670.2	−15.6		30	0.47	wnw.	17.1	3,184	7,950	
						3,000	692.8	−14.4		34	0.59	nw.	16.2	2,939	6,650	
						2,750	715.8	−13.1		37	0.73	nw.	15.3	2,694	5,950	4/10 Ci.St., wnw.; 4/10 A.St., wnw.
						2,500	739.6	−11.9		40	0.88	nw.	14.4	2,450	5,280	
						2,250	764.1	−10.7		44	1.07	nw.	13.5	2,205	4,600	
11:03	966.9	1.9	69	nw.	4.5	2,225	766.1	−10.6	0.29	44	1.08	nw.	13.4	2,180	4,540	
						2,000	789.0	− 9.9		50	1.31	nw.	12.7	1,960	3,970	
						1,750	815.0	− 9.2		56	1.56	nw.	12.0	1,715	3,350	
11:16	967.1	1.4	69	wnw.	4.0	1,612	829.2	− 8.8	0.92	59	1.71	nw.	11.6	1,580	3,000	
						1,500	841.3	− 7.8		58	1.83	nw.	12.6	1,470	2,540	6/10 Ci.St., wnw.
						1,250	868.7	− 5.5		56	2.15	nw.	14.8	1,225	1,530	
						1,000	896.5	− 3.2		54	2.53	wnw.	17.1	980	600	
11:42	967.4	1.0	69	wnw.	5.4	840	915.1	− 1.7	0.61	53	2.81	wnw.	18.5	824	0	
						750	925.5	− 1.2		56	3.10	wnw.	15.8	735	0	
						500	955.0	0.4		65	4.09	wnw.	8.1	490	0	
11:48	967.5	1.0	69	wnw.	4.9	396	967.5	1.0		69	4.53	wnw.	4.9	388		3/10 Ci., wnw.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 27, 1917, series (No. 4).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
12:35	967.8	0.4	68	wnw.	4.5	396	967.8	0.4	.....	68	4.28	wnw.	4.5	388	.....	4/10 Ci., wnw.
12:37	967.8	0.2	70	wnw.	4.5	478	957.9	0.9	−0.62	66	4.30	wnw.	15.3	469	0	
.....	.....	.....	.....	.....	.....	500	955.0	0.8	.....	65	4.21	wnw.	15.4	490	0	
.....	.....	.....	.....	.....	.....	750	925.5	−0.3	.....	54	3.22	wnw.	16.9	735	0	
12:46	967.8	0.0	71	wnw.	4.5	767	923.5	−0.4	0.45	53	3.13	wnw.	17.0	752	0	
.....	.....	.....	.....	.....	.....	1,000	896.9	−1.9	.....	55	2.87	nw.	17.7	980	930	
12:56	967.9	0.0	72	wnw.	4.5	1,218	873.2	−3.3	0.64	57	2.64	nw.	18.3	1,192	1,800	
.....	.....	.....	.....	.....	.....	1,250	869.5	−3.6	.....	58	2.62	nw.	18.3	1,225	2,040	
.....	.....	.....	.....	.....	.....	1,500	842.9	−5.6	.....	64	2.44	nw.	18.3	1,470	3,890	
.....	.....	.....	.....	.....	.....	1,750	816.7	−7.6	.....	71	2.28	nw.	18.3	1,715	5,330	
1:16	967.8	0.0	73	wnw.	4.5	1,945	795.7	−9.2	0.81	76	2.12	nw.	18.3	1,906	6,150	
.....	.....	.....	.....	.....	.....	2,000	790.0	−9.1	.....	73	2.05	nw.	18.1	1,960	6,380	
1:19	967.8	0.0	72	wnw.	4.5	2,169	772.7	−8.8	−0.18	64	1.85	nw.	17.6	2,126	7,080	8/10 Ci.St., wnw.
.....	.....	.....	.....	.....	.....	2,250	764.2	−9.3	.....	61	1.68	nw.	17.8	2,205	7,420	
.....	.....	.....	.....	.....	.....	2,500	739.5	−10.9	.....	51	1.22	nw.	18.5	2,450	8,590	
.....	.....	.....	.....	.....	.....	2,750	716.1	−12.4	.....	41	0.86	nw.	19.1	2,694	9,760	
.....	.....	.....	.....	.....	.....	3,000	693.0	−14.0	.....	31	0.56	nw.	19.8	2,939	10,950	3/10 Ci., wnw.
1:57	967.6	−0.1	75	wnw.	4.5	3,195	675.7	−15.2	0.62	23	0.37	nw.	20.3	3,130	11,950	
.....	.....	.....	.....	.....	.....	3,250	670.1	−15.7	.....	23	0.36	nw.	20.3	3,184	12,230	
.....	.....	.....	.....	.....	.....	3,500	648.3	−18.0	.....	26	0.32	wnw.	20.2	3,429	13,590	
2:17	967.6	−0.3	74	wnw.	4.5	3,637	636.3	−19.3	0.67	27	0.30	wnw.	20.0	3,563	.....	
.....	.....	.....	.....	.....	.....	3,500	648.3	−18.7	.....	31	0.36	wnw.	20.9	3,429	13,610	
.....	.....	.....	.....	.....	.....	3,250	670.0	−17.7	.....	40	0.51	wnw.	22.5	3,184	12,620	Few Ci., wnw.; 1/10 A.Cu., wnw.
.....	.....	.....	.....	.....	.....	3,000	692.5	−16.7	.....	48	0.68	wnw.	24.1	2,939	11,640	
.....	.....	.....	.....	.....	.....	2,750	715.7	−15.6	.....	56	0.87	nw.	25.8	2,694	10,650	
.....	.....	.....	.....	.....	.....	2,500	739.5	−14.6	.....	64	1.09	nw.	27.4	2,450	9,360	
3:05	967.6	−0.9	75	wnw.	3.6	2,302	758.3	−13.8	0.75	71	1.31	nw.	28.7	2,256	8,300	
.....	.....	.....	.....	.....	.....	2,250	763.8	−13.4	.....	71	0.95	nw.	28.1	2,205	7,960	
.....	.....	.....	.....	.....	.....	2,000	788.9	−11.5	.....	71	1.61	nw.	24.9	1,960	6,360	
.....	.....	.....	.....	.....	.....	1,750	815.1	−9.6	.....	72	1.93	wnw.	21.8	1,715	4,740	Cloudless.
.....	.....	.....	.....	.....	.....	1,500	841.9	−7.7	.....	72	2.29	wnw.	18.7	1,470	3,430	
.....	.....	.....	.....	.....	.....	1,250	869.1	−5.8	.....	72	2.70	wnw.	15.6	1,225	2,330	
3:33	967.4	−1.4	80	w.	4.0	1,221	872.0	−5.6	0.96	72	2.74	wnw.	15.2	1,197	2,200	
.....	.....	.....	.....	.....	.....	1,000	896.9	−3.5	.....	66	3.01	wnw.	15.6	980	1,130	
.....	.....	.....	.....	.....	.....	750	925.5	−1.1	.....	59	3.29	w.	16.1	735	0	
3:47	967.3	−1.3	81	w.	4.0	712	929.8	−0.7	−0.19	58	3.34	w.	16.2	698	0	
.....	.....	.....	.....	.....	.....	500	955.0	−1.1	.....	74	4.12	w.	8.0	490	0	
3:51	967.3	−1.3	82	w.	4.0	396	967.3	−1.3	.....	82	4.49	w.	4.0	388	.....	Cloudless.

October 27, 1917, series (No. 5).

Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.																
4:47	967.2	−1.5	82	w.	3.6	396	967.2	−1.5	.....	82	4.42	w.	3.6	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	954.5	−1.2	.....	74	4.09	w.	7.9	490	0	
4:52	967.2	−1.4	80	w.	3.6	645	937.6	−0.7	−0.32	62	3.57	w.	13.8	632	0	
.....	.....	.....	.....	.....	.....	750	925.4	−1.2	.....	63	3.48	w.	13.4	735	30	Few A.Cu., wnw.
.....	.....	.....	.....	.....	.....	1,000	896.6	−2.3	.....	64	3.23	wnw.	12.6	980	1,320	
5:23	967.2	−1.7	83	w.	3.6	1,094	885.9	−2.7	0.45	65	3.17	wnw.	12.3	1,073	1,800	4/10 A.Cu., wnw.
.....	.....	.....	.....	.....	.....	1,250	868.6	−3.9	.....	66	2.91	wnw.	13.4	1,225	2,860	
.....	.....	.....	.....	.....	.....	1,500	841.0	−5.9	.....	68	2.52	wnw.	15.3	1,470	4,570	
.....	.....	.....	.....	.....	.....	1,750	814.8	−7.9	.....	69	2.15	wnw.	17.1	1,715	6,570	8/10 A.Cu., wnw.
.....	.....	.....	.....	.....	.....	2,000	789.0	−9.9	.....	71	1.86	whw.	18.9	1,960	9,140	
.....	.....	.....	.....	.....	.....	2,250	764.0	−11.9	.....	72	1.58	wnw.	20.7	2,205	12,060	3/10 A.Cu., wnw.
6:08	967.2	−1.0	78	w.	3.6	2,330	756.1	−12.5	0.79	73	1.51	wnw.	21.3	2,283	11,770	
.....	.....	.....	.....	.....	.....	2,500	738.9	−13.5	.....	70	1.32	wnw.	20.9	2,450	11,400	
.....	.....	.....	.....	.....	.....	2,750	714.3	−14.9	.....	67	1.12	wnw.	20.4	2,694	10,850	
.....	.....	.....	.....	.....	.....	3,000	690.7	−16.4	.....	62	0.90	wnw.	19.9	2,939	10,300	
.....	.....	.....	.....	.....	.....	3,250	668.0	−17.8	.....	57	0.72	w.	19.4	3,184	9,260	
.....	.....	.....	.....	.....	.....	3,500	646.5	−19.3	.....	53	0.58	w.	18.8	3,429	10,340	
.....	.....	.....	.....	.....	.....	3,750	625.7	−20.7	.....	49	0.47	w.	18.3	3,673	9,750	Few A.Cu., wnw.
7:02	966.9	−1.3	78	w.	4.5	3,905	612.5	−21.6	0.60	46	0.40	w.	18.0	3,825	9,800	
.....	.....	.....	.....	.....	.....	3,750	625.7	−20.7	.....	46	0.44	w.	17.7	3,673	(*)	
.....	.....	.....	.....	.....	.....	3,500	646.5	−19.1	.....	45	0.50	w.	17.2	3,429	(*)	
.....	.....	.....	.....	.....	.....	3,250	668.0	−17.6	.....	45	0.58	w.	16.7	3,184	(*)	
.....	.....	.....	.....	.....	.....	3,000	690.7	−16.1	.....	43	0.64	w.	16.1	2,939	14,480	
.....	.....	.....	.....	.....	.....	2,750	714.3	−14.6	.....	42	0.72	w.	15.6	2,694	12,420	
7:44	966.9	−0.4	79	w.	3.6	2,639	725.2	−13.9	−0.27	42	0.77	w.	15.6	2,586	11,510	
7:50	966.9	−0.2	78	w.	4.0	2,528	735.8	−14.2	0.69	51	0.91	w.	15.4	2,477	10,750	
.....	.....	.....	.....	.....	.....	2,500	738.9	−14.0	.....	51	0.92	w.	15.4	2,450	10,610	
.....	.....	.....	.....	.....	.....	2,250	764.0	−12.3	.....	55	1.16	w.	15.4	2,205	9,350	
.....	.....	.....	.....	.....	.....	2,000	789.0	−10.6	.....	58	1.43	w.	15.4	1,960	8,080	Cloudless.
.....	.....	.....	.....	.....	.....	1,750	814.8	−8.9	.....	62	1.77	w.	15.4	1,715	6,440	
8:21	966.9	0.9	71	w.	5.8	1,534	837.5	−7.4	0.73	65	2.12	w.	15.4	1,504	5,000	
.....	.....	.....	.....	.....	.....	1,500	841.0	−7.2	.....	64	2.12	w.	15.2	1,470	4,730	
.....	.....	.....	.....	.....	.....	1,250	868.6	−5.3	.....	60	2.35	w.	14.6	1,225	2,780	
.....	.....	.....	.....	.....	.....	1,000	896.6	−3.5	.....	56	2.55	wnw.	13.8	980	1,020	
8:48	966.9	1.9	64	wnw.	5.8	784	921.1	−1.9	1.01	53	2.77	wnw.	13.2	769	930	
.....	.....	.....	.....	.....	.....	750	925.4	−1.6	.....	54	2.89	wnw.	12.5	735	850	
.....	.....	.....	.....	.....	.....	500	954.5	1.0	.....	61	4.01	w.	7.1	490	250	
8:53	966.9	2.0	64	w.	4.9	396	966.9	2.0	.....	64	4.52	w.	4.9	388	.....	Few A.Cu., wnw.

October 27, 1917, series (No. 6).

Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.																
9:40	966.4	3.2	55	wnw.	8.5	396	966.4	3.2	.....	55	4.23	wnw.	8.5	388	.....	Few A.Cu., nw.
.....	.....	.....	.....	.....	.....	500	954.0	2.3	.....	57	4.11	wnw.	9.1	490	710	
.....	.....	.....	.....	.....	.....	750	924.8	0.2	.....	62	3.84	w.	10.6	735	2,430	
9:52	966.3	3.6	50	wnw.	6.3	782	921.0	−0.1	0.85	63	3.82	w.	10.8	767	2,610	
.....	.....	.....	.....	.....	.....	1,000	896.1	−1.9	.....	63	3.29	w.	13.3	980	3,670	

* More than 10,000 volts.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 27, 1917, series (No. 6)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						1,250	868.3	−3.9	.....	62	2.73	w.	15.4	1,225	4,380	Few A.Cu., nw.
10:07	966.2	3.8	49	wnw.	8.0	1,296	863.4	−4.3	0.82	62	2.64	w.	15.9	1,270	5,230	
						1,500	841.0	−5.8	.....	64	2.40	w.	16.8	1,470	6,530	
						1,750	814.2	−7.6	.....	67	2.15	w.	18.0	1,715	9,890	
						2,000	788.6	−9.4	.....	70	1.92	w.	19.1	1,960	11,030	
10:29	966.2	3.9	48	wnw.	7.2	2,062	782.6	−9.8	0.73	71	1.87	w.	19.4	2,021	11,310	
10:33	966.2	4.1	48	wnw.	8.5	2,146	774.1	−9.0	−0.95	58	1.65	w.	18.4	2,103	11,690	
						2,250	763.5	−9.6	.....	54	1.45	w.	19.1	2,205	12,250	Few Ci., nw.
						2,500	739.1	−11.0	.....	44	1.04	w.	20.8	2,450	13,990	
						2,750	715.6	−12.5	.....	34	0.70	wnw.	22.5	2,694	15,720	
						3,000	692.5	−13.9	.....	24	0.44	wnw.	24.1	2,939	17,130	
11:15	966.0	5.1	49	wnw.	7.2	3,184	675.9	−15.0	0.58	16	0.26	wnw.	25.4	3,119	17,500	
						3,000	692.5	−13.9	.....	19	0.35	wnw.	24.1	2,939	17,500	1/10 Ci., wnw.; Few St.Cu., w.
						2,750	715.6	−12.5	.....	24	0.50	wnw.	22.4	2,694	15,360	
						2,500	739.1	−11.1	.....	29	0.68	wnw.	20.7	2,450	13,220	
						2,250	763.5	−9.6	.....	33	0.89	wnw.	19.0	2,205	11,070	4/10 Ci.St., wnw.; 1/10 St. Cu., w.
P. M.																
12:28	964.9	6.2	49	w.	6.7	2,214	766.9	−9.4	0.83	34	0.93	wnw.	18.8	2,170	10,730	
12:33	964.8	6.2	50	w.	9.8	2,022	786.2	−7.8	0.06	33	1.04	w.	16.4	1,982	8,940	
						2,000	788.6	−7.8	.....	33	1.04	w.	16.2	1,960	8,740	
						1,750	814.0	−7.6	.....	33	1.06	wsw.	14.0	1,715	6,400	
12:38	964.7	6.1	50	w.	8.0	1,664	822.7	−7.6	0.76	33	1.06	wsw.	13.2	1,631	5,600	
						1,500	840.5	−6.3	.....	51	1.83	wsw.	12.3	1,470	4,060	
12:47	964.5	6.6	49	w.	10.7	1,310	860.9	−4.9	1.10	71	2.88	wsw.	11.3	1,284	3,560	
						1,250	867.3	−4.2	.....	69	2.97	wsw.	11.3	1,225	3,420	
						1,000	894.7	−1.1	.....	62	3.45	wsw.	11.5	980	2,430	
1:11	963.9	6.6	45	w.	8.5	765	921.0	1.8	1.36	55	3.83	wsw.	11.6	750	810	Few Ci., wnw.; Few St.Cu., w.
						750	923.0	2.0	.....	55	3.88	wsw.	11.4	735	780	
						500	952.0	5.4	.....	53	4.75	w.	8.4	490	230	
1:16	964.6	6.8	52	w.	7.2	396	964.6	6.8	.....	52	5.14	w.	7.2	388	.....	

October 27, 1917, series (No. 7).

P. M.																
2:05	962.8	7.8	47	ssw.	8.5	396	962.8	7.8	.....	47	4.97	ssw.	8.5	388	.....	3/10 A.Cu., wnw.; Few St. Cu., w.
						500	950.8	6.8	.....	49	4.84	ssw.	9.3	490	350	
						750	922.0	4.5	.....	52	4.38	sw.	11.1	735	1,200	
2:12	962.7	8.0	56	sw.	8.5	873	908.2	3.4	0.92	54	4.21	sw.	12.0	856	1,570	
						1,000	893.9	2.4	.....	54	3.92	sw.	12.5	980	1,900	7/10 A.Cu., wnw.
						1,250	866.4	0.3	.....	55	3.43	sw.	13.5	1,225	4,120	
						1,500	840.0	−1.7	.....	56	2.97	wsw.	14.4	1,470	5,840	
						1,750	814.0	−3.8	.....	57	2.53	wsw.	15.4	1,715	6,730	
3:00	962.5	7.9	46	wsw.	6.3	1,776	811.1	−4.0	0.82	57	2.49	wsw.	15.5	1,741	6,820	
						2,000	788.0	−5.2	.....	61	2.40	wsw.	17.9	1,960	7,880	
						2,250	762.8	−6.5	.....	66	2.33	wsw.	20.6	2,205	9,150	
						2,500	738.4	−7.7	.....	70	2.23	wsw.	23.3	2,450	10,410	
						2,750	715.2	−9.0	.....	75	2.13	wsw.	26.0	2,694	11,670	
						3,000	702.3	−10.3	.....	80	2.02	wsw.	28.7	2,939	12,930	
3:41	962.5	7.8	47	wsw.	7.6	3,013	691.1	−10.4	0.23	80	2.01	wsw.	28.8	2,952	13,000	
						3,000	702.3	−10.4	.....	80	2.01	wsw.	28.6	2,939	12,390	9/10 St.Cu., w.
						2,750	714.7	−10.5	.....	85	2.11	wsw.	23.9	2,694	9,610	
						2,500	737.5	−10.7	.....	90	2.20	w.	19.3	2,450	9,120	
4:08	962.4	7.5	50	wsw.	5.4	2,291	757.7	−10.8	0.83	94	2.27	w.	15.4	2,245	8,710	
						2,250	761.7	−10.5	.....	91	2.26	w.	15.2	2,205	8,620	
						2,000	786.9	−8.4	.....	74	2.21	w.	14.3	1,960	8,130	
						1,750	812.8	−6.3	.....	57	2.05	w.	13.3	1,715	6,890	
4:32	962.3	7.3	51	wsw.	3.6	1,608	827.1	−5.1	−0.29	47	1.87	w.	12.8	1,576	6,030	
						1,500	838.8	−5.4	.....	62	2.41	w.	14,1	1,470	5,380	
4:42	962.2	7.2	52	sw.	3.6	1,436	845.6	−5.6	1.25	71	2.71	w.	14.8	1,408	4,990	
						1,250	865.4	−3.2	.....	69	3.23	wsw.	13.3	1,225	3,410	
4:54	962.1	7.0	57	sw.	3.1	1,012	891.8	−0.1	1.10	66	4.00	sw.	11.3	992	950	
						1,000	892.9	0.0	.....	66	4.03	sw.	11.1	980	930	
						750	921.0	2.8	.....	62	4.63	sw.	7.8	735	600	
						500	950.0	5.6	.....	59	5.37	ssw.	4.5	490	260	
5:11	962.2	6.7	57	ssw.	3.1	396	962.2	6.7	.....	57	5.59	ssw.	3.1	388	.....	10/10 St., sw.

October 28, 1917.

A. M.																
7:12	961.2	3.6	76	n.	3.1	396	961.2	3.6	.....	76	6.01	n.	3.1	388	.....	5/10 A.Cu., wsw.; 3/10 St., nne.
						500	948.9	3.3	.....	80	6.19	n.	8.7	490	80	
7:17	961.4	2.8	87	n.	4.9	620	935.2	3.0	0.27	85	6.44	nne.	15.2	608	170	Altitude of St. base about 600m.
						750	920.7	2.4	.....	83	6.03	nne.	13.8	735	970	
						1,000	893.0	1.3	.....	80	5.37	ne.	11.2	980	3,940	4/10 A.Cu., wsw.; 4/10 St., nne.
						1,250	866.0	0.2	.....	76	4.71	ne.	8.6	1,225	3,540	
8:51	963.1	2.8	91	ne.	5.4	1,345	856.2	− 0.2	0.44	75	4.51	ne.	7.6	1,318	3,700	
						1,500	840.0	0.3	.....	73	4.55	ne.	6.6	1,470	3,960	
						1,750	814.2	1.3	.....	69	4.63	ne.	4.9	1,715	4,380	
8:58	963.1	2.8	91	ne.	5.4	1,964	792.4	2.1	−0.54	66	4.69	ne.	3.5	1,925	.....	10/10 St., nne.
						1,750	814.2	0.6	.....	71	4.53	ne.	5.3	1,715	4,370	Altitude of St. base about 700m.
						1,500	840.0	− 1.0	.....	78	4.38	ne.	7.4	1,470	5,150	
9:16	963.5	2.5	91	nne.	5.4	1,481	841.3	− 1.3	0.45	78	4.27	ne.	7.6	1,452	5,200	
9:21	963.6	2.0	92	nne.	6.3	1,283	862.4	− 0.4	−1.44	76	4.49	ne.	7.6	1,258	5,860	
						1,250	866.0	− 0.9	.....	80	4.54	ne.	9.1	1,225	5,980	
9:30	963.8	1.2	91	nne.	7.2	1,123	879.8	− 2.7	0.37	94	4.59	ne.	14.8	1,101	6,430	
						1,000	893.5	− 2.2	.....	93	4.73	ne.	14.0	980	6,580	
						750	922.0	− 1.3	.....	91	4.99	nne.	12.5	735	3,800	
						500	951.6	− 0.4	.....	90	5.32	n.	10.9	490	1,060	
10:00	964.5	0	89	n.	10.3	396	964.5	0	.....	89	5.44	n.	10.3	388	.....	10/10 St., nne.

TABLE 7.—*Free-air data from kite flights at Drexel Aerological Station, October, 1917*—Continued.

October 29, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
7:12	974.7	−5.6	78	nnw.	7.6	396	974.7	− 5.6	.....	78	2.97	nnw.	7.6	388	.....	10/10 St.Cu., nnw.
						500	961.5	− 6.5	.....	79	2.79	nnw.	10.4	490	250	Dry snow from 7:12 to 8:25 a. m.
						750	931.3	− 7.5	.....	83	2.68	nnw.	15.9	735	850	
7:23	974.7	−5.4	75	nnw.	5.4	849	919.7	− 9.4	0.84	84	2.30	nnw.	19.6	832	1,390	
						1,000	902.0	−10.4	.....	87	2.18	nnw.	19.1	980	2,590	
						1,250	873.2	−13.2	.....	95	1.85	nnw.	18.2	1,225	4,520	
						1,500	844.9	−16.6	.....	97	1.38	nnw.	17.3	1,470	6,190	
7:45	974.7	−5.1	72	nnw.	5.4	1,641	829.0	−17.0	0.95	100	1.37	nnw.	16.8	1,608	7,100	Altitude of St.Cu., base about 1,600 m.
						1,750	816.8	−17.3	.....	100	1.33	nnw.	14.9	1,715	7,880	
8:18	974.7	−5.0	64	nnw.	8.9	1,895	801.0	−17.8	−2.14	100	1.27	nnw.	12.4	1,857	.....	
8:20	974.7	−5.0	66	nnw.	8.9	1,871	803.4	−18.9	0.67	100	1.14	nnw.	12.2	1,834	8,600	
						1,750	816.8	−18.1	.....	100	1.23	nnw.	12.3	1,715	7,850	Dry snow from 8:48 to 8:50 a. m.
						1,500	844.1	−16.4	.....	100	1.45	nnw.	13.5	1,470	6,920	
9:13	974.7	−4.5	58	nnw.	8.9	1,275	869.7	−14.9	1.06	100	1.67	nnw.	14.3	1,250	4,900	[1,300 m.
						1,250	872.8	−14.6	.....	99	1.69	nnw.	14.5	1,225	4,740	Altitude of St.Cu. base about
						1,000	902.0	−12.0	.....	90	1.95	nnw.	15.4	980	3,190	Dry snow from 9:44 to 10:30 a. m
10:46	974.4	−3.4	54	nnw.	6.7	793	926.0	− 9.8	1.66	82	2.16	nnw.	16.0	778	2,000	
						750	931.3	− 9.1	.....	79	2.22	nnw.	15.0	735	1,780	
						500	961.5	− 4.9	.....	60	2.43	nnw.	9.5	490	520	
10:53	974.3	−3.2	52	nnw.	6.7	396	974.3	− 3.2	.....	52	2.43	nnw.	6.7	388	.....	8/10 St.Cu., nnw.

October 30, 1917 (No. 1).

A. M.																
8:42	968.2	−5.4	90	wsw.	5.4	396	968.2	− 5.4	.....	90	3.49	wsw.	5.4	388	.....	6/10 Ci.St., w.; 4/10 A.St., wnw.
						500	955.0	− 5.2	.....	80	3.15	wsw.	5.6	490	0	
						750	925.5	− 4.7	.....	56	2.31	sw.	6.0	735	25,000	(*)
9:48	968.2	−3.7	81	ssw.	3.1	993	897.7	− 4.3	0.12	32	1.36	ssw.	6.4	974	.....	10/10 A.Cu., wnw.
						750	925.5	− 3.3	.....	43	2.00	ssw.	5.3	735	25,000	
						500	955.0	− 2.2	.....	53	2.70	ssw.	4.1	490	17,460	
10:32	967.9	−1.8	58	ssw.	3.6	396	967.9	− 1.8	.....	58	3.05	ssw.	3.6	388	.....	10/10 A.St., wnw.

October 30, 1917 (No. 2).

P. M.																
1:12	966.4	2.0	64	sw.	4.9	396	966.4	2.0	.....	64	4.52	sw.	4.9	388	.....	10/10 A.St., wnw.
						500	953.8	1.0	.....	63	4.14	sw.	4.9	490	0	
						750	924.5	− 1.3	.....	62	3.40	sw.	5.0	735	940	
2:45	966.1	1.2	53	sw.	4.5	910	905.8	− 2.8	0.86	61	2.95	sw.	5.1	892	.....	
						750	924.5	− 1.5	.....	59	3.18	sw.	4.8	490	.....	
						500	953.8	0.5	.....	56	3.54	sw.	4.2	735	.....	
2:59	966.2	1.3	55	sw.	4.0	396	966.2	1.3	.....	55	3.69	sw.	4.0	388	.....	10/10 A.St., wnw.

October 31, 1917.

P. M.																
1:15	972.5	5.2	55	nw.	3.6	396	972.5	5.2	.....	55	4.87	nw.	3.6	388	.....	4/10 A.Cu., wnw.
						500	960.0	4.3	.....	57	4.74	nw.	4.6	490	0	
						750	931.0	2.3	.....	63	4.54	nw.	6.9	735	1,080	3/10 Ci.St., wnw.
						1,000	902.5	0.2	.....	69	4.28	nw.	9.3	980	2,550	
1:51	972.3	6.7	50	nw.	3.1	1,076	894.0	− 0.4	0.82	71	4.20	nw.	10.0	1,055	3,000	
						1,250	874.9	− 1.8	.....	69	3.63	nw.	11.0	1,225	4,080	
						1,500	847.0	− 3.7	.....	67	3.00	nw.	12.4	1,470	5,620	
						1,750	820.2	− 5.7	.....	64	2.42	nw.	13.9	1,715	7,170	7/10 Ci.St., wnw.; Few Cu., nnw.
						2,000	794.4	− 7.6	.....	62	1.99	nnw.	15.3	1,960	8,710	Faint solar halo, 22° radius,
						2,250	770.0	− 9.6	.....	59	1.59	nnw.	16.7	2,205	9,600	from 2:18 to 2:50 p. m.
						2,500	745.9	−11.6	.....	56	1.26	nnw.	18.2	2,450	10,480	
2:34	972.3	8.0	42	n.	4.0	2,646	732.1	−12.7	0.78	55	1.12	nnw.	19.0	2,593	11,000	
						2,750	722.4	−13.0	.....	52	1.03	nnw.	18.9	2,694	11,450	
						3,000	699.2	−13.7	.....	46	0.86	nnw.	18.5	2,939	12,540	
						3,250	677.0	−14.4	.....	40	0.70	nnw.	18.2	3,184	13,620	
						3,500	655.0	−15.1	.....	33	0.54	nnw.	17.9	3,429	14,660	
						3,750	632.5	−15.8	.....	27	0.41	nnw.	17.5	3,673	.....	
3:09	972.4	7.6	42	nw.	5.4	3,756	632.0	−15.8	0.18	27	0.41	nnw.	17.5	3,679	.....	
						3,750	632.5	−15.8	.....	27	0.41	nnw.	17.5	3,673	.....	
						3,500	655.0	−15.6	.....	31	0.48	nnw.	17.2	3,429	14,070	
						3,250	677.0	−15.4	.....	36	0.57	nnw.	16.9	3,184	12,400	
						3,000	699.2	−15.2	.....	40	0.65	nnw.	16.8	2,939	10,740	4/10 Ci.St., wnw.
3:49	972.9	7.5	37	nnw.	5.8	2,756	721.5	−15.0	0.91	44	0.73	nnw.	16.2	2,700	9,110	
						2,750	722.4	−14.9	.....	44	0.73	nnw.	16.2	2,694	9,070	
						2,500	745.9	−12.7	.....	45	0.92	nnw.	15.4	2,450	7,430	
						2,250	770.0	−10.4	.....	45	1.13	nnw.	14.6	2,205	5,790	Few Ci.St., wnw.
						2,000	795.4	− 8.1	.....	46	1.41	nnw.	13.9	1,960	4,280	
						1,750	821.8	− 5.8	.....	47	1.76	nnw.	13.1	1,715	3,500	
						1,500	849.0	− 3.6	.....	48	2.17	nnw.	12.3	1,470	2,730	
						1,250	876.4	− 1.3	.....	48	2.63	nnw.	11.6	1,225	1,960	
4:48	973.5	6.4	43	nnw.	3.6	1,064	896.5	0.4	0.75	49	3.08	nnw.	11.0	1,043	1,380	
						1,000	904.0	0.9	.....	49	3.19	nnw.	10.3	980	1,180	
						750	932.3	2.8	.....	48	3.59	nnw.	7.5	735	410	
						500	961.2	4.6	.....	46	3.90	nnw.	4.8	490	0	
5:06	973.7	5.4	46	nnw.	3.6	396	973.7	5.4	.....	46	4.13	nnw.	3.6	388	.....	Few Ci.St., wnw.

* Parhelia at right and left of sun from 8:43 to 9:03 a. m. Circumzenithal arc about 6° long from 8:45 to 9:00 a. m. Solar halo, of 22° radius, from 9:03 to 9:14 a. m.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917.*

November 1, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*10^5 ergs.*	*volts.*	
7:57	980.1	− 2.9	85	nnw.	4.0	396	980.1	− 2.9	.....	85	4.08	nnw.	4.0	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	967.0	− 2.8	.....	84	4.06	nnw.	5.9	490	.....	
.....	.....	.....	.....	.....	.....	750	937.1	− 2.7	.....	82	4.00	nnw.	10.4	735	.....	
8:07	980.1	− 2.5	81	nnw.	4.5	794	932.1	− 2.7	−0.50	82	4.00	nnw.	11.2	779	.....	2/10 Ci., nnw.
.....	.....	.....	.....	.....	.....	1,000	908.3	− 3.8	.....	77	3.42	nnw.	12.4	980	.....	
8:25	980.2	− 1.8	79	nnw.	2.7	1,223	883.2	− 5.0	0.54	72	2.89	nnw.	13.7	1,199	3,300	
.....	.....	.....	.....	.....	.....	1,250	880.3	− 5.1	.....	71	2.84	nnw.	14.0	1,225	3,500	
.....	.....	.....	.....	.....	.....	1,500	853.0	− 6.0	.....	56	2.06	nnw.	16.3	1,470	5,380	
.....	.....	.....	.....	.....	.....	1,750	826.5	− 6.8	.....	42	1.44	nnw.	18.7	1,715	7,250	9/10 A.Cu., nnw.
11:07	980.8	3.3	53	nnw.	5.4	1,823	818.8	− 7.1	0.35	38	1.27	nnw.	19.4	1,787	7,800	
.....	.....	.....	.....	.....	.....	2,000	800.4	− 7.8	.....	35	1.10	nnw.	20.6	1,960	9,200	
.....	.....	.....	.....	.....	.....	2,250	775.7	− 8.7	.....	30	0.87	n.	22.4	2,205	11,170	
.....	.....	.....	.....	.....	.....	2,500	751.4	− 9.6	.....	26	0.70	n.	24.1	2,450	13,150	
.....	.....	.....	.....	.....	.....	2,750	727.3	−10.6	.....	22	0.54	nne.	25.9	2,694	.....	
.....	.....	.....	.....	.....	.....	3,000	703.5	−11.5	.....	17	0.38	nne.	27.6	2,939	.....	
11:39	981.0	3.6	57	n.	4.0	3,180	686.9	−12.2	0.39	14	0.30	nne.	28.9	3,115	.....	8/10 A.Cu., n.; 1/10 Cu., n.
.....	.....	.....	.....	.....	.....	3,000	703.5	−11.5	.....	13	0.30	nne.	27.1	2,939	.....	
.....	.....	.....	.....	.....	.....	2,750	726.9	−10.5	.....	12	0.30	n.	24.7	2,694	.....	
.....	.....	.....	.....	.....	.....	2,500	750.9	− 9.4	.....	11	0.30	nnw.	22.3	2,450	13,780	
P. M.																
12:05	981.1	3.5	60	n.	4.0	2,440	756.5	− 9.2	−0.50	11	0.31	nnw.	21.7	2,391	13,280	
.....	.....	.....	.....	.....	.....	2,250	775.0	− 8.2	.....	12	0.36	nnw.	18.9	2,205	11,640	
.....	.....	.....	.....	.....	.....	2,000	800.4	− 7.0	.....	13	0.44	nnw.	15.2	1,960	9,460	
12:36	980.9	5.4	54	n.	4.5	1,901	810.8	− 6.5	−0.49	13	0.46	nnw.	13.8	1,863	8,600	
.....	.....	.....	.....	.....	.....	1,750	826.5	− 7.2	.....	19	0.63	nnw.	16.3	1,715	7,290	
12:41	980.9	4.8	54	n.	4.5	1,717	830.2	− 7.4	−0.89	20	0.65	nnw.	16.8	1,683	7,000	
.....	.....	.....	.....	.....	.....	1,500	853.0	− 7.6	.....	26	0.83	nnw.	9.4	1,470	4,950	
12:51	980.8	4.3	54	n.	5.4	1,381	866.5	− 7.7	1.04	30	0.95	nnw.	5.3	1,354	3,820	
.....	.....	.....	.....	.....	.....	1,250	881.1	− 6.3	.....	40	1.44	nnw.	5.8	1,225	2,580	2/10 A.St., nnw.; 3/10 Cu., nnw.
.....	.....	.....	.....	.....	.....	1,000	909.6	− 3.8	.....	59	2.62	n.	6.8	980	960	
1:16	980.9	4.7	59	n.	4.9	753	938.3	− 1.2	1.74	78	4.31	n.	7.8	738	0	
.....	.....	.....	.....	.....	.....	500	968.1	3.2	.....	65	5.00	n.	5.5	490	0	
1:23	980.9	5.0	59	n.	4.5	396	980.9	5.0	.....	59	5.14	n.	4.5	388	.....	7/10 A.Cu., n.; 1/10 Cu., n.

November 2, 1917 (No. 1).

A. M.																
7:02	981.8	− 1.6	75	ssw.	6.7	396	981.8	− 1.6	.....	75	4.01	ssw.	6.7	388	.....	4/10 Ci.St., nnw.
.....	.....	.....	.....	.....	.....	500	968.9	0.3	.....	68	4.24	ssw.	8.8	490	350	
.....	.....	.....	.....	.....	.....	750	939.5	5.0	.....	50	4.36	sw.	13.8	735	1,190	
7:13	981.6	− 1.7	79	ssw.	8.0	765	937.7	5.3	−1.87	49	4.37	sw.	14.1	750	1,240	
.....	.....	.....	.....	.....	.....	1,000	911.4	9.6	.....	35	4.18	wnw.	5.4	980	2,900	3/10 Ci.St., nnw.
9:38	980.8	5.3	54	ssw.	6.7	1,028	908.1	10.1	−1.83	33	4.08	wnw.	4.4	1,008	3,090	2/10 Ci.St., nnw.
.....	.....	.....	.....	.....	.....	1,250	884.6	9.7	.....	35	4.21	wnw.	4.6	1,225	.....	
.....	.....	.....	.....	.....	.....	1,500	858.4	9.3	.....	36	4.22	wnw.	4.8	1,470	.....	
.....	.....	.....	.....	.....	.....	1,750	833.0	8.9	.....	38	4.33	wnw.	5.1	1,715	.....	
10:13	980.8	6.6	53	ssw.	7.6	1,873	820.5	8.7	0.21	39	4.39	wnw.	5.2	1,836	.....	
.....	.....	.....	.....	.....	.....	1,750	833.0	9.0	.....	37	4.25	w.	5.6	1,715	.....	
.....	.....	.....	.....	.....	.....	1,500	858.4	9.7	.....	34	4.09	wsw.	6.3	1,470	.....	
.....	.....	.....	.....	.....	.....	1,250	884.6	10.3	.....	31	3.88	sw.	7.1	1,225	.....	
10:38	980.8	7.9	48	ssw.	7.6	1,191	891.0	10.5	0.51	30	3.81	sw.	7.3	1,168	.....	
.....	.....	.....	.....	.....	.....	1,000	911.4	11.5	.....	30	4.07	sw.	7.5	980	3,830	
10:50	980.8	8.2	49	ssw.	8.5	855	927.8	12.2	−1.97	30	4.26	sw.	7.6	838	2,950	
.....	.....	.....	.....	.....	.....	750	939.5	10.1	.....	34	4.20	sw.	7.6	735	2,300	
11:01	980.8	8.5	49	ssw.	6.7	591	957.8	7.0	0.87	41	4.11	ssw.	7.6	579	1,270	
.....	.....	.....	.....	.....	.....	500	968.5	7.8	.....	42	4.44	ssw.	7.4	490	680	
11:04	980.8	8.7	43	ssw.	7.2	396	980.8	8.7	.....	43	5.51	ssw.	7.2	388	.....	3/10 Ci.St., nnw.

November 2, 1917 (No. 2).

A. M.																
11:46	980.3	11.0	46	ssw.	6.7	396	980.3	11.0	.....	46	6.04	ssw.	6.7	388	.....	3/10 Ci.St., nnw.
.....	.....	.....	.....	.....	.....	500	968.2	9.9	.....	47	5.73	ssw.	8.3	490	590	
P. M.																
12:03	980.1	11.2	44	ssw.	5.4	713	943.3	7.7	1.04	49	5.15	sw.	11.6	699	2,575	
.....	.....	.....	.....	.....	.....	750	939.2	8.1	.....	47	5.08	sw.	11.6	735	2,980	
.....	.....	.....	.....	.....	.....	1,000	911.2	11.0	.....	36	4.73	sw.	11.9	980	5,370	
12:15	979.9	11.8	44	sw.	6.7	1,034	907.3	11.4	−1.15	35	4.72	sw.	11.9	1,014	5,600	
.....	.....	.....	.....	.....	.....	1,250	884.4	10.9	.....	35	4.56	wsw.	9.8	1,225	6,950	2/10 Ci.St., nnw.
.....	.....	.....	.....	.....	.....	1,500	858.0	10.4	.....	34	4.29	w.	7.3	1,470	8,410	
.....	.....	.....	.....	.....	.....	1,750	831.6	9.8	.....	34	4.12	wnw.	4.9	1,715	9,510	1/10 Ci.St., nnw.
1:57	978.1	15.2	39	s.	8.0	1,849	821.9	9.6	0.22	34	4.06	wnw.	3.9	1,812	10,000	
.....	.....	.....	.....	.....	.....	2,000	806.5	8.8	.....	34	3.85	wnw.	5.0	1,960	10,070	
.....	.....	.....	.....	.....	.....	2,250	783.0	7.5	.....	34	3.52	wnw.	6.9	2,205	10,190	
.....	.....	.....	.....	.....	.....	2,500	760.0	6.1	.....	34	3.20	wnw.	8.8	2,450	10,300	
.....	.....	.....	.....	.....	.....	2,750	737.2	4.8	.....	33	2.84	wnw.	10.7	2,694	10,420	
.....	.....	.....	.....	.....	.....	3,000	714.8	3.5	.....	33	2.59	wnw.	12.6	2,939	10,530	
.....	.....	.....	.....	.....	.....	3,250	692.8	2.1	.....	33	2.35	wnw.	14.5	3,184	.....	
2:11	977.9	15.4	35	s.	7.6	3,384	681.0	1.4	0.51	33	2.23	wnw.	15.5	3,315	.....	
.....	.....	.....	.....	.....	.....	3,250	692.8	2.1	.....	33	2.35	wnw.	14.9	3,184	.....	
.....	.....	.....	.....	.....	.....	3,000	714.8	3.3	.....	32	2.48	wnw.	13.8	2,939	10,020	
.....	.....	.....	.....	.....	.....	2,750	737.2	4.5	.....	31	2.61	wnw.	12.7	2,694	9,020	
.....	.....	.....	.....	.....	.....	2,500	760.0	5.7	.....	30	2.75	w.	11.6	2,450	8,030	
.....	.....	.....	.....	.....	.....	2,250	783.0	6.9	.....	29	3.09	w.	10.5	2,205	7,210	
.....	.....	.....	.....	.....	.....	2,000	806.5	8.1	.....	29	3.13	w.	9.4	1,960	6,440	
2:46	977.5	16.3	38	ssw.	6.7	1,824	824.1	9.0	0.38	28	3.21	w.	8.6	1,784	5,900	Few Ci., nnw.
.....	.....	.....	.....	.....	.....	1,750	831.5	9.3	.....	28	3.28	w.	9.5	1,715	5,640	
.....	.....	.....	.....	.....	.....	1,500	857.0	10.2	.....	28	3.49	wsw.	12.7	1,470	4,740	
3:04	977.4	17.3	37	ssw.	8.0	1,353	872.2	10.8	0.26	28	3.63	wsw.	14.6	1,326	4,170	
.....	.....	.....	.....	.....	.....	1,250	883.0	11.1	.....	29	3.83	wsw.	14.0	1,225	3,570	
.....	.....	.....	.....	.....	.....	1,000	909.5	11.7	.....	32	4.40	sw.	12.6	980	2,130	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 2, 1917 (No. 2)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
3:17	977.3	16.7	36	ssw.	8.0	863	924.1	12.1	0.96	34	4.80	ssw.	11.8	846	1,350	
						750	937.0	13.2		34	5.16	ssw.	10.9	735	710	
						500	965.0	15.6		33	5.85	ssw.	8.8	490	0	
3:29	977.2	16.6	33	ssw.	8.0	396	977.2	16.6		33	6.23	ssw.	8.0	388		Few Ci., mnw.

November 3, 1917.

A. M.																
7:00	974.7	7.4	55	ssw.	4.0	396	974.7	7.4		55	5.66	ssw.	4.0	388		1/10 Ci.St., w.; 5/10 A.Cu., w.
						500	962.6	10.3		48	6.01	sw.	6.0	490	0	
						750	934.8	17.2		30	5.89	wsw.	10.7	735	0	
7:13	974.8	7.4	55	ssw.	3.6	865	922.0	20.4	2.77	22	5.27	wsw.	12.9	848	460	
						1,000	907.5	19.5		22	4.98	wsw.	12.6	980	980	
						1,250	881.0	17.8		23	4.69	wsw.	12.1	1,225	2,020	
						1,500	855.8	16.2		23	4.24	wsw.	11.5	1,470	3,150	
7:33	974.9	7.8	53	ssw.	3.6	1,555	850.6	15.8	0.67	23	4.13	wsw.	11.4	1,524	3,400	Few Ci., w.; 8/10 St., w.
						1,750	831.0	13.9		26	4.13	wsw.	10.7	1,715	4,330	
						2,000	807.0	11.4		31	4.18	sw.	9.8	1,960	5,510	
8:13	975.0	7.4	55	ssw.	4.0	2,073	799.8	10.7	0.98	32	4.12	sw.	9.5	2,032	5,880	
						2,250	783.3	9.2		33	3.84	sw.	9.2	2,205	6,350	Few Ci.St., w.; 7/10 A.St., w.
						2,500	760.4	7.1		34	3.43	wsw.	8.7	2,450	7,870	
						2,750	738.0	5.0		36	3.14	wsw.	8.2	2,694	9,800	
						3,000	715.7	2.9		37	2.79	w.	7.7	2,939	11,410	
						3,250	693.5	0.8		38	2.46	w.	7.3	3,184		
						3,500	671.2	− 1.3		40	2.19	w.	6.8	3,429		
9:35	975.0	9.0	53	ssw.	4.0	3,541	667.8	− 1.7	0.84	40	2.12	w.	6.7	3,469		
						3,500	671.2	− 1.3		40	2.19	w.	6.9	3,429		
						3,250	693.5	0.8		37	2.39	w.	7.9	3,184		
						3,000	715.2	2.9		34	2.56	wsw.	8.9	2,939	11,070	
						2,750	737.0	5.0		31	2.70	wsw.	9.8	2,694	9,630	
						2,500	759.0	7.1		28	2.82	sw.	10.8	2,450	8,880	3/10 Ci.w.; 4/10 A.St., w.
10:20	974.9	11.0	46	sw.	3.6	2,310	776.1	8.7	0.72	26	2.93	sw.	11.6	2,264	8,300	
						2,250	782.0	9.1		26	3.00	sw.	11.5	2,205	7,280	
						2,000	806.0	10.9		24	3.13	sw.	10.9	1,960	6,950	6/10 Ci., w.
						1,750	830.5	12.7		22	3.23	sw.	10.3	1,715	5,620	
						1,500	855.8	14.5		21	3.47	sw.	9.7	1,470	3,990	
						1,250	881.0	16.3		20	3.73	sw.	9.2	1,225	3,140	
10:59	974.7	13.2	37	sw.	3.6	999	907.2	18.1	−2.38	18	3.74	sw.	8.6	980	2,240	
						750	934.8	12.2		28	3.98	sw.	7.6	735	1,330	
11:12	975.0	13.5	38	sw.	4.0	684	942.0	10.6	1.04	30	3.83	sw.	7.4	671	1,080	
						500	962.6	12.5		35	5.07	sw.	5.2	490	390	
11:15	974.8	13.6	38	sw.	4.0	396	974.8	13.6		38	5.92	sw.	4.0	388		5/10 Ci., w.

November 4, 1917.

A. M.																
10:24	973.6	10.5	45	ssw.	5.8	396	973.6	10.5		45	5.72	ssw.	5.8	388		Few Ci., w.
						500	961.5	9.1		54	6.24	s.	7.7	490	0	
10:28	973.6	10.9	43	ssw.	6.7	526	958.5	8.7	1.38	56	6.30	s.	8.2	516	0	
10:55	973.6	13.4	39	s.	4.5	594	950.9	14.1	−7.94	32	5.15	s.	7.2	582	0	
						750	933.0	17.1		21	4.10	ssw.	7.1	735	320	
						1,000	906.2	18.9		14	3.06	sw.	7.0	980	830	
P. M.																
1:04	973.0	18.5	36	ssw.	4.9	1,025	903.7	19.2	−1.18	13	2.89	sw.	7.0	1,005	880	
						1,250	880.2	17.8		13	2.65	sw.	7.2	1,225	1,340	
						1,500	854.8	16.3		12	2.22	sw.	7.5	1,470	1,860	
						1,750	830.0	14.7		12	2.01	sw.	7.7	1,715	2,370	
						2,000	805.6	13.2		11	1.67	sw.	7.9	1,960	2,880	
1:38	972.7	18.9	40	s.	4.0	2,057	800.0	12.8	0.62	11	1.63	sw.	8.0	2,016	3,000	
						2,250	782.0	10.8		13	1.68	sw.	8.0	2,205		
2:20	972.6	20.1	32	s.	4.9	2,450	763.4	8.7	0.99	16	1.80	sw.	8.0	2,401		
						2,250	782.0	11.5		16	2.17	sw.	8.8	2,205		
						2,000	805.6	12.9		16	2.38	sw.	9.8	1,960	3,490	
						1,750	830.0	15.3		16	2.78	sw.	10.9	1,715	2,100	
2:42	972.6	20.7	32	s.	4.9	1,670	837.9	16.0	0.54	16	2.91	sw.	11.2	1,637	1,830	
						1,500	854.8	16.9		17	3.27	ssw.	9.8	1,470	1,250	
						1,250	880.2	18.3		18	3.78	s.	7.8	1,225	390	
2:57	972.6	20.7	30	s.	5.4	1,118	893.9	19.0	0.62	18	3.95	s.	6.7	1,096	0	
						1,000	906.2	18.3		19	4.00	s.	7.9	980	0	
3:06	972.6	20.8	28	s.	4.9	795	928.4	17.0	0.90	20	3.88	sse.	10.0	779	0	
						750	933.0	17.4		21	4.17	sse.	9.5	735	0	
						500	961.0	19.7		25	5.74	sse.	6.2	490	0	
3:14	972.6	20.6	27	sse.	4.9	396	972.6	20.6		27	6.55	sse.	4.9	388		Few Ci.

November 5, 1917.

A. M.																
7:06	973.0	3.4	67	sse.	4.5	396	973.0	3.4		67	5.23	sse.	4.5	388		Cloudless.
						500	961.0	6.6		56	5.46	s.	4.7	490	0	
8:46	973.3	6.7	59	s.	2.7	582	951.6	9.1	−3.06	48	5.55	ssw.	4.8	571	330	
						750	933.0	13.1		39	5.88	ssw.	5.4	735		
8:57	973.3	8.4	54	ssw.	4.0	884	917.9	16.3	−2.38	32	5.93	ssw.	5.8	867		
						750	933.0	13.1		39	5.88	ssw.	5.9	735		
9:16	973.4	9.0	50	ssw.	3.6	517	959.2	7.6	1.40	50	5.22	ssw.	6.1	507		
						500	961.0	7.8		50	5.29	ssw.	5.6	490		
9:22	973.4	9.3	51	ssw.	2.7	396	973.4	9.3		51	5.98	ssw.	2.7	388		Cloudless.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 6, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\,m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
7:07	973.3	3.8	79	sse.	4.5	396	973.3	3.8	.....	79	5.90	sse.	4.5	388	.....	Cloudless.
						500	961.3	6.9	.....	70	6.97	s.	4.9	490	0	
8:29	973.8	6.5	72	se.	4.5	676	941.4	12.2	−3.00	55	7.82	sw.	5.6	663	0	
						750	933.4	14.6	.....	51	8.48	s.	10.8	735	370	
8:34	973.8	7.0	72	sse.	4.0	779	930.1	15.6	−3.30	49	8.68	sse.	12.9	764	520	
						1,000	905.8	15.4	.....	43	7.52	s.	12.1	980	1,630	
						1,250	879.5	15.3	.....	37	6.43	ssw.	11.2	1,225	2,890	
						1,500	854.1	15.1	.....	30	5.15	sw.	10.3	1,470	4,150	
8:55	974.0	8.0	68	sse.	4.0	1,590	845.3	15.0	0.07	28	4.77	sw.	10.0	1,558	4,600	
						1,750	829.3	13.8	.....	26	4.10	sw.	9.8	1,715	5,200	
						2,000	805.2	11.8	.....	24	3.32	sw.	9.6	1,960	6,270	
						2,250	782.0	9.9	.....	21	2.56	sw.	9.4	2,205	7,400	
						2,500	758.8	8.0	.....	18	1.93	sw.	9.1	2,450	8,270	
						2,750	736.3	6.1	.....	16	1.51	sw.	8.9	2,694	9,150	
10:43	974.6	13.7	49	ssw.	3.1	2,822	729.7	5.5	0.77	15	1.35	sw.	8.8	2,765	9,400	
						3,000	714.4	4.0	.....	15	1.22	sw.	8.2	2,939	11,780	
						3,250	692.8	2.0	.....	15	1.06	sw.	7.4	3,184	11,200	
						3,500	671.0	−0.1	.....	14	0.85	sw.	6.6	3,429	10,620	
P. M.																
12:31	974.0	17.7	44	sse.	2.7	3,736	651.4	− 2.0	0.80	14	0.72	sw.	5.9	3,659	.....	
						3,500	671.0	− 0.2	.....	12	0.72	sw.	5.9	3,429	10.300	
						3,250	691.9	1.8	.....	11	0.76	sw.	5.9	3,184	9,300	
						3,000	713.0	3.7	.....	12	0.96	sw.	5.9	2,939	8,300	
						2,750	735.0	5.7	.....	12	1.10	sw.	5.9	2,694	7,290	
12:46	973.6	17.7	42	s.	3.1	2,578	750.2	7.0	0.81	12	1.20	sw.	5.9	2,526	6,600	
						2,500	757.8	7.6	.....	12	1.25	sw.	6.8	2,450	5,640	
						2,250	781.8	9.7	.....	10	1.20	sw.	9.5	2,205	4,460	
						2,000	805.2	11.7	.....	9	1.24	sw.	12.3	1,960	3,990	
						1,750	829.3	13.7	.....	7	1.10	sw.	15.0	1,715	3,520	
1:23	973.2	18.6	42	se.	3.6	1,718	832.4	14.0	0.40	7	1.12	sw.	15.4	1,684	3,470	
						1,500	854.1	14.9	.....	8	1.36	sw.	14.7	1,470	2,600	
1:35	973.1	19.2	38	s.	3.1	1,297	875.0	15.7	−1.89	8	1.43	sw.	14.0	1,271	1,720	
						1,250	880.0	14.8	.....	9	1.51	ssw.	12.2	1,225	1,520	
1:37	973.1	19.3	39	s.	3.1	1,122	893.2	12.4	0.88	10	1.44	ssw.	7.2	1,100	960	
						1,000	906.1	13.5	.....	15	2.32	ssw.	6.7	980	430	
						750	933.4	15.7	.....	26	4.64	s.	5.8	735	0	
						500	961.3	17.9	.....	37	7.59	s.	4.9	490	0	
1:56	973.0	18.8	41	s.	4.5	396	973.0	18.8	.....	41	9.15	s.	4.5	388	.....	Cloudless.

November 7, 1917.

A. M.																
9:19	977.4	11.7	65	sw.	2.7	396	977.4	11.7	.....	65	8.94	sw.	2.7	388	.....	Cloudless.
						509	965.4	11.6	.....	61	8.33	wsw.	5.2	490	.....	
9:29	977.4	11.8	59	ssw.	3.1	564	957.9	11.6	0.06	59	8.06	wsw.	6.8	553	.....	
10:13	977.4	12.1	62	wsw.	2.7	743	937.8	14.8	−1.67	49	8.25	wsw.	6.4	729	.....	
10:22	977.4	12.3	61	wsw.	2.2	499	965.5	10.9	1.46	63	8.22	wsw.	6.0	489	.....	
10:25	977.4	12.4	61	wsw.	2.2	396	977.4	12.4	.....	61	8.78	wsw.	2.2	388	.....	Cloudless.

November 8, 1917, series (No. 1).

A. M.																
8:25	977.8	8.4	82	sse.	4.0	396	977.8	8.4	.....	82	9.04	sse.	4.0	388	.....	Cloudless.
						500	966.0	11.0	.....	62	8.14	sse.	5.1	490	0	
9:41	977.8	12.0	70	se.	4.0	704	942.8	16.0	−2.47	52	9.45	sse.	7.2	690	580	
						750	938.0	15.7	.....	53	9.46	sse.	7.4	735	730	
						1,000	910.5	13.9	.....	57	9.05	sse.	8.2	980	1,570	
						1,250	884.0	12.1	.....	61	8.61	sse.	9.0	1,225	2,400	
						1,500	858.0	10.3	.....	65	8.14	sse.	9.9	1,470	3,240	
9:57	977.7	12.8	65	se.	4.0	1,654	841.9	9.2	0.72	68	7.92	sse.	10.4	1,621	3,750	
						1,750	832.5	8.1	.....	71	7.67	sse.	10.9	1,715	4,070	
						2,000	807.5	5.2	.....	79	6.99	s.	12.3	1,960	4,910	
9:59	977.7	13.0	64	sse.	4.0	2,023	805.1	4.9	1.17	80	6.93	s.	12.4	1,983	4,980	Few Ci., Calm.
10.01	977.7	13.2	63	sse.	4.0	2,207	787.0	6.0	−0.60	36	3.37	s.	13.3	2,163	5,600	
						2,250	783.4	6.0	.....	33	3.09	s.	12.8	2,205	5,830	
						2,500	759.8	5.9	.....	17	1.58	s.	9.0	2,450	6,770	
11:29	977.4	17.9	51	se.	4.0	2,741	737.6	5.8	0.04	1	0.09	s.	7.2	2,686	.....	
						2,750	737.0	5.7	.....	1	0.09	s.	7.2	2,694	.....	
						3,000	714.6	3.4	.....	1	0.08	sse.	6.6	2,939	.....	
11:36	977.3	18.1	50	se.	4.0	3,224	694.7	1.3	0.74	1	0.07	sse.	6.0	3,159	.....	
						3,000	714.6	2.5	.....	1	0.07	sse.	6.8	2,939	.....	
						2,750	736.5	3.9	.....	1	0.08	s.	7.7	2,694	.....	
						2,500	759.0	5.3	.....	1	0.09	s.	8.7	2,450	6,990	
NOON.	977.0	19.0	50	se.	4.0	2,297	778.0	6.4	−0.01	1	0.10	s.	9.4	2,251	6,370	
						2,250	782.7	6.0	.....	10	0.94	s.	9.8	2,205	6,260	
P. M.																
12:05	977.0	19.1	49	se.	2.7	2,111	796.0	4.7	0.87	35	2.99	s.	11.0	2,069	5,800	
						2,000	806.9	5.7	.....	39	3.57	s.	11.0	1,960	5,460	
						1,750	831.7	7.8	.....	47	4.97	s.	11.0	1,715	4,700	
						1,500	857.1	10.0	.....	55	6.75	s.	11.0	1,470	3,160	
12:25	976.9	19.2	50	sse.	4.5	1,294	878.8	11.8	0.90	62	8.58	s.	11.0	1,269	1,890	
						1,250	883.5	12.2	.....	61	8.67	s.	10.7	1,225	1,500	
						1,000	910.0	14.4	.....	57	9.35	s.	8.7	980	0	
						750	937.1	16.7	.....	52	9.89	sse.	6.8	735	0	
						500	965.0	19.0	.....	48	10.55	sse.	4.8	490	0	
12:40	976.8	19.9	46	sse.	4.0	396	976.8	19.9	.....	46	10.69	sse.	4.0	388	.....	Few Ci., Calm.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 8, 1917, series (No. 2).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
1:21	976.5	21.2	43	sse.	4.0	396	976.5	21.2	.....	43	10.83	sse.	4.0	388	.....	Few Ci., wnw.
.....	.....	.....	.....	.....	.....	500	964.8	20.1	.....	45	10.59	sse.	5.6	490	0	
.....	.....	.....	.....	.....	.....	750	936.9	17.3	.....	51	10.07	sse.	9.6	735	0	
1:57	976.0	21.2	40	se.	5.4	988	910.7	14.7	1.01	56	9.37	sse.	13.3	969	790	
.....	.....	.....	.....	.....	.....	1,000	909.5	14.6	.....	56	9.31	sse.	13.3	980	850	
.....	.....	.....	.....	.....	.....	1,250	882.8	12.9	.....	67	9.97	sse.	13.7	1,225	2,200	
.....	.....	.....	.....	.....	.....	1,500	856.8	9.2	.....	77	8.96	sse.	13.9	1,470	3,470	
.....	.....	.....	.....	.....	.....	1,750	831.3	6.7	.....	88	8.63	s.	14.3	1,715	4,670	
.....	.....	.....	.....	.....	.....	2,000	806.4	3.8	.....	98	7.86	s.	14.7	1,960	4,990	
2:19	975.9	21.7	41	sse.	5.8	2,020	804.2	3.6	1.08	99	7.83	s.	14.7	1,980	5,020	
.....	.....	.....	.....	.....	.....	2,250	781.9	5.7	.....	32	2.93	sse.	11.3	2,205	5,320	
2:26	975.9	21.6	41	sse.	5.8	2,263	780.4	5.8	−0.91	28	2.58	sse.	11.1	2,218	5,330	
.....	.....	.....	.....	.....	.....	2,500	757.9	4.3	.....	21	1.75	sse.	10.8	2,450	5,720	
.....	.....	.....	.....	.....	.....	2,750	734.6	2.8	.....	13	0.97	sse.	10.4	2,694	6,020	
.....	.....	.....	.....	.....	.....	3,000	712.0	1.3	.....	6	0.40	sse.	10.0	2,939	6,200	
3:39	975.4	21.5	41	sse.	6.3	3,028	709.8	1.1	0.62	5	0.33	sse.	10.0	2,967	.....	
.....	.....	.....	.....	.....	.....	3,250	690.1	−1.3	.....	6	0.33	sse.	8.7	3,184	.....	
3:47	975.4	21.1	44	sse.	5.4	3,429	674.9	−3.2	0.94	6	0.28	sse.	7.7	3,359	.....	
.....	.....	.....	.....	.....	.....	3,250	690.1	−1.8	.....	5	0.26	sse.	8.5	3,184	.....	
.....	.....	.....	.....	.....	.....	3,000	712.0	0.2	.....	5	0.31	sse.	9.6	2,939	6,180	
.....	.....	.....	.....	.....	.....	2,750	734.2	2.2	.....	4	0.29	s.	10.7	2,694	5,060	
.....	.....	.....	.....	.....	.....	2,500	757.1	4.1	.....	3	0.25	s.	11.7	2,450	4,230	
4:10	975.3	20.6	46	se.	4.5	2,441	762.8	4.6	−1.13	3	0.25	s.	12.0	2,392	4,060	
4:14	975.3	20.4	46	se.	4.5	2,264	779.3	2.6	0.84	24	1.77	s.	12.0	2,219	3,560	
.....	.....	.....	.....	.....	.....	2,250	781.0	3.8	.....	25	2.00	s.	12.0	2,205	3,520	
.....	.....	.....	.....	.....	.....	2,000	805.5	4.8	.....	36	3.10	s.	12.5	1,960	2,820	
.....	.....	.....	.....	.....	.....	1,750	830.5	6.9	.....	48	4.78	sse.	12.9	1,715	2,000	
.....	.....	.....	.....	.....	.....	1,500	856.0	9.0	.....	60	6.89	sse.	13.3	1,470	1,110	
4:36	975.3	19.2	48	se.	4.0	1,347	871.8	10.3	1.11	67	8.40	sse.	13.6	1,320	560	
.....	.....	.....	.....	.....	.....	1,250	882.0	11.4	.....	64	8.63	sse.	13.5	1,225	440	
.....	.....	.....	.....	.....	.....	1,000	908.5	14.1	.....	55	8.85	sse.	13.1	980	100	
4:47	975.3	18.8	50	se.	3.6	923	916.8	15.0	0.57	52	8.87	sse.	13.0	905	0	
.....	.....	.....	.....	.....	.....	750	935.9	16.0	.....	52	9.45	sse.	9.8	735	0	
.....	.....	.....	.....	.....	.....	500	963.5	17.4	.....	52	10.33	se.	5.1	490	0	
4:56	975.3	18.0	52	se.	3.1	396	975.3	18.0	.....	52	10.73	se.	3.1	388	.....	Few Ci., wnw.

November 8, 1917, series (No. 3).

P. M.																
5:36	975.5	16.6	53	se.	4.0	396	975.5	16.6	.....	53	10.01	se.	4.9	388	.....	1/10 Ci., wnw.
.....	.....	.....	.....	.....	.....	500	963.7	18.1	.....	46	9.55	se.	12.8	490	0	
5:37	975.5	16.5	53	se.	4.0	523	961.1	18.4	−1.42	45	9.52	se.	14.5	513	0	
.....	.....	.....	.....	.....	.....	750	935.8	16.7	.....	47	8.93	se.	14.2	735	0	
.....	.....	.....	.....	.....	.....	1,000	908.3	14.8	.....	50	8.42	sse.	13.8	980	510	
5:59	975.7	15.4	56	se.	3.1	1,245	882.9	13.0	0.75	52	7.79	sse.	13.4	1,220	1,100	
.....	.....	.....	.....	.....	.....	1,500	856.0	10.2	.....	60	7.47	sse.	12.8	1,470	1,620	
.....	.....	.....	.....	.....	.....	1,750	830.5	7.5	.....	68	7.05	s.	12.3	1,715	2,180	
6:24	975.7	14.8	58	se.	4.9	1,866	819.0	6.2	1.10	71	6.73	s.	12.0	1,829	2,460	
.....	.....	.....	.....	.....	.....	2,000	805.5	4.9	.....	76	6.58	s.	12.2	1,960	2,780	
.....	.....	.....	.....	.....	.....	2,250	781.5	2.4	.....	86	6.24	s.	12.6	2,205	3,400	
6:42	975.7	14.4	59	se.	4.5	2,366	770.3	1.2	1.00	90	5.99	s.	12.8	2,318	3,750	
.....	.....	.....	.....	.....	.....	2,500	757.4	1.8	.....	81	5.64	s.	12.3	2,450	4,150	
6:46	975.7	14.5	57	se.	4.9	2,563	751.7	2.2	−0.51	74	5.30	s.	12.0	2,511	4,340	
.....	.....	.....	.....	.....	.....	2,750	734.3	1.7	.....	60	4.15	s.	11.9	2,694	5,030	
.....	.....	.....	.....	.....	.....	3,000	712.0	0.9	.....	40	2.61	ssw.	11.8	2,939	5,950	
.....	.....	.....	.....	.....	.....	3,250	690.1	0.2	.....	21	1.30	ssw.	11.7	3,184	.....	
7:25	975.8	14.0	56	se.	4.9	3,394	677.7	− 0.2	0.30	10	0.60	ssw.	11.6	3,325	.....	Few Ci., wnw.
.....	.....	.....	.....	.....	.....	3,250	690.1	0.2	.....	9	0.56	ssw.	12.7	3,184	.....	
.....	.....	.....	.....	.....	.....	3,000	712.0	1.0	.....	7	0.46	s.	14.6	2,939	5,360	
.....	.....	.....	.....	.....	.....	2,750	734.1	1.8	.....	5	0.35	s.	16.5	2,694	4,830	
7:47	975.9	13.4	61	se.	4.0	2,640	744.2	2.1	−0.43	4	0.28	s.	17.3	2,587	4,590	
.....	.....	.....	.....	.....	.....	2,500	757.0	1.5	.....	18	1.23	s.	15.7	2,450	4,290	
7:49	975.9	13.3	61	se.	4.0	2,383	768.2	1.0	0.89	23	1.51	s.	14.4	2,335	4,040	
.....	.....	.....	.....	.....	.....	2,250	781.0	2.2	.....	29	2.08	s.	14.7	2,205	3,680	
.....	.....	.....	.....	.....	.....	2,000	805.5	4.4	.....	40	3.35	s.	15.3	1,960	2,990	
.....	.....	.....	.....	.....	.....	1,750	830.5	6.6	.....	51	4.97	s.	15.8	1,715	2,300	
8:09	976.0	12.5	68	se.	4.0	1,507	855.3	8.8	1.11	61	6.91	s.	16.4	1,477	1,890	1/10 Ci., wnw.
.....	.....	.....	.....	.....	.....	1,500	856.0	8.9	.....	61	6.95	s.	16.4	1,470	1,880	
.....	.....	.....	.....	.....	.....	1,250	882.0	11.7	.....	54	7.42	s.	17.2	1,225	1,610	
.....	.....	.....	.....	.....	.....	1,000	908.3	14.4	.....	47	7.71	s.	18.0	980	700	
8:33	976.0	12.4	68	se.	4.9	762	934.6	17.1	−1.34	40	7.80	s.	18.8	747	0	
.....	.....	.....	.....	.....	.....	750	935.8	16.9	.....	41	7.89	s.	18.3	735	0	
.....	.....	.....	.....	.....	.....	500	964.0	13.6	.....	60	9.35	sse.	8.8	490	0	
8:38	976.0	12.2	68	sse.	4.9	396	976.0	12.2	.....	68	9.66	sse.	4.9	388	.....	1/10 Ci., wnw.

November 8, 1917, series (No. 4).

P. M.																
9:12	976.1	12.0	68	sse.	5.4	396	976.1	12.0	.....	68	9.54	sse.	5.4	388	.....	1/10 Ci., wnw.
.....	.....	.....	.....	.....	.....	500	964.3	13.4	.....	61	9.38	sse.	8.6	490	100	
.....	.....	.....	.....	.....	.....	750	936.0	16.8	.....	43	8.23	s.	16.2	735	340	
9:15	976.1	12.0	68	sse.	5.4	764	934.5	17.0	−1.36	42	8.14	s.	16.6	749	360	
.....	.....	.....	.....	.....	.....	1,000	908.8	14.8	.....	46	7.74	s.	16.0	980	1,030	
.....	.....	.....	.....	.....	.....	1,250	882.8	12.6	.....	49	7.15	ssw.	15.4	1,225	1,820	
.....	.....	.....	.....	.....	.....	1,500	856.8	10.3	.....	53	6.64	ssw.	14.7	1,470	2,850	
9:38	976.3	11.8	68	sse.	4.5	1,633	842.8	9.1	0.91	55	6.36	ssw.	14.4	1,601	3,400	
.....	.....	.....	.....	.....	.....	1,750	831.0	7.8	.....	60	6.35	ssw.	14.1	1,715	3,700	
.....	.....	.....	.....	.....	.....	2,000	805.5	5.1	.....	70	6.15	ssw.	13.5	1,960	4,330	
.....	.....	.....	.....	.....	.....	2,250	781.2	2.3	.....	80	5.77	ssw.	12.9	2,205	4,960	
10:01	976.4	11.4	69	sse.	4.5	2,461	761.5	0.0	1.10	89	5.44	ssw.	12.4	2,412	5,840	Few Ci., wnw.
.....	.....	.....	.....	.....	.....	2,500	757.8	0.2	.....	82	5.08	ssw.	12.2	2,450	6,000	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 8, 1917, series (No. 4)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						2,750	734.5	1.6	.....	34	2.33	ssw.	10.8	2,694	7,980	
10:21	976.4	11.2	70	sse.	4.9	2,869	723.7	2.2	−0.54	11	0.79	ssw.	10.2	2,811	8,400	
						3,000	712.0	1.3	.....	11	0.74	ssw.	10.2	2,939	8,590	
						3,250	690.4	− 0.4	.....	10	0.59	ssw.	10.1	3,184	.....	
						3,500	669.0	− 2.1	.....	9	0.46	ssw.	10.0	3,429	.....	
10:33	976.4	11.0	71	sse.	5.4	3,686	653.3	− 3.4	0.64	8	0.37	ssw.	10.0	3,610	.....	
						3,500	669.0	− 2.3	.....	7	0.35	ssw.	11.2	3,429	.....	
						3,250	690.0	− 0.8	.....	5	0.29	ssw.	12.8	3,184	.....	
						3,000	711.8	0.6	.....	3	0.19	ssw.	14.4	2,939	7,220	
10:53	976.4	10.9	71	sse.	4.5	2,803	730.0	1.8	−0.94	2	0.14	ssw.	15.6	2,746	6,990	
						2,750	734.5	1.3	.....	4	0.27	ssw.	14.0	2,694	6,840	
10:56	976.4	10.8	71	sse.	4.5	2,559	751.8	− 0.5	0.92	13	0.76	ssw.	8.2	2,507	6,300	
						2,500	757.0	0.0	.....	15	0.92	ssw.	8.5	2,450	6,140	
						2,250	780.8	2.3	.....	22	1.59	ssw.	10.0	2,205	5,420	
						2,000	805.5	4.7	.....	28	2.39	ssw.	11.0	1,960	4,660	Cloudless.
						1,750	831.0	7.0	.....	34	3.41	ssw.	12.2	1,715	3,900	
						1,500	856.2	9.3	.....	41	4.81	ssw.	13.5	1,470	3,130	
						1,250	882.5	11.6	.....	47	6.42	ssw.	14.7	1,225	2,320	
11:24	976.4	9.8	75	sse.	4.5	1,150	892.8	12.5	0.92	50	7.24	ssw.	15.2	1,127	2,000	
						1,000	908.8	13.9	.....	48	7.62	ssw.	16.3	980	1,520	
						750	936.0	16.2	.....	37	6.82	s.	18.1	735	710	
11:41	976.4	9.6	76	sse.	4.5	685	943.3	16.8	−2.46	35	6.70	s.	18.6	672	550	
						500	964.3	12.3	.....	61	8.73	sse.	10.2	490	200	
11:46	976.4	9.7	75	sse.	4.0	396	976.4	9.7	.....	75	9.02	sse.	5.4	388	.....	Cloudless.

November 9, 1917, series (No. 5).

A. M.																
12:25	976.2	10.2	70	sse.	4.0	396	976.2	10.2	.....	70	8.72	sse.	4.0	388	.....	Cloudless.
						500	963.8	11.8	.....	62	8.58	sse.	8.3	490	0	
						750	935.8	15.7	.....	43	7.67	ssw.	18.5	735	0	4/10 St.Cu., ssw.
12:34	976.2	10.1	74	sse.	4.0	816	928.7	16.7	−1.55	38	7.22	ssw.	21.2	800	190	
						1,000	908.5	14.2	.....	42	6.80	ssw.	19.8	980	1,210	
						1,250	882.5	13.1	.....	48	7.24	ssw.	18.0	1,225	2,600	
						1,500	856.8	11.0	.....	53	6.96	ssw.	16.2	1,470	3,520	
12:51	976.1	10.3	72	sse.	4.5	1,710	834.9	9.2	0.84	58	6.75	ssw.	14.6	1,676	4,300	
						1,750	830.8	8.7	.....	60	6.75	ssw.	14.4	1,715	4,420	
						2,000	805.6	5.9	.....	70	6.50	ssw.	13.5	1,960	5,160	
						2,250	781.3	3.1	.....	81	6.18	ssw.	12.5	2,205	5,840	
1:16	976.0	10.1	72	sse.	3.6	2,392	768.0	1.5	1.13	87	5.92	ssw.	12.0	2,344	6,110	
						2,500	758.0	0.2	.....	89	5.52	ssw.	12.3	2,450	6,320	
						2,750	734.7	− 2.7	.....	93	4.54	ssw.	12.9	2,694	6,800	5/10 St.Cu., ssw.
1:45	976.0	9.7	75	sse.	4.0	2,891	721.6	− 4.3	1.16	95	4.05	ssw.	13.2	2,833	8,060	
						3,000	711.8	− 3.0	.....	76	3.61	ssw.	13.8	2,939	8,250	
1:49	976.0	9.7	74	se.	4.5	3,176	696.0	− 0.9	−1.19	45	2.55	ssw.	14.8	3,111	8,560	
						3,250	689.8	− 1.1	.....	34	1.89	ssw.	14.6	3,184	8,690	
2:02	976.0	9.5	74	se.	4.5	3,432	673.9	− 1.6	0.25	7	0.37	ssw.	14.0	3,362	.....	
						3,250	689.8	− 1.2	.....	3	0.17	ssw.	11.8	3,184	8,460	
2:08	976.0	9.4	74	se.	3.6	3,173	696.0	− 1.0	−1.65	1	0.06	ssw.	10.8	3,109	8,030	
						3,000	711.8	− 3.9	.....	47	2.07	ssw.	9.8	2,939	7,050	
2:12	976.0	9.4	74	se.	3.6	2,991	712.0	− 4.0	0.88	49	2.14	ssw.	9.8	2,930	7,000	
						2,750	734.7	− 1.9	.....	57	2.98	ssw.	11.4	2,694	6,440	
						2,500	758.0	0.3	.....	33	2.06	ssw.	13.1	2,450	5,850	
						2,250	781.3	2.5	.....	74	5.41	ssw.	14.7	2,205	5,260	
2:32	976.0	9.6	75	se.	4.0	2,180	788.1	3.1	1.05	76	5.80	ssw.	15.2	2,136	5,100	
						2,000	805.3	5.0	.....	70	6.10	ssw.	15.8	1,960	4,720	
						1,750	830.1	7.6	.....	61	6.37	ssw.	16.8	1,715	4,360	
						1,500	856.0	9.3	.....	53	6.21	ssw.	17.7	1,470	3,050	6/10 St.Cu., ssw.
2:59	976.0	10.0	70	se.	4.0	1,250	882.2	12.9	0.62	44	6.55	ssw.	18.6	1,225	2,700	
						1,000	908.5	14.4	.....	37	6.07	s.	17.2	980	1,800	
						750	935.8	16.0	.....	30	5.45	sse.	15.9	735	1,060	
3:15	975.8	10.2	69	sse.	4.5	588	953.8	17.0	−3.54	25	4.84	sse.	15.0	576	570	
						500	963.8	13.9	.....	40	6.73	sse.	10.2	490	310	
3:19	975.8	10.2	69	sse.	4.5	396	975.8	10.2	.....	69	8.72	sse.	4.5	388	.....	8/10 St.Cu., ssw.

November 9, 1917, series (No. 6).

A. M.																
4:05	975.3	9.8	70	sse.	4.9	396	975.3	9.8	.....	70	8.48	sse.	4.9	388	.....	4/10 St.Cu., ssw.
						500	963.6	12.2	.....	57	8.10	s.	9.2	490	0	
4:10	975.3	9.8	70	sse.	4.5	707	939.7	16.9	−2.28	32	6.16	ssw.	17.6	693	0	
						750	934.9	16.6	.....	34	6.42	ssw.	17.4	735	0	
						1,000	907.0	14.6	.....	46	7.65	ssw.	16.5	980	1,420	
						1,250	880.7	12.7	.....	59	8.67	ssw.	15.0	1,225	2,850	
						1,500	855.1	10.8	.....	71	8.19	ssw.	14.7	1,470	3,520	
4:29	975.3	9.7	70	se.	4.9	1,680	837.0	9.4	0.77	80	9.43	ssw.	14.1	1,647	4,000	2/10 St.Cu., ssw.
						1,750	830.2	8.7	.....	82	9.22	ssw.	13.7	1,715	4,180	
						2,000	805.3	6.2	.....	87	8.25	ssw.	12.2	1,960	4,830	
						2,250	781.3	3.7	.....	93	7.40	ssw.	10.8	2,205	5,480	
4:55	975.3	9.7	70	se.	4.9	2,421	764.9	2.0	1.00	97	6.85	ssw.	9.8	2,372	5,750	
						2,500	757.6	1.3	.....	96	6.44	ssw.	9.9	2,450	5,870	7/10 St.Cu., ssw.
						2,750	734.4	− 0.7	.....	93	5.36	ssw.	10.4	2,694	6,800	
						3,000	711.7	− 2.8	.....	90	4.36	ssw.	10.7	2,939	8,030	
						3,250	689.5	− 4.9	.....	87	3.52	ssw.	11.1	3,184	8,860	
5:29	975.2	9.8	70	se.	5.8	3,319	683.3	− 5.5	0.84	86	3.30	ssw.	11.2	3,251	9,210	
5:31	975.1	9.7	70	se.	5.4	3,474	669.7	− 4.4	−0.71	44	1.86	ssw.	12.4	3,403	9,700	
						3,500	667.3	− 4.5	.....	40	1.68	ssw.	12.3	3,429	.....	3/10 St.Cu., ssw.
5:45	975.1	9.2	72	se.	4.5	3,686	651.2	− 5.4	0.41	14	0.54	ssw.	11.9	3,610	.....	
						3,500	667.0	− 4.8	.....	12	0.49	ssw.	11.4	3,429	.....	
5:53	975.0	9.2	72	se.	5.4	3,255	687.4	− 3.9	−0.23	10	0.44	ssw.	10.7	3,189	9,190	
						3,000	710.5	− 4.5	.....	48	2.01	ssw.	8.2	2,939	8,600	
5:56	975.0	9.2	72	se.	5.4	2,955	714.0	− 4.6	1.11	55	2.28	ssw.	7.8	2,895	8,500	
						2,750	733.3	− 2.3	.....	90	4.54	ssw.	9.3	2,694	8,028	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 9, 1917, series (No. 6)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity.		Wind.		Potential.		
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Gravity.	Electric.	
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
6:01	975.0	9.2	72	se.	4.5	2,738	734.4	− 2.2	0.96	92	4.68	ssw.	9.4	2,683	8,000	
						2,500	756.7	0.1		84	5.17	ssw.	10.5	2,450	7,620	
						2,250	780.4	2.5		73	5.34	ssw.	11.6	2,205	6,870	2/10 St.Cu., ssw.
						2,000	804.4	4.9		67	5.80	ssw.	12.7	1,960	5,940	
6:33	974.8	8.8	72	se.	5.8	1,799	824.3	6.8	0.90	60	5.93	ssw.	13.6	1,763	5,200	
						1,750	829.1	7.2		59	5.99	ssw.	13.9	1,715	5,010	
						1,500	854.3	9.5		51	6.05	ssw.	15.2	1,470	4,040	
						1,250	880.0	11.8		44	6.09	s.	16.6	1,225	3,010	
						1,000	906.7	14.0		37	5.91	s.	17.9	980	1,770	
6:59	974.7	8.8	72	se.	6.7	759	933.4	16.2	−1.98	30	5.53	s.	19.2	744	640	1/10 St.Cu., ssw.
						750	934.1	16.0		31	5.64	s.	18.9	735	620	
						500	962.3	11.1		57	7.53	sse.	10.0	490	180	
7:07	974.7	9.0	68	se.	6.3	396	974.7	9.0		68	7.81	se.	6.3	388		

November 9, 1917, series (No. 7).

A. M.																
7:52	974.7	9.6	68	se.	4.9	396	974.7	9.6		68	8.13	se.	4.9	388		1/10 St.Cu., ssw.
						500	962.7	10.9		62	8.08	sse.	9.3	490	440	
7:55	974.7	9.8	66	se.	5.4	753	934.0	14.2	−1.29	47	7.61	s.	20.1	738	1,500	
8:03	974.7	9.8	67	se.	5.8	936	914.0	16.7	−1.37	40	7.60	ssw.	20.7	918	2,490	
						1,000	906.9	16.1		42	7.69	ssw.	20.4	980	2,850	
						1,250	880.7	13.8		51	8.05	ssw.	19.3	1,225	3,970	
						1,500	854.8	11.5		59	8.01	s.	18.2	1,470	4,770	
						1,750	829.5	9.2		68	7.92	s.	17.1	1,715	5,560	2/10 St.Cu., ssw.
8:20	974.7	10.6	60	se.	6.3	1,762	828.5	9.1	0.92	68	7.86	s.	17.0	1,727	5,600	
						2,000	804.8	6.8		71	7.01	sse.	17.0	1,960	6,810	
8:33	974.7	10.9	64	se.	5.8	2,232	782.6	4.6	0.96	73	6.19	sse.	17.0	2,187	8,000	
						2,250	781.0	4.5		73	6.15	sse.	17.0	2,205	8,070	
						2,500	757.1	2.5		78	5.70	sse.	16.5	2,450	9,090	
						2,750	734.2	0.5		83	5.25	s.	16.0	2,694	10,090	
						3,000	711.5	− 1.5		88	4.74	s.	15.5	2,939	11,080	
						3,250	689.1	− 3.5		93	4.24	ssw.	15.0	3,184	12,080	2/10 A.Cu., ssw.
						3,500	668.0	− 5.5		98	3.76	ssw.	14.6	3,429	12,940	Altitude of A.Cu. base about 3,650 m.
9:45	974.4	14.8	46	s.	5.4	3,588	660.7	− 6.2	0.80	100	3.62	ssw.	14.4	3,515	13,240	
						3,750	647.7	− 7.5		96	3.10	ssw.	14.4	3,673	13,800	7/10 A.Cu., ssw.
						4,000	627.7	− 9.6		89	2.39	ssw.	14.3	3,918	14,660	
						4,250	608.1	−11.6		83	1.87	sw.	14.3	4,162	15,420	
						4,500	588.2	−13.7		76	1.41	sw.	14.3	4,407	16,100	7/10 A.Cu., sw.
						4,750	568.5	−15.7		70	1.08	sw.	14.2	4,651		
10:35	974.1	16.8	38	sse.	5.8	4,823	562.6	−16.3	0.74	68	0.99	sw.	14.2	4,723		
						4,750	568.5	−15.8		70	1.07	sw.	14.3	4,651		
						4,500	587.8	−14.1		79	1.41	sw.	14.6	4,407	15,730	
						4,250	607.0	−12.4		87	1.82	sw.	14.8	4,162	14,450	
						4,000	626.6	−10.7		95	2.32	sw.	15.1	3,918	13,740	
11:06	974.0	16.8	40	s.	5.8	3,844	639.0	− 9.7	0.94	100	2.67	sw.	15.3	3,765	13,290	
						3,750	646.9	− 8.8		98	2.83	sw.	15.6	3,673	13,030	6/10 St.Cu., sw.
						3,500	667.5	− 6.5		92	3.25	sw.	16.2	3,429	12,320	
						3,250	689.1	− 4.1		86	3.72	ssw.	16.8	3,184	11,610	
						3,000	711.5	− 1.7		80	4.24	ssw.	17.4	2,939	10,900	
						2,750	734.2	0.6		73	4.66	ssw.	18.1	2,694	9,960	
						2,500	757.1	3.0		67	5.08	ssw.	18.7	2,450	8,720	
						2,250	781.0	5.3		61	5.44	s.	19.3	2,205	7,490	3/10 St.Cu., sw.
11:36	973.8	17.3	35	s.	7.2	2,030	802.0	7.4	1.00	56	5.77	s.	19.9	1,989	6,400	
						2,000	804.8	7.7		55	5.78	s.	20.1	1,960	6,320	
						1,750	829.5	10.2		48	5.98	s.	21.7	1,715	5,680	
11:50	973.7	18.5	36	s.	6.3	1,528	852.1	12.4	0.33	42	6.05	s.	23.2	1,498	5,100	
						1,500	854.8	12.5		41	5.94	s.	22.7	1,470	4,920	
P. M.																
12:03	973.5	19.4	33	s.	5.4	1,258	879.7	13.3	0.72	36	5.50	s.	18.5	1,233	3,400	
						1,250	880.7	13.4		36	5.53	s.	18.4	1,225	3,340	
						1,000	906.9	15.2		34	5.87	s.	14.7	980	1,580	
						750	934.5	17.0		32	6.20	s.	11.0	735	0	
						500	961.0	18.7		31	6.69	s.	7.3	490	0	
12:23	972.7	19.5	30	s.	5.8	396	972.7	19.5		30	6.80	s.	5.8	388		3/10 St.Cu., sw. Thunder in west.

November 9, 1917, series (No. 8).

P. M.																
1:38	970.7	15.3	65	se.	6.7	396	970.7	15.3		65	11.30	se.	6.7	388		8/10 St.Cu., sw.
						500	958.9	15.8		58	10.41	se.	11.0	490	610	
1:39	970.7	15.4	63	se.	6.7	624	945.0	16.5	−0.53	50	9.38	se.	16.1	612	1,330	
						750	931.0	15.6		51	9.04	se.	16.7	735	2,260	
						1,000	903.9	13.7		52	8.15	sse.	17.9	980	7,760	
2:11	970.2	17.9	48	s.	2.7	1,193	883.2	12.3	0.74	53	7.58	s.	18.8	1,170	12,000	
						1,250	877.1	11.8		55	7.61	s.	19.1	1,225	(*)	
						1,500	851.0	9.7		66	7.94	s.	20.7	1,470	(*)	
						1,750	825.5	7.6		77	8.04	ssw.	22.2	1,715	(*)	
						2,000	800.9	5.5		87	7.86	ssw.	23.7	1,960	(*)	
						2,250	776.9	3.3		98	7.59	ssw.	25.3	2,205	(*)	10/10 St.Cu., ssw.
2:31	970.1	17.7	48	s.	4.0	2,303	771.9	2.9	0.85	100	7.53	ssw.	25.6	2,257	(*)	
						2,500	753.2	1.2		100	6.66	ssw.		2,450	(*)	Altitude of St.Cu. base about 2,850 m.
						2,750	729.6	− 1.1		100	5.57	s.		2,694	(*)	
						3,000	707.0	− 3.3		100	4.64	s.		2,939		
2:52	970.0	17.3	49	s.	4.5	3,058	701.6	− 3.8	0.79	100	4.44	s.		2,996		
						3,000	707.0	− 3.4		99	4.55	s.		2,939		

*More than 50,000 volts.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 9, 1917, series (No. 8)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind.		Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity.		Wind.		Potential.		Remarks.
				Dir.	Vel.					Rel.	Vap. pres.	Dir.	Vel.	Gravity.	Electric.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						2,750	729.6	− 1.7		96	5.09	s.		2,694		
						2,500	752.6	0.1		93	5.72	s.		2,450		
						2,250	775.9	1.8		91	6.33	s.		2,205		
						2,000	799.8	3.5		88	6.91	s.		1,960		
2:59	969.9	17.2	49	s.	4.0	1,859	813.8	4.5		86	7.24	s.	24.2	1,822		10/10 St.Cu., ssw.; wire struck by lightning and kites broke away.
November 10, 1917.																
P. M.																
3:45	969.1	8.2	95	nnw.	4.5	396	969.1	8.2		95	10.33	nnw.	4.5	388		10/10 St., nnw.
						500	957.0	7.6		95	9.92	nnw.	5.9	490	320	
						750	928.5	6.3		96	9.17	nw.	9.2	735	780	
						1,000	900.5	4.9		97	8.40	nw.	12.5	980	1,210	
4:03	969.2	8.3	93	nnw.	4.9	1,025	897.8	4.8	0.54	97	8.34	nw.	12.8	1,005	1,260	
4:45	969.5	8.5	94	nnw.	3.6	1,084	891.7	7.2	−4.07	81	8.23	nw.	9.2	1,063	1,600	
						1,250	873.7	6.2		82	7.77	nw.	8.9	1,225	1,750	
						1,500	847.5	4.6		83	7.04	nnw.	8.4	1,470	2,640	
						1,750	822.2	3.1		84	6.41	nnw.	7.9	1,715	2,820	
						2,000	797.3	1.6		85	5.83	n.	7.5	1,960	2,530	
5:16	969.6	8.5	94	n.	3.6	2,138	783.6	.7	0.68	86	5.53	n.	7.2	2,095		
						2,000	797.3	1.7		84	5.80	n.	7.7	1,960	2,490	
						1,750	822.2	3.5		80	6.28	n.	8.7	1,715	2,400	
						1,500	847.5	5.4		76	6.82	nne.	9.7	1,470	2,310	
						1,250	873.7	7.2		71	7.21	nne.	10.7	1,225	2,220	
5:53	969.6	8.7	94	n.	3.1	1,109	889.2	8.2	−1.00	70	7.61	nne.	11.3	1,087	1,300	
						1,000	900.5	7.1		83	8.37	nne.	10.6	980	880	
5:58	969.6	8.8	93	n.	3.1	850	917.6	5.6	0.70	100	9.10	n.	9.7	833	300	
						750	928.5	6.3		98	9.36	n.	8.4	735	0	
						500	957.0	8.1		95	10.26	n.	5.0	490	0	
6:11	969.7	8.8	93	n.	3.6	396	969.7	8.8		93	10.54	n.	3.6	388	(−)	10/10 St., nnw.
November 11, 1917.																
A. M.																
7:22	974.3	5.2	92	nne.	4.0	396	974.3	5.2		92	8.14	nne.	4.0	388		Cloudless.
						500	962.0	8.0		74	7.94	nne.	8.9	490	0	Light haze.
7:25	974.3	5.1	93	n.	4.0	661	943.6	12.2	−2.64	47	6.68	ne.	16.5	648	0	
						750	933.8	11.7		49	6.74	ne.	16.1	735	0	
						1,000	906.2	10.1	(−)	55	6.80	nne.	15.0	980	810	
7:44	974.5	5.1	93	n.	4.0	1,237	880.8	8.7	0.61	60	6.75	nne.	14.0	1,213	1,700	
						1,250	879.9	8.6		60	6.70	nne.	14.0	1,225	1,750	Cloudless.
						1,500	853.5	6.4		65	6.25	nne.	14.8	1,470	2,660	
						1,750	827.2	4.3		69	5.73	nne.	15.5	1,715	3,590	
						2,000	802.0	2.1		74	5.26	n.	16.3	1,960	4,630	
						2,250	777.8	0.0		79	4.83	n.	17.1	2,205	5,660	
8:13	974.8	5.3	92	n.	4.0	2,331	769.9	− 0.7	0.86	80	4.61	n.	17.3	2,284	6,000	
						2,500	754.0	− 1.9		72	3.76	n.	17.2	2,450	6,720	
						2,750	731.0	− 3.6		60	2.71	n.	17.0	2,694	7,660	
						3,000	708.4	− 5.3		49	1.92	n.	16.8	2,939	8,150	
						3,250	686.0	− 7.2		37	1.23	n.	16.6	3,184	8,630	
8:59	975.0	6.4	90	n.	4.9	3,441	669.1	− 8.0	0.69	28	0.87	n.	16.4	3,371	9,000	
						3,500	664.5	− 8.3		27	0.82	n.	16.2	3,429	9,060	
						3,750	643.8	− 9.4		20	0.55	n.	15.3	3,673	9,310	
						4,000	623.6	−10.6		13	0.32	nne.	14.4	3,918		
9:56	975.7	8.2	83	n.	5.4	4,215	606.8	−11.6	0.50	9	0.20	nne.	13.6	4,128		
						4,000	623.6	−10.5		10	0.25	nne.	13.6	3,918		
						3,750	644.0	− 9.1		11	0.31	nne.	13.5	3,673	8,500	
						3,500	665.5	− 7.8		12	0.38	nne.	13.5	3,429	7,360	
						3,250	687.3	− 6.5		13	0.46	nne.	13.5	3,184	6,390	
						3,000	709.7	− 5.2		14	0.55	nne.	13.4	2,939	5,700	
10:41	975.7	10.2	75	n.	4.5	2,889	719.9	− 4.6	0.73	15	0.62	nne.	13.4	2,831	5,400	
						2,750	732.7	− 3.6		21	0.95	nne.	13.4	2,694	5,100	
						2,500	755.9	− 1.8		33	1.74	nne.	13.5	2,450	4,560	
						2,250	779.8	− 0.7		40	2.30	nne.	13.5	2,205	3,970	
						2,000	804.5	1.8		56	3.90	n.	13.6	1,960	3,250	
11:14	975.6	11.8	72	n.	3.6	1,772	827.6	3.6	0.76	66	5.22	n.	13.6	1,737	2,600	
						1,750	829.6	3.8		66	5.29	n.	13.5	1,715	2,540	
						1,500	855.5	5.7		63	5.77	n.	13.0	1,470	1,820	
						1,250	881.5	7.6		60	6.26	n.	12.4	1,225	1,100	
						1,000	907.7	9.5		57	6.77	n.	12.0	980	450	
11:35	975.5	11.4	73	n.	3.6	827	926.2	10.8	−0.50	55	7.12	n.	11.6	811	0	
						750	934.9	10.4		61	7.69	n.	10.4	735	0	
11:40	975.4	11.6	71	nnw.	4.0	648	946.2	9.9	0.67	68	8.30	nnw.	8.8	635	0	
						500	963.2	10.9		69	9.00	nnw.	6.0	490	0	
11:43	975.4	11.6	70	nnw.	4.0	396	975.4	11.6		70	9.56	nnw.	4.0	388		Light haze.
November 15, 1917.																
A. M.																
3:20	980.9	4.2	85	sw.	4.0	396	980.9	4.2		85	7.01	sw.	4.0	388		2/10 A.Cu., w.; 2/10 St.Cu., wnw.
						500	968.5	7.1		73	7.37	wsw.	5.9	490	0	
						750	939.8	14.0		46	7.35	w.	10.5	735	0	
3:28	980.8	4.5	83	sw.	4.5	766	938.0	14.4	−2.76	44	7.22	w.	10.8	751	0	
						1,000	912.0	14.0		48	7.67	w.	10.7	980	950	
3:44	980.6	4.7	84	ssw.	4.0	1,234	887.3	13.7	0.15	52	8.15	w.	10.6	1,210	2,200	Light haze.
						1,250	885.5	13.6		53	8.26	w.	10.6	1,225	2,260	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 15, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						1,500	859.6	11.5	.....	61	8.28	w.	10.4	1,470	3,290	
8:57	980.4	5.0	83	sw.	4.9	1,672	841.9	10.0	0.84	66	8.10	w.	10.4	1,639	4,000	
						1,750	834.0	9.5	.....	65	7.72	w.	10.3	1,715	4,270	
						2,000	808.9	8.0	.....	63	6.76	w.	10.2	1,960	5,140	
						2,250	784.5	6.6	.....	61	5.95	w.	10.1	2,205	6,010	
						2,500	760.9	5.1	.....	59	5.19	w.	9.9	2,450	6,500	
						2,750	738.1	3.6	.....	56	4.46	w.	9.8	2,694	6,510	
11:00	979.1	9.7	72	wsw.	4.0	2,998	716.7	2.1	0.60	54	3.84	w.	9.7	2,937	.....	Light haze.
						3,250	695.0	0.1	.....	55	3.38	w.	9.1	3,184	.....	
						3,500	673.6	− 1.9	.....	56	2.92	w.	8.6	3,429	.....	
						3,750	652.5	− 4.0	.....	57	2.49	w.	8.0	3,673	.....	
						4,000	632.0	− 6.0	.....	58	2.13	w.	7.4	3,918	.....	1/10 Ci.St., w.
P. M.																
1:07	978.0	15.9	54	sw.	4.0	4,104	623.6	− 6.8	0.78	58	2.00	w.	7.2	4,020	.....	
						4,000	632.0	− 6.0	.....	57	2.10	w.	7.6	3,918	6,610	
						3,750	652.5	− 4.1	.....	55	2.38	w.	7.9	3,673	5,840	
						3,500	672.9	− 2.2	.....	53	2.70	w.	8.4	3,429	4,860	
						3,250	694.0	− 0.3	.....	52	3.10	w.	8.9	3,184	4,640	
						3,000	715.7	1.6	.....	50	3.43	w.	9.4	2,939	4,680	
						2,750	737.8	3.4	.....	48	3.74	w.	9.9	2,694	3,890	
1:51	977.7	16.8	48	sw.	4.9	2,650	747.0	4.2	0.75	47	3.88	w.	10.1	2,597	3,410	
						2,500	760.9	5.3	.....	47	4.19	w.	10.4	2,450	2,550	
						2,250	784.0	7.2	.....	46	4.67	w.	11.0	2,205	1,260	
						2,000	807.7	9.1	.....	46	5.32	w.	11.5	1,960	1,150	
						1,750	832.7	11.0	.....	45	5.91	w.	12.0	1,715	1,030	
						1,500	858.1	12.9	.....	45	6.70	w.	12.6	1,470	920	
2:18	977.6	17.4	45	wsw.	3.6	1,255	883.7	14.7	0.87	44	7.36	w.	14.1	1,230	810	
						1,000	910.5	16.9	.....	39	7.51	w.	14.2	980	340	
2:24	977.6	17.7	46	wsw.	4.0	943	916.8	17.4	−0.35	38	7.55	w.	14.2	925	230	
						750	937.7	16.7	.....	40	7.60	w.	12.1	735	0	
2:32	977.5	17.8	46	wsw.	4.0	656	948.0	16.4	0.54	40	7.46	w.	11.4	643	0	
						500	965.2	17.2	.....	43	8.44	wsw.	7.5	490	0	
2:36	977.5	17.8	45	wsw.	4.9	396	977.5	17.8	.....	45	9.17	wsw.	4.9	388	.....	1/10 Ci.St., w.

November 16, 1917, series (No. 1).

A. M.																
7:12	975.6	6.6	77	ssw.	5.8	396	975.6	6.6	.....	77	7.51	ssw.	5.8	388	.....	Few A.Cu., w.
						500	963.6	9.4	.....	66	7.78	ssw.	9.6	490	280	
7:17	975.6	6.6	77	ssw.	5.4	715	938.9	15.3	−2.73	43	7.72	sw.	17.6	701	860	
						750	935.0	15.1	.....	44	7.55	sw.	17.2	735	960	
						1,000	907.0	13.6	.....	49	7.63	ssw.	14.3	980	2,360	
						1,250	880.6	12.1	.....	55	7.77	ssw.	11.5	1,225	3,450	
7:52	975.4	7.4	73	ssw.	5.8	1,468	858.4	10.8	0.60	60	7.77	s.	9.0	1,439	4,000	
						1,500	855.0	10.6	.....	59	7.54	s.	9.3	1,470	4,140	Few A.Cu., w.
						1,750	829.8	9.0	.....	53	6.08	s.	11.9	1,715	5,250	
						2,000	805.2	7.4	.....	47	4.84	sse.	14.4	1,960	6,290	
						2,250	781.1	5.8	.....	41	3.78	sse.	17.0	2,205	7,270	
8:17	975.2	7.5	74	ssw.	5.4	2,351	771.4	5.2	0.63	38	3.36	sse.	18.0	2,304	7,590	
						2,500	757.5	3.7	.....	42	3.34	sse.	19.2	2,450	8,070	
						2,750	734.5	1.3	.....	50	2.36	se.	21.1	2,694	8,860	
						3,000	711.8	− 1.2	.....	57	3.15	se.	23.1	2,939	9,660	
8:33	975.1	7.8	73	ssw.	5.8	3,106	702.2	− 2.2	0.98	60	3.05	se.	23.9	3,043	10,000	
						3,250	689.8	− 2.9	.....	55	2.64	se.	23.9	3,184	10,470	
						3,500	668.0	− 4.0	.....	45	1.97	se.	23.9	3,429	11,280	
						3,750	647.4	− 5.3	.....	36	1.41	sse.	24.0	3,673	12,380	
						4,000	627.0	− 6.8	.....	26	0.89	sse.	24.0	3,918	13,590	
						4,250	607.5	− 8.0	.....	17	0.53	sse.	24.0	4,162	14,800	Cloudless.
9:22	974.9	9.9	65	ssw.	4.9	4,378	597.3	− 8.7	0.54	12	0.35	sse.	24.0	4,288	.....	
						4,250	607.5	− 8.0	.....	13	0.40	sse.	23.5	4,162	14,620	
						4,000	627.0	− 6.5	.....	16	0.56	sse.	22.7	3,918	12,980	
						3,750	647.4	− 5.1	.....	19	0.76	sse.	21.8	3,673	12,200	
						3,500	668.0	− 3.7	.....	22	0.99	sse.	20.9	3,429	11,430	
						3,250	689.2	− 2.3	.....	24	1.21	sse.	20.0	3,184	10,660	
						3,000	711.1	− 0.8	.....	27	1.54	sse.	19.1	2,939	9,890	
10:08	974.6	12.5	56	ssw.	5.4	2,752	733.3	0.6	0.73	30	1.91	sse.	18.2	2,696	9,070	
						2,500	756.6	2.4	.....	31	2.25	sse.	17.0	2,450	7,800	
						2,250	780.5	4.3	.....	33	2.74	s.	15.9	2,205	6,530	Few Ci.St., w.
						2,000	804.8	6.1	.....	34	3.28	s.	14.7	1,960	5,200	
						1,750	829.2	7.9	.....	35	3.73	s.	13.5	1,715	3,840	
						1,500	854.5	9.7	.....	37	4.45	ssw.	12.4	1,470	2,730	
10:49	974.4	13.9	51	ssw.	5.8	1,267	878.7	11.4	0.77	38	5.12	ssw.	11.3	1,242	1,700	
						1,250	880.4	11.5	.....	38	5.16	ssw.	11.3	1,225	1,660	
						1,000	906.0	13.5	.....	33	5.11	ssw.	11.5	980	1,100	
						750	933.7	15.4	.....	29	5.08	sw.	11.7	735	550	
11:03	974.3	14.1	50	ssw.	6.7	629	947.7	16.3	−2.89	27	5.00	sw.	11.8	617	360	
11:05	974.3	14.0	50	sw.	6.7	539	957.8	13.7	0.21	41	6.43	sw.	10.2	528	220	
						500	962.0	13.8	.....	44	6.94	sw.	8.9	490	160	
11:09	974.3	14.0	51	sw.	5.4	396	974.3	14.0	.....	51	8.15	sw.	5.4	388	.....	1/10 Ci.St., w.

November 16, 1917, series (No. 2).

A. M.																
11:45	974.1	16.2	44	ssw.	5.4	396	974.1	16.2	.....	44	8.10	ssw.	5.4	388	.....	1/10 Ci.St., sw.
						500	962.4	15.8	.....	43	7.72	ssw.	7.0	490	0	
						750	934.5	14.8	.....	39	6.57	ssw.	11.0	735	0	
11:59	974.0	17.2	36	ssw.	5.4	769	932.0	14.7	0.40	39	6.52	ssw.	11.3	754	0	
						1,000	907.1	12.9	.....	43	6.40	ssw.	10.8	980	710	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 16, 1917, series (No. 2)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
12:14	973.8	18.3	40	ssw.	5.4	1,157	890.0	11.6	0.80	45	6.15	ssw.	10.4	1,134	1,200	
						1,250	880.5	11.1		41	5.42	ssw.	11.1	1,225	1,460	
						1,500	854.5	9.9		32	3.90	ssw.	13.1	1,470	2,170	
						1,750	829.4	8.6		22	2.46	ssw.	15.1	1,715	2,880	
12:37	973.6	20.0	33	ssw.	5.8	1,933	810.7	7.7	0.50	15	1.58	ssw.	16.6	1,895	3,400	
						2,000	804.6	7.2		15	1.52	ssw.	16.5	1,960	3,630	
						2,250	780.4	5.2		14	1.24	ssw.	16.3	2,205	4,510	
						2,500	756.5	3.3		14	1.08	ssw.	16.1	2,450	5,380	
						2,750	733.5	1.3		14	0.94	ssw.	15.8	2,694	6,370	
						3,000	710.7	− 0.6		13	0.76	ssw.	15.6	2,939	6,880	
						3,250	688.3	− 2.6		13	0.64	ssw.	15.3	3,184	7,350	
						3,500	666.6	− 4.5		12	0.50	ssw.	15.1	3,429	7,820	
1:15	973.1	19.8	33	ssw.	7.2	3,596	658.4	− 5.3	0.72	12	0.47	ssw.	15.0	3,522	8,000	
						3,500	666.6	− 4.7		13	0.54	ssw.	15.1	3,429	7,680	
						3,250	688.1	− 3.0		14	0.66	ssw.	15.4	3,184	6,840	1/10 Ci.St., sw.
						3,000	710.0	− 1.4		16	0.87	ssw.	15.6	2,939	6,010	
						2,750	732.3	0.2		18	1.12	ssw.	15.9	2,694	5,180	
						2,500	755.0	1.9		20	1.40	ssw.	16.2	2,450	4,300	
						2,250	778.5	3.5		21	1.65	ssw.	16.4	2,205	3,420	
						2,000	802.8	5.1		23	2.02	ssw.	16.7	1,960	2,540	
1:49	972.7	19.9	30	s.	8.0	1,989	803.8	5.2	0.71	23	2.04	ssw.	16.7	1,949	2,500	
						1,750	827.7	6.9		28	2.79	ssw.	15.0	1,715	2,020	
						1,500	853.0	8.7		30	3.38	ssw.	13.2	1,470	1,520	
						1,250	879.2	10.4		34	4.29	ssw.	11.5	1,225	1,020	
2:03	972.6	20.0	29	s.	7.6	1,170	887.6	11.0	0.99	35	4.60	ssw.	10.9	1,147	860	2/10 Ci.St., sw.
						1,000	905.8	12.7		35	5.14	ssw.	10.2	980	520	
						750	933.0	15.2		36	6.22	s.	9.3	735	30	
2:15	972.5	19.9	30	s.	6.7	736	934.5	15.3	1.32	36	6.26	s.	9.2	722	0	
						500	960.6	18.4		31	6.56	s.	7.8	490	0	
2:25	972.5	19.8	29	s.	7.2	396	972.5	19.8		29	6.70	s.	7.2	388		3/10 Ci.St., sw.

November 16, 1917, series (No. 3).

P. M.																
3:13	972.2	19.2	28	s.	4.5	396	972.2	19.2		28	6.23	s.	4.5	388		3/10 Ci.St., sw.; 2/10 A.Cu., sw.
						500	960.2	18.0		29	5.99	s.	6.3	490	0	
3:21	972.2	19.4	28	s.	3.6	739	933.9	15.2	1.17	31	5.35	s.	10.3	725	0	
						750	932.1	15.1		31	5.32	s.	10.3	735	20	7/10 Ci.St., sw.; 1/10 A.Cu., sw.
						1,000	904.8	12.5		36	5.22	s.	11.0	980	430	
						1,250	877.8	10.0		41	5.03	s.	11.7	1,225	860	
						1,500	852.2	7.4		45	4.64	s.	12.4	1,470	1,340	
3:48	972.1	18.2	30	s.	3.1	1,740	827.4	5.0	1.02	50	4.36	s.	13.0	1,705	1,800	
						1,750	826.6	4.9		50	4.33	s.	13.1	1,715	1,820	
						2,000	801.2	3.1		55	4.20	s.	15.7	1,960	2,450	
						2,250	776.8	1.3		59	3.96	sse.	18.2	2,205	3,080	
4:04	972.0	17.4	35	s.	2.7	2,396	762.7	0.2	0.73	62	3.84	sse.	19.7	2,348	3,500	
						2,500	753.0	− 0.6		63	3.66	sse.	20.3	2,450	3,860	10/10 Ci. St., sw.
						2,750	730.3	− 2.6		67	3.30	sse.	21.8	2,694	4,730	
						3,000	708.2	− 4.6		70	2.90	sse.	23.3	2,939	5,420	
						3,250	686.0	− 6.6		73	2.56	sse.	24.8	3,184	5,900	
						3,500	663.5	− 8.7		76	2.21	sse.	26.3	3,429	6,380	Altitude of A.Cu. base about 3,650 m.
4:36	971.8	16.3	40	s.	2.7	3,622	652.6	− 9.5	5.66	78	2.11	sse.	27.0	3,548		
4:42	971.7	16.1	41	s.	2.2	3,603	654.5	− 7.5	−1.81	85	2.75	sse.	18.2	3,529		
						3,500	663.5	− 9.0		88	2.50	sse.	21.6	3,429	6,240	
4:46	971.7	16.0	41	s.	2.2	3,476	665.2	− 9.8	0.82	88	2.32	sse.	22.2	3,405	6,140	
						3,250	685.3	− 7.9		87	2.71	sse.	20.8	3,184	5,200	
						3,000	707.3	− 5.9		82	3.04	s.	19.2	2,939	4,540	
						2,750	729.5	− 3.8		79	3.51	s.	17.6	2,694	3,960	
5:12	971.6	15.4	39	s.	2.7	2,638	739.9	− 2.9	0.81	78	3.74	s.	16.9	2,585	3,700	
						2,500	752.3	− 1.8		77	4.05	s.	16.9	2,450	3,370	3/10 Ci.St., sw.; 7/10 A.St., sw.
						2,250	776.0	0.2		74	4.59	s.	16.9	2,205	2,780	
						2,000	800.2	2.2		71	5.08	s.	17.0	1,960	2,180	
5:31	971.6	14.3	40	sse.	4.5	1,757	825.1	4.2	0.81	69	5.69	s.	17.0	1,722	1,600	
						1,750	825.8	4.3		69	5.73	s.	17.0	1,715	1,590	
						1,500	851.3	6.3		59	5.63	sse.	15.5	1,470	1,090	
5:45	971.6	14.0	40	se.	4.0	1,276	874.8	8.1	1.00	50	5.40	sse.	14.2	1,251	640	
						1,250	877.0	8.4		49	5.40	sse.	14.1	1,225	610	
						1,000	903.9	10.9		44	5.74	sse.	13.1	980	280	
5:58	971.6	13.6	43	sse.	3.6	786	927.6	13.0	0.89	39	5.84	sse.	12.2	771	0	
						750	931.2	13.3		38	5.80	sse.	12.1	735	0	
						500	959.5	15.5		34	5.99	sse.	11.6	490	0	
6:03	971.6	13.5	42	sse.	3.6	494	960.4	15.6	−2.14	34	6.02	sse.	11.6	484	0	
6:05	971.6	13.5	42	sse.	4.0	396	971.6	13.5		42	6.50	sse.	4.0	388		4/10 Ci.St., sw.; 6/10 A.St., sw.

November 16, 1917, series (No. 4).

P. M.																
6:47	971.4	13.3	44	sse.	4.0	396	971.4	13.3		44	6.72	sse.	4.0	388		4/10 Ci.St., sw.; 6/10 A.St., sw.
6:49	971.4	13.2	44	sse.	3.6	505	959.0	16.4	−2.84	33	6.15	sse.	14.8	495	0	
						750	932.0	14.4		38	6.23	sse.	14.7	735	0	
						1,000	904.3	12.4		42	6.05	s.	14.5	980	0	
7:11	971.4	13.0	44	sse.	3.6	1,242	878.6	10.4	0.81	47	5.93	s.	14.4	1,218	0	
						1,250	877.0	10.3		47	5.89	s.	14.4	1,225	30	
						1,500	850.8	8.0		55	5.90	s.	15.2	1,470	950	
						1,750	825.1	5.7		62	5.68	s.	15.9	1,715	1,800	
						2,000	800.2	3.4		69	5.38	ssw.	16.6	1,960	2,470	
						2,250	776.4	1.1		77	5.10	ssw.	17.4	2,205	3,150	
						2,500	753.0	− 1.1		84	4.68	ssw.	18.1	2,450	3,830	
7:44	971.5	13.1	41	s.	4.5	2,560	747.3	− 1.7	0.92	86	4.56	ssw.	18.3	2,508	4,020	
						2,750	730.0	− 2.8		83	4.02	ssw.	18.1	2,694	4,660	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 16, 1917, series (No. 4)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	3,000	707.8	− 4.2	.....	78	3.36	ssw.	17.9	2,939	5,560	
.....	.....	.....	.....	.....	.....	3,250	685.5	− 5.7	.....	73	2.76	ssw.	17.7	3,184	6,530	
.....	.....	.....	.....	.....	.....	3,500	664.0	− 7.1	.....	69	2.31	ssw.	17.5	3,429	7,430	
.....	.....	.....	.....	.....	.....	3,750	642.3	− 8.5	.....	64	1.89	ssw.	17.3	3,673	8,240	
8:37	971.6	12.5	43	ssw.	3.6	3,937	626.2	− 9.6	0.78	61	1.64	ssw.	17.1	3,856	.....	
.....	.....	.....	.....	.....	.....	3,750	642.3	− 8.8	.....	66	1.91	ssw.	17.0	3,673	8,200	4/10 Ci.St., sw.; 6/10 A.St., sw.
.....	.....	.....	.....	.....	.....	3,500	663.3	− 7.7	.....	74	2.35	ssw.	16.8	3,429	7,240	
.....	.....	.....	.....	.....	.....	3,250	684.5	− 6.6	.....	81	2.84	ssw.	16.6	3,184	6,280	
.....	.....	.....	.....	.....	.....	3,000	706.0	− 5.5	.....	88	3.38	ssw.	16.4	2,939	5,270	
.....	.....	.....	.....	.....	.....	2,750	728.0	− 4.5	.....	95	3.98	ssw.	16.2	2,694	4,170	
9:20	971.7	12.0	46	ssw.	4.0	2,576	743.9	− 3.7	0.81	100	4.48	ssw.	16.1	2,524	3,400	6/10 A.St., sw.; 4/10 St.Cu., ssw.
.....	.....	.....	.....	.....	.....	2,500	751.0	− 3.1	.....	99	4.66	ssw.	16.0	2,450	3,280	Sprinkling rain, began 9:22 p. m. and continued at end of flight.
.....	.....	.....	.....	.....	.....	2,250	774.8	− 1.0	.....	95	5.34	ssw.	15.8	2,205	2,880	
.....	.....	.....	.....	.....	.....	2,000	799.2	1.0	.....	92	6.04	ssw.	15.5	1,960	2,500	
.....	.....	.....	.....	.....	.....	1,750	824.8	3.0	.....	88	6.67	ssw.	15.3	1,715	2,110	
9:39	971.9	12.4	45	ssw.	4.0	1,678	832.5	3.6	0.84	87	6.83	ssw.	15.2	1,645	2,000	
.....	.....	.....	.....	.....	.....	1,500	850.8	5.1	.....	84	7.38	ssw.	15.7	1,470	1,120	
.....	.....	.....	.....	.....	.....	1,250	877.0	7.2	.....	79	8.03	ssw.	16.4	1,225	0	
.....	.....	.....	.....	.....	.....	1,000	904.3	9.3	.....	75	8.79	ssw.	17.1	980	0	
10:03	972.0	11.6	55	ssw.	5.4	809	925.1	10.9	0.27	71	9.26	ssw.	17.6	793	0	3/10 A.St., sw.; 7/10 St.Cu., ssw.
.....	.....	.....	.....	.....	.....	750	932.0	11.1	.....	69	9.11	ssw.	15.8	735	0	
.....	.....	.....	.....	.....	.....	500	960.0	11.7	.....	60	8.25	ssw.	8.1	490	0	
10:13	972.0	12.0	56	ssw.	4.9	396	972.0	12.0	.....	56	7.86	ssw.	4.9	388	.....	10/10 St.Cu., ssw.

November 17, 1917, series (No. 5).

A. M.																
8:35	970.7	9.3	81	ese.	3.6	396	970.7	9.3	.....	81	9.49	ese.	3.6	388	.....	4/10 Ci.St., calm; 6/10 St.Cu., sse.
.....	.....	.....	.....	.....	.....	500	958.8	9.8	.....	73	8.85	ese.	5.4	490	210	
.....	.....	.....	.....	.....	.....	750	930.3	11.1	.....	55	7.27	se.	9.8	735	720	
8:42	970.7	9.7	74	se.	3.6	761	929.0	11.1	−0.49	54	7.13	se.	10.0	746	740	
.....	.....	.....	.....	.....	.....	1,000	902.3	8.8	.....	60	6.80	se.	9.5	980	1,390	
.....	.....	.....	.....	.....	.....	1,250	875.5	6.3	.....	66	6.30	se.	8.9	1,225	1,900	
.....	.....	.....	.....	.....	.....	1,500	849.8	3.9	.....	73	5.90	se.	8.4	1,470	2,330	
9:34	970.9	10.2	72	sse.	3.1	1,630	836.1	2.6	0.98	76	5.60	se.	8.1	1,598	3,330	
.....	.....	.....	.....	.....	.....	1,750	824.0	1.9	.....	80	5.61	se.	10.1	1,715	5,100	
.....	.....	.....	.....	.....	.....	2,000	798.8	0.5	.....	88	5.57	sse.	14.1	1,960	5,790	
.....	.....	.....	.....	.....	.....	2,250	774.3	− 0.8	.....	97	5.54	sse.	18.2	2,205	6,120	
9:47	970.9	10.0	68	sse.	2.7	2,287	770.3	− 1.1	0.56	98	5.46	sse.	18.8	2,241	6,190	Altitude of St.Cu. base about 2,550 m.
.....	.....	.....	.....	.....	.....	2,500	749.0	− 2.5	.....	98	4.86	sse.	18.4	2,450	6,620	
.....	.....	.....	.....	.....	.....	2,750	725.1	− 4.1	.....	99	4.29	sse.	18.0	2,694	6,930	
.....	.....	.....	.....	.....	.....	3,000	702.4	− 5.8	.....	99	3.71	se.	17.5	2,939	6,640	
.....	.....	.....	.....	.....	.....	3,250	681.0	− 7.4	.....	100	3.26	se.	17.1	3,184	6,360	
10:10	971.0	10.0	73	sse.	2.2	3,388	669.5	− 8.3	0.56	100	3.02	se.	16.8	3,319	6,200	Altitude of St.Cu. base about 1,700 m.
.....	.....	.....	.....	.....	.....	3,250	681.0	− 7.6	.....	100	3.21	se.	16.3	3,184	5,660	
.....	.....	.....	.....	.....	.....	3,000	702.4	− 6.5	.....	100	3.53	se.	15.4	2,939	4,690	Light rain from 10:28 to 10:50 a. m.
.....	.....	.....	.....	.....	.....	2,750	725.1	− 5.3	.....	100	3.91	se.	14.5	2,694	3,720	
.....	.....	.....	.....	.....	.....	2,500	749.0	− 4.1	.....	100	4.33	se.	13.5	2,450	2,740	
10:37	971.3	9.8	77	sse.	1.8	2,360	762.6	− 3.4	0.64	100	4.60	se.	13.0	2,313	2,200	Altitude of St.Cu. base about 1,600 m.
.....	.....	.....	.....	.....	.....	2,250	774.3	− 2.7	.....	99	4.83	se.	12.9	2,205	2,240	
.....	.....	.....	.....	.....	.....	2,000	799.5	− 1.2	.....	98	5.47	se.	12.6	1,960	2,350	
.....	.....	.....	.....	.....	.....	1,750	825.3	0.5	.....	97	6.14	se.	12.4	1,715	2,450	
.....	.....	.....	.....	.....	.....	1,500	851.0	2.1	.....	96	6.83	se.	12.1	1,470	2,250	
.....	.....	.....	.....	.....	.....	1,250	876.5	3.7	.....	94	7.48	se.	11.9	1,225	1,780	
10:59	971.6	10.4	73	sse.	3.1	1,201	881.2	4.0	0.92	94	7.64	se.	11.8	1,177	1,685	
.....	.....	.....	.....	.....	.....	1,000	902.8	4.4	.....	92	7.70	se.	11.6	980	980	
.....	.....	.....	.....	.....	.....	750	930.3	6.7	.....	84	8.24	sse.	10.2	735	100	
11:13	971.3	10.3	75	sse.	1.8	721	934.0	8.4	0.74	77	8.49	sse.	9.2	707	0	
.....	.....	.....	.....	.....	.....	500	959.0	10.0	.....	74	9.09	sse.	4.5	490	0	
11:18	971.2	10.8	73	sse.	1.8	396	971.2	10.8	.....	73	9.45	sse.	1.8	388	.....	9/10 St.Cu., sw.

November 18, 1917.

A. M.																
7:22	982.3	0.3	73	n.	3.6	396	982.3	0.3	.....	73	4.56	n.	3.6	388	.....	1/10 St.Cu., n.
.....	.....	.....	.....	.....	.....	500	969.7	− 0.8	.....	76	4.34	n.	8.3	490	300	
.....	.....	.....	.....	.....	.....	750	940.0	− 3.3	.....	82	3.80	n.	19.5	735	1,010	
7:40	982.7	0.0	74	n.	4.0	837	929.6	− 4.3	1.01	84	3.58	n.	23.4	821	1,440	
.....	.....	.....	.....	.....	.....	1,000	910.9	− 0.2	.....	50	3.00	n.	21.4	980	2,300	
7:50	982.9	0.1	74	n.	3.6	1,117	897.7	2.7	−2.50	25	1.86	n.	19.9	1,095	2,730	
.....	.....	.....	.....	.....	.....	1,250	883.0	2.2	.....	27	1.93	n.	18.9	1,225	3,170	
.....	.....	.....	.....	.....	.....	1,500	856.0	1.3	.....	32	2.15	n.	17.0	1,470	4,010	
.....	.....	.....	.....	.....	.....	1,750	830.2	0.4	.....	36	2.26	n.	15.1	1,715	4,960	
.....	.....	.....	.....	.....	.....	2,000	804.8	− 0.5	.....	40	2.34	n.	13.1	1,960	5,970	
8:24	983.4	0.2	71	nne.	6.3	2,032	801.7	− 0.6	0.36	41	2.38	n.	12.9	1,991	6,100	
.....	.....	.....	.....	.....	.....	2,250	780.3	− 1.5	.....	37	1.99	n.	12.8	2,205	6,910	
.....	.....	.....	.....	.....	.....	2,500	756.6	− 2.6	.....	32	1.57	n.	12.7	2,450	7,850	Few St.Cu., n.
.....	.....	.....	.....	.....	.....	2,750	733.7	− 3.7	.....	27	1.21	n.	12.6	2,694	9,200	
.....	.....	.....	.....	.....	.....	3,000	711.0	− 4.8	.....	22	0.90	n.	12.5	2,939	10,760	
.....	.....	.....	.....	.....	.....	3,250	688.1	− 5.8	.....	17	0.64	n.	12.4	3,184	13,110	
.....	.....	.....	.....	.....	.....	3,500	666.2	− 6.9	.....	12	0.41	n.	12.2	3,429	.....	
10:19	983.6	2.1	55	nne.	5.8	3,610	656.8	− 7.4	0.41	10	0.33	n.	12.2	3,536	.....	
.....	.....	.....	.....	.....	.....	3,500	666.2	− 7.0	.....	9	0.30	n.	12.4	3,429	.....	
.....	.....	.....	.....	.....	.....	3,250	688.1	− 6.0	.....	7	0.26	n.	12.7	3,184	13,810	
.....	.....	.....	.....	.....	.....	3,000	711.0	− 5.4	.....	6	0.23	nne.	12.9	2,939	11,600	
.....	.....	.....	.....	.....	.....	2,750	733.7	− 4.1	.....	3	0.13	nne.	13.4	2,694	10,030	
11:14	983.1	2.8	52	nne.	4.9	2,555	750.9	− 3.3	0.53	1	0.05	nne.	13.7	2,503	9,290	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 18, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						2,500	756.6	− 3.0		1	0.05	nne.	13.8	2,450	9,090	1/10 Ci.St., near horizon.
						2,250	780.3	− 1.7		1	0.05	nne.	14.2	2,205	8,220	
						2,000	804.8	− 0.3		1	0.06	nne.	14.5	1,960	7,260	
						1,750	830.6	1.0		1	0.07	n.	14.9	1,715	6,260	
						1,500	857.2	2.3		1	0.07	n.	15.2	1,470	5,270	
						1,250	884.2	3.7		1	0.08	n.	15.7	1,225	4,270	
P. M.																
12:11	983.0	4.1	47	n.	6.3	1,092	901.4	4.5	−2.04	1	0.08	n.	15.9	1,071	3,550	
						1,000	911.7	2.7		1	0.07	n.	15.7	980	3,080	
12:15	983.0	4.3	48	n.	6.3	812	933.3	− 1.2	1.32	1	0.06	n.	15.2	796	2,130	
						750	940.0	− 0.4		8	0.47	n.	13.6	735	1,820	
						500	969.7	2.9		36	2.71	n.	7.2	490	530	
12:27	983.0	4.3	47	n.	4.5	396	983.0	4.3		47	3.91	n.	4.5	388		2/10 Ci.St., ne.

November 19, 1917.

A. M.																
7:31	978.7	−5.4	92	sw.	3.6	396	978.7	− 5.4		92	3.57	sw.	3.6	388		4/10 A.Cu., nw.; 2/10 Ci.St., wnw.
						500	966.0	− 2.5		73	3.62	sw.	4.8	490	580	
						750	936.4	4.3		30	2.49	wsw.	7.6	735	1,780	6/10 A.Cu., nw.; 2/10 Ci.St., wnw.
7:47	978.7	−4.6	88	sw.	3.6	792	931.7	5.8	−2.83	20	1.84	wsw.	8.2	777	1,860	
						1,000	907.9	5.9		17	1.58	w.	7.6	980	2,650	2/10 Ci.St., wnw.; 3/10 A.Cu., nw.
						1,250	880.8	5.9		9	0.84	w.	7.0	1,225	3,290	3/10 Ci.St., wnw.; 5/10 A.Cu., nw.
						1,500	854.4	6.0		2	0.19	wnw.	6.3	1,470	3,540	Solar halo, 22° radius, from 8:50 to 9:15 a. m.
10:40	977.5	2.2	59	sw.	5.4	1,549	849.5	6.0	−0.03	1	0.09	wnw.	6.2	1,518	3,650	
						1,750	828.5	5.1		5	0.44	nw.	7.4	1,715	4,080	
						2,000	802.9	4.1		10	0.82	nw.	8.9	1,960	4,620	9/10 St.Cu., nnw.
						2,250	779.0	3.0		15	1.14	nnw.	10.3	2,205	5,160	
						2,500	755.5	1.9		19	1.33	nnw.	11.8	2,450	8,690	
11:40	976.9	5.4	32	ssw.	5.8	2,734	734.1	0.9	0.48	24	1.56	n.	13.2	2,679		7/10 St.Cu., n.
						2,500	755.5	2.0		24	1.69	nnw.	12.2	2,450	8,530	
						2,250	779.0	3.1		24	1.83	nnw.	11.1	2,205	7,310	
						2,000	802.9	4.3		25	2.08	nw.	10.0	1,960	6,090	
						1,750	827.8	5.4		25	2.24	nw.	8.9	1,715	4,870	
						1,500	853.5	6.6		25	2.44	wnw.	7.8	1,470	3,660	
P. M.																
12:01	976.7	6.6	24	sw.	5.8	1,406	863.7	7.0	0.05	25	2.50	wnw.	7.4	1,378	3,200	
						1,250	879.5	7.1		20	2.02	wnw.	8.8	1,225	2,780	9/10 St.Cu., nne.
						1,000	906.0	7.2		12	1.22	w.	12.1	980	2,120	
12:27	975.9	6.7	34	wsw.	4.9	829	925.5	7.3	−1.40	6	0.61	w.	12.6	813	1,900	
						750	934.0	6.2		10	0.95	w.	12.3	735	1,550	
12:30	975.9	6.7	36	wsw.	4.9	643	946.7	4.7	0.77	15	1.28	w.	12.0	630	1,080	
						500	963.0	5.8		29	2.67	wsw.	8.4	490	460	
12:34	975.7	6.6	39	wsw.	5.8	396	975.7	6.6		39	3.80	wsw.	5.8	388		9/10 St.Cu., nne.

November 20, 1917 (No. 1).

A. M.																
7:25	966.7	5.5	71	wnw.	6.3	396	966.7	5.5		71	6.41	wnw.	6.3	388		Cloudless.
7:28	966.7	5.4	71	wnw.	6.3	453	960.1	15.7	−1.79	47	8.38	nnw.	16.6	444	0	
						500	954.8	15.8		45	8.08	nnw.	16.3	490	0	
						750	927.1	16.2		35	6.45	nnw.	14.9	735	0	
7:35	966.7	4.6	75	w.	6.3	898	910.9	16.5	−0.18	29	5.44	nnw.	14.1	880	630	
						1,000	900.0	16.0		28	5.09	nnw.	14.5	980	1,090	
						1,250	873.8	14.7		25	4.18	nnw.	15.5	1,225	1,720	
						1,500	848.4	13.4		22	3.38	nnw.	16.6	1,470	2,700	
						1,750	823.4	12.1		20	2.82	nnw.	17.6	1,715	3,880	
8:03	966.5	6.6	67	w.	5.4	1,903	807.8	11.3	0.54	18	2.41	nnw.	18.2	1,865		
						1,750	823.4	12.1		17	2.40	nnw.	18.4	1,715	3,890	
						1,500	847.8	13.5		16	2.48	nw.	18.8	1,470	2,720	
						1,250	872.8	14.9		16	2.71	nw.	19.2	1,225	1,550	
8:30	966.5	7.4	62	w.	5.4	1,118	886.3	15.6	−1.14	15	2.66	nw.	19.4	1,096	1,040	
						1,000	898.7	14.3		23	3.75	nw.	17.3	980		
						750	925.9	11.4		39	5.26	wnw.	12.7	735		
						500	954.4	8.6		55	6.14	wnw.	8.2	490		
8:49	966.5	7.4	62	wnw.	6.3	396	966.5	7.4		62	6.39	wnw.	6.3	388		Cloudless.

November 20, 1917 (No. 2).

A. M.																
9:02	966.5	7.4	63	wnw.	6.7	396	966.5	7.4		63	6.49	wnw.	6.7	388		Cloudless.
						500	954.5	8.7		58	6.52	wnw.	8.3	490	0	
						750	926.4	11.9		45	6.27	nw.	12.1	735	610	
						1,000	899.0	15.0		32	5.46	nw.	16.0	980	1,010	
9:16	966.6	8.0	61	wnw.	6.7	1,053	893.6	15.7	−1.26	29	5.17	nw.	16.8	1,032	1,210	
						1,250	872.8	14.6		30	4.99	nw.	17.7	1,225	1,850	
						1,500	847.3	13.2		31	4.70	nw.	18.8	1,470	2,420	
						1,750	823.0	11.7		32	4.40	nw.	19.9	1,715	3,090	
						2,000	798.6	10.3		34	4.26	nw.	20.9	1,960	3,830	
9:42	966.8	8.8	58	nw.	6.7	2,058	793.0	10.0	0.57	34	4.18	nw.	21.2	2,017	3,980	
						2,250	774.7	8.7		33	3.71	nw.	20.8	2,205	4,470	
						2,500	751.2	7.1		32	3.23	nw.	20.2	2,450	5,030	
						2,750	728.8	5.4		32	2.87	nw.	19.9	2,694	5,540	
						3,000	707.0	3.8		31	2.49	nnw.	19.1	2,939	6,060	
						3,250	686.0	2.1		30	2.13	nnw.	19.6	3,184	6,610	
10:43	966.6	13.1	43	nw.	6.3	3,480	666.5	0.6	0.64	29	1.85	nnw.	18.1	3,409	6,900	Cloudless.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 20, 1917 (No. 2)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁹ ergs.*	*volts.*	
						3,250	686.0	2.0		30	2.12	nnw.	18.1	3,184	6,080	
						3,000	707.0	3.6		32	2.53	nnw.	18.2	2,939	5,190	
						2,750	728.8	5.2		33	2.92	nnw.	18.2	2,694	4,440	
						2,500	751.2	6.7		34	3.34	nnw.	18.3	2,450	3,870	
11:23	966.5	15.4	35	nw.	4.5	2,381	762.5	7.5	0.61	35	3.63	nnw.	18.3	2,333	3,600	Few A.Cu., wnw.
						2,250	774.7	8.3		35	3.83	nnw.	18.5	2,205	3,300	
						2,000	798.6	9.8		36	4.36	nnw.	18.9	1,960	2,740	
						1,750	823.0	11.3		36	4.82	nnw.	19.3	1,715	2,170	
						1,500	847.3	12.9		36	5.36	nnw.	19.7	1,470	1,730	
						1,250	872.8	14.4		37	6.07	nnw.	20.1	1,225	1,520	
11:52	966.5	16.4	34	nnw.	8.0	1,183	880.2	14.8	−0.84	37	6.23	nnw.	20.2	1,160	1,470	
						1,000	899.0	13.3		39	5.96	nw.	15.8	980	820	
11:57	966.5	16.5	35	nw.	7.6	872.	913.4	12.2	0.92	40	5.68	nw.	14.1	855	370	
						750	926.4	13.3		38	5.80	nw.	12.2	735	0	
						500	954.5	15.6		34	6.02	nw.	8.3	490	0	
P. M.																
12:08	966.4	16.6	32	nw.	6.7	396	966.4	16.6		32	6.04	nw.	6.7	388		Few A.Cu., wnw.

November 21, 1917 (No. 1).

A. M.																
7:31	961.8	7.4	57	wnw.	6.3	396	961.8	7.4		57	5.87	wnw.	6.3	388		3/10 Ci.St., wnw.; 5/10 St.Cu., wnw.
						500	950.0	10.7		53	6.82	wnw.	16.5	490	0	
7:32	961.8	7.7	55	wnw.	6.3	604	938.0	14.0	−3.17	49	7.83	wnw.	26.8	592	0	
7:41	961.8	8.3	53	wnw.	6.7	695	928.0	14.9	−0.99	42	7.11	nw.	26.5	682	170	
						750	922.0	14.6		43	7.15	nw.	26.7	735	330	
						1,000	895.0	13.5		46	7.12	nw.	27.7	980	1,060	
						1,250	869.0	12.4		50	7.20	nw.	28.7	1,225	1,780	
7:58	961.8	8.6	53	wnw.	6.7	1,461	847.3	11.4	0.46	53	7.14	nw.	29.6	1,432	2,400	
						1,500	843.5	11.3		53	7.10	nw.	29.7	1,470	2,610	
						1,750	818.8	10.4		53	6.68	nw.	30.6	1,715	3,950	
						2,000	794.2	9.7		53	6.38	nw.	31.5	1,960	5,280	
8:10	961.9	8.6	53	wnw.	4.0	2,132	781.3	9.1	0.31	53	6.13	nw.	32.0	2,089		
						2,000	794.2	9.5		53	6.29	nw.	31.6	1,960	5,290	
						1,750	818.8	10.2		53	6.60	nw.	30.2	1,715	4,220	
						1,500	843.5	10.9		53	6.91	nw.	29.8	1,470	3,160	
						1,250	869.0	11.6		53	7.24	nw.	29.0	1,225	2,100	
8:43	962.3	10.0	53	nw.	4.0	1,017	893.2	12.2	−0.05	53	7.53	nw.	28.2	997	1,105	
						1,000	895.0	12.2		53	7.53	nw.	27.6	980	1,050	
						750	922.2	12.1		52	7.34	nw.	18.0	735	210	
						500	950.8	12.0		51	7.16	nw.	8.5	490	0	
9:10	962.5	11.9	50	nw.	4.5	396	962.5	11.9		50	6.96	nw.	4.5	388		6/10 Ci.St., nw.

November 21, 1917 (No. 2).

A. M.																
9:52	962.5	16.0	41	nw.	10.7	396	962.5	16.0		41	7.45	nw.	10.7	388		3/10 Ci., nw.; 2/10 Ci.St., nw.
						500	950.7	15.0		41	6.99	nw.	15.5	490	0	
						750	922.9	12.6		41	5.98	nw.	27.1	735	0	
9:57	962.5	16.0	41	nw.	10.7	783	919.3	12.3	0.96	41	5.87	nw.	28.6	768	0	
						1,000	895.8	12.1		41	5.79	nw.	29.9	980	870	
						1,250	869.8	12.0		41	5.75	n.	31.4	1,225	1,870	
10:08	962.5	16.0	41	nw.	10.3	1,357	858.5	11.9	0.07	41	5.71	n.	32.0	1,330	2,300	
						1,500	844.2	10.7		44	5.66	n.	31.8	1,470	2,850	Partial solar halo, 22° radius, from 10:18 to 11:21 a. m.
						1,750	819.4	8.5		49	5.44	nnw.	31.5	1,715	3,820	
10:25	962.6	16.9	40	nnw.	12.1	1,908	803.7	7.1	0.84	52	5.25	nnw.	31.3	1,870	4,300	
						1,750	819.4	8.4		50	5.51	nnw.	31.5	1,715	3,670	
						1,500	844.2	10.4		47	5.93	nnw.	31.8	1,470	2,670	
10:54	962.8	17.2	38	nnw.	10.3	1,375	857.3	11.4	0.66	46	6.20	nnw.	32.0	1,348	2,170	7/10 Ci., nw.
						1,250	869.8	12.2		45	6.39	nnw.	29.4	1,225	1,710	
						1,000	895.8	13.8		43	6.79	nnw.	24.2	980	790	
						750	922.9	15.5		40	7.04	nnw.	18.9	735	0	
						500	950.7	17.1		38	7.41	nnw.	13.8	490	0	
11:11	962.8	17.8	37	nnw.	11.6	396	962.8	17.8		37	7.54	nnw.	11.6	388		9/10 Ci., nw.

November 22, 1917.

A. M.																
7:27	969.4	− 0.4	75	n.	4.5	396	969.4	− 0.4		75	4.43	n.	4.5	388		Few St.Cu., nnw.
						500	956.8	− 1.3		80	4.38	n.	9.1	490	400	
						750	927.4	− 3.5		93	4.24	nnw.	20.1	735	1,370	
7:38	969.5	− 0.6	73	n.	5.8	757	926.5	− 3.6	0.89	93	4.20	nnw.	20.4	742	1,400	
						1,000	898.5	− 4.4		82	3.46	nnw.	31.2	980	2,380	
7:54	969.8	− 0.6	77	n.	4.9	1,080	889.6	− 4.7	0.34	78	3.21	nnw.	34.7	1,059	2,700	
7:58	969.9	− 0.6	77	n.	4.9	1,212	875.0	− 3.6	−0.83	64	2.89	nnw.	33.9	1,188	3,320	
						1,250	870.5	− 3.6		63	2.85	nnw.	33.8	1,225	3,500	
						1,500	843.5	− 3.8		58	2.58	nnw.	32.9	1,470	4,670	
						1,750	817.2	− 4.0		54	2.36	nnw.	32.1	1,715	5,840	
						2,000	791.7	− 4.2		49	2.11	nnw	31.2	1,960	7,020	3/10 St.Cu., nnw.
8:08	970.0	− 0.4	76	n.	4.9	2,097	782.1	− 4.3	0.08	47	2.00	nnw.	30.9	2,055	7,470	
						2,250	766.9	− 5.5		45	1.73	nnw.	29.5	2,205	8,190	
						2,500	742.6	− 7.4		43	1.40	nnw.	27.1	2,450	9,360	
8:14	970.1	− 0.3	75	n.	4.9	2,593	733.8	− 8.1	0.59	42	1.29	nnw.	26.2	2,541	9,800	
						2,500	742.6	− 7.7		42	1.34	nnw.	26.5	2,450	9,470	
						2,250	766.9	− 6.7		44	1.53	nnw.	27.5	2,205	8,590	
						2,000	791.7	− 5.6		45	1.71	nnw.	28.4	1,960	7,700	
						1,750	817.2	− 4.6		46	1.91	nnw.	29.3	1,715	6,820	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 22, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*10^5 ergs.*	*volts.*	
8:21	970.2	− 0.2	74	n.	6.7	1,519	841.7	− 3.6	−0.55	47	2.12	nnw.	30.2	1,489	6,000	
						1,500	843.5	− 3.7		48	2.15	nnw.	30.2	1,470	5,940	
						1,250	870.5	− 5.1		68	2.71	nnw.	30.2	1,225	5,050	
8:58	970.9	0.0	71	n.	9.8	1,009	898.1	− 6.4	4.33	86	3.06	nnw.	30.2	989	4,200	
9:07	970.9	0.1	70	n.	7.6	1,076	890.8	− 3.5	−0.53	63	2.87	nnw.	31.2	1,055	4,440	
						1,000	898.5	− 3.9		70	3.09	nnw.	27.3	980	3,430	3/10 A.St., nnw.; 2/10 St. Cu., nnw.
						750	927.6	− 5.2		94	3.70	n.	14.5	735	1,410	Altitude of St.Cu. base about 1,000 m.
9:44	970.9	0.6	68	n.	6.3	736	930.2	− 5.3	1.18	95	3.71	n.	13.8	722	1,300	
9:49	970.9	0.7	68	n.	6.7	566	950.3	− 3.3	2.41	89	4.13	n.	13.2	555	650	
						500	958.0	− 1.7		81	4.29	n.	10.5	490	400	
9:51	970.9	0.8	68	n.	6.3	396	970.9	0.8		68	4.40	n.	6.3	388		8/10 A.St., nnw.; Few St.Cu., nnw.

November 23, 1917.

A. M.																
8:12	972.8	− 3.8	96	nne.	1.8	396	972.8	− 3.8		96	4.26	nne.	1.8	388		10/10 St.Cu., ne.
						500	959.9	− 4.7		97	4.00	nne.	3.1	490	0	
						750	930.0	− 6.9		98	3.34	ne.	6.1	735	2,270	Altitude of St.Cu. base about 900 m.
8:44	973.3	− 2.6	78	ne.	3.6	974	904.1	− 8.8	0.87	100	2.89	ne.	8.8	955	5,420	
						1,000	901.0	− 8.3		95	2.87	ne.	9.2	980	5,570	
8:51	973.4	− 2.6	78	ne.	3.6	1,211	877.2	− 4.0	−2.03	57	2.49	ne.	12.4	1,187	6,710	
						1,250	872.6	− 4.1		57	2.47	ne.	12.4	1,225	6,920	
						1,500	845.0	− 5.1		59	2.35.	ne.	12.2	1,470	8,270	5/10 St. Cu., nne.
						1,750	818.8	− 6.0		60	2.21	nne.	12.1	1,715	9,630	
						2,000	793.0	− 6.9		62	2.11	nne.	12.0	1,960	10,900	
						2,250	768.4	− 7.8		63	1.98	n.	11.9	2,205	12,120	
						2,500	744.0	− 8.8		65	1.88	n.	11.7	2,450	13,330	
9:29	973.8	− 1.5	70	ne.	4.5	2,535	741.0	− 8.9	0.37	65	1.86	n.	11.7	2,484	13,500	
						2,750	720.5	−10.1		57	1.46	n.	13.2	2,694	14,630	
						3,000	697.4	−11.6		47	1.06	n.	14.8	2,939	15,940	
						3,250	674.9	−13.0		38	0.75	nne.	16.5	3,184	17,260	
						3,500	653.0	−14.5		28	0.48	nne.	18.2	3,429	19,790	3/10 St. Cu., nne.
10:17	974.2	− 1.0	65	ne.	4.0	3,661	639.3	−15.4	0.50	22	0.35	nne.	19.3	3,586		
						3,500	653.0	−14.7		26	0.44	nne.	19.2	3,429	19,790	
						3,250	674.9	−13.6		32	0.60	nne.	19.1	3,184	15,760	
						3,000	697.4	−12.6		38	0.78	nne.	19.0	2,939	13,770	
11:02	974.7	0.5	61	ne.	2.2	2,961	701.0	−12.4	0.41	39	0.82	nne.	19.0	2,901	13,480	
						2,750	720.5	−11.5		41	0.93	nne.	18.1	2,694	11,920	
						2,500	744.0	−10.5		44	1.09	nne.	17.1	2,450	10,080	
						2,250	768.4	− 9.5		46	1.25	nne.	16.0	2,205	8,660	
						2,000	793.0	− 8.4		49	1.47	nne.	15.0	1,960	7,360	2/10 St. Cu., nnw.
						1,750	819.3	− 7.4		52	1.70	nne.	13.9	1,715		
						1,500	846.2	− 6.4		54	1.92	nne.	12.9	1,470		
						1,250	873.8	− 5.3		57	2.23	nne.	11.8	1,225		
11:40	974.4	0.7	59	ne.	2.2	1,147	885.7	− 4.9	−1.87	58	2.35	nne.	11.4	1,124		
11:41	974.4	0.8	59	ne.	2.2	1,008	901.6	− 7.5	0.91	71	2.29	nne.	11.4	988		
						1,000	902.2	− 7.4		71	2.31	nne.	11.3	980		
						750	931.3	− 5.2		76	2.99	nne.	7.2	735		
						500	961.5	− 2.9		81	3.89	ne.	3.2	490		
11:46	974.4	1.0	56	ne.	2.7	468	965.6	− 2.6	5.56	82	4.03	ne.	2.7	459		
11:55	974.3	1.4	63	ne.	2.7	396	974.3	1.4		63	4.26	ne.	2.7	388		1/10 St.Cu., nnw.

November 25, 1917.

P. M.																
1:34	981.2	2.6	75	e.	5.4	396	981.2	2.6		75	5.53	e.	5.4	388		10/10 St.Cu., se.; Lt. fog ese.
						500	968.0	1.8		78	5.43	e.	5.5	490		
						750	937.8	− 0.3		85	5.07	ese.	5.6	735	1,490	10/10 St.Cu., ese.; Lt. fog e.
						1,000	909.0	− 2.3		92	4.64	ese.	5.8	980	2,910	Altitude of St.Cu. base about 900 m.
						1,250	881.2	− 4.3		99	4.22	se.	6.0	1,225	5,660	
3:10	980.8	1.6	80	e.	4.0	1,262	879.8	− 4.4	0.81	99	4.18	se.	6.0	1,237	6,000	
3:43	980.8	1.8	77	e.	5.8	1,282	877.4	− 2.6	−9.00	74	3.64	se.	6.9	1,257	5,950	
						1,500	854.0	− 3.6		80	3.62	se.	6.8	1,470	5,170	
						1,750	827.2	− 4.7		87	3.58	se.	6.8	1,715		
						2,000	801.0	− 5.8		94	3.52	se.	6.7	1,960		
3:53	980.8	2.0	74	e.	5.8	2,025	798.5	− 5.9	0.37	95	3.52	se.	6.7	1,981		
						2,000	801.0	− 5.8		95	3.56	se.	6.7	1,960		
						1,750	827.2	− 5.1		96	3.82	se.	6.5	1,715		
						1,500	854.0	− 4.3		97	4.13	se.	6.3	1,470	3,640	
						1,250	881.2	− 3.6		98	4.43	ese.	6.2	1,225	2,510	
						1,000	909.0	− 2.9		99	4.75	ese.	6.0	980	1,180	
						750	937.8	− 2.1		100	5.13	ese.	5.8	735	0	
4:29	980.6	1.6	77	ese.	5.4	706	943.5	− 2.0	1.16	100	5.17	ese.	5.8	692	0	
						500	967.4	0.4		83	5.22	ese.	5.5	490	0	
4:45	980.5	1.6	75	ese.	5.4	396	980.5	1.6		75	5.14	ese.	5.4	388		10/10 St.Cu., ese.

November 27, 1917 (No. 1).

A. M.																
8:07	977.0	0.8	86	wnw.	1.3	396	977.0	0.8		86	5.56	wnw.	1.3	388		4/10 St.Cu., nnw.
						500	964.3	0.4		86	5.41	wnw.	3.8	490	0	
8:19	977.1	1.2	82	wnw.	1.3	737	936.4	− 0.6	0.41	86	5.00	nw.	9.6	723	0	
						750	934.8	− 0.7		86	4.95	nw.	9.5	735	520	Few St.Cu., nnw.
						1,000	905.9	− 3.5		94	4.27	nw.	7.6	980	1,050	
8:49	977.3	1.7	82	nw.	3.1	1,112	893.5	− 4.7	1.09	98	4.04	nw.	6.8	1,090	1,500	1/10 St.Cu., nnw.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 27, 1917 (No. 1)—Continued.

Surface.						At different heights above sea.											
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁸ ergs.*	*volts.*	
						1,250	878.0	− 3.5		80	3.65	nw.	9.5	1,225	2,070	
						1,500	851.0	− 1.4		47	2.56	nw.	14.4	1,470	3,020	
8:54	977.4	1.7	83	nw.	3.1	1,581	842.3	0.7	−0.88	36	2.31	nw.	16.0	1,550	3,280	
						1,750	824.9	0.2		36	2.23	nw.	15.8	1,715	3,800	
						2,000	799.7	− 0.6		37	2.15	wnw.	15.6	1,960	4,580	
						2,250	775.4	− 1.3		38	2.08	wnw.	15.3	2,205	5,360	
9:12	977.5	2.3	80	nw.	2.7	2,392	761.2	− 1.8	0.31	38	2.00	wnw.	15.2	2,344	5,800	5/10 St.Cu., nnw.
						2,500	751.3	− 2.6		42	2.07	wnw.	15.7	2,450	6,300	
						2,750	727.5	− 4.6		52	2.16	wnw.	16.9	2,694	7,460	
						3,000	704.7	− 6.5		62	2.19	wnw.	18.1	2,939	8,610	
9:31	977.7	2.2	79	nw.	3.1	3,063	699.0	− 7.0	0.77	64	2.16	wnw.	18.4	3,001	8,900	1/10 St.Cu., nnw.
						3,250	682.4	− 8.3		63	1.90	wnw.	18.3	3,184	9,300	
						3,500	661.0	−10.2		59	1.50	wnw.	18.1	3,429	9,960	
						3,750	640.0	−12.0		56	1.22	wnw.	17.9	3,673	10,560	
						4,000	619.3	−13.8		53	0.98	wnw.	17.7	3,918	11,320	
10:07	978.0	3.0	80	nw.	2.7	4,095	611.6	−14.5	0.80	52	0.90	wnw.	17.6	4,011	.....	
						4,000	619.3	−13.7		52	0.97	wnw.	17.7	3,918	11,220	
						3,750	640.0	−11.5		52	1.18	wnw.	18.0	3,673	10,050	
						3,500	661.0	− 9.3		52	1.44	wnw.	18.2	3,429	8,890	
						3,250	682.4	− 7.2		52	1.73	wnw.	18.5	3,184	7,720	
10:44	978.3	3.6	76	nw.	5.8	3,161	690.4	− 6.4	0.33	52	1.85	wnw.	18.6	3,097	7,300	2/10 St.Cu., nnw.
						3,000	704.7	− 5.9		55	2.04	wnw.	17.6	2,939	6,800	
						2,750	727.5	− 5.0		61	2.45	wnw.	16.2	2,694	6,010	3/10 St.Cu., nnw.
11:02	978.4	3.7	75	nw.	5.4	2,587	742.9	− 4.5	0.48	64	2.68	wnw.	15.2	2,535	5,500	
						2,500	751.3	− 4.1		60	2.60	wnw.	14.9	2,450	5,170	
						2,250	775.4	− 2.9		49	2.35	nw.	14.2	2,205	4,210	
						2,000	800.0	− 1.7		38	2.01	nw.	13.5	1,960	3,250	
						1,750	825.4	− 0.5		28	1.64	nnw.	12.6	1,715	2,290	
11:18	978.4	4.1	72	nw.	6.7	1,643	836.6	0.0	−2.00	23	1.41	nnw.	12.4	1,610	1,880	
						1,500	852.0	− 2.8		30	1.45	nnw.	8.5	1,470	1,330	7/10 St. Cu., nw.
11:24	978.4	3.9	71	nw.	5.8	1,393	863.5	− 5.0	0.75	36	1.44	nnw.	5.5	1,366	1,160	Altitude of St.Cu. base about 1000 m.
						1,250	879.5	− 3.9		43	1.90	nnw.	5.5	1,225	950	
						1,000	907.4	− 2.1		56	2.87	nnw.	5.5	980	590	
						750	936.2	− 0.2		70	4.21	nw.	5.5	735	230	
11:40	978.4	4.0	69	nw.	5.8	590	955.2	1.0	1.80	77	5.06	nw.	5.5	578	0	
						500	965.8	2.6		74	5.59	nw.	6.1	490	0	
11:54	978.4	4.5	70	nw.	6.7	396	978.4	4.5		70	5.89	nw.	6.7	388	.....	8/10 St.Cu., nw.

November 27, 1917 (No. 2).

P. M.																
1:06	977.4	4.5	62	nw.	4.0	396	977.4	4.5		62	5.22	nw.	4.0	388	.....	6/10 St.Cu., nw.
						500	964.7	3.3		68	5.26	nw.	4.6	490	0	
						750	935.0	0.4		81	5.09	nnw.	6.2	735	0	
						1,000	906.1	− 2.6		95	4.67	nnw.	7.7	980	0	
2:47	977.0	4.5	66	wnw.	3.1	1,089	896.1	− 3.6	1.17	100	4.52	nnw.	8.3	1,068	0	
						1,250	878.1	− 2.1		72	3.69	nnw.	11.2	1,225	0	
2:51	977.0	4.6	65	wnw.	3.1	1,469	854.3	0.0	−1.24	33	2.02	nnw.	15.1	1,440	0	
						1,250	878.1	− 3.3		48	2.23	nnw.	8.3	1,225	0	
2:58	977.0	5.1	63	wnw.	5.4	1,240	879.2	− 3.5	0.63	49	2.23	nnw.	8.0	1,216	0	
						1,000	906.1	− 2.0		69	3.57	nnw.	8.2	980	0	
3:08	977.0	3.8	69	nw.	4.5	778	931.7	− 0.6	1.15	87	5.05	nw.	8.4	763	0	
						750	935.0	− 0.3		86	5.13	nw.	8.0	735	0	
						500	964.7	2.6		75	5.53	nw.	4.5	490	0	
3:17	977.1	3.8	71	nw.	3.6	396	977.1	3.8		71	5.69	nw.	3.6	388	.....	1/10 St.Cu., nnw.

November 28, 1917, series (No. 1).

A. M.																
9:07	974.7	−4.2	86	sse.	2.7	396	974.7	− 4.2		86	3.70	sse.	2.7	388	.....	Dense fog from 8:52 to 9:15 a. m.
						500	962.0	− 2.8		82	3.97	s.	4.7	490	810	Light fog from 9:15 to 9:30 a. m.
9:17	974.8	−4.4	92	sse.	2.7	678	940.7	− 0.5	−1.31	75	4.40	ssw.	8.0	665	2,200	
						750	932.5	0.3		61	3.81	ssw.	7.8	735	2,720	
						1,000	904.0	3.1		14	1.07	ssw.	7.3	980	2,980	2/10 St., s.
10:16	975.0	−1.8	96	sse.	2.7	1,009	903.3	3.2	−1.12	12	0.92	ssw.	7.3	989	3,010	
						1,250	876.7	3.0		24	1.82	sw.	7.7	1,225	3,920	
10:27	975.0	−0.9	100	sse.	3.6	1,435	857.2	2.8	0.09	34	2.54	sw.	8.0	1,407	4,630	
						1,500	850.0	2.5		34	2.49	sw.	8.1	1,470	4,870	
						1,750	824.0	1.3		33	2.21	sw.	8.7	1,715	5,820	
						2,000	798.8	0.1		32	1.97	sw.	9.2	1,960	6,770	
						2,250	774.3	− 1.0		30	1.69	wsw.	9.8	2,205	7,720	
						2,500	750.3	− 2.2		29	1.48	wsw.	10.3	2,450	8,470	
11:08	974.9	1.8	73	s.	6.7	2,579	743.2	− 2.6	0.47	29	1.43	wsw.	10.5	2,527	8,700	
						2,750	726.6	− 0.7		7	0.40	ssw.	5.3	2,694	.....	Few St., s.
P. M.																
12:09	973.8	4.2	71	s.	7.2	2,794	722.7	− 0.2	−1.12	1	0.06	s.	3.9	2,738	.....	
12:36	973.2	5.4	62	sw.	7.2	2,854	717.1	− 1.2	0.62	1	0.06	ssw.	8.2	2,796	.....	Few Ci. near horizon.
						2,750	726.1	− 1.7		1	0.05	ssw.	8.8	2,694	.....	
12:45	973.0	5.7	63	s.	7.2	2,577	742.2	− 2.4	0.45	1	0.05	sw.	9.8	2,525	6,620	
						2,500	749.7	− 2.1		5	0.26	sw.	10.0	2,450	6,440	
						2,250	773.8	− 0.9		17	0.96	sw.	10.4	2,235	5,840	
						2,000	798.0	0.2		29	1.80	sw.	10.9	1,960	5,190	
						1,750	823.2	1.3		42	2.82	sw.	11.4	1,715	4,270	
						1,500	849.0	2.4		54	3.92	sw.	11.9	1,470	2,720	
1:14	972.4	6.0	63	s.	6.3	1,398	859.6	2.9	0.03	59	4.44	sw.	12.1	1,370	2,520	
						1,250	875.5	2.9		60	4.52	sw.	11.0	1,225	2,250	
						1,000	902.8	3.0		61	4.62	ssw.	9.2	980	1,500	
						750	931.0	3.1		63	4.81	ssw.	7.3	735	460	
1:34	972.0	6.5	58	s.	6.3	708	935.0	3.1	1.19	63	4.81	ssw.	7.0	694	280	
						500	959.7	5.0		58	5.28	ssw.	6.2	490	0	
1:40	971.9	6.8	56	ssw.	5.8	396	971.9	6.8		56	5.53	ssw.	5.8	388	.....	1/10 Ci.St., s.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 28, 1917, series (No. 2).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^5 *ergs.*	*volts.*	
2:18	971.3	7.4	52	ssw.	7.6	396	971.3	7.4	.....	52	5.36	ssw.	7.6	388	.....	1/10 Ci. St., s.
						500	958.7	6.7	.....	51	5.00	ssw.	8.1	490	0	
						750	929.8	5.2	.....	49	4.34	sw.	9.3	735	0	
2:42	970.9	8.0	47	ssw.	4.9	967	905.3	3.8	0.63	47	3.77	sw.	10.3	948	1,000	
						1,000	901.7	3.8	.....	48	3.85	sw.	10.2	980	1,220	
						1,250	874.5	3.6	.....	54	4.27	sw.	9.9	1,225	2,820	
						1,500	847.7	3.4	.....	60	4.68	wsw.	9.5	1,470	3,850	
3:07	970.6	8.2	48	s.	5.4	1,536	844.0	3.4	0.07	61	4.76	wsw.	9.4	1,505	4,000	
						1,750	821.8	2.3	.....	56	4.04	wsw.	9.2	1,715	4,850	
						2,000	796.6	1.1	.....	51	3.38	wsw.	8.9	1,960	5,840	1/10 Ci.St., s.
						2,250	772.5	−0.2	.....	45	2.70	wsw.	8.7	2,205	6,770	
3:34	970.4	8.0	49	s.	4.0	2,311	766.4	−0.5	0.50	44	2.58	wsw.	8.6	2,265	6,970	
						2,500	748.3	−0.5	.....	32	1.88	sw.	7.1	2,450	7,610	
						2,750	725.0	−0.4	.....	17	1.00	ssw.	5.2	2,694	.....	
4:19	970.2	7.1	52	sse.	4.5	2,866	714.4	−0.4	−0.01	10	0.59	ssw.	4.3	2,808	.....	
						2,750	725.0	−0.4	.....	11	0.65	ssw.	5.5	2,694	.....	
						2,500	747.9	−0.4	.....	12	0.71	ssw.	8.1	2,450	6,130	
4:49	970.0	4.9	64	sse.	4.0	2,254	770.8	−0.4	0.39	13	0.77	ssw.	10.6	2,209	4,630	
						2,000	795.6	0.6	.....	25	1.60	ssw.	11.0	1,960	4,400	
						1,750	820.7	1.6	.....	36	2.47	ssw.	11.3	1,715	4,060	
						1,500	846.5	2.5	.....	48	3.51	ssw.	11.7	1,470	3,170	
5:11	969.8	4.0	65	sse.	4.5	1,253	872.5	3.5	−0.57	59	4.63	ssw.	12.0	1,228	2,290	
5:18	969.8	3.9	65	sse.	4.5	1,007	899.2	2.1	0.25	59	4.19	ssw.	13.3	987	1,500	
						1,000	900.0	2.1	.....	59	4.19	ssw.	13.2	980	1,460	
						750	928.1	2.7	.....	61	4.53	s.	9.6	735	60	
						500	957.1	3.3	.....	63	4.88	sse.	6.0	490	0	Few Ci. near western horizon.
5:26	969.8	3.6	64	sse.	4.5	396	969.8	3.6	.....	64	5.06	sse.	4.5	388	.....	

November 28, 1917, series (No. 3).

P.M.																
6:11	969.5	2.4	71	sse.	4.5	396	969.5	2.4	.....	71	5.15	sse.	4.5	388	.....	Few Ci., wsw.
						500	956.6	3.2	.....	66	5.08	sse.	8.4	490	0	
6:14	969.5	2.4	71	sse.	3.1	669	937.5	4.5	−0.77	59	4.97	s.	14.7	656	0	
						750	927.8	4.4	.....	58	4.85	s.	14.2	735	230	
						1,000	899.5	4.3	.....	57	4.74	ssw.	12.8	980	1,780	
						1,250	872.6	4.1	.....	55	4.50	ssw.	11.3	1,225	2,730	
						1,500	846.2	4.0	.....	54	4.39	sw.	9.9	1,470	2,790	
6:47	969.3	1.3	75	sse.	4.9	1,580	838.0	3.9	0.07	53	4.28	sw.	9.4	1,549	2,880	
						1,750	820.6	2.9	.....	50	3.76	sw.	10.0	1,715	3,190	
						2,000	795.6	1.3	.....	45	3.02	sw.	11.0	1,960	3,650	
						2,250	771.4	−0.2	.....	40	2.40	sw.	11.9	2,205	4,600	
7:11	969.1	1.4	76	sse.	5.4	2,400	756.6	−1.1	0.61	37	2.06	sw.	12.5	2,352	5,300	
						2,500	747.3	−1.1	.....	31	1.73	sw.	11.1	2,450	5,550	
						2,750	724.4	−1.1	.....	17	0.95	sw.	7.6	2,694	6,590	
7:47	969.0	1.2	77	sse.	4.9	2,917	709.0	−1.1	0.01	8	0.45	sw.	5.2	2,858	.....	
						2,750	724.4	−1.1	.....	6	0.33	sw.	6.7	2,694	5,970	
						2,500	747.3	−1.0	.....	3	0.17	sw.	8.9	2,450	4,900	
8:29	968.9	1.4	73	sse.	4.9	2,294	766.3	−1.0	0.46	1	0.06	sw.	10.8	2,248	4,100	
						2,250	770.7	−0.8	.....	2	0.11	sw.	10.9	2,205	4,000	
						2,000	794.8	0.3	.....	8	0.50	sw.	11.6	1,960	3,400	
						1,750	820.0	1.5	.....	15	1.02	ssw.	12.3	1,715	2,810	
						1,500	845.7	2.6	.....	21	1.55	ssw.	13.0	1,470	2,310	
						1,250	872.2	3.8	.....	27	2.17	ssw.	13.6	1,225	1,850	
						1,000	899.5	4.9	.....	33	2.86	s.	14.3	980	1,080	
9:01	968.9	1.0	76	s.	5.4	894	911.4	5.4	−0.08	36	3.23	s.	14.6	877	680	
						750	927.8	5.3	.....	41	3.65	s.	15.8	735	140	
9:11	968.8	1.2	74	s.	6.3	511	955.2	5.1	−3.48	48	4.22	s.	17.9	501	0	
						500	956.4	1.3	.....	50	3.36	s.	16.7	490	0	
9:14	968.7	1.1	74	s.	5.8	396	968.7	1.1	.....	74	4.90	s.	5.8	388	.....	Few Ci., wsw.

November 28–29, 1917, series (No. 4).

P. M.																
9:56	968.2	0.4	75	s.	5.8	396	968.2	0.4	.....	75	4.72	s.	5.8	388	.....	Few Ci., wsw.
						500	955.8	3.1	.....	64	4.88	s.	11.4	490	0	
9:58	968.2	0.5	75	s.	5.8	573	947.3	5.0	−2.60	56	4.88	s.	15.3	562	0	
						750	927.2	5.0	.....	55	4.80	s.	14.5	735	0	
						1,000	899.0	5.1	.....	54	4.75	ssw.	13.3	980	1,170	
10:17	968.0	0.4	77	s.	7.2	1,202	876.8	5.1	−0.02	53	4.66	ssw.	12.4	1,178	2,200	
						1,250	871.7	4.9	.....	52	4.50	ssw.	12.3	1,225	2,360	
						1,500	845.0	3.9	.....	44	3.56	ssw.	12.0	1,470	3,200	
						1,750	819.4	2.9	.....	37	2.79	sw.	11.7	1,715	4,140	
						2,000	794.6	2.0	.....	30	2.12	sw.	11.3	1,960	5,130	
10:45	967.8	0.8	74	s.	6.7	2,170	778.0	1.3	0.39	25	1.68	sw.	11.1	2,127	5,800	
						2,250	770.3	1.4	.....	21	1.42	sw.	10.3	2,205	6,390	
						2,500	746.3	1.5	.....	6	0.41	sw.	7.8	2,450	8,740	
11:38	967.6	0.5	72	s.	6.3	2,598	737.3	1.6	−0.07	1	0.07	sw.	6.8	2,546	9,100	Few Ci., wsw.
						2,750	723.5	0.4	.....	1	0.06	sw.	6.4	2,694	.....	
						3,000	701.3	−1.6	.....	1	0.05	sw.	5.9	2,939	.....	
11:55	967.6	0.4	75	s.	5.8	3,160	687.0	−2.9	0.59	1	0.05	sw.	5.5	3,096	.....	
						3,000	701.3	−2.3	.....	1	0.05	sw.	6.5	2,939	.....	
						2,750	723.5	−1.3	.....	1	0.05	sw.	8.0	2,694	.....	
						2,500	745.9	−0.4	.....	1	0.06	sw.	9.5	2,450	7,220	
A. M.																
12:34	967.4	0.6	72	s.	7.2	2,279	766.9	0.5	0.43	1	0.06	sw.	10.9	2,233	6,200	
						2,250	769.1	0.6	.....	2	0.13	sw.	.....	2,205	6,100	
						2,000	793.1	1.7	.....	11	0.76	sw.	.....	1,960	5,250	
						1,750	817.8	2.8	.....	19	1.42	sw.	.....	1,715	4,390	

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 28–29, 1917, series (No. 4)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ crgs.*	*volts.*	
.....	.....	.....	.....	.....	.....	1,500	843.6	3.8	.....	28	2.25	sw.	.....	1,470	3,570	
.....	.....	.....	.....	.....	.....	1,250	870.5	4.9	.....	36	3.12	sw.	.....	1,225	2,780	
1:02	967.2	0.4	74	s.	6.7	1,059	891.4	5.7	−0.03	43	3.94	sw.	.....	1,038	1,940	
.....	.....	.....	.....	.....	.....	1,000	897.3	5.7	.....	42	3.85	sw.	.....	980	1,550	
1:13	967.1	0.4	70	s.	5.8	770	923.4	5.6	−1.39	40	3.64	ssw.	.....	755	0	
.....	.....	.....	.....	.....	.....	750	925.5	5.3	.....	42	3.74	ssw.	.....	735	0	
.....	.....	.....	.....	.....	.....	500	954.5	1.8	.....	62	4.32	s.	.....	490	0	
1:20	967.1	0.4	70	s.	6.3	396	967.1	0.4	.....	70	4.40	s.	6.3	388	.....	1/10 Ci., wsw.

November 29, 1917, series (No. 5).

A. M.																
2:01	966.9	0.0	72	s.	6.7	396	966.9	0.0	.....	72	4.40	s.	6.7	388	.....	Cloudless.
.....	.....	.....	.....	.....	.....	500	954.5	1.9	.....	68	4.77	s.	12.4	490	0	
2:03	966.9	0.1	73	s.	7.2	642	937.9	6.1	−1.76	59	5.56	ssw.	25.2	629	0	
.....	.....	.....	.....	.....	.....	750	925.6	6.1	.....	59	5.56	ssw.	23.5	735	260	
.....	.....	.....	.....	.....	.....	1,000	897.5	6.1	.....	58	5.46	ssw.	19.6	980	1,780	2/10 Ci., wsw.
2:23	966.7	−0.3	75	s.	5.8	1,152	881.2	6.1	0.00	57	5.37	ssw.	17.2	1,129	3,000	
.....	.....	.....	.....	.....	.....	1,250	870.8	5.7	.....	53	4.85	ssw.	16.6	1,225	3,280	
.....	.....	.....	.....	.....	.....	1,500	844.0	4.8	.....	44	3.78	ssw.	15.0	1,470	4,000	4/10 Ci. St., wsw.
.....	.....	.....	.....	.....	.....	1,750	818.0	3.8	.....	34	2.73	ssw.	13.4	1,715	4,760	
.....	.....	.....	.....	.....	.....	2,000	793.5	2.8	.....	25	1.87	sw.	11.9	1,960	5,600	
.....	.....	.....	.....	.....	.....	2,250	769.8	1.8	.....	15	1.04	sw.	10.6	2,205	6,300	
2:53	966.5	−0.4	77	s.	7.2	2,360	759.2	1.4	0.39	15	1.01	sw.	9.6	2,313	6,600	
.....	.....	.....	.....	.....	.....	2,500	746.0	0.5	.....	13	0.82	sw.	9.2	2,450	7,580	
.....	.....	.....	.....	.....	.....	2,750	723.0	− 1.1	.....	9	0.50	sw.	8.5	2,694	8,500	
.....	.....	.....	.....	.....	.....	3,000	700.3	− 2.6	.....	5	0.25	ssw.	7.8	2,939	.....	
3:42	965.8	−0.2	74	s.	8.0	3,219	680.6	− 4.0	0.52	1	0.04	ssw.	7.2	3,154	.....	
.....	.....	.....	.....	.....	.....	3,000	700.3	− 3.1	.....	1	0.05	ssw.	7.4	2,939	.....	
.....	.....	.....	.....	.....	.....	2,750	723.0	− 2.1	.....	1	0.05	ssw.	7.6	2,694	7,560	
.....	.....	.....	.....	.....	.....	2,500	745.8	− 1.1	.....	1	0.06	sw.	7.9	2,450	5,810	
.....	.....	.....	.....	.....	.....	2,250	769.0	− 0.1	.....	1	0.06	sw.	8.1	2,205	4,790	4/10 St. Cu., wsw.
4:13	965.3	−0.8	80	ssw.	6.7	2,039	789.0	0.8	0.67	1	0.06	sw.	8.3	1,998	4,000	
.....	.....	.....	.....	.....	.....	2,000	792.8	1.1	.....	2	0.13	sw.	8.6	1,960	3,910	
.....	.....	.....	.....	.....	.....	1,750	817.2	2.7	.....	5	0.37	sw.	10.6	1,715	3,350	
.....	.....	.....	.....	.....	.....	1,500	842.9	4.4	.....	9	0.75	sw.	12.7	1,450	2,640	
4:33	965.1	−0.2	78	ssw.	5.4	1,310	863.2	5.7	0.31	12	1.10	sw.	14.2	1,284	2,100	
.....	.....	.....	.....	.....	.....	1,250	869.5	5.9	.....	16	1.49	sw.	14.7	1,225	1,860	
.....	.....	.....	.....	.....	.....	1,000	896.0	6.7	.....	31	3.04	sw.	16.6	980	460	
.....	.....	.....	.....	.....	.....	750	924.0	7.4	.....	46	4.74	sw.	18.5	735	0	
4:56	964.8	0.0	77	ssw.	5.4	620	937.9	7.8	−3.30	54	5.71	sw.	19.4	614	0	
.....	.....	.....	.....	.....	.....	500	952.5	3.6	.....	65	5.14	ssw.	12.2	490	0	
5:03	964.8	0.2	74	ssw.	6.3	396	964.8	0.2	.....	74	4.59	ssw.	6.3	388	.....	5/10 Ci., wsw.; 2/10 St. Cu., wsw.

November 29, 1917, series (No. 6).

A. M.																
5:42	964.4	0.3	77	ssw.	2.2	396	964.4	0.3	.....	77	4.80	ssw.	2.2	388	.....	5/10 Ci.St., wsw.
.....	.....	.....	.....	.....	.....	500	952.4	2.3	.....	72	5.19	ssw.	7.7	490	0	2/10 St.Cu., wsw.
.....	.....	.....	.....	.....	.....	750	923.7	7.0	.....	61	6.11	sw.	21.0	735	0	
5:45	964.4	0.6	75	ssw.	9.8	757	922.6	7.1	−1.88	61	6.15	sw.	21.4	742	0	
.....	.....	.....	.....	.....	.....	1,000	895.7	7.2	.....	51	5.18	sw.	17.9	980	870	Lunar halo, 22° radius, from
.....	.....	.....	.....	.....	.....	1,250	868.8	7.4	.....	41	4.22	sw.	14.3	1,225	1,940	5:59 to 6:40 a. m.
6:03	964.1	1.1	70	ssw.	8.9	1,298	863.4	7.4	−0.06	39	4.02	sw.	13.6	1,272	2,220	
.....	.....	.....	.....	.....	.....	1,500	842.3	6.6	.....	34	3.32	sw.	13.7	1,470	3,380	
.....	.....	.....	.....	.....	.....	1,750	816.8	5.6	.....	29	2.64	sw.	13.9	1,715	4,120	3/10 Ci.St., wsw.; 1/10 St.Cu.,
.....	.....	.....	.....	.....	.....	2,000	792.1	4.6	.....	23	1.95	sw.	14.0	1,960	5,560	wsw.
.....	.....	.....	.....	.....	.....	2,250	768.0	3.6	.....	17	1.34	sw.	14.1	2,205	8,700	
.....	.....	.....	.....	.....	.....	2,500	744.3	2.5	.....	11	0.80	sw.	14.3	2,450	10,760	8/10 St.Cu., wsw.
7:05	963.1	0.3	79	ssw.	7.2	2,685	727.3	1.8	0.40	7	0.49	sw.	14.4	2,631	11,000	
.....	.....	.....	.....	.....	.....	2,750	721.3	1.3	.....	7	0.47	sw.	14.1	2,694	11,000	
.....	.....	.....	.....	.....	.....	3,000	699.0	− 0.5	.....	8	0.47	sw.	12.8	2,939	10,710	
.....	.....	.....	.....	.....	.....	3,250	677.0	− 2.4	.....	9	0.45	sw.	11.6	3,184	10,090	
.....	.....	.....	.....	.....	.....	3,500	655.9	− 4.2	.....	10	0.43	sw.	10.4	3,429	.....	9/10 A.St., wsw.
7:28	963.1	0.0	81	ssw.	5.8	3,602	647.4	− 5.0	0.60	10	0.40	sw.	9.9	3,528	.....	
.....	.....	.....	.....	.....	.....	3,500	655.9	− 4.5	.....	10	0.42	sw.	9.9	3,429	.....	
.....	.....	.....	.....	.....	.....	3,250	667.0	− 3.4	.....	11	0.51	sw.	10.0	3,184	10,760	
.....	.....	.....	.....	.....	.....	3,000	699.0	− 2.3	.....	11	0.55	sw.	10.1	2,939	9,860	
.....	.....	.....	.....	.....	.....	2,750	721.3	− 1.1	.....	12	0.67	sw.	10.2	2,694	8,690	
.....	.....	.....	.....	.....	.....	2,500	743.9	0.0	.....	13	0.79	sw.	10.3	2,450	7,520	
.....	.....	.....	.....	.....	.....	2,250	767.1	1.1	.....	13	0.86	sw.	10.4	2,205	6,360	
.....	.....	.....	.....	.....	.....	2,000	791.2	2.3	.....	14	1.01	sw.	10.5	1,960	5,330	
8:20	963.1	0.5	80	s.	7.6	1,909	799.8	2.7	0.41	14	1.04	sw.	10.5	1,871	5,100	
.....	.....	.....	.....	.....	.....	1,750	815.8	3.4	.....	20	1.56	sw.	11.2	1,715	4,700	
.....	.....	.....	.....	.....	.....	1,500	841.1	4.4	.....	30	2.51	sw.	12.2	1,470	3,730	
.....	.....	.....	.....	.....	.....	1,250	867.5	5.4	.....	40	3.59	sw.	13.3	1,225	2,580	10/10 A.St., wsw.
.....	.....	.....	.....	.....	.....	1,000	894.5	6.4	.....	50	4.81	sw.	14.3	980	1,240	
8:55	963.1	1.4	73	ssw.	8.0	791	917.5	7.3	−1.39	58	5.93	sw.	15.2	776	0	
.....	.....	.....	.....	.....	.....	750	922.5	6.7	.....	59	5.79	sw.	14.0	735	0	
.....	.....	.....	.....	.....	.....	500	951.0	3.2	.....	68	5.23	ssw.	6.6	490	0	
9:05	963.1	1.8	71	ssw.	3.6	396	963.1	1.8	.....	71	4.94	ssw.	3.6	388	.....	10/10 A.St., wsw.

TABLE 8.—*Free-air data from kite flights at Drexel Aerological Station, November, 1917*—Continued.

November 29, 1917, series (No. 7).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*10³ ergs.*	*volts.*	
9:50	963.1	2.6	64	ssw.	8.9	396	963.1	2.6	.....	64	4.72	ssw.	8.9	388	.....	10/10 A.St., wsw.
						500	951.0	4.5	.....	63	5.30	ssw.	10.5	490	0	
9:55	963.1	2.7	64	s.	10.7	725	925.2	8.7	−1.85	62	6.98	sw.	14.0	711	0	
						750	922.7	8.6	.....	62	6.93	sw.	13.9	735	0	
						1,000	894.8	7.5	.....	57	5.99	sw.	13.1	980	1,410	
						1,250	867.8	6.4	.....	53	5.09	sw.	12.3	1,225	2,990	
						1,500	841.9	5.2	.....	49	4.34	sw.	11.5	1,470	3,980	10/10 A.St., wsw.
10:24	963.1	3.3	68	ssw.	9.8	1,555	836.2	5.0	0.45	48	4.19	sw.	11.3	1,524	4,200	
						1,750	816.5	3.6	.....	50	3.96	sw.	11.5	1,715	4,940	
						2,000	791.8	1.9	.....	52	3.65	wsw.	11.7	1,960	5,890	
						2,250	767.3	0.1	.....	54	3.32	wsw.	12.0	2,205	7,000	
10:58	963.1	4.5	66	sw.	8.0	2,497	744.1	− 1.6	0.70	56	3.00	w.	12.2	2,447	8,360	
						2,750	721.0	− 3.3	.....	59	2.74	w.	11.1	2,694	9,510	
						3,000	699.0	− 4.9	.....	62	2.51	wnw.	10.1	2,939	10,450	
						3,250	677.0	− 6.6	.....	64	2.24	wnw.	9.0	3,184	.....	3/10 Ci.St., wsw.; 7/10 A.St., wsw.
11:35	962.9	5.5	63	ssw.	8.5	3,494	655.2	− 8.2	0.66	67	2.04	wnw.	8.0	3,423	.....	
						3,250	677.0	− 6.6	.....	64	2.24	wnw.	8.6	3,184	.....	Solar halo, 22° radius, from 11:30 to 11:50 a. m.
						3,000	699.0	− 5.0	.....	62	2.49	wnw.	9.2	2,939	9,490	
						2,750	721.0	− 3.3	.....	59	2.74	w.	9.8	2,694	8,250	
						2,500	743.8	− 1.6	.....	57	3.05	w.	10.4	2,450	7,020	
						2,250	766.9	0.0	.....	54	3.30	w.	11.0	2,205	5,780	
11:58	962.8	5.7	64	ssw.	9.4	2,234	768.3	0.1	0.61	54	3.32	w.	11.0	2,189	5,700	
						2,000	790.8	1.5	.....	53	3.61	w.	12.2	1,960	5,070	
						1,750	815.5	3.1	.....	52	3.97	wsw.	13.4	1,715	4,390	
						1,500	841.0	4.6	.....	51	4.32	wsw.	14.4	1,470	3,670	10/10 A.St., wsw.
						1,250	867.0	6.2	.....	50	4.74	wsw.	15.9	1,225	2,670	
						1,000	893.8	7.8	.....	50	5.29	sw.	17.2	980	1,560	
P. M.																
12:24	962.4	5.8	63	ssw.	8.5	831	912.6	8.8	−4.57	49	5.55	sw.	18.0	815	810	
						750	921.8	5.1	.....	53	4.66	sw.	12.5	735	600	
12:31	962.3	6.0	62	sw.	8.0	739	922.7	4.6	0.47	54	4.58	sw.	11.8	725	590	
						500	950.1	5.7	.....	58	5.31	ssw.	8.6	490	180	
12:35	962.2	6.2	60	ssw.	7.2	396	962.2	6.2	.....	60	5.69	ssw.	7.2	388	.....	10/10 A.St., wsw.

November 29, 1917, series (No. 8).

P. M.																
1:12	961.7	6.7	60	ssw.	7.6	396	961.7	6.7	.....	60	5.89	ssw.	7.6	388	.....	10/10 A.St., wsw.
						500	949.5	6.1	.....	61	5.75	ssw.	9.4	490	180	
						750	921.0	4.5	.....	65	5.47	sw.	13.7	735	610	
1:15	961.7	6.8	62	ssw.	8.0	781	917.5	4.3	0.62	65	5.40	sw.	14.2	766	680	
1:22	961.7	6.7	60	sw.	6.7	846	910.1	7.5	−6.62	54	5.60	sw.	15.3	829	780	
						1,000	893.2	7.1	.....	50	5.04	sw.	12.7	980	1,430	
						1,250	866.4	6.6	.....	44	4.29	wsw.	8.6	1,225	2,440	
2:34	961.5	7.6	58	ssw.	7.2	1,322	858.8	6.4	0.23	42	4.04	wsw.	7.4	1,296	2,590	
						1,500	840.0	5.4	.....	42	3.77	wsw.	7.8	1,470	3,380	
						1,750	815.0	3.9	.....	43	3.47	w.	8.5	1,715	3,660	
						2,000	790.5	2.4	.....	44	3.19	w.	9.1	1,960	4,090	9/10 A.St., wsw.; few St.Cu., sw.
2:50	961.5	7.9	61	ssw.	6.3	2,117	778.6	1.7	0.59	44	3.04	w.	9.4	2,075	4,290	
						2,250	766.0	0.5	.....	48	3.04	w.	10.6	2,205	4,520	
						2,500	742.3	−1.8	.....	55	2.89	w.	12.8	2,450	4,950	
						2,750	719.3	−4.1	.....	62	2.68	w.	15.0	2,694	.....	
2:57	961.5	7.9	59	ssw.	5.8	2,856	709.4	−5.1	0.78	65	2.59	w.	16.0	2,798	.....	
						2,750	719.3	−4.4	.....	65	2.74	w.	14.9	2,694	.....	
						2,500	742.3	−2.8	.....	65	3.15	w.	12.2	2,450	4,530	
						2,250	766.0	−1.2	.....	64	3.54	w.	9.6	2,205	3,290	
3:14	961.6	8.0	58	ssw.	7.2	2,130	777.4	−0.4	0.86	64	3.78	w.	8.3	2,087	2,700	
						2,000	790.5	0.7	.....	60	3.86	w.	7.8	1,960	2,550	
						1,750	815.0	2.9	.....	54	4.07	wsw.	6.9	1,715	2,260	
						1,500	840.0	5.0	.....	47	4.10	wsw.	5.9	1,470	1,970	
3:20	961.6	8.1	59	ssw.	7.2	1,471	843.3	5.3	0.27	46	4.10	wsw.	5.8	1,442	1,930	
						1,250	866.4	5.8	.....	49	4.52	wsw.	9.8	1,225	1,820	
						1,000	893.2	6.4	.....	53	5.09	sw.	14.4	980	1,170	
3:46	961.7	8.0	58	ssw.	7.6	972	896.5	6.5	−0.64	53	5.13	sw.	14.9	953	1,050	9/10 A.St., wsw.; 1/10 St.Cu., wsw.
3:54	961.8	8.0	58	sw.	7.2	816	913.8	5.5	0.60	64	5.78	sw.	12.8	780	560	
						750	921.0	5.9	.....	63	5.85	sw.	11.9	735	470	
						500	949.5	7.4	.....	59	6.08	sw.	8.6	490	140	
3:58	961.8	8.0	58	sw.	7.2	396	961.8	8.0	.....	58	6.22	sw.	7.2	388	.....	6/10 A.St., wsw.; 4/10 St.Cu., wsw.

November 30, 1917.

A. M.																
8:13	966.1	−1.1	92	nnw.	2.7	396	966.1	−1.1	.....	92	5.12	nnw.	2.7	388	.....	4/10 Ci.St., wnw.; 2/10 A.St. wnw.
8:33	966.4	−0.3	91	nnw.	2.7	480	956.4	4.3	−6.43	72	5.98	n.	5.5	471	.....	6/10 A.St., wnw.; 4/10 A.Cu., wnw.
						500	954.8	4.9	.....	69	5.98	n.	4.7	490	.....	
9:08	967.0	0.6	89	nnw.	1.3	550	948.7	6.4	−3.38	63	6.05	nnw.	2.7	539	.....	
						500	954.8	4.5	.....	71	5.98	nnw.	2.3	490	.....	
9:09	966.8	0.6	89	nnw.	1.3	396	966.8	0.6	.....	89	5.68	nnw.	1.3	388	.....	9/10 A.St., wnw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917.*

December 1, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
7:57	967.9	1.0	89	e.	13.0	396	967.9	1.0	.....	89	5.85	e.	13.0	388	.....	Cloudless.
						500	955.1	2.4	.....	85	6.17	ese.	14.1	490	760	
						750	926.6	5.8	.....	77	7.10	se.	16.6	735	2,600	
8:06	967.8	1.3	91	e.	7.2	805	920.3	6.5	−1.34	75	7.26	se.	17.2	789	3,000	
						1,000	898.8	8.3	.....	63	6.90	sse.	16.9	980	3,540	
						1,250	872.0	10.5	.....	48	6.10	ssw.	16.4	1,225	4,320	
8:21	967.7	1.4	93	ese.	6.3	1,389	857.6	11.8	−0.91	39	5.40	sw.	16.2	1,362	5,000	
						1,500	846.3	11.4	.....	38	5.12	sw.	16.5	1,470	5,550	
						1,750	821.3	10.5	.....	36	4.57	sw.	17.0	1,715	6,780	
						2,000	796.7	9.6	.....	34	4.06	sw.	17.6	1,960	8,770	
8:38	967.5	1.5	94	e.	6.3	2,183	779.4	8.9	0.37	33	3.76	sw.	18.0	2,139	9,170	
						2,250	772.8	8.4	.....	33	3.64	sw.	18.1	2,205	9,320	
						2,500	749.3	6.5	.....	34	3.29	sw.	18.4	2,450	10,100	
						2,750	727.0	4.7	.....	34	2.90	sw.	18.8	2,694	11,400	
						3,000	705.0	2.8	.....	35	2.61	sw.	19.1	2,939	12,710	
9:04	967.2	2.3	93	ese.	8.0	3,131	694.0	1.8	0.75	35	2.44	sw.	19.3	3,067	13,160	
						3,250	683.9	0.8	.....	35	2.26	sw.	19.6	3,184	13,420	
						3,500	662.9	− 1.3	.....	34	1.86	sw.	20.1	3,429	13,970	
						3,750	642.8	− 3.5	.....	33	1.50	wsw.	20.7	3,673	15,440	
						4,000	622.7	− 5.6	.....	32	1.22	wsw.	21.2	3,918	16,280	
10:18	966.5	5.5	86	ese.	6.7	4,180	608.4	− 7.1	0.82	31	1.04	wsw.	21.6	4,094	16,500	3/10 Ci.St., wnw.; 4/10 St.Cu., se.
						4,000	622.7	− 5.7	.....	31	1.17	wsw.	21.1	3,918	15,740	
						3,750	642.8	− 3.7	.....	30	1.34	wsw.	20.4	3,673	14,670	
						3,500	663.2	− 1.8	.....	30	1.58	wsw.	19.7	3,429	13,430	
						3,250	684.3	0.2	.....	29	1.80	wsw.	19.1	3,184	11,950	
11:07	966.2	6.0	87	ese.	8.5	3,122	695.1	1.2	0.82	29	1.93	wsw.	18.7	3,059	11,380	
						3,000	705.4	2.2	.....	29	2.08	wsw.	19.6	2,939	10,830	
						2,750	727.0	4.2	.....	28	2.31	sw.	21.4	2,694	9,720	
						2,500	749.2	6.3	.....	27	2.58	sw.	23.3	2,450	8,600	
						2,250	772.5	8.3	.....	26	2.85	ssw.	25.1	2,205	7,490	
11:24	965.6	6.8	82	se.	12.5	2,073	789.7	9.8	0.82	25	3.03	ssw.	26.4	2,032	6,700	4/10 Ci.St., wnw.; 2/10 St. Cu., se.
						2,000	796.2	10.4	.....	24	3.03	ssw.	26.3	1,960	6,460	
						1,750	820.3	12.4	.....	19	2.74	ssw.	26.2	1,715	5,420	Altitude of St.Cu. base about 850 m.
						1,500	845.0	14.5	.....	15	2.48	ssw.	26.0	1,470	4,450	
						1,250	870.0	16.5	.....	11	2.06	ssw.	25.8	1,225	3,680	
11:58	964.3	6.9	80	se.	12.1	1,205	874.6	16.9	−2.20	10	1.92	ssw.	25.8	1,181	3,500	Altitude of St. Cu. base about 650 m.
						1,000	895.8	12.4	.....	41	5.90	s.	23.0	980	2,440	
						750	933.0	6.9	.....	79	7.86	sse.	19.6	735	1,620	
P. M.																
12:20	963.7	7.7	76	se.	13.0	664	932.8	5.0	1.08	92	8.02	se.	18.4	651	430	
						500	951.0	6.8	.....	83	8.20	se.	13.1	490	0	
12:28	963.9	7.9	77	se.	9.8	396	963.9	7.9	.....	77	8.20	se.	9.8	388	.....	6/10 Ci.St., wnw.

December 2, 1917.

A. M.																
10:55	961.8	5.0	80	nnw.	6.3	396	961.8	5.0	.....	80	6.98	nnw.	6.3	388	.....	7/10 A.Cu., wsw.
						500	950.0	4.6	.....	79	6.70	nnw.	8.2	490	0	2/10 St.Cu., wsw.
						750	921.0	3.7	.....	78	6.21	nne.	12.8	735	0	
11:04	961.8	5.3	79	nnw.	7.2	825	912.5	3.4	0.37	77	6.01	nne.	14.2	809	0	
						1,000	893.3	10.1	.....	43	5.31	n.	11.9	980	1,020	
11:20	961.8	4.8	78	nnw.	8.0	1,131	879.3	15.1	−3.82	18	3.09	nnw.	10.2	1,109	1,650	
						1,250	867.0	14.3	.....	18	2.93	nnw.	10.1	1,225	2,110	6/10 A.Cu., wsw.; 3/10 St.Cu., wsw.
						1,500	841.3	12.5	.....	17	2.46	nnw.	9.8	1,470	2,670	
						1,750	816.9	10.8	.....	17	2.20	nnw.	9.5	1,715	3,300	
						2,000	793.0	9.0	.....	17	1.95	nw.	9.2	1,960	3,750	
						2,250	769.6	7.3	.....	16	1.64	nw.	8.9	2,205	4,970	
P. M.																
12:40	962.5	2.6	83	nnw.	8.5	2,477	748.5	5.7	0.70	16	1.47	nw.	8.6	2,427	7,310	
						2,500	746.1	5.5	.....	16	1.44	nw.	8.6	2,450	7,580	4/10 St.Cu., wsw.; 6/10 St., n.
						2,750	723.7	3.3	.....	20	1.55	nw.	8.8	2,694	8,500	
						3,000	701.7	1.2	.....	25	1.66	wnw.	9.1	2,939	9,080	
						3,250	680.2	− 1.0	.....	29	1.63	wnw.	9.3	3,184	9,660	
						3,500	659.0	− 3.1	.....	33	1.55	w.	9.5	3,429	.....	
1:34	963.0	3.6	79	n.	8.5	3,509	658.5	− 3.2	0.76	33	1.54	w.	9.5	3,437	.....	
						3,500	659.0	− 3.1	.....	33	1.55	w.	9.6	3,429	.....	
						3,250	680.2	− 1.5	.....	32	1.72	wnw.	11.2	3,184	8,930	
						3,000	701.7	0.2	.....	31	1.92	nw.	12.9	2,939	7,440	
2:18	963.5	4.2	73	n.	8.0	2,827	717.0	1.3	0.78	30	2.01	nw.	14.1	2,770	6,540	
						2,750	723.7	1.9	.....	30	2.10	nw.	14.2	2,694	6,300	
						2,500	746.1	3.8	.....	29	2.33	nnw.	14.4	2,450	5,500	
						2,250	770.0	5.8	.....	29	2.67	nnw.	14.5	2,205	4,710	
						2,000	793.6	7.7	.....	28	2.94	nnw.	14.7	1,960	4,000	
						1,750	818.0	9.7	.....	27	3.25	n.	14.9	1,715	3,560	
2:44	964.1	2.7	78	n.	8.5	1,668	826.7	10.3	0.12	27	3.38	n.	14.9	1,635	3,420	
						1,500	843.2	10.5	.....	28	3.56	n.	15.0	1,470	3,100	4/10 A.Cu., wsw.; 2/10 St., n.
						1,250	869.3	10.8	.....	30	3.88	n.	15.1	1,225	2,490	
3:05	964.7	2.2	80	n.	7.2	1,183	876.8	10.9	−0.30	31	4.04	n.	15.1	1,160	2,320	
						1,000	896.3	10.4	.....	61	7.69	n.	15.2	980	1,880	
3:22	965.2	2.2	80	n.	7.6	779	921.2	9.7	−1.98	98	11.79	n.	15.3	764	1,200	Altitude of St. base about 750 m
						750	924.0	9.1	.....	97	11.21	n.	14.6	735	1,110	
						500	952.7	4.2	.....	86	7.10	n.	9.0	490	330	
3:28	965.4	2.1	82	n.	6.7	396	965.4	2.1	.....	82	5.83	n.	6.7	388	.....	4/10 A.Cu., wsw.; 4/10 St., n.

December 3, 1917.

P. M.																
1:17	973.8	0.0	92	ne.	4.0	396	973.8	0.0	.....	92	5.62	ne.	4.0	388	.....	10/10 St., nnw.
						500	961.0	0.5	.....	80	5.06	ne.	5.7	490	0	
						750	931.5	1.9	.....	50	3.50	ene.	9.8	735	0	
1:34	973.6	0.0	92	ne.	8.9	832	922.3	2.3	−0.53	40	2.88	ene.	11.2	816	0	

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 3, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	1,000	902.9	1.0	.....	43	2.83	ene.	10.4	980	.....	Few A.St., e.; 10/10 St., e.
.....	.....	.....	.....	.....	.....	1,250	875.3	− 0.8	.....	46	2.63	e.	9.3	1,225	.....	
2:20	973.3	0.8	89	e.	8.0	1,497	848.4	− 2.7	0.75	50	2.44	ese.	8.2	1,467	.....	
.....	.....	.....	.....	.....	.....	1,750	821.5	− 5.5	.....	59	2.27	ese.	7.9	1,715	.....	
3:07	973.4	1.0	82	ene.	8.0	1,935	802.1	− 7.5	0.88	66	2.13	ese.	7.7	1,896	.....	
.....	.....	.....	.....	.....	.....	1,750	821.5	− 6.3	.....	65	2.33	ese.	7.0	1,715	.....	
.....	.....	.....	.....	.....	.....	1,500	848.0	− 4.7	.....	63	2.60	e.	6.0	1,470	.....	
.....	.....	.....	.....	.....	.....	1,250	875.3	− 3.0	.....	61	2.90	e.	5.0	1,225	.....	
3:17	973.5	1.0	82	e.	0.9	1,034	898.9	− 1.6	0.41	60	3.21	e.	4.2	1,014	.....	
.....	.....	.....	.....	.....	.....	1,000	902.9	− 1.5	.....	61	3.29	e.	4.0	980	.....	
.....	.....	.....	.....	.....	.....	750	931.5	− 0.4	.....	70	4.14	e.	2.7	735	.....	
.....	.....	.....	.....	.....	.....	500	961.0	0.6	.....	78	4.98	e.	1.4	490	.....	
3:20	973.5	1.0	82	e.	0.9	396	973.5	1.0	.....	82	5.39	e.	0.9	388	.....	10/10 St.Cu., wsw.

December 4, 1917.

A. M.																
8:04	975.0	− 1.6	92	w.	3.1	396	976.3	− 1.6	.....	92	4.93	w.	3.1	388	.....	10/10 St.Cu., n.
.....	.....	.....	.....	.....	.....	500	962.9	− 0.6	.....	98	5.69	wnw.	12.5	490	0	
8:06	975.0	− 1.6	92	wnw.	3.6	527	959.1	− 0.3	−0.99	100	5.96	wnw.	15.0	517	0	
.....	.....	.....	.....	.....	.....	750	932.5	− 1.4	.....	96	5.22	nw.	13.8	735	650	
.....	.....	.....	.....	.....	.....	1,000	903.7	− 2.5	.....	92	4.56	nnw.	12.5	980	3,520	
8:30	975.0	− 0.6	96	nw.	4.5	1,210	880.2	− 3.6	0.48	88	3.98	nnw.	11.3	1,186	6,500	
.....	.....	.....	.....	.....	.....	1,250	875.7	− 3.8	.....	86	3.82	nnw.	11.5	1,225	6,720	Altitude of St.Cu. base about 750 m.
.....	.....	.....	.....	.....	.....	1,500	848.5	− 4.9	.....	75	3.04	nnw.	12.9	1,470	8,070	
.....	.....	.....	.....	.....	.....	1,750	822.0	− 6.1	.....	65	2.37	nnw.	14.2	1,715	9,420	
.....	.....	.....	.....	.....	.....	2,000	796.5	− 7.2	.....	54	1.79	nw.	15.5	1,980	10,770	
.....	.....	.....	.....	.....	.....	2,250	771.9	− 8.3	.....	43	1.30	nw.	16.9	2,205	11,660	
.....	.....	.....	.....	.....	.....	2,500	747.5	− 9.5	.....	32	0.87	nw.	18.2	2,450	13,180	
8:52	975.0	0.7	87	nw.	4.9	2,553	742.6	− 9.7	0.45	30	0.80	nw.	18.5	2,502	13,500	
.....	.....	.....	.....	.....	.....	2,750	723.5	−10.6	.....	24	0.59	nw.	17.5	2,694	14,770	
.....	.....	.....	.....	.....	.....	3,000	699.2	−11.7	.....	15	0.33	nw.	16.2	2,939	16,380	
9:24	975.3	0.5	86	nw.	5.4	3,217	678.7	−12.6	0.44	8	0.16	nw.	15.1	3,152	15,500	8/10 St., nw.; 2/10 St.Cu., nw.
.....	.....	.....	.....	.....	.....	3,000	698.3	−11.6	.....	11	0.24	nnw.	15.2	2,939	14,140	
.....	.....	.....	.....	.....	.....	2,750	722.0	−10.6	.....	14	0.34	n.	15.3	2,694	12,580	
9:44	975.5	− 0.2	81	nw.	8.0	2,545	741.5	− 9.7	0.42	16	0.43	n.	15.4	2,495	11,300	
.....	.....	.....	.....	.....	.....	2,500	746.4	− 9.5	.....	16	0.43	n.	15.4	2,450	8,060	
.....	.....	.....	.....	.....	.....	2,250	770.9	− 8.5	.....	16	0.47	n.	15.6	2,205	7,810	
.....	.....	.....	.....	.....	.....	2,000	795.8	− 7.4	.....	17	0.55	nnw.	15.7	1,960	6,800	
10:11	975.8	− 0.2	81	nnw.	7.6	1,848	811.3	− 6.8	0.56	17	0.58	nnw.	15.8	1,811	6,040	
.....	.....	.....	.....	.....	.....	1,750	822.0	− 6.2	.....	20	0.72	nnw.	15.5	1,715	5,550	
.....	.....	.....	.....	.....	.....	1,500	848.5	− 4.8	.....	29	1.18	nnw.	14.6	1,470	4,110	
.....	.....	.....	.....	.....	.....	1,250	875.7	− 3.2	.....	38	1.78	nnw.	13.7	1,225	2,630	Altitude of St.Cu. base about 850 m.
10:35	976.1	− 0.7	81	nnw.	7.6	1,190	882.6	− 3.1	−1.96	40	1.88	nnw.	13.5	1,167	2,280	
.....	.....	.....	.....	.....	.....	1,000	903.8	− 6.8	.....	92	3.16	nnw.	12.4	980	1,190	
10:38	976.1	− 0.7	83	nnw.	7.6	986	905.7	− 7.1	1.00	96	3.22	nnw.	12.3	967	1,110	
.....	.....	.....	.....	.....	.....	750	932.5	− 4.7	.....	93	3.83	nnw.	9.9	735	0	
.....	.....	.....	.....	.....	.....	500	962.9	− 2.2	.....	90	4.58	nnw.	7.4	490	0	
10:54	976.3	− 1.2	88	nnw.	6.3	396	976.3	− 1.2	.....	88	4.87	nnw.	6.3	388	.....	10/10 St., nnw.

December 5, 1917 (No. 1).

A. M.																
8:23	970.1	−10.0	96	e.	7.2	396	970.1	−10.0	.....	96	2.50	e.	7.2	388	.....	Light snow falling; 10/10 St., ene.
.....	.....	.....	.....	.....	.....	500	956.9	−11.1	.....	98	2.30	e.	6.9	490	0	
8:40	970.2	−10.0	95	ene.	6.3	649	938.7	−12.6	1.03	100	2.05	ene.	6.4	636	1,460	Altitude at St. base about 700 m.
9:21	970.4	−10.0	100	ene.	4.9	722	930.0	−10.7	−1.12	100	2.44	ene.	2.2	708	.....	
9:32	970.5	−10.0	100	ene.	4.9	600	945.0	−12.5	1.23	100	2.07	ene.	3.7	588	.....	
.....	.....	.....	.....	.....	.....	500	956.9	−11.3	.....	100	2.31	ene.	4.3	490	.....	
9:38	970.5	−10.0	100	ene.	4.9	396	970.5	−10.0	.....	100	2.60	ene.	4.9	388	.....	10/10 St., ene.; light snow falling.

December 5, 1917 (No. 2).

P. M.																
3:44	972.4	− 9.6	87	nne.	6.7	396	972.4	− 9.6	.....	87	2.34	nne.	6.7	388	.....	Light snow falling; 10/10 St., nne.
.....	.....	.....	.....	.....	.....	500	959.8	−10.8	.....	90	2.18	nne.	.....	490	.....	
.....	.....	.....	.....	.....	.....	750	929.0	−13.5	.....	98	1.85	n.	.....	735	4,500	Altitude at St. base about 950 m.
3:55	972.6	− 9.5	88	nne.	7.2	802	922.4	−14.1	1.11	100	1.79	n.	.....	786	5,180	
.....	.....	.....	.....	.....	.....	1,000	898.8	−15.5	.....	100	1.57	n.	.....	980	7,840	
4:07	972.7	− 9.6	87	n.	6.7	1,234	871.2	−17.2	0.72	100	1.34	n.	.....	1,210	12,330	10/10 St., n.
.....	.....	.....	.....	.....	.....	1,250	869.5	−16.0	.....	100	1.50	n.	.....	1,225	12,750	
4:14	972.8	− 9.6	86	n.	6.7	1,297	864.1	−12.3	−0.78	100	2.11	n.	.....	1,271	14,000	
.....	.....	.....	.....	.....	.....	1,500	841.5	−11.9	.....	97	2.12	n.	.....	1,470	15,710	
.....	.....	.....	.....	.....	.....	1,750	814.8	−11.4	.....	93	2.13	n.	.....	1,715	17,810	
.....	.....	.....	.....	.....	.....	2,000	788.9	−10.8	.....	88	2.13	nnw.	.....	1,960	19,960	
.....	.....	.....	.....	.....	.....	2,250	763.8	−10.3	.....	84	2.13	nnw.	.....	2,205	22,130	
4:35	973.2	− 9.6	85	n.	2.7	2,453	743.7	− 9.9	−0.21	81	2.12	nnw.	.....	2,404	23,900	
.....	.....	.....	.....	.....	.....	2,500	739.2	−10.2	.....	78	1.99	nnw.	.....	2,450	24,300	
.....	.....	.....	.....	.....	.....	2,750	715.6	−11.7	.....	64	1.43	nnw.	.....	2,694	.....	
4:42	973.3	− 9.8	87	n.	6.3	2,774	713.6	−11.8	0.58	63	1.39	nnw.	.....	2,718	.....	
.....	.....	.....	.....	.....	.....	2,750	715.6	−11.7	.....	63	1.40	nnw.	.....	2,694	.....	
.....	.....	.....	.....	.....	.....	2,500	739.2	−10.2	.....	61	1.56	nnw.	.....	2,450	23,450	

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 5, 1917 (No. 2)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
4:52	973.5	−10.0	87	n.	7.2	2,300	759.0	− 9.1	−0.19	59	1.66	nnw.		2,254	20,050	
						2,250	763.8	−10.0		68	1.77	nnw.		2,205	19,200	
4:56	973.5	−10.0	87	n.	6.7	2,178	771.1	−11.4	0.54	81	1.85	nnw.		2,134	17,980	
						2,000	788.9	−10.4		91	2.28	nnw.		1,960	15,650	
5:06	973.7	−10.1	87	n.	6.3	1,917	797.9	−10.0	−0.33	96	2.50	nnw.		1,879	14,810	
						1,750	815.2	−10.6		96	2.36	nnw.		1,715	13,100	
						1,500	842.3	−11.4		95	2.18	nnw.		1,470	10,600	
5:19	973.9	−10.2	87	n.	3.1	1,254	870.0	−12.2	−1.59	94	2.00	nnw.		1,229	8,330	
5:29	974.1	−10.4	90	n.	5.8	996	900.2	−16.3	0.95	100	1.46	n.		976	5,550	
						750	930.3	−14.0		94	1.70	n.		735	2,580	Snow ended 5:30 p. m.
						500	961.3	−11.6		88	1.98	nne.		490	760	
5:46	974.4	−10.6	86	nne.	5.4	396	974.4	−10.6		86	2.12	nne.	5.4	388		3/10 A.St.,w.; 7/10 St.Cu., nnw.

December 6, 1917.

P. M.																
4:19	971.9	−10.2	74	sse.	4.5	396	971.9	−10.2		74	1.89	sse.	4.5	388		3/10 A.St., wsw.
						500	958.5	−11.6		77	1.73	sse.	5.2	490	1,120	5/10 Ci., w.
						750	927.8	−14.9		84	1.40	sse.	7.0	735	3,790	
4:37	971.8	−10.2	74	sse.	5.4	770	925.3	−15.2	1.37	85	1.38	sse.	7.1	755	4,000	
						1,000	897.8	−14.0		85	1.54	s.	7.1	980	6,650	
5:10	971.6	−10.4	73	sse.	4.5	1,242	869.3	−12.7	−0.53	85	1.73	ssw.	7.2	1,218		
						1,250	868.9	−12.6		85	1.74	ssw.	7.1	1,225	8,940	
						1,500	840.4	−10.3		85	2.15	ssw.	3.9	1,470		
6:22	971.4	−10.3	69	sse.	3.6	1,539	836.3	− 9.9	−0.79	85	2.23	ssw.	3.3	1,517		
						1,500	840.4	−10.1		85	2.18	ssw.	3.5	1,470		Light snow began 6:45 p. m. and continued at end of flight.
						1 250	868.9	−11.7		85	1.90	ssw.	5.0	1,225	4,200	
						1,000	897.8	−13.3		85	1.64	s.	6.3	980	1,990	
7:02	971.6	−10.1	67	sse.	3.6	799	921.6	−14.6	1.12	85	1.45	s.	7.6	783	770	
						750	927.8	−14.1		83	1.49	s.	7.1	735	530	
						500	958.5	−11.3		72	1.66	sse.	4.6	490	0	
7:13	971.7	−10.1	67	sse.	3.6	396	971.7	−10.1		67	1.72	sse.	3.6	388		10/10 A.St., wsw.

December 7, 1917.

P. M.																
12:39	975.9	−11.7	96	n.	7.2	396	975.9	−11.7		96	2.14	n.	7.2	388		8/10 A.St., n.
						500	962.6	−12.4		97	2.03	n.	8.4	490	2,440	
						750	931.7	−14.1		98	1.75	n.	11.2	735	8,250	
						1,000	901.0	−15.9		99	1.50	n.	14.0	980		
12:54	976.0	−12.0	85	n.	6.3	1,107	888.7	−16.6	0.69	100	1.42	n.	15.2	1,085		
						1,250	871.6	−15.6		100	1.56	n.	13.5	1,225	(*)	
1:06	976.0	−12.7	88	n.	6.7	1,363	858.9	−14.5	−0.82	100	1.73	n.	11.6	1,336	(*)	
						1,500	842.9	−14.7		99	1.68	n.	11.6	1,470	(*)	Altitude of St.Cu. base about 1,150 m.
						1,750	815.5	−15.0		98	1.62	n.	11.7	1,715	(*)	Solar halo, 22° radius from 1:20 to 3:00 p. m.
						2,000	789.1	−15.4		97	1.54	nnw.	11.8	1,960	(*)	
1:45	976.3	−14.2	89	n.	8.0	2,216	766.8	−15.7	0.14	96	1.49	nnw.	11.9	2,162	(*)	
						2,250	763.5	−15.9		96	1.46	nnw.	11.9	2,205	(*)	
						2,500	738.0	−17.7		97	1.24	nnw.	11.5	2,450	(*)	
						2,750	713.5	−19.5		98	1.06	nw.	11.2	2,694	(*)	
						3,000	689.5	−21.2		99	0.90	nw.	10.9	2,939	(*)	4/10 A.St., nnw.; 2/10 A.Cu., nnw.
2:45	976.6	−16.4	84	n.	8.0	3.138	676.8	−22.2	0.64	100	0.83	nw.	10.7	3,074	(*)	
						3,000	689.5	−21.4		97	0.87	nw.	10.8	2,939	(*)	5/10 A.St., nnw; 1/10 St.Cu., nnw.
						2,750	713.0	−20.0		91	0.94	nw.	11.1	2,694	(*)	
						2,500	737.2	−18.6		86	1.01	nw.	11.3	2,450	(*)	
3:22	977.0	−17.2	84	n.	8.0	2,330	754.8	−17.6	0.31	82	1.06	nw.	11.5	2,283	(*)	5/10 A.St., nnw.; 1/10 A.Cu., nnw.
						2,250	762.8	−17.4		79	1.04	nw.	11.7	2,205	(*)	
						2,000	788.6	−16.6		70	0.99	nnw.	12.4	1,960	(*)	
						1,750	815.0	−15.8		61	0.93	nnw.	13.1	1,715	11,000	
						1,500	842.9	−15.1		52	0.85	n.	13.8	1,470	9,720	
3:41	977.2	−17.7	84	n.	7.6	1,482	844.8	−15.0	−0.84	51	0.84	n.	13.9	1,453	9,640	
						1,250	871.6	−16.9		54	0.75	n.	15.2	1,225	8,430	3/10 Ci.St., nnw.; 3/10 A.St., nnw.
						1,000	901.0	−19.0		58	0.66	n.	16.5	980	6,270	
						750	931.7	−21.1		62	0.57	n.	17.9	735	3,680	
4:02	977.5	−18.0	76	n.	7.2	732	934.1	−21.3	0.92	62	0.56	n.	18.0	718	3,500	5/10 Ci.St., nnw.; 1/10 A.St. nw.
						500	963.9	−19.2		75	0.83	n.	11.8	490	1,080	
4:11	977.8	−18.2	81	n.	7.6	396	977.8	−18.2		81	0.99	n.	7.6	388		

December 8, 1917.

A. M.																
9:57	975.7	−24.0	90	nw.	3.6	396	975.7	−24.0		90	0.62	nw.	3.6	388		Cloudless.
						500	962.1	−24.8		91	0.58	nw.	10.3	490	2,200	
9:58	975.7	−23.6	88	nw.	3.6	633	944.4	−25.8	0.76	92	0.53	nw.	18.9	621	5,020	
						750	929.3	−22.9		90	0.69	nnw.	20.7	735	7,500	
10:10	975.7	−22.0	83	nnw.	4.5	848	917.0	−20.4	−2.51	88	0.87	n.	22.2	831	(*)	
						1,000	898.0	−21.0		87	0.81	n.	20.5	980	(*)	
						1,250	868.0	−21.9		85	0.72	n.	17.8	1,225	(*)	
						1,500	839.0	−22.8		82	0.64	n.	15.0	1,470	(*)	
10:27	975.7	−21.2	85	nw.	4.5	1,554	833.1	−23.0	0.37	82	0.63	n.	14.4	1,523	(*)	
						1,750	811.0	−23.6		80	0.58	n.	15.4	1,715	(*)	
						2,000	783.6	−24.3		77	0.52	n.	16.6	1,960	(*)	
						2,250	757.0	−25.0		73	0.45	nnw.	17.9	2,205	(*)	
10:45	975.7	−21.2	74	nw.	2.2	2,446	737.1	−25.6	0.29	71	0.42	nnw.	18.9	2,397	(*)	
						2,500	731.7	−25.8		70	0.41	nnw.		2,450	(*)	

*More than 10,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 8, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	10^5 *ergs.*	*volts.*	
						2,750	707.4	−26.8		67	0.35	nnw.		2,694	(*)	
						3,000	683.2	−27.8		64	0.30	nnw.		2,939	(*)	
11:17	975.6	−22.0	83	nw.	6.7	3,159	668.0	−28.4	0.36	62	0.27	nnw.		3,095	(*)	
						3,000	683.2	−27.9		62	0.29	nnw.		2,939	(*)	
						2,750	707.4	−27.1		61	0.30	nnw.		2,694	(*)	
						2,500	732.0	−26.3		60	0.33	nnw.		2,450	(*)	
P. M.																
12:29	975.0	−19.4	73	nw.	3.6	2,282	754.3	−25.6	0.34	60	0.35	nnw.	18.4	2,236	(*)	
						2,250	757.4	−25.5		60	0.36	nnw.	18.2	2,205	(*)	
						2,000	783.6	−24.6		63	0.41	nnw.	16.7	1,960	(*)	
						1,750	811.0	−23.8		66	0.47	nnw.	15.3	1,715	(*)	
12:50	974.8	−18.9	74	nw.	4.9	1,527	836.5	−23.0	0.47	69	0.53	nnw.	14.0	1,497	(*)	
						1,500	839.0	−22.9		69	0.53	nnw.	14.1	1,470	(*)	
						1,250	868.0	−21.7		72	0.63	nnw.	15.1	1,225	(*)	
						1,000	898.0	−20.5		74	0.73	nnw.	16.0	980	(*)	
1:04	974.6	−18.3	76	nw.	5.4	948	904.7	−20.3	−0.71	75	0.75	nnw.	16.2	929	(*)	
1:12	974.5	−17.9	77	nw.	6.3	808	922.0	−21.3	0.73	82	0.75	nnw.	14.7	792	6,200	
						750	929.0	−20.9		82	0.77	nnw.	13.6	735	5,330	
						500	961.0	−19.1		82	0.92	nw.	8.7	490	1,560	
1:20	974.3	−18.3	82	nw.	6.7	396	974.3	−18.3		82	0.99	nw	6.7	388		Cloudless.

December 9, 1917.

A. M.																
9:10	971.6	−20.1	93	nnw.	11.6	396	971.6	−20.1		93	0.95	nnw.	11.6	388		10/10 St., nw.: Solar halo, 22° radius, from 8:20 a. m. to 12:30 p. m. Two parhelia to right and left of sun from 8:30 to 8:35 a. m., and at 9:15 a. m.
						500	958.0	−20.8		94	0.89	nnw.	12.9	490	(*)	
						750	926.5	−22.4		96	0.78	nnw.	16.1	735	(*)	
						1,000	895.7	−24.1		98	0.68	nw.	19.3	980	(*)	10/10 St., nw.
9:38	972.4	−20.4	100	nnw.	9.8	1,175	874.4	−25.2	0.65	100	0.61	nw.	21.5	1,152	(*)	Circumzenithal arc from 9:40 a. m.
						1,250	865.4	−24.2		100	0.68	nw.	23.6	1,225	(*)	
9:41	972.4	−20.5	100	nnw.	13.4	1,377	850.7	−22.5	−1.34	100	0.80	nw.	27.1	1,350	(*)	Altitude of St. base about 850 m.
						1,500	837.7	−22.6		97	0.78	nw.	26.8	1,470	(*)	
						1,750	808.5	−22.8		92	0.72	nw.	26.3	1,715	(*)	
						2,000	781.5	−23.1		87	0.66	nw.	25.7	1,960	(*)	
10:12	973.2	−20.4	93	nnw.	12.5	2,054	776.3	−23.1	0.09	86	0.65	nw.	25.6	2,013	(*)	
						2,250	755.7	−24.6		84	0.55	nw.	26.4	2,205	(*)	
						2,500	730.5	−26.4		82	0.44	nw.	27.4	2,450	(*)	
10:19	973.3	−20.4	93	nnw.	13.4	2,509	729.4	−26.5	0.80	82	0.44	nw.	27.4	2,459	(*)	
						2,500	730.5	−26.4		82	0.44	nw.	27.3	2,450	(*)	
						2,250	755.7	−24.3		81	0.54	nw.	25.2	2,205	(*)	
						2,000	782.0	−22.2		80	0.66	nw.	23.2	1,960		
11:28	973.8	−20.3	93	nw.	12.5	1,754	809.1	−20.1	−0.86	79	0.81	nw.	21.1	1,719		
						1,500	836.1	−22.3		87	0.71	nw.	20.5	1,470		7/10 St., nw.
						1,250	866.9	−24.5		96	0.63	nw.	20.0	1,225		Altitude of St. base about 1,000 m.
P. M.																
1:17	974.1	−19.6	93	nw.	11.6	1,118	882.8	−25.6	0.83	100	0.59	nw.	19.7	1,096	2,550	
						1,000	896.7	−24.6		99	0.64	nw.	18.0	980	2,330	
						750	928.0	−22.5		96	0.77	nnw.	14.4	735	1,690	
						500	960.4	−20.5		94	0.92	nnw.	10.9	490	500	
1:43	974.2	−19.6	93	nnw.	9.4	396	974.2	−19.6		93	1.00	nnw.	9.4	388		6/10 St., nw.

December 11, 1917, series (No. 1).

A. M.																
8:54	980.9	−19.7	93	s.	4.0	396	980.9	−19.7		93	0.99	s.	4.0	388		Few Ci., wnw.
						500	967.2	−18.4		93	1.12	s.	6.3	490	2,380	
9:07	980.8	−19.3	100	s.	5.4	752	935.2	−15.3	−1.24	93	1.49	ssw.	11.8	737	8,000	
						1,000	904.9	−13.7		87	1.62	ssw.	10.9	980		
						1,250	875.5	−12.1		80	1.72	sw.	9.9	1,225	(*)	
						1,500	847.5	−10.5		73	1.81	sw.	9.0	1,470	(*)	
						1,750	820.6	− 8.9		67	1.92	wsw.	8.1	1,715	(*)	Cloudless.
10:00	980.4	−17.4	88	s.	4.9	1,820	813.1	− 8.4	−0.65	65	1.94	wsw.	7.8	1,784	(*)	
						2,000	794.0	− 9.6		66	1.78	wsw.	8.4	1,960	(*)	
						2,250	768.8	−11.2		68	1.58	wsw.	9.3	2,205	(*)	
						2,500	744.1	−12.8		70	1.41	w.	10.1	2,450	(*)	
11:04	980.0	−14.3	73	s.	6.3	2,692	725.7	−14.1	0.65	71	1.27	w.	10.8	2,638	(*)	
						2,750	720.1	−14.5		71	1.23	w.	11.0	2,694	(*)	
						3,000	696.6	−16.3		72	1.05	w.	11.6	2,939	(*)	
						3,250	673.7	−18.0		73	0.91	wnw.	12.3	3,184	(*)	
						3,500	651.5	−20.8		74	0.70	wnw.	13.0	3,429	(*)	
11:19	979.6	−13.9	73	s.	6.3	3,683	635.6	−21.1	0.71	75	0.69	wnw.	13.5	3,608	(*)	
						3,750	630.0	−21.7		74	0.64	wnw.	13.8	3,673	(*)	
						4,000	608.7	−23.7		71	0.50	wnw.	14.7	3,918	(*)	
						4,250	588.0	−25.8		67	0.39	wnw.	15.7	4,162	(*)	
11:30	979.3	−13.3	73	s.	6.7	4,277	585.7	−26.0	0.80	67	0.38	wnw.	15.8	4,189	(*)	
						4,250	588.0	−25.8		67	0.39	wnw.	15.7	4,162	(*)	
						4,000	608.7	−23.9		69	0.48	wnw.	15.0	3,918	(*)	
						3,750	629.2	−22.0		70	0.59	wnw.	14.3	3,673	(*)	
						3,500	650.2	−20.1		71	0.72	wnw.	13.7	3,429	(*)	
						3,250	672.6	−18.1		73	0.90	wnw.	13.0	3,184	(*)	
						3,000	695.5	−16.2		74	1.10	wnw.	12.3	2,939	(*)	
P. M.																
12:02	978.4	−12.6	76	s.	7.6	2,827	711.9	−14.9	0.73	75	1.25	wnw.	11.8	2,770	(*)	
						2,750	718.8	−14.3		74	1.30	wnw.	11.7	2,694	(*)	
						2,500	742.6	−12.5		72	1.49	wnw.	11.5	2,450	(*)	
						2,250	767.3	−10.7		69	1.68	w.	11.2	2,205	(*)	

*More than 10,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 11, 1917, series (No. 1)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						2,000	792.5	− 8.9	.....	66	1.89	w.	10.9	1,960	(*)	
12:30	977.7	−11.8	72	s.	7.2	1,759	817.7	− 7.1	−1.51	64	2.14	w.	10.7	1,724	(*)	
						1,750	818.7	− 7.2	.....	64	2.12	w.	10.8	1,715	(*)	
						1,500	845.2	−11.0	.....	73	1.73	wsw.	12.7	1,470	(*)	
12:37	977.5	−11.5	69	ssw.	8.0	1,288	869.2	−14.2	−0.12	81	1.44	wsw.	14.4	1,263	(*)	
						1,250	873.2	−14.2	.....	80	1.42	wsw.	14.2	1,225	(*)	
						1,000	902.6	−14.5	.....	76	1.31	sw.	13.0	980	(*)	
12:53	977.2	−10.8	72	ssw.	7.6	792	927.8	−14.8	1.06	73	1.23	sw.	12.0	778	7,800	
						750	933.0	−14.4	.....	73	1.27	sw.	11.4	735	7,000	
						500	963.8	−11.7	.....	72	1.61	ssw.	8.1	490	2,110	
12:59	977.0	−10.6	72	ssw.	6.7	396	977.0	−10.6	.....	72	1.77	ssw.	6.7	388	.....	Cloudless.

December 11, 1917, series (No. 2).

P. M.																
1:44	976.0	− 9.6	64	ssw.	7.6	396	976.0	− 9.6	.....	64	1.72	ssw.	7.6	388	.....	Few Ci.St., wnw.
						500	962.6	−10.9	.....	67	1.60	ssw.	9.1	490	2,400	
						750	931.6	−14.0	.....	76	1.38	sw.	12.5	735	8,140	
1:55	975.8	− 9.5	61	s.	8.5	783	927.6	−14.4	1.24	77	1.34	sw.	13.0	768	8,900	
						1,000	901.4	−11.9	.....	78	1.71	sw.	12.2	980	.....	
						1,250	872.8	− 9.0	.....	79	2.24	wsw.	11.3	1,225	(*)	
2:14	975.4	− 9.6	64	s.	8.9	1,494	845.6	− 6.1	−1.17	80	2.92	wsw.	10.4	1,465	(*)	
						1,500	845.0	− 6.1	.....	80	2.92	wsw.	10.4	1,470	(*)	
						1,750	818.0	− 7.8	.....	77	2.42	wsw.	10.8	1,715	(*)	
						2,000	791.8	− 9.5	.....	75	2.03	w.	11.3	1,960	(*)	
2:33	974.9	− 9.4	69	s.	9.4	2,142	777.3	−10.4	0.66	73	1.83	w.	11.5	2,090	(*)	2/10 Ci.St., wnw.
						2,250	766.5	−11.2	.....	73	1.70	w.	12.1	2,205	(*)	
						2,500	741.4	−13.2	.....	74	1.44	w.	13.5	2,450	(*)	
						2,750	717.3	−15.1	.....	75	1.22	wnw.	14.9	2,694	(*)	
						3,000	694.0	−17.0	.....	75	1.03	wnw.	16.3	2,939	(*)	
						3,250	671.5	−18.9	.....	76	0.87	wnw.	17.7	3,184	(*)	
2:54	974.4	− 9.4	69	s.	8.0	3,311	665.8	−19.4	0.77	76	0.83	wnw.	18.0	3,244	(*)	
						3,500	649.2	−20.6	.....	74	0.72	wnw.	17.5	3,429	(*)	5/10 Ci.St., wnw.
						3,750	627.8	−22.2	.....	71	0.59	wnw.	16.7	3,673	(*)	
						4,000	606.5	−23.7	.....	68	0.48	wnw.	16.0	3,918	(*)	Faint solar halo, 22° radius,
3:25	974.2	− 9.2	74	s.	8.9	4,136	595.2	−24.6	0.62	66	0.43	wnw.	15.6	4,051	(*)	from 3:05 to 3:31 p. m.
						4,000	606.5	−23.8	.....	67	0.48	wnw.	15.5	3,918	(*)	
						3,750	627.8	−22.3	.....	67	0.55	wnw.	15.2	3,673	(*)	
						3,500	649.2	−20.8	.....	68	0.65	w.	14.9	3,429	(*)	
						3,250	671.5	−19.3	.....	69	0.76	w.	14.7	3,184	(*)	
4:00	974.0	− 9.0	75	s.	8.9	3,094	685.7	−18.4	0.80	70	0.84	w.	14.5	3,031	(*)	
						3,000	694.0	−17.6	.....	70	0.90	w.	14.5	2,939	(*)	
						2,750	717.3	−15.6	.....	71	1.11	w.	14.4	2,694	(*)	
						2,500	741.4	−13.6	.....	72	1.35	w.	14.3	2,450	(*)	
4:20	973.9	− 9.6	76	s.	8.9	2,247	766.4	−11.6	0.82	73	1.64	w.	14.2	2,202	(*)	
						2,000	791.7	− 9.6	.....	67	1.80	w.	13.8	1,960	(*)	
						1,750	817.6	− 7.5	.....	61	1.97	wsw.	13.4	1,715	(*)	
4:37	973.8	−10.1	83	s.	7.2	1,516	842.6	− 5.6	−1.13	56	2.13	wsw.	13.0	1,486	(*)	
						1,500	844.2	− 5.8	.....	56	2.10	wsw.	13.0	1,470	(*)	
						1,250	871.6	− 8.6	.....	64	1.88	wsw.	12.2	1,225	(*)	
						1,000	900.0	−11.5	.....	71	1.61	sw.	11.4	980	(*)	
4:51	973.7	−10.3	84	s.	6.7	934	907.9	−12.2	0.32	73	1.55	sw.	11.2	916	(*)	
						750	929.8	−11.6	.....	77	1.73	ssw.	9.7	735	4,570	
						500	960.0	−10.8	.....	82	1.98	s.	7.6	490	1,340	
5:04	973.6	−10.5	84	s.	6.7	396	973.6	−10.5	.....	84	2.08	s.	6.7	388	.....	8/10 Ci.St., wnw.

December 11, 1917, series (No. 3).

P. M.																
5:46	973.4	−10.5	84	s.	6.3	396	973.4	−10.5	.....	84	2.08	s.	6.3	388	.....	Cloudless
						500	960.7	−10.7	.....	84	2.05	s.	7.8	490	1,440	
						750	930.0	−11.3	.....	82	1.89	ssw.	11.4	735	4,890	
						1,000	899.5	−11.8	.....	81	1.79	ssw.	15.1	980	.....	
6:00	973.3	−10.7	78	s.	5.8	1,044	894.5	−11.9	0.22	81	1.77	sw.	15.7	1,024	.....	
6:03	973.3	−10.8	76	s.	5.8	1,148	882.4	− 6.9	−0.29	78	2.66	sw.	12.8	1,125	.....	
						1,250	870.9	− 6.4	.....	75	2.67	sw.	12.4	1,225	(*)	
6:12	973.2	−10.8	78	s.	3.6	1,432	851.2	− 5.4	−0.53	71	2.75	sw.	11.8	1,404	(*)	
						1,500	842.6	− 5.9	.....	71	2.63	sw.	11.7	1,470	(*)	
						1,750	816.0	− 7.8	.....	73	2.30	sw.	11.5	1,715	(*)	
						2,000	790.5	− 9.7	.....	74	1.98	wsw.	11.3	1,960	(*)	
6:40	973.1	−11.1	81	s.	5.8	2,230	767.6	−11.5	0.76	75	1.70	wsw.	11.1	2,185	(*)	
						2,250	765.5	−11.7	.....	75	1.67	wsw.	11.1	2,205	(*)	
						2,500	740.5	−13.5	.....	73	1.38	wsw.	11.8	2,450	(*)	
						2,750	716.4	−15.5	.....	71	1.11	wsw.	12.4	2,694	(*)	
						3,000	692.8	−17.4	.....	69	0.91	wsw.	13.0	2,939	(*)	
7:07	973.0	−10.6	78	s.	6.3	3,027	690.9	−17.6	0.77	69	0.89	wsw.	13.1	2,966	(*)	
						3,250	670.0	−19.1	.....	69	0.77	wsw.	14.4	3,184	(*)	
						3,500	647.8	−20.9	.....	69	0.65	w.	15.9	3,429	(*)	
						3,750	626.8	−22.6	.....	69	0.55	w.	17.3	3,673	(*)	
7:26	972.8	−10.1	80	ssw.	7.6	3,897	614.2	−23.6	0.68	69	0.50	w.	18.2	3,817	(*)	
						3,750	626.8	−22.6	.....	69	0.55	w.	17.3	3,673	(*)	
						3,500	647.8	−21.0	.....	69	0.64	wsw.	15.7	3,429	(*)	
						3,250	670.0	−19.3	.....	69	0.76	wsw.	14.2	3,184	(*)	
						3,000	692.8	−17.7	.....	68	0.87	wsw.	12.6	2,939	(*)	
						2,750	716.4	−16.0	.....	68	1.02	sw.	11.0	2,694	.....	
						2,500	740.5	−14.4	.....	68	1.18	sw.	9.4	2,450	.....	
7:51	972.7	− 9.8	80	ssw.	8.5	2,474	743.6	−14.2	0.78	68	1.21	sw.	9.3	2,420	.....	
						2,250	765.5	−12.5	.....	68	1.41	sw.	9.5	2,205	10,160	
						2,000	790.8	−10.5	.....	68	1.69	sw.	9.8	1,960	9,520	

* More than 10,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 11, 1917, series (No. 3)—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						1,750	817.0	− 8.6		69	2.03	ssw.	10.0	1,715	8,880	
						1,500	843.9	− 6.6		69	2.42	ssw.	10.2	1,470	8,160	
8:14	972.5	−10.1	80	ssw.	10.3	1,442	850.0	− 6.2	−0.07	69	2.50	ssw.	10.3	1,414	7,920	
						1,250	871.2	− 6.3		77	2.76	ssw.	12.8	1,225	7,180	
						1,000	899.5	− 6.5		87	3.07	ssw.	16.1	980	5,330	
8:25	972.5	−10.2	80	ssw.	9.4	989	900.7	− 6.5	−2.26	87	3.07	ssw.	16.2	970	5,180	
8:27	972.5	−10.2	80	ssw.	8.9	830	919.2	−10.1	−0.09	85	2.18	ssw.	16.2	814	3,460	
						750	928.9	−10.2		85	2.17	ssw.	14.9	735	2,600	
						500	959.2	−10.4		86	2.16	ssw.	11.0	490	720	
8:42	972.4	−10.5	86	ssw.	9.4	396	972.4	−10.5		86	2.13	ssw.	9.4	388		Cloudless.

December 11-12, 1917, series (No. 4).

P. M.																
9:28	972.0	−10.6	86	ssw.	8.9	396	972.0	−10.6		86	2.12	ssw.	8.9	388		Cloudless.
						500	959.0	− 9.9		86	2.25	ssw.	11.6	490	1,120	
9:31	971.9	−10.6	86	ssw.	9.4	694	935.1	− 8.7	−0.64	85	2.47	ssw.	16.6	681	3,180	
						750	928.5	− 8.0		84	2.60	ssw.	15.1	735	3,700	
						1,000	898.5	− 4.7		81	3.34	sw.	8.5	980	5,080	
9:57	971.6	−10.6	86	ssw.	8.9	1,019	896.7	− 4.5	−1.29	81	3.39	sw.	8.0	999	5,200	
						1,250	870.0	− 4.9		83	3.36	sw.	7.1	1,225	6,520	
10:23	971.5	−10.6	86	ssw.	6.7	1,441	849.7	− 5.3	0.19	85	3.32	sw.	6.4	1,413	7,630	
						1,500	843.0	− 5.7		83	3.14	sw.	6.6	1,470	7,970	
						1,750	817.8	− 7.5		74	2.39	sw.	7.4	1,715	9,630	
						2,000	791.0	− 9.4		65	1.78	ssw.	8.2	1,960		
						2,250	765.2	−11.3		56	1.29	ssw.	9.1	2,205		
11:23	971.1	−11.8	85	s.	7.2	2,349	755.4	−12.0	0.74	53	1.15	ssw.	9.4	2,302	(*)	
						2,500	740.4	−13.0		53	1.05	ssw.	10.2	2,450	(*)	
						2,750	716.4	−14.5		52	0.90	ssw.	11.5	2,694	(*)	
						3,000	693.0	−16.1		52	0.77	ssw.	12.7	2,939	(*)	
						3,250	670.8	−17.7		51	0.65	sw.	14.0	3,184	(*)	
						3,500	648.8	−19.3		51	0.56	sw.	15.3	3,429	(*)	
						3,750	627.0	−20.9		50	0.47	sw.	16.6	3,673	(*)	
11:40	971.0	−12.3	87	s.	8.0	3,853	618.1	−21.5	0.63	50	0.44	sw.	17.1	3,774	(*)	
						3,750	627.0	−20.8		49	0.47	sw.	17.0	3,673	(*)	
						3,500	648.8	−19.3		47	0.52	sw.	16.9	3,429	(*)	
						3,250	670.8	−17.7		46	0.59	wsw.	16.7	3,184	(*)	2/10 Ci.St., wnw.
A. M.																
12:12	970.8	−12.8	96	s.	7.6	3,026	690.7	−16.3	0.73	44	0.64	wsw.	16.6	2,965	(*)	
						3,000	693.0	−16.1		44	0.66	wsw.	16.4	2,939	(*)	
						2,750	716.4	−14.3		44	0.77	wsw.	14.1	2,694	(*)	
						2,500	740.4	−12.4		45	0.94	sw.	11.8	2,450	(*)	
						2,250	765.0	−10.6		45	1.11	sw.	9.5	2,205		
						2,000	790.0	− 8.8		45	1.30	sw.	7.2	1,960		
12:32	970.6	−13.0	100	s.	8.9	1,978	792.0	− 8.6	0.54	45	1.32	sw.	7.0	1,939		
						1,750	815.5	− 7.4		46	1.50	sw.	7.4	1,715		
						1,500	841.8	− 6.0		47	1.73	sw.	7.9	1,470	6,920	
						1,250	869.0	− 4.7		49	2.02	sw.	8.3	1,225	5,310	
12:45	970.5	−13.2	98	s.	9.4	1,201	874.8	− 4.4	−1.19	49	2.07	sw.	8.4	1,177	5,000	
						1,000	897.6	− 6.8		59	2.03	ssw.	8.2	980	4,220	
						750	927.0	− 9.8		73	1.93	ssw.	8.0	735	3,100	
						500	957.2	−12.8		86	1.74	s.	7.7	490	920	
1:05	970.3	−14.0	91	s.	7.6	396	970.3	−14.0		91	1.65	s.	7.6	388		Few Ci.St., wnw.

December 12, 1917, series (No. 5).

A. M.																
1:45	970.3	−15.2	100	s.	7.2	396	970.3	−15.2		100	1.62	s.	7.2	388		Few Ci.St., wnw.
						500	956.6	−12.2		96	2.04	ssw.	8.0	490	1,260	
						750	926.4	− 4.9		85	3.44	wsw.	10.0	735	4,270	
1:53	970.3	−15.3	100	s.	8.0	769	924.4	− 4.4	−0.29	84	3.54	wsw.	10.2	754	4,500	
						1,000	896.8	− 4.5		80	3.35	wsw.	10.9	980	6,300	
						1,250	869.0	− 4.7		76	3.13	wsw.	11.7	1,225	8,440	
						1,500	842.3	− 4.9		72	2.92	wsw.	12.5	1,470	10,590	
2:24	970.1	−15.4	100	sse.	6.7	1,548	837.2	− 4.9	0.06	71	2.88	wsw.	12.7	1,517	11,000	
						1,750	815.5	− 6.4		68	2.42	wsw.	13.1	1,715		
						2,000	789.8	− 8.2		65	1.98	wsw.	13.6	1,960		
						2,250	764.8	−10.1		62	1.59	wsw.	14.1	2,205	(†)	
						2,500	740.2	−11.9		59	1.29	wsw.	14.7	2,450	(†)	
						2,750	716.7	−13.8		56	1.03	wsw.	15.2	2,694	(†)	
2:53	969.9	−15.5	100	sse.	4.9	2,809	711.1	−14.2	0.74	55	0.98	wsw.	15.3	2,752	(†)	
						3,000	693.1	−15.6		60	0.94	wsw.	16.9	2,939	(†)	
						3,250	670.3	−17.5		66	0.86	wsw.	19.1	3,184	(†)	
						3,500	648.0	−19.3		72	0.79	w.	21.2	3,429	(†)	
						3,750	626.3	−21.2		78	0.71	w.	23.4	3,673	(†)	
3:17	969.7	−15.0	100	sse.	4.0	3,832	619.1	−21.8	0.72	80	0.69	w.	24.1	3,753	(†)	
						3,750	626.3	−21.2		78	0.71	w.	23.7	3,673	(†)	
						3,500	648.0	−19.5		73	0.79	w.	22.3	3,429	(†)	
						3,250	670.3	−17.7		68	0.87	w.	21.0	3,184	(†)	
						3,000	693.1	−15.9		63	0.96	w.	19.7	2,939	(†)	
						2,750	716.7	−14.2		58	1.03	w.	18.3	2,694	(†)	
3:59	969.2	−14.7	100	sse.	4.0	2,611	729.4	−13.2	0.90	55	1.07	w.	17.6	2,558	(†)	1/10 Ci.St., wnw.
						2,500	740.2	−12.2		55	1.17	w.	17.2	2,450	(†)	
						2,250	764.8	− 9.9		56	1.47	w.	16.2	2,205		
						2,000	789.8	− 7.7		58	1.84	wsw.	15.3	1,960		
						1,750	815.2	− 5.4		59	2.29	wsw.	14.2	1,715		
4:38	968.6	−14.6	100	sse.	3.1	1,636	826.7	− 4.4	0.18	59	2.49	wsw.	13.8	1,603	9,500	

* More than 10,000 volts.

† More than 11,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 12, 1917, series (No. 5)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						1,500	841.0	− 4.1		61	2.61	wsw.	13.1	1,450	8,300	
						1,250	867.5	− 3.7		65	2.91	sw.	11.8	1,205	6,090	3/10 Ci.St., wnw.
						1,000	895.0	− 3.2		69	3.23	sw.	10.5	980	4,240	
4:57	968.2	−14.8	100	sse.	1.8	987	897.2	− 3.2	−1.07	69	3.23	sw.	10.4	968	4,140	
5:06	968.2	−14.9	100	sse.	1.3	763	923.2	− 5.6	−2.53	84	3.20	ssw.	9.6	748	2,500	
						750	924.7	− 5.9		85	3.15	ssw.	9.3	735	2,410	
						500	954.8	−12.4		98	2.05	s.	3.7	490	710	
5:11	968.3	−15.1	100	sse.	1.3	396	968.3	−15.1		100	1.63	sse.	1.3	388		8/10 Ci.St., wnw.

December 12, 1917, series (No. 6).

A. M.																
9:02	970.9	−12.2	92	n.	2.7	396	970.9	−12.2		92	1.96	n.	2.7	388		Light snow.
						500	957.5	−13.1		94	1.84	n.	4.4	490	2,140	9/10 St., nne.
						750	926.0	−15.3		98	1.57	n.	8.5	735	6,990	
9:18	971.2	−12.3	96	n.	4.5	872	912.1	−16.4	0.88	100	1.45	n.	10.5	855	8,570	
						1,000	897.0	−15.4		100	1.59	n.	9.0	980	10,230	4/10 A.St., wsw.; 6/10 St., nne.
						1,250	869.0	−13.6		100	1.88	n.	6.0	1,225	(*)	2/10 A.St., wsw.; 8/10 St., nne.
10:56	972.6	−12.2	92	nne.	8.9	1,352	857.5	−12.8	−0.75	100	2.02	n.	4.8	1,325	(*)	
						1,500	841.2	−10.0		100	2.60	nnw.	4.7	1,470	(*)	
11:00	972.7	−13.8	99	nne.	7.6	1,598	830.3	− 8.2	−1.87	100	3.04	nw.	4.7	1,566	(*)	
						1,750	814.7	− 7.4		95	3.10	wnw.	7.2	1,715	(*)	
						2,000	788.8	− 6.3		88	3.16	w.	11.2	1,960	(*)	8/10 A.Cu., w.
11:18	972.8	−13.8	91	nne.	8.9	2,178	771.1	− 5.4	−0.38	82	3.18	wsw.	14.1	2,134	(*)	2/10 St., nne.
						2,000	788.8	− 5.9		83	3.08	wsw.	12.5	1,960	(*)	
						1,750	814.7	− 6.6		85	2.98	wsw.	10.3	1,715	(*)	
11:32	973.0	−14.0	91	n.	8.9	1,735	816.4	− 6.6	−1.34	85	2.98	wsw.	10.2	1,700	(*)	
						1,500	841.2	− 9.8		91	2.40	w.	9.1	1,470		
						1,250	869.0	−13.1		97	1.90	nw.	7.9	1,225		
11:38	973.0	−14.1	94	nne.	7.2	1,108	885.1	−15.0	−1.29	100	1.65	nnw.	7.2	1,086	8,800	
						1,000	893.0	−16.4		100	1.45	n.	8.7	980	6,990	
11:48	973.2	−13.9	91	n.	7.6	844	917.0	−18.4	0.98	100	1.20	ne.	10.8	828	4,380	
						750	928.0	−17.5		98	1.27	ne.	10.2	735	2,800	4/10 A.Cu., w.; 4/10 St., nne.
						500	959.8	−15.0		93	1.53	nne.	8.6	490	770	
P. M.																
12:01	973.3	−14.0	91	nne.	8.0	396	973.3	−14.0		91	1.65	nne.	8.0	388		5/10 A.Cu., w.; 5/10 St., nne. Light snow.

December 12, 1917, series (No. 7).

P. M.																
1:05	973.6	−14.8	90	n.	7.2	396	973.6	−14.8		90	1.51	n.	7.2	388		8/10 A.St., w.; 1/10 St., nne. Light snow.
						500	960.4	−16.0		92	1.38	n.	8.7	490	2,100	
						750	928.8	−19.0		97	1.10	nne.	12.2	735	7,150	
1:16	973.6	−15.0	90	n.	7.6	873	913.5	−20.4	1.17	100	0.99	nne.	14.0	856	8,220	
						1,000	898.0	−18.8		100	1.15	ne.	12.6	980	8,560	
1:20	973.6	−15.0	90	n.	8.5	1,166	878.2	−16.7	−1.26	100	1.41	ne.	10.8	1,143	9,000	
						1,250	868.0	−16.2		100	1.48	nne.	8.0	1,225		Altitude of A.St., base about 1,800 m.
1:42	973.6	−15.6	90	n.	9.8	1,300	862.7	−15.9	−0.60	100	1.52	nne.	6.4	1,274		
						1,500	840.1	−12.3		100	2.11	n.	7.5	1,470	(*)	
1:55	973.6	−15.7	90	n.	8.0	1,714	817.2	−8.5	−1.79	100	2.96	nw.	8.6	1,680	(*)	
						1,750	813.7	−10.0		100	2.60	nw.	9.8	1,715	(*)	
2:10	973.8	−15.7	90	n.	9.4	1,769	811.5	−10.8	4.18	100	2.42	nw.	10.4	1,734	(*)	7/10 A.St., w.; 2/10 St., n.
						2,000	788.1	−9.5		100	2.71	nw.	11.6	1,960	(*)	Altitude of St. base about 1,050 m.
2:52	974.8	−15.9	90	n.	8.5	2,207	767.6	−8.3	−0.57	100	3.02	nw.	12.6	2,163	(*)	
						2,250	763.6	−8.5		100	2.96	nw.	12.9	2,205	(*)	
						2,500	739.4	−9.7		100	2.67	wnw.	14.5	2,450	(*)	
						2,750	715.5	−10.9		100	.39	wnw.	16.1	2,694	(*)	
						3,000	692.0	−12.0		100	2.17	w.	17.7	2,939	(*)	
3:00	975.0	−16.0	90	nnw.	8.0	3,101	682.9	−12.5	0.47	100	2.07	w.	18.2	3,038	(*)	10/10 St., n.
						3,000	692.0	−12.0		99	2.15	w.	17.8	2,939	(*)	
						2,750	715.0	−10.8		96	2.32	w.	16.8	2,694	(*)	
						2,500	738.0	−9.7		93	2.48	wnw.	15.9	2,450	(*)	
						2,250	762.4	−8.5		90	2.66	wnw.	14.8	2,205	(*)	
3:30	975.5	−16.5	92	n.	8.9	2,203	766.6	−8.3	−1.36	90	2.72	wnw.	14.7	2,159	(*)	
						2,000	787.4	−11.1		92	2.16	nw.	14.4	1,980	(*)	
						1,750	813.7	−14.4		94	1.64	nnw.	14.0	1,715	(*)	
						1,500	841.5	−17.8		96	1.22	n.	13.6	1,470	(*)	
						1,250	869.5	−21.2		98	0.89	nne.	13.2	1,225	(*)	
3:57	976.0	−16.9	100	n.	8.5	1,076	890.3	−23.6	0.93	99	0.71	nne.	12.9	1,055	(*)	
						1,000	899.6	−22.9		99	0.76	nne.	12.5	980	(*)	
						750	930.5	−20.6		99	0.96	nne.	11.2	735	(*)	
						500	962.5	−18.3		100	1.21	n.	9.9	490	(*)	
4:16	976.1	−17.3	100	n.	9.4	396	976.1	−17.3		100	1.33	n.	9.4	388		10/10 St. n.; light snow.

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A. M.																
8:33	979.3	−22.8	91	nnw.	3.6	396	979.3	−22.8		91	0.71	nnw.	3.6	388		1/10 Ci.St., nnw.
						500	965.6	−23.2		92	0.69	n.	5.8	490	830	•Partial solar halo, 22° radius, at 8:10 a. m.
8:37	979.3	−22.6	82	nnw.	3.6	729	935.7	−24.0	0.36	93	0.64	nne.	10.6	715	2,640	
						750	933.0	−24.0		93	0.64	nne.	10.7	735	2,810	
						1,000	901.7	−24.4		93	0.61	n.	11.5	980	8,870	
9:05	979.5	−21.5	83	nnw.	4.5	1,243	872.1	−24.8	0.16	93	0.60	n.	12.4	1,219		
						1,250	871.5	−24.7		93	0.60	n.	12.4	1,225		
						1,500	842.0	−21.7		79	0.69	n.	13.7	1,470		

* More than 10,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 14, 1917—Continued.

Surface.						At different heights above sea.										Remarks.
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	
A. M.	*mb.*	°*C.*	%		*m.p.s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m.p.s.*	10^6 *ergs.*	*volts.*	
						1,750	813.0	−18.7		65	0.75	nnw.	15.0	1,715	(*)	
9:20	979.6	−20.1	86	nnw.	3.6	1,976	789.9	−16.0	−1.20	52	0.78	nnw.	16.2	1,937	(*)	
						2,000	787.3	−15.7		51	0.79	nnw.	16.6	1,960	(*)	4/10 A.Cu., nw.; 1/10 A.St., nw.
						2,250	762.3	−13.0		43	0.85	nw.	21.2	2,205	(*)	
						2,500	738.5	−10.3		35	0.89	wnw.	25.8	2,450	(*)	1/10 Ci., nw.; 4/10 A.Cu., nw.
10:05	980.1	−21.7	83	nnw.	4.9	2,671	722.1	−8.4	−1.01	29	0.87	wnw.	28.9	2,617	(*)	8/10 A.Cu., nw.
						2,500	739.2	−10.0		23	0.60	nw.	25.0	2,450	(*)	
						2,250	763.7	−12.3		15	0.32	nnw.	19.3	2,205	(*)	
						2,000	788.8	−14.7		7	0.12	n.	13.5	1,960	(*)	
11:04	980.1	−20.9	85	n.	3.1	1,933	795.5	−15.3	−1.12	5	0.08	n.	12.0	1,895	(*)	10/10 A.Cu., nw.
						1,750	814.0	−17.4		7	0.09	n.	11.5	1,715	(*)	
						1,500	842.6	−20.2		10	0.10	nne.	10.8	1,470	(*)	
11:12	980.0	−21.2	85	n.	4.0	1,310	865.0	−22.3	−0.21	12	0.10	nne.	10.3	1,284	9,530	
						1,250	871.8	−22.4		14	0.11	nne.	10.0	1,225	8,740	2/10 A.Cu., nw.; 8/10 A.St., nw.
						1,000	902.3	−23.0		22	0.17	n.	8.6	980	5,430	Light snow from 11:25 to 11:29 a. m.
						750	933.7	−23.5		30	0.22	n.	7.2	735	2,530	
11:35	979.7	−20.9	90	nnw.	3.1	510	964.7	−24.0	2.72	37	0.26	nnw.	5.9	500	810	
						500	965.6	−21.3		85	0.77	nnw.	3.4	490	740	
11:37	979.7	−20.9	92	nnw.	3.1	396	979.7	−20.9		92	0.86	nnw.	3.1	388		

December 15, 1917.

A. M.																
8:45	976.6	−15.1	95	sse.	6.7	396	976.6	−15.1		95	1.55	sse.	6.7	388		10/10 A.St., wsw.; Few St., sse.
						500	963.1	−15.6		86	1.34	sse.	8.4	490	2,800	
						750	931.9	−16.9		65	0.90	s.	12.4	735	5,930	
8:54	976.7	−15.0	95	s.	5.8	794	926.4	−17.1	0.50	61	0.82	s.	13.1	779	7,800	
						1,000	901.0	−15.4		63	1.00	ssw.	12.2	980		
9:05	976.7	−14.9	95	s.	6.7	1,187	879.3	−13.9	−0.81	65	1.19	ssw.	11.4	1,164	(*)	8/10 A.St., wsw.
						1,250	871.7	−13.1		67	1.31	ssw.	11.3	1,225	(*)	
						1,500	843.5	−10.1		74	1.90	sw.	11.1	1,470	(*)	
						1,750	817.0	− 7.0		81	2.74	wsw.	10.9	1,715	(*)	Altitude of A.St. base about 2,950 m.
9:36	976.5	−14.5	91	sse.	6.7	1,817	810.3	− 6.2	−1.22	83	3.00	wsw.	10.8	1,781	(*)	
						2,000	791.4	− 5.4		87	3.38	wsw.	12.1	1,960	(*)	
						2,250	767.0	− 4.3		93	3.96	wsw.	13.8	2,205	(*)	
9:45	976.5	−14.3	91	sse.	6.7	2,278	764.4	− 4.2	−0.43	94	4.04	wsw.	14.0	2,232	(*)	
						2,500	742.8	− 5.4		95	3.69	wsw.	14.5	2,450	(*)	
						2,750	718.9	− 6.8		96	3.30	wsw.	15.1	2,694	(*)	
						3,000	695.4	− 8.2		96	2.92	wsw.	15.7	2,939	(*)	
						3,250	673.0	− 9.5		97	2.63	wsw.	16.2	3,184	(*)	
						3,500	651.8	−10.9		98	2.34	wsw.	16.8	3,429	(*)	10/10 A.St., wsw.
						3,750	631.5	−12.3		99	2.09	wsw.	17.4	3,673	(*)	
						4,000	611.5	−13.6		100	1.88	wsw.	18.1	3,918	(*)	
10:45	976.4	−13.6	91	sse.	6.7	4,142	600.1	−14.4	0.49	100	1.74	wsw.	18.3	4,057	(*)	
						4,000	611.5	−13.8		100	1.84	wsw.	17.7	3,918	(*)	
						3,750	631.5	−12.7		100	2.04	wsw.	16.7	3,673	(*)	
						3,500	651.8	−11.6		100	2.25	wsw.	15.6	3,429	(*)	
						3,250	673.0	−10.6		100	2.46	wsw.	14.6	3,184	(*)	
						3,000	695.4	− 9.5		100	2.71	wsw.	13.6	2,939	(*)	
11:13	976.1	−13.2	83	sse.	6.7	2,930	701.9	− 9.2	0.64	100	2.79	wsw.	13.3	2,871	(*)	Altitude of A.St. base about 3,300 m.
						2,750	718.9	− 8.1		96	2.95	wsw.	13.1	2,694	(*)	
						2,500	742.8	− 6.5		89	3.14	wsw.	12.8	2,450	(*)	
						2,250	766.7	− 4.9		83	3.36	sw.	12.5	2,205	(*)	
11:44	975.4	−12.7	88	sse.	6.7	2,030	787.1	− 3.5	−2.74	78	3.56	sw.	12.2	1,989	(*)	
						2,000	790.8	− 4.3		78	3.32	sw.	12.2	1,960	(*)	
						1,750	816.4	−11.2		81	1.89	ssw.	12.5	1,715	(*)	
11:51	975.2	−12.7	88	sse.	6.7	1,596	832.5	−15.4	0.55	83	1.32	ssw.	12.7	1,564	(*)	
						1,500	843.2	−14.9		82	1.37	ssw.	13.1	1,470	(*)	
11:58	975.0	−12.6	84	sse.	6.3	1,306	864.8	−13.8	−0.33	80	1.47	ssw.	14.0	1,280	(*)	
						1,250	871.3	−14.0		82	1.48	ssw.	13.7	1,225	5,500	
						1,000	900.1	−14.8		90	1.51	s.	12.6	980		
P. M.																
12:16	974.9	−12.6	85	sse.	6.7	794	925.1	−15.5	0.70	97	1.52	s.	11.7	779	(*)	
						750	930.5	−15.2		96	1.56	s.	11.2	735		
						500	961.5	−13.4		90	1.72	sse.	8.4	490		
12:22	974.9	−12.7	88	sse.	7.2	396	974.9	−12.7		88	1.80	sse.	7.2	388		

December 16, 1917.

A. M.																
8:07	976.0	−11.6	100	s.	4.9	396	976.0	−11.6		100	2.25	s.	4.9	388		Cloudless.
						500	963.2	− 2.0		81	4.19	ssw.	6.4	490	0	
8:11	976.0	−11.6	100	s.	4.9	552	956.9	2.8	−9.23	72	5.38	ssw.	7.2	541	0	
						750	934.0	3.9		58	4.69	sw.	7.1	735		
9:18	976.2	− 9.6	92	s.	4.9	928	913.6	4.8	−0.53	46	3.96	wsw.	7.0	910		
						1,000	905.7	4.3		46	3.82	wsw.	7.2	980		
						1,250	878.3	2.7		48	3.56	wsw.	7.7	1,225		
						1,500	851.5	1.1		49	3.24	wsw.	8.3	1,470		
						1,750	825.4	− 0.5		50	2.93	w.	8.8	1,715		
						2,000	800.0	− 2.2		52	2.65	w.	9.4	1,960		
9:37	976.4	− 8.8	86	s.	5.4	2,223	777.6	− 3.6	0.65	53	2.40	w.	9.9	2,179		
						2,250	775.0	− 3.7		53	2.37	w.	10.0	2,205		
						2,500	751.0	− 5.0		53	2.13	w.	10.6	2,450	(*)	
						2,750	727.7	− 6.2		53	1.92	w.	11.3	2,694	(*)	
						3,000	705.2	− 7.5		53	1.71	w.	12.0	2,939	(*)	
10:02	976.7	− 7.8	82	s.	6.7	3,122	694.1	− 8.1	0.50	53	1.63	w.	12.3	3,059	(*)	
						3,250	683.0	− 7.8		51	1.61	w.	13.5	3,184	(*)	
						3,500	661.0	− 7.2		47	1.56	wnw.	15.8	3,429	(*)	

* More than 10,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 16, 1917—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	%		*m. p. s.*	*m.*	*mb.*	*°C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
10:08	976.7	− 7.4	78	s.	6.7	3,575	654.6	− 7.0	−0.24	46	1.55	wnw.	16.5	3,502	(*)	
						3,750	640.1	− 8.1		46	1.41	wnw.	16.8	3,673	(*)	
						4,000	620.2	− 9.6		45	1.21	nw.	17.2	3,918	(*)	
10:28	976.6	− 5.0	71	s.	5.8	4,141	608.9	−10.5	0.50	45	1.12	nw.	17.4	4,056	(*)	
						4,000	620.2	−10.0		45	1.17	nw.	16.7	3,918	(*)	
						3,750	640.1	− 9.1		44	1.24	wnw.	15.5	3,673	(*)	
						3,500	661.0	− 8.2		44	1.34	wnw.	14.3	3,429	(*)	
						3,250	683.0	− 7.2		43	1.43	w.	13.2	3,184	(*)	
						3,000	705.2	− 6.3		43	1.54	w.	12.0	2,939	(*)	
						2,750	727.7	− 5.4		43	1.67	w.	10.8	2,694	(*)	
11:14	976.2	− 4.0	70	s.	3.6	2,607	741.3	− 4.9	0.67	42	1.70	wsw.	10.1	2,554	(*)	Cloudless.
						2,500	751.0	− 4.2		42	1.81	wsw.	10.3	2,450		
						2,250	775.0	− 2.7		42	2.05	wsw.	10.8	2,205	8,820	
						2,000	800.0	− 0.8		42	2.40	sw.	11.4	1,960	8,560	
						1,750	825.4	1.1		42	2.78	sw.	11.9	1,715	7,400	
11:40	975.9	− 3.4	71	s.	3.1	1,599	841.0	1.9	0.40	42	2.94	sw.	12.2	1,567	6,570	
						1,500	851.5	2.3		42	3.03	sw.	12.0	1,470	6,050	
						1,250	878.3	3.3		43	3.33	sw.	11.3	1,225	4,730	Few Ci.St., w.
						1,000	905.4	4.3		43	3.57	ssw.	10.7	980	2,920	
P. M.																
12:06	975.7	− 2.4	70	s.	3.6	759	932.6	5.3	−2.07	44	3.92	ssw.	10.1	744	950	
						750	933.5	5.1		45	3.96	ssw.	9.9	735	930	
						500	963.0	− 0.5		62	3.63	s.	5.5	490	270	
12:10	975.6	− 2.8	69	s.	3.6	396	975.6	− 2.8		69	3.34	s.	3.6	388		

December 17, 1917.

A. M.																
8:38	971.7	0.5	92	ssw.	9.4	396	971.7	0.5		92	5.82	ssw.	9.4	388		10/10 St., ssw.; altitude of St. base about 600 m.
						500	959.3	0.1		92	5.66	ssw.	14.1	490	350	
8:46	971.7	0.8	93	ssw.	9.8	718	933.5	− 0.6	0.34	91	5.29	s.	23.9	704	1,400	
						750	929.9	3.7		72	5.73	s.	24.9	735	1,740	
8:48	971.7	0.8	93	s.	8.9	794	924.7	9.7	−1.36	46	5.53	ssw.	26.3	779	2,200	
						1,000	902.0	11.8		20	2.77	ssw.	22.0	980	3,770	
9:15	971.4	1.2	93	ssw.	10.7	1,076	893.9	12.6	−1.03	11	1.60	ssw.	20.4	1,055	4,500	
						1,250	875.5	11.6		11	1.50	ssw.	20.9	1,225	5,920	
						1,500	849.6	10.0		10	1.23	ssw.	21.7	1,470		
						1,750	823.8	8.5		10	1.11	ssw.	22.4	1,715		
9:39	971.1	1.6	93	ssw.	9.4	1,800	818.8	8.2	0.60	10	1.09	ssw.	22.6	1,764		
						1,750	823.8	8.5		10	1.11	ssw.	22.8	1,715		
						1,500	849.3	10.0		10	1.23	ssw.	24.1	1,470		
						1,250	875.0	11.4		10	1.35	ssw.	25.3	1,225	5,950	
9:46	971.1	1.6	93	ssw	10.7	1,115	889.0	12.2	0.05	10	1.42	ssw.	26.0	1,093	5,310	
						1,000	901.2	12.3		11	1.57	sw.	27.2	980	4,760	
10:09	971.0	2.0	90	ssw.	13.4	908	911.1	12.3	−20.15	12	1.72	sw.	28.2	890	4,320	
10:21	971.0	2.1	90	ssw.	13.9	842	918.5	− 1.0	0.71	85	4.78	sw.	22.6	826	4,000	
						750	928.9	− 0.3		86	5.13	sw.	19.6	735		
						500	958.6	1.5		89	6.06	ssw.	11.1	490	260	Altitude of St. base about 700 m.
11:05	971.3	2.2	90	ssw.	7.6	396	971.3	2.2		90	6.24	ssw.	7.6	388		10/10 St., ssw.

December 18, 1917.

A. M.																
8:34	970.8	− 1.6	92	ssw.	4.5	396	970.8	− 1.6		92	4.92	ssw.	4.5	388		3/10 Ci.St., ssw.
						500	958.5	3.0		69	5.23	w.	5.4	490	0	
8:44	970.8	− 1.4	92	ssw.	4.0	556	951.6	5.5	−4.44	56	5.06	wnw.	5.9	545	0	5/10 Ci.St., nnw.
9:47	971.2	0.2	92	ssw.	4.5	507	958.0	6.3	1.83	49	4.68	sw.	3.5	497	0	1/10 Ci.St., nnw.
9:49	971.2	0.2	92	ssw.	4.5	663	940.2	12.9	−4.23	25	3.72	sw.	5.2	650	0	
						750	930.8	13.2				sw.	5.2	735	0	3/10 Ci.St., nnw.
11:27	971.5	3.8	76	w.	3.1	970	906.7	14.1	−0.39			sw.	5.1	951	1,940	
						1,000	903.8	13.9				sw.	5.1	980	1,950	
						1,250	877.3	12.0				sw.	5.5	1,225	1,970	
						1,500	851.5	10.1				wsw.	5.9	1,470	2,000	
						1,750	826.0	8.2				wsw.	6.3	1,715		
11:56	971.3	5.0	75	w.	1.3	1,812	819.5	7.7	0.73			wsw.	6.4	1,776		
						1,750	826.0	8.1				wsw.	6.4	1,715		
						1,500	851.5	9.9				wsw.	6.6	1,470	1,690	
						1,250	877.3	11.6				wsw.	6.7	1,225	1,000	
						1,000	903.8	13.4				wsw.	6.9	980	730	
P. M.																
12:17	971.0	6.3	81	s.	2.7	806	924.0	14.7	−3.38			wsw.	7.0	790	580	
						750	930.8	12.8				wsw.	7.2	735	530	3/10 Ci., nnw.
12:26	970.9	6.3	80	s.	2.7	537	954.2	5.6	0.50			ssw.	7.9	526	220	
						500	958.5	5.8				ssw.	6.5	490	160	
12:27	970.9	6.3	80	s.	2.7	396	970.9	6.3		80	7.64	s.	2.7	388		

December 19, 1917 (No. 1).

A. M.																
8:15	968.0	1.7	77	ssw.	6.7	396	968.0	1.7		77	5.32	ssw.	6.7	388		9/10 Ci.St., wnw.
						500	956.0	7.2		62	6.30	ssw.	7.0	490	0	
8:25	968.0	1.8	77	ssw.	5.8	582	946.4	11.5	−5.27	50	6.78	ssw.	7.2	571	0	
9:00	968.2	2.0	77	ssw.	7.2	617	942.6	10.1	4.00	50	6.18	wnw.	6.9	605		

* More than 10,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 19, 1917 (No. 1)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*10^6 ergs.*	*volts.*	
9:07	968.2	2.0	77	ssw.	6.3	606	943.9	17.1	.....	32	6.24	wnw.	4.7	594	.....	
						750	927.8	16.8	.....	31	5.93	wnw.	5.5	735	360	
						1,000	900.0	16.2	.....	30	5.53	wnw.	7.0	980	1,050	
						1,250	872.1	15.6	.....	28	4.96	nw.	8.4	1,225	1,730	
						1,500	845.3	15.0	.....	27	4.60	nw.	9.9	1,470	2,200	
9:19	968.3	2.2	77	ssw.	5.8	1,594	840.5	14.8	0.16	26	4.38	nw.	10.4	1,562	2,200	
						1,500	845.6	15.5	.....	25	4.40	nw.	9.8	1,470	2,000	Partial solar halo, 22° radius, at 9:38 a. m.
						1,250	873.8	17.5	.....	22	4.40	wnw.	8.3	1,225	2,170	
						1,000	901.5	19.5	.....	19	4.31	wnw.	6.8	980	.....	
10:42	969.0	3.6	73	ssw.	6.3	959	906.6	19.8	−0.56	19	4.39	wnw.	6.5	940	.....	10/10 Ci.St., wnw.
						750	928.6	18.6	.....	25	5.36	wsw.	10.4	735	.....	
P. M.																
12:08	968.9	5.8	68	ssw.	7.2	693	935.1	18.3	−4.21	26	5.47	wsw.	11.4	680	.....	
						500	956.7	10.2	.....	51	6.35	sw.	7.8	490	.....	
12:13	968.7	5.8	65	ssw.	5.8	396	968.7	5.8	.....	65	5.99	ssw.	5.8	386	.....	10/10 A.St., wnw.

December 19, 1917 (No. 2).

P. M.																
2:07	967.9	7.8	63	ssw.	4.9	396	967.9	7.8	.....	63	6.67	ssw.	4.9	388	.....	10/10 Ci.St., wnw.
						500	955.7	6.9	.....	64	6.37	sw.	7.0	490	0	
2:17	967.8	8.2	63	ssw.	4.5	570	947.6	6.3	0.86	65	6.21	wsw.	8.4	559	0	
2:24	967.8	8.0	63	ssw.	4.9	680	935.0	10.2	−3.55	51	6.35	sw.	10.3	667	280	
						750	927.0	12.8	.....	45	6.65	sw.	9.5	735	500	
2:25	967.8	8.0	63	ssw.	4.9	849	916.4	16.4	−3.67	37	6.90	sw.	8.4	832	810	
2:40	967.7	8.5	60	ssw.	6.3	986	901.6	17.4	−0.73	25	4.97	wsw.	6.8	967	.....	
						1,000	900.0	17.4	.....	25	4.97	wsw.	6.7	980	1,680	5/10 Ci.St., wnw.; 5/10 A.St., wnw.
						1,250	874.0	16.6	.....	22	4.16	sw.	4.3	1,225	740	
3:45	967.8	7.6	68	sse.	4.0	1,289	870.1	16.5	0.16	22	4.13	sw.	3.9	1,264	0	10/10 A. St., wnw.
						1,250	874.0	16.5	.....	22	4.13	sw.	4.3	1,225	0	
						1,000	900.0	16.6	.....	24	4.53	sw.	6.9	980	0	
3:59	967.9	7.4	69	sse.	4.9	872	913.9	16.6	−4.50	25	4.72	sw.	8.3	855	0	
						750	927.0	11.1	.....	31	4.10	ssw.	8.9	735	0	
4:01	967.9	7.4	69	sse.	4.9	681	935.0	8.0	−0.28	35	3.76	ssw.	9.2	668	0	
						500	955.7	7.5	.....	55	5.70	s.	5.9	490	0	
4:06	967.9	7.2	67	sse.	4.0	396	967.9	7.2	.....	67	6.81	sse.	4.0	388	.....	10/10 A.St., wnw.

December 20, 1917 (No. 1).

A. M.																
8:13	961.2	2.0	86	sw.	6.7	396	961.2	2.0	.....	86	6.07	sw.	6.7	388	.....	Few Ci.St., wsw.
						500	949.2	7.9	.....	65	6.92	wsw.	10.2	490	0	
8:17	961.2	2.1	85	sw.	5.8	663	930.8	17.2	−5.69	31	6.08	wnw.	15.8	650	0	
						750	921.0	17.2	.....	28	5.49	wnw.	15.6	735	30	
						1,000	894.0	17.0	.....	20	3.88	wnw.	15.1	980	210	
8:32	961.3	2.5	82	sw.	6.7	1.080	886.2	17.0	0.05	18	3.49	wnw.	14.9	1,059	260	
						1,250	868.5	15.8	.....	18	3.23	wnw.	16.2	1,225	810	
						1,500	843.3	14.1	.....	19	3.06	w.	18.0	1,470	1,610	
						1,750	818.7	12.3	.....	20	2.86	w.	19.9	1,715	2,420	
8:49	961.4	3.4	78	sw.	7.2	1,838	810.2	11.7	0.70	20	2.75	w.	20.5	1,801	2,700	
						2,000	793.9	10.4	.....	21	2.65	w.	20.9	1,960	3,250	
						2,250	770.1	8.5	.....	21	2.33	w.	21.6	2,205	.....	
						2,500	747.3	6.6	.....	22	2.14	w.	22.3	2,450	.....	
						2,750	725.0	4.6	.....	23	1.95	w.	22.9	2,694	.....	
8:59	961.5	3.0	81	sw.	8.0	2,778	722.4	4.4	0.76	23	1.93	w.	23.0	2,722	.....	
						2,750	725.0	4.6	.....	23	1.95	w.	23.0	2,694	.....	
						2,500	746.8	6.4	.....	23	2.21	w.	23.0	2,450	.....	
						2,250	769.0	8.2	.....	23	2.50	w.	23.0	2,205	.....	
						2,000	792.9	10.1	.....	23	2.84	w.	22.9	1,960	4,000	
						1,750	817.8	11.9	.....	23	3.20	w.	22.9	1,715	3,420	
9:23	961.6	3.4	77	sw.	8.0	1,650	827.6	12.6	0.59	23	3.36	w.	22.9	1,617	2,970	
						1,500	842.7	13.5	.....	22	3.40	w.	21.4	1,470	2,280	
						1,250	868.0	15.0	.....	20	3.41	w.	18.9	1,225	1,140	
						1,000	894.0	16.4	.....	18	3.36	w.	16.4	980	510	
10:03	961.9	4.6	73	sw.	7.2	923	902.2	16.9	−5.26	17	3.27	w.	15.6	905	380	
10:07	962.0	4.8	72	sw.	6.3	767	919.5	8.7	−1.34	27	3.04	wnw.	17.0	752	120	
						750	921.0	8.5	.....	28	3.11	wnw.	16.6	735	90	
						500	949.6	5.1	.....	44	3.87	w.	10.2	490	0	
10:15	962.2	5.2	69	sw.	5.8	460	954.8	4.6	0.93	46	3.90	w.	9.2	451	0	
10:19	962.2	5.2	69	sw.	4.9	396	962.2	5.2	.....	69	6.11	sw.	4.9	388	.....	Few Ci.St., wsw.

December 20, 1917 (No. 2).

A. M.																
11:00	963.5	7.0	64	wsw.	5.8	396	963.5	7.0	.....	64	6.41	wsw.	5.8	388	.....	Cloudless.
						500	951.4	6.7	.....	64	6.28	wsw.	7.8	490	0	
11:10	963.6	7.7	63	w.	6.7	715	926.9	6.2	0.25	64	6.07	w.	12.0	701	0	
						750	923.1	6.9	.....	62	6.17	w.	12.3	735	0	
						1,000	895.7	11.8	.....	44	6.09	w.	14.7	980	1,020	
11:20	963.7	8.2	61	w.	5.8	1,137	881.2	14.5	−1.97	34	5.61	w.	16.0	1,115	1,600	
						1,250	869.2	13.9	.....	33	5.24	w.	16.6	1,225	2,080	
						1,500	843.9	12.5	.....	31	4.49	wsw.	17.8	1,470	2,700	
						1,750	819.6	11.2	.....	29	3.86	sw.	19.0	1,715	3,320	
11:35	963.9	8.6	60	w.	7.6	1,822	812.4	10.8	0.54	28	3.63	sw.	19.4	1,786	3,500	Cloudless.
						2,000	795.5	9.6	.....	28	3.35	sw.	19.5	1,960	4,250	

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 20, 1917 (No. 2)—Continued.

Surface.						At different heights above sea.											
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						2,250	772.0	8.0		28	3.00	sw.	19.6	2,205	5,290	
						2,500	749.0	6.3		27	2.58	wsw.	19.7	2,450	6,360	
11:54	964.1	8.3	63	wnw.	7.6	2,693	731.0	5.0	0.77	27	2.35	wsw.	19.8	2,639	7,210	
						2,750	726.0	4.5		26	2.19	wsw.	20.7	2,694	7,460	Few St.Cu., nw.
						3,000	703.3	2.4		23	1.67	wsw.	24.8	2,939	8,180	
						3,250	681.0	0.3		19	1.19	w.	28.8	3,184		
P. M.																
12:18	964.5	5.2	80	nw.	8.0	3,351	672.1	−0.6	0.76	18	1.05	w.	30.4	3,283		
						3,250	680.3	0.1		19	1.17	w.	29.1	3,184		
						3,000	701.6	1.7		22	1.52	wsw.	25.8	2,939	8,650	3/10 St.Cu., nw.
						2,750	723.5	3.4		25	1.95	wsw.	22.5	2,694	9,000	
						2,500	745.8	5.0		27	2.35	sw.	19.2	2,450	9,000	10/10 St., nw.
1:08	965.4	2.7	92	nw.	8.0	2,442	750.7	5.4	0.43	28	2.51	sw.	18.4	2,393	9,000	
						2,250	768.8	6.2		29	2.75	sw.	17.4	2,205	8,290	
						2,000	792.0	7.3		29	2.97	wsw.	16.0	1,960	7,190	
						1,750	816.2	8.4		30	3.31	wsw.	14.7	1,715	6,340	
						1,500	841.8	9.4		31	3.65	w.	13.4	1,470	5,920	
1:30	965.8	2.3	90	nnw.	8.0	1,490	842.8	9.5	−3.74	31	3.68	w.	13.3	1,461	5,900	
						1,250	868.7	0.5		59	3.73	wnw.	13.6	1,225	5,500	
1:42	966.1	2.0	92	nnw.	7.6	1,153	878.8	−3.1	0.66	71	3.34	wnw.	13.7	1,130	5,060	
						1,000	896.2	−2.1		75	3.85	wnw.	12.6	980	3,680	
						750	924.8	−0.4		82	4.85	nw.	10.9	735	1,420	Altitude of St. base about 600 m.
						500	954.4	1.2		89	5.93	nnw.	9.2	490	360	
1:58	966.5	1.9	92	nnw.	8.5	396	966.5	1.9		92	6.45	nnw.	8.5	388		10/10 St., nw.

December 20, 1917 (No. 3).

P. M.																
2:42	967.3	1.8	92	nnw.	7.2	396	967.3	1.8		92	6.40	nnw.	7.2	388		10/10 St., nw.
						500	955.0	1.0		94	6.18	nnw.	8.7	490	530	Altitude of St. base about 600 m.
						750	925.5	−1.0		98	5.51	nnw.	12.3	735	1,800	
2:48	967.4	1.8	92	nnw.	9.4	839	915.4	−1.7	0.79	100	5.30	nnw.	13.6	823	2,250	
						1,000	897.0	−2.0		99	5.12	nnw.		980		
						1,250	869.5	−2.4		98	4.90	nnw.		1,225		
2:57	967.5	1.8	93	nnw.	8.0	1,286	865.3	−2.5	0.18	98	4.86	nnw.		1,261		Kite broke away.

December 22, 1917.

A. M.																
8:32	975.8	−5.0	98	sse.	3.6	396	975.8	−5.0		98	3.93	sse.	3.6	388		8/10 A.Cu., wnw.
						500	962.8	−0.8		97	5.54	s.	8.5	490	0	
8:35	975.8	−5.0	99	sse.	3.6	539	958.3	0.8	−4.06	96	6.21	s.	10.3	528	0	
						750	932.7	0.6		87	5.55	s.	10.2	735	1,390	10/10 A.Cu., wnw.
						1,000	903.6	0.5		75	4.75	ssw.	10.1	980	2,640	
9:25	975.0	−3.0	96	sse.	3.1	1,224	879.4	0.3	0.07	65	4.06	ssw.	10.0	1,200	3,560	
						1,250	875.4	0.5		61	3.80	ssw.	10.2	1,225	3,650	
9:40	974.9	−2.5	96	sse.	3.1	1,466	853.3	2.4	−0.87	25	1.82	sw.	11.5	1,437	4,360	
						1,500	849.8	2.3		25	1.80	sw.	11.6	1,470	4,480	
						1,750	824.0	1.3		24	1.61	sw.	12.4	1,715	5,230	
						2,000	798.8	0.4		24	1.51	sw.	13.1	1,960	5,980	
10:03	974.7	−2.0	98	sse.	3.1	2,231	775.7	−0.5	0.38	23	1.35	sw.	13.8	2,186	6,880	
						2,250	774.0	−0.7		24	1.38	sw.	13.9	2,205	6,950	
						2,500	750.0	−2.8		33	1.60	sw.	14.9	2,450	7,970	
						2,750	726.4	−5.0		43	1.72	wsw.	15.9	2,694	8,980	
						3,000	703.0	−7.1		52	1.74	wsw.	17.0	2,939	10,060	
						3,250	681.0	−9.3		61	1.68	w.	18.0	3,184	12,350	
10:24	974.4	−1.3	96	sse.	3.1	3,372	670.7	−10.3	0.86	66	1.67	w.	18.5	3,303	13,180	
						3,500	659.5	−11.0		70	1.66	w.	19.9	3,429	14,040	8/10 A.Cu., wnw.
						3,750	638.9	−12.5		78	1.61	w.	22.7	3,673	15,740	
						4,000	618.5	−13.9		86	1.57	wnw.	25.4	3,918	17,400	
						4,250	598.3	−15.3		94	1.50	wnw.	28.2	4,162	19,000	Altitude of A.Cu. base about 4,250 m.
10:57	974.0	0.3	90	sse.	4.5	4,316	592.8	−15.7	0.60	96	1.49	wnw.	28.9	4,227	19,500	Altitude of A.Cu., base about 4,100 m.
						4,250	598.3	−15.3		95	1.52	wnw.	28.2	4,162	18,970	
						4,000	618.5	−13.7		91	1.69	wnw.	25.6	3,918	16,960	
						3,750	638.9	−12.1		87	1.87	w.	23.0	3,673	14,950	6/10 A.Cu., wnw.
						3,500	659.5	−10.5		84	2.08	w.	20.3	3,429	12,940	
11:43	972.8	2.0	71	s.	5.4	3,258	680.1	−9.0	0.97	80	2.27	w.	17.8	3,192	11,000	
						3,250	681.0	−8.9		80	2.29	w.	17.8	3,184	10,930	
						3,000	703.0	−6.5		69	2.44	w.	16.9	2,939	8,980	9/10 A.Cu., wnw.
						2,750	725.8	−4.0		58	2.53	w.	16.1	2,694	7,640	
						2,500	748.5	−1.6		48	2.57	w.	15.2	2,450	6,300	
P. M.																
12:12	971.9	3.0	69	s.	5.4	2,314	765.9	0.2	0.36	40	2.48	w.	14.6	2,268	5,300	
						2,250	772.0	0.4		42	2.64	w.	14.8	2,205	5,180	
						2,000	796.2	1.3		48	3.22	w.	15.3	1,960	4,710	
						1,750	821.1	2.2		55	3.94	wsw.	15.9	1,715	4,210	
12:34	971.2	3.4	75	s.	7.6	1,507	846.2	3.1	−0.37	61	4.65	wsw.	16.5	1,477	3,470	
						1,500	846.5	3.1		61	4.65	wsw.	16.5	1,470	3,450	
						1,250	873.0	2.2		71	5.08	sw.	15.3	1,225	2,660	
						1,000	900.5	1.2		81	5.39	ssw.	14.1	980	1,680	
						750	929.0	0.3		91	5.68	s.	12.9	735	180	
12:59	970.3	4.4	71	s.	7.2	721	932.0	0.2	1.29	92	5.70	s.	12.8	707	0	
						500	958.0	3.1		76	5.80	s.	8.4	490	0	
1:07	970.1	4.4	68	s.	6.3	396	970.1	4.4		68	5.69	s.	6.3	388		Few Ci., w.; 5/10 A.Cu., wnw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 23, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*10^5 ergs.*	*volts.*	
8:18	960.3	2.2	93	ssw.	9.8	396	960.3	2.2	.....	93	6.66	ssw.	9.8	388	.....	10/10 St., ssw.
						500	947.9	1.4	.....	95	6.42	ssw.	9.4	490	0	Altitude of St. base about 600 m.
8:37	960.2	2.3	95	ssw.	8.5	725	921.7	− 0.4	0.79	100	5.91	ssw.	8.6	711	1,660	
						750	919.0	1.9	.....	81	5.68	sw.	8.2	735	1,790	
9:16	960.1	2.5	93	ssw.	10.3	780	915.4	4.7	−9.27	58	4.95	wsw.	7.7	765	1,400	
						1,000	891.5	9.5	.....	54	6.41	w.	10.4	980	1,880	
9:19	960.1	2.5	93	ssw.	8.5	1,149	875.4	12.8	−2.20	51	7.54	w.	12.2	1,126	2,210	
						1,250	865.0	12.2	.....	49	6.96	w.	12.0	1,225	2,430	
						1,500	839.6	10.6	.....	43	5.50	w.	11.4	1,470	2,980	
						1,750	815.0	9.0	.....	38	4.36	w.	10.9	1,715	3,530	10/10 St., sw.
9:37	960.1	2.4	93	ssw.	9.4	1,879	802.1	8.2	0.63	35	3.80	w.	10.6	1,842	3,820	
						2,000	790.8	7.3	.....	36	3.68	w.	11.1	1,960	4,090	
						2,250	767.0	5.5	.....	37	3.34	wnw.	12.1	2,205	3,700	2/10 Ci., nw.; 3/10 St., sw.
						2,500	743.7	3.6	.....	38	3.01	wnw.	13.0	2,450	3,950	
11:30	959.2	5.3	78	sw.	8.9	2,744	721.2	1.8	0.74	39	2.71	nw.	14.0	2,689	4,630	
						2,750	720.8	1.8	.....	39	2.71	nw.	14.0	2,694	4,640	
						3,000	698.3	0.3	.....	39	2.43	nw.	14.5	2,939	5,340	
						3,250	676.3	− 1.1	.....	39	2.17	nw.	14.9	3,184	6,040	
						3,500	655.2	− 2.5	.....	39	1.93	nw.	15.4	3,429	6,740	
						3,750	635.8	− 4.0	.....	39	1.70	nw.	15.8	3,673	7,440	
						4,000	615.3	− 5.4	.....	39	1.51	nw.	16.3	3,918	8,140	
11:52	958.8	5.8	77	sw.	8.9	4,053	611.4	− 5.7	0.57	39	1.47	nw.	16.4	3,970	8,290	
						4,250	596.6	− 6.6	.....	38	1.33	nw.	17.1	4,162	8,840	4/10 Ci., nw.
						4,500	578.2	− 7.7	.....	37	1.18	nw.	18.0	4,407	.....	
						4,750	560.0	− 8.9	.....	36	1.03	nw.	18.8	4,651	.....	
P. M.																
12:06	958.6	5.9	75	sw.	7.6	4,797	556.1	− 9.1	0.51	36	1.01	nw.	19.0	4,697	.....	
						4,750	560.0	− 8.8	.....	36	1.04	nw.	18.9	4,651	.....	
						4,500	578.2	− 7.4	.....	35	1.14	nw.	18.2	4,407	.....	
						4,250	597.0	− 6.0	.....	34	1.25	wnw.	17.5	4,162	8,760	
						4,000	616.0	− 4.6	.....	33	1.37	wnw.	16.8	3,918	7,980	
12:33	958.2	6.5	72	ssw.	8.5	3,847	628.0	− 3.7	0.52	33	1.48	wnw.	16.4	3,768	7,500	
						3,750	635.0	− 3.2	.....	33	1.54	wnw.	16.3	3,673	7,210	
						3,500	655.2	− 1.9	.....	34	1.77	wnw.	15.9	3,429	6,460	
						3,250	676.0	− 0.6	.....	34	1.98	wnw.	15.5	3,184	5,720	
						3,000	697.3	0.7	.....	35	2.25	w.	15.2	2,939	5,060	
						2,750	719.6	2.0	.....	35	2.47	w.	14.8	2,694	4,520	
						2,500	742.3	3.3	.....	36	2.79	w.	14.4	2,450	3,990	
1:04	957.6	6.7	70	ssw.	5.8	2,490	743.4	3.4	0.68	36	2.81	w.	14.4	2,440	3,970	
						2,250	765.5	5.0	.....	36	3.14	w.	14.3	2,205	3,460	
						2,000	789.4	6.7	.....	35	3.43	w.	14.2	1,960	2,970	
						1,750	813.8	8.5	.....	35	3.88	wsw.	14.0	1,715	2,480	
1:20	957.3	6.0	84	ssw.	8.5	1,685	819.8	8.9	0.72	35	3.99	wsw.	14.0	1,651	2,350	5/10 Ci.St., nw.
						1,500	838.0	10.2	.....	33	4.11	wsw.	14.4	1,470	1,810	
						1,250	863.5	12.0	.....	31	4.35	wsw.	15.0	1,225	1,040	8/10 Ci.St., nw.
						1,000	889.3	13.8	.....	29	4.58	wsw.	15.6	980	540	
1:43	956.8	7.9	68	ssw.	7.2	921	897.8	14.4	−2.89	28	4.59	wsw.	15.8	903	270	
						750	916.2	9.5	.....	32	3.80	sw.	13.5	735	0	
1:52	956.6	8.4	66	ssw.	8.0	610	932.0	5.4	1.59	36	3.23	sw.	11.7	598	0	
						500	944.5	7.1	.....	51	5.15	ssw.	9.4	490	0	
1:55	956.5	8.8	65	ssw.	7.2	396	956.5	8.8	.....	65	7.36	ssw.	7.2	388	.....	8/10 Ci.St., nw.

December 24, 1917.

A. M.																
8:36	976.7	− 8.8	70	n.	8.9	396	976.7	− 8.8	.....	70	2.02	n.	8.9	388	.....	10/10 A.St., nw.
						500	963.9	− 9.5	.....	74	2.01	n.	10.5	490	0	
						750	933.1	−11.1	.....	82	1.93	nne.	14.3	735	0	
8:50	977.1	− 8.8	70	n.	9.4	889	916.5	−12.0	0.65	87	1.89	nne.	16.4	872	0	
						1,000	903.5	− 9.5	.....	85	2.30	nne.	14.8	980	210	
9:00	977.4	− 8.8	70	n.	9.4	1,133	888.2	− 6.6	−2.21	83	2.90	nne.	12.8	1,111	460	
						1,250	875.0	− 5.9	.....	83	3.08	nne.	12.9	1,225	680	
						1,500	848.0	− 4.6	.....	84	3.49	n.	13.0	1,470	1,180	
9:20	977.8	− 8.9	70	n.	9.4	1,743	822.4	− 3.2	−0.56	85	3.98	n.	13.1	1,708	1,960	
						1,750	822.0	− 3.5	.....	86	3.92	n.	13.1	1,715	1,980	
						2,000	796.4	− 4.2	.....	89	3.83	n.	13.4	1,960	2,660	
						2,250	771.7	− 5.2	.....	92	3.62	nnw.	13.7	2,205	3,410	Altitude of A.St. base about 2,450 m.
						2,500	747.5	− 6.2	.....	95	3.44	nnw.	13.9	2,450	4,470	
						2,750	723.5	− 7.1	.....	99	3.32	nw.	14.2	2,694	.....	
10:20	978.9	− 9.7	68	n.	9.8	2,830	715.7	− 7.4	0.44	100	3.26	nw.	14.3	2,773	.....	
						2,750	723.0	− 7.0	.....	100	3.38	nw.	14.3	2,694	.....	
						2,500	746.2	− 5.8	.....	100	3.75	nnw.	14.2	2,450	6,970	
10:39	979.2	− 9.8	68	n.	8.9	2,324	762.9	− 4.9	−0.45	100	4.05	nnw.	14.1	2,277	5,860	
						2,250	770.3	− 5.2	.....	96	3.78	nnw.	14.1	2,205	5,400	
						2,000	795.0	− 6.4	.....	83	2.95	n.	14.0	1,960	3,820	
10:57	979.4	− 9.9	70	n.	3.6	1,837	812.0	− 7.1	−1.32	75	2.51	n.	13.9	1,800	2,800	
						1,750	821.5	− 8.3	.....	65	1.96	n.	15.5	1,715	3,140	
11:01	979.4	− 9.9	68	n.	8.0	1,595	837.7	−10.3	0	48	1.21	nne.	18.4	1,563	3,740	
						1,500	848.0	−10.3	.....	44	1.11	nne.	19.5	1,470	4,110	
11:16	979.5	− 9.8	70	n.	8.9	1,326	867.6	−10.3	−0.73	36	0.91	nne.	21.6	1,300	3,410	
						1,250	876.4	−10.9	.....	40	0.96	nne.	20.4	1,225	3,020	
						1,000	905.0	−12.7	.....	53	1.08	nne.	16.6	980	1,720	
11:29	979.5	− 9.5	71	n.	4.5	958	910.3	−13.0	0.66	55	1.09	nne.	16.0	939	1,500	
						750	935.1	−11.4	.....	59	1.35	nne.	13.6	735	940	
						500	965.1	−10.0	.....	63	1.64	n.	10.6	490	280	
11:41	979.6	− 9.3	65	n.	9.4	396	979.6	− 9.3	.....	65	1.79	n.	9.4	388	.....	10/10 A.St., nw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 25, 1917.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	*°C.*	*%*		*m. p. s.*	*m.*	*mb.*	*°C.*		*%*	*mb.*		*m. p. s.*	*10^5 ergs.*	*volts.*	
9:04	988.9	−12.7	59	ne.	3.6	396	988.9	−12.7	.....	59	1.20	ne.	3.6	388	.....	10/10 St.Cu., nw.
						500	976.2	−13.3	.....	60	1.16	ne.	3.6	490	0	
10:38	989.7	−11.7	51	ene.	3.1	673	954.4	−14.3	0.79	62	1.09	ene.	3.5	660	0	
						500	976.2	−13.3	.....	59	1.14	ene.	3.3	490	0	
10:44	989.7	−11.6	55	ene.	3.1	396	989.7	−11.6	.....	55	1.24	ene.	3.1	388	.....	10/10 St.Cu., nw.

December 26, 1917, series (No. 1).

A. M.																
8:19	981.3	− 9.4	55	s.	7.2	396	981.3	− 9.4	.....	55	1.51	s.	7.2	388	.....	7/10 Ci.St., wsw.
						500	968.5	− 9.0	.....	54	1.53	s.	10.7	490	1,290	
						750	937.8	− 7.9	.....	51	1.59	s.	19.1	735	4,620	
8:32	981.2	− 9.1	55	s.	6.7	760	936.3	− 7.9	−0.41	51	1.59	s.	19.4	745	4,760	
						1,000	907.7	− 5.1	.....	41	1.63	s.	19.2	980	8,160	
8:36	981.2	− 9.0	53	s.	7.2	1,122	893.9	− 3.6	−1.19	36	1.63	s.	19.1	1,100	9,094	
						1,250	878.7	− 3.2	.....	39	1.83	s.	19.2	1,225	11,420	
						1,500	851.3	− 2.5	.....	44	2.18	ssw.	19.4	1,470	13,540	10/10 Ci.St., wsw.
						1,750	825.2	− 1.7	.....	50	2.65	sw.	19.6	1,715	15,650	
						2,000	800.0	− 0.9	.....	55	3.12	sw.	19.7	1,960	17,370	
9:04	981.1	− 8.3	52	s.	6.3	2,109	789.5	− 0.3	−0.30	60	3.58	wsw.	19.9	2,067	18,010	
						2,250	775.0	− 1.6	.....	63	3.37	wsw.	19.2	2,205	18,830	
						2,500	750.8	− 3.8	.....	69	3.06	wsw.	17.9	2,450	20,290	
						2,750	727.6	− 6.1	.....	76	2.77	wsw.	16.7	2,694	21,930	
						3,000	705.0	− 8.4	.....	82	2.45	wsw.	15.4	2,939	23,720	
9:32	980.9	− 7.7	50	s.	6.7	3,016	703.3	− 8.5	0.90	82	2.43	wsw.	15.3	2,955	23,830	
						3,250	682.8	− 8.9	.....	83	2.37	wsw.	18.6	3,184	26,010	
						3,500	661.2	− 9.3	.....	84	2.32	sw.	22.2	3,429	27,000	
10:07	980.7	− 7.1	48	s.	6.7	3,601	652.4	− 9.5	0.36	85	2.30	sw.	23.6	3,527	.....	
						3,500	661.2	− 9.0	.....	83	2.36	sw.	22.8	3,429	26,950	
						3,250	682.8	− 7.6	.....	79	2.54	sw.	20.8	3,184	23,610	
						3,000	704.6	− 6.3	.....	74	2.66	sw.	18.7	2,939	21,320	
						2,750	727.3	− 4.9	.....	70	2.84	sw.	16.7	2,694	19,550	10/10 A.St., wsw.
10:39	980.3	− 6.4	43	s.	8.5	2,648	736.9	− 4.4	0.47	68	2.87	sw.	15.9	2,595	18,820	
						2,500	750.8	− 3.7	.....	67	3.00	sw.	16.4	2,450	17,700	
						2,250	775.0	− 2.6	.....	64	3.15	sw.	17.3	2,005	15,820	
						2,000	800.0	− 1.4	.....	62	3.37	ssw.	18.1	1,960	13,940	
						1,750	825.2	− 0.2	.....	59	3.55	ssw.	18.9	1,715	12,050	
10:59	980.1	− 6.3	49	s.	8.9	1,703	830.2	0.0	−0.51	59	3.60	ssw.	19.1	1,669	11,700	
						1,500	851.3	− 1.0	.....	50	2.81	ssw.	19.9	1,470	10,170	
						1,250	878.7	− 2.3	.....	38	1.92	s.	20.9	1,225	8,180	
11:12	980.0	− 6.2	49	s.	8.0	1,156	889.0	− 2.8	−1.50	34	1.65	s.	21.3	1,133	7,140	
						1,000	906.9	− 5.2	.....	35	1.38	s.	18.9	980	5,420	
						750	936.5	− 8.9	.....	38	1.09	s.	14.9	735	2,760	
11:26	979.8	− 5.9	46	s.	6.3	717	940.1	− 9.4	1.15	38	1.04	s.	14.4	703	2,500	
						500	966.5	− 8.2	.....	41	1.25	s.	12.2	490	810	
11:32	979.7	− 5.7	46	s.	7.6	396	979.7	− 5.7	.....	46	1.74	s.	7.6	388	.....	10/10 A.St., wsw.

December 26, 1917, series (No. 2).

P. M.																
12:13	979.2	− 4.2	45	s.	4.9	396	979.2	− 4.2	.....	45	1.94	s.	4.9	388	.....	10/10 A.St., w.
						500	966.0	− 5.3	.....	45	1.76	s.	6.9	490	1,040	
12:28	978.9	− 3.7	36	s.	7.6	715	939.9	− 7.5	1.03	46	1.49	s.	11.0	706	3,180	
						750	936.0	− 7.1	.....	44	1.47	s.	11.9	735	3,560	
						1,000	906.4	− 4.0	.....	31	1.35	s.	18.7	980	8,060	
12:47	978.6	− 3.7	39	s.	6.3	1,143	889.8	− 2.3	−1.21	24	1.21	s.	22.5	1,121	6,000	
						1,250	878.1	− 1.9	.....	28	1.46	s.	22.4	1,225	10,350	
						1,500	850.8	− 1.0	.....	37	2.08	s.	22.0	1,470	12,630	
						1,750	824.6	− 0.2	.....	47	2.82	ssw.	21.7	1,715	14,750	
						2,000	799.0	0.7	.....	56	3.60	ssw.	21.3	1,960	16,770	
1:08	978.2	− 3.3	42	s.	5.4	2,024	796.8	0.8	−0.35	57	3.69	ssw.	21.3	1,984	16,960	
						2,250	773.3	0.5	.....	56	3.54	ssw.	20.5	2,205	18,440	4/10 A.St., w.; 3/10 Ci.st., w.
						2,500	750.2	− 2.0	.....	56	2.90	sw.	19.7	2,450	19,580	
1:30	977.7	− 3.2	43	s.	5.8	2,701	731.3	− 3.2	0.59	55	2.57	sw.	18.8	2,647	20,500	
						2,750	726.9	− 3.6	.....	56	2.53	sw.	18.9	2,694	20,700	
						3,000	703.5	− 5.5	.....	59	2.27	sw.	19.4	2,939	21,720	
						3,250	681.1	− 7.4	.....	63	2.05	wsw.	19.9	3,184	23,160	2/10 Ci.St., w.; 8/10 A.St., w.
2:02	977.0	− 2.8	39	s.	5.4	3,445	664.5	− 8.9	0.82	66	1.89	wsw.	20.3	3,375	25,500	
						3,250	681.1	− 7.2	.....	65	2.81	wsw.	18.7	3,184	23,120	
						3,000	703.5	− 5.1	.....	65	2.59	sw.	16.7	2,939	20,060	
2:24	976.6	− 2.0	31	s.	4.9	2,786	722.5	− 3.2	0.50	64	3.00	sw.	14.9	2,730	18,060	
						2,750	726.0	− 3.0	.....	64	3.04	sw.	15.1	2,694	17,870	
						2,500	749.0	− 1.8	.....	61	3.21	sw.	16.1	2,450	16,580	
						2,250	772.6	− 0.5	.....	58	3.40	sw.	17.2	2,205	15,280	
						2,000	797.2	0.8	.....	55	3.56	sw.	18.3	1,960	13,710	
2:41	976.3	− 1.3	34	s.	6.7	1,969	800.3	0.9	−0.76	55	3.59	sw.	18.4	1,930	13,470	
						1,750	822.6	− 0.8	.....	51	2.91	sw.	18.4	1,715	11,730	
						1,500	848.5	− 2.7	.....	47	2.29	ssw.	18.5	1,470	9,750	
						1,250	875.4	− 4.5	.....	43	1.80	ssw.	18.5	1,225	7,340	
3:13	975.7	− 1.4	37	s.	7.6	1,046	898.4	− 6.1	0.68	40	1.46	s.	18.5	1,025	4,950	4/10 Ci.St., w.; 6/10 A.St., w.
						1,000	903.6	− 5.8	.....	40	1.50	s.	17.7	980	4,450	
						750	933.0	− 4.1	.....	40	1.73	s.	13.1	735	1,980	
						500	962.7	− 2.4	.....	39	1.95	s.	8.6	490	582	
3:31	975.3	− 1.7	39	s.	6.7	396	975.3	− 1.7	.....	39	2.07	s.	6.7	388	.....	7/10 Ci.St., w.; 3/10 A.St., w.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 26, 1917, series (No. 3).

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
4:14	974.6	− 2.0	40	s.	6.7	396	974.6	− 2.0	.....	40	2.07	s.	6.7	388	.....	7/10 Ci.St., w.; 2/10 A.St., w.
						500	962.0	− 2.7	.....	41	2.00	s.	8.9	490	820	
						750	932.0	− 4.3	.....	44	1.87	ssw.	14.2	735	2,780	
4:27	974.5	− 2.1	41	s.	6.3	921	911.7	− 5.4	0.65	46	1.78	ssw.	17.9	903	4,620	
						1,000	902.8	− 3.4	.....	49	2.25	ssw.	19.0	980	5,520	
4:31	974.5	− 2.2	41	s.	6.7	1,219	878.3	1.7	−2.48	56	3.87	ssw.	22.1	1,195	8,000	
						1,250	875.0	1.8	.....	55	3.83	ssw.	21.9	1,225	8,150	
						1,500	848.0	2.4	.....	51	3.70	sw.	20.3	1,470	9,330	
4:47	974.4	− 2.4	42	s.	5.8	1,685	828.9	3.0	−0.28	46	3.49	sw.	18.9	1,651	10,200	
						1,750	822.3	2.7	.....	46	3.41	sw.	18.3	1,715	10,400	
						2,000	796.9	1.4	.....	44	2.97	sw.	15.9	1,960	11,150	
						2,250	772.6	0.0	.....	42	2.57	wsw.	13.5	2,205	12,060	
						2,500	749.0	− 1.2	.....	41	2.27	wsw.	11.1	2,450	13,130	10/10 A.St., w.
5:17	974.2	− 2.4	52	sse.	5.4	2,587	740.8	− 1.7	0.52	40	2.12	wsw.	10.3	2,535	13,500	
						2,750	726.0	− 2.6	.....	40	1.97	wsw.	12.0	2,694	12,150	
						3,000	703.5	− 3.9	.....	41	1.81	wsw.	14.5	2,939	.....	
5:45	974.1	− 2.7	51	sse.	4.9	3,239	682.2	− 5.2	0.59	42	1.65	wsw.	17.0	3,173	.....	
						3,000	703.5	− 3.7	.....	40	1.79	wsw.	15.2	2,939	.....	
						2,750	725.8	− 2.1	.....	38	1.95	sw.	13.4	2,694	11,410	
						2,500	748.8	− 0.4	.....	36	2.13	sw.	11.6	2,450	11,130	8/10 A. Cu., w.; 1/10 A. St., w.
6:08	973.9	− 2.8	49	sse.	5.4	2,383	759.7	0.3	0.54	35	2.18	sw.	10.7	2,335	11,000	
						2,250	772.6	1.0	.....	35	2.30	sw.	11.2	2,205	10,630	
						2,000	796.9	2.4	.....	36	2.61	sw.	12.2	1,960	9,950	
						1,750	822.3	3.7	.....	37	2.94	sw.	13.2	1,715	9,260	
6:23	973.8	− 2.8	51	sse.	6.3	1,656	831.3	4.2	−0.79	37	3.05	sw.	13.6	1,623	9,000	
						1,500	847.9	3.0	.....	45	3.41	sw.	18.1	1,450	8,090	
						1,250	874.5	1.0	.....	58	3.81	ssw.	25.4	1,225	6,640	
6:38	973.7	− 3.0	53	sse.	5.4	1,223	877.1	0.8	−8.49	59	3.82	ssw.	26.2	1,199	6,480	Lunar halo, 22° radius, at 6:45 p. m.
6:42	973.7	− 3.0	54	sse.	4.9	1,157	884.4	− 4.8	0.61	62	2.53	ssw.	20.6	1,134	6,100	
						1,000	902.8	− 3.9	.....	57	2.47	s.	19.9	980	3,980	
6:54	973.6	− 3.3	58	sse.	4.5	861	918.0	− 3.0	−0.06	52	2.47	s.	19.2	844	2,100	
						750	931.4	− 3.1	.....	53	2.50	s.	15.9	735	1,600	
						500	961.0	− 3.2	.....	55	2.57	sse.	8.5	490	470	
7:02	973.6	− 3.3	56	sse.	5.4	396	973.6	− 3.3	.....	56	2.60	sse.	5.4	388	.....	8/10 A.Cu., wnw.

December 26, 1917, series (No. 4).

P. M.																
7:40	973.2	− 3.2	61	sse.	6.3	396	973.2	− 3.2	.....	61	2.85	sse.	6.3	388	.....	2/10 A.Cu., wnw.; 4/10 Ci.St., wnw.
						500	960.8	− 3.4	.....	62	2.85	sse.	8.1	490	580	
						750	930.7	− 4.0	.....	64	2.80	sse.	12.3	735	2,090	
						1,000	901.5	− 4.6	.....	67	2.78	s.	16.6	980	4,190	
7:57	973.0	− 3.1	61	sse.	6.3	1,122	887.4	− 4.9	0.23	68	2.75	s.	18.7	1,100	5,210	6/10 A.Cu., wnw.
						1,250	873.4	− 0.7	.....	59	3.40	s.	16.7	1,225	5,880	8/10 A.Cu., wnw.
8:10	972.9	−.3.0	61	sse.	5.4	1,449	852.2	5.8	−3.27	46	4.24	ssw.	13.5	1,420	6,680	
						1,500	846.8	5.5	.....	45	4.06	ssw.	13.1	1,470	6,880	
						1,750	821.1	4.1	.....	39	3.19	sw.	10.8	1,715	7,820	
						2,000	796.0	2.7	.....	34	2.52	wsw.	8.6	1,960	8,820	
8:47	972.7	− 3.1	61	sse.	5.4	2,086	787.6	2.2	0.56	32	2.29	wsw.	7.8	2,044	9,500	7/10 Ci.St., wnw.; 1/10 A.Cu., wnw.
						2,250	772.0	0.8	.....	37	2.39	wsw.	7.9	2,205	10,820	
						2,500	748.2	− 1.2	.....	45	2.49	wsw.	8.0	2,450	.....	
						2,750	725.0	− 3.3	.....	53	2.46	wsw.	8.1	2,694	.....	8/10 Ci.St., wnw.
9:33	972.4	− 3.6	67	sse.	5.8	2,854	715.2	− 4.2	0.86	56	2.41	wsw.	8.1	2,796	.....	
						2,750	725.0	− 3.3	.....	55	2.55	wsw.	7.9	2,694	.....	
						2,500	748.2	− 1.0	.....	52	2.92	wsw.	7.3	2,450	.....	
						2,250	772.0	1.2	.....	48	3.20	wsw.	6.7	2,205	8,810	
						2,000	796.0	3.4	.....	45	3.51	wsw.	6.1	1,960	7,650	6/10 Ci., wnw.
10:03	972.3	− 3.7	69	sse.	5.8	1,983	798.1	3.6	0.59	45	3.56	wsw.	6.1	1,944	7,570	
						1,750	821.1	5.0	.....	41	3.58	sw.	8.7	1,715	6,620	
						1,500	846.8	6.5	.....	36	3.48	ssw.	11.6	1,470	6,210	
10:20	972.2	− 3.9	72	sse.	5.4	1,377	859.5	7.2	−3.93	34	3.45	ssw.	13.0	1,350	5,780	
						1,250	873.4	2.2	.....	37	2.65	ssw.	13.5	1,225	5,320	
10:23	972.2	− 4.0	72	sse.	5.8	1,194	878.9	0.0	−1.82	38	3.32	ssw.	13.7	1,171	5,120	
						1,000	900.5	− 3.5	.....	54	2.46	ssw.	15.8	980	4,120	
10:32	972.1	− 4.0	74	sse.	5.4	985	902.2	− 3.8	−0.02	55	2.44	ssw.	16.0	966	4,040	
						750	929.0	− 3.8	.....	63	2.80	ssw.	12.3	735	2,760	3/10 Ci., wnw.
						500	959.0	− 3.8	.....	71	3.13	s.	8.3	490	890	
10:48	972.1	− 3.9	75	s.	6.7	396	972.1	− 3.9	.....	75	3.31	s.	6.7	388	.....	1/10 Ci., wnw.

December 26–27, 1917, series (No. 5).

P. M.																
11:27	972.1	− 3.8	77	s.	6.3	396	972.1	− 3.8	.....	77	3.42	s.	6.3	388	.....	1/10 Ci., wnw.
						500	959.0	− 3.7	.....	78	3.49	s.	7.7	490	590	
						750	929.5	− 3.4	.....	79	3.63	ssw.	11.0	735	2,120	
11:40	972.2	− 3.4	82	s.	5.8	972	904.0	− 3.2	−0.10	81	3.79	sw.	13.9	953	3,620	
						1,000	901.0	− 2.8	.....	77	3.73	sw.	13.4	980	3,830	
11:47	972.2	− 3.4	84	s.	6.7	1,060	894.0	− 2.0	−1.36	69	3.57	sw.	12.4	1,039	4,230	
						1,250	873.0	1.6	.....	58	3.98	sw.	11.3	1,225	5,390	
						1,500	846.0	6.4	.....	43	4.13	sw.	9.9	1,470	6,910	
11:52	972.3	− 3.4	86	s.	5.8	1,513	845.2	6.6	−1.90	42	4.10	sw.	9.8	1,483	6,990	
						1,750	820.0	4.7	.....	42	3.59	sw.	9.5	1,715	7,860	
						2,000	795.0	2.7	.....	43	3.19	sw.	9.1	1,960	9,050	
						2,250	771.0	0.7	.....	43	2.76	wsw.	8.7	2,205	10,060	
						2,500	747.5	− 1.3	.....	44	2.41	wsw.	8.3	2,450	10,750	
A. M.																
12:42	972.3	− 4.4	91	s.	3.6	2,592	739.5	− 2.0	0.78	44	2.27	wsw.	8.2	2.540	11,000	
						2,750	725.0	− 3.3	.....	50	2.30	wsw.	9.8	2,694	12,030	1/10 Ci., wnw.
1:00	972.3	− 4.9	92	s.	4.0	2,927	708.8	− 4.8	0.84	56	2.28	wsw.	11.5	2,868	13,190	
						3,000	702.3	− 5.0	.....	57	2.29	wsw.	11.7	2,939	13,660	
						3,250	680.4	− 6.2	.....	62	2.24	wsw.	12.3	3,184	15,300	

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 26-27, 1917, series (No. 5)—Continued.

Surface.						At different heights above sea.											
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁶ ergs.*	*volts.*	
						3,500	659.0	− 7.3		67	2.20	w.	12.8	3,429	16,930	
						3,750	638.0	− 8.4		72	2.15	w.	13.4	3,673		
1:18	972.1	− 4.9	94	s.	4.5	3,870	628.0	− 8.9	0.42	74	2.12	w.	13.7	3,791		
						3,750	638.0	− 8.4		75	2.24	w.	13.3	3,673		
						3,500	659.0	− 7.4		77	2.51	w.	12.4	3,429	16,640	
						3,250	680.0	− 6.4		79	2.81	wsw.	11.5	3,184	13,990	
						3,000	701.8	− 5.4		81	3.14	wsw.	10.7	2,939	12,250	
1:40	971.8	− 5.1	98	s.	4.5	2,956	705.6	− 5.2	0.87	81	3.19	wsw.	10.5	2,896	12,040	Few Ci., wnw.
						2,750	724.5	− 3.3		73	3.39	wsw.	10.4	2,694	11,050	
						2,500	747.2	− 1.2		64	3.54	wsw.	10.3	2,450	9,850	
						2,250	771.0	1.0		54	3.55	wsw.	10.2	2,205	8,640	
1:52	971.7	− 4.9	98	s.	4.9	2,200	775.8	1.4	0.38	52	3.52	wsw.	10.2	2,156	8,400	
						2,000	795.0	2.2		50	3.58	wsw.	9.5	1,960	7,690	
						1,750	820.0	3.1		47	3.59	sw.	8.6	1,715	7,030	
						1,500	846.0	4.0		45	3.66	sw.	7.6	1,470	6,380	
2:03	971.6	− 4.5	98	s.	5.8	1,437	852.4	4.3	−2.15	44	3.66	sw.	7.4	1,409	6,210	
						1,250	872.6	0.3		48	3.00	sw.	7.5	1,225	5,570	
2:06	971.6	− 4.6	98	s.	5.8	1,177	880.4	− 1.3	−0.35	49	2.69	sw.	7.5	1,154	5,280	
						1,000	900.0	− 1.9		65	3.39	ssw.	11.2	980	4,580	
2:27	971.5	− 4.5	98	s.	5.8	747	929.2	− 2.8	−0.48	88	4.26	s.	16.5	732	2,800	
						500	958.0	− 4.0		95	4.15	s.	9.0	490	830	
2:33	971.4	− 4.5	98	s.	5.8	396	971.4	− 4.5		98	4.11	s.	5.8	388		Few Ci., wnw.

December 27, 1917, series (No. 6).

A. M.																
3:18	971.3	− 4.5	98	s.	6.3	396	971.3	− 4.5		98	4.11	s.	6.3	388		Few Ci., wnw.
						500	959.0	− 3.4		92	4.23	ssw.	8.3	490	860	
						750	929.0	− 0.8		77	4.40	sw.	13.2	735	2,940	
3:21	971.3	− 4.5	98	s.	6.3	757	928.1	− 0.7	−1.05	77	4.44	sw.	13.3	742	3,000	
						1,000	900.0	1.0		65	4.27	wsw.	11.5	980	3,860	
						1,250	872.8	2.8		53	3.96	wsw.	9.6	1,225	5,120	
4:48	971.3	− 5.7	100	s.	4.0	1,470	849.3	4.4	−0.71	42	3.52	w.	8.0	1,441	8,150	
						1,500	846.2	4.4		42	3.52	w.	8.2	1,470	8,250	1/10 Ci., wnw.
						1,750	820.4	4.7		40	3.42	w.	9.9	1,715	9,070	
4:50	971.3	− 5.7	100	s.	4.0	1,829	812.6	4.8	−0.11	40	3.44	w.	10.4	1,793	9,340	
						2,000	795.2	3.6		44	3.48	w.	10.4	1,960	9,900	4/10 Ci.St., wnw.
						2,250	771.1	1.8		50	3.48	w.	10.5	2,205	10,730	
						2,500	747.6	0.0		56	3.42	w.	10.5	2,450	11,550	
						2,750	724.8	− 1.8		62	3.26	w.	10.6	2,694	12,380	
						3,000	702.6	− 3.5		68	3.10	w.	10.6	2,939	13,200	
						3,250	680.8	− 5.3		73	2.85	w.	10.7	3,184		
5:05	971.3	− 6.1	100	s.	3.1	3,486	659.8	− 7.0	0.68	79	2.67	w.	10.7	3,415		
						3,250	680.6	− 5.4		77	2.99	w.	10.6	3,184		4/10 Ci.St., wnw.
						3,000	702.6	− 3.8		74	3.29	w.	10.5	2,939	13,160	4/10 Ci.Cu., nnw.
						2,750	724.8	− 2.1		72	3.69	w.	10.5	2,694	12,110	
						2,500	747.6	− 0.5		70	4.10	w.	10.4	2,450	10,900	
						2,250	771.1	1.1		67	4.44	w.	10.3	2,205	9,680	
5:39	971.5	− 6.2	100	sw.	4.0	2,212	774.5	1.4	0.59	67	4.53	w.	10.3	2,268	9,500	
						2,000	795.2	2.7		58	4.30	wsw.	10.5	1,960	8,200	
						1,750	820.4	4.1		48	3.93	wsw.	10.8	1,715	6,670	
5:57	971.6	− 6.2	100	sw.	3.6	1,570	838.5	5.2	−0.80	41	3.63	sw.	11.0	1,539	6,210	
						1,500	845.7	4.6		41	3.48	sw.	10.5	1,470	6,080	
						1,250	872.4	2.6		43	3.17	wsw.	8.6	1,225	5,600	
						1,000	900.0	0.6		44	2.81	w.	6.7	980	4,870	7/10 Ci.St., wnw.
6:10	971.7	− 6.3	100	w.	4.5	982	901.8	0.5	−4.19	44	2.79	w.	6.6	963	4,780	
6:16	971.8	− 6.3	100	w.	4.0	810	921.8	− 6.7	0.12	100	3.47	w.	9.4	794	4,000	6/10 Ci.St., wnw.; 3/10 A.St., nw
						750	929.0	− 6.6		100	3.50	w.	8.7	735	3,420	
						500	959.0	− 6.3		100	3.59	wnw.	5.7	490	1,000	
6:24	971.9	− 6.2	100	nw.	4.5	396	971.9	− 6.2		100	3.62	nw.	4.5	388		

December 27, 1917, series (No. 7).

A. M.																
7:37	973.8	− 7.4	89	nnw.	6.7	396	973.8	− 7.4		89	2.90	nnw.	6.7	388		6/10 Ci.St., w.; 2/10 A.Cu., wnw.
						500	961.1	− 8.2		90	2.74	nnw.	9.9	490	700	
7:39	973.9	− 7.4	89	nnw.	6.7	735	932.1	−10.0	0.77	93	2.42	nnw.	17.2	721	2,280	
						750	930.5	− 9.8		92	2.43	nnw.	17.0	735	2,380	
						1,000	901.2	− 7.1		78	2.61	nw.	13.0	980	4,410	
						1,250	873.5	− 4.3		65	2.77	w.	9.1	1,225	6,470	
8:15	975.1	−10.1	78	nw.	8.9	1,300	867.8	− 3.8	−1.10	62	2.75	w.	8.3	1,274		
						1,500	846.6	− 1.7		62	3.29	w.	9.7	1,470		
						1,750	820.4	0.8		63	4.08	w.	11.5	1,715		
8:19	975.2	−10.3	80	nw.	8.9	1,923	802.7	2.6	−1.03	63	4.64	w.	12.7	1,885		
						2,000	795.1	2.1		64	4.55	w.	12.7	1,960		
						2,250	770.9	0.6		66	4.21	w.	12.7	2,205		
						2,500	747.0	− 1.0		67	3.78	w.	12.7	2,450		
						2,750	724.4	− 2.6		69	3.55	w.	12.7	2,694		
						3,000	702.3	− 4.1		71	3.07	wnw.	12.8	2,939	17,100	
						3,250	680.0	− 5.7		73	2.76	wnw.	12.8	3,184	19,090	
						3,500	658.5	− 7.3		75	2.47	wnw.	12.8	3,429	21,080	
9:14	976.9	−11.1	82	nw.	7.6	3,615	649.2	− 8.0	0.63	76	2.36	wnw.	12.8	3,541	22,000	7/10 A.Cu., nw.
						3,750	638.2	− 8.6		78	2.29	wnw.	12.9	3,673	22,860	
						4,000	618.3	− 9.7		82	2.19	wnw.	13.2	3,918	24,450	
						4,250	598.6	−10.8		86	2.08	wnw.	13.5	4,162	26,040	
						4,500	579.8	−11.9		90	1.97	wnw.	13.8	4,407	27,630	
						4,750	561.6	−13.0		94	1.86	wnw.	14.0	4,651	29,220	
						5,000	543.5	−14.1		98	1.75	wnw.	14.3	4,896		6/10 A.Cu., wnw.
10:47	979.2	−11.2	67	nnw.	7.6	5,094	536.2	−14.5	0.46	100	1.73	wnw.	14.4	4,988		Altitude of A.Cu. base about 5,100 m.
						5,000	543.5	−14.1		99	1.77	wnw.	14.7	4,896		
						4,750	561.6	−12.5		98	2.03	wnw.	15.4	4,651	29,310	8/10 A. Cu., wnw.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 27, 1917, series (No. 7)—Continued.

Surface.						At different heights above sea.										
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	$\frac{\Delta t}{100\ m.}$	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
A. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
.....	.....	.....	.....	.....	.....	4,500	579.8	−11.7	.....	97	2.16	wnw.	16.1	4,407	27,900	
.....	.....	.....	.....	.....	.....	4,250	598.5	−10.5	.....	95	2.36	nw.	16.8	4,162	26,570	
.....	.....	.....	.....	.....	.....	4,000	617.7	− 9.3	.....	94	2.59	nw.	17.5	3,918	25,670	
.....	.....	.....	.....	.....	.....	3,750	637.7	− 8.1	.....	92	2.82	nw.	18.2	3,673	24,780	
11:41	980.1	−12.0	62	nnw.	8.9	3,728	639.9	− 8.0	0.49	92	2.85	nw.	18.3	3,652	24,700	5/10 A.Cu., wnw.
.....	.....	.....	.....	.....	.....	3,500	658.5	− 6.9	.....	89	3.03	nw.	18.2	3,429	21,910	
.....	.....	.....	.....	.....	.....	3,250	680.0	− 5.6	.....	86	3.28	nw.	18.2	3,184	18,860	
.....	.....	.....	.....	.....	.....	3,000	702.3	− 4.4	.....	83	3.50	nw.	18.1	2,939	15,870	
.....	.....	.....	.....	.....	.....	2,750	725.3	− 3.2	.....	80	3.74	nw.	18.0	2,694	13,790	
.....	.....	.....	.....	.....	.....	2,500	748.0	− 1.9	.....	78	4.07	nw.	18.0	2,450	11,720	
.....	.....	.....	.....	.....	.....	2,250	771.6	− 0.7	.....	75	4.32	nw.	17.9	2,205	9,650	
.....	.....	.....	.....	.....	.....	2,000	795.9	0.5	.....	72	4.56	nw.	17.8	1,960	6,850	
P. M.																
12:33	980.4	−13.0	64	nnw.	10.7	1,943	801.6	0.8	−1.20	71	4.59	nw.	17.8	1,904	6,140	
.....	.....	.....	.....	.....	.....	1,750	821.3	− 1.5	.....	88	4.74	nw.	15.4	1,715	3,730	
12:44	980.4	−12.4	60	nnw.	11.2	1,626	834.2	− 3.0	−2.97	99	4.70	nw.	13.9	1,594	2,180	
.....	.....	.....	.....	.....	.....	1,500	847.8	− 6.8	.....	99	3.41	nw.	13.7	1,470	1,440	
.....	.....	.....	.....	.....	.....	1,250	875.8	−14.2	.....	99	1.76	nw.	13.2	1,225	3,540	
12:52	980.4	−12.2	61	nnw.	9.4	1,162	886.1	−16.8	0.47	99	1.38	nw.	13.0	1,139	4,270	
.....	.....	.....	.....	.....	.....	1,000	905.0	−16.0	.....	92	1.38	nw.	11.9	980	5,630	
.....	.....	.....	.....	.....	.....	750	935.8	−14.9	.....	81	1.35	nnw.	10.3	735	2,530	
.....	.....	.....	.....	.....	.....	500	967.0	−13.7	.....	70	1.30	nnw.	8.7	490	0	
1:20	980.5	−13.2	66	nnw.	8.0	396	980.5	−13.2	.....	66	1.29	nnw.	8.0	388	.....	2/10 Ci.St., nw.

December 27, 1917, series (No. 8.).

P. M.																
1:57	980.8	−13.6	65	nnw.	9.4	396	980.8	−13.6	.....	65	1.22	nnw.	9.4	388	.....	2/10 Ci.St., nw.
.....	.....	.....	.....	.....	.....	500	968.5	−14.3	.....	68	1.20	nnw.	10.7	490	0	
.....	.....	.....	.....	.....	.....	750	936.8	−16.1	.....	76	1.13	nnw.	13.7	735	0	
.....	.....	.....	.....	.....	.....	1,000	905.8	−17.9	.....	83	1.05	nnw.	16.7	980	2,540	
2:14	981.1	−13.2	60	nnw.	10.3	1,135	889.5	−18.9	0.72	87	0.99	nnw.	18.3	1,113	4,000	
.....	.....	.....	.....	.....	.....	1,250	876.0	−16.4	.....	92	1.33	nnw.	16.5	1,225	4,600	
2:31	981.5	−13.5	62	nnw.	10.7	1,463	851.9	−11.7	−2.20	100	2.23	nnw.	13.1	1,434	5,700	
.....	.....	.....	.....	.....	.....	1,500	847.7	−10.8	.....	100	2.42	nnw.	13.5	1,470	5,920	
.....	.....	.....	.....	.....	.....	1,750	821.0	− 4.5	.....	100	4.19	nw.	16.3	1,715	7,420	
2:39	981.6	−13.9	63	nnw.	10.3	1,829	812.9	− 2.5	−2.51	100	4.96	nw.	17.2	1,793	7,890	
.....	.....	.....	.....	.....	.....	2,000	795.1	− 3.1	.....	98	4.62	nw.	17.5	1,960	8,910	
.....	.....	.....	.....	.....	.....	2,250	752.8	− 4.0	.....	96	4.20	nw.	17.9	2,205	10,410	
.....	.....	.....	.....	.....	.....	2,500	747.0	− 4.9	.....	93	3.77	wnw.	18.4	2,450	13,370	
3:05	982.2	−14.8	62	nnw.	8.5	2,747	723.8	− 5.8	0.36	91	3.41	wnw.	18.8	2,691	16,500	
.....	.....	.....	.....	.....	.....	3,000	701.0	− 7.1	.....	87	2.91	wnw.	18.1	2,939	18,840	
.....	.....	.....	.....	.....	.....	3,250	679.0	− 8.3	.....	84	2.54	nw.	17.5	3,184	21,160	
.....	.....	.....	.....	.....	.....	3,500	657.4	− 9.6	.....	81	2.18	nw.	16.8	3,429	23,480	
3:31	982.6	−15.5	65	nnw.	10.3	3,610	648.0	−10.1	0.47	79	2.03	nw.	16.5	3,536	24,500	
.....	.....	.....	.....	.....	.....	3,500	657.4	− 9.6	.....	79	2.13	nw.	16.4	3,429	23,690	
.....	.....	.....	.....	.....	.....	3,250	679.0	− 8.5	.....	80	2.37	nw.	16.1	3,184	21,840	
.....	.....	.....	.....	.....	.....	3,000	701.0	− 7.4	.....	81	2.64	nw.	15.9	2,939	20,000	
.....	.....	.....	.....	.....	.....	2,750	723.8	− 6.3	.....	81	2.91	nw.	15.7	2,694	18,220	
.....	.....	.....	.....	.....	.....	2,500	747.0	− 5.2	.....	82	3.23	nnw.	15.4	2,450	16,710	
.....	.....	.....	.....	.....	.....	2,250	753.3	− 4.1	.....	83	3.59	nnw.	15.2	2,205	15,000	
.....	.....	.....	.....	.....	.....	2,000	796.3	− 3.0	.....	83	3.94	nnw.	14.9	1,960	11,850	
4:24	983.5	−16.6	68	nnw.	8.9	1,774	819.9	− 2.0	−3.07	84	4.34	nnw.	14.7	1,739	9,000	Few Ci., nw.; 1/10 A.St., nw.
.....	.....	.....	.....	.....	.....	1,750	822.4	− 2.7	.....	84	4.10	nnw.	14.7	1,715	8,700	
4:28	983.6	−16.6	68	nnw.	8.5	1,536	844.7	− 9.3	−2.55	80	2.21	nnw.	14.8	1,505	6,000	
.....	.....	.....	.....	.....	.....	1,500	849.0	−10.2	.....	80	2.04	nnw.	14.8	1,470	5,770	
.....	.....	.....	.....	.....	.....	1,250	877.5	−16.6	.....	82	1.16	n.	18.1	1,225	4,150	
4:48	983.9	−17.2	73	n.	8.9	1,074	898.1	−21.1	0.52	83	0.76	n.	20.1	1,053	2,880	
.....	.....	.....	.....	.....	.....	1,000	907.4	−20.7	.....	82	0.79	n.	18.8	980	2,240	
.....	.....	.....	.....	.....	.....	750	939.0	−19.4	.....	80	0.87	n.	14.6	735	100	
.....	.....	.....	.....	.....	.....	500	971.0	−18.1	.....	78	0.96	nnw.	10.3	490	0	
5:04	984.2	−17.6	77	nnw.	8.5	396	984.2	−17.6	.....	77	0.99	nnw.	8.5	388	.....	3/10 Ci., nw.

December 28, 1917.

A. M.																
8:45	990.8	−22.4	100	n.	5.8	396	990.8	−22.4	.....	100	0.81	n.	5.8	388	.....	10/10 Ci.St., wnw.
.....	.....	.....	.....	.....	.....	500	977.0	−23.3	.....	100	0.74	n.	7.0	490	300	
.....	.....	.....	.....	.....	.....	750	944.3	−25.4	.....	100	0.60	nne.	9.9	735	1,010	
9:03	991.0	−22.3	100	n.	5.4	911	923.2	−26.7	0.83	100	0.53	nne.	11.8	893	7,000	
.....	.....	.....	.....	.....	.....	1,000	912.0	−24.0	.....	98	0.68	ne.	11.1	980	.....	
9:08	991.0	−22.1	100	n.	7.2	1,067	903.7	−21.9	−3.08	96	0.82	ne.	10.6	1,046	.....	
9:12	991.1	−22.2	96	n.	5.8	1,118	897.6	−21.4	−0.46	93	0.84	ne.	8.8	1,096	.....	
.....	.....	.....	.....	.....	.....	1,000	912.0	−21.3	.....	89	0.81	nne.	8.3	980	.....	2/10 Ci.St., wnw.
.....	.....	.....	.....	.....	.....	750	944.3	−21.2	.....	81	0.74	nne.	7.3	735	7,060	8/10 St.Cu., nnw.
.....	.....	.....	.....	.....	.....	500	978.2	−21.1	.....	72	0.66	n.	6.2	490	3,210	
11:53	992.2	−21.0	69	n.	5.8	396	992.2	−21.0	.....	69	0.64	n.	5.8	388	.....	10/10 A.St., wsw.

December 29, 1917.

P. M.																
4:25	991.2	−17.0	67	s.	2.7	396	991.2	−17.0	.....	67	0.92	s.	2.7	388	.....	1/10 Ci., w.
.....	.....	.....	.....	.....	.....	500	977.2	−17.8	.....	71	0.90	s.	4.7	490	.....	
.....	.....	.....	.....	.....	.....	750	944.5	−19.6	.....	79	0.85	ssw.	9.4	735	.....	
4:57	990.6	−18.3	75	se.	2.2	779	941.0	−19.8	0.73	80	0.84	ssw.	10.0	764	.....	
.....	.....	.....	.....	.....	.....	1,000	912.8	−19.1	.....	77	0.86	ssw.	10.1	980	(*)	

* More than 10,000 volts.

TABLE 9.—*Free-air data from kite flights at Drexel Aerological Station, December, 1917*—Continued.

December 29, 1917—Continued.

Surface.						At different heights above sea.											
Time.	Pressure.	Temperature.	Relative humidity.	Wind. Dir.	Wind. Vel.	Altitude.	Pressure.	Temperature.	Δt / 100 m.	Humidity. Rel.	Humidity. Vap. pres.	Wind. Dir.	Wind. Vel.	Potential. Gravity.	Potential. Electric.	Remarks.
P. M.	*mb.*	°*C.*	%		*m. p. s.*	*m.*	*mb.*	°*C.*		%	*mb.*		*m. p. s.*	*10⁵ ergs.*	*volts.*	
						1,250	882.4	−18.3		74	0.90	ssw.	10.2	1,225	(*)	3/10 Ci., w.; few A.St., w.
						1,500	853.4	−17.5		71	0.92	sw.	10.3	1,470	(*)	
						1,750	825.7	−16.8		68	0.95	sw.	10.4	1,715	(*)	
5:30	990.1	−19.0	87	se.	2.7	1,862	813.3	−16.4	−0.31	67	0.97	sw.	10.4	1,825	(*)	
						2,000	798.5	−14.6		59	1.01	sw.	9.6	1,960	(*)	
						2,250	772.2	−11.4		39	0.89	ssw.	7.6	2,205	(*)	
6:30	989.0	−19.2	87	se.	8.0	2,394	757.7	− 9.6	−1.28	37	1.00	ssw.	7.0	2,316	(*)	
						2,500	747.0	− 9.3		35	0.97	ssw.	7.5	2,450	(*)	
						2,750	723.3	− 8.5		31	0.92	ssw.	8.6	2,694	(*)	
6:44	988.8	−18.8	87	sse.	8.0	2,926	707.2	− 7.9	−0.32	28	0.87	ssw.	9.4	2,867	(*)	1/10 A.St., nw.
						3,000	700.6	− 8.1		28	0.86	ssw.	10.0	2,939	(*)	
						3,250	678.7	− 8.6		30	0.88	sw.	12.2	3,184	(*)	
						3,500	657.2	− 9.2		31	0.86	sw.	14.4	3,429	(*)	
6:57	988.6	−18.9	87	sse.	8.0	3,747	636.4	− 9.8	0.25	32	0.84	wsw.	16.6	3,670	(*)	
						3,500	657.2	− 9.1		31	0.87	wsw.	15.1	3,429	(*)	
						3,250	678.7	− 8.5		29	0.86	sw.	13.7	3,184	(*)	Lunar halo, 22° radius, from 6:53 to 6:56 p. m.
						3,000	700.6	− 7.8		28	0.88	sw.	12.2	2,939	(*)	
						2,750	723.3	− 7.1		27	0.90	ssw.	10.7	2,694	(*)	
7:20	988.0	−18.2	76	sse.	4.9	2,560	741.5	− 6.6	−1.19	26	0.91	ssw.	9.6	2,508	(*)	
						2,500	747.0	− 7.3		28	0.92	ssw.	10.0	2,450	(*)	7/10 Ci.St., w.
						2,250	771.4	−10.3		34	0.86	ssw.	11.5	2,205	(*)	
						2,000	796.9	−13.3		40	0.77	ssw.	13.1	1,960	(*)	
						1,750	823.5	−16.2		47	0.70	ssw.	14.6	1,715	(*)	
7:34	987.6	−17.4	77	se.	5.4	1,670	832.7	−17.2	−0.25	49	0.66	ssw.	15.1	1,637	(*)	
						1,500	851.0	−17.6		48	0.62	ssw.	14.4	1,470	(*)	
						1,250	880.0	−18.2		46	0.56	ssw.	13.3	1,225	.....	
						1,000	910.1	−18.9		45	0.51	ssw.	12.3	980	6,910	
7:54	987.1	−17.0	74	se.	5.8	902	922.4	−19.1	0.49	44	0.49	ssw.	11.9	881	5,400	
						750	941.5	−18.3		51	0.62	s.	11.4	735	2,850	
						500	973.0	−17.1		63	0.85	sse.	10.6	490	220	
8:10	986.9	−16.6	68	se.	10.3	396	986.9	−16.6		68	0.97	se.	10.3	388	.....	10/10 A.St., w.

December 30, 1917.

A. M.																	
8:02	970.9	−10.6	72	ssw.	13.4	396	970.9	−10.6		72	1.77	ssw.	13.4	388	.....	10/10 A.Cu., nw.
						500	957.5	−11.4		73	1.67	ssw.	17.1	490	1,860	
						750	927.0	−13.4		76	1.45	sw.	26.0	735	6,320	
8:14	971.1	−10.4	73	ssw.	12.5	964	901.5	−15.1	0.79	79	1.29	wsw.	33.6	945	.....	
						1,000	897.6	−13.1		79	1.55	wsw.	33.6	980	.....	
						1,250	869.6	0.6		76	4.85	w.	33.4	1,225	.....	
8:18	971.1	−10.4	72	ssw.	9.4	1,377	855.7	7.6	−5.50	75	7.83	wnw.	33.4	1,350	.....	
						1,500	842.9	7.2		75	7.62	wnw.	33.3	1,470	(*)	
						1,750	818.1	6.5		75	7.26	wnw.	33.2	1,715	(*)	
8:35	971.3	−10.2	73	sw.	12.5	1,988	794.4	5.8	0.29	75	6.92	wnw.	33.0	1,948	(*)	
						2,000	793.0	5.7		75	6.87	wnw.	33.0	1,960	(*)	
						2,250	769.3	3.9		77	6.22	wnw.	32.9	2,205	(*)	
						2,500	746.2	2.0		79	5.58	wnw.	32.7	2,450	(*)	
						2,750	723.8	0.2		81	5.02	wnw.	32.4	2,694	(*)	
9:12	971.4	− 9.3	72	sw.	11.2	2,911	709.1	− 1.0	0.72	82	4.61	wnw.	32.5	2,852	(*)	9/10 A.Cu., nw.
						2,750	723.8	0.1		81	4.98	wnw.	31.3	2,694	(*)	
						2,500	746.2	1.9		79	5.54	wnw.	29.3	2,450	(*)	
						2,250	769.3	3.7		77	6.13	wnw.	27.4	2,205	(*)	
						2,000	793.0	5.4		75	6.73	wnw.	25.5	1,960	(*)	
10:09	970.6	− 9.0	70	sw.	12.5	1,919	801.2	6.0	0.17	74	6.92	wnw.	24.9	1,881	(*)	
						1,750	817.3	6.3		69	6.59	wnw.	23.6	1,715	(*)	3/10 Ci., nw.; 7/10 A.Cu., nw.
						1,500	843.9	6.7		60	5.89	w.	21.6	1,470	(*)	
10:34	970.6	− 8.2	65	sw.	12.1	1,393	854.5	6.9	−3.73	57	5.67	w.	20.8	1,366	.....	
						1,250	870.1	1.6		63	4.32	wsw.	19.7	1,225	.....	
						1,000	897.6	− 7.8		73	2.30	sw.	17.8	980	.....	
10:47	970.6	− 8.4	64	sw.	11.6	870	912.6	−12.6	0.89	78	1.60	sw.	16.8	853	6,800	
						750	927.0	−11.5		74	1.68	sw.	15.8	735	5,080	
						500	957.5	− 9.3		67	1.85	sw.	13.8	490	1,490	
10:55	970.6	− 8.4	64	sw.	13.0	396	970.6	− 8.4		64	1.91	sw.	13.0	388	.....	4/10 A.St., nw.; 6/10 A.Cu., nw.

December 31, 1917.

A. M.																	
10:17	981.9	−11.8	92	nne.	3.1	396	981.9	−11.8		92	2.03	nne.	3.1	388	.....	10/10 St.Cu., nnw.
						500	968.0	−13.0		95	1.88	n.	7.1	490	.....	Altitude of St.Cu. base about 800 m.
10:33	982.0	−11.8	85	ne.	3.6	644	950.5	−14.7	1.17	100	1.70	nnw.	12.6	631	.....	
						750	937.5	−11.8		95	2.10	nnw.	13.2	735	.....	
						1,000	907.8	− 5.0		84	3.37	nw.	14.7	980	.....	
10:40	982.0	−11.7	84	ne.	3.6	1,090	897.5	− 2.6	−2.71	80	3.94	nw.	15.2	1,069	.....	
						1,250	879.5	− 1.6		77	4.12	nw.	15.8	1,225	10,140	
						1,500	852.6	0.0		72	4.40	nw.	16.6	1,470	10,400	
10:52	982.1	−11.6	85	ne.	3.6	1,549	847.5	0.3	−0.63	71	4.43	nw.	16.8	1,518	10,450	
						1,750	826.5	− 1.3		74	4.06	nw.	16.9	1,715	.....	
						2,000	800.8	− 3.2		78	3.65	nw.	17.1	1,960	.....	
						2,250	775.7	− 5.2		82	3.23	nw.	17.2	2,205	(†)	
11:32	981.4	−10.4	79	ne.	3.6	2,308	769.6	− 5.7	0.79	83	3,14	nw.	17.2	2,262	(†)	
						2,500	751.0	− 6.2		72	2.61	nw.	17.4	2,450	(†)	
						2,750	727.6	− 6.8		67	2.30	nw.	17.5	2,694	(†)	
						3,000	704.8	− 7.3		43	1.41	nnw.	17.7	2,939	(†)	
11:54	980.9	−10.5	83	nnw.	.....	3,231	684.0	− 7.9	0.33	30	0.94	nnw.	17.8	3,165	(†)	
						3,000	704.8	− 6.9		43	1.47	nnw.	17.9	2,939	(†)	
						2,750	727.6	− 5.9		58	2.15	nnw.	18.7	2,694	(†)	
						2,500	751.0	− 4.8		72	2.94	nnw.	19.2	2,450	(†)	
						2,250	775.7	− 3.7		86	3.85	nnw.	19.6	2,205	(†)	

* More than 10,000 volts.

† More than 10,500 volts.

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CORRIGENDA.

Supplement No. 3 (Aerology No. 1)—

Page 47: In record of November 23, 1915, the altitude in second line from bottom should be 500 instead of 550.

Supplement No. 5 (Aerology No. 2)—

Page 28: Time of last entry should be 12:32 instead of 2:32.

Supplement No. 7 (Aerology No. 3)—

Page 49: Time for June 28, 1916, series (No. 3) should be p. m. instead of a. m.

Supplement No. 8 (Aerology No. 4)—

Page 6: Table 3, in last column, opposite 2,000 meters, value should be −4.3 instead of −5.3.

Page 34: In record of August 18–19, 1916, series (No. 5), time of last entry should be 3:16 instead of 8:16.

Page 47: In record of September 19, 1916, series (No. 1) make wind direction during descent at 2,000 and 1,750 meters wsw. instead of w., and at 1,500 meters sw. instead of w.

Page 76: In first record the number of the series should be 8 instead of 9, and the time should be p. m. instead of a. m.