

LOCATION OF OFFICE DECEMBER 31, 1903.

Street, 10th and Bank.Number, Times BldgRoom, 22, 23, 24, 25

SUM OF BAROMETER CORRECTIONS.

From 8 a. m. Jan 1 to 8 p. m. Dec 31 inc., -.010 in.

From _____ m. _____ to _____ m. _____ inc., _____ in.

From _____ m. _____ to _____ m. _____ inc., _____ in.

REMARKS.

U. S. Department of Agriculture,

WEATHER BUREAU.

ANNUAL METEOROLOGICAL SUMMARY

FOR

1903.

STATION:

Richmond Va

INSTRUCTIONS.

1. This form will be made out in duplicate at the end of the year, on the current edition.
2. Seventy-fifth meridian time must be used throughout this report.
3. If the elevation of the anemometer, thermometer, or rain gage has been changed, that on December 31 must be given. The dates and changes in elevation must be carefully recorded on the margin.
4. The sum of corrections, and all changes in the same, must be carefully noted under "Sum of Barometer Corrections," page 1, with the authority for the new correction; also the date and observation upon which it was first used.
5. When one or more observations are taken late, state the fact on the margin of page 2 in this way: One (or more) 8 a. m. (or 8 p. m.) observations taken late. Connect the note to the name of the month by a reference mark. When one or more observations are missed connect all data for less than a full month with a footnote, stating the length of time of the record.

8. The data to be entered in the columns headed "Possible" will be taken from the summary headed on Form 1070. The "Percentage" from the monthly percentage of "Total," with a sunshine recorder will leave these columns blank.

9. The prevailing wind direction for the year (the column headed "Prevailing Direction") will be the sum of "Number of times observed blowing from each direction," except at stations preparing page 10 for the whole year. When Form 1021 is prepared the wind direction will be determined from the directions in the column headed "Prevailing Direction;" and when the wind direction will be determined from the sums of the "Number of times observed blowing from each direction."

10. The mean hourly pressure (recorded in the column headed "Pressure," temperature, and wind velocity will be taken at the foot of Forms 1026 and 1022, respectively, and entered in columns headed "For the month," "For the year," "For the month," "For the year," "For the month," "For the year." The base number will be entered once only in the column headed "For the month," for it on page 5. The data for entry on page 5 will be the sums as recorded at the foot of page 10. The percentage for the year will be obtained by dividing the sum of the total number of miles and hours for the year by 100. Stations not preparing page 5, Form 1021, should enter the data on this page blank. Data for less than a month will not be recorded, and in case the data for a month are missing, the sums and means for the year will be obtained by dividing the sums in the columns by 12, and each mean will be rounded to the number of decimal places as the data from which it is recorded.

11. A copy of this form will be for the use of the Chief of Bureau not later than the last day of the year for which it is the record. It will be filed in the "Records."

WILLIAMS

ANNUAL METEOROLOGICAL SUMMARY FOR 1903.—STATION

Richmond Va.

Latitude N. *37° 32'*, Longitude W. *77° 27'*, Local time *0 h. 10 min. (t) slower* than 75th meridian time.

MONTHS.	STATION PRESSURE. (Corrected for temperature, instrumental error, gravity, and removal.)							TEMPERATURE.															
	STATION ELEVATION OF BAROMETER CISTERN ABOVE MEAN SEA-LEVEL, <i>144</i> FEET.							ELEVATION OF DRY THERMOMETER BULB ABOVE GROUND ON DEC. 31, <i>82</i> FEET.											No. OF DAYS.				
	MEAN.			Highest observed. (c.)	Date.	Lowest observed. (c.)	Date.	Absolute range. (c.)	MEAN.		FROM SELF-REGISTERING INSTRUMENTS.							Max. below 32°	Max. above 90°	Min. below 32°			
	8 a. m. (c)	8 p. m. (c)	<i>X</i> Corrected monthly. (c)						8 a. m. (d.)	8 p. m. (d.)	MEAN.			High-est. (e.)	Date.	Low-est. (e.)	Date.				RANGE.		Mean daily change. (d.)
In.	In.	In.	In.	In.	In.	In.	Max. (d.)	Min. (d.)	Month-ly. (d.)	Abso-lute. (e.)	Mean daily. (d.)	Abso-lute. (e.)	Mean daily. (d.)										
Jan.,	29.906		29.884	30.382	19"	29.362	8"	1.020	33.6		46.5	29.9	38.2	64	28"	17	13"	47	16.5	5.4	2	0	18
Feb.,	29.995		29.972	30.508	19"	29.332	16"	1.176	37.7		52.2	33.8	43.0	72	28"	11	19"	61	18.4	6.0	1	0	10
Mar.,	30.084		30.052	30.403	3"	29.536	30"	0.867	48.3		63.5	45.2	54.4	76	20"	31	2"	45	18.2	6.3	0	0	1
April,	29.802		29.770	30.306	6"	29.295	15"	1.011	52.5		67.3	48.4	57.8	88	30"	31	5"	57	18.8	5.3	0	0	1
May,	30.011		29.979	30.289	2"	29.820	22"	0.469	62.5		78.2	57.3	67.8	92	21"	43	2"	49	20.9	3.9	0	3	0
June,	29.810		29.782	30.143	3"	29.537	21"	0.586	66.4		78.9	61.5	70.2	90	30"	52	13"	38	17.4	2.6	0	1	0
July,	29.861		29.836	30.028	25"	29.615	18"	0.413	75.9		89.0	69.6	79.3	97	3"	62	15"	35	19.4	2.8	0	13	0
Aug.,	29.866		29.842	30.236	2"	29.625	20"	0.611	72.5		83.9	67.6	75.8	98	25"	63	1"	35	16.3	3.1	0	7	0
Sept.,	30.023		29.999	30.301	30"	29.630	24"	0.671	65.0		79.0	59.9	69.4	88	11"	47	25"	41	19.1	3.5	0	0	0
Oct.,	29.947		29.923	30.275	27"	29.535	9"	0.740	54.5		68.7	49.1	58.9	83	6"	35	27"	48	19.6	4.6	0	0	0
Nov.,	30.002		29.978	30.545	20"	29.545	29"	1.000	40.6		54.8	34.9	44.8	75	4"	20	27"	35	19.9	4.3	0	0	14
Dec.,	29.969		29.946	30.420	19"	29.503	20"	0.917	31.8		44.5	28.0	36.2	56	13"	16	27"	40	16.5	4.6	0	0	22
Sum,	359.276		358.963	Highest.	Date.	Lowest.	Date.	9.481	641.3		80.65	585.2	695.8	Max.	Date.	Min.	Date.	537	221.0	52.4	3	24	66
Mean,	29.940		29.914	30.545	20"	29.295	15"	0.790	53.4		67.2	48.8	58.0	98	25"	11	19"	46	18.4	4.4	a.	a.	a.

a.—Omit data from this space. c.—To thousandths. d.—To tenths. e.—To whole numbers. t.—Enter the word "faster," or "slower," as the case may be.

X. Corrected to mean 24 hours.

MONTHS.	TEMPERATURE.								DEW-POINT.			RELATIVE HUMIDITY (Percentage).			VAPOR PRESSURE.			PRECIPITATION. (Amount in inches and hundredths). ELEVATION OF TOP OF GAUGE ABOVE GROUND DEC. 31, <u>76</u> FEET.									SNOWFALL (total depth).				
	No. OF DAYS.																														
	MEAN.								MEAN.			MEAN.			TOTAL AMOUNT.	GREATEST AMOUNT IN ANY 24 CONSECUTIVE HOURS.		EXCESSIVE.													
	BELOW—		ABOVE—						8 a. m.	8 p. m.	Month-ly.	8 a. m.	8 p. m.	Month-ly.		8 a. m.	8 p. m.	Month-ly.	Am't.	Date.	2.50 inches in 24 hours. (g.)		1 inch per hour. (g.)								
	14°	32°	41°	50°	59°	68°	77°	90°	(e.)	(e.)	(e.)	(e.)	(e.)	(e.)		(e.)	(e.)	(e.)	In.	In.	In.	In.	In.	In.	In.	In.		In.	In.	In.	In.
Jan.,	0	5	11	2	0	0	0	0	28			80					167				3.61	1.67	2"	None			None			0.9	
Feb.,	0	4	15	5	1	0	0	0	32			80					202				5.02	2.37	16"	None			None			0.2	
Mar.,	0	0	30	21	7	0	0	0	44			86					304				8.14	3.59	21" 22"	359	23.23	22"	133	0.36	21"	0	
April,	0	0	29	27	10	4	0	0	45			77					310				4.46	1.34	13" 14"	None			None			0	
May,	0	0	31	31	29	14	3	0	55			78					452				3.36	2.03	30" 31"	None			1.00	0.36	30"	0	
June,	0	0	30	30	30	21	1	0	60			80					523				5.73	2.41	10" 11"	None			None			0	
July,	0	0	31	31	31	31	24	0	68			77					690				5.17	2.16	12" 13"	None			1.24	0.45	4"	0	
Aug.,	0	0	31	31	31	29	12	0	67			83					663				3.21	1.01	30"	None			None			0	
Sept.,	0	0	30	30	28	17	4	0	59			80					515				1.60	0.84	17"	None			None			0	
Oct.,	0	0	31	27	15	4	0	0	47			77					349				3.44	1.39	8"	None			None			0	
Nov.,	0	5	19	10	4	0	0	0	33			74					207				1.40	0.97	17"	None			None			0.4	
Dec.,	0	7	7	0	0	0	0	0	25			74					139				2.28	1.21	19" 20"	None			None			0.9	
Sum,	0	21	295	245	186	120	44	0	563			946					4521				47.42	a.	a.	a.	a.	a.	a.	a.	a.	a.	2.4
Mean,	a.	a.	a.	a.	a.	a.	a.	a.	47			79					377				a.	3.59	21" 22"	a.	a.	a.	a.	a.	a.	a.	a.

g.—No entry unless the precipitation actually equaled or exceeded 2.50 inches in 24 consecutive hours, or 1 inch per hour, as the case may be.

MONTHS.	MEAN CLOUDINESS. (0 to 10.)		HOURS OF SUNSHINE.			WIND. ELEVATION OF ANEMOMETER CUPS ABOVE GROUND DEC. 31, <u>90</u> FEET.											NUMBER OF DAYS.														
	8a.m.	8p.m.	Monthly. (<i>h.</i>)	TOTAL.	POSSIBLE.	PERCENTAGE.	TOTAL MOVEMENT IN MILES.	PRE-VALUING DIRECTION.	MAXIMUM HOURLY VELOCITY DURING MONTH.			NO. OF DAYS WITH GALES.	DIRECTION.								No. of Gales.	CLEAR.	PARTLY CLOUDY.	CLOUDY.	PRECIPITATION.				FOG.	THUNDERSTORMS.	AURORAS.
	(<i>d.</i>)	(<i>d.</i>)							Miles.	From.	Date.		(<i>h.</i>)	NUMBER OF TIMES OBSERVED BLOWING FROM THE—											.01 inch and over.	.04 inch and over.	SNOW.	HAIL.			
												N.	NE.	E.	SE.	S.	SW.	W.	NW.												
Jan.,	5.6	5.8	98.2	170.8	57	4531	W	25	W	30"	0	5	6	4	6	7	12	12	10	0	8	12	11	11	10	4	0	5	0	0	0
Feb.,	5.9	5.4	182.8	302.3	60	4473	SW	33	SW	28"	0	11	2	3	4	10	14	8	4	0	11	3	14	8	7	1	0	0	0	0	0
Mar.,	6.5	6.2	175.1	371.4	47	3962	NE	28	S	23"	0	6	14	7	9	11	6	2	7	0	10	6	15	10	7	0	1	3	3	0	0
April,	5.8	5.6	220.1	396.2	56	4931	N	33	S	3"	0	12	6	3	5	10	8	4	11	1	9	7	14	13	11	0	0	0	2	0	0
May,	6.1	5.0	297.5	441.7	67	3991	NE	25	NW	22"	0	9	13	8	10	10	9	1	1	1	12	9	10	10	7	0	1	0	6	0	0
June,	6.1	6.5	216.4	443.1	49	3648	SE	20	SW	14"	0	7	8	7	12	7	6	8	5	0	6	9	15	19	16	0	0	0	8	0	0
July,	4.8	4.3	349.5	450.1	78	3902	SW	30	SW	12"	0	13	3	2	5	10	21	6	2	0	14	12	5	8	8	0	0	0	7	0	0
Aug.,	6.5	5.7	216.8	422.1	51	3301	N	18	SW	30"	0	19	7	3	13	3	8	8	1	0	7	15	9	13	10	0	0	0	8	0	0
Sept.,	3.3	4.3	163.2	378.0	71	3419	N	20	S	17"	0	24	5	2	10	9	5	2	3	0	12	12	6	7	6	0	0	1	2	0	0
Oct.,	5.1	5.5	192.5	347.3	55	4414	NW	30	N	9"	0	9	4	0	3	11	13	6	16	0	11	8	12	11	8	0	0	1	0	0	0
Nov.,	4.9	5.3	175.5	304.0	58	3404	N	28	SW	16"	0	18	4	1	3	9	5	6	11	3	7	13	10	6	5	1	0	1	1	0	0
Dec.,	4.1	4.5	169.1	296.7	57	4345	S	26	SW	20"	0	13	2	2	2	14	12	4	12	1	13	9	9	5	4	1	0	0	0	0	0
Sum,	64.7	64.1	2556.7	4318.8	706	48341	a.	a.	a.	a.	0	146	74	42	82	111	119	67	83	6	120	115	130	121	99	7	2	11	37	0	0
Mean,	5.4	5.3	213.1	359.9	59	a.	N	33	S	3"	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.	a.

4 records for 17 days.

A - Days with 40 miles per hour.

CORRECTED MEAN MONTHLY REDUCED PRESSURES
AND MEAN MONTHLY REDUCED TEMPERATURES.

MONTHS.	SEA LEVEL.		3,500-FOOT.		10,000-FOOT.	
	Pressure.	Tem- pera- ture.	Pressure.	Tem- pera- ture.	Pressure.	Tem- pera- ture.
	(a) In.	(d) °	(a) In.	(d) °	(a) In.	(d) °
Jan.,	30.05	38.5	26.30	30.9	20.44	16.8
Feb.,	30.13	43.3	26.42	31.1	20.59	15.4
Mar.,	30.21	54.7	26.57	45.5	20.83	28.5
April,	29.92	58.1	26.34	46.7	20.70	28.8
May,	30.13	68.2	26.60	55.8	21.00	38.6
June,	29.93	70.6	26.43	60.5	20.89	46.1
July,	29.98	79.7	26.55	68.7	21.08	54.0
Aug.,	29.99	76.2	26.52	66.2	21.02	57.8
Sept.,	30.15	69.8	26.62	61.6	21.03	47.5
Oct.,	30.08	59.3	26.49	49.1	20.82	33.3
Nov.,	30.14	45.1	26.44	35.4	20.63	20.9
Dec.,	30.11	36.5	26.35	26.4	20.46	11.3
Sum,	360.82	700.0	317.6 ³	577.9 ⁴	249.49	393.0
Mean,	30.07	58.3	26.47	48.2 ¹	20.79	32.8