

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

October 2004

Station: Westford
 Latitude: 44° 37' 39" N Longitude: 73° 02' 29" W Elevation (Ground): 850 feet Time Zone: Eastern

Date	Temperature					Humidity	Deq. F		Precip Ty	Snow Cvr	Precip		Pressure			Wind						Sun				
	Maximum	Minimum	Average	Mean	Dew Point		Mean	Heating Base			Cooling Base	Adj. to Sea Level		Water Equivalent	Ice Pellets Snow	Maximum	Minimum	Mean	Avg	Res	Res		Peak		Minute	
												1	2										3	4	5	6	7	8	9	10
	1	2	3	4A	4B		5	6			7	8	9	10	11	12	13	14	15	16	17		18	19	20	21	22	23
1	56.2	55.4	55.8	55.6	50	81	10	0	.....	0	0.00	0.0	30.14	30.14	30.142	0.0	0.0	0	0	S	0	0			
2	63.9	44.5	54.2	56.3	51	82	11	0	.....	0	0.25	0.0	30.14	29.88	30.024	4.9	4.0	187	31	S	0	0			
3	59.8	38.6	49.2	47.1	40	79	16	0	.....	0	0.00	0.0	30.21	30.01	30.128	0.7	0.4	235	12	SSW	0	0			
4	64.2	40.5	52.3	49.5	42	76	13	0	.....	0	0.05	0.0	30.13	29.80	29.939	4.5	3.4	199	30	S	0	0			
5	47.9	29.8	38.9	38.0	31	77	27	0	.....	0	0.00	0.0	30.33	30.13	30.261	1.1	0.9	313	14	WNW	0	0			
6	57.8	30.3	44.0	45.4	37	72	21	0	.....	0	0.00	0.0	30.30	30.17	30.244	4.0	3.9	191	19	S	0	0			
7	70.1	45.5	57.8	55.6	46	72	8	0	.....	0	0.00	0.0	30.32	30.23	30.270	2.9	2.8	196	14	S	0	0			
8	75.3*	53.2	64.3*	62.1	53	73	1	0	.....	0	0.00	0.0	30.30	30.06	30.206	3.2	2.1	199	17	S	1	3			
9	66.8	55.0	60.9	61.5	52	71	5	0	.....	0	0.03	0.0	30.05	29.81	29.922	6.8	5.4	60	29	ENE	0	0			
10	55.0	44.6	49.8	49.3	42	77	16	0	.....	0	0.01	0.0	30.05	29.91	29.981	2.7	2.5	126	19	ESE	0	0			
11	50.2	42.2	46.2	44.9	40	84	19	0	.....	0	0.01	0.0	30.10	29.97	30.056	1.1	0.4	127	13	N	0	73			
12	54.1	38.0	46.0	44.4	39	82	19	0	.....	0	0.01	0.0	29.96	29.67	29.783	1.8	0.9	155	19	SSE	0	0			
13	63.4	34.0	48.7	45.3	36	74	17	0	.....	0	0.01	0.0	29.71	29.64	29.675	0.4	0.3	273	10	W	0	0			
14	69.4	34.9	52.2	50.2	38	66	13	0	.....	0	0.02	0.0	29.64	29.55	29.599	0.8	0.5	172	13	S	0	190			
15	59.6	47.6	53.6	52.8	49	89	12	0	.....	0	0.04	0.0	29.61	29.29	29.497	1.4	1.1	151	14	SE	0	0			
16	55.0	42.2	48.6	49.3	47	91	17	0	.....	0	0.55	0.0	29.43	29.18	29.309	3.4	2.6	195	21	WSW	0	0			
17	45.4	40.3	42.9	42.9	38	84	23	0	.....	0	0.03	0.0	29.70	29.43	29.554	5.2	5.1	193	27	S	4	178			
18	47.1	30.0	38.5	39.8	33	77	27	0	.....	0	0.02	0.0	30.17	29.70	29.974	3.3	2.9	263	19	W	0	0			
19	51.3	28.8	40.0	37.8	32	81	25	0	.....	0	0.00	0.0	30.22	30.16	30.190	0.6	0.5	28	12	N	0	0			
20	55.1	28.4	41.7	39.3	34	83	24	0	.....	0	0.01	0.0	30.24	30.13	30.178	0.6	0.4	325	12	WNW	0	0			
21	46.1	32.8	39.4	40.5	36	83	26	0	.....	0	0.00	0.0	30.27	30.12	30.200	0.4	0.3	237	8	WSW	0	0			
22	51.0	29.0	40.0	38.3	34	85	25	0	.....	0	0.00	0.0	30.37	30.27	30.314	0.3	0.3	344	11	ENE	0	0			
23	53.3	29.3	41.3	38.3	33	83	24	0	.....	0	0.00	0.0	30.30	30.07	30.213	0.5	0.4	315	12	WNW	0	0			
24	54.1	28.1	41.1	39.2	33	80	24	0	.....	0	0.00	0.0	30.06	29.96	30.017	1.3	0.6	176	18	SSW	1	196			
25	52.2	33.2	42.7	41.6	33	74	23	0	.....	0	0.00	0.0	30.09	30.01	30.042	0.4	0.2	4	8	N	0	0			
26	49.2	30.6	39.9	41.0	37	85	26	0	.....	0	0.00	0.0	30.18	30.08	30.140	0.2	0.2	342	8	WNW	0	0			
27	50.1	28.1	39.1	42.7	38	84	26	0	.....	0	0.00	0.0	30.31	30.14	30.205	1.0	0.9	338	12	N	0	0			
28	45.8	26.1	35.9*	33.5	28	82	30	0	.....	0	0.00	0.0	30.39	30.18	30.296	0.5	0.5	314	11	WNW	0	0			
29	52.5	24.8*	38.6	36.5	29	78	27	0	.....	0	0.00	0.0	30.17	29.89	30.037	0.4	0.3	319	8	N	0	0			
30	57.6	34.4	46.0	50.0	43	78	19	0	.....	0	0.03	0.0	29.89	29.46	29.684	5.0	4.7	173	26	S	0	0			
31	58.6	42.1	50.3	52.7	46	79	15	0	.....	0	0.38	0.0	29.76	29.44	29.559	7.9	7.0	235	28	WSW	0	0			
Sum	Sum	-----	-----	---	----	Ttl	Ttl									For the month:						---				
1738	1142					589	0	Number of Days		1.45	0.0	30.39	29.18	29.988	2.2	1.1	194	31	S	4	178					
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl	Date	Date	-----	----	----	---	Date	Date	Avg							
56.1	36.8	46.5	45.9	39	79.4	----	----	≥.01 inch	15	37.07	0.0	28	16	-----	----	----	---	2	17							
Number of Days							Season to Date	Snow, Ice ≥1.0 inch	0	Greatest in 24 Hours and Dates					Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date											
Max Temperature			Min Temperature			881	184	Thunder	0	Precipitation		Snow, Ice Plts														
≥ 90°F	< 32°F	< 32°F	< 0°F	----	----	Heavy Fog	0	0.56	15-16	0.0	-			0												
0	0	12	0	----	----	Clear	5	Partly Cloudy	15	Cloudy	11															

NOTES:
 Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.
 Data in column 4A are (MAX+MIN) ÷ 2, whereas columns 4B, 5, 6, 15, 16, 23 are means via continuous observations for 24 hours.
 Column 5: Dew point is calculated from temperature and humidity and is continuously averaged for 24 hours.
 Data in columns 9, 10, 12 are entered manually by the station observer.
 Columns 17-18: Resultant wind is calculated by the vector sum of continuous wind observations.
 Column 23: Sunshine index is measured in Watts/m^2 and is continuously averaged for 24 hours.
 Data in columns 4B, 5, 6, 15, 16, 23 are updated continuously, there by achieving a "true" mean.

OBSERVATIONS AT 3-HOUR INTERVALS
October 2004: Westford

Hour	Wind			Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Wind			Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Wind																																											
	Direction	Speed	Gust							Direction	Speed	Gust							Direction	Speed	Gust																																									
OCT 01																					OCT 02																					OCT 03																				
01																																																														
04																																																														
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OCT 04																					OCT 05																					OCT 06																				
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OCT 07																					OCT 08																					OCT 09																				
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OCT 10																					OCT 11																					OCT 12																				
01																																																														
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OCT 13																					OCT 14																					OCT 15																				
01																																																														
04																																																														
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22																																																														
OCT 16																					OCT 17																					OCT 18																				
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MAXIMUM SHORT DURATION PRECIPITATION

Time Period (minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ended: Date	00	00	00	00	00	00	00	00	00	00	00	00
Ended: Time	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000	0000

The precipitation amounts may occur at any time during the month. The time indicated is the ending time of the interval. Date and time are not entered for trace amounts.

**OBSERVATIONS AT 3-HOUR INTERVALS
October 2004: Westford**

Hour	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Wind			Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Wind			Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Wind				
						Humidity	Direction	Speed						Humidity	Direction	Speed						Humidity	Direction	Speed		
OCT 19									OCT 20									OCT 21								
01		30.18	0.00	30	28	94	00	0	0	30.20	0.00	33	32	95	00	0	0	30.12	0.00	40	37	89	04	0	3	
04		30.17	0.00	29	28	95	00	0	0	30.20	0.00	30	29	96	00	0	0	30.12	0.00	40	37	90	00	0	0	
07		30.19	0.00	32	30	90	09	1	5	30.22	0.00	29	28	96	00	0	0	30.17	0.00	39	37	92	00	0	0	
10		30.21	0.00	38	32	81	00	1	6	30.23	0.00	40	37	89	02	0	2	30.20	0.00	43	33	70	00	1	3	
13		30.18	0.00	48	33	55	04	2	7	30.17	0.00	51	35	54	02	2	6	30.21	0.00	44	36	73	24	3	8	
16		30.18	0.00	50	33	52	00	2	7	30.13	0.00	52	40	63	31	2	5	30.23	0.00	44	35	72	31	2	4	
19		30.19	0.00	40	36	84	00	0	0	30.15	0.00	41	36	84	00	0	0	30.26	0.00	41	35	82	00	0	0	
22		30.20	0.00	36	33	89	04	0	1	30.13	0.00	38	36	93	00	0	0	30.27	0.00	35	34	95	00	0	0	
OCT 22									OCT 23									OCT 24								
01		30.28	0.00	31	30	96	00	0	0	30.28	0.00	33	32	95	00	0	0	30.06	0.00	33	31	93	20	0	3	
04		30.29	0.00	30	29	96	00	0	0	30.28	0.00	32	31	96	00	0	0	30.05	0.00	31	29	92	00	0	0	
07		30.32	0.00	31	31	97	00	0	0	30.28	0.00	30	29	96	00	0	0	30.05	0.00	30	27	90	00	0	0	
10		30.36	0.00	38	37	98	00	0	0	30.28	0.00	41	35	78	33	1	3	30.04	0.00	39	34	82	04	1	5	
13		30.33	0.00	50	35	55	31	1	3	30.21	0.00	50	37	62	20	0	3	29.99	0.00	51	37	58	13	3	8	
16		30.30	0.00	50	40	69	00	1	3	30.15	0.00	52	35	51	31	2	5	29.97	0.00	51	38	62	24	4	7	
19		30.32	0.00	41	37	86	00	0	0	30.13	0.00	38	35	86	00	0	0	30.00	0.00	41	35	79	18	2	6	
22		30.31	0.00	36	34	93	00	0	0	30.10	0.00	32	30	92	00	0	0	30.01	0.00	37	33	85	18	0	2	
OCT 25									OCT 26									OCT 27								
01		30.02	0.00	34	32	91	20	0	2	30.08	0.00	32	29	91	00	0	0	30.14	0.00	44	41	88	00	0	0	
04		30.01	0.00	41	33	74	13	0	1	30.10	0.00	34	33	96	00	0	0	30.15	0.00	45	43	92	00	0	2	
07		30.06	0.00	40	33	78	09	0	1	30.15	0.00	36	35	96	00	0	0	30.16	0.00	44	41	91	33	1	5	
10		30.06	0.00	43	35	73	04	1	5	30.17	0.00	42	37	84	33	0	2	30.19	0.00	49	43	80	29	4	10	
13		30.04	0.00	50	36	60	33	0	3	30.15	0.00	49	38	66	29	3	7	30.22	0.00	49	40	70	31	2	6	
16		30.01	0.00	52	34	50	33	1	5	30.14	0.00	48	41	77	00	0	0	30.21	0.00	48	39	69	00	2	7	
19		30.06	0.00	39	33	79	00	0	0	30.15	0.00	45	40	82	00	0	0	30.25	0.00	39	33	81	02	1	6	
22		30.08	0.00	35	31	85	00	0	0	30.16	0.00	44	40	85	00	0	0	30.29	0.00	31	29	95	00	0	0	
OCT 28									OCT 29									OCT 30								
01		30.31	0.00	29	28	96	00	0	0	30.14	0.00	30	29	94	00	0	0	29.86	0.00	39	31	72	20	1	2	
04		30.32	0.00	28	26	92	00	0	0	30.11	0.00	30	28	92	00	0	0	29.82	0.00	46	35	66	18	2	5	
07		30.35	0.00	26	25	93	00	0	0	30.11	0.00	26	24	94	00	0	0	29.79	0.00	47	36	65	18	2	5	
10		30.38	0.00	36	33	88	00	0	1	30.08	0.00	38	31	76	00	0	1	29.76	0.00	52	43	73	15	3	8	
13		30.31	0.00	44	29	55	33	2	5	30.01	0.00	49	31	50	33	2	5	29.69	0.00	54	47	78	15	9	16	
16		30.26	0.00	44	31	60	31	2	8	29.96	0.00	52	25	34	29	1	3	29.59	0.00	54	49	81	15	6	12	
19		30.25	0.00	33	28	83	00	0	0	29.97	0.00	36	33	87	00	0	0	29.52	0.00	52	50	94	18	5	10	
22		30.21	0.00	29	27	90	00	0	0	29.93	0.00	34	30	83	00	0	0	29.49	0.00	57	55	93	20	9	21	
OCT 31																										
01		29.45	0.06	57	57	97	20	7	18																	
04		29.46	0.00	56	55	94	20	5	11																	
07		29.53	0.00	52	44	72	22	10	20																	
10		29.52	0.00	54	45	71	22	4	10																	
13		29.53	0.00	54	44	68	22	9	20																	
16		29.57	0.00	53	44	72	22	7	13																	
19		29.64	0.00	52	45	76	22	7	14																	
22		29.72	0.00	44	40	87	27	10	25																	

WEATHER NOTES

NOTES:
 Units are: Temperature=°F, Wind=mph, Pressure=Inches Hg, Precipitation=inches.
 Wind Direction: Directions are those from which the wind is blowing, indicated in tens of degrees from true north: i.e., 09 for East, 18 for South, 27 for West, and 00 or 36 for North.
 Wind Speed: The observed one-minute average speed in miles-per-hour.
 Wind Gust: The maximum instantaneous wind speed for the 10-minute period preceding the observation.
 Rainfall Rate: The instantaneous rainfall rate at the time of observation, calculated by timing consecutive 0.01" pulses from the electronic rain gauge and interpolating this rate for one hour.

SUMMARY BY HOUR

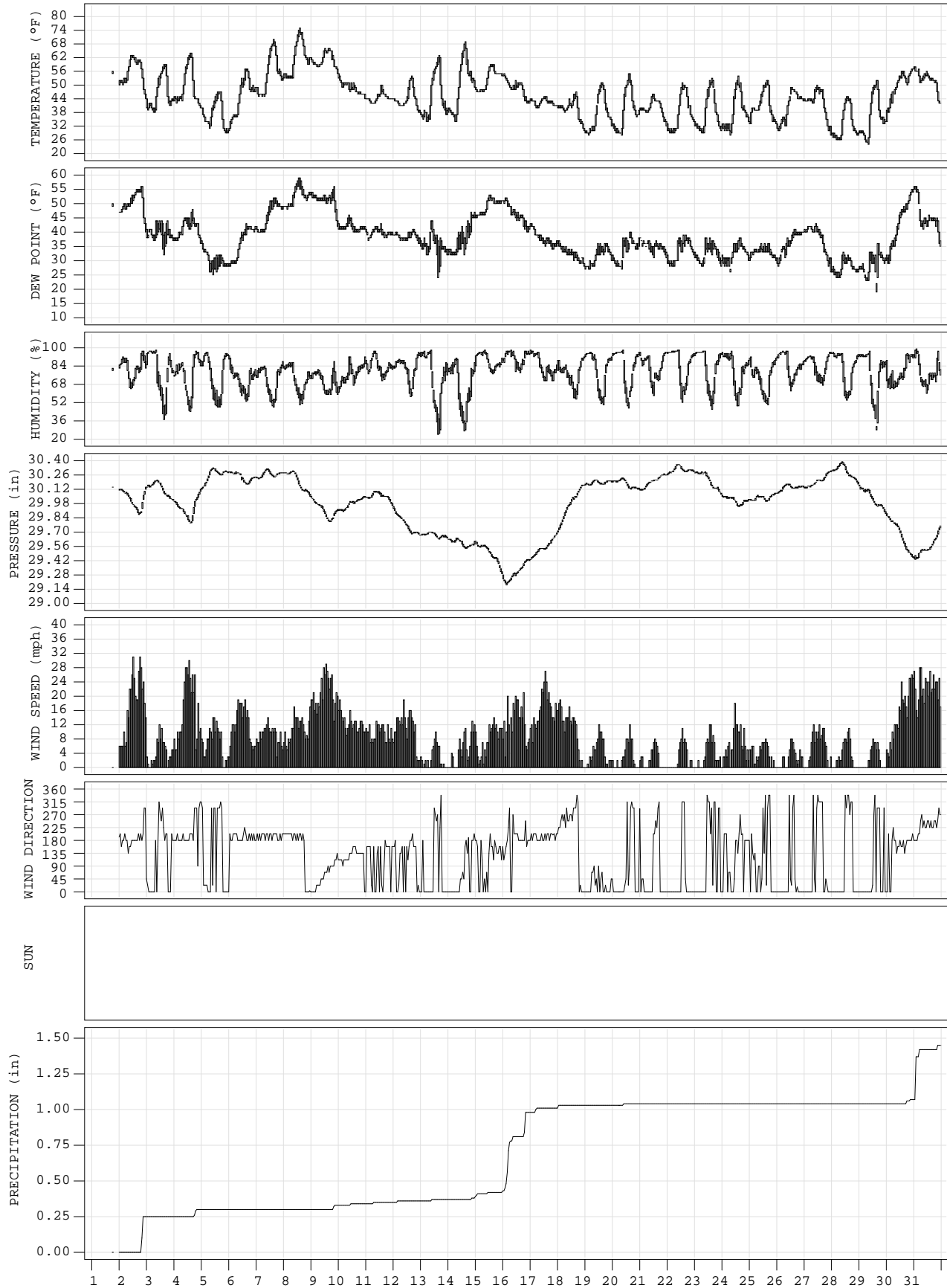
Hour	Averages						Resultant Wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		29.987	42	38	88	1.4	18	0.7
04		29.981	41	38	88	1.5	20	0.8
07		30.004	40	37	88	1.6	19	0.7
10		30.011	47	40	78	3.0	19	1.3
13		29.978	53	40	64	3.9	20	1.6
16		29.950	54	40	61	2.9	20	1.3
19		29.973	46	40	81	1.7	19	1.0
22		29.983	42	38	86	1.6	23	0.8

HOURLY PRECIPITATION (Water Equivalent)
October 2004: Westford

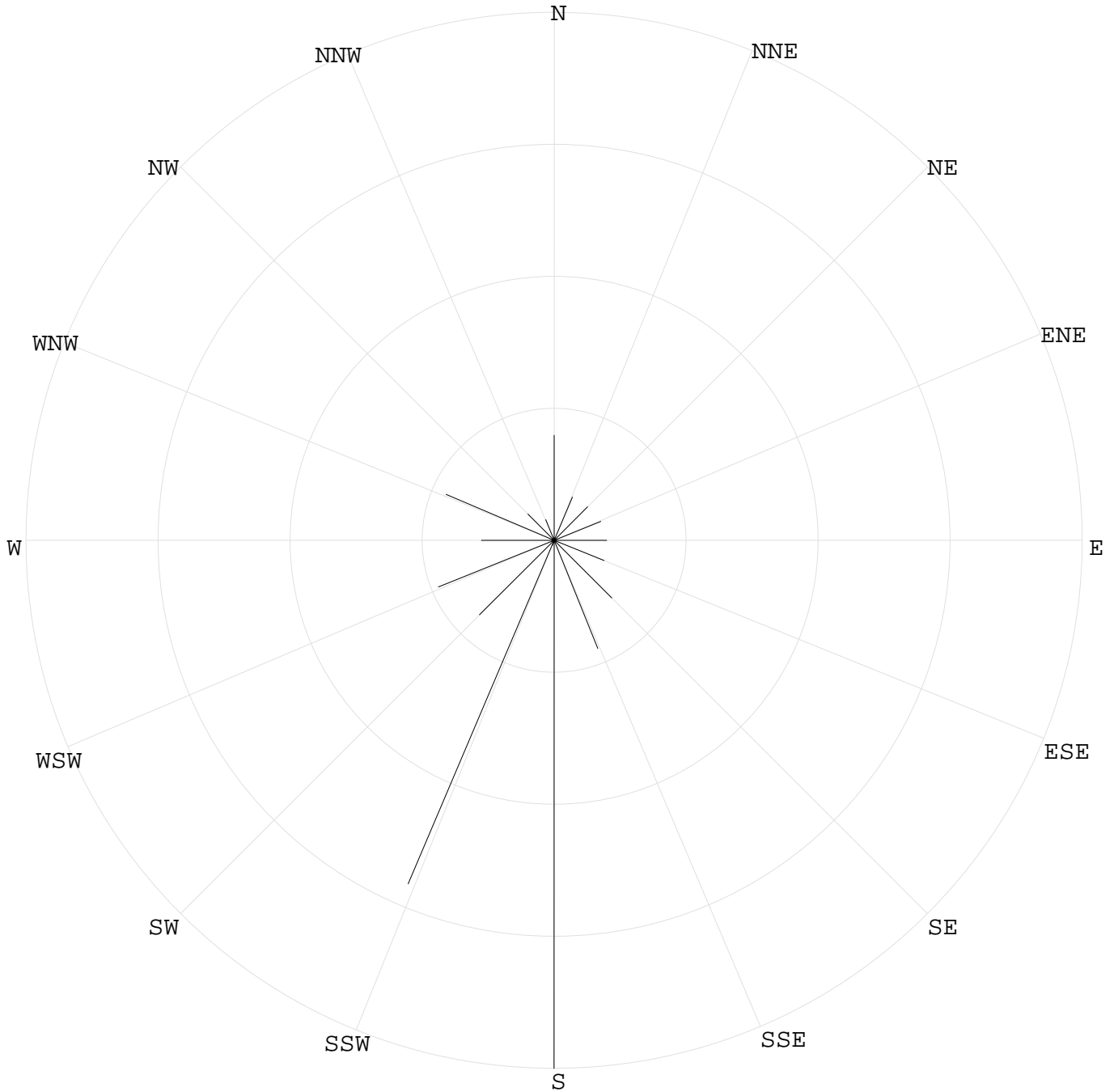
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12	
01																									01
02																				0.10	0.15				02
03																									03
04																		0.01	0.03	0.01					04
05																									05
06																									06
07																									07
08																									08
09																				0.02	0.01				09
10											0.01														10
11												0.01													11
12				0.01																					12
13												0.01													13
14													0.01												14
15	0.01	0.01												0.01							0.01			0.01	15
16		0.02	0.03	0.08	0.15	0.06	0.01		0.03									0.03	0.14						16
17					0.02	0.01																			17
18	0.02																								18
19																									19
20										0.01															20
21																									21
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23																									23
24																									24
25																									25
26																									26
27																									27
28																									28
29																									29
30																	0.02				0.01				30
31		0.30			0.05																		0.03		31
Sum	0.03	0.33	0.03	0.09	0.22	0.07	0.02	0.00	0.03	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.03	0.06	0.27	0.21	0.00	0.00	0.02	Sum	

During a frozen precipitation event, hourly precipitation totals may not be recorded. In this case, daily amounts are typically entered in the last column (hour ending at 12 A.M.)

HOURLY-BY-HOURLY DATA
October 2004: Westford



Wind Rose: October 2004
Westford



Maximum direction of wind: 437.8 miles from 180°.
1612.9 total miles of wind.