

LOCAL CLIMATOLOGICAL DATA

Monthly Summary

April 2003

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

Date	Temperature					Humidity	Deg. Days		Precip Ty 1 fog 2 hvy fog 3 thunder 4 ice plt 5 hail 6 glaze 7 duststm 8 smk, hz 9 blw snw	Snow Cvr	Precip		Pressure			Wind						Sun			
	Maximum	Minimum	Average	Mean	Dew Point		Mean	Heating			Cooling	Water Equivalent	Ice Pellets Snow	Adj. to Sea Level			Avg	Res	Res	Peak			Minute		Mean Index
														Maximum	Minimum	Mean				Speed	Speed		Dir	Speed		Dir	Speed	Dir
1	2	3	4A	4B	5	6	7	8	10	11	12	13	14	15	16	17	18	19	20	21	22	23			
1	30.6	11.7	21.2*	22.6	10	61	44	0	.....	0	0.04	0.4	30.07	29.88	29.964	4.0	3.5	189	19	SSW	8	195		
2	38.6	28.8	33.7	31.9	28	86	32	0	.....	0	0.02	0	30.10	29.92	30.038	1.4	1.0	222	12	SSW	0	0		
3	30.0	21.9	25.9	27.1	17	68	40	0	.....	0	0.01	0	30.18	30.09	30.134	1.3	1.1	325	11	WNW	0	0		
4	27.0	21.3	24.1	23.7	9	54	41	0	.....	0	0.01	0.2	30.20	30.09	30.150	1.7	1.7	355	12	N	0	0		
5	32.2	22.7	27.5	27.4	22	79	38	0	...4.6...	0	0.38	2.1	30.08	29.72	29.865	6.7	5.8	170	28	SSE	10	210			
6	30.0	18.6	24.3	24.4	12	59	41	0	.....	0	0.00	0.0	30.55	29.84	30.250	7.8	7.0	284	28	WSW	0	0		
7	31.5	13.6	22.6	24.0	7	49	43	0	.....	0	0.00	0.0	30.69	30.50	30.615	1.5	1.4	343	14	NW	6	326		
8	32.9	22.4	27.7	28.2	25	87	38	0	.....	0	0.13	1.0	30.53	30.29	30.402	0.5	0.0	291	10	SSW	0	0		
9	37.9	29.0	33.5	32.6	29	87	32	0	.....	0	0.02	0.0	30.30	30.19	30.253	0.3	0.2	308	6	WNW	0	0		
10	53.3	25.7	39.5	39.2	27	66	26	0	.....	0	0.00	0.0	30.26	30.08	30.188	1.1	0.6	225	18	WSW	0	0		
11	51.0	33.1	42.0	42.6	23	47	23	0	.....	0	0.00	0.0	30.10	29.74	29.970	3.2	2.9	167	20	SSE	0	0		
12	56.3	34.6	45.4	44.9	30	57	20	0	.....	0	0.00	0.0	29.87	29.63	29.689	3.6	3.4	329	24	NNW	0	0		
13	46.0	29.3	37.6	37.3	19	49	28	0	.....	0	0.00	0.0	30.27	29.87	30.103	3.2	3.0	324	19	WNW	5	331		
14	57.5	25.8	41.6	45.0	16	32	24	0	.....	0	0.00	0.0	30.36	29.93	30.186	7.8	7.5	186	32	S	0	0		
15	78.8*	51.0	64.9*	63.0	37	40	1	0	...3.....	0	0.01	0.0	30.00	29.62	29.788	8.5	7.4	199	34	WSW	0	0			
16	55.1	23.3	39.2	36.8	29	76	26	0	.....	0	0.05	0.0	30.29	29.61	29.940	3.3	2.8	353	18	N	0	0		
17	37.8	15.9	26.8	26.5	5	40	39	0	.....	0	0.00	0.0	30.53	30.30	30.452	2.8	2.5	343	18	WNW	0	0		
18	54.7	25.1	39.9	40.0	13	35	26	0	.....	0	0.00	0.0	30.45	30.34	30.399	7.4	7.3	168	26	S	2	178		
19	62.1	40.3	51.2	50.5	36	60	14	0	.....	0	0.02	0.0	30.43	30.29	30.370	3.5	3.0	171	24	SSW	0	0		
20	73.3	48.6	61.0	60.3	38	47	5	0	.....	0	0.00	0.0	30.29	29.94	30.131	5.6	5.4	181	24	S	0	0		
21	68.3	50.1	59.2	57.3	28	39	6	0	.....	0	0.14	0.0	29.95	29.70	29.818	9.9	9.3	189	34	S	12	141		
22	52.5	44.8	48.6	48.0	43	84	17	0	.....	0	0.29	0.0	29.71	29.60	29.660	4.0	3.8	181	21	S	0	0		
23	45.8	31.9	38.8	36.1	34	94	27	0	.....	0	0.65	0.5	29.80	29.61	29.709	4.2	4.0	275	17	WNW	5	282		
24	33.2	29.7	31.5	31.3	30	94	34	0	.....	0	0.10	4.2	29.88	29.78	29.834	5.6	5.5	304	21	WNW	0	0		
25	49.5	27.0	38.3	38.7	29	69	27	0	.....	0	0.30	0.0	29.95	29.85	29.914	1.1	0.7	308	13	W	0	0		
26	47.3	34.0	40.6	42.2	39	88	25	0	.....	0	0.65	0.0	29.93	29.84	29.882	2.8	2.4	166	18	SSE	0	0		
27	58.7	41.3	50.0	46.9	41	82	15	0	.....	0	0.00	0.0	29.95	29.83	29.887	1.7	0.7	334	12	ENE	0	0		
28	75.4	45.8	60.6	61.2	36	43	5	0	...3.....	0	T	0.0	29.90	29.64	29.770	7.6	7.1	196	25	S	3	217			
29	66.0	42.6	54.3	54.3	37	53	11	0	...3.....	0	T	0.0	29.94	29.64	29.795	5.4	4.3	295	21	WNW	0	0			
30	56.9	35.5	46.2	46.7	27	48	19	0	.....	0	0.00	0.0	30.18	29.95	30.093	1.6	1.0	339	14	SSW	0	0		
Sum	Sum	-----	-----	---	----	Ttl	Ttl						For the month:						---						
1470	925					767	0	Number of Days		2.82	8.4	30.69	29.60	30.042	4.0	1.7	219	34	WSW	12	141				
Avg	Avg	Avg	Mean	Avg	Avg	----	----	Precip		Season Ttl	Date	Date	-----	----	----	----	Date	Date	Avg						
49.0	30.8	39.9	39.7	26	62.4	----	----	>.01 inch	16	9.62	96.8	7	22	-----	----	----	----	----	15+	21					
Number of Days								Season to Date	Snow, Ice >1.0 inch	3	Greatest in 24 Hours and Dates						Greatest Depth on Ground of Snow, Ice Pellets or Ice and Date								
Max Temperature				Min Temperature				7912	0	Thunder	3	Precipitation		Snow, Ice Plts											
> 90°F	< 32°F	< 32°F	< 0°F	----	----	Heavy Fog	0	0.77	22-23	4.2	24	0						-							
0	5	18	0	----	----	Clear	9	Partly Cloudy	8	Cloudy	13														

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/m² 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

April 2003: Westford

Hour	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity			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	Direction	Speed	Gust						Direction	Speed	Gust												
APR 01																																										
01	29.97	0.00	14	3	60	29	0	5	29.94	0.00	29	26	88	20	5	10	30.09	0.00	29	27	92	00	0	0	0	29.94	0.00	29	26	88	20	5	10	30.09	0.00	29	27	92	00	0	0	0
04	30.02	0.00	12	3	64	29	1	6	30.00	0.00	29	27	91	00	0	0	30.11	0.00	29	27	91	33	0	2	6	30.00	0.00	29	27	91	00	0	0	30.11	0.00	29	27	91	33	0	2	6
07	30.07	0.00	14	2	58	22	2	2	30.05	0.00	30	26	85	00	0	0	30.15	0.00	29	27	91	33	1	1	2	30.07	0.00	30	26	85	00	0	0	30.15	0.00	29	27	91	33	1	1	2
10	30.03	0.00	23	1	37	18	5	10	30.07	0.00	33	27	79	22	2	5	30.18	0.00	28	13	51	33	2	2	6	30.07	0.00	33	27	79	22	2	5	30.18	0.00	28	13	51	33	2	2	6
13	29.95	0.00	29	-2	26	18	6	13	30.06	0.00	37	29	73	24	5	8	30.17	0.00	24	17	75	29	2	2	5	30.06	0.00	37	29	73	24	5	8	30.17	0.00	24	17	75	29	2	2	5
16	29.89	0.00	28	17	61	15	3	7	30.04	0.00	34	32	89	31	1	4	30.14	0.00	28	15	56	31	3	7	11	30.04	0.00	34	32	89	31	1	4	30.14	0.00	28	15	56	31	3	7	11
19	29.90	0.00	26	24	89	18	4	7	30.07	0.00	32	30	95	00	0	0	30.14	0.00	25	12	57	00	0	0	0	30.07	0.00	32	30	95	00	0	0	30.14	0.00	25	12	57	00	0	0	0
22	29.91	0.00	29	25	86	20	7	13	30.10	0.00	31	29	94	00	1	3	30.13	0.00	24	15	69	00	0	2	2	30.10	0.00	31	29	94	00	1	3	30.13	0.00	24	15	69	00	0	2	2
APR 02																																										
APR 03																																										
APR 04																																										
APR 05																																										
APR 06																																										
APR 07																																										
APR 08																																										
APR 09																																										
APR 10																																										
APR 11																																										
APR 12																																										
APR 13																																										
APR 14																																										
APR 15																																										
APR 16																																										
APR 17																																										
APR 18																																										

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

April 2003: Westford

Hour	APR 19								APR 20								APR 21										
	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust	Sunshine	Pressure	Rainfall rate	Temperature	Dew Point	Humidity	Direction	Speed	Gust
01																											
04																											
07																											
10																											
13																											
16																											
19																											
22																											
APR 22								APR 23								APR 24											
01																											
04																											
07																											
10																											
13																											
16																											
19																											
22																											
APR 25								APR 26								APR 27											
01																											
04																											
07																											
10																											
13																											
16																											
19																											
22																											
APR 28								APR 29								APR 30											
01																											
04																											
07																											
10																											
13																											
16																											
19																											
22																											

WEATHER NOTES

SUMMARY BY HOUR

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.

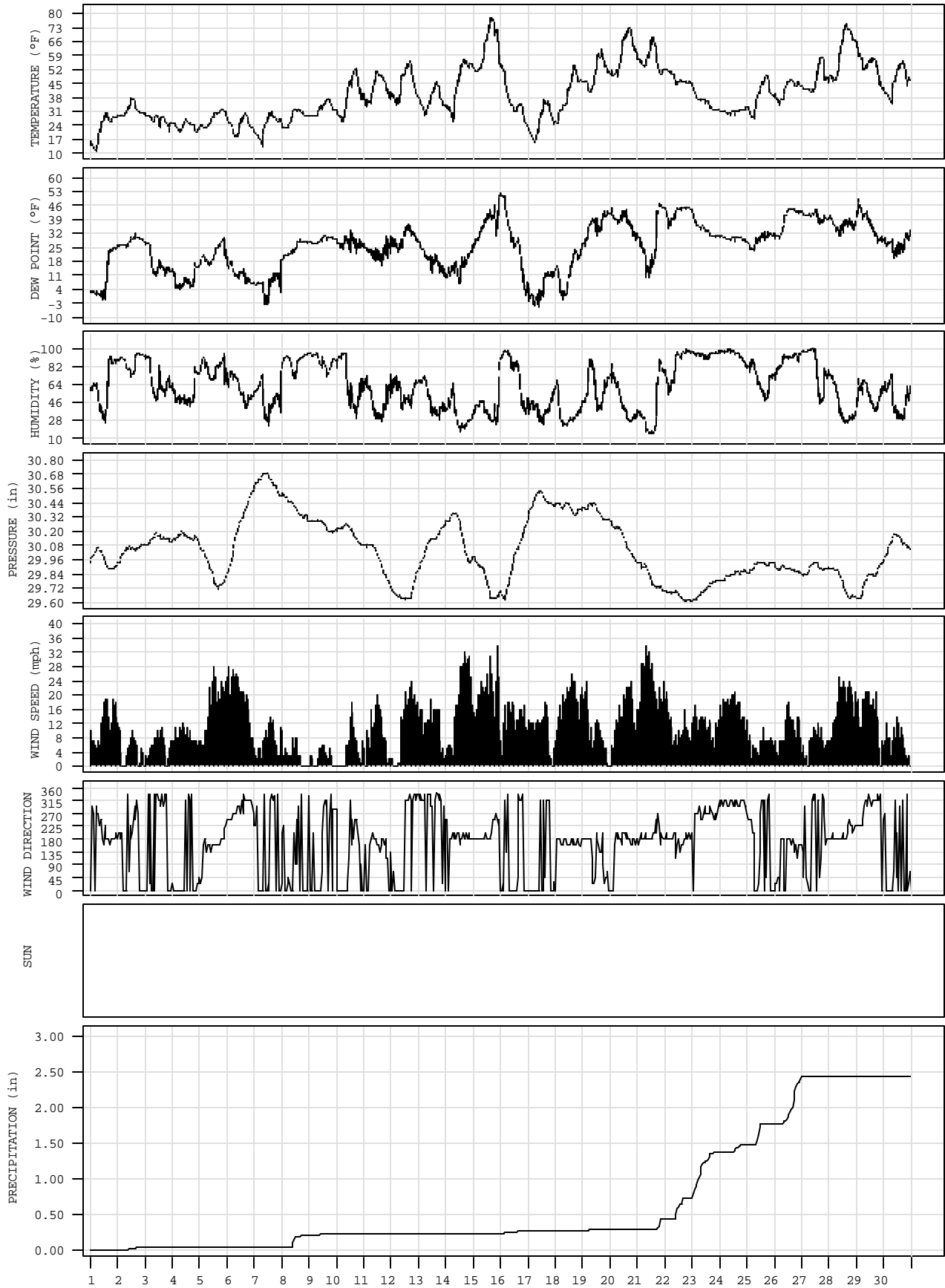
Hour	Averages						Resultant wind	
	Sunshine	Pressure	Temperature	Dew Point	Humidity	Wind Speed	Direction	Speed
01		30.032	37	27	69	2.7	22	1.6
04		30.036	35	26	71	3.2	20	1.8
07		30.069	34	24	71	3.0	22	1.4
10		30.078	39	24	58	4.8	23	1.4
13		30.053	43	25	54	6.1	22	3.0
16		30.017	46	27	53	5.3	23	2.2
19		30.017	43	27	58	3.7	22	1.7
22		30.028	40	28	66	3.1	22	1.9

HOURLY PRECIPITATION (Water Equivalent)
April 2003: Westford

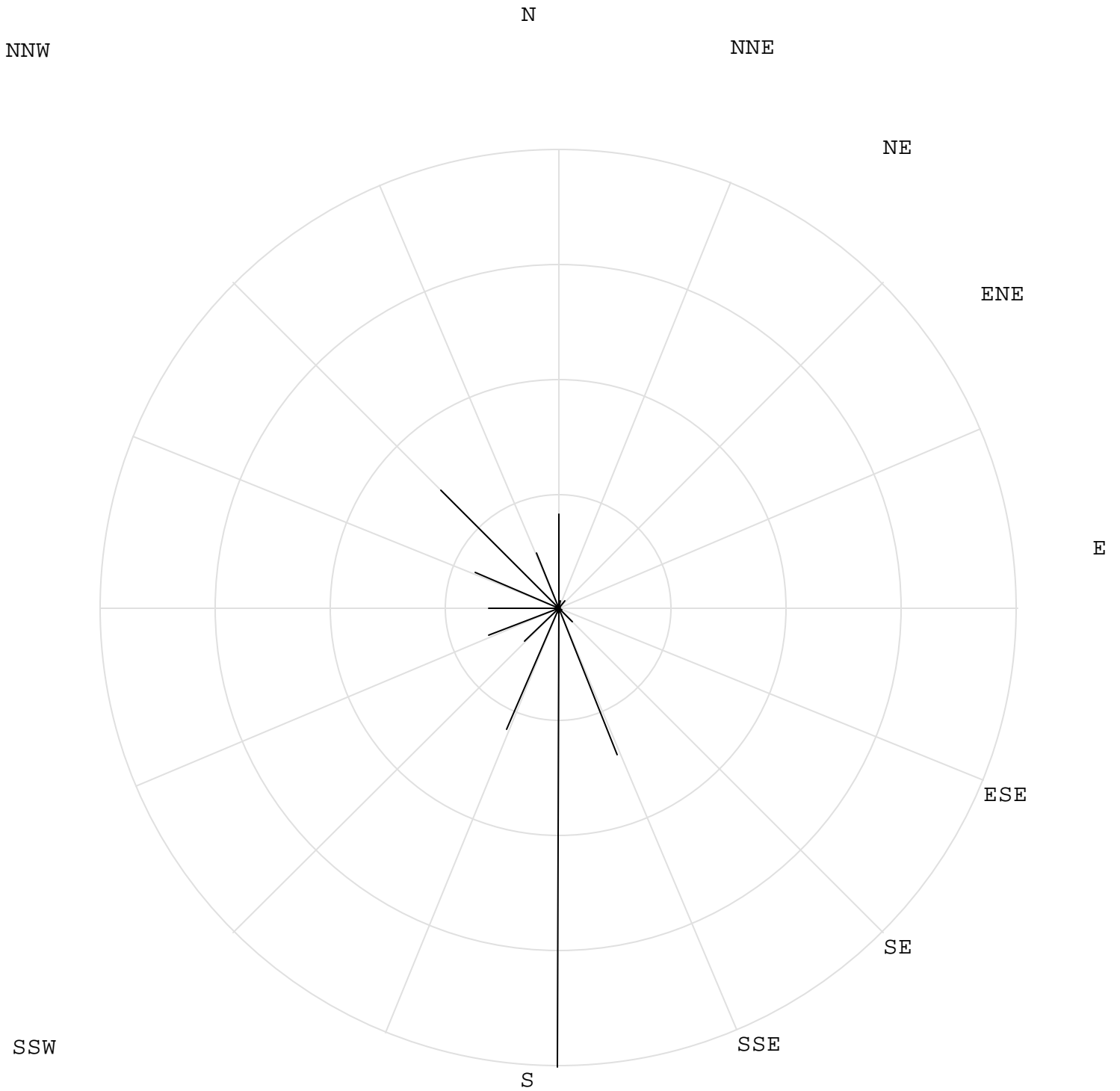
Date	A.M. Hour Ending at												P.M. Hour Ending at												Date	
	01	02	03	04	05	06	07	08	09	10	11	12	01	02	03	04	05	06	07	08	09	10	11	12		
01												0.01												01		
02												0.01												02		
03																0.01								03		
04																								04		
05																								05		
06																								06		
07																								07		
08																								08		
09												0.06	0.04	0.03										09		
10											0.02													10		
11																								11		
12																								12		
13																								13		
14																								14		
15																						0.01		15		
16			0.01	0.01	0.01										0.01						0.01			16		
17																								17		
18																								18		
19						0.01	0.01																	19		
20																								20		
21																		0.02	0.02	0.10				21		
22											0.06	0.09	0.02	0.03		0.01	0.07	0.01						22		
23	0.06	0.06	0.04	0.02	0.08	0.04	0.04	0.10	0.04	0.02	0.02	0.02	0.02	0.01	0.02	0.04	0.04	0.01		0.02				23		
24																									24	
25	0.01									0.06	0.07	0.10	0.05	0.01		0.02	0.01	0.01	0.01	0.01	0.01			25		
26								0.02	0.02			0.02	0.03	0.02	0.04	0.04	0.03	0.10	0.12	0.07	0.04	0.02	0.01	0.04	0.03	26
27																									27	
28																									28	
29																									29	
30																									30	
Sum	0.07	0.06	0.05	0.03	0.09	0.05	0.05	0.12	0.12	0.24	0.26	0.16	0.08	0.07	0.13	0.15	0.16	0.15	0.12	0.15	0.03	0.02	0.04	0.03	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.)

HOUR-BY-HOUR DATA
April 2003: Westford



Wind Rose: April 2003
Westford



Maximum direction of wind: 922.4 miles from 180°.
2847.2 total miles of wind.