



# MARCH 2004

## LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

# OAK RIDGE, TN

OAK RIDGE (OQT)  
 Lat: 36°01' N Long: 84°14' W Elev (Ground): 913 Feet  
 Time Zone: EASTERN WBAN: 53868 ISSN #: -

MARCH 2004  
 OAK RIDGE, TN

DATE	TEMPERATURE °F						DEG DAYS BASE 65°		WEATHER	SNOW/ICE ON GND(IN)		PRECIPITATION (INCHES)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES						DATE																	
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		0700 LST	1300 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM																				
																			5-SEC		2-MIN																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																
01	71	40	56	12	43	50	9	0	RA				T	29.17	30.15	4.0	21	5.5	24	21	20	20	01																
02	67	50	59	14	55	56	6	0	RA BR				0.62	29.24	30.20	2.8	23	4.3	28	23	21	21	02																
03	59	49	54	9	52	53	11	0	RA BR				0.01	29.32	30.30	1.2	05	2.3	9	03	7	05	03																
04	75	48	62	17	52	57	3	0	FG+ BR				0.00	29.16	30.12	3.5	21	4.1	24	22	18	20	04																
05	74	64	69*	23	61	64	0	4	RA BR				0.99	29.00	29.94	8.4	21	9.5	32	21	23	22	05																
06	69	48	59	13	52	55	6	0	RA BR				1.42	29.01	29.96	4.0	26	5.9	29	29	22	29	06																
07	66	38	52	6	36	44	13	0	RA FG+ BR				0.01	29.10	30.08	3.9	28	5.0	31	31	23	32	07																
08	53	39	46	-1	23	37	19	0					0.00	29.15	30.14	4.6	30	6.7	26	28	16	31	08																
09	52	33	43	-4	32	37	22	0	RA				0.02	29.03	30.03	2.8	03	4.0	21	01	15	36	09																
10	53	31	42	-5	26	35	23	0					0.00	29.27	30.28	2.5	04	4.1	14	07	12	06	10																
11	62	27	45	-2	31	39	20	0					0.00	29.21	30.21	3.1	25	4.8	22	23	15	22	11																
12	57	35	46	-2	22	37	19	0					0.00	29.23	30.22	3.2	25	5.1	21	27	14	26	12																
13	60	33	47	-1	24	37	18	0	RA				T	29.36	30.36	4.8	05	5.4	18	07	15	06	13																
14	68	42	55	7	41	48	10	0	RA				T	29.28	30.26	3.2	22	4.0	28	23	18	21	14																
15	56	48	52	3	47	50	13	0	RA BR				0.54	29.20	30.17	3.9	05	4.0	15	05	12	07	15																
16	66	44	55	6	45	50	10	0	RA BR				1.02	28.90	29.86	3.8	27	5.7	25	30	17	29	16																
17	58	41	50	1	34	42	15	0					0.00	29.02	30.00	2.1	27	4.1	22	28	13	27	17																
18	62	44	53	4	47	49	12	0	RA BR				0.43	29.09	30.07	1.3	23	3.3	17	22	13	20	18																
19	66	44	55	5			10	0	FG+ BR				0.00					2.2	13	08	8	11	19																
20	76	39	58	8	46	50	7	0	RA BR				0.61	29.26	30.24	2.9	24	4.6	35*	29	24*	30	20																
21	60	34	47	-3	26	37	18	0					0.00	29.27	30.25	7.8	35	9.0	25	35	18	35	21																
22	47	32	40*	-11	15	30	25	0					0.00	29.39	30.41	3.0	02	5.1	17	01	13	36	22																
23	59	26*	43	-8	21	34	22	0					0.00	29.47	30.48	0.9	22	1.8	15	21	10	19	23																
24	71	45	58	7	28	45	7	0	RA				T	29.44	30.43	3.9	23	5.5	20	20	14	21	24																
25	75	45	60	9	40	51	5	0					0.00	29.48	30.45	2.7	22	3.7	15	21	13	21	25																
26	78	54	66	14	48	56	0	1					0.00	29.42	30.38	2.7	22	3.9	20	19	15	18	26																
27	79	52	66	14	49	57	0	1					0.00	29.31	30.27	1.5	21	2.8	17	14	13	19	27																
28	81*	52	67	15	51	57	0	2					0.00	29.22	30.17	1.1	20	1.8	14	20	10	20	28																
29	77	55	66	14	53	59	0	1	RA BR				0.01	29.15	30.10	3.0	22	4.8	21	20	16	20	29																
30	67	51	59	6	45	51	6	0	RA BR				0.41	29.02	29.98	4.7	24	6.4	23	26	16	22	30																
31	51	45	48	-5	37	43	17	0	RA				0.10	28.93	29.90	1.7	31	3.7	15	27	12	28	31																
										65.0				42.8		53.9		■ ■		11.2		0.3		< MONTHLY AVERAGES TOTALS-->				6.19				4.6		<-- MONTHLY AVERAGES					
										4.0		6.2		5.1		■ ■		<-----DEPARTURE FROM NORMAL----->										0.47		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									
<b>DEGREE DAYS</b>										GREATEST 24-HR PRECIPITATION: 2.41				DATE :05-06		SEA LEVEL PRESSURE				DATE		TIME																	
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL:				DATE :		MAXIMUM				: 30.57		23 0953																	
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH:				DATE :		MINIMUM				: 29.68		05 2353																	
HEATING: 346										NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0		MINIMUM TEMP ≤ 32: 4		PRECIPITATION ≥ 0.01 INCH : 13																					
COOLING: 9														MAXIMUM TEMP ≤ 32 : 0		MINIMUM TEMP ≤ 0 : 0		PRECIPITATION ≥ 0.10 INCH : 9																					
														THUNDERSTORMS : 0		HEAVY FOG : 3		SNOWFALL ≥ 1.0 INCH :																					

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

# OAK RIDGE, TN

MARCH 2004

OQT

WBAN # 53868

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note)	2400 LST
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			Water Equiv.
01													01												01			T
02	T	0.06	0.05	0.14	0.16	0.03	0.02	T	0.06	0.01	0.01	0.07	02	T	T	0.01								T	02			0.62
03									0.01				03		T									T	03			0.01
04													04												04			0.00
05								T					05						0.09	0.07	0.11	0.20	0.15	0.09	05	0.71		0.99
06	0.67	0.56	0.25	0.12	0.06	0.04							06												06	1.70		1.42
07													07			0.01	T								07			0.01
08													08												08			0.00
09				T									09		T	0.01	0.01	T		T	T				09			0.00
10													10												10			0.02
11													11												11			0.00
12													12												12			0.00
13													13												13			T
14													14			T	T	T	T						14			T
15	T	0.01		0.01	T								15		0.01	0.02	0.01	0.03	0.05	0.10	0.05	0.01	0.06	0.18	15			0.54
16	0.40	0.15	0.01	0.04	0.24	0.10	0.07	T	0.01	T			16												16			1.02
17													17												17			0.00
18			0.02	0.04	0.05	0.08	0.01	0.01	0.07	0.03	T		18								0.01	0.11	T		18			0.43
19													19												19			0.00
20								T	0.05	0.02			20			T	0.15	0.28	0.06	0.01	0.01	0.03	T	20			0.61	
21													21												21			0.00
22													22												22			0.00
23													23												23			0.00
24	T												24												24			T
25													25												25			0.00
26													26												26			0.00
27													27												27			0.00
28													28												28			0.00
29													29											0.01	29			0.01
30	0.02	0.04	0.01	0.08	0.08	0.13	0.04						30							T	0.01				30			0.41
31	T		T	T							0.05	0.02	31	0.03										31			0.10	

## MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)												
Ending Date												
Ending Time (Hour/Min)												

Date and time are not entered for TRACE amounts.

Note : The sum of the hourly totals is given when it differs from the daily total. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

## REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

\* = Extreme for the month (last occurrence if more than one)

T = Trace precipitation amount

+ = also occurs on earlier date

FG+ = Heavy fog, visibility .25 miles or less

BLANK entries denote missing or unreported data

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1971–2000

### WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well-Developed Dust/Sand Whirls
MI Shallow	PL Ice Pellets	HZ Haze	SQ Squalls
PR Partial	RA Rain	PY Spray	SS Sandstorm
SH Shower(s)	SG Snow Grains	SA Sand	GL Glaze
TS Thunderstorm	SN Snow	VA Volcanic Ash	
VC In the Vicinity	UP Unknown Precipitation		

Intensity (as indicated on pages 4 to 6):  
'+' = Heavy    ' ' = Moderate    '-' = Light

## OAK RIDGE, TN MARCH 2004

Ceilorometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR–SS), or midnight to midnight (MN–MN).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0–2 oktas, Partly Cloudy = 3–6 oktas, Cloudy = 7–8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled to saturation at constant pressure by evaporation of water into it.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

### ADDITIONAL NOTES:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							10.00	10.00	
02							1.75	10.00	
03							.75	10.00	
04							.25	10.00	
05							1.50	10.00	
06							.75	10.00	
07							.25	10.00	
08							10.00	10.00	
09							10.00	10.00	
10							10.00	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							1.00	10.00	
16							.75	10.00	
17							10.00	10.00	
18							.75	10.00	
19							.00	10.00	
20							2.00	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							9.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							6.00	10.00	
30							1.75	10.00	
31							4.00	10.00	
<b>MONTHLY AVGS</b>							6.42	10.00	
<b>SUNSHINE (MINUTES)</b>									
Total:                      Possible:                      Percent Possible:									
<b>NUMBER OF DAYS WITH:</b>									
<b>SKY CONDITION</b>									
CLR   PTLY CLDY   CLOUDY   MISSING									
31									
<b>MINIMUM VISIBILITY (MILES)</b>									
<=0.25    <=3.0    >=7.0									
3            11           17									





# OBSERVATIONS AT 3-HOURLY INTERVALS

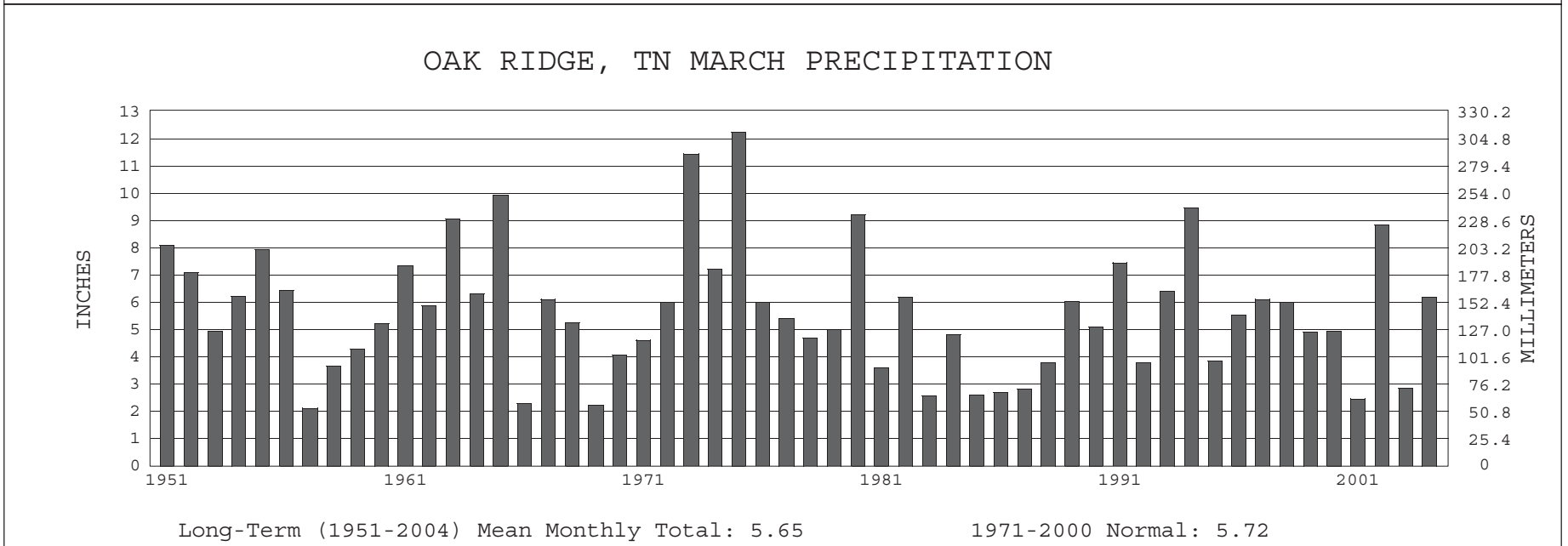
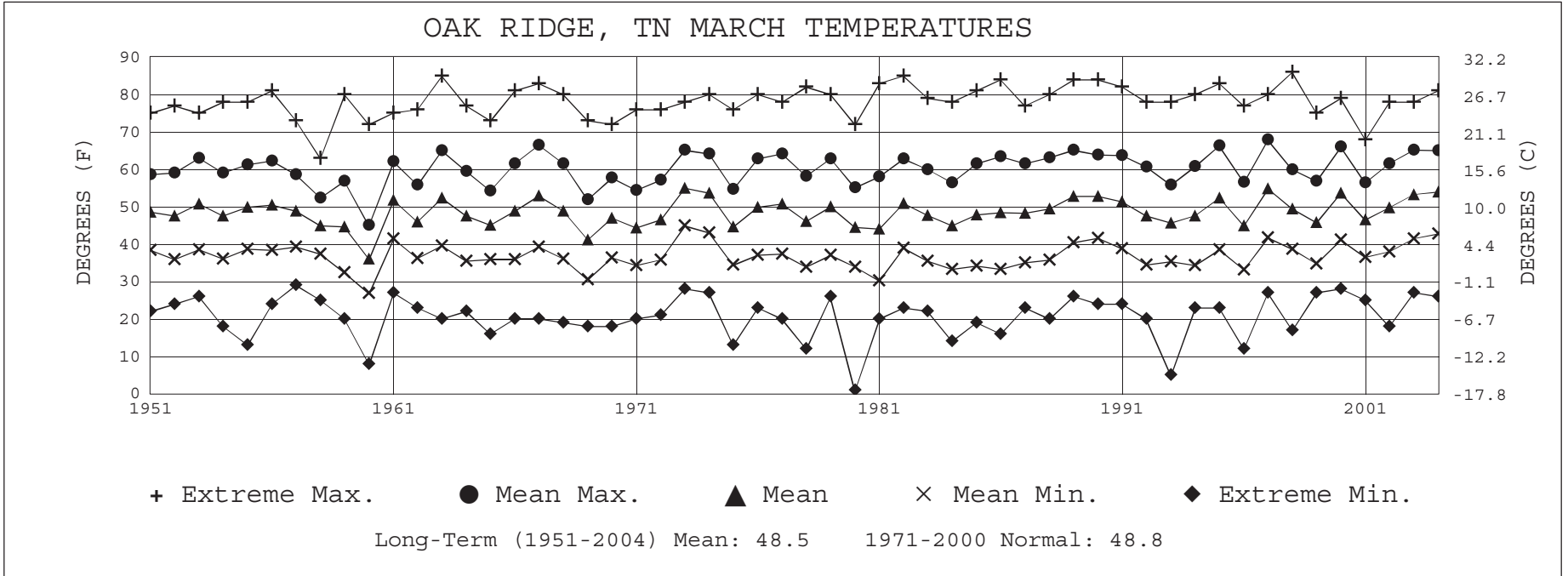
# OAK RIDGE, TN

MARCH 2004

OQT

WBAN # 53868

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)	
	SKY COVER	CEILING		OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		SKY COVER	CEILING		OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0633								MAR 25				SUNSET: 1853				SUNRISE: 0624								MAR 31				SUNSET: 1858			
01	CLR	NC			10.00			57	31	45	37	0	00	29.45	30.43	01	OVC	065			10.00	-RA	50	46	48	86	0	00	28.95	29.92	
04	CLR	NC			10.00			49	35	43	59	0	00	29.47	30.45	04	OVC	060			10.00		48	44	46	86	0	00	28.93	29.89	
07	CLR	NC			10.00			46	36	42	68	0	00	29.52	30.51	07	OVC	030			10.00		48	41	45	77	0	00	28.93	29.90	
10	CLR	NC			10.00			63	35	50	35	5	VR	29.55	30.53	10	OVC	045			10.00		48	38	43	68	6	VR	28.94	29.92	
13	CLR	NC			10.00			71	45	57	39	6	VR	29.50	30.48	13	BKN	035			10.00		47	38	43	71	0	00	28.93	29.91	
16	CLR	NC			10.00			74	42	57	32	10	20	29.44	30.40	16	BKN	050			10.00		51	34	43	52	7	34	28.90	29.88	
19	CLR	NC			10.00			70	45	56	41	0	00	29.43	30.40	19	OVC	060			10.00		50	28	41	43	7	VR	28.91	29.89	
22	CLR	NC			10.00			60	46	53	60	3	23	29.45	30.42	22	OVC	085			10.00		47	31	40	54	7	VR	28.94	29.93	
SUNRISE: 0631								MAR 26				SUNSET: 1854				3-HOURLY OBSERVATION NOTES															
01	CLR	NC			10.00			57	46	51	67	0	00	29.45	30.41	Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8, SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, VV = Vertical Visibility = 8/8. Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC= No ceiling detected. & = Original observation contained additional weather elements. See page 3 for additional notes.															
04	CLR	NC			10.00			56	46	51	70	0	00	29.45	30.42																
07	CLR	NC			10.00			54	45	49	72	3	22	29.48	30.46																
10	CLR	NC			10.00			67	49	57	53	9	23	29.48	30.45																
13	CLR	NC			10.00			73	48	59	41	10	21	29.43	30.39																
16	CLR	NC			10.00			76	48	60	37	5	VR	29.37	30.32																
19	CLR	NC			10.00			72	48	59	43	5	24	29.35	30.32																
22	CLR	NC			10.00			64	49	56	58	0	00	29.37	30.32																
SUNRISE: 0630								MAR 27				SUNSET: 1855				SUMMARY BY HOUR															
01	CLR	NC			10.00			58	50	54	75	0	00	29.36	30.32	AVERAGES															
04	CLR	NC			10.00			57	48	52	72	0	00	29.36	30.31	RESULTANT WIND (MPH)															
07	FEW	NC			10.00			54	48	51	80	0	00	29.39	30.35	HOUR (LST)															
10	OVC	065			10.00			67	50	58	55	7	27	29.39	30.35	CEILOMETER															
13	CLR	NC			10.00			76	51	61	42	6	VR	29.32	30.27	EFF CLD AMT															
16	CLR	NC			10.00			77	49	61	37	7	VR	29.25	30.20	DRY BULB															
19	CLR	NC			10.00			75	48	60	39	5	19	29.23	30.19	DEW POINT															
22	CLR	NC			10.00			62	50	55	65	0	00	29.24	30.20	WET BULB															
SUNRISE: 0628								MAR 28				SUNSET: 1856				RELATIVE HUMIDITY															
01	CLR	NC			10.00			57	50	53	78	0	00	29.24	30.19	PRESSURE (INCHES, HG)															
04	CLR	NC			10.00			54	50	52	87	0	00	29.24	30.20	STATION															
07	CLR	NC			10.00			53	50	51	89	0	00	29.28	30.24	SEA LEVEL															
10	SCT	NC			10.00			66	53	59	63	0	00	29.28	30.24	VISIBILITY (MILES)															
13	FEW	NC			10.00			77	50	61	39	5	VR	29.22	30.17	WIND SPEED (MPH)															
16	CLR	NC			10.00			80	48	62	33	5	VR	29.16	30.11	SPEED															
19	CLR	NC			10.00			76	49	60	39	0	00	29.14	30.10	DIRECTION															
22	CLR	NC			10.00			63	51	56	65	0	00	29.17	30.13																
SUNRISE: 0627								MAR 29				SUNSET: 1857																			
01	OVC	085			10.00			60	52	56	75	0	00	29.17	30.11																
04	BKN	075			10.00			58	52	55	81	0	00	29.17	30.12																
07	CLR	NC			10.00			56	52	54	87	0	00	29.22	30.17																
10	FEW	NC			10.00			70	53	60	55	9	19	29.22	30.17																
13	SCT	NC			10.00			76	54	63	47	9	19	29.16	30.11																
16	FEW	NC			10.00			76	51	61	42	9	22	29.09	30.04																
19	CLR	NC			10.00			72	50	59	46	7	VR	29.08	30.03																
22	OVC	060			10.00			66	55	60	68	5	VR	29.08	30.03																
SUNRISE: 0625								MAR 30				SUNSET: 1857																			
01	OVC	050			4.00	-RA BR		60	58	59	93	7	VR	29.06	30.01																
04	OVC	040			6.00	RA BR		54	52	53	93	9	22	29.07	30.02																
07	OVC	012			10.00			52	51	52	97	6	26	29.08	30.04																
10	BKN	034			10.00			56	49	52	77	7	VR	29.09	30.05																
13	SCT	NC			10.00			64	43	53	46	9	22	29.02	29.97																
16	BKN	085			10.00			64	33	49	32	12	27	28.95	29.91																
19	BKN	090			10.00			58	35	47	42	6	VR	28.97	29.94																
22	OVC	080			10.00			52	43	48	72	0	00	28.99	29.96																





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DIRECTOR

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