



# DECEMBER 2003

## 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 #: -

DECEMBER 2003  
 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	57	37	47	4	20	36	18	0					0.00	29.39	30.39	2.4	36	4.6	17	06	14	01	01					
02	50	26	38	-5	17	31	27	0					0.00	29.50	30.52	1.3	04	2.5	18	01	13	35	02					
03	49	36	43	1	22	35	22	0	RA				0.08	29.38	30.39	2.4	06	3.6	14	06	12	06	03					
04	43	37	40	-2	39	40	25	0	RA BR				0.83	29.20	30.20	1.4	05	2.4	10	26	8	05	04					
05	43	37	40	-2	37	39	25	0	RA BR				0.12	29.02	30.01	2.5	24	5.6	21	27	15	28	05					
06	40	28	34	-7	31	34	31	0	RA BR				T	29.22	30.23	1.0	35	2.1	13	01	10	01	06					
07	48	27	38	-3	29	33	27	0	FG+ FZFG BR				0.00	29.23	30.25	0.5	17	1.1	8	27	6	13	07					
08	51	29	40	-1	32	35	25	0	FG+ FZFG BR				0.00	29.16	30.17	0.2	32	1.0	10	26	7	26	08					
09	56	30	43	2	36	39	22	0	FG+ FZFG BR				0.00	29.11	30.12	0.2	20	.5	7	21	6	20	09					
10	53	36	45	5	40	43	20	0	RA FG BR				0.94	28.71	29.69	4.9	25	6.9	23	28	16	27	10					
11	39	29	34	-6	28	32	31	0					0.00	29.03	30.04	4.2	25	5.9	20	28	13	26	11					
12	46	24	35	-5	24	30	30	0	FG+ FZFG BR				0.00	29.23	30.25	2.2	06	2.8	12	06	9	06	12					
13	42	33	38	-2	27	34	27	0	RA				0.08	29.15	30.15	5.2	06	5.5	15	06	10	07	13					
14	43	37	40	0	36	38	25	0	RA BR				0.50	28.99	29.98	1.8	24	3.8	18	29	12	29	14					
15	51	29	40	1	31	36	25	0	BR				0.00	29.16	30.17	0.1	22	1.2	9	26	7	27	15					
16	57	30	44	5	38	42	21	0	RA BR				0.27	29.03	30.02	3.8	26	5.2	22	27	15	27	16					
17	41	31	36	-3	24	31	29	0	RA				0.13	29.04	30.05	4.5	27	5.2	21	27	16	27	17					
18	42	31	37	-2	28	33	28	0	RA SN BR				0.07	28.96	29.97	3.8	26	4.9	25	27	16	27	18					
19	36	28	32	-7	25	30	33	0	SN BR				0.02	29.06	30.08	5.0	26	7.3	23	27	16	25	19					
20	36	23	30*	-8	18	25	35	0					0.00	29.32	30.36	0.7	26	2.3	9	31	7	27	20					
21	47	20*	34	-4	20	27	31	0	BR				0.00	29.42	30.46	1.0	24	2.0	14	22	10	22	21					
22	55	28	42	4	28	35	23	0					0.00	29.29	30.30	2.4	24	3.5	14	21	10	22	22					
23	59	30	45	7	39	42	20	0	RA BR				0.42	28.99	29.99	1.2	25	2.4	16	29	10	19	23					
24	47	32	40	2	26	32	25	0	RA				0.03	29.05	30.05	2.8	31	5.2	16	28	13	27	24					
25	41	26	34	-4	20	28	31	0					0.00	29.25	30.28	1.0	26	2.5	14	17	9	19	25					
26	48	22	35	-2	22	29	30	0					0.00	29.40	30.43	2.1	05	2.7	13	07	10	06	26					
27	56	25	41	4	25	32	24	0					0.00	29.34	30.36	0.8	07	1.0	7	12	6	05	27					
28	58	25	42	5	28	35	23	0					0.00	29.28	30.29	0.3	20	.9	9	24	7	22	28					
29	66*	33	50*	13	38	44	15	0	RA BR				0.16	29.08	30.07	3.5	21	4.4	32*	21	25*	20	29					
30	49	29	39	2	30	35	26	0	RA				0.07	29.32	30.32	0.2	25	2.1	30	29	20	29	30					
31	56	25	41	4	27	33	24	0	FG+ FZFG BR				0.00	29.40	30.43	1.4	21	1.9	16	21	13	22	31					
48.5 29.5 39.0 ■■										28.6 34.5 25.7 0.0 < MONTHLY AVERAGES TOTALS-->				3.72 29.18 30.19 0.9 27 3.3 <-- MONTHLY AVERAGES														
- .5 - .3 - .4 ■■										<-----DEPARTURE FROM NORMAL----->				-1.70				SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.94 DATE :10				SEA LEVEL PRESSURE				DATE TIME											
MONTHLY TOTAL DEPARTURE									GREATEST 24-HR SNOWFALL:				MAXIMUM				: 30.60 02 0853											
SEASON TO DATE TOTAL DEPARTURE									GREATEST SNOW DEPTH:				MINIMUM				: 29.52 10 1353											
HEATING: 798 11 1362 -203									NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32 : 23				PRECIPITATION ≥ 0.01 INCH : 14							
COOLING: 0 0 1343 42													MAXIMUM TEMP ≤ 32 : 0				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 8							
																	THUNDERSTORMS : 0				HEAVY FOG : 5				SNOWFALL ≥ 1.0 INCH :			

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

# OAK RIDGE, TN

DECEMBER 2003 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			0.00	
02													02												02			0.00	
03													03												03			0.08	
04	0.07	0.06	0.02	0.02	0.02	0.03	0.05	0.01	0.14	0.16	0.12	0.05	04	0.03	0.01	0.01	0.01		T		0.01		T	0.01	0.01	0.06	0.83		
05	0.01	0.01	0.01						T	0.01		T	05	0.01	0.01	0.06			T					05			0.12		
06											T		06												06			T	
07													07												07			0.00	
08													08												08			0.00	
09													09												09			0.00	
10	T	T	T	0.02	0.05	T	0.01	0.06	0.22	0.34	0.12	0.12	10	T		T							T	10			0.94		
11													11												11			0.00	
12													12												12			0.00	
13													13												13			0.08	
14	0.10	0.09	0.09	0.03	0.09	0.01	0.02	0.03	0.01	0.01	0.01	0.01	14	T				T	0.05	0.02	T	0.01		T	14			0.50	
15													15												15			0.00	
16													16								T	0.01	0.09	0.12	0.02	0.03	16		0.27
17	0.06	0.04	0.03										17												17			0.13	
18													18	T	T	0.01	T			0.01	0.01	T	T	0.03	0.01	T	18		0.07
19	T	T	T	T	T	T	T						19	T	T	0.01	T			T	T	T	T		19			0.02	
20												0.01	20												20			0.00	
21													21												21			0.00	
22													22												22			0.00	
23													23												23			0.42	
24		0.02	0.01	T									24								0.05	0.06	0.13	0.09	0.07	0.01	T	0.01	0.03
25													25												25			0.00	
26													26												26			0.00	
27													27												27			0.00	
28													28												28			0.00	
29													29												29			0.16	
30	0.04	0.03	T										30								T	T	0.01	0.02	T	0.01	0.12	0.07	
31													31												31			0.00	

## MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.08	.13	.18	.21	.27	.33	.38	.43	.54	.62	.66	.71
Ending Date	10	10	10	10	10	10	10	10	10	10	10	10
Ending Time (Hour/Min)	0950	0952	0952	0952	0952	1003	1010	0947	1006	1006	1034	1108

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 DECEMBER 2003

Ceilometer (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							10.00	10.00	
03							9.00	10.00	
04							2.00	10.00	
05							1.75	10.00	
06							5.00	10.00	
07							<.25	10.00	
08							<.25	10.00	
09							.25	10.00	
10							.50	10.00	
11							9.00	10.00	
12							.25	10.00	
13							7.00	10.00	
14							1.75	10.00	
15							5.00	10.00	
16							2.50	10.00	
17							10.00	10.00	
18							1.50	10.00	
19							.75	10.00	
20							10.00	10.00	
21							2.50	10.00	
22							10.00	10.00	
23							2.00	10.00	
24							9.00	10.00	
25							10.00	10.00	
26							7.00	10.00	
27							10.00	10.00	
28							9.00	10.00	
29							2.50	10.00	
30							8.00	10.00	
31							.25	10.00	
<b>MONTHLY AVGS</b>							5.71	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									
5            12            17									

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

DECEMBER 2003

QQT

WBAN # 53868

HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)							
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)		DIRECTION TENS OF DEG	STATION		SEA LEVEL	OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		
<b>SUNRISE: 0729</b>				<b>DEC 01</b>				<b>SUNSET: 1723</b>				<b>SUNRISE: 0734</b>				<b>DEC 07</b>				<b>SUNSET: 1723</b>									
01	CLR	NC			10.00	41	28	36	60	7	23	29.27	30.27	01	CLR	NC			10.00	BR	28	26	27	92	0	00	29.26	30.29	
04	CLR	NC			10.00	42	26	36	53	5	24	29.29	30.28	04	OVC	043			7.00	BR	30	28	29	92	0	00	29.25	30.27	
07	CLR	NC			10.00	39	27	34	62	5	VR	29.31	30.32	07	BKN	044			5.00	BR	28	26	27	92	0	00	29.29	30.32	
10	CLR	NC			10.00	49	30	41	48	0	00	29.38	30.38	10	FEW	NC			4.00	BR	32	32	32	100	0	00	29.29	30.32	
13	CLR	NC			10.00	55	14	40	20	6	VR	29.38	30.38	13	CLR	NC			10.00	BR	45	30	39	56	5	VR	29.22	30.24	
16	CLR	NC			10.00	54	14	39	20	8	36	29.40	30.39	16	CLR	NC			10.00	BR	47	30	40	52	3	09	29.19	30.20	
19	CLR	NC			10.00	41	19	33	41	0	00	29.45	30.47	19	CLR	NC			10.00	BR	37	32	35	82	0	00	29.19	30.21	
22	CLR	NC			10.00	41	11	31	29	6	36	29.50	30.52	22	CLR	NC			10.00	BR	32	30	31	92	0	00	29.18	30.21	
<b>SUNRISE: 0730</b>				<b>DEC 02</b>				<b>SUNSET: 1723</b>				<b>SUNRISE: 0735</b>				<b>DEC 08</b>				<b>SUNSET: 1723</b>									
01	CLR	NC			10.00	40	6	30	24	9	35	29.54	30.55	01	VV	001			1.00	BR	30	28	29	92	0	00	29.17	30.18	
04	CLR	NC			10.00	29	17	25	61	3	21	29.53	30.55	04	VV	001			0.25	FZFG	30	30	30	100	0	00	29.18	30.19	
07	CLR	NC			10.00	27	18	24	69	0	00	29.56	30.59	07	VV	001			0.25	FZFG	30	29	30	96	0	00	29.21	30.23	
10	CLR	NC			10.00	37	21	31	52	0	00	29.57	30.60	10	VV	001			0.25	FG	32	32	32	100	0	00	29.22	30.25	
13	CLR	NC			10.00	47	18	36	31	5	VR	29.51	30.53	13	CLR	NC			10.00	BR	47	32	40	56	3	VR	29.14	30.15	
16	CLR	NC			10.00	50	12	36	22	5	09	29.45	30.47	16	CLR	NC			10.00	BR	50	31	42	48	5	27	29.10	30.11	
19	CLR	NC			10.00	39	21	32	48	0	00	29.44	30.47	19	CLR	NC			10.00	BR	41	34	38	76	0	00	29.12	30.14	
22	CLR	NC			10.00	35	21	30	57	3	05	29.43	30.45	22	CLR	NC			10.00	BR	36	33	35	89	0	00	29.12	30.14	
<b>SUNRISE: 0731</b>				<b>DEC 03</b>				<b>SUNSET: 1723</b>				<b>SUNRISE: 0736</b>				<b>DEC 09</b>				<b>SUNSET: 1723</b>									
01	OVC	110			10.00	38	18	31	44	5	04	29.42	30.42	01	CLR	NC			9.00	BR	32	30	31	92	0	00	29.14	30.15	
04	BKN	120			10.00	40	17	32	40	6	05	29.41	30.41	04	VV	001			1.00	BR	31	30	31	96	0	00	29.17	30.17	
07	SCT	NC			10.00	39	18	32	43	5	04	29.42	30.43	07	OVC	041			7.00	BR	32	32	32	100	0	00	29.21	30.22	
10	FEW	NC			10.00	42	19	34	40	7	08	29.45	30.46	10	OVC	043			9.00	BR	39	35	37	86	0	00	29.21	30.23	
13	CLR	NC			10.00	48	19	37	32	0	00	29.39	30.39	13	CLR	NC			10.00	BR	51	33	43	50	0	00	29.14	30.14	
16	CLR	NC			10.00	49	21	38	33	0	00	29.35	30.35	16	CLR	NC			10.00	BR	55	39	47	55	5	20	29.07	30.06	
19	SCT	NC			10.00	44	28	38	53	0	00	29.32	30.32	19	BKN	040			10.00	BR	48	41	45	77	0	00	29.04	30.03	
22	BKN	080			10.00	41	31	37	67	5	22	29.34	30.35	22	OVC	048			10.00	BR	47	42	45	83	0	00	28.99	29.98	
<b>SUNRISE: 0731</b>				<b>DEC 04</b>				<b>SUNSET: 1723</b>				<b>SUNRISE: 0736</b>				<b>DEC 10</b>				<b>SUNSET: 1723</b>									
01	OVC	045			6.00	RA BR	39	37	38	93	5	07	29.31	30.31	01	OVC	060			10.00	-RA	45	42	44	90	0	00	28.92	29.91
04	OVC	035			10.00	-RA	37	36	37	96	5	05	29.29	30.29	04	OVC	045			5.00	RA BR	45	43	44	93	0	00	28.84	29.81
07	OVC	028			7.00	-RA	38	37	38	97	3	05	29.26	30.26	07	OVC	080			5.00	-RA BR	46	44	45	93	3	VR	28.70	29.67
10	OVC	021			2.50	+RA BR	39	38	39	96	5	04	29.23	30.24	10	OVC	017			0.50	+RA FG	49	48	48	97	3	VR	28.63	29.60
13	OVC	007			7.00		41	39	40	93	3	03	29.20	30.21	13	BKN	028			10.00		52	49	50	89	10	21	28.58	29.54
16	OVC	009			6.00	-RA BR	42	41	42	96	0	00	29.15	30.16	16	OVC	025			10.00		48	40	44	74	12	26	28.61	29.58
19	OVC	006			5.00	BR	42	41	42	96	3	07	29.12	30.12	19	OVC	032			10.00		41	31	37	67	12	27	28.71	29.69
22	OVC	004			2.50	BR	42	41	42	96	3	VR	29.10	30.10	22	OVC	031			10.00		38	29	34	70	13	27	28.77	29.76
<b>SUNRISE: 0732</b>				<b>DEC 05</b>				<b>SUNSET: 1723</b>				<b>SUNRISE: 0737</b>				<b>DEC 11</b>				<b>SUNSET: 1723</b>									
01	OVC	005			3.00	BR	40	39	40	97	5	VR	29.07	30.07	01	OVC	022			10.00		36	28	33	73	10	26	28.83	29.82
04	OVC	003			2.50	BR	41	40	41	96	6	VR	29.03	30.02	04	OVC	024			10.00		35	27	32	72	8	25	28.88	29.87
07	OVC	003			4.00	BR	41	40	41	96	3	VR	29.01	30.00	07	OVC	022			10.00		34	27	31	76	8	27	28.97	29.97
10	OVC	005			8.00		42	40	41	92	6	VR	29.01	30.00	10	OVC	036			10.00		36	29	33	76	6	VR	29.05	30.06
13	OVC	013			3.00	-RA BR	43	41	42	93	7	22	28.95	29.95	13	OVC	025			10.00		39	28	35	65	7	VR	29.05	30.05
16	OVC	048			10.00		41	34	38	76	8	27	28.96	29.96	16	OVC	029			10.00		38	28	34	68	8	26	29.08	30.09
19	OVC	065			10.00		38	33	36	83	5	23	29.03	30.03	19	OVC	027			10.00		36	28	33	73	5	23	29.13	30.15
22	OVC	031			10.00		38	31	35	76	6	27	29.07	30.07	22	FEW	NC			10.00		31	27	29	85	0	00	29.16	30.18
<b>SUNRISE: 0733</b>				<b>DEC 06</b>				<b>SUNSET: 1723</b>				<b>SUNRISE: 0738</b>				<b>DEC 12</b>				<b>SUNSET: 1723</b>									
01	OVC	025			10.00		37	30	34	76	6	30	29.10	30.11	01	CLR	NC			8.00		28	25	27	88	0	00	29.18	30.20
04	OVC	028			10.00		36	31	34	82	3	VR	29.13	30.14	04	CLR	NC			8.00		26	23	25	88	0	00	29.20	30.23
07	OVC	024			10.00		36	32	34	86	0	00	29.15	30.17	07	OVC	001			0.25	FZFG	25	23	24	92	0	00	29.22	30.25
10	OVC	019			10.00		37	34	36	89	0	00	29.22	30.24	10	CLR	NC			10.00		32	28	31	85	7	08	29.27	30.30
13	OVC	015			10.00		38	33	36	83	5	36	29.24	30.26	13	CLR	NC			10.00		41	24	35	51	0	00	29.24	30.26
16	OVC	035			10.00		40	31	36	70	3	35	29.26	30.27	16	CLR	NC			10.00		46	21	36	37	3	VR	29.22	30.24
19	CLR	NC			10.00		35	30	33	82	0	00	29.28	30.29	19	FEW	NC			10.00		38	24	33	57	5	05	29.25	30.28
22	CLR	NC			6.00	BR	30	28	29	92	0	00	29.27	30.29	22	CLR	NC			10.00		35	23	31	61	6	05	29.24	30.27

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

DECEMBER 2003

QQT

WBAN # 53868

HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)					
	SKY COVER	CEILING 100'S OF FT			OBSERVATION TIME (LST)	EFF CLD AMT Oktas	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL			SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Oktas	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
<b>SUNRISE: 0739    DEC 13    SUNSET: 1724</b>																													
01	CLR	NC	10.00		33	24	30	70	5	05	29.22	30.24	01	OVC	042	8.00	-SN	33	27	31	78	8	25	29.01	30.02				
04	OVC	090	10.00		37	24	32	60	6	03	29.24	30.24	04	OVC	030	10.00		33	27	31	78	8	25	29.02	30.02				
07	OVC	095	10.00		37	24	32	60	8	07	29.23	30.24	07	OVC	043	10.00		33	26	30	75	7	VR	29.03	30.04				
10	OVC	090	10.00		39	23	33	53	3	06	29.26	30.27	10	OVC	033	10.00		34	27	31	76	7	21	29.06	30.07				
13	FEW	NC	10.00		41	22	34	47	7	06	29.18	30.19	13	OVC	028	4.00	-SN	35	27	32	72	12	28	29.01	30.02				
16	BKN	100	10.00		41	25	35	53	3	VR	29.12	30.13	16	OVC	037	10.00		34	23	30	64	7	VR	29.05	30.06				
19	OVC	070	7.00	-RA	37	35	36	93	3	04	29.04	30.05	19	OVC	041	4.00	-SN BR	30	28	29	92	5	VR	29.10	30.12				
22	OVC	032	10.00		39	36	38	89	5	09	28.99	29.99	22	BKN	070	9.00		29	20	26	69	7	29	29.16	30.19				
<b>SUNRISE: 0739    DEC 14    SUNSET: 1724</b>																													
01	OVC	028	4.00	RA BR	39	38	39	96	0	00	28.94	29.94	01	OVC	050	10.00		29	14	24	54	5	29	29.17	30.20				
04	OVC	008	2.00	-RA BR	40	39	40	97	0	00	28.95	29.95	04	OVC	039	10.00		27	20	25	75	0	00	29.20	30.22				
07	OVC	004	3.00	-RA BR	40	39	40	97	0	00	28.95	29.94	07	OVC	036	10.00		25	18	23	75	0	00	29.26	30.29				
10	OVC	006	2.00	-RA BR	41	39	40	93	3	23	28.97	29.96	10	CLR	NC	10.00		28	17	25	63	0	00	29.34	30.37				
13	OVC	004	6.00	BR	42	41	42	96	6	21	28.93	29.92	13	FEW	NC	10.00		33	18	28	54	3	VR	29.35	30.37				
16	OVC	026	10.00		41	35	38	79	8	25	28.97	29.96	16	CLR	NC	10.00		35	18	29	50	5	VR	29.35	30.38				
19	BKN	024	10.00		38	32	35	79	7	27	29.04	30.04	19	CLR	NC	10.00		30	18	26	61	0	00	29.41	30.45				
22	OVC	027	10.00		37	30	34	76	6	VR	29.09	30.09	22	CLR	NC	10.00		25	20	23	81	0	00	29.44	30.47				
<b>SUNRISE: 0740    DEC 15    SUNSET: 1724</b>																													
01	OVC	025	10.00		37	31	35	79	7	27	29.11	30.12	01	CLR	NC	9.00		22	20	21	92	0	00	29.45	30.49				
04	OVC	021	10.00		36	30	34	79	3	VR	29.13	30.14	04	CLR	NC	9.00		21	19	20	92	0	00	29.45	30.49				
07	CLR	NC	6.00	BR	30	28	29	92	0	00	29.18	30.20	07	CLR	NC	8.00		20	18	19	92	0	00	29.48	30.53				
10	CLR	NC	10.00		37	29	34	73	3	VR	29.24	30.26	10	CLR	NC	10.00		27	22	25	81	0	00	29.52	30.58				
13	CLR	NC	10.00		46	33	40	61	0	00	29.19	30.19	13	CLR	NC	10.00		41	20	33	43	6	VR	29.45	30.47				
16	CLR	NC	10.00		50	33	42	52	3	07	29.12	30.12	16	CLR	NC	10.00		46	18	36	33	5	VR	29.37	30.40				
19	CLR	NC	10.00		41	34	38	76	0	00	29.12	30.14	19	CLR	NC	10.00		35	22	30	59	5	22	29.35	30.39				
22	CLR	NC	9.00		35	32	34	89	0	00	29.12	30.14	22	CLR	NC	10.00		35	19	29	52	5	23	29.35	30.38				
<b>SUNRISE: 0741    DEC 16    SUNSET: 1724</b>																													
01	CLR	NC	7.00		32	31	32	96	0	00	29.10	30.11	01	CLR	NC	10.00		28	21	26	75	5	23	29.35	30.37				
04	CLR	NC	5.00	BR	30	28	29	92	0	00	29.11	30.11	04	CLR	NC	10.00		29	21	26	72	3	23	29.37	30.38				
07	CLR	NC	10.00		43	33	39	68	12	27	29.14	30.14	07	BKN	032	10.00		33	22	29	64	0	00	29.37	30.39				
10	OVC	036	10.00		48	36	43	63	7	24	29.14	30.14	10	OVC	028	10.00		40	24	34	53	3	VR	29.37	30.38				
13	OVC	034	10.00		51	38	45	61	7	27	29.04	30.04	13	FEW	NC	10.00		49	27	40	43	8	25	29.27	30.28				
16	OVC	049	10.00		55	41	48	59	5	27	28.94	29.93	16	CLR	NC	10.00		54	34	45	47	6	23	29.22	30.23				
19	OVC	039	9.00	-RA	53	44	49	72	0	00	28.89	29.87	19	CLR	NC	10.00		46	36	42	68	3	25	29.23	30.24				
22	OVC	026	7.00	-RA	49	46	47	90	9	27	28.90	29.88	22	CLR	NC	10.00		40	35	38	83	0	00	29.21	30.22				
<b>SUNRISE: 0741    DEC 17    SUNSET: 1725</b>																													
01	OVC	036	10.00	-RA	40	38	39	93	6	22	28.96	29.95	01	CLR	NC	10.00		35	32	34	89	0	00	29.14	30.14				
04	OVC	024	10.00		35	31	33	85	9	27	29.00	29.98	04	CLR	NC	8.00		31	30	31	96	0	00	29.10	30.10				
07	BKN	031	10.00		33	24	30	70	3	VR	29.05	30.04	07	CLR	NC	10.00		33	31	32	92	0	00	29.08	30.08				
10	CLR	NC	10.00		35	23	31	61	7	28	29.08	30.08	10	SCT	NC	10.00		45	35	41	68	5	VR	29.07	30.06				
13	CLR	NC	10.00		38	22	32	53	8	25	29.03	30.03	13	BKN	060	10.00		58	41	49	54	6	VR	28.97	29.95				
16	CLR	NC	10.00		39	19	32	45	10	25	29.03	30.03	16	OVC	050	10.00		55	42	49	62	3	28	28.91	29.90				
19	CLR	NC	10.00		34	21	29	59	3	23	29.09	30.11	19	OVC	041	2.50	RA BR	50	49	49	96	3	VR	28.92	29.91				
22	CLR	NC	10.00		31	23	28	72	0	00	29.08	30.11	22	OVC	012	10.00		50	49	49	96	0	00	28.88	29.86				
<b>SUNRISE: 0742    DEC 18    SUNSET: 1725</b>																													
01	CLR	NC	10.00		31	23	28	72	3	22	29.05	30.06	01	OVC	014	10.00		45	43	44	93	3	VR	28.89	29.86				
04	OVC	080	10.00		32	24	29	73	0	00	29.02	30.03	04	OVC	023	10.00		38	35	37	89	3	02	28.94	29.93				
07	OVC	100	10.00		32	28	30	85	0	00	28.96	29.97	07	OVC	019	10.00		34	29	32	82	3	35	29.03	30.03				
10	OVC	048	10.00		35	27	32	72	6	VR	28.93	29.95	10	OVC	027	10.00		34	24	30	67	6	36	29.09	30.09				
13	OVC	030	9.00	-SN	38	31	35	76	7	VR	28.88	29.89	13	OVC	031	10.00		36	22	31	57	3	VR	29.05	30.05				
16	OVC	029	10.00		42	31	37	65	9	26	28.91	29.91	16	FEW	NC	10.00		38	22	32	53	7	26	29.07	30.07				
19	OVC	045	10.00		39	32	36	76	10	26	28.96	29.96	19	BKN	042	10.00		34	20	29	56	8	26	29.11	30.14				
22	OVC	019	10.00	-RA	36	31	34	82	8	27	28.98	29.99	22	OVC	041	10.00		33	19	28	56	8	27	29.13	30.16				

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

DECEMBER 2003

QQT

WBAN # 53868

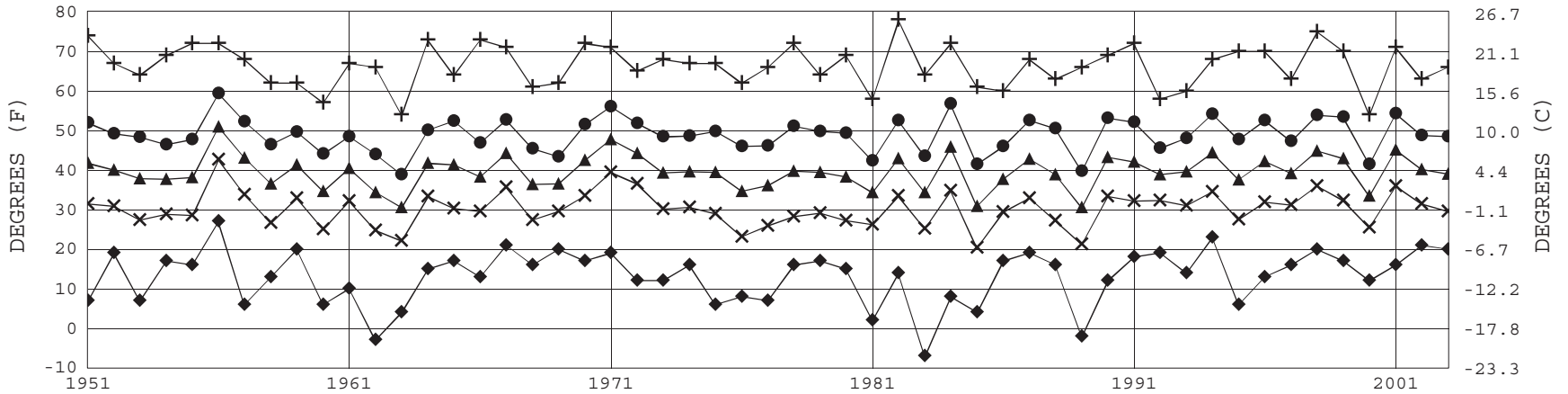
HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		OBSERVATION TIME (LST)	EFF CLD AMT Okltas	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		OBSERVATION TIME (LST)	EFF CLD AMT Okltas	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)	
	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)					SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)		SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL												
SUNRISE: 0745										DEC 25				SUNSET: 1729				SUNRISE: 0747										DEC 31				SUNSET: 1733			
01	OVC	041						10.00		32	17	27	54	5	VR	29.14	30.16	01	CLR	NC						10.00		29	26	28	89	0	00	29.38	30.40
04	OVC	039						10.00		32	18	27	56	5	25	29.17	30.19	04	CLR	NC					9.00		27	25	26	92	0	00	29.38	30.40	
07	OVC	031						10.00		31	21	28	67	3	27	29.20	30.22	07	OVC	001					0.50	FZFG	26	25	26	96	0	00	29.42	30.45	
10	CLR	NC						10.00		32	18	27	56	0	00	29.28	30.31	10	CLR	NC					10.00		32	29	31	88	0	00	29.47	30.51	
13	CLR	NC						10.00		38	20	31	48	6	20	29.26	30.28	13	CLR	NC					10.00		51	27	41	39	10	22	29.41	30.42	
16	CLR	NC						10.00		41	19	33	41	5	31	29.26	30.27	16	CLR	NC					10.00		55	26	43	33	9	19	29.37	30.38	
19	CLR	NC						10.00		33	22	29	64	0	00	29.30	30.33	19	CLR	NC					10.00		42	30	37	62	0	00	29.41	30.43	
22	CLR	NC						10.00		28	23	26	81	0	00	29.33	30.37	22	CLR	NC					10.00		35	29	33	78	0	00	29.42	30.44	
SUNRISE: 0746										DEC 26				SUNSET: 1729				<h3>3-HOURLY OBSERVATION NOTES</h3> <p>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.                      &amp; = Original observation contained additional weather elements.                      See page 3 for additional notes.</p>																	
01	CLR	NC						8.00		26	23	25	88	0	00	29.33	30.36																		
04	CLR	NC						7.00		23	21	22	92	0	00	29.38	30.41																		
07	CLR	NC						8.00		24	21	23	88	0	00	29.41	30.45																		
10	CLR	NC						10.00		32	26	30	79	6	05	29.46	30.50																		
13	CLR	NC						10.00		43	22	35	43	7	06	29.41	30.43																		
16	CLR	NC						10.00		48	20	37	33	6	02	29.38	30.40																		
19	CLR	NC						10.00		37	21	31	52	0	00	29.40	30.43																		
22	CLR	NC						10.00		30	23	28	75	0	00	29.39	30.42																		
SUNRISE: 0746										DEC 27				SUNSET: 1730																					
01	CLR	NC						10.00		29	25	28	85	3	06	29.38	30.40																		
04	CLR	NC						10.00		28	25	27	88	3	06	29.36	30.37																		
07	CLR	NC						10.00		27	25	26	92	0	00	29.37	30.40																		
10	CLR	NC						10.00		35	26	32	70	5	06	29.41	30.44																		
13	CLR	NC						10.00		50	23	39	35	3	17	29.34	30.35																		
16	CLR	NC						10.00		56	19	41	24	0	00	29.31	30.31																		
19	CLR	NC						10.00		41	25	35	53	0	00	29.30	30.32																		
22	CLR	NC						10.00		33	26	30	75	0	00	29.29	30.32																		
SUNRISE: 0746										DEC 28				SUNSET: 1730																					
01	CLR	NC						10.00		29	25	28	85	0	00	29.28	30.29																		
04	CLR	NC						10.00		27	24	26	89	0	00	29.31	30.31																		
07	CLR	NC						10.00		26	24	25	92	0	00	29.33	30.35																		
10	CLR	NC						10.00		35	30	33	82	0	00	29.37	30.40																		
13	CLR	NC						10.00		53	27	42	37	5	VR	29.28	30.29																		
16	CLR	NC						10.00		57	28	44	33	0	00	29.25	30.25																		
19	CLR	NC						10.00		43	31	38	63	0	00	29.25	30.27																		
22	CLR	NC						10.00		41	31	37	67	0	00	29.22	30.23																		
SUNRISE: 0747										DEC 29				SUNSET: 1731																					
01	CLR	NC						10.00		36	30	34	79	0	00	29.22	30.22																		
04	CLR	NC						10.00		38	29	34	70	3	VR	29.21	30.20																		
07	FEW	NC						10.00		35	30	33	82	0	00	29.17	30.19																		
10	OVC	046						10.00		41	33	38	74	0	00	29.19	30.20																		
13	SCT	NC						10.00		62	41	51	46	8	21	29.06	30.03																		
16	OVC	060						10.00		63	43	53	48	14	20	29.01	29.99																		
19	OVC	041						10.00	-RA	59	46	52	62	6	24	28.97	29.95																		
22	OVC	037						7.00	-RA	53	51	52	93	0	00	28.91	29.89																		
SUNRISE: 0747										DEC 30				SUNSET: 1732																					
01	OVC	060						10.00	-RA	42	35	39	76	9	27	29.07	30.04																		
04	BKN	040						10.00		38	35	37	89	0	00	29.22	30.21																		
07	CLR	NC						10.00		37	25	32	62	7	36	29.29	30.29																		
10	CLR	NC						10.00		40	28	35	63	5	VR	29.37	30.36																		
13	CLR	NC						10.00		45	28	38	52	3	21	29.34	30.34																		
16	CLR	NC						10.00		48	26	39	42	5	16	29.35	30.35																		
19	CLR	NC						10.00		39	30	35	70	0	00	29.38	30.39																		
22	CLR	NC						10.00		32	28	31	85	0	00	29.40	30.42																		

## SUMMARY BY HOUR

HOUR (LST)	AVERAGES										RESULTANT WIND (MPH)	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	SPEED	DIRECTION
							STATION	SEA LEVEL				
01			34	28	32	79	29.17	30.18	8.65	3	1	28
02			34	28	32	80	29.18	30.18	8.57	2	1	28
03			34	28	31	80	29.19	30.19	8.85	2	1	25
04			33	28	31	82	29.19	30.19	8.19	2	1	28
05			33	27	31	82	29.19	30.19	7.80	2	1	30
06			32	27	31	83	29.19	30.20	7.52	2	0	0
07			33	27	31	82	29.20	30.22	7.87	2	1	33
08			33	27	31	83	29.21	30.23	7.74	2	1	26
09			35	29	32	81	29.22	30.24	7.81	2	0	0
10			37	29	34	74	29.23	30.25	8.59	2	0	0
11			40	29	36	65	29.23	30.24	9.26	4	0	0
12			43	28	37	59	29.20	30.21	9.23	3	0	0
13			45	29	38	56	29.18	30.18	9.32	4	2	23
14			46	29	39	53	29.16	30.16	9.56	4	2	25
15			47	28	39	51	29.15	30.16	9.68	3	1	25
16			47	28	39	51	29.16	30.16	9.87	5	3	25
17			46	28	39	54	29.16	30.17	9.26	4	1	25
18			43	29	37	61	29.16	30.17	9.42	2	1	26
19			40	30	36	69	29.17	30.19	9.27	2	2	26
20			39	30	35	73	29.17	30.19	9.55	2	1	27
21			37	30	35	76	29.18	30.19	9.26	2	1	27
22			37	30	34	77	29.18	30.19	9.37	3	1	28
23			36	29	33	78	29.18	30.19	9.32	2	1	32
24			35	28	32	79	29.18	30.19	9.35	2	2	28



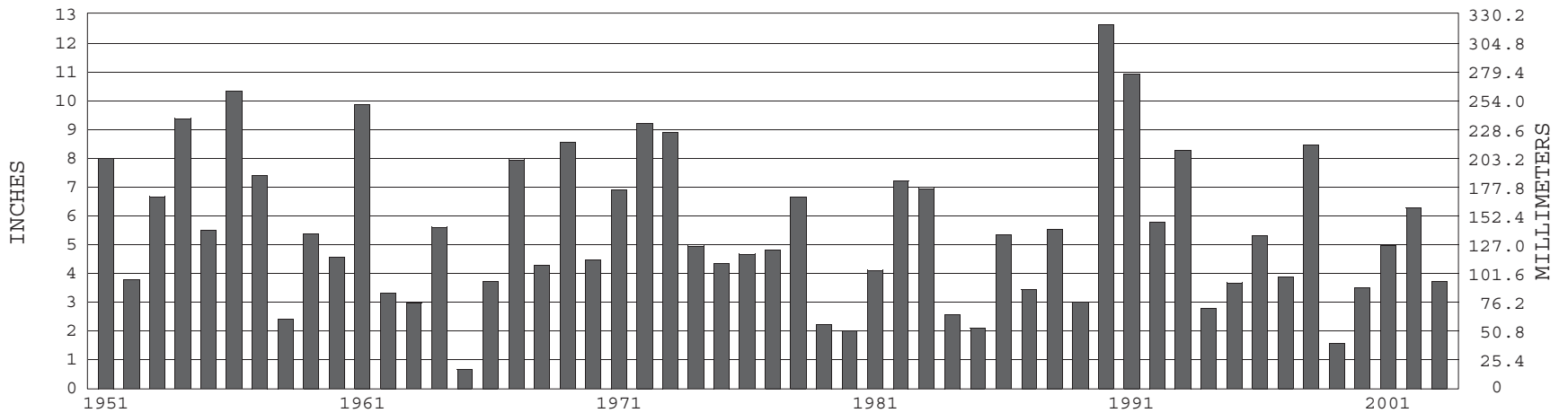
### OAK RIDGE, TN DECEMBER TEMPERATURES



+ Extreme Max.      ● Mean Max.      ▲ Mean      × Mean Min.      ◆ Extreme Min.

Long-Term (1951-2003) Mean: 39.6      1961-1990 Normal: 39.4

### OAK RIDGE, TN DECEMBER PRECIPITATION



Long-Term (1951-2003) Mean Monthly Total: 5.50

1961-1990 Normal: 5.42



DECEMBER 2003

OAK RIDGE, TN

# LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

*I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA – National Weather Service / Department Of Transportation – Federal Aviation Administration and received at the National Climatic Data Center (NCDC), Asheville, North Carolina 28801.*

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