



# JULY 2002

## 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 #: -

JULY 2002  
 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	94	71	83	8	70	74	0	18	BR HZ				0.00	29.20	30.12	0.4	15	1.9	10	17	9	16	01
02	95	70	83	8	68	72	0	18	RA BR HZ				0.01	29.16	30.08	1.8	05	3.3	24	14	17	14	02
03	93	68	81	6	68	71	0	16	RA BR HZ				0.17	29.10	30.03	1.2	06	3.0	37	08	28*	08	03
04	93	65*	79	4	67	71	0	14	BR HZ				0.00	29.10	30.02	1.6	07	3.2	12	09	9	06	04
05	99*	70	85*	10	69	74	0	20	BR HZ				0.00	29.11	30.03	1.4	04	3.4	16	07	13	07	05
06	94	73	84	9	64	71	0	19	BR HZ				0.00	29.13	30.05	3.1	05	5.1	17	07	13	06	06
07	94	67	81	5	64	70	0	16					0.00	29.18	30.10	0.7	12	3.4	20	17	12	21	07
08	92	73	83	7	68	73	0	18	HZ				0.00	29.24	30.16	1.2	23	3.5	16	22	12	21	08
09	92	72	82	6	64	71	0	17	BR HZ				0.00	29.18	30.10	2.9	21	3.9	16	20	13	18	09
10	90	71	81	5	70	72	0	16	RA FG BR HZ				0.29	29.10	30.02	1.5	23	3.5	18	26	13	26	10
11	90	68	79	3	70	72	0	14	RA FG+ BR HZ				0.03	29.05	29.98	1.2	07	2.7	16	14	12	13	11
12	86	69	78	2	69	71	0	13	RA FG BR HZ				1.48	29.03	29.95	0.4	17	3.7	16	08	14	06	12
13	72	67	70*	-6	69	70	0	5	RA FG+ BR				1.70	28.98	29.91	0.9	05	1.5	6	03	5	05	13
14	83	69	76	0	70	71	0	11	RA BR HZ				0.04	29.01	29.95	0.4	18	.9	12	18	9	18	14
15	88	69	79	3	70	72	0	14	BR				0.00	29.11	30.04	0.0	00	1.5	12	08	9	09	15
16	90	68	79	3	69	72	0	14	BR HZ				0.00	29.17	30.09	0.6	08	2.1	12	08	9	06	16
17	90	70	80	4	71	74	0	15	BR HZ				0.00	29.17	30.09	0.6	20	1.6	13	07	8	06	17
18	89	73	81	5	70	73	0	16	RA BR				T	29.10	30.02	2.2	25	4.7	15	24	10	23	18
19	89	69	79	3	69	72	0	14	RA FG+ BR				1.26	29.06	29.98	2.6	25	4.2	40*	26	25	25	19
20	86	68	77	1	71	72	0	12	RA FG+ BR HZ				1.16	29.10	30.03	0.8	20	1.2	39	25	20	25	20
21	91	69	80	4	71	74	0	15	FG+ BR HZ				0.00	29.12	30.05	0.8	10	1.3	10	08	9	09	21
22	93	71	82	6	69	73	0	17	BR HZ				0.00	29.13	30.05	0.8	21	3.1	22	18	16	19	22
23	90	71	81	5	69	72	0	16	HZ				0.00	29.14	30.06	1.2	19	4.3	18	29	13	27	23
24	88	69	79	3	69	72	0	14	RA BR				T	29.14	30.06	0.4	34	1.8	12	36	9	36	24
25	87	72	80	4	71	74	0	15	RA BR HZ				T	29.11	30.04	2.0	21	2.6	13	19	10	16	25
26	90	73	82	6	71	74	0	17	RA BR HZ				T	29.12	30.04	2.2	22	3.9	14	20	12	21	26
27	91	73	82	6	72	75	0	17	BR HZ				0.00	29.12	30.04	1.8	21	3.5	12	20	10	20	27
28	89	73	81	5	73	75	0	16	RA BR				0.07	29.14	30.06	1.3	26	2.6	24	26	16	26	28
29	93	72	83	7	71	75	0	18	RA BR				T	29.12	30.04	2.8	22	4.2	15	30	12	20	29
30	94	71	83	7	71	73	0	18	RA BR				0.12	29.13	30.05	1.4	21	3.4	31	35	22	33	30
31	88	69	79	3			0	14	RA FG+ BR HZ				0.04	29.10		0.7	06	1.1	12	32	9	32	31

90.1	70.1	80.1	■ ■	0.0	15.4	< MONTHLY AVERAGES	TOTALS-->	6.37	29.12	0.5	20	2.9	<- MONTHLY AVERAGES
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2.9	■ ■	<-----DEPARTURE FROM NORMAL----->	-1.80	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3
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<b>DEGREE DAYS</b>				GREATEST 24-HR PRECIPITATION: 3.18 DATE: 12-13				SEA LEVEL PRESSURE DATE TIME			
MONTHLY TOTAL DEPARTURE		SEASON TO DATE TOTAL DEPARTURE		GREATEST 24-HR SNOWFALL: DATE: DATE:				MAXIMUM MINIMUM		: 30.24 08 0853	
HEATING: 0 0		SEASON TO DATE TOTAL DEPARTURE: 0 0		GREATEST SNOW DEPTH: DATE: DATE:				: 29.87 13 1853		PRECIPITATION ≥ 0.01 INCH : 12	
COOLING: 463 83		970 220		NUMBER OF DAYS WITH →		MAXIMUM TEMP ≥ 90: 20		MINIMUM TEMP ≤ 32: 0		PRECIPITATION ≥ 0.10 INCH : 7	
						MAXIMUM TEMP ≤ 32 : 0		MINIMUM TEMP ≤ 0 : 0		SNOWFALL ≥ 1.0 INCH :	
						THUNDERSTORMS : 0		HEAVY FOG : 6			

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

# OAK RIDGE, TN

JULY 2002

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		0.01		
03					0.02								03						0.08	0.02	0.04	0.01	T		03		0.17		
04													04												04		0.00		
05													05												05		0.00		
06													06												06		0.00		
07													07												07		0.00		
08													08												08		0.00		
09													09												09		0.00		
10											T		10			T	0.15	0.13	0.01					10		0.29			
11													11					T	0.03	T				11		0.03			
12													12								0.16	1.00	0.32	T	12		1.48		
13				0.03	0.19	0.03	T	0.01	0.04	0.17		0.25	13	0.67	0.22			0.09						13		1.70			
14				0.01	0.03								14												14		0.04		
15													15												15		0.00		
16													16												16		0.00		
17													17												17		0.00		
18													18			T	T								18		T		
19													19					T	0.67	0.59					19		1.26		
20													20	0.49	0.60	0.06	0.01								20		1.16		
21													21												21		0.00		
22													22												22		0.00		
23													23												23		0.00		
24	T												24												24		T		
25													25	T											25		T		
26													26												26		T		
27				T									27												27		0.00		
28												0.04	28		0.01	0.01							0.01		28		0.07		
29													29								T				29		T		
30													30	T				0.10	0.02					30		0.12			
31													31					.04	T					31		0.04			

## 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 JULY 2002

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							2.50	8.00	
02							2.50	10.00	
03							1.50	10.00	
04							2.00	10.00	
05							1.75	10.00	
06							4.00	10.00	
07							8.00	10.00	
08							5.00	9.00	
09							4.00	9.00	
10							.50	9.00	
11							.00	9.00	
12							.50	10.00	
13							.50	10.00	
14							2.50	10.00	
15							4.00	10.00	
16							2.50	6.00	
17							1.50	7.00	
18							4.00	10.00	
19							.25	10.00	
20							.25	10.00	
21							<.25	10.00	
22							2.00	10.00	
23							6.00	10.00	
24							6.00	10.00	
25							4.00	8.00	
26							2.50	10.00	
27							3.00	10.00	
28							1.75	10.00	
29							5.00	10.00	
30							.75	10.00	
31							.50	10.00	
<b>MONTHLY AVGS</b>							2.78	9.52	
<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            20           1									

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

JULY 2002

QQT

WBAN # 53868

HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)					
	SKY COVER	CEILING 100'S OF FT			OBSERVATION TIME (LST)	EFF CLD AMT Oktas	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	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	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0524					JUL 01				SUNSET: 1958				SUNRISE: 0527					JUL 07				SUNSET: 1957							
01	CLR	NC	5.00	BR	74	70	71	88	3	07	29.20	30.12	01	CLR	NC	10.00		72	61	65	69	0	00	29.16	30.08				
04	FEW	NC	4.00	BR	72	70	71	94	0	00	29.21	30.13	04	CLR	NC	10.00		69	61	64	76	5	05	29.15	30.07				
07	CLR	NC	4.00	BR	73	70	71	90	0	00	29.23	30.16	07	CLR	NC	10.00		70	61	64	73	3	07	29.19	30.12				
10	CLR	NC	6.00	HZ	84	72	76	67	0	00	29.24	30.17	10	CLR	NC	10.00		83	62	69	49	3	VR	29.22	30.14				
13	CLR	NC	7.00		91	66	74	44	0	00	29.20	30.12	13	CLR	NC	9.00		91	66	74	44	6	VR	29.19	30.12				
16	BKN	065	7.00		91	68	75	47	8	17	29.15	30.08	16	FEW	NC	9.00		93	64	73	38	3	VR	29.14	30.07				
19	CLR	NC	7.00		88	70	75	55	5	VR	29.15	30.07	19	SCT	NC	8.00		90	68	75	49	8	17	29.15	30.07				
22	CLR	NC	8.00		81	72	75	74	0	00	29.18	30.10	22	BKN	070	9.00		83	68	73	61	0	00	29.20	30.12				
SUNRISE: 0524					JUL 02				SUNSET: 1958				SUNRISE: 0527					JUL 08				SUNSET: 1957							
01	CLR	NC	6.00	HZ	76	70	72	82	0	00	29.16	30.09	01	BKN	055	8.00		79	68	72	69	0	00	29.22	30.14				
04	CLR	NC	5.00	BR	72	70	71	94	0	00	29.17	30.09	04	CLR	NC	8.00		76	67	70	74	0	00	29.22	30.14				
07	CLR	NC	3.00	BR	73	70	71	90	3	01	29.21	30.14	07	OVC	095	5.00	HZ	76	68	71	77	3	VR	29.28	30.20				
10	CLR	NC	5.00	HZ							29.20		10	FEW	NC	7.00		80	68	72	67	8	26	29.30	30.23				
13	FEW	NC	5.00	HZ	93	69	76	46	7	07	29.16	30.07	13	SCT	NC	9.00		88	66	73	48	5	VR	29.26	30.19				
16	CLR	NC	6.00	HZ	93	65	74	40	5	VR	29.10	30.01	16	FEW	NC	8.00		91	67	75	45	5	VR	29.19	30.11				
19	CLR	NC	7.00		87	66	73	50	7	04	29.09	30.02	19	CLR	NC	7.00		88	67	74	50	3	VR	29.19	30.11				
22	CLR	NC	6.00	BR	72	69	70	91	3	36	29.16	30.10	22	CLR	NC	8.00		82	70	74	67	3	20	29.22	30.14				
SUNRISE: 0525					JUL 03				SUNSET: 1957				SUNRISE: 0528					JUL 09				SUNSET: 1956							
01	CLR	NC	4.00	BR	71	68	69	90	0	00	29.12	30.04	01	CLR	NC	7.00		77	69	72	77	0	00	29.21	30.13				
04	OVC	110	6.00	HZ	72	67	69	84	0	00	29.13	30.05	04	CLR	NC	5.00	BR	72	69	70	91	0	00	29.20	30.13				
07	CLR	NC	2.00	BR	70	68	69	93	0	00	29.15	30.08	07	CLR	NC	5.00	HZ	74	67	69	79	3	VR	29.23	30.15				
10	CLR	NC	8.00		77	67	70	71	6	VR	29.13	30.06	10	CLR	NC	7.00		85	64	71	50	9	20	29.24	30.16				
13	CLR	NC	10.00		87	65	72	48	10	08	29.09	30.02	13	CLR	NC	8.00		90	59	70	35	8	24	29.19	30.11				
16	SCT	NC	10.00		91	67	75	45	3	VR	29.03	29.94	16	CLR	NC	9.00		90	58	69	34	8	21	29.12	30.05				
19	OVC	045	1.50	RA BR	69	69	69	100	5	VR	29.12	30.06	19	CLR	NC	8.00		88	62	71	42	5	18	29.11	30.03				
22	FEW	NC	4.00	-RA BR	69	69	69	100	0	00	29.13	30.06	22	CLR	NC	8.00		80	66	71	62	0	00	29.13	30.06				
SUNRISE: 0525					JUL 04				SUNSET: 1957				SUNRISE: 0529					JUL 10				SUNSET: 1956							
01	CLR	NC	4.00	BR	69	67	68	93	0	00	29.08	30.01	01	SCT	NC	7.00		76	66	69	72	0	00	29.13	30.05				
04	CLR	NC	4.00	BR	67	66	66	97	0	00	29.08	30.01	04	CLR	NC	6.00	HZ	74	68	70	82	3	22	29.09	30.02				
07	CLR	NC	3.00	BR	67	66	66	97	3	VR	29.12	30.07	07	SCT	NC	5.00	HZ	76	70	72	82	3	VR	29.12	30.04				
10	CLR	NC	9.00		77	66	70	69	6	07	29.14	30.08	10	SCT	NC	7.00		82	69	73	65	5	VR	29.13	30.05				
13	CLR	NC	10.00		86	67	73	53	3	VR	29.11	30.04	13	CLR	NC	9.00		88	69	75	54	6	VR	29.09	30.01				
16	CLR	NC	9.00		92	65	74	41	5	02	29.05	29.97	16	OVC	060	1.25	+RA BR	76	73	74	91	5	VR	29.09	30.02				
19	CLR	NC	10.00		90	63	72	41	5	06	29.05	29.97	19	CLR	NC	7.00		72	71	71	97	6	VR	29.04	29.97				
22	CLR	NC	8.00		79	69	72	72	0	00	29.11	30.04	22	BKN	085	6.00	BR	71	70	70	96	0	00	29.11	30.04				
SUNRISE: 0526					JUL 05				SUNSET: 1957				SUNRISE: 0529					JUL 11				SUNSET: 1956							
01	CLR	NC	5.00	BR	74	70	71	88	0	00	29.10	30.02	01	CLR	NC	5.00	BR	71	70	70	96	0	00	29.08	29.99				
04	CLR	NC	3.00	BR	71	69	70	94	3	VR	29.10	30.02	04	OVC	001	1.25	BR	68	68	68	100	3	VR	29.07	30.01				
07	CLR	NC	3.00	BR	72	69	70	91	3	VR	29.13	30.05	07	OVC	005	4.00	BR	70	69	69	97	0	00	29.08	30.03				
10	CLR	NC	8.00		86	69	74	57	0	00	29.14	30.07	10	OVC	027	7.00		76	71	73	85	3	12	29.08	30.02				
13	FEW	NC	9.00		94	68	76	43	9	05	29.11	30.03	13			7.00		84	68	73	59	0	00	29.06	29.98				
16	CLR	NC	10.00		97	62	73	32	7	VR	29.08	29.99	16	CLR	NC	8.00		88	69	75	54	5	36	28.99	29.91				
19	CLR	NC	9.00		90	70	76	52	5	01	29.08	30.01	19	OVC	050	2.50	-RA	78	72	74	82	0	00	29.01	29.94				
22	CLR	NC	10.00		83	72	75	70	5	08	29.11	30.03	22	CLR	NC	6.00	HZ	78	70	73	76	6	07	29.04	29.96				
SUNRISE: 0526					JUL 06				SUNSET: 1957				SUNRISE: 0530					JUL 12				SUNSET: 1955							
01	CLR	NC	7.00		77	71	73	82	0	00	29.12	30.04	01	OVC	075	5.00	BR	73	69	70	87	3	09	29.04	29.95				
04	CLR	NC	6.00	BR	74	71	72	91	0	00	29.11	30.03	04	CLR	NC	5.00	BR	70	68	69	93	0	00	29.04	29.96				
07	CLR	NC	5.00	HZ	75	70	72	84	0	00	29.15	30.07	07	OVC	038	4.00	BR	70	67	68	90	0	00	29.08	30.01				
10	CLR	NC	8.00		83	69	74	63	7	VR	29.16	30.08	10	BKN	023	8.00		77	68	71	74	6	22	29.08	30.00				
13	CLR	NC	10.00		91	56	69	31	8	02	29.13	30.05	13	SCT	NC	8.00		83	69	74	63	5	VR	29.03	29.95				
16	CLR	NC	10.00		91	61	71	37	8	06	29.10	30.02	16	FEW	NC	7.00		85	69	74	59	9	26	28.98	29.90				
19	CLR	NC	10.00		88	59	69	38	7	VR	29.09	30.01	19	OVC	060	6.00	HZ	81	70	73	69	10	08	29.00	29.92				
22	CLR	NC	10.00		78	61	67	56	3	07	29.14	30.07	22	OVC	009	0.75	+RA BR	69	69	69	100	7	08	29.03	29.96				

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

JULY 2002

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
SUNRISE: 0530					JUL 13			SUNSET: 1955					SUNRISE: 0534					JUL 19			SUNSET: 1952				
01	BKN	004	5.00	BR	70	70	70	100	0	00	29.00	29.92	01	CLR	NC	10.00		72	70	71	94	0	00	29.07	29.98
04	OVC	004	3.00	RA BR	70	69	69	97	0	00	28.99	29.91	04	SCT	NC	10.00		71	68	69	90	0	00	29.07	29.98
07	OVC	036	4.00	BR	69	68	68	96	0	00	29.00	29.93	07	CLR	NC	10.00		72	68	69	87	5	VR	29.08	30.00
10	OVC	007	3.00	BR	70	69	69	97	3	VR	28.98	29.92	10	BKN	060	10.00		79	69	72	72	5	VR	29.09	30.02
13	OVC	007	0.50	+RA FG	68	68	68	100	3	01	28.99	29.92	13	SCT	NC	10.00		85	69	74	59	0	00	29.07	29.98
16	OVC	013	6.00	-RA BR	70	69	69	97	0	00	28.96	29.90	16	FEW	NC	10.00		87	68	74	53	8	26	29.02	29.94
19	OVC	026	10.00		71	70	70	96	3	05	28.94	29.87	19	OVC	039	0.25	+RA FG	71	70	70	96	25	25	29.08	30.02
22	OVC	048	6.00	BR	71	70	70	96	0	00	28.98	29.92	22	CLR	NC	7.00		71	70	70	96	0	00	29.07	30.00
SUNRISE: 0531					JUL 14			SUNSET: 1955					SUNRISE: 0535					JUL 20			SUNSET: 1952				
01	OVC	031	5.00	BR	70	69	69	97	0	00	28.97	29.91	01	CLR	NC	8.00		70	69	69	97	0	00	29.06	29.98
04	OVC	025	3.00	-RA BR	69	69	69	100	0	00	28.98	29.91	04	FEW	NC	8.00		68	68	68	100	0	00	29.06	29.98
07	OVC	003	4.00	BR	70	69	69	97	0	00	29.01	29.94	07	SCT	NC	8.00		70	68	69	93	0	00	29.10	30.05
10	OVC	008	8.00		73	70	71	90	0	00	29.03	29.97	10	CLR	NC	10.00		80	70	73	71	3	VR	29.12	30.06
13	SCT	NC	6.00	HZ	80	70	73	71	5	VR	29.03	29.95	13	OVC	034	0.25	+RA FG	73	69	70	87	10	20	29.13	30.08
16	BKN	080	7.00		81	69	73	67	0	00	28.99	29.92	16	CLR	NC	5.00	HZ	80	74	76	82	0	00	29.09	30.03
19	BKN	110	10.00		78	70	73	76	0	00	29.03	29.96	19	CLR	NC	5.00	HZ	80	75	77	85	0	00	29.09	30.03
22	BKN	065	8.00		75	72	73	90	0	00	29.06	29.99	22	CLR	NC	4.00	BR	74	73	73	97	0	00	29.12	30.05
SUNRISE: 0532					JUL 15			SUNSET: 1954					SUNRISE: 0536					JUL 21			SUNSET: 1951				
01	CLR	NC	5.00	BR	72	71	71	97	0	00	29.06	29.98	01	OVC	002	0.25	FG	72	72	72	100	0	00	29.13	30.07
04	CLR	NC	8.00		70	69	69	97	0	00	29.07	30.00	04	VV	001	0.25	FG	71	71	71	100	0	00	29.12	30.05
07	CLR	NC	7.00		71	69	70	94	0	00	29.12	30.05	07	VV	001	0.25	FG	70	70	70	100	0	00	29.15	30.09
10	BKN	031	10.00		79	70	73	74	3	VR	29.13	30.06	10	CLR	NC	6.00	HZ	79	72	74	79	3	14	29.18	30.11
13	SCT	NC	8.00		86	69	74	57	6	26	29.12	30.05	13	CLR	NC	8.00		88	71	76	57	5	VR	29.14	30.07
16	BKN	048	10.00		87	72	76	61	7	VR	29.10	30.03	16	CLR	NC	10.00		91	69	76	49	3	08	29.08	30.01
19	SCT	NC	8.00		84	67	73	57	5	VR	29.10	30.03	19	CLR	NC	9.00		88	70	75	55	3	09	29.07	29.99
22	CLR	NC	6.00	BR	75	71	72	88	0	00	29.12	30.06	22	CLR	NC	6.00	HZ	78	73	75	85	0	00	29.10	30.03
SUNRISE: 0532					JUL 16			SUNSET: 1954					SUNRISE: 0537					JUL 22			SUNSET: 1950				
01	CLR	NC	5.00	BR	71	69	70	94	0	00	29.14	30.06	01	CLR	NC	4.00	BR	75	72	73	90	3	35	29.11	30.03
04	CLR	NC	3.00	BR	69	68	68	96	0	00	29.13	30.06	04	CLR	NC	4.00	BR	73	71	72	94	0	00	29.11	30.03
07	CLR	NC	3.00	BR	71	68	69	90	0	00	29.18	30.11	07	CLR	NC	2.00	BR	72	70	71	94	0	00	29.15	30.07
10	CLR	NC	6.00	HZ	81	70	73	69	3	VR	29.20	30.13	10	CLR	NC	7.00		84	70	74	63	6	VR	29.16	30.09
13	SCT	NC	6.00	HZ	87	68	74	53	6	VR	29.18	30.11	13	CLR	NC	8.00		89	70	76	53	7	VR	29.14	30.06
16	FEW	NC	5.00	HZ	89	67	74	48	3	VR	29.14	30.06	16	SCT	NC	9.00		92	68	75	46	3	VR	29.08	30.00
19	FEW	NC	5.00	HZ	85	70	75	61	3	09	29.13	30.06	19	FEW	NC	10.00		83	65	71	55	8	18	29.10	30.03
22	FEW	NC	5.00	HZ	78	72	74	82	0	00	29.18	30.10	22	CLR	NC	10.00		78	64	69	62	0	00	29.15	30.07
SUNRISE: 0533					JUL 17			SUNSET: 1953					SUNRISE: 0537					JUL 23			SUNSET: 1950				
01	CLR	NC	3.00	BR	73	71	72	94	0	00	29.17	30.10	01	CLR	NC	10.00		75	65	69	71	0	00	29.15	30.07
04	CLR	NC	2.50	BR	71	70	70	96	0	00	29.16	30.09	04	CLR	NC	8.00		71	66	68	84	0	00	29.12	30.05
07	CLR	NC	2.00	BR	71	70	70	96	0	00	29.21	30.14	07	CLR	NC	6.00	HZ	73	68	70	84	0	00	29.16	30.09
10	CLR	NC	4.00	HZ	84	70	74	63	0	00	29.20	30.13	10	CLR	NC	9.00		81	69	73	67	8	22	29.17	30.10
13	BKN	043	4.00	HZ	87	70	75	57	3	04	29.19	30.11	13	SCT	NC	7.00		87	71	76	59	7	VR	29.15	30.07
16	SCT	NC	5.00	HZ	89	71	76	55	3	VR	29.14	30.07	16	FEW	NC	7.00		88	71	76	57	8	18	29.08	30.00
19	CLR	NC	6.00	HZ	86	70	75	59	5	22	29.12	30.05	19	FEW	NC	8.00		84	70	74	63	8	27	29.09	30.02
22	CLR	NC	5.00	HZ	80	73	75	79	0	00	29.14	30.06	22	CLR	NC	10.00		76	68	71	77	5	06	29.17	30.10
SUNRISE: 0534					JUL 18			SUNSET: 1953					SUNRISE: 0538					JUL 24			SUNSET: 1949				
01	CLR	NC	4.00	BR	76	73	74	91	0	00	29.11	30.03	01	CLR	NC	10.00		72	69	70	91	0	00	29.16	30.08
04	BKN	060	10.00		76	68	71	77	5	VR	29.12	30.04	04	CLR	NC	10.00		71	68	69	90	0	00	29.14	30.06
07	CLR	NC	10.00		75	70	72	84	3	24	29.14	30.06	07	CLR	NC	8.00		70	68	69	93	0	00	29.16	30.09
10	FEW	NC	10.00		81	70	73	69	8	24	29.14	30.07	10	FEW	NC	10.00		79	69	72	72	3	VR	29.18	30.11
13	SCT	NC	10.00		87	68	74	53	8	27	29.11	30.03	13	SCT	NC	10.00		86	68	74	55	5	VR	29.15	30.08
16	BKN	110	10.00		84	72	76	67	5	VR	29.08	29.99	16	SCT	NC	10.00		85	70	75	61	6	01	29.09	30.02
19	CLR	NC	10.00		81	71	74	72	7	29	29.06	29.98	19	CLR	NC	10.00		83	71	75	67	3	35	29.08	30.00
22	CLR	NC	10.00		76	71	73	85	6	22	29.07	29.99	22	CLR	NC	10.00		79	72	74	79	0	00	29.12	30.05

# OBSERVATIONS AT 3-HOURLY INTERVALS

# OAK RIDGE, TN

JULY 2002

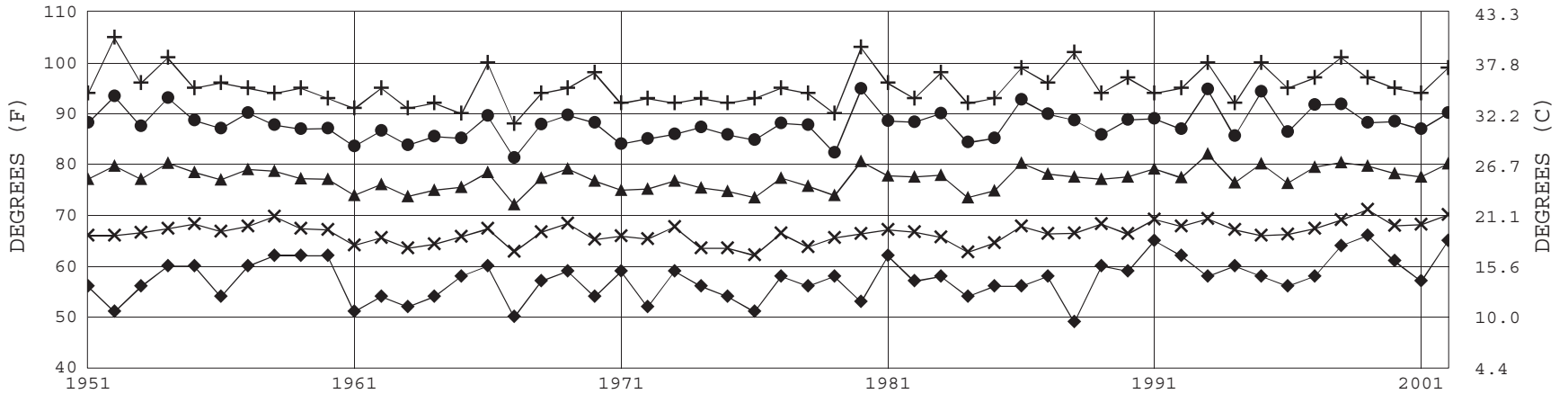
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WBAN # 53868

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		OBSERVATION TIME (LST)	EFF CLD AMT Okta	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 Okta	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: 0539										JUL 25				SUNSET: 1948				SUNRISE: 0543										JUL 31				SUNSET: 1943					
01	CLR	NC						8.00		74	72	73	94	0	00	29.10	30.03	01	BKN	002						5.00	BR	71	70	70	96	0	00	29.13	30.06		
04	CLR	NC						6.00	BR	73	71	72	94	0	00	29.10	30.02	04	OVC	004						5.00	HZ					0	00	29.13			
07	CLR	NC						5.00	BR	73	71	72	94	0	00	29.12	30.05	07	OVC	001						0.50	FG					0	00	29.14			
10	BKN	100						8.00		78	70	73	76	5	25	29.15	30.08	10	FEW	NC						10.00						0	00	29.14			
13	FEW	NC						7.00		84	74	77	72	0	00	29.12	30.04	13	FEW	NC						8.00						0	00	29.10			
16	CLR	NC						7.00		84	71	75	65	7	22	29.08	29.99	16	BKN	060						8.00		86	70	75	59	0	00	29.06			
19	CLR	NC						4.00	HZ	82	71	74	69	6	21	29.08	30.00	19	FEW	NC						6.00	HZ	79	73	75	82	0	00	29.04			
22	OVC	043						7.00		78	71	73	79	0	00	29.12	30.05	22	CLR	NC						4.00	BR	75	74	74	96	0	00	29.07			
SUNRISE: 0540										JUL 26				SUNSET: 1948				3-HOURLY OBSERVATION NOTES																			
01	OVC	033						4.00	BR	75	72	73	90	0	00	29.12	30.04	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.																			
04	OVC	100						4.00	BR	75	72	73	90	3	27	29.11	30.03	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.																			
07	CLR	NC						2.50	BR	73	71	72	94	5	23	29.13	30.06	NC = No ceiling detected.																			
10	SCT	NC						4.00	HZ	80	73	75	79	3	VR	29.16	30.09	& = Original observation contained additional weather elements.																			
13	BKN	042						6.00	HZ	85	71	75	63	8	21	29.15	30.08	See page 3 for additional notes.																			
16	CLR	NC						9.00		88	69	75	54	5	VR	29.10	30.02																				
19	CLR	NC						8.00		86	71	76	61	6	20	29.06	29.98																				
22	CLR	NC						7.00		80	72	74	76	0	00	29.11	30.03																				
SUNRISE: 0540										JUL 27				SUNSET: 1947				SUMMARY BY HOUR																			
01	FEW	NC						6.00	BR	76	72	73	88	0	00	29.11	30.03	AVERAGES																			
04	BKN	046						5.00	BR	74	71	72	91	3	VR	29.12	30.04	HOUR (LST)	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	RESULTANT WIND (MPH)								
07	OVC	007						4.00	BR	75	72	73	90	3	VR	29.14	30.07								STATION	SEA LEVEL			SPEED	DIRECTION							
10	OVC	013						4.00	HZ	79	73	75	82	0	00	29.18	30.11	01			74	70	71	88	29.11	30.04	6.17	0	0	0							
13	FEW	NC						6.00	HZ	88	72	77	59	6	VR	29.14	30.06	02			73	70	71	89	29.11	30.03	6.20	1	1	23							
16	BKN	042						8.00		89	71	76	55	9	18	29.08	30.01	03			72	69	70	91	29.11	30.03	6.12	1	0	0							
19	FEW	NC						8.00		87	73	77	63	0	00	29.07	29.98	04			72	69	70	91	29.11	30.03	5.77	0	0	0							
22	SCT	NC						10.00		83	72	75	70	6	VR	29.10	30.02	05			71	69	70	93	29.12	30.04	5.75	1	0	0							
SUNRISE: 0541										JUL 28				SUNSET: 1946				06										71	69	69	93	29.13	30.06	4.28	1	0	0
01	CLR	NC						9.00		78	72	74	82	3	26	29.10	30.03	07										72	69	70	90	29.14	30.07	4.85	1	0	0
04	FEW	NC						7.00		74	71	72	91	0	00	29.12	30.04	08										75	69	71	84	29.15	30.08	5.82	2	1	10
07	OVC	037						6.00	BR	75	71	72	88	3	24	29.16	30.09	09										78	70	72	77	29.16	30.09	7.00	2	0	0
10	SCT	NC						10.00		83	73	76	72	7	VR	29.18	30.10	10										80	70	73	71	29.15	30.08	7.71	2	1	22
13	CLR	NC						10.00		85	73	77	68	7	24	29.14	30.06	11										83	69	74	65	29.15	30.08	7.93	2	1	18
16	FEW	NC						10.00		83	74	77	74	0	00	29.11	30.04	12										85	69	74	61	29.14	30.07	7.63	3	2	19
19	CLR	NC						10.00		82	74	76	77	0	00	29.10	30.02	13										86	68	74	57	29.13	30.05	7.60	3	0	0
22	CLR	NC						10.00		78	73	75	85	0	00	29.12	30.04	14										87	68	74	56	29.11	30.03	7.69	3	1	25
SUNRISE: 0542										JUL 29				SUNSET: 1945				15										88	68	74	53	29.10	30.02	8.11	3	2	21
01	CLR	NC						7.00		74	73	73	97	0	00	29.11	30.03	16										88	68	75	55	29.08	30.00	8.07	3	1	21
04	CLR	NC						9.00		73	72	72	96	0	00	29.10	30.03	17										86	69	75	58	29.07	30.00	7.60	2	1	17
07	BKN	004						5.00	BR	73	72	72	96	3	21	29.16	30.09	18										86	69	74	60	29.07	29.99	7.94	2	0	0
10	CLR	NC						10.00		82	73	76	74	7	26	29.17	30.09	19										83	69	74	67	29.08	30.01	7.43	4	1	23
13	CLR	NC						10.00		90	70	76	52	8	21	29.11	30.03	20										80	70	73	72	29.09	30.02	7.77	1	0	0
16	FEW	NC						10.00		92	70	77	49	8	21	29.07	29.98	21										78	70	73	78	29.10	30.03	7.94	1	1	13
19	BKN	075						10.00		86	70	75	59	7	31	29.08	29.99	22										77	70	72	81	29.12	30.04	7.35	1	1	10
22	CLR	NC						10.00		80	71	74	74	6	20	29.12	30.05	23										76	70	72	85	29.12	30.04	7.32	1	0	0
SUNRISE: 0543										JUL 30				SUNSET: 1944				24										74	70	71	87	29.12	30.04	6.79	1	0	0
01	CLR	NC						10.00		76	70	72	82	0	00	29.11	30.03																				
04	CLR	NC						10.00		73	70	71	90	0	00	29.12	30.04																				
07	CLR	NC						10.00		74	70	71	88	0	00	29.15	30.08																				
10	CLR	NC						10.00		84	73	76	70	6	VR	29.16	30.09																				
13	SCT	NC						10.00		89	71	76	55	5	VR	29.11	30.03																				
16	FEW	NC						10.00		92	70	77	49	7	VR	29.08	29.99																				
19	CLR	NC						10.00		74	72	73	94	3	22	29.13	30.07																				
22	CLR	NC						9.00		72	70	71	94	0	00	29.11	30.04																				



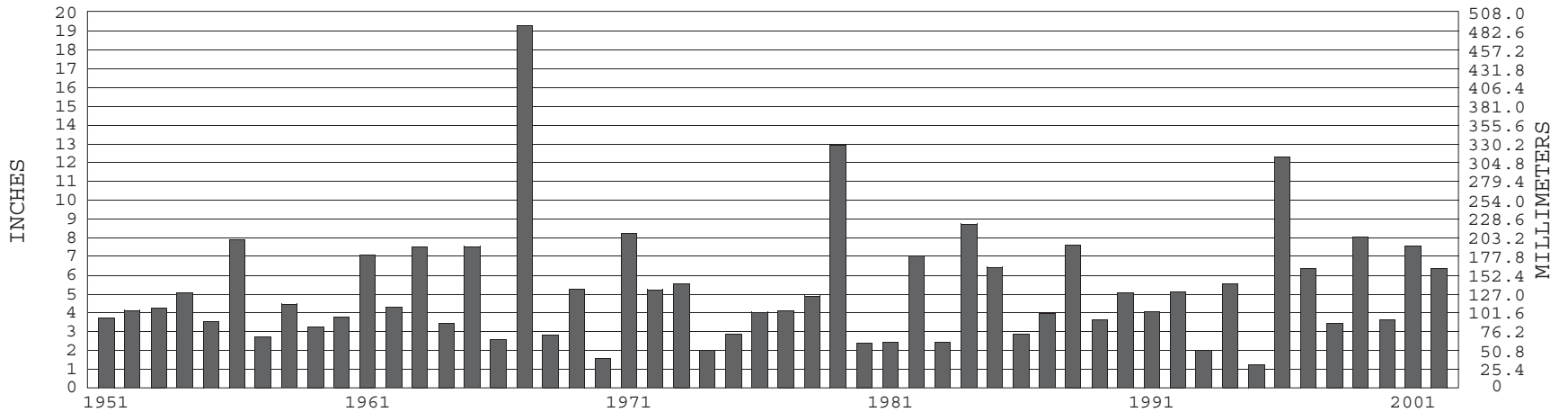
### OAK RIDGE, TN JULY TEMPERATURES



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

Long-Term (1951-2002) Mean: 77.2      1961-1990 Normal: .0

### OAK RIDGE, TN JULY PRECIPITATION



Long-Term (1951-2002) Mean Monthly Total: 5.23

1961-1990 Normal: 0.00



JULY 2002

OAK RIDGE, TN

# LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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DIRECTOR

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