NOVEMBER 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 #: —

DATE	TEMPERATURE °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	DEG DAYS BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER EQUIV	PRECIPITATION (INCHES) 2400 LST SNOW–FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 5–SEC SPEED	5–SEC DIR	MAXIMUM 2–MIN SPEED	2–MIN DIR	DATE
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	50	37	44	−8	40	43	21	0	BR				0.00	29.29	30.29	1.0	27	2.4	12	29	8	28	01
02	53	29	41	−11	29	37	24	0	BR				0.00	29.28	30.26	0.8	16	1.2	12	21	9	19	02
03	50	41	46	−6	39	42	19	0	RA BR				0.15	29.20	30.19	0.5	17	1.6	7	19	6	18	03
04	55	45	50	−1	46	48	15	0	RA BR				0.09	29.12	30.10	0.3	10	2.6	10	07	8	01	04
05	57	47	52	1	50	51	13	0	RA BR				1.13	28.87	29.85	0.6	06	1.7	12	27	9	25	05
06	57	42	50	−1	40	44	15	0	RA				T	29.00	29.98	2.7	27	4.7	20	28	14	28	06
07	57	39	48	−2	36	42	17	0					0.00	29.27	30.27	0.5	20	1.6	13	21	8	15	07
08	65	32	49	−1	38	43	16	0	BR				0.00	29.21	30.20	1.8	21	3.3	18	22	13	22	08
09	68	46	57	7	47	53	8	0					0.00	29.05	30.02	4.1	22	5.3	23	21	16	21	09
10	76*	61	69*	20	63	65	0	4	RA FG+ BR				2.42	28.74	29.68	9.1	21	10.5	40*	17	28*	19	10
11	67	55	61	12	54	56	4	0	RA BR				0.31	28.94	29.90	1.0	22	2.5	22	28	16	27	11
12	61	46	54	5	46	50	11	0	RA				0.07	29.12	30.09	3.2	36	4.3	17	36	13	36	12
13	56	37	47	−1	34	41	18	0					0.00	29.28	30.27	0.9	35	2.5	18	35	12	33	13
14	58	33	46	−2	35	39	19	0	FG+ BR				0.00	29.19	30.19	0.5	23	1.2	15	19	12	21	14
15	53	38	46	−2	42	44	19	0	RA BR				0.39	29.02	30.00	0.2	31	1.2	8	12	7	14	15
16	50	39	45	−3	43	45	20	0	RA BR				0.04	28.94	29.92	2.5	36	3.9	13	34	10	36	16
17	40	31	36	−11	30	35	29	0	RA				0.01	29.03	30.03	2.6	31	4.2	14	29	10	29	17
18	51	25	38	−9	29	34	27	0					0.00	29.32	30.34	0.5	17	.9	12	17	8	18	18
19	57	37	47	0	44	45	18	0	RA FG+ BR				0.25	29.28	30.27	0.2	28	1.0	12	21	8	22	19
20	52	43	48	2	45	46	17	0	RA FG+ BR				0.10	29.21	30.20	1.1	08	1.2	8	08	7	07	20
21	61	46	54	8	44	48	11	0	RA BR				0.40	28.91	29.88	2.9	24	4.9	24	29	17	29	21
22	46	39	43	−3	27	35	22	0	RA				T	29.02	30.01	3.0	29	5.4	22	30	15	28	22
23	50	28	39	−6	25	34	26	0					0.00	29.22	30.23	1.8	23	3.3	14	26	10	19	23
24	60	30	45	0	32	39	20	0					0.00	29.23	30.23	1.2	21	1.3	10	16	8	17	24
25	61	32	47	2	36	41	18	0	FG+ BR				0.00	29.21	30.20	0.1	10	.3	8	05	7	05	25
26	52	39	46	2	40	43	19	0	RA BR				0.21	29.20	30.20	0.9	27	2.7	14	35	10	35	26
27	39	33	36	−8	24	31	29	0					0.00	29.31	30.33	4.3	01	5.3	14	01	10	01	27
28	38	25	32*	−12	20	28	33	0					0.00	29.32	30.35	0.3	29	1.8	13	20	9	20	28
29	53	23*	38	−6	25	33	27	0					0.00	29.06	30.08	5.0	22	6.0	23	20	18	21	29
30	55	30	43	0	24	36	22	0					0.00	28.90	29.88	5.9	27	7.0	32	26	24	26	30
	54.9	37.6	46.3		37.6	42.4	18.6	0.1	< MONTHLY AVERAGES	TOTALS–>			5.57	29.12	30.12	1.0	25	3.2	<– MONTHLY AVERAGES				
	−4.1	1.2	−1.4		<–––––––––––DEPARTURE FROM NORMAL–––––––––––>								0.71	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING:	557	39	698	−80
COOLING:	4	3	1773	472

GREATEST 24–HR PRECIPITATION: 2.66 DATE: 10-11
GREATEST 24–HR SNOWFALL: DATE:
GREATEST SNOW DEPTH: DATE:

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM	30.42	18	1053
MINIMUM	29.51	10	2053

NUMBER OF DAYS WITH →

MAXIMUM TEMP ≥ 90:	0	MINIMUM TEMP ≤ 32 :	10
MAXIMUM TEMP ≤ 32 :	0	MINIMUM TEMP ≤ 0 :	0
THUNDERSTORMS :	0	HEAVY FOG :	5
PRECIPITATION ≥ 0.01 INCH :	13		
PRECIPITATION ≥ 0.10 INCH :	9		
SNOWFALL ≥ 1.0 INCH :			

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

OAK RIDGE, TN

NOVEMBER 2002 OQT WBAN # 53868

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT											DATE	Sum if Different (See Note)	2400 LST Water Equiv.
	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													01													01		0.00
02													02													02		0.00
03	T	T	T	0.01	T								03			T	0.01	0.03	0.03	T	T		0.01	0.03	0.03	03		0.15
04	0.05	0.03	0.01										04													04		0.09
05						0.01	0.02	0.17	0.06	0.01	0.02	0.03	05	0.05	0.15	0.14	0.18	0.04	0.04	0.09	0.07	0.02	0.02	T	0.01	05		1.13
06								T	T		T	T	06													06		T
07													07													07		0.00
08													08													08		0.00
09													09													09		0.00
10		0.03		0.40	0.40	T	T				T		10	0.03			0.04	T					0.32	T	1.07	10	2.29	2.42
11	0.27	0.07	0.06	0.03	T	T	0.01						11												T	11	0.44	0.31
12	T	T	T	0.02	0.04	0.01	T	T					12													12		0.07
13													13													13		0.00
14													14													14		0.00
15									T	T			15		0.01	0.02	0.05	0.08	0.10	0.13	T	T				15		0.39
16	T	0.01											16				T			0.01	0.01	0.01				16		0.04
17						T	0.01						17													17		0.01
18													18													18		0.00
19					0.04	0.08	0.09	0.03	0.01				19													19		0.25
20													20					0.02	T	0.04	T	T		0.01	0.03	20		0.10
21	0.08	0.06	0.12	0.05	0.02	0.02	0.04	0.01					21										T	T	T	21		0.40
22						T		T	T				22						T							22		T
23													23													23		0.00
24													24													24		0.00
25													25													25		0.00
26							T						26	T		0.03	0.01	0.05	0.08	0.04	T	T				26		0.21
27													27													27		0.00
28													28													28		0.00
29													29													29		0.00
30													30													30		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)	.44	.77	1.01	1.11	1.20	1.23	1.24	1.30	1.36	1.38	1.41	1.55
Ending Date	10	10	10	10	11	11	11	11	11	11	11	11
Ending Time (Hour/Min)	2346	2349	2353	2358	0005	0005	0020	0056	0104	0118	0155	0005

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 occurence 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		
DESCRIPTOR	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
NOVEMBER 2002

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
			SR−SS		MN−MN				
	TOTAL MINUTES	PERCENT POSSIBLE	CEILOMETER	SATELLITE	CEILOMETER	SATELLITE	MINIMUM	MAXIMUM	
01							6.00	10.00	
02							6.00	10.00	
03							1.75	10.00	
04							1.50	10.00	
05							1.50	10.00	
06							8.00	10.00	
07							7.00	10.00	
08							1.25	10.00	
09							10.00	10.00	
10							.25	10.00	
11							.75	10.00	
12							7.00	10.00	
13							10.00	10.00	
14							<.25	10.00	
15							.00	10.00	
16							2.50	10.00	
17							10.00	10.00	
18							7.00	10.00	
19							.25	10.00	
20							.25	10.00	
21							1.50	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							8.00	10.00	
25							<.25	10.00	
26							2.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							8.00	10.00	
30							10.00	10.00	
MONTHLY AVGS							5.27	10.00	

SUNSHINE (MINUTES)

Total: Possible:
Percent Possible:

NUMBER OF DAYS WITH:

SKY CONDITION

CLR	PTLY CLDY	CLOUDY	MISSING
			30

MINIMUM VISIBILITY (MILES)

<=0.25	<=3.0	>=7.0
5	14	14

OBSERVATIONS AT 3–HOURLY INTERVALS

OAK RIDGE, TN

NOVEMBER 2002 OQT WBAN # 53868

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0659	**NOV 01**			**SUNSET: 1741**					
01	OVC	041			8.00		47	44	46	90	0	00	29.26	30.25
04	OVC	041			7.00		46	44	45	93	0	00	29.24	30.24
07	OVC	043			7.00		46	43	45	89	0	00	29.27	30.26
10	OVC	038			10.00		48	42	45	80	3	VR	29.31	30.31
13	OVC	033			10.00		49	37	43	64	7	VR	29.31	30.31
16	OVC	040			10.00		49	37	43	64	7	22	29.28	30.27
19	CLR	NC			10.00		46	37	42	71	3	26	29.30	30.30
22	CLR	NC			8.00		39	36	38	89	0	00	29.32	30.32
					SUNRISE: 0700	**NOV 02**			**SUNSET: 1740**					
01	CLR	NC			10.00		40	27	35	60	3	VR	29.32	30.32
04	CLR	NC			6.00	BR	32	31	32	96	0	00	29.30	30.31
07	CLR	NC			7.00		30	28	29	92	0	00	29.32	30.33
10	CLR	NC			10.00		41	25	35	53	0	00	29.34	30.35
13	CLR	NC			10.00		49	24	39	38	0	00	29.28	30.28
16	CLR	NC			10.00		53	21	40	29	5	VR	29.23	30.23
19	CLR	NC			10.00		45	32	39	61	0	00	29.23	30.25
22	CLR	NC			10.00		44	36	40	73	0	00	29.24	30.24
					SUNRISE: 0701	**NOV 03**			**SUNSET: 1739**					
01	OVC	080			10.00	-RA	43	37	40	80	0	00	29.25	30.25
04	OVC	060			10.00	-RA	42	39	41	89	0	00	29.23	30.23
07	OVC	060			10.00		41	37	39	86	0	00	29.26	30.26
10	BKN	075			10.00		44	35	40	71	0	00	29.26	30.26
13	FEW	NC			10.00		49	32	42	52	5	21	29.20	30.20
16	OVC	065			10.00	-RA	48	42	45	80	0	00	29.16	30.15
19	OVC	028			10.00	-RA	45	43	44	93	0	00	29.15	30.15
22	OVC	018			4.00	-RA BR	44	43	44	96	0	00	29.12	30.11
					SUNRISE: 0702	**NOV 04**			**SUNSET: 1738**					
01	OVC	005			1.75	-RA BR	45	45	45	100	3	22	29.09	30.09
04	OVC	004			8.00		47	47	47	100	0	00	29.09	30.08
07	OVC	004			7.00		48	47	47	96	0	00	29.09	30.09
10	OVC	010			10.00		50	48	49	93	3	VR	29.14	30.14
13	OVC	024			10.00		53	47	50	80	3	06	29.13	30.12
16	OVC	040			10.00		55	47	51	74	3	VR	29.09	30.08
19	OVC	034			10.00		50	46	48	86	3	VR	29.11	30.09
22	OVC	026			10.00		49	45	47	86	0	00	29.13	30.11
					SUNRISE: 0703	**NOV 05**			**SUNSET: 1737**					
01	CLR	NC			9.00		47	46	46	97	0	00	29.12	30.11
04	OVC	085			10.00		47	46	46	97	5	07	29.06	30.03
07	OVC	060			5.00	-RA BR	48	47	47	96	0	00	29.00	29.98
10	OVC	006			5.00	-RA BR	50	48	49	93	6	06	28.97	29.95
13	OVC	018			4.00	-RA BR	51	50	51	96	0	00	28.82	29.80
16	OVC	019			1.75	RA BR	52	51	52	97	0	00	28.73	29.71
19	OVC	014			3.00	-RA BR	54	54	54	100	5	VR	28.70	29.67
22	OVC	004			7.00		55	55	55	100	0	00	28.70	29.66
					SUNRISE: 0704	**NOV 06**			**SUNSET: 1737**					
01	BKN	055			10.00		54	52	53	93	7	25	28.72	29.69
04	OVC	055			10.00		51	46	49	83	7	27	28.78	29.75
07	OVC	037			10.00		48	43	46	83	7	VR	28.86	29.84
10	OVC	029			10.00		48	41	45	77	5	25	28.96	29.93
13	OVC	032			10.00		48	38	43	68	7	VR	29.03	30.01
16	OVC	043			10.00		48	35	42	61	6	28	29.10	30.09
19	BKN	040			10.00		45	32	39	61	0	00	29.17	30.17
22	OVC	038			10.00		44	34	40	68	0	00	29.20	30.20

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0705	**NOV 07**			**SUNSET: 1736**					
01	OVC	028			10.00		43	34	39	71	6	36	29.24	30.24
04	OVC	033			10.00		42	35	39	76	0	00	29.25	30.25
07	OVC	035			10.00		42	36	39	79	0	00	29.28	30.28
10	SCT	NC			10.00		47	34	41	61	6	13	29.31	30.30
13	CLR	NC			10.00		53	35	45	51	5	25	29.27	30.27
16	CLR	NC			10.00		57	35	47	44	7	16	29.25	30.24
19	CLR	NC			10.00		47	40	44	77	0	00	29.26	30.26
22	CLR	NC			8.00		41	39	40	93	0	00	29.26	30.26
					SUNRISE: 0706	**NOV 08**			**SUNSET: 1735**					
01	CLR	NC			7.00		38	37	38	97	0	00	29.25	30.25
04	CLR	NC			6.00	BR	35	34	35	96	0	00	29.25	30.25
07	CLR	NC			6.00	BR	33	32	33	96	0	00	29.27	30.28
10	CLR	NC			9.00		47	41	44	80	0	00	29.28	30.28
13	CLR	NC			10.00		60	41	50	50	7	22	29.21	30.20
16	CLR	NC			10.00		65	39	52	39	8	23	29.14	30.13
19	CLR	NC			10.00		54	42	48	64	5	VR	29.13	30.13
22	CLR	NC			10.00		53	41	47	64	5	VR	29.13	30.12
					SUNRISE: 0707	**NOV 09**			**SUNSET: 1734**					
01	CLR	NC			10.00		50	41	46	71	6	VR	29.16	30.14
04	SCT	NC			10.00		49	41	45	74	3	VR	29.15	30.13
07	OVC	040			10.00		48	43	46	83	5	VR	29.16	30.14
10	OVC	049			10.00		56	45	50	67	5	27	29.14	30.11
13	OVC	050			10.00		64	49	56	58	5	26	29.05	30.01
16	BKN	060			10.00		68	48	57	49	9	21	28.98	29.94
19	OVC	065			10.00		65	51	57	61	3	19	28.94	29.90
22	OVC	044			10.00		66	54	59	65	8	21	28.91	29.87
					SUNRISE: 0708	**NOV 10**			**SUNSET: 1733**					
01	OVC	039			10.00		64	57	60	78	6	21	28.89	29.83
04	OVC	028			0.75	+RA BR	61	60	60	97	6	VR	28.79	29.74
07	OVC	019			10.00		66	63	64	90	14	21	28.79	29.74
10	OVC	023			10.00		69	63	65	81	9	23	28.79	29.73
13	OVC	029			10.00		71	66	68	84	10	21	28.75	29.69
16	BKN	041			10.00		76	64	68	67	14	20	28.70	29.63
19	FEW	NC			10.00		73	63	67	71	15	20	28.67	29.60
22	OVC	040			9.00	-RA	65	64	64	97	6	VR	28.64	29.57
					SUNRISE: 0709	**NOV 11**			**SUNSET: 1732**					
01	OVC	055			2.50	+RA BR	61	59	60	93	8	20	28.72	29.66
04	OVC	012			10.00	-RA	57	56	56	96	3	15	28.78	29.72
07	SCT	NC			8.00		55	55	55	100	3	21	28.87	29.82
10	CLR	NC			10.00		59	54	56	83	3	28	28.95	29.91
13	CLR	NC			10.00		65	52	58	63	7	20	28.97	29.92
16	CLR	NC			10.00		66	50	57	56	3	26	29.00	29.95
19	FEW	NC			10.00		61	54	57	78	0	00	29.06	30.02
22	BKN	110			10.00		57	52	54	83	0	00	29.08	30.04
					SUNRISE: 0710	**NOV 12**			**SUNSET: 1732**					
01	OVC	080			10.00	-RA	55	52	53	90	0	00	29.08	30.03
04	OVC	060			10.00	-RA	54	52	53	93	0	00	29.08	30.04
07	OVC	065			7.00		53	52	52	96	0	00	29.07	30.04
10	OVC	013			10.00		54	52	53	93	3	33	29.11	30.08
13	BKN	029			10.00		60	49	54	67	6	34	29.08	30.04
16	CLR	NC			10.00		55	43	49	64	12	36	29.10	30.07
19	SCT	NC			10.00		51	41	46	69	7	02	29.16	30.14
22	CLR	NC			10.00		48	37	43	66	7	35	29.20	30.19

OBSERVATIONS AT 3–HOURLY INTERVALS

OAK RIDGE, TN

NOVEMBER 2002 OQT WBAN # 53868

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0711	**NOV 13**			**SUNSET: 1731**					
01	OVC	031			10.00		45	34	40	66	9	34	29.25	30.23
04	OVC	033			10.00		43	33	39	68	0	00	29.26	30.25
07	OVC	037			10.00		44	32	39	63	3	32	29.30	30.29
10	CLR	NC			10.00		46	32	40	58	3	VR	29.33	30.33
13	CLR	NC			10.00		53	33	44	47	5	11	29.30	30.29
16	CLR	NC			10.00		56	32	45	40	0	00	29.26	30.24
19	CLR	NC			10.00		47	37	42	69	0	00	29.27	30.26
22	CLR	NC			10.00		40	37	39	89	0	00	29.26	30.27
					SUNRISE: 0712	**NOV 14**			**SUNSET: 1730**					
01	CLR	NC			10.00		36	35	36	97	0	00	29.26	30.25
04	VV	001			0.25	FG	34	34	34	100	0	00	29.24	30.24
07	VV	001			0.25	FG	33	33	33	100	0	00	29.26	30.27
10	CLR	NC			6.00	BR	39	39	39	100	0	00	29.28	30.29
13	CLR	NC			10.00		54	37	46	53	5	26	29.19	30.19
16	CLR	NC			10.00		58	32	46	38	6	VR	29.13	30.12
19	CLR	NC			10.00		48	36	43	63	0	00	29.11	30.11
22	CLR	NC			10.00		41	36	39	82	0	00	29.10	30.11
					SUNRISE: 0713	**NOV 15**			**SUNSET: 1730**					
01	CLR	NC			10.00		39	35	37	86	3	VR	29.08	30.07
04	CLR	NC			10.00		39	35	37	86	3	VR	29.07	30.04
07	OVC	048			10.00		41	39	40	93	0	00	29.05	30.03
10	BKN	046			10.00		47	41	44	80	0	00	29.05	30.04
13	BKN	090			10.00		53	38	46	57	3	33	28.99	29.97
16	OVC	047			4.00	-RA BR	48	46	47	93	0	00	28.98	29.96
19	OVC	007			3.00	-RA BR	47	47	47	100	3	VR	28.97	29.96
22	OVC	011			4.00	BR	48	48	48	100	5	07	28.98	29.96
					SUNRISE: 0714	**NOV 16**			**SUNSET: 1729**					
01	OVC	016			4.00	BR	49	48	48	97	0	00	28.96	29.93
04	OVC	012			4.00	BR	50	49	49	96	0	00	28.93	29.91
07	OVC	004			3.00	BR	50	49	49	96	0	00	28.94	29.92
10	OVC	037			10.00		49	46	47	90	3	VR	28.97	29.95
13	OVC	022			10.00		48	43	46	83	7	01	28.92	29.89
16	OVC	027			10.00		45	40	43	83	3	01	28.91	29.89
19	OVC	022			8.00	-RA	42	38	40	85	7	36	28.94	29.92
22	OVC	026			10.00		40	36	38	86	8	35	28.95	29.94
					SUNRISE: 0715	**NOV 17**			**SUNSET: 1728**					
01	OVC	020			10.00		39	34	37	82	3	35	28.94	29.93
04	OVC	021			10.00		38	33	36	83	3	33	28.93	29.92
07	OVC	021			10.00		38	34	36	86	0	00	28.95	29.95
10	OVC	026			10.00		38	32	35	79	3	35	28.99	29.99
13	OVC	024			10.00		39	32	36	76	6	35	28.99	29.98
16	OVC	027			10.00		39	29	35	67	9	30	29.05	30.04
19	OVC	042			10.00		37	27	33	67	3	26	29.12	30.13
22	OVC	043			10.00		36	20	30	52	5	VR	29.19	30.21
					SUNRISE: 0716	**NOV 18**			**SUNSET: 1728**					
01	CLR	NC			10.00		29	24	27	82	0	00	29.23	30.26
04	CLR	NC			10.00		27	24	26	89	0	00	29.27	30.30
07	CLR	NC			8.00		25	23	24	92	0	00	29.33	30.36
10	CLR	NC			10.00		37	26	33	65	3	20	29.40	30.42
13	CLR	NC			10.00		47	28	39	48	3	VR	29.38	30.39
16	CLR	NC			10.00		51	33	43	50	3	19	29.32	30.33
19	CLR	NC			10.00		42	37	40	82	0	00	29.30	30.33
22	CLR	NC			8.00		38	36	37	93	0	00	29.30	30.32

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0717	**NOV 19**			**SUNSET: 1727**					
01	SCT	NC			6.00	BR	37	35	36	93	0	00	29.29	30.29
04	OVC	044			10.00		44	38	41	79	0	00	29.23	30.22
07	OVC	010			2.00	RA BR	44	43	44	96	0	00	29.27	30.27
10	OVC	008			2.00	BR	47	45	46	93	0	00	29.31	30.32
13	OVC	006			4.00	BR	50	48	49	93	3	VR	29.29	30.29
16	CLR	NC			10.00		56	49	52	77	0	00	29.25	30.24
19	FEW	NC			5.00	BR	48	47	47	96	0	00	29.27	30.27
22	VV	001			0.25	FG	43	43	43	100	0	00	29.28	30.27
					SUNRISE: 0718	**NOV 20**			**SUNSET: 1727**					
01	OVC	009			0.25	FG	45	44	45	97	0	00	29.29	30.29
04	OVC	004			2.50	BR	46	45	46	96	0	00	29.28	30.27
07	OVC	002			1.75	BR	45	45	45	100	0	00	29.28	30.27
10	OVC	006			5.00	BR	46	43	45	89	3	08	29.27	30.27
13	OVC	010			6.00	BR	47	43	45	86	0	00	29.21	30.21
16	BKN	075			9.00		52	43	48	72	0	00	29.13	30.12
19	OVC	041			4.00	-RA BR	49	47	48	93	0	00	29.12	30.11
22	OVC	016			3.00	BR	49	47	48	93	0	00	29.11	30.11
					SUNRISE: 0719	**NOV 21**			**SUNSET: 1726**					
01	OVC	005			2.00	RA BR	48	47	47	96	0	00	29.08	30.06
04	OVC	005			3.00	-RA BR	48	47	47	96	0	00	29.03	30.01
07	OVC	003			3.00	-RA BR	48	48	48	100	0	00	29.00	29.98
10	OVC	003			4.00	BR	50	49	49	96	3	22	28.98	29.96
13	CLR	NC			10.00		57	48	52	72	6	VR	28.89	29.86
16	FEW	NC			10.00		61	40	50	46	13	20	28.80	29.77
19	OVC	085			10.00		56	40	48	55	8	21	28.76	29.73
22	OVC	060			10.00	-RA	54	41	48	62	5	29	28.78	29.75
					SUNRISE: 0720	**NOV 22**			**SUNSET: 1726**					
01	OVC	030			10.00		44	33	39	65	12	29	28.87	29.85
04	OVC	046			10.00		42	31	37	65	6	VR	28.89	29.86
07	OVC	029			10.00		40	31	36	70	9	28	28.94	29.92
10	OVC	040			10.00		40	27	35	60	5	26	29.00	29.98
13	OVC	060			10.00		41	21	34	45	7	29	29.02	30.01
16	OVC	060			10.00		41	25	35	53	7	VR	29.06	30.05
19	OVC	060			10.00		39	26	34	60	5	VR	29.12	30.12
22	OVC	050			10.00		39	27	34	62	3	VR	29.16	30.17
					SUNRISE: 0721	**NOV 23**			**SUNSET: 1725**					
01	OVC	046			10.00		38	21	32	51	6	36	29.17	30.18
04	CLR	NC			10.00		30	25	28	82	0	00	29.19	30.20
07	CLR	NC			10.00		28	25	27	88	0	00	29.23	30.25
10	CLR	NC			10.00		39	27	34	62	3	21	29.26	30.27
13	CLR	NC			10.00		46	25	38	44	7	VR	29.23	30.23
16	CLR	NC			10.00		50	25	40	38	7	23	29.19	30.20
19	CLR	NC			10.00		45	26	37	48	3	23	29.20	30.22
22	CLR	NC			10.00		38	30	35	73	3	22	29.22	30.23
					SUNRISE: 0722	**NOV 24**			**SUNSET: 1725**					
01	CLR	NC			10.00		35	28	32	76	5	22	29.24	30.24
04	CLR	NC			10.00		34	28	32	79	0	00	29.26	30.27
07	CLR	NC			10.00		31	28	30	89	0	00	29.28	30.29
10	CLR	NC			10.00		42	30	37	62	0	00	29.29	30.30
13	CLR	NC			10.00		56	32	45	40	7	22	29.22	30.22
16	CLR	NC			10.00		59	35	48	41	3	19	29.17	30.17
19	CLR	NC			10.00		47	39	43	74	0	00	29.18	30.19
22	CLR	NC			9.00		39	36	38	89	0	00	29.18	30.19

OBSERVATIONS AT 3−HOURLY INTERVALS

OAK RIDGE, TN

NOVEMBER 2002 OQT WBAN # 53868

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0723	**NOV 25**			**SUNSET: 1724**					
01	CLR	NC			8.00		36	35	36	97	0	00	29.17	30.17
04	OVC	001			0.25	FG	33	33	33	100	0	00	29.19	30.19
07	OVC	002			0.25	FG	32	32	32	100	0	00	29.22	30.23
10	SCT	NC			3.00	BR	40	39	40	97	0	00	29.24	30.25
13	CLR	NC			10.00		57	37	47	47	0	00	29.18	30.18
16	CLR	NC			10.00		60	36	48	41	0	00	29.16	30.15
19	BKN	055			10.00		49	39	44	69	0	00	29.21	30.22
22	OVC	050			10.00		46	37	42	71	0	00	29.23	30.23
					SUNRISE: 0724	**NOV 26**			**SUNSET: 1724**					
01	OVC	110			10.00		44	37	41	76	0	00	29.23	30.21
04	OVC	050			10.00		44	37	41	76	0	00	29.22	30.21
07	OVC	040			10.00		45	39	42	80	3	07	29.23	30.22
10	OVC	037			10.00		47	38	43	71	0	00	29.23	30.23
13	OVC	036			10.00		51	39	45	64	3	VR	29.18	30.17
16	OVC	032			3.00	−RA BR	48	45	47	89	6	25	29.14	30.14
19	OVC	041			8.00	−RA	47	45	46	93	6	VR	29.16	30.16
22	OVC	026			10.00		42	38	40	85	6	36	29.23	30.23
					SUNRISE: 0725	**NOV 27**			**SUNSET: 1724**					
01	OVC	016			10.00		38	34	36	86	5	01	29.25	30.25
04	OVC	025			10.00		36	28	33	73	7	35	29.25	30.26
07	OVC	028			10.00		34	25	31	70	5	36	29.28	30.29
10	OVC	028			10.00		34	24	30	67	5	03	29.32	30.34
13	OVC	036			10.00		35	22	30	59	5	32	29.35	30.37
16	OVC	039			10.00		35	23	31	61	6	02	29.32	30.34
19	OVC	037			10.00		34	22	30	61	5	02	29.35	30.37
22	OVC	039			10.00		34	20	29	56	5	35	29.36	30.38
					SUNRISE: 0726	**NOV 28**			**SUNSET: 1724**					
01	BKN	035			10.00		33	20	29	59	3	33	29.34	30.37
04	CLR	NC			10.00		27	21	25	78	0	00	29.34	30.37
07	OVC	037			10.00		29	21	26	72	3	36	29.35	30.38
10	OVC	037			10.00		33	19	28	56	5	VR	29.37	30.40
13	OVC	039			10.00		35	19	29	52	0	00	29.32	30.35
16	SCT	NC			10.00		37	19	31	48	7	26	29.28	30.31
19	CLR	NC			10.00		30	22	27	72	0	00	29.31	30.34
22	CLR	NC			10.00		27	21	25	78	0	00	29.28	30.31
					SUNRISE: 0727	**NOV 29**			**SUNSET: 1723**					
01	CLR	NC			10.00		26	21	24	81	0	00	29.27	30.29
04	CLR	NC			10.00		23	21	22	92	0	00	29.23	30.26
07	CLR	NC			9.00		23	21	22	92	0	00	29.19	30.22
10	CLR	NC			10.00		33	25	30	72	6	24	29.13	30.16
13	CLR	NC			10.00		47	27	39	46	13	22	29.04	30.04
16	CLR	NC			10.00		53	28	42	38	10	21	28.93	29.93
19	CLR	NC			10.00		48	27	39	44	6	VR	28.90	29.91
22	CLR	NC			10.00		48	28	40	46	8	22	28.91	29.90
					SUNRISE: 0728	**NOV 30**			**SUNSET: 1723**					
01	CLR	NC			10.00		46	30	39	54	5	25	28.87	29.85
04	CLR	NC			10.00		43	31	38	63	5	VR	28.82	29.80
07	CLR	NC			10.00		39	32	36	76	0	00	28.80	29.79
10	CLR	NC			10.00		50	34	43	54	8	22	28.81	29.79
13	CLR	NC			10.00		54	24	41	31	17	26	28.81	29.79
16	CLR	NC			10.00		51	20	39	29	12	27	28.88	29.86
19	CLR	NC			10.00		42	14	32	32	5	VR	29.00	30.00
22	CLR	NC			10.00		33	15	27	48	5	30	29.08	30.09

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE:	**NOV 31**			**SUNSET:**					

3−HOURLY OBSERVATION NOTES

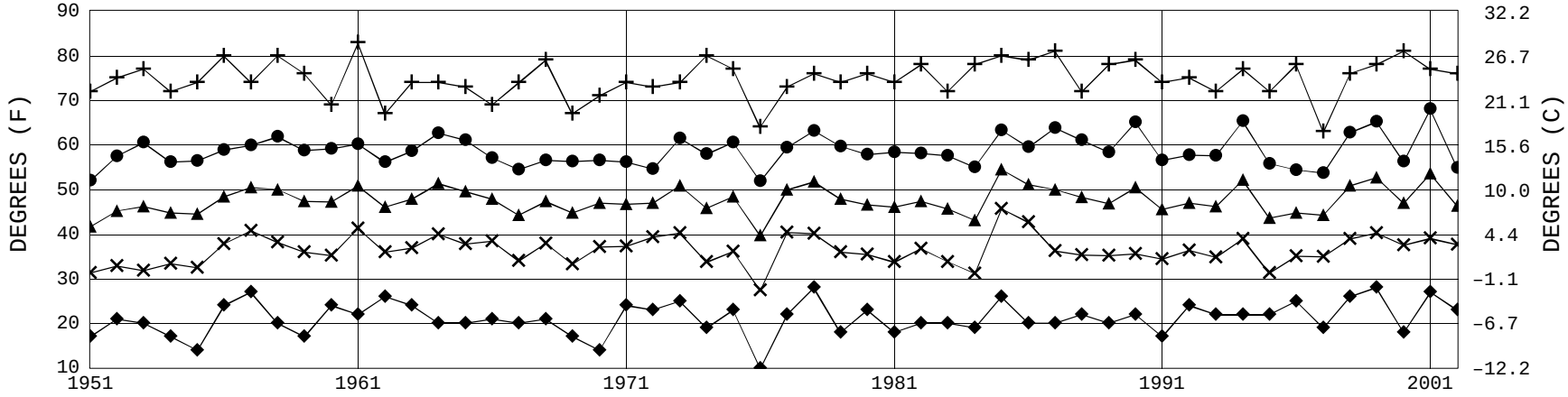
Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8−2/8, SCT = 3/8−4/8, BKN = 5/8−7/8, OVC = 8/8, VV = Vertical Visibilty = 8/8.
Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC= No ceiling detected.
& = Original observation contained additional weather elements.
See page 3 for additional notes.

SUMMARY BY HOUR

HOUR (LST)	AVERAGES: CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL	VISIBILITY (MILES)	WIND SPEED (MPH)	RESULTANT WIND (MPH): SPEED	RESULTANT WIND (MPH): DIRECTION
01			43	38	41	82	29.13	30.12	8.28	3	1	29
02			43	38	41	84	29.13	30.11	8.23	2	1	27
03			42	38	40	84	29.13	30.12	8.13	1	0	0
04			41	37	40	86	29.12	30.11	7.92	1	0	0
05			41	37	40	87	29.13	30.12	7.80	2	1	25
06			41	37	40	87	29.13	30.13	7.74	1	0	0
07			41	38	39	88	29.14	30.13	7.47	1	1	26
08			42	38	40	87	29.15	30.14	7.19	1	0	0
09			43	38	41	83	29.16	30.15	7.91	2	0	0
10			46	38	42	76	29.16	30.15	8.80	3	1	24
11			48	38	43	69	29.16	30.15	9.37	2	1	24
12			50	37	44	64	29.15	30.13	9.40	3	2	25
13			51	37	45	60	29.12	30.11	9.47	4	2	25
14			53	37	46	57	29.10	30.09	9.53	3	2	24
15			53	37	46	58	29.09	30.08	9.29	5	3	22
16			53	37	46	58	29.09	30.08	9.26	5	3	24
17			52	37	45	61	29.09	30.08	8.93	3	2	22
18			49	38	44	67	29.10	30.09	9.13	3	1	24
19			48	38	44	72	29.11	30.10	9.03	2	1	24
20			47	38	43	74	29.11	30.09	9.24	3	1	26
21			46	38	42	76	29.11	30.11	8.93	3	1	26
22			45	38	42	78	29.12	30.11	8.68	2	1	31
23			44	37	41	78	29.12	30.12	8.47	3	2	26
24			43	37	41	80	29.12	30.12	8.21	3	1	29

Published By: National Climatic Data Center

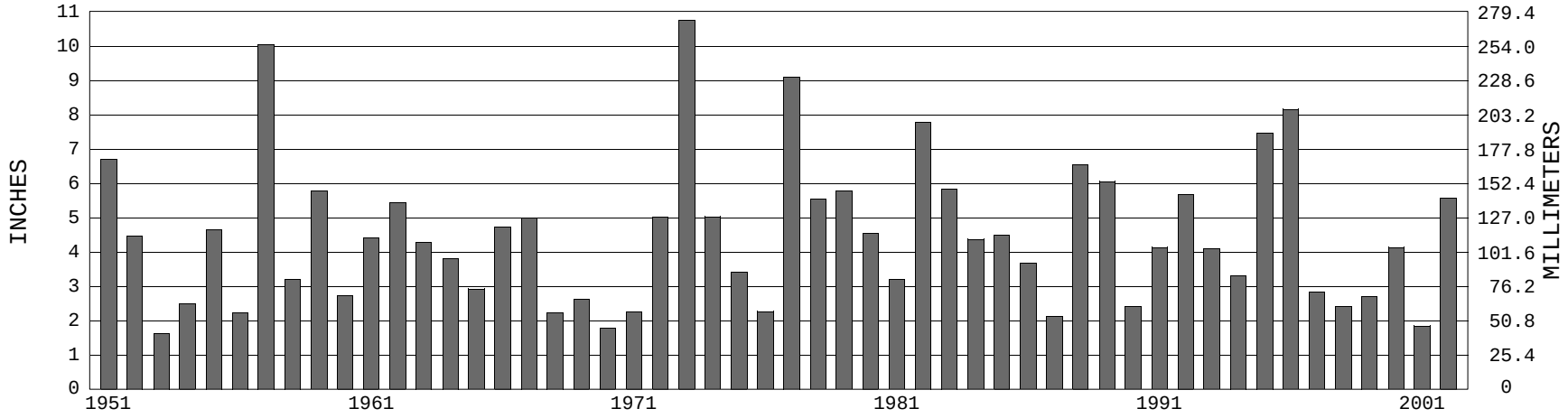
OAK RIDGE, TN NOVEMBER TEMPERATURES



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

Long–Term (1951–2002) Mean: 47.6 1961–1990 Normal: 47.7

OAK RIDGE, TN NOVEMBER PRECIPITATION



Long–Term (1951–2002) Mean Monthly Total: 4.50 1961–1990 Normal: 4.86

NOVEMBER 2002

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.

DIRECTOR

NCDC now offers an annual online subscription for the **Edited *Local Climatological Data* Publication.** When you purchase this subscription service, you will have **immediate online access** to all previous publications back to July 1996 and all publications thereafter until the expiration of the subscription. Your subscription is valid for one year after purchase. **The total cost is $29 for online delivery (including back issues) compared to $34 for offline delivery**. To order this and other subscriptions online with your credit card, go to:
www.ncdc.noaa.gov and choose subscriptions.

We welcome your questions or comments, please contact us at
Toll Free Number (866) 742—3322 (voice)
Fax Number :(304) 726—4409
TDD : 828—271—4010
or Email : ncdc.info@noaa.gov
Local Climatological Data is available at www.ncdc.noaa.gov

United States Department of Commerce | National Oceanic and Atmospheric Administration | National Environmental Satellite Data, and Information Service

For address correction, please return a photocopy of this page to Subscription Services indicating changes

NCDC Subscription Services Center
310 State Route 956 Building 300
Rocket Center, WV 26726

OFFICIAL BUSINESS, PENALTY FOR PRIVATE USE $300

FIRST CLASS
POSTAGE AND FEES PAID
NOAA
PERMIT G—19