



# MARCH 2001

## LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

# KNOXVILLE, TN

MC GHEE TYSON AIRPORT (TYS)  
 Lat: 35° 49' N Long: 83° 59' W Elev (Ground): 979 Feet  
 Time Zone: EASTERN WBAN: 13891 ISSN #: 0198-4810

MARCH 2001  
KNOXVILLE, 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																																																
																			SPEED	DIR	SPEED	DIR																																															
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	58	36	47	3	31	40	18	0					0.00	28.92	29.96	1.0	33	5.4	13	23	12	23	01																																														
02	61	50	56*	11	45	50	9	0	RA BR				T	28.74	29.77	5.5	26	6.1	17	25	14	20	02																																														
03	58	51	55	10	52	53	10	0	RA BR HZ				0.23	28.69	29.72	2.2	04	4.2	12	06	10	06	03																																														
04	68*	40	54	9	49	50	11	0	RA FG+ BR				0.31	28.57	29.59	8.4	25	12.2	40*	24	35*	25	04																																														
05	41	33	37	-9	28	34	28	0	RA SN BR HZ				0.03	28.91	29.97	11.0	30	11.6	33	28	26	28	05																																														
06	41	28	35*	-11	18	28	30	0	SN				T	28.99	30.05	8.2	31	9.0	33	28	28	28	06																																														
07	49	29	39	-7	23	32	26	0					0.00	29.05	30.11	3.3	02	6.4	20	03	16	02	07																																														
08	59	27	43	-4	30	38	22	0					0.00	28.95	30.01	6.0	24	6.7	25	25	22	23	08																																														
09	49	31	40	-7	22	34	25	0					0.00	28.96	30.02	5.2	03	6.1	16	02	13	03	09																																														
10	55	28	42	-5	20	33	23	0					0.00	29.01	30.07	3.6	03	5.0	15	05	13	04	10																																														
11	64	29	47	-1	31	40	18	0					0.00	29.03	30.08	2.0	23	4.0	21	23	15	23	11																																														
12	58	42	50	2	46	48	15	0	RA FG BR				0.48	28.82	29.86	1.8	33	5.3	24	12	20	12	12																																														
13	63	47	55	7	42	50	10	0	RA				0.10	28.73	29.76	14.0	25	14.9	36	27	29	25	13																																														
14	63	42	53	5	33	44	12	0					0.00	28.89	29.92	3.9	23	6.4	15	25	14	24	14																																														
15	57	46	52	3	45	48	13	0	RA BR				0.54	28.67	29.70	4.1	04	7.0	21	16	16	08	15																																														
16	61	46	54	5	44	48	11	0	RA BR				0.09	28.74	29.77	10.6	25	13.0	36	22	30	24	16																																														
17	49	38	44	-5	35	40	21	0	DZ				T	29.09	30.14	7.5	31	9.7	21	29	16	02	17																																														
18	54	37	46	-4	27	37	19	0					0.00	29.20	30.26	12.3	04	12.7	26	05	23	03	18																																														
19	60	33	47	-3	24	38	18	0	RA				T	29.14	30.20	6.1	05	7.6	31	16	25	16	19																																														
20	50	41	46	-4	35	40	19	0	RA BR				0.06	28.90	29.95	18.7	05	19.2	38	07	32	05	20																																														
21	46	38	42	-9	39	41	23	0	RA DZ BR				0.09	28.83	29.87	4.4	35	8.1	22	05	18	05	21																																														
22	61	36	49	-2	37	44	16	0	RA FG+ BR				0.01	28.95	30.00	3.7	01	5.2	20	03	15	02	22																																														
23	64	35	50	-1	34	43	15	0					0.00	29.00	30.05	1.1	21	2.2	13	28	12	27	23																																														
24	63	38	51	0	37	44	14	0	HZ				0.00	28.98	30.02	4.1	28	6.7	22	24	17	29	24																																														
25	52	33	43	-9	17	33	22	0					0.00	29.06	30.11	7.3	34	9.3	21	31	18	28	25																																														
26	46	27	37	-15	14	29	28	0					0.00	29.13	30.19	4.0	34	7.2	22	27	17	27	26																																														
27	48	24*	36	-16	17	30	29	0					0.00	29.22	30.29	2.4	03	4.3	17	04	12	31	27																																														
28	58	25	42	-11	23	36	23	0	RA HZ				T	29.12	30.17	0.9	19	5.5	18	19	16	19	28																																														
29	53	43	48	-5	45	46	17	0	RA BR				0.60	28.86	29.90	6.0	03	7.3	18	09	16	09	29																																														
30	58	48	53	0	49	50	12	0	RA BR HZ				0.09	28.75	29.79	1.9	33	4.3	15	06	14	05	30																																														
31	55	47	51	-2	46	49	14	0	BR HZ				0.00	28.78	29.81	6.4	27	6.9	16	26	13	26	31																																														
55.5										37.0		46.3		■ ■		33.5		41.0		18.4		0.0		< MONTHLY AVERAGES		TOTALS-->		2.63		28.93		29.97		2.6		33		7.7		<- MONTHLY AVERAGES																													
-5.8										0.4		-2.7		■ ■		<-----DEPARTURE FROM NORMAL----->																				-2.46		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																															
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 0.60 DATE: 29										SEA LEVEL PRESSURE										DATE		TIME																																					
MONTHLY										GREATEST 24-HR SNOWFALL:										MAXIMUM										DATE		TIME																																					
TOTAL DEPARTURE										GREATEST SNOW DEPTH:										MINIMUM										DATE		TIME																																					
HEATING: 571										NUMBER OF DAYS WITH										MAXIMUM TEMP ≥ 90: 0										MINIMUM TEMP ≤ 32: 9										PRECIPITATION ≥ 0.01 INCH: 12																													
COOLING: 0										MAXIMUM TEMP ≤ 32: 0										MINIMUM TEMP ≤ 0: 0										PRECIPITATION ≥ 0.10 INCH: 6										SNOWFALL ≥ 1.0 INCH: 0																													
SEASON TO DATE										THUNDERSTORMS: 0										HEAVY FOG: 2																																																	
TOTAL DEPARTURE										HEATING: 571										COOLING: 0										SEASON TO DATE										TOTAL DEPARTURE										HEATING: 3669										COOLING: 60									
TOTAL DEPARTURE										HEATING: 0										COOLING: 0										SEASON TO DATE										TOTAL DEPARTURE										HEATING: 0										COOLING: 0									

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## KNOXVILLE, TN

MARCH 2001

TYS

WBAN # 13891

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			T	
03													03												03			0.23	
04													04												04			0.31	
05													05												05			0.03	
06													06												06			T	
07													07												07			0.00	
08													08												08			0.00	
09													09												09			0.00	
10													10												10			0.00	
11													11												11			0.00	
12													12												12			0.48	
13													13												13			0.10	
14													14												14			0.00	
15													15												15			0.54	
16													16												16			0.09	
17													17												17			T	
18													18												18			0.00	
19													19												19			T	
20													20												20			0.06	
21													21												21			0.09	
22													22												22			0.01	
23													23												23			0.00	
24													24												24			0.00	
25													25												25			0.00	
26													26												26			0.00	
27													27												27			0.00	
28													28												28			T	
29													29												29			0.60	
30													30												30			0.09	
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)	.06	.07	.07	.08	.12	.16	.19	.23	.26	.28	.31	.34
Ending Date	13	13	13	13	12	12	12	12	12	12	12	12
Ending Time (Hour/Min)	0641	0641	0641	0641	1731	1736	1741	1750	1750	1741	1750	1750

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 1961–1990

### 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

## KNOXVILLE, TN MARCH 2001

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							5.00	10.00	
03							1.00	7.00	
04							<.25	10.00	
05							3.00	10.00	
06							7.00	10.00	
07							10.00	10.00	
08							7.00	10.00	
09							7.00	10.00	
10							9.00	10.00	
11							7.00	10.00	
12							.50	10.00	
13							8.00	10.00	
14							10.00	10.00	
15							1.25	10.00	
16							2.50	10.00	
17							7.00	10.00	
18							7.00	10.00	
19							7.00	10.00	
20							5.00	10.00	
21							1.75	10.00	
22							<.25	10.00	
23							7.00	10.00	
24							6.00	10.00	
25							9.00	10.00	
26							10.00	10.00	
27							7.00	10.00	
28							6.00	10.00	
29							1.25	9.00	
30							1.00	10.00	
31							1.50	7.00	
<b>MONTHLY AVGS</b>							5.44	9.77	
<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									
2                      11                      16									

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

MARCH 2001

TYS

WBAN # 13891

Table with multiple columns: HOUR (LST), SKY COVER, CEILING, SATELLITE, WEATHER, TEMPERATURE (DRY BULB, DEW POINT, WET BULB), WIND (SPEED, DIRECTION), PRESSURE (STATION, SEA LEVEL), and additional columns for a second set of observations.



# OBSERVATIONS AT 3-HOURLY INTERVALS

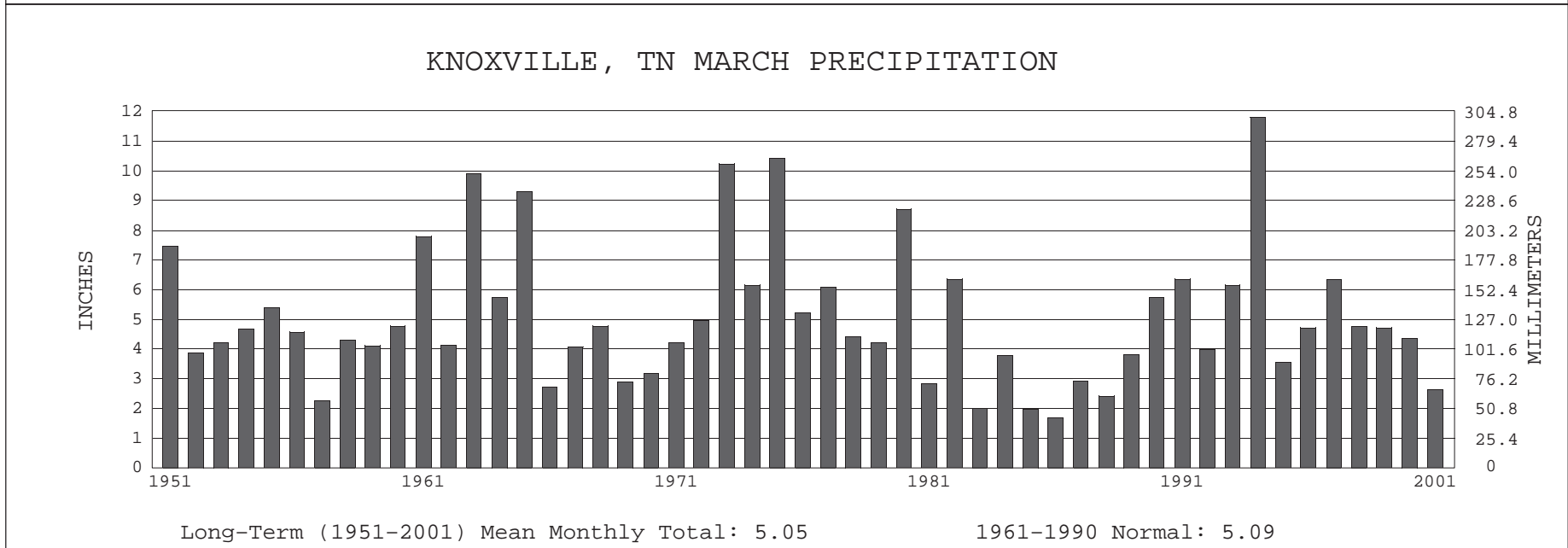
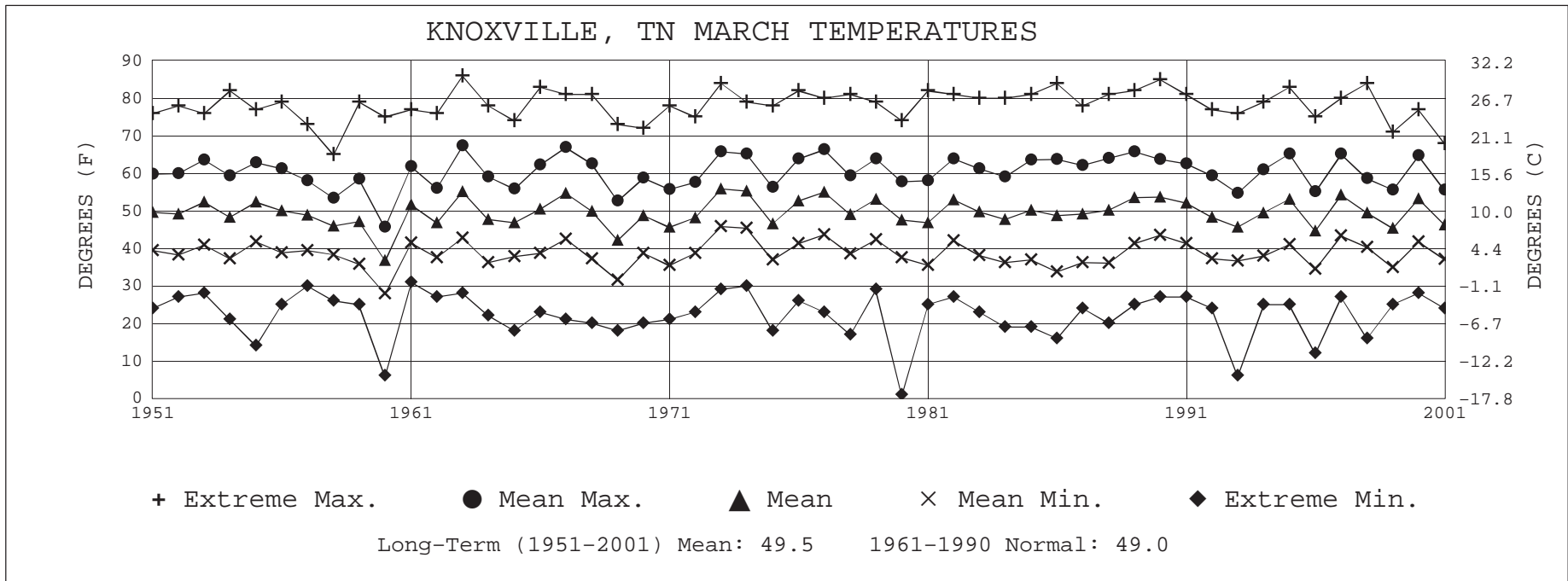
# KNOXVILLE, TN

MARCH 2001

TYS

WBAN # 13891

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)																	
	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: 0632								MAR 25								SUNSET: 1852								SUNRISE: 0624								MAR 31								SUNSET: 1857							
01	FEW	NC				10.00		41	18	33	39	13	01	29.07	30.11	01	OVC	014				3.00	BR	51	50	51	96	7	24	28.76	29.79																
04	CLR	NC				10.00		36	19	30	50	10	01	29.07	30.11	04	OVC	022				3.00	BR	50	50	50	100	6	29	28.75	29.78																
07	CLR	NC				10.00		33	20	29	59	7	36	29.09	30.15	07	OVC	021				5.00	BR	49	45	47	86	3	25	28.78	29.82																
10	CLR	NC				10.00		39	20	32	46	5	VR	29.12	30.18	10	OVC	033				6.00	BR HZ	52	45	48	77	10	27	28.81	29.85																
13	CLR	NC				10.00		45	16	34	31	0	00	29.06	30.12	13	OVC	037				7.00		54	44	49	69	12	26	28.80	29.83																
16	CLR	NC				10.00		51	16	38	25	6	29	28.99	30.04	16	OVC	033				5.00	HZ	53	44	49	72	9	29	28.77	29.80																
19	FEW	NC				10.00		46	12	34	25	10	31	29.00	30.06	19	OVC	060				5.00	HZ	52	45	48	77	5	32	28.77	29.80																
22	BKN	120				10.00		42	15	33	33	14	31	29.04	30.10	22	OVC	085				4.00	BR	49	45	47	86	3	25	28.78	29.81																
SUNRISE: 0631								MAR 26								SUNSET: 1853								3-HOURLY OBSERVATION NOTES																							
01	SCT	NC				10.00		37	14	29	39	12	33	29.07	30.13	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	FEW	NC				10.00		31	16	26	54	7	35	29.10	30.16	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.																															
07	CLR	NC				10.00		27	12	23	53	5	02	29.14	30.20	NC= No ceiling detected.																															
10	CLR	NC				10.00		33	13	27	43	10	01	29.17	30.24	& = Original observation contained additional weather elements.																															
13	FEW	NC				10.00		39	16	31	39	9	27	29.15	30.22	See page 3 for additional notes.																															
16	FEW	NC				10.00		44	18	34	35	8	20	29.09	30.16																																
19	FEW	NC				10.00		41	13	31	32	9	29	29.11	30.18																																
22	CLR	NC				10.00		36	14	29	40	6	34	29.16	30.22																																
SUNRISE: 0629								MAR 27								SUNSET: 1854																															
01	CLR	NC				10.00		33	15	27	48	0	00	29.19	30.26																																
04	CLR	NC				10.00		31	16	26	54	0	00	29.19	30.26																																
07	CLR	NC				10.00		26	20	24	78	0	00	29.24	30.32																																
10	CLR	NC				8.00		36	19	30	50	5	01	29.27	30.35																																
13	CLR	NC				10.00		43	18	34	37	8	30	29.23	30.31																																
16	CLR	NC				10.00		47	15	35	28	5	VR	29.18	30.24																																
19	CLR	NC				10.00		44	18	34	35	5	08	29.20	30.26																																
22	CLR	NC				10.00		39	15	31	38	10	03	29.22	30.29																																
SUNRISE: 0628								MAR 28								SUNSET: 1855																															
01	CLR	NC				10.00		35	15	28	44	6	02	29.21	30.27																																
04	CLR	NC				10.00		31	17	26	56	7	03	29.21	30.27																																
07	CLR	NC				8.00		29	19	26	66	5	05	29.20	30.27																																
10	CLR	NC				9.00		41	22	34	47	5	VR	29.20	30.26																																
13	CLR	NC				9.00		54	24	42	31	5	VR	29.13	30.19																																
16	CLR	NC				10.00		58	23	43	26	3	VR	29.02	30.08																																
19	SCT	NC				10.00		55	28	43	36	0	00	29.00	30.06																																
22	OVC	060				6.00	HZ	51	28	41	41	10	20	29.02	30.06																																
SUNRISE: 0626								MAR 29								SUNSET: 1855																															
01	OVC	050				7.00	-RA	47	39	43	74	3	34	29.00	30.05																																
04	OVC	047				9.00		46	42	44	86	5	36	28.98	30.02																																
07	OVC	046				6.00	BR	43	43	43	100	8	04	28.94	29.98																																
10	OVC	041				2.50	-RA BR	45	45	45	100	10	06	28.92	29.97																																
13	OVC	010				1.50	-RA BR	46	46	46	100	10	04	28.85	29.89																																
16	OVC	009				1.50	RA BR	48	47	47	96	13	03	28.76	29.80																																
19	OVC	006				5.00	BR	48	46	47	94	9	05	28.70	29.74																																
22	OVC	080				5.00	BR	49	49	49	100	0	00	28.75	29.79																																
SUNRISE: 0625								MAR 30								SUNSET: 1856																															
01	OVC	010				4.00	BR	48	48	48	100	3	33	28.76	29.80																																
04	OVC	002				1.75	BR	48	48	48	100	0	00	28.74	29.78																																
07	OVC	013				2.50	BR	48	48	48	100	3	33	28.78	29.81																																
10	OVC	013				2.00	BR	50	48	49	93	7	06	28.79	29.82																																
13	OVC	011				9.00		53	48	50	83	7	01	28.74	29.77																																
16	OVC	022				10.00		57	49	53	75	7	26	28.74	29.77																																
19	OVC	024				6.00	HZ	55	49	52	80	6	28	28.74	29.77																																
22	OVC	015				2.50	BR	52	50	51	93	3	26	28.77	29.80																																





**MARCH 2001  
KNOXVILLE, TN**

# LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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