



# JULY 2003

## 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

JULY 2003  
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																																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24																																					
01	71	66	69*	-8	67	68	0	4	RA BR				1.33	29.01	30.03	8.4	05	8.6	21	06	17	05	01																																					
02	76	65	71	-6	66	67	0	6	RA DZ FG+ BCFG BR				1.07	28.82	29.83	5.0	04	7.7	21	04	17	05	02																																					
03	86	63	75	-2	67	70	0	10	FG+ BR				0.00	28.91	29.92	0.9	33	2.0	10	03	8	12	03																																					
04	90	67	79	2	69	72	0	14	BR HZ				0.00	28.99	30.01	1.1	27	3.1	12	25	10	25	04																																					
05	86	70	78	1	70	73	0	13	BR				0.00	29.04	30.05	7.2	25	7.8	18	27	15	28	05																																					
06	85	71	78	1	71	73	0	13	TS TSRA RA BR				0.39	29.04	30.05	9.4	24	9.9	28	26	23	26	06																																					
07	84	72	78	1	72	74	0	13	RA BR				0.14	29.08	30.10	7.9	23	8.1	18	24	15	22	07																																					
08	90	71	81	4	72	75	0	16	BR				0.00	29.11	30.12	7.1	24	7.6	17	25	14	24	08																																					
09	90	70	80	2	72	74	0	15	TS TSRA RA BR				1.59	29.03	30.04	5.0	24	8.5	26	24	23	24	09																																					
10	84	69	77	-1	71	72	0	12	TS TSRA RA BR				0.53	28.92	29.93	9.8	22	11.3	31	30	25*	29	10																																					
11	85	67	76	-2	67	70	0	11	TSRA RA BR				1.06	28.94	29.96	7.0	24	8.7	21	29	18	29	11																																					
12	86	64	75	-3	66	69	0	10	TSRA BR				0.18	29.00	30.02	6.7	23	7.8	25	22	21	23	12																																					
13	84	65	75	-3	67	69	0	10	TS TSRA BCFG BR HZ				0.17	29.03	30.05	1.2	32	4.4	23	01	20	01	13																																					
14	83	65	74	-4	68	70	0	9	BCFG BR				0.00	29.06	30.08	2.4	26	4.4	14	30	12	26	14																																					
15	86	68	77	-1	70	72	0	12	BR HZ				0.00	29.05	30.07	5.3	24	6.2	18	27	15	27	15																																					
16	86	73	80	2	73	74	0	15	TS BR				0.00	29.04	30.05	6.9	24	7.7	24	23	22	23	16																																					
17	88	70	79	1	69	72	0	14	FG+ BR HZ				0.00	29.08	30.09	2.3	02	3.3	13	01	10	02	17																																					
18	87	68	78	0	70	72	0	13	TS BR HZ				0.00	29.02	30.04	2.6	28	4.4	18	26	14	29	18																																					
19	88	71	80	2	70	73	0	15	BR HZ				0.00	28.97	29.98	0.8	27	3.7	13	27	10	27	19																																					
20	89	68	79	1	69	72	0	14	BCFG BR HZ				0.00	28.97	29.98	1.6	25	2.7	13	28	9	24	20																																					
21	89	68	79	1	70	72	0	14	TS TSRA RA BCFG BR HZ				0.06	28.88	29.88	8.4	24	10.0	30	27	24	27	21																																					
22	76	68	72	-6	69	70	0	7	TS TSRA RA DZ BR				0.44	28.84	29.85	8.1	23	9.2	25	21	22	22	22																																					
23	81	62	72	-6	65	67	0	7	TS TSRA RA BR				0.01	28.90	29.92	3.3	24	7.3	17	06	15	05	23																																					
24	80	59*	70	-8	62	65	0	5	FG+ BR				0.00	29.06	30.09	2.5	07	3.4	15	03	12	07	24																																					
25	86	62	74	-4	65	68	0	9	BR				0.00	29.16	30.18	2.9	05	4.3	13	04	10	07	25																																					
26	88	64	76	-2	68	71	0	11	BR HZ				0.00	29.20	30.22	1.1	33	3.3	12	33	9	21	26																																					
27	87	70	79	1	72	74	0	14	BR				0.00	29.12	30.13	5.9	24	6.9	16	28	14	28	27																																					
28	91*	71	81*	3	72	74	0	16	TS TSRA BR HZ				0.09	28.96	29.97	7.2	25	8.3	31*	01	22	36	28																																					
29	79	70	75	-3	71	72	0	10	RA BR				0.09	28.92	29.93	4.4	24	5.2	14	26	13	25	29																																					
30	87	69	78	0	71	73	0	13	FG+ BR HZ				0.00	28.98	29.99	0.5	32	3.2	12	30	9	26	30																																					
31	85	71	78	0	72	73	0	13	TS TSRA RA BR				1.12	29.00	30.01	5.2	22	5.9	26	30	23	30	31																																					
84.9											67.6	76.3	■ ■	69.1	71.3	0.0	11.5	< MONTHLY AVERAGES		TOTALS-->		8.27	29.00	30.02	0.8	18	6.3	<-- MONTHLY AVERAGES																																
-2.0				-.9				-1.4				■ ■				<-----DEPARTURE FROM NORMAL----->											3.56	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																																
DEGREE DAYS											GREATEST 24-HR PRECIPITATION: 2.07 DATE :01-02											SEA LEVEL PRESSURE											DATE		TIME																									
MONTHLY TOTAL DEPARTURE											SEASON TO DATE TOTAL DEPARTURE											GREATEST 24-HR SNOWFALL:											MAXIMUM											DATE		TIME														
HEATING: 0											0											GREATEST SNOW DEPTH:											MINIMUM											DATE		TIME														
COOLING: 358											-50											NUMBER OF DAYS WITH →											MAXIMUM TEMP ≥ 90: 4											MINIMUM TEMP ≤ 32: 0											PRECIPITATION ≥ 0.01 INCH: 15		DATE		TIME	
											698											-135											MAXIMUM TEMP ≤ 32: 0											MINIMUM TEMP ≤ 0: 0											PRECIPITATION ≥ 0.10 INCH: 11		DATE		TIME	
																																	THUNDERSTORMS :13											HEAVY FOG : 5											SNOWFALL ≥ 1.0 INCH :		DATE		TIME	

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## KNOXVILLE, TN

JULY 2003

TYS

WBAN # 13891

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	T	T	0.01	T	0.02	0.03	0.03	0.03	0.04	0.04	0.02	0.01	01	T	0.02	0.03	0.04	0.04	0.04	0.14	0.30	0.25	0.17	0.03	0.04	01		1.33
02	0.04	0.04	0.13	0.11	0.30	0.05	0.06	0.13	0.02	T	T	0.02	02	0.01	T			T	0.05	0.02	0.09				02		1.07	
03													03												03		0.00	
04													04												04		0.00	
05													05												05		0.00	
06													06				0.02				0.08	0.19	0.05	T	06	0.34	0.39	
07				0.02	0.08	0.04	T				T	T	07												07		0.14	
08													08												08		0.00	
09													09	0.01	T	T					0.02	0.05		0.13	0.11	09	0.32	1.59
10													10					T	0.17	0.20	0.12	0.02			10	0.51	0.53	
11													11	T											11		1.06	
12										0.81	0.25	T	12					T	0.17	0.01					12		0.18	
13													13							0.17					13		0.17	
14													14												14		0.00	
15													15												15		0.00	
16													16												16		0.00	
17													17												17		0.00	
18													18												18		0.00	
19													19												19		0.00	
20													20												20		0.00	
21													21				T	0.01	0.04	0.01					21		0.06	
22				0.01	T							T	22	0.29		0.06	T								22	0.36	0.44	
23				T	T	T							23					T	0.01						23		0.01	
24													24												24		0.00	
25													25												25		0.00	
26													26												26		0.00	
27													27												27		0.00	
28													28							0.09					28		0.09	
29	T				T								29	T	T	0.03	0.06	T						29		0.09		
30													30												30		0.00	
31				0.01	0.09	0.02	0.05		0.27	0.06	0.01		31		T	0.52	0.07	0.02	T	T				31		1.12		

### MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.29	.50	.58	.72	.81	.94	1.04	1.06	1.06	1.06	1.06	1.06
Ending Date	11	11	11	11	11	11	11	11	11	11	11	11
Ending Time (Hour/Min)	0937	0937	0940	0947	0953	1011	1016	1038	1038	1038	1038	1038

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

## KNOXVILLE, TN JULY 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							2.00	10.00	
02							.50	10.00	
03							.13	10.00	
04							2.00	10.00	
05							2.50	10.00	
06							1.00	10.00	
07							2.00	10.00	
08							5.00	10.00	
09							.75	10.00	
10							1.25	10.00	
11							.75	10.00	
12							1.50	10.00	
13							1.75	10.00	
14							3.00	10.00	
15							4.00	10.00	
16							6.00	10.00	
17							<.25	10.00	
18							3.00	10.00	
19							4.00	9.00	
20							1.25	10.00	
21							4.00	10.00	
22							1.50	10.00	
23							4.00	10.00	
24							<.25	10.00	
25							5.00	10.00	
26							4.00	10.00	
27							6.00	10.00	
28							2.00	10.00	
29							3.00	10.00	
30							.25	10.00	
31							1.00	10.00	
<b>MONTHLY AVGS</b>							3.16	9.97	
<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            17           1									

# OBSERVATIONS AT 3-HOURLY INTERVALS

## KNOXVILLE, TN

JULY 2003

TYS

WBAN # 13891

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: 0523					JUL 01					SUNSET: 1956					SUNRISE: 0526					JUL 07					SUNSET: 1955				
01	OVC	090	7.00		68	67	67	96	0	00	29.13	30.15	01	BKN	180	9.00		72	71	71	97	5	27	29.03	30.04				
04	OVC	120	6.00	-RA BR	67	67	67	100	6	06	29.09	30.11	04	OVC	041	4.00	-RA BR	72	71	71	97	5	24	29.05	30.07				
07	OVC	055	3.00	-RA BR	68	68	68	100	5	05	29.11	30.14	07	OVC	043	6.00	BR	72	71	71	97	6	23	29.07	30.09				
10	OVC	028	7.00	-RA	69	67	68	93	5	08	29.11	30.13	10	OVC	011	8.00	-RA	75	72	73	90	10	23	29.10	30.12				
13	OVC	009	10.00	-RA	71	69	70	94	9	06	29.04	30.07	13	BKN	023	10.00		80	73	75	79	12	23	29.11	30.12				
16	OVC	025	5.00	-RA BR	70	69	69	97	9	05	28.96	29.98	16	SCT	NC	10.00		84	74	77	72	10	22	29.05	30.07				
19	OVC	030	3.00	+RA BR	68	67	67	96	12	05	28.88	29.91	19	SCT	NC	10.00		81	72	75	74	12	24	29.04	30.05				
22	BKN	024	3.00	RA BR	66	65	65	96	15	05	28.85	29.87	22	BKN	250	10.00		77	72	74	85	7	23	29.12	30.13				
SUNRISE: 0524					JUL 02					SUNSET: 1956					SUNRISE: 0527					JUL 08					SUNSET: 1955				
01	OVC	019	7.00	-RA	66	64	65	93	14	04	28.80	29.82	01	SCT	NC	10.00		75	72	73	90	5	25	29.14	30.15				
04	OVC	006	2.00	RA BR	65	64	64	97	15	04	28.76	29.78	04	CLR	NC	8.00		73	71	72	94	6	24	29.13	30.15				
07	OVC	011	3.00	RA BR	65	64	64	97	13	04	28.78	29.79	07	FEW	NC	7.00		74	71	72	91	5	29	29.16	30.17				
10	OVC	007	5.00	-RA BR	67	66	66	97	8	36	28.82	29.84	10	BKN	026	10.00		80	73	75	79	9	22	29.16	30.17				
13	OVC	017	7.00		69	66	67	90	5	VR	28.85	29.87	13	SCT	NC	9.00		86	74	77	67	5	VR	29.14	30.16				
16	BKN	020	10.00		74	67	69	79	6	16	28.83	29.84	16	FEW	NC	10.00		89	73	78	59	12	25	29.06	30.07				
19	BKN	120	10.00		73	69	70	87	3	21	28.83	29.84	19	SCT	NC	10.00		85	72	76	65	9	25	29.03	30.04				
22	FEW	NC	10.00		69	69	69	100	0	00	28.86	29.88	22	OVC	250	10.00		79	72	74	79	7	22	29.07	30.09				
SUNRISE: 0524					JUL 03					SUNSET: 1956					SUNRISE: 0527					JUL 09					SUNSET: 1955				
01	VV	001	0.50	FG	65	65	65	100	0	00	28.87	29.89	01	BKN	250	10.00		76	72	73	88	7	23	29.06	30.07				
04	BKN	050	2.00	BR	65	65	65	100	0	00	28.88	29.90	04	SCT	NC	9.00		73	71	72	94	7	23	29.04	30.06				
07	BKN	001	0.25	FG	66	66	66	100	3	32	28.91	29.93	07	SCT	NC	8.00		76	72	73	88	6	23	29.08	30.09				
10	SCT	NC	10.00		75	70	72	84	3	26	28.93	29.95	10	BKN	026	10.00		83	74	77	74	9	23	29.08	30.09				
13	SCT	NC	10.00		83	67	72	59	5	VR	28.92	29.94	13	BKN	049	7.00	-RA	81	72	75	74	7	25	29.03	30.04				
16	FEW	NC	10.00		86	65	72	50	5	VR	28.88	29.90	16	BKN	200	10.00		88	73	77	61	13	24	28.96	29.98				
19	FEW	NC	10.00		83	68	73	61	5	32	28.88	29.90	19	BKN	055	10.00		79	72	74	79	14	05	28.97	29.98				
22	CLR	NC	8.00		76	70	72	82	0	00	28.94	29.96	22	OVC	050	7.00	TS	71	70	70	96	12	10	29.01	30.03				
SUNRISE: 0525					JUL 04					SUNSET: 1956					SUNRISE: 0528					JUL 10					SUNSET: 1955				
01	CLR	NC	7.00		71	68	69	90	0	00	28.95	29.97	01	SCT	NC	10.00		70	69	69	97	7	31	28.96	29.98				
04	CLR	NC	3.00	BR	68	67	67	96	3	06	28.96	29.97	04	OVC	050	10.00		70	69	69	97	5	14	28.95	29.96				
07	CLR	NC	2.50	BR	69	68	68	96	3	05	29.01	30.02	07	SCT	NC	10.00		74	72	73	94	5	24	28.96	29.97				
10	CLR	NC	7.00		80	69	73	69	0	00	29.03	30.04	10	BKN	030	7.00		81	73	75	77	12	22	28.94	29.96				
13	FEW	NC	9.00		86	71	76	61	5	22	29.00	30.02	13	BKN	100	10.00		78	73	75	85	14	21	28.91	29.93				
16	FEW	NC	10.00		88	69	75	54	5	26	28.97	29.98	16	BKN	080	10.00		82	71	74	69	17	20	28.84	29.85				
19	FEW	NC	10.00		87	70	75	57	3	34	28.95	29.97	19	OVC	034	5.00	-TSRA BR	71	69	70	94	12	19	28.90	29.92				
22	FEW	NC	8.00		79	70	73	74	9	25	29.03	30.04	22	OVC	250	10.00		70	68	69	93	12	24	28.91	29.92				
SUNRISE: 0525					JUL 05					SUNSET: 1956					SUNRISE: 0529					JUL 11					SUNSET: 1954				
01	SCT	NC	6.00	BR	74	70	71	88	7	26	29.01	30.03	01	BKN	038	10.00		69	67	68	93	8	24	28.91	29.93				
04	CLR	NC	5.00	BR	72	68	69	87	3	27	29.02	30.03	04	OVC	008	10.00		70	69	69	97	9	23	28.90	29.91				
07	SCT	NC	2.50	BR	72	69	70	91	3	22	29.07	30.08	07	OVC	029	6.00	BR	72	70	71	94	13	23	28.93	29.95				
10	BKN	050	10.00		78	70	73	76	9	24	29.08	30.09	10	OVC	009	1.75	RA BR	70	68	69	93	12	27	28.96	29.98				
13	SCT	NC	10.00		83	71	75	67	14	28	29.07	30.08	13	BKN	080	8.00		76	73	74	91	7	16	28.96	29.98				
16	BKN	200	10.00		86	71	76	61	8	27	29.02	30.03	16	SCT	NC	10.00		84	65	71	53	10	31	28.92	29.93				
19	SCT	NC	10.00		82	71	74	69	8	24	28.98	30.00	19	SCT	NC	10.00		80	62	68	54	7	28	28.93	29.95				
22	BKN	050	10.00		78	72	74	82	8	25	29.05	30.06	22	CLR	NC	10.00		69	64	66	84	3	22	28.99	30.02				
SUNRISE: 0526					JUL 06					SUNSET: 1956					SUNRISE: 0529					JUL 12					SUNSET: 1954				
01	BKN	180	10.00		75	71	72	88	9	25	29.04	30.05	01	CLR	NC	10.00		67	64	65	91	5	20	29.00	30.02				
04	SCT	NC	9.00		73	70	71	90	5	25	29.03	30.04	04	CLR	NC	10.00		66	63	64	90	3	29	28.99	30.01				
07	BKN	180	10.00		73	70	71	90	7	23	29.06	30.07	07	SCT	NC	10.00		67	63	64	87	0	00	29.02	30.03				
10	BKN	150	10.00		77	70	72	79	12	22	29.05	30.07	10	SCT	NC	10.00		78	67	71	69	8	24	29.02	30.04				
13	BKN	250	10.00		83	70	74	65	14	24	29.04	30.05	13	SCT	NC	10.00		83	67	72	59	15	22	29.01	30.02				
16	BKN	150	10.00		84	72	76	67	12	22	29.00	30.01	16	BKN	110	10.00		84	67	73	57	17	23	28.95	29.97				
19	BKN	075	9.00		78	73	75	85	8	26	29.01	30.03	19	BKN	050	10.00		75	70	72	84	10	19	28.96	29.98				
22	OVC	031	4.00	TSRA BR	73	72	72	96	7	23	29.05	30.07	22	SCT	NC	10.00		69	66	67	90	7	25	29.02	30.03				

# OBSERVATIONS AT 3-HOURLY INTERVALS

## KNOXVILLE, TN

JULY 2003

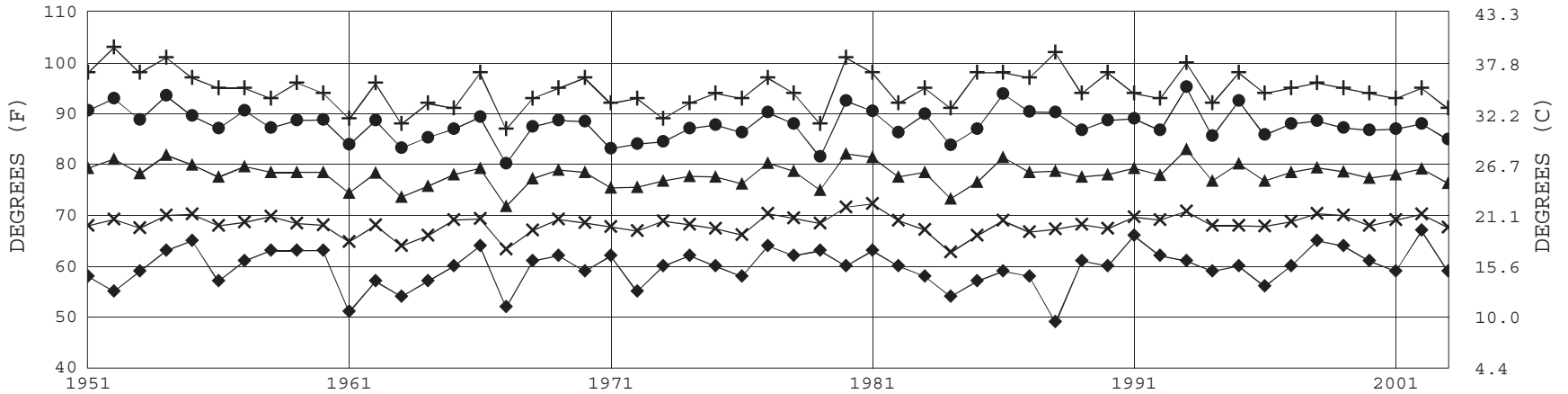
TYS

WBAN # 13891

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
<b>SUNRISE: 0530 JUL 13 SUNSET: 1954</b>																													
01	BKN	250	10.00		66	64	65	93	5	21	29.03	30.05	01	BKN	200	9.00		75	66	69	74	0	00	28.98	29.98				
04	OVC	039	10.00		67	65	66	93	6	20	29.02	30.03	04	BKN	200	5.00	BR	71	70	70	96	6	22	28.97	29.98				
07	BKN	250	10.00		68	65	66	90	0	00	29.06	30.08	07	SCT	NC	5.00	BR	73	69	70	87	3	25	29.00	30.01				
10	BKN	200	10.00		74	68	70	82	3	VR	29.08	30.10	10	FEW	NC	6.00	HZ	80	70	73	71	0	00	29.00	30.01				
13	BKN	090	10.00		79	70	73	74	5	25	29.03	30.05	13	FEW	NC	6.00	HZ	85	69	74	59	3	VR	28.98	29.99				
16	BKN	250	10.00		82	69	73	65	8	06	28.98	30.00	16	SCT	NC	5.00	HZ	87	70	75	57	6	33	28.92	29.93				
19	OVC	045	4.00	BR	70	68	69	93	5	32	29.00	30.02	19	FEW	NC	6.00	HZ	83	72	75	70	6	08	28.93	29.95				
22	SCT	NC	7.00		69	67	68	93	7	30	29.02	30.04	22	CLR	NC	4.00	BR	76	73	74	91	0	00	28.98	29.99				
<b>SUNRISE: 0530 JUL 14 SUNSET: 1953</b>																													
01	BKN	250	4.00	BCFG	67	66	66	97	3	28	29.03	30.05	01	FEW	NC	4.00	BCFG	74	70	71	88	3	36	28.98	29.99				
04	SCT	NC	7.00		65	64	64	97	3	16	29.03	30.05	04	SCT	NC	2.00	BR	71	69	70	94	0	00	28.97	29.98				
07	OVC	007	5.00	BR	67	65	66	93	0	00	29.07	30.09	07	SCT	NC	1.50	BR	71	69	70	94	0	00	29.00	30.02				
10	OVC	031	9.00		73	68	70	84	6	04	29.10	30.12	10	FEW	NC	4.00	HZ	80	71	74	74	0	00	29.01	30.03				
13	BKN	032	9.00		78	70	73	76	7	26	29.08	30.10	13	SCT	NC	5.00	HZ	85	70	75	61	7	30	28.98	29.99				
16	BKN	200	10.00		83	71	75	67	9	27	29.03	30.05	16	FEW	NC	9.00		88	68	74	52	7	28	28.94	29.95				
19	SCT	NC	9.00		81	71	74	72	6	28	29.04	30.06	19	CLR	NC	8.00		84	69	74	61	7	22	28.93	29.95				
22	FEW	NC	7.00		76	70	72	82	0	00	29.07	30.09	22	SCT	NC	7.00		78	69	72	74	0	00	28.95	29.96				
<b>SUNRISE: 0531 JUL 15 SUNSET: 1953</b>																													
01	FEW	NC	5.00	BR	71	69	70	94	5	22	29.07	30.09	01	CLR	NC	4.00	BR	74	70	71	88	7	18	28.93	29.94				
04	CLR	NC	6.00	BR	69	67	68	93	6	21	29.07	30.09	04	CLR	NC	5.00	BR	73	69	70	87	0	00	28.89	29.90				
07	CLR	NC	5.00	BR	70	68	69	93	6	32	29.10	30.11	07	SCT	NC	4.00	HZ	73	68	70	84	0	00	28.93	29.94				
10	SCT	NC	9.00		78	70	73	76	3	VR	29.11	30.12	10	SCT	NC	8.00		83	73	76	72	16	22	28.89	29.91				
13	SCT	NC	8.00		84	72	76	67	9	21	29.07	30.08	13	SCT	NC	10.00		89	74	78	61	15	22	28.87	29.88				
16	BKN	200	8.00		84	72	76	67	15	27	29.01	30.02	16	OVC	250	10.00		85	72	76	65	8	29	28.85	29.85				
19	BKN	200	10.00		80	72	74	76	7	23	28.97	29.99	19	BKN	038	5.00	-RA BR	70	67	68	90	9	21	28.81	29.82				
22	SCT	NC	6.00	BR	76	73	74	91	7	21	29.03	30.05	22	BKN	250	10.00		70	66	67	87	8	28	28.83	29.83				
<b>SUNRISE: 0532 JUL 16 SUNSET: 1952</b>																													
01	BKN	250	8.00		76	70	72	82	10	23	29.01	30.02	01	OVC	055	10.00		69	67	68	93	9	22	28.83	29.83				
04	BKN	075	8.00		75	71	72	88	8	26	29.02	30.03	04	OVC	045	10.00	-TSRA	69	67	68	93	5	26	28.82	29.83				
07	OVC	090	7.00	TS	75	71	72	88	7	25	29.06	30.07	07	OVC	021	10.00		72	68	69	87	7	24	28.86	29.87				
10	OVC	035	8.00		78	73	75	85	9	23	29.07	30.09	10	OVC	019	8.00		75	71	72	88	13	22	28.84	29.85				
13	BKN	050	10.00		84	75	78	74	13	25	29.05	30.06	13	OVC	008	3.00	TSRA BR	70	68	69	93	13	24	28.89	29.91				
16	BKN	250	10.00		83	75	77	77	10	28	29.03	30.04	16	BKN	100	10.00		74	70	71	88	6	26	28.82	29.83				
19	BKN	090	10.00		80	73	75	79	6	24	29.03	30.05	19	BKN	120	10.00		73	68	70	84	9	23	28.83	29.84				
22	BKN	250	8.00	TS	75	73	74	94	5	VR	29.07	30.09	22	BKN	250	10.00		72	69	70	91	10	24	28.86	29.87				
<b>SUNRISE: 0532 JUL 17 SUNSET: 1952</b>																													
01	OVC	250	6.00	BR	74	72	73	94	0	00	29.07	30.08	01	SCT	NC	10.00		69	67	68	93	9	27	28.85	29.86				
04	BKN	002	2.50	BR	72	71	71	97	0	00	29.08	30.09	04	OVC	090	10.00	-RA	68	67	67	96	8	19	28.86	29.87				
07	BKN	001	0.25	FG	71	71	71	100	0	00	29.12	30.14	07	SCT	NC	4.00	BR	67	67	67	100	6	24	28.88	29.90				
10	BKN	005	2.50	BR	77	73	74	88	0	00	29.12	30.13	10	BKN	050	10.00		72	65	67	79	8	27	28.91	29.93				
13	FEW	NC	10.00		85	68	73	57	6	01	29.10	30.11	13	SCT	NC	10.00		77	64	69	64	9	28	28.90	29.92				
16	SCT	NC	10.00		87	65	72	48	6	VR	29.05	30.06	16	SCT	NC	10.00		80	65	70	60	10	26	28.87	29.88				
19	SCT	NC	10.00		83	68	73	61	5	07	29.03	30.05	19	SCT	NC	10.00		70	65	67	84	14	07	28.92	29.94				
22	CLR	NC	9.00		75	68	70	79	6	03	29.06	30.08	22	SCT	NC	10.00		64	62	63	93	3	05	28.96	29.99				
<b>SUNRISE: 0533 JUL 18 SUNSET: 1951</b>																													
01	CLR	NC	7.00		72	68	69	87	0	00	29.03	30.05	01	SCT	NC	8.00		62	61	61	96	0	00	29.00	30.02				
04	CLR	NC	4.00	BR	69	68	68	96	0	00	29.04	30.06	04	SCT	NC	7.00		59	59	59	100	0	00	29.00	30.02				
07	SCT	NC	3.00	BR	70	69	69	97	0	00	29.07	30.09	07	VV	001	<.25	FG	60	60	60	100	0	00	29.06	30.09				
10	SCT	NC	7.00		79	70	73	74	3	25	29.05	30.06	10	SCT	NC	10.00		70	62	65	76	3	VR	29.10	30.13				
13	SCT	NC	8.00		85	71	75	63	8	25	29.03	30.04	13	SCT	NC	10.00		77	63	68	62	8	03	29.08	30.11				
16	BKN	120	7.00		86	71	76	61	9	29	29.00	30.02	16	SCT	NC	10.00		80	62	69	54	8	09	29.06	30.09				
19	BKN	200	6.00	HZ	83	72	75	70	6	28	28.96	29.98	19	FEW	NC	10.00		77	62	68	60	6	08	29.07	30.09				
22	BKN	200	6.00	HZ	77	72	74	85	6	08	29.01	30.02	22	SCT	NC	10.00		69	63	65	81	0	00	29.11	30.13				



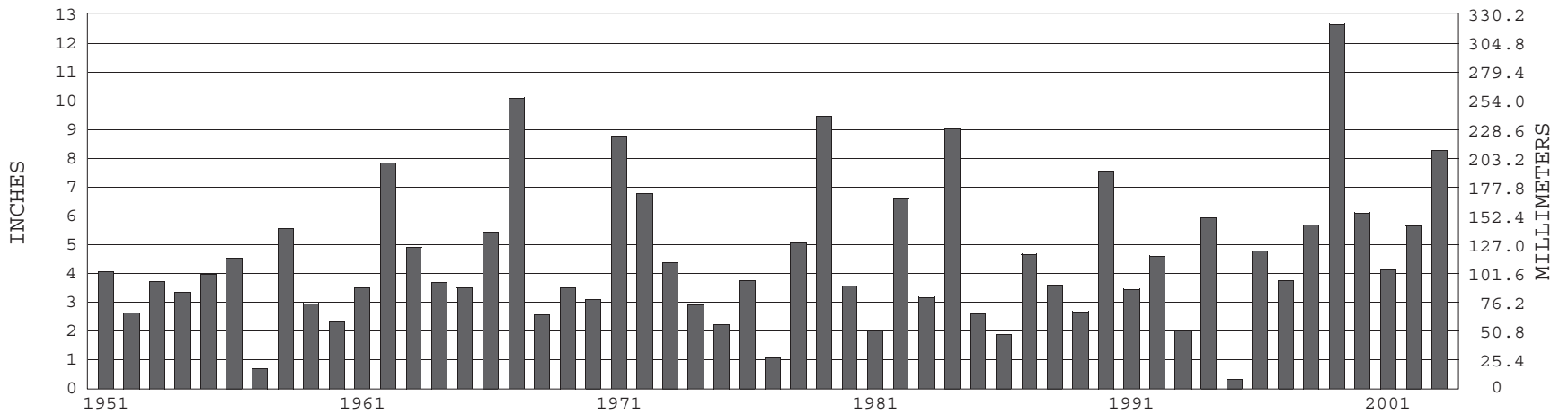
### KNOXVILLE, TN JULY TEMPERATURES



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

Long-Term (1951-2003) Mean: 78.0      1961-1990 Normal: 77.7

### KNOXVILLE, TN JULY PRECIPITATION



Long-Term (1951-2003) Mean Monthly Total: 4.55

1961-1990 Normal: 4.71



JULY 2003

KNOXVILLE, 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](http://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](mailto:ncdc.info@noaa.gov)  
Local Climatological Data is available at [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

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