



JUNE 1997

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

JUNE 1997
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	75	61	68	-3	59	62	0	3	RA BR	0			0.10	28.64	29.65	8.9	24	9.5	23	22	18	22	01				
02	77	59	68	-3	58	61	0	3	TS TSRA RA BR	0			0.01	28.68	29.70	1.1	21	4.6	22	23	20	23	02				
03	78	55	67	-4	59	61	0	2	RA FG+ BR	0			0.62	28.75	29.77	2.1	33	3.5	28	02	23	02	03				
04	75	60	68	-3	56	60	0	3	FG+ BR	0			0.00	28.80	29.82	4.5	06	6.6	14	02	13	02	04				
05	67	58	63	-8	57	59	2	0	RA BR	0			0.29	28.88	29.90	2.1	34	4.6	11	34	9	19	05				
06	75	54*	65	-6	56	59	0	0	RA FG+ BR	0			0.09	28.86	29.89	1.0	05	4.2	17	23	15	23	06				
07	66	58	62	-10	57	59	3	0	RA	0			0.02	28.93	29.96	3.1	02	4.3	10	32	9	33	07				
08	70	59	65	-7	58	61	0	0	RA	0			T	28.96	29.99	4.3	26	5.4	16	24	14	24	08				
09	64	59	62*	-10	60	61	3	0	RA DZ BR	0			0.52	29.06	30.09	4.5	05	4.8	11	06	10	06	09				
10	77	58	68	-4	61	63	0	3	RA BR	0			0.01	29.09	30.12	2.8	03	4.2	11	06	8	01	10				
11	77	64	71	-1	63	66	0	6	RA FG+ BR	0			0.05	29.00	30.02	1.1	28	3.5	11	24	10	24	11				
12	78	66	72	-1	67	68	0	7	TS TSRA RA BR	0			0.46	28.80	29.81	6.4	25	7.4	25	23	21	23	12				
13	85	65	75	2	67	69	0	10	TS TSRA RA BR HZ VCTS	0			0.57	28.73	29.74	2.8	26	8.7	29	28	23	35	13				
14	78	63	71	-2	65	66	0	6	TS TSRA RA FG BR	0			1.50	28.76	29.77	1.1	25	9.3	29	28	24	28	14				
15	82	62	72	-1	64	67	0	7	BR HZ	0			0.00	28.87	29.89	2.3	05	3.9	15	06	13	06	15				
16	81	65	73	-1	65	69	0	8	BR HZ	0			0.00	28.81	29.82	9.0	23	9.4	28	23	23	23	16				
17	81	70	76	2	69	71	0	11	TSRA RA BR HZ	0			0.30	28.79	29.80	6.5	25	7.8	25	22	23	22	17				
18	78	66	72	-2	67	69	0	7	RA BR	0			0.23	28.86	29.87	11.8	23	12.1	34	23	25	22	18				
19	84	64	74	0	67	69	0	9	TS BR	0			0.00	29.00	30.02	2.7	23	4.2	14	25	13	25	19				
20	87	66	77	3	66	69	0	12	BR HZ	0			0.00	28.98	30.00	1.0	25	4.3	17	25	13	15	20				
21	87	65	76	2	66	69	0	11	TS BR	0			0.00	28.97	29.98	3.5	23	5.4	33	21	25	21	21				
22	83	67	75	1	68	70	0	10	TS TSRA RA BR	0			0.21	29.02	30.04	3.7	23	5.5	16	22	14	22	22				
23	88	67	78	3	69	72	0	13	RA BR HZ	0			0.01	29.07	30.09	4.0	06	4.6	20	01	14	03	23				
24	88	70	79	4	71	73	0	14	TS TSRA RA BR HZ	0			0.04	29.08	30.09	0.5	32	2.9	18	23	16	23	24				
25	88*	69	79	4	70	73	0	14	TS RA BR HZ	0			T	29.06	30.07	3.6	22	4.4	23	21	17	21	25				
26	86	71	79*	4	70	72	0	14	TS RA BR	0			0.05	29.02	30.03	6.1	24	7.2	22	25	17	23	26				
27	85	71	78	3	70	72	0	13	RA BR	0			0.03	29.00	30.01	5.5	03	6.6	17	03	14	04	27				
28	85	70	78	3	70	71	0	13	TS TSRA RA FG BR HZ	0			0.58	28.99	30.00	0.5	05	2.5	51*	14	34*	15	28				
29	82	68	75	0	69	71	0	10	FG BR	0			0.00	29.00	30.02	0.9	01	2.8	10	02	9	24	29				
30	85	70	78	3	70	72	0	13	RA BR	0			0.01	28.97	29.98	4.9	24	5.7	20	22	17	24	30				
< MONTHLY AVERAGES											TOTALS-->				5.70	28.92	29.93	1.6	22	5.7	<- MONTHLY AVERAGES						
-4.8				2.2		-1.3		<----- DEPARTURE FROM NORMAL ----->										1.73		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3							
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 1.93 DATE: 13-14				SEA LEVEL PRESSURE DATE TIME													
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: DATE:				MAXIMUM : 30.18 10 1003													
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH: 0 DATE:				MINIMUM : 29.59 01 0319													
HEATING: 8		8		3607		-330		NUMBER OF DAYS WITH =>		MAXIMUM TEMP ≥ 90: 0		MINIMUM TEMP ≤ 32: 0		PRECIPITATION ≥ 0.01 INCH : 21													
COOLING: 222		-24		281		-80				MAXIMUM TEMP ≤ 32 : 0		MINIMUM TEMP ≤ 0 : 0		PRECIPITATION ≥ 0.10 INCH : 11													
										THUNDERSTORMS : 12		HEAVY FOG : 4		SNOWFALL ≥ 1.0 INCH : 0													

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN

JUNE 1997

TYS

WBAN # 13891

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note 2)	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		0.05	0.03	0.01	0.01								01				T	0.01	T					01			0.10		
02													02												02			0.01	
03													03						0.54	0.08					03			0.62	
04													04												04			0.00	
05		0.21	0.05	0.01	T	T	T	0.01	T	0.01			05												05			0.29	
06													06						0.01	0.03	0.03	0.02		T	06			0.09	
07	T							T	0.02	T	T		07											T	07			0.02	
08													08										T	T	08			T	
09	0.03	0.03	0.03	T	0.01	T	T	0.10	0.10	0.06	0.04	0.02	09	0.04	0.02	0.03	0.01		T	T	T	T		T	09			0.52	
10													10					T	T	T	T	T		T	10			0.01	
11					T	0.03	0.02	T					11	T	T	T									11			0.05	
12											0.01	0.03	12												12	0.45		0.46	
13	0.07	T	0.06	0.01									13		T	T	0.07	0.01					T		13			0.57	
14	0.12	0.03	0.08	0.35	0.08	0.18	0.04						14			0.45	0.17	0.11		T	0.01	0.01	T		14			1.50	
15													15												15			0.00	
16													16												16			0.00	
17													17	0.06											17			0.30	
18						0.05							18	0.12	0.06										18			0.23	
19													19					0.01							19			0.00	
20													20												20			0.00	
21													21												21			0.00	
22					0.20	0.01							22												22			0.21	
23													23												23	0.00		0.01	
24													24		0.02	T		0.02	T						24			0.04	
25													25			T									25			T	
26				0.01			0.01	T					26			T	T	T	0.02	T					26		0.02	0.05	
27	0.01				T	0.01							27												27			0.03	
28													28			0.06	0.04								28		0.10	0.58	
29													29												29			0.00	
30													30												30	0.01		0.01	

MAXIMUM SHORT DURATION PRECIPITATION (See Note 1)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	0.26	0.43	0.56	0.59	0.61	0.62	0.62	0.62	0.62	0.62	0.62	0.62
Ending Date	03	03	03	03	03	03	03	03	03	03	03	03
Ending Time (Hour/Min)	1845	1850	1854	1858	1909	1918	1918	1918	1918	1918	1918	1918

Date and time are not entered for TRACE amounts.

Note 1: NCDC derives these data from one-minute ASOS values. The table is not printed when inconsistent with ASOS hourly totals.

Note 2: 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	PE 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 JUNE 1997

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 at constant pressure by evaporation of moisture into it, to 100% relative humidity.

ADDITIONAL NOTES:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01	578	67					2.50	10.00	
02	604	70					7.00	10.00	
03	493						<.25	10.00	
04	566						1.25	10.00	
05	383						2.50	10.00	
06	513						<.25	10.00	
07	364	42					8.00	10.00	
08	561	64					7.00	10.00	
09	130	15					1.25	8.00	
10	566	65					3.00	10.00	
11	521	60					1.00	10.00	
12	455	52					2.50	10.00	
13	552	63					2.50	10.00	
14	479						1.75	10.00	
15	731						3.00	10.00	
16	610						5.00	10.00	
17	431						2.00	10.00	
18	558	64					1.50	10.00	
19	737	84					2.50	10.00	
20	591	67					3.00	10.00	
21	608	69					4.00	10.00	
22	547						5.00	10.00	
23	735						2.50	10.00	
24	524						2.50	7.00	
25	625						2.50	10.00	
26	596	0					4.00	10.00	
27	672	77					3.00	10.00	
28	522	60					1.00	10.00	
29	570						.50	10.00	
30	543						6.00	10.00	
MONTHLY AVGS							2.95	9.83	
SUNSHINE (MINUTES)									
Total: 16365 Possible: 26171 Percent Possible: 63									
NUMBER OF DAYS WITH:									
SKY CONDITION									
CLR PTLY CLDY CLOUDY MISSING 30									
MINIMUM VISIBILITY (MILES)									
<=0.25 <=3.0 >=7.0 2 22 3									

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

JUNE 1997

TYS

WBAN # 13891

HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)			
	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION		SEA LEVEL	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0521 JUN 01 SUNSET: 1946						SUNRISE: 0520 JUN 07 SUNSET: 1950																							
01	OVC	050			6.00 BR	66	64	65	93	5	24	28.60	29.61	01	OVC	047			8.00	62	60	61	93	0	00	28.87	29.89		
04	OVC	006			2.50 BR	61	60	60	97	10	23	28.60	29.61	04	OVC	065			10.00	59	55	57	87	5	01	28.88	29.90		
07	OVC	006			10.00	62	60	61	93	8	22	28.65	29.66	07	OVC	055			10.00	58	54	56	87	5	31	28.93	29.96		
10	OVC	042			10.00	64	60	62	87	8	22	28.66	29.68	10	OVC	015		-RA	10.00	59	56	57	90	5	34	28.96	29.99		
13	BKN	050			10.00	72	56	62	57	16	24	28.66	29.67	13	OVC	019			10.00	62	55	58	78	3	03	28.95	29.98		
16	SCT	NC			10.00	74	57	64	56	9	26	28.62	29.64	16	OVC	035			10.00	64	57	60	78	6	VR	28.92	29.95		
19	SCT	NC			10.00	73	57	63	57	8	27	28.62	29.64	19	FEW	NC			10.00	65	58	61	78	7	08	28.90	29.93		
22	FEW	NC			10.00	65	56	60	73	6	15	28.68	29.69	22	BKN	022			10.00	62	58	60	86	0	00	28.95	29.98		
SUNRISE: 0521 JUN 02 SUNSET: 1947						SUNRISE: 0520 JUN 08 SUNSET: 1950																							
01	SCT	NC			10.00	61	54	57	78	3	16	28.67	29.69	01	OVC	024			10.00	62	58	60	86	0	00	28.95	29.98		
04	SCT	NC			9.00	59	56	57	90	0	00	28.66	29.68	04	OVC	065			10.00	60	56	58	86	9	25	28.94	29.98		
07	FEW	NC			7.00	61	59	60	93	3	24	28.69	29.70	07	SCT	NC			10.00	62	55	58	78	6	17	28.97	30.00		
10	SCT	NC			10.00	70	60	64	71	3	VR	28.69	29.70	10	BKN	100			10.00	66	56	60	70	12	25	28.99	30.02		
13	SCT	NC			10.00	74	57	64	56	9	27	28.66	29.67	13	BKN	041			10.00	68	57	61	68	7	24	28.97	30.00		
16	BKN	090			9.00 -TSRA	68	57	61	68	13	19	28.67	29.69	16	OVC	045			10.00	68	58	62	70	6	26	28.94	29.97		
19	BKN	070			10.00	67	58	62	73	3	18	28.69	29.70	19	OVC	045			10.00	67	59	62	76	3	36	28.93	29.96		
22	OVC	090			10.00	62	60	61	93	5	05	28.74	29.75	22	OVC	048			9.00	65	60	62	84	0	00	28.97	30.00		
SUNRISE: 0521 JUN 03 SUNSET: 1947						SUNRISE: 0519 JUN 09 SUNSET: 1951																							
01	FEW	NC			6.00 BR	59	58	58	96	6	04	28.71	29.73	01	OVC	044			5.00 -RA BR	63	61	62	93	0	00	28.99	30.01		
04	VV	001			0.25 FG	56	56	56	100	0	00	28.72	29.74	04	OVC	003			3.00 -RA BR	60	59	59	96	3	03	28.99	30.02		
07	VV	001			<.25 FG	57	57	57	100	0	00	28.76	29.78	07	OVC	003			1.50 BR	60	58	59	93	5	09	29.04	30.07		
10	OVC	005			4.00 BR	63	59	61	87	0	00	28.79	29.81	10	OVC	010			3.00 -RA BR	61	59	60	93	3	02	29.08	30.11		
13	SCT	NC			10.00	74	57	64	56	7	30	28.75	29.77	13	OVC	011			4.00 BR	63	60	61	90	9	05	29.09	30.12		
16	SCT	NC			10.00	77	58	65	52	9	30	28.72	29.73	16	OVC	012			3.00 BR	63	61	62	93	7	06	29.08	30.11		
19	OVC	006			0.75 +RA BR	64	62	63	93	9	02	28.76	29.78	19	OVC	060			6.00 DZ BR	63	60	61	90	6	06	29.08	30.11		
22	BKN	033			8.00	65	62	63	90	3	01	28.79	29.80	22	OVC	070			4.00 BR	62	60	61	93	5	11	29.11	30.15		
SUNRISE: 0520 JUN 04 SUNSET: 1948						SUNRISE: 0519 JUN 10 SUNSET: 1951																							
01	CLR	NC			5.00 BR	63	61	62	93	0	00	28.76	29.77	01	OVC	055			4.00 BR	61	60	60	97	5	02	29.11	30.14		
04	OVC	025			5.00 BR	62	59	60	90	3	02	28.77	29.78	04	OVC	090			6.00 BR	60	58	59	93	7	05	29.10	30.13		
07	OVC	010			2.50 BR	62	60	61	93	6	06	28.80	29.83	07	BKN	050			5.00 BR	59	56	57	90	5	04	29.14	30.18		
10	OVC	024			10.00	64	58	60	81	6	06	28.83	29.85	10	SCT	NC			8.00	66	58	61	75	3	VR	29.15	30.18		
13	BKN	047			10.00	69	61	64	76	9	07	28.83	29.84	13	SCT	NC			10.00	73	59	64	62	3	VR	29.10	30.13		
16	BKN	045			10.00	73	60	65	64	8	07	28.79	29.80	16	BKN	120			10.00	76	60	66	58	7	01	29.05	30.08		
19	OVC	110			10.00	70	50	59	49	7	06	28.79	29.80	19	OVC	095			10.00 -RA	71	63	66	76	6	35	29.06	30.09		
22	OVC	042			10.00	65	42	53	44	8	25	28.83	29.84	22	SCT	NC			5.00 -RA BR	67	66	66	97	0	00	29.07	30.09		
SUNRISE: 0520 JUN 05 SUNSET: 1949						SUNRISE: 0519 JUN 11 SUNSET: 1952																							
01	OVC	027			10.00	63	45	53	52	7	22	28.84	29.85	01	OVC	090			4.00 BR	67	65	66	93	0	00	29.05	30.08		
04	OVC	035			10.00	60	60	60	100	6	32	28.86	29.87	04	OVC	100			2.50 BR	65	64	64	97	3	07	29.04	30.06		
07	OVC	004			6.00 -RA BR	60	58	59	93	5	VR	28.88	29.91	07	OVC	050			1.00 -RA BR	65	64	64	97	5	07	29.07	30.10		
10	BKN	028			10.00	62	60	61	93	6	34	28.91	29.93	10	BKN	100			10.00	70	62	65	76	3	12	29.05	30.07		
13	BKN	060			10.00	63	58	60	84	6	34	28.90	29.93	13	BKN	080			10.00 -RA	73	63	67	71	6	30	29.02	30.04		
16	BKN	049			10.00	66	57	61	73	3	34	28.87	29.90	16	BKN	065			10.00	76	60	66	58	3	29	28.96	29.98		
19	OVC	048			10.00	66	58	61	75	3	VR	28.87	29.89	19	OVC	038			10.00	72	64	67	76	6	26	28.94	29.96		
22	FEW	NC			8.00	60	58	59	93	3	06	28.88	29.91	22	OVC	060			10.00	69	66	67	90	5	24	28.93	29.95		
SUNRISE: 0520 JUN 06 SUNSET: 1949						SUNRISE: 0519 JUN 12 SUNSET: 1952																							
01	BKN	001			1.00 BR	55	55	55	100	0	00	28.87	29.90	01	OVC	047			8.00	67	66	66	97	5	23	28.89	29.91		
04	VV	001			<.25 FG	57	56	56	96	0	00	28.87	29.89	04	OVC	045			5.00 BR	67	65	66	93	3	27	28.87	29.88		
07	BKN	110			3.00 BR	56	55	55	97	5	30	28.89	29.93	07	BKN	100			10.00	67	65	66	93	5	23	28.86	29.88		
10	SCT	NC			10.00	66	53	59	63	5	05	28.89	29.92	10	OVC	025			6.00 -RA	71	66	68	84	10	27	28.85	29.86		
13	FEW	NC			10.00	72	53	61	52	3	VR	28.85	29.87	13	BKN	033			10.00	77	67	70	71	13	25	28.80	29.81		
16	OVC	050			10.00	72	53	61	52	6	09	28.83	29.85	16	OVC	019			2.50 TSRA BR	71	69	70	94	8	29	28.76	29.77		
19	OVC	060			10.00	64	60	62	87	13	24	28.85	29.88	19	SCT	NC			10.00	73	69	70	87	7	23	28.72	29.73		
22	OVC	045			10.00	62	60	61	93	0	00	28.87	29.89	22	BKN	045			8.00 -TSRA	71	68	69	90	13	27	28.72	29.73		

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

JUNE 1997

TYS

WBAN # 13891

HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)		HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F			WIND		PRESSURE (INCHES, HG)							
	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		
SUNRISE: 0519 JUN 13 SUNSET: 1953												SUNRISE: 0520 JUN 19 SUNSET: 1955																			
01	OVC	055		10.00	-TSRA	66	65	65	96	8	17	28.72	29.73	01	CLR	NC		7.00						69	67	68	93	7	25	28.96	29.98
04	BKN	065		10.00		66	64	65	93	0	00	28.70	29.71	04	SCT	NC		4.00	BR					66	65	65	96	3	20	28.97	29.98
07	OVC	026		4.00	BR	68	67	67	96	5	26	28.73	29.74	07	FEW	NC		4.00	BR					68	66	67	93	3	23	29.03	30.05
10	BKN	017		6.00	HZ	76	71	73	85	12	23	28.76	29.77	10	FEW	NC		10.00						76	67	70	74	3	27	29.06	30.07
13	SCT	NC		10.00		81	68	72	65	14	28	28.75	29.75	13	SCT	NC		10.00						82	65	71	56	0	00	29.02	30.04
16	BKN	049		10.00		83	69	73	63	13	23	28.70	29.70	16	SCT	NC		10.00						84	67	73	57	8	21	28.97	29.99
19	BKN	110		10.00		72	67	69	84	10	06	28.72	29.74	19	SCT	NC		10.00	TS					81	68	72	65	8	24	28.98	29.99
22	BKN	070		10.00		67	64	65	91	7	04	28.76	29.77	22	CLR	NC		10.00						73	67	69	81	5	05	29.00	30.01
SUNRISE: 0519 JUN 14 SUNSET: 1953												SUNRISE: 0520 JUN 20 SUNSET: 1955																			
01	OVC	024		4.00	TSRA BR	64	63	63	96	9	15	28.80	29.81	01	SCT	NC		8.00						70	67	68	90	7	02	29.00	30.01
04	OVC	036		10.00	-RA	64	63	63	96	9	02	28.77	29.78	04	CLR	NC		6.00	BR					68	65	66	90	0	00	28.99	30.00
07	SCT	NC		10.00		65	63	64	93	3	VR	28.75	29.77	07	CLR	NC		3.00	BR					69	66	67	90	0	00	29.02	30.04
10	OVC	034		10.00		71	67	68	87	9	24	28.76	29.77	10	CLR	NC		7.00						79	69	72	72	0	00	29.02	30.03
13	BKN	035		10.00		76	67	70	74	17	26	28.72	29.74	13	SCT	NC		10.00						84	67	73	57	8	31	28.99	30.00
16	OVC	015		1.75	-TSRA BR	67	66	66	97	13	28	28.72	29.73	16	SCT	NC		10.00						84	65	71	53	3	34	28.95	29.97
19	OVC	032		10.00		70	66	67	87	10	05	28.76	29.78	19	SCT	NC		10.00						77	65	69	66	9	16	28.95	29.97
22	OVC	090		10.00		67	64	65	91	6	04	28.82	29.83	22	SCT	NC		10.00						73	65	68	76	0	00	28.96	29.98
SUNRISE: 0519 JUN 15 SUNSET: 1953												SUNRISE: 0520 JUN 21 SUNSET: 1955																			
01	SCT	NC		10.00		65	64	64	97	7	02	28.83	29.84	01	CLR	NC		9.00						70	65	67	84	0	00	28.96	29.98
04	CLR	NC		10.00		63	62	62	97	6	05	28.84	29.86	04	SCT	NC		7.00						67	65	66	93	5	03	28.95	29.97
07	CLR	NC		4.00	BR	64	62	63	93	5	08	28.89	29.92	07	CLR	NC		7.00						68	65	66	90	3	05	28.96	29.98
10	BKN	020		8.00		71	65	67	81	3	VR	28.92	29.94	10	CLR	NC		9.00						78	67	71	69	0	00	28.99	30.00
13	SCT	NC		6.00	HZ	78	66	70	67	3	08	28.91	29.93	13	SCT	NC		8.00						85	70	75	61	8	22	28.95	29.96
16	FEW	NC		8.00		82	61	69	49	3	VR	28.87	29.88	16	BKN	100		10.00	TS					78	65	70	64	12	17	28.95	29.97
19	CLR	NC		8.00		79	65	70	62	0	00	28.84	29.85	19	SCT	NC		10.00						76	66	69	72	10	23	28.94	29.96
22	CLR	NC		6.00	HZ	72	67	69	84	3	16	28.85	29.85	22	FEW	NC		10.00						71	67	68	87	6	24	28.96	29.97
SUNRISE: 0519 JUN 16 SUNSET: 1954												SUNRISE: 0520 JUN 22 SUNSET: 1955																			
01	FEW	NC		6.00	HZ	70	65	67	84	6	25	28.83	29.83	01	SCT	NC		10.00						68	66	67	93	6	24	29.02	30.03
04	CLR	NC		5.00	HZ	68	62	64	81	7	25	28.82	29.83	04	BKN	038		10.00	TS					68	64	66	87	10	29	29.00	30.03
07	SCT	NC		7.00		69	63	65	81	7	22	28.86	29.87	07	OVC	005		9.00						69	67	68	93	8	22	29.02	30.04
10	SCT	NC		7.00		78	63	68	60	12	18	28.84	29.85	10	OVC	013		10.00						72	68	69	87	6	23	29.06	30.08
13	BKN	075		8.00		80	65	70	60	18	24	28.82	29.83	13	BKN	037		10.00						77	69	72	77	5	24	29.06	30.08
16	OVC	065		8.00		78	66	70	67	12	23	28.79	29.80	16	SCT	NC		10.00						82	69	73	65	5	17	29.01	30.02
19	BKN	043		8.00		76	67	70	74	10	21	28.77	29.78	19	CLR	NC		10.00						81	70	73	69	3	08	29.00	30.01
22	BKN	095		8.00		74	67	69	79	10	22	28.79	29.79	22	CLR	NC		5.00	BR					75	71	72	88	0	00	29.03	30.05
SUNRISE: 0520 JUN 17 SUNSET: 1954												SUNRISE: 0521 JUN 23 SUNSET: 1956																			
01	BKN	080		6.00	BR	72	68	69	87	7	24	28.78	29.78	01	CLR	NC		5.00	BR					70	69	69	97	0	00	29.05	30.06
04	OVC	043		6.00	BR	71	68	69	90	7	28	28.78	29.79	04	CLR	NC		2.50	BR					67	67	67	100	0	00	29.07	30.09
07	OVC	009		5.00	BR	72	69	70	91	3	22	28.82	29.82	07	SCT	NC		3.00	BR					71	69	70	94	6	04	29.11	30.12
10	BKN	041		8.00		75	69	71	82	10	26	28.82	29.83	10	SCT	NC		8.00						81	72	75	74	8	07	29.11	30.12
13	BKN	030		10.00		71	69	70	94	8	15	28.82	29.83	13	SCT	NC		9.00						85	71	75	63	7	10	29.09	30.11
16	BKN	120		10.00		81	72	75	74	6	24	28.74	29.75	16	FEW	NC		9.00						87	69	75	55	7	03	29.06	30.07
19	SCT	NC		10.00		77	70	72	79	16	23	28.77	29.78	19	CLR	NC		9.00						85	70	75	61	8	07	29.03	30.04
22	CLR	NC		10.00		73	68	70	84	6	24	28.78	29.78	22	CLR	NC		7.00						81	70	73	70	0	00	29.07	30.09
SUNRISE: 0520 JUN 18 SUNSET: 1954												SUNRISE: 0521 JUN 24 SUNSET: 1956																			
01	FEW	NC		10.00		71	66	68	84	8	25	28.82	29.83	01	BKN	050		7.00						75	68	70	78	0	00	29.09	30.10
04	BKN	055		10.00		71	65	67	81	9	25	28.81	29.82	04	FEW	NC		7.00						75	68	70	78	0	00	29.07	30.09
07	BKN	034		10.00		71	67	68	87	10	23	28.81	29.82	07	CLR	NC		2.50	BR					73	71	72	94	3	05	29.11	30.12
10	BKN	050		10.00		75	68	70	79	18	23	28.86	29.87	10	CLR	NC		6.00	HZ					82	71	74	69	3	VR	29.11	30.12
13	OVC	025		1.50	RA BR	67	65	66	93	15	25	28.88	29.91	13	BKN	075		6.00	HZ					86	70	75	59	3	31	29.08	30.09
16	BKN	040		10.00		75	68	70	79	14	22	28.85	29.85	16	BKN	100		6.00	TS HZ					88	72	77	59	6	01	29.04	30.05
19	SCT	NC		10.00		78	68	71	71	9	25	28.87	29.88	19	CLR	NC		7.00						77	72	74	85	3	21	29.04	30.06
22	FEW	NC		10.00		71	68	69	90	5	22	28.94	29.96	22	CLR	NC		7.00						75	71	72	88	0	00	29.06	30.07

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

JUNE 1997

TYS

WBAN # 13891

HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	≤ 12K FEET		SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)					
	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION		SEA LEVEL	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		
SUNRISE: 0521						JUN 25						SUNSET: 1956						SUNRISE: JUN 31 SUNSET:													
01	CLR	NC			5.00	BR	72	70	71	94	0	00	29.08	30.09																	
04	CLR	NC			3.00	BR	70	70	70	100	0	00	29.07	30.08																	
07	FEW	NC			3.00	BR	73	70	71	90	0	00	29.11	30.12																	
10	SCT	NC			6.00	HZ	81	72	75	74	3	22	29.12	30.14																	
13	SCT	NC			8.00		85	72	76	65	0	00	29.07	30.08																	
16	BKN	110			10.00		77	70	72	79	9	19	29.02	30.03																	
19	CLR	NC			10.00		82	71	74	69	8	21	28.99	30.00																	
22	SCT	NC			10.00		76	69	71	79	9	26	29.02	30.03																	
SUNRISE: 0522						JUN 26						SUNSET: 1956																			
01	SCT	NC			10.00		73	68	70	84	7	25	29.03	30.05																	
04	CLR	NC			10.00		71	68	69	90	6	24	29.02	30.04																	
07	BKN	036			7.00	-RA	73	69	70	87	6	24	29.06	30.07																	
10	BKN	120			10.00		78	71	73	79	12	24	29.05	30.07																	
13	BKN	040			10.00		82	70	74	67	9	23	29.01	30.03																	
16	BKN	100			8.00	-RA	80	71	74	74	13	29	28.97	29.98																	
19	BKN	060			7.00		74	72	73	94	6	23	28.99	30.01																	
22	OVC	060			10.00		72	70	71	94	0	00	29.00	30.01																	
SUNRISE: 0522						JUN 27						SUNSET: 1956																			
01	FEW	NC			6.00	BR	72	71	71	97	3	25	28.97	29.98																	
04	OVC	020			4.00	-RA BR	72	70	71	94	5	36	28.99	30.00																	
07	OVC	004			3.00	BR	71	70	70	96	6	02	29.02	30.04																	
10	BKN	016			10.00		77	71	73	82	7	02	29.04	30.05																	
13	BKN	030			9.00		81	70	73	69	9	01	29.02	30.03																	
16	SCT	NC			10.00		85	69	74	59	12	02	28.96	29.98																	
19	SCT	NC			10.00		82	65	71	56	9	07	28.96	29.97																	
22	CLR	NC			7.00		75	69	71	82	5	06	28.99	30.00																	
SUNRISE: 0522						JUN 28						SUNSET: 1956																			
01	CLR	NC			8.00		72	69	70	91	3	36	28.99	30.00																	
04	OVC	045			8.00		71	69	70	94	3	04	28.98	29.99																	
07	BKN	055			5.00	BR	72	69	70	91	0	00	29.02	30.03																	
10	BKN	065			6.00	HZ	78	70	73	76	0	00	29.02	30.03																	
13	BKN	065			7.00		81	68	72	65	3	35	28.98	30.00																	
16	SCT	NC			6.00	BR	73	70	71	90	5	15	28.97	29.99																	
19	BKN	120			10.00		75	70	72	84	6	25	28.96	29.98																	
22	BKN	120			8.00		72	70	71	94	0	00	28.98	30.00																	
SUNRISE: 0523						JUN 29						SUNSET: 1956																			
01	FEW	NC			8.00		71	69	70	94	0	00	28.99	30.00																	
04	OVC	002			0.50	FG	68	68	68	100	0	00	28.98	30.00																	
07	OVC	100			6.00	BR	69	66	67	90	5	04	29.02	30.04																	
10	BKN	120			8.00		76	69	71	79	3	02	29.03	30.05																	
13	BKN	055			10.00		79	70	73	74	9	29	29.02	30.03																	
16	BKN	110			10.00		79	68	72	69	3	VR	28.97	29.98																	
19	OVC	100			10.00		75	70	72	84	7	01	28.98	30.00																	
22	BKN	110			8.00		74	72	73	94	0	00	29.00	30.01																	
SUNRISE: 0523						JUN 30						SUNSET: 1956																			
01	BKN	110			7.00		73	71	72	94	0	00	28.97	29.99																	
04	OVC	040			7.00		70	69	69	97	0	00	28.99	30.00																	
07	BKN	055			7.00		72	69	70	91	0	00	29.02	30.04																	
10	BKN	100			7.00		77	68	71	74	0	00	29.02	30.04																	
13	BKN	033			10.00		82	70	74	67	9	24	29.00	30.01																	
16	SCT	NC			10.00		84	69	74	61	14	23	28.93	29.94																	
19	CLR	NC			10.00		81	70	73	69	8	25	28.91	29.92																	
22	CLR	NC			8.00		78	71	73	79	8	25	28.93	29.94																	

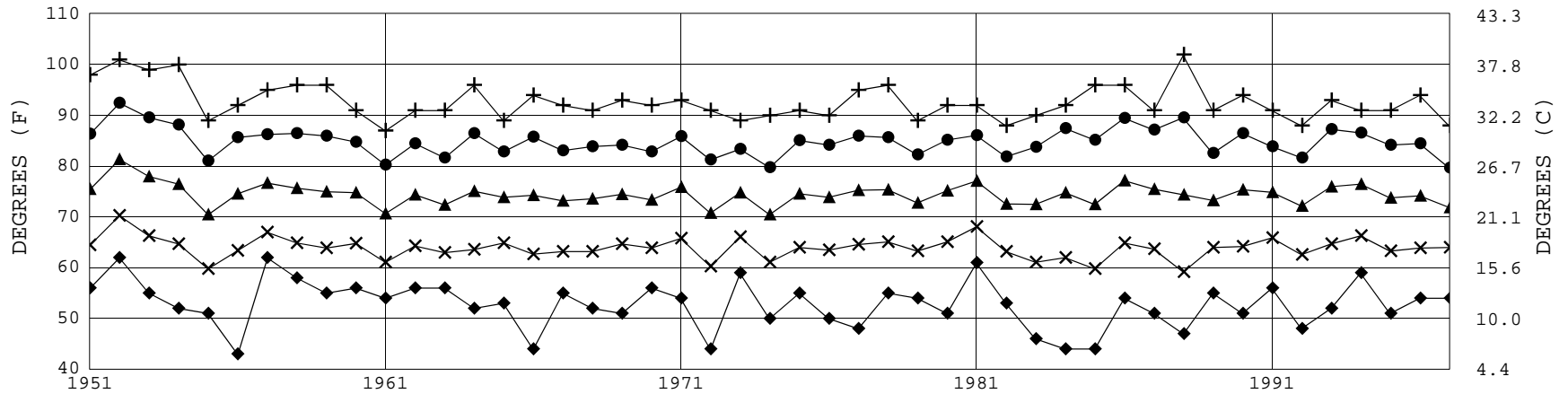
3-HOURLY OBSERVATION NOTES

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

SUMMARY BY HOUR

HOUR (LST)	AVERAGES										RESULTANT WIND (MPH)	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	SPEED	DIRECTION
							STATION	SEA LEVEL				
01			67	64	65	90	28.91	29.92	7.10	4	1	24
02			67	64	65	91	28.90	29.92	6.26	4	1	23
03			66	64	64	92	28.90	29.91	6.24	4	2	32
04			65	63	64	93	28.90	29.92	6.05	4	2	31
05			65	63	64	94	28.91	29.93	5.68	4	1	26
06			65	63	64	94	28.93	29.94	5.01	4	0	0
07			66	64	65	92	28.93	29.95	5.52	4	1	23
08			68	64	65	87	28.94	29.96	6.70	5	0	0
09			70	64	66	84	28.95	29.97	7.72	5	1	25
10			72	65	67	78	28.95	29.97	8.23	5	2	25
11			74	65	68	74	28.95	29.96	8.73	6	3	25
12			75	65	68	70	28.94	29.96	8.90	7	3	26
13			76	64	69	68	28.93	29.94	8.88	8	4	27
14			77	65	69	68	28.91	29.93	9.13	8	3	26
15			78	65	69	66	28.90	29.91	9.12	9	5	23
16			77	64	69	68	28.89	29.90	8.71	8	3	25
17			76	65	69	70	28.89	29.90	9.53	7	2	26
18			75	65	68	71	28.88	29.90	9.40	8	2	24
19			74	65	68	75	28.89	29.91	9.19	7	1	23
20			72	65	67	79	28.89	29.91	8.93	5	1	23
21			70	65	67	83	28.90	29.92	9.07	5	0	0
22			70	65	67	85	28.92	29.93	8.53	4	1	25
23			69	64	66	87	28.92	29.94	8.50	4	1	25
24			68	64	66	88	28.92	29.94	7.27	4	2	28

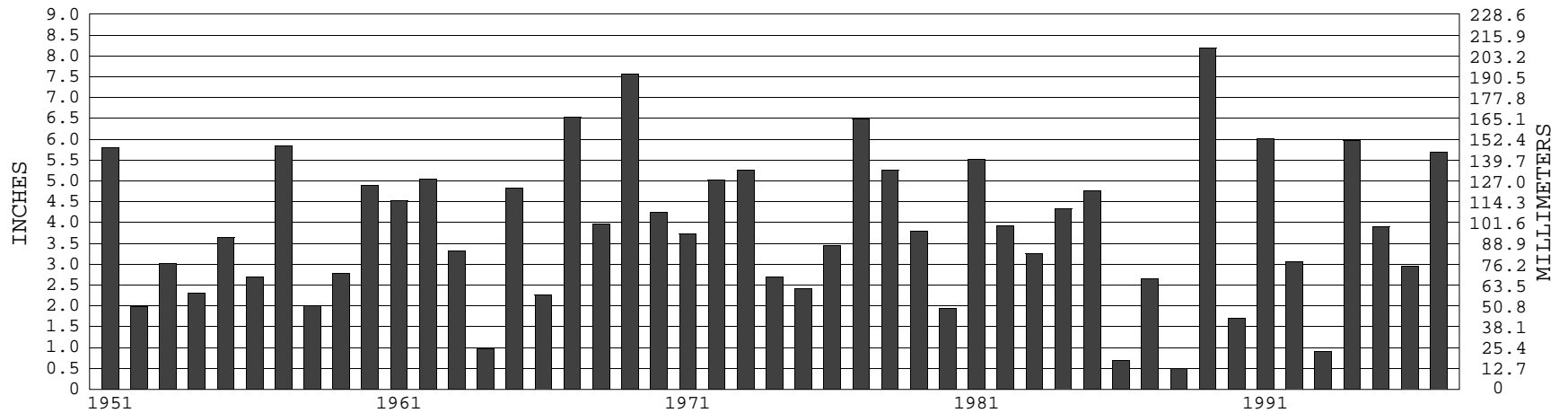
KNOXVILLE, TN JUNE TEMPERATURES



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

Long-Term (1951-1997) Mean: 74.4 1961-1990 Normal: 73.2

KNOXVILLE, TN JUNE PRECIPITATION



Long-Term (1951-1997) Mean Monthly Total: 3.88

1961-1990 Normal: 3.97



**JUNE 1997
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.

Kenneth D Hadean

DIRECTOR

NOTICE

Effective July 1, 1996, the National Weather Service & Federal Aviation Administration began using the METAR format for Hourly Observations.

We welcome your questions or comments, please contact us at
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