



OCTOBER 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

OCTOBER 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	11	12	13	14	15	16	17	18	19	20	21	22	23	24																																
01	72	53	63	-2	49	55	2	0				0.00	28.97	29.99	4.4	02	5.8	21	02	16	01	01																																
02	71	46	59	-5	48	53	6	0				0.00	29.04	30.08	2.3	36	4.0	14	24	9	30	02																																
03	75	46	61	-3	51	55	4	0	FG+ BR			0.00	29.01	30.04	1.0	28	2.3	11	22	9	21	03																																
04	79	51	65	2	56	59	0	0	BR HZ			0.00	29.06	30.09	0.6	07	1.4	11	09	8	06	04																																
05	79	49	64	2	56	60	1	0	FG+ MIFG BR HZ			0.00	29.13	30.16	0.8	34	2.1	11	26	9	26	05																																
06	81	56	69	7	59	62	0	4	BR HZ			0.00	29.16	30.19	1.2	36	1.9	13	29	9	30	06																																
07	82	54	68	6	59	62	0	3	FG+ MIFG BR HZ			0.00	29.16	30.19	2.1	06	2.8	13	03	9	02	07																																
08	83	56	70	9	60	63	0	5	MIFG BR HZ			0.00	29.17	30.20	1.1	08	2.2	10	16	9	15	08																																
09	83	57	70	9	61	64	0	5	BR HZ			0.00	29.22	30.25	2.7	27	4.3	20	22	16	22	09																																
10	81	63	72	11	64	66	0	7	RA BR HZ			0.08	29.26	30.29	0.6	02	3.5	16	33	14	30	10																																
11	82	61	72	12	64	67	0	7	FG+ BR HZ			0.00	29.18	30.20	1.9	01	2.8	10	06	8	07	11																																
12	85*	62	74*	15	61	65	0	9	BR HZ			0.00	29.10	30.12	3.3	16	5.1	18	14	15	13	12																																
13	83	59	71	12	57	63	0	6	BR HZ			0.00	29.04	30.06	3.1	21	6.9	24	20	21	21	13																																
14	71	49	60	1	51	53	5	0	RA BR			0.18	29.16	30.19	6.7	02	8.3	21	36	16	36	14																																
15	66	43	55	-4	41	48	10	0				0.00	29.17	30.22	10.0	04	10.4	25	06	21	05	15																																
16	63	46	55	-3	43	49	10	0				0.00	29.11	30.15	4.8	04	6.1	14	04	13	03	16																																
17	56	49	53	-5	49	50	12	0	RA DZ BR			0.23	29.05	30.09	3.2	05	3.5	11	02	9	02	17																																
18	61	50	56	-2	50	52	9	0	RA			0.00	28.96	30.00	3.1	01	3.8	13	04	11	04	18																																
19	64	48	56	-1	49	52	9	0	RA BR			0.04	28.96	29.99	2.2	33	3.0	13	34	10	34	19																																
20	68	43	56	-1	47	51	9	0	BR			0.00	29.07	30.11	2.7	22	2.8	10	20	8	36	20																																
21	56	43	50	-6	49	50	15	0	RA DZ FG+ BCFG BR			0.38	29.04	30.08	1.6	28	3.3	14	33	11	22	21																																
22	58	36	47	-9	36	43	18	0	RA FG+ BCFG BR			T	29.05	30.10	2.1	01	3.1	14	36	11	03	22																																
23	61	31*	46	-10	34	40	19	0	FG+ BR			0.00	29.04	30.09	0.9	04	1.5	10	28	9	30	23																																
24	57	42	50	-5	48	49	15	0	RA BR			0.27	28.82	29.85	3.6	03	4.3	15	04	13	04	24																																
25	69	52	61	6	58	59	4	0	TS TSRA RA FG+ BR			0.19	28.84	29.87	1.4	36	4.3	13	25	11	25	25																																
26	69	59	64	9	61	62	1	0	TS TSRA RA BR			1.52	28.70	29.72	3.8	23	8.4	33*	26	28*	25	26																																
27	59	42	51	-3	37	42	14	0	RA BR			0.01	28.87	29.90	7.7	30	10.5	30	26	25	26	27																																
28	54	34	44*	-10	32	39	21	0				0.00	29.09	30.15	2.9	04	3.9	15	06	14	08	28																																
29	60	35	48	-6	39	43	17	0				0.00	29.10	30.15	0.4	01	.9	10	29	7	28	29																																
30	66	34	50	-3	41	45	15	0	FG BR			0.00	29.07	30.11	0.9	06	1.0	6	01	6	05	30																																
31	68	41	55	2	45	49	10	0	RA			0.00	28.88	29.93	0.0	00						31																																
69.7											48.1	58.9	■ ■	50.2	53.9	7.3	1.5	< MONTHLY AVERAGES		TOTALS-->				2.90	29.05	30.08	1.4	01	<- MONTHLY AVERAGES																									
-.9											2.1	0.5	■ ■	<----- DEPARTURE FROM NORMAL ----->										0.06	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																													
DEGREE DAYS											GREATEST 24-HR PRECIPITATION: 1.52 DATE: 26											SEA LEVEL PRESSURE DATE TIME																																
MONTHLY TOTAL DEPARTURE											GREATEST 24-HR SNOWFALL: DATE:											MAXIMUM :																																
SEASON TO DATE TOTAL DEPARTURE											GREATEST SNOW DEPTH: 0 DATE:											MINIMUM :																																
HEATING: 226 -12											NUMBER OF DAYS WITH →											MAXIMUM TEMP ≥ 90: 0											MINIMUM TEMP ≤ 32: 1											PRECIPITATION ≥ 0.01 INCH : 9										
COOLING: 46 13																						MAXIMUM TEMP ≤ 32 : 0											MINIMUM TEMP ≤ 0 : 0											PRECIPITATION ≥ 0.10 INCH : 6										
																						THUNDERSTORMS : 2											HEAVY FOG : 8											SNOWFALL ≥ 1.0 INCH : 0										

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN

OCTOBER 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													01												01		0.00		
02													02												02		0.00		
03													03												03		0.00		
04													04												04		0.00		
05													05												05		0.00		
06													06												06		0.00		
07													07												07		0.00		
08													08												08		0.00		
09													09												09		0.00		
10													10				0.08	0.04	T	T		T	T		10	0.12	0.08		
11		T	T	T									11												11	T	0.00		
12													12												12		0.00		
13													13												13		0.00		
14		T	T	T	0.01	0.10	0.02	T	0.02				14	0.01											14		0.18		
15													15												15		0.00		
16													16												16		0.00		
17				T	0.03	0.02	0.03	0.01	0.01	0.03	0.06	0.03	17	0.01	T									17		0.23			
18													18												18		T		
19	0.02	0.01	0.01	T									19											T	19		0.04		
20													20											T	20		0.00		
21													21	0.02				T	0.04	0.02	0.09	0.07	0.05	0.02	21		0.38		
22	T												22												22		T		
23													23												23		0.00		
24								T	T	0.05	0.12	0.08	0.02	24											24		0.27		
25			0.02	0.05	0.05	0.01							25										0.03	0.03	25		0.19		
26	0.06	0.06	0.10	0.16	0.32	0.19	0.19	0.20	0.13	T	T	0.02	26	0.03	T	T	T	0.01	0.04	T	T	0.01		26		1.52			
27													27					0.01							27		0.01		
28													28												28		0.00		
29													29												29		0.00		
30													30												30		0.00		
31													31											T	31		T		

MAXIMUM SHORT DURATION PRECIPITATION (See Note 1)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)												
Ending Date												
Ending Time (Hour/Min)												

Date and time are not entered for TRACE amounts.

Note 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	
PR Partial	RA Rain	PY Spray	SQ Squalls
SH Shower(s)	SG Snow Grains	SA Sand	SS Sandstorm
TS Thunderstorm	SN Snow	VA Volcanic Ash	GL Glaze
VC In the Vicinity	UP Unknown Precipitation		

Intensity (as indicated on pages 4 to 6):
'+' = Heavy ' ' = Moderate '- ' = Light

KNOXVILLE, TN OCTOBER 1997

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

ADDITIONAL NOTES:

ERRATA -August 1997- Make the following changes to column 5 (DEP FROM NORMAL) for days indicated:
11=1, 20=-1, 23=-8.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01	603	85					10.00	10.00	
02	642						8.00	10.00	
03	645	91					.25	10.00	
04	627	89					1.50	10.00	
05	581	83					<.25	10.00	
06	610	87					2.00	10.00	
07	542						<.25	10.00	
08	579						1.00	10.00	
09	565						3.00	10.00	
10	389						1.75	7.00	
11	473	69					<.25	9.00	
12	522	76					1.00	10.00	
13	552	81					2.50	10.00	
14	11						2.50	10.00	
15	623						10.00	10.00	
16	444						10.00	10.00	
17	0	0					1.50	10.00	
18	235	35					8.00	10.00	
19	346	52					5.00	10.00	
20	545	82					2.00	10.00	
21	86	13					<.25	5.00	
22	555						.50	10.00	
23	566						<.25	10.00	
24	66						1.00	10.00	
25	397						.50	10.00	
26	0	0					1.75	10.00	
27	14	2					5.00	10.00	
28	558	86					10.00	10.00	
29	540						7.00	10.00	
30	537						3.00	10.00	
31							7.00	10.00	
MONTHLY AVGS							3.43	9.71	
SUNSHINE (MINUTES)									
Total:					Possible:				
					Percent Possible:				
NUMBER OF DAYS WITH:									
SKY CONDITION									
CLR			PTLY CLDY		CLOUDY		MISSING		
							31		
MINIMUM VISIBILITY (MILES)									
<=0.25			<=3.0			>=7.0			
6			21			8			

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

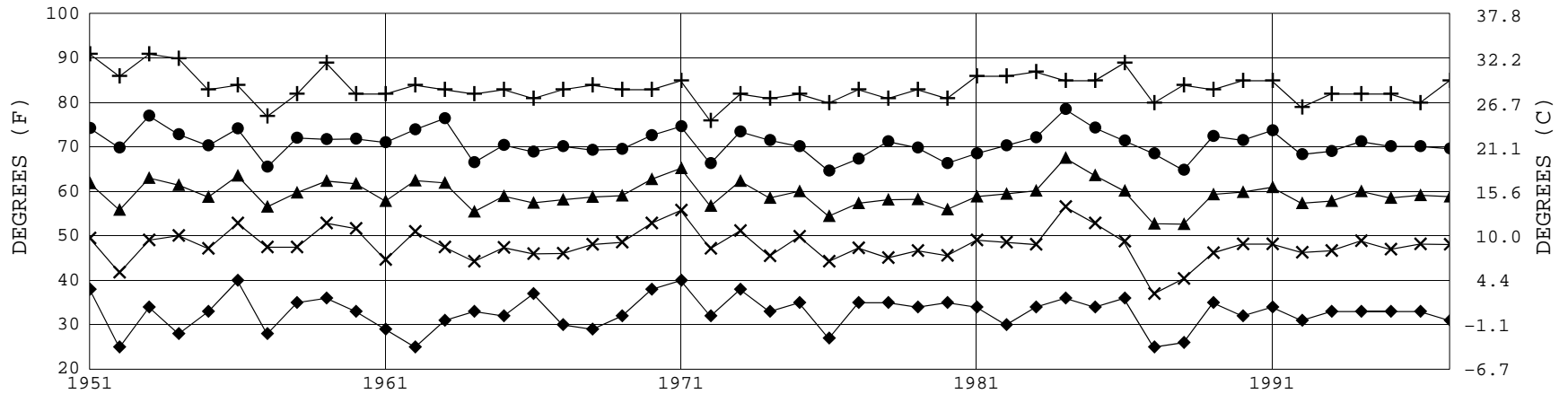
OCTOBER 1997

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
SUNRISE: 0652						OCT 25	SUNSET: 1748						SUNRISE: 0657						OCT 31	SUNSET: 1741							
01	OVC	028			3.00 BR	53	53	53	100	0	00	28.78	29.82	01	CLR	NC			10.00	44	42	43	93	0	00	29.00	30.04
04	OVC	046			3.00 -RA BR	54	54	54	100	6	03	28.80	29.83	04	CLR	NC			10.00	41	40	41	96	0	00	28.97	30.01
07	OVC	095			4.00 BR	55	54	54	96	7	36	28.84	29.87	07	SCT	NC			7.00	42	40	41	94	0	00	28.98	30.03
10	BKN	001			1.50 BR	56	56	56	100	6	02	28.88	29.92	10	CLR	NC			10.00	53	46	49	76	0	00	28.98	30.02
13	CLR	NC			10.00	67	60	63	79	5	23	28.86	29.89	13	FEW	NC			10.00	64	44	54	48	0	00	28.90	
16	BKN	120			10.00	68	61	64	78	7	24	28.84	29.86	16	SCT	NC			10.00	65	45	54	49	0	00	28.80	29.85
19	CLR	NC			10.00	63	61	62	93	3	36	28.86	29.88	19	SCT	NC			10.00	55	48	51	77	0	00	28.78	29.81
22	BKN	110			7.00	62	61	61	96	5	31	28.86	29.88	22	BKN	120			10.00	55	48	51	78	0	00	28.75	29.78
SUNRISE: 0653						OCT 26	SUNSET: 1747						3-HOURLY OBSERVATION NOTES														
01	OVC	002			3.00 RA BR	62	61	61	96	5	36	28.84	29.86	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.													
04	OVC	020			4.00 RA BR	61	60	60	97	8	01	28.79	29.80	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.													
07	OVC	024			5.00 RA BR	61	60	60	97	3	04	28.77	29.79	NC = No ceiling detected.													
10	OVC	055			10.00	66	62	64	87	7	17	28.76	29.78	& = Original observation contained additional weather elements.													
13	BKN	080			10.00	67	63	64	87	8	13	28.66	29.68	See page 3 for additional notes.													
16	OVC	060			10.00	67	64	65	91	0	00	28.61	29.62														
19	BKN	050			10.00 -TSRA	68	63	65	84	15	21	28.60	29.62														
22	SCT	NC			10.00	65	56	60	73	18	24	28.62	29.64														
SUNRISE: 0654						OCT 27	SUNSET: 1746																				
01	BKN	120			10.00	56	46	51	70	22	29	28.69	29.71														
04	BKN	035			10.00	47	37	42	69	13	26	28.74	29.76														
07	OVC	028			10.00	46	39	43	77	8	26	28.77	29.79														
10	OVC	032			10.00	46	37	42	71	10	29	28.82	29.85														
13	OVC	038			10.00	47	36	42	66	10	30	28.84	29.88														
16	OVC	025			5.00 -RA BR	45	41	43	86	10	29	28.88	29.93														
19	OVC	026			10.00	42	35	39	76	14	36	28.99	30.04														
22	OVC	029			10.00	42	33	38	71	9	02	29.05	30.11														
SUNRISE: 0655						OCT 28	SUNSET: 1745																				
01	OVC	035			10.00	42	33	38	71	3	36	29.05	30.10														
04	OVC	039			10.00	41	28	36	60	6	05	29.10	30.15														
07	CLR	NC			10.00	35	30	33	82	5	04	29.13	30.19														
10	CLR	NC			10.00	44	30	38	58	12	07	29.15	30.20														
13	CLR	NC			10.00	50	31	42	48	7	03	29.10	30.15														
16	CLR	NC			10.00	54	32	44	43	3	VR	29.06	30.11														
19	CLR	NC			10.00	48	34	42	58	0	00	29.08	30.14														
22	FEW	NC			10.00	43	36	40	76	0	00	29.07	30.12														
SUNRISE: 0656						OCT 29	SUNSET: 1744																				
01	CLR	NC			9.00	38	36	37	93	0	00	29.08	30.13														
04	FEW	NC			9.00	35	34	35	96	0	00	29.11	30.16														
07	CLR	NC			7.00	37	36	37	96	0	00	29.15	30.21														
10	CLR	NC			10.00	48	44	46	86	0	00	29.15	30.20														
13	FEW	NC			10.00	59	47	53	63	0	00	29.09	30.14														
16	FEW	NC			10.00	60	46	53	59	0	00	29.06	30.11														
19	CLR	NC			10.00	53	33	44	47	5	31	29.07	30.13														
22	CLR	NC			10.00	45	38	42	77	5	04	29.08	30.13														
SUNRISE: 0656						OCT 30	SUNSET: 1742																				
01	CLR	NC			10.00	41	38	40	89	0	00	29.09	30.13														
04	CLR	NC			6.00 BR	36	35	36	97	3	07	29.10	30.15														
07	FEW	NC			3.00 BR	35	34	35	96	3	04	29.12	30.17														
10	CLR	NC			7.00	47	42	44	83	3	VR	29.13	30.19														
13	CLR	NC			10.00	62	46	53	56	0	00	29.07	30.11														
16	CLR	NC			10.00	65	40	52	40	0	00	29.00	30.04														
19	CLR	NC			10.00	57	45	51	65	0	00	29.02	30.07														
22	CLR	NC			10.00	49	47	48	93	0	00	29.02	30.07														

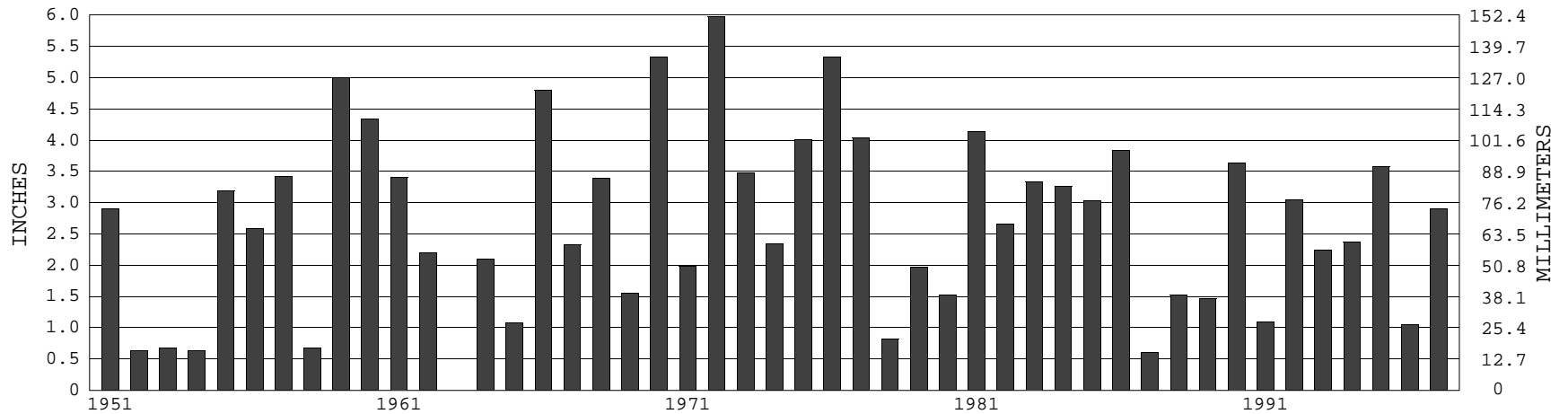
KNOXVILLE, TN OCTOBER TEMPERATURES



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

Long-Term (1951-1997) Mean: 59.5 1961-1990 Normal: 58.4

KNOXVILLE, TN OCTOBER PRECIPITATION



Long-Term (1951-1997) Mean Monthly Total: 2.67

1961-1990 Normal: 2.84



**OCTOBER 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.

ACTING 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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