



NOVEMBER 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

NOVEMBER 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	77	48	63	10	53	56	2	0	BR				0.00	29.24	30.28	2.3	02	2.7	13	02	10	01	01																															
02	80	47	64	11	53	57	1	0	BR				0.00	29.18	30.21	0.7	36	1.6	7	05	6	31	02																															
03	80	48	64	11	50	55	1	0	BR				0.00	29.10	30.14	1.0	05	1.2	8	24	8	24	03																															
04	80*	49	65	13	56	60	0	0					0.00	29.03	30.06	2.4	26	3.8	22	26	18	26	04																															
05	74	63	69*	17	66	67	0	4	RA BR HZ				0.65	29.03	30.05	0.5	30	3.1	15	28	13	28	05																															
06	72	62	67	15	65	66	0	2	RA FG+ BR				0.57	29.03	30.06	2.5	34	4.7	21	36	17	36	06																															
07	62	52	57	6	51	53	8	0					0.00	29.17	30.21	8.9	01	9.2	20	02	16	02	07																															
08	61	43	52	1	37	45	13	0					0.00	29.29	30.34	11.8	03	12.0	21	03	17	04	08																															
09	61	40	51	0	36	43	14	0					0.00	29.37	30.43	5.3	04	6.2	15	03	12	01	09																															
10	63	40	52	1	42	46	13	0	BR				0.00	29.31	30.36	0.5	21	.7	7	23	7	22	10																															
11	69	50	60	10	48	53	5	0	RA				T	29.14	30.18	8.8	25	9.2	28	22	21	22	11																															
12	74	59	67	17	58	61	0	2	RA BR				0.32	28.97	29.99	17.6	24	18.3	39	22	31*	23	12																															
13	59	35	47	-3	23	37	18	0					0.00	29.23	30.28	7.8	30	9.2	24	27	20	28	13																															
14	50	28	39	-10	24	34	26	0					0.00	29.25	30.32	3.2	03	4.2	16	07	13	04	14																															
15	47	42	45	-4	31	39	20	0	RA DZ				T	29.11	30.17	4.8	03	5.3	15	10	14	09	15																															
16	55	46	51	2	49	50	14	0	RA DZ BR				0.38	29.10	30.15	2.0	03	3.5	15	31	13	31	16																															
17	64	54	59	10	57	57	6	0	RA BR				0.02	29.10	30.14	3.2	03	3.7	9	01	8	02	17																															
18	76	53	65	17	57	60	0	0	RA FG+ BR				1.05	28.84	29.87	9.5	18	11.9	39*	19	29	19	18																															
19	62	44	53	5	51	54	12	0	TSRA RA BR				0.72	28.71	29.73	5.1	26	7.5	22	34	20	28	19																															
20	64	39	52	4	38	45	13	0					0.00	29.03	30.07	2.0	23	2.8	10	24	9	23	20																															
21	68	37	53	5	41	46	12	0					0.00	29.07	30.11	1.2	24	1.7	12	21	9	24	21																															
22	68	37	53	5	45	49	12	0	BR				0.00	29.05	30.10	1.3	24	2.8	14	21	13	22	22																															
23	70	38	54	7	47	51	11	0	BR				0.00	28.98	30.02	4.2	21	6.5	22	23	17	17	23																															
24	67	29	48	2	38	43	17	0	RA BR				0.43	28.95	29.99	7.7	26	13.1	31	26	28	25	24																															
25	47	26*	37	-9	26	32	28	0					0.00	29.05	30.12	3.6	05	4.3	14	07	12	07	25																															
26	50	31	41	-5	33	38	24	0					0.00	29.06	30.12	2.4	04	3.0	9	08	8	09	26																															
27	50	41	46	0	43	45	19	0	RA BR				0.16	28.98	30.03	2.0	07	3.4	16	34	14	33	27																															
28	62	31	47	2	37	41	18	0	RA SN BR				0.41	28.89	29.93	11.5	28	13.3	37	28	30	29	28																															
29	41	30	36*	-9	23	30	29	0	SN				T	29.18	30.25	9.9	25	10.6	25	29	21	27	29																															
30	56	29	43	-2	24	35	22	0					0.00	29.17	30.24	10.2	23	10.9	23	23	18	21	30																															
< MONTHLY AVERAGES											TOTALS-->				4.71	29.09	30.13	1.9	28	6.4	<-- MONTHLY AVERAGES																																	
4.6											3.5		4.0		<-----DEPARTURE FROM NORMAL----->											0.73		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																										
DEGREE DAYS											GREATEST 24-HR PRECIPITATION: 1.77 DATE: 18-19											SEA LEVEL PRESSURE											DATE		TIME																			
MONTHLY											GREATEST 24-HR SNOWFALL:											MAXIMUM											: 30.50		09 0953																			
TOTAL DEPARTURE											GREATEST SNOW DEPTH:											MINIMUM											: 29.58		19 0353																			
HEATING: 358 -112											NUMBER OF DAYS WITH											MAXIMUM TEMP ≥ 90: 0											MINIMUM TEMP ≤ 32: 7											PRECIPITATION ≥ 0.01 INCH: 10										
COOLING: 8 5											SEASON TO DATE											MAXIMUM TEMP ≤ 32: 0											MINIMUM TEMP ≤ 0: 0											PRECIPITATION ≥ 0.10 INCH: 9										
											TOTAL DEPARTURE											THUNDERSTORMS: 1											HEAVY FOG: 2											SNOWFALL ≥ 1.0 INCH: :										
											593 -109																																											
											1295 -155																																											

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN

NOVEMBER 2003 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		0.00		
03													03												03		0.00		
04													04												04		0.00		
05											0.03		05	0.07	0.01	0.43	.04	0.02					T	0.04	05	0.64	0.65		
06	T			0.02	0.08	0.08	0.37	0.05	T	0.01	T	T	06		T									06	0.61	0.57			
07													07												07		0.00		
08													08												08		0.00		
09													09												09		0.00		
10													10												10		0.00		
11										T			11												11		T		
12													12						0.06	0.19	0.06	0.01			12		0.32		
13													13												13		0.00		
14													14												14		0.00		
15					T	T	T	T	T	T	T		15			T	T				T	T		T	15		T		
16			T	T	T	T				0.08	0.11	0.06	0.05	16			T	0.02	0.01	0.01	0.03	T	T	T	0.01	16	0.38		
17		0.01	0.01										17												17		0.02		
18													18					T	0.11	0.27	0.14	0.08	0.12	0.18	0.15	18	1.05		
19	T	0.18	0.28	0.02	0.04	0.01	0.03				0.05	.03	0.03	19	0.05	T	T								19	0.72			
20													20												20		0.00		
21													21												21		0.00		
22													22												22		0.00		
23													23												23		0.00		
24							0.16	0.17	0.04	0.05	T	0.01	24												24		0.43		
25													25												25		0.00		
26													26												26		0.00		
27											0.01	0.05	27	0.04	0.05	T	0.01								27		0.16		
28		T	T	T	T	0.04	0.16	0.01	0.02	0.08	0.07	0.03	28	T	T	T								T	28		0.41		
29	T	T	T	T									29												29		T		
30													30												30		0.00		

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.16	.22	.24	.26	.27	.34	.46	.47	.47	.49	.52	.56
Ending Date	05	05	05	05	05	05	05	05	05	18	18	18
Ending Time (Hour/Min)	1409	1413	1413	1420	1420	1449	1459	1504	1504	1948	2014	2051

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 NOVEMBER 2003

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							1.50	10.00	
02							1.00	10.00	
03							5.00	10.00	
04							7.00	10.00	
05							1.00	10.00	
06							.25	10.00	
07							10.00	10.00	
08							10.00	10.00	
09							9.00	10.00	
10							6.00	10.00	
11							9.00	10.00	
12							1.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							10.00	10.00	
16							1.50	10.00	
17							1.00	8.00	
18							.25	10.00	
19							1.50	10.00	
20							10.00	10.00	
21							8.00	10.00	
22							6.00	10.00	
23							1.00	10.00	
24							1.75	10.00	
25							10.00	10.00	
26							9.00	10.00	
27							2.50	10.00	
28							1.25	10.00	
29							9.00	10.00	
30							10.00	10.00	
MONTHLY AVGS							5.68	9.90	
SUNSHINE (MINUTES)									
Total: Possible: Percent Possible:									
NUMBER OF DAYS WITH:									
SKY CONDITION									
CLR PTLY CLDY CLOUDY MISSING 30									
MINIMUM VISIBILITY (MILES)									
<=0.25 <=3.0 >=7.0 2 13 14									

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

NOVEMBER 2003

TYS

WBAN # 13891

HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)	
	SKY COVER	CEILING 100'S OF FT		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		DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
	OBSERVATION TIME (LST)	EFF CLD AMT Oktas		VISIBILITY (MILES)									OBSERVATION TIME (LST)	EFF CLD AMT Oktas		VISIBILITY (MILES)							
SUNRISE: 0658				NOV 01	SUNSET: 1741				SUNRISE: 0704				NOV 07	SUNSET: 1735									
01	SCT	NC	7.00	54	52	53	93	0	00	29.24	30.28	01	OVC	130	10.00	60	57	58	90	6	02	29.11	30.14
04	SCT	NC	4.00	51	50	51	96	3	02	29.24	30.28	04	OVC	050	10.00	57	53	55	87	8	36	29.12	30.15
07	SCT	NC	4.00	48	48	48	100	0	00	29.28	30.33	07	OVC	012	10.00	55	51	53	87	7	35	29.15	30.19
10	CLR	NC	7.00	60	54	57	80	3	VR	29.31	30.36	10	OVC	012	10.00	56	51	53	84	10	02	29.18	30.22
13	CLR	NC	10.00	74	56	63	54	5	VR	29.25	30.29	13	OVC	016	10.00	59	53	56	81	6	03	29.16	30.20
16	FEW	NC	10.00	76	55	63	48	5	05	29.21	30.24	16	OVC	027	10.00	58	51	54	78	12	02	29.15	30.19
19	FEW	NC	10.00	69	54	60	59	5	03	29.21	30.24	19	OVC	037	10.00	54	49	51	83	13	01	29.20	30.24
22	FEW	NC	10.00	60	53	56	78	3	04	29.21	30.25	22	OVC	028	10.00	52	47	49	83	10	03	29.22	30.27
SUNRISE: 0659				NOV 02	SUNSET: 1740				SUNRISE: 0705				NOV 08	SUNSET: 1734									
01	CLR	NC	6.00	55	52	53	90	0	00	29.20	30.23	01	OVC	030	10.00	52	45	48	77	10	03	29.22	30.27
04	CLR	NC	4.00	48	47	47	96	3	04	29.20	30.23	04	OVC	022	10.00	48	41	45	77	14	02	29.23	30.29
07	SCT	NC	5.00	49	48	48	97	0	00	29.21	30.24	07	SCT	NC	10.00	43	39	41	86	10	05	29.28	30.34
10	FEW	NC	7.00	61	54	57	78	0	00	29.23	30.28	10	SCT	NC	10.00	52	41	47	66	15	03	29.31	30.37
13	FEW	NC	10.00	74	57	64	56	5	20	29.19	30.22	13	SCT	NC	10.00	59	37	48	44	16	03	29.29	30.34
16	FEW	NC	10.00	80	55	65	42	5	32	29.13	30.16	16	SCT	NC	10.00	61	34	48	36	13	03	29.26	30.31
19	FEW	NC	10.00	68	53	59	59	3	06	29.14	30.18	19	FEW	NC	10.00	52	31	43	45	14	01	29.31	30.37
22	CLR	NC	10.00	60	53	56	78	3	06	29.16	30.19	22	FEW	NC	10.00	47	29	39	50	8	04	29.35	30.41
SUNRISE: 0660				NOV 03	SUNSET: 1739				SUNRISE: 0706				NOV 09	SUNSET: 1734									
01	CLR	NC	8.00	53	50	51	89	0	00	29.14	30.17	01	SCT	NC	10.00	43	30	38	60	8	03	29.37	30.43
04	CLR	NC	5.00	48	47	47	96	3	05	29.12	30.15	04	SCT	NC	10.00	42	31	37	65	9	04	29.36	30.42
07	FEW	NC	6.00	49	47	48	93	0	00	29.16	30.20	07	BKN	044	10.00	42	30	37	62	8	04	29.42	30.48
10	CLR	NC	10.00	61	53	57	75	5	VR	29.18	30.22	10	CLR	NC	10.00	47	32	41	56	7	06	29.43	30.50
13	CLR	NC	10.00	75	52	62	45	0	00	29.11	30.14	13	CLR	NC	10.00	56	37	47	49	6	08	29.39	30.45
16	CLR	NC	10.00	80	51	63	37	0	00	29.05	30.08	16	SCT	NC	10.00	60	40	50	48	6	04	29.34	30.39
19	CLR	NC	10.00	71	49	59	46	0	00	29.04	30.08	19	FEW	NC	10.00	54	40	47	59	6	04	29.33	30.40
22	CLR	NC	10.00	58	50	54	75	0	00	29.05	30.09	22	CLR	NC	10.00	49	41	45	74	0	00	29.34	30.40
SUNRISE: 0701				NOV 04	SUNSET: 1738				SUNRISE: 0707				NOV 10	SUNSET: 1733									
01	CLR	NC	9.00	54	50	52	87	0	00	29.04	30.07	01	SCT	NC	10.00	45	40	43	83	0	00	29.33	30.39
04	FEW	NC	7.00	50	49	49	96	0	00	29.04	30.07	04	OVC	120	9.00	44	41	43	89	0	00	29.36	30.41
07	FEW	NC	9.00	51	48	50	89	3	32	29.07	30.10	07	FEW	NC	9.00	43	40	42	89	0	00	29.38	30.44
10	FEW	NC	10.00	65	53	58	66	0	00	29.08	30.11	10	SCT	NC	10.00	51	39	45	64	0	00	29.39	30.45
13	SCT	NC	10.00	78	61	67	56	14	25	29.02	30.05	13	BKN	100	10.00	57	43	50	60	0	00	29.31	30.37
16	BKN	065	10.00	78	62	68	58	13	24	29.00	30.03	16	SCT	NC	10.00	62	43	52	50	0	00	29.24	30.29
19	BKN	080	10.00	72	62	66	71	3	29	28.99	30.02	19	FEW	NC	10.00	55	43	49	64	0	00	29.24	30.29
22	BKN	085	10.00	68	62	64	81	0	00	29.00	30.02	22	BKN	200	10.00	51	43	47	74	5	25	29.24	30.29
SUNRISE: 0702				NOV 05	SUNSET: 1737				SUNRISE: 0708				NOV 11	SUNSET: 1732									
01	OVC	090	10.00	66	62	64	87	0	00	28.99	30.01	01	BKN	110	10.00	50	45	47	83	5	22	29.21	30.26
04	SCT	NC	10.00	65	61	63	87	0	00	28.99	30.01	04	OVC	060	10.00	52	43	48	72	9	27	29.20	30.24
07	OVC	080	9.00	64	61	62	90	0	00	29.03	30.05	07	OVC	055	10.00	52	42	47	69	6	25	29.21	30.25
10	BKN	075	8.00	69	64	66	84	3	11	29.06	30.08	10	OVC	060	10.00	54	44	49	69	10	25	29.22	30.28
13	OVC	030	9.00	71	69	70	94	5	22	29.04	30.06	13	BKN	090	10.00	66	51	58	59	21	22	29.16	30.20
16	BKN	049	7.00	72	70	71	94	3	24	29.02	30.04	16	BKN	080	10.00	68	54	60	61	13	24	29.08	30.11
19	BKN	090	4.00	70	69	69	97	3	02	29.04	30.06	19	BKN	075	10.00	63	51	56	65	7	27	29.07	30.11
22	OVC	017	1.75	69	68	68	96	6	01	29.05	30.07	22	CLR	NC	10.00	59	50	54	72	8	25	29.05	30.09
SUNRISE: 0703				NOV 06	SUNSET: 1736				SUNRISE: 0709				NOV 12	SUNSET: 1731									
01	OVC	001	1.50	68	67	67	96	0	00	29.03	30.05	01	BKN	060	10.00	61	51	56	70	9	25	29.04	30.07
04	OVC	001	0.25	67	67	67	100	3	01	29.00	30.02	04	OVC	075	10.00	64	52	57	65	14	24	29.02	30.05
07	OVC	021	3.00	67	67	67	100	0	00	29.00	30.02	07	BKN	080	10.00	64	56	59	75	16	24	29.01	30.04
10	BKN	012	3.00	69	68	68	96	7	27	29.04	30.06	10	SCT	NC	10.00	70	61	64	73	23	22	28.99	30.02
13	OVC	015	9.00	72	69	70	91	6	28	29.00	30.03	13	BKN	030	10.00	72	62	66	71	23	24	28.92	29.95
16	OVC	030	10.00	68	62	64	81	6	06	29.01	30.04	16	OVC	043	9.00	72	61	65	69	23	22	28.87	29.89
19	OVC	055	10.00	66	61	63	84	3	35	29.05	30.08	19	OVC	036	10.00	69	60	64	73	21	22	28.89	29.92
22	OVC	025	10.00	64	59	61	84	6	02	29.10	30.13	22	OVC	045	7.00	61	57	59	87	9	25	28.96	29.98

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

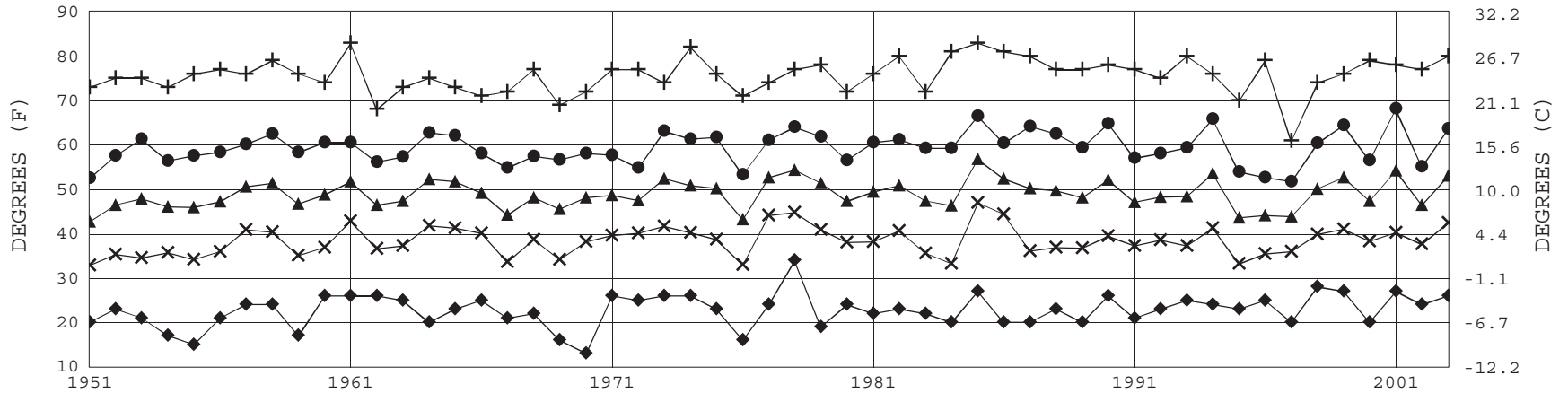
NOVEMBER 2003

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: 0710					NOV 13					SUNSET: 1731					SUNRISE: 0716					NOV 19					SUNSET: 1727				
01	BKN	150		10.00		58	46	52	65	8	28	29.04	30.06	01	OVC	055		10.00	RA	61	58	59	90	9	06	28.60	29.62		
04	BKN	150		10.00		50	24	39	36	12	30	29.13	30.16	04	OVC	005		10.00	-RA	60	59	59	96	0	00	28.56	29.58		
07	SCT	NC		10.00		42	22	34	45	5	30	29.21	30.26	07	OVC	005		10.00		60	59	59	96	3	21	28.57	29.59		
10	FEW	NC		10.00		44	21	35	40	15	29	29.26	30.32	10	OVC	017		4.00	-TSRA BR	60	58	59	93	10	26	28.60	29.62		
13	CLR	NC		10.00		47	22	37	37	10	26	29.24	30.30	13	OVC	032		6.00	-RA BR	57	54	55	90	15	25	28.66	29.68		
16	FEW	NC		10.00		49	17	37	28	10	30	29.23	30.29	16	SCT	NC		10.00		59	47	53	64	8	33	28.74	29.77		
19	CLR	NC		10.00		43	17	34	35	6	33	29.28	30.35	19	CLR	NC		10.00		49	42	46	77	9	23	28.85	29.88		
22	CLR	NC		10.00		37	20	31	50	5	08	29.31	30.38	22	CLR	NC		10.00		48	36	43	63	8	24	28.94	29.98		
SUNRISE: 0711					NOV 14					SUNSET: 1730					SUNRISE: 0717					NOV 20					SUNSET: 1726				
01	CLR	NC		10.00		36	21	31	55	6	01	29.29	30.36	01	CLR	NC		10.00		45	34	40	66	5	19	28.95	29.99		
04	CLR	NC		10.00		30	25	28	82	3	04	29.29	30.35	04	CLR	NC		10.00		42	35	39	76	3	16	28.96	30.00		
07	SCT	NC		10.00		30	24	28	79	3	04	29.29	30.36	07	CLR	NC		10.00		40	37	39	89	3	20	29.03	30.09		
10	SCT	NC		10.00		40	23	34	51	10	05	29.32	30.39	10	CLR	NC		10.00		51	40	46	66	8	25	29.08	30.13		
13	BKN	250		10.00		46	20	36	35	5	03	29.29	30.36	13	CLR	NC		10.00		60	39	50	46	6	22	29.06	30.10		
16	BKN	250		10.00		49	19	37	31	3	03	29.23	30.29	16	FEW	NC		10.00		64	38	51	38	0	00	29.02	30.06		
19	SCT	NC		10.00		45	23	36	42	0	00	29.19	30.26	19	FEW	NC		10.00		55	38	47	53	3	34	29.04	30.09		
22	OVC	120		10.00		44	24	36	45	0	00	29.16	30.21	22	SCT	NC		10.00		48	40	44	74	0	00	29.04	30.09		
SUNRISE: 0712					NOV 15					SUNSET: 1729					SUNRISE: 0718					NOV 21					SUNSET: 1726				
01	OVC	095		10.00		44	27	37	51	3	01	29.15	30.21	01	CLR	NC		10.00		44	39	42	83	0	00	29.05	30.09		
04	OVC	065		10.00		45	28	38	52	5	01	29.15	30.20	04	CLR	NC		10.00		40	37	39	89	5	03	29.08	30.12		
07	OVC	060		10.00	-RA	42	32	38	68	9	02	29.15	30.21	07	CLR	NC		10.00		38	36	37	93	0	00	29.12	30.16		
10	OVC	065		10.00		43	31	38	63	6	04	29.18	30.23	10	FEW	NC		10.00		48	42	45	80	0	00	29.14	30.19		
13	OVC	055		10.00		45	30	39	56	0	00	29.11	30.16	13	SCT	NC		10.00		62	43	52	50	0	00	29.08	30.12		
16	OVC	080		10.00		47	31	40	54	5	02	29.06	30.11	16	SCT	NC		10.00		68	43	55	41	8	24	29.01	30.06		
19	OVC	060		10.00		46	31	40	56	3	02	29.09	30.14	19	SCT	NC		10.00		60	42	51	52	3	15	29.02	30.06		
22	OVC	110		10.00		46	31	40	56	5	07	29.07	30.12	22	FEW	NC		10.00		50	42	46	74	0	00	29.03	30.07		
SUNRISE: 0713					NOV 16					SUNSET: 1729					SUNRISE: 0719					NOV 22					SUNSET: 1725				
01	OVC	080		10.00		46	42	44	86	5	04	29.09	30.14	01	CLR	NC		10.00		47	41	44	80	3	05	29.03	30.07		
04	OVC	080		10.00	-RA	46	44	45	93	6	06	29.08	30.13	04	CLR	NC		10.00		40	39	40	97	0	00	29.06	30.10		
07	OVC	036		10.00		47	45	46	93	5	03	29.08	30.13	07	SCT	NC		10.00		40	39	40	97	0	00	29.09	30.14		
10	OVC	026		2.50	-RA BR	48	47	47	96	7	12	29.13	30.18	10	CLR	NC		10.00		50	44	47	80	0	00	29.12	30.17		
13	OVC	020		4.00	BR	51	50	51	96	3	26	29.09	30.14	13	FEW	NC		10.00		66	52	58	61	8	21	29.05	30.09		
16	OVC	021		3.00	-RA BR	54	53	53	97	0	00	29.08	30.13	16	FEW	NC		10.00		68	51	58	55	7	24	29.01	30.05		
19	OVC	005		2.00	-RA BR	54	53	53	97	0	00	29.10	30.14	19	FEW	NC		10.00		59	49	54	69	3	07	29.02	30.06		
22	OVC	005		1.50	-RA BR	54	54	54	100	0	00	29.11	30.16	22	FEW	NC		10.00		53	48	50	83	5	25	29.03	30.08		
SUNRISE: 0714					NOV 17					SUNSET: 1728					SUNRISE: 0720					NOV 23					SUNSET: 1725				
01	OVC	001		1.50	BR	54	54	54	100	5	01	29.12	30.16	01	CLR	NC		7.00		49	47	48	93	0	00	29.04	30.07		
04	OVC	003		1.50	BR	55	54	54	96	0	00	29.12	30.16	04	CLR	NC		5.00	BR	44	43	44	96	3	04	29.04	30.07		
07	OVC	002		1.75	BR	55	54	54	96	6	04	29.15	30.19	07	SCT	NC		2.50	BR	39	38	39	96	3	08	29.05	30.10		
10	OVC	002		2.00	BR	57	56	56	96	5	02	29.17	30.21	10	CLR	NC		9.00		50	46	48	86	3	07	29.08	30.12		
13	OVC	004		3.00	BR	62	59	60	90	3	35	29.11	30.15	13	CLR	NC		10.00		68	49	57	51	17	23	29.00	30.03		
16	OVC	250		6.00	BR	64	60	62	87	0	00	29.07	30.11	16	BKN	250		10.00		69	50	58	51	15	26	28.92	29.96		
19	SCT	NC		5.00	BR	60	58	59	93	3	01	29.08	30.12	19	FEW	NC		10.00		58	49	53	72	7	23	28.92	29.96		
22	SCT	NC		3.00	BR	57	57	57	100	5	06	29.05	30.09	22	BKN	070		10.00		65	49	56	56	13	18	28.88	29.91		
SUNRISE: 0715					NOV 18					SUNSET: 1727					SUNRISE: 0721					NOV 24					SUNSET: 1724				
01	BKN	150		1.50	BR	57	57	57	100	5	01	29.00	30.03	01	FEW	NC		10.00		64	50	56	61	14	20	28.82	29.83		
04	BKN	001		0.50	FG	54	53	53	97	5	08	28.97	30.00	04	BKN	080		10.00		62	51	56	67	10	18	28.75	29.76		
07	BKN	180		10.00		66	54	59	65	12	17	28.94	29.98	07	OVC	048		5.00	RA BR	59	57	58	93	20	24	28.76	29.79		
10	OVC	065		10.00		72	56	62	57	18	19	28.92	29.95	10	OVC	014		3.00	-RA BR	44	42	43	93	24	27	28.94	29.98		
13	OVC	090		10.00		74	58	64	57	21	19	28.81	29.82	13	SCT	NC		10.00		44	34	40	68	15	29	29.01	30.05		
16	OVC	070		10.00		74	58	64	57	14	19	28.70	29.72	16	FEW	NC		10.00		41	27	35	57	8	29	29.04	30.09		
19	OVC	017		3.00	+RA BR	62	60	61	93	12	21	28.81	29.83	19	BKN	037		10.00		37	27	33	67	7	31	29.08	30.13		
22	OVC	060		9.00	-RA	61	59	60	93	7	12	28.73	29.74	22	CLR	NC		10.00		32	23	29	69	8	02	29.12	30.18		

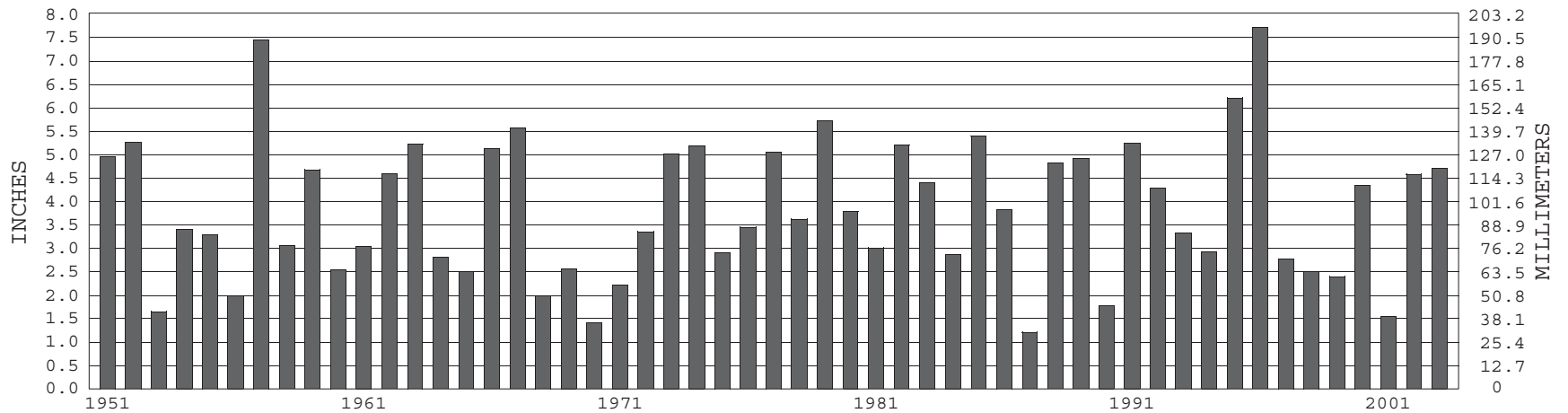
KNOXVILLE, TN NOVEMBER TEMPERATURES



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

Long-Term (1951-2003) Mean: 48.9 1961-1990 Normal: 49.0

KNOXVILLE, TN NOVEMBER PRECIPITATION



Long-Term (1951-2003) Mean Monthly Total: 3.84

1961-1990 Normal: 3.98



NOVEMBER 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.

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