FEBRUARY 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

DATE	TEMPERATURE °F MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	DEG DAYS BASE 65° HEATING	COOLING	WEATHER	SNOW/ICE ON GND(IN) 0700 LST DEPTH	1300 LST WATER EQUIV	PRECIPITATION (INCHES) 2400 LST SNOW−FALL	2400 LST WATER EQUIV	PRESSURE (INCHES OF HG) AVERAGE STATION	AVERAGE SEA LEVEL	WIND SPEED = MPH DIR = TENS OF DEGREES RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM 5−SEC SPEED	5−SEC DIR	MAXIMUM 2−MIN SPEED	2−MIN DIR	DATE
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	45	33	39	0	35	38	26	0	RA DZ BR				0.02	28.97	30.02	6.4	25	7.1	23	28	18	27	01
02	64	30	47	8	35	41	18	0	BR				0.00	28.90	29.95	6.9	24	7.8	25	23	22	23	02
03	64	46	55	16	44	50	10	0	RA				T	28.76	29.79	15.0	23	15.9	37	20	31	21	03
04	63	34	49	10	33	40	16	0	RA BR				0.62	28.84	29.88	13.6	26	14.7	41	27	33	27	04
05	44	24	34	−6	15	28	31	0					0.00	29.15	30.22	2.6	03	3.9	13	10	9	04	05
06	41	32	37	−3	27	33	28	0	RA SN PL BR				0.34	29.09	30.15	4.9	03	5.5	14	02	13	04	06
07	37	25	31	−9	28	31	34	0	DZ SN BR				0.08	29.06	30.13	6.2	28	7.5	20	26	16	27	07
08	32	17*	25*	−15	13	21	40	0	SN				T	29.21	30.30	2.3	29	5.8	16	30	14	29	08
09	41	22	32	−8	22	28	33	0	SN BR				0.06	29.09	30.16	1.1	03	2.9	12	31	9	30	09
10	38	29	34	−7	30	33	31	0	RA SN BR				0.24	28.90	29.96	6.4	27	8.0	23	26	20	25	10
11	52	25	39	−2	29	34	26	0					0.00	29.00	30.06	11.2	24	11.6	35	24	30	24	11
12	46	28	37	−4	17	32	28	0					0.00	29.11	30.17	9.8	26	11.2	25	26	21	27	12
13	50	25	38	−3	18	31	27	0					0.00	29.21	30.27	3.7	22	4.2	18	23	15	23	13
14	42	35	39	−3	36	38	26	0	RA BR				1.63	29.02	30.08	2.3	03	3.6	13	08	13	08	14
15	53	42	48	6	49	49	17	0	TSRA RA DZ FG BR				0.93	28.85	29.89	2.4	35	4.2	14	29	12	29	15
16	54	42	48	6	46	47	17	0	TSRA RA DZ BR				1.28	28.79	29.83	4.3	03	6.9	16	03	14	04	16
17	42	32	37	−5	35	36	28	0	RA DZ BR				0.06	28.91	29.97	8.7	27	8.9	20	27	16	27	17
18	36	30	33	−9	29	32	32	0	SN BR				T	29.15	30.22	3.9	28	5.4	15	26	12	26	18
19	55	32	44	1	36	39	21	0	RA BR				0.03	29.16	30.23	1.1	01	3.6	12	26	10	26	19
20	50	44	47	4	46	46	18	0	RA DZ BR				0.06	29.15	30.20	4.7	03	4.9	13	34	10	05	20
21	51	46	49	6	48	48	16	0	RA DZ FG+ BR				0.32	28.86	29.91	3.4	03	3.9	17	33	10	33	21
22	73*	44	59*	15	51	54	6	0	TS TSRA RA BR				2.08	28.30	29.32	8.7	22	16.1	47*	25	38*	25	22
23	46	33	40	−4	31	36	25	0	RA SN PL BR				0.03	28.81	29.86	9.6	26	10.8	33	27	29	26	23
24	55	35	45	1	35	41	20	0	RA				T	29.10	30.16	6.1	28	10.4	37	21	30	23	24
25	38	31	35	−9	29	32	30	0	SN BR				0.05	29.21	30.28	8.0	03	8.3	18	02	15	05	25
26	41	33	37	−8	36	37	28	0	RA DZ FG+ BR				0.38	29.01	30.07	5.2	03	5.5	14	04	12	04	26
27	46	40	43	−2	43	43	22	0	RA DZ BR				0.48	28.84	29.89	2.2	02	6.1	14	23	13	23	27
28	55	44	50	4	45	47	15	0	DZ BR				T	28.97	30.02	4.6	26	5.6	14	23	13	23	28
	48.4	33.3	40.9		33.6	38.0	23.9	0.0	< MONTHLY AVERAGES TOTALS−>				8.69	28.98	30.04	3.3	27	7.5					<− MONTHLY AVERAGES
	−3.3	1.5	−.9		<−−−−−−−−−−−−−DEPARTURE FROM NORMAL−−−−−−−−−−−−−>								4.68	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

DEGREE DAYS

	MONTHLY TOTAL	MONTHLY DEPARTURE	SEASON TO DATE TOTAL	SEASON TO DATE DEPARTURE
HEATING:	669	17	3058	130
COOLING:	0	−1	0	−1

GREATEST 24−HR PRECIPITATION: 2.17 DATE: 21−22
GREATEST 24−HR SNOWFALL: DATE:
GREATEST SNOW DEPTH: DATE:

SEA LEVEL PRESSURE		DATE	TIME
MAXIMUM	30.37	25	0853
MINIMUM	29.09	22	1553

NUMBER OF DAYS WITH →

MAXIMUM TEMP ≥ 90:	0	MINIMUM TEMP ≤ 32 :	14
MAXIMUM TEMP ≤ 32 :	1	MINIMUM TEMP ≤ 0 :	0
THUNDERSTORMS :	3	HEAVY FOG :	2
		PRECIPITATION ≥ 0.01 INCH :	18
		PRECIPITATION ≥ 0.10 INCH :	10
		SNOWFALL ≥ 1.0 INCH :	

FEBRUARY 2003
KNOXVILLE, TN

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN

FEBRUARY 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	0.01				01													01		0.02
02													02													02		0.00
03													03											T	T	03		T
04	0.12	0.14	0.18	0.14	0.04	T							04													04		0.62
05													05													05		0.00
06													06		T	0.01	0.05	0.06	0.07	0.03	0.02	0.02	0.02	0.02	0.04	06		0.34
07	0.02	0.01	0.02	0.02	0.01						T	T	07			T					T	T		T	T	07		0.08
08	T				T	T							08													08		T
09													09						T	T	T	T	0.06	T	T	09		0.06
10	T	0.01	T	T			0.01	T	0.01	T	0.07	T	10						T			T	T			10	0.10	0.24
11													11													11		0.00
12													12													12		0.00
13													13													13		0.00
14								T	T	0.05	0.08	0.17	14	0.11	0.06		0.15	0.13	0.21	0.23	0.18	0.09	0.04	0.04	0.01	14	1.55	1.63
15	T	0.01			0.01	0.02	0.04	0.13	0.09	0.01	0.01	0.02	15	0.09	0.04	0.11	0.09	0.11	0.05	0.02	0.02	0.01	0.01	0.01	0.02	15	0.92	0.93
16	0.36	0.05	0.14	0.33	0.04	T	T	0.01	0.06	0.08	0.01	T	16		T	T	0.01	0.03	0.05	0.06	T	0.02	0.02	0.01	0.01	16	1.29	1.28
17	0.01	0.01	0.01	T	T	T	0.01	T	0.01	T	T	T	17	0.01		T	T	T	T	T	T	T				17		0.06
18										T	T	T	18													18		T
19													19									T	0.01	0.01	0.01	19		0.03
20	0.01	0.01	0.01	0.02	T	T	0.01	T	T				20	T	T	T	T	T	T	T						20		0.06
21							0.01	0.03	0.05	0.04	0.05	0.05	21	0.02	0.01		T	T						T	0.06	21		0.32
22	0.09	0.25	0.39	0.16	0.23	0.03	0.33	0.17	0.26	0.06	0.06		22						0.02	T	T	T	0.01	0.02	T	22		2.08
23	T	T	T	0.02	0.01	T	T	T					23													23		0.03
24					T								24													24		T
25										T	T		25	T	T	T	0.03	0.02	T	T						25		0.05
26									T	0.01	0.03	0.05	26	0.07		0.03	0.04	0.04	T	T	0.02	0.04	0.01	T	0.01	26	0.35	0.38
27	0.01	0.01	T	0.01	0.02	0.02	0.01	0.01	0.06	0.05	0.06	0.04	27	0.05	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	T	0.02	0.01	27		0.48
28	T	T	T										28													28		T

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.14	.22	.25	.28	.32	.36	.42	.52	.62	.71	.80	.87
Ending Date	16	16	16	16	16	22	22	22	22	22	22	22
Ending Time (Hour/Min)	0049	0053	0053	0055	0103	0712	0716	0319	0317	0319	0319	0319

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 occurence 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		
DESCRIPTOR	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
FEBRUARY 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:

Note: 2002 LCD Annual, the element "Normal Dry Bulb" was not updated using the 1971−2000 Normals. Correction will be made in the 2003 LCD Annual.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
			SR−SS		MN−MN				
	TOTAL MINUTES	PERCENT POSSIBLE	CEILOMETER	SATELLITE	CEILOMETER	SATELLITE	MINIMUM	MAXIMUM	
01							2.00	10.00	
02							3.00	10.00	
03							9.00	10.00	
04							2.50	10.00	
05							10.00	10.00	
06							1.00	10.00	
07							1.00	10.00	
08							9.00	10.00	
09							.75	10.00	
10							.75	10.00	
11							8.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							.75	10.00	
15							.50	6.00	
16							1.25	10.00	
17							1.25	10.00	
18							2.00	10.00	
19							4.00	10.00	
20							1.50	4.00	
21							.06	3.00	
22							.75	10.00	
23							1.50	10.00	
24							10.00	10.00	
25							.75	10.00	
26							.50	6.00	
27							1.00	7.00	
28							2.50	10.00	
MONTHLY AVGS							3.51	9.14	

SUNSHINE (MINUTES)

Total: Possible:
Percent Possible:

NUMBER OF DAYS WITH:

SKY CONDITION

CLR	PTLY CLDY	CLOUDY	MISSING
			28

MINIMUM VISIBILITY (MILES)

<=0.25	<=3.0	>=7.0
1	20	7

OBSERVATIONS AT 3–HOURLY INTERVALS

KNOXVILLE, TN

FEBRUARY 2003 TYS WBAN # 13891

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0736	**FEB 01**			**SUNSET: 1803**					
01	OVC	027			6.00	-RA BR	40	38	39	93	8	24	28.91	29.96
04	OVC	019			10.00		40	37	39	89	9	24	28.93	29.99
07	OVC	017			7.00		39	38	39	96	9	22	28.95	30.01
10	BKN	026			7.00		41	38	40	89	9	26	29.00	30.05
13	OVC	034			10.00		43	34	39	71	14	28	29.00	30.05
16	BKN	033			10.00		45	34	40	66	5	30	28.97	30.02
19	SCT	NC			10.00		42	33	38	71	0	00	28.98	30.04
22	CLR	NC			10.00		37	32	35	82	0	00	28.96	30.02
					SUNRISE: 0736	**FEB 02**			**SUNSET: 1804**					
01	SCT	NC			7.00		32	31	32	96	0	00	28.94	30.00
04	BKN	110			7.00		32	31	32	96	0	00	28.96	30.01
07	CLR	NC			7.00		30	28	29	92	3	24	28.94	30.01
10	FEW	NC			9.00		39	35	37	86	6	28	28.95	30.01
13	SCT	NC			10.00		60	41	50	50	20	24	28.89	29.94
16	SCT	NC			10.00		64	39	51	40	13	23	28.84	29.88
19	SCT	NC			10.00		54	38	46	55	8	23	28.83	29.87
22	CLR	NC			10.00		52	38	45	59	10	24	28.85	29.88
					SUNRISE: 0735	**FEB 03**			**SUNSET: 1805**					
01	CLR	NC			10.00		51	37	45	59	10	24	28.84	29.87
04	CLR	NC			10.00		52	38	45	59	14	24	28.83	29.85
07	SCT	NC			10.00		46	38	42	73	8	24	28.85	29.89
10	BKN	250			9.00		55	46	50	72	21	24	28.86	29.89
13	BKN	250			10.00		61	47	53	60	18	25	28.79	29.81
16	OVC	250			10.00		59	44	51	58	18	26	28.75	29.78
19	BKN	250			10.00		56	45	50	67	14	25	28.70	29.73
22	OVC	060			10.00		62	50	55	65	21	21	28.61	29.63
					SUNRISE: 0734	**FEB 04**			**SUNSET: 1806**					
01	OVC	041			5.00	-RA BR	59	56	57	90	22	20	28.50	29.52
04	OVC	065			10.00	-RA	51	47	49	86	22	26	28.59	29.62
07	OVC	034			10.00		44	36	40	73	15	28	28.78	29.82
10	BKN	042			10.00		40	30	36	68	21	26	28.88	29.92
13	SCT	NC			10.00		44	27	37	51	13	28	28.89	29.93
16	SCT	NC			10.00		47	28	39	48	14	25	28.89	29.94
19	CLR	NC			10.00		41	24	34	51	8	27	28.96	30.01
22	FEW	NC			10.00		37	22	32	54	10	28	29.03	30.09
					SUNRISE: 0733	**FEB 05**			**SUNSET: 1807**					
01	FEW	NC			10.00		32	21	28	64	3	31	29.08	30.14
04	CLR	NC			10.00		28	16	24	61	0	00	29.09	30.15
07	FEW	NC			10.00		26	16	23	66	3	06	29.15	30.22
10	FEW	NC			10.00		31	14	26	49	7	04	29.19	30.26
13	SCT	NC			10.00		38	9	29	30	3	04	29.20	30.27
16	BKN	250			10.00		43	8	32	24	0	00	29.17	30.23
19	BKN	250			10.00		39	14	31	36	3	07	29.16	30.23
22	BKN	250			10.00		36	17	29	46	7	05	29.16	30.23
					SUNRISE: 0732	**FEB 06**			**SUNSET: 1808**					
01	OVC	100			10.00		36	16	29	44	6	01	29.17	30.23
04	OVC	085			10.00		35	19	29	52	8	05	29.15	30.21
07	OVC	050			10.00		35	20	30	54	8	08	29.17	30.23
10	OVC	030			7.00		37	23	32	57	5	03	29.18	30.24
13	OVC	042			10.00		41	32	37	70	12	03	29.08	30.14
16	OVC	008			3.00	RA BR	37	35	36	93	6	02	29.04	30.10
19	OVC	009			1.75	-SN BR	33	32	33	96	3	03	29.03	30.10
22	OVC	009			1.00	-SN BR	33	32	33	96	6	02	28.98	30.04

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0731	**FEB 07**			**SUNSET: 1809**					
01	OVC	006			1.00	-SN BR	33	32	33	96	6	04	28.96	30.02
04	BKN	024			1.00	BR	33	32	33	96	0	00	28.95	30.02
07	OVC	002			2.00	BR	33	33	33	100	3	27	28.98	30.05
10	OVC	005			8.00		34	33	34	97	5	26	29.05	30.12
13	OVC	021			7.00		36	30	34	79	6	29	29.08	30.15
16	OVC	023			7.00		35	28	32	76	15	27	29.08	30.14
19	BKN	035			10.00		32	24	29	73	9	26	29.12	30.19
22	FEW	NC			10.00		27	18	24	69	13	27	29.19	30.26
					SUNRISE: 0730	**FEB 08**			**SUNSET: 1810**					
01	SCT	NC			10.00		24	16	22	71	10	28	29.22	30.30
04	OVC	023			10.00		22	16	20	78	8	03	29.22	30.31
07	BKN	025			10.00		17	11	15	77	6	04	29.23	30.32
10	CLR	NC			10.00		20	11	17	68	0	00	29.25	30.34
13	FEW	NC			10.00		28	16	24	61	7	VR	29.24	30.32
16	BKN	250			10.00		32	14	26	47	10	23	29.18	30.26
19	SCT	NC			10.00		28	13	23	53	5	23	29.19	30.27
22	CLR	NC			10.00		27	12	23	53	0	00	29.17	30.25
					SUNRISE: 0729	**FEB 09**			**SUNSET: 1811**					
01	SCT	NC			10.00		22	18	21	85	0	00	29.18	30.26
04	OVC	110			10.00		24	21	23	88	3	03	29.16	30.23
07	BKN	070			10.00		26	20	24	78	0	00	29.17	30.24
10	SCT	NC			10.00		31	20	27	64	5	07	29.17	30.24
13	BKN	080			10.00		38	19	31	47	3	VR	29.13	30.20
16	OVC	080			10.00		40	18	32	41	0	00	28.98	30.05
19	OVC	028			1.25	-SN BR	33	31	32	92	5	31	29.05	30.11
22	OVC	001			1.25	-SN BR	32	31	32	96	5	07	28.95	30.02
					SUNRISE: 0728	**FEB 10**			**SUNSET: 1812**					
01	OVC	022			2.00	-SN BR	32	31	32	96	3	01	28.91	29.97
04	OVC	014			4.00	-FZRASN BR	32	31	32	96	5	36	28.80	29.85
07	OVC	002			0.75	-FZRASN BR	32	31	32	96	3	20	28.76	29.81
10	OVC	005			3.00	BR	33	33	33	100	9	24	28.81	29.87
13	OVC	021			10.00		38	32	35	79	15	26	28.89	29.95
16	BKN	039			10.00		38	29	34	70	13	28	28.94	30.00
19	OVC	044			10.00		36	28	33	73	9	26	29.00	30.07
22	BKN	048			10.00		35	27	32	72	7	27	29.03	30.10
					SUNRISE: 0727	**FEB 11**			**SUNSET: 1813**					
01	CLR	NC			10.00		29	25	28	85	8	25	29.06	30.12
04	CLR	NC			9.00		26	23	25	88	7	23	29.05	30.11
07	FEW	NC			10.00		28	24	27	85	5	20	29.03	30.09
10	SCT	NC			10.00		36	30	34	79	17	23	29.02	30.09
13	FEW	NC			10.00		47	31	40	54	24	23	28.99	30.05
16	SCT	NC			10.00		51	31	42	46	17	27	28.92	29.98
19	SCT	NC			10.00		44	31	39	60	9	25	28.95	30.01
22	CLR	NC			10.00		40	30	36	68	8	25	28.97	30.03
					SUNRISE: 0726	**FEB 12**			**SUNSET: 1814**					
01	CLR	NC			10.00		37	29	34	73	8	23	29.00	30.05
04	BKN	100			10.00		37	30	34	76	10	21	29.02	30.08
07	OVC	110			10.00		37	30	34	76	7	22	29.05	30.10
10	SCT	NC			10.00		43	26	36	51	17	27	29.12	30.17
13	FEW	NC			10.00		45	12	34	26	18	27	29.16	30.22
16	CLR	NC			10.00		45	5	32	19	14	29	29.13	30.19
19	CLR	NC			10.00		39	4	29	23	7	28	29.15	30.22
22	CLR	NC			10.00		31	8	24	38	8	20	29.21	30.28

OBSERVATIONS AT 3–HOURLY INTERVALS

KNOXVILLE, TN

FEBRUARY 2003 TYS WBAN # 13891

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0725	**FEB 13**							**SUNSET: 1815**	
01	CLR	NC			10.00		32	5	24	32	0	00	29.22	30.29
04	CLR	NC			10.00		30	9	24	41	0	00	29.24	30.31
07	FEW	NC			10.00		27	11	22	51	3	22	29.24	30.32
10	SCT	NC			10.00		35	16	29	46	3	VR	29.26	30.34
13	SCT	NC			10.00		45	20	36	37	9	26	29.22	30.29
16	BKN	250			10.00		49	22	38	35	10	20	29.17	30.22
19	SCT	NC			10.00		44	24	36	45	7	23	29.16	30.22
22	SCT	NC			10.00		42	24	35	49	0	00	29.16	30.22
					SUNRISE: 0724	**FEB 14**							**SUNSET: 1816**	
01	SCT	NC			10.00		40	25	34	55	0	00	29.13	30.19
04	BKN	250			10.00		36	30	34	79	3	03	29.10	30.16
07	OVC	090			10.00		38	29	34	70	5	24	29.09	30.15
10	OVC	035			3.00	RA BR	38	35	37	89	3	23	29.12	30.18
13	OVC	002			2.00	RA BR	38	38	38	100	8	05	29.05	30.11
16	OVC	042			1.00	+RA BR	40	40	40	100	7	01	28.93	29.99
19	OVC	005			1.25	+RA BR	41	41	41	100	3	36	28.93	29.99
22	OVC	047			2.00	-RA BR	41	41	41	100	6	01	28.90	29.96
					SUNRISE: 0723	**FEB 15**							**SUNSET: 1817**	
01	OVC	038			2.50	DZ BR	42	41	42	96	5	06	28.87	29.91
04	OVC	028			4.00	BR	43	43	43	100	0	00	28.85	29.89
07	OVC	018			2.00	RA BR	47	47	47	100	3	27	28.87	29.91
10	OVC	021			0.50	FG	48	48	48	100	3	28	28.88	29.93
13	OVC	022			0.50	RA FG	51	51	51	100	0	00	28.87	29.91
16	OVC	001			0.75	RA BR	53	53	53	100	3	07	28.84	29.88
19	OVC	001			1.00	-RA BR	52	52	52	100	7	03	28.85	29.89
22	OVC	010			1.50	DZ BR	52	52	52	100	5	06	28.83	29.86
					SUNRISE: 0722	**FEB 16**							**SUNSET: 1818**	
01	OVC	001			1.25	+TSRA BR	53	53	53	100	0	00	28.84	29.87
04	OVC	002			1.50	RA BR	53	52	52	96	6	07	28.81	29.84
07	OVC	004			9.00		49	48	48	97	10	02	28.77	29.81
10	OVC	008			2.00	-RA BR	46	45	46	96	10	05	28.78	29.81
13	BKN	055			10.00		47	45	46	93	9	03	28.78	29.82
16	OVC	019			5.00	-RA BR	46	43	45	89	6	35	28.77	29.80
19	OVC	013			3.00	-RA BR	44	43	44	96	0	00	28.80	29.84
22	OVC	002			1.50	-RA BR	44	43	44	96	6	26	28.83	29.87
					SUNRISE: 0721	**FEB 17**							**SUNSET: 1819**	
01	OVC	002			1.50	+DZ BR	42	41	42	96	9	27	28.84	29.88
04	OVC	002			1.50	+DZ BR	40	39	40	97	7	27	28.83	29.87
07	OVC	002			1.50	DZ BR	37	36	37	96	7	31	28.87	29.92
10	OVC	004			2.50	-RA BR	36	35	36	97	7	28	28.90	29.96
13	OVC	007			5.00	BR	38	35	37	89	12	25	28.89	29.95
16	OVC	007			1.50	DZ BR	37	35	36	93	12	26	28.90	29.96
19	OVC	012			3.00	DZ BR	34	31	33	89	14	27	28.98	30.04
22	OVC	015			10.00		32	28	31	85	10	28	29.02	30.09
					SUNRISE: 0720	**FEB 18**							**SUNSET: 1820**	
01	OVC	021			10.00		32	26	30	79	12	28	29.04	30.11
04	OVC	013			10.00		31	27	29	85	6	26	29.07	30.14
07	OVC	013			7.00		30	27	29	88	8	27	29.14	30.21
10	OVC	017			5.00	-SN BR	31	27	29	85	8	27	29.19	30.26
13	OVC	013			9.00		34	30	32	85	5	27	29.17	30.24
16	OVC	015			8.00		36	30	34	79	3	VR	29.17	30.24
19	OVC	017			9.00		35	30	33	82	3	31	29.20	30.27
22	OVC	015			7.00		35	31	33	85	5	02	29.20	30.26
					SUNRISE: 0719	**FEB 19**							**SUNSET: 1821**	
01	OVC	250			6.00	BR	33	31	32	92	5	07	29.18	30.25
04	OVC	250			5.00	BR	33	31	32	92	3	05	29.18	30.24
07	OVC	090			6.00	BR	33	31	32	92	3	36	29.18	30.25
10	BKN	250			6.00	BR	37	33	35	86	0	00	29.19	30.26
13	BKN	250			10.00		46	37	42	71	6	VR	29.17	30.23
16	BKN	080			10.00		54	38	46	55	6	27	29.11	30.16
19	OVC	065			10.00		50	39	45	66	0	00	29.13	30.19
22	OVC	043			7.00	-RA	46	44	45	93	3	05	29.17	30.23
					SUNRISE: 0718	**FEB 20**							**SUNSET: 1822**	
01	OVC	040			4.00	-RA BR	45	44	45	97	0	00	29.19	30.24
04	OVC	042			3.00	-RA BR	44	44	44	100	5	05	29.19	30.24
07	OVC	046			4.00	-RA BR	44	43	44	96	7	04	29.19	30.24
10	OVC	039			2.50	BR	46	45	46	96	9	04	29.21	30.26
13	OVC	037			4.00	-RA BR	49	46	47	90	0	00	29.19	30.24
16	OVC	010			1.50	DZ BR	49	47	48	93	5	05	29.13	30.18
19	BKN	120			2.50	BR	48	47	47	96	5	02	29.11	30.16
22	OVC	004			2.00	BR	48	47	47	96	6	02	29.08	30.13
					SUNRISE: 0716	**FEB 21**							**SUNSET: 1823**	
01	OVC	001			1.25	BR	47	47	47	100	0	00	29.06	30.11
04	VV	001			0.13	FG	46	46	46	100	5	05	28.99	30.04
07	VV	001			0.25	-RA FG	46	46	46	100	0	00	28.97	30.01
10	OVC	001			2.00	-RA BR	46	46	46	100	5	05	28.93	29.98
13	OVC	003			2.50	-RA BR	49	48	48	97	5	06	28.84	29.88
16	OVC	009			2.00	-DZ BR	51	49	50	92	5	02	28.78	29.81
19	OVC	050			2.50	BR	50	49	49	96	3	04	28.76	29.80
22	BKN	046			2.50	BR	50	49	49	96	3	03	28.71	29.75
					SUNRISE: 0715	**FEB 22**							**SUNSET: 1824**	
01	OVC	023			1.00	RA BR	49	49	49	100	7	06	28.61	29.65
04	OVC	031			1.25	-RA BR	50	50	50	100	7	04	28.46	29.48
07	OVC	002			2.00	+RA	51	50	51	96	3	VR	28.45	29.47
10	OVC	022			10.00	-RA	54	53	53	97	6	10	28.33	29.35
13	SCT	NC			10.00		71	60	64	68	25	20	28.19	29.18
16	BKN	120			10.00		72	53	61	52	28	20	28.09	29.09
19	BKN	095			9.00	-TSRA	61	51	55	70	30	23	28.17	29.18
22	OVC	039			10.00	-RA	53	51	52	93	18	22	28.23	29.24
					SUNRISE: 0714	**FEB 23**							**SUNSET: 1825**	
01	BKN	022			10.00		42	35	39	76	22	26	28.35	29.37
04	OVC	023			2.00	-SN BR	35	31	33	85	15	26	28.53	29.55
07	OVC	020			7.00	-SN	34	30	32	85	15	27	28.71	29.75
10	BKN	150			10.00		37	30	34	76	17	26	28.86	29.90
13	BKN	035			10.00		41	30	36	65	9	28	28.91	29.97
16	SCT	NC			10.00		46	31	40	56	7	27	28.93	29.99
19	SCT	NC			10.00		43	31	38	63	0	00	28.97	30.02
22	SCT	NC			10.00		38	32	35	79	5	06	28.99	30.05
					SUNRISE: 0713	**FEB 24**							**SUNSET: 1826**	
01	OVC	090			10.00		39	34	37	82	3	36	29.00	30.06
04	OVC	060			10.00		39	34	37	82	5	03	28.95	30.00
07	OVC	040			10.00		47	38	43	71	14	21	28.98	30.03
10	SCT	NC			10.00		53	42	48	66	18	25	29.10	30.15
13	SCT	NC			10.00		54	39	47	57	12	28	29.13	30.18
16	OVC	250			10.00		51	35	44	54	15	29	29.16	30.22
19	OVC	250			10.00		44	32	39	63	7	29	29.21	30.26
22	SCT	NC			10.00		38	30	35	73	6	35	29.23	30.29

OBSERVATIONS AT 3−HOURLY INTERVALS

KNOXVILLE, TN

FEBRUARY 2003 TYS WBAN # 13891

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE: 0711	**FEB 25**			**SUNSET: 1827**					
01	BKN	250			10.00		34	28	32	79	8	02	29.23	30.29
04	OVC	028			10.00		32	26	30	79	10	02	29.25	30.32
07	OVC	024			10.00		32	24	29	73	15	01	29.27	30.34
10	OVC	060			8.00	-SN	33	26	30	75	13	04	29.26	30.34
13	OVC	050			9.00	-SN	36	28	33	73	9	02	29.21	30.29
16	OVC	007			1.00	-SN BR	33	32	33	96	6	01	29.18	30.24
19	OVC	009			3.00	BR	33	32	33	96	9	04	29.17	30.24
22	OVC	009			7.00		34	32	33	92	9	05	29.15	30.22
					SUNRISE: 0710	**FEB 26**			**SUNSET: 1828**					
01	OVC	005			6.00	BR	34	32	33	92	3	01	29.10	30.16
04	OVC	003			4.00	BR	34	33	34	97	5	05	29.07	30.13
07	OVC	001			1.00	BR	34	34	34	100	6	09	29.05	30.12
10	OVC	005			2.50	-RA BR	36	35	36	97	0	00	29.08	30.14
13	OVC	005			2.50	-RA BR	38	37	38	97	5	36	29.04	30.11
16	OVC	005			2.50	-RA BR	39	39	39	100	6	03	28.97	30.03
19	OVC	003			2.50	-RA BR	40	39	40	97	8	03	28.94	30.00
22	OVC	005			1.50	-RA BR	40	40	40	100	8	02	28.93	29.99
					SUNRISE: 0709	**FEB 27**			**SUNSET: 1829**					
01	OVC	002			1.75	-RA BR	41	40	41	96	5	02	28.89	29.95
04	OVC	002			1.75	-RA BR	41	41	41	100	5	36	28.86	29.91
07	OVC	002			2.50	BR	42	41	42	96	8	01	28.83	29.88
10	OVC	007			3.00	-RA BR	42	42	42	100	8	02	28.84	29.89
13	OVC	005			4.00	-RA BR	45	44	45	97	8	06	28.80	29.85
16	OVC	007			3.00	BR	46	45	46	96	0	00	28.80	29.84
19	OVC	006			1.50	-RA BR	45	45	45	100	6	22	28.84	29.88
22	OVC	005			4.00	DZ BR	45	45	45	100	7	24	28.87	29.92
					SUNRISE: 0708	**FEB 28**			**SUNSET: 1830**					
01	OVC	002			4.00	DZ BR	45	45	45	100	10	23	28.88	29.93
04	OVC	004			5.00	BR	45	45	45	100	7	27	28.89	29.94
07	OVC	011			10.00		46	45	46	96	8	24	28.95	30.00
10	OVC	004			3.00	BR	46	45	46	96	8	25	29.01	30.06
13	OVC	038			10.00		51	47	49	86	6	27	28.99	30.04
16	BKN	035			10.00		54	45	49	72	7	25	28.96	30.01
19	BKN	034			10.00		53	45	49	74	0	00	29.00	30.05
22	FEW	NC			10.00		47	44	46	90	3	04	29.04	30.09
					SUNRISE:	**FEB 29**			**SUNSET:**					
					SUNRISE:	**FEB 30**			**SUNSET:**					

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE: OBSERVATION TIME (LST)	SATELLITE: EFF CLD AMT Oktas	VISIBILITY (MILES)	WEATHER	TEMPERATURE ℉: DRY BULB	TEMPERATURE ℉: DEW POINT	TEMPERATURE ℉: WET BULB	RELATIVE HUMIDITY (PCT)	WIND: SPEED (MPH)	WIND: DIRECTION TENS OF DEG	PRESSURE (INCHES,HG): STATION	PRESSURE (INCHES,HG): SEA LEVEL
					SUNRISE:	**FEB 31**			**SUNSET:**					

3−HOURLY OBSERVATION NOTES

Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8−2/8, SCT = 3/8−4/8, BKN = 5/8−7/8, OVC = 8/8, VV = Vertical Visibilty = 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: CEILOMETER	AVERAGES: EFF CLD AMT	AVERAGES: DRY BULB	AVERAGES: DEW POINT	AVERAGES: WET BULB	AVERAGES: RELATIVE HUMIDITY	AVERAGES: PRESSURE (INCHES,HG): STATION	AVERAGES: PRESSURE (INCHES,HG): SEA LEVEL	AVERAGES: VISIBILITY (MILES)	AVERAGES: WIND SPEED (MPH)	RESULTANT WIND (MPH): SPEED	RESULTANT WIND (MPH): DIRECTION
01			38	33	37	83	28.97	30.02	6.44	6	3	27
02			38	33	36	84	28.97	30.02	6.51	7	3	27
03			37	33	36	86	28.97	30.02	6.38	7	2	28
04			37	33	36	86	28.96	30.02	6.43	6	2	30
05			37	33	36	86	28.97	30.02	6.56	7	2	28
06			37	33	35	86	28.98	30.03	6.55	6	2	31
07			37	32	35	85	28.99	30.04	6.75	7	2	28
08			37	32	35	85	29.00	30.05	6.21	7	2	27
09			38	33	36	83	29.01	30.07	5.83	7	3	29
10			39	34	37	82	29.02	30.07	6.54	8	4	27
11			41	34	38	79	29.02	30.08	6.89	9	4	28
12			43	34	39	74	29.02	30.07	7.96	8	4	29
13			45	34	40	71	28.99	30.05	8.05	9	5	27
14			46	34	41	69	28.97	30.02	7.95	9	6	25
15			46	34	41	68	28.96	30.01	7.29	9	6	26
16			46	34	41	68	28.96	30.01	7.01	9	5	27
17			46	34	41	69	28.96	30.01	7.33	9	5	28
18			44	34	40	71	28.96	30.02	6.80	7	4	27
19			43	34	39	74	28.98	30.03	6.83	7	4	27
20			42	34	39	76	28.99	30.04	7.28	6	4	28
21			41	34	39	77	28.98	30.04	7.30	7	3	27
22			40	34	38	79	28.98	30.04	7.08	7	2	28
23			40	34	37	81	28.98	30.03	6.84	7	3	27
24			39	34	37	82	28.97	30.03	6.96	7	3	28

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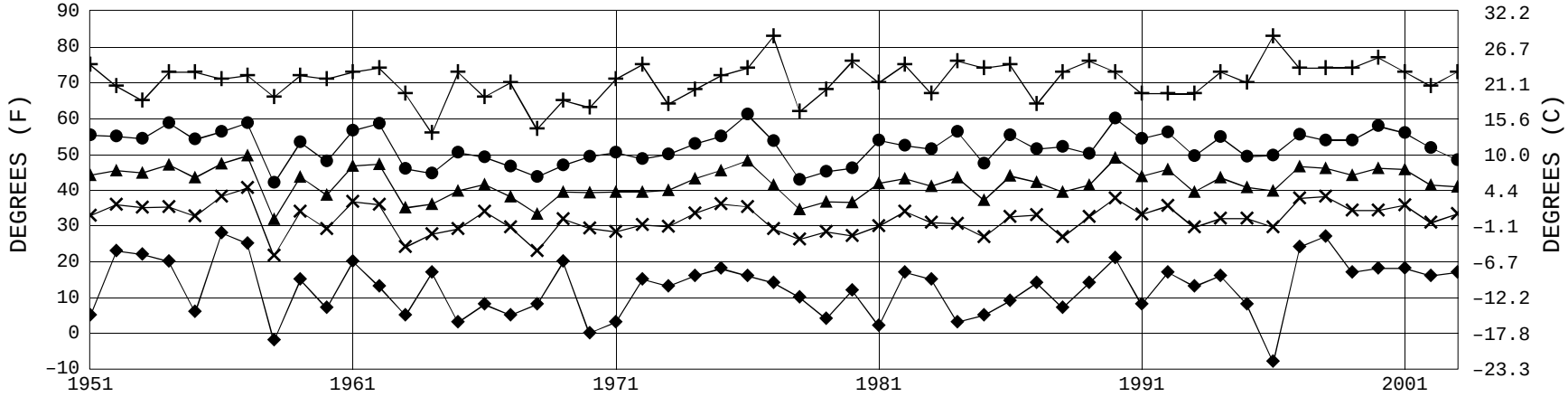
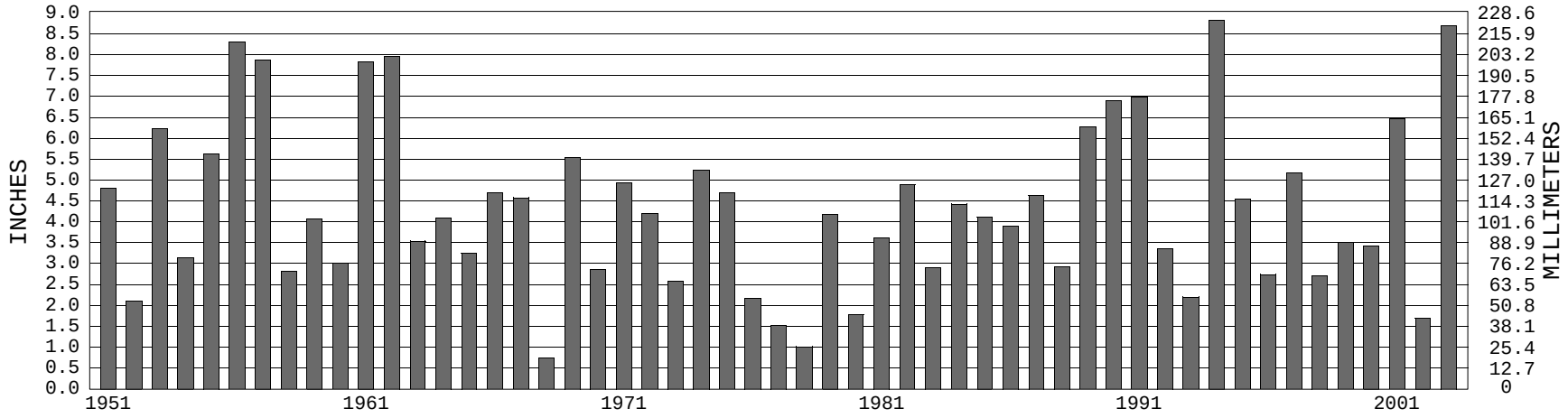
KNOXVILLE, TN FEBRUARY TEMPERATURES



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

Long–Term (1951–2003) Mean: 41.9 1961–1990 Normal: 41.8

KNOXVILLE, TN FEBRUARY PRECIPITATION



Long–Term (1951–2003) Mean Monthly Total: 4.34 1961–1990 Normal: 4.01

FEBRUARY 2003

KNOXVILLE, TN

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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