



NOVEMBER 1999

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): 992 Feet
 Time Zone: EASTERN WBAN: 13891 ISSN #: 0198-4810

NOVEMBER 1999
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	74	50	62	9	56	59	3	0	RA BR	0		0.0	0.16	28.97	30.01	3.1	05	3.5	16	10	14	09	01				
02	61	39	50	-3	46	49	15	0	RA FG+ BR	0		0.0	0.98	28.72	29.76	8.0	27	12.0	43*	17	33*	19	02				
03	51	30	41	-11	22	34	24	0		0		0.0	0.00	29.09	30.16	9.0	24	9.5	24	24	18	24	03				
04	61	28	45	-7	27	37	20	0		0		0.0	0.00	29.30	30.38	0.9	25	1.4	14	22	11	24	04				
05	66	31	49	-3	34	42	16	0	FU	0		0.0	0.00	29.39	30.46	2.0	23	3.1	18	24	15	23	05				
06	69	37	53	1	45	49	12	0		0		0.0	0.00	29.36	30.43	1.5	23	1.7	9	18	8	20	06				
07	73	47	60	9	53	56	5	0	BR	0		0.0	0.00	29.24	30.30	0.7	02	1.6	13	03	10	03	07				
08	76*	51	64	13	55	58	1	0	BR HZ	0		0.0	0.00	29.16	30.21	4.0	23	4.0	15	24	13	24	08				
09	75	49	62	11	53	56	3	0	BR	0		0.0	0.00	29.16	30.21	4.0	23	4.5	20	22	15	22	09				
10	72	52	62	12	53	57	3	0		0		0.0	0.00	29.09	30.13	8.8	23	9.1	28	25	21	23	10				
11	72	55	64*	14	51	57	1	0		0		0.0	0.00	29.06	30.11	1.8	30	7.7	18	02	15	03	11				
12	70	45	58	8	49	52	7	0	BR HZ	0		0.0	0.00	29.18	30.24	0.9	29	3.8	11	23	10	22	12				
13	70	46	58	9	50	53	7	0	BR HZ	0		0.0	0.00	29.12	30.17	5.9	23	6.2	15	19	13	24	13				
14	74	48	61	12	48	54	4	0	BR HZ	0		0.0	0.00	28.95	29.99	6.3	25	9.5	26	36	20	36	14				
15	57	41	49	0	31	42	16	0		0		0.0	0.00	28.95	30.00	6.9	01	7.8	17	02	14	02	15				
16	54	33	44	-5	28	37	21	0		0		0.0	0.00	28.96	30.02	4.7	02	5.1	23	01	20	02	16				
17	53	32	43	-5	28	36	22	0		0		0.0	0.00	29.09	30.16	3.9	04	4.7	15	02	13	04	17				
18	60	27	44	-4	33	39	21	0	HZ	0		0.0	0.00	29.19	30.26	0.4	02	1.7	9	27	8	29	18				
19	68	31	50	2	41	45	15	0	BR HZ	0		0.0	0.00	29.19	30.25	4.4	22	5.6	31	22	23	23	19				
20	68	45	57	10	51	54	8	0	RA BR	0		0.0	T	29.05	30.10	1.7	31	2.9	9	29	8	30	20				
21	72	51	62	15	54	56	3	0	BR	0		0.0	0.00	29.00	30.05	0.8	31	3.2	11	17	9	16	21				
22	72	47	60	13	52	55	5	0	BR	0		0.0	0.00	29.08	30.13	0.5	33	1.3	10	04	7	03	22				
23	70	44	57	11	53	55	8	0	BR HZ	0		0.0	0.00	29.10	30.15	0.9	24	2.5	10	25	9	25	23				
24	64	53	59	13	58	58	6	0	RA BR	0		0.0	0.09	29.08	30.13	2.4	35	3.5	13	36	11	36	24				
25	57	50	54	8	54	54	11	0	RA DZ BR	0		0.0	0.91	28.93	29.98	3.7	01	4.7	9	02	8	04	25				
26	57	38	48	2	48	49	17	0	RA FG BR	0		0.0	0.26	28.87	29.92	7.0	26	7.9	24	27	21	27	26				
27	57	32	45	0	37	40	20	0	FG+ BCFG BR	0		0.0	0.00	29.07	30.14	1.7	23	2.9	10	23	9	28	27				
28	62	35	49	4	40	45	16	0		0		0.0	0.00	29.22	30.28	2.5	02	3.0	15	02	11	01	28				
29	55	37	46	1	27	39	19	0		0		0.0	0.00	29.40	30.46	8.4	02	8.7	20	02	15	02	29				
30	42	27*	35*	-9	18	29	30	0		0		0.0	0.00	29.50	30.59	7.6	03	8.2	23	04	20	04	30				
< MONTHLY AVERAGES										TOTALS-->				<- MONTHLY AVERAGES													
4.5										3.5				4.0				<----- DEPARTURE FROM NORMAL ----->									
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 1.14 DATE: 01-02				SEA LEVEL PRESSURE DATE TIME													
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: 0.0 DATE:				MAXIMUM : 30.64 30 1053													
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH: 0 DATE:				MINIMUM : 29.55 02 0353													
HEATING: 359 -130										NUMBER OF DAYS WITH =>				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 8				PRECIPITATION ≥ 0.01 INCH : 5					
COOLING: 0 0														MAXIMUM TEMP ≤ 32 : 0				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 4					
														THUNDERSTORMS : 0				HEAVY FOG : 2				SNOWFALL ≥ 1.0 INCH : 0					

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

KNOXVILLE, TN

NOVEMBER 1999

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			0.16		
02	T	0.03	0.01	0.11	0.48	0.05	0.01	T	T	T	0.08	0.08	0.08	02	0.05		T							T	0.13	0.01	0.02	0.98		
03														03														0.00		
04														04														0.00		
05														05														0.00		
06														06														0.00		
07														07														0.00		
08														08														0.00		
09														09														0.00		
10														10														0.00		
11														11														0.00		
12														12														0.00		
13														13														0.00		
14														14														0.00		
15														15														0.00		
16														16														0.00		
17														17														0.00		
18														18														0.00		
19														19														0.00		
20														20														T		
21														21														0.00		
22														22														0.00		
23														23														0.00		
24														24														0.09		
25								0.01	0.04			0.05	0.08	25	0.05	0.01	T	0.03	T	T	0.10	0.22	0.11	0.13	0.02	0.01	0.01	0.01	0.88	0.91
26	0.01	0.01	0.01		T	0.03	0.05	0.03	0.06	0.03	0.02	0.01	26															0.26		
27													27															0.00		
28													28															0.00		
29													29															0.00		
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)												
Ending Date												
Ending Time (Hour/Min)												

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.

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

NOVEMBER 1999

TYS

WBAN # 13891

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
	DRY BULB	DEW POINT		WET BULB	DRY BULB			DEW POINT	WET BULB	SPEED (MPH)		DIRECTION TENS OF DEG	STATION	SEA LEVEL	DRY BULB		DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG			STATION	SEA LEVEL						
				SUNRISE: 0658			NOV 01				SUNSET: 1741										SUNRISE: 0704			NOV 07					SUNSET: 1735		
01	SCT	NC			9.00			55	54	54	96	3	07	29.11	30.16	01	CLR	NC			8.00			54	51	52	90	0	00	29.30	30.35
04	BKN	080			8.00			55	53	54	93	0	00	29.10	30.14	04	OVC	065			7.00			53	51	52	93	0	00	29.28	30.34
07	SCT	NC			8.00			52	51	52	97	0	00	29.08	30.13	07	FEW	NC			4.00	BR		48	48	48	100	5	21	29.27	30.33
10	BKN	060			7.00	-RA		60	56	58	86	0	00	29.07	30.12	10	CLR	NC			7.00			60	54	57	80	0	00	29.31	30.37
13	SCT	NC			10.00			72	57	63	60	6	06	28.97	30.01	13	FEW	NC			10.00			71	56	62	59	0	00	29.24	30.29
16	BKN	090			9.00			72	57	63	60	5	VR	28.90	29.94	16	BKN	080			10.00			72	56	62	57	7	04	29.19	30.25
19	SCT	NC			10.00			65	58	61	78	3	04	28.84	29.88	19	CLR	NC			10.00			64	55	59	73	0	00	29.18	30.24
22	BKN	110			10.00	-RA		61	60	60	97	8	06	28.79	29.83	22	FEW	NC			7.00			58	54	56	87	0	00	29.18	30.24
				SUNRISE: 0659			NOV 02				SUNSET: 1740										SUNRISE: 0705			NOV 08					SUNSET: 1734		
01	OVC	060			10.00			60	60	60	100	9	05	28.67	29.70	01	CLR	NC			5.00	BR		53	52	52	96	0	00	29.18	30.23
04	OVC	048			3.00	+RA BR		61	61	61	100	12	02	28.53	29.55	04	OVC	070			5.00	BR		52	52	52	100	0	00	29.17	30.22
07	BKN	080			10.00			57	57	57	100	9	25	28.55	29.57	07	OVC	075			5.00	BR		53	53	53	100	0	00	29.18	30.24
10	OVC	014			1.50	+RA BR		55	55	55	100	16	23	28.56	29.59	10	SCT	NC			6.00	HZ		61	56	58	84	5	24	29.20	30.26
13	OVC	028			6.00	BR		48	46	47	93	12	26	28.69	29.72	13	FEW	NC			10.00			73	58	64	59	9	22	29.15	30.20
16	OVC	041			7.00			45	39	42	80	10	26	28.83	29.88	16	SCT	NC			10.00			74	56	63	54	8	24	29.11	30.16
19	OVC	050			10.00			46	36	42	68	9	26	28.87	29.92	19	CLR	NC			10.00			66	54	59	65	6	23	29.12	30.17
22	BKN	050			10.00			42	30	37	62	17	28	28.93	29.98	22	CLR	NC			9.00			61	55	58	81	0	00	29.13	30.19
				SUNRISE: 0660			NOV 03				SUNSET: 1739										SUNRISE: 0706			NOV 09					SUNSET: 1734		
01	FEW	NC			10.00			37	28	34	70	5	27	28.95	30.02	01	CLR	NC			8.00			55	53	54	93	3	22	29.15	30.20
04	CLR	NC			10.00			36	21	31	55	10	26	28.99	30.05	04	CLR	NC			6.00	BR		53	52	52	96	3	30	29.16	30.21
07	FEW	NC			10.00			30	23	28	75	9	22	29.05	30.12	07	FEW	NC			5.00	BR		51	51	51	100	0	00	29.18	30.24
10	CLR	NC			10.00			41	25	35	53	14	24	29.11	30.19	10	BKN	060			7.00			59	55	57	87	0	00	29.23	30.29
13	CLR	NC			10.00			47	20	37	34	17	24	29.10	30.16	13	FEW	NC			10.00			72	57	63	60	7	VR	29.18	30.22
16	CLR	NC			10.00			51	19	39	28	10	25	29.10	30.16	16	FEW	NC			10.00			74	55	63	52	13	23	29.12	30.16
19	CLR	NC			10.00			41	24	34	51	8	22	29.14	30.22	19	CLR	NC			10.00			65	54	59	68	5	20	29.11	30.17
22	FEW	NC			9.00			39	25	34	57	6	19	29.19	30.27	22	CLR	NC			8.00			58	52	55	81	8	23	29.12	30.17
				SUNRISE: 0701			NOV 04				SUNSET: 1738										SUNRISE: 0707			NOV 10					SUNSET: 1733		
01	FEW	NC			10.00			36	23	31	59	0	00	29.20	30.28	01	CLR	NC			10.00			57	51	54	81	8	24	29.13	30.18
04	FEW	NC			8.00			33	26	30	75	0	00	29.24	30.32	04	CLR	NC			10.00			54	50	52	87	5	24	29.14	30.19
07	CLR	NC			10.00			28	27	28	96	0	00	29.31	30.39	07	SCT	NC			9.00			54	51	52	90	3	27	29.14	30.19
10	CLR	NC			10.00			41	33	38	74	0	00	29.36	30.44	10	SCT	NC			9.00			62	56	59	81	7	23	29.16	30.22
13	CLR	NC			10.00			56	28	44	34	0	00	29.32	30.39	13	SCT	NC			10.00			70	54	61	57	20	24	29.08	30.12
16	CLR	NC			10.00			60	18	43	19	10	22	29.28	30.35	16	SCT	NC			10.00			71	54	61	55	17	22	29.01	30.05
19	CLR	NC			10.00			53	24	41	32	0	00	29.30	30.38	19	SCT	NC			10.00			63	53	57	70	10	22	29.02	30.07
22	FEW	NC			10.00			44	32	39	63	0	00	29.33	30.41	22	BKN	075			10.00			59	53	56	81	8	23	29.04	30.09
				SUNRISE: 0702			NOV 05				SUNSET: 1737										SUNRISE: 0708			NOV 11					SUNSET: 1732		
01	FEW	NC			9.00			39	32	36	76	3	07	29.34	30.41	01	OVC	060			10.00			63	52	57	68	9	21	29.02	30.06
04	FEW	NC			9.00			36	31	34	82	0	00	29.38	30.45	04	OVC	080			10.00			62	53	57	73	8	23	29.00	30.03
07	CLR	NC			10.00			32	31	32	96	0	00	29.43	30.51	07	SCT	NC			10.00			57	52	54	83	7	22	29.01	30.05
10	CLR	NC			10.00			47	37	42	69	0	00	29.46	30.54	10	OVC	030			9.00			62	55	58	78	8	24	29.06	30.10
13	CLR	NC			10.00			63	36	50	37	10	22	29.40	30.46	13	SCT	NC			10.00			70	52	60	53	0	00	29.05	30.08
16	CLR	NC			10.00			65	33	50	31	9	24	29.36	30.42	16	FEW	NC			10.00			71	47	58	42	12	04	29.06	30.09
19	CLR	NC			10.00			60	33	47	36	3	21	29.37	30.44	19	FEW	NC			10.00			62	52	56	70	10	03	29.11	30.17
22	CLR	NC			10.00			49	37	43	64	3	17	29.38	30.45	22	CLR	NC			10.00			57	51	54	81	7	01	29.16	30.21
				SUNRISE: 0703			NOV 06				SUNSET: 1736										SUNRISE: 0709			NOV 12					SUNSET: 1731		
01	CLR	NC			10.00			42	37	40	82	0	00	29.39	30.46	01	CLR	NC			7.00			52	48	50	86	6	03	29.17	30.22
04	CLR																														

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

NOVEMBER 1999

TYS

WBAN # 13891

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			WIND		PRESSURE (INCHES, HG)			
	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)			SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	DRY BULB	DEW POINT	WET BULB		RELATIVE HUMIDITY (PCT)	SPEED (MPH)		DIRECTION TENS OF DEG	STATION			SEA LEVEL								
SUNRISE: 0710								NOV 13								SUNSET: 1731															
01	CLR	NC				4.00	BR	51	51	51	100	7	23	29.16	30.22	01	CLR	NC				6.00	BR	37	35	36	93	0	00	29.20	30.27
04	FEW	NC				3.00	BR	49	49	49	100	6	24	29.14	30.19	04	CLR	NC				6.00	BR	38	34	36	86	0	00	29.20	30.27
07	FEW	NC				2.50	BR	46	46	46	100	0	00	29.16	30.22	07	CLR	NC				5.00	BR	33	33	33	100	0	00	29.25	30.32
10	CLR	NC				3.00	BR	55	52	53	90	7	26	29.18	30.24	10	SCT	NC				5.00	HZ	45	39	42	80	0	00	29.27	30.34
13	CLR	NC				8.00		68	51	58	55	8	20	29.12	30.17	13	SCT	NC				8.00		61	42	51	50	5	30	29.19	30.26
16	CLR	NC				10.00		69	50	58	51	9	21	29.07	30.11	16	SCT	NC				10.00		67	47	56	49	16	23	29.14	30.20
19	CLR	NC				8.00		62	49	55	62	5	24	29.07	30.12	19	CLR	NC				10.00		57	46	51	67	9	21	29.13	30.20
22	CLR	NC				8.00		56	49	52	77	8	25	29.07	30.11	22	CLR	NC				10.00		56	47	51	72	7	19	29.11	30.18
SUNRISE: 0711								NOV 14								SUNSET: 1730															
01	CLR	NC				10.00		54	47	50	77	6	24	29.05	30.09	01	BKN	065				10.00		56	46	51	70	0	00	29.10	30.14
04	CLR	NC				7.00		51	48	50	89	3	23	29.04	30.08	04	BKN	070				10.00		51	47	49	86	5	01	29.09	30.13
07	CLR	NC				5.00	BR	49	47	48	93	7	21	29.02	30.07	07	SCT	NC				10.00		48	46	47	93	0	00	29.08	30.13
10	CLR	NC				6.00	HZ	63	51	56	65	14	22	28.99	30.03	10	CLR	NC				10.00		55	49	52	80	5	05	29.10	30.15
13	CLR	NC				10.00		71	54	61	55	13	25	28.91	29.95	13	CLR	NC				10.00		67	54	59	63	6	VR	29.03	30.07
16	CLR	NC				10.00		74	55	63	52	12	23	28.83	29.87	16	BKN	060				10.00		66	54	59	65	6	31	28.99	30.04
19	CLR	NC				10.00		68	50	58	53	10	28	28.87	29.91	19	OVC	041				10.00		61	54	57	78	3	22	29.03	30.08
22	CLR	NC				10.00		62	36	49	38	14	35	28.91	29.95	22	BKN	110				8.00		58	58	58	100	0	00	29.03	30.08
SUNRISE: 0712								NOV 15								SUNSET: 1729															
01	CLR	NC				10.00		54	30	43	40	7	35	28.93	29.97	01	SCT	NC				4.00	BR	54	54	54	100	0	00	29.00	30.04
04	CLR	NC				10.00		48	34	42	58	9	33	28.94	29.98	04	OVC	075				6.00	BR	55	55	55	100	5	01	29.00	30.04
07	CLR	NC				10.00		43	36	40	76	8	36	28.97	30.02	07	OVC	065				6.00	BR	54	54	54	100	0	00	29.02	30.07
10	CLR	NC				7.00		49	37	43	64	12	05	29.02	30.06	10	BKN	065				10.00		58	54	56	87	5	36	29.05	30.10
13	CLR	NC				7.00		54	32	44	43	3	06	28.95	30.00	13	FEW	NC				10.00		69	55	61	61	3	VR	28.98	30.03
16	CLR	NC				10.00		57	25	43	29	9	05	28.91	29.96	16	OVC	090				10.00		68	54	60	61	5	29	28.96	30.00
19	CLR	NC				10.00		49	26	39	41	8	02	28.90	29.96	19	SCT	NC				10.00		64	53	58	68	5	15	28.97	30.02
22	CLR	NC				10.00		46	28	39	50	9	02	28.93	29.99	22	CLR	NC				10.00		58	53	55	84	5	25	29.01	30.05
SUNRISE: 0713								NOV 16								SUNSET: 1729															
01	CLR	NC				10.00		41	29	36	62	0	00	28.93	29.98	01	CLR	NC				10.00		52	51	52	97	0	00	29.03	30.07
04	CLR	NC				10.00		35	31	33	85	0	00	28.90	29.96	04	FEW	NC				10.00		49	49	49	100	0	00	29.05	30.10
07	CLR	NC				10.00		35	29	33	78	0	00	28.93	30.00	07	FEW	NC				10.00		48	47	47	96	0	00	29.10	30.14
10	CLR	NC				10.00		45	30	39	56	6	05	28.98	30.04	10	FEW	NC				10.00		58	53	55	84	0	00	29.14	30.19
13	CLR	NC				10.00		52	23	40	32	12	35	28.95	30.01	13	FEW	NC				10.00		69	55	61	61	3	VR	29.09	30.14
16	CLR	NC				10.00		53	25	41	34	15	02	28.92	29.98	16	SCT	NC				10.00		72	53	61	52	0	00	29.06	30.10
19	CLR	NC				10.00		46	27	38	47	7	01	28.97	30.04	19	FEW	NC				10.00		63	52	57	68	0	00	29.08	30.13
22	CLR	NC				10.00		42	28	36	58	6	36	29.02	30.09	22	SCT	NC				10.00		57	52	54	83	0	00	29.11	30.16
SUNRISE: 0714								NOV 17								SUNSET: 1728															
01	CLR	NC				10.00		38	29	34	70	6	06	29.04	30.10	01	SCT	NC				9.00		50	49	49	96	3	08	29.11	30.15
04	CLR	NC				10.00		34	27	31	76	6	06	29.06	30.13	04	CLR	NC				10.00		50	48	49	93	0	00	29.11	30.15
07	CLR	NC				10.00		33	29	31	85	9	02	29.10	30.16	07	FEW	NC				9.00		46	46	46	100	0	00	29.11	30.17
10	CLR	NC				7.00		40	30	36	68	7	05	29.13	30.21	10	SCT	NC				10.00		57	53	55	87	0	00	29.15	30.21
13	CLR	NC				10.00		50	27	40	41	3	VR	29.11	30.17	13	BKN	060				10.00		66	55	60	68	0	00	29.11	30.16
16	SCT	NC				10.00		52	26	41	37	3	05	29.09	30.15	16	BKN	090				10.00		69	55	61	61	3	16	29.07	30.11
19	CLR	NC				10.00		46	26	38	46	3	06	29.10	30.17	19	OVC	080				10.00		66	55	60	68	0	00	29.07	30.12
22	CLR	NC				10.00		40	27	35	60	0	00	29.11	30.19	22	BKN	080				10.00		62	56	59	81	6	27	29.09	30.13
SUNRISE: 0715								NOV 18								SUNSET: 1727															
01	CLR	NC				10.00		33	28	31	82	3	05	29.13	30.21	01	CLR	NC				10.00		58	56	57	93	5	28	29.08	30.12
04	CLR	NC				10.00		29	28	29	96	0	00	29.16	30.24	04	SCT	NC				10.00		55	55	55	100	0	00	29.09	30.13
07	CLR	NC				10.00		30	28	29	92	0	00	29.20	30.28	07	SCT	NC				8.00		54	54	54	100	0	00	29.11	30.15
10	CLR	NC				8.00		39	33	37	79	3	VR	29.25	30.32	10	BKN	080				7.00		59	57	58	93	0	00	29.13	30.18
13	CLR	NC				7.00		56	34	46	44	3	VR	29.19	30.26	13	OVC	044				9.00		63	59	61	87	6	34	29.09	30.13
16	CLR	NC				7.00		59	36	48	42	3	33	29.16	30.23	16	OVC	070				6.00	BR	63	60	61	90	0	00	29.06	30.11
19	CLR	NC				7.00		53	35	45	51	3	18	29.17	30.25	19	OVC	026				2.00	-RA BR	61	61	61	100	6	01	29.07	30.11
22	CLR	NC				7.00		44	38	41	79	0	00	29.19	30.27	22	OVC	005				4.00	BR	57	57	57	100	8	36	29.06	30.11

OBSERVATIONS AT 3-HOURLY INTERVALS

KNOXVILLE, TN

NOVEMBER 1999

TYS

WBAN # 13891

HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)			
	SKY COVER	CEILING		OBSERVATION TIME (LST)	EFF CLD AMT Okta		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	
							SUNRISE: 0722		NOV 25		SUNSET: 1724					
01	OVC	007			10.00		53	52	52	96	5	36	29.05	30.10		
04	OVC	007			10.00		51	50	51	96	6	02	29.03	30.08		
07	OVC	005			10.00		51	50	51	96	7	36	29.02	30.06		
10	OVC	021			1.50	RA BR	51	51	51	100	8	04	29.00	30.05		
13	OVC	005			2.00	-RA BR	54	54	54	100	3	34	28.93	29.98		
16	OVC	005			3.00	DZ BR	57	57	57	100	5	04	28.87	29.93		
19	OVC	002			2.50	+RA BR	57	57	57	100	5	03	28.83	29.88		
22	OVC	006			2.50	-RA BR	56	57	57	100	3	29	28.81	29.85		

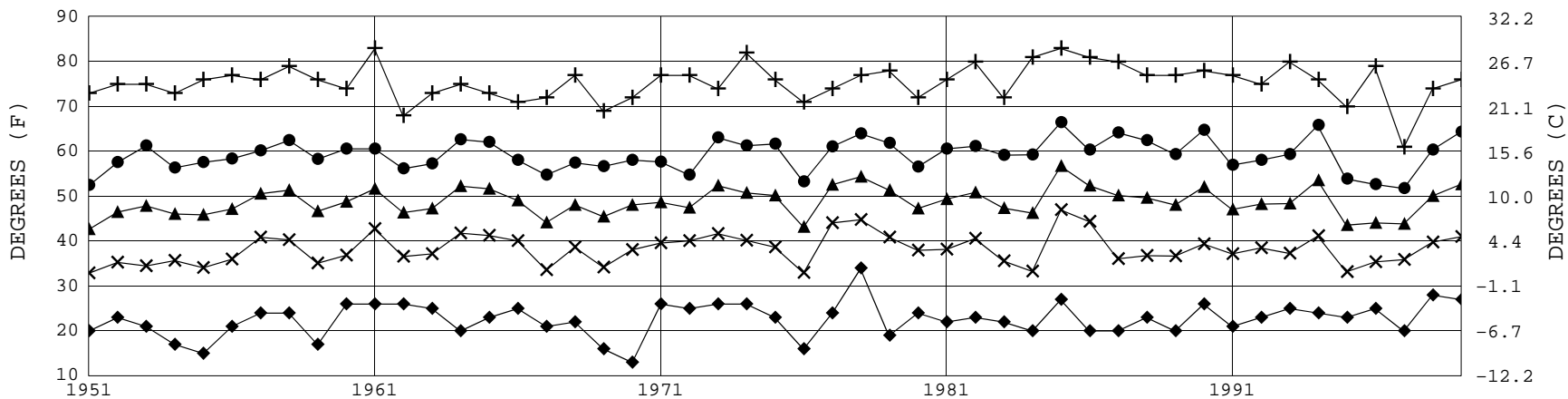
HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)			
	SKY COVER	CEILING		OBSERVATION TIME (LST)	EFF CLD AMT Okta		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	
							SUNRISE: 0723		NOV 26		SUNSET: 1724					
01	OVC	001			2.50	-RA BR	56	56	56	100	6	21	28.78	29.83		
04	OVC	001			0.75	BR	56	56	56	100	12	25	28.77	29.81		
07	OVC	009			4.00	-RA BR	55	55	55	100	10	25	28.78	29.82		
10	OVC	014			6.00	-RA BR	50	49	49	96	13	27	28.86	29.91		
13	OVC	032			7.00		50	46	48	86	9	26	28.87	29.92		
16	BKN	030			10.00		51	45	48	80	8	24	28.91	29.96		
19	CLR	NC			10.00		44	41	43	89	7	15	28.91	29.97		
22	FEW	NC			6.00	BR	42	40	41	92	0	00	28.97	30.03		
							SUNRISE: 0724		NOV 27		SUNSET: 1723					
01	FEW	NC			4.00	BCFG	37	37	37	100	3	11	28.99	30.05		
04	VV	001			0.25	FG	34	34	34	100	0	00	29.02	30.09		
07	VV	001			<.25	FG	33	33	33	100	0	00	29.06	30.13		
10	VV	001			<.25	FG	36	36	36	100	0	00	29.10	30.17		
13	CLR	NC			10.00		51	42	47	71	0	00	29.07	30.13		
16	CLR	NC			10.00		57	39	48	51	8	22	29.08	30.14		
19	CLR	NC			10.00		51	38	45	61	7	23	29.09	30.16		
22	FEW	NC			9.00		44	39	42	83	3	18	29.11	30.18		
							SUNRISE: 0725		NOV 28		SUNSET: 1723					
01	CLR	NC			10.00		44	38	41	79	5	26	29.15	30.22		
04	SCT	NC			8.00		39	37	38	93	0	00	29.16	30.23		
07	CLR	NC			7.00		35	35	35	100	0	00	29.19	30.27		
10	CLR	NC			10.00		46	41	44	83	0	00	29.24	30.31		
13	FEW	NC			10.00		58	43	50	58	3	02	29.21	30.28		
16	SCT	NC			10.00		62	41	51	46	0	00	29.21	30.27		
19	SCT	NC			10.00		55	43	49	64	6	04	29.23	30.31		
22	BKN	120			10.00		50	44	47	80	6	02	29.27	30.34		
							SUNRISE: 0725		NOV 29		SUNSET: 1723					
01	FEW	NC			10.00		47	39	43	74	7	01	29.31	30.37		
04	BKN	110			10.00		44	37	41	76	10	03	29.32	30.38		
07	CLR	NC			10.00		42	33	38	71	9	03	29.37	30.43		
10	CLR	NC			10.00		47	36	42	66	8	05	29.42	30.49		
13	CLR	NC			10.00		54	28	43	37	9	02	29.40	30.47		
16	CLR	NC			10.00		54	24	42	31	10	03	29.39	30.46		
19	CLR	NC			10.00		45	18	35	34	6	36	29.44	30.52		
22	CLR	NC			10.00		40	16	32	38	8	02	29.48	30.56		
							SUNRISE: 0726		NOV 30		SUNSET: 1723					
01	CLR	NC			10.00		37	15	30	41	8	35	29.48	30.57		
04	CLR	NC			10.00		32	19	28	59	6	01	29.48	30.57		
07	CLR	NC			10.00		28	19	25	69	7	03	29.51	30.61		
10	CLR	NC			10.00		36	21	31	55	13	04	29.54	30.64		
13	FEW	NC			10.00		40	18	32	41	8	05	29.50	30.60		
16	FEW	NC			10.00		42	17	33	36	10	33	29.48	30.57		
19	CLR	NC			10.00		36	17	30	46	6	01	29.49	30.60		
22	CLR	NC			10.00		33	17	28	52	10	03	29.50	30.60		

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 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			49	43	46	82	29.10	30.16	8.52	4	1	33
02			48	43	45	85	29.10	30.16	8.23	4	2	33
03			47	42	45	86	29.10	30.16	8.17	4	2	32
04			46	42	44	88	29.10	30.16	7.73	3	1	32
05			45	42	44	89	29.11	30.17	7.50	4	1	30
06			44	42	43	92	29.12	30.18	7.54	4	1	31
07			44	42	43	93	29.13	30.19	7.67	3	1	29
08			44	42	44	93	29.14	30.20	6.75	4	1	29
09			48	44	46	87	29.15	30.21	6.87	4	1	31
10			51	45	48	80	29.16	30.22	7.37	5	1	28
11			56	45	51	70	29.15	30.20	8.23	5	2	30
12			58	45	52	63	29.14	30.20	8.77	4	2	27
13			61	45	53	57	29.11	30.17	9.03	5	3	27
14			62	44	53	54	29.10	30.15	9.27	7	3	27
15			63	44	53	52	29.09	30.14	9.17	8	4	27
16			63	43	53	52	29.09	30.14	9.40	8	3	26
17			61	43	52	54	29.09	30.14	9.30	7	3	27
18			58	43	51	60	29.09	30.15	9.47	6	2	27
19			56	43	50	63	29.10	30.16	9.32	5	1	26
20			55	43	49	66	29.10	30.17	9.08	5	2	30
21			53	43	48	71	29.11	30.17	8.78	4	1	34
22			51	43	48	75	29.12	30.18	8.72	5	2	32
23			50	42	47	76	29.12	30.16	8.63	5	2	30
24			49	42	46	78	29.12	30.18	8.63	4	1	28

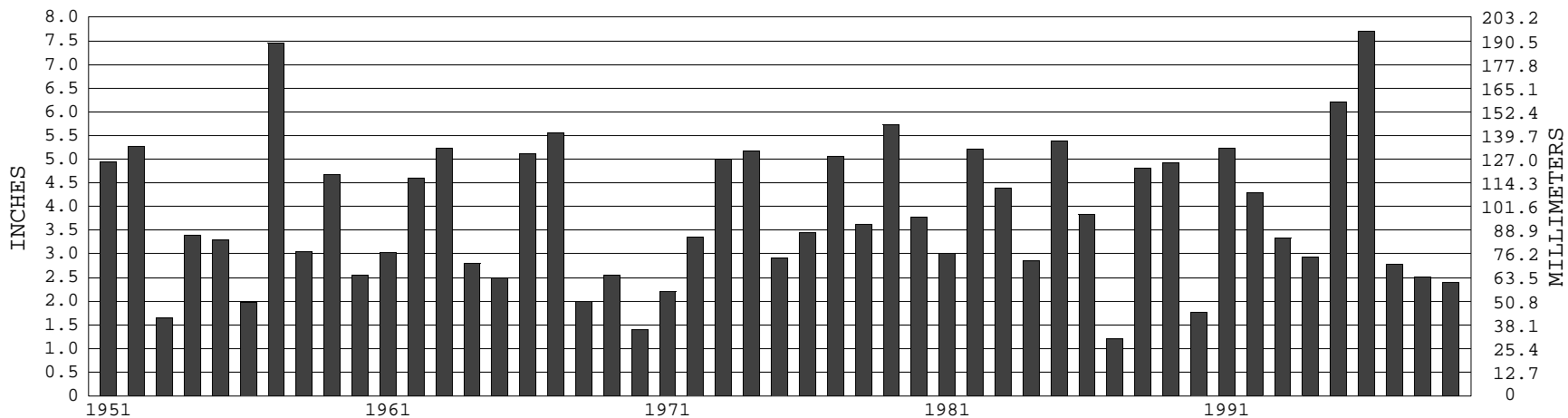
KNOXVILLE, TN NOVEMBER TEMPERATURES



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

Long-Term (1951-1999) Mean: 48.8 1961-1990 Normal: 48.7

KNOXVILLE, TN NOVEMBER PRECIPITATION



Long-Term (1951-1999) Mean Monthly Total: 3.84

1961-1990 Normal: 3.75



**NOVEMBER 1999
KNOXVILLE, TN**

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA – National Weather Service / Department Of Transportation – Federal Aviation Administration and received at the National Climatic Data Center (NCDC), Asheville, North Carolina 28801.

DIRECTOR

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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