



# NOVEMBER 2002

## LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

## MADISON, WI

DANE COUNTY REGIONAL AIRPORT (MSN)

Lat: 43°08' N Long: 89°20' W Elev (Ground): 857 Feet

Time Zone: CENTRAL WBAN: 14837 ISSN #:0198-5736

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		0600 LST	1200 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM												
																			5-SEC		2-MIN										
																			SPEED	DIR	SPEED	DIR									
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	38	22	30	-12	17	26	35	0		0		0.0	0.00	29.26	30.22	7.8	27	8.8	21	28	15	28	01								
02	45	22	34	-8	20	28	31	0		0		0.0	0.00	29.15	30.10	4.5	28	5.1	20	29	15	29	02								
03	45	20	33	-8	26	31	32	0		0		0.0	0.00	29.07	30.02	4.2	22	5.1	18	22	12	22	03								
04	40	26	33	-8	24	29	32	0		0		0.0	0.00	29.15	30.11	1.0	32	3.1	14	32	10	01	04								
05	37	31	34	-6	32	34	31	0	RA BR HZ	0		0.0	0.09	28.92	29.86	1.4	15	4.9	15	13	13	13	05								
06	44	33	39	-1	31	35	26	0	BR HZ	0		0.0	0.00	29.02	29.97	5.2	28	6.9	18	02	16	01	06								
07	57	25	41	2	32	39	24	0	BR HZ	0		0.0	0.00	28.95	29.89	9.0	20	9.4	24	20	18	21	07								
08	60	42	51	12	39	45	14	0		0		0.0	0.00	28.66	29.58	7.6	20	8.0	21	21	16	22	08								
09	62*	45	54*	16	47	51	11	0	BR HZ	0		0.0	0.00	28.50	29.41	10.2	18	10.3	22	16	18	16	09								
10	58	43	51	13	47	49	14	0	TSRA RA BR HZ	0		0.0	0.21	28.44	29.34	3.3	28	6.0	18	03	14	03	10								
11	43	32	38	0	32	34	27	0	RA DZ SN BR	0		T	0.45	29.00	29.94	5.7	35	6.3	23	01	18	02	11								
12	43	32	38	1	27	33	27	0	RA	0		0.0	T	29.21	30.16	5.6	23	6.8	17	21	13	21	12								
13	52	26	39	2	32	38	26	0	BR	0		0.0	0.00	29.02	29.97	5.1	19	6.3	21	19	18	19	13								
14	49	33	41	5	31	35	24	0	HZ	0		0.0	0.00	28.97	29.91	4.7	36	6.7	15	04	13	03	14								
15	34	24	29	-7	22	27	36	0	SN	0		T	T	29.22	30.18	9.3	02	9.4	20	04	15	02	15								
16	36	21	29	-6	20	25	36	0	SN	0		T	T	29.29	30.25	5.8	02	6.5	17	02	16	05	16								
17	35	17	26	-9	18	23	39	0	BR	0		0.0	0.00	29.15	30.12	2.4	35	3.1	13	04	9	27	17								
18	41	18	30	-4	27	30	35	0	RA DZ SN BR HZ	0		T	0.18	29.05	30.01	3.8	16	5.3	16	16	14	16	18								
19	51	26	39	5	30	35	26	0	BR	0		0.0	0.00	29.03	29.98	4.3	23	4.9	18	21	13	22	19								
20	50	25	38	5	32	35	27	0	BR	0		0.0	0.00	29.00	29.95	1.4	21	2.6	14	36	10	35	20								
21	38	32	35	2	28	32	30	0	SN BR	T		0.7	0.07	28.97	29.92	9.7	35	10.2	28	02	22	36	21								
22	34	26	30	-3	22	28	35	0	SN	0		T	T	29.13	30.09	4.1	33	6.8	21	02	18	02	22								
23	46	32	39	7	24	32	26	0		0		0.0	0.00	28.98	29.93	6.5	24	8.7	21	28	16	29	23								
24	33	23	28	-4	16	25	37	0		0		0.0	0.00	29.23	30.19	5.9	31	7.2	18	33	14	33	24								
25	29	14	22	-9	13	19	43	0		0		0.0	0.00	29.39	30.37	4.4	31	5.1	20	32	15	33	25								
26	31	11*	21	-10	14	19	44	0		0		0.0	0.00	29.45	30.43	4.0	35	4.4	15	01	13	01	26								
27	29	12	21*	-9	13	19	44	0		0		0.0	0.00	29.38	30.36	2.8	27	4.3	14	24	10	24	27								
28	37	19	28	-2	19	25	37	0	HZ	0		0.0	0.00	29.08	30.04	7.8	22	8.6	23	22	17	21	28								
29	46	36	41	12	26	35	24	0	SN	0		T	T	28.53	29.46	9.7	26	10.8	30	33	20	32	29								
30	36	12	24	-5	9	18	41	0	SN GS BR	T		0.5	0.01	28.96	29.91	11.7	31	12.2	31*	31	22*	31	30								
42.6 26.0 34.3 ■■										25.7 31.1 30.5 0.0		< MONTHLY AVERAGES TOTALS->			1.2	1.01	29.04	29.99	2.6	27	6.8	<- MONTHLY AVERAGES									
-.7 -1.7 -1.2 ■■										<-----DEPARTURE FROM NORMAL----->										-1.30		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.66 DATE :10-11				SEA LEVEL PRESSURE DATE TIME																		
MONTHLY TOTAL DEPARTURE 914 22									GREATEST 24-HR SNOWFALL: 0.7 DATE :21				MAXIMUM : 30.46 26 0853																		
SEASON TO DATE TOTAL DEPARTURE 1647 23									GREATEST SNOW DEPTH: T DATE :30+				MINIMUM : 29.19 10 0253																		
HEATING: 914 22									NUMBER OF DAYS WITH → MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32 : 24				PRECIPITATION ≥ 0.01 INCH : 6														
COOLING: 0 0									MAXIMUM TEMP ≤ 32 : 3				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 3														
									THUNDERSTORMS : 1				HEAVY FOG : 0				SNOWFALL ≥ 1.0 INCH : 0														

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MADISON, WI

NOVEMBER 2002

MSN

WBAN # 14837

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											T	0.03	0.02	05	0.03	0.01	T								05			0.09
06													06												06			0.00
07													07												07			0.00
08													08												08			0.00
09													09												09			0.00
10													10						T	0.04			0.01	0.16	10			0.21
11	0.16	0.08	0.02	0.02	0.03	0.05	0.05	0.04	T	T	T		11				T	T							11			0.45
12													12												12			T
13													13												13			0.00
14													14												14			0.00
15	T												15												15			T
16													16				T				T	T			16			T
17													17												17			0.00
18													18	T	T	T	0.01	0.01	0.03	0.06	0.05	0.02	T	T	18			0.18
19													19												19			0.00
20													20												20			0.00
21													21								T	T		T	21			0.07
22	T	T		T	T	0.01 T	0.04	0.02	T	T			22												22			T
23													23												23			0.00
24													24												24			0.00
25													25												25			0.00
26													26												26			0.00
27													27												27			0.00
28													28												28			0.00
29													29												29			T
30	T	T	T	T	0.01	T					T	T	30	T	T	T									30			0.01

## MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.05	.09	.12	.14	.19	.25	.29	.31	.32	.38	.40	.42
Ending Date	11	11	11	11	11	11	11	11	11	11	11	11
Ending Time (Hour/Min)	0011	0014	0016	0016	0016	0016	0025	0025	0025	0121	0127	0211

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.

\* = 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

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

## WEATHER NOTATIONS

**MADISON, WI  
NOVEMBER 2002**

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.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							10.00	10.00	
02							10.00	10.00	
03							7.00	10.00	
04							7.00	10.00	
05							2.00	8.00	
06							2.50	10.00	
07							2.50	10.00	
08							10.00	10.00	
09							5.00	10.00	
10							2.00	10.00	
11							1.50	10.00	
12							9.00	10.00	
13							1.00	10.00	
14							5.00	10.00	
15							10.00	10.00	
16							7.00	10.00	
17							5.00	10.00	
18							2.50	10.00	
19							4.00	10.00	
20							5.00	10.00	
21							.75	10.00	
22							9.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							10.00	10.00	
26							10.00	10.00	
27							8.00	10.00	
28							5.00	10.00	
29							9.00	10.00	
30							.25	10.00	
<b>MONTHLY AVGS</b>							6.07	9.93	
<b>SUNSHINE (MINUTES)</b>  Total:                  Possible: Percent Possible:									
<b>NUMBER OF DAYS WITH:</b>  <b>SKY CONDITION</b> CLR   PTLY CLDY   CLOUDY   MISSING 30 <b>MINIMUM VISIBILITY (MILES)</b> <=0.25            <=3.0            >=7.0 0                     9                    15									

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

NOVEMBER 2002

MSN

WBAN # 14837

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)	
				OBSERVATION TIME (LST)	EFF CLD AMT <small>Okta</small>			DRY BULB	DEW POINT	WET BULB	SPEED (MPH)		DIRECTION TENS OF DEG	STATION	SEA LEVEL	OBSERVATION TIME (LST)					EFF CLD AMT <small>Okta</small>	DRY BULB			DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL		
				SUNRISE: 0632			NOV 01	SUNSET: 1649														SUNRISE: 0640			NOV 07	SUNSET: 1642							
03	CLR	NC			10.00			24	18	22	77	7	29	29.26	30.22	03	CLR	NC			4.00	BR		27	24	26	89	0	00	29.17	30.12		
06	CLR	NC			10.00			23	17	21	78	7	28	29.30	30.27	06	CLR	NC			4.00	BR		30	28	29	92	6	18	29.12	30.08		
09	FEW	NC			10.00			27	18	24	69	14	29	29.33	30.29	09	FEW	NC			6.00	HZ		38	30	35	73	14	18	29.08	30.03		
12	FEW	NC			10.00			33	18	28	54	13	27	29.30	30.26	12	CLR	NC			10.00		50	33	42	52	16	20	28.98	29.91			
15	CLR	NC			10.00			37	14	29	39	10	28	29.25	30.21	15	CLR	NC			10.00		56	35	46	46	12	20	28.84	29.78			
18	BKN	100			10.00			35	15	28	44	6	VR	29.24	30.20	18	CLR	NC			10.00		55	34	45	45	13	20	28.77	29.71			
21	FEW	NC			10.00			33	17	28	52	7	26	29.22	30.18	21	CLR	NC			10.00		54	37	46	53	10	20	28.75	29.68			
24	FEW	NC			10.00			31	17	26	56	7	VR	29.18	30.13	24	CLR	NC			10.00		49	37	43	64	7	VR	28.70	29.63			
				SUNRISE: 0633			NOV 02	SUNSET: 1648														SUNRISE: 0641			NOV 08	SUNSET: 1641							
03	CLR	NC			10.00			29	20	26	69	8	27	29.14	30.10	03	CLR	NC			10.00		51	37	45	59	12	21	28.68	29.60			
06	CLR	NC			10.00			27	20	25	75	7	28	29.14	30.10	06	FEW	NC			10.00		50	37	44	61	9	22	28.67	29.59			
09	CLR	NC			10.00			32	22	28	66	9	29	29.17	30.13	09	CLR	NC			10.00		52	39	46	61	10	21	28.70	29.62			
12	CLR	NC			10.00			40	23	34	51	8	26	29.14	30.10	12	CLR	NC			10.00		56	39	48	53	10	21	28.66	29.58			
15	CLR	NC			10.00			45	19	35	35	8	31	29.11	30.06	15	CLR	NC			10.00		58	41	49	54	6	19	28.63	29.55			
18	CLR	NC			10.00			32	21	28	64	0	00	29.15	30.11	18	CLR	NC			10.00		52	40	46	64	5	16	28.64	29.56			
21	CLR	NC			10.00			26	20	24	78	0	00	29.16	30.13	21	CLR	NC			10.00		42	37	40	82	0	00	28.63	29.57			
24	CLR	NC			10.00			23	20	22	88	0	00	29.16	30.12	24	BKN	065			10.00		48	38	43	68	8	18	28.60	29.53			
				SUNRISE: 0635			NOV 03	SUNSET: 1647														SUNRISE: 0642			NOV 09	SUNSET: 1640							
03	CLR	NC			10.00			22	20	21	92	0	00	29.13	30.08	03	BKN	060			10.00		47	38	43	71	7	17	28.59	29.50			
06	CLR	NC			10.00			20	17	19	89	0	00	29.12	30.09	06	CLR	NC			10.00		47	39	43	74	8	18	28.57	29.48			
09	CLR	NC			8.00			36	29	33	76	5	19	29.12	30.08	09	CLR	NC			10.00		53	44	49	72	12	20	28.56	29.47			
12	OVC	050			10.00			44	28	38	53	6	VR	29.06	30.01	12	CLR	NC			10.00		60	49	54	67	12	20	28.52	29.43			
15	OVC	046			10.00			44	28	37	53	12	21	29.01	29.97	15	CLR	NC			9.00		62	51	56	67	17	18	28.46	29.37			
18	SCT	NC			10.00			41	28	36	60	8	23	29.01	29.97	18	OVC	028			6.00	HZ		59	52	55	78	12	17	28.44	29.35		
21	FEW	NC			10.00			38	28	34	68	9	22	29.00	29.96	21	OVC	027			5.00	HZ		58	53	55	84	10	18	28.41	29.32		
24	CLR	NC			8.00			35	29	33	78	3	VR	29.03	29.98	24	BKN	090			5.00	BR		56	53	54	90	3	17	28.35	29.26		
				SUNRISE: 0636			NOV 04	SUNSET: 1646														SUNRISE: 0644			NOV 10	SUNSET: 1639							
03	CLR	NC			10.00			30	24	28	79	5	29	29.09	30.04	03	BKN	016			3.00	BR		53	52	52	96	6	19	28.31	29.22		
06	SCT	NC			10.00			27	20	25	75	6	32	29.13	30.09	06	OVC	006			2.50	BR		54	52	53	93	8	22	28.33	29.23		
09	OVC	025			10.00			33	25	30	72	8	01	29.20	30.15	09	OVC	007			2.50	BR		53	51	52	93	5	VR	28.36	29.27		
12	BKN	029			10.00			37	24	32	60	7	29	29.21	30.16	12	BKN	037			5.00	BR		56	49	52	77	12	32	28.43	29.33		
15	CLR	NC			10.00			38	24	33	57	0	00	29.17	30.13	15	SCT	NC			10.00		57	44	50	62	6	34	28.44	29.35			
18	CLR	NC			10.00			29	23	27	78	0	00	29.18	30.15	18	FEW	NC			10.00		45	40	43	83	0	00	28.50	29.41			
21	CLR	NC			10.00			27	22	25	81	0	00	29.15	30.11	21	OVC	014			10.00		47	43	45	86	10	36	28.57	29.49			
24	CLR	NC			10.00			31	27	29	85	6	12	29.12	30.08	24	OVC	016			3.00	-RA BR		43	41	42	93	6	32	28.61	29.54		
				SUNRISE: 0637			NOV 05	SUNSET: 1644														SUNRISE: 0645			NOV 11	SUNSET: 1638							
03	BKN	027			6.00	BR		34	30	32	85	7	12	29.07	30.02	03	OVC	034			7.00	-RA		40	38	39	93	15	36	28.67	29.60		
06	OVC	026			4.00	HZ		35	30	33	82	9	13	28.99	29.94	06	OVC	011			4.00	-SN BR		34	33	34	97	10	36	28.80	29.74		
09	OVC	017			3.00	BR		36	32	34	86	6	13	28.94	29.89	09	OVC	016			6.00	BR		34	33	34	97	3	32	28.93	29.86		
12	OVC	006			2.00	-RA BR		36	34	35	93	5	15	28.87	29.81	12	OVC	015			10.00		36	31	34	82	6	34	29.02	29.96			
15	OVC	008			2.00	BR		37	34	36	89	0	00	28.81	29.75	15	OVC	017			10.00		35	29	33	78	6	VR	29.10	30.06			
18	OVC	030			4.00	BR		37	35	36	93	0	00	28.82	29.76	18	OVC	019			10.00		35	28	32	76	5	32	29.18	30.13			
21	OVC	014			4.00	BR		36	33	35	89	6	29	28.85	29.80	21	OVC	021			10.00		35	29	33	78	0	00	29.23	30.18			
24	OVC	013			6.00	BR		34	30	32	85	7	30	28.89	29.84	24	OVC	023			10.00		35	27	32	72	3	30	29.25	30.20			
				SUNRISE: 0639			NOV 06	SUNSET: 1643														SUNRISE: 0646			NOV 12	SUNSET: 1637							
03	OVC	013			4.00	BR		34	31	33	89	7	29	28.90	29.85	03	OVC	021			10.00		34	25	31	70	3	26	29.27	30.23			
06	OVC	011			4.00	BR		36	32	34	86	7	VR	28.94	29.88	06	OVC	021			10.00		33	25	30	72	7	29	29.28				

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

NOVEMBER 2002

MSN

WBAN # 14837

HOUR (LST)			SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)			SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		
			OBSERVATION TIME (LST)	EFF CLD AMT <i>Okta</i> s		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION				SEA LEVEL	OBSERVATION TIME (LST)		EFF CLD AMT <i>Okta</i> s	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION
			SUNRISE: 0648			NOV 13	SUNSET: 1636										SUNRISE: 0655			NOV 19	SUNSET: 1630							
03	CLR	NC			9.00	35	31	33	85	5	29	29.13	30.08	03	CLR	NC			4.00	BR	30	28	29	92	0	00	29.02	29.98
06	CLR	NC			8.00	28	27	28	96	0	00	29.15	30.11	06	CLR	NC			4.00	BR	28	25	27	88	6	28	29.01	29.97
09	CLR	NC			8.00	36	31	34	82	0	00	29.17	30.12	09	CLR	NC			10.00		38	30	35	73	8	22	29.04	29.99
12	CLR	NC			10.00	45	34	40	66	8	17	29.07	30.02	12	CLR	NC			10.00		48	32	41	54	13	22	29.00	29.94
15	SCT	NC			10.00	51	37	45	59	12	17	28.97	29.91	15	CLR	NC			10.00		50	33	42	52	8	23	28.98	29.92
18	OVC	100			10.00	51	33	43	50	10	19	28.88	29.82	18	CLR	NC			10.00		45	34	40	66	8	23	29.04	29.99
21	BKN	085			10.00	51	32	43	48	8	21	28.85	29.78	21	CLR	NC			10.00		34	31	33	89	0	00	29.06	30.02
24	CLR	NC			10.00	49	35	43	59	9	23	28.87	29.80	24	CLR	NC			10.00		28	26	27	92	0	00	29.07	30.02
			SUNRISE: 0649			NOV 14	SUNSET: 1635										SUNRISE: 0656			NOV 20	SUNSET: 1630							
03	CLR	NC			10.00	45	35	41	68	6	22	28.86	29.79	03	CLR	NC			5.00	BR	26	24	25	92	0	00	29.06	30.01
06	CLR	NC			10.00	38	33	36	83	3	32	28.89	29.83	06	OVC	100			10.00		29	27	28	92	0	00	29.05	30.00
09	OVC	019			5.00	40	33	37	77	9	36	28.97	29.90	09	BKN	080			7.00		34	33	34	97	0	00	29.03	29.99
12	OVC	019			6.00	38	30	35	73	7	34	28.98	29.92	12	OVC	080			10.00		48	34	42	58	7	20	28.99	29.94
15	OVC	023			10.00	37	28	34	70	7	35	28.99	29.93	15	SCT	NC			10.00		50	34	43	54	5	22	28.96	29.91
18	OVC	027			10.00	35	28	32	76	8	02	29.01	29.96	18	OVC	110			10.00		47	35	42	63	5	21	28.97	29.91
21	OVC	028			10.00	35	28	32	76	6	03	29.03	29.98	21	BKN	100			10.00		41	34	38	76	6	33	28.97	29.91
24	OVC	025			10.00	33	27	31	78	12	04	29.07	30.03	24	FEW	NC			10.00		34	31	33	89	6	32	28.95	29.89
			SUNRISE: 0650			NOV 15	SUNSET: 1634										SUNRISE: 0658			NOV 21	SUNSET: 1629							
03	OVC	033			10.00	30	22	27	72	7	03	29.11	30.06	03	OVC	011			7.00		35	31	33	85	6	33	28.91	29.85
06	OVC	035			10.00	26	20	24	78	10	01	29.15	30.11	06	OVC	008			1.50	-SN BR	33	31	32	92	6	35	28.90	29.84
09	OVC	035			10.00	27	20	25	75	9	01	29.21	30.18	09	OVC	039			7.00		33	31	32	92	12	36	28.93	29.87
12	OVC	035			10.00	32	21	28	64	13	01	29.23	30.19	12	OVC	027			10.00		35	27	32	72	15	01	28.95	29.89
15	BKN	038			10.00	34	22	30	61	12	04	29.25	30.20	15	BKN	047			10.00		38	23	32	55	14	34	28.99	29.93
18	OVC	050			10.00	32	21	28	64	10	02	29.28	30.24	18	BKN	060			10.00		35	26	32	70	8	34	29.03	29.99
21	BKN	060			10.00	29	23	27	78	5	04	29.31	30.28	21	OVC	049			10.00		35	25	31	67	8	32	29.06	30.01
24	BKN	065			10.00	29	24	27	82	7	03	29.33	30.29	24	OVC	060			9.00	-SN	33	26	30	75	10	33	29.07	30.03
			SUNRISE: 0651			NOV 16	SUNSET: 1633										SUNRISE: 0659			NOV 22	SUNSET: 1628							
03	BKN	065			10.00	27	22	25	81	5	34	29.32	30.29	03	OVC	060			10.00		31	23	28	72	10	33	29.10	30.06
06	BKN	065			10.00	25	21	24	85	7	02	29.33	30.29	06	OVC	027			10.00		30	22	27	72	12	34	29.14	30.09
09	SCT	NC			10.00	30	20	27	66	8	05	29.34	30.30	09	BKN	033			10.00		30	22	27	72	7	35	29.17	30.13
12	SCT	NC			10.00	33	16	27	49	10	05	29.30	30.27	12	BKN	029			10.00		34	21	29	59	8	33	29.16	30.12
15	SCT	NC			10.00	32	16	27	52	8	03	29.26	30.22	15	FEW	NC			10.00		34	21	29	59	0	00	29.14	30.10
18	FEW	NC			10.00	26	20	24	78	7	04	29.26	30.22	18	CLR	NC			10.00		28	21	26	75	0	00	29.13	30.09
21	SCT	NC			8.00	22	19	21	89	5	32	29.25	30.22	21	CLR	NC			10.00		29	23	27	78	6	16	29.10	30.06
24	CLR	NC			7.00	22	20	21	92	5	35	29.21	30.18	24	BKN	090			10.00		31	23	28	72	6	18	29.07	30.03
			SUNRISE: 0653			NOV 17	SUNSET: 1632										SUNRISE: 0700			NOV 23	SUNSET: 1628							
03	CLR	NC			7.00	20	18	19	92	3	33	29.19	30.16	03	OVC	065			10.00		33	22	29	64	14	19	28.99	29.94
06	CLR	NC			7.00	20	18	19	92	6	33	29.19	30.16	06	OVC	075			10.00		34	24	30	67	10	19	28.93	29.88
09	CLR	NC			10.00	25	20	23	81	7	01	29.19	30.16	09	FEW	NC			10.00		35	26	32	70	10	23	28.93	29.88
12	FEW	NC			10.00	33	20	29	59	5	02	29.15	30.12	12	FEW	NC			10.00		43	28	37	56	12	28	28.93	29.87
15	SCT	NC			10.00	33	17	28	52	5	29	29.11	30.07	15	FEW	NC			10.00		45	25	37	46	15	27	28.93	29.87
18	CLR	NC			10.00	26	16	23	66	0	00	29.11	30.08	18	CLR	NC			10.00		38	24	33	57	6	28	28.99	29.95
21	CLR	NC			10.00	21	17	20	85	0	00	29.12	30.09	21	FEW	NC			10.00		35	24	31	64	5	VR	29.05	30.00
24	CLR	NC			10.00	21	16	20	81	0	00	29.11	30.08	24	CLR	NC			10.00		33	22	29	64	6	26	29.07	30.03
			SUNRISE: 0654			NOV 18	SUNSET: 1631										SUNRISE: 0701			NOV 24	SUNSET: 1627							
03	CLR	NC			9.00	24	19	22	81	3	16	29.10	30.06	03	SCT	NC			10.00		31	22	28	69	5	VR	29.14	30.09
06	CLR	NC			9.00	25	20	23	81	8	16	29.09	30.05	06	OVC	120			10.00		30	17	26	59	7	31	29.17	30.13
09	BKN	120			8.00	31	24	28	76	10	16	29.08	30.04	09	OVC	100			10.00		30	17	26	59	9	34	29.23	30.19
12	BKN	070			8.00	37	27	33	67	10	15	29.04	30.00	12	CLR	NC			10.00		29	15	25	56	9	31	29.24	30.20
15	BKN	055			5.00	37	33	35	86	7	17	28.99	29.94	15	BKN	060			10.00		28	13	23	53	8	32	29.24	30.20
18	OVC	021			3.00	36	35	36	97	0	00	29.01	29.97	18	OVC	110			10.00		27	14	23	58				

## OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

NOVEMBER 2002

MSN

WBAN # 14837

HOUR (LST)	SKY COVER		CEILING 100'S OFF	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		HOUR (LST)	SKY COVER		CEILING 100'S OFF	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		
				OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL					OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	
				NOVEMBER 2007																												
SUNRISE: 0702 NOV 25 SUNSET: 1626																																
03	CLR	NC				10.00		20	14	18	78	3	31	29.33	30.29																	
06	CLR	NC				10.00		18	15	17	88	0	00	29.35	30.32																	
09	FEW	NC				10.00		23	15	21	72	9	31	29.39	30.37																	
12	BKN	028				10.00		26	13	22	57	9	29	29.40	30.38																	
15	FEW	NC				10.00		28	13	23	53	8	30	29.38	30.36																	
18	CLR	NC				10.00		23	13	20	65	3	36	29.42	30.41																	
21	CLR	NC				10.00		17	12	16	80	3	34	29.45	30.43																	
24	CLR	NC				10.00		14	11	13	88	0	00	29.47	30.46																	
SUNRISE: 0704 NOV 26 SUNSET: 1626																																
03	CLR	NC				10.00		13	10	12	88	0	00	29.47	30.45																	
06	CLR	NC				10.00		16	13	15	88	3	34	29.45	30.44																	
09	CLR	NC				10.00		20	17	19	89	0	00	29.48	30.46																	
12	FEW	NC				10.00		29	21	26	72	8	01	29.45	30.43																	
15	FEW	NC				10.00		31	16	26	54	9	35	29.42	30.40																	
18	CLR	NC				10.00		25	14	22	63	5	34	29.42	30.41																	
21	CLR	NC				10.00		21	12	19	68	5	31	29.44	30.42																	
24	CLR	NC				10.00		16	12	15	84	0	00	29.43	30.42																	
SUNRISE: 0705 NOV 27 SUNSET: 1625																																
03	CLR	NC				10.00		17	12	16	80	6	30	29.42	30.40																	
06	CLR	NC				10.00		13	10	12	88	0	00	29.42	30.41																	
09	BKN	038				10.00		20	16	19	85	3	31	29.42	30.41																	
12	BKN	032				10.00		26	11	22	53	5	27	29.39	30.38																	
15	SCT	NC				10.00		28	12	23	51	6	25	29.35	30.32																	
18	FEW	NC				10.00		24	12	21	60	6	21	29.33	30.30																	
21	CLR	NC				10.00		22	12	19	66	5	VR	29.35	30.32																	
24	BKN	120				8.00		22	14	20	71	3	22	29.31	30.28																	
SUNRISE: 0706 NOV 28 SUNSET: 1625																																
03	BKN	110				6.00 HZ		21	14	19	74	6	21	29.27	30.24																	
06	FEW	NC				5.00 HZ		20	15	19	81	7	VR	29.24	30.21																	
09	OVC	029				6.00 HZ		24	18	22	77	8	20	29.20	30.17																	
12	CLR	NC				10.00		31	19	27	61	10	22	29.12	30.09																	
15	CLR	NC				10.00		34	20	29	56	10	23	29.03	29.99																	
18	CLR	NC				8.00		32	21	28	64	12	22	28.98	29.94																	
21	CLR	NC				7.00		32	23	29	69	13	21	28.85	29.80																	
24	CLR	NC				10.00		37	24	32	60	15	21	28.68	29.63																	

## 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.

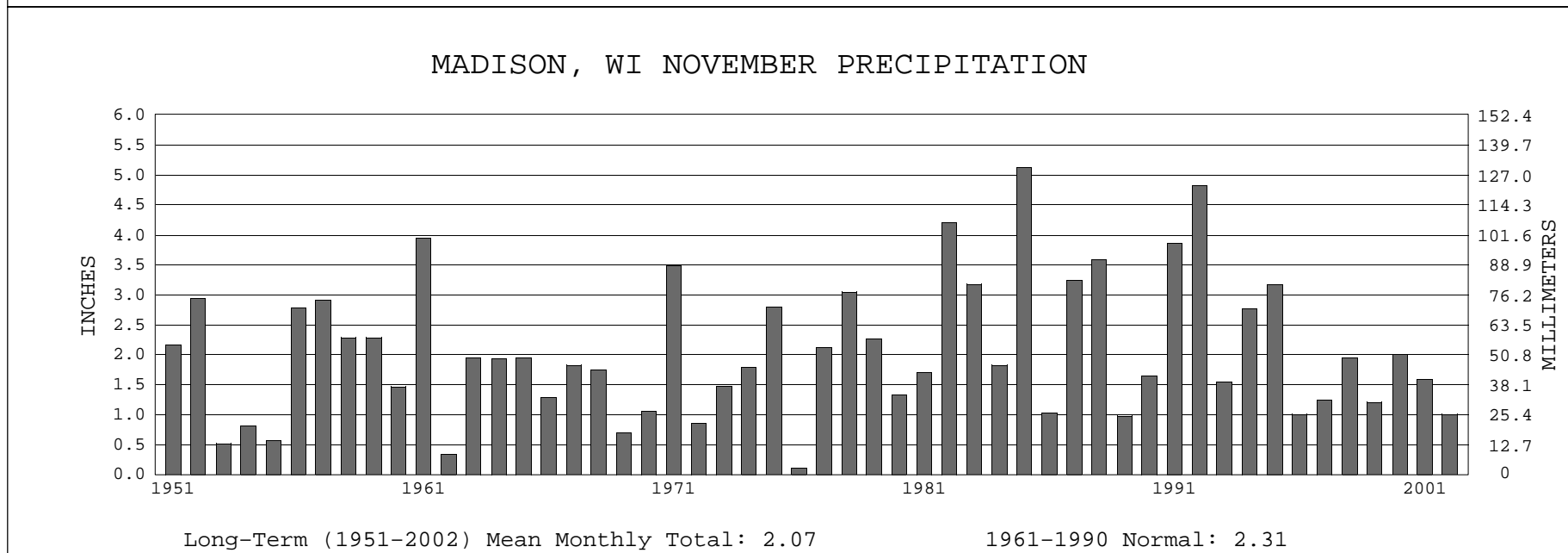
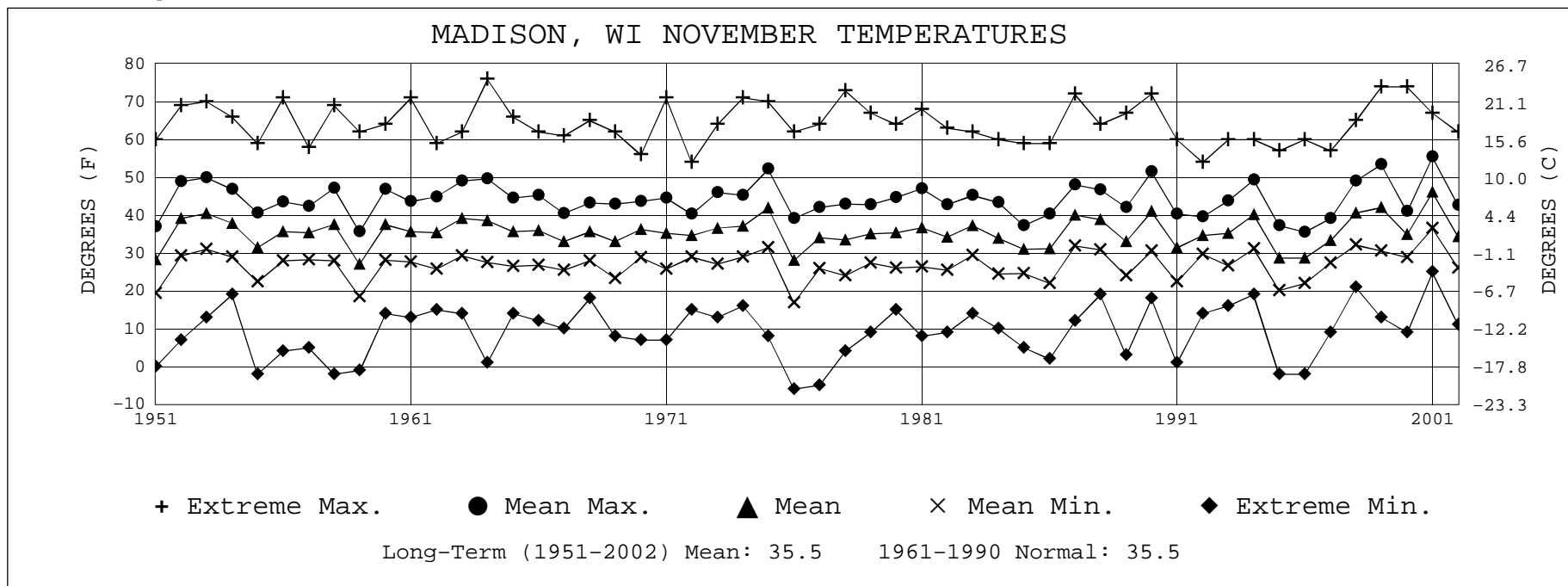
NC= No ceiling detected.

& = 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			32	26	29	80	29.03	29.98	8.50	6	3	28





NOVEMBER 2002

MADISON, WI

# 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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