



DECEMBER 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	36	11	24	-5	11	20	41	0		T		0.0	0.00	28.93	29.89	5.0	22	5.6	22	22	16	21	01	
02	28	11	20	-8	13	19	45	0	SN BR	1		1.3	0.03	29.12	30.08	11.2	02	11.5	25	01	22	01	02	
03	24	5	15	-13	4	11	50	0		1		0.0	0.00	29.61	30.61	2.9	36	3.5	12	02	10	02	03	
04	25	5	15	-12	9	14	50	0	SN	T		T	T	29.51	30.50	0.1	35	.3	7	33	6	36	04	
05	23	12	18	-9	10	16	47	0	SN BR	T		T	T	29.26	30.24	4.7	27	5.9	17	24	13	28	05	
06	34	5	20	-6	12	18	45	0	BR HZ	T		0.0	0.00	29.10	30.07	7.4	21	8.4	24	24	17	23	06	
07	37	22	30	4	22	28	35	0		0		0.0	0.00	29.05	30.01	5.6	26	6.8	18	23	13	26	07	
08	26	4	15*	-11	4	14	50	0		T		0.0	0.00	29.49	30.47	4.3	31	4.9	22	34	17	33	08	
09	31	2*	17	-8	7	17	48	0		T		0.0	0.00	29.39	30.37	7.4	21	7.5	20	20	15	22	09	
10	46	22	34	9	20	29	31	0		T		0.0	0.00	29.17	30.13	5.3	20	5.8	15	24	10	18	10	
11	44	19	32	7	21	28	33	0	BR HZ	0		0.0	0.00	29.07	30.03	5.3	18	5.7	17	18	15	18	11	
12	40	34	37	13	32	35	28	0	BR HZ	0		0.0	0.00	29.09	30.04	6.0	19	6.0	14	19	10	19	12	
13	36	26	31	7	31	32	34	0	FG+ FZFG BR HZ	0		0.0	0.00	29.02	29.97	3.4	36	4.4	14	36	12	36	13	
14	40	30	35	12	28	32	30	0	BR HZ	0		0.0	0.00	28.94	29.89	4.1	22	6.3	16	21	14	19	14	
15	44	24	34	11	25	31	31	0		0		0.0	0.00	28.95	29.89	8.2	02	9.6	24	06	22	05	15	
16	32	18	25	2	17	23	40	0	SN	0		T	T	29.16	30.12	11.8	08	13.0	25	10	22	10	16	
17	36	30	33	11	25	30	32	0	TSRA RA DZ BR	0		0.0	0.04	29.03	29.98	16.8	11	16.9	30	11	25	11	17	
18	53	35	44*	22	44	45	21	0	RA DZ BR	0		0.0	0.58	28.65	29.58	11.7	15	13.4	37*	15	31*	15	18	
19	42	33	38	16	29	34	27	0	SN BR	T		T	T	28.65	29.58	6.5	24	7.8	25	25	15	23	19	
20	33	28	31	10	22	27	34	0	SN BR	T		0.3	0.02	28.53	29.47	10.4	26	10.7	26	27	18	27	20	
21	32	27	30	9	18	25	35	0	SN	0		T	T	28.76	29.70	10.1	26	10.5	28	26	21	26	21	
22	28	24	26	5	17	24	39	0	SN	0		T	T	28.90	29.85	11.8	27	11.9	31	28	21	28	22	
23	31	16	24	3	12	21	41	0		0		0.0	0.00	29.10	30.07	8.7	27	9.0	30	26	20	26	23	
24	26	11	19	-1	13	18	46	0		0		0.0	0.00	29.04	30.01	6.0	36	6.2	20	02	16	01	24	
25	25	22	24	4	18	22	41	0	SN BR	0		T	T	29.06	30.02	6.9	31	8.2	17	34	14	33	25	
26	35	18	27	7	18	24	38	0		0		0.0	0.00	29.26	30.23	4.5	23	5.6	15	24	12	23	26	
27	37	21	29	10	23	27	36	0	BR HZ	0		0.0	0.00	29.18	30.14	7.5	21	8.3	25	24	17	22	27	
28	37	21	29	10	26	29	36	0	BR HZ	0		0.0	0.00	28.99	29.95	4.0	20	4.9	17	18	15	17	28	
29	43	22	33	14	28	31	32	0	BR HZ	0		0.0	0.00	28.99	29.95	8.4	12	8.6	23	12	20	12	29	
30	53*	31	42	23	37	40	23	0	BR HZ	0		0.0	0.00	28.72	29.65	5.1	22	9.4	23	30	17	30	30	
31	34	19	27	9	15	23	38	0		0		0.0	0.00	29.07	30.03	4.9	31	6.5	20	30	14	32	31	
35.2		19.6	27.4	■ ■ ■	19.7	25.4	37.3	0.0	< MONTHLY AVERAGES	TOTALS->		1.6	0.67	29.06	30.02	2.0	23	7.9	<- MONTHLY AVERAGES					
5.0		3.8	4.4	■ ■ ■	<-----DEPARTURE FROM NORMAL----->							-.99		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.62 DATE :17-18				GREATEST 24-HR SNOWFALL: 1.3 DATE :02				GREATEST SNOW DEPTH: 1 DATE :03+				SEA LEVEL PRESSURE DATE TIME			
MONTHLY TOTAL DEPARTURE									1157 -141				2804 -118				SEASON TO DATE TOTAL DEPARTURE				MAXIMUM : 30.67 03 0953			
HEATING: 0									COOLING: 0				752 170				MINIMUM : 29.41 20 0453				PRECIPITATION ≥ 0.01 INCH : 4			
									NUMBER OF DAYS WITH ➡				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 28				PRECIPITATION ≥ 0.10 INCH : 1			
													MAXIMUM TEMP ≤ 32 :12				MINIMUM TEMP ≤ 0 : 0				SNOWFALL ≥ 1.0 INCH : 1			
													THUNDERSTORMS : 1				HEAVY FOG : 1							

DECEMBER 2002
MADISON, WI

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

MADISON, WI

DECEMBER 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				T	T	0.01	0.02	T	T	T			02												02			0.03
03													03												03			0.00
04													04												04			T
05	T	T	T	T	T	T	T	T	T	T	T		05											T	05			T
06													06												06			0.00
07													07												07			0.00
08													08												08			0.00
09													09												09			0.00
10													10												10			0.00
11													11												11			0.00
12													12												12			0.00
13													13												13			0.00
14													14												14			0.00
15													15												15			0.00
16													16												16			T
17													17								T	T			17	T		0.04
18	0.03	0.01	0.06	0.01	0.01	T	T						18	0.17	0.17	0.12	T								18			0.58
19													19							T	T				19			T
20	T	T		T				T	T	T	T		20	T	T	T	T	T	T	T		T	T	T	20	T		0.02
21	T	T	T										21												21			T
22													22	T	T	T	T								22			T
23													23												23			0.00
24													24												24			0.00
25	T	T	T										25												25			T
26													26												26			0.00
27													27												27			0.00
28													28												28			0.00
29													29												29			0.00
30													30												30			0.00
31													31												31			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)	.04	.05	.07	.09	.13	.18	.22	.28	.34	.38	.44	.46
Ending Date	18	18	18	18	18	18	18	18	18	18	18	18
Ending Time (Hour/Min)	0159	1402	1257	1257	1303	1316	1329	1344	1405	1425	1442	1442

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
DECEMBER 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							.75	10.00	
03							10.00	10.00	
04							8.00	10.00	
05							3.00	10.00	
06							5.00	10.00	
07							8.00	10.00	
08							10.00	10.00	
09							9.00	10.00	
10							10.00	10.00	
11							4.00	10.00	
12							4.00	7.00	
13							.25	5.00	
14							2.50	10.00	
15							9.00	10.00	
16							9.00	10.00	
17							2.00	10.00	
18							1.25	10.00	
19							6.00	10.00	
20							.00	10.00	
21							6.00	10.00	
22							9.00	10.00	
23							10.00	10.00	
24							8.00	10.00	
25							6.00	10.00	
26							8.00	10.00	
27							4.00	10.00	
28							2.00	7.00	
29							2.50	7.00	
30							4.00	10.00	
31							10.00	10.00	
MONTHLY AVGS							5.90	9.55	

SUNSHINE (MINUTES)

 Total: Possible:
 Percent Possible:

NUMBER OF DAYS WITH:
SKY CONDITION
 CLR PTLY CLDY CLOUDY MISSING
 31
MINIMUM VISIBILITY (MILES)
 <=0.25 <=3.0 >=7.0
 1 9 14

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

DECEMBER 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)			
	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT <small>Okta</small>		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION		SEA LEVEL	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT <small>Okta</small>	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0709 DEC 01 SUNSET: 1624						SUNRISE: 0715 DEC 07 SUNSET: 1622																							
03	CLR	NC			10.00	13	-1	10	54	6	VR	29.12	30.10	03	CLR	NC			8.00	32	25	29	75	9	23	28.94	29.89		
06	OVC	080			10.00	17	2	14	51	9	22	29.07	30.05	06	CLR	NC			10.00	30	24	28	79	5	VR	28.98	29.93		
09	OVC	110			10.00	21	6	17	52	13	23	29.00	29.98	09	CLR	NC			10.00	30	22	27	72	8	30	29.05	30.01		
12	BKN	110			10.00	28	12	23	51	13	21	28.85	29.81	12	CLR	NC			10.00	35	21	30	57	8	27	29.06	30.01		
15	BKN	090			10.00	34	16	28	48	6	22	28.78	29.74	15	CLR	NC			10.00	37	22	32	54	8	26	29.06	30.01		
18	BKN	120			10.00	26	17	23	69	0	00	28.79	29.75	18	CLR	NC			10.00	30	21	27	69	0	00	29.10	30.06		
21	OVC	110			10.00	25	20	23	81	0	00	28.82	29.78	21	CLR	NC			10.00	23	18	21	81	3	VR	29.14	30.10		
24	OVC	070			10.00	27	21	25	78	0	00	28.85	29.80	24	CLR	NC			10.00	26	18	23	71	8	28	29.19	30.15		
SUNRISE: 0710 DEC 02 SUNSET: 1623						SUNRISE: 0716 DEC 08 SUNSET: 1622																							
03	OVC	060			10.00	27	20	25	75	10	04	28.87	29.82	03	CLR	NC			10.00	22	16	20	78	6	27	29.26	30.22		
06	OVC	012			1.50	24	22	23	91	8	02	28.92	29.88	06	CLR	NC			10.00	19	4	15	52	7	32	29.38	30.35		
09	OVC	010			1.50	23	19	22	85	14	02	28.99	29.96	09	CLR	NC			10.00	18	4	15	54	10	32	29.49	30.47		
12	FEW	NC			10.00	24	12	21	60	16	36	29.07	30.03	12	CLR	NC			10.00	21	2	16	43	10	33	29.54	30.52		
15	SCT	NC			10.00	24	10	20	55	18	01	29.16	30.12	15	CLR	NC			10.00	22	1	17	40	8	32	29.56	30.55		
18	FEW	NC			10.00	14	5	12	67	9	01	29.28	30.25	18	CLR	NC			10.00	13	1	10	59	0	00	29.61	30.60		
21	BKN	055			10.00	17	7	15	64	14	01	29.39	30.37	21	CLR	NC			10.00	5	-1	4	76	0	00	29.61	30.61		
24	CLR	NC			10.00	11	3	9	70	9	01	29.46	30.45	24	CLR	NC			10.00	4	0	3	83	0	00	29.59	30.58		
SUNRISE: 0711 DEC 03 SUNSET: 1623						SUNRISE: 0717 DEC 09 SUNSET: 1622																							
03	CLR	NC			10.00	10	4	9	76	6	34	29.53	30.53	03	CLR	NC			9.00	3	-1	2	83	0	00	29.55	30.55		
06	CLR	NC			10.00	8	2	7	76	6	34	29.59	30.59	06	CLR	NC			10.00	15	3	12	59	7	22	29.51	30.50		
09	CLR	NC			10.00	12	4	10	70	5	36	29.67	30.66	09	CLR	NC			10.00	18	6	15	60	10	21	29.50	30.49		
12	CLR	NC			10.00	20	6	16	55	5	03	29.65	30.64	12	CLR	NC			10.00	27	6	21	41	7	22	29.38	30.37		
15	CLR	NC			10.00	23	4	18	44	0	00	29.61	30.60	15	CLR	NC			10.00	30	9	24	41	12	19	29.29	30.27		
18	CLR	NC			10.00	12	5	10	73	0	00	29.63	30.63	18	CLR	NC			10.00	28	12	23	51	10	19	29.26	30.23		
21	CLR	NC			10.00	8	5	7	87	0	00	29.63	30.63	21	CLR	NC			10.00	29	13	24	51	8	21	29.24	30.22		
24	CLR	NC			10.00	6	3	5	87	3	35	29.63	30.63	24	CLR	NC			10.00	29	13	24	51	7	22	29.22	30.19		
SUNRISE: 0712 DEC 04 SUNSET: 1623						SUNRISE: 0718 DEC 10 SUNSET: 1622																							
03	OVC	120			10.00	10	6	9	84	0	00	29.59	30.58	03	CLR	NC			10.00	28	16	24	61	5	20	29.21	30.17		
06	FEW	NC			10.00	14	9	13	80	0	00	29.56	30.56	06	CLR	NC			10.00	26	16	23	66	6	19	29.21	30.17		
09	BKN	070			10.00	18	11	16	74	0	00	29.57	30.57	09	CLR	NC			10.00	29	17	25	61	5	VR	29.22	30.18		
12	OVC	075			10.00	23	10	19	57	0	00	29.52	30.51	12	CLR	NC			10.00	41	24	34	51	7	20	29.18	30.14		
15	OVC	070			10.00	24	9	20	52	0	00	29.49	30.48	15	CLR	NC			10.00	45	25	37	46	9	19	29.13	30.09		
18	SCT	NC			10.00	20	11	17	68	0	00	29.44	30.43	18	CLR	NC			10.00	34	24	30	67	5	18	29.13	30.09		
21	CLR	NC			10.00	11	8	10	88	3	35	29.41	30.40	21	CLR	NC			10.00	28	24	27	85	0	00	29.13	30.09		
24	OVC	029			10.00	12	10	12	92	0	00	29.38	30.36	24	CLR	NC			10.00	27	20	25	75	3	16	29.10	30.06		
SUNRISE: 0713 DEC 05 SUNSET: 1623						SUNRISE: 0719 DEC 11 SUNSET: 1622																							
03	OVC	025			10.00	19	14	18	81	0	00	29.36	30.33	03	CLR	NC			10.00	20	17	19	89	3	16	29.09	30.05		
06	OVC	027			7.00	18	14	17	84	3	26	29.31	30.29	06	CLR	NC			8.00	20	17	19	89	0	00	29.08	30.05		
09	OVC	015			3.00	18	13	17	81	7	29	29.31	30.29	09	CLR	NC			10.00	28	22	26	78	7	17	29.09	30.06		
12	CLR	NC			10.00	20	9	17	62	9	26	29.25	30.23	12	CLR	NC			10.00	42	23	35	47	14	18	29.05	30.01		
15	CLR	NC			10.00	22	7	18	52	8	28	29.19	30.16	15	CLR	NC			10.00	43	22	35	43	10	18	29.03	29.99		
18	FEW	NC			10.00	18	8	15	65	6	VR	29.20	30.17	18	CLR	NC			10.00	36	21	31	55	8	18	29.06	30.02		
21	CLR	NC			10.00	15	6	13	67	5	VR	29.20	30.18	21	CLR	NC			10.00	34	21	29	59	8	22	29.07	30.03		
24	CLR	NC			10.00	12	5	10	73	5	VR	29.21	30.19	24	OVC	020			4.00	34	29	32	82	3	19	29.08	30.03		
SUNRISE: 0714 DEC 06 SUNSET: 1623						SUNRISE: 0720 DEC 12 SUNSET: 1623																							
03	CLR	NC			10.00	10	5	9	80	6	28	29.22	30.20	03	OVC	026			5.00	37	31	35	79	5	20	29.07	30.02		
06	CLR	NC			10.00	6	2	5	83	0	00	29.22	30.21	06	OVC	022			7.00	37	31	35	79	8	19	29.08	30.03		
09	CLR	NC			7.00	15	10	14	80	6	19	29.21	30.18	09	OVC	026			4.00	37	31	35	79	7	20	29.11	30.06		
12	CLR	NC			10.00	23	13	20	65	10	23	29.13	30.11	12	OVC	028			4.00	38	32	36	79	9	19	29.09	30.05		
15	CLR	NC			10.00	27	14	23	58	12	19	29.04	30.01	15	OVC	018			4.00	40	33	37	77	6	19	29.05	30.00		
18	CLR	NC			10.00	26	17	23	69	10	20	28.99	29.95	18	OVC	031			4.00	39	33	37	79	6	19	29.11	30.06		
21	CLR	NC			10.00	30	18	26	61	12	20	28.95	29.91	21	OVC	031			4.00	37	33	35	86	0	00	29.08	30.04		
24	CLR	NC			10.00	34	24	30	67	14	22	28.92	29.87	24	BKN	031			4.00	36	32	34	86	0	00	29.10	30.05		

OBSERVATIONS AT 3-HOURLY INTERVALS

MADISON, WI

DECEMBER 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)									
	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT <small>Okta</small>		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION		SEA LEVEL	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT <small>Okta</small>	VISIBILITY (MILES)	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL						
SUNRISE: 0721						DEC 13						SUNSET: 1623						SUNRISE: 0725						DEC 19						SUNSET: 1625					
03	OVC	031			3.00BR	31	29	30	92	0	00	29.09	30.04	03	OVC	022			7.00	40	35	38	83	7	23	28.70	29.63								
06	OVC	005			2.00BR	30	29	30	96	0	00	29.04	29.99	06	OVC	022			10.00	38	30	35	73	8	26	28.69	29.62								
09	VV	001			0.25FG	33	32	33	96	6	06	29.04	29.99	09	OVC	022			10.00	37	30	34	76	8	22	28.70	29.63								
12	OVC	001			0.75BR	34	33	34	97	0	00	28.99	29.94	12	SCT	NC			10.00	39	29	35	67	10	23	28.68	29.62								
15	OVC	005			1.50BR	34	32	33	92	9	01	28.95	29.90	15	BKN	030			10.00	38	25	33	60	8	27	28.61	29.55								
18	OVC	003			1.25BR	32	31	32	96	3	30	28.99	29.93	18	OVC	031			10.00	35	24	31	64	6	25	28.61	29.55								
21	OVC	011			4.00BR	33	29	31	85	8	35	28.99	29.95	21	OVC	034			10.00	34	26	31	73	8	25	28.57	29.50								
24	OVC	011			5.00BR	32	28	30	85	7	35	28.99	29.95	24	OVC	029			10.00	33	26	30	75	12	24	28.51	29.44								
SUNRISE: 0721						DEC 14						SUNSET: 1623						SUNRISE: 0725						DEC 20						SUNSET: 1625					
03	OVC	011			5.00HZ	32	27	30	82	8	01	29.00	29.95	03	OVC	030			10.00	31	24	28	76	8	25	28.50	29.43								
06	OVC	009			4.00BR	31	27	29	85	3	VR	28.99	29.95	06	OVC	036			10.00	31	22	28	69	10	24	28.49	29.42								
09	OVC	009			3.00BR	30	27	29	88	3	24	29.02	29.98	09	OVC	042			10.00	30	20	27	66	8	24	28.50	29.44								
12	CLR	NC			5.00HZ	34	27	31	76	10	19	28.99	29.93	12	OVC	039			5.00	30	23	28	75	9	25	28.49	29.43								
15	CLR	NC			6.00HZ	40	28	35	63	9	20	28.89	29.83	15	OVC	050			10.00	30	21	27	69	12	27	28.53	29.46								
18	CLR	NC			6.00HZ	37	28	34	70	8	22	28.89	29.83	18	OVC	031			2.00	29	23	27	78	8	26	28.58	29.52								
21	CLR	NC			8.00	37	28	34	70	9	22	28.87	29.81	21	OVC	037			10.00	28	18	25	66	12	28	28.60	29.53								
24	CLR	NC			10.00	37	28	34	70	0	00	28.84	29.78	24	OVC	090			10.00	28	18	25	66	13	26	28.61	29.56								
SUNRISE: 0722						DEC 15						SUNSET: 1623						SUNRISE: 0726						DEC 21						SUNSET: 1625					
03	CLR	NC			9.00	32	27	30	82	0	00	28.83	29.78	03	OVC	037			10.00	28	18	25	66	14	27	28.64	29.59								
06	BKN	120			10.00	35	28	32	76	6	29	28.85	29.79	06	OVC	035			10.00	28	17	24	63	14	27	28.69	29.63								
09	FEW	NC			10.00	36	28	33	73	7	34	28.90	29.84	09	BKN	035			10.00	28	17	24	63	14	27	28.77	29.72								
12	SCT	NC			10.00	42	29	37	60	9	03	28.91	29.85	12	BKN	030			10.00	30	17	26	59	20	26	28.79	29.74								
15	OVC	029			10.00	39	27	34	62	12	01	28.94	29.88	15	FEW	NC			10.00	31	18	27	59	8	26	28.80	29.75								
18	OVC	032			10.00	37	26	33	65	8	04	29.01	29.96	18	CLR	NC			10.00	28	18	25	66	5	27	28.80	29.75								
21	BKN	030			10.00	29	19	26	66	18	04	29.10	30.06	21	OVC	026			10.00	28	19	25	69	6	VR	28.82	29.77								
24	SCT	NC			10.00	24	14	21	65	16	04	29.16	30.12	24	OVC	028			10.00	27	19	24	72	6	26	28.78	29.73								
SUNRISE: 0723						DEC 16						SUNSET: 1623						SUNRISE: 0726						DEC 22						SUNSET: 1626					
03	CLR	NC			10.00	18	12	16	77	9	05	29.16	30.12	03	CLR	NC			10.00	25	19	23	78	8	26	28.78	29.73								
06	OVC	024			10.00	20	14	18	78	12	05	29.15	30.11	06	OVC	022			10.00	26	19	24	75	12	28	28.79	29.75								
09	OVC	024			10.00	25	18	23	75	13	06	29.18	30.14	09	OVC	026			10.00	27	17	24	66	9	28	28.87	29.82								
12	BKN	110			10.00	31	15	26	52	18	09	29.15	30.12	12	OVC	030			10.00	28	15	24	58	15	28	28.90	29.85								
15	BKN	120			10.00	30	14	25	51	15	11	29.13	30.10	15	BKN	030			10.00	27	14	23	58	17	26	28.93	29.88								
18	SCT	NC			10.00	26	18	23	71	13	09	29.14	30.11	18	OVC	033			10.00	27	16	23	63	8	26	28.99	29.94								
21	OVC	055			10.00	29	23	27	78	14	10	29.17	30.13	21	OVC	029			10.00	28	20	25	72	16	28	28.99	29.95								
24	OVC	050			10.00	30	22	27	72	17	11	29.12	30.09	24	OVC	025			10.00	27	17	24	66	13	27	28.99	29.95								
SUNRISE: 0723						DEC 17						SUNSET: 1624						SUNRISE: 0727						DEC 23						SUNSET: 1626					
03	OVC	045			10.00	30	22	27	72	15	10	29.13	30.09	03	OVC	025			10.00	25	15	22	66	13	26	29.02	29.98								
06	OVC	031			10.00	31	23	28	72	14	11	29.13	30.09	06	CLR	NC			10.00	23	15	21	72	9	25	29.04	30.01								
09	OVC	031			10.00	32	24	29	73	17	11	29.11	30.07	09	CLR	NC			10.00	22	12	19	66	10	27	29.09	30.06								
12	OVC	019			10.00	35	25	31	67	16	11	29.03	29.99	12	CLR	NC			10.00	28	8	22	43	13	26	29.07	30.03								
15	OVC	019			10.00	34	25	31	70	20	10	28.99	29.93	15	CLR	NC			10.00	30	10	24	43	12	25	29.10	30.06								
18	OVC	021			10.00	35	24	31	64	18	11	28.95	29.89	18	CLR	NC			10.00	25	11	21	55	5	30	29.15	30.11								
21	OVC	013			10.00	34	30	32	85	17	12	28.92	29.86	21	CLR	NC			10.00	21	12	18	68	6	31	29.16	30.13								
24	OVC	005			2.00-DZ BR	35	33	34	93	16	11	28.83	29.77	24	CLR	NC			10.00	16	11	15	80	0	00	29.17	30.14								
SUNRISE: 0724						DEC 18						SUNSET: 1624						SUNRISE: 0727						DEC 24						SUNSET: 1627					
03	OVC	003			2.00-DZ BR	37	36	37	96	13	12	28.77	29.71	03	CLR	NC			10.00	12	10	12	92	3	33	29.15	30.12								
06	OVC	005			5.00-DZ BR	42	40	41	92	13	13	28.69	29.63	06	CLR	NC			10.00	11	8	10	88	0	00	29.15	30.12								
09	OVC	012			5.00BR	49	47	48	93	14	15	28.65	29.59	09	CLR	NC			10.00	17	12	16	80	3	01	29.12	30.10								
12	OVC	014			10.00	52	48	50	86	18	16	28.60	29.53	12	FEW	NC			10.00	22	14	20	71	6	01	29.04	30.01								
15	OVC	065			8.00-RA	51	46	49	83	21	15	28.55	29.47	15	CLR	NC			10.00	25	13	21	60	12	01	28.98	29.95								
18	OVC	013			10.00	50	47	48	89	13	18	28.60	29.52	18	OVC	029			10.00	24	15	21	68	10	01	28.96	29.92								
21	OVC	008			9.00	50	49	49	96	3	VR	28.61	29.54	21	OVC	025			10.00	24	17	22	75	10	36	28.93	29.89								
24	FEW	NC			7.00	42	38	40	85	8	24	28.64	29.57	24	OVC	019			9.00	23	18	21	81	8	35	28.91	29.87								

OBSERVATIONS AT 3-HOURLY INTERVALS

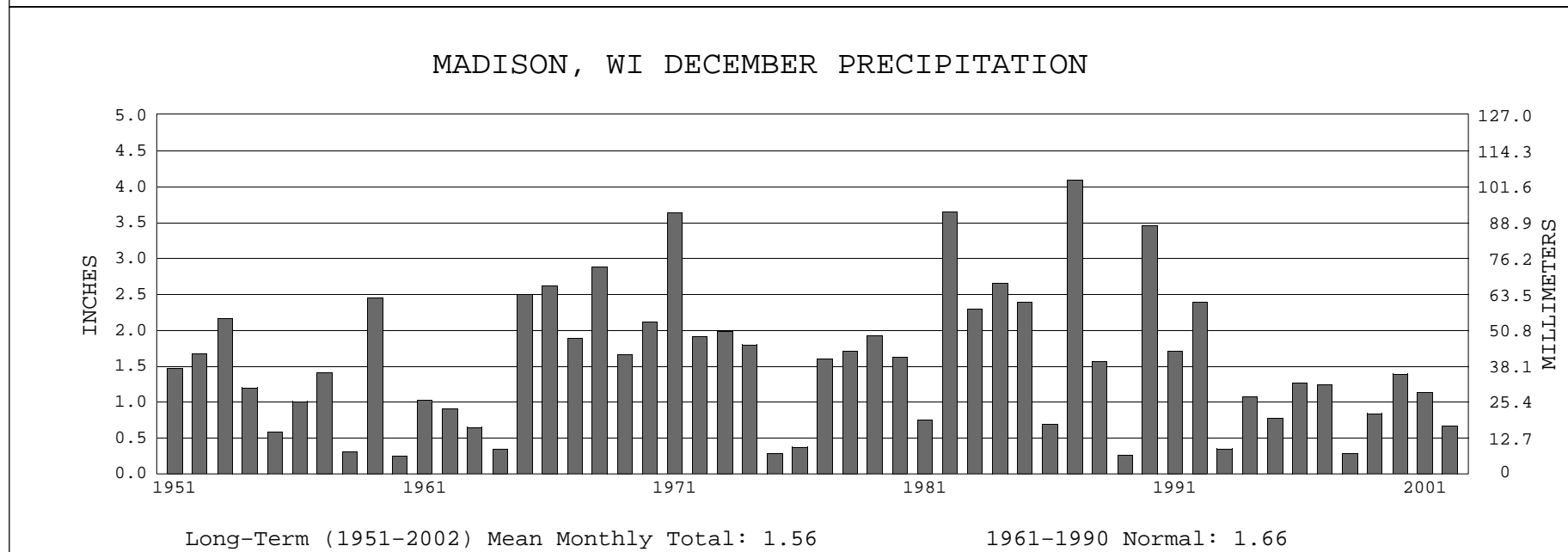
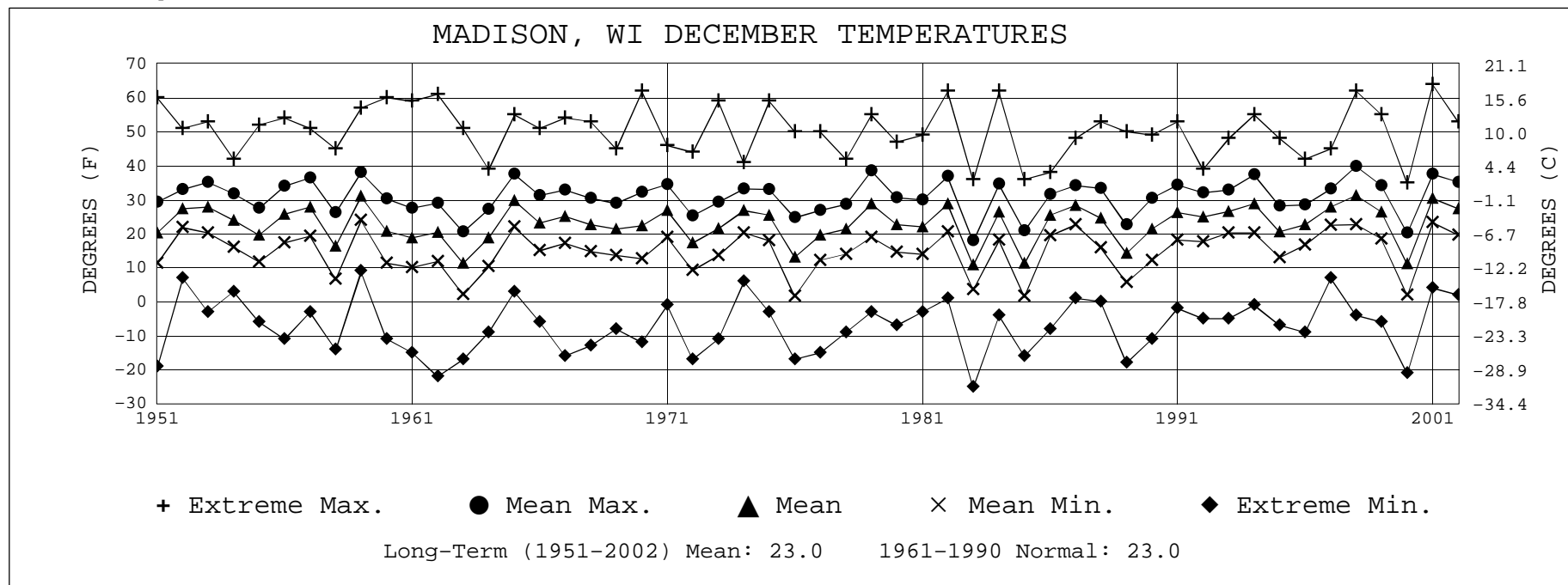
MADISON, WI

DECEMBER 2002

MSN

WBAN # 14837

HOUR (LST)	SKY COVER		CEILING 100'S OFFT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES,HG)		HOUR (LST)	SKY COVER		CEILING 100'S OFFT	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	
SUNRISE: 0728 DEC 25 SUNSET: 1628								23	18	21	81	8	35	28.93	29.89	03	CLR	NC			10.00		28	17	24	63	5	VR	29.00	29.95		
06	OVC	034				10.00		23	17	21	78	9	33	28.97	29.93	06	CLR	NC			10.00		25	16	22	69	5	VR	29.03	29.98		
09	OVC	025				10.00		24	17	22	75	7	32	29.02	29.99	09	CLR	NC			10.00		26	17	23	69	9	31	29.07	30.03		
12	OVC	013				10.00		24	18	22	77	9	29	29.04	30.01	12	CLR	NC			10.00		30	15	25	54	7	30	29.04	30.01		
15	OVC	013				10.00		23	18	21	81	12	29	29.08	30.05	15	CLR	NC			10.00		34	13	27	42	7	34	29.04	30.00		
18	OVC	015				10.00		23	17	21	78	6	27	29.13	30.10	18	CLR	NC			10.00		25	14	22	63	0	00	29.15	30.11		
21	OVC	013				7.00		24	19	22	81	6	27	29.19	30.16	21	CLR	NC			10.00		24	13	21	62	7	34	29.11	30.07		
24	BKN	013				8.00		23	18	21	81	9	28	29.21	30.18	24	CLR	NC			10.00		21	11	18	65	7	36	29.12	30.09		
SUNRISE: 0728 DEC 26 SUNSET: 1628								21	17	20	85	8	24	29.24	30.21	3-HOURLY OBSERVATION NOTES																
03	CLR	NC				10.00		20	15	19	81	5	24	29.24	30.21	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.																
06	CLR	NC				10.00		21	16	20	81	6	25	29.29	30.27	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.																
09	CLR	NC				8.00		31	17	26	56	10	23	29.28	30.24	NC= No ceiling detected.																
12	CLR	NC				10.00		35	19	29	52	8	24	29.26	30.22	& = Original observation contained additional weather elements.																
15	CLR	NC				10.00		29	19	26	66	3	22	29.27	30.24	See page 3 for additional notes.																
18	CLR	NC				10.00		29	20	26	69	6	22	29.27	30.24																	
21	CLR	NC				10.00		29	19	26	66	8	21	29.26	30.22																	
24	CLR	NC				10.00		29	19	26	66	8	21	29.26	30.22																	
SUNRISE: 0728 DEC 27 SUNSET: 1629								26	18	23	71	5	20	29.26	30.22																	
03	CLR	NC				10.00		21	18	20	88	8	16	29.23	30.20																	
06	FEW	NC				8.00		25	19	23	78	12	19	29.23	30.20																	
09	CLR	NC				4.00	HZ	34	26	31	73	7	21	29.17	30.12																	
12	CLR	NC				6.00	HZ	34	27	31	76	10	22	29.14	30.10																	
15	OVC	018				7.00		33	26	30	75	9	23	29.12	30.09																	
18	SCT	NC				6.00	HZ	32	27	30	82	10	23	29.11	30.07																	
21	OVC	014				4.00	HZ	31	27	29	85	7	23	29.08	30.04																	
24	OVC	012				4.00	BR																									
SUNRISE: 0728 DEC 28 SUNSET: 1630								32	27	30	82	6	22	29.05	30.00																	
03	OVC	110				4.00	HZ	31	27	29	85	7	20	29.01	29.97																	
06	BKN	075				3.00	BR	31	28	30	89	8	18	28.97	29.91																	
09	OVC	008				2.00	BR	35	27	32	72	8	19	28.90	29.85																	
12	SCT	NC				4.00	HZ	36	26	32	67	5	VR	28.92	29.87																	
15	CLR	NC				7.00		28	23	26	81	0	00	28.99	29.94																	
18	CLR	NC				4.00	HZ	25	23	24	92	0	00	29.05	30.01																	
21	CLR	NC				4.00	BR	22	20	21	92	0	00	29.07	30.03																	
24	CLR	NC				4.00	BR																									
SUNRISE: 0729 DEC 29 SUNSET: 1630								25	24	25	96	0	00	29.09	30.05																	
03	OVC	110				3.00	BR	27	25	26	92	0	00	29.10	30.06																	
06	FEW	NC				3.00	BR	31	28	30	89	9	13	29.12	30.09																	
09	CLR	NC				2.50	BR	40	30	36	68	14	12	29.05	30.01																	
12	CLR	NC				3.00	HZ	43	30	38	60	15	13	28.98	29.92																	
15	CLR	NC				6.00	HZ	35	29	33	78	16	12	28.90	29.85																	
18	CLR	NC				4.00	HZ	33	29	31	85	9	13	28.85	29.79																	
21	CLR	NC				4.00	BR	34	30	32	85	8	11	28.75	29.69																	
24	BKN	050				4.00	BR																									
SUNRISE: 0729 DEC 30 SUNSET: 1631								40	35	38	83	12	15	28.69	29.62																	
03	OVC	047				6.00	HZ	43	40	42	89	12	16	28.63	29.57																	
06	OVC	010				5.00	BR	47	44	46	90	9	18	28.62	29.55																	
09	OVC	008				4.00	BR	51	48	49	89	7	21	28.60	29.53																	
12	OVC	011				4.00	BR	52	42	47	69	9	24	28.64	29.57																	
15	BKN	035				10.00		43	33	39	68	12	29	28.78	29.72																	
18	CLR	NC				10.00		35	28	32	76	12	29	28.88	29.82																	
21	CLR	NC				7.00		31	18	27	59	9	28	28.94	29.87																	
24	CLR	NC				10.00																										





DECEMBER 2002

MADISON, WI

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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