

2002

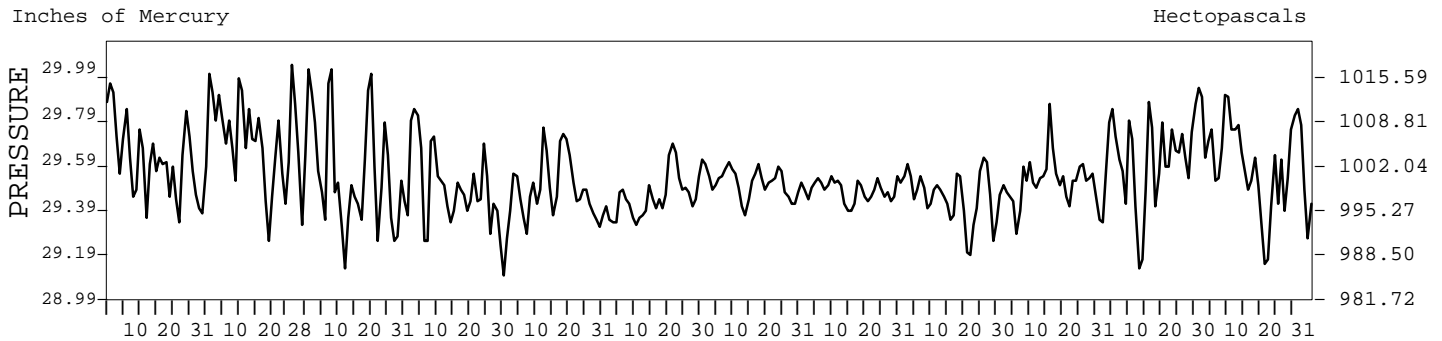
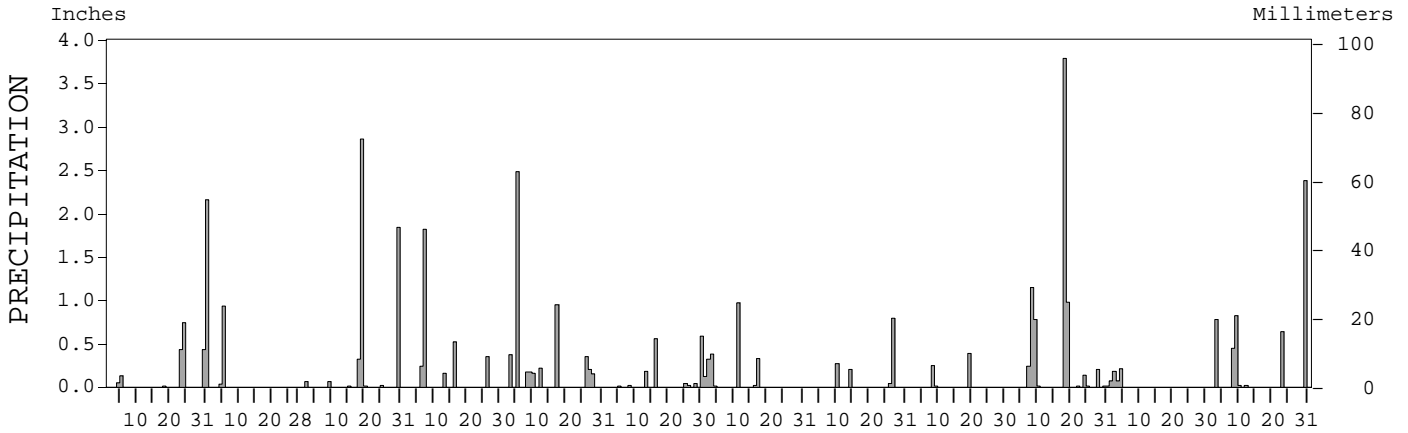
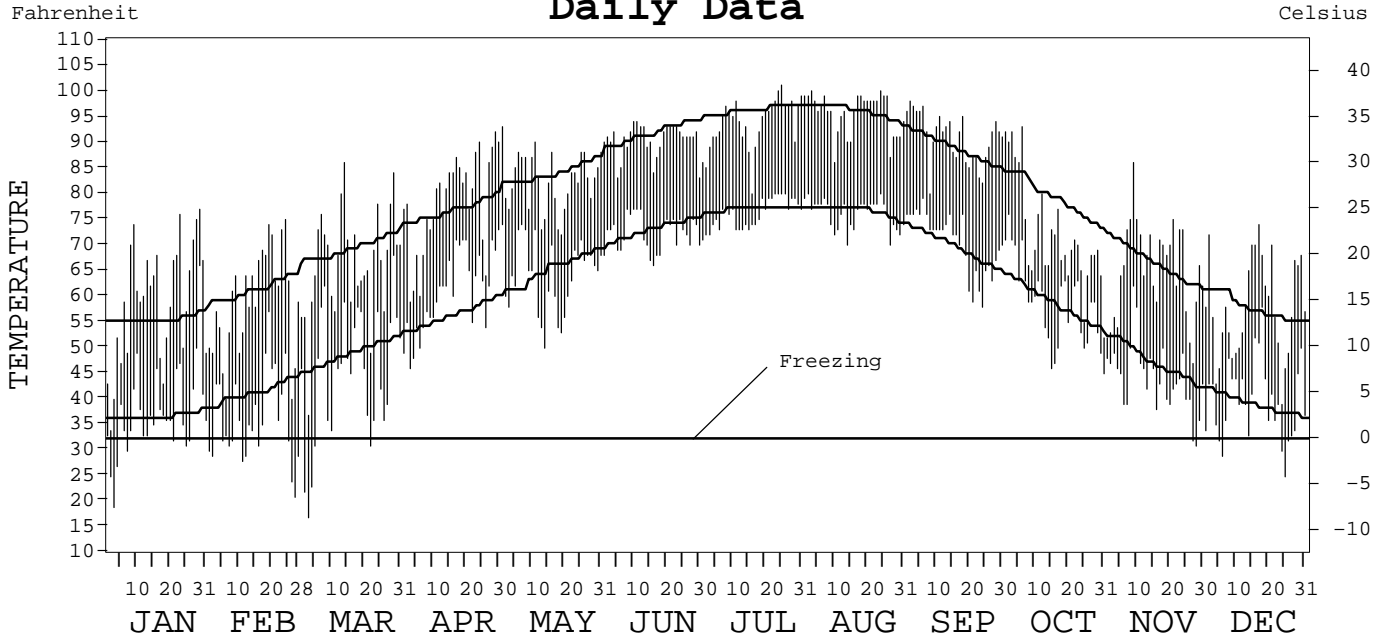
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 1528-7408

DALLAS,
TEXAS (DAL)

Daily Data



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Thomas R. Karl

NATIONAL
OCEANIC AND
ATMOSPHERIC ADMINISTRATION

NATIONAL
ENVIRONMENTAL SATELLITE, DATA,
AND INFORMATION SERVICE

NATIONAL
CLIMATIC DATA CENTER
ASHEVILLE, NORTH CAROLINA

DIRECTOR
NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 2002

DALLAS, TX (DAL)

LATITUDE: 32° 50' 49" N LONGITUDE: 96° 51' 05" W ELEVATION (FT): GRND: 509 BARO: 512 TIME ZONE: CENTRAL (UTC + 6) WBAN: 13960

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	59.1	58.9	66.5	78.3	82.5	90.4	93.6	95.6	90.9	72.2	65.2	57.8	75.9	
	HIGHEST DAILY MAXIMUM	77	75	86	92	93	94	101	100	98	93	86	74	101	
	DATE OF OCCURRENCE	29	24	14	29	01	11+	25	24+	02	06	09	17	JUL 25	
	MEAN DAILY MINIMUM	37.4	36.2	45.0	60.8	64.1	72.3	76.0	76.1	70.4	58.6	44.1	39.6	56.7	
	LOWEST DAILY MINIMUM	19	21	17	46	50	66	71	70	58	45	31	25	17	
	DATE OF OCCURRENCE	03	27	03	03	14	16	01	27+	24	31	28	25	MAR 03	
	AVERAGE DRY BULB	48.3	47.6	55.8	69.6	73.3	81.4	84.8	85.9	80.7	65.4	54.7	48.7	66.4	
	MEAN WET BULB	42.7	40.8	49.2	63.4	66.9	72.4	75.2	74.6	69.5	59.6	47.0	44.9	58.8	
	MEAN DEW POINT	34.8	30.5	42.4	59.2	62.8	68.0	71.3	69.7	63.7	55.6	39.4	39.8	53.1	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	3	2	22	25	29	19	4	0	0	0	104
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	7	12	5	0	0	0	0	0	0	0	2	5	31	
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0		
H/C	HEATING DEGREE DAYS	518	482	310	48	6	0	0	0	89	315	498	2266		
	COOLING DEGREE DAYS	7	1	28	190	275	496	624	653	476	113	0	2874		
RH	MEAN (PERCENT)	64	55	67	72	71	67	67	61	59	75	61	73	66	
	HOUR 00 LST	69	61	72	75	76	74	74	69	67	78	68	79	72	
	HOUR 06 LST	76	72	76	84	87	86	85	81	80	86	78	84	81	
	HOUR 12 LST	55	45	63	66	63	56	58	52	49	68	47	65	57	
	HOUR 18 LST	52	40	56	62	57	54	53	46	44	68	48	64	54	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	0	0	0	0	0	0	0	0	0	0	0	2	2	
	THUNDERSTORMS	4	0	4	5	11	6	5	4	1	4	0	3	47	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)														
	SATELLITE (> 12,000 FT.)														
NUMBER OF DAYS WITH:															
CLEAR															
PARTLY CLOUDY															
CLOUDY															
PR	MEAN STATION PRESS. (IN.)	29.59	29.69	29.53	29.47	29.45	29.43	29.49	29.46	29.42	29.50	29.61	29.55	29.52	
	MEAN SEA-LEVEL PRESS. (IN.)	30.11	30.21	30.05	29.98	29.95	29.93	29.99	29.96	29.92	30.01	30.13	30.07	30.03	
WINDS	RESULTANT SPEED (MPH)	1.5	0.9	2.3	3.9	5.9	5.3	3.3	2.9	2.3	3.0	1.0	1.3	2.0	
	RES. DIR. (TENS OF DEGS.)	19	18	16	14	14	10	20	12	09	08	31	21	14	
	MEAN SPEED (MPH)	9.4	9.6	12.3	11.9	11.9	9.8	8.1	9.0	7.8	7.9	8.0	8.8	9.5	
	PREVAIL. DIR. (TENS OF DEGS.)	17	16	18	17	17	16	17	17	13	13	35	18	17	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	28	37	37	31	30	38	32	35	26	31	28	36	38	
	DIR. (TENS OF DEGS.)	35	33	32	27	17	35	17	33	18	34	18	31	35	
	DATE OF OCCURRENCE	24	26	09	07	11	13	17	27+	18+	06	08	30	JUN 13	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	35	41	44	44	37	44	37	46	33	40	32	45	46	
DIR. (TENS OF DEGS.)	36	33	35	28	27	34	17	01	18	34	20	31	01		
DATE OF OCCURRENCE	24+	26	09	07	09	13	17	25	18	06	14+	30	AUG 25		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	3.95	0.96	5.18	3.09	5.22	1.46	2.15	1.30	0.65	7.33	0.53	5.11	36.93	
	GREATEST 24-HOUR (IN.)	2.55	0.96	2.86	1.88	2.48	0.59	0.97	0.79	0.39	4.77	0.21	2.38	4.77	
	DATE OF OCCURRENCE	30-31	04-05	19	06-07	05	30	11	27	19	18-19	04+	30	OCT 18-19	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	7	2	8	5	10	8	7	4	3	12	4	7	77	
PRECIPITATION ≥ 0.10	5	1	3	5	10	3	5	3	2	7	2	5	51		
PRECIPITATION ≥ 1.00	1	0	2	1	1	0	0	0	0	2	0	1	8		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)														
	GREATEST 24-HOUR (IN.)														
	DATE OF OCCURRENCE														
	MAXIMUM SNOW DEPTH (IN.)														
	DATE OF OCCURRENCE														
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0															

NORMALS, MEANS, AND EXTREMES

DALLAS, TX (DAL)

LATITUDE: 32° 50' 49" N LONGITUDE: 96° 51' 05" W ELEVATION (FT): GRND: 509 BARO: 512 TIME ZONE: CENTRAL (UTC + 6) WBAN: 13960

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	55.4	61.0	69.1	76.5	83.8	91.6	96.1	95.8	88.5	78.6	66.0	57.4	76.7	
	MEAN DAILY MAXIMUM	3	57.4	62.9	66.1	76.8	84.8	90.0	96.3	97.3	89.4	75.9	64.5	55.4	76.4	
	HIGHEST DAILY MAXIMUM	3	80	81	86	92	96	97	104	106	110	93	86	80	110	
	YEAR OF OCCURRENCE		2000	2000	2002	2002	2000	2001	2000	2000	2000	2002	2002	1999	2002	SEP 2000
	MEAN OF EXTREME MAXS.	3	75.3	77.3	82.0	88.0	94.3	95.3	102.7	102.6	97.9	88.7	80.8	70.1	87.9	
	NORMAL DAILY MINIMUM	30	36.4	41.0	48.5	56.1	64.9	72.7	76.8	76.4	69.2	58.2	46.8	38.6	57.1	
	MEAN DAILY MINIMUM	3	37.7	41.5	46.9	58.7	66.0	72.2	77.8	78.1	68.8	58.3	47.4	38.6	57.7	
	LOWEST DAILY MINIMUM	3	19	21	17	41	50	62	69	70	49	39	29	21	17	
	YEAR OF OCCURRENCE		2002	2002	2002	2000	2002	2000	2001	2002	2000	2000	2001	2001	2000	MAR 2002
	MEAN OF EXTREME MINS.	3	21.3	25.7	30.0	43.7	53.0	63.7	70.3	71.3	53.3	42.0	30.0	25.0	44.1	
	NORMAL DRY BULB	30	44.6	49.1	57.8	66.7	73.9	81.5	85.9	85.5	78.0	67.8	56.8	47.7	66.3	
	MEAN DRY BULB	3	47.6	52.2	56.5	67.8	75.4	81.2	87.1	88.2	79.1	67.7	57.2	47.7	67.3	
	MEAN WET BULB	3	42.5	46.8	50.6	61.5	67.9	72.5	74.9	74.4	68.2	59.9	51.0	43.0	59.4	
	MEAN DEW POINT	3	35.8	40.0	44.7	56.6	63.5	68.3	69.5	68.0	62.0	54.1	44.8	36.7	53.7	
	NORMAL NO. DAYS WITH: MAXIMUM ≥ 90° MAXIMUM ≤ 32° MINIMUM ≤ 32° MINIMUM ≤ 0°															
	H/C	NORMAL HEATING DEG. DAYS	30	605	415	238	75	9	0	0	0	7	62	281	527	2219
		NORMAL COOLING DEG. DAYS	30	2	9	39	110	290	511	659	646	417	162	28	5	2878
RH	NORMAL (PERCENT)															
	HOUR 00 LST															
	HOUR 06 LST															
	HOUR 12 LST															
	HOUR 18 LST															
S	PERCENT POSSIBLE SUNSHINE															
W/O	MEAN NO. DAYS WITH: HEAVY FOG(VISBY≤1/4 MI)	3	0.0	0.7	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.2	0.2	1.2	2.6	
	THUNDERSTORMS	3	2.0	3.3	5.0	5.7	8.7	7.0	2.0	3.0	3.5	4.5	1.5	2.8	49.0	
CLOUDINESS	MEAN: SUNRISE-SUNSET (OKTAS)															
	MIDNIGHT-MIDNIGHT (OKTAS)															
	MEAN NO. DAYS WITH: CLEAR															
	PARTLY CLOUDY CLOUDY															
PR	MEAN STATION PRESSURE(IN)	3	29.60	29.61	29.48	29.47	29.40	29.43	29.44	29.44	29.43	29.55	29.58	29.60	29.50	
	MEAN SEA-LEVEL PRES. (IN)	3	30.15	30.15	30.02	29.99	29.92	29.94	29.96	29.95	29.95	30.06	30.11	30.14	30.03	
WINDS	MEAN SPEED (MPH)	3	9.1	10.1	10.3	11.4	11.8	10.3	9.1	8.5	8.3	9.0	8.2	9.1	9.6	
	PREVAIL.DIR (TENS OF DEGS)															
	MAXIMUM 2-MINUTE: SPEED (MPH)	3	34	38	37	36	37	38	32	35	32	36	30	36	38	
	DIR. (TENS OF DEGS)		30	19	32	18	02	35	17	33	02	14	01	31	35	
	YEAR OF OCCURRENCE		2000	2001	2002	2001	2001	2002	2002	2002	2001	2000	1999	2002	JUN 2002	
	MAXIMUM 5-SECOND: SPEED (MPH)	3	41	47	47	44	47	44	37	46	48	43	38	45	48	
	DIR. (TENS OF DEGS)		30	18	29	28	29	34	17	01	32	14	30	31	32	
YEAR OF OCCURRENCE		2000	2001	2000	2002	2000	2002	2002	2002	2001	2000	2001	2002	SEP 2001		
PRECIPITATION	NORMAL (IN)	30	1.89	2.31	3.13	3.46	5.30	3.92	2.43	2.17	2.65	4.65	2.61	2.53	37.05	
	MAXIMUM MONTHLY (IN)	3	3.95	6.80	5.18	3.13	5.22	9.71	2.15	2.64	3.31	7.33	7.01	5.11	9.71	
	YEAR OF OCCURRENCE		2002	2001	2002	2000	2002	2000	2002	2001	2002	2000	2000	2002	JUN 2000	
	MINIMUM MONTHLY (IN)	3	2.55	3.81	2.86	1.88	2.48	3.32	T	0.79	0.65	2.38	0.53	3.36	T	
	YEAR OF OCCURRENCE		2000	2002	2000	2001	2001	2002	2002	2002	2002	1999	2002	2000	JUL 2002	
	MAXIMUM IN 24 HOURS (IN)	3	2.55	3.81	2.86	1.88	2.48	3.32	T	T	1.44	4.77	1.65	3.36	4.77	
	YEAR OF OCCURRENCE		2002	2001	2002	2002	2002	2000	2002	2000	2001	2002	2000	2001	OCT 2002	
	NORMAL NO. DAYS WITH: PRECIPITATION ≥ 0.01 PRECIPITATION ≥ 1.00															
SNOWFALL	NORMAL (IN)	30	0.8	0.6	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	1.8	
	MAXIMUM MONTHLY (IN)															
	YEAR OF OCCURRENCE															
	MAXIMUM IN 24 HOURS (IN)															
	YEAR OF OCCURRENCE															
MAXIMUM SNOW DEPTH (IN)																
YEAR OF OCCURRENCE																
NORMAL NO. DAYS WITH: SNOWFALL ≥ 1.0	30	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7		

PRECIPITATION (inches) 2002 DALLAS, TX (DAL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1999			2.76	2.15	6.98	1.61	1.50	T	1.26	2.57	1.55	4.45	
2000	1.82	1.72	3.55	3.13	2.90	9.71	T	0.00	0.03	5.64	7.01	3.52	39.03
2001	2.16	6.80	4.53	1.29	2.63	1.63	1.84	2.64	3.31	3.07	1.06	4.34	35.30
2002	3.95	0.96	5.18	3.09	5.22	1.46	2.15	1.30	0.65	7.33	0.53	5.11	36.93
POR= 3 YRS	2.65	3.17	4.01	2.43	4.44	3.61	1.38	1.33	1.32	4.66	2.55	4.37	35.92

WBAN : 13960

AVERAGE TEMPERATURE (°F) 2002 DALLAS, TX (DAL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1999								89.9	79.2	69.2	62.6	51.1	
2000	50.5	57.5	60.6	64.9	77.1	80.3	87.8	90.5	81.1	70.7	50.9	40.7	67.7
2001	44.0	51.6	53.1	68.9	75.8	81.8	88.5	86.3	75.6	65.8	60.6	50.5	66.9
2002	48.3	47.6	55.8	69.6	73.3	81.4	84.8	85.9	80.7	65.4	54.7	48.7	66.4
POR= 3 YRS	47.6	52.3	56.5	67.8	75.4	81.2	87.1	88.2	79.2	67.8	57.3	47.7	67.3

HEATING DEGREE DAYS (base 65°F) 2002 DALLAS, TX (DAL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1998-99									270	44	2	0	
1999-00	0	0	0	47	122	430	447	233	170	82	0	0	1531
2000-01	0	0	10	59	425	745	645	378	364	35	0	0	2661
2001-02	0	0	1	70	178	461	518	482	310	48	6	0	2074
2002-	0	0	0	89	315	498							

WBAN : 13960

COOLING DEGREE DAYS (base 65°F) 2002 DALLAS, TX (DAL)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1999			4	146	274	507	643	778	431	186	57	9	
2000	4	23	39	87	383	464	711	797	499	242	8	0	3257
2001	0	8	1	159	341	508	736	665	330	99	52	16	2915
2002	7	1	28	190	275	496	624	653	476	113	11	0	2874

SNOWFALL (inches) 2002 DALLAS, TX (DAL)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
POR=													

WBAN : 13960

REFERENCE NOTES :

PAGE 1 :
 THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).

PAGE 2 AND 3 :
 H/C INDICATES HEATING AND COOLING DEGREE DAYS.
 RH INDICATES RELATIVE HUMIDITY
 W/O INDICATES WEATHER AND OBSTRUCTIONS
 S INDICATES SUNSHINE.
 PR INDICATES PRESSURE.
 CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).

GENERAL:
 T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE.
 + INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES.
 BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.
 NORMALS ARE 30-YEAR AVERAGES (1961 - 1990).
 ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM.
 PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH.
 POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING.
 WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED.
 0.* OR * INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05.
 CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET.
 THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.

GENERAL CONTINUED:
 CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS. WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED.
 WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH.
 RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION.
 AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2.
 SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL.
 A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F.
 DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR.
 DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY.
 WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.

ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.

2002
DALLAS,
TEXAS (DAL)

No Narrative.

STATION LOCATION

DALLAS, TEXAS

LOCATION	Occupied From	Occupied To	Airline Distances and Directions from previous Location	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATIC OBSERVING EQUIPMENT *	* TYPE M = AMOS T = AUTOB S = ASOS W = AWOS REMARKS
						GROUND											
						SEA LEVEL	GROUND	WIND INSTRUMENT	EXTREME THERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	TIPPING GAUGE	RAINING GAUGE	8 INCH RAIN GAGE	HYGROMETER		
Dallas Love Field	11/19/97	Present	NA	32°50'	96°51'	a509										S	ASOS Commissioned 11/19/97. a. Ground elevation.

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