



MAY 2004

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

HOUSTON, TX

G BUSH INTCNTL APT/HOU APT (IAH)
 Lat: 29°59' N Long: 95°21' W Elev (Ground): 118 Feet
 Time Zone: CENTRAL WBAN: 12960 ISSN #:0198-5094

MAY 2004
HOUSTON, TX

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	74	58	66	-6	62	64	0	1	TS TSRA RA BR	0		0.0	2.53	29.81	29.93	2.4	35	14.6	35	05	30	05	01													
02	74	55	65*	-8	48	55	0	0		0		0.0	0.00	30.02	30.13	10.7	36	11.2	29	01	22	36	02													
03	82	53*	68	-5	51	58	0	3		0		0.0	0.00	30.05	30.17	4.0	27	4.6	16	30	13	29	03													
04	84	60	72	-1	55	62	0	7		0		0.0	0.00	30.01	30.12	5.8	20	7.2	16	16	14	16	04													
05	83	60	72	-1	60	64	0	7		0		0.0	0.00	29.99	30.10	6.0	16	6.7	21	13	17	11	05													
06	83	62	73	-1	62	66	0	8		0		0.0	0.00	30.01	30.13	7.0	15	7.4	22	13	18	13	06													
07	84	64	74	0	65	68	0	9		0		0.0	0.00	30.03	30.15	8.0	13	8.4	23	13	20	14	07													
08	83	68	76	2	67	70	0	11	RA BR	0		0.0	T	29.99	30.10	8.4	13	9.0	25	11	21	12	08													
09	86	70	78	4	65	69	0	13	RA BCFG	0		0.0	T	29.92	30.03	9.9	14	10.3	26	12	22	13	09													
10	82	67	75	0	69	70	0	10	TSRA RA BR	0		0.0	0.49	29.89	30.00	8.5	14	8.8	25	14	22	14	10													
11	82	67	75	0	69	70	0	10	TS TSRA RA BR	0		0.0	1.97	29.82	29.94	6.9	14	7.6	39	10	32	11	11													
12	87	72	80	5	73	75	0	15	RA BR	0		0.0	0.02	29.77	29.88	10.5	16	10.9	21	16	18	16	12													
13	81	65	73	-2	68	69	0	8	TS TSRA RA BR	0		0.0	1.80	29.81	29.92	6.4	13	12.4	41*	01	33*	01	13													
14	80	64	72	-3	64	67	0	7	TSRA RA	0		0.0	0.36	29.93	30.04	7.1	34	8.5	25	02	18	36	14													
15	83	62	73	-3	63	66	0	8		0		0.0	0.00	29.98	30.10	7.1	02	8.4	21	01	16	01	15													
16	85	66	76	0	68	70	0	11	RA BR	0		0.0	0.02	29.95	30.06	5.5	08	6.9	26	10	22	12	16													
17	85	71	78	1	72	74	0	13	TS TSRA RA BR	0		0.0	0.01	29.96	30.07	6.8	15	7.2	22	15	18	15	17													
18	88	71	80	3	71	73	0	15	BR	0		0.0	0.00	29.97	30.08	6.8	14	7.3	22	18	15	11	18													
19	89	72	81	4	71	73	0	16		0		0.0	0.00	29.97	30.08	6.7	15	7.4	24	15	20	14	19													
20	88	72	80	3	70	73	0	15		0		0.0	0.00	30.02	30.14	9.3	14	9.8	24	14	21	14	20													
21	88	71	80	3	70	73	0	15	RA	0		0.0	T	29.97	30.09	9.2	15	9.5	24	14	21	14	21													
22	89	72	81	4	69	72	0	16		0		0.0	0.00	29.84	29.96	10.9	17	11.0	25	15	22	15	22													
23	90	71	81	4	68	72	0	16		0		0.0	0.00	29.79	29.91	10.6	17	10.8	28	15	22	16	23													
24	90	71	81	4	69	73	0	16		0		0.0	0.00	29.82	29.94	9.5	17	9.6	25	15	21	15	24													
25	91	72	82	4	70	73	0	17		0		0.0	0.00	29.82	29.93	9.5	17	9.8	23	16	18	15	25													
26	90	72	81	3	69	73	0	16		0		0.0	0.00	29.80	29.92	9.1	18	9.4	24	16	21	16	26													
27	92	73	83	5	70	74	0	18		0		0.0	0.00	29.74	29.85	9.1	19	9.4	26	16	22	16	27													
28	87	75	81	3	73	75	0	16	RA BR	0		0.0	0.12	29.74	29.85	6.1	19	7.1	16	22	13	22	28													
29	91	74	83	5	74	77	0	18		0		0.0	0.00	29.67	29.79	12.1	16	12.2	26	17	23	17	29													
30	92	80	86	7	76	78	0	21	RA	0		0.0	0.01	29.61	29.72	11.5	17	11.7	23	19	18	17	30													
31	96*	80	88*	9	76	79	0	23	BR	0		0.0	0.00	29.63	29.74	6.2	15	7.6	20	13	15	12	31													
85.8											68.1	77.0	■ ■	67.0	70.2	0.0	12.2	< MONTHLY AVERAGES		TOTALS->		0.0	7.33	29.88	30.00	2.0	23	9.1	<- MONTHLY AVERAGES							
0.3											2.0	1.2	■ ■	->-----DEPARTURE FROM NORMAL-----<											2.18	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 2.53		DATE :01		SEA LEVEL PRESSURE		DATE		TIME																		
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: 0.0		DATE :		MAXIMUM		: 30.24		03 0853																		
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH: 0		DATE :		MINIMUM		: 29.66		30 1853																		
HEATING: 0 -2 1177 -348										NUMBER OF DAYS WITH		MAXIMUM TEMP ≥ 90: 8		MINIMUM TEMP ≤ 32: 0		PRECIPITATION ≥ 0.01 INCH: 10																				
COOLING: 379 51 681 107										→		MAXIMUM TEMP ≤ 32: 0		MINIMUM TEMP ≤ 0: 0		PRECIPITATION ≥ 0.10 INCH: 6																				
												THUNDERSTORMS: 6		HEAVY FOG: 0		SNOWFALL ≥ 1.0 INCH: 0																				

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

HOUSTON, TX

MAY 2004

IAH

WBAN # 12960

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	0.01	0.01	0.07	0.02	0.02	0.09	0.04	0.01	1.40	0.29	.13	0.31	01	0.13	T	T									01		2.53	
02													02												02		0.00	
03													03												03		0.00	
04													04												04		0.00	
05													05												05		0.00	
06													06												06		0.00	
07													07												07		0.00	
08													08	T											08		T	
09													09												09		T	
10												0.04	10	0.43	0.01		T		T	0.01	T				10		0.49	
11												0.89	11	0.13	T	0.07	0.60	0.17	T	0.10	0.01				11		1.97	
12													12							T	T				12		0.02	
13	T	0.01	T	0.01					0.01	T			13	0.57	0.38	0.13	0.20	0.05	0.01	0.02	0.09	0.12	0.14	0.04	0.04	13		1.80
14	0.08	0.08	0.10	0.08	0.01	0.01							14												14		0.36	
15													15												15		0.00	
16													16			0.02	T								16		0.02	
17													17	0.01	T		T								17		0.01	
18													18												18		0.00	
19													19												19		0.00	
20													20												20		0.00	
21													21												21		T	
22													22												22		0.00	
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	0.01	0.10	0.01	T	T							28		0.12	
29													29												29		0.00	
30													30								0.01	T			30		0.01	
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)	.48	.88	1.08	1.20	1.35	1.42	1.52	1.64	1.69	1.73	1.80	1.96
Ending Date	01	01	01	01	01	01	01	01	01	01	01	01
Ending Time (Hour/Min)	0830	0832	0835	0839	0844	0859	0915	0932	0951	1016	1050	1120

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 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

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		
	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

HOUSTON, TX MAY 2004

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:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							.25	10.00	
02							10.00	10.00	
03							10.00	10.00	
04							10.00	10.00	
05							9.00	10.00	
06							10.00	10.00	
07							7.00	10.00	
08							2.50	10.00	
09							7.00	10.00	
10							2.00	10.00	
11							.75	10.00	
12							6.00	10.00	
13							.75	10.00	
14							8.00	10.00	
15							10.00	10.00	
16							6.00	10.00	
17							6.00	10.00	
18							5.00	10.00	
19							8.00	10.00	
20							8.00	10.00	
21							7.00	10.00	
22							8.00	10.00	
23							10.00	10.00	
24							9.00	10.00	
25							7.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							6.00	10.00	
29							7.00	10.00	
30							6.00	10.00	
31							6.00	10.00	
MONTHLY AVGS							7.18	10.00	
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									
0 4 23									

OBSERVATIONS AT 3-HOURLY INTERVALS

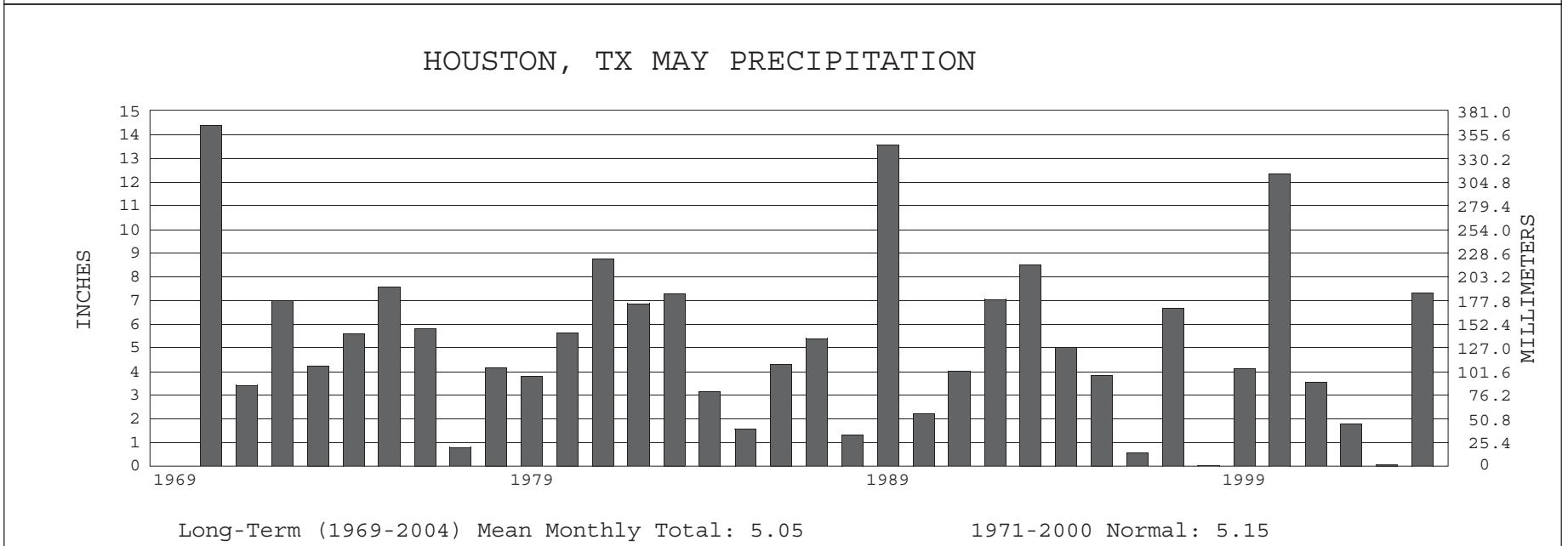
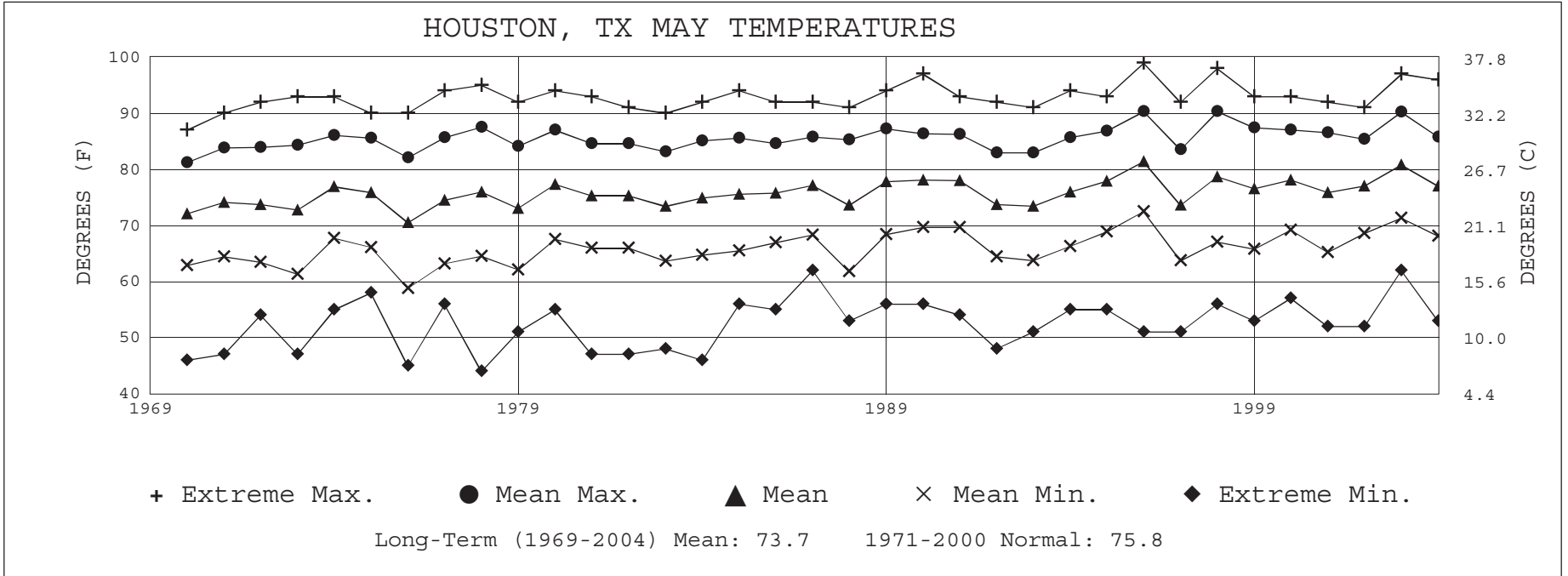
HOUSTON, TX

MAY 2004

IAH

WBAN # 12960

HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)			
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)		DIRECTION TENS OF DEG	STATION		SEA LEVEL	OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG
SUNRISE: 0523 MAY 25 SUNSET: 1914												SUNRISE: 0521 MAY 31 SUNSET: 1917													
03	SCT	NC			74	71	72	91	3	17	29.80	29.91	03	OVC	017			81	77	78	88	7	18	29.61	29.73
06	BKN	250			73	71	72	94	7	16	29.79	29.90	06	OVC	015			81	77	78	88	3	17	29.63	29.75
09	BKN	250			81	70	74	69	15	19	29.84	29.96	09	BKN	044			86	76	79	72	8	18	29.66	29.77
12	BKN	250			88	66	73	48	13	19	29.83	29.94	12	BKN	050			92	75	80	58	5	VR	29.65	29.77
15	BKN	250			89	68	75	50	14	16	29.81	29.92	15	SCT	NC			95	72	79	47	6	VR	29.60	29.72
18	BKN	250			85	71	75	63	14	16	29.79	29.90	18	SCT	NC			89	75	79	63	14	12	29.58	29.70
21	SCT	NC			78	71	73	79	13	17	29.85	29.97	21	SCT	NC			84	77	79	80	13	15	29.64	29.76
24	SCT	NC			75	71	72	88	6	17	29.85	29.96	24	OVC	013			82	76	78	82	8	06	29.69	29.81
SUNRISE: 0523 MAY 26 SUNSET: 1914												3-HOURLY OBSERVATION NOTES													
03	SCT	NC			73	70	71	90	6	16	29.81	29.92	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.												
06	BKN	250			73	70	71	90	5	18	29.84	29.96	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.												
09	BKN	250			82	70	74	67	12	19	29.88	29.99	NC = No ceiling detected.												
12	OVC	250			87	67	74	51	15	20	29.81	29.93	& = Original observation contained additional weather elements.												
15	BKN	044			88	69	75	54	13	18	29.76	29.87	See page 3 for additional notes.												
18	SCT	NC			85	69	74	59	14	16	29.74	29.85													
21	SCT	NC			78	69	72	74	12	17	29.77	29.89													
24	SCT	NC			75	70	72	84	7	17	29.76	29.88													
SUNRISE: 0522 MAY 27 SUNSET: 1915												SUMMARY BY HOUR													
03	SCT	NC			74	71	72	91	10	18	29.72	29.83	AVERAGES												
06	SCT	NC			74	71	72	91	7	18	29.74	29.85	HOUR (LST)	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	RESULTANT WIND (MPH)	
09	BKN	250			82	70	74	67	12	19	29.77	29.89								STATION	SEA LEVEL			SPEED	DIRECTION
12	BKN	250			87	68	74	53	9	22	29.76	29.88	01			71	67	69	88	29.88	29.99	9.19	6	5	16
15	BKN	250			91	67	75	45	14	18	29.70	29.81	02			70	67	68	89	29.87	29.99	9.00	5	4	17
18	BKN	250			85	70	75	61	15	17	29.66	29.78	03			70	67	68	90	29.87	29.98	8.65	5	3	17
21	SCT	NC			79	71	74	77	5	19	29.74	29.85	04			70	67	68	91	29.87	29.98	8.68	5	3	16
24	BKN	250			76	72	73	88	5	16	29.77	29.89	05			70	67	68	91	29.87	29.99	8.68	4	2	16
SUNRISE: 0522 MAY 28 SUNSET: 1915												06			70	67	68	90	29.88	30.00	8.31	5	3	14	
03	BKN	250			75	72	73	90	8	17	29.72	29.83	07			72	68	69	87	29.90	30.01	8.58	7	5	15
06	OVC	010			76	73	74	91	0	00	29.75	29.86	08			75	68	71	79	29.90	30.02	9.32	10	6	16
09	OVC	120			83	73	76	72	10	23	29.78	29.90	09			77	67	71	72	29.92	30.03	9.56	10	6	17
12	OVC	090			87	71	76	59	8	23	29.76	29.88	10			80	66	71	64	29.92	30.03	9.65	12	6	16
15	OVC	045		-RA	82	76	78	82	8	22	29.72	29.84	11			81	66	71	60	29.92	30.03	9.77	11	6	16
18	OVC	065			85	73	77	68	8	18	29.70	29.81	12			81	65	71	60	29.91	30.02	9.35	11	4	15
21	BKN	250			79	68	72	69	12	16	29.72	29.83	13			83	66	72	59	29.88	30.00	9.36	13	6	14
24	BKN	014			77	73	74	88	8	17	29.72	29.84	14			83	66	72	58	29.87	29.99	9.71	12	8	15
SUNRISE: 0522 MAY 29 SUNSET: 1916												15			82	66	72	60	29.86	29.97	9.48	12	8	15	
03	BKN	250			75	73	74	94	3	17	29.70	29.81	16			82	67	72	61	29.84	29.96	9.55	12	8	14
06	BKN	250			76	74	75	94	9	16	29.71	29.83	17			81	66	71	63	29.84	29.96	9.71	14	8	14
09	SCT	NC			83	75	77	77	10	18	29.72	29.84	18			80	67	71	66	29.84	29.95	10.00	13	10	14
12	BKN	035			90	73	78	58	16	17	29.70	29.81	19			77	67	70	71	29.84	29.96	9.74	12	9	14
15	OVC	034			87	73	77	63	17	16	29.65	29.77	20			76	67	70	76	29.86	29.98	9.81	11	8	15
18	BKN	048			85	73	77	68	14	17	29.62	29.73	21			74	67	70	80	29.87	29.99	9.81	9	7	15
21	BKN	036			82	75	77	79	12	16	29.61	29.73	22			73	68	70	84	29.89	30.00	9.65	8	5	16
24	BKN	022			82	76	78	82	15	17	29.61	29.73	23			73	67	69	84	29.89	30.00	9.61	7	5	17
SUNRISE: 0521 MAY 30 SUNSET: 1917												24			72	68	69	87	29.89	30.00	9.48	6	3	17	
03	BKN	027			81	75	77	82	10	16	29.61	29.72													
06	BKN	030			81	74	76	79	13	15	29.62	29.73													
09	OVC	021			84	75	78	74	9	17	29.63	29.75													
12	OVC	031			86	76	79	72	9	16	29.63	29.75													
15	BKN	050			90	75	79	62	17	17	29.58	29.69													
18	BKN	050			87	75	78	67	14	18	29.55	29.67													
21	OVC	021		-RA	82	78	79	88	9	19	29.59	29.71													
24	BKN	017			81	77	78	88	9	18	29.61	29.72													





MAY 2004

HOUSTON, TX

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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