



MARCH 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

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		DEPTH	WATER EQUIV	SNOW FALL	WATER EQUIV	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM				
																			5-SEC	2-MIN	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	72	60	66	7	56	61	0	1	RA BR	0		0.0	0.09	29.88	29.99	1.3	21	5.0	25	31	21	30	01
02	80	58	69	10	63	65	0	4	RA BR	0		0.0	T	29.93	30.05	8.7	12	10.5	25	12	21	14	02
03	79	67	73	13	66	68	0	8	RA BR	0		0.0	0.01	29.90	30.01	13.8	14	14.1	25	14	22	14	03
04	74	67	71	11	67	68	0	6	RA BR HZ	0		0.0	0.04	29.71	29.83	14.8	15	15.7	39*	15	35*	14	04
05	78	58	68	8	57	61	0	3	RA BR	0		0.0	0.16	29.78	29.89	1.0	36	4.4	15	34	14	34	05
06	75	54	65	5	48	55	0	0		0		0.0	0.00	30.01	30.13	4.3	30	5.3	20	33	14	36	06
07	85*	52	69	9	49	58	0	4		0		0.0	0.00	30.12		4.7	33	6.4	18	36	15	01	07
08	72	48	60	-1	34	49	5	0		0		0.0	0.00	30.23	30.34	3.0	02	6.2	21	01	16	36	08
09	82	51	67	6	40	52	0	2		0		0.0	0.00	30.09	30.20	7.3	32	9.2	35	36	23	33	09
10	69	47*	58*	-3	41	50	7	0		0		0.0	0.00	30.11	30.23	8.8	12	10.2	24	13	21	14	10
11	74	49	62	1	49	55	3	0		0		0.0	0.00	30.13	30.25	5.2	11	6.1	18	12	14	14	11
12	70	51	61	-1	50	55	4	0		0		0.0	0.00	30.09	30.20	4.4	11	5.8	17	12	14	14	12
13	68	55	62	0	56	59	3	0	RA	0		0.0	0.03	30.02	30.13	8.6	11	10.4	29	13	22	12	13
14	67	64	66	4	63	64	0	1	TSRA RA FG BR	0		0.0	1.36	30.03	30.14	4.4	07	5.8	14	06	12	04	14
15	75	62	69	7	63	64	0	4	RA FG BR HZ	0		0.0	0.01	29.93	30.04	1.1	08	3.8	12	13	9	13	15
16	79	61	70	8	58	62	0	5	RA FG+ BR	0		0.0	0.06	29.90	30.01	1.5	10	5.3	17	04	15	04	16
17	81	63	72	9	62	65	0	7	RA BR	0		0.0	T	29.88	29.99	7.9	18	8.9	21	15	18	15	17
18	83	66	75	12	64	67	0	10		0		0.0	0.00	29.91	30.02	7.5	18	8.2	21	18	16	16	18
19	78	66	72	9	66	68	0	7	BR	0		0.0	0.00	30.07		9.4	14	9.6	21	13	17	13	19
20	83	62	73	10	63	66	0	8	FG BR	0		0.0	0.00	30.12	30.24	5.3	14	6.2	16	17	13	13	20
21	75	58	67	4	58	62	0	2	TSRA RA BR	0		0.0	0.21	30.16	30.27	4.2	03	6.9	21	05	17	04	21
22	71	51	61	-2	38	50	4	0		0		0.0	0.00	30.19	30.30	7.7	09	9.2	20	11	16	07	22
23	73	52	63	0	52	57	2	0		0		0.0	0.00	30.15	30.26	10.1	13	10.7	26	13	22	13	23
24	71	61	66	2	61	64	0	1	RA BR	0		0.0	T	30.06	30.18	12.4	13	12.5	30	15	25	14	24
25	78	67	73	9	66	68	0	8	TS RA BR	0		0.0	0.10	30.08	30.19	13.7	14	13.8	28	15	23	13	25
26	78	66	72	8	64	67	0	7	BR	0		0.0	0.00	30.09	30.20	13.7	14	13.9	26	15	22	14	26
27	78	66	72	7	66	68	0	7	RA	0		0.0	0.02	29.97	30.08	14.3	14	14.4	31	14	25	13	27
28	82	70	76*	11	67	69	0	11	RA BR	0		0.0	0.02	29.93	30.04	10.3	16	10.4	17	15	15	16	28
29	73	55	64	-1	59	62	1	0	RA BR	0		0.0	0.12	30.05	30.17	5.1	35	6.1	23	03	18	33	29
30	83	49	66	1	48	56	0	1		0		0.0	0.00	30.04	30.16	6.0	30	6.6	29	30	18	28	30
31	83	49	66	1	47	56	0	1		0		0.0	0.00	29.96	30.07	1.3	28	2.9	18	27	12	33	31

76.4	58.2	67.3	■ ■	56.2	61.0	0.9	3.5	< MONTHLY AVERAGES	TOTALS->	0.0	2.23	30.02		4.5	13	8.5	<- MONTHLY AVERAGES
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3.1	6.9	5.0	■ ■	->-----DEPARTURE FROM NORMAL-----<								-1.13	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3					
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DEGREE DAYS				GREATEST 24-HR PRECIPITATION: 1.37 DATE: 14-15				SEA LEVEL PRESSURE DATE TIME							
MONTHLY TOTAL DEPARTURE				SEASON TO DATE TOTAL DEPARTURE				GREATEST 24-HR SNOWFALL: 0.0 DATE:				MAXIMUM : 30.45 08 0953			
HEATING: 29 -127				1144 -331				GREATEST SNOW DEPTH: 0 DATE:				MINIMUM : 29.71 04 1453			
COOLING: 108 45				126 27				NUMBER OF DAYS WITH =>		MAXIMUM TEMP ≥ 90: 0		MINIMUM TEMP ≤ 32: 0		PRECIPITATION ≥ 0.01 INCH : 13	
								MAXIMUM TEMP ≤ 32 : 0		MINIMUM TEMP ≤ 0 : 0		PRECIPITATION ≥ 0.10 INCH : 5			
								THUNDERSTORMS : 3		HEAVY FOG : 1		SNOWFALL ≥ 1.0 INCH : 0			

MARCH 2004
HOUSTON, TX

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

HOUSTON, TX

MARCH 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	0.07	0.02	T	T	T								01			T	T	T	T	T					01		0.09		
02					T			T	T				02												02		T		
03													03						T	T					03		0.01		
04													04	T	0.01	T			T					04		0.04			
05		T	0.05	0.01	0.06	0.02	0.01	T	0.01	T	T	0.02	05						T		0.01	0.01	T		05		0.16		
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							T	T	0.02	0.01			13		T	T	T						T	T	13		0.03		
14													14	0.24	0.16	0.06	T	0.01							14		1.36		
15					0.01	T					T	0.89	15												15		0.01		
16								0.05					16												16	0.05	0.06		
17				T									17												17		T		
18													18												18		0.00		
19													19												19		0.00		
20													20												20		0.00		
21									0.15	0.06	T		21												21		0.21		
22													22												22		0.00		
23													23												23		0.00		
24													24		T	T	T	T	T	T					24		T		
25													25	T	0.04	T	T	T	T						25		0.10		
26													26												26		0.00		
27	T	0.02											27		T	T				T	T	0.01	T	0.01	27		0.02		
28													28												28		0.02		
29					T	T				T	0.11	T	29												29		0.12		
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)												
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.

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 MARCH 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							6.00	10.00	
02							.25	10.00	
03							.75	10.00	
04							2.00	8.00	
05							3.00	10.00	
06							10.00	10.00	
07							10.00	10.00	
08							10.00	10.00	
09							10.00	10.00	
10							10.00	10.00	
11							10.00	10.00	
12							7.00	10.00	
13							6.00	10.00	
14							.50	10.00	
15							.25	10.00	
16							.25	10.00	
17							2.50	10.00	
18							8.00	10.00	
19							5.00	10.00	
20							.13	10.00	
21							1.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							2.50	10.00	
25							2.50	10.00	
26							6.00	10.00	
27							7.00	10.00	
28							5.00	10.00	
29							2.50	10.00	
30							10.00	10.00	
31							10.00	10.00	
MONTHLY AVGS							5.63	9.94	
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 4 11 13									

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUSTON, TX

MARCH 2004

IAH

WBAN # 12960

HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)					
	SKY COVER	CEILING 100'S OF FT			OBSERVATION TIME (LST)	EFF CLD AMT Oktas	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL			SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT Oktas	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0647					MAR 01					SUNSET: 1820					SUNRISE: 0640					MAR 07					SUNSET: 1824				
03	OVC	050	8.00	-RA	67	65	66	93	9	19	29.80	29.92	03	BKN	250	10.00		54	48	51	80	0	00	30.03	30.14				
06	OVC	014	8.00		67	65	66	93	6	18	29.83	29.95	06	BKN	250	10.00		55	50	52	82	0	00	30.06	30.18				
09	OVC	013	7.00	-RA	61	57	59	87	13	29	29.93	30.04	09	BKN	250	10.00		64	59	61	85	5	28	30.15	30.27				
12	OVC	037	10.00		67	51	58	57	0	00	29.92	30.03	12	OVC	250	10.00		78	49	61	36	8	26	30.15	30.27				
15	OVC	033	10.00	-RA	71	50	59	47	7	27	29.86	29.98	15	SCT	NC	10.00		84	47	63	27	10	31	30.08	30.20				
18	OVC	033	10.00		66	54	59	65	6	32	29.87	29.98	18	BKN	250	10.00		79	49	62	35	9	33	30.11	30.23				
21	OVC	085	10.00		64	52	57	65	5	04	29.90	30.02	21	SCT	NC	10.00		70	49	58	47	14	01	30.20	30.32				
24	BKN	250	10.00		61	54	57	78	0	00	29.93	30.04	24	SCT	NC	10.00		64	41	52	43	13	36	30.24	30.35				
SUNRISE: 0646					MAR 02					SUNSET: 1821					SUNRISE: 0639					MAR 08					SUNSET: 1825				
03	OVC	047	10.00		61	52	56	72	6	04	29.91	30.03	03	BKN	250	10.00		57	35	47	44	9	36	30.25	30.36				
06	OVC	004	10.00		61	56	58	84	3	01	29.93	30.05	06	SCT	NC	10.00		51	35	44	54	5	36	30.29	30.40				
09	OVC	002	0.25	BR	63	62	62	97	7	06	29.98	30.10	09	BKN	250	10.00		59	31	46	35	12	05	30.33	30.45				
12	BKN	085	10.00		76	66	70	72	9	11	29.96	30.08	12	BKN	250	10.00		65	28	48	25	6	VR	30.29	30.41				
15	BKN	250	10.00		78	65	70	64	16	14	29.89	30.01	15	BKN	250	10.00		70	29	51	22	0	00	30.19	30.31				
18	OVC	008	2.00	BR	71	67	68	87	15	13	29.89	30.01	18	BKN	250	10.00		70	32	52	25	3	23	30.13	30.25				
21	OVC	004	2.00	BR	69	67	68	93	14	14	29.93	30.04	21	OVC	120	10.00		62	39	51	43	5	18	30.14	30.26				
24	OVC	010	2.00	BR	71	68	69	90	14	16	29.94	30.06	24	BKN	250	10.00		58	40	49	53	0	00	30.13	30.25				
SUNRISE: 0645					MAR 03					SUNSET: 1821					SUNRISE: 0638					MAR 09					SUNSET: 1826				
03	OVC	010	8.00		71	67	68	87	13	16	29.92	30.03	03	SCT	NC	10.00		52	45	49	77	3	23	30.09	30.21				
06	BKN	008	9.00		68	65	66	90	12	12	29.90	30.02	06	BKN	250	10.00		52	46	49	80	3	27	30.10	30.22				
09	OVC	250	8.00		70	65	67	84	12	13	29.94	30.06	09	FEW	NC	10.00		63	45	54	52	10	28	30.13	30.25				
12	BKN	250	10.00		79	63	69	58	18	16	29.92	30.04	12	CLR	NC	10.00		77	44	59	31	15	34	30.10	30.21				
15	OVC	028	8.00		75	67	70	76	21	14	29.86	29.98	15	SCT	NC	10.00		81	40	59	23	16	01	30.02	30.14				
18	OVC	006	3.00	BR	70	67	68	90	13	14	29.85	29.96	18	CLR	NC	10.00		75	31	54	20	13	33	30.03	30.14				
21	OVC	004	0.75	BR	69	67	68	93	13	14	29.86	29.98	21	CLR	NC	10.00		63	32	49	31	9	35	30.08	30.20				
24	OVC	010	5.00	BR	70	67	68	90	9	13	29.85	29.97	24	CLR	NC	10.00		55	34	45	45	7	34	30.10	30.22				
SUNRISE: 0643					MAR 04					SUNSET: 1822					SUNRISE: 0637					MAR 10					SUNSET: 1826				
03	OVC	012	7.00		69	66	67	90	13	14	29.80	29.92	03	FEW	NC	10.00		50	34	43	54	3	01	30.08	30.20				
06	BKN	075	8.00		68	64	66	87	13	12	29.77	29.89	06	CLR	NC	10.00		48	34	42	58	5	06	30.12	30.24				
09	OVC	010	7.00		69	65	66	87	22	14	29.76	29.88	09	CLR	NC	10.00		57	41	49	55	13	11	30.17	30.28				
12	OVC	008	2.00	-RA BR	70	67	68	90	26	12	29.62	29.74	12	FEW	NC	10.00		67	39	53	36	17	14	30.15	30.27				
15	OVC	017	2.00	HZ	74	68	70	82	23	16	29.60	29.71	15	FEW	NC	10.00		68	44	55	42	17	14	30.09	30.21				
18	OVC	014	3.00	HZ	73	68	70	84	21	16	29.61	29.72	18	CLR	NC	10.00		63	46	54	54	14	11	30.07	30.19				
21	OVC	013	2.00	-RA BR	71	69	70	94	10	17	29.68	29.80	21	CLR	NC	10.00		56	47	51	72	7	14	30.08	30.20				
24	OVC	009	2.00	BR	70	69	69	97	10	16	29.71	29.83	24	FEW	NC	10.00		54	47	50	77	6	10	30.10	30.22				
SUNRISE: 0642					MAR 05					SUNSET: 1823					SUNRISE: 0635					MAR 11					SUNSET: 1827				
03	OVC	010	5.00	-RA BR	61	60	60	97	8	01	29.73	29.84	03	SCT	NC	10.00		52	48	50	86	7	10	30.09	30.21				
06	OVC	021	7.00	-RA	61	60	60	97	6	08	29.73	29.85	06	SCT	NC	10.00		52	48	50	86	7	10	30.13	30.24				
09	OVC	033	10.00	-RA	63	60	61	90	6	16	29.77	29.89	09	BKN	250	10.00		60	51	55	72	9	12	30.17	30.29				
12	OVC	046	10.00		67	62	64	84	6	VR	29.78	29.90	12	BKN	250	10.00		70	49	58	47	7	12	30.18	30.30				
15	OVC	055	10.00		74	55	63	52	5	30	29.74	29.86	15	SCT	NC	10.00		74	48	59	40	13	09	30.11	30.23				
18	BKN	250	10.00		75	52	62	45	0	00	29.75	29.87	18	SCT	NC	10.00		71	49	59	46	9	12	30.09	30.21				
21	SCT	NC	10.00		61	54	57	78	0	00	29.85	29.96	21	FEW	NC	10.00		60	49	54	67	5	18	30.12	30.24				
24	SCT	NC	10.00		59	56	57	90	0	00	29.90	30.02	24	CLR	NC	10.00		56	50	53	81	0	00	30.13	30.25				
SUNRISE: 0641					MAR 06					SUNSET: 1824					SUNRISE: 0634					MAR 12					SUNSET: 1827				
03	SCT	NC	10.00		56	54	55	93	0	00	29.93	30.05	03	SCT	NC	10.00		52	49	50	89	0	00	30.11	30.23				
06	SCT	NC	10.00		56	49	52	77	6	28	30.00	30.12	06	BKN	250	8.00		53	50	51	89	5	01	30.12	30.24				
09	BKN	250	10.00		61	48	54	63	7	33	30.07	30.19	09	OVC	250	8.00		59	52	55	78	7	05	30.15	30.27				
12	BKN	250	10.00		70	46	57	42	12	31	30.07	30.19	12	OVC	250	10.00		67	50	58	55	7	12	30.13	30.25				
15	BKN	250	10.00		74	56	64	53	8	30	30.01	30.13	15	OVC	250	10.00		69	47	57	45	13	11	30.04	30.16				
18	SCT	NC	10.00		75	39	56	27	8	23	30.00	30.12	18	OVC	110	10.00		67	47	56	49	14	12	30.02	30.14				
21	CLR	NC	10.00		60	46	53	60	0	00	30.03	30.15	21	BKN	250	10.00		62	48	55	60	3	17	30.06	30.18				
24	SCT	NC	10.00		56	49	52	77	0	00	30.03	30.15	24	BKN	250	10.00		58	53	55	84	5	10	30.03	30.15				

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUSTON, TX

MARCH 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	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
SUNRISE: 0633				MAR 13				SUNSET: 1828				SUNRISE: 0626				MAR 19				SUNSET: 1832									
03	OVC	110			9.00	58	55	56	90	5	04	30.02	30.14	03	OVC	007			6.00	BR	68	65	66	90	7	16	30.00	30.12	
06	OVC	070			9.00	57	53	55	87	7	02	30.05	30.17	06	OVC	025			7.00		69	66	67	90	5	16	30.03	30.15	
09	OVC	250			10.00	56	49	52	77	9	08	30.03	30.15	09	OVC	028			7.00		72	68	69	87	8	13	30.09	30.21	
12	OVC	250			10.00	64	54	58	70	14	11	30.04	30.16	12	OVC	038			10.00		77	66	70	69	14	15	30.09	30.21	
15	OVC	019			8.00	65	61	63	87	10	14	29.97	30.09	15	OVC	049			10.00		77	65	69	66	13	16	30.06		
18	BKN	250			8.00	66	61	63	84	14	13	29.97	30.09	18	BKN	055			10.00		75	66	69	74	15	13	30.06		
21	OVC	013			7.00	65	61	63	87	8	12	30.02	30.14	21	SCT	NC			6.00	BR	69	66	67	90	8	15	30.10		
24	OVC	011			8.00	64	62	63	93	8	12	30.01	30.13	24	FEW	NC			10.00		66	63	64	90	7	14	30.11		
SUNRISE: 0632				MAR 14				SUNSET: 1829				SUNRISE: 0625				MAR 20				SUNSET: 1833									
03	OVC	006			6.00	65	63	64	93	6	08	30.00	30.12	03	SCT	NC			6.00	BR	63	61	62	93	3	13	30.09	30.20	
06	OVC	006			5.00	64	63	63	96	5	11	30.02	30.14	06	OVC	003			1.00	BR	63	61	62	93	0	00	30.11	30.23	
09	OVC	005			2.00	66	64	65	93	6	06	30.05	30.17	09	SCT	NC			10.00		70	63	66	79	8	15	30.16	30.27	
12	OVC	007			1.25	65	65	65	100	5	26	30.07	30.19	12	SCT	NC			10.00		79	62	68	56	8	12	30.16	30.27	
15	OVC	110			8.00	65	64	64	97	5	VR	30.01	30.13	15	BKN	045			10.00		81	62	69	53	9	15	30.09	30.21	
18	OVC	036			9.00	66	64	65	93	6	VR	30.00	30.12	18	FEW	NC			10.00		79	63	69	58	10	13	30.08	30.20	
21	OVC	016			10.00	64	62	63	93	9	02	30.03	30.15	21	BKN	050			10.00		71	66	68	84	7	16	30.12	30.24	
24	OVC	004			6.00	64	63	63	96	0	00	30.02	30.14	24	SCT	NC			7.00		68	66	67	93	5	19	30.15	30.27	
SUNRISE: 0631				MAR 15				SUNSET: 1829				SUNRISE: 0623				MAR 21				SUNSET: 1833									
03	OVC	007			5.00	63	62	62	97	6	35	29.98	30.10	03	OVC	007			8.00		67	64	65	91	6	22	30.10	30.22	
06	OVC	005			3.00	62	61	61	96	0	00	29.97	30.09	06	OVC	005			7.00		67	65	66	93	6	36	30.15	30.27	
09	OVC	002			0.25	63	62	62	97	3	12	29.96	30.08	09	OVC	065			10.00	-RA	64	63	63	96	10	12	30.17	30.29	
12	OVC	012			2.00	68	63	65	84	3	VR	29.94	30.06	12	OVC	025			10.00		69	62	65	78	15	03	30.19	30.31	
15	OVC	027			10.00	72	62	66	71	3	VR	29.86	29.98	15	OVC	036			10.00		71	57	63	61	5	VR	30.14	30.26	
18	BKN	090			9.00	73	63	67	71	5	16	29.84	29.96	18	SCT	NC			10.00		72	47	58	41	8	03	30.13	30.25	
21	BKN	050			6.00	69	65	66	87	7	15	29.89	30.01	21	FEW	NC			10.00		63	53	57	70	0	00	30.15	30.27	
24	OVC	008			3.00	65	64	64	97	5	34	29.90	30.02	24	FEW	NC			10.00		58	51	54	78	3	02	30.13	30.25	
SUNRISE: 0630				MAR 16				SUNSET: 1830				SUNRISE: 0622				MAR 22				SUNSET: 1834									
03	OVC	001			1.00	61	60	60	97	0	00	29.89	30.01	03	CLR	NC			10.00		58	39	49	50	15	08	30.14	30.26	
06	OVC	010			2.00	62	61	61	96	8	36	29.91	30.02	06	FEW	NC			10.00		54	33	45	45	9	08	30.18	30.30	
09	BKN	250			10.00	65	57	60	76	15	04	29.95	30.07	09	BKN	080			10.00		56	33	46	42	12	09	30.25	30.37	
12	FEW	NC			10.00	74	55	63	52	0	00	29.94	30.06	12	SCT	NC			10.00		65	33	50	31	12	07	30.23	30.35	
15	SCT	NC			10.00	78	49	61	36	6	15	29.86	29.98	15	SCT	NC			10.00		69	34	52	27	8	13	30.17	30.29	
18	BKN	060			10.00	76	51	62	42	6	15	29.83	29.95	18	SCT	NC			10.00		67	36	52	32	9	13	30.15	30.27	
21	BKN	070			9.00	71	63	66	76	6	19	29.89	30.01	21	SCT	NC			10.00		59	44	51	58	5	15	30.18	30.29	
24	FEW	NC			10.00	66	60	62	81	6	19	29.89	30.01	24	SCT	NC			10.00		54	46	50	75	0	00	30.18	30.30	
SUNRISE: 0628				MAR 17				SUNSET: 1831				SUNRISE: 0621				MAR 23				SUNSET: 1834									
03	OVC	055			6.00	64	60	62	87	7	24	29.90	30.01	03	BKN	250			10.00		54	45	49	72	0	00	30.15	30.27	
06	OVC	008			8.00	64	61	62	90	5	23	29.90	30.02	06	BKN	250			10.00		53	45	49	74	0	00	30.16	30.28	
09	BKN	008			3.00	67	62	64	84	6	21	29.94	30.06	09	BKN	250			10.00		61	48	54	63	10	09	30.19	30.30	
12	BKN	028			10.00	76	63	68	64	8	16	29.90	30.02	12	BKN	120			10.00		71	54	61	55	15	14	30.17	30.29	
15	BKN	080			10.00	80	61	68	52	10	16	29.82	29.94	15	SCT	NC			10.00		71	55	62	57	16	11	30.11	30.23	
18	SCT	NC			10.00	76	63	68	64	13	17	29.80	29.92	18	BKN	046			10.00		67	56	61	68	20	13	30.11	30.22	
21	SCT	NC			10.00	69	63	65	81	12	18	29.85	29.97	21	SCT	NC			10.00		64	58	60	81	7	15	30.13	30.25	
24	BKN	018			10.00	68	64	66	87	12	19	29.84	29.96	24	BKN	046			10.00		64	59	61	84	8	15	30.11	30.23	
SUNRISE: 0627				MAR 18				SUNSET: 1831				SUNRISE: 0620				MAR 24				SUNSET: 1835									
03	BKN	022			10.00	68	61	64	78	7	21	29.81	29.93	03	BKN	250			10.00		62	58	60	86	6	14	30.06	30.18	
06	BKN	027			10.00	67	63	64	87	5	19	29.84	29.96	06	BKN	095			10.00		62	58	60	86	0	00	30.06	30.18	
09	OVC	022			10.00	71	63	66	76	8	19	29.91	30.03	09	OVC	020			10.00		70	62	65	76	16	14	30.08	30.20	
12	BKN	037			10.00	77	62	68	60	9	18	29.93	30.05	12	OVC	050			10.00		70	62	65	76	18	13	30.08	30.20	
15	BKN	050			10.00	82	61	69	49	8	15	29.89	30.00	15	OVC	021			2.50	-RA BR	67	64	65	91	14	14	30.03	30.15	
18	BKN	055			10.00	77	65	69	66	12	18	29.91	30.03	18	OVC	034			10.00		69	62	65	78	16	14	30.03	30.15	
21	FEW	NC			10.00	71	66	68	84	9	18	29.98	30.10	21	OVC	085			10.00		68	62	64	81	16	14	30.07	30.19	
24	FEW	NC			8.00	67	65	66	93	6	13	30.01	30.13	24	OVC	019			10.00		68	63	65	84	6	10	30.08	30.20	

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUSTON, TX

MARCH 2004

IAH

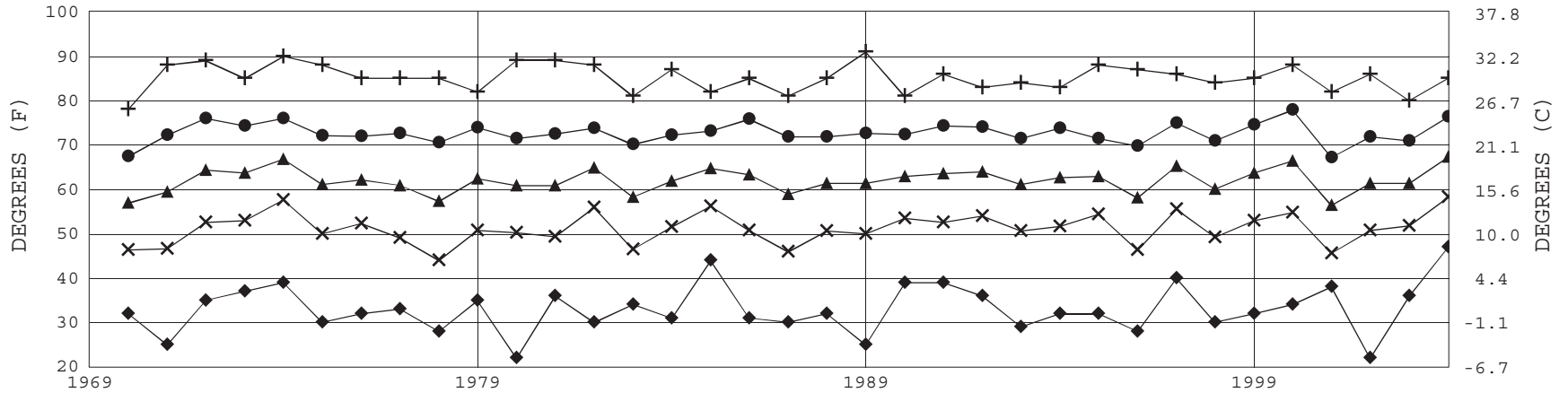
WBAN # 12960

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)																	
	OBSERVATION TIME (LST)	EFF CLD AMT Okltas		OBSERVATION TIME (LST)	EFF CLD AMT Okltas			RELATIVE HUMIDITY (PCT)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION		SEA LEVEL	OBSERVATION TIME (LST)		EFF CLD AMT Okltas	OBSERVATION TIME (LST)			EFF CLD AMT Okltas	RELATIVE HUMIDITY (PCT)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL														
SUNRISE: 0619								MAR 25								SUNSET: 1836								SUNRISE: 0611								MAR 31								SUNSET: 1839							
03	OVC	017				10.00		68	64	66	87	10	14	30.03	30.15	03	CLR	NC					10.00		51	46	49	83	0	00	30.00	30.12															
06	OVC	012				8.00		68	65	66	90	8	15	30.05	30.17	06	FEW	NC					10.00		50	46	48	86	0	00	29.99	30.11															
09	BKN	013				3.00		73	67	69	81	12	15	30.10	30.22	09	FEW	NC					10.00		67	46	56	47	5	02	30.03	30.15															
12	OVC	025				8.00		74	70	71	88	10	13	30.10	30.21	12	CLR	NC					10.00		75	40	57	28	5	VR	29.99	30.11															
15	BKN	090				10.00		75	66	69	74	15	16	30.07	30.18	15	CLR	NC					10.00		82	44	61	26	10	24	29.90	30.02															
18	OVC	060				8.00		72	66	68	82	21	14	30.07	30.19	18	CLR	NC					10.00		80	46	61	30	6	29	29.87	29.99															
21	OVC	018				9.00		71	66	68	84	15	14	30.11	30.22	21	CLR	NC					10.00		68	53	59	59	6	17	29.90	30.01															
24	OVC	016				9.00		69	65	66	87	10	14	30.10	30.22	24	CLR	NC					10.00		62	57	59	84	0	00	29.91	30.02															
SUNRISE: 0617								MAR 26								SUNSET: 1836								3-HOURLY OBSERVATION NOTES																							
03	OVC	023				9.00		69	65	66	87	12	16	30.07	30.19	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	SCT	NC				10.00		67	64	65	91	8	13	30.09	30.21	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.																															
09	OVC	016				10.00		71	64	67	79	13	15	30.12	30.24	NC = No ceiling detected.																															
12	BKN	050				10.00		77	63	68	62	20	14	30.10	30.22	& = Original observation contained additional weather elements.																															
15	BKN	033				10.00		75	63	67	66	16	13	30.06	30.17	See page 3 for additional notes.																															
18	SCT	NC				10.00		72	62	66	71	17	13	30.06	30.17																																
21	BKN	041				10.00		68	64	66	87	12	13	30.08	30.19																																
24	FEW	NC				10.00		67	64	65	91	10	16	30.06	30.18																																
SUNRISE: 0616								MAR 27								SUNSET: 1837																															
03	BKN	013				10.00		68	64	66	87	12	15	30.00	30.12																																
06	FEW	NC				8.00		66	64	65	93	10	15	29.99	30.11																																
09	BKN	017				10.00		73	65	68	76	20	15	29.99	30.11																																
12	BKN	024				10.00		75	66	69	74	18	13	29.99	30.11																																
15	BKN	065				10.00		76	66	70	72	18	13	29.94	30.06																																
18	BKN	020				10.00		73	66	69	79	17	14	29.90	30.01																																
21	OVC	025				9.00	-RA	71	67	68	87	16	14	29.93	30.05																																
24	OVC	020				10.00	-RA	70	67	68	90	8	16	29.92	30.04																																
SUNRISE: 0615								MAR 28								SUNSET: 1837																															
03	OVC	016				10.00		71	67	68	87	10	17	29.88	30.00																																
06	BKN	016				9.00		70	67	68	90	7	17	29.88	30.00																																
09	BKN	017				10.00		73	67	69	81	14	17	29.93	30.05																																
12	BKN	075				10.00		79	65	70	62	15	16	29.95	30.07																																
15	BKN	036				10.00		81	66	71	61	17	16	29.90	30.02																																
18	BKN	048				10.00		77	66	70	69	12	18	29.91	30.02																																
21	FEW	NC				10.00		71	67	68	87	8	16	29.96	30.08																																
24	BKN	022				10.00		70	67	68	90	5	19	29.98	30.10																																
SUNRISE: 0614								MAR 29								SUNSET: 1838																															
03	BKN	095				8.00		68	66	67	93	0	00	29.97	30.09																																
06	OVC	007				10.00		64	62	63	93	14	33	30.02	30.14																																
09	OVC	029				5.00	RA BR	62	61	61	96	9	03	30.07	30.19																																
12	OVC	012				10.00		65	60	62	84	14	36	30.12	30.24																																
15	OVC	250				10.00		69	57	62	66	7	30	30.06	30.18																																
18	CLR	NC				10.00		71	60	64	68	8	36	30.02	30.14																																
21	SCT	NC				10.00		60	52	56	75	5	32	30.07	30.19																																
24	SCT	NC				10.00		55	53	54	93	0	00	30.09	30.21																																
SUNRISE: 0613								MAR 30								SUNSET: 1839																															
03	BKN	250				10.00		52	51	52	97	0	00	30.09	30.20																																
06	SCT	NC				10.00		49	47	48	93	3	32	30.08	30.19																																
09	SCT	NC				10.00		67	50	58	55	6	28	30.11	30.22																																
12	SCT	NC				10.00		79	42	59	27	12	30	30.07	30.19																																
15	SCT	NC				10.00		83	46	62	28	13	29	29.99	30.11																																
18	FEW	NC				10.00		79	48	61	34	13	30	29.96	30.08																																
21	FEW	NC				10.00		67	50	58	55	6	35	30.00	30.11																																
24	CLR	NC				10.00		58	45	51	62	0	00	30.00	30.12																																

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			62	57	59	83	30.01	30.13	8.52	7	4	14
02			62	56	59	84	30.01	30.12	8.65	6	3	14
03			61	56	59	84	30.00	30.12	8.45	6	3	14
04			61	56	59	85	30.00	30.11	8.32	6	2	14
05			61	56	58	86	30.00	30.12	8.04	6	3	12
06			60	56	58	85	30.01	30.13	8.29	5	2	10
07			60	56	58	86	30.03	30.15	7.06	6	3	11
08			62	57	59	82	30.04	30.16	7.16	8	4	11
09			65	56	60	76	30.05	30.17	8.08	10	5	12
10			68	56	62	68	30.06	30.18	8.92	10	5	12
11			70	55	62	63	30.06	30.18	8.81	10	5	13
12			72	56	63	60	30.04	30.16	9.14	11	6	13
13			73	55	63	57	30.02	30.14	9.27	11	6	13
14			74	55	63	55	30.00	30.12	9.39	11	6	13
15			75	55	64	55	29.98	30.10	9.31	11	6	15
16			75	56	64	56	29.97	30.08	9.52	10	6	14
17			74	55	63	56	29.97	30.07	9.61	12	7	13
18			72	55	63	59	29.97	30.09	9.10	11	7	14
19			69	56	62	66	29.98	30.09	9.16	10	6	14
20			68	57	62	70	29.99	30.11	9.11	9	6	14
21			66	57	61	74	30.01	30.13	8.73	8	5	14
22			65	57	61	77	30.02	30.14	8.86	7	5	14
23			64	57	60	80	30.02	30.14	8.92	6	4	15
24			63	57	60	82	30.02	30.13	8.71	5	3	14

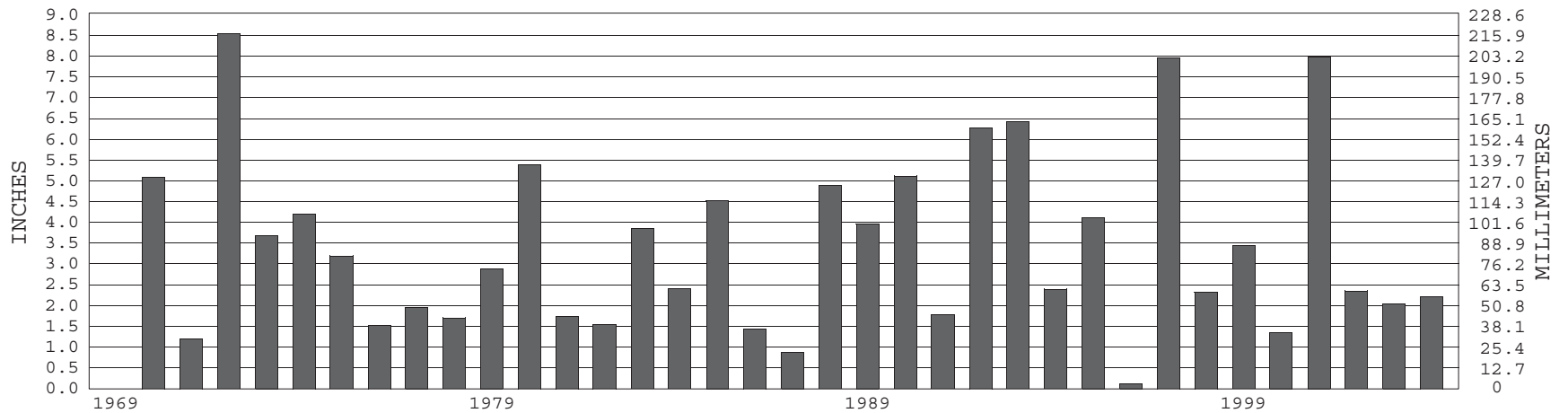
HOUSTON, TX MARCH TEMPERATURES



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

Long-Term (1969-2004) Mean: 60.2 1971-2000 Normal: 62.3

HOUSTON, TX MARCH PRECIPITATION



Long-Term (1969-2004) Mean Monthly Total: 3.34

1971-2000 Normal: 3.36



MARCH 2004

HOUSTON, TX

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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