



JULY 2002

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

HOUSTON, TX

INTERCONTINENTAL AIRPORT (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		0600 LST	1200 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM				
																			5-SEC		2-MIN		
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	87	77	82	-1	78	79	0	17	RA	0		0.0	0.08	29.95	30.06	8.3	13	8.8	25	13	22	13	01
02	89	77	83	0	77	78	0	18	TS RA	0		0.0	T	29.91	30.01	8.0	13	8.4	25	14	21	12	02
03	92	76	84	1	75	77	0	19		0		0.0	0.00	29.86	29.97	8.7	14	9.2	25	14	21	15	03
04	92	76	84	1	75	78	0	19		0		0.0	0.00	29.89	30.00	8.0	14	8.3	23	14	18	13	04
05	92	75	84	1	75	78	0	19	MIFG	0		0.0	0.00	29.90	30.01	4.3	14	5.1	18	11	15	11	05
06	97	73	85	2	73	76	0	20	MIFG BR	0		0.0	0.00	29.90	30.01	1.6	06	3.4	20	10	17	11	06
07	96	77	87	4	75	79	0	22	HZ	0		0.0	0.00	29.91	30.02	4.2	11	5.9	18	11	16	10	07
08	96	78	87	4	76	79	0	22	BR	0		0.0	0.00	29.94	30.05	4.7	07	7.4	23	13	20	13	08
09	89	75	82	-1	77	78	0	17	TS TSRA RA	0		0.0	0.23	29.95	30.06	5.5	09	7.7	23	15	20	15	09
10	92	75	84	1	75	77	0	19	TS	0		0.0	0.00	29.94	30.05	1.5	22	2.7	14	22	12	23	10
11	97	75	86	3	75	78	0	21	TS RA	0		0.0	0.01	29.88	29.99	3.0	29	4.8	21	17	17	17	11
12	97	77	87	4	75	78	0	22	TS	0		0.0	0.00	29.79	29.89	2.2	25	5.8	23	09	21	09	12
13	92	71	82	-1	74	76	0	17	TS TSRA RA FG+ BR	0		0.0	5.40	29.77	29.88	2.4	19	9.0	31	06	28*	06	13
14	87	71*	79	-4	74	75	0	14	TS RA	0		0.0	0.01	29.85	29.97	0.2	30	4.9	21	14	18	15	14
15	82	73	78	-6	75	75	0	13	TS TSRA RA BR	0		0.0	0.55	29.93	30.05	4.3	11	6.4	17	12	14	13	15
16	81	73	77*	-7	75	75	0	12	TSRA RA BR	0		0.0	0.79	29.95	30.06	6.9	12	7.9	32*	15	26	15	16
17	92	75	84	0	76	78	0	19	RA	0		0.0	0.01	29.99	30.10	6.8	14	7.7	21	13	17	15	17
18	93	75	84	0	76	78	0	19		0		0.0	0.00	29.94	30.05	5.8	15	6.1	22	17	17	13	18
19	95	76	86	2	77	79	0	21	TS	0		0.0	0.00	29.90	30.01	3.0	17	4.0	21	15	17	16	19
20	95	76	86	2	77	79	0	21	MIFG	0		0.0	0.00	29.93	30.04	4.4	16	5.3	21	13	17	12	20
21	95	76	86	2	77	79	0	21	TS TSRA RA MIFG	0		0.0	T	29.94	30.04	3.6	17	4.6	23	15	20	14	21
22	97	76	87	3	75	78	0	22		0		0.0	0.00	29.95	30.06	2.4	18	3.9	16	16	14	16	22
23	96	77	87	3	76	79	0	22		0		0.0	0.00	29.99	30.10	1.9	20	4.1	18	16	16	15	23
24	97	78	88	4	75	78	0	23	TS RA	0		0.0	0.03	29.97	30.08	2.8	23	4.6	20	19	15	17	24
25	96	77	87	3	74	78	0	22		0		0.0	0.00	29.91	30.02	4.1	19	6.7	21	13	17	13	25
26	96	78	87	3	76	78	0	22	RA	0		0.0	T	29.89	30.00	6.5	17	7.4	24	16	21	16	26
27	94	78	86	2	76	78	0	21	TS	0		0.0	0.00	29.88	29.99	8.4	17	8.7	24	16	20	16	27
28	93	78	86	2	77	79	0	21	TS	0		0.0	0.00	29.89	30.00	7.7	16	8.0	25	16	21	13	28
29	97*	78	88*	4	75	78	0	23		0		0.0	0.00	29.89	30.00	8.6	18	9.0	22	16	17	17	29
30	95	78	87	3	76	79	0	22		0		0.0	0.00	29.95	30.05	6.6	18	7.1	20	18	16	16	30
31	96	76	86	2	73	76	0	21		0		0.0	0.00	29.92	30.03	4.8	18	5.8	17	16	14	17	31

93.1	75.8	84.5	■ ■	75.5	77.8	0.0	19.7	< MONTHLY AVERAGES	TOTALS->	0.0	7.11	29.91	30.02	2.2	20	6.4	<- MONTHLY AVERAGES					
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- .5										2.3		0.9		->-----DEPARTURE FROM NORMAL-----<										3.93		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									
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DEGREE DAYS								GREATEST 24-HR PRECIPITATION: 5.40 DATE: 13				SEA LEVEL PRESSURE				DATE TIME			
MONTHLY TOTAL DEPARTURE				SEASON TO DATE TOTAL DEPARTURE				GREATEST 24-HR SNOWFALL: 0.0 DATE:				MAXIMUM MINIMUM				: 30.15 23 1053			
HEATING: 0 0				0 0				GREATEST SNOW DEPTH: 0 DATE:				: 29.81 12 1653				PRECIPITATION ≥ 0.01 INCH : 9			
COOLING: 611 38				1871 239				NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 25				PRECIPITATION ≥ 0.10 INCH : 4			
												MINIMUM TEMP ≤ 32 : 0				SNOWFALL ≥ 1.0 INCH : 0			
												MAXIMUM TEMP ≤ 32 : 0							
												THUNDERSTORMS : 14							
												MINIMUM TEMP ≤ 0 : 0							
												HEAVY FOG : 1							

JULY 2002
HOUSTON, TX

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

HOUSTON, TX

JULY 2002

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												0.08	01	T	T	T	T									01		0.08	
02													02		T											02		T	
03													03		T											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													08		0.00	
09												0.07	09			T		0.16	T						09		0.23		
10													10												10		0.00		
11													11												11		0.01		
12													12												12		0.00		
13													13	0.20		0.02	3.38	0.52	T		0.96	0.27	0.02	0.03	T	13		5.40	
14													14		0.01										14		0.01		
15				0.02	T	0.15	0.18	0.07	0.05	0.04	T	0.02	15	T									T	0.02	15		0.55		
16	0.12	0.05	T				0.04	0.13	0.06	T		0.37	16	0.02	T	T									16		0.79		
17					T							0.01	17												17		0.01		
18													18												18		0.00		
19													19												19		0.00		
20													20												20		0.00		
21													21			T									21		T		
22													22												22		0.00		
23													23												23		0.00		
24													24										0.03		24		0.03		
25													25												25		0.00		
26													26		T	T									26		T		
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)	.41	.77	1.05	1.38	1.84	2.71	3.52	3.71	3.90	3.92	3.92	3.92
Ending Date	13	13	13	13	13	13	13	13	13	13	13	13
Ending Time (Hour/Min)	1506	1511	1516	1552	1557	1550	1557	1617	1629	1629	1629	1629

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 JULY 2002

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							7.00	10.00	
02							10.00	10.00	
03							9.00	10.00	
04							7.00	10.00	
05							7.00	10.00	
06							6.00	10.00	
07							6.00	10.00	
08							4.00	10.00	
09							5.00	10.00	
10							8.00	10.00	
11							10.00	10.00	
12							9.00	10.00	
13							.50	10.00	
14							10.00	10.00	
15							5.00	10.00	
16							1.00	10.00	
17							10.00	10.00	
18							7.00	10.00	
19							10.00	10.00	
20							10.00	10.00	
21							7.00	10.00	
22							8.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							10.00	10.00	
26							7.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							10.00	10.00	
30							7.00	10.00	
31							8.00	10.00	
MONTHLY AVGS							7.92	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 1 25									

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUSTON, TX

JULY 2002

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 %	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 %	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG
SUNRISE: 0524				JUL 01				SUNSET: 1926				SUNRISE: 0527				JUL 07				SUNSET: 1926							
03	BKN	130			10.00	77	77	77	100	5	13	29.94	30.05	03	SCT	NC			10.00	80	76	77	87	0	100	29.90	30.01
06	OVC	120			7.00	77	77	77	100	9	10	29.97	30.08	06	BKN	250			7.00	77	75	76	94	3	36	29.92	30.03
09	BKN	250			10.00	82	79	80	91	9	13	29.97	30.09	09	CLR	NC			8.00	87	76	79	70	5	VR	29.94	30.05
12	OVC	026			10.00	79	77	78	94	5	22	29.96	30.08	12	SCT	NC			8.00	94	72	78	49	8	06	29.93	30.04
15	OVC	250			10.00	84	77	79	80	18	14	29.93	30.04	15	SCT	NC			8.00	96	72	79	46	13	10	29.88	29.99
18	OVC	120			10.00	83	78	79	85	10	12	29.91	30.03	18	SCT	NC			7.00	92	76	80	60	12	14	29.87	29.98
21	OVC	250			10.00	80	78	79	94	7	13	29.92	30.03	21	SCT	NC			7.00	86	77	80	75	7	15	29.91	30.03
24	OVC	250			10.00	79	77	78	94	5	11	29.93	30.04	24	BKN	200			7.00	83	78	79	85	0	00	29.94	30.05
SUNRISE: 0524				JUL 02				SUNSET: 1926				SUNRISE: 0527				JUL 08				SUNSET: 1926							
03	BKN	250			10.00	79	78	78	97	6	09	29.90	30.01	03	OVC	065			6.00	81	78	79	91	5	04	29.93	30.04
06	BKN	130			10.00	77	77	77	100	3	16	29.92	30.03	06	BKN	250			4.00	78	76	77	93	5	01	29.95	30.06
09	BKN	025			10.00	84	77	79	80	10	15	29.93	30.04	09	BKN	250			7.00	84	73	76	70	6	VR	29.98	30.10
12	OVC	033			10.00	87	76	79	70	9	10	29.91	30.02	12	SCT	NC			8.00	92	76	80	60	8	04	29.97	30.08
15	BKN	180			10.00	86	77	80	75	17	12	29.88	29.99	15	BKN	250			8.00	95	74	80	51	10	05	29.90	30.01
18	OVC	130			10.00	84	76	78	77	8	14	29.87	29.98	18	BKN	250			8.00	91	75	80	59	12	12	29.89	30.00
21	BKN	250			10.00	80	76	77	87	3	17	29.89	30.00	21	SCT	NC			9.00	85	78	80	80	10	12	29.94	30.05
24	BKN	130			10.00	79	76	77	90	6	11	29.90	30.01	24	SCT	NC			10.00	81	75	77	82	6	08	29.95	30.06
SUNRISE: 0525				JUL 03				SUNSET: 1926				SUNRISE: 0528				JUL 09				SUNSET: 1926							
03	CLR	NC			10.00	76	76	76	100	6	11	29.87	29.98	03	CLR	NC			10.00	77	75	76	94	7	04	29.91	30.03
06	BKN	250			10.00	77	76	76	96	3	11	29.87	29.98	06	SCT	NC			10.00	75	74	74	96	7	03	29.95	30.06
09	BKN	130			10.00	84	79	80	85	12	13	29.90	30.01	09	SCT	NC			10.00	85	76	79	75	10	09	29.97	30.08
12	BKN	250			10.00	90	71	77	54	16	15	29.87	29.98	12	BKN	050			10.00	88	77	80	70	13	10	29.97	30.08
15	SCT	NC			10.00	92	70	77	49	13	16	29.84	29.96	15	OVC	130			10.00	86	77	80	75	10	13	29.94	30.05
18	BKN	250			10.00	87	72	77	61	13	16	29.80	29.91	18	BKN	120			10.00	79	78	78	97	7	33	29.93	30.05
21	SCT	NC			9.00	81	75	77	82	9	14	29.84	29.95	21	BKN	250			10.00	78	78	78	100	0	00	29.94	30.05
24	SCT	NC			10.00	78	76	77	93	6	13	29.86	29.97	24	BKN	250			10.00	78	78	78	100	3	13	29.97	30.08
SUNRISE: 0525				JUL 04				SUNSET: 1926				SUNRISE: 0528				JUL 10				SUNSET: 1926							
03	SCT	NC			10.00	77	76	76	96	0	00	29.87	29.98	03	SCT	NC			8.00	76	76	76	100	0	00	29.93	30.04
06	BKN	250			10.00	77	76	76	96	5	11	29.90	30.01	06	BKN	250			8.00	75	75	75	100	0	00	29.96	30.08
09	SCT	NC			10.00	83	76	78	79	9	17	29.92	30.03	09	BKN	250			10.00	83	77	79	82	3	15	29.99	30.10
12	BKN	035			10.00	90	72	77	56	14	15	29.91	30.02	12	BKN	250			10.00	89	74	78	61	0	00	29.97	30.08
15	BKN	250			10.00	91	74	79	57	18	13	29.85	29.96	15	BKN	045			10.00	84	75	78	74	10	21	29.92	30.03
18	SCT	NC			10.00	88	73	77	61	12	13	29.84	29.95	18	OVC	250			10.00	80	74	76	82	6	24	29.90	30.01
21	FEW	NC			10.00	81	75	77	82	8	13	29.87	29.99	21	BKN	250			10.00	78	75	76	90	0	00	29.90	30.01
24	SCT	NC			7.00	77	75	76	94	3	16	29.91	30.02	24	SCT	NC			10.00	76	75	75	97	0	00	29.93	30.05
SUNRISE: 0526				JUL 05				SUNSET: 1926				SUNRISE: 0529				JUL 11				SUNSET: 1925							
03	FEW	NC			8.00	77	75	76	94	0	00	29.89	30.00	03	CLR	NC			10.00	76	74	75	94	0	00	29.91	30.03
06	BKN	250			7.00	76	75	75	97	0	00	29.90	30.01	06	BKN	250			10.00	76	76	76	100	5	27	29.91	30.03
09	BKN	250			9.00	85	77	79	77	10	13	29.94	30.05	09	BKN	250			10.00	86	77	80	75	9	28	29.93	30.04
12	OVC	250			10.00	90	72	77	56	3	15	29.92	30.03	12	BKN	250			10.00	93	74	79	54	6	VR	29.90	30.01
15	OVC	047			10.00	90	74	79	59	6	VR	29.88	29.99	15	BKN	250			10.00	94	73	79	51	7	33	29.82	29.93
18	BKN	250			10.00	88	77	80	70	12	12	29.85	29.97	18	BKN	250			10.00	86	77	80	75	6	19	29.82	29.93
21	BKN	250			10.00	82	76	78	82	0	00	29.89	30.01	21	BKN	150			10.00	83	77	79	82	0	00	29.82	29.93
24	SCT	NC			9.00	77	76	76	96	0	00	29.91	30.02	24	BKN	250			10.00	80	77	78	90	3	22	29.83	29.94
SUNRISE: 0526				JUL 06				SUNSET: 1926				SUNRISE: 0529				JUL 12				SUNSET: 1925							
03	SCT	NC			8.00	75	74	74	96	0	00	29.90	30.01	03	SCT	NC			10.00	79	77	78	94	5	23	29.79	29.90
06	FEW	NC			7.00	73	73	73	100	0	00	29.92	30.03	06	SCT	NC			9.00	78	77	77	97	0	00	29.83	29.94
09	SCT	NC			10.00	83	76	78	79	0	00	29.95	30.06	09	BKN	250			10.00	87	75	78	67	9	31	29.85	29.96
12	SCT	NC			10.00	91	64	73	41	0	00	29.93	30.04	12	SCT	NC			10.00	95	72	79	47	7	27	29.81	29.92
15	SCT	NC			10.00	95	69	77	43	0	00	29.87	29.98	15	SCT	NC			10.00	97	73	80	46	12	26	29.72	29.83
18	SCT	NC			10.00	95	71	78	46	8	05	29.84	29.95	18	SCT	NC			10.00	95	73	79	49	7	25	29.70	29.82
21	BKN	250			10.00	85	76	79	75	6	02	29.89	30.00	21	BKN	250			10.00	82	74	76	77	12	11	29.75	29.86
24	BKN	250																									

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUSTON, TX

JULY 2002

IAH

WBAN # 12960

HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)					
	SKY COVER	CEILING 100'S OF FT			OBSERVATION TIME (LST)	EFF CLD AMT Oktas	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 Oktas	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
			SUNRISE: 0530		JUL 13	SUNSET: 1925									SUNRISE: 0533		JUL 19	SUNSET: 1923											
03	CLR	NC	10.00				77	75	76	94	3	19	29.73	29.84	03	CLR	NC	10.00				78	77	77	97	0	100	29.89	30.01
06	BKN	250	10.00				78	75	76	90	6	24	29.75	29.86	06	FEW	NC	10.00				77	77	77	100	3	17	29.92	30.03
09	BKN	250	10.00				85	76	79	75	9	25	29.77	29.89	09	SCT	NC	10.00				85	77	79	77	3	28	29.94	30.05
12	BKN	065	10.00				91	75	80	59	7	27	29.77	29.88	12	SCT	NC	10.00				89	74	78	61	3	23	29.92	30.03
15	BKN	042	10.00				78	76	77	93	20	05	29.75	29.86	15	BKN	250	10.00				93	73	79	52	5	VR	29.87	29.98
18	BKN	100	10.00	-TSRA			75	75	75	100	10	14	29.75	29.86	18	BKN	065	10.00		TS		84	79	80	85	5	20	29.84	29.96
21	BKN	060	10.00	-TSRA			72	69	70	91	14	14	29.83	29.94	21	SCT	NC	10.00				83	78	79	85	5	17	29.88	29.99
24	OVC	130	10.00				71	70	70	96	5	23	29.76	29.88	24	CLR	NC	10.00				80	78	79	94	0	00	29.92	30.03
			SUNRISE: 0530		JUL 14	SUNSET: 1925									SUNRISE: 0533		JUL 20	SUNSET: 1922											
03	CLR	NC	10.00				72	71	71	97	0	00	29.80	29.91	03	FEW	NC	10.00				78	78	78	100	3	18	29.91	30.02
06	BKN	250	10.00				71	71	71	100	0	00	29.84	29.96	06	SCT	NC	10.00		MIFG		76	76	76	100	0	00	29.93	30.04
09	OVC	070	10.00				80	74	76	82	0	00	29.89	30.01	09	SCT	NC	10.00				86	75	78	70	5	15	29.96	30.08
12	BKN	090	10.00				86	75	78	70	7	35	29.89	30.00	12	BKN	039	10.00				90	75	79	62	5	21	29.96	30.07
15	OVC	250	10.00	TS			81	77	78	88	7	19	29.87	29.98	15	BKN	045	10.00				93	77	81	60	13	14	29.91	30.02
18	OVC	130	10.00				80	74	76	82	5	15	29.81	29.92	18	SCT	NC	10.00				89	78	81	70	8	17	29.88	29.99
21	OVC	140	10.00				78	76	77	93	3	14	29.87	29.98	21	SCT	NC	10.00				83	77	79	82	6	18	29.91	30.02
24	BKN	250	10.00				77	75	76	94	3	11	29.88	29.99	24	CLR	NC	10.00				80	77	78	90	3	18	29.96	30.07
			SUNRISE: 0531		JUL 15	SUNSET: 1924									SUNRISE: 0534		JUL 21	SUNSET: 1922											
03	OVC	140	10.00				76	76	76	100	3	03	29.89	30.01	03	FEW	NC	9.00				77	76	76	96	0	00	29.95	30.06
06	OVC	048	6.00	TSRA BR			73	73	73	100	6	15	29.93	30.05	06	FEW	NC	9.00		MIFG		76	76	76	100	0	00	29.95	30.06
09	OVC	055	9.00	-RA			74	74	74	100	5	35	29.99	30.11	09	SCT	NC	10.00				86	78	80	77	6	VR	29.99	30.10
12	OVC	130	10.00	-RA			76	73	74	91	7	02	29.97	30.09	12	SCT	NC	10.00				92	74	79	56	6	VR	29.96	30.07
15	OVC	250	10.00				81	74	76	79	12	12	29.94	30.06	15	BKN	250	10.00				91	77	81	64	20	15	29.90	30.02
18	OVC	130	10.00	-RA			79	75	76	88	6	12	29.89	30.01	18	BKN	045	10.00				89	77	80	68	7	16	29.86	29.98
21	BKN	049	10.00				76	75	75	97	6	12	29.92	30.03	21	SCT	NC	10.00				83	77	79	82	6	17	29.91	30.02
24	OVC	110	10.00	-RA			77	77	77	100	7	10	29.93	30.04	24	FEW	NC	10.00				80	76	77	87	3	19	29.92	30.03
			SUNRISE: 0531		JUL 16	SUNSET: 1924									SUNRISE: 0535		JUL 22	SUNSET: 1921											
03	BKN	095	10.00				74	74	74	100	5	10	29.91	30.02	03	FEW	NC	10.00				77	76	76	96	0	00	29.91	30.02
06	OVC	110	10.00				74	74	74	100	6	07	29.91	30.03	06	FEW	NC	10.00				77	76	76	96	0	00	29.95	30.06
09	OVC	042	10.00	-RA			74	74	74	100	8	13	29.96	30.08	09	SCT	NC	10.00				85	77	79	77	5	24	29.99	30.10
12	OVC	032	7.00	-TSRA			77	76	76	96	7	11	29.98	30.09	12	SCT	NC	10.00				92	72	78	52	5	VR	29.97	30.09
15	OVC	130	10.00				77	75	76	94	9	12	29.95	30.07	15	SCT	NC	10.00				95	69	77	43	6	VR	29.92	30.03
18	OVC	130	10.00				80	75	77	85	10	12	29.94	30.05	18	BKN	060	10.00				89	78	81	70	12	16	29.90	30.01
21	BKN	250	10.00				76	75	75	97	7	11	29.95	30.07	21	BKN	250	10.00				85	75	78	72	6	17	29.96	30.07
24	OVC	016	10.00				76	75	75	97	7	08	29.95	30.06	24	CLR	NC	10.00				82	76	78	82	5	23	29.98	30.09
			SUNRISE: 0532		JUL 17	SUNSET: 1924									SUNRISE: 0535		JUL 23	SUNSET: 1921											
03	OVC	005	10.00				76	76	76	100	6	09	29.96	30.08	03	CLR	NC	10.00				79	77	78	94	0	00	29.97	30.08
06	OVC	250	10.00				76	76	76	100	3	11	30.00	30.11	06	FEW	NC	10.00				77	77	77	100	0	00	30.00	30.11
09	BKN	032	10.00				85	79	81	82	9	16	30.03	30.15	09	SCT	NC	10.00				85	77	79	77	7	28	30.03	30.14
12	BKN	250	10.00				90	73	78	58	10	16	30.01	30.12	12	SCT	NC	10.00				93	73	79	52	3	VR	30.03	30.14
15	BKN	250	10.00				92	73	79	54	10	15	29.97	30.08	15	SCT	NC	10.00				95	71	78	46	3	VR	29.97	30.08
18	SCT	NC	10.00				88	77	80	70	15	13	29.93	30.04	18	SCT	NC	10.00				94	73	79	51	7	17	29.93	30.04
21	SCT	NC	10.00				81	77	78	88	8	14	29.97	30.08	21	SCT	NC	10.00				85	78	80	80	6	17	29.99	30.10
24	CLR	NC	10.00				78	76	77	93	3	16	29.98	30.09	24	CLR	NC	10.00				83	76	78	79	6	23	30.00	30.11
			SUNRISE: 0532		JUL 18	SUNSET: 1923									SUNRISE: 0536		JUL 24	SUNSET: 1920											
03	CLR	NC	9.00				76	76	76	100	0	00	29.95	30.06	03	CLR	NC	10.00				79	76	77	90	0	00	29.99	30.10
06	SCT	NC	7.00				75	75	75	100	0	00	29.97	30.08	06	BKN	250	10.00				78	77	77	97	5	25	30.00	30.11
09	SCT	NC	10.00				86	77	80	75	9	15	30.00	30.11	09	FEW	NC	10.00											

OBSERVATIONS AT 3-HOURLY INTERVALS

HOUSTON, TX

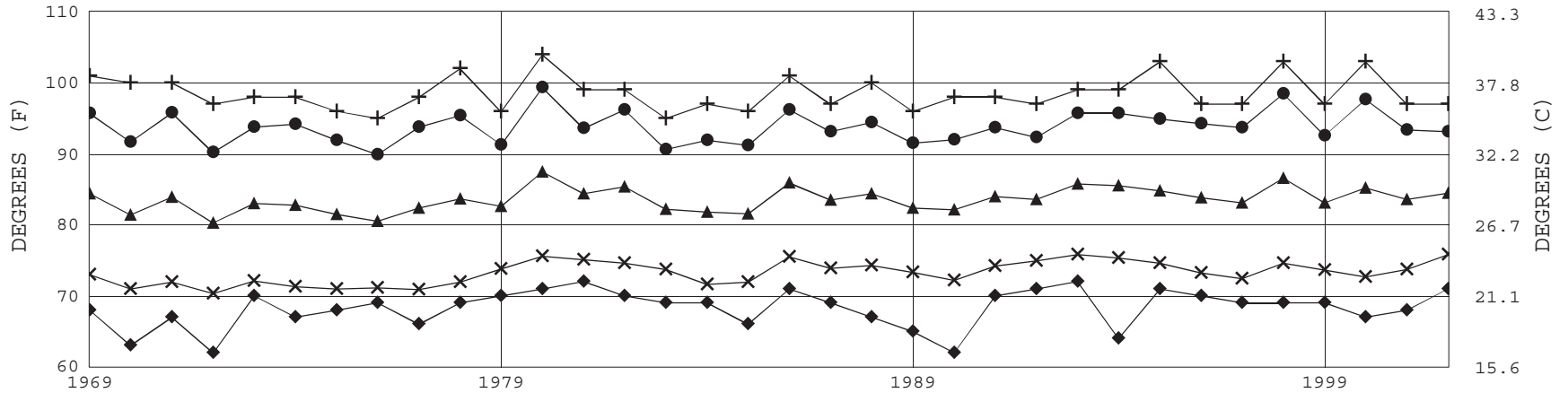
JULY 2002

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)	
	SKY COVER	CEILING		OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		SKY COVER	CEILING		OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0536								JUL 25				SUNSET: 1920				SUNRISE: 0540								JUL 31				SUNSET: 1916			
03	CLR	NC			10.00			80	73	75	79	6	23	29.90	30.01	03	CLR	NC			10.00			77	76	76	96	3	17	29.93	30.04
06	BKN	250			10.00			77	75	76	94	3	19	29.92	30.03	06	BKN	250			8.00			76	75	75	97	3	19	29.96	30.07
09	BKN	250			10.00			85	76	79	75	9	24	29.95	30.06	09	SCT	NC			10.00			84	74	77	92	9	22	29.98	30.09
12	SCT	NC			10.00			91	71	77	52	8	24	29.93	30.04	12	BKN	250			10.00			92	71	77	51	9	17	29.95	30.06
15	BKN	250			10.00			94	72	78	49	5	VR	29.89	30.00	15	BKN	250			10.00			94	69	77	44	9	16	29.89	30.00
18	BKN	110			10.00			89	76	80	65	14	14	29.86	29.98	18	SCT	NC			10.00			93	67	75	42	8	17	29.85	29.96
21	BKN	250			10.00			84	74	77	72	7	16	29.88	29.99	21	SCT	NC			10.00			84	72	76	67	6	18	29.88	29.99
24	BKN	250			10.00			81	76	77	85	6	18	29.89	30.00	24	CLR	NC			10.00			79	74	75	85	3	19	29.90	30.02
SUNRISE: 0537								JUL 26				SUNSET: 1919				3-HOURLY OBSERVATION NOTES															
03	SCT	NC			10.00			80	77	78	90	3	18	29.89	30.00	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.															
06	BKN	250			7.00			79	76	77	90	0	00	29.91	30.02																
09	SCT	NC			10.00			87	76	79	70	8	25	29.93	30.04																
12	BKN	120			10.00			91	74	79	57	9	22	29.91	30.03																
15	BKN	120			10.00			88	76	79	68	14	17	29.88	29.99																
18	BKN	250			10.00			89	75	79	63	12	15	29.86	29.97																
21	SCT	NC			10.00			83	76	78	79	9	17	29.87	29.98																
24	SCT	NC			10.00			81	77	78	88	3	16	29.88	29.99																
SUNRISE: 0537								JUL 27				SUNSET: 1919				SUMMARY BY HOUR															
03	SCT	NC			10.00		TS	80	77	78	90	0	00	29.88	29.99	AVERAGES															
06	BKN	250			10.00			79	76	77	90	6	13	29.89	30.01	RESULTANT WIND (MPH)															
09	SCT	NC			10.00			86	76	79	72	10	17	29.91	30.02	HOUR (LST)															
12	BKN	250			10.00			92	73	79	54	14	17	29.90	30.01	CEILOMETER															
15	BKN	250			10.00			91	75	80	59	12	18	29.86	29.97	EFF CLD AMT															
18	BKN	250			10.00			88	75	79	66	10	17	29.83	29.94	DRY BULB															
21	SCT	NC			10.00			84	76	78	77	8	17	29.86	29.97	DEW POINT															
24	FEW	NC			10.00			81	76	77	85	6	18	29.88	29.99	WET BULB															
SUNRISE: 0538								JUL 28				SUNSET: 1918				RELATIVE HUMIDITY															
03	SCT	NC			10.00			79	77	78	94	3	17	29.87	29.98	PRESSURE (INCHES, HG)															
06	FEW	NC			10.00			78	77	77	97	5	16	29.89	30.00	STATION															
09	BKN	023			10.00			87	77	80	72	10	18	29.92	30.03	SEA LEVEL															
12	BKN	250			10.00			88	77	80	70	12	14	29.91	30.03	VISIBILITY (MILES)															
15	BKN	250			10.00			85	77	79	77	9	13	29.88	29.99	WIND SPEED (MPH)															
18	BKN	250			10.00			88	74	78	63	14	16	29.85	29.96	SPEED															
21	SCT	NC			10.00			83	77	79	82	8	17	29.88	29.99	DIRECTION															
24	SCT	NC			10.00			80	77	78	90	6	17	29.88	29.99																
SUNRISE: 0539								JUL 29				SUNSET: 1917																			
03	SCT	NC			10.00			80	78	79	94	7	17	29.87	29.98																
06	SCT	NC			10.00			78	77	77	97	3	17	29.88	29.99																
09	SCT	NC			10.00			88	77	80	70	12	20	29.92	30.03																
12	BKN	044			10.00			94	74	80	52	12	19	29.91	30.02																
15	BKN	250			10.00			96	69	77	42	10	18	29.87	29.98																
18	SCT	NC			10.00			90	73	78	58	12	16	29.85	29.97																
21	FEW	NC			10.00			84	76	78	77	9	16	29.89	30.01																
24	FEW	NC			10.00			81	77	78	88	6	17	29.91	30.03																
SUNRISE: 0539								JUL 30				SUNSET: 1917																			
03	CLR	NC			10.00			79	77	78	94	3	17	29.92	30.03																
06	SCT	NC			7.00			79	77	78	94	0	00	29.95	30.06																
09	BKN	023			10.00			86	77	80	75	8	23	29.98	30.09																
12	BKN	250			10.00			92	73	79	54	15	16	29.97	30.08																
15	BKN	250			10.00			93	74	79	54	10	19	29.92	30.03																
18	BKN	130			10.00			91	75	80	59	9	17	29.91	30.02																
21	BKN	250			10.00			84	74	77	72	3	16	29.94	30.05																
24	FEW	NC			10.00			80	76	77	87	5	17	29.95	30.06																

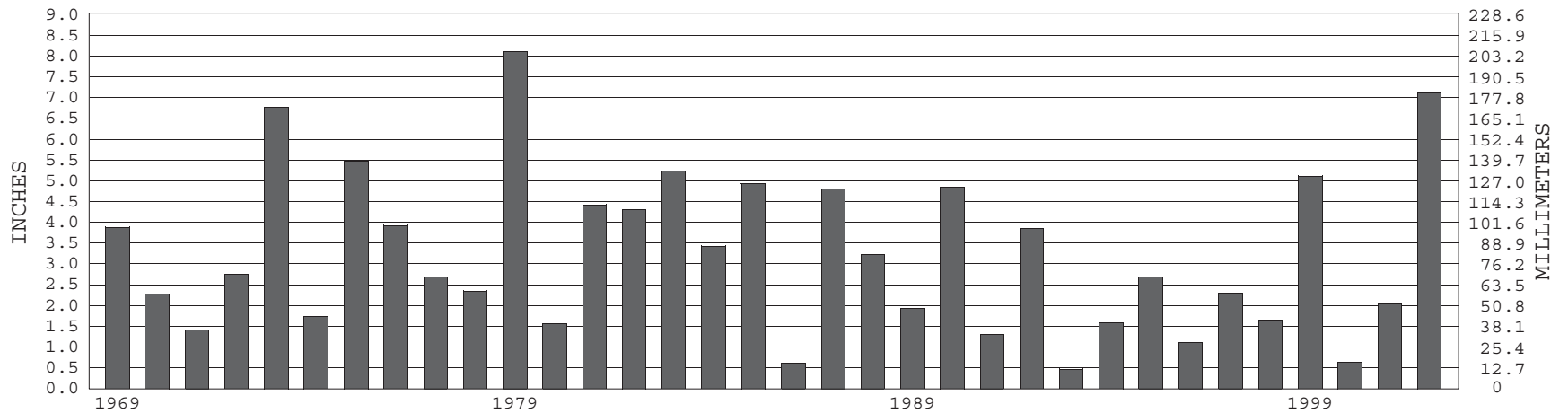
HOUSTON, TX JULY TEMPERATURES



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

Long-Term (1969-2002) Mean: 83.6 1961-1990 Normal: 83.6

HOUSTON, TX JULY PRECIPITATION



Long-Term (1969-2002) Mean Monthly Total: 3.25

1961-1990 Normal: 3.18



JULY 2002

HOUSTON, TX

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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