



# DECEMBER 2010 LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

HOUSTON, TX  
G BUSH INTERCONTINENTAL AP/HOUSTON AP (KIAH)  
Lat:29° 59'N Long: 95° 21'W Elev (Ground) 94 Feet  
Time Zone : CENTRAL WBAN: 12960 ISSN#: 0198-5094



Date 1	Temperature °F						Deg Days BASE 65°		WEATHER 10	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES								Date 24
	MAXIMUM 2	MINIMUM 3	AVERAGE 4	DEP FROM NORMAL 5	AVERAGE DEW PT 6	AVERAGE WET BULB 7	HEATING 8	COOLING 9		0600 LST 11	1200 LST 12	2400 LST 13	2400 LST 14	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM					
																			3-SEC		2-MIN			
																			SPEED 20	DIR 21	SPEED 22	DIR 23		
01	64	32	48	-9	27	39	17	0			0.0	0.00	30.20	30.33	2.5	21	3.2	17	30	12	21	01		
02	71	37	54	-2	44	49	11	0			0.0	0.00	30.11	30.24	3.8	16	4.3	18	18	15	14	02		
03	76	47	62	6	53	57	3	0	BR		0.0	0.00	30.01	30.15	4.2	18	4.6	20	13	16	13	03		
04	80	58	69	13	57	62	0	4			0.0	0.00	29.96	30.07	2.7	27	6.7	23	27	16	25	04		
05	62	42	52	-4	34	44	13	0			0.0	0.00	30.24	30.32	10.7	02	11.0	25	01	21	02	05		
06	57	35	46	-9	30	39	19	0			0.0	0.00	30.29	30.41	1.9	02	2.7	15	01	10	36	06		
07	62	33	48	-7	36	43	17	0	RA BR HZ		0.0	0.05	30.06	30.20	5.7	11	6.3	22	13	16	13	07		
08	53	37	45	-10	38	43	20	0	RA BR		0.0	T	30.19	30.29	8.5	02	9.8	25	05	20	05	08		
09	63	31	47	-8	40	45	18	0			0.0	0.00	30.08	30.21	5.0	16	5.2	21	15	16	16	09		
10	75	43	59	4	52	56	6	0	MIFG BR		0.0	0.00	29.88	30.02	5.6	17	6.0	23	17	17	16	10		
11	77	54	66	12	50	57	0	1			0.0	0.00	29.81	29.91	4.6	29	11.0	38	35	29	35	11		
12	57	38	48	-6	20	38	17	0			0.0	0.00	30.17	30.26	13.6	33	14.1	38*	34	28	36	12		
13	58	31	45	-9	21	36	20	0			0.0	0.00	30.15	30.27	0.4	18	4.1	18	15	15	14	13		
14	71	37	54	0	44	50	11	0			0.0	0.00	29.93	30.08	6.7	16	7.6	26	17	18	17	14		
15	77	52	65	11	55	60	0	0			0.0	0.00	29.67	29.82	8.7	19	9.0	37	19	21	21	15		
16	72	57	65	12	53	58	0	0			0.0	0.00	29.73	29.84	3.8	31	8.0	22	23	15	34	16		
17	60	47	54	1	41	48	11	0	RA		0.0	T	29.92	30.01	9.4	01	9.9	21	01	17	36	17		
18	60	38	49	-4	32	42	16	0			0.0	0.00	29.97	30.09	4.9	01	5.6	16	02	13	03	18		
19	62	37	50	-3	40	45	15	0			0.0	0.00	29.93	30.05	6.4	13	7.3	23	12	18	14	19		
20	78	56	67	14	58	61	0	2			0.0	0.00	29.83	29.95	8.3	17	9.0	25	22	16	17	20		
21	82*	67	75*	22	63	67	0	10			0.0	0.00	29.88	30.00	8.3	21	8.5	24	23	16	23	21		
22	76	64	70	17	62	64	0	5	RA BR HZ		0.0	T	30.03	30.14	2.2	30	6.0	17	02	14	02	22		
23	64	50	57	4	47	51	8	0			0.0	0.00	30.10	30.10	9.7	18	08	15	09	15	09	23		
24	67	46	57	5	47	51	8	0	TSRA RA FG BR		0.0	1.03	29.96	30.09	5.4	08	12.1	32	34	25	34	24		
25	46	37	42	-10	33	39	23	0	RA DZ BR		0.0	T	30.19	30.28	16.9	35	17.2	37	36	29*	35	25		
26	50	30	40*	-12	27	34	25	0			0.0	0.00	30.24	30.36	4.6	33	5.5	17	31	13	35	26		
27	53	29*	41	-11	33	39	24	0			0.0	0.00	30.19	30.32	9.0	11	9.2	22	12	20	14	27		
28	64	48	56	4	50	53	9	0			0.0	0.00	30.03	30.17	10.0	12	10.4	22	14	18	14	28		
29	64	56	60	8	56	57	5	0	TS TSRA RA BR		0.0	1.96	29.67	29.84	8.1	14	9.0	30	15	26	15	29		
30	74	57	66	14	64	65	0	1	RA BR HZ		0.0	T	29.57	29.69	11.1	16	11.3	28	16	21	16	30		
31	76	60	68	16	58	62	0	3	RA BR HZ		0.0	T	29.66	29.76	1.7	07	9.3	24	35	21	35	31		
66.2		44.7	55.5	Σ	43.9	50.1	10.2	0.8	< MONTHLY AVERAGES   TOTALS >				0.0	3.04	29.99	30.11	1.0	11	8.2	< MONTHLY AVERAGES				
1.6	1.9	1.8	<-----DEPARTURE FROM NORMAL ----->						-0.65	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3														
<b>DEGREE DAYS</b>									GREATEST 24-HR PRECIPITATION : 1.96 DATE : 29				SEA LEVEL PRESSURE				DATE TIME							
MONTHLY									GREATEST 24-HR SNOWFALL : 0.0 DATE :				MAXIMUM : 30.53 06 1002											
TOTAL DEPARTURE									GREATEST SNOW DEPTH : 0 DATE :				MINIMUM : 29.62 30 1753											
SEASON TO DATE									NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 0				MINIMUM TEMP <= 32 : 5				PRECIPITATION >= 0.01 INCH : 3			
HEATING : 316 -51 479 -115									THUNDERSTORMS : 2				MAXIMUM TEMP <= 32 : 0				MINIMUM TEMP <= 0 : 0				PRECIPITATION >= 0.10 INCH : 2			
COOLING : 26 1 3417 524																	HEAVY FOG : 0				SNOWFALL >= 1.0 INCH : 0			

DECEMBER 2010  
HOUSTON, TX

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

HOUSTON, TX (KIAH)  
DECEMBER 2010

WBAN # 12960

Date	FOR HOUR (LST) ENDING AT												Date	FOR HOUR (LST) ENDING AT												Date	Sum of Hourly Data	2400 LST Water Equiv.
	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													01												01	0.00	0.00	
02													02												02	0.00	0.00	
03													03												03	0.00	0.00	
04													04												04	0.00	0.00	
05													05												05	0.00	0.00	
06													06												06	0.00	0.00	
07													07												07	0.05	0.05	
08	T				T			T	T				08								T	T	0.02	0.03	08	T	T	
09													09												09	0.00	0.00	
10													10												10	0.00	0.00	
11													11												11	0.00	0.00	
12													12												12	0.00	0.00	
13													13												13	0.00	0.00	
14													14												14	0.00	0.00	
15													15												15	0.00	0.00	
16													16												16	0.00	0.00	
17													17				T								17	T	T	
18													18						T						18	0.00	0.00	
19													19												19	0.00	0.00	
20													20												20	0.00	0.00	
21													21												21	0.00	0.00	
22													22												22	T	T	
23													23												23	0.00	0.00	
24													24	T					T	0.56	0.31	0.10	0.06	T	24	1.03	1.03	
25													25												25	T	T	
26													26												26	0.00	0.00	
27													27												27	0.00	0.00	
28													28												28	0.00	0.00	
29													29	0.14	0.06	0.11	0.56	0.51	T	0.01				T	29	1.96	1.96	
30													30												30	T	T	
31													31												31	T	T	

\* Indicates sum of Hourly and Daily disagree.

### MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	0.25	0.36	0.41	0.45	0.59	0.70	0.80	0.97	1.05	1.08	1.09	1.19
Ending Date	24	24	24	24	24	24	29	29	29	29	29	29
Ending Time (Hr/Min)	1841	1846	1851	1856	1906	1913	1638	1644	1657	1657	1657	1657

Note : The hourly and daily precipitation totals are printed in the last 2 columns and hi-lighted in red when they disagree. 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.

Date and time are not entered for TRACE amounts.

# 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		
DESCRIPTOR	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	
PR Partial	RA Rain	PY Spray	SQ Squalls
SH Shower(s)	SG Snow Grains	SA Sand	SS Sandstorm
TS Thunderstorm	SN Snow	VA Volcanic Ash	GL Glaze
VC In the Vicinity	UP Unkown Precipitation		

Intensity (as indicated on pages 4 to 6):  
'+' = Heavy    '' = Moderate    '-' = Light

# HOUSTON, TX DECEMBER 2010

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	
			Sky Cover	Satellite	Sky Cover	Satellite			
01							10.00	10.00	
02							10.00	10.00	
03							4.00	10.00	
04							9.00	10.00	
05							10.00	10.00	
06							10.00	10.00	
07							6.00	10.00	
08							6.00	10.00	
09							8.00	10.00	
10							5.00	10.00	
11							9.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							8.00	10.00	
16							7.00	10.00	
17							10.00	10.00	
18							10.00	10.00	
19							10.00	10.00	
20							8.00	10.00	
21							7.00	10.00	
22							2.00	10.00	
23							8.00	10.00	
24							0.50	10.00	
25							3.00	10.00	
26							10.00	10.00	
27							9.00	10.00	
28							10.00	10.00	
29							1.00	10.00	
30							0.25	10.00	
31							2.50	10.00	
MONTHLY AVGS							7.20	10.00	
<b>SUNSHINE (Minutes)</b>									
Total : 0					Possible : 19079				
Percent Possible : 0									
<b>NUMBER OF DAYS WITH :</b>									
SKY CONDITION									
Clear		Partly CLDY			Cloudy			Missing	
<b>MINIMUM VISIBILITY (MILES)</b>									
<= .25			<= 3.0				>= 7.0		
1			6				21		

# OBSERVATIONS AT 3-HOURLY INTERVALS

## HOUSTON, TX

### DECEMBER 2010

### KIAH

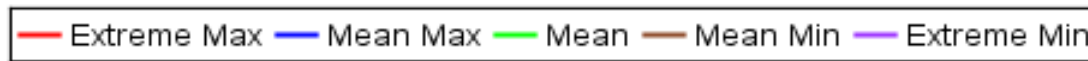
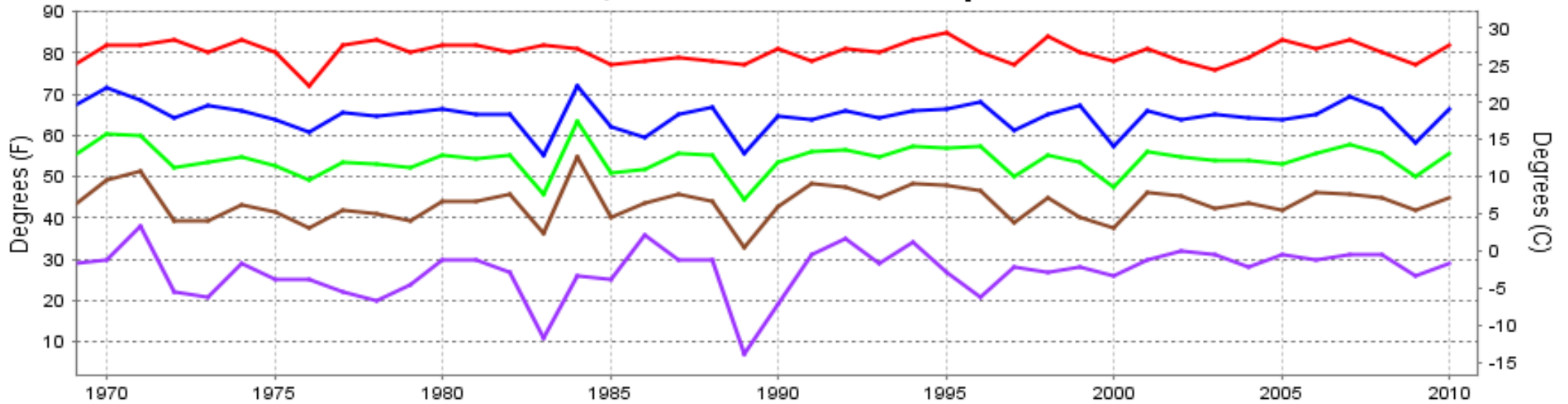
### WBAN # 12960

HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100's of FT.	SATELLITE		WEATHER	TEMPERATURE °F			WIND SPEED (MPH) DIRECTION Tens of Deg	PRESSURE (INCHES, HG)																																																																																																																					
			Observation Time (LST)	Eff Cld Amt Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)				STATION	SEA LEVEL		Observation Time (LST)	Eff Cld Amt Oktas	VISIBILITY (MILES)		DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	STATION	SEA LEVEL																																																																																																																
SUNRISE: 0660						DEC 01						SUNSET: 1721						SUNRISE: 0704						DEC 07						SUNSET: 1722																																																																																																													
03	CLR	NC			10.00	34	28	32	79	0	00	30.26	30.37	03	FEW	250			10.00	36	32	34	85	0	00	30.18	30.29	06	FEW	250			10.00	33	28	31	82	0	00	30.26	30.37	09	FEW	250			10.00	46	32	40	58	0	00	30.29	30.41	12	SCT	250			10.00	60	20	44	21	9	24	30.24	30.36	15	OVC	250			10.00	63	21	45	20	9	21	30.16	30.28	18	OVC	060			10.00	51	29	42	43	3	19	30.14	30.26	21	OVC	040			10.00	51	31	42	46	5	18	30.16	30.28	24	OVC	060			10.00	43	33	39	68	0	00	30.16	30.28	24	OVC	060			10.00	49	46	48	89	8	08	30.01	30.12
SUNRISE: 0700						DEC 02						SUNRISE: 0705						DEC 08						SUNSET: 1722																																																																																																																			
03	CLR	NC			10.00	41	34	38	76	0	00	30.14	30.26	03	OVC	028			8.00	48	45	47	89	11	08	30.02	30.13	06	OVC	033			10.00	40	36	38	86	0	00	30.14	30.25	09	OVC	070			10.00	55	45	50	69	0	00	30.18	30.29	12	BKN	055			10.00	68	47	57	47	11	19	30.14	30.27	15	OVC	035			10.00	70	45	57	41	6	17	30.08	30.19	18	OVC	031			10.00	61	51	56	70	9	14	30.09	30.20	21	OVC	029			10.00	58	51	54	78	3	16	30.11	30.22	24	CLR	NC			10.00	51	49	50	93	0	00	30.10	30.21	24	CLR	NC			10.00	37	34	36	89	0	00	30.24	30.35
SUNRISE: 0701						DEC 03						SUNRISE: 0706						DEC 09						SUNSET: 1722																																																																																																																			
03	CLR	NC			7.00	48	47	48	96	0	00	30.08	30.19	03	CLR	NC			10.00	33	32	33	96	0	00	30.22	30.32	06	CLR	NC			8.00	49	48	48	96	0	00	30.08	30.19	09	FEW	250			10.00	61	57	59	87	0	00	30.11	30.22	12	SCT	250			10.00	72	56	63	57	9	19	30.06	30.18	15	SCT	250			10.00	75	51	61	43	7	21	29.98	30.09	18	SCT	250			10.00	69	55	61	61	8	16	29.98	30.08	21	SCT	039			10.00	65	56	60	73	7	18	29.98	30.10	24	FEW	040			10.00	64	56	59	75	7	19	29.96	30.07	24	FEW	040			10.00	47	45	46	93	3	18	29.98	30.10
SUNRISE: 0702						DEC 04						SUNRISE: 0706						DEC 10						SUNSET: 1722																																																																																																																			
03	SCT	250			10.00	63	56	59	78	5	19	29.92	30.03	03	FEW	037			10.00	45	44	45	96	0	00	29.97	30.08	06	FEW	250			10.00	61	57	59	87	0	00	29.92	30.02	09	SCT	250			10.00	66	61	63	84	5	25	29.98	30.09	12	BKN	028			10.00	76	62	67	62	8	24	29.95	30.06	15	BKN	250			10.00	79	58	66	49	8	27	29.91	30.01	18	BKN	250			10.00	73	58	64	59	7	01	29.95	30.05	21	OVC	060			10.00	67	58	62	73	5	VR	29.98	30.10	24	SCT	250			10.00	62	47	54	58	11	01	30.08	30.19	24	FEW	035			10.00	64	59	61	84	3	18	29.81	29.92
SUNRISE: 0703						DEC 05						SUNRISE: 0707						DEC 11						SUNSET: 1722																																																																																																																			
03	BKN	070			10.00	55	34	45	45	16	01	30.11	30.22	03	SCT	038			10.00	63	58	60	84	5	17	29.78	29.89	06	BKN	065			10.00	51	34	43	52	16	02	30.16	30.28	09	BKN	250			10.00	49	33	42	54	17	03	30.22	30.34	12	BKN	250			10.00	58	33	47	39	11	01	30.22	30.34	15	BKN	250			10.00	58	34	47	41	14	36	30.19	30.31	18	SCT	250			10.00	52	32	43	47	7	02	30.24	30.35	21	CLR	NC			10.00	47	33	41	58	7	02	30.32	30.42	24	CLR	NC			10.00	42	33	38	71	3	34	30.34	30.45	24	CLR	NC			10.00	55	15	40	20	22	35	30.02	30.13
SUNRISE: 0703						DEC 06						SUNRISE: 0708						DEC 12						SUNSET: 1723																																																																																																																			
03	CLR	NC			10.00	38	31	35	76	3	35	30.32	30.45	03	CLR	NC			10.00	50	19	38	29	21	35	30.03	30.15	06	CLR	NC			10.00	36	31	34	82	5	34	30.37	30.47	09	FEW	250			10.00	42	32	38	68	5	05	30.40	30.52	12	SCT	250			10.00	49	29	41	46	5	03	30.37	30.48	15	SCT	250			10.00	56	26	43	32	5	VR	30.27	30.38	18	SCT	250			10.00	50	28	41	43	0	00	30.24	30.35	21	FEW	250			10.00	41	31	37	68	0	00	30.22	30.35	24	FEW	250			10.00	38	32	36	79	0	00	30.22	30.33	24	CLR	NC			10.00	44	17	34	34	8	32	30.22	30.33



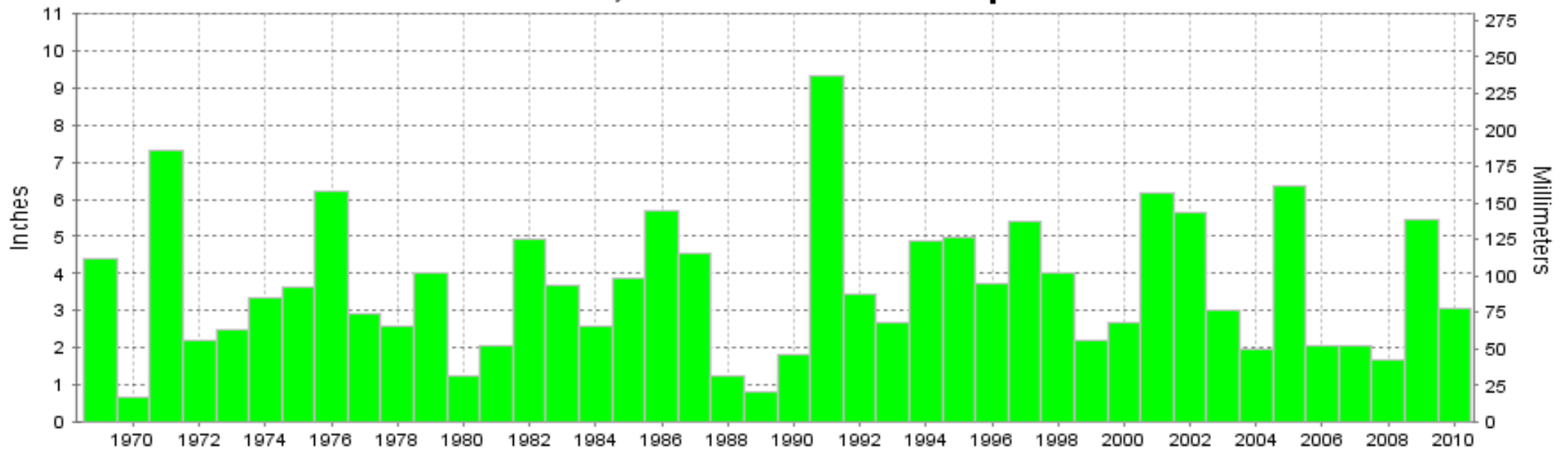


## HOUSTON, TX DECEMBER Temperatures



Long-Term (1969-2010) Mean: 54.1  
 1971-2000 Normal: 53.7

## HOUSTON, TX DECEMBER Precipitation



Long-Term (1969-2010) Mean Monthly Total: 3.64

1971-2000 Normal: 3.69



DECEMBER 2010  
HOUSTON, TX

## LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

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