

2004

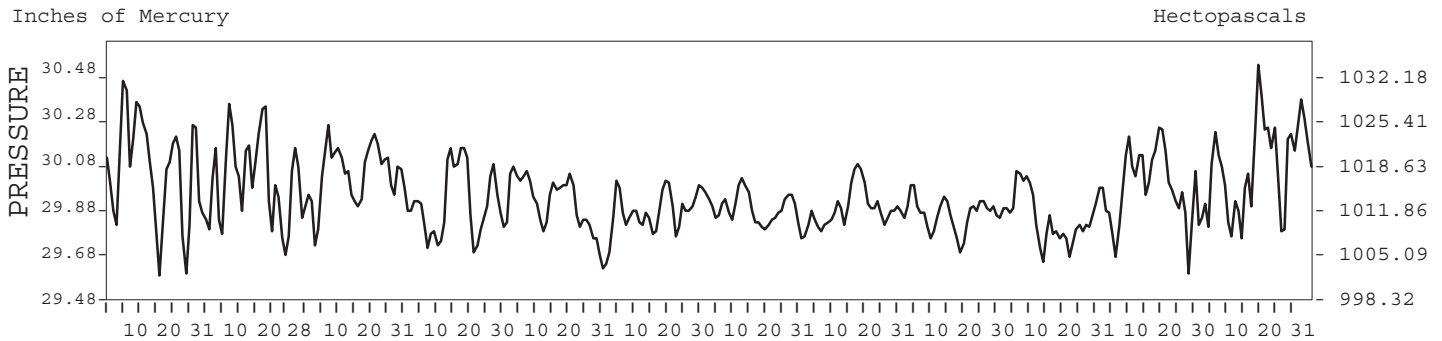
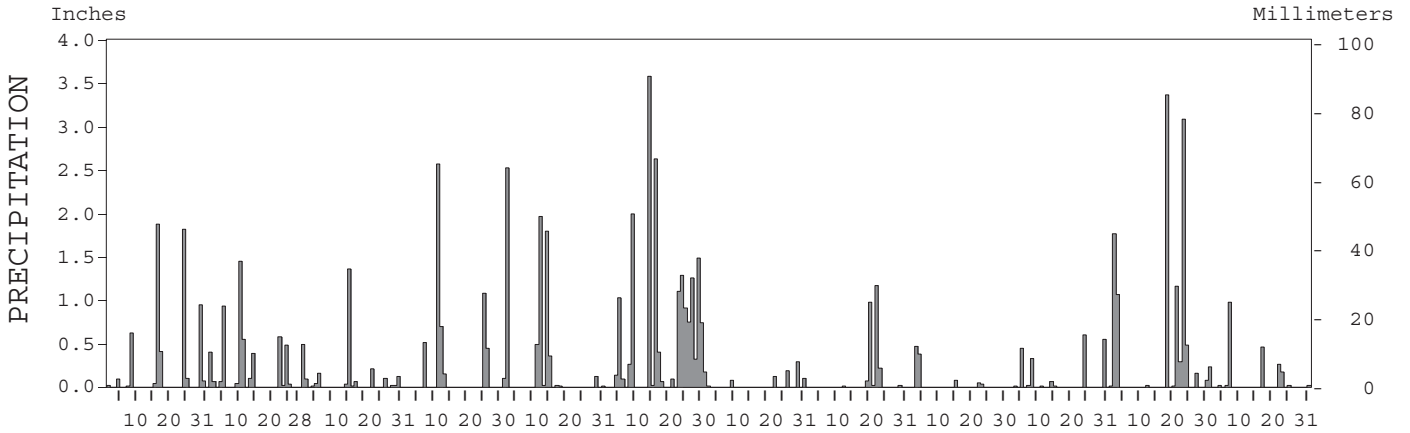
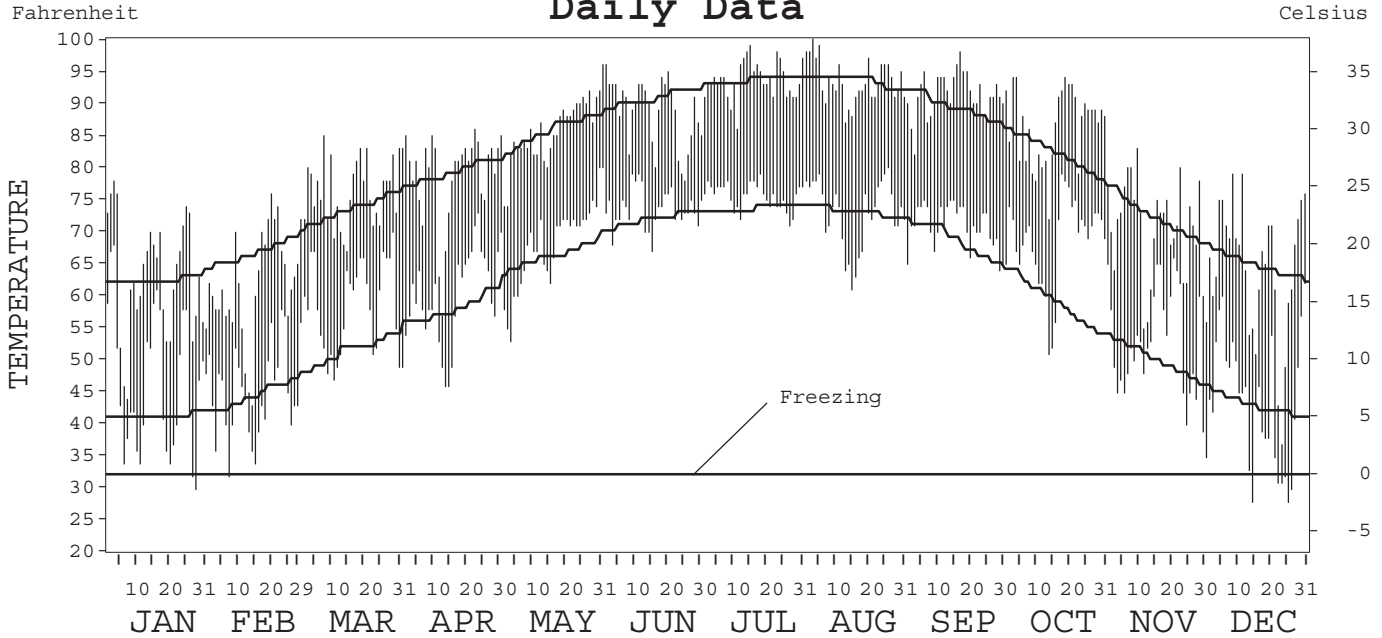
LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-5086

HOUSTON,
TEXAS (IAH)

Daily Data



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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION	NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE	NATIONAL CLIMATIC DATA CENTER ASHEVILLE, NORTH CAROLINA	DIRECTOR NATIONAL CLIMATIC DATA CENTER
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METEOROLOGICAL DATA FOR 2004

HOUSTON, TX (IAH)

LATITUDE: 29° 59' 33" N LONGITUDE: 95° 21' 50" W ELEVATION (FT): GRND: 118 BARO: 121 TIME ZONE: CENTRAL (UTC + 6) WBAN: 12960

	ELEMENT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE °F	MEAN DAILY MAXIMUM	62.9	62.0	76.4	78.8	85.8	88.6	93.6	93.5	91.4	86.5	70.8	64.2	79.5	
	HIGHEST DAILY MAXIMUM	78	76	85	86	96	96	99	100	98	94	83	79	100	
	DATE OF OCCURRENCE	03	20	07	22	31	01	15	03	17	19+	10	12+	AUG 03	
	MEAN DAILY MINIMUM	46.5	45.0	58.2	60.2	68.1	73.6	75.6	72.9	71.0	68.5	53.1	43.4	61.3	
	LOWEST DAILY MINIMUM	30	32	47	46	53	67	71	61	64	51	39	28	28	
	DATE OF OCCURRENCE	28	07	10	14+	03	15	27	15	29	14	30	26+	DEC 26+	
	AVERAGE DRY BULB	54.7	53.5	67.3	69.5	77.0	81.1	84.6	83.2	81.2	77.5	62.0	53.8	70.5	
	MEAN WET BULB	50.8	49.1	61.0	63.4	70.2	74.9	76.2	73.7	71.5	70.8	58.2	48.9	64.1	
	MEAN DEW POINT	46.0	44.8	56.2	59.5	67.0	72.8	72.8	69.5	67.1	67.8	55.1	43.0	60.1	
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	8	16	29	28	24	10	0	0	0	115
	MAXIMUM ≤ 32°	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MINIMUM ≤ 32°	2	1	0	0	0	0	0	0	0	0	0	6	9	9
MINIMUM ≤ 0°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
H/C	HEATING DEGREE DAYS	328	328	29	33	0	0	0	0	0	3	121	350	1192	
	COOLING DEGREE DAYS	17	1	108	176	379	491	616	570	495	398	37	11	3299	
RH	MEAN (PERCENT)	75	76	72	74	76	80	72	68	68	76	80	70	74	
	HOUR 00 LST	82	83	82	85	87	89	83	80	82	88	86	78	84	
	HOUR 06 LST	85	86	85	90	90	90	91	87	86	91	90	82	88	
	HOUR 12 LST	66	65	60	59	60	69	55	50	51	60	70	57	60	
	HOUR 18 LST	67	67	59	63	66	74	59	55	53	68	75	65	64	
S	PERCENT POSSIBLE SUNSHINE														
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	4	3	1	2	0	1	0	0	0	0	1	1	13	
	THUNDERSTORMS	4	5	3	5	6	18	10	7	1	4	7	1	71	
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.)	30.03	30.00	30.02	29.89	29.88	29.87	29.86	29.88	29.84	29.83	29.96	30.07	29.93	
	MEAN SEA-LEVEL PRESS. (IN.)	30.14	30.11		30.01	30.00	29.98	29.97		29.96	29.95	30.08	30.19		
WINDS	RESULTANT SPEED (MPH)	1.3	3.0	4.5	3.9	2.0	1.6	1.0	2.0	2.2	3.0	1.7	1.4	1.0	
	RES. DIR. (TENS OF DEGS.)	07	04	13	16	23	11	09	19	03	19	04	02	12	
	MEAN SPEED (MPH)	8.1	9.1	8.5	8.8	9.1	6.7	5.7	6.4	6.2	7.4	8.0	7.1	7.6	
	PREVAIL. DIR. (TENS OF DEGS.)	11	01	14	16	16	16	16	17	04	17	33	01	16	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	32	26	35	33	33	45	24	24	26	30	35	26	45	
	DIR. (TENS OF DEGS.)	33	14	14	15	01	13	16	34	10	31	30	35	13	
	DATE OF OCCURRENCE	26	28	04	20	13	13	06	21+	14	04	23	23+	JUN 13	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	38	33	39	39	41	54	29	35	30	38	47	37	54	
DIR. (TENS OF DEGS.)	32	13	15	14	01	13	16	21	10	15	30	28	13		
DATE OF OCCURRENCE	26	28	04	20	13	13	06	19	14	31	23	06	JUN 13		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	6.01	5.58	2.23	5.56	7.33	18.33	0.79	2.49	1.01	2.05	11.73	1.95	65.06	
	GREATEST 24-HOUR (IN.)	2.28	1.61	1.37	3.26	2.53	3.58	0.29	1.17	0.85	0.60	3.37	0.98	3.58	
	DATE OF OCCURRENCE	16-17	10-11	14-15	10-11	01	13	28	21	02-03	23	17	06	JUN 13	
	NUMBER OF DAYS WITH:														
	PRECIPITATION ≥ 0.01	11	14	13	7	10	20	6	7	5	10	12	8	123	
PRECIPITATION ≥ 0.10	6	9	5	7	6	16	4	3	2	4	9	4	75		
PRECIPITATION ≥ 1.00	2	1	1	2	3	8	0	1	0	0	5	0	23		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	
	GREATEST 24-HOUR (IN.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	
	DATE OF OCCURRENCE												24	DEC 24	
	MAXIMUM SNOW DEPTH (IN.)	0	0	0	0	0	0	0	0	0	0	0	0	0	
	NUMBER OF DAYS WITH:														
SNOWFALL ≥ 1.0	0	0	0	0	0	0	0	0	0	0	0	0	0		

NORMALS, MEANS, AND EXTREMES

HOUSTON, TX (IAH)

LATITUDE: 29° 59' 33" N LONGITUDE: 95° 21' 50" W ELEVATION (FT): GRND: 118 BARO: 121 TIME ZONE: CENTRAL (UTC + 6) WBAN: 12960

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	62.3	66.5	73.3	79.1	85.5	90.7	93.6	93.5	89.3	82.0	72.0	64.6	79.4
	MEAN DAILY MAXIMUM	35	61.8	66.0	72.7	79.2	85.5	90.7	93.8	93.6	88.9	81.4	71.6	64.7	79.2
	HIGHEST DAILY MAXIMUM	35	84	91	91	95	99	103	104	107	109	96	89	85	109
	YEAR OF OCCURRENCE		1975	1986	1989	1987	1996	1980	1980	2000	2000	1991	1989	1995	SEP 2000
	MEAN OF EXTREME MAXS.	35	78.4	81.1	85.2	88.4	92.8	96.7	98.5	99.4	96.5	91.2	84.9	80.0	89.4
	NORMAL DAILY MINIMUM	30	41.2	44.3	51.3	57.9	66.1	71.8	73.5	73.0	68.4	58.8	49.8	42.8	58.2
	MEAN DAILY MINIMUM	35	41.4	44.5	51.1	58.3	66.0	71.6	73.5	73.0	68.6	59.2	49.9	43.5	58.4
	LOWEST DAILY MINIMUM	35	12	20	22	31	44	52	62	60	48	29	19	7	7
	YEAR OF OCCURRENCE		1982	1997	2002	1987	1978	1970	1990	1992	1975	1993	1976	1989	DEC 1989
	MEAN OF EXTREME MINS.	35	24.9	27.4	33.0	40.4	52.4	62.8	68.5	67.5	54.7	42.5	32.4	26.8	44.4
	NORMAL DRY BULB	30	51.8	55.4	62.3	68.5	75.8	81.3	83.6	83.3	78.9	70.4	60.9	53.7	68.8
	MEAN DRY BULB	35	51.8	55.2	61.9	68.7	75.6	81.0	83.6	83.2	78.7	70.2	60.6	54.1	68.7
	MEAN WET BULB	21	48.2	51.2	56.6	63.0	70.1	74.6	75.8	75.7	71.5	64.7	56.4	47.5	62.9
	MEAN DEW POINT	21	43.0	46.3	51.7	58.6	66.8	71.7	72.9	72.4	68.0	61.1	52.4	43.2	59.0
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.1	0.1	0.9	6.4	20.1	27.3	25.7	15.9	3.1	0.0	0.0	99.6	
MAXIMUM ≤ 32°	30	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	
MINIMUM ≤ 32°	30	6.3	3.8	1.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	1.3	5.1	18.0	
MINIMUM ≤ 0°	30	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
H/C	NORMAL HEATING DEG. DAYS	30	427	298	156	48	2	0	0	0	1	37	189	367	1525
	NORMAL COOLING DEG. DAYS	30	15	21	63	147	328	485	573	563	412	196	65	25	2893
RH	NORMAL (PERCENT)	30	75	74	73	74	76	76	74	75	76	75	76	76	75
	HOUR 00 LST	30	82	83	83	85	87	88	86	87	88	88	86	84	86
	HOUR 06 LST	30	86	87	88	89	92	92	93	94	93	91	89	87	90
	HOUR 12 LST	30	64	60	59	58	60	60	57	57	59	57	61	62	60
	HOUR 18 LST	30	67	62	60	60	64	64	62	62	66	68	72	71	65
S	PERCENT POSSIBLE SUNSHINE	27	45	50	54	58	62	68	70	68	66	64	52	51	59
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	35	4.4	3.4	2.9	2.3	1.6	0.7	0.2	0.3	1.2	2.5	3.3	3.7	26.5
	THUNDERSTORMS	35	2.2	2.5	3.6	3.9	6.7	9.2	10.1	10.2	7.0	3.9	3.1	2.0	64.4
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	27	5.5	5.3	5.4	5.3	5.2	4.6	4.4	4.4	4.2	4.0	4.6	5.3	4.8
	MIDNIGHT-MIDNIGHT (OKTAS)	26	5.3	5.0	5.1	5.0	4.9	3.9	3.8	3.7	3.6	3.5	4.3	5.0	4.4
	MEAN NO. DAYS WITH:														
	CLEAR	27	7.2	7.0	7.0	7.2	5.6	7.3	6.9	6.1	8.6	11.2	9.0	7.2	90.3
PARTLY CLOUDY	27	5.4	5.6	6.4	7.1	11.0	13.3	15.9	16.9	11.5	8.9	7.0	5.5	114.5	
CLOUDY	27	18.4	15.6	17.6	15.7	14.3	9.3	8.2	8.0	10.0	10.9	14.0	18.3	160.3	
PR	MEAN STATION PRESSURE (IN)	32	30.00	29.99	29.90	29.90	29.80	29.90	29.90	29.89	29.90	30.00	30.00	30.00	29.91
	MEAN SEA-LEVEL PRES. (IN)	20	30.14	30.09	30.02	29.97	29.93	29.94	30.00	29.98	29.97	30.04	30.09	30.14	30.03
WINDS	MEAN SPEED (MPH)	32	8.1	8.4	9.0	9.0	8.1	7.5	6.7	6.1	6.6	7.1	7.7	7.7	7.7
	PREVAIL. DIR (TENS OF DEGS)	32	36	36	13	16	16	16	18	18	12	13	36	35	16
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	8	32	40	35	37	36	45	36	38	37	30	35	46	46
	DIR. (TENS OF DEGS)		33	10	14	11	02	13	34	02	29	31	30	14	14
	YEAR OF OCCURRENCE		2004	2000	2004	1997	1999	2004	1998	2002	2002	2004	2004	2002	DEC 2002
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	8	38	44	41	43	47	66	49	45	48	47	47	52	66
DIR. (TENS OF DEGS)		32	10	30	09	35	15	33	01	10	13	30	13	15	
YEAR OF OCCURRENCE		2004	2000	2003	1997	1997	2000	1998	2002	2000	1998	2004	2002	JUN 2000	
PRECIPITATION	NORMAL (IN)	30	3.68	2.98	3.36	3.60	5.15	5.35	3.18	3.83	4.33	4.50	4.19	3.69	47.84
	MAXIMUM MONTHLY (IN)	35	9.78	5.99	8.52	10.92	14.39	19.21	8.10	10.58	11.35	16.05	11.73	9.34	19.21
	YEAR OF OCCURRENCE		1991	1992	1972	1976	1970	2001	1979	1996	1976	1984	2004	1991	JUN 2001
	MINIMUM MONTHLY (IN)	35	0.36	0.38	0.12	0.43	0.04	0.26	0.47	0.31	0.80	0.05	0.41	0.64	0.04
	YEAR OF OCCURRENCE		1971	1976	1996	1983	1998	1970	1993	1990	1975	1978	1988	1973	MAY 1998
	MAXIMUM IN 24 HOURS (IN)	35	2.73	2.22	7.47	8.16	10.36	11.02	5.40	6.83	7.98	9.31	6.33	4.14	11.02
	YEAR OF OCCURRENCE		1995	1985	1972	1976	1989	2001	2002	1981	1976	1984	1998	1995	JUN 2001
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	10.5	8.5	9.1	7.0	8.2	9.7	8.9	8.9	8.9	7.5	8.6	9.4	105.2
PRECIPITATION ≥ 1.00	30	1.1	0.9	0.8	1.2	1.7	1.7	0.9	1.1	1.2	1.5	1.2	1.2	14.5	
SNOWFALL	NORMAL (IN)	30	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.*	0.1	0.4
	MAXIMUM MONTHLY (IN)	35	2.0	2.8	T	T	T	T	0.0	0.0	0.0	0.0	T	1.7	2.8
	YEAR OF OCCURRENCE		1973	1973	1992	1993	1993	1996					1979	1989	FEB 1973
	MAXIMUM IN 24 HOURS (IN)	35	2.0	1.4	T	T	T	T	0.0	0.0	0.0	0.0	T	1.7	2.0
	YEAR OF OCCURRENCE		1973	1980	1992	1993	1993	1996					1979	1989	JAN 1973
	MAXIMUM SNOW DEPTH (IN)	34	1	1	0	0	0	0	0	0	0	0	0	0	1
	YEAR OF OCCURRENCE		1973	1973											FEB 1973
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	

PRECIPITATION (inches) 2004 HOUSTON, TX (IAH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	1.97	2.63	3.19	4.80	7.57	7.50	5.48	5.72	0.80	5.62	2.08	3.61	50.97
1976	1.39	0.38	1.53	10.92	5.80	2.63	3.93	1.59	11.35	5.83	3.05	6.22	54.62
1977	2.67	1.70	1.95	4.34	0.79	3.55	2.69	4.45	3.92	0.82	5.17	2.89	34.94
1978	7.15	3.07	1.70	0.57	4.15	9.37	2.35	3.66	4.27	0.05	5.99	2.60	44.93
1979	6.30	5.23	2.88	7.79	3.78	1.88	8.10	4.57	9.83	2.80	1.78	4.03	58.97
1980	6.09	2.54	5.39	2.05	5.63	0.92	1.57	1.40	6.00	4.03	2.12	1.25	38.99
1981	2.32	2.21	1.74	2.69	8.75	9.65	4.43	7.01	2.91	6.96	5.26	2.05	55.98
1982	1.82	1.59	1.55	2.28	6.87	1.10	4.32	1.90	0.98	6.64	8.91	4.91	42.87
1983	2.00	3.97	3.85	0.43	7.29	5.37	5.23	9.42	7.23	1.56	3.17	3.69	53.21
1984	3.99	4.37	2.41	0.56	3.13	1.99	3.43	3.52	3.87	16.05	2.28	2.59	48.19
1985	2.10	5.38	4.52	4.31	1.57	5.29	4.93	1.14	4.67	6.54	4.84	3.85	49.14
1986	0.71	2.74	1.44	2.63	4.29	6.34	0.61	3.27	3.70	6.83	6.66	5.71	44.93
1987	2.42	4.26	0.88	0.47	5.39	9.31	4.79	1.48	3.46	0.17	3.41	4.56	40.60
1988	1.27	1.29	4.88	1.26	1.32	2.00	3.23	3.52	1.20	1.29	0.41	1.26	22.93
1989	4.80	0.90	3.96	1.48	13.56	16.28	1.92	2.74	2.69	1.76	1.84	0.80	52.73
1990	3.96	4.54	5.11	6.21	2.23	2.98	4.85	0.31	1.57	3.79	3.01	1.81	40.37
1991	9.78	5.79	1.77	8.06	4.02	7.69	1.31	2.97	2.76	2.57	5.03	9.34	61.09
1992	7.70	5.99	6.28	3.74	7.05	3.38	3.85	2.78	1.08	1.03	5.99	3.46	52.33
1993	5.79	2.67	6.41	7.88	8.50	12.08	0.47	1.82	1.10	5.32	3.27	2.68	57.99
1994	2.08	2.79	2.39	2.11	5.02	3.40	1.60	5.45	1.12	10.62	1.67	4.90	43.15
1995	5.95	2.55	4.11	2.59	3.83	4.11	2.68	4.90	2.52	2.77	3.63	4.99	44.63
1996	0.88	1.29	0.12	2.05	0.56	8.37	1.11	10.58	6.96	2.60	4.55	3.74	42.81
1997	3.26	5.35	7.96	7.17	6.69	4.46	2.30	2.26	4.86	7.11	3.38	5.42	60.22
1998	4.35	5.85	2.32	1.21	0.04	2.87	1.65	4.38	10.16	7.79	10.21	4.01	54.84
1999	2.12	0.80	3.44	1.06	4.10	5.26	5.11	0.50	1.36	0.56	1.53	2.20	28.04
2000	1.25	2.32	1.35	5.52	12.35	3.29	0.64	2.11	4.34	3.27	8.50	2.69	47.63
2001	4.25	0.82	7.97	2.00	3.53	19.21	2.05	4.83	8.82	8.95	2.58	6.18	71.19
2002	1.24	0.89	2.36	3.79	1.79	4.54	7.11	5.47	8.02	14.65	4.20	5.65	59.71
2003	2.09	4.08	2.04	1.46	0.06	3.62	5.35	4.47	6.79	4.99	7.80	2.99	45.74
2004	6.01	5.58	2.23	5.56	7.33	18.33	0.79	2.49	1.01	2.05	11.73	1.95	65.06
POR= 70 YRS	3.69	3.14	2.95	3.45	4.82	5.19	3.81	3.96	4.51	4.26	4.19	4.02	47.99

WBAN : 12960

AVERAGE TEMPERATURE (°F) 2004 HOUSTON, TX (IAH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	56.9	55.4	61.1	68.3	75.9	80.0	81.5	81.1	74.9	69.5	59.7	52.7	68.1
1976	50.6	60.1	62.2	67.7	70.5	78.4	80.5	81.4	76.2	60.6	51.8	49.2	65.8
1977	42.7	53.8	60.9	66.9	74.5	81.0	82.4	83.1	80.0	69.2	61.8	53.7	67.5
1978	40.8	45.1	57.3	67.6	76.0	80.4	83.7	83.1	79.3	68.9	64.7	52.9	66.7
1979	44.1	51.7	62.4	68.7	73.1	79.8	82.6	81.5	75.6	70.7	55.7	52.4	66.5
1980	55.0	53.7	60.9	66.2	77.3	85.1	87.5	86.6	83.2	67.8	58.0	55.2	69.7
1981	51.4	55.4	60.9	74.3	75.3	82.7	84.4	84.4	78.6	72.3	64.4	54.5	69.9
1982	52.9	52.1	64.9	67.8	75.3	83.0	85.4	84.1	79.3	69.5	60.9	55.4	69.2
1983	50.1	52.5	58.3	64.0	73.4	79.0	82.2	82.6	76.6	70.1	63.1	45.7	66.5
1984	47.0	54.0	61.9	67.8	74.9	78.6	81.8	82.9	77.4	74.2	60.0	63.4	68.7
1985	45.7	49.6	64.7	70.0	75.6	81.0	81.6	84.2	79.8	72.5	67.0	51.0	68.6
1986	54.4	59.9	63.3	71.7	75.8	82.0	85.9	82.6	81.8	68.9	62.0	51.7	70.0
1987	51.4	56.1	58.9	67.2	77.1	81.3	83.5	86.2	78.9	68.7	60.5	55.6	68.8
1988	48.1	54.1	61.3	67.6	73.6	80.5	84.4	85.3	80.8	72.0	65.7	55.4	69.1
1989	57.5	52.7	61.3	69.4	77.8	79.9	82.4	81.7	77.0	70.2	62.9	44.4	68.1
1990	57.0	59.1	62.9	69.4	78.1	84.8	82.1	85.1	80.1	68.7	63.4	53.6	70.4
1991	50.4	57.4	63.5	72.2	78.0	82.0	84.0	83.0	77.4	72.3	56.7	56.2	69.4
1992	51.0	58.5	64.0	68.7	73.7	81.7	83.6	80.1	79.3	71.4	56.8	56.7	68.8
1993	53.6	56.7	61.1	65.9	73.4	81.6	85.8	86.5	80.2	69.5	56.9	54.6	68.8
1994	52.6	55.2	62.7	69.6	76.0	83.5	85.5	83.1	78.3	71.9	65.7	57.2	70.1
1995	54.3	58.7	62.9	68.6	77.9	80.6	84.8	84.9	81.6	70.4	61.4	57.1	70.3
1996	52.0	58.7	58.1	69.4	81.4	80.7	83.8	82.0	77.5	70.6	62.0	57.4	69.5
1997	50.8	55.3	65.3	64.2	73.6	79.2	83.1	83.2	79.1	68.9	55.7	50.1	67.4
1998	57.1	55.1	60.1	65.9	78.7	85.5	86.6	84.7	82.2	72.6	64.3	55.1	70.7
1999	57.1	61.5	63.7	73.0	76.6	81.9	83.1	86.8	78.0	69.0	62.2	53.7	70.6
2000	56.5	61.7	66.4	67.9	78.1	81.4	85.2	84.8	79.4	70.9	57.6	47.6	69.8
2001	49.3	59.3	56.4	71.7	75.9	80.5	83.6	83.5	77.0	66.9	63.4	56.0	68.6
2002	54.6	50.7	61.3	73.5	77.0	81.7	84.5	83.9	79.7	71.6	58.8	54.6	69.3
2003	50.1	53.8	61.4	70.5	80.8	82.7	83.4	84.7	77.7	71.7	65.0	53.8	69.6
2004	54.7	53.5	67.3	69.5	77.0	81.1	84.6	83.2	81.2	77.5	62.0	53.8	70.5
POR= 35 YRS	51.7	55.2	62.1	68.8	75.7	81.1	83.5	83.3	78.7	70.4	60.7	54.1	68.8

HEATING DEGREE DAYS (base 65°F) 2004 HOUSTON, TX (IAH)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0	0	0	26	217	399	441	178	155	26	7	0	1449
1976-77	0	0	0	173	398	484	687	312	166	25	0	0	2245
1977-78	0	0	0	34	150	365	752	553	250	33	17	0	2154
1978-79	0	0	0	22	111	393	646	376	135	23	2	0	1708
1979-80	0	0	0	27	297	389	308	350	169	45	0	0	1585
1980-81	0	0	0	67	255	323	416	291	144	6	1	0	1503
1981-82	0	0	0	50	82	326	409	363	143	79	1	0	1453
1982-83	0	0	0	53	175	328	457	346	219	96	0	0	1674
1983-84	0	0	6	27	138	606	549	325	150	45	2	0	1848
1984-85	0	0	6	12	204	144	591	432	91	22	0	0	1502
1985-86	0	0	5	17	76	434	326	209	99	11	0	0	1177
1986-87	0	0	0	28	175	411	421	245	196	82	0	0	1558
1987-88	0	0	0	16	185	301	525	331	171	35	0	0	1564
1988-89	0	0	0	5	120	309	260	379	210	56	0	0	1339
1989-90	0	0	0	47	160	637	264	177	122	34	0	0	1441
1990-91	0	0	0	61	129	395	448	222	115	8	0	0	1378
1991-92	0	0	0	15	289	303	428	197	95	37	4	0	1368
1992-93	0	0	0	1	270	268	351	235	157	62	0	0	1344
1993-94	0	0	0	76	269	343	391	291	136	40	1	0	1547
1994-95	0	0	0	21	75	268	347	192	155	28	0	0	1086
1995-96	0	0	4	8	145	303	408	267	259	54	0	0	1448
1996-97	0	0	1	29	159	280	458	287	77	70	0	0	1361
1997-98	0	0	0	58	282	454	254	276	212	57	0	0	1593
1998-99	0	0	0	8	92	349	276	153	106	25	0	0	1009
1999-00	0	0	0	51	114	355	298	152	72	50	0	0	1092
2000-01	0	0	5	51	267	532	480	207	262	19	0	0	1823
2001-02	0	0	0	57	111	311	343	395	181	11	1	0	1410
2002-03	0	0	0	13	201	332	461	314	135	24	0	0	1480
2003-04	0	0	0	12	105	342	328	328	29	33	0	0	1177
2004-	0	0	0	3	121	350							

WBAN : 12960

COOLING DEGREE DAYS (base 65°F) 2004 HOUSTON, TX (IAH)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1975	47	8	61	155	342	455	514	505	303	174	68	24	2656
1976	5	43	75	110	182	408	490	520	341	42	9	0	2225
1977	0	5	44	91	302	487	547	565	456	173	58	23	2751
1978	10	5	19	120	369	471	584	568	437	150	108	25	2866
1979	7	13	62	142	261	454	552	519	324	211	26	6	2577
1980	4	31	49	86	388	610	705	677	553	162	52	26	3343
1981	1	28	23	295	330	538	606	609	413	285	71	7	3206
1982	39	11	147	170	329	547	641	599	437	199	60	40	3219
1983	0	0	18	76	268	427	541	554	362	196	87	18	2547
1984	0	13	64	135	315	415	527	562	384	302	62	100	2879
1985	0	6	87	180	335	487	521	602	456	257	143	9	3083
1986	4	71	52	220	341	518	654	553	510	157	92	4	3176
1987	4	4	14	154	383	497	580	661	423	137	54	15	2926
1988	7	20	65	121	274	472	609	637	478	229	144	20	3076
1989	33	44	105	194	405	454	547	526	363	218	105	5	2999
1990	20	19	65	174	413	603	536	630	456	181	87	47	3231
1991	0	14	76	231	408	514	593	565	376	248	47	37	3109
1992	0	17	74	155	281	508	584	476	437	210	32	20	2794
1993	4	10	42	92	267	506	652	674	463	221	31	27	2989
1994	15	25	74	186	347	561	644	569	406	243	102	33	3205
1995	24	22	98	142	406	476	622	622	508	183	42	65	3210
1996	15	89	53	192	513	475	587	532	384	205	78	51	3174
1997	23	21	94	52	274	432	567	570	426	187	9	0	2655
1998	16	6	64	90	429	621	678	616	524	250	75	50	3419
1999	37	60	73	270	365	515	568	685	395	182	35	11	3196
2000	41	64	126	143	413	495	632	622	443	242	51	0	3272
2001	2	51	3	230	344	474	585	581	370	123	70	40	2873
2002	27	2	72	272	380	507	611	590	449	223	24	17	3174
2003	6	6	31	196	495	538	575	617	387	228	111	3	3193
2004	17	1	108	176	379	491	616	570	495	398	37	11	3299

SNOWFALL (inches) 2004 HOUSTON, TX (IAH)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1975-76	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976-77	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T
1977-78	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.4
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1979-80	0.0	0.0	0.0	0.0	T	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4
1980-81	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	0.0	0.0	0.0	T
1981-82	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1982-83	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1983-84	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1984-85	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.3	0.0	0.0	0.0	0.0	1.7
1985-86	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1987-88	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1988-89	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	T
1989-90	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	T	1.7
1990-91	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1991-92	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T	0.0	T
1992-93	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	0.0	T
1993-94	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
1994-95	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	T
1995-96	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T	T
1996-97	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T
1997-98	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1998-99	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
1999-00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	T
2000-01	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	0.0	0.0	0.0	T
2001-02	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2002-03	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2003-04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2004-	0.0	0.0	0.0	0.0	0.0	T							
POR= 69 YRS	0.0	0.0	0.0	0.0	T	0.0	0.2	0.2	0.0	T	T	T	0.4

WBAN : 12960

REFERENCE NOTES :

<p>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).</p> <p>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).</p> <p>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 (1971 - 2000). 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.</p>	<p>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.</p> <p>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.</p>
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2004
HOUSTON,
TEXAS (IAH)

Houston, the largest city in Texas, is located in the flat Coastal Plains, about 50 miles from the Gulf of Mexico and about 25 miles from Galveston Bay. The climate is predominantly marine. The terrain includes numerous small streams and bayous which, together with the nearness to Galveston Bay, favor the development of both ground and advective fogs. Prevailing winds are from the southeast and south, except in January, when frequent passages of high pressure areas bring invasions of polar air and prevailing northerly winds.

Temperatures are moderated by the influence of winds from the Gulf, which result in mild winters. Another effect of the nearness of the Gulf is abundant rainfall, except for rare extended dry periods. Polar air penetrates the area frequently enough to provide variability in the weather.

Records of sky cover for daylight hours indicate about one-fourth of the days per year as clear, with a high number of clear days in October and November. Cloudy days are relatively frequent from December to May and partly cloudy days are the more frequent for June through September. Sunshine averages nearly 60 percent of the possible amount for the year ranging from 42 percent in January to 67 percent in June.

Heavy fog occurs on an average of 16 days a year and light fog occurs about 62 days a year in the city. The frequency of heavy fog is considerably higher at William P. Hobby Airport and at Intercontinental Airport.

Destructive windstorms are fairly infrequent, but both thundersqualls and tropical storms occasionally pass through the area.

STATION LOCATION

HOUSTON, 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	TRAINING GAUGE	WEIGHING RAIN GAUGE	8 INCH RAIN GAUGE	HYGROMETER		
*NOTES:																	
<u>AIRPORT</u>																	
Trailer, NW corner of Houston Intercontinental AP	6/01/69	8/15/72	23 mi. NNW	29°59'	95°22'	96	20	5	5				c4	3	b4	b. Commissioned 11/14/69. c. Commissioned 1/1/70.	
Qualitron Building Intercontinental AP 17795 J.F. Kennedy Blvd	8/15/72	06/01/96	1.6 mi. SE	29°58'	95°21'	96	d20			46	e45	45	45	d4 f5		d. Same site as prior to 8/15/72. e. Added 10/15/74. f. Type change and move 1250 ft. NNW 7/28/82.	
Intercontinental Airport	06/01/96	Present	NA	30°00'	95°22'	g118									S	ASOS Commissioned 06/01/96 g. Ground elevation.	

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* NOTES: For previous station history see previous editions.