



JULY 2001

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

WILMINGTON, DE

NEW CASTLE COUNTY APRT (ILG)
 Lat: 39° 40' N Long: 75° 36' W Elev (Ground): 92 Feet
 Time Zone: EASTERN WBAN: 13781 ISSN #: 0198-117X

JULY 2001
WILMINGTON, DE

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	0700 LST		1300 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	88	69	79	4	70	72	0	14	TS RA BR			0.0	0.03	29.78	29.87	9.6	23	10.4	35	31	26	32	01															
02	73	55	64*	-11	45	54	1	0				0.0	0.00	30.07	30.16	8.7	31	10.3	26	33	21	33	02															
03	77	52*	65	-10	55	60	0	0				0.0	0.00	30.12	30.20	7.1	19	7.5	23	19	18	20	03															
04	84	70	77	2	69	71	0	12	RA BR HZ			0.0	0.33	29.89	29.98	3.7	21	4.6	16	28	14	29	04															
05	83	65	74	-1	66	68	0	9	TS TSRA RA BR HZ			0.0	0.18	29.77	29.85	6.6	26	8.1	41	32	28	33	05															
06	76	59	68	-8	54	60	0	3	RA			0.0	T	29.95	30.04	8.5	30	9.1	23	32	18	32	06															
07	81	55	68	-8	56	62	0	3	RA			0.0	T	30.02	30.10	5.8	19	6.9	21	19	17	23	07															
08	77	66	72	-4	67	69	0	7	RA BR HZ			0.0	0.07	29.77	29.86	5.1	18	5.8	13	17	10	14	08															
09	89	68	79	3	66	70	0	14	TSRA RA BR			0.0	0.59	29.71	29.79	5.7	32	6.8	18	25	16	24	09															
10	89	68	79	3	67	70	0	14	TSRA RA BR			0.0	0.32	29.65	29.73	3.6	25	6.4	41*	31	36*	31	10															
11	84	64	74	-2	62	67	0	9	BR			0.0	0.00	29.62	29.70	9.3	29	10.3	29	32	24	29	11															
12	80	60	70	-6	55	61	0	5				0.0	0.00	29.81	29.89	7.3	29	7.7	24	27	20	27	12															
13	79	57	68	-8	55	61	0	3				0.0	0.00	29.84	29.92	4.3	32	4.8	18	31	15	31	13															
14	81	58	70	-6	56	62	0	5				0.0	0.00	29.79	29.88	7.7	31	8.1	21	29	18	29	14															
15	84	58	71	-6	58	64	0	6				0.0	0.00	29.88	29.96	4.6	30	5.5	18	29	16	27	15															
16	88	63	76	-1	62	67	0	11	RA			0.0	T	29.95	30.03	3.1	28	4.7	15	29	13	29	16															
17	89	70	80	3	67	71	0	15	RA BR HZ			0.0	T	29.93	30.01	2.8	23	6.1	17	06	14	05	17															
18	77	70	74	-3	68	70	0	9	RA BR HZ			0.0	0.60	29.93	30.01	7.3	07	8.1	21	07	15	07	18															
19	79	66	73	-4	62	66	0	8	BR			0.0	0.00	30.03	30.12	8.7	05	9.7	23	02	18	07	19															
20	81	60	71	-6	56	62	0	6				0.0	0.00	30.06	30.14	5.4	06	7.4	22	04	16	06	20															
21	85	58	72	-5	58	64	0	7				0.0	0.00	29.97	30.06	2.5	15	6.1	22	15	20	16	21															
22	81	62	72	-5	63	67	0	7				0.0	0.00	29.95	30.03	6.6	15	6.9	18	14	16	15	22															
23	86	66	76	-1	71	73	0	11	BR			0.0	0.00	29.93	30.02	6.7	17	7.6	23	17	21	16	23															
24	90	73	82	5	73	76	0	17	BR			0.0	0.00	29.85	29.93	9.4	20	9.6	22	20	17	20	24															
25	91*	77	84*	7	73	76	0	19				0.0	0.00	29.82	29.91	10.2	21	10.6	23	19	20	21	25															
26	82	65	74	-3	69	71	0	9	RA BR			0.0	0.10	29.87	29.95	2.6	30	9.3	24	02	21	02	26															
27	80	60	70	-7	52	60	0	5				0.0	0.00	30.15	30.23	4.4	04	8.0	24	05	20	05	27															
28	78	60	69	-8	56	61	0	4				0.0	0.00	30.18	30.26	6.5	16	7.7	20	15	17	15	28															
29	68	65	67	-10	61	63	0	2	RA BR			0.0	0.13	30.05	30.13	6.2	09	8.0	17	06	15	11	29															
30	81	64	73	-4	61	65	0	8	RA			0.0	T	30.02	30.11	8.0	05	8.7	21	07	17	03	30															
31	82	58	70	-7	60	64	0	5				0.0	0.00	30.16	30.25	3.7	15	4.7	22	16	20	15	31															
< MONTHLY AVERAGES											TOTALS->		0.0	2.35	29.92	30.00	0.8	21	7.6	<- MONTHLY AVERAGES																		
-3.6											-3.8		-3.7		<-----DEPARTURE FROM NORMAL----->											-1.88		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3										
DEGREE DAYS											GREATEST 24-HR PRECIPITATION: 0.66 DATE :08-09				SEA LEVEL PRESSURE				DATE TIME																			
MONTHLY TOTAL DEPARTURE											GREATEST 24-HR SNOWFALL: 0.0 DATE :				MAXIMUM : 30.32 28 0751				MINIMUM : 29.64 11 0451																			
SEASON TO DATE TOTAL DEPARTURE											NUMBER OF DAYS WITH =>				MAXIMUM TEMP ≥ 90: 2				MINIMUM TEMP ≤ 32: 0				PRECIPITATION ≥ 0.01 INCH : 9															
HEATING: 1 1											MAXIMUM TEMP ≤ 32 : 0				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 7																			
COOLING: 247 -106											THUNDERSTORMS : 4				HEAVY FOG : 0				SNOWFALL ≥ 1.0 INCH : 0																			

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

WILMINGTON, DE

JULY 2001

ILG

WBAN # 13781

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													01					T	0.03	T					01		0.03		
02													02								T				02		0.00		
03													03												03		0.00		
04													04						T						04		0.33		
05	0.03	T				T	T						05	0.03	T				0.03	0.09	T	0.03	0.14	0.16	05		0.18		
06	T												06												06		T		
07													07												07		T		
08						T		0.07					08												08		0.07		
09		0.59	T										09												09		0.59		
10													10			0.01	0.31	T							10		0.32		
11													11												11		0.00		
12													12												12		0.00		
13													13												13		0.00		
14													14												14		0.00		
15													15												15		0.00		
16													16												16		T		
17													17												17		T		
18				T	T								18	0.50	0.08	0.01									18		0.60		
19													19												19		0.00		
20													20												20		0.00		
21													21												21		0.00		
22													22												22		0.00		
23													23												23		0.00		
24													24												24		0.00		
25													25												25		0.00		
26									0.06	0.02			26			T	T	T	0.02	T				26		0.10			
27													27												27		0.00		
28													28												28		0.00		
29													29	T	T	0.05	0.05	0.01	0.01	T				29		0.13			
30			T										30												30		T		
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)	.31	.44	.48	.51	.57	.59	.59	.59	.59	.59	.59	.59
Ending Date	09	09	09	09	09	09	09	09	09	09	18	18
Ending Time (Hour/Min)	0104	0108	0111	0115	0120	0135	0135	0135	0135	0135	1419	1419

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 1961–1990

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

WILMINGTON, DE JULY 2001

Ceilorometer (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							4.00	10.00	
02							10.00	10.00	
03							10.00	10.00	
04							3.00	10.00	
05							1.00	10.00	
06							7.00	10.00	
07							10.00	10.00	
08							5.00	10.00	
09							.75	10.00	
10							2.00	10.00	
11							2.50	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							10.00	10.00	
16							.00	10.00	
17							4.00	10.00	
18							.75	10.00	
19							6.00	10.00	
20							7.00	10.00	
21							10.00	10.00	
22							7.00	10.00	
23							2.00	10.00	
24							5.00	10.00	
25							9.00	10.00	
26							4.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							1.50	10.00	
30							10.00	10.00	
31							10.00	10.00	
MONTHLY AVGS							6.70	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 6 17									

OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE

JULY 2001

ILG

WBAN # 13781

Table with columns for Hour (LST), Sky Cover, Ceiling, Observation Time, Satellites, Visibility, Weather, Temperature (Dry Bulb, Dew Point, Wet Bulb), Relative Humidity, Wind (Speed, Direction), Pressure (Station, Sea Level), and various meteorological data points for July 13-24, 2001.

OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE

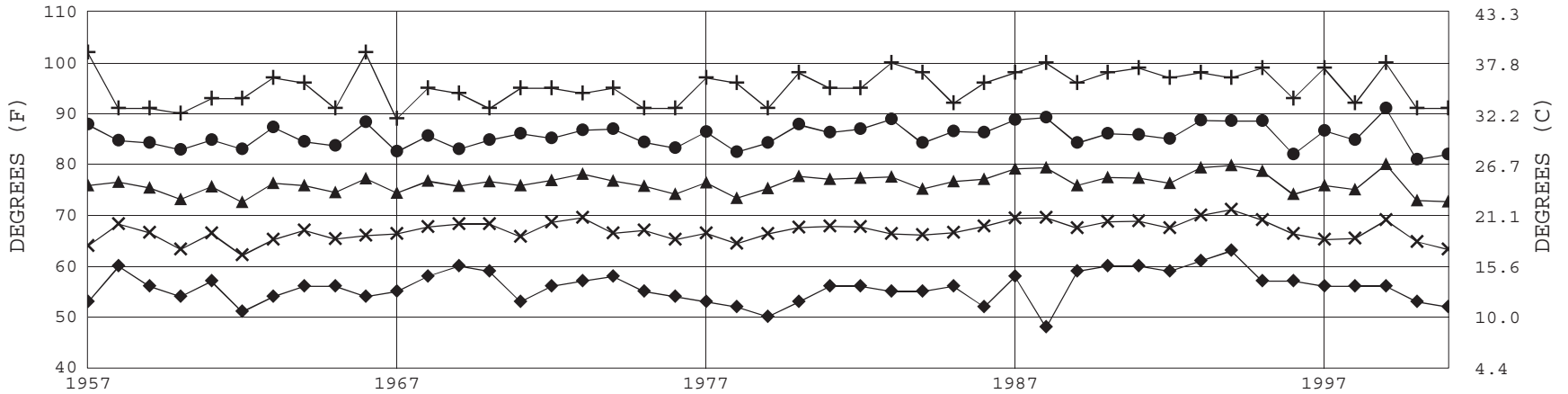
JULY 2001

ILG

WBAN # 13781

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)	
	DRY BULB	DEW POINT		WET BULB	RELATIVE HUMIDITY (PCT)			SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)		SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL										
SUNRISE: 0455								JUL 25				SUNSET: 1923				SUNRISE: 0501								JUL 31				SUNSET: 1917			
01	CLR	NC				10.00		80	73	75	79	12	23	29.81	29.90	01	CLR	NC				10.00		63	59	61	87	0	00	30.08	30.16
04	CLR	NC				10.00		78	73	75	85	8	23	29.82	29.91	04	CLR	NC				10.00		60	58	59	93	0	00	30.09	30.18
07	FEW	NC				10.00		78	73	75	85	10	22	29.85	29.93	07	CLR	NC				10.00		67	60	63	79	5	02	30.16	30.24
10	CLR	NC				10.00		86	75	78	70	8	22	29.84	29.92	10	CLR	NC				10.00		75	59	65	58	5	13	30.18	30.27
13	CLR	NC				10.00		90	75	79	62	16	23	29.82	29.91	13	SCT	NC				10.00		80	60	68	51	8	15	30.16	30.24
16	CLR	NC				10.00		90	75	79	62	16	19	29.79	29.87	16	CLR	NC				10.00		80	60	68	51	6	VR	30.14	30.23
19	CLR	NC				10.00		85	72	76	65	9	20	29.81	29.90	19	OVC	060				10.00		73	62	66	69	14	15	30.17	30.26
22	SCT	NC				10.00		82	71	75	69	6	21	29.83	29.91	22	CLR	NC				10.00		69	61	64	76	0	00	30.23	30.32
SUNRISE: 0456								JUL 26				SUNSET: 1922				3-HOURLY OBSERVATION NOTES															
01	CLR	NC				10.00		79	71	74	77	7	19	29.80	29.88	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.															
04	CLR	NC				10.00		78	71	73	79	12	21	29.77	29.85	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.															
07	OVC	060				10.00		78	71	73	79	12	22	29.79	29.88	NC = No ceiling detected.															
10	SCT	NC				10.00		76	74	75	94	7	24	29.81	29.90	& = Original observation contained additional weather elements.															
13	FEW	NC				10.00		81	69	73	67	14	35	29.83	29.92	See page 3 for additional notes.															
16	OVC	050				10.00		73	65	68	76	17	02	29.88	29.96																
19	OVC	020				10.00		69	66	67	90	8	01	29.97	30.06																
22	CLR	NC				10.00		67	65	66	93	3	34	30.00	30.09																
SUNRISE: 0457								JUL 27				SUNSET: 1921				SUMMARY BY HOUR															
01	OVC	047				10.00		66	61	63	84	6	36	30.04	30.13	AVERAGES															
04	CLR	NC				10.00		62	57	59	84	10	36	30.09	30.18	RESULTANT WIND (MPH)															
07	CLR	NC				10.00		66	51	58	59	14	05	30.16	30.24	HOUR (LST)															
10	CLR	NC				10.00		72	47	58	41	17	05	30.19	30.28	CEILOMETER															
13	CLR	NC				10.00		76	47	60	36	5	35	30.17	30.25	EFF CLD AMT															
16	CLR	NC				10.00		79	44	60	29	6	35	30.14	30.22	DRY BULB															
19	CLR	NC				10.00		73	49	60	43	5	36	30.14	30.22	DEW POINT															
22	CLR	NC				10.00		66	55	60	68	8	18	30.19	30.28	WET BULB															
SUNRISE: 0458								JUL 28				SUNSET: 1920				RELATIVE HUMIDITY															
01	CLR	NC				10.00		62	54	58	75	0	00	30.20	30.29	PRESSURE (INCHES, HG)															
04	CLR	NC				10.00		63	54	58	73	0	00	30.19	30.28	STATION															
07	CLR	NC				10.00		64	57	60	78	5	28	30.23	30.32	SEA LEVEL															
10	CLR	NC				10.00		73	57	63	57	7	VR	30.23	30.32	VISIBILITY (MILES)															
13	CLR	NC				10.00		77	53	63	44	9	18	30.18	30.27	WIND SPEED (MPH)															
16	CLR	NC				10.00		77	54	63	45	13	16	30.15	30.24	SPEED															
19	CLR	NC				10.00		72	57	63	60	14	15	30.13	30.22	DIRECTION															
22	BKN	060				10.00		68	59	63	73	9	18	30.13	30.22																
SUNRISE: 0459								JUL 29				SUNSET: 1919				-RA															
01	BKN	060				10.00		67	56	61	68	12	17	30.12	30.20	-RA															
04	BKN	075				10.00		66	59	62	78	6	10	30.08	30.16	BR															
07	FEW	NC				10.00		67	59	62	76	9	11	30.08	30.16																
10	OVC	080				10.00		68	59	63	73	0	00	30.08	30.16																
13	OVC	023				10.00		67	62	64	84	12	08	30.04	30.13																
16	OVC	008				7.00		65	64	64	97	12	10	30.02	30.11																
19	OVC	015				6.00		65	64	64	97	13	06	30.00	30.09																
22	OVC	012				10.00		65	64	64	97	9	06	30.01	30.10																
SUNRISE: 0460								JUL 30				SUNSET: 1918																			
01	OVC	060				10.00		66	64	65	93	7	05	29.99	30.07																
04	OVC	048				10.00		66	63	64	90	9	06	29.96	30.05																
07	OVC	090				10.00		67	64	65	91	7	35	30.00	30.09																
10	BKN	029				10.00		74	61	66	64	14	05	30.02	30.11																
13	BKN	049				10.00		77	60	67	56	6	05	30.02	30.11																
16	SCT	NC				10.00		79	58	66	49	10	08	30.01	30.10																
19	CLR	NC				10.00		72	60	65	66	7	09	30.04	30.13																
22	SCT	NC				10.00		67	57	61	71	5	10	30.08	30.16																

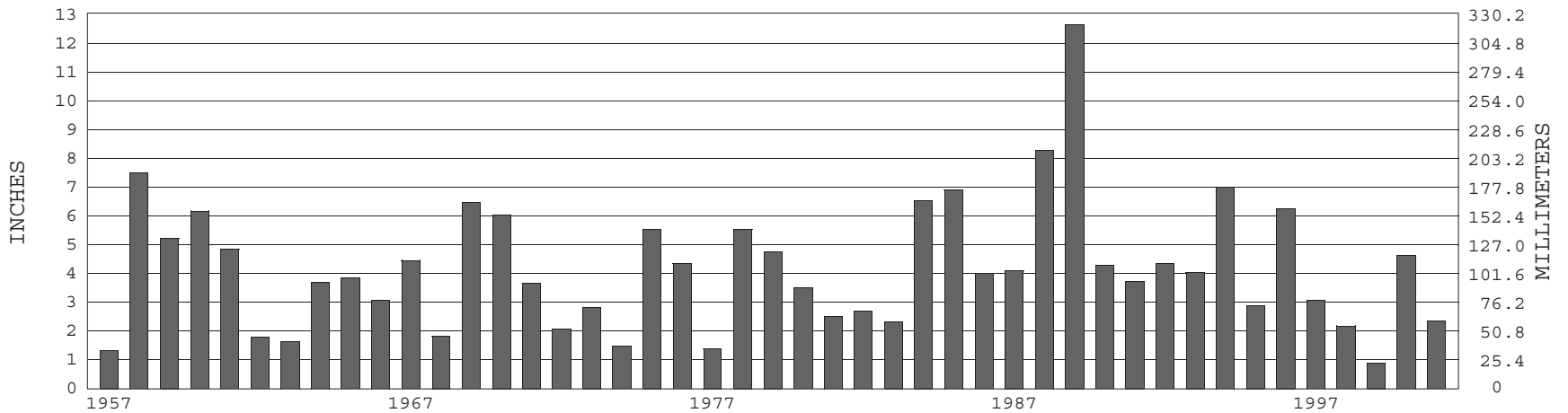
WILMINGTON, DE JULY TEMPERATURES



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

Long-Term (1957-2001) Mean: 76.3 1961-1990 Normal: 76.4

WILMINGTON, DE JULY PRECIPITATION



Long-Term (1957-2001) Mean Monthly Total: 4.19

1961-1990 Normal: 4.23



**JULY 2001
WILMINGTON, DE**

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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