



# DECEMBER 2001

## LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

# RICHMOND, VA

R.E.BYRD INTERNATIONAL AP (RIC)  
 Lat: 37°30' N Long: 77°19' W Elev (Ground): 164 Feet  
 Time Zone: EASTERN WBAN: 13740 ISSN #:0198-537X

DECEMBER 2001  
RICHMOND, VA

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																												
																			SPEED	DIR	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	74	53	64	19	55	58	1	0	BR			0.0	0.00	29.91	30.10	4.4	22	6.9	21	03	15	02	01																										
02	58	39	49	5	39	45	16	0				0.0	0.00	30.09	30.28	8.9	02	9.1	22	02	17	04	02																										
03	60	34	47	3	38	42	18	0	BR			0.0	0.00	30.16	30.35	1.4	35	2.1	10	33	8	01	03																										
04	69	34	52	9	36	44	13	0	BR			0.0	0.00	30.18	30.37	2.8	17	3.3	13	16	10	17	04																										
05	78*	43	61	18	40	49	4	0				0.0	0.00	30.17	30.36	6.8	19	7.0	15	20	13	19	05																										
06	77	48	63	20	50	55	2	0				0.0	0.00	29.97	30.16	8.6	22	9.5	23	21	18	21	06																										
07	65	55	60	18	54	57	5	0	RA BR			0.0	0.02	29.86	30.05	2.2	19	3.9	17	20	15	20	07																										
08	57	50	54	12	49	51	11	0	RA BR			0.0	0.04	29.83	30.02	4.4	04	5.6	14	05	12	04	08																										
09	55	37	46	4	38	43	19	0	RA BR			0.0	0.03	29.96	30.15	9.3	36	9.6	35	36	24	36	09																										
10	51	31	41	0	38	41	24	0	RA BR			0.0	0.10	30.15	30.34	4.7	03	5.1	12	02	9	03	10																										
11	50	45	48	7	47	48	17	0	RA BR			0.0	0.76	30.08	30.27	9.6	02	9.9	18	01	16	04	11																										
12	50	46	48	7	47	47	17	0	RA DZ BR			0.0	0.01	30.18	30.37	5.2	02	5.6	12	01	10	01	12																										
13	63	48	56	15	54	54	9	0	DZ FG+ BR			0.0	0.01	29.90	30.09	7.9	22	8.1	23	21	18	21	13																										
14	71	56	64*	24	61	62	1	0	DZ BR			0.0	T	29.73	29.92	11.8	21	12.4	28	22	24	22	14																										
15	63	40	52	12	39	46	13	0				0.0	0.00	30.07	30.26	9.0	35	10.4	30	01	22	33	15																										
16	51	33	42	2	32	38	23	0				0.0	0.00	30.25	30.44	1.0	06	3.1	9	10	7	05	16																										
17	65	35	50	10	46	48	15	0	RA BR			0.0	0.32	29.78	29.97	6.6	19	7.3	23	22	20	21	17																										
18	61	35	48	9	42	48	17	0	RA BR			0.0	0.13	29.46	29.65	9.2	31	13.6	38*	31	28*	32	18																										
19	57	31	44	5	36	40	21	0				0.0	0.00	29.71	29.90	5.7	18	6.0	22	18	18	18	19																										
20	50	36	43	4	23	37	22	0				0.0	0.00	29.78	29.97	11.3	29	12.0	30	31	25	29	20																										
21	51	30	41	2	15	31	24	0				0.0	0.00	30.03	30.23	5.9	31	9.2	26	30	21	31	21																										
22	47	25	36	-2	21	30	29	0				0.0	0.00	30.22	30.42	1.6	02	4.0	14	01	12	02	22																										
23	61	27	44	6	34	40	21	0	RA			0.0	T	29.91	30.10	8.7	18	9.0	29	20	24	19	23																										
24	60	33	47	9	37	42	18	0	RA BR			0.0	0.25	29.67	29.86	5.2	29	7.1	28	19	22	20	24																										
25	45	21	33	-5	20	30	32	0				0.0	0.00	29.85	30.04	1.6	20	1.9	14	18	12	19	25																										
26	43	22	33	-5	22	30	32	0				0.0	0.00	29.65	29.84	6.0	35	6.7	17	02	15	01	26																										
27	42	22	32	-5	16	27	33	0				0.0	0.00	29.63	29.82	9.3	25	10.1	28	26	24	25	27																										
28	48	24	36	-1	24	32	29	0				0.0	0.00	29.59	29.79	7.8	22	8.7	23	24	20	22	28																										
29	58	27	43	6	26	35	22	0				0.0	0.00	29.64	29.83	5.6	28	9.6	31	32	24	31	29																										
30	36	20	28	-9	11	24	37	0				0.0	0.00	29.92	30.12	4.9	30	6.8	18	30	16	31	30																										
31	38	17*	28*	-9	14	25	37	0				0.0	0.00	29.95	30.14	1.0	26	2.3					31																										
										56.6		35.4	46.0	■ ■	35.6	41.9	18.8	0.0	< MONTHLY AVERAGES		TOTALS-->		0.0	1.67	29.91	30.10	2.0	28	7.3	<- MONTHLY AVERAGES																			
										6.4	5.5	5.9	■ ■	<-----DEPARTURE FROM NORMAL----->										-1.59	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																								
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 0.86 DATE: 10-11										SEA LEVEL PRESSURE DATE TIME																													
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: 0.0 DATE:										MAXIMUM : 30.54 16 0654																													
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH:										MINIMUM : 29.36 18 0454																													
HEATING: 582 -190										NUMBER OF DAYS WITH →										MAXIMUM TEMP ≥ 90: 0										MINIMUM TEMP ≤ 32: 12										PRECIPITATION ≥ 0.01 INCH : 10									
COOLING: 0 0																				MAXIMUM TEMP ≤ 32 : 0										MINIMUM TEMP ≤ 0 : 0										PRECIPITATION ≥ 0.10 INCH : 5									
																				THUNDERSTORMS : 0										HEAVY FOG : 1										SNOWFALL ≥ 1.0 INCH : 0									

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## RICHMOND, VA

DECEMBER 2001

RIC

WBAN # 13740

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												01		0.00		
02													02												02		0.00		
03													03												03		0.00		
04													04												04		0.00		
05													05												05		0.00		
06													06												06		0.00		
07													07												07		0.02		
08													08												08		0.04		
09													09												09		0.03		
10													10												10		0.10		
11													11												11		0.76		
12													12												12		0.01		
13													13												13		0.01		
14													14												14		T		
15													15												15		0.00		
16													16												16		0.00		
17													17												17		0.32		
18													18												18		0.13		
19													19												19		0.00		
20													20												20		0.00		
21													21												21		0.00		
22													22												22		0.00		
23													23												23		T		
24													24												24		0.25		
25													25												25		0.00		
26													26												26		0.00		
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)	.07	.10	.10	.12	.15	.19	.21	.22	.26	.31	.40	.47
Ending Date	24	24	24	24	24	11	11	11	11	11	11	11
Ending Time (Hour/Min)	0132	0133	0140	0145	0153	0447	0502	0502	0338	0447	0452	0452

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

## RICHMOND, VA DECEMBER 2001

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							2.50	10.00	
02							10.00	10.00	
03							3.00	10.00	
04							4.00	10.00	
05							10.00	10.00	
06							10.00	10.00	
07							4.00	10.00	
08							2.50	10.00	
09							2.00	10.00	
10							6.00	10.00	
11							.75	10.00	
12							1.00	9.00	
13							.25	10.00	
14							2.00	10.00	
15							10.00	10.00	
16							10.00	10.00	
17							2.00	10.00	
18							3.00	10.00	
19							9.00	10.00	
20							10.00	10.00	
21							10.00	10.00	
22							10.00	10.00	
23							10.00	10.00	
24							2.50	10.00	
25							10.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							10.00	10.00	
29							10.00	10.00	
30							10.00	10.00	
31							8.00	10.00	
<b>MONTHLY AVGS</b>							6.73	9.97	
<b>SUNSHINE (MINUTES)</b>									
Total:                      Possible: Percent Possible:									
<b>NUMBER OF DAYS WITH:</b>									
<b>SKY CONDITION</b>									
CLR   PTLY CLDY   CLOUDY   MISSING 31									
<b>MINIMUM VISIBILITY (MILES)</b>									
<=0.25    <=3.0    >=7.0 1            8            17									

# OBSERVATIONS AT 3-HOURLY INTERVALS

# RICHMOND, VA

DECEMBER 2001

RIC

WBAN # 13740

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	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
<p><b>SUNRISE: 0705      DEC 01      SUNSET: 1652</b></p>																											
01	FEW	NC		10.00	65	60	62	84	12	22	29.84	30.03	01	SCT	NC		10.00	59	53	56	81	9	20	29.82	30.01		
04	CLR	NC		10.00	61	59	60	93	8	21	29.85	30.04	04	BKN	130		10.00	56	53	54	90	7	18	29.80	29.99		
07	BKN	007	BR	5.00	58	58	58	100	8	22	29.90	30.09	07	BKN	120		10.00	56	53	54	90	7	20	29.81	30.00		
10	FEW	NC		10.00	63	57	60	81	7	24	29.94	30.13	10	OVC	025	-RA	BR	59	56	57	90	6	21	29.86	30.06		
13	CLR	NC		10.00	72	54	61	53	8	21	29.90	30.09	13	OVC	120		10.00	63	57	60	81	0	00	29.85	30.04		
16	FEW	NC		10.00	73	53	61	50	6	19	29.89	30.08	16	OVC	250		10.00	63	56	59	78	0	00	29.87	30.06		
19	FEW	NC		10.00	63	52	57	68	5	23	29.93	30.13	19	OVC	100		10.00	58	55	56	90	0	00	29.91	30.10		
22	BKN	250		10.00	56	51	53	84	0	00	29.95	30.14	22	OVC	110		10.00	56	53	54	90	6	06	29.92	30.11		
<p><b>SUNRISE: 0706      DEC 02      SUNSET: 1651</b></p>																											
01	OVC	200		10.00	56	42	49	60	12	03	29.97	30.16	01	OVC	037		10.00	57	50	53	78	7	07	29.94	30.13		
04	OVC	200		10.00	52	40	46	64	9	03	30.02	30.21	04	OVC	050	-RA		52	48	50	86	7	06	29.93	30.12		
07	BKN	200		10.00	49	40	45	71	12	03	30.07	30.26	07	OVC	050	-RA		52	48	50	86	5	05	29.94	30.13		
10	OVC	150		10.00	52	39	46	61	14	02	30.12	30.32	10	OVC	048		8.00	50	48	49	93	9	04	29.92	30.11		
13	BKN	200		10.00	55	39	47	55	12	36	30.09	30.29	13	OVC	008	BR	4.00	51	50	51	96	6	09	29.81	30.01		
16	BKN	150		10.00	55	38	47	53	10	04	30.10	30.29	16	BKN	065		7.00	55	52	53	90	5	02	29.75	29.94		
19	BKN	200		10.00	49	38	44	66	7	01	30.13	30.33	19	OVC	060	BR	5.00	51	50	51	96	6	35	29.73	29.93		
22	SCT	NC		10.00	44	37	41	76	3	01	30.15	30.35	22	OVC	070	-RA	BR	2.50	51	51	51	100	3	34	29.70	29.89	
<p><b>SUNRISE: 0707      DEC 03      SUNSET: 1651</b></p>																											
01	CLR	NC		10.00	41	37	39	86	0	00	30.16	30.35	01	OVC	004		2.50	-RA	BR	50	50	50	100	8	33	29.70	29.89
04	CLR	NC		7.00	35	34	35	96	5	34	30.14	30.34	04	OVC	040	-RA	BR	47	46	46	97	9	36	29.76	29.96		
07	CLR	NC	BR	6.00	34	33	34	97	7	36	30.19	30.39	07	OVC	085		10.00	47	45	46	93	6	36	29.84	30.03		
10	CLR	NC		7.00	48	41	45	77	7	36	30.23	30.42	10	OVC	110		10.00	49	39	44	69	17	36	29.96	30.15		
13	CLR	NC		10.00	57	42	50	58	0	00	30.16	30.35	13	CLR	NC		10.00	55	35	46	47	14	36	29.96	30.15		
16	CLR	NC		10.00	59	40	50	49	0	00	30.13	30.32	16	CLR	NC		10.00	53	33	44	47	13	36	30.01	30.20		
19	CLR	NC		10.00	45	38	42	77	3	16	30.13	30.33	19	CLR	NC		10.00	43	32	38	65	6	36	30.10	30.29		
22	FEW	NC		7.00	39	38	39	96	0	00	30.15	30.35	22	CLR	NC		10.00	40	31	36	70	6	36	30.15	30.35		
<p><b>SUNRISE: 0708      DEC 04      SUNSET: 1651</b></p>																											
01	CLR	NC		7.00	37	35	36	93	0	00	30.15	30.35	01	CLR	NC		10.00	37	31	35	79	6	04	30.16	30.36		
04	CLR	NC		7.00	36	33	35	89	0	00	30.14	30.34	04	FEW	NC		10.00	33	31	32	92	5	34	30.20	30.40		
07	CLR	NC		8.00	36	34	35	93	0	00	30.18	30.37	07	BKN	250		10.00	33	31	32	92	7	05	30.20	30.39		
10	CLR	NC		10.00	52	39	46	61	0	00	30.22	30.42	10	OVC	200		10.00	44	37	41	76	5	01	30.21	30.41		
13	CLR	NC		10.00	66	37	52	34	6	VR	30.17	30.36	13	OVC	090		10.00	49	38	44	66	6	05	30.15	30.35		
16	CLR	NC		10.00	67	38	52	35	7	17	30.15	30.34	16	OVC	070		10.00	51	40	46	66	5	36	30.11	30.31		
19	CLR	NC		10.00	55	36	46	49	6	17	30.17	30.37	19	OVC	060		10.00	47	44	46	90	5	02	30.11	30.31		
22	CLR	NC		10.00	51	37	45	59	0	00	30.19	30.38	22	OVC	040	-RA		46	45	46	96	5	05	30.06	30.26		
<p><b>SUNRISE: 0709      DEC 05      SUNSET: 1651</b></p>																											
01	CLR	NC		10.00	49	39	44	69	5	20	30.20	30.39	01	OVC	005		5.00	-RA	BR	45	45	45	100	10	03	30.00	30.20
04	CLR	NC		10.00	45	39	42	80	8	20	30.20	30.39	04	OVC	005		6.00	-RA	BR	46	46	46	100	13	04	29.97	30.17
07	CLR	NC		10.00	45	40	43	83	5	17	30.21	30.40	07	OVC	038	RA	BR	47	46	47	97	9	05	30.00	30.19		
10	CLR	NC		10.00	61	41	51	48	7	22	30.22	30.41	10	OVC	004	-RA	BR	48	48	48	100	10	01	30.07	30.27		
13	CLR	NC		10.00	76	39	57	27	9	18	30.15	30.35	13	OVC	005		10.00	49	49	49	100	12	02	30.05	30.25		
16	CLR	NC		10.00	75	37	56	25	8	18	30.12	30.31	16	OVC	003	BR	1.50	49	49	49	100	14	01	30.09	30.28		
19	CLR	NC		10.00	60	41	51	50	8	17	30.14	30.33	19	OVC	005	BR	1.50	49	48	48	97	6	03	30.16	30.35		
22	CLR	NC		10.00	54	42	48	64	8	19	30.13	30.32	22	OVC	015		9.00	49	48	48	97	8	02	30.18	30.37		
<p><b>SUNRISE: 0710      DEC 06      SUNSET: 1651</b></p>																											
01	CLR	NC		10.00	51	42	47	71	9	20	30.09	30.28	01	OVC	032		8.00	48	46	47	93	6	02	30.18	30.37		
04	CLR	NC		10.00	52	45	49	77	9	21	30.06	30.26	04	OVC	036		8.00	48	46	47	93	6	01	30.19	30.39		
07	FEW	NC		10.00	49	46	47	90	8	19	30.02	30.22	07	OVC	016		9.00	47	44	46	90	7	05	30.22	30.41		
10	CLR	NC		10.00	65	54	59	68	15	24	30.02	30.21	10	OVC	012	-DZ	BR	48	46	47	93	9	01	30.24	30.44		
13	CLR	NC		10.00	75	52	62	45	12	24	29.93	30.12	13	OVC	008	BR	1.00	49	47	48	93	8	01	30.18	30.37		
16	SCT	NC		10.00	74	51	61	45	9	24	29.91	30.10	16	OVC	006	BR	1.00	48	48	48	100	6	05	30.14	30.34		
19	SCT	NC		10.00	59	50	54	72	3	19	29.92	30.11	19	OVC	003	BR	1.00	48	48	48	100	3	36	30.14	30.34		
22	SCT	NC		10.00	58	52	55	81	8	19	29.88	30.07	22	OVC	003	BR	1.00	48	48	48	100	3	33	30.12	30.32		



# OBSERVATIONS AT 3-HOURLY INTERVALS

# RICHMOND, VA

DECEMBER 2001

RIC

WBAN # 13740

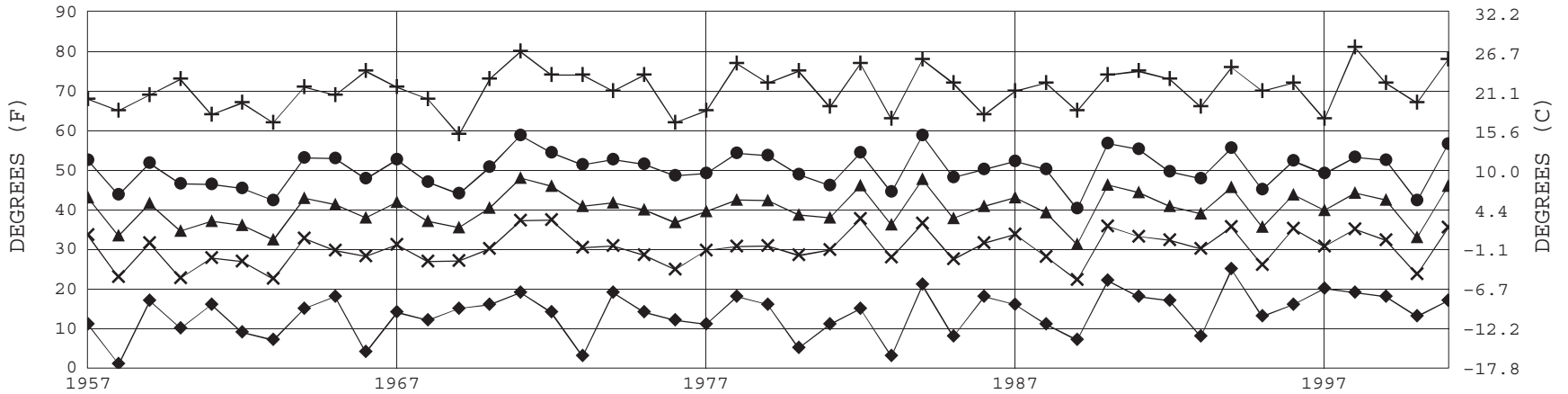
HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER		CEILING 100'S OF FT	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Ok/as			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 Ok/as			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0722								DEC 25								SUNSET: 1657															
01	CLR	NC				10.00		29	22	27	75	0	00	29.80	29.99	01	BKN	250				10.00		29	10	23	45	6	31	29.95	30.15
04	CLR	NC				10.00		29	22	27	75	0	00	29.85	30.05	04	BKN	250				10.00		26	11	22	53	0	00	29.96	30.16
07	FEW	NC				10.00		22	18	21	85	3	18	29.90	30.09	07	BKN	250				10.00		19	12	17	74	0	00	29.97	30.17
10	FEW	NC				10.00		37	19	31	48	0	00	29.94	30.13	10	OVC	250				10.00		31	11	25	43	3	24	30.02	30.22
13	CLR	NC				10.00		43	16	33	34	5	24	29.87	30.06	13	OVC	250				10.00		36	11	28	35	0	00	29.92	30.12
16	SCT	NC				10.00		43	16	33	34	8	19	29.81	30.01	16	OVC	220				10.00		37	13	29	37	6	26	29.91	30.11
19	BKN	140				10.00		38	22	32	53	0	00	29.83	30.03	19	OVC	120				10.00		33	17	28	52	0	00	29.93	30.13
22	OVC	250				10.00		38	22	32	53	0	00	29.80	30.00	22	OVC	110				10.00		31	19	27	61	0	00	29.90	30.10
SUNRISE: 0722								DEC 26								SUNSET: 1658															
01	BKN	060				10.00		36	24	32	62	0	00	29.74	29.94	3-HOURLY OBSERVATION NOTES															
04	BKN	110				10.00		31	23	28	72	7	01	29.71	29.91	Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8,															
07	SCT	NC				10.00		30	24	28	79	10	36	29.70	29.90	SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, VV = Vertical Visibility = 8/8.															
10	CLR	NC				10.00		35	23	31	61	13	36	29.71	29.90	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.															
13	CLR	NC				10.00		41	24	35	51	10	36	29.60	29.80	NC = No ceiling detected.															
16	FEW	NC				10.00		41	21	34	45	7	33	29.55	29.75	& = Original observation contained additional weather elements.															
19	CLR	NC				10.00		33	21	29	61	3	36	29.57	29.77	See page 3 for additional notes.															
22	CLR	NC				10.00		27	19	24	72	0	00	29.60	29.80																
SUNRISE: 0723								DEC 27								SUNSET: 1658															
01	CLR	NC				10.00		30	15	25	54	9	27	29.61	29.81																
04	CLR	NC				10.00		25	12	21	58	3	22	29.61	29.81																
07	CLR	NC				10.00		26	12	22	55	8	24	29.66	29.85																
10	CLR	NC				10.00		35	15	28	44	13	24	29.66	29.85																
13	FEW	NC				10.00		40	16	32	38	17	25	29.58	29.78																
16	SCT	NC				10.00		41	17	33	38	20	25	29.58	29.78																
19	CLR	NC				10.00		32	18	27	56	5	20	29.62	29.82																
22	CLR	NC				10.00		32	18	27	56	8	23	29.65	29.85																
SUNRISE: 0723								DEC 28								SUNSET: 1659															
01	OVC	080				10.00		35	20	30	54	10	24	29.67	29.86																
04	FEW	NC				10.00		28	19	25	69	6	21	29.65	29.85																
07	BKN	250				10.00		25	19	23	78	8	20	29.64	29.83																
10	OVC	200				10.00		38	23	32	55	14	21	29.62	29.82																
13	OVC	140				10.00		45	26	37	48	14	21	29.52	29.71																
16	BKN	250				10.00		48	26	39	42	14	23	29.51	29.70																
19	BKN	080				10.00		40	27	35	60	9	21	29.56	29.76																
22	SCT	NC				10.00		41	28	36	60	3	24	29.59	29.78																
SUNRISE: 0723								DEC 29								SUNSET: 1660															
01	SCT	NC				10.00		31	25	29	79	0	00	29.61	29.80																
04	BKN	090				10.00		30	26	29	85	3	20	29.63	29.83																
07	OVC	140				10.00		34	29	32	82	0	00	29.63	29.82																
10	OVC	120				10.00		43	31	38	63	8	19	29.64	29.83																
13	FEW	NC				10.00		54	32	44	43	10	21	29.54	29.72																
16	BKN	085				10.00		54	30	43	40	13	30	29.55	29.74																
19	SCT	NC				10.00		44	24	36	45	20	32	29.68	29.88																
22	FEW	NC				10.00		35	16	29	46	15	33	29.76	29.95																
SUNRISE: 0724								DEC 30								SUNSET: 1701															
01	CLR	NC				10.00		29	14	24	54	7	32	29.83	30.02																
04	CLR	NC				10.00		27	12	23	53	10	31	29.88	30.07																
07	BKN	250				10.00		23	12	20	63	3	02	29.92	30.12																
10	FEW	NC				10.00		28	10	23	47	5	26	29.99	30.18																
13	CLR	NC				10.00		35	10	27	35	12	33	29.91	30.11																
16	CLR	NC				10.00		36	11	28	35	9	28	29.91	30.11																
19	CLR	NC				10.00		25	12	21	58	3	18	29.93	30.13																
22	BKN	250				10.00		28	13	24	53	7	25	29.95	30.15																

## 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			44	36	41	76	29.90	30.09	8.95	6	2	25
02			43	36	40	78	29.90	30.09	8.71	6	2	29
03			42	35	39	79	29.91	30.10	8.89	6	2	31
04			41	35	39	81	29.90	30.09	9.06	6	2	28
05			41	35	38	82	29.90	30.09	8.75	6	1	29
06			40	35	38	83	29.91	30.10	8.92	6	1	28
07			40	35	38	84	29.93	30.12	8.67	6	1	31
08			40	35	38	82	29.94	30.13	8.57	6	1	29
09			44	36	41	75	29.95	30.15	8.83	7	2	32
10			47	36	43	68	29.96	30.15	8.47	9	3	30
11			50	36	44	62	29.94	30.14	8.90	9	3	29
12			52	36	45	57	29.92	30.11	9.39	10	4	28
13			54	36	46	53	29.89	30.09	9.55	10	4	26
14			55	35	46	51	29.88	30.07	9.51	10	5	26
15			55	35	46	50	29.87	30.07	9.39	10	4	27
16			54	35	46	52	29.88	30.07	9.34	9	3	26
17			52	35	45	57	29.89	30.08	9.25	8	2	29
18			49	35	43	62	29.90	30.09	9.26	6	2	26
19			47	36	42	66	29.90	30.10	9.27	6	1	24
20			46	35	42	69	29.91	30.11	9.40	6	2	25
21			45	36	41	73	29.91	30.11	9.26	6	2	27
22			44	36	41	74	29.91	30.11	9.11	6	1	26
23			43	35	40	75	29.91	30.10	8.95	6	1	25
24			43	35	40	75	29.91	30.10	9.05	6	2	24



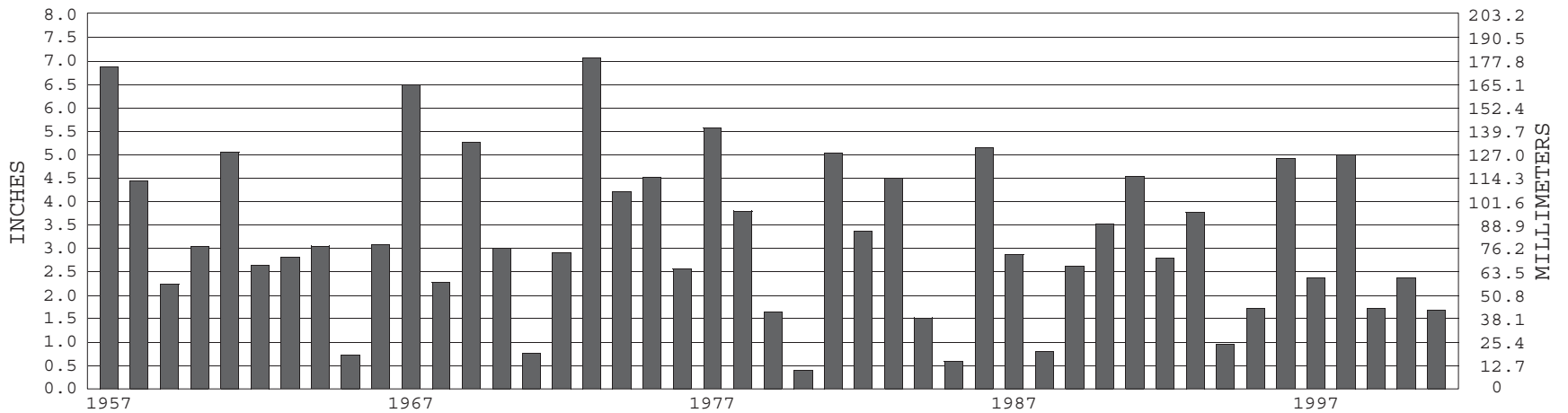
### RICHMOND, VA DECEMBER TEMPERATURES



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

Long-Term (1957-2001) Mean: 40.3      1961-1990 Normal: 40.1

### RICHMOND, VA DECEMBER PRECIPITATION



Long-Term (1957-2001) Mean Monthly Total: 3.25

1961-1990 Normal: 3.26



DECEMBER 2001

RICHMOND, VA

# 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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