



FEBRUARY 2003

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

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	45	33	39	2	35	36	26	0	DZ FG+ BR			0.0	T	29.68	29.87	7.4	30	7.8	23	32	18	32	01		
02	47	27	37	0	31	34	28	0	BR			0.0	0.00	29.73	29.92	3.9	27	4.2	17	26	14	25	02		
03	54	30	42	5	33	39	23	0				0.0	0.00	29.71	29.90	3.0	14	4.3	14	18	13	17	03		
04	60	33	47	10	38	46	18	0	RA BR			0.0	0.23	29.47	29.65	11.3	24	14.8	38	26	32	26	04		
05	45	28	37	0	18	30	28	0				0.0	0.00	29.93	30.12	3.3	32	5.8	22	30	20	30	05		
06	39	27	33	-4	24	30	32	0	RA SN BR			1.2	0.23	30.15	30.34	5.4	10	6.1	15	13	13	11	06		
07	38	31	35	-2	33	33	30	0	RA FZRA SN BR			T	0.37	29.79	29.98	3.5	32	6.1	17	03	15	04	07		
08	39	22	31	-7	16	26	34	0				0.0	0.00	30.00	30.19	4.3	26	7.8	23	26	20	26	08		
09	47	23	35	-3	17	29	30	0				0.0	0.00	29.95	30.15	4.8	26	5.1	16	28	14	28	09		
10	40	32	36	-3	32	35	29	0	RA SN PL BR			1.0	0.11	29.64	29.84	5.2	24	7.7	24	26	20	26	10		
11	48	25	37	-2	26	34	28	0				0.0	0.00	29.75	29.94	9.3	23	10.1	24	21	21	21	11		
12	49	30	40	1	13	32	25	0				0.0	0.00	29.75	29.94	12.3	27	14.3	44	27	33	28	12		
13	48	21	35	-4	9	28	30	0				0.0	0.00	29.90	30.09	10.3	27	11.0	30	28	23	28	13		
14	48	25	37	-2	31	35	28	0	RA BR			0.0	0.05	29.99	30.19	2.0	16	3.7	15	24	13	25	14		
15	43	26	35	-5	35	36	30	0	RA FZRA SN PL BR			0.8	0.86	29.99	30.19	7.7	05	9.8	26	02	21	04	15		
16	26	20*	23*	-17	20	22	42	0	RA SN PL FZFG BR			0.8	0.41	30.14	30.34	9.7	04	10.4	17	34	13	35	16		
17	26	21	24	-16	22	24	41	0	RA FZRA FZDZ SN PL BR			0.3	0.11	29.83	30.02	8.3	01	8.7	18	35	13	36	17		
18	37	26	32	-8	28	29	33	0	SN BR			T	T	29.98	30.17	0.9	36	3.0	13	25	10	27	18		
19	48	28	38	-2	34	36	27	0	BR			0.0	0.00	30.08	30.28	5.1	19	5.3	15	17	13	18	19		
20	52	35	44	3	36	40	21	0	RA BR			0.0	T	30.10	30.29	1.0	12	3.6	14	06	12	05	20		
21	50	38	44	3	38	41	21	0	RA BR HZ			0.0	0.29	29.90	30.09	2.3	09	3.8	12	02	10	10	21		
22	62	38	50*	9	44	44	15	0	RA DZ FG+ BR			0.0	0.65	29.40	29.59	3.3	14	8.1	25	18	22	32	22		
23	62	32	47	5	38	45	18	0	RA BR			0.0	0.26	29.36	29.54	13.8	25	17.6	44*	28	33*	29	23		
24	63*	25	44	2	31	38	21	0				0.0	0.00	29.95	30.15	6.5	22	9.6	37	23	28	21	24		
25	46	31	39	-3	23	32	26	0	SN			T	T	30.15	30.34	9.4	04	9.6	23	03	17	02	25		
26	31	28	30	-12	24	27	35	0	SN PL BR			1.6	0.11	30.10	30.30	7.3	03	8.2	15	01	13	04	26		
27	33	27	30	-13	30	30	35	0	RA FZRA SN PL BR			0.3	0.52	29.90	30.10	9.5	02	9.7	18	01	15	01	27		
28	37	31	34	-9	33	34	31	0	RA DZ SN BR			T	0.01	29.93	30.12	4.8	02	5.7	12	01	10	36	28		
< MONTHLY AVERAGES										TOTALS->				<- MONTHLY AVERAGES											
-4.2 -1.4 -2.8										<-----DEPARTURE FROM NORMAL----->				1.23								SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3			
DEGREE DAYS									GREATEST 24-HR PRECIPITATION: 0.90 DATE :21-22				SEA LEVEL PRESSURE DATE TIME												
MONTHLY TOTAL DEPARTURE									GREATEST 24-HR SNOWFALL: 1.6 DATE :26				MAXIMUM : 30.46 06 0954												
SEASON TO DATE TOTAL DEPARTURE									GREATEST SNOW DEPTH:				MINIMUM : 29.17 23 0654												
HEATING: 785 80 3287 238									NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 23				PRECIPITATION ≥ 0.01 INCH : 14				
COOLING: 0 -1 0 -1													MAXIMUM TEMP ≤ 32 : 3				MINIMUM TEMP ≤ 0 : 0				PRECIPITATION ≥ 0.10 INCH : 12				
													THUNDERSTORMS : 0				HEAVY FOG : 2				SNOWFALL ≥ 1.0 INCH : 3				

FEBRUARY 2003
RICHMOND, VA

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA

FEBRUARY 2003

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	T	T	T	T	T	T							01												01		T	
02													02												02		0.00	
03													03												03		0.00	
04									0.01	0.13	0.06	0.03	04												04		0.23	
05													05												05		0.00	
06													06												06		0.23	
07	0.06	0.07		0.11	0.03	0.01							07							T	0.04	0.03	0.05	0.06	0.05	06	0.28	0.37
08													08												08		0.00	
09													09												09		0.00	
10					T	T	0.01	0.01	0.02	T	0.03	0.03	10	0.01	T	T								10		0.11		
11													11												11		0.00	
12													12												12		0.00	
13													13												13		0.00	
14													14							T	T	0.01	0.01	0.01	T	0.02	0.05	
15	0.01	T	T	0.01	0.04	0.06	0.04	0.06	0.03	0.04	0.05	0.04	15	T	0.04	0.07	0.06	0.05	0.03	0.05	0.05	0.05	0.03	0.03	0.01	0.85	0.86	
16	T	0.01	0.01	0.02	0.01	0.01	0.02	T	0.04	0.01	0.01	0.02	16	T	T	0.01	0.01	0.01	0.02	0.04	0.05	0.03	0.02	0.03	0.03	16	0.12	0.41
17	T	T	T	T	T	0.02	0.05	0.04	0.01	T	T	T	17	T	T	T	T	T	T	T	T	T	T	T	17		0.11	
18													18												18		T	
19													19												19		0.00	
20			T	T	T								20												20		T	
21													21			T	0.02	0.01	0.06	0.01	0.11	0.01	0.03	0.01	0.03	21		0.29
22	T	0.02	T	0.01	0.09	0.03	0.01	0.01	T	T	T	0.01	22	0.05	0.30	0.06	0.03	0.02	0.01					22		0.65		
23	T	0.01			0.21	T		T	0.01	0.03			23												23		0.26	
24													24												24		0.00	
25													25									T	T	T	25		T	
26					T	T	T	T					26		T	T	0.01	0.02	0.02	0.03	0.02	0.01	T	T	26		0.11	
27	0.01	T	T	T	T	0.01	T	T	0.01	0.03	0.01	T	27	0.01	0.05	0.04	0.07	0.06	0.03	0.06	0.05	0.03	0.03	0.01	27		0.52	
28	0.01	T	T	T	T	T	T	T	T	T	T	T	28												28		0.01	

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.12	.22	.25	.29	.31	.34	.35	.36	.38	.40	.41	.43
Ending Date	23	22	22	22	22	22	22	22	22	22	22	22
Ending Time (Hour/Min)	0436	1349	1352	1358	1402	1402	1411	1436	1402	1411	1436	1520

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	
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 Unknown Precipitation		

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

RICHMOND, VA FEBRUARY 2003

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:

Note: 2002 LCD Annual, the element "Normal Dry Bulb" was not updated using the 1971–2000 Normals. Correction will be made in the 2003 LCD Annual.

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							.13	10.00	
02							6.00	10.00	
03							7.00	10.00	
04							2.00	10.00	
05							10.00	10.00	
06							1.00	10.00	
07							1.50	10.00	
08							10.00	10.00	
09							10.00	10.00	
10							.50	10.00	
11							10.00	10.00	
12							10.00	10.00	
13							10.00	10.00	
14							3.00	10.00	
15							1.00	10.00	
16							.50	4.00	
17							1.00	10.00	
18							2.50	10.00	
19							1.25	10.00	
20							5.00	10.00	
21							1.50	10.00	
22							.13	10.00	
23							3.00	10.00	
24							10.00	10.00	
25							10.00	10.00	
26							.75	10.00	
27							1.75	8.00	
28							2.50	8.00	
MONTHLY AVGS							4.46	9.64	
SUNSHINE (MINUTES)									
Total:					Possible:				
					Percent Possible:				
NUMBER OF DAYS WITH:									
SKY CONDITION									
CLR		PTLY CLDY		CLOUDY		MISSING		28	
MINIMUM VISIBILITY (MILES)									
<=0.25			<=3.0			>=7.0			
2			17			9			

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

FEBRUARY 2003

RIC

WBAN # 13740

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)	
			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				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: 0713						FEB 01	SUNSET: 1733						SUNRISE: 0707						FEB 07	SUNSET: 1740									
01	VV	001			1.00	-DZ BR	34	34	34	100	3	36	29.79	29.99	01	OVC	004			2.00	-FZRA BR	31	31	31	100	8	02	29.89	30.09
04	VV	001			0.13	-DZ FG	34	34	34	100	3	23	29.73	29.93	04	OVC	006			2.00	-FZRA	32	32	32	100	8	04	29.77	29.96
07	OVC	003			1.50	BR	33	33	33	100	8	31	29.69	29.88	07	OVC	006			10.00		31	31	31	100	0	00	29.73	29.93
10	OVC	005			10.00		35	34	35	96	9	31	29.69	29.88	10	OVC	008			2.50	-SN BR	32	32	32	100	6	34	29.75	29.95
13	BKN	014			10.00		41	37	39	86	15	30	29.61	29.80	13	OVC	011			9.00		34	33	34	97	6	33	29.74	29.94
16	BKN	100			10.00		44	36	40	73	12	30	29.62	29.81	16	OVC	150			10.00		37	33	35	86	7	33	29.76	29.96
19	FEW	NC			10.00		39	36	38	89	6	28	29.66	29.86	19	OVC	065			8.00		33	33	33	100	5	20	29.80	30.00
22	FEW	NC			9.00		37	34	36	89	7	30	29.68	29.88	22	OVC	055			8.00		34	34	34	100	6	22	29.83	30.03
SUNRISE: 0712						FEB 02	SUNSET: 1734						SUNRISE: 0706						FEB 08	SUNSET: 1741									
01	CLR	NC			10.00		34	30	32	85	6	28	29.69	29.89	01	SCT	NC			10.00		34	25	31	70	13	28	29.89	30.09
04	CLR	NC			10.00		27	26	27	96	0	00	29.72	29.92	04	FEW	NC			10.00		30	15	25	54	10	33	29.97	30.17
07	BKN	180			10.00		32	28	31	85	3	27	29.75	29.95	07	FEW	NC			10.00		24	15	21	68	7	02	30.03	30.23
10	OVC	095			10.00		39	30	35	70	9	26	29.76	29.96	10	CLR	NC			10.00		30	12	25	47	3	VR	30.07	30.27
13	BKN	100			10.00		46	30	39	54	8	29	29.71	29.91	13	FEW	NC			10.00		35	17	29	48	7	VR	29.99	30.19
16	BKN	065			10.00		47	34	41	61	6	26	29.68	29.87	16	SCT	NC			10.00		39	17	31	41	17	23	29.97	30.17
19	BKN	250			10.00		39	34	37	82	0	00	29.72	29.91	19	CLR	NC			10.00		34	13	27	42	12	26	29.99	30.19
22	SCT	NC			10.00		35	33	34	93	0	00	29.75	29.94	22	CLR	NC			10.00		28	12	23	51	5	22	30.00	30.20
SUNRISE: 0711						FEB 03	SUNSET: 1735						SUNRISE: 0705						FEB 09	SUNSET: 1742									
01	FEW	NC			8.00		32	32	32	100	7	04	29.77	29.96	01	CLR	NC			10.00		27	9	22	47	5	25	29.96	30.16
04	SCT	NC			10.00		34	30	32	85	3	07	29.78	29.98	04	CLR	NC			10.00		25	8	20	48	7	24	29.95	30.15
07	OVC	250			10.00		32	28	31	85	0	00	29.81	30.01	07	BKN	150			10.00		26	7	21	44	5	26	29.98	30.18
10	BKN	250			10.00		43	29	37	58	9	11	29.82	30.01	10	SCT	NC			10.00		33	11	26	40	3	25	30.00	30.19
13	BKN	250			10.00		52	33	44	49	9	17	29.72	29.92	13	FEW	NC			10.00		43	20	35	40	7	27	29.96	30.16
16	OVC	200			10.00		53	36	45	52	7	18	29.65	29.85	16	CLR	NC			10.00		46	21	37	37	8	27	29.92	30.11
19	OVC	180			10.00		48	37	43	66	3	13	29.62	29.82	19	BKN	150			10.00		37	23	32	57	0	00	29.90	30.10
22	OVC	150			10.00		45	38	42	77	3	13	29.56	29.76	22	OVC	110			10.00		35	27	32	72	5	20	29.92	30.12
SUNRISE: 0710						FEB 04	SUNSET: 1736						SUNRISE: 0704						FEB 10	SUNSET: 1743									
01	OVC	250			10.00		51	43	47	74	10	18	29.48	29.66	01	OVC	080			10.00		35	30	33	82	5	15	29.85	30.05
04	OVC	150			10.00		56	43	49	62	16	19	29.40	29.58	04	OVC	041			10.00		37	26	33	65	6	21	29.83	30.02
07	OVC	030			10.00		57	51	54	81	16	18	29.31	29.49	07	OVC	060			9.00	-PL	34	34	34	100	3	08	29.68	29.88
10	OVC	070			4.00	RA BR	56	55	55	97	14	21	29.32	29.50	10	OVC	004			1.50	BR	34	34	34	100	5	13	29.61	29.81
13	FEW	NC			10.00		60	40	50	48	23	28	29.36	29.54	13	OVC	016			1.50	-SN BR	34	34	34	100	3	VR	29.51	29.70
16	FEW	NC			10.00		53	25	41	34	22	27	29.51	29.69	16	OVC	012			10.00		38	38	38	100	16	26	29.48	29.66
19	CLR	NC			10.00		46	27	38	47	10	27	29.62	29.82	19	CLR	NC			10.00		38	36	37	93	10	26	29.55	29.75
22	CLR	NC			10.00		42	21	34	43	8	27	29.67	29.87	22	CLR	NC			10.00		38	27	34	65	13	27	29.64	29.84
SUNRISE: 0709						FEB 05	SUNSET: 1737						SUNRISE: 0703						FEB 11	SUNSET: 1744									
01	CLR	NC			10.00		32	24	29	73	3	29	29.71	29.91	01	CLR	NC			10.00		34	26	31	73	8	23	29.70	29.90
04	SCT	NC			10.00		34	22	30	61	7	28	29.74	29.93	04	CLR	NC			10.00		29	24	27	82	7	23	29.73	29.93
07	CLR	NC			10.00		32	18	27	56	7	30	29.82	30.01	07	CLR	NC			10.00		26	23	25	88	3	15	29.81	30.01
10	BKN	250			10.00		37	18	30	46	3	VR	29.92	30.12	10	FEW	NC			10.00		38	23	32	55	7	25	29.85	30.04
13	FEW	NC			10.00		43	16	34	34	9	34	29.94	30.14	13	CLR	NC			10.00		44	24	36	45	14	21	29.76	29.96
16	FEW	NC			10.00		44	12	33	27	9	34	29.97	30.17	16	BKN	070			10.00		46	28	39	50	16	21	29.67	29.87
19	BKN	250			10.00		36	15	29	42	0	00	30.04	30.24	19	SCT	NC			10.00		44	29	38	55	8	22	29.69	29.88
22	BKN	250			10.00		32	19	28	59	3	08	30.11	30.31	22	CLR	NC			10.00		44	27	37	51	13	27	29.71	29.91
SUNRISE: 0708						FEB 06	SUNSET: 1739						SUNRISE: 0702						FEB 12	SUNSET: 1745									
01	OVC	250			10.00		30	22	27	72	0	00	30.14	30.33	01	CLR	NC			10.00		34	27	31	76	7	20	29.69	29.89
04	OVC	250			10.00		29	21	26	72	5	07	30.16	30.36	04	CLR	NC			10.00		37	27	33	67	7	23	29.66	29.85
07	OVC	250			10.00		27	22	25	81	3	06	30.21	30.41	07	SCT	NC			10.00		39	26	34	60	16	23	29.65	29.84
10	OVC	110			10.00		32	20	28	61	7	10	30.26	30.46	10	FEW	NC			10.00		47	21	37	36	16	29	29.72	29.91
13	OVC	085			10.00		37	19	31	48	9	12	30.19	30.39	13	CLR	NC			10.00		47	6	34	19	23	29	29.73	29.93
16	OVC	130			10.00		38	23	32	55	8	09	30.11	30.31	16	CLR	NC			10.00		46	1	33	15	26	30	29.75	29.95
19	OVC	007			1.00	-SN BR	32	32	32	100	5	10	30.11	30.31	19	CLR	NC			10.00		40	1	29	19	13	28	29.83	30.02
22	OVC	024			1.00	-SN BR	31	31	31	100	5	07	30.03	30.23	22	CLR	NC			10.00		35	0	26	22	10	28	29.88	30.08

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

FEBRUARY 2003

RIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SKY COVER	CEILING 100'S OF FT	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		
			OBSERVATION TIME (LST)	EFF CLD AMT Okta		DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL				OBSERVATION TIME (LST)	EFF CLD AMT Okta		DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	
SUNRISE: 0701 FEB 13						SUNSET: 1746						SUNRISE: 0654 FEB 19						SUNSET: 1753										
01	CLR	NC		10.00		27	4	21	37	5	21	29.88	30.07	01	FEW	NC		2.50	BR		29	28	29	96	0	00	30.10	30.30
04	CLR	NC		10.00		25	5	20	42	0	00	29.89	30.09	04	OVC	250		2.50	BR		30	30	30	100	0	00	30.11	30.31
07	CLR	NC		10.00		28	0	21	29	8	28	29.93	30.13	07	BKN	150		4.00	BR		31	31	31	100	0	00	30.14	30.33
10	CLR	NC		10.00		35	-1	26	21	20	29	29.96	30.16	10	OVC	150		5.00	BR		37	34	36	89	7	18	30.13	30.33
13	CLR	NC		10.00		43	5	31	21	18	27	29.87	30.06	13	OVC	250		9.00			42	36	39	79	9	20	30.09	30.29
16	CLR	NC		10.00		48	13	36	24	21	28	29.81	30.01	16	OVC	250		10.00			46	37	42	71	8	17	30.03	30.22
19	CLR	NC		10.00		45	19	35	35	16	27	29.86	30.06	19	OVC	250		8.00			40	37	39	89	6	19	30.03	30.23
22	CLR	NC		10.00		39	21	33	48	8	26	29.92	30.11	22	OVC	250		6.00	BR		38	37	38	97	7	20	30.03	30.23
SUNRISE: 0660 FEB 14						SUNSET: 1747						SUNRISE: 0653 FEB 20						SUNSET: 1754										
01	CLR	NC		10.00		32	24	29	73	6	27	29.94	30.14	01	OVC	120		9.00			43	37	40	80	6	24	30.04	30.23
04	CLR	NC		10.00		28	21	26	75	3	08	29.96	30.16	04	OVC	075		9.00	-RA		42	38	40	85	3	26	30.04	30.23
07	OVC	250		10.00		26	23	25	88	6	14	30.03	30.22	07	OVC	075		7.00			39	37	38	93	0	00	30.10	30.30
10	OVC	200		10.00		34	30	32	85	3	VR	30.04	30.24	10	OVC	075		10.00			42	34	39	73	8	04	30.16	30.36
13	OVC	200		10.00		46	31	40	56	0	00	30.00	30.20	13	BKN	250		10.00			48	35	42	61	0	00	30.14	30.34
16	OVC	180		10.00		47	32	41	56	0	00	29.98	30.18	16	OVC	250		10.00			50	34	43	54	0	00	30.09	30.29
19	OVC	029		10.00	-RA	44	44	44	100	8	22	30.01	30.21	19	BKN	250		10.00			43	35	40	74	5	16	30.09	30.29
22	OVC	050		3.00	-RA BR	41	41	41	100	6	13	29.94	30.14	22	OVC	110		10.00			39	35	37	86	5	13	30.08	30.27
SUNRISE: 0659 FEB 15						SUNSET: 1748						SUNRISE: 0652 FEB 21						SUNSET: 1755										
01	OVC	040		3.00	-RA BR	41	41	41	100	5	12	29.91	30.10	01	OVC	055		10.00			40	35	38	83	3	10	30.03	30.23
04	OVC	040		3.00	-RA BR	40	40	40	100	3	14	29.85	30.04	04	OVC	120		9.00			38	35	37	89	0	00	29.99	30.19
07	OVC	026		2.50	-RA BR	41	41	41	100	5	16	29.84	30.03	07	OVC	110		8.00			39	35	37	86	0	00	29.98	30.18
10	OVC	003		1.00	-RA BR	43	43	43	100	0	00	29.87	30.07	10	OVC	150		5.00	HZ		43	37	40	80	0	00	29.95	30.14
13	OVC	007		5.00	-RA BR	37	35	36	93	17	02	29.95	30.14	13	OVC	090		10.00			48	37	43	66	6	13	29.88	30.08
16	OVC	009		5.00	-RA BR	33	31	32	92	15	04	30.05	30.24	16	OVC	080		6.00	-RA BR		46	42	44	86	6	04	29.83	30.03
19	OVC	009		2.50	-FZRASN BR	30	27	29	88	13	04	30.16	30.36	19	OVC	034		7.00	-RA		43	41	42	93	6	07	29.81	30.00
22	OVC	028		3.00	-SNPL BR	27	25	26	92	14	04	30.21	30.41	22	OVC	015		4.00	-RA BR		41	41	41	100	3	03	29.77	29.97
SUNRISE: 0658 FEB 16						SUNSET: 1749						SUNRISE: 0650 FEB 22						SUNSET: 1756										
01	OVC	012		2.00	-SNPL BR	26	23	25	88	12	05	30.22	30.42	01	OVC	003		2.00	-RA BR		40	40	40	100	6	02	29.72	29.91
04	OVC	010		2.00	-SNPL BR	25	22	24	88	12	04	30.25	30.45	04	OVC	003		1.50	-RA BR		39	39	39	100	6	04	29.63	29.82
07	OVC	012		3.00	-FZRAPL BR	23	21	22	92	12	05	30.23	30.43	07	OVC	003		2.00	-RA BR		39	39	39	100	7	11	29.55	29.74
10	OVC	031		1.00	-SNPL BR	22	19	21	89	9	06	30.23	30.43	10	VV	001		0.13	-DZ FG		41	41	41	100	3	10	29.45	29.63
13	OVC	013		2.00	-SNPL BR	22	19	21	89	10	04	30.18	30.38	13	OVC	005		1.75	-RA BR		38	38	38	100	8	36	29.40	29.58
16	OVC	021		1.00	-SNPL BR	21	19	20	92	12	04	30.09	30.29	16	OVC	033		3.00	-RA		42	42	42	100	9	17	29.32	29.51
19	OVC	007		1.25	-SNPL BR	20	18	19	92	9	04	30.07	30.27	19	OVC	002		2.00	BR		47	47	47	100	5	15	29.24	29.42
22	OVC	015		4.00	-SNPL BR	21	18	20	88	13	35	29.94	30.14	22	OVC	150		10.00			58	57	57	97	15	17	29.18	29.36
SUNRISE: 0656 FEB 17						SUNSET: 1750						SUNRISE: 0649 FEB 23						SUNSET: 1757										
01	OVC	008		4.00	-SN BR	24	22	23	91	8	35	29.86	30.06	01	OVC	017		7.00	-RA		62	59	60	90	15	20	29.08	29.26
04	OVC	006		2.50	-FZDZ BR	24	22	23	91	8	01	29.79	29.99	04	SCT	NC		10.00			62	59	60	90	15	20	29.00	29.18
07	OVC	014		1.75	-SNPL BR	21	19	20	92	12	35	29.81	30.01	07	SCT	NC		10.00			57	54	55	90	13	21	28.98	29.17
10	OVC	013		7.00	-SNPL	22	19	21	89	9	35	29.86	30.06	10	OVC	029		10.00			53	50	51	89	24	25	29.10	29.28
13	OVC	010		9.00	-SNPL	25	23	24	92	9	36	29.80	29.99	13	OVC	048		10.00			47	30	40	52	25	27	29.29	29.47
16	OVC	006		1.50	-FZDZSNPL BR	26	25	26	96	7	36	29.80	30.00	16	BKN	250		10.00			46	23	37	40	29	29	29.53	29.71
19	OVC	006		2.00	-FZDZSNPL BR	26	25	26	96	7	03	29.83	30.03	19	CLR	NC		10.00			43	23	35	45	16	29	29.74	29.93
22	OVC	010		9.00	-FZDZSNPL	26	24	25	92	7	03	29.86	30.06	22	CLR	NC		10.00			38	24	33	57	12	25	29.88	30.07
SUNRISE: 0655 FEB 18						SUNSET: 1751						SUNRISE: 0648 FEB 24						SUNSET: 1758										
01	OVC	010		10.00		26	24	25	92	3	03	29.85	30.05	01	CLR	NC		10.00			33	24	30	70	8	23	29.95	30.15
04	OVC	007		8.00	-SN	26	24	25	92	6	03	29.85	30.05	04	FEW	NC		10.00			28	23	26	81	5	13	30.00	30.19
07	OVC	060		10.00		26	24	25	92	0	00	29.91	30.10	07	OVC	120		10.00			29	25	28	85	6	16	30.01	30.22
10	OVC	017		10.00		29	25	28	85	0	00	29.96	30.16	10	OVC	090		10.00			38	28	34	68	9	19	30.00	30.20
13	OVC	013		10.00		33	29	32	85	7	VR	29.99	30.19	13	FEW	NC		10.00			55	35	46	47	21	20	29.87	30.06
16	BKN	250		9.00		36	30	34	79	5	31	29.99	30.19	16	FEW	NC		1										

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

FEBRUARY 2003

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)									
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Okta			DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL								
								SUNRISE: 0646			FEB 25		SUNSET: 1759										
01	BKN	080				10.00		43	32	38	65	3	05	30.01	30.20								
04	BKN	200				10.00		37	31	35	79	8	05	30.06	30.25								
07	OVC	200				10.00		35	26	32	70	10	03	30.13	30.32								
10	FEW	NC				10.00		38	22	32	53	14	03	30.20	30.40								
13	BKN	120				10.00		43	25	36	49	10	04	30.15	30.35								
16	OVC	150				10.00		40	22	33	49	14	05	30.14	30.34								
19	OVC	044				10.00		34	18	29	52	10	05	30.18	30.38								
22	OVC	110				10.00	-SN	32	16	27	52	7	05	30.21	30.40								
								SUNRISE: 0645			FEB 26		SUNSET: 1760										
01	OVC	060				10.00		31	14	26	49	8	07	30.17	30.37								
04	OVC	055				10.00		30	18	26	61	0	00	30.14	30.34								
07	OVC	042				9.00	-SN	30	15	25	54	10	06	30.16	30.36								
10	OVC	015				10.00		28	24	27	85	12	03	30.13	30.33								
13	OVC	011				3.00	BR	29	27	28	92	9	01	30.10	30.30								
16	OVC	007				1.00	-SN BR	29	28	29	96	8	01	30.05	30.24								
19	OVC	009				1.00	-SN BR	28	28	28	100	8	36	30.06	30.25								
22	OVC	010				7.00	-SN	28	27	28	96	7	02	30.04	30.24								
								SUNRISE: 0644			FEB 27		SUNSET: 1801										
01	OVC	010				2.50	-SN BR	27	25	26	92	9	03	30.00	30.20								
04	OVC	010				2.00	-SN BR	27	25	26	92	10	01	29.96	30.16								
07	OVC	006				2.00	-SNPL BR	27	26	27	96	9	02	29.96	30.16								
10	OVC	004				2.00	-FZASNPL BR	29	29	29	100	9	02	29.97	30.16								
13	OVC	004				2.00	-RA BR	32	32	32	100	10	03	29.91	30.10								
16	OVC	006				5.00	-RA BR	33	33	33	100	12	03	29.83	30.03								
19	OVC	006				2.00	-RA BR	32	32	32	100	10	03	29.81	30.01								
22	OVC	006				7.00	-RA	32	32	32	100	10	01	29.80	30.00								
								SUNRISE: 0642			FEB 28		SUNSET: 1802										
01	OVC	006				2.50	-RA BR	31	31	31	100	10	36	29.79	29.99								
04	OVC	005				2.50	-DZ BR	31	31	31	100	8	01	29.78	29.98								
07	OVC	006				2.50	-RA BR	32	32	32	100	6	36	29.85	30.05								
10	OVC	006				2.50	-SN BR	32	32	32	100	7	01	29.92	30.12								
13	OVC	009				7.00		35	33	34	93	7	36	29.95	30.15								
16	OVC	008				8.00		37	35	36	93	0	00	29.94	30.14								
19	OVC	010				8.00		36	35	36	97	3	04	30.00	30.20								
22	OVC	010				6.00	BR	36	35	36	97	3	10	30.06	30.26								
								SUNRISE:			FEB 29		SUNSET:										
								SUNRISE:			FEB 30		SUNSET:										

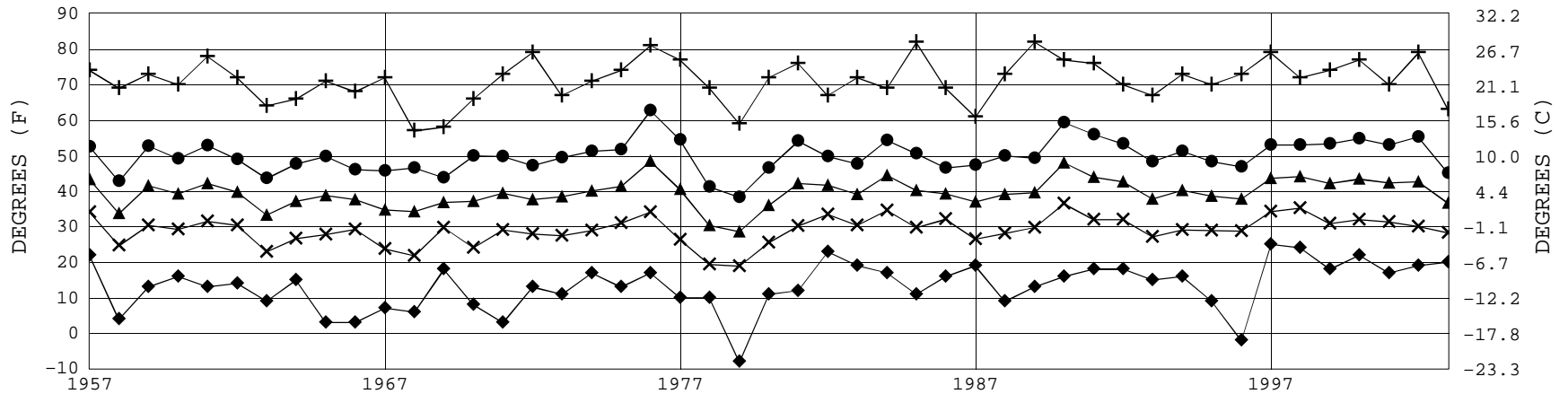
3-HOURLY OBSERVATION NOTES

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.

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)	DIRECTION	SPEED	DIRECTION
							STATION	SEA LEVEL					
01			34	28	32	81	29.86	30.06	7.34	6	1	31	
02			34	29	32	82	29.86	30.05	7.38	7	0	0	
03			34	28	32	81	29.85	30.05	7.32	7	1	35	
04			33	28	31	81	29.85	30.04	7.29	6	0	0	
05			33	28	31	82	29.85	30.05	6.93	7	1	26	
06			33	27	31	82	29.85	30.05	7.12	6	1	30	
07			33	27	31	83	29.86	30.06	7.58	6	0	0	
08			33	28	32	82	29.87	30.07	6.68	6	0	0	
09			35	28	33	79	29.88	30.08	6.79	7	1	30	
10			36	28	34	75	29.88	30.08	7.20	8	2	31	
11			38	28	34	71	29.89	30.08	7.90	9	3	29	
12			39	28	35	68	29.87	30.07	8.14	10	3	29	
13			41	28	36	66	29.85	30.04	8.19	10	4	30	
14			42	28	36	64	29.83	30.03	8.38	11	4	28	
15			42	28	37	64	29.83	30.02	8.23	12	5	29	
16			42	28	37	64	29.84	30.03	8.20	11	5	29	
17			41	28	36	66	29.84	30.04	8.19	10	4	29	
18			40	29	36	70	29.85	30.05	7.81	9	2	28	
19			38	29	35	75	29.87	30.07	7.46	7	2	29	
20			37	29	34	76	29.88	30.07	7.47	7	1	30	
21			37	29	34	78	29.88	30.08	7.57	7	1	35	
22			36	29	34	78	29.88	30.08	7.86	7	1	30	
23			36	28	33	76	29.88	30.08	7.46	7	2	30	
24			35	28	33	79	29.88	30.07	7.45	6	0	0	

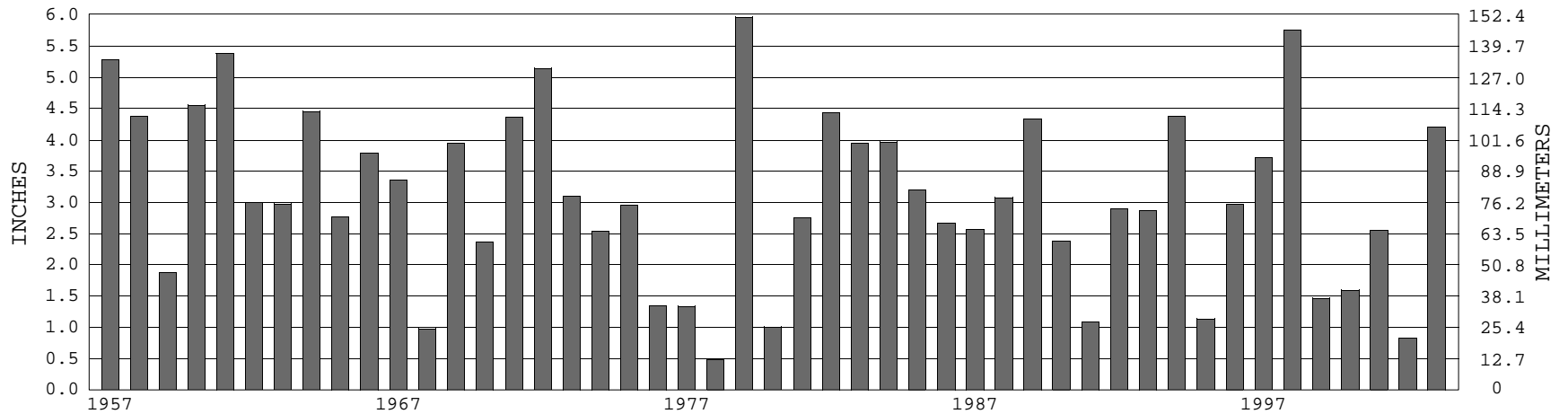
RICHMOND, VA FEBRUARY TEMPERATURES



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

Long-Term (1957-2003) Mean: 39.5 1961-1990 Normal: 39.5

RICHMOND, VA FEBRUARY PRECIPITATION



Long-Term (1957-2003) Mean Monthly Total: 3.11

1961-1990 Normal: 2.98



FEBRUARY 2003

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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