



# NOVEMBER 2002

## 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

NOVEMBER 2002  
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						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25			
01	57	34	46	-7	37	42	19	0				0.0	0.00	29.91	30.11	7.1	26	7.5	26	27	22	26	01				
02	52	30	41	-12	28	36	24	0				0.0	0.00	29.92	30.11	4.5	26	6.4	22	27	17	29	02				
03	55	32	44	-8	32	38	21	0				0.0	0.00	29.98	30.17	1.6	11	3.9	14	20	12	20	03				
04	58	42	50	-2	44	46	15	0	RA BR			0.0	0.25	29.91	30.10	3.1	21	5.8	17	22	15	21	04				
05	52	40	46	-6	43	45	19	0	RA BR			0.0	0.73	29.89	30.08	3.9	09	6.5	20	13	15	14	05				
06	52	43	48	-4	45	47	17	0	RA BR			0.0	0.45	29.48	29.67	6.8	32	7.3	26	33	22	32	06				
07	54	36	45	-6	35	41	20	0				0.0	0.00	29.94	30.13	5.5	29	7.8	25	31	21	32	07				
08	65	33	49	-2	41	44	16	0	BR			0.0	0.00	30.01	30.20	8.1	20	8.6	23	22	21	22	08				
09	70	44	57	6	50	53	8	0				0.0	0.00	29.91	30.10	11.7	20	12.4	28	22	23	23	09				
10	74	56	65	14	61	63	0	0	RA			0.0	T	29.70	29.89	12.5	18	12.7	29	20	23	20	10				
11	74*	58	66*	16	65	66	0	1	TSRA RA FG+ BR			0.0	0.33	29.70	29.88	8.8	20	9.7	35	30	28	29	11				
12	64	50	57	7	56	56	8	0	RA FG+ BR			0.0	0.97	29.81	30.00	6.6	01	8.7	30	02	24	01	12				
13	54	37	46	-4	42	45	19	0	RA BR			0.0	0.16	29.88	30.07	9.0	35	9.2	29	01	22	36	13				
14	62	33	48	-1	39	43	17	0	BR			0.0	0.00	29.95	30.14	6.1	21	6.3	20	23	15	21	14				
15	64	37	51	2	42	47	14	0				0.0	0.00	29.88	30.07	5.9	20	6.8	20	25	16	25	15				
16	54	51	53	4	52	52	12	0	RA DZ BR			0.0	0.67	29.71	29.90	5.2	01	6.2	18	01	15	01	16				
17	51	43	47	-2	45	46	18	0	RA DZ BR			0.0	0.72	29.53	29.72	7.4	34	8.9	20	36	16	35	17				
18	52	33	43	-6	33	39	22	0				0.0	0.00	30.01	30.21	8.0	27	8.3	23	27	18	30	18				
19	58	30	44	-5	36	40	21	0				0.0	0.00	30.09	30.29	5.2	20	5.8	21	24	17	23	19				
20	59	34	47	-1	40	43	18	0	BR			0.0	0.00	30.05	30.24	2.9	13	3.0	14	13	12	15	20				
21	59	41	50	3	48	49	15	0	FG+ BR			0.0	0.00	29.74	29.93	1.7	15	1.9	12	15	10	15	21				
22	54	39	47	0	41	45	18	0	RA FG+ BR HZ			0.0	T	29.47	29.66	9.8	26	11.1	29	28	22	28	22				
23	50	35	43	-4	25	35	22	0				0.0	0.00	29.83	30.02	9.8	27	10.7	24	29	20	30	23				
24	62	35	49	2	34	42	16	0				0.0	0.00	29.94	30.13	4.2	24	5.5	15	26	14	27	24				
25	67	37	52	6	43	47	13	0				0.0	0.00	29.93	30.12	3.3	19	4.9	16	22	14	21	25				
26	54	39	47	1	40	43	18	0				0.0	0.00	30.01	30.20	6.4	04	7.3	21	03	17	04	26				
27	47	31	39	-7	28	36	26	0				0.0	0.00	29.95	30.15	10.5	36	11.0	29	01	24	01	27				
28	41	24	33*	-12	19	28	32	0				0.0	0.00	30.03	30.23	1.5	29	5.9	17	02	13	02	28				
29	52	21*	37	-8	23	33	28	0				0.0	0.00	29.71	29.90	12.9	22	13.1	33	23	29	23	29				
30	59	39	49	4	31	41	16	0				0.0	0.00	29.42	29.61	13.9	25	16.1	43*	28	33*	29	30				
										<b>&lt; MONTHLY AVERAGES TOTALS--&gt;</b>				<b>&lt;-- MONTHLY AVERAGES</b>													
										<b>&lt;-----DEPARTURE FROM NORMAL-----&gt;</b>				<b>SUNSHINE, CLOUD, &amp; VISIBILITY TABLES ON PAGE 3</b>													
<b>DEGREE DAYS</b>										GREATEST 24-HR PRECIPITATION: 1.14 DATE: 16-17				SEA LEVEL PRESSURE DATE TIME													
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: 0.0 DATE:				MAXIMUM : 30.37 18 2354													
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH:				MINIMUM : 29.46 30 1354													
HEATING: 512 42 726 3										NUMBER OF DAYS WITH →				MAXIMUM TEMP ≥ 90: 0				MINIMUM TEMP ≤ 32: 6				PRECIPITATION ≥ 0.01 INCH: 8					
COOLING: 1 -5 1764 330														MAXIMUM TEMP ≤ 32: 0				MINIMUM TEMP ≤ 0: 0				PRECIPITATION ≥ 0.10 INCH: 8					
														THUNDERSTORMS: 1				HEAVY FOG: 4				SNOWFALL ≥ 1.0 INCH: 0					

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

## RICHMOND, VA

NOVEMBER 2002

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	T	T	0.08	0.10	0.06	T	T	0.01					04												04		0.25		
05													05	T	0.03	0.05	0.09	0.04	0.03	0.06	0.08	0.02	0.06	0.08	0.19	05		0.73	
06	0.05	0.03	T	0.22	0.04	T		0.02			T		06		T	0.07	0.02								06		0.45		
07													07												07		0.00		
08													08												08		0.00		
09													09												09		0.00		
10											T		10												10		T		
11													11	T											11		0.33		
12												0.21	0.12	12	0.02	0.04	0.07	0.01	0.01	0.06	0.01	T	0.02	T	0.01	0.03	12		0.97
13	T	0.04	0.03	T	0.03	0.01	0.03	0.02	0.18	0.28	0.14	T	13												13		0.16		
14													14												14		0.00		
15													15												15		0.00		
16	T	T	T	T		T	T			0.01	0.01	T	16		0.01	T	0.04	0.01	0.12	0.13	0.11	0.07	0.06	0.07	0.03	16		0.67	
17	0.03	0.03	0.03	0.01	T	T	0.02	0.01	T	0.01	0.03	0.03	17	0.02	0.06	0.09	0.09	0.09	0.06	0.06	0.03	0.02	T	T		17		0.72	
18													18												18		0.00		
19													19												19		0.00		
20													20												20		0.00		
21													21												21		0.00		
22													22		T										22		T		
23													23												23		0.00		
24													24												24		0.00		
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		

### MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	.11	.15	.21	.25	.31	.33	.33	.38	.43	.49	.57	.61
Ending Date	11	11	11	11	11	11	11	12	12	12	12	12
Ending Time (Hour/Min)	1047	1048	1057	1057	1107	1116	1116	1035	0959	1019	1040	1040

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	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 NOVEMBER 2002

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							7.00	10.00	
02							7.00	10.00	
03							10.00	10.00	
04							6.00	10.00	
05							1.50	10.00	
06							1.00	10.00	
07							10.00	10.00	
08							5.00	10.00	
09							10.00	10.00	
10							9.00	10.00	
11							.13	10.00	
12							.13	10.00	
13							6.00	10.00	
14							4.00	10.00	
15							10.00	10.00	
16							1.00	10.00	
17							2.00	10.00	
18							10.00	10.00	
19							9.00	10.00	
20							3.00	10.00	
21							<.25	10.00	
22							.25	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							9.00	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	
<b>MONTHLY AVGS</b>							6.49	10.00	
<b>SUNSHINE (MINUTES)</b>									
Total:                      Possible: Percent Possible:									
<b>NUMBER OF DAYS WITH:</b>									
<b>SKY CONDITION</b>									
CLR   PTLY CLDY   CLOUDY   MISSING 30									
<b>MINIMUM VISIBILITY (MILES)</b>									
<=0.25      <=3.0      >=7.0 4                      8                      18									



# OBSERVATIONS AT 3-HOURLY INTERVALS

# RICHMOND, VA

### NOVEMBER 2002

RIC

WBAN # 13740

HOUR (LST)	SATELLITE			WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE			WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	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	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL	SKY COVER		CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT Oktas		VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG
<b>SUNRISE: 0647</b>					<b>NOV 13</b>				<b>SUNSET: 1700</b>					<b>SUNRISE: 0653</b>					<b>NOV 19</b>				<b>SUNSET: 1656</b>				
01	OVC	085		10.00	-RA	49	49	49	100	10	35	29.81	30.00	01	CLR	NC		10.00	32	32	32	100	0	00	30.17	30.36	
04	OVC	065		10.00	-RA	49	48	48	97	10	36	29.81	30.00	04	FEW	NC		9.00	32	32	32	100	0	00	30.14	30.34	
07	OVC	055		10.00		49	46	47	90	14	36	29.86	30.06	07	FEW	NC		9.00	31	30	31	96	3	15	30.14	30.34	
10	OVC	140		10.00		49	44	47	83	15	35	29.86	30.06	10	CLR	NC		10.00	48	37	43	66	10	19	30.12	30.31	
13	BKN	250		10.00		52	41	47	66	12	36	29.88	30.07	13	SCT	NC		10.00	57	34	46	42	13	21	30.05	30.24	
16	FEW	NC		10.00		51	37	45	59	15	35	29.88	30.07	16	FEW	NC		10.00	57	37	48	47	14	23	30.02	30.22	
19	CLR	NC		10.00		42	38	40	85	5	01	29.92	30.12	19	CLR	NC		10.00	46	39	43	77	8	21	30.06	30.25	
22	CLR	NC		7.00		39	38	39	96	0	00	29.94	30.14	22	CLR	NC		10.00	43	39	41	86	0	00	30.06	30.26	
<b>SUNRISE: 0648</b>					<b>NOV 14</b>				<b>SUNSET: 1660</b>					<b>SUNRISE: 0654</b>					<b>NOV 20</b>				<b>SUNSET: 1656</b>				
01	CLR	NC		5.00	BR	36	36	36	100	0	00	29.95	30.14	01	CLR	NC		10.00	38	38	38	100	3	16	30.06	30.26	
04	CLR	NC		5.00	BR	35	35	35	100	0	00	29.96	30.16	04	CLR	NC		9.00	36	36	36	100	0	00	30.07	30.27	
07	CLR	NC		5.00	BR	34	34	34	100	3	18	29.99	30.18	07	SCT	NC	BR	5.00	35	35	35	100	0	00	30.09	30.28	
10	CLR	NC		10.00		50	41	46	71	3	22	30.01	30.20	10	OVC	250		10.00	49	45	47	86	5	12	30.11	30.31	
13	FEW	NC		10.00		60	39	50	46	13	21	29.94	30.14	13	BKN	250		10.00	56	41	49	57	6	12	30.06	30.26	
16	BKN	250		10.00		60	39	50	46	8	20	29.90	30.10	16	BKN	200		10.00	56	41	49	57	3	16	30.03	30.23	
19	BKN	250		10.00		50	41	46	71	9	20	29.92	30.11	19	BKN	200		10.00	45	41	43	86	5	11	29.99	30.19	
22	OVC	250		10.00		48	42	45	80	9	20	29.92	30.11	22	OVC	250		10.00	44	44	44	100	0	00	29.99	30.18	
<b>SUNRISE: 0649</b>					<b>NOV 15</b>				<b>SUNSET: 1659</b>					<b>SUNRISE: 0655</b>					<b>NOV 21</b>				<b>SUNSET: 1655</b>				
01	BKN	200		10.00		47	41	44	80	10	21	29.90	30.09	01	OVC	060		7.00	44	44	44	100	0	00	29.94	30.14	
04	OVC	200		10.00		43	40	42	89	7	18	29.89	30.08	04	OVC	001		0.75	41	41	41	100	0	00	29.89	30.09	
07	BKN	250		10.00		39	38	39	96	7	19	29.91	30.11	07	OVC	002		0.25	42	42	42	100	0	00	29.85	30.05	
10	OVC	200		10.00		49	42	46	77	7	21	29.92	30.11	10	OVC	150		0.50	49	49	49	100	0	00	29.83	30.02	
13	BKN	250		10.00		61	39	50	44	14	23	29.87	30.06	13	OVC	070		10.00	58	49	53	72	6	15	29.72	29.91	
16	OVC	250		10.00		60	43	51	53	8	19	29.84	30.03	16	OVC	048		10.00	56	50	53	81	0	00	29.67	29.86	
19	OVC	250		10.00		51	45	48	80	6	17	29.86	30.06	19	OVC	055		7.00	52	52	52	100	5	15	29.62	29.82	
22	OVC	110		10.00		52	47	49	83	3	13	29.84	30.04	22	OVC	004		2.00	51	51	51	100	0	00	29.55	29.74	
<b>SUNRISE: 0650</b>					<b>NOV 16</b>				<b>SUNSET: 1658</b>					<b>SUNRISE: 0656</b>					<b>NOV 22</b>				<b>SUNSET: 1655</b>				
01	OVC	090		10.00	-RA	52	48	50	86	5	12	29.80	30.00	01	VV	001		0.25	52	52	52	100	3	21	29.50	29.68	
04	OVC	080		10.00		52	51	52	97	0	00	29.78	29.97	04	VV	001		0.25	52	52	52	100	6	19	29.44	29.62	
07	OVC	010		10.00	-RA	51	50	51	96	6	03	29.80	30.00	07	OVC	007		4.00	51	51	51	100	7	25	29.43	29.61	
10	OVC	006		5.00	-RA BR	53	53	53	100	3	04	29.80	29.99	10	BKN	085		3.00	51	49	50	92	7	25	29.43	29.62	
13	OVC	004		1.50	BR	54	54	54	100	6	04	29.74	29.93	13	OVC	045		10.00	52	40	46	64	15	28	29.41	29.59	
16	OVC	004		2.00	-RA BR	54	54	54	100	5	04	29.68	29.87	16	BKN	055		10.00	51	33	43	50	18	27	29.43	29.61	
19	OVC	004		5.00	RA BR	53	53	53	100	6	35	29.62	29.81	19	FEW	NC		10.00	45	28	38	52	15	27	29.51	29.70	
22	OVC	005		9.00	-RA	51	51	51	100	12	36	29.55	29.74	22	CLR	NC		10.00	41	27	35	57	10	26	29.57	29.76	
<b>SUNRISE: 0651</b>					<b>NOV 17</b>				<b>SUNSET: 1657</b>					<b>SUNRISE: 0657</b>					<b>NOV 23</b>				<b>SUNSET: 1654</b>				
01	OVC	005		3.00	-RA BR	51	51	51	100	9	35	29.49	29.67	01	CLR	NC		10.00	38	26	33	62	13	27	29.61	29.80	
04	OVC	005		4.00	-RA BR	50	50	50	100	7	32	29.46	29.64	04	CLR	NC		10.00	38	24	33	57	10	27	29.69	29.88	
07	OVC	007		2.00	-RA BR	48	48	48	100	10	31	29.52	29.70	07	CLR	NC		10.00	36	21	31	55	10	30	29.77	29.97	
10	OVC	023		10.00	RA	44	44	44	100	9	01	29.53	29.72	10	SCT	NC		10.00	42	21	34	43	15	27	29.85	30.04	
13	OVC	008		10.00	-RA	44	44	44	100	12	36	29.50	29.68	13	CLR	NC		10.00	48	22	38	36	14	29	29.85	30.04	
16	OVC	040		5.00	RA BR	43	43	43	100	8	01	29.49	29.67	16	FEW	NC		10.00	49	23	39	36	16	27	29.87	30.07	
19	OVC	036		8.00	RA	44	44	44	100	9	31	29.55	29.73	19	CLR	NC		10.00	40	29	36	65	6	23	29.91	30.10	
22	OVC	022		10.00	-DZ	44	43	44	96	9	34	29.62	29.81	22	OVC	090		10.00	44	30	38	58	7	23	29.92	30.11	
<b>SUNRISE: 0652</b>					<b>NOV 18</b>				<b>SUNSET: 1657</b>					<b>SUNRISE: 0658</b>					<b>NOV 24</b>				<b>SUNSET: 1654</b>				
01	OVC	100		10.00		43	41	42	93	9	26	29.69	29.88	01	FEW	NC		10.00	41	29	36	62	7	22	29.89	30.08	
04	CLR	NC		10.00		39	33	37	79	8	27	29.79	29.99	04	CLR	NC		10.00	42	28	36	58	9	27	29.90	30.09	
07	CLR	NC		10.00		37	31	35	79	9	26	29.93	30.12	07	CLR	NC		10.00	39	28	35	65	5	24	29.94	30.14	
10	CLR	NC		10.00		47	31	40	54	14	27	30.05	30.24	10	CLR	NC		10.00	53	33	44	47	12	27	29.98	30.17	
13	CLR	NC		10.00		51	30	42	45	12	26	30.07	30.27	13	CLR	NC		10.00	59	35	48	41	0	00	29.93	30.12	
16	CLR	NC		10.00		52	31	43	45	13	24	30.09	30.28	16	CLR	NC		10.00	60	38	49	44	7	19	29.92	30.11	
19	CLR	NC		10.00		41	34	38	76	5	25	30.13	30.33	19	CLR	NC		10.00	46	39	43	77	0	00	29.95	30.15	
22	CLR	NC		10.00		37	34	36	89	0	00	30.16	30.35	22	CLR	NC		10.00	42	39	41	89	3	15	29.97	30.16	

# OBSERVATIONS AT 3-HOURLY INTERVALS

# RICHMOND, VA

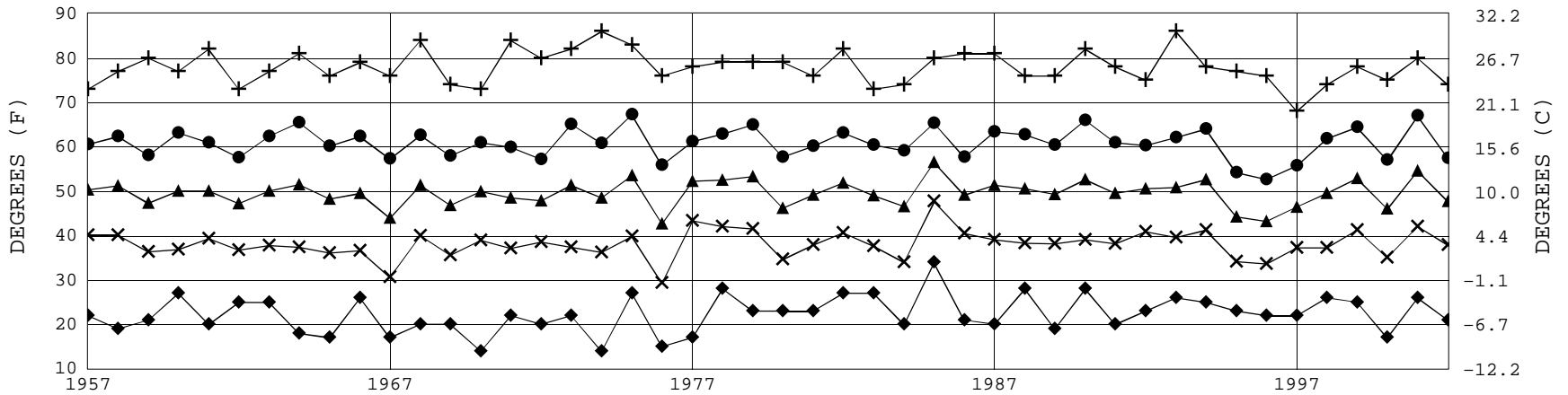
NOVEMBER 2002

RIC

WBAN # 13740

HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	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	SPEED (MPH)		DIRECTION TENS OF DEG	STATION		SEA LEVEL	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)
				<b>SUNRISE: 0659</b>	<b>NOV 25</b>					<b>SUNSET: 1653</b>					<b>SUNRISE:</b>	<b>NOV 31</b>					<b>SUNSET:</b>					
01	CLR	NC		10.00	42	38	40	85	5	15	29.95	30.14														
04	CLR	NC		10.00	41	39	40	93	3	14	29.94	30.13														
07	BKN	250		10.00	39	39	39	100	5	14	29.95	30.14														
10	OVC	250		10.00	53	42	48	66	7	24	29.97	30.16														
13	OVC	250		10.00	66	44	55	45	12	22	29.89	30.08														
16	BKN	250		10.00	65	47	55	52	9	22	29.87	30.07														
19	OVC	250		10.00	55	48	51	77	0	00	29.91	30.11														
22	OVC	250		10.00	47	47	47	100	3	17	29.94	30.13														
				<b>SUNRISE: 0700</b>	<b>NOV 26</b>					<b>SUNSET: 1653</b>					<b>3-HOURLY OBSERVATION NOTES</b>											
01	SCT	NC		10.00	47	43	45	86	13	01	29.98	30.17	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	44	41	43	89	9	04	30.01	30.20	Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.													
07	CLR	NC		10.00	42	38	40	85	10	04	30.08	30.27	NC= No ceiling detected.													
10	CLR	NC		10.00	48	39	44	71	14	04	30.11	30.31	& = Original observation contained additional weather elements.													
13	FEW	NC		10.00	53	39	46	59	5	08	30.03	30.23	See page 3 for additional notes.													
16	OVC	250		10.00	52	40	46	64	3	08	29.98	30.18														
19	OVC	250		10.00	44	40	42	85	7	11	29.94	30.13														
22	OVC	250		10.00	43	40	42	89	0	00	29.89	30.09														
				<b>SUNRISE: 0701</b>	<b>NOV 27</b>					<b>SUNSET: 1653</b>																
01	OVC	090		10.00	43	41	42	93	3	35	29.87	30.06														
04	OVC	065		10.00	42	40	41	92	5	34	29.83	30.03														
07	SCT	NC		10.00	39	35	37	86	15	36	29.90	30.10														
10	SCT	NC		10.00	43	29	37	58	14	35	29.97	30.16														
13	SCT	NC		10.00	46	25	38	44	12	31	29.93	30.12														
16	SCT	NC		10.00	43	24	36	47	12	34	29.94	30.14														
19	FEW	NC		10.00	36	23	31	59	6	02	30.02	30.22														
22	CLR	NC		10.00	34	18	29	52	14	02	30.06	30.26														
				<b>SUNRISE: 0702</b>	<b>NOV 28</b>					<b>SUNSET: 1652</b>																
01	CLR	NC		10.00	32	18	27	56	10	02	30.08	30.27														
04	CLR	NC		10.00	27	19	24	72	7	02	30.08	30.28														
07	CLR	NC		10.00	25	20	23	81	5	04	30.12	30.32														
10	FEW	NC		10.00	35	21	30	57	9	03	30.11	30.31														
13	SCT	NC		10.00	38	17	31	43	5	21	30.02	30.22														
16	FEW	NC		10.00	41	17	33	38	12	27	29.96	30.15														
19	CLR	NC		10.00	31	19	27	61	3	16	29.97	30.16														
22	CLR	NC		10.00	28	20	25	72	8	22	29.94	30.14														
				<b>SUNRISE: 0703</b>	<b>NOV 29</b>					<b>SUNSET: 1652</b>																
01	CLR	NC		10.00	29	19	26	66	5	25	29.93	30.13														
04	CLR	NC		10.00	24	18	22	77	3	23	29.90	30.10														
07	BKN	250		10.00	22	19	21	89	3	18	29.90	30.09														
10	SCT	NC		10.00	36	23	31	59	13	22	29.82	30.02														
13	SCT	NC		10.00	48	25	39	41	22	23	29.65	29.84														
16	SCT	NC		10.00	51	24	40	35	14	21	29.55	29.74														
19	FEW	NC		10.00	48	23	38	37	20	21	29.54	29.73														
22	BKN	250		10.00	48	26	39	42	17	23	29.51	29.70														
				<b>SUNRISE: 0704</b>	<b>NOV 30</b>					<b>SUNSET: 1652</b>																
01	OVC	250		10.00	48	29	40	48	15	22	29.47	29.65														
04	OVC	250		10.00	47	32	41	56	13	22	29.46	29.64														
07	OVC	250		10.00	47	33	41	59	12	23	29.44	29.63														
10	OVC	110		10.00	49	35	43	59	13	22	29.40	29.58														
13	SCT	NC		10.00	52	37	45	57	14	22	29.31	29.49														
16	BKN	110		10.00	57	32	46	39	18	27	29.30	29.48														
19	CLR	NC		10.00	49	30	41	48	21	27	29.42	29.60														
22	FEW	NC		10.00	43	20	34	40	20	30	29.55	29.74														

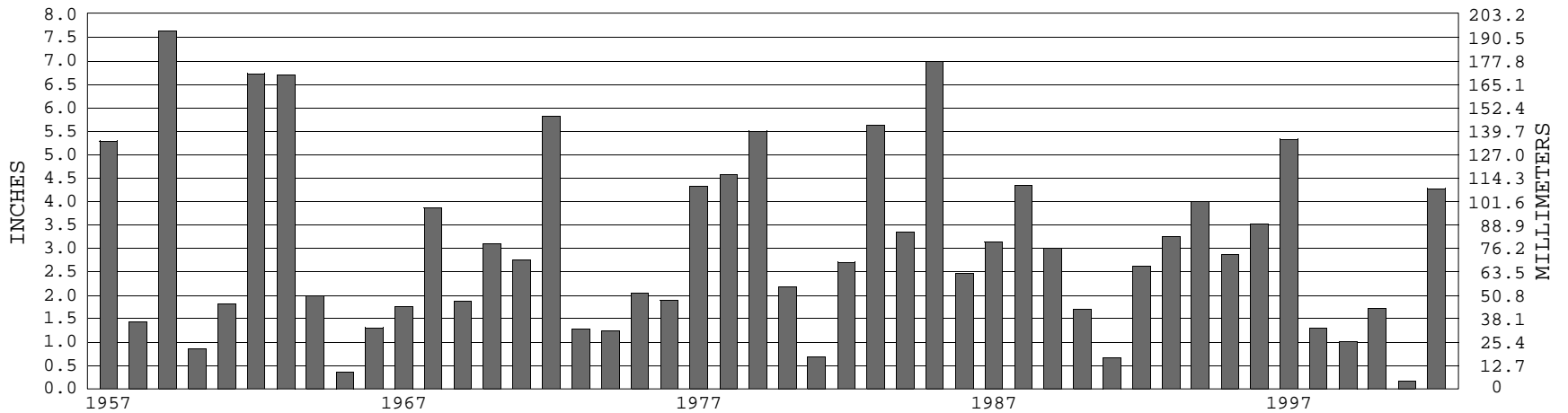
### RICHMOND, VA NOVEMBER TEMPERATURES



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

Long-Term (1957-2002) Mean: 49.5      1961-1990 Normal: 49.0

### RICHMOND, VA NOVEMBER PRECIPITATION



Long-Term (1957-2002) Mean Monthly Total: 3.06

1961-1990 Normal: 3.06



NOVEMBER 2002

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.*

DIRECTOR

NCDC now offers an annual online subscription for the **Edited Local Climatological Data Publication**. When you purchase this subscription service, you will have **immediate online access** to all previous publications back to July 1996 and all publications thereafter until the expiration of the subscription. Your subscription is valid for one year after purchase. **The total cost is \$29 for online delivery (including back issues) compared to \$34 for offline delivery.** To order this and other subscriptions on-line with your credit card, go to: [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov) and choose subscriptions.

We welcome your questions or comments, please contact us at  
Toll Free Number (866) 742–3322 (voice)  
Fax Number :(304) 726–4409  
TDD : 828–271–4010  
or Email : [ncdc.info@noaa.gov](mailto:ncdc.info@noaa.gov)  
Local Climatological Data is available at [www.ncdc.noaa.gov](http://www.ncdc.noaa.gov)

For address correction, please return a photocopy of this page to Subscription Services indicating changes

NCDC Subscription Services Center  
310 State Route 956 Building 300  
Rocket Center, WV 26726

OFFICIAL BUSINESS. PENALTY FOR PRIVATE USE \$300

FIRST CLASS  
POSTAGE AND FEES PAID  
NOAA  
PERMIT G-19