

OCT 1993
 RICHMOND, VA
 NOAA-NATIONAL WEATHER SERVICE
 RIC INTL APT/EXECUTIVE TERMINAL

ISSN 0198-537X

LOCAL CLIMATOLOGICAL DATA

Monthly Summary



INQUIRIES/COMMENTS CALL
 (704) 271-4800

R.E. BYRD INTERNATIONAL AP.

LATITUDE 37° 30' N LONGITUDE 77° 20' W ELEVATION (GROUND) 164 FEET TIME ZONE EASTERN 13740

OCT 1993
RICHMOND, VA

DATE	TEMPERATURE °F						DEGREE DAYS BASE 65°F		WEATHER TYPES 1 FOG 2 HEAVY FOG 3 THUNDERSTORM 4 ICE PELLETS 5 HAIL 6 GLAZE 7 DUSTSTORM 8 SMOKE, HAZE 9 BLOWING SNOW	SNOW ICE PELLETS OR ICE ON GROUND AT 0700 INCHES	PRECIPITATION		AVERAGE STATION PRESSURE IN INCHES ELEV. 177 FEET ABOVE M. S. L.	WIND (M.P.H.)						SUNSHINE		SKY COVER (TENTHS)	
	MAXIMUM	MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	AVERAGE DEW POINT	HEATING (SEASON BEGINS WITH JUL)	COOLING (SEASON BEGINS WITH JAN)	WATER EQUIVALENT (INCHES)			SNOW, ICE PELLETS (INCHES)	RESULTANT DIR.		RESULTANT SPEED	AVERAGE SPEED	PEAK GUST	FASTEST 1-MIN	MINUTES	PERCENT OF TOTAL POSSIBLE	SUNRISE TO SUNSET	MIDNIGHT TO MIDNIGHT		
01	69	38	54	-10	41	11	0		0	0.00	0.0	30.090	17	2.5	5.4	16	S	13	17	635	90	1	1
02	79	46	63	-1	49	2	0		0	0.00	0.0	29.950	19	9.0	9.3	21	S	15	21	688	98	1	4
03	72	50	61	-3	48	4	0		0	T	0.0	29.890	31	3.6	7.6	18	NW	14	36	613	87	3	4
04	80	46	63	0	50	2	0	1		0.00	0.0	29.830	22	8.7	9.2	25	SW	16	23	698	100	0	0
05	70	54	62	-1	48	3	0		0	0.00	0.0	30.040	02	5.7	8.1	22	N	18	02	677	97	0	1
06	70	48	59	-3	47	6	0		0	0.00	0.0	30.270	07	4.6	6.2	13	NE	9	05	613	88	9	9
07	77	47	62	0	56	3	0	1	8	0.00	0.0	30.110	16	1.8	2.4	12	S	9	16	590	85	10	9
08	74	55	65	4	61	0	0	1		0.01	0.0	29.820	02	5.7	6.3	16	N	13	35	149	22	10	8
09	84	54	69	8	59	0	4	1	8	T	0.0	29.640	22	6.3	8.5	21	W	16	26	649	94	0	2
10	68	44	56	-5	48	9	0	1		0.05	0.0	29.860	36	10.3	11.6	31	N	21	01	0	0	10	9
11	57	39	48	-12	43	17	0	0		T	0.0	29.980	02	10.0	10.3	21	N	16	02	53	8	9	8
12	67	46	57	-2	49	8	0	1		0.08	0.0	29.700	30	7.8	9.4	22	W	20	27	74	11	9	7
13	70	42	56	-3	45	9	0	1	8	0.00	0.0	29.930	08	1.4	4.8	10	NE	8	08	567	84	8	7
14	68	47	58	-1	51	7	0	1	8	T	0.0	30.080	14	2.7	4.5	14	SE	12	21	482	71	10	6
15	74	44	59	0	49	6	0	1	8	0.00	0.0	30.120	13	2.5	3.3	14	SE	10	15	475	70	2	3
16	70	47	59	1	54	6	0	2	8	0.00	0.0	29.990	09	4.5	5.0	13	E	12	11	42	6	10	8
17	67	60	64	6	62	1	0	1		0.07	0.0	29.680	04	2.7	5.4	12	E	9	09	0	0	10	9
18	76	54	65	7	54	0	0	1		0.00	0.0	29.820	35	3.6	6.0	20	N	14	32	469	70	3	5
19	71	52	62	5	56	3	0	1	8	0.12	0.0	30.010	14	4.1	5.8	13	NW	12	31	125	19	10	9
20	86	61	74*	17	66	0	9	1	8	0.00	0.0	29.945	20	8.6	9.2	18	SW	13	23	226	34	6	7
21	86*	58	72	15	65	0	7	1	8	0.43	0.0	29.890	22	9.6	12.6	36	W	23	29	400	61	7	7
22	61	43	52	-4	40	13	0	0		0.00	0.0	30.105	34	2.6	6.1	13	N	12	06	111	17	10	9
23	64	39	52	-4	37	13	0	0		0.00	0.0	30.170	01	6.5	8.0	22	N	15	02	657	100	1	1
24	70	34*	52	-4	37	13	0	1		0.00	0.0	30.080	17	3.0	3.6	13	S	9	18	650	99	6	3
25	76	38	57	2	40	8	0	0		0.00	0.0	29.965	07	2.3	4.2	12	NE	9	03	540	83	6	7
26	63	47	55	0	56	10	0	1		0.39	0.0	29.865	01	8.7	9.0	23	N	16	01	0	0	10	10
27	71	57	64	9	55	1	0	1	8	0.01	0.0	29.670	30	5.0	9.6	20	N	15	36	404	62	5	7
28	62	39	51	-4	42	14	0	1	8	0.15	0.0	29.640	27	3.1	6.4	21	NW	13	26	567	88	6	5
29	69	36	53	-1	37	12	0	1	8	0.00	0.0	29.690	20	8.3	8.6	21	S	15	20	534	83	5	6
30	58	49	54	0	50	11	0	1		0.85	0.0	29.470	36	3.3	9.0	24	E	20	10	0	0	10	10
31	50	38	44*	-10	46	21	0	1		0.07	0.0	29.430	30	5.7	9.3	24	W	15	23	0	0	10	9
SUM	SUM	SUM	SUM	SUM	SUM	TOTAL	TOTAL	NUMBER OF DAYS		TOTAL	TOTAL	FOR THE MONTH:						TOTAL	%	SUM	SUM		
2179	1452					213	20			2.23	0.0	29.890	32	0.5	7.3	36	W	23	29	11698	for	197	197
AVG.	AVG.	AVG.	DEP.	AVG.	DEP.	DEP.	DEP.	PRECIPITATION		DEP.						DATE: 21	DATE: 21	POSSIBLE	MONTH	AVG.	AVG.		
70.3	46.8	58.6	0.0	49.6	-2.0	-1.4	-1.4	≥ 0.1 INCH.		11	1.30								20853	56	6.4	6.0	
NUMBER OF DAYS						SEASON TO DATE		SNOW, ICE PELLETS		GREATEST IN 24 HOURS AND DATES						GREATEST DEPTH ON GROUND OF							
						TOTAL	TOTAL	≥ 1.0 INCH								SNOW, ICE PELLETS OR ICE AND DATE							
MAXIMUM TEMP.			MINIMUM TEMP.			239	1687	THUNDERSTORMS		PRECIPITATION		SNOW, ICE PELLETS											
≥ 90°			≤ 32°			0	0	HEAVY FOG		1		0.85		30		0							
0			0			-17	339	CLEAR		9		PARTLY CLOUDY		7		CLOUDY 15							

* EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.
 † TRACE AMOUNT.
 + ALSO ON EARLIER DATE(S).
 HEAVY FOG: VISIBILITY 1/4 MILE OR LESS.
 BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.

DATA IN COLS 6 AND 12-15 ARE BASED ON 21 OR MORE OBSERVATIONS AT HOURLY INTERVALS. RESULTANT WIND IS THE VECTOR SUM OF WIND SPEEDS AND DIRECTIONS DIVIDED BY THE NUMBER OF OBSERVATIONS. COLS 16 & 17: PEAK GUST - HIGHEST INSTANTANEOUS WIND SPEED. ONE OF TWO WIND SPEEDS IS GIVEN UNDER COLS 18 & 19: FASTEST MILE - HIGHEST RECORDED SPEED FOR WHICH A MILE OF WIND PASSES STATION (DIRECTION IN COMPASS POINTS). FASTEST OBSERVED ONE MINUTE WIND - HIGHEST ONE MINUTE SPEED (DIRECTION IN TENS OF DEGREES). ERRORS WILL BE CORRECTED IN SUBSEQUENT PUBLICATIONS.

I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE NORTH CAROLINA

Kenneth D. Haden
 DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

OBSERVATIONS AT 3-HOUR INTERVALS

OCT 1993 RICHMOND, VA 13740

HOUR L.S.T.	VISI-BILITY			TEMPERATURE				WIND		SKY COVER (TENTHS)	VISI-BILITY			TEMPERATURE				WIND		SKY COVER (TENTHS)	VISI-BILITY			TEMPERATURE				WIND																																																							
	CEILING IN HUNDREDS OF FEET	WHOLE MILES	16THS MILE	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)		CEILING IN HUNDREDS OF FEET	WHOLE MILES	16THS MILE	WEATHER	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION		SPEED (KNOTS)	CEILING IN HUNDREDS OF FEET	WHOLE MILES	16THS MILE	WEATHER	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)																																																				
OCT 1st																												OCT 2nd																												OCT 3rd																											
01	0	UNL	12	43	42	40	89	36	4	0	UNL	7		48	47	46	93	17	7	10	120	8		63	57	52	68	19	6																																																						
04	0	UNL	12	40	40	39	96	00	0	0	UNL	7		47	47	46	96	18	5	10	100	8		64	58	54	70	25	7																																																						
07	0	UNL	10	42	41	40	93	33	5	1	UNL	10		49	48	46	90	18	3	10	90	8		62	59	57	84	35	7																																																						
10	4	UNL	15	59	48	36	42	11	7	3	UNL	10		67	55	45	45	21	13	1	UNL	15		65	55	47	52	33	7																																																						
13	0	UNL	15	65	53	41	42	15	8	0	UNL	10		77	61	49	37	20	11	0	UNL	15		71	55	41	34	30	10																																																						
16	0	UNL	15	68	53	39	35	16	5	0	UNL	10		79	63	51	38	20	11	0	UNL	15		71	55	41	34	35	7																																																						
19	0	UNL	12	56	50	43	62	13	3	0	UNL	8		65	58	52	63	17	8	0	UNL	12		58	53	49	72	15	4																																																						
22	0	UNL	12	50	47	44	80	16	5	0	UNL	8		64	57	52	65	19	9	0	UNL	10		52	49	46	80	12	3																																																						
OCT 4th																												OCT 5th																												OCT 6th																											
01	0	UNL	8	51	50	48	90	19	5	0	UNL	10		62	55	49	63	25	5	8	55	10		55	50	46	72	03	6																																																						
04	0	UNL	8	48	47	46	93	18	4	0	UNL	10		57	52	48	72	30	5	7	60	10		52	49	45	77	03	6																																																						
07	0	UNL	6	50	49	48	93	18	5	0	UNL	10		60	54	49	67	29	3	9	UNL	10		49	47	45	86	01	6																																																						
10	0	UNL	7	68	60	53	59	21	11	0	UNL	15		66	58	51	59	04	8	10	44	10		61	52	43	52	05	8																																																						
13	0	UNL	15	77	60	46	33	24	12	0	UNL	15		70	58	49	47	01	8	9	UNL	10		67	56	46	47	05	8																																																						
16	0	UNL	15	80	62	49	34	21	12	0	UNL	12		69	57	47	46	04	8	10	49	10		68	57	47	47	07	6																																																						
19	0	UNL	12	65	58	52	63	22	6	0	UNL	10		60	51	43	54	04	10	10	250	10		59	55	51	75	12	5																																																						
22	0	UNL	10	65	57	51	61	23	7	7	55	10		54	50	46	75	06	4	10	250	10		54	52	51	90	11	4																																																						
OCT 7th																												OCT 8th																												OCT 9th																											
01	10	UNL	8	52	52	51	96	00	0	10	250	7		60	59	59	97	36	5	0	UNL	6		56	55	55	97	20	4																																																						
04	0	UNL	6	51	51	50	96	00	0	10	180	7		61	60	60	97	02	4	1	UNL	6		54	54	54	100	13	6																																																						
07	10	UNL	6	50	49	48	93	00	0	10	140	7		61	60	60	97	02	5	2	UNL	3		57	57	57	100	19	5																																																						
10	10	UNL	7	69	63	59	71	18	5	10	180	7		65	64	63	93	05	7	0	UNL	6		73	66	61	66	24	9																																																						
13	10	UNL	7	76	63	54	47	15	4	10	100	7		72	68	65	79	06	8	0	UNL	7		82	67	67	43	25	6																																																						
16	10	250	7	74	64	58	58	17	3	9	110	7		72	66	63	73	01	8	0	UNL	7		83	67	58	43	23	9																																																						
19	10	200	7	65	63	62	90	00	0	7	110	8		67	64	62	84	01	5	0	UNL	7		70	64	60	71	17	8																																																						
22	10	180	7	63	62	61	93	00	0	0	UNL	8		60	59	59	97	12	3	10	80	7		72	66	62	71	31	5																																																						
OCT 10th																												OCT 11th																												OCT 12th																											
01	10	85	6	68	66	64	87	20	6	4	UNL	10		44	41	36	74	02	8	10	11	2		53	52	51	93	04	9																																																						
04	10	55	5	65	65	65	100	32	5	4	UNL	10		41	39	35	79	36	8	10	4	4		54	53	52	96	32	7																																																						
07	10	19	10	56	54	53	90	01	13	4	UNL	15		41	39	35	79	36	9	10	5	6		51	51	50	96	30	10																																																						
10	10	24	10	53	49	44	72	36	15	10	100	10		48	43	38	69	02	11	10	8	7		53	51	50	90	31	9																																																						
13	10	23	2	47	45	43	86	36	11	10	25	8		56	50	45	67	02	14	10	45	7		60	55	50	70	28	10																																																						
16	10	55	7	48	45	42	80	04	8	10	24	8		56	51	47	72	02	9	7	48	15		64	55	47	54	27	9																																																						
19	10	110	7	48	46	43	83	36	5	10	35	7		55	52	50	83	02	7	1	UNL	15		57	52	48	72	26	5																																																						
22	3	UNL	7	44	43	42	93	36	6	10	17	7		55	52	50	83	04	8	0	UNL	10		52	50	47	83	24	5																																																						
OCT 13th																												OCT 14th																												OCT 15th																											
01	0	UNL	7	46	45	44	93	30	4	5	UNL	6		51	50	49	93	04	3	3	UNL	2		50	50	50	100	33	3																																																						
04	0	UNL	6	44	43	42	93	29	4	9	75	6		50	50	49	96	32	3	1	UNL	2		46	46	45	96	00	0																																																						
07	5	UNL	5	43	42	41	93	35	4	9	250	5		50	50	49	96	12	5	4	UNL	1		45	45	44	96	10	3																																																						
10	10	UNL	6	62	54	46	56	15	4	10	120	6		62	58	54	75	13	5	0	UNL	5		65	59	54	68	16	4																																																						
13	10	UNL	10	66	54	43	43	00	0	10	140	6		66	58	51	59	24	5	0	UNL	7		72	60	51	48	17	4																																																						
16	8	45	10	66	55	45	47	06	7	10	110	6		65	58	52	63	16	4	5	UNL	7		73	59	47	40	16	6																																																						
19	10	UNL	8	58	54	50	75	08	7	1	UNL	6		56	55	54	93	00	0	8	UNL	7		60	55	51	72	11	5																																																						
22	10	75	8	54	52	50	86	08	4	0	UNL	6		53	52	51	93	13	4	10	UNL	6		54	52	51	90	00	0																																																						
OCT 16th																												OCT 17th																												OCT 18th																											
01	0	UNL	6	50	49	48	93	00	0	10	180	6		60	59	59	97	05	4	10	0	0	12		62	62	62	100	24	8																																																					
04	2	UNL	5	48	48	47	96	00	0	10	12	5		60	59	59	97	05	5	0	UNL	6		59	59	59	100	35	4																																																						
07	10	0	0	51	51	50	96	36	4	10	3	1		62	62	62	100	06	3	1	UNL	6		58	57	57	97	01	10																																																						
10	10	200	5	63	58	54	73	10	6	10	7	2		65	64	63	93	06	6	0	UNL	7		66	59	53	63	32	12																																																						
13	10	200	6	69	61	56	63	12	8	10	13	3		66	65	64	93	08	6	3	UNL	10		72	60	50	46	35	8																																																						
16	10	180	6	68	62	58	71	09	7	10	5	2		66	65	64	93	05	7	3	UNL	10		75	59	46	36	30	3																																																						
19	10	150	6	62	60	58	87	09	6	8	17	7		64	63	63	97	32	4	8	250	10		58	55	53	84	16	3																																																						
22	10	180	6	59	58	58	97	10	4	3	UNL	3		61	61	61	100	21	5	10	250	10		57	54	52	84	11	4																																																						

MAXIMUM SHORT DURATION PRECIPITATION

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)	0.11	0.19	0.26	0.29	0.31	0.34	0.36	0.38	0.40	0.46	0.51	0.54
ENDED: DATE	21	21	21	21	21	21	21	21	30	30	30	30
ENDED: TIME	1655	1700	1705	1707	1717	1734	1748	1806	1158	1159	1209	1231

THE PRECIPITATION AMOUNTS FOR THE INDICATED TIME INTERVALS MAY OCCUR AT ANY TIME DURING THE MONTH. THE TIME INDICATED IS THE ENDING TIME OF THE INTERVAL. DATE AND TIME ARE NOT ENTERED FOR TRACE AMOUNTS.

OBSERVATIONS AT 3-HOUR INTERVALS

OCT 1993
RICHMOND, VA

13740

HOUR	L.S.T.	SKY COVER (TENTHS)	VISI-BILITY		TEMPERATURE				WIND		SKY COVER (TENTHS)	CEILING IN HUNDREDS OF FEET	VISI-BILITY		TEMPERATURE				WIND		SKY COVER (TENTHS)	CEILING IN HUNDREDS OF FEET	VISI-BILITY		TEMPERATURE				WIND			
			WHOLE MILES	16THS MILE	AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)			AIR OF	WET BULB OF	DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)	AIR OF	WET BULB OF			DEW POINT OF	REL HUMIDITY %	DIRECTION	SPEED (KNOTS)						
OCT 19th																																
01	10	150	10		57	56	55	93	13	4	10	32	6	F	62	61	61	97	20	5	0	UNL	7			70	68	67	90	19	11	
04	6	150	10		56	55	55	97	17	3	10	25	6	F	64	63	63	97	19	8	10	10	7			69	68	68	97	20	0	
07	10	65	6	F	54	54	53	96	06	4	10	5	5	F	66	65	65	97	19	6	5	UNL	6	F		71	70	69	93	18	9	
10	10	55	5	H	66	60	55	68	16	6	10	9	2	F	72	69	68	87	21	10	5	UNL	6	H		79	72	68	69	20	16	
13	10	36	7		69	59	51	53	15	7	3	UNL	5	H	84	74	69	61	21	10	10	5	UNL	6	H		85	72	65	51	21	12
16	10	27	7		70	61	54	57	11	7	4	UNL	6	H	84	73	67	57	21	10	7	90	6	H		82	71	65	57	20	11	
19	10	27	7		53	62	61	93	10	6	8	170	6	F	74	70	68	82	16	8	10	110	6	RF		67	65	64	90	22	5	
22	10	140	6	F	60	59	59	97	15	6	7	300	6	F	72	69	67	84	17	8	10	130	6	F		67	66	65	93	29	6	
OCT 20th																																
OCT 21st																																
OCT 22nd																																
OCT 23rd																																
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WEATHER CODES

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| <ul style="list-style-type: none"> * TORNADO T THUNDERSTORM O SQUALL R RAIN RW RAIN SHOWERS ZR FREEZING RAIN L DRIZZLE ZL FREEZING DRIZZLE S SNOW | <ul style="list-style-type: none"> SW SNOW SHOWERS SG SNOW GRAINS SP SNOW PELLETS IC ICE CRYSTALS IP ICE PELLETS IPW ICE PELLET SHOWERS A HAIL F FOG IF ICE FOG | <ul style="list-style-type: none"> GF GROUND FOG BD BLOWING DUST BN BLOWING SAND BS BLOWING SNOW BY BLOWING SPRAY K SMOKE H HAZE D DUST |
|--|--|---|

CEILING: UNL INDICATES UNLIMITED
 WIND DIRECTION: DIRECTIONS ARE THOSE FROM WHICH THE WIND BLOWS, INDICATED IN TENS OF DEGREES FROM TRUE NORTH: I.E., 09 FOR EAST, 18 FOR SOUTH
 27 FOR WEST. AN ENTRY OF 00 INDICATES CALM.
 SPEED: THE OBSERVED AVERAGE ONE-MINUTE VALUE, EXPRESSED IN KNOTS
 (MPH=KNOTS X 1.151).

SUMMARY BY HOURS

HOUR	L.S.T.	SKY COVER (TENTHS)	AVERAGES					RESULTANT WIND	
			STATION PRESSURE (INCHES)	TEMPERATURE			WIND SPEED (MPH)	DIRECTION	SPEED (MPH)
				AIR TEMP OF	WET BULB OF	DEW POINT OF			
01	6	29.900	53	51	50	88	6.4	31	1.1
04	9	29.895	52	50	49	91	5.4	32	1.5
07	6	29.920	51	50	49	91	6.2	36	2.7
10	6	29.930	62	55	50	67	9.8	02	1.2
13	6	29.880	67	57	49	55	8.8	31	0.6
16	6	29.850	68	58	49	54	8.3	19	0.7
19	6	29.870	59	55	51	77	6.5	14	1.4
22	6	29.890	56	53	51	84	6.0	18	1.4

