

II. *Part of a Letter from the Reverend Mr Derham to Dr Sloane, giving an account of his observations of the weather for the Year 99.*

Upminster, Jan. 23. 1700.

S I R,

I Here send you the Tables of my last years observations; together with which I think it convenient to send some few remarks relating thereunto.

I promis'd last year the addition of two Columns to each Months observations, which are here inserted. The one sheweth the *Flying of the Clouds*, concerning which I desire it may be observed, that I have never set down the Point towards which the Clouds flew; but when they varied from the Winds. In all those vacancies therefore in the Column of Clouds, it is to be supposed, that either there were no Clouds at all appeared, or their motion was not discernible, or that they flew in the same track with the Winds.

Concerning the *Thermometer*, it is necessary that I should tell you, that the graduation of it is by Inch-measure, *viz.* Inches and tenths of Inches. The point of *Freezing* is at about 8'0, or at most 8'2 degrees, and consequently 'tis *Cold* at about 9'0, and *Temperate* at about 10'0 degrees. I need not say, that the Degrees above 100 are *Warm* or *Hot*; and those below 80 are *Harder Frosts*. The Degrees of my Thermometer reach to 24'0, altho I could never make the Spirits descend with Artificial Freezing, much lower than 50, neither when expos'd to the heat of a pretty strong Sun, did they ascend above 225.

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The *Scituation* of my *Thermometer* is against a Northern Wall in the open Air : whereby it is defended against the Heat of the Sun, and so sheweth only the true present Temperature of the Air. 'Tis also guarded against the Beams of the Morning and Evening Sun, when it riseth and setteth on the Northern side of the E. and W. points of the Horizon.

I have thought it unnecessary for the most part, in the Column of *Weather*, to take notice of the Temperature of the Air, whether Hot, Cold, or Moderate, because the Column of the Thermometer sheweth this. Neither also have I said what *Rain* fell, whether much or little, because the Column of Rain sufficiently demonstrateth it. So that it is easy to observe, almost at one view, what Seasons we have had last year, whether Hot, Cold, Temperate, Wet or Dry. I need look no farther back for an instance, than the last Winter-Months, which now, or any time hereafter, we may discover to have been very mild, by the Spirits having been for the most part above 82 Degrees. Yea, many of the days of *November* and *December*, we may find were not much colder than many of the mornings and evenings of the warmer Months. So also for *Wet* and *Dry*, we may find what reason there is for the present great scarcity of Water, which is complained of in many places. For besides what happened in former Months, the two last Months of the Year were much dryer than usual, so that had it not been for the rains of *October*, perhaps a drought had been a General calamity.

I have had frequent confirmations of what I observ'd last year, (*Phil. Trans.* N. 249.) concerning the *Mercury* rising in Foggy weather. The like it doth also in misting weather; as may be seen in divers places of the Table.

I observed last year, that the highest pitch I ever found the Mercury at, was 30,40 inches. But Dec. 22. last, the Weather being misting, and Wind Northerly, it ascended to 30,50 inches, the highest I ever saw it at *Upminster*.

Whether the observations my Register is filled with, will be of any use, to judge of the Fertility or Scarcity, the Healthiness or Diseases, or any other occurrences of the last, or of former or future years, I shall leave to the much better judgments of the learned Members of your Honourable Society, who have been pleased to accept of my past labours of this kind, and by their desires to command my continuance of the same for the future. Whether what I have done may answer your expectations, I am not able to judge. I can only assure you, that it is done with all possible accuracy and fidelity.

I beg pardon for the chasms which you will meet with in some of the months, occasioned by my absence from my observations about necessary affairs. I am

S I R,

*Your most Humble Servant,*

W. Derham.

# A REGISTER of the Weather, Bearing of the Winds, Flying and the Quantity of Rain fallen at Up

		January. 8, 12, 9.					February. 7, 12, 9.					M			
Day	Weather	Winds	Clouds	Barom.	Ther.	Rain.	Weather	Winds.	Clouds.	Barom.	Ther.	Rain.	Weather	Winds.	Clouds.
1	Frost Fair Snow ---Rain Warmer and Rain	S E b. S o S S E 1		29. 77 73 43			Fair Pleasant Day	S W 1 W by S 2 W by S o		29. 43 53 77	98 108 83		Fair Sleet Snow Fair		
2	Same	S 3 S b. E 3		21 28. 76	o. 63		Small Fro. Hazy Rain	W S W o S by W o S 1	W N W	88 91 85	79 95 100	o. 05			
3	Same	S 3 S b. W 3	S by W	57 47	o. 37		Fair	S S E 3 S by W 3 S W b. W 1	S by E S W	59 51 64	100 105 92	o. 05	Hard Fro. Fair Cloudy	N W b. N o W 1 W by S 1	N
4	Cloudy Fairer	S S W 3 S W 4 S W 4	SW by W	44 56 72	110 109 108		Small Fro. Fair Cloudy	W S W 1 W 2 S 1	W N W N by W S W	74 80 73	82 101 89		Cloudy Rain Cloudy	N by W 2 N 2 N 2	N
5	Frost and Fair ---Rain Warm Snow	S W 3 S 1 S o S 5		29. 22 29 67 61	85 94 104 105	o. 75 3. 48	Cloudy Fair Rain	SW b. W 3 W S W 3 W by S 3	W S W W W	48 51 48	104 113 91	o. 37	Frost Cloudy Fairer	N W o N by E 1 N by W o	N
6	Small Fro. Fair Rain	S W 2 S W b. W 3 S by W o	S by W S W	29. 00 08 19	85 86 85	o. 03	Violent Storms	W 8 W N W 10	W by N N W	28. 99 29. 22 78	103 101 92	1. 52	Hard Fro. Fair Cloudy	N N W o E 1 S by E o	N
7	Frost and Fair	S W o W by S 1	W S W S W	34 44 70	85 88 88		Cloudy Fair Cloudy	N W o S by W 1	NW by N N W	98 30. 00 29. 88	88 101 99		Fair Cloudy	E S E o E by N 2	N
8	hard Fro. and Fair			72 73			Misting Fair	W SW 3	W by N	79 30. 07	106 87	o. 20	Frost and Cloudy	N E o E N E 2	
9	Same	E by S 1 SE by E 2	E S E	82 82 60	85 89		Hoar Fro. somewhat Fair	S W 2 W 3	N N W N	102 03 01	88 109 95		Cloudy	N by E o N by E 1	E
10	---Rain Cloudy	S W 2 SW b. W 2	W S W W	59 59 71	101 99 102	o. 40	Cloudy Fairer	W by S 1 S W 2	N W W by N	29. 98 99 98	87 107 96		Small Rain	E by N o S by W 2	S
11	Cloudy	SW by S o S W 2		69 66 59	103 109 101		Fair Hazy Clou. Rain	S W 2 S W 3 5	N by W N W	94 84 46	84 102 101		Cloudy	S 1 S by W 1	
12	Misting ---Rain Fair	SW b. W 3 W by S 3	W W by N	48 42 48	93 107 93	o. 16		West 4	W	34 30. 07	107 87	o. 02	Rain Fairer	S by W 1 S by E 1	
13	Cloudy Fairer	N by W 4	N by W	53 97	94 96	o. 14							Cloudy		
14	Cloudy ---Rain	N 1 N by W 1		30. 12 14 17	90 94 82	o. 16							Cloudy		
15	Cloudy Day	W by S o	N by W	10 15	81 93		---Rain Cloudy						Cloudy Fair Cloudy		
16	Foggy	NW b. W o N W o		22 24 27	94 100 94		Cloudy	E by N 2	N E	37 52	100 97	1. 50	Cloudy Fair Cloudy	S W 1 S W 2	
17	Fog	W o		26			---Rain Fair and Pleasant	W NW 1 N W 1		76 82 83	93 105 94		Fair Hail	S 2	S
18	Fog						---Rain Fair	W by S 3 W by N 4		84 71 77	91 87 104	o. 09 o. 13	Small Fro. Fair and Pleasant	S W o W 2	
19	hard Fro. Fair Foggy	S o S by E 1		34 27 24	77 70 76		---Rain Cloudy Fair	W by S 3 W by N 4		94 94 29. 98	90 90 97		Cloudy	SW by S 3 S W 4	
20	hard Fro. Fair	S by E o E by N 1	E N E	18 22	82 82		Frost and Fair	W S W 1		30. 00 29. 98	82 97		---Rain Cloudy Fair Cloudy	SW b. W 3 W by S 4	v
	hard Fro. Fair	S by E o E by N 1	E N E	18 22	82 82		Cloudy	W S W 1	W N W	94 94	92 92		Fair	S W 3	v

lying of the Clouds, Height of the Mercury in the Barometer, and of the  
 Upminster, in Essex, for the First Six Months of the Year 1699.

March.					April.					May.						
		6, 12, 9.					6, 12, 9.					6, 12, 9.				
Winds.	Clouds.	Barom.	Ther.	Rain.	Weather.	Winds.	Clouds.	Barom.	Ther.	Rain.	Weather.	Winds.	Clouds.	Barom.	Ther.	Rain.
					Rain and Hail	W by N 4	N W	29. 37 93			Fair	W by S 1 N W 1	N W	29. 84 112		
by E 2		29. 26	86	o. 12				39 102						84 112		
by W 3			82		Same	N N W 3 N 2		50 92			Fair Dry					
		64	80	o. 04		N by E 2	N E	53 102			Rain	S by W 3		65 113		
Wb. No 1		72	68		Cloudy	N 2 NE by N 3	NE by N	63 88			Cloudy	SW W 2 W S W 3		47 120	o.	
by S 1	N W	77	96			N by E 3	NE by N	67 108			Showers	W 3		38 133		
by W 2	N N E	82	93		Fairer Day	N by E 3 NE 4	NE	79 93			Fair	SW 1		35 106	o.	
2		91	98			N by E 2		85 90			Rain			34 105		
W o	N	30. 02	90	o. 02	Frost and Fair	N by E 2		90 107			Fair			11 99	o.	
by E 1	N by W	11	79		Cloudy	N by E 2		83 82			Thunder Rain	W by S 2 SW 1		17 90		
by W o		15	94			N E 2		75 109			Hoar Fro. Fair Shower	S S W 1 SW 3		31 118		
N W o		19	77		Cloudy	E by N o	N	69 95			Fair	S by W o S by E 2 S		40 98	o.	
1	N by E	11	65		Cloudy	E S E 1	S	55 92			Fair			51 92	o.	
by E o		29. 95	87		Cloudy Cold Fair	SE by E 1 E 2	SE	46 112			Same			58 121		
E 1	S by E	82	82		Cloudy with some Drops	N 2 N by W 1		43 95			Fair and Warm	E 1		79 98		
E by S 2	S E	83 107	89		Cloudy	S o N W		37 85			Same	NE 1 N by E 1		81 137		
		88	89			S 1 SW		28 98			Same			87 108		
S E o	NE by E	97	82		Cloudy	S o N W		17 98			Same	S 1 S 2		90 102		
by N 2		30. 05	11	85	Rain	S 1 SW		12 103			Same			93 143		
E o		12	80		Fair	S by W o S 1	S W	13 97			Same					
NE 2		13 98	14	87	Cloudy	S 1		15 115			Same			93 115		
by E o	E	10	85		Fair	S by W o S 1	S W	16 97	o. 52		Same					
by E 1		11 103	08	91	Cloudy			23 93			Same			90 92		
		08	91		Rain	N 1 N 3	N N E	31 124			Same			88 147		
by N o	S	29. 97	102		Cloudy	NE 3 NE 4		43 104			Same			92 118		
by W 2		93 92	0. 41		Rain			46 99			Same			30. 00 117		
1		84 93	0. 18		Cloudy			48 101	o. 07		Same			10 150		
by W 1		84 106	78	97	Cloudy			52 103	o. 35		Fair and Dry			21 108		
		78	97		Cloudy Fair			59 103			Same			17 105		
by W 1		63 93	0. 01		Cloudy			70 113			Same			14 132		
by E 1		58 102	69	88	Cloudy			83 99			Same			10 108		
		69 88	1. 68		Cloudy Fair			90			Same			10 110		
W o		80	81		Cloudy			86 97			Same			08 137		
		84	108		Cloudy Fair			82 104			Same			06 109		
W by S 2	W by S	87	107		Cloudy Fair			83 121			Same			05 110		
		30. 02	116		Rain			76 108	o. 12		Same			01 112		
W 1	W S W	04	112		Cloudy Fairer			64 105	o. 05		Same			29. 99 110		
W 2		02	127		Cloudy			61 101	o. 97		Same			92 100		
2	S by W	29. 99	110		Cloudy			61 101			Same					
		84	108		Fair			58 101			Same					
W o		30. 12	92	o. 05	Fair			50 129			Same					
W 2		19	78		Hoar Fro. Fair			36 103			Same					
		22 112	09	94	Cloudy			21 103			Same					
W by S 3		29. 88	98		Fairer			25 99	o. 21		Same					
W 4		77 115	60	103	Cloudy			34 100			Same					
Wb. W 3		47	101	o. 05	Cloudy			28 103	o. 02		Same					
W by S 4	W S W	54 118	48	100	Hoar Fro. Fair			42 125			Same					
		38	09		Cloudy			65 110			Same					
W 3	W by S	38	09		Cloudy			72 89			Same					

# of the Spirits in the Thermometer,

599.

6, 12, 9.		June				6, 12, 9.	
Ther	Rain	Weather.	Winds.	Clouds.	Barom.	Ther	Rain.
84	112 138	Very Dry Hot Day	SW 2	W by S	30. 08	132	
					00	138	
		Fair	SW by S	SW by S	29. 91	132	
65	113	Rain			85	134	o. CI
47	120 o. 34		W 2		90	123	
38	133						
35	106 o. 19						
34	105						
11	99 o. 88						
17	90						
31	118						
40	98 o. 29						o. OI
51	92 o. 08	Fair and Dry	W by S 2		72	120	
58	121		W by S 3	W by N	78	121	
69	107 o. 01		W 2		82	142	
79	98						
81	137						
87	108						
90	102						
93	143						
		Great Drought					
93	115	Cloudy		NW			
90	92		W by N 2	W by N	67	146	o. 53
88	147	Fair	W 0		73	125	
92	118	Fair	W by S 1		79	126	
00	117	Hot					
10	150	Cloudy	E 0		87	128	
21	108	Hot and Very Dry	E 1	W by S	86	138	
17	105		E by S 0		81	136	
14	132	Fair	E 1		76	131	
10	108	Rain	E by S 1	S E by S	71	158	
10	110		S 1	S by E	70	138	o. 04
08	137		SSW 3		80	126	
06	109		S by W 4	SW by S	92	154	
05	110						
01	112						
99	110						
92	100						
88	108						
87	131						
83	110						
76	113						
72	137						
71	113						
69	115						
77	124						
80	113						
83	146						
86	115						
86	110	Some Cloudy	WNW 1		88	148	3. 61
86	143	Some Fair	WNW 0	NW by N	92	128	
83	110		W 0	NNW	95	130	
80	112						









# A REGISTER of the Weather, Bearing of the Winds, Flyin and the Quantity of Rain fallen at Uj

Day	July. 6, 12, 9.					August. 6, 12, 9.					Weather.	Winds.	
	Weather.	Winds.	Clouds.	Barom.	Ther. Rain	Weather.	Winds.	Clouds.	Barom.	Ther. Rain.			
1	Mifling Hot and Fair	NE by E 1 E S E 2	N	30. 00 00 29. 97	134 150 122	Fair Rain Cloudy	S by W 4 SW by S 4 S W 8	S S W	29. 32 33 36	128 145 130	0. 07	Mist Fair	S W 0 SW by S S 0
2	Fair and Hot	E S E 1 N E 2		96 92 87	125 150 124	Fair Cloudy	W by S 1 W SW 1	W by S	62 70 63	118 142 131		Cloudy	S E 0
3	Same	E 1 E 2		83 82 78	131 157 129	Fair	N N W 1	W S W	56	123		Same	S S E 0 N W 2
4	Fair Cloudy Fair	E by N 1 NE by N 1		74 80	120 135	Fair Fair Rain	N N W 0 E by S 2	W by S W by N	75 71 50	105 147 123		Fair	NE by N N 2
5	Fair Cloudy	N 2 N 2	N N E	85 87 90	123 150 125	Rain Fairer	E by S 0 S W 1	S W by S W	37 31 63	125 139 127	4. 38 0. 46	Mist Fairer	N 0 E 1
6	Cloudy	N by E 1 N N E 2		90 90 86	120 143 115	Showry	S 0 S 2		67 59 50	125 139 139	0. 08	Mist Fair	E 0 E S E 1
7	Fair	NE by N E 1	E by N	84 81 78	120 147 125	Fairer Rain	S W 4		39	126		Mist Fair Cloudy	E 0 N E 2
8	Fair and Hot	E by S 1 W N W 1 N W b. N 0	W by N	79 82 90	116 165 143	Fair Rain	S W 4 S W 3		30 33 55	118 141 117	0. 75 0. 66	Mifling. Fair Cloudy	N by E E N E.
9	Same	N by W 1 N W b. W 1	N W	30. 01 03 04	132 153 131	Fairer	S W 2 S W b. W 3	W S W	63 66 69	116 145 125		Fair	N 1
10	Same	W		01 29. 88	119 147	Fair Cloudy	SW by S 3 S W 3		70 72 72	119 150 131		Fair	E 0 E 2
11	Hot and Dry	W by S 2 W by N 2	N W	89 89 92	140 162 143	Fair Cloudy Rain	S 1 S 3	S S W	65 58 43	116 152 137		Mist Fair	E 0 E 1
12	Sultry Hot Cloudy	E by N 0 E N E 1		97 97 97	140 178 143	Fair	N W 1 W by N 3	W by S	49 57 65	117 140 120	0. 44	Same	E 0 E 1
13	Very Hot and Dry	E by S 0 E S E 1	S by E	96 97 90	133 173 142	Rain	S S W 3	N W	67	120		Misty fomewht. Cloudy	E 0 E by N
14	Sultry Rain and Thunder	E 1 E by S 2	E by N	87 88 91	136 164 139	Cloudy Fair	S W 2 W by S 2	N W	61 69 73	131 153 134	0. 17	Misty less Cloudy	E 0
15	Cloudy Fair and Dry	NE by N 2 N E 3		93 90 87	136 164 136	Fair Rain	W S W 2 W S W 3	W by S	73 72 75	139 158 122	0. 44	Same Very Dry	S W 1
16	Fair Hot and Dry	N E 2 E 2	N E	87 88 89	140 172 134	Fair	N W 1 N W b. N 2		87 98 30. 00	110 132 111		Rain Cloudy	SW by S S W
17	Same	E by N 0 E by N 2		91 93 99	138 167 131	Fair Cloudy	N N W 1		29. 98 30. 00	108 116		Rain	E 0 S W 1
18	Cloudy Cool Day	N by E 3 N 2		30. 03 06 06	130 142 127	Cloudy	N by W 1 N 2	N N E	01 03 02	110 138 115		Fair	W by W N V
19	Same	N 2 N 1		29. 01 98 92	126 138 123	Cloudy	N 2 N by E 2	N N E	29. 97 92 87	116 142 124		Rain Cloudy	S S W
20	Rain Cloudy and Cool	N N W 2 N W b. N 2		86 86 86	115 139 126	Cloudy Fairer Cloudy	N N E 1 NE by N 2		82 80 80	119 140 127		Rain Cloudy	S by SW by



# End of the Spirits in the Thermometer, 1699.

8, 12, 9.			December.			8, 12, 9.		
Barom.	Ther	Rain.	Weather	Winds	Clouds.	Barom.	Ther	Rain.
9.	29	95	Cloudy	N N W 0		29.	71	73
	42	103	Hard Fro.	N W 0			71	76
	67	99	Fairer				58	60
	80	106 o.	Frost	E by S 3			30	78
	85	116	Cloudy	E 4			12	82
	84	109	Snow			28.	91	83
	53	105	Rain	E 3			61	91 o. 56
	52	119		E by S 3			52	94
	60	102 o.	Cloudy	E S E 3	S S E		44	100
	85	96	Fair				60	98 o. 18
	92	112	---Rain---	S by E 0	S by W	29.	74	99 o. 13
	96	111	Fair	S 2	S S W		61	99 o. 13
o.	01	120	---Rain---	S 2			14	110
	03	112	Fair	S by E 3	S by W		28	103
	02	100	Rain and				26	107 o. 74
	02	115	Warm				32	115
9.	97	97	Cloudy	S 1			39	108
o.	02	110	and				50	106 o. 30
	22	94	Warm				48	112
	27	84	Cloudy	S S E 1	S by E		48	105
	27	98	Miffling	S S E 3			37	109
	30	101	Warm				32	116
	29	100	Rain	S E 3			36	114
	28	107		S S E 3			19	113
	22	87	Fair	S by E 1			19	117
	16	80	Fair	S by E 2			29	112 o. 38
	18	103					41	103
	27	92	Fair	S W 0			46	112
	31	87	Cloudy				57	98
	30	101	---Rain---	S by E 2	S by W		88	92 o. 06
	33	96	Cloudy and	S 1	S W		95	108
	30	94	some Rain				84	109 o. 36
	30	104	Cloudy	S W 3			78	115
	23	103	Fair	SWb.W 3			73	108
	09	103	Rain	S W 1	W by S		54	110 o. 61
	03	110		W by S 1			57	112
9.	85	109	Fair				63	104
	76	103 o.	Rain				51	102 o. 21
	70	110	Fair	W by N 2	N N W		43	108
	36	114	Cloudy	N N W 1			48	98
	53	109	Miffling	N N W 1			64	100
	63	115	Fair	N 1			69	103
	84	94	Frost and	N 0			91	99
	87	89	Fair	S W 1			30.	07 95
	88	105	Rain				14	101
	80	113	Frost	N W 1			27	87
	86	103	Fair				25	73
	93	105	Frost	N W 1			20	88
	91	85	Hazy				33	90 o. 20
	81	92	Fair				44	82
	87	107	Cloudy	W 1	N W		35	76
	94	94	with	N W 1			21	81
	94	97	Thaw				20	93
	91	92	Cloudy	N W 0	N		23	91
	85	88		N W 1			26	86
	85	106					27	102

	Rain			92	123				87	124		Cloudy	
20	Cloudy and Cool	NNW 2		86	115				82	119		Rain	S by 1
		NWb.N2		86	139				80	140			SW by 1
				86	126	0.	06		76	127		Cloudy	
21	Cloudy	NNW 1		87	126				70	117		Fair	WSV
	Fair	NNW 1	NNE	87	155							Cloudy	S by 1
	Fair	S 1		83	134							Rain	S by 1
22	Fair	W by S 1		81	122				56	129		Fairer	S W
	Fair	NW 1		80	159				50	126		Rain	SWb.
	Cloudy	SE 0		78	135				59	122		Stormy	
23	Fair	SE 1		78	131				63	118		Fair	S W
	Some Drops	S 2		74	172				64				SW b
	Fair	SW 1		71	128				56	128		Cloudy	
24	Rain	SW 2	W	67	160				47	129	0.	24	W by 1
	Fair			58	129	0.	01		43	148		Fairer	W by 1
									37	127	0.	21	Rain
25	Rain	SSE 1	S	37	129				41	119			W by 1
		S 1		21					53	149		Fair	
				17	129	1.	89		64	124			
26	Fairer	S 1	SW	21	118				71	116		Milling	S W
	Rain		SSW	24	156				68	137			WN
	Fair	S 2		25	129	0.	23		63	136	0.	58	Cloudy
27	Same	S by W 2	SW by S	11	128				67	120			ESI
		S 4	SSW		153				65	143		Fair	E by 1
				18	128	0.	21		45	128			
28	Fair	S 1		24	125				48	118		Fair	N by 1
	Rain	SW 4	SSW	27	147				59	140			N by 1
				28	129	0.	34		80	117		Small	
29	Fair	S by W 3		30	129				86	112		--Rain	E 0
	Rain	SW by S 4	SW	29	148							Fair	E by 1
	Thunder			35	124	2.	21		89	129	0.	12	EN 1
30	Fairer	SW by S 3	SW	38	122				89	121			E by 1
		SW 4		42	149				89	150		Cloudy	E 3
				46	128				78	121			E by 1
31	Rain	SSE 1	S by W	36	126	1.	04		60	115	0.	01	
	Fair	S 4		34	144								
				36	127	6.	63		73	129	8.	57	
	Cloudy	NNE 1											
	Fairer	NE by N 2											
	Cloudy												
	Fairer	NE 1	E by N										
	Mist	NNE 0											
	Fair	W by N 1											
	Misty	S by W 0	S										
	Cloudy	S 2											
	--Rain												
	Cloudy	S 1	S by W										
	Rain	S by W 3											
	Cloudy	SW 1	W										
	Fair	SW 3											
	Fair	SW 1	W by S										
	Rain	S by E 2											
	Fair	SW by S 2											
	Cloudy	SW by S 3											
	Fair	S 4	SSW										
	Fair	SW 5	SW by W										
	Fair	W by S 5	WNW										
	Fair	WSW 1	W										
	Rain	SW 0	W										
	Rain	SW 1											
	Fair	SSW 2	SW										
	Fair	SSW 2	S										
	Fair	E 1											
	Rain	W 2											

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91	71		Thaw			20	93
	92					23	91
85	88		Cloudy	N W 0	N	26	86
85	106			N W 1		27	102
86	109		Fair	W NW 0		31	94
84	112	0. 05	Misting	N by W 0		36	90
82	122			N by E 1		40	99
78	112		Fairer			47	94 0. 03
75	103	0. 45	Misting	N 0	NE	50	89
83				N 1		49	92
89	85		Cloudy			46	85 0. 07
89	80		Frost	N by W 0		40	74
90	91		Fog	N 0		38	88
92	75		Cloudy	S by E		35	86
86	71			S W 0		21	86
85	90		Cloudy	SW by S 2		19	94
83	95			S S W 1		15	91
76	89		Fairer	S S W 1		14	98
				SW b. W 1		12	102
			Rain	S by W 1		29.	98 102
			Cloudy	W 0	NW b. W	96	107 0. 08
				W 1	N W	30.	06 105
			Fair			10	94
			Fair	W by S 2	NN W	29.	95 86
				N W 2		94	98
				W by N 0	N by W	94	91
			Fog	W by N 0		90	94
				W by S 0	NW b. W	86	108
			Misting			80	106 0. 27
			Rain				
			Fair	W by N 2		72	96 0. 58
				N W 4		83	100
			Frost	S W 2		30.	03 82
			Cloudy	S W 3	W by S	29.	01 89
60	60	0. 59	Rain			96	104
						94	105 0. 24
			Fairer	S W 3		93	110 0. 02
				S W 3		92	112
			Cloudy			95	108 5. 77
			Tot. 1. 93				

*Philosoph. Transact. Numb. 262 Tab. 2.*

**A REGISTER of the Weather, Bearing of the Winds, Flying of the Clouds, Height of the Mercury in the Barometer, and of the Spirits in the Thermometer, and the Quantity of Rain fallen at Upminster, in Essex, for the First Six Months of the Year 1699.**

Day	January. 8, 12, 9.					February. 7, 12, 9.					March. 6, 12, 9.					April. 6, 12, 9.					May. 6, 12, 9.					June 6, 12, 9.																	
	Weather	Winds	Clouds	Barom.	Ther. Rain.	Weather	Winds	Clouds	Barom.	Ther. Rain.	Weather	Winds	Clouds	Barom.	Ther. Rain.	Weather	Winds	Clouds	Barom.	Ther. Rain.	Weather	Winds	Clouds	Barom.	Ther. Rain.	Weather	Winds	Clouds	Barom.	Ther. Rain.													
1	Frost Fair Snow	S E b. S 1		29. 77 73 43		Fair Pleasant Day	S W 1 W by S 2 W by S 0	S W	29. 43 53 77	98 108 83	Fair	N by E 2		29. 26 86	o. 12	Rain and Hail	W by N 1 N 4	N W	29. 37 39 52	93 102 98	Fair	W by S 1 N W 1	N W	29. 84 112 138		Very Dry Hot Day	SW 2	W by S	30. 08 132														
2	Warmer and Rain	S 3	S b. E 3	28. 76 21	o. 63	Small Fro. Hazy Rain	W S W 0 S by W 0 S 1	W N W	28. 88 91 85	75 95 0. 05	Sleet Snow Fair	N by E 2 N by W 3		29. 26 40 64	86 82 0. 04	Same	NNW 3 N 2 N by E 2	NE	50 53 61	92 102 95	Fair Dry Rain	S by W 3		65 113		Fair	SW by S 0	S W by S	29. 91 132														
3	Same	S 3	S by W	57	o. 37	Rain	S S E 3 S by W 3 S W 1	S by E	59 105 64	106 105 1. 05	Hard Fro. Fair Cloudy	N W b. N W 1 W by S 1	N W	72 77 78	68 96 06	Cloudy	N 2 N E b. N 3 N by E 3	NE by N	63 67 79	88 108 93	Cloudy	SW W 2 WSW 3 W 3		47 38 35	120 133 106	o. 34																	
4	Cloudy Fairer	S S W 3 S W 4 S W 4	S by W	44 56 72	110 109 108	Small Fro. Fair Cloudy	W S W 1 W 2 S 1	W N W N by W S W	74 80 73	84 101 89	Cloudy	N by W 2 N 2	NN E	82 91 30.	94 98 02	Fairer Day	N by E 3 NE 4 N by E 2	NE	85 90 91	90 107 86	Rain	S W 1		34 105																			
5	Frost and Fair	S W 3 S 1		29. 22 29	85 94	Cloudy Rain	SW W 3 W S W 3 W by S 3	W S W W W	48 51 48	104 113 91	Frost and Fair	N W 0 N by E 1 N by W 0	N	11 15 19	79 94 77	Frost and Fair	N by E 2 NE 2		83 75	82 109	Fair	W by S 2 S W 1		17 31 40	98 118 98	o. 29																	
6	Rain Warm Snow	S 0		28. 67 61	104 105	Small Fro. Fair Rain	W by N 1		76 52	85 93	Hard Fro. Fair Cloudy	N N W 0 E 1 S by E 0	N by E	11 07 29.	65 96 87	Cloudy	E by N 0 E S E 1	N	55 46	92 112	Cloudy	S S W 1 S W 3		51 58 69	92 121 107	o. 08	Fair and Dry	W by S 2		72 120													
7	Small Fro. Fair Rain	S W 2 S W b. W 3 S by W 0	S by W	29. 00 18	85 86 85	Violent Storms	W 8 W NW 10	W by N N W	28. 95 29. 22	103 101	Cloudy	N W 0 S by W 1	NW by N N W	30. 00 29. 88	101 99	Fair	S E 1 S E by S 2	S E	82 83 88	82 107 78	Cloudy	S by W 0 S by E 2	S	79 81 87	98 137 108																		
8	Frost and Fair	S W 0 W by S 1	W S W	34 44 70	85 88 88	Cloudy Fair	N W 0 S by W 1	NW by N N W	30. 00 29. 88	101 99	Frost and Cloudy	N E 0 E N E 2		12 13 14	60 58 87	Rain	S by W 0 S 1	N W S W	13 15	97 115	Fair	S 1		90 102 93	102 143																		
9	Hard Fro. and Fair			73		Fair			20. 07	87	o. 20	Hoar Fro. somewhat Fair	S W 2 W 3	N N W N	10 11	85 103	Cloudy	N by E 0 N by E 1	E	10 31	85 124	Same	N by E 1		92 147 118		Cloudy	W by N 2 W 0	N W W by N	67 73	146 125	o. 53											
10	Same	E by S 1 SE by E 2	E S E	82 82 60	85 89	Cloudy	W by S 1 S W 2	N W W by N	29. 98 99	87 107	Small Rain	E by N 0 S by W 2	N S	29. 57 93	102 92	o. 41	Cloudy	S 1 S by W 1		84 78	93 97	Rain	N 1 N 3	N N E	46 48	99 101	o. 07	Fair and Dry	N by W 2 N 4		17 14 10	105 132 108	Hot and Very Dry	E 1 E by S 0	W by S	85 81	138 126						
11	Cloudy	S W 2 SW W 2	W S W	59 59 71	101 99 102	Fairer	S W 1 S W 3 W 5	N by W N W	94 84 46	84 102 101	Rain	S by W 1 S by E 1		63 58 69	93 102 88	o. 68	Fairer	W 0 S by E 1		80 69	81 88	Cloudy	N E 3 N E 4		86 86	97	Same	N by E 3 N N E 4		10 08 06	110 137 109	Fair Hot Cloudy	E 0 E 0		87 75	128							
12	Cloudy	SW by S 0 S W 2	W	69 66 59	103 109 101	Fair Hazy Cloudy	S W 1 S W 3 W 5	N W	94 84 46	84 102 101	Cloudy	N E 0 E N E 2		12 13 14	60 58 87	Rain	S by W 1 S by E 1		63 58 69	93 102 88	o. 01	Cloudy	N E 3 N E 4		59 70 83	103 113 99	o. 35	Cloudy	N 1 N 3	N N E	46 48	99 101	o. 07	Fair and Dry	N by W 2 N 4		17 14 10	105 132 108	Hot and Very Dry	E 1 E by S 0	W by S	85 81	138 126
13	Milling Fair	SW W 3 W by S 3	W	48 43 48	93 97	Fair	W 4	W	34	107	o. 02	Cloudy	SW by S 2 W by S		87	107	Cloudy	N E 3 N E 4		82 83	104 121	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19				
14	Cloudy	N 1 N by W 1		30. 12 14 17	90 94 82	Fairer	S W 1 S W 3 W 5	N by W N W	94 84 46	84 102 101	Cloudy	N E 0 E N E 2		12 13 14	60 58 87	Rain	S by W 1 S by E 1		63 58 69	93 102 88	o. 01	Cloudy	N E 3 N E 4		59 70 83	103 113 99	o. 35	Cloudy	N 1 N 3	N N E	46 48	99 101	o. 07	Fair and Dry	N by W 2 N 4		17 14 10	105 132 108	Hot and Very Dry	E 1 E by S 0	W by S	85 81	138 126
15	Cloudy Day			29. 12 14 17	90 94 82	Cloudy			30. 02	116	o. 11	Cloudy	SW by S 2 W by S		87	107	Cloudy	N E 3 N E 4		82 83	104 121	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19				
16	Frost	W by S 0 N by W		10 81		Cloudy	E by N 2 N E		37 52	101 97	o. 50	Cloudy	E by N 0 E by N 1	W by S	76 82	93 105	Fair	S 2 S by W		84	108	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19	Cloudy	N N E 2 N by E 2		05 01	110 112	o. 19				
17	Foggy	NW b. W 0 N W 0		22 24 27	94 100 94	Cloudy	E by N 0 E by N 1	W by S	76 82	93 105	o. 05	Small Fro. Fair and Pleasant	S W 0 W 2		19 22	78 112	o. 05	Cloudy	SW by S 3 S W 4		29. 88 77	98 115	Cloudy	S S W 1 S W 2	S W	87 94	110 115	o. 21	Fair	W S W 2		21	103	o. 21	Fair	W S W 2		21	103	o. 21			
18	Fog	W 0		26		Fair and Pleasant	W NW 1 N W 1		84 93	91 110	o. 09	Small Fro. Fair and Pleasant	S W 0 W 2		19 22	78 112	o. 05	Cloudy	SW by S 3 S W 4		29. 88 77	98 115	Cloudy	S S W 1 S W 2	S W	87 94	110 115	o. 21	Fair	W S W 2		21	103	o. 21	Fair	W S W 2		21	103	o. 21			
19	Fog			34 77		Fair	W by S 3 W by N 4		71 77	87 104	o. 13	Cloudy	SW by S 3 S W 4		29. 88 77	98 115	o. 05	Cloudy	SW by S 3 S W 4		29. 88 77	98 115	Cloudy	S S W 1 S W 2	S W	87 94	110 115	o. 21	Fair	W S W 2		21	103	o. 21	Fair	W S W 2		21	103	o. 21			
20	Hard Fro. Fair Foggy	S 0 S by E 1		27 24 21	70 88 76	Frost and Fair	W S W 1 W by N 2	W N W	29. 98 97	97	Cloudy	SW by S 3 S W 4		29. 88 77	98 115	o. 05	Cloudy	SW by S 3 S W 4		29. 88 77	98 115	Cloudy	S S W 1 S W 2	S W	87 94	110 115	o. 21	Fair	W S W 2		21	103	o. 21	Fair	W S W 2		21	103	o. 21				
21	Hard Fro. Fog Fair	S by E 0 E by N 1	E N E	18 18 18	62 82 81	Cloudy	W S W 1 W by N 2	W N W	94 92 91	92 110 90	Fairer	W by S 2 N W 3	W N W	81 74	84 100	o. 09	Hard Fro. Fair Sleet	N W 2		83	75	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40				
22	Frost and Fair	E by N 1 E by N 2	E by N	16 18 19	77 86 84	Cloudy	W by S 2 N W 3	W N W	81 74	84 100	o. 25	Hard Fro. Fair Sleet	N W 2		83	75	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40			
23	Cloudy Fair Small Fro	N E 2		15 87		Hard Fro. Fair Sleet	N W 2		83	75	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40			
24	Frost and Fair	E by N 0 E 2		13 14 12	73 88 78	Cloudy Bluffing Fairer	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40	Cloudy	N N W 6		60	92	o. 40		
25	Frost and Fair Pleasant Day	E 0 E 1		11 12 09	75 86 75	Fair	NW by W 1 SW W 1	N W	90 82	83 102	Cloudy	SW by S 2 N W 3	W N W	81 74	84 100	o. 08	Hard Fro. Fair Rain	W by S 2 S by W 2	W by N	64 41	99 117	Cloudy	SW by S 2 N W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45				
26	Same	E 0 E 1		05 88		Cloudy	W 1 W by N 1	W N W	77 83	86 105	o. 08	Hard Fro. Fair Rain	W by S 2 S by W 2	W by N	64 41	99 117	Cloudy	SW by S 2 N W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45			
27	Frost and Cloudy Fair	E N E 0 E by N 1		76 72 59	76 85 76	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45	Cloudy	SW by S 2 N W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45	Rain	W by S 2 NW W 3	W by N	64 67	99 103	o. 45		
28	Rain and Thaw	S E 2 S by E 2	SE by S	48 47	89 92	Cloudy	SW 3 W		58	93	o. 10	Cloudy	SW 3 W		58	93	o. 10	Cloudy	SW 3 W		58	93	o. 10	Cloudy	SW 3 W		58	93	o. 10	Cloudy	SW 3 W		58	93	o. 10	Cloudy	SW 3 W		58	93	o. 10		
29	Frost Fair Rain	SW by S 0 S 1	W by N	86 87 72	85 92 98	Cloudy	S 2 S 2	S by W	56 49	107 115	o. 82	Cloudy	S 2 S 2	S by W	5																												



**A REGISTER of the Weather, Bearing of the Winds, Flying of the Clouds, Height of the Mercury in the Barometer, and of the Spirits in the Thermometer, and the Quantity of Rain fallen at Upminster, in Essex, for the Last Six Months of the Year 1699.**

Day	July. 6, 12, 9.					August. 6, 12, 9.					September. 6, 12, 9.					October. 6, 12, 9.					November. 8, 12, 9.					December. 8, 12, 9.									
	Weather.	Winds.	Clouds.	Barom.	Ther. Rain.	Weather.	Winds.	Clouds.	Barom.	Ther. Rain.	Weather.	Winds.	Clouds.	Barom.	Ther. Rain.	Weather.	Winds.	Clouds.	Barom.	Ther. Rain.	Weather.	Winds.	Clouds.	Barom.	Ther. Rain.	Weather.	Winds.	Clouds.	Barom.	Ther. Rain.					
1	Miling Hot and Fair	NE by E 1 ESE 2	N	30.00 134 150 122		Fair Rain Cloudy	S by W 4 SW by S 4 SW 8	S S W	29.32 128 145 130	0.07	Milt	S W 0 SW by S 2 S 0		29.84 98 145 122		Fairer	E by N 1 E 2	E	29.97 122 132 123		Fair	W 3 W by N 4	W S W	29.29 95 103 99		Cloudy	NNW 0 NW 0		29.71 73 76 60						
2	Fair and Hot	ESE 1 NE 2		96 125 150 124		Cloudy	W by S 1 W SW 1 W by S		62 118 142 131		Cloudy	SE 0 S by E		77 112 130 112		Fairer	E by N 2 E by N 1		87 118 131 111	1.45	Fair	SW by W 2 S W		80 106 116 109	0.28	Fair	E by S 3 E 4		30 78 78 82						
3	Same	E 1 E 2		83 131 157 129		Cloudy	NNW 1 W S W		56 123 143 117		Same	SS E 0 N W 2	NW by N	65 144 120 120		Fairer	E by S 1 S W 2	SS W	66 115 128 118	1.92	Fair	S 3 S 6	S by W	53 105 119 102		Rain	E 3 E by S 3		61 91 52 44	0.56					
4	Fair Cloudy	E by N 1		74 120 135 125		Cloudy	NNW 0 E by S 2 W by N		75 147 147 123		Fair	NE by N 1 N 2	S S E N by W	90 108 138 115		Milt	N 0 E 1	E	17 96 111 112		Cloudy	S W 3 S W 2	NNW W	30.01 120 112 112		Fair	S by E 0 S by W	S by W SS W	29.01 99 110 110	0.13					
5	Fair	NE by N 1		80 123 150 125		Rain	E by S 0 SW 1 W		37 125 139 127	0.46	Fairer	S 0 S 2		67 125 139 139	0.08	Milt	E 0 ESE 1	E	07 92 142 115		Fair	SS E 0 SS E 1	S	02 100 115 97		Fair	S 2 S by E 3	S by W	26 107 115 108	0.74					
6	Cloudy	N by E 1 NNE 2		50 120 143 115		Fairer	S 0 S 2		67 125 139 139	0.08	Milt	E 0 ESE 1	E	07 92 142 115		Fair	S 2 S by E 1		28 107 117 87		Cloudy	S 3 S 6	S by W	53 105 119 102		Rain	E 3 E by S 3		61 91 52 44	0.56					
7	Fair	NE by N 1 E 1	E by N	84 120 147 125		Fairer	S 0 S 2		67 125 139 139	0.08	Milt	E 0 ESE 1	E	07 92 142 115		Fair	S 2 S by E 1		28 107 117 87		Cloudy	S 3 S 6	S by W	53 105 119 102		Rain	E 3 E by S 3		61 91 52 44	0.56					
8	Fair and Hot	E by S 1 WNW 1 NW by N		79 116 143 143		Rain	SW 4 SW 4 SW 3		30 118 141 117	0.75	Miling	N by E 2 ENE 3	NE	21 123 137 121		Fair	N 1 NE by N		18 116 115 115		Cloudy	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
9	Same	N by W 1 NW by W 1	NW	30.01 132 153 121		Fairer	SW 2 SW 3 SW 3	W S W	63 116 145 125		Fair	N 1 NE by N		18 116 115 115		Same	E 0 E by N 2		06 119 101 99		Cloudy	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
10	Same			01 119 147 125		Fair	SW by S 3 SW 3		70 119 150 131		Fair	E 0 E 2		10 97 142 121		Milt	E 0 E 1		08 104 150 121		Fair	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
11	Hot and Dry	W by S 2 W by N 2	NW	89 140 162 143		Fair	S 1 S 3	S S W	65 116 152 137		Milt	E 0 E 1		08 104 150 121		Fair	E 0 E 1		08 104 150 121		Fair	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
12	Sultry Hot Cloudy	E by N 0 ENE 1		97 140 178 143		Fair	NW 1 W by N 3	W by S	45 117 140 120	0.44	Same	E 0 E 1		08 104 150 121		Fair	E 0 E 1		08 104 150 121		Fair	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
13	Very Hot and Dry	E by S 0 ESE 1	S by E	96 133 173 142		Cloudy	S S W 3 NW		67 120 143 120		Milt	E 0 E 1		08 104 150 121		Fair	E 0 E 1		08 104 150 121		Fair	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
14	Sultry Rain and Thunder	E 1 E by S 2	E by N	87 136 164 139	0.64	Cloudy	S S W 3 NW		67 120 143 120		Milt	E 0 E 1		08 104 150 121		Fair	E 0 E 1		08 104 150 121		Fair	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
15	Cloudy Fair and Dry	NE by N 2 NE 3		93 136 164 136		Fair	W S W 2 W S W 3	W by S	73 139 158 122	0.44	Same	E 0 E 1		08 104 150 121		Fair	E 0 E 1		08 104 150 121		Fair	W 0 W by N 1		18 99 19 96		Milt	S S W 2		30.02 110 110 110		Cloudy	S 3 S 6	S by W	53 105 119 102	
16	Fair Hot and Dry	NE 2 E 2	NE	87 140 172 134		Fair	NW 1 NW by N 2		87 110 132 111		Cloudy	E 0 S W 1		59 112 141 116	0.15	Rain	E 0 S W 1		59 112 141 116		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
17	Same	E by N 0 E by N 2		91 138 167 131		Fair	NNW 1		29.98 108 116 116		Cloudy	E 0 S W 1		59 112 141 116	0.15	Rain	E 0 S W 1		59 112 141 116		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
18	Cloudy Cool Day	N by E 3 N 2		30.03 130 142 127		Cloudy	N by W 1 N 2	NNE	01 110 138 115		Fair	W by S 2 W NW 2		82 102 88 105		Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
19	Same	N 2 N 1		01 126 138 123		Cloudy	N 2 N by E 2	NNE	29.97 116 124 124		Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
20	Cloudy and Cool	NNW 2 NW by N 2		86 115 139 126	0.06	Cloudy	NNW 1 NE by N 2		82 119 140 127		Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
21	Cloudy	NNW 1 NNW 1	NNE	87 126 155 134		Fairer	NE 1 E by N		70 117 129 117		Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
22	Fair	W by S 1 NW 1		81 122 159 135		Milt	NNE 0 W by N 1		50 126 150 122		Fairer	SW 3 SW by W 4	W	44 106 132 116	0.16	Frost	E 0 E by S 1		91 73 98 79		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
23	Fair Some Drops	SE 1 S 2		78 131 172 139		Fair	S by W 0 S 2		63 118 142 128		Fairer	SW 3 SW by W 4	W	44 106 132 116	0.16	Frost	E 0 E by S 1		91 73 98 79		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
24	Fair Rain Fair	SW 1 SW 2	W	71 128 160 129	0.01	Cloudy	S 1 S by W 3	S by W	47 129 148 127	0.24	Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
25	Rain	SSE 1 S 1	S	37 129 171 129	1.89	Cloudy	SW 1 SW 3	W	41 119 149 124		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
26	Fairer Rain Fair	S 1 S 2	SSW	21 118 156 129	0.23	Fair	SW 1 S by E 2	W by S	71 116 137 136	0.58	Rain	SW 3 SW by S 3	S S W	67 120 143 128		Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
27	Same	S by W 2 S 4	SSW	11 128 153 128	0.21	Cloudy	SW 5 SW by S 3 S 4	S S W	48 118 140 128		Fair	N by W 1 N by E 2		16 100 130 117		Small	E 0 E by N 2	ENE	12 117 135 122	0.29	Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
28	Fair Rain	S by W 3 SW by S 4	SSW	30 129 148 124	0.21	Fair	SW 0 W		86 112 135 121		Rain	SW 1 S W 2	S	89 121 150 121	0.12	Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
29	Fairer Thunder	SW by S 3 SW 4	SSW	38 122 149 128		Fair	E 1 E 2		60 115 129 121	0.01	Rain	W 2		73 129 148 127	0.57	Cloudy	N E 2 E by N 3		68 116 123 114		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134		Fair	W by S 1 W S W 2		87 140 172 134	
30	Fairer	SW by S 3 SW 4	SSW	38 122 149 128		Fair	E 1 E 2		60 115 129 121	0.01	Rain	W 2																							