

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

Day	January. 8, 12, 9.					February. 7, 12, 9.					M		
	Weather	Winds	Clouds	Barom.	Ther. Rain.	Weather	Winds.	Clouds.	Barom.	Ther. Rain.	Weather	Winds.	Clc
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	Hard Fro. Fair Cloudy	N W b. N o W 1 W by S 1	N
3	Same	S 3 S b. W 3	S by W	57 47	o. 37	Fair Small Fro. Fair Cloudy	S S E 3 S by W 3 S W b. W 1	S by E S W	59 51 64	100 105 92	Frost 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 Rain Warm Snow	S W 3 S 1 S o S 5		29. 22 29 94	85 94	---Rain 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	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 S W		29. 00 08 19	85 86 85 o. 03	Small Fro. Fair Rain	W by N 1		76 52	85 93	Hard Fro. Fair Cloudy	N N W o E 1 S by E o	N
7	Frost and Fair hard Fro. and Fair	S W o W by S 1 W S W S W		34 44 70	85 88 88	Violent Storms	W 8 W N W 10	W by N N W	28. 99 29. 22 78	103 101 92	Fair Cloudy	S E 1 S E by S 2	S
8	Same	E by S 1 SE by E 2	E S E	82 82 60	85 89	Cloudy Fair Cloudy	N W o S by W 1	NW by N N W	30. 00 29. 88	101 99	Fair Cloudy	E S E o E by N 2	N
9	Cloudy	S W 2 SW b. W 2	W S W W	59 59 71	101 99 102	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
10	Cloudy	SW by S o S W 2		69 66	103 109	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	
11	Misting ---Rain Fair	SW b. W 3 W by S 3	W W by N	48 42 48	93 107 93	---Rain Fair and Pleasant	West 4	W	34	107 o. 02	Rain Fairer	S by W 1 S by E 1	
12	Cloudy ---Rain	N by W 4	N by W	53 97	94 96	---Rain Fair and Pleasant					Frost Fair Cloudy	W o	
13	Cloudy Day	N 1 N by W 1		30. 12 14 17	90 94 82	---Rain Fair and Pleasant					Cloudy	SW by S 2	v
14	Frost Cloudy	W by S o N by W		10 15	81 93	---Rain Fair and Pleasant					Cloudy Fair Cloudy	S W 1 S W 2	v
15	Foggy	NW b. W o N W o		22 24 27	94 100 94	---Rain Fair and Pleasant					Fair Hail	S 2	S
16	Fog	W o		26	93	---Rain Fair and Pleasant					Small Fro. Fair and Pleasant	S W o W 2	
17	Fog					---Rain Fair and Pleasant					Cloudy	SW by S 3 S W 4	
18	hard Fro. Fair Foggy	S o S by E 1		34 27 24	77 70 76	---Rain Fair and Pleasant					---Rain Cloudy Fair Cloudy	SW b. W 3 W by S 4	v
19	hard Fro. Fair	S by E o E by N 1	E N E	18 22	62 62	---Rain Fair and Pleasant					Fair	S W 3	v
20	hard Fro. Fair	S by E o E by N 1	E N E	18 22	62 62	---Rain Fair and Pleasant					Cloudy	SW by S 3 S W 4	

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.				6, 12, 9.	
Days.	Clouds.	Barom.	Ther.	Rain.	Weather.	Winds.	Clouds.	Barom.	Ther.	Rain.	Weather.	Winds.	Clouds.	Barom.	Ther.
by E 2		29.	26	86	Rain and Hail	W by N 4	N W	29.	37	93	Fair	W by S 1	N W	29.	84
by W 3			40	82	Same	N N W 3			39	102	Dry	N W 1			112
			64	80		N by E 2	N E		52	98	Rain	S by W 3			113
Wb. No 1			72	68	Cloudy	N 2	N E by N		50	92	Cloudy	SW W 2			120
by S 1	N W		77	96		NE by N 3			53	102	Showers	W S W 3			133
by W 2	N N E		82	93	Fairer Day	N by E 3	N E by N		61	95	Fair	W 3			106
2			91	98		NE 4			63	88	Rain	SW W 1			105
		30.	02	90	Frost and Fair	N by E 2			90	107	Cloudy				11
W 0	N		11	79	Cloudy	N E 2			83	82	Fair	W by S 2			17
by E 1	N by W		15	94	Cloudy	N E 2			75	109	Thunder Rain	SW W 1			31
by W 0			19	77					69	95	Hoar Fro.	S S W 1			51
N W 0			11	65		E by N 0	N		46	112	Fair	SW 3			58
1	N by E		07	96		E S E 1	S		43	95	Showers				69
by E 0		29.	95	87	Cloudy Cold	SE by E 1	SE		37	85	Fair	S by W 0			79
E 1	S by E		82	82	Fair	E 2			28	98	Same	S by E 2	S		81
E by S 2	S E		83	107	Cloudy with some Drops	N 2			17	98	Fair	S 1			90
		30.	05	11		N by W 1			12	103	Same	S 2			93
			11	85	Cloudy	S 0	N W		13	97	Fair and Warm	E 1			93
S E 0	NE by E		97	82	Rain	S 1	SW		15	115	Same	N E 1			90
by N 2		30.	08	91	Fair	S by W 0	S W		23	93	Cloudy	N by E 1			88
E 0			13	98	Cloudy	S 1			31	124	Same	N by E 3			92
NE 2			14	87					43	104	Same	N 2			117
by E 0	E		10	85	Rain	N 1	N N E		46	99	Same	N 2		30.	00
by E 1			11	103	Fair	N 3			48		Fair and Dry	N by W 2			10
			08	91	Cloudy				52	101	Same	N 4			17
by N 0			00	86	Cloudy Fair	NE 3			59	103	Cloudy	N by E 3			10
by W 2	S	29.	97	102	Cloudy	NE 4			70	113	Same	N N E 4			08
			93	92					83	99	Cloudy	N N E 2			05
1			84	93	Rain	NE by E 3	E		82	104	Fair	N by E 2			01
by W 1			84	106	Cloudy	E N E 3			76	108	Same	E 1	N N E		01
			78	97	Cloudy Fairer	NE by N 1	E S W		64	105	Same	E N E 1	N E	29.	99
by W 1			63	93	Cloudy	SW 1			61	118	Cloudy				92
by E 1			58	102	Fair	S by W 1			61	101	Cloudy	NE by E 2	E N E		88
			69	88	Cloudy	S 1			58	101	Fair	E N E 3			87
V 0			80	81	Fair				50	129	Cloudy	E N E 3			83
			84	108	Rain	W S W 2			36	103	Cloudy	NE by E 3			76
W by S 2	W by S		87	107	Fair				21	103	Fair	E N E 3			72
		30.	02	116	Hoar Fro.	SW 1			25	99	Fair and Hot Day	NE by N 2			71
W 1	W S W		04	112	Fair	S by W 1			34	85	Cloudy	N 2	N by E		80
W 2			02	127	Rain	S 1			34	100	Fair	NE by E 3			83
2	S by W		29.	99	Fairer	E 2			28	103	Same	E by S 0			86
			84	108	Cloudy	W by N 1			42	125	Cloudy	N E 2			86
W 0			19	78	Cloudy				65	110	Same	E by S 2			86
W 2			22	112	Hoar Fro.	W 0			72	89	Cloudy	N E 2			86
			09	94	Fair				84	115	Same	E by S 2			86
W by S 3		29.	88	98	Fairer				84	115	Cloudy	N N E 1			82
W 4			77	115	Cloudy				87	110	Cloudy	N N E 1			82
			60	103	Hoar Fro.				84	115	Cloudy	N N E 1			82
Wb. W 3			47	101	Fair				84	115	Cloudy	N N E 1			82
W by S 4	W S W		54	118	Cloudy	S S W 1	S W		87	110	Cloudy	N N E 1			82
			48	100					87	110	Cloudy	N N E 1			82
W 3	W by S		38	99					87	110	Cloudy	N N E 1			82

of the Spirits in the Thermometer,

599.

6, 12, 9.		June				6, 12, 9.	
1.	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	S W 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 o		73	125	
92	118	Fair	W by S 1		79	126	
00	117	Hot					
10	150	Cloudy	E o		87	128	
21	108	Hot and Very Dry	E 1	W by S	86	138	
17	105		E by S o		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	S W 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 o	NW by N	92	128	
83	110		W o	NNW	95	130	
80	112						

20	Fair Foggy	S by E 1		24															Cloudy	
	hard Fro.	S by E 0		21	76														Fair	
21	Fog Fair	E by N 1	E N E	18	62														Cloudy	
	Frost and Fair	E by N 1	E by N	18	82														Fair	
22		E by N 2		18	81														Rain	
	Cloudy Fair small Fro	NE 2		16	77														Hoar Fro.	
23		E by N 2		18	86														Fair	
	Frost and Fair	E by N 0		19	84														Cloudy	
24		E 2		15	87														Rain	
	Frost and Fair Plea- fant Day	E 0		13	81														Cloudy	
25		E 1		13	73														Fair	
	Same	E 1		14	88														Thunder	
26		E 1		12	78														Rain	
	Frost and Cloudy Fair	E NE 0	E	11	73														Cloudy	
27		E by N 1		12	86														Fair	
	Rain and Thaw	SE 2	SE by S	09	79														Cloudy	
28		S by E 2	S	05	70														Thunder	
	Frost Fair Rain	SW by S 0	W by N	08	88														Rain	
29		S 1		29.	96														Cloudy	
	Cloudy Warm Day	S 2	S	76	76														Fair	
30		S 3	S by W	72	85														Rain	
	Cloudy	SSW 3	SW by S	59	76														Fair	
31		S by W 2	W S W	48	89														Rain	
	Rain	S 3		47	92														Cloudy	
		SSE 2	SSE	66	93	I. 51													Rain	
				86	85														Fair	
				87	92														Rain	
				72	98														Fair	
				56	107	0. 82													Cloudy	
				49	115														Fair	
				42	109														Cloudy	
				49	108	0. 17													Fair	
				37	113														Cloudy	
				47	109	8. 91													Fair	
																			Rain	

Place this Pag. 494.

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	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 0 E 1	E by N	84 81 78	120 147 125	Fairer	S W 4		39			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 lefs Cloudy	E 0
15	Cloudy Fair and Dry	NE b. 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	119 140 137		Rain Cloudy	S by SW by

Flying of the Clouds, Height of the Mercury in the Barometer, and of at Uppingham, in Essex, for the Last Six Months of the Year 1699

September					October					November						
6, 12, 9.					6, 12, 9.					8.						
Winds.	Clouds.	Barom.	Ther.	Rain.	Weather	Winds.	Clouds.	Barom.	Ther.	Rain.	Weather	Winds.	Clouds.	Barom.	Ther.	Rain.
SW 0		29.	84	98	Fairer	E by N 1	E	29.	97	122	Fair	W 3	W S W	29.	29	
SW by S 2	S		85	145	Cloudy	E 2			93	132		W by N 4			42	
S 0			80	122	Rain	E by N 2			93	123					67	
SE 0	S by E		77	112	Fairer	E by N 1			87	118		SW by W 0	W by S		80	
			77	130	---Rain---	E by N 1			80	131		S by W 2	S W		85	
SSE 0	S		67	122	Fairer	E by S 1	S S W		73	111		S 3			53	
NW 2	NW by N		65	144	Cloudy	S W 2			66	115		S 6	S by W		52	
			72	120					67	128					60	
NE by N 1	SSE		90	108		SW 0			73	118		SW 3	W S W		85	
N 2	N by W	30.	18	138	Cloudy				79	108		Fairer			92	
			12	115											96	
N 0	E		17	96	Fair							SW 3	NNW		98	
E 1			18	139	Hour Fro. and	NNW 1			98	96		SW 2	W	30.	01	
			15	112	Fair	N 1									03	
E 0	E		07	92	Cloudy	NW 0			30.	12		SSE 0			02	
ESE 1	E		03	142	---Rain---	W by N 1			17	112		SSE 1	S		02	
			01	115	Cloudy				22	89					29.	97
E 0			03	97	Cloudy	NW 0			18	99		Milty	SSW 2		30.	02
NE 2	NNE		06	47	---Rain---	W by N 1			19	96		Fair			22	
			15	131	Cloudy	NE by N 1			21	105		Mift	W 0		27	
N by E 2	NE		21	123	Cloudy	E by N 1			20	119		W 1			27	
ENE 3			22	137					16	110					30	
			22	121	Same	E 0			07	106		S by E 1			29	
N 1	NE by N		18	116	Mift	E by N 2			06	119		SE 1			28	
			12	115	Fair				01	99		Cloudy			22	
E 0			10	97	Mift	E by N 0			29.	92		Froft and	E 1		16	
E 2			08	142	Fair				85	104		Fair	E 1		18	
			05	121	Mift				80	99		Foggy	N 0		31	
E 0		29.	95	110	Cloudy	E 1			80	99		N by E 0			30	
E 1			94	150	Mifling				80	120					33	
			91	121	Mift	SE by E 0			75	60		Mift	NNE 0	SW by S	30	
E 0			89	102	Warm	S 2			77	140		E by N 0	SW by W		30	
E 1			90	152	Fair				79	115		Cloudy			23	
			90	127	Cloudy	S 0	S by W		77	106		Cloudy	SW 1	W by N	09	
E 0			91	114	and	SW by S 3			79	136		Fair	SW 3		03	
E by N 1	E		93	143	Warm				87	119		Cloudy			29.	85
			93	129	Same	S by E 2			87	119		Fair	WSW 1		76	
E 0			89	126	Mift	S 2			81	133		Stormy	WSW 4	N W	70	
			89	127	Cloudy	S 3	SSW		65	122		Cloudy	WSW 8		36	
SW 1	SW by W		91	122	Mifling	S 2			57	129		Cloudy	W 6	N W	53	
			93	134	Rain				57	136		Fair	W by N 5	N W	63	
SW by S 0			92	128	Rain	ESE 2	SE by S		52	122		Fair	W by S 1	W N W	87	
SSW 1			92	140		SE 1	S by E		48	130		Fair	WSW 2	W	88	
			81	122	Fair				50	122					80	
E 0			59	112	Fair	E 1	SE		50	117		Fair	NW 3	W	86	
SW 1			50	141	Cloudy	E 1	SE by E		56	130		Fair	W 1		93	
			60	116					61	111		Froft	WSW 3		91	
W by S 2	NW		82	102	Cloudy	NE 2			65	118		Fair	WSW 3		87	
WNW 2			88		Same	E by N 1			65			Froft and	WSW 3		94	
			91	106	Cloudy				66	119		Fair			94	
SSW 2	W		80	115	Same	NE 2			68	116		Froft	S by W 0	N W	94	
			65	130	Cloudy	E by N 3			71	123		and	S 1		94	
S by W 3			41	127	Cloudy	E 3			74	114		Fair			91	
SW by S 4	S by W		42	125	and	E by N 3			75	111		Same	S 1	SW	85	
			26	150	Cool				80	111					85	

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
	52	119		E by S 3			52	94
	60	102 o.					44	100
	85	96	Cloudy	E S E 3	S S E		60	98
	92	112	Fair				74	99
	96	111	---Rain---				29.	61
	98	107	Fair	S by E 0	S by W		14	110
o.	01	120	Fair	S 2	S S W		28	103
	03	112	---Rain---				26	107
	02	100	Fair	S 2			32	115
	02	115	Rain and	S by E 3	S by W		39	108
9.	97	97	Warm				50	106
o.	02	110	Cloudy	S 1			48	112
	22	94	and				48	105
	27	84	Warm				37	109
	27	98	Cloudy	S S E 1	S by E		32	116
	30	101	Miffling	S S E 3			36	114
	29	100	Warm				19	113
	28	107	Rain	S E 3			19	117
	22	87		S S E 3			29	112
	16	80	Fair	S by E 1			41	103
	18	103	Fair	S by E 2			46	112
	27	92	Fair				57	98
	31	87	Fair	S W 0			88	92
	30	101	Cloudy				95	108
	33	96	---Rain---				84	109
	30	94		S by E 2	S by W		78	115
	30	104	Cloudy and	S 1	S W		73	108
	23	103	some Rain				54	110
	09	103	Cloudy	S W 3			57	112
	03	110	Fair	SWb.W 3			63	104
9.	85	109	Rain	S W 1	W by S		51	102
	76	103 o.		W by S 1			43	108
	70	110	Fair				48	98
	36	114	Fair	W by N 2	N N W		64	100
	53	109	Cloudy	N N W 1			69	103
	63	115	Miffling	N N W 1			91	99
	84	94	Fair	N 1			30.	07
	87	89	Frost and	N 0			14	101
	88	105	Fair	S W 1			27	87
	80	113	Rain				25	73
	86	103	Frost	N W 1			20	88
	93	105	Hazy				33	90
	91	85	Fair				44	82
	81	92	Cloudy	W 1	N W		35	76
	87	107	with	N W 1			21	81
	94	94	Thaw				20	93
	94	79	Cloudy	N W 0	N		23	91
	91	92		N W 1			26	86
	85	88					27	102
	85	106						

	Rain			92	123				87	124		Cloudy		
20	Cloudy and Cool	NNW 2		86	115				82	119		Rain	S by	
		NWb.N2		86	139				80	140			SW by	
				86	126	o.	o6		76	127		Cloudy		
21	Cloudy	NNW 1		87	126							Fair	WSV	
	Fair	NNW 1	NNE	87	155							Cloudy	S by	
		S 1		83	134							Rain	S by	
22	Fair	W by S 1		81	122				56	129		Fairer	S W	
	Fair	NW 1		80	159				53	150		Rain	SWb.	
	Cloudy	SE o		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	
				73	139				56	128		Cloudy		
24	Fair	SW 1		71	128							--Rain--	W by	
	Rain	SW 2	W	67	160				47	129	o.	24	Fairer	W by
	Fair			58	129	o.	o1		43	148				W by
25	Rain	SSE 1	S	37	129				37	127	o.	21	Rain	
		S 1		21					41	119				W by
				17	129	I.	89		53	149			Fair	
26	Fairer	S 1	SW	21	118				64	124				
	Rain		SSW	24	156				71	116			Milling	S W
	Fair	S 2		25	129	o.	23		68	137			Cloudy	WN
27	Same	S by W 2	SW by S	11	128				63	136	o.	58		N by
		S 4	SSW		153									ESI
				18	128	o.	21		67	120			Fair	E by
28	Fair	S 1		24	125				65	143				
	Rain	SW 4	SSW	27	147				45	128			Fair	Nby
				28	129	o.	34		48	118			Fair	N by
29	Fair	S by W 3		30	129				59	140			Small	
	Rain	SW by S 4	SW	29	148				80	117			--Rain--	E o
	Thunder			35	124	2.	21		86	112			Fair	E by
30	Fairer	SW by S 3	SW	38	122									ENI
		SW 4		42	149				89	121			Cloudy	E by
				46	128				89	150				E 3
31	Rain	SSE 1	S by W	36	126	I.	o4		78	121				E by
	Fair	S 4		34	144				60	115	o.	o1		E by
				36	127	6.	63							
	Cloudy	NNE 1												
	Fairer	NE by N 2												
	Cloudy													
	Fairer	NE 1	E by N											
	Mist	NNE o												
	Fair	W by N 1												
	Misty	S by W o	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												
		S 4	SSW											
	Fair	SW 5	SW by W											
	Fair	W by S 5	WNW											
	Fair	WSW 1	W											
	Fair	SW o	W											
	Rain	SW 1												
	Fair	SSW 2	SW											
	Fair	SSW 2	S											
	Fair	E 1												
	Rain	W 2												

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y				65	130	o. 01					74	114		Fair			91		
	S by W 3	S by W		41	127			Cloudy	E 3		75	111		Same	S 1	S W	85		
	SW by S 4			42	125		Cloudy	E by N 3			80	111			SW by S 2			85	
y				36	115	o. 34		Cool			85	93					86		
	WSW 3	W		44	106			First Ice	E 1		89	79		Cloudy	SW by S 2	W S W	84		
	S by W 4			46	132				E 3		92	102		Fair	SW by S 3	W by S	82		
				38	116	o. 16				93	83		Rain				78		
r	S W 3	SW by W 4		14	112	2. 57		Frost	E 0		91	73		Fair	W 0	NW by W	75		
	SW by W 4			21	128		Frost	E by S 1			91	98			N 1			83	
ny				21	116	1. 01	Fair				87	79						89	
	S W 3	SW by S 6		05	103	o. 27		Same	E 0		77	70		Frost	NW 0	N by E	89		
	SW by S 6			07	122				E by S 2 E		77	101		and	NW 0			90	
			28.	95	102						70	82		Fair				92	
	W by S 2	NNW W by N	29.	08	100	o. 77		Cloudy	E 1	SW	51	85		Frost	NW 0			86	
	W by S 3			26	121				S E 3	S W by S		32	111		and	NW 1			85
				51	100	1. 07	Rain					07	109	1. 95	Cloudy	SW 1			83
	W by S 1			75	88			Fair	S W 3		18	54	1. 04	Cloudy	SW 0			76	
			39.	00	101			Cloudy											
ng	S W 1	N by W		04	102	o. 06		---Rain---			16	96							
	WNW 1			10	130		Fair	W 1	NW by N			18	92	o. 90					
dy	N by W 0			18	121				N by W 3	N W		32	110		Rain				
	E S E 0	ENE		21	112			WNW 0			51	88							
	E by S 2			23	123		Frost	W SW 0			51	82							
				23	101		Cloudy	S 3			42	107			Frost				
	N by W 1	N by E 2		16	100			Cloudy	S W 1		43	111		and					
	N by E 2			12	130		Cloudy	S W 0			51	100		Fair					
				08	117		Cloudy	SW by S 1			51	114		hard Fro.					
	E 0	ENE		12	117		Rain	E S E 2		28	110	1. 24							
	E by N 2			12	135		Rain	S 3			08	117	o. 31						
	ENE 3			11	122	o. 29		S S E 2	S		03	122		Snow					
	E by N 3	E by N		08	122			WNW 3		16	96	o. 43		Snow					
	E 3			10	127			SW by W 2			48	89							
	E by N 3			08	123		Fair				48	109		Fairer	N by E 2			60	
							Cloudy	S 4	SW	36	115	3. 12							
							Rain			14	113	13. 49						To	

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
75	103	0. 45	Misting	N 0	NE	50	89
83				N 1		49	92
89	85		Cloudy			46	85
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
			Rain	SW b. W 1		12	102
				S by W 1		29.	98
			Cloudy	W 0	NW b. W	96	107
				W 1	N W	30.	06
			Fair			10	94
			Fair	W by S 2	NN W	29.	95
				N W 2		94	98
				W by N 0	N by W	94	91
			Fog	W by N 0		90	94
			Misting	W by S 0	NW b. W	86	108
			Rain			80	106
			Fair	W by N 2		72	96
				N W 4		83	100
			Frost	S W 2		30.	03
			Cloudy	S W 3	W by S	29.	96
60	60	0. 59	Rain			94	105
			Fairer	SW 3		93	110
				SW 3		92	112
			Cloudy			95	108
							5. 77
			Tot. 1. 93				

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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.	Therm.	Rain.	Weather.	Winds.	Clouds.	Barom.	Therm.	Rain.	Weather.	Winds.	Clouds.	Barom.	Therm.	Rain.	Weather.	Winds.	Clouds.	Barom.	Therm.	Rain.	Weather.	Winds.	Clouds.	Barom.	Therm.	Rain.	Weather.	Winds.	Clouds.	Barom.	Therm.	Rain.												
1	Milling 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	Mitt Fair	S W 0 SW by S 2 S S 0		29.84	98 145 122		Fairer Cloudy	E by N 1 E 2	E	29.97	122 132 123		Fair Rain Fairer Cloudy	SW by W 3 W by N 4 S by W 2 S W	W S W	29.29	95 103 99		Fair Cloudy Fairer Rain	W 3 W by N 4 SW by W 2 S by W 2	W S W	29.80	106 106 109	0.28	Cloudy Fair Fairer Rain	NNW 0 NNW 0 E by S 3 E 4		29.71	71 73 76		Fair Cloudy Fairer Rain	NNW 0 NNW 0 E by S 3 E 4		29.71	71 73 76	