

XVI. *On the Relation of the Direction of the Wind to the Age of the Moon, as inferred from Observations made at the Royal Observatory, Greenwich, from 1840 November to 1847 December.* By G. B. AIRY, Esq., Astronomer Royal.

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IN the year 1849, in a voyage to Shetland, I heard allusions to the belief entertained generally by Norwegian seamen, that a northerly wind may always be expected about the time of new moon. The expression of this belief was so positive, and the implication of the interests of the persons entertaining it was so distinct, that it appeared to me extremely probable that there was some physical foundation for it. At the first convenient opportunity, therefore, I took measures for discussing, with reference to this question, the directions of the wind at the Royal Observatory, during a period of rather more than seven years, as ascertained from the records of OSLER'S Self-registering Anemometer. I extended the research so far as to enable every reader to judge whether there is any probable relation between any Direction of Wind and any Age of the Moon.

The collection and summation of the numbers was effected under the immediate superintendence of Mr. GLAISHER. Great pains were taken to establish such checks on the operation that error is almost impossible.

The general result is contained in the Table subjoined to this paper. And, while it shows that there is great uncertainty in the verification of an empirical law, even from nearly ninety lunations, it seems very distinctly to negative the asserted law which gave rise to the inquiry.

In explanation of the Table, it is only necessary to remark that the civil day on which the new moon occurred is taken as the day of new moon (at whatever hour the conjunction occurred), and that the other days are counted in succession from it. The moon's synodic period being nearly  $29\frac{1}{2}$  days, the month sometimes consists of twenty-nine days, sometimes of thirty, in almost equal proportions in the long run; and thus the numbers in the last horizontal row of figures must, to make them comparable with the others, be very nearly doubled. Although the sums of numbers in the other horizontal lines are not absolutely equal, they are so nearly equal that no remarkable error will be produced by assuming them as equal.

TABLE exhibiting the number of hours during which the wind blew in each of sixteen equal divisions of the azimuthal circle, and also the number of hours of sensible calm, in the period extending (with very small interruptions) from 1840 November to 1847 December; from the records of OSLER'S Self-registering Anemometer at the Royal Observatory, Greenwich: arranged in reference to the days of the Moon's Age.

Days of the Moon's Age.	Number of hours of wind in each direction.																Number of hours of calm.	Total number of hours for each day.
	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.		
1	146	52	84	42	80	6	...	4	194	260	234	282	128	32	40	38	386	2008
2	140	58	86	66	54	4	6	26	200	242	264	174	78	34	74	90	454	2050
3	164	80	52	52	36	32	12	32	166	242	254	180	84	32	36	84	502	2040
4	112	88	48	18	56	10	18	44	198	244	238	220	100	22	14	74	560	2064
5	126	58	62	34	104	22	10	26	126	210	254	250	78	44	44	52	508	2008
6	132	46	110	76	66	20	6	30	132	192	268	214	98	46	46	86	414	1982
7	108	66	84	72	102	12	26	20	120	206	288	148	176	28	44	54	488	2042
8	116	72	96	58	66	18	4	14	172	174	208	278	124	46	56	56	484	2042
9	150	78	64	48	68	30	10	28	130	160	246	244	96	56	48	80	540	2076
10	190	62	106	32	98	18	18	36	170	184	188	162	138	44	36	74	530	2086
11	184	76	88	52	66	16	10	22	144	210	204	212	120	20	54	76	534	2088
12	100	92	98	66	50	12	6	22	168	116	204	264	146	44	26	48	576	2038
13	194	72	68	58	74	18	12	32	172	110	166	170	104	44	46	76	608	2024
14	190	72	60	80	78	24	20	34	156	144	206	164	82	24	66	86	568	2054
15	278	86	68	60	86	30	34	30	140	190	206	148	104	30	32	64	478	2064
16	150	84	50	104	86	30	52	26	84	138	252	194	100	28	62	80	524	2064
17	208	70	64	46	78	16	20	16	136	166	244	188	96	14	52	60	590	2064
18	212	82	60	70	98	12	14	42	128	194	188	184	100	20	40	50	558	2052
19	228	68	114	80	104	16	26	44	64	86	166	202	126	36	52	88	510	2010
20	174	80	116	76	138	50	20	24	92	114	176	190	122	38	26	40	544	2020
21	168	56	72	98	168	36	16	40	88	140	216	222	122	38	52	44	496	2072
22	206	68	102	76	118	36	26	32	74	150	170	176	90	42	50	80	562	2058
23	224	70	110	56	62	30	24	48	180	126	196	176	86	32	32	74	506	2032
24	236	72	80	38	42	34	20	24	140	156	242	246	100	28	26	176	378	2038
25	206	64	58	76	52	30	8	22	124	202	238	196	136	28	40	90	476	2046
26	126	46	72	100	70	18	16	14	114	178	230	164	164	30	56	78	532	2008
27	98	58	100	64	26	8	10	24	192	210	286	230	88	28	22	26	518	1988
28	88	68	48	68	74	28	32	50	154	190	322	286	92	22	30	50	402	2004
29	82	64	74	60	106	18	4	10	180	198	220	226	170	44	32	50	454	1992
30	80	26	32	30	20	...	2	16	96	124	110	154	48	18	12	26	262	1056
Sum for each direction	4816	2034	2326	1956	2226	634	482	832	4234	5276	6684	6144	3296	992	1246	2050	14942	60170

Royal Observatory, Greenwich,  
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