

Hector Observatory, Bulletin 10.—Astronomical Tables of the Moon.

Hector Observatory, Wellington, N.Z., 25th March, 1918.

THESE tables are published for general information. They are interpolated from the British Nautical Almanac and the American Ephemeris. They give the times of the moon's meridian passage, and of the moon's rising and setting for the meridian 12 hours east of Greenwich. This meridian will be referred to as the standard meridian. The time used is for the standard meridian 0 h., and 24 h. = midnight.

The method of using the tables is shown in the examples, one of which is for a place near the east coast of the North Island and the other for a place in Stewart Island.

Examples.—Required for 1918, March 27, the times of moonrise and of the moon's meridian passage for a place—

(1.) In latitude 38° south, and longitude 178° east, of Greenwich.

(2.) " 47° " " 168° " " "

(1.) Latitude 38° south, longitude 178° E. = 2° W. of standard meridian = 8 m. W.

				Moon Rise.		Moon's Meridian Passage.	
				h.	m.	h.	m.
For March 27 and latitude 38°	..	..	..	17	25	23	52
" 28 "	38°	..	..	17	51	24	33
Difference				0	26	Difference 0 41	

Correction for longitude = + 8 m. + $\frac{8}{60 \times 24} \times 26$ m. = + 8 m. = + 8 m. + $\frac{8}{60 \times 24} \times 41$ m. = + 8 m.
Hence standard meridian times are .. March 27 d. 17 h. 33 m. March 27 d. 24 h. 0 m.
= March 28 d. 0 h. 0 m.

(2.) Latitude 47° south, longitude 168° E. = 12° W. of standard meridian = 48 m. W.

				Moon Rise.		Moon's Meridian Passage.	
				h.	m.	h.	m.
For March 27 and latitude 47°	..	..	..	17	18	23	52
" 28 "	47°	..	..	17	39	24	33
Difference				0	21	Difference 0 41	

Correction for longitude = + 48 m. + $\frac{48}{60 \times 24} \times 21$ m. = + 49 m. = + 48 m. + $\frac{48}{60 \times 24} \times 41$ m. = + 49 m.
Hence standard meridian times are .. March 27 d. 18 h. 7 m. March 27 d. 24 h. 41 m.
= March 28 d. 0 h. 41 m.

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1918. March.	Moon Rise: South Latitude.			Moon's Meridian Passage.	Phases, &c.	Moon Set: South Latitude.		
	35° h. m.	40° h. m.	45° h. m.			35° h. m.	40° h. m.	45° h. m.
Friday 1 ..	19 51	19 44	19 37	1 53		8 30	8 35	8 42
Saturday 2 ..	20 21	20 12	20 1	2 35		9 26	9 34	9 44
Sunday 3 ..	20 55	20 44	20 30	3 18		10 22	10 33	10 46
Monday 4 ..	21 34	21 21	21 5	4 5		11 20	11 33	11 49
Tuesday 5 ..	22 20	22 4	21 46	4 54		12 18	12 33	12 50
Wednesday 6 ..	23 11	22 56	22 37	5 46	D, S	13 14	13 30	13 48
Thursday 7 ..	..	23 55	23 38	6 40		14 8	14 24	14 42
Friday 8 ..	0 10	..	..	7 36		14 58	15 12	15 28
Saturday 9 ..	1 15	1 2	0 46	8 33		15 43	15 55	16 8
Sunday 10 ..	2 23	2 13	2 1	9 28		16 25	16 33	16 43
Monday 11 ..	3 34	3 27	3 19	10 23		17 3	17 8	17 14
Tuesday 12 ..	4 46	4 43	4 39	11 18		17 39	17 40	17 42
Wednesday 13 ..	5 59	5 59	6 0	12 12	E, ●, P	18 15	18 13	18 10
Thursday 14 ..	7 12	7 16	7 21	13 6		18 52	18 46	18 40
Friday 15 ..	8 25	8 33	8 41	14 2		19 31	19 22	19 12
Saturday 16 ..	9 37	9 48	10 1	14 58		20 14	20 2	19 48
Sunday 17 ..	10 46	11 0	11 16	15 56		21 2	20 48	20 32
Monday 18 ..	11 51	12 6	12 24	16 54		21 55	21 39	21 21
Tuesday 19 ..	12 50	13 5	13 23	17 50	N	22 51	22 36	22 18
Wednesday 20 ..	13 40	13 55	14 12	18 44	☾	23 49	23 36	23 19
Thursday 21 ..	14 24	14 37	14 52	19 34		..	..	..
Friday 22 ..	15 2	15 13	15 25	20 22		0 48	0 36	0 22
Saturday 23 ..	15 35	15 43	15 52	21 7		1 46	1 37	1 26
Sunday 24 ..	16 5	16 10	16 17	21 49		2 43	2 37	2 29
Monday 25 ..	16 33	16 35	16 38	22 30		3 39	3 35	3 30
Tuesday 26 ..	17 0	17 0	16 59	23 11	E	4 34	4 33	4 32
Wednesday 27 ..	17 26	17 24	17 20	23 52	A	5 29	5 31	5 32
Thursday 28 ..	17 54	17 49	17 42	..	○	6 24	6 28	6 34
Friday 29 ..	18 24	18 16	18 6	0 33		7 20	7 27	7 36
Saturday 30 ..	18 57	18 47	18 34	1 17		8 17	8 26	8 38
Sunday 31 ..	19 35	19 22	19 7	2 2		9 14	9 26	9 40
April								
Monday 1 ..	20 18	20 3	19 46	2 51		10 11	10 25	10 42
Tuesday 2 ..	21 6	20 51	20 33	3 41		11 8	11 23	11 41
Wednesday 3 ..	22 2	21 47	21 29	4 34	S	12 1	12 16	12 35
Thursday 4 ..	23 2	22 48	22 32	5 28		12 51	13 5	13 22
Friday 5 ..	..	23 55	23 42	6 22	D	13 37	13 49	14 3
Saturday 6 ..	0 7	..	..	7 16		14 18	14 28	14 39