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# THE NEW PRACTICAL NAVIGATOR;

BEING AN  
EPITOME OF NAVIGATION,  
CONTAINING  
THE DIFFERENT METHODS OF WORKING THE  
LUNAR OBSERVATIONS,  
AND ALL THE REQUISITE TABLES USED WITH THE  
NAUTICAL ALMANAC,  
IN DETERMINING THE LATITUDE AND LONGITUDE AND  
KEEPING A COMPLETE RECKONING AT SEA:  
ILLUSTRATED BY PROPER RULES AND EXAMPLES.

THE WHOLE EXEMPLIFIED IN A  
JOURNAL  
KEPT FROM  
ENGLAND TO THE ISLAND OF TENERIFFE:

ALSO,

The Substance of INFORMATION every CANDIDATE for the AMERICAN NAVY ought to be acquainted with, previous to his being appointed: This, with the SEA TERMS, is particularly recommended to the attention of all YOUNG GENTLEMEN designed for, or belonging to, the SEA.

THE FIRST AMERICAN, FROM THE THIRTEENTH ENGLISH EDITION

OF

JOHN HAMILTON MOORE,

IMPROVED BY THE INTRODUCTION OF SEVERAL NEW TABLES, AND BY LARGE ADDITIONS TO THE FORMER TABLES, AND REVISED AND CORRECTED BY A SKILFUL MATHEMATICIAN AND NAVIGATOR.

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ILLUSTRATED WITH COPPER-PLATES.

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TO WHICH ARE ADDED,

SOME GENERAL INSTRUCTIONS and INFORMATION to MERCHANTS, MASTERS of VESSELS, and others concerned in NAVIGATION, relative to the MERCANTILE and MARITIME LAWS and CUSTOMS.

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PUBLISHED AS DIRECTED BY ACT OF CONGRESS.

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T A B L E I X.

THE REFRACTIONS OF THE HEAVENLY BODIES IN ALTITUDE.											
App. Refr.		App. Refr.		App. Ref.		App. Ref.		Ap. Ref.		Ap. Ref.	
Alt.		Alt.		Alt.		Alt.		Alt.		Alt.	
D.M.	M.S.	D.M.	M.S.	D.M.	MS.	D.M.	M.S.	D.	M.S.	D.	M.S.
0.0	33.0	2.30	16.24	6.30	7.51	12.20	4.16	30	1.38	60	0.33
0.5	32.10	2.35	16.4	6.40	7.40	12.40	4.9	31	1.35	61	0.32
0.10	31.22	2.40	15.45	6.50	7.30	13.0	4.3	32	1.31	62	0.30
0.15	30.35	2.45	15.27	7.0	7.20	13.20	3.57	33	1.28	63	0.29
0.20	29.50	2.50	15.9	7.10	7.11	13.40	3.51	34	1.24	64	0.28
0.25	29.6	2.55	14.52	7.20	7.2	14.0	3.45	35	1.21	65	0.26
0.30	28.22	3.0	14.36	7.30	6.53	14.20	3.40	36	1.18	66	0.25
0.35	27.41	3.5	14.20	7.40	6.45	14.40	3.35	37	1.16	67	0.24
0.40	27.0	3.10	14.4	7.50	6.37	15.0	3.30	38	1.13	68	0.23
0.45	26.20	3.15	13.49	8.0	6.29	15.30	3.24	39	1.10	69	0.22
0.50	25.42	3.20	13.34	8.10	6.22	16.0	3.17	40	1.8	70	0.21
0.55	25.5	3.25	13.20	8.20	6.15	16.30	3.10	41	1.5	71	0.19
1.0	24.29	3.30	13.6	8.30	6.8	17.0	3.4	42	1.3	72	0.18
1.5	23.54	3.40	12.40	8.40	6.1	17.30	2.59	43	1.1	73	0.17
1.10	23.20	3.50	12.15	8.50	5.55	18.0	2.54	44	0.59	74	0.16
1.15	22.47	4.0	11.51	9.0	5.48	18.30	2.49	45	0.57	75	0.15
1.20	22.15	4.10	11.29	9.10	5.42	19.0	2.44	46	0.55	76	0.14
1.25	21.44	4.20	11.8	9.20	5.36	19.30	2.39	47	0.53	77	0.13
1.30	21.15	4.30	10.48	9.30	5.31	20.0	2.35	48	0.51	78	0.12
1.35	20.46	4.40	10.29	9.40	5.25	20.30	2.31	49	0.49	79	0.11
1.40	20.18	4.50	10.11	9.50	5.20	21.0	2.27	50	0.48	80	0.10
1.45	19.51	5.00	9.54	10.0	5.15	21.30	2.24	51	0.46	81	0.9
1.50	19.25	5.10	9.38	10.15	5.7	22.0	2.20	52	0.44	82	0.8
1.55	19.0	5.20	9.23	10.30	5.0	23.0	2.14	53	0.43	83	0.7
2.0	18.35	5.30	9.8	10.45	4.53	24.0	2.7	54	0.41	84	0.6
2.5	18.11	5.40	8.54	11.0	4.47	25.0	2.2	55	0.40	85	0.5
2.10	17.48	5.50	8.41	11.15	4.40	26.0	1.56	56	0.38	86	0.4
2.15	17.26	6.0	8.28	11.30	4.24	27.0	1.51	57	0.37	87	0.3
2.20	17.4	6.10	8.15	11.45	4.29	28.0	1.47	58	0.35	88	0.2
2.25	16.45	6.20	8.3	12.0	4.23	29.0	1.42	59	0.34	89	0.1

TABLE X. DEPRESSION OR DIP OF THE HORIZON OF THE SEA.

Height of Eye.	Dip of Horiz.	Height of Eye.	Dip of Horiz.	Height of Eye.	Dip of Horiz.	Height of Eye.	Dip of Horiz.
Feet.	M.S.	Feet.	M.S.	Feet.	M.S.	Feet.	M.S.
1	0.57	10	3.1	19	4.10	35	5.39
2	1.21	11	3.10	20	4.16	40	6.2
3	1.39	12	3.18	21	4.22	45	6.24
4	1.55	13	3.26	22	4.28	50	6.44
5	2.8	14	3.34	23	4.34	60	7.23
6	2.20	15	3.42	24	4.40	70	7.59
7	2.31	16	3.49	26	4.52	80	8.32
8	2.42	17	3.56	28	5.3	90	9.3
9	2.52	18	4.3	30	5.14	100	9.33