

### MAKEMAKE

M d 2012	Wschr.	Kulm.	Zach.	A	$\alpha$	$\delta$	D	V	$\Delta I$
	$\lambda=0^\circ$	$\varphi=50^\circ$			$0^hUT$				
	h m	h m	h m	$\pm^\circ$	h m	$^\circ \ ' \ ''$	"	m	$^\circ$
I 0	21 32	6 07	14 39	136	12 44.8	26 49	0.0	17.0	99
8	20 60	5 36	14 08	136	12 44.8	26 53	0.0	17.0	106
16	20 28	5 05	13 38	136	12 44.8	26 58	0.0	17.0	113
24	19 55	4 33	13 07	136	12 44.7	27 03	0.0	17.0	120
II 1	19 23	4 01	12 36	136	12 44.5	27 08	0.0	17.0	127
9	18 51	3 30	12 05	136	12 44.2	27 13	0.0	17.0	133
17	18 18	2 58	11 33	137	12 43.9	27 18	0.0	17.0	139
25	17 46	2 26	11 02	137	12 43.5	27 23	0.0	17.0	144
III 4	17 13	1 54	10 31	137	12 43.0	27 28	0.0	17.0	148
12	16 41	1 22	9 59	137	12 42.5	27 32	0.0	16.9	150
20	16 08	0 50	9 28	137	12 42.0	27 36	0.0	16.9	151
28	15 36	0 18	8 56	137	12 41.4	27 39	0.0	17.0	-149
IV 5	15 04	23 42	8 25	137	12 40.9	27 41	0.0	17.0	-146
13	14 31	23 10	7 53	137	12 40.3	27 43	0.0	17.0	-142
21	13 59	22 38	7 21	137	12 39.8	27 44	0.0	17.0	-136
29	13 27	22 06	6 49	137	12 39.3	27 45	0.0	17.0	-131
V 7	12 55	21 34	6 17	137	12 38.8	27 44	0.0	17.0	-124
15	12 24	21 02	5 45	137	12 38.4	27 43	0.0	17.0	-118
23	11 52	20 31	5 13	137	12 38.0	27 41	0.0	17.0	-111
31	11 21	19 59	4 41	137	12 37.8	27 38	0.0	17.0	-105
VI 8	10 50	19 27	4 09	137	12 37.6	27 35	0.0	17.0	-98
16	10 19	18 56	3 37	137	12 37.4	27 31	0.0	17.0	-91
24	9 48	18 24	3 05	137	12 37.4	27 26	0.0	17.1	-85
VII 2	9 17	17 53	2 33	137	12 37.4	27 21	0.0	17.1	-78
10	8 46	17 21	2 01	136	12 37.5	27 16	0.0	17.1	-72
18	8 16	16 50	1 29	136	12 37.7	27 10	0.0	17.1	-65
26	7 45	16 19	0 57	136	12 38.0	27 04	0.0	17.1	-59
VIII 3	7 15	15 48	0 25	136	12 38.3	26 58	0.0	17.1	-53
11	6 45	15 17	23 49	136	12 38.8	26 52	0.0	17.0	-47
19	6 14	14 46	23 17	135	12 39.2	26 46	0.0	17.0	-41
27	5 44	14 15	22 46	135	12 39.8	26 41	0.0	17.0	-36
IX 4	5 14	13 44	22 14	135	12 40.4	26 35	0.0	17.0	-32
12	4 44	13 13	21 43	135	12 41.0	26 30	0.0	17.0	-29
20	4 14	12 42	21 11	135	12 41.6	26 25	0.0	17.0	-28
28	3 43	12 12	20 40	135	12 42.3	26 21	0.0	17.0	29
X 6	3 13	11 41	20 09	134	12 43.0	26 17	0.0	17.0	31
14	2 43	11 10	19 37	134	12 43.7	26 14	0.0	17.0	35
22	2 12	10 39	19 06	134	12 44.3	26 12	0.0	17.0	40
30	1 42	10 09	18 35	134	12 45.0	26 10	0.0	17.0	46
XI 7	1 11	9 38	18 04	134	12 45.6	26 09	0.0	17.0	52
15	0 40	9 07	17 34	134	12 46.2	26 09	0.0	17.1	59
23	0 09	8 36	17 03	134	12 46.7	26 10	0.0	17.1	65
XII 1	23 34	8 05	16 32	134	12 47.1	26 11	0.0	17.1	72
9	23 03	7 34	16 01	134	12 47.5	26 13	0.0	17.1	79
17	22 31	7 03	15 30	134	12 47.8	26 16	0.0	17.0	86
25	21 59	6 31	14 59	135	12 48.0	26 19	0.0	17.0	93
2013 I 2	21 28	6 00	14 29	135	12 48.2	26 23	0.0	17.0	100