

KG  
11366  
v. 704

D.

M.

*List*

+ 53°

+ 54°



4  
20.445  
518.  
20.4926  
~~4926~~

*[Red ink scribble]*

























53°

53°

11 0 61	10 1 06	89.4	24.8	193	12 19 7.6	19 56	82.6	288	233
X 11 2 59.3	3 57	85.6	49.9	449	23 5.8	24 45	65.4	515	469
3 2.2	4 01	9.56	8.7	-1.8	29 30.8	30 19	91.6	545	490
3 27.0	4 2	9.04	83.9	284	38 24.4	39 12	89.6	9.8	4.3
3 31.3	4 27	9.0	200	145	88 47.3	39 35	9.0	54.0	485
4 5-14.3	4 31	9.26	59.8	54.3	40 47.2	41 34	73.4	39.1	23.6
6 12.9	6 14	7.74	39.2	33.7	41 39.1	42 26	6.54	19.4	8.9
7 42.7	7 07	7.24	43.7	38.2	45 27	45 49	9.14	18.9	13.4
11 12.5	8 44	6.54	33.6	280	48 6.7	48 53	9.56	16.7	11.2
13 24.9	12 11	9.56	4.9	-0.7	49 16.3	50 02	7.56	31.5	26.3
13 38.8	14 23	9.0	37.2	316	49 21.4	50 07	9.16	34.8	29.3
22 25.0	14 34	9.0	21.8	163	49 30.4	50 15	9.04	52.4	46.9
24 58.4	23 23	8.84	28.7	19.6	51 14.2	52 03	8.84	10.4	4.9
28 54.3	25 56	8.84	21.3	168	51 45.6	52 31	8.34	20.1	14.6
31 26.9	29 50	9.24	12.8	7.2	51 58.5	52 43	9.36	84.1	28.6
32 28.2	32 22	9.46	33.3	27.7	52 42.3	53 27	9.04	44.1	41.6
33 37.5	33 24	8.04	3.0	-2.6	53 10.8	53 56	8.84	40.4	34.9
35 58.4	34 33	9.34	4.11	25.5	54 40.6	55 26	7.04	19.3	13.8
38 29.8	36 54	7.04	12.8	7.2	56 6.8	56 51	8.64	10.9	5.4
39 57.4	39 25	8.8	10.9	5.3	56 12.5	56 57	8.44	1.2	-4.3
40 9.6	40 46	9.46	57.1	45.5	58 0.8	58 46	8.86	14.0	8.5
47 57.1	41 4	7.84	49.2	43.6	12 59 30.3	13 0 15	8.56	15.3	9.8
49 17.8	48 51	9.56	59.5	53.9	0 54	0 54	8.34	1.1	-3.8
49 20.8	50 12	8.44	53.6	48.0	0 38.9	1 23	8.8	42.7	37.2
53 46.7	50 15	8.5	5.6	0.0	4 13.3	4 57	8.6	12.1	7.6
54 42.5	54 41	8.74	87.0	32.4	4 14.4	4 58	9.04	41.5	37.0
58 12.1	55 36	9.34	18.7	13.1	7 16.1	8 00	8.94	38.3	32.8
12 2.28	58 12.1	7.76	40.9	35.3	8 23.0	9 07	8.24	40.2	39.7
3 57	12 23	9.04	22.9	17.3	9 8.6	9 53	8.34	2.9	-2.6
4 46.1	3 57	9.46	54.1	48.5	11 4.0	11 48	9.34	12.3	6.8
5 9.4	4 46.1	9.34	28.8	23.2	14 2.5	14 45	9.04	44.5	39.0
8 16.3	5 38	9.04	36.4	30.8	14 56.1	15 39	8.04	28.2	22.7
11 22.4	6 00	9.04	36.4	30.8	21 10.1	21 53	6.34	29.5	24.4
11 59.9	8 16.3	8.34	31.5	25.9	23 30.0	24 13	7.84	57.0	51.6
12 5.6	12 23	9.56	46.0	40.4	25 30.0	26 13	8.74	54.4	49.0
16 13.4	12 56	8.54	21.2	15.6	25 38.5	26 21	9.36	41.0	35.6
16 36.9	17 04	8.34	59.8	54.3	26 52.7	27 35	8.86	40.5	35.1
17 54.0	17 27	9.46	3.7	-2.5	29 57.8	30 40	8.34	27.2	21.8
18 34.9	18 44	9.56	39.5	33.9	30 57.1	31 3.2	7.24	25.9	20.6
19 2.5	19 25	9.04	41.1	35.5					



33°

X	13 31 114	31 50	8.7A	21.0	15.7	XX	19 22 294	23 04	78A	56.6	52.0
XX	31 321	32 11	7.0A	19.1	13.8	XX	22 427	23 18	8.7A	15.3	10.7
XXXX	33 551	34 34	388A	388	33.6	XX	23 279	24 03	9.1A	25.7	21.1
XX	34 350	35 14	7.6A	51.3	46.1	XX	28 471	29 22	7.3B	32.0	26.5
XX	34 472	35 26	9.1A	5.7	52.5	XX	30 598	31 34	9.3B	8.7	-0.8
	34 477	35 27	7.1A	55.7	50.5	XX	31 182	31 52	8.9A	50.7	46.2
XX	34 555	35 34	9.3B	29.2	24.0	XX	33 171	33 51	8.4	40.7	35.9
XX	35 46	35 44	7.1A	30.5	25.3	XX	34 161	34 50	8.8	53.2	48.7
XX	36 194	36 58	8.9B	7.6	4.4	XX	36 388	37 13	8.2B	16.1	11.6
XXXX	42 376	43 16	8.8A	3.0	-1.4	XX	42 541	43 28	8.2R	25.9	21.4
XX	43 96	43 47	8.5A	5.7	52.7	XX	43 236	43 58	9.0A	49.7	45.3
	43 343	44 12	8.0A	22.6	17.5		43 312	44 05	9.0	46.8	42.4
XX	44 184	44 56	8.7A	2.4	-2.9		43 399	44 14	8.1B	13.8	9.4
XX	45 341	46 12	7.0A	59.9	54.8	XX	44 107	44 45	8.7	39.4	35.0
XX	46 296	47 02	7.2A	83.4	28.3	XX	45 390	46 10	7.3A	0.2	-4.1
XX	47 539	48 32	6.3A	2.3	-2.8	XX	46 456	47 19	9.0	50.7	46.4
XX	49 358	50 14	9.0B	19.0	13.9	XX	47 337	48 07	7.4A	11.1	7.8
XX	50 289	51 08	9.3B	17.2	12.1	XX	49 349	50 08	8.9A	5.7	53.6
	50 378	51 16	9.5B	7.1	35.1	XX	51 07	51 33	9.2A	2.2	-2.1
	50 480	51 26	9.2A	8.3	8.3	XX	51 120	51 44	7.5A	8.6	4.3
XX	53 365	54 14	7.3A	4.1	43.1	XX	51 193	51 51	8.8A	19.7	19.5
	54 373	55 15	8.0A	9.8	4.8	XX	52 319	53 04	8.6A	5.78	53.6
X	54 476	55 23	8.8B	38.1	33.1	XX	54 350	55 07	8.7	21.5	17.3
XXXX	59 134	59 57	7.7A	6.7	1.7	XX	15 2349	3 17	7.8A	52.5	48.5
XXXX	140 1310	2 09	7.0A	59.9	55.0	XX	3 11	3 32	7.3B	18.2	14.2
XX	2 15.0	2 53	8.0A	26.4	22.0	XX	3 169	3 48	7.5A	32.8	28.8
XX	6 160	6 54	8.8A	25.5	20.6	XX	4 194	4 50	7.1A	41.6	44.6
XX	6 309	7 09	9.3B	11.1	6.2	XX	5 182	5 49	8.9A	0.0	-3.9
XX	7 457	8 24	8.8A	23.5	18.6	XX	8 8.2	8 34	8.5A	8.18	27.9
XX	8 166	8 55	9.0	10.3	5.4	XX	8 11.9	8 43	7.5A	28.6	24.7
XX	10 118	10 80	7.0A	12.3	7.4	XX	9 517	10 23	9.1A	8.1	4.2
X	10 155	10 52	8.7	20.7	15.8	XX	10 394	16 10	8.8	16.5	12.8
X	10 583	11 35	9.0	27.6	22.8	XX	17 283	17 53	8.2B	35.7	31.4
XX	11 85	11 45	8.7	36.5	31.7	XX	23 180	23 48	8.7	40.2	41.5
XX	11 427	12 20	7.5A	56.4	51.7	XX	25 471	26 17	9.2B	34.8	31.1
XX	14 272	15 04	8.9	8.2	-0.8	XX	26 169	26 47	9.2A	36.2	32.5
XX	20 26	20 40	9.0	44.1	39.4	XX	26 577	27 23	9.3A	80.3	26.7
XX	21 373	22 14	8.4	16.3	11.6	XX	27 399	28 04	8.5	49.6	45.0
XX	22 18	22 39	9.0A	7.9	3.2	XX	29 383	30 07	8.3	33.9	30.5



53°

1872

mry

XX	15 31 129	15 31 42	88	54.5	51.1	XX	16 57 138	54.37	90	124	11
XX	34 278	34 57	93.6	26	-0.8	XX	54 160	54.40	90	137	12
XX	39 50.3	40 19	93.6	28.1	247	XX	56 473	54.10	75.6	155	14
XX	40 14.8	40 44	75.6	23.4	19.1	XX	57 592	58 23	89	86.3	35
XX	40 34.7	40 04	70.6	25.8	22.5	XX	58 9.6	58 27	88.0	54.1	53
XX	41 23.8	41 53	77.9	86	54	XX	658 482	59 12	89	22.7	21
XX	43 55.1	44 24	88	25.0	21.8	XX	170 434 17.4	7.7	78.0	24.4	23
XX	47 22.6	47 51	65.8	21.3	182	XX	1 7.6	1 31	8.2	0.9	0
XX	49 7.4	49 35	95.6	44.8	417	XX	1 45.0	2 10	8.5	20.5	19
XX	49 57.6	50 20	87.4	8.4	60	XX	2 36.1	3 0	8.3	56.1	55
XX	53 57.3	56 25	80.8	33.3	30.2	XX	2 45.8	3 10	9.0	22.8	21
XX	58 25.0	58 53	60.8	19.0	15.9	XX	6 11.8	6 35	9.5	16.1	15
XX	59 38.4	60 06	8.2	37.3	342	XX	11 26.9	11.50	9.2	59.3	58
XX	59 38.9	00 06	8.9	51.3	48.3	XX	11 39.1	12 3	8.5	46.7	45
XX	15 59 57.9	00 19	88	48.5	48.5	XX	12 18.9	12 42	9.0	48.5	47
XX	16 0 49.8	1 17	89	76	47	XX	13 44.0	14 8	8.6	32.7	31
XX	2 47.9	3 09	82.6	91.2	38.3	XX	15 9.6	15 33	8.8	47.2	46
XX	2 44.3	3 11	84.4	53.8	50.9	XX	15 21.0	15 43	9.3	18.0	12
XX	5 43.7	6 11	80.8	17.4	145	XX	15 23.1	15 46	8.8	54.6	53
XX	6 55.3	7 22	75.8	24.8	23	XX	15 29.6	15 52	8.6	38.4	37
XX	12 16.3	12 43	70.4	86.3	33.7	XX	18 37.3	19 0	6.0	33.6	32
XX	15 24.6	15 51	88	52.7	50.2	XX	18 58.7	19 21	8.8	59.0	58
XX	19 3.1	19 29	90.4	57.4	48.9	XX	19 1.3	19 24	9.1	52.5	51
XX	21 36.9	22 03	79.6	27.4	25.0	XX	20 29.7	20 52	8.1	28.2	28
XX	28 28.9	28 55	80.6	18.0	15.7	XX	21 59.7	22 23	9.5	15.3	15
XX	30 31.9	30 57	90	16.0	13.8	XX	25 38.1	26 1	9.3	20.8	20
XX	32 46.9	33 12	53.4	71.2	9.0	XX	26 47.8	27 10	9.4	1.8	1
XX	32 49.2	33 14	50.4	13.4	11.2	XX	26 53.1	27 18	9.0	11.2	10
XX	38 21.2	38 46	83.4	20.7	19.5	XX	27 2.3	27 25	8.9	11.0	10
XX	38 58.3	39 23	90.4	54.3	52.2	XX	27 16.5	27 39	8.8	15.0	14
XX	39 13.6	39 39	84.4	8.3	6.2	XX	34 26.4	34 49	9.0	15.2	14
XX	39 20.4	39 45	89.4	51.8	49.7	XX	34 48.6	35 35	9.0	27.5	27
XX	42 27.9	42 53	95.2	57.8	49.8	XX	35 43.3	36 6	8.6	44.4	44
XX	42 40.5	43 04	85.4	39	19	XX	36 9.5	37 32	8.9	21.8	21
XX	42 42.2	43 06	90.6	0.7	-0.3	XX	37 18.1	37 41	8.4	24.2	23
XX	46 2.9	46 27	70.4	9.6	18.8	XX	37 43.9	38 6	9.0	24.0	23
XX	46 3.9	46 30	90	41.5	39.7	XX	38 54.1	39 16	8.5	31.1	30
XX	49 9.6	49 34	83.4	10.7	8.9	XX	40 58.8	41 24	5.9	50.4	50
XX	50 13.8	50 38	54.6	20.7	18.9	XX	41 46.3	42.8	9.0	21.5	21



53.

XX	42.42.3	43.5	9.0	29.1	29
XX	43.5.5	43.28	8.4	32.4	32
XX	43.26.4	43.39	7.5A	28	28
XX	44.13.5	44.37	9.0B	40.6	41
XX	45.10.9	45.34	8.7A	36.1	36
XX	49.51.9	50.15	8.8	27.5	28
XX	49.59.8	50.23	8.8	17.8	18
XX	51.15.4	51.38	9.0	59.0	59
XX	52.10.4	52.23	8.9	45.7	46
XX	53.56.9	54.20	8.0	27.8	28
XX	56.51.8	57.15	8.9	16.3	16
XX	57.11.0	57.34	8.7B	53.9	54
XX	57.47.4	58.10	7.8B	37.9	38
XX	57.51.9	58.13	8.5	20.7	21
XX	1.50.4.18	2.13	9.1R	43.7	44
XX	2.1.1	2.24	8.1B	21.0	21
XX	2.43.4	3.06	8.8	57.5	58
XX	2.47.9	3.10	9.0	55.1	55
XX	3.58.4	4.21	9.0	40.7	41
XX	4.19.1	4.42	7.8A	10.2	10
XX	5.57.6	6.20	9.0	12.2	12
XX	7.38.2	8.01	8.8	15.3	15
XX	7.42.9	8.05	7.8R	28.2	28
XX	8.1.1	8.24	9.3R	27.6	28
XX	8.29.7	8.52	9.0	26.8	27
XX	8.54.2	9.17	8.8	28.2	29
XX	9.41.4	10.04	8.3R	31.6	32
XX	10.4.7	10.27	8.8B	39.5	39
XX	10.42.9	11.15	9.0	28.7	29
XX	10.44.2	11.07	8.3R	38.1	38
XX	11.41.6	12.04	8.8R	36.6	37
XX	12.56.2	13.14	7.3G	13.8	14
XX	14.36.4	14.59	8.0A	41.6	42
XX	15.9.6	15.31	8.6A	32.7	33
XX	17.44.3	18.07	8.9	25.7	26
XX	18.9.3	18.32	8.0B	20.3	21
XX	18.20.1	18.43	8.2A	56.7	57
XX	20.17.8	20.40	9.2R	42.9	43

18

XX	20.41.7	21.04	6.5	13.7	14
XX	20.54.2	21.17	9.1R	45.0	45
XX	22.48.6	23.11	9.0	22.6	23
XX	23.3.1	23.25	8.9	24.1	24
XX	24.38.4	25.01	7.0A	51.0	51
XX	25.58.1	26.21	9.1A	55.8	56
XX	26.23.5	26.46	9.3B	51.1	51
XX	27.49.6	28.12	9.1R	5.5	6
XX	34.17.8	34.40	8.2	3.4	4
XX	35.15.0	35.38	8.5A	45.0	46
XX	36.45.9	37.08	8.3A	10.9	11
XX	37.26.9	37.49	9.1A	54.1	55
XX	37.46.8	38.09	9.1A	52.4	53
XX	38.22.6	38.45	9.0A	40.8	41
XX	38.49.6	39.12	9.2R	16.4	17
XX	39.9.9	39.32	8.3	0.5	1
XX	39.32.7	39.55	8.8A	35.8	36
XX	40.9.3	40.32	8.3A	17.0	18
XX	40.24.3	40.47	6.0A	43.8	45
XX	40.54.0	41.17	8.8A	7.8	9
XX	43.39.7	44.12	9.0A	30.6	32
XX	44.0.9	44.23	9.0A	46.5	47
XX	44.4.3	44.27	8.5A	40.8	42
XX	44.25.0	44.48	8.3	15.0	16
XX	44.30.2	44.53	8.4R	2.8	4
XX	44.39.2	45.02	9.3B	50.7	52
XX	46.33.7	46.56	9.1R	17.4	18
XX	48.3.1	48.56	9.3R	54.1	55
XX	49.0.9	49.23	9.0	27.4	28
XX	50.19.3	50.42	8.9	24.4	25
XX	53.24.2	53.47	9.5R	50.5	52
XX	54.5.1	54.28	8.2A	44.2	45
XX	55.7.3	55.30	9.3A	18.9	20
XX	57.35.7	57.58	8.5A	32.3	33
XX	57.49.0	58.12	8.9	5.1	6
XX	58.4.4	58.27	8.8	15.0	16
XX	58.8.2	58.31	8.4A	55.1	56
XX	59.52.9	60.16	8.6A	33.3	35



530

h R.A

1872

Mag

S

XX	19. 1.38.3	2	02	9.1B	6.5	8
+	1.39.7	2	03	5.4A	11.7	13
+	1 40.7	2	04	8.9	7.8	9
+	2 41.7	3	05	8.8A	5.0	6
+	3 0.3	3	24	8.8R	33.8	35
+	3 10.7	3	34	8.8R	35.6	37
+	3 57.2	4	21	9.0B	37.2	39
+	4 32.3	4	56	9.1A	25.4	27
+	5 3.7	5	27	8.5A	51.8	53
+	5 7.9	5	31	7.5A	24.4	26
+	5 21.6	5	45	9.2A	34.3	36
+	5 26.8	5	50	9.0	58.0	59
+	6 9.3	6	33	9.2A	35.3	37
+	6 43.7	7	07	9.2B	29.7	31
+	7 29.6	7	53	9.4A	31.8	33
+	7 47.7	8	11	9.0A	24.4	26
+	9 9.9	9	33	9.0A	42.8	44
+	9 36.0	10	10	9.0	3.6	5
+	9 41.7	10	05	9.0A	37.6	39
+	10 8.2	10	32	9.4A	43.4	45
+	10 13.9	10	37	9.2A	46.7	48
+	10 53.8	12	19	8.7A	52.5	54
+	13 4.3	13	28	9.0A	18.7	20
+	13 47.0	14	01	4.5A	6.1	8
+	14 23.6	14	47	8.6	52.4	54
+	14 58.0	15	22	8.1A	12.3	14
+	15 2.8	15	26	7.9A	8.1	20
+	15 3.9	15	29	9.0	58.9	60
+	15 20.7	15	44	7.8B	42.2	44
+	15 28.4	15	52	8.7A	3.0	5
+	15 42.2	16	06	8.5A	23.7	25
+	16 34.2	16	58	8.1A	5.4	7
+	16 47.3	17	11	8.5A	16.5	18
+	18 37.2	19	01	8.8A	36.6	38
+	19 25.2	19	49	9.1A	19.9	21
+	19 33.7	19	57	9.2A	29.7	31
+	20 42.6	21	06	9.0A	29.7	31
+	21 53.9	22	17	8.5A	29.2	31
+	21 54.4	22	18	9.4B	9.1	11

+	25 2.4	25	27	7.8A	40.3	42
+	26 37.9	27	01	8.1A	40.8	43
+	27 38.2	28	02	8.5	44.9	46
+	28 12.8	28	36	9.0	52.6	54
+	28 43.5	29	07	9.0	54.8	56
+	28 59.7	29	23	9.0	57.2	59
+	29 11.4	29	35	9.0	47.2	49
+	29 23.2	29	57	9.0B	31.0	33
+	30 21.5	30	46	8.9	9.0	11
+	31 44.6	32	09	8.6	53.0	55
+	32 5.4	32	30	7.0A	13.9	16
+	32 43.3	33	08	8.5A	3.0	5
+	35 29.9	35	54	9.2B	28.4	30
+	35 42.8	36	07	7.7B	50.9	53
+	35 46.8	36	11	9.0A	16.0	18
+	35 48.2	36	13	8.6A	18.5	21
+	36 14.6	36	39	9.4A	9.1	11
+	36 40.9	37	05	9.0A	20.5	23
+	36 43.7	37	08	9.0	38.4	41
+	37 0.5	37	25	9.0	59.2	61
+	39 26.8	39	51	9.0	58.2	60
+	40 46.5	41	11	8.5	39.8	42
+	44 14.1	44	39	8.9B	33.6	36
+	45 32.5	45	57	7.1B	24.2	26
+	46 34.7	46	59	8.9	56.0	58
+	46 42.8	47	07	9.0	46.9	49
+	47 8.2	47	33	7.7B	32.4	34
+	47 25.5	47	50	9.0	26.5	29
+	47 54.5	48	19	9.0	9.0	11
+	48 15.2	48	40	9.0	24.5	27
+	50 40.5	51	05	8.0A	55.2	57
+	51 55.1	52	20	8.1A	59.7	62
+	52 28.2	52	53	9.5B	55.8	58
+	52 28.7	52	53	8.2A	59.8	62
+	52 56.7	53	21	8.0A	23.9	26
+	53 32.5	53	57	8.9	4.0	6
+	54 29.2	54	54	8.5A	31.8	34
+	55 32.4	55	57	8.7A	10.6	13
+	55 44.2	56	09	9.0	57.1	59



530

<i>h</i>	<i>m</i>	<i>sec</i>		<i>h</i>	<i>m</i>	<i>sec</i>	
X 19 57 14.7	57 39 9.0	48.8	51	X 20 29 17.9	29 45 9.4A	37.6	41
57 22.9	57 47 8.19	6.7	9	X 30 49.9	31 10 8.8	19.5	23
X 58 5.7	58 30 9.0	37.3	40	XX 31 48.5	32 16 8.5A	50.6	54
X 59 6.0	59 31 8.3	28.9	31	31 58.0	32 26 8.0A	57.5	62
X 20 0 4.7	0 31 8.0A	1.9	1	32 19.0	32 47 9.0	12.2	17
0 30.8	1 03 8.5	41.8	45	XX 33 30.1	33 58 9.0A	59.7	64
1 48.6	2 15 9.0	2.2	5	XX 33 38.5	34 06 8.4B	20.7	25
X 2 33.2	3 00 8.6	31.4	34	33 41.6	34 09 8.2B	13.0	17
X 4 15.4	4 42 9.0B	34.1	37	33 58.2	34 26 9.2A	59.3	64
XX 7 32.5	7 59 8.6	47.3	51	XX 35 20.0	35 48 9.0	18.3	22
XX 8 42.7	8 09 8.0B	28.2	31	XX 35 32.1	36 00 9.5B	55.2	59
8 51.3	9 18 9.3A	58.6	61	35 38.3	36 04 8.6A	47.0	51
9 1.2	9 28 9.4A	54.6	57	36 13.2	36 41 8.8A	45.4	50
9 31.4	9 58 9.0	5.0	8	XX 36 15.3	36 43 9.0A	56.4	60
XX 9 50.7	10 17 8.6B	13.3	16	XX 37 24.4	37 52 7.8A	46.3	45
X 11 31.6	11 58 7.0A	42.8	45	37 36.6	38 04 9.0	17.6	21
12 8.8	12 35 9.3A	39.0	42	37 43.4	38 11 9.0	11.1	15
XX 14 2.6	14 29 8.6A	3.4	6	37 46.7	38 14 8.8	30.3	34
14 7.3	14 34 6.5A	51.8	54	37 54.5	38 22 7.6A	54.0	57
14 9.0	14 36 8.6A	34.1	37	38 15.7	38 43 8.8A	3.3	7
XX 16 46.3	17 07 6.5A	7.7	11	XX 38 33.1	39 01 8.7	33.5	37
XX 18 47.8	17 14 9.4A	57.4	60	40 44.6	41 02 8.6A	58.7	62
XX 18 28.6	18 55 9.0B	10.2	13	40 50.5	41 18 9.0A	5.1	9
XX 20 6.4	20 33 8.5A	52.1	55	41 12.9	41 40 9.2A	27.4	31
20 31.2	20 59 9.0	34.0	37	41 23.6	41 51 7.9A	29.3	33
20 37.9	21 05 8.2B	4.9	8	42 1.5	42 29 7.9A	51.7	54
21 18.0	21 46 9.2A	57.3	61	43 44.5	44 12 9.0	13.4	17
XX 22 23.1	22 51 8.5A	32.3	35	44 0.8	44 28 9.0B	26.6	30
22 26.5	22 54 8.2A	18.6	22	44 24.0	44 52 7.5B	22.2	26
22 29.6	22 57 8.5A	33.0	36	44 32.1	45 00 8.8	32.9	36
XX 23 17.9	23 45 9.0A	21.8	25	45 1.7	45 30 6.6A	41.8	45
XX 25 19.3	25 47 8.5A	3.9	7	45 3.4	45 32 8.6A	49.9	53
25 48.1	26 13 7.7A	38.4	42	45 10.3	45 39 8.3	59.1	63
XX 25 57.8	26 25 7.3A	13.2	16	47 16.9	47 45 8.0A	32.3	36
XX 26 14.1	26 42 9.4B	36.6	40	47 18.8	47 47 8.2A	29.9	33
XX 27 32.1	28 00 9.3A	44.6	48	XX 49 10.7	49 39 6.5A	58.1	61
X 27 49.3	28 17 8.2A	37.9	41	XX 50 7.6	50 36 7.1B	12.9	16
XX 28 23.0	28 51 7.0A	39.7	43	50 25.3	50 54 9.0	3.1	6
XX 29 13.5	29 41 6.8A	57.3	61	50 46.6	51 15 8.6B	10.8	14



530

	h	m	sec	mag	S		h	m	sec	mag	S	
XX	20	50	50.4	51 19	9.0	57.1	61	XX	21	10	38.0	11 10 9.0 7.8 12
			51 0.6	51 29	9.0	31.9	35	X	11	14.8	11 46 9.0 20.0 24	
XX	51	27.2	51 56	8.0A	15.4	19	XX	12	15.2	12 47 9.1A	12.4 16	
	52	11.9	52 40	9.0	23.1	27	X	12	29.9	13 01 5.8A	23.4 27	
XX	52	28.0	52 57	8.8	15.2	19	XX	12	46.1	13 18 8.1	46.5 50	
	52	48.1	53 17	8.5A	3.1	6	XX	13	56.4	14 28 7.4A	34.0 38	
	53	54.5	54 23	8.5	25.6	29	XX	14	4.7	14 36 8.6A	59.1 63	
	56	20.0	56 49	8.7	58.0	62	XX	15	10.3	15 42 7.6A	20.6 24	
XX	57	21.3	57 50	9.0	47.3	52		15	12.8	15 44 9.2B	42.8 47	
XX	58	43.6	59 12	9.0	57.1	62		15	40.9	16 13 9.5A	17.2 21	
XX	59	12.9	59 41	8.7A	45.1	49	XX	15	41.5	16 14 7.8A	34.3 38	
	59	18.5	59 47	8.0A	23.1	27	XX	16	44.1	17 17 9.0A	50.2 54	
+	59	23.9	59 52	8.3A	23.0	26	XX	16	44.3	17 17 8.3A	59.0 63	
XX	59	28.3	59 57	7.1A	45.9	49	XX	18	7.0	18 40 7.2A	36.7 41	
XX	21	0	51.8	1 22	8.8A	39.9	43	XX	18	7.7	18 40 8.6A	40.5 44
XX	1	7.2	1 38	8.0B	5.4	9	XX	19	27.9	20 00 8.5A	12.2 16	
XX	1	37.0	2 08	8.5A	49.7	53	XX	19	54.8	20 27 8.7A	27.1 31	
	1	37.9	2 08	8.5A	52.1	56	XX	20	1.7	20 34 8.9A	0.4 4	
	1	40.0	2 10	8.6A	47.0	51	XX	20	52.4	21 25 8.9	40.1 44	
XX	1	55.8	2 26	8.3A	26.5	30	XX	20	56.8	21 29 8.5A	52.1 56	
XX	2	13.5	2 44	7.4A	38.2	42	XX	24	22.1	24 55 8.1	9.5 14	
	2	13.9	2 44	9.0	42.0	46	XX	25	40.8	26 13 9.0	36.9 41	
	2	21.0	2 52	7.8A	22.5	26	XX	26	24.8	26 57 8.8A	16.7 21	
XX	3	35.4	4 06	9.3B	1.4	5	XX	27	19.0	27 52 7.5A	22.5 27	
XX	3	59.6	4 30	8.7A	4.0	8	XX	27	43.8	28 16 9.2A	7.6 12	
XX	4	5.5	4 36	8.5A	11.9	16	XX	27	49.8	28 22 8.7A	9.7 14	
XX	4	44.7	5 15	8.9A	2.2	6	XX	28	19.4	28 52 8.5	28.3 33	
XX	4	47.9	5 18	9.0A	46.0	50	XX	29	2.3	29 35 7.4A	40.5 45	
XX	5	25.6	5 56	8.1A	9.8	14	XX	29	20.9	29 53 9.4B	15.9 20	
XX	6	54.1	7 25	8.1B	31.3	35	XX	30	42.7	31 16 8.0A	1.8 6	
XX	6	57.4	7 28	7.5A	50.5	54	XX	32	12.3	32 46 7.5A	59.5 64	
	7	11.1	7 42	6.5A	9.7	14	XX	32	20.8	32 54 9.4B	6.6 11	
	7	37.8	8 08	8.9	46.7	51	XX	32	50.0	33 24 6.5B	23.8 28	
XX	7	47.8	8 18	7.0A	14.2	18	XX	33	40.5	34 14 8.8	4.6 9	
XX	8	0.2	8 31	8.0A	18.3	22	XX	34	11.8	34 45 8.0A	7.5 12	
	8	4.1	8 35	8.3B	52.3	56	XX	34	19.3	34 53 8.4	1.5 6	
XX	9	9.2	9 40	9.4B	24.7	29	XX	34	19.4	34 53 9.0	29.8 34	
XX	9	45.7	10 16	8.6A	43.1	47	XX	34	40.3	35 14 8.8	58.5 63	
XX	9	47.8	10 18	7.5A	52.9	57	XX	35	9.0	35 43 7.6B	18.8 23	



53°

XX	35	35.2	36	40	8.9	22.4	27	XX	53	34.2	54	11	8.5A	32.9	37
XX	35	45.8	36	20	8.6	40.0	44	XX	54	21.2	54	58	9.4B	50.2	55
XX	37	16.4	37	51	8.8	24.5	29	XX	54	30.0	55	07	9.2A	29.2	34
XX	37	56.7	38	31	7.6A	6.4	11	XX	54	44.6	55	21	8.8A	22.7	27
XX	38	3.6	38	38	6.8A	54.3	59	XX	54	51.5	55	28	7.5B	24.8	29
XX	39	8.1	39	43	8.2A	37.5	42	XX	55	24.0	56	01	9.0A	28.3	33
XX	40	3.7	40	38	9.0A	47.0	51	XX	55	44.7	56	21	9.0A	27.6	32
XX	40	17.4	40	52	8.6A	50.7	55	XX	56	19.1	56	56	8.4A	17.0	22
XX	41	12.9	41	47	9.4A	51.6	56	XX	56	23.8	57	00	7.9A	5.7	10
XX	41	28.7	42	03	9.4B	26.9	31	XX	59	28.2	60	05	8.5	13.8	18
XX	42	35.6	43	10	9.4A	37.1	61	XX	59	32.0	60	09	8.5A	3.1	8
XX	43	14.2	43	49	8.8	26.5	31	XX	59	47.9	60	24	9.0	58.4	63
XX	43	17.8	43	52	8.0A	42.9	47	XX	22	7.0	60	10	8.9	39.7	44
XX	44	24.1	44	59	9.1A	54.1	59	XX	0	14.5	0	52	9.0	40.3	45
XX	44	24.2	44	59	8.6A	50.6	55	XX	1	21.3	1	59	9.0A	48.6	53
XX	44	25.7	45	00	8.0A	9.1	14	XX	1	47.0	2	25	9.0	27.4	32
XX	44	27.5	45	02	8.0A	42.0	47	XX	2	50.3	3	28	9.0	58.3	63
XX	44	31.0	45	07	8.3A	31.1	36	XX	3	16.3	3	54	8.8	34.4	39
XX	44	33.8	45	09	9.1A	41.7	46	XX	4	1.9	4	39	9.0A	27.1	32
XX	44	56.6	45	32	8.0A	33.8	38	XX	4	8.8	4	46	8.3A	26.6	33
XX	46	22.0	46	58	8.6A	36.5	41	XX	4	52.3	5	30	7.7R	50.7	55
XX	46	55.8	47	31	9.1A	20.0	25	XX	5	29.9	6	07	9.3R	59.7	64
XX	47	12.6	47	48	8.7A	48.0	52	XX	5	50.5	6	28	8.9	3.6	8
XX	47	20.8	47	56	9.0A	1.9	6	XX	6	55.1	7	33	9.0	9.5	14
XX	48	15.8	48	51	6.5A	18.7	23	XX	6	55.8	7	33	8.8A	42.2	47
XX	48	28.8	49	04	9.1A	36.6	41	XX	7	2.4	7	40	8.6A	24.5	29
XX	48	36.0	49	12	9.4A	10.2	45	XX	7	22.9	8	00	9.0B	22.8	27
XX	48	38.0	49	14	9.4B	7.3	12	XX	7	34.7	8	12	8.5A	16.0	20
XX	48	50.5	49	26	9.1A	9.8	14	XX	7	38.8	8	16	9.0A	46.8	51
XX	48	51.7	49	27	8.9A	36.9	41	XX	7	45.1	8	23	9.0A	10.7	15
XX	49	47.8	50	23	9.2A	27.9	32	XX	7	55.5	8	33	9.1A	11.1	16
XX	49	51.4	50	27	9.0A	54.0	58	XX	8	5.8	8	43	9.3A	49.6	54
XX	49	51.9	50	27	7.2A	14.8	19	XX	8	49.7	9	27	9.2A	49.5	54
XX	49	56.4	50	32	9.0A	49.0	54	XX	8	55.0	9	33	9.2A	0.1	5
XX	49	57.8	50	33	8.4A	8.8	6	XX	9	31.4	10	19	8.8A	45.9	50
XX	50	5.6	50	41	8.0A	29.1	34	XX	9	36.3	10	14	9.2A	47.6	52
XX	50	13.8	50	49	9.1A	12.8	17	XX	9	55.1	10	33	9.4B	34.8	39
XX	51	24.2	52	00	8.9A	55.8	60	XX	10	4.4	10	42	9.3A	5.5	10
XX	53	21.3	53	57	8.8	47.2	52	XX	10	11.6	10	49	9.0R	38.1	43



53°

	h	m	sec	Mag	S		h	m	sec	Mag	S
XX	20	30	50.4	51 19	9.0	57.1 61	XX	21	10	38.0	11 10 9.0 7.8 12
		51	0.6	51 29	9.0	31.9 35			11	14.8	11 46 9.0 20.0 24
XX	51	27.2	51 56	8.0A	15.4 19		XX	12	15.2	12 47 9.1A	12.4 16
	52	11.9	52 40	9.0	23.1 27			12	29.9	13 01 5.8A	23.4 27
XX	52	28.0	52 57	8.8	15.2 19		XX	12	46.1	13 18 8.1	46.5 50
	52	48.1	53 17	8.5A	3.1 6		XX	13	56.4	14 28 7.4A	34.0 38
	53	54.5	54 23	8.5	25.6 29		XX	14	4.7	14 36 8.6A	59.1 63
↑	56	26.0	56 49	8.7	58.0 62		XX	15	10.3	15 42 7.6A	20.6 24
XX	57	21.3	57 50	9.0	47.3 52			15	12.8	15 44 9.2B	42.8 47
XX	58	43.6	59 12	9.0	57.1 62			15	40.9	16 13 9.5A	17.2 21
XX	59	12.9	59 41	8.7A	45.1 49			15	41.5	16 14 7.8A	34.3 38
	59	18.5	59 47	8.0A	23.1 27		XX	16	44.1	17 17 9.0A	50.2 54
+	59	23.9	59 52	8.3A	23.0 26		XX	16	44.3	17 17 8.3A	59.0 63
XX	59	28.3	59 57	7.1A	45.9 49		XX	18	7.0	18 40 7.2A	36.7 41
XX	21	0	55.8	1 22	8.8A	39.9 43	XX	18	7.7	18 40 8.6A	40.5 44
XX	1	7.2	1 38	8.0B	5.4 9		XX	19	27.9	20 00 8.5A	12.2 16
XX	1	37.0	2 08	8.5A	49.7 53		XX	19	54.8	20 27 8.7A	27.1 31
	1	37.9	2 08	8.5A	52.1 56		XX	20	1.7	20 34 8.9A	0.4 4
	1	40.0	2 10	8.6A	47.0 51		XX	20	52.4	21 25 8.9	40.1 44
XX	1	55.8	2 26	8.3A	26.5 30		XX	20	56.8	21 29 8.5A	52.1 56
XX	2	13.5	2 44	7.4A	38.2 42		XX	24	22.1	24 55 8.1	9.5 14
	2	13.9	2 44	9.0	42.0 46		XX	25	40.8	26 13 9.0	36.9 41
XX	2	21.0	2 52	7.8A	22.5 26		XX	26	24.8	26 57 8.8A	16.7 21
XX	3	35.4	4 06	9.3B	1.4 5		XX	27	19.0	27 52 7.5A	22.5 27
+	3	59.6	4 30	8.7A	4.0 8		XX	27	43.8	28 16 9.2A	7.6 12
XX	4	5.5	4 36	8.5A	11.9 16		XX	27	49.8	28 22 8.7A	9.7 14
XX	4	44.7	5 15	8.9A	2.2 6		XX	28	19.4	28 52 8.5	28.3 33
XX	4	47.9	5 18	9.0A	46.0 50		XX	29	2.3	29 35 7.4A	40.5 45
XX	5	25.6	5 56	8.1A	9.8 14		XX	29	20.9	29 53 9.4B	15.9 20
XX	6	54.1	7 25	8.1B	31.3 35		XX	30	42.7	31 16 8.0A	1.8 6
XX	6	57.4	7 28	7.5A	50.5 54		XX	32	12.3	32 46 7.5A	59.5 64
XX	7	11.1	7 42	6.5A	9.7 14		XX	32	20.8	32 54 9.4B	6.6 11
	7	37.8	8 08	8.9	46.7 51		XX	32	50.0	33 24 6.59	13.8 28
XX	7	47.8	8 18	7.0A	14.2 18		XX	33	40.5	34 14 8.8	4.6 9
XX	8	0.2	8 31	8.0A	18.3 22		XX	34	11.8	34 45 8.0A	7.5 12
	8	4.1	8 35	8.3B	52.3 56		XX	34	19.3	34 53 8.4	1.5 6
XX	9	9.2	9 40	9.4B	24.7 29		XX	34	19.4	34 53 9.0	29.8 34
XX	9	45.7	10 16	8.6A	43.1 47		XX	34	40.3	35 14 8.8	58.5 63
XX	9	47.8	10 18	7.5A	52.9 57		XX	35	9.0	35 43 7.6B	18.8 23



53°

<del>XX</del>	21	35	32.0	36	40	8.9	22.4	27	<del>XX</del>	1	53	34.2	54	11	8.5A	32.7	37
<del>XX</del>	35	45.8	35	20	8.6	40.0	44		<del>XX</del>	34	21.2	54	58	9.4B	50.2	55	
<del>XX</del>	37	16.4	37	51	8.8	24.5	29		<del>XX</del>	54	30.0	55	07	9.2A	29.2	34	
<del>XX</del>	37	56.7	38	31	7.6A	6.4	11		<del>XX</del>	54	44.6	55	21	8.8A	22.7	27	
<del>XX</del>	38	3.6	38	38	6.8A	54.3	54		<del>XX</del>	54	51.5	55	28	7.5B	24.8	29	
<del>XX</del>	39	8.1	39	43	8.2A	37.5	42		<del>XX</del>	55	24.0	56	01	9.0A	28.3	33	
<del>XX</del>	40	3.7	40	38	9.0A	47.0	51		<del>XX</del>	55	44.7	56	21	9.0A	27.6	32	
<del>XX</del>	40	12.4	40	52	8.6A	50.7	55		<del>XX</del>	56	19.1	56	56	8.4A	17.0	22	
<del>XX</del>	41	12.9	41	47	9.4A	51.6	56		<del>XX</del>	56	23.8	57	00	7.9A	5.7	10	
<del>XX</del>	41	28.7	42	03	9.4B	26.9	31		<del>XX</del>	59	28.2	60	05	8.5	13.8	18	
<del>XX</del>	42	35.6	42	10	9.4A	57.1	61		<del>XX</del>	59	32.0	60	09	8.5A	3.1	8	
<del>XX</del>	43	14.2	43	49	8.8	26.5	31		<del>XX</del>	59	47.9	60	24	9.0	58.4	63	
<del>XX</del>	43	12.8	43	52	8.0A	42.9	47		<del>XX</del>	22	0	60	10	8.9	39.7	44	
<del>XX</del>	44	24.1	44	59	9.1A	54.1	59		<del>XX</del>	0	14.5	0	52	9.0	40.3	45	
<del>XX</del>	44	24.2	44	59	8.6A	50.6	55		<del>XX</del>	1	21.3	1	59	9.0A	45.6	53	
<del>XX</del>	44	25.7	45	00	8.0A	9.1	14		<del>XX</del>	1	47.0	2	25	9.0	27.4	32	
<del>XX</del>	44	27.5	45	02	8.0A	42.0	47		<del>XX</del>	2	50.3A	3	28	9.0	58.3	63	
<del>XX</del>	44	31.0	45	07	8.3A	31.1	36		<del>XX</del>	3	16.3	3	54	8.8	34.4	39	
<del>XX</del>	44	33.8	45	09	9.1A	41.7	46		<del>XX</del>	4	1.9	4	39	9.0A	27.1	32	
<del>XX</del>	44	56.6	45	32	8.0A	33.8	38		<del>XX</del>	4	8.8	4	46	8.3A	26.6	33	
<del>XX</del>	46	22.0	46	58	8.6A	36.5	41		<del>XX</del>	4	52.3	5	30	7.7B	50.7	55	
<del>XX</del>	46	55.8	47	31	9.1A	20.0	25		<del>XX</del>	5	29.9	6	07	9.3B	59.7	64	
<del>XX</del>	47	12.6	47	48	8.7A	48.0	52		<del>XX</del>	5	50.5	6	28	8.9	3.6	8	
<del>XX</del>	47	20.8	47	56	9.0A	1.9	6		<del>XX</del>	6	55.1	7	33	9.0	9.5	14	
<del>XX</del>	48	15.8	48	51	6.5A	18.7	23		<del>XX</del>	6	55.8	7	33	8.8A	42.2	47	
<del>XX</del>	48	28.8	49	04	9.1A	36.6	41		<del>XX</del>	7	2.4	7	40	8.6A	24.5	29	
<del>XX</del>	48	36.0	49	12	9.4A	10.2	45		<del>XX</del>	7	22.9	8	00	9.0B	22.8	27	
<del>XX</del>	48	38.0	49	14	9.4B	7.3	12		<del>XX</del>	7	34.7	8	12	8.5A	16.0	20	
<del>XX</del>	48	50.5	49	26	9.1A	9.8	14		<del>XX</del>	7	38.8	8	16	9.0A	46.8	51	
<del>XX</del>	48	56.7	49	27	8.9A	36.9	41		<del>XX</del>	7	45.1	8	23	9.0A	10.7	15	
<del>XX</del>	49	47.8	50	23	9.2A	27.9	32		<del>XX</del>	7	55.5	8	33	9.1A	11.1	16	
<del>XX</del>	49	51.4	50	27	9.0A	54.0	58		<del>XX</del>	8	5.8	8	43	9.3A	49.6	54	
<del>XX</del>	49	51.9	50	27	7.2A	14.8	19		<del>XX</del>	8	49.7	9	27	9.2A	49.5	54	
<del>XX</del>	49	56.4	50	32	9.0A	49.0	54		<del>XX</del>	8	55.0	9	33	9.2A	0.1	5	
<del>XX</del>	49	57.8	50	33	8.4A	8.8	6		<del>XX</del>	9	31.4	10	09	8.8A	45.9	50	
<del>XX</del>	50	5.6	50	41	8.0A	29.1	34		<del>XX</del>	9	36.3	10	14	9.2A	47.6	52	
<del>XX</del>	50	13.8	50	49	9.1A	12.8	17		<del>XX</del>	9	55.1	10	33	9.4B	34.8	39	
<del>XX</del>	51	24.2	52	00	8.9A	55.8	60		<del>XX</del>	10	4.4	10	42	9.3A	5.5	10	
<del>XX</del>	53	21.3	53	57	8.8	47.2	52		<del>XX</del>	10	11.6	10	49	9.0B	38.1	43	

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System



530

h						m sec						
22	10 21.4	11 00	8.4A	48.7	54	22	28 54.1	29	34	9.0A	43.3	48
	10 27.1	11 06	7.8A	56.9	62		29 32.1	30	12	8.9A	35.9	45
	10 47.7	11 27	8.9A	13.3	18	++	29 49.7	30	29	9.0A	47.2	52
	10 49.5	11 28	9.0	18.6	24		29 52.2	30	33	8.4A	27.4	32
	11 40.4	12 19	8.5A	47.1	52		30 44.3	31	25	8.5A	2.2	7
	12 55.1	13 34	8.2A	46.1	51	++	30 59.8	31	40	7.3A	40.1	45
	13 8.9	13 49	8.9A	51.3	56		31 18.6	32	00	9.4B	29.8	35
	13 23.7	14 07	8.0A	51.4	56		31 27.5	32	8	9.3A	34.1	39
	15 2.4	15 41	8.3B	4.9	10		31 32.7	32	14	9.4B	10.2	15
	15 15.5	15 44	8.7	2.4	9		31 34.3	32	15	9.1A	12.3	17
	15 27.3	16 06	8.5	42.3	47		31 45.9	32	27	9.0A	11.5	16
	15 36.8	16 16	8.8	59.3	64	XX	32 25.5	33	6	9.4B	57.4	62
	15 41.4	16 20	8.5	48.8	54	++	33 52.6	34	34	8.9B	55.6	61
	15 51.9	16 32	9.4B	9.8	15		33 55.8	34	47	9.5B	43.6	49
	16 24.1	17 04	8.5	24.6	30		34 25.5	35	6	6.0B	5.5	10
	17 50.6	18 31	8.5	35.1	40	+	34 50.0	35	31	9.0	10.0	15
	18 0.4	18 38	8.7	5.6	11	+	35 29.8	36	11	8.8A	19.5	24
	19 4.8	19 33	8.9	58.3	63	XX	35 41.4	36	22	8.0A	37.6	43
	19 11.9	19 50	8.0B	39.6	45	XX	36 25.9	37	7	6.0A	8.8	14
	19 17.6	19 56	8.4B	59.2	64		36 29.4	37	11	7.3A	27.4	34
	20 7.2	20 45	9.0	20.8	26		36 47.2	37	29	9.4B	15.0	20
	20 8.5	20 46	7.1B	4.8	10		36 59.3	37	41	7.4B	59.7	65
	20 14.4	20 52	7.1B	12.0	17		38 37.9	39	20	9.0B	30.3	35
	20 19.0	20 57	8.1B	2.5	7		38 50.8	34	33	9.0	19.9	25
	20 38.0	21 16	8.6B	5.1	10		39 23.4	40	5	8.4A	57.4	62
	20 48.5	21 27	7.6B	21.8	27	++	39 35.3	40	17	9.0	55.1	60
	20 55.9	21 35	8.9A	54.0	59	XX	39 40.2	40	22	8.5A	34.9	40
	21 8.8	21 48	8.5A	46.0	51	++	40 48.5	41	30	8.3	4.7	10
	21 32.3	22 11	9.0A	44.8	50	XX	40 53.0	41	35	8.1L	2.2	7
	21 36.9	22 16	9.3B	36.2	61		40 54.5	41	36	8.8B	11.3	16
	23 41.8	24 24	6.5B	30.1	35		41 13.4	41	55	7.6B	59.3	64
	23 46.7	24 26	8.7	21.2	27	XX	42 15.3	42	57	9.0	15.9	21
	24 9.4	24 48	9.0	2.6	8	XX	42 25.1	43	7	8.6	23.3	28
	24 34.1	25 14	8.8A	39.2	45		42 47.4	43	29	6.0B	39.2	44
	25 1.0	25 41	8.7A	32.9	38	++	43 35.7	44	18	9.3B	5.8	11
	26 34.3	27 14	6.5A	16.8	22	XX	43 42.4	44	24	8.4	54.4	59
	27 16.1	27 56	9.0	24.3	29		43 46.8	44	29	8.1B	16.4	22
	27 37.7	28 19	9.1B	24.6	30	+	44 6.1	44	48	8.0B	9.7	15
	28 24.2	29 4	7.3A	19.9	25	XX	44 37.5	45	19	8.8	0.1	5



[illegible]



53°

	<i>h</i>	<i>m</i>	<i>sec</i>					
	23	34	22.3	35	11	9.0 <sup>9</sup>	33.5	39
XX			49					
		34	53.4	35	42	8.6A	53.5	59
		35	26.3	36	15	8.3	48.0	54
XX		38	51.0	39	40	8.5A	56.3	62
XX		39	42.1	40	31	8.3	23.7	30
XX		41	15.4	42	4	7.8A	53.8	60
		41	46.9	42	36	8.4	3.3	9
XX		42	28.9	43	18	9.0A	55.8	62
		42	46.4	43	35	9.3A	54.4	60
		43	1.6	43	51	9.0	33.7	40
XX		43	27.0	44	16	6.79	24.0	30
		43	37.8	44	27	9.0	17.1	23
XX		44	7.2	44	56	8.9	12.9	19
XX		45	26.8	46	16	7.72	28.3	34
XX		45	35.6	46	26	8.62	25.0	31
			50				+6	
		45	47.2	46	37	9.0	28.3	34
XX		47	11.3	48	1	8.42	43.9	50
XX		47	37.6	48	28	9.45B	45.7	52
		47	48.3	48	38	7.82	47.0	53
XX		49	14.1	50	4	9.0	15.5	21
XX		49	15.7	50	6	8.22	9.5	15
XX		51	41.5	52	31	8.5	54.8	61
		51	56.4	52	46	8.6	3.9	10
		52	11.0	53	1	8.09B	52.9	59
		52	14.2	53	4	8.5	11.2	17
			51				+6	
XX		53	6.1	53	57	8.8A	29.4	35
XX		53	20.2	54	11	9.0A	6.5	7
XX		55	0.9	55	52	9.2A	19.5	26
XX		55	10.0	56	1	8.7A	44.7	51
XX		55	47.1	56	38	9.4A	42.6	49
XX		56	55.1	57	46	7.22	28.1	34
		57	10.0	58	1	9.2A	51.6	58
		57	30.5	58	21	9.0A	58.0	64
XX		57	34.7	58	26	8.7	2.4	8
XX		59	18.3	0	9	8.0A	41.5	47
		59	22.4	0	21	9.1A	55.1	16
		59	30.7	0	21	8.6	10.4	16
		59	42.5	0	33	9.0A	57.2	63
			52				+6	



XX	h	m	sec							h	m	sec							
XX	0	0	52.3	1	44	9.0A	53.7	60		0	30	39.1	31	35	9.0	45.2	51		
X		1	11.9	2	4	8.3A	0.3	6		XX	30	52.0	31	48	8.3A	54.7	61		
XX		2	1.4	2	53	8.7	32.7	39			33	43.8	34	39	9.0B	15.0	21		
XX		4	6.9	4	59	8.0B	31.7	38				46.7	34	43	8.5	58.8	64		
		4	14.9	5	7	9.0	7.6	14				52.4	34	49	8.9A	9.7	15		
XX XX		5	27.8	6	20	9.0	39.6	46				55.2	34	52	9.3B	31.4	35		
X		6	8.1	7	0	8.2	39.4	45		XX	35	47.1	36	44	8.5	48.0	54		
XX		6	57.5	7	49	8.2	1.3	7			36	10.8	37	8	9.0A	35.3	41		
		7	23.5	8	15	7.1B	16.4	22				12.0	37	10	7.5A	21.0	27		
XX X		8	45.8	9	38	7.0L	18.3	14			37	38.8	38	36	8.5A	41.8	48		
XX		9	0.9	9	54	6.8B	51.3	57				39.2	38	36	8.0A	51.5	57		
X		10	21.1	11	14	9.0	1.4	7				58.6	38	56	9.1B	29.4	35		
XX X		12	29.9	13	23	8.6	24.0	30			38	36.0	39	33	8.1A	49.2	55		
XX		14	46.8	15	40	8.5	28.7	35			40	20.7	41	18	8.6A	22.0	25		
		15	0.0	15	53	7.1B	50.2	56		XX		57.4	41	44	9.3A	73.6	20		
		15	4.2	15	57	8.3	31.7	38			41	6.4	42	3	9.3A	13.4	19		
		15	10.7	16	4	8.1L	28.8	35		XX	45	4.9	46	2	8.9B	40.8	46		
		15	27.2	16	20	9.0	44.8	51			4	11.9	46	10	8.9	49.8	55		
		15	30.0	16	23	8.5L	31.1	37				16.2	46	14	8.7	17.5	22		
XX		15	53.1	16	47	8.8B	37.8	44		XX		59.4	46	57	8.9	44.1	49		
X		16	2.5	16	57	9.0	21.5	27		XX	47	10.2	48	8	8.0A	35.3	40		
		16	3.4	16	57	8.5	52.8	59				28.9	48	27	9.0	53.0	59		
X		16	25.6	17	20	7.3A	1.0	7				42.7	48	41	8.5	19.4	25		
		16	33.3	17	27	9.0B	34.2	40		XX		45.0	48	43	9.0	14.4	20		
		17	8.1	18	2	8.4A	4.2	10		XX	49	7.9	50	6	8.4B	36.7	42		
		18	38.5	19	32	9.0A	42.4	48		XX		52.6	50	51	9.1B	38.5	43		
		19	35.3	20	29	9.0	15.9	22			50	33.7	51	31	8.9	48.2	53		
		23	47.5	24	41	8.1B	9.7	16				38.8	51	33	8.9	57.4	56		
		23	48.8	24	43	5.2B	43.3	49			51	12.5	52	11	8.8	59.5	64		
		23	52.4	24	47	8.2	30.0	36				18.3	52	17	8.8	57.0	62		
		24	13.3	25	8	7.4B	1.0	7				41.4	52	50	8.8	23.7	29		
		24	28.4	25	20	8.5	8.8	15		XX	52	37.7	53	36	8.0A	48.1	53		
		24	47.8	25	43	7.3B	19.2	25			53	2.0	54	1	8.9	2.4	7		
		25	15.8	26	11	9.0	9.9	16		XX		48.7	54	48	9.2B	44.9	50		
		26	13.0	27	8	7.3B	15.9	22				57.4	54	56	8.5	28.5	33		
XX		27	27.2	28	22	7.1B	24.4	30		XX	54	41.9	55	41	8.5	7.9	13		
		28	6.0	29	1	5.8B	22.2	28			55	42.0	56	41	8.5	40.4	45		
XX		28	40.5	29	35	7.4B	52.4	58				45.9	56	45	7.0L	25.3	30		
		28	56.0	29	51	4.1B	5.9	12			56	12.0	57	12	9.0	54.5	59		



53°

h	m					h	m				
0	38 16.10	57 16	8.9	49.2	54	22 8.7	23 12	8.8A	23.6	29	
	57 0.0	58 0	8.9	20.8	26	22 26.8	23 30	9.0A	29.5	34	
	15.8	58 16	8.6	49.8	55	22 48.5	23 51	8.9A	14.5	19	
	33.0	58 33	9.0	59.7	65	23 1.1	24 4	7.4A	16.4	21	
	55.7	58 56	8.8	49.9	55	23 20.6	24 23	8.4	43.9	49	
	38 2.8	59 3	8.8	35.3	40	23 31.2	24 34	8.6	59.4	64	
h	59 43.7	0	44	6.8L	27.3	24 1.3	25 4	8.9	31.2	36	
+	0 27.3	1	27	8.8	22.3	24 26.3	25 29	9.1A	6.8	12	
+	1 2.5	2	2	8.6	51.3	26 25.0	27 28	8.7A	58.9	64	
	1.9.8	2	10	7.0A	38.2	27 17.6	28 21	7.0A	57.3	63	
+	1 56.5	2	56	8.7A	42.9	28 10.9	29 14	8.8A	59.8	65	
	1 59.0	2	59	8.8	32.3	28 26.3	29 29	8.1B	22.3	27	
+	2 35.8	3	36	9.4B	22.6	29 1.4	30 4	8.2B	50.9	56	
+	4 20.8	5	21	8.2A	37.9	29 17.6	30 21	9.0	18.5	23	
+	5 48.5	6	48	9.4B	14.5	30 4.6	31 8	7.5L	51.8	57	
+	7 19.4	8	19	9.0	39.8	30 15.2	31 19	8.0B	23.9	29	
+	48.8	8	49	8.9	58.8	30 52.5	31 56	9.3B	49.2	54	
+	8 11.5	9	11	8.3B	0.1	30 58.6	32 3	7.8L	42.9	48	
+	9 12.6	10	13	8.0B	9.1	31 1.7	32 6	7.0B	8.0	13	
+	10 6.4	11	6	9.0	0.5	31 13.0	32 17	9.4B	21.8	27	
+	9.5	11	9	8.7	43.1	32 56.1	34 0	9.2B	22.7	28	
+	11 19.4	12	19	8.9	3.9	33 9.2	34 13	9.5B	57.6	63	
+	12 10.5	13	10	7.3A	52.3	34 34.7	35 39	8.6	13.2	18	
+	13 2.6	14	3	8.8A	53.7	36 44.9	37 49	9.0	43.2	48	
+	14 15.4	15	15	9.0A	48.3	38 22.7	39 27	7.2A	16.7	22	
+	14 52.5	15	52	8.9A	29.0	38 43.6	39 48	8.0A	9.9	15	
+	15 8.5	16	8	8.0A	36.0	39 29.8	40 34	9.0A	35.5	8	
+	15 26.6	16	29	9.1A	34.4	39 46.8	40 51	9.5B	26.6	32	
+	16 7.5	17	9	8.7A	38.2	40 0.0	41 4	8.9A	9.1	14	
+	16 12.5	17	14	8.7	11.4	40 17.5	41 21	8.8A	11.3	16	
+	19 27.2	20	29	9.4B	24.1	40 54.5	41 58	9.2A	26.6	32	
+	19 36.5	20	38	8.5	15.2	41 7.3	42 11	8.5A	0.9	6	
+	20 16.9	21	19	8.1A	36.8	41 27.6	42 32	9.1A	28.8	34	
+	20 22.3	21	24	8.5A	28.3	41 31.4	42 35	9.4B	29.6	35	
+	23.1	21	25	8.7A	33.8	41 37.3	42 41	8.4A	19.6	25	
+	47.0	21	49	8.5	51.7	42 18.1	43 22	8.7	8.9	14	
+	53.3	21	55	8.7	2.2	42 44.6	43 49	9.2A	38.4	43	
+	21 8.4	22	10	8.6B	30.9	43 2.9	44 7	8.4A	10.8	16	
+	19.5	22	21	8.1A	23.7	43 29.0	44 34	9.0B	9.2	14	



1883phae:proj:1

9	44 19.4	45 24	8.7 R	11.7	17	2	14 12.0	15 20	9.0 A	33.1	38
4	44 21.6	45 27	9.0 R	31.6	37	14 17.5	15 25	8.2 A	32.7	38	
9	45 13.3	46 18	8.2 R	11.8	16	14 25.7	15 34	8.2 A	7.1	12	
1	45 25.4	46 31	9.2 B	39.6	45	15 28.1	16 36	9.3 A	1.1	6	
9	45 30.8	46 36	7.0 B	28.4	33	16 24.6	17 34	8.9	27.9	33	
4	46 17.5	47 22	8.5	36.9	42	16 28.5	17 37	8.2 S	38.6	44	
6	48 38.3	49 43	8.8	38.1	43	16 31.1	17 40	8.5	29.3	34	
2	48 40.5	49 46	8.9	53.9	59	18 14.5	19 20	8.8 S	43.9	49	
4	52 18.6	53 25	9.0	18.4	23	18 15.5	19 24	9.0 B	45.1	50	
3	52 22.4	53 28	8.9 A	43.2	48	19 16.6	20 26	8.5	13.1	78	
5	52 41.6	53 48	5.0 A	47.4	52	20 0.4	21 9	8.0 B	12.1	17	
7	53 47.7	54 54	7.9 S	59.7	65	20 32.5	21 41	9.4 B	22.4	27	
6	57 3.1	58 9	8.0 S	36.4	41	20 50.4	21 59	9.4 B	18.1	23	
3	58 36.7	59 43	8.8	53.7	59	22 8.2	23 17	9.0	36.5	41	
7	59 35.7	0 42	8.9 S	38.3	43	22 22.0	23 31	9.0	39.7	45	
9	59 48.3	0 54	8.9	56.2	61	22 43.6	23 52	9.0	19.4	24	
4	0 20.1	1 27	8.5 S	38.7	44	22 48.5	23 57	7.5 A	54.8	60	
8	0 24.6	1 32	6.0 S	11.0	15	25 25.9	26 35	8.5	2.8	8	
3	0 51.4	1 58	8.7	25.7	31	25 28.8	26 36	8.5	41.7	47	
1	1 59.0	3 6	8.8	51.9	57	28 36.5	29 45	8.8	47.6	53	
8	2 44.6	3 51	9.5 B	35.4	40	30 13.1	31 22	9.0 A	38.7	44	
3	3 26.5	4 32	8.1 S	31.3	36	30 43.7	31 53	9.3 B	4.2	9	
5	4 1.5	5 8	9.4 B	2.9	8	31 0.5	32 10	9.0 A	17.0	21	
8	4 5.5	5 12	8.9	13.6	19	31 5.0	32 15	8.4	54.1	58	
2	4 30.0	5 37	8.4 B	9.6	15	32 8.0	33 18	8.7 B	33.2	37	
5	4 57.2	6 4	9.2 B	21.7	29	36 19.6	37 30	6.8 A	27.1	31	
2	5 8.1	6 10	8.5 B	51.1	56	37 19.7	38 30	6.8 A	19.8	24	
4	5 13.0	6 20	9.4 B	36.4	41	37 25.8	38 36	8.3 A	29.6	34	
6	7 59.3	9 6	8.4 A	53.6	59	37 27.0	38 37	9.4 B	34.6	39	
2	8 4.1	9 12	8.4 A	47.6	53	37 35.0	38 45	8.0 A	16.3	20	
4	8 18.0	9 26	9.0 A	3.1	8	38 27.0	39 38	7.8 A	32.0	36	
8	8 31.8	9 40	7.5 S	36.7	42	39 23.7	40 35	6.5 A	18.8	23	
1	9 5.0	10 13	9.0	25.2	30	42 3.2	43 14	8.9	25.4	29	
5	10 34.6	11 43	8.8	31.3	38	42 29.8	43 41	8.7	7.0	11	
5	10 38.0	11 46	9.2 A	2.1	7	43 19.1	44 30	7.8 R	11.8	16	
1	11 16.1	12 24	6.5 A	50.8	56	44 22.4	45 33	8.7	57.1	61	
3	11 43.6	12 53	9.2 B	46.8	52	44 31.8	45 43	8.8	49.7	54	
6	11 54.0	13 2	8.6 A	34.7	40	47 1.6	48 13	8.3	45.7	50	
4	13 36.1	14 44	9.0 A	5.0	10	47 21.5	48 33	8.5	49.1	53	



530

47 48.8	49	1	7.7A	12.7	17	XX	24 38.9	25	54	9.3A	125.4	29
48 19.5	49	31	8.6A	42.1	46	XX	26 10.2	27	25	9.2A	17.0	21
48 41.4	49	53	8.5	47.3	51	XX	26 11.9	27	27	8.4A	29.2	33
49 14.8	50	27	8.5A	45.1	49	XX	26 56.5	28	13	9.1A	15.2	19
51 24.7	52	27	9.2A	9.7	14		27 37.2	28	52	8.3A	23.1	27
51 52.4	53	4	7.8A	47.0	51		30 3.8	31	19	9.0A	31.1	35
52 15.0	53	27	8.5A	42.0	46		32 19.5	33	35	9.0	38.5	41
55 50.8	57	3	9.0	53.9	58		32 49.7	34	6	9.0	4.0	7
56 47.7	58	0	8.8A	32.9	37		35 4.1	36	20	8.0A	27.1	30
56 53.3	58	5	8.0A	32.5	36		36 25.1	37	41	9.4B	29.9	33
56 54.0	58	6	8.5	55.3	59		36 42.8	37	59	8.6A	39.4	42
56 55.9	58	8	9.3B	54.4	58	XX	37 42.0	38	58	8.8	31.2	34
57 22.4	58	34	9.2B	47.1	51		37 43.7	39	0	9.0A	22.7	26
57 24.4	58	36	9.4B	49.6	54		40 15.8	41	32	8.7A	64	9
59 19.1	0	31	8.4A	37.5	41	XX	40 36.0	41	52	8.2A	40.0	43
1 3.5	2	16	9.5B	45.4	49	XX	41 45.8	43	2	8.5A	2.8	6
1 8.6	2	22	9.3B	8.4	12	XX	44 19.5	45	35	8.5	7.1	10
1 25.9	2	39	9.5B	57.9	62		44 29.3	45	45	9.0	26.8	30
7 14.6	8	28	8.5A	20.5	24		47 25.2	48	42	8.8A	39.3	482
8 54.1	10	7	7.5A	35.5	39		47 27.8	48	45	6.8A	34.3	37
8 53.4	10	8	8.0A	19.2	14	XX	5.0 26.1	51	43	6.8A	27.1	30
9 44.1	10	57	9.4B	37.1	41	XX	51 4.9	52	22	8.9A	19.5	22
10 31.8	11	46	8.8A	36.4	40		54 52.7	56	10	8.4A	11.3	14
10 35.2	11	49	9.0A	31.6	36	XX	55 20.6	56	38	6.0A	37.0	40
11 59.0	13	14	8.3	58.7	63	XX	57 31.8	58	49	9.4B	44.9	48
13 2.2	14	16	8.7	43.7	48	XX	58 36.9	59	54	8.0A	28.8	32
13 52.0	15	6	8.7	3.8	8	XX	59 11.1	0	28	9.0A	7.6	11
14 0.0	15	14	8.7	33.8	38	XX	4 1 27.8	2	45	9.3B	23.5	26
15 0.9	16	15	6.3A	24.6	29	XX	1 37.9	2	56	8.8A	18.9	22
15 39.0	16	54	9.5B	2.4	6		1 45.2	3	3	8.5A	21.6	25
17 59.4	19	14	8.7	41.0	45	XX	2 40.8	3	59	9.0	59.3	62
19 31.2	20	46	8.7A	46.8	51	XX	3 57.8	5	16	8.2A	20.4	23
19 49.6	20	5	8.9A	9.3	13		4 0.0	5	18	9.5B	5.3	8
20 32.3	21	47	9.4B	9.2	13	XX	5 25.9	6	44	5.0A	14.0	17
21 26.6	22	42	8.8	59.5	63	XX	6 32.8	7	51	8.2B	37.4	40
21 41.6	22	57	9.0A	54.0	58	XX	7 22.4	8	40	8.0A	9.6	13
21 50.2	23	5	8.4A	45.1	49		10 0.6	11	19	8.0A	30.5	23
23 37.7	24	52	8.2	5.6	10		10 6.1	11	24	9.3B	19.9	23
23 59.2	25	14	8.8A	27.0	31		10 26.6	11	45	9.0A	55.0	58



	h	m	sec					
XXXX	12	45.3	13	53	7.0A	9.6	13	
XX	14	5.0	15	23	9.0	4.8	8	
	14	34.0	15	42	8.0B	26.7	30	
	14	54.2	16	12	8.4A	16.4	19	
XX	15	7.9	16	26	8.5A	9.1	12	
XX	16	10.2	17	28	9.4B	6.4	9	
XX	17	3.2	18	24	8.5A	6.5	9	
XX	17	13.1	18	32	8.4A	35.2	38	
XX	18	32.9	19	51	9.0B	32.7	36	
	18	47.4	20	6	9.0	23.2	26	
XX	19	29.6	20	49	9.0B	43.6	47	
XX	20	11.9	21	31	9.0	29.7	33	
XX	20	34.4	21	53	6.0A	35.7	39	
X	20	57.9	22	17	9.5B	54.8	58	
XX	25	28.5	26	47	9.1A	9.9	13	
	26	18.9	27	38	8.5A	10.1	13	
XX	26	33.0	27	52	9.0	43.0	46	
	26	48.9	28	5	8.4A	28.8	32	
	28	29.8	29	49	5.4A	10.5	13	
	28	55.9	30	15	8.8B	10.6	14	
X	30	31.3	31	50	8.3A	17.5	19	
X	31	51.4	32	10	9.0	47.0	49	
XX	31	51.7	33	11	8.8	27.3	29	
-	32	58.0	33	17	8.8A	24.2	26	
XX	33	37.6	34	57	9.0A	11.5	13	
X	33	55.2	35	14	9.0B	22.0	24	
-	36	20.9	37	40	7.0B	1.4	3	
X	37	54.4	39	13	8.5A	36.7	39	
-	38	1.7	39	21	7.8B	6.3	8	
	38	10.9	39	30	9.4B	47.8	50	
X	39	27.4	40	46	8.7A	28.8	31	
XX	45	41.3	47	00	5.0A	30.3	32	
XX	46	26.2	47	47	9.4B	40.3	42	
XX	46	50.3	48	10	9.5B	11.1	13	
XX	48	20.0	49	40	8.0A	12.0	15	
XX	49	24.4	50	44	9.1B	21.2	23	
XX	51	9.0	52	29	8.6A	32.4	34	
XX	51	51.6	53	12	8.7A	17.1	19	
	52	3.0	53	23	9.3A	19.6	22	

	$\frac{h}{m}$	$\frac{sec}{m}$						
<del>XX</del>	4	52	13.0	53	35	8.8A	1.5	3
<del>XX</del>		53	46.8	55	7	9.3B	7.7	10
		53	49.2	55	9	9.2B	10.1	12
X		55	5.1	56	25	8.7A	18.6	21
		55	10.2	56	30	9.0A	29.9	32
X		56	16.2	57	36	8.0A	0.7	3
<del>XXXX</del>		57	17.5	58	37	8.5L	38.8	41
<del>XX</del>		58	28.1	59	48	8.1G	31.0	33
<del>XXX</del>	A	59	34.5	1	14	7.9A	1.3	3
<del>XX</del>	5	0	18.0	1	38	7.5A	15.6	17
		1	20.4	2	41	9.2A	56.8	59
XX		1	43.6	3	5	9.4B	27.1	29
		1	51.6	3	13	9.0A	22.4	24
<del>XX</del>		2	26.7	3	48	8.0A	50.3	52
-		3	8.4	4	29	6.5A	1.6	4
<del>XX</del>		3	13.4	4	33	9.2B	3.1	5
		5	4.0	6	25	8.3	18.1	20
		5	10.6	6	32	9.0	8.6	11
		5	31.0	6	52	9.0B	24.6	27
		5	34.1	6	55	8.8A	0.3	2
X		5	35.9	6	57	10.5	25.2	27
		5	50.5	7	11	9.0	40.3	42
		5	52.1	7	13	8.8B	30.6	33
		8	9.1	9	30	9.0	48.6	51
X		10	59.3	12	20	9.0A	22.9	25
-		11	8.1	12	29	9.0A	28.9	31
		11	11.6	12	33	9.4A	40.2	42
		11	21.6	12	43	9.2A	30.9	33
		11	35.1	12	56	9.0A	50.6	53
		11	39.0	13	0	9.0A	56.5	58
X		11	57.8	13	19	9.0	12.1	14
-		12	8.5	13	29	8.9A	25.4	27
<del>XX</del>		12	18.0	13	39	9.3B	55.3	57
<del>XX</del>		13	9.6	14	31	8.5A	42.1	49
<del>XXX</del>		13	59.1	15	20	9.0	8.8	11
<del>XX</del>		15	41.5	17	2	8.1A	27.7	30
		15	51.1	17	12	8.7	38.3	40
		16	0.1	17	21	9.2A	55.9	57
		16	29.7	17	51	9.3A	58.9	60



530

XX	16	42.2	18 03	9.3A	56.4	57	XX	52	57.1	54 19	9.0A	49.7	50
XX	18	12.6	19 34	7.3A	17.3	18	XX	56	33.8	57 56	8.0A	8.5	8
XX	18	55.1	20 16	8.8	32.4	33	XX	59	8.6	0 30	9.0A	38.6	31
XX	19	3.0	20 24	7.7A	2.0	3	+	59	19.1	0 41	8.0A	38.4	39
XX	19	30.3	20 51	8.2A	13.4	14	XX	0	3.3	1 25	8.2A	50.2	50
XX	22	30.7	23 52	9.4B	8.8	10	XX	4	32.5	5 54	9.3B	50.2	50
XX	27	12.9	28 34	8.5	28.4	29	XX	4	35.9	5 58	8.7	31.2	31
XX	27	42.4	29 03	9.0	46.8	47	XX	19.3	7 41	7.5A	41.8	42	
XX	28	18.5	29 39	9.0	26.3	27	XX	6	41.4	8 03	9.0A	41.2	41
XX	29	36.6	30 58	6.3A	24.3	25	XX	10	1.2	10 23	5.8A	30.5	31
XX	29	46.7	31 08	9.4A	26.6	28	XX	11	46.8	13 09	7.5A	7.1	7
XX	29	50.6	31 12	9.4B	14.1	15	XX	12	10.7	13 33	8.2A	17.8	18
XX	30	34.1	31 55	9.1A	25.4	26	XX	14	4.2	15 26	8.5A	7.9	8
XX	30	41.7	32 04	9.2A	27.5	28	XX	15	33.7	16 56	9.1A	0.1	0
XX	33	45.2	35 07	8.5A	13.4	14	XX	16	17.3	17 39	8.3A	7.9	8
XX	34	37.6	36 00	9.4B	43.7	45	+	19	17.0	20 39	9.0A	55.0	55
XX	36	42.2	38 04	8.9B	44.8	46	XXX	19	29.4	20 51	7.9A	51.1	51
XX	36	47.4	38 09	8.6B	43.6	44	XXXX	21	44.2	23 06	9.0A	44.3	44
XX	37	9.6	38 32	8.5A	57.9	58	XXX	25	29.9	26 52	8.0B	35.2	35
XX	37	53.0	39 15	9.0	28.0	29	XX	26	4.5	27 26	8.8A	38.1	38
XX	39	0.3	40 22	8.8	58.8	60	XX	29	21.8	30 44	7.6A	31.0	31
XX	39	11.9	40 34	9.0	26.5	27	XX	34	38.2	32 00	9.0	1.6	2
XX	39	15.4	40 37	8.9	8.9	10	XX	37	23.2	32 45	8.5A	7.6	7
XX	39	31.5	40 53	8.9	22.8	24	XX	31	29.8	32 52	9.0	10.0	9
XX	40	10.2	41 32	9.0	46.1	47	XX	32	28.4	33 50	6.5	25.7	25
XX	41	12.0	42 34	9.2B	52.5	53	XX	33	35.1	34 57	7.3A	12.9	12
XX	41	16.7	42 39	9.3A	16.3	17	XX	34	4.4	35 26	8.5A	46.4	45
XX	42	43.1	44 05	9.0A	56.9	58	XX	35	12.9	36 40	8.9A	41.0	40
XX	43	50.7	45 13	8.0A	25.5	26	XX	36	45.6	38 41	9.1A	16.5	16
XX	43	54.3	45 16	9.0B	25.0	26	XX	37	58.2	39 21	7.8A	11.0	10
XX	44	35.3	45 57	8.2A	32.0	33	XX	38	9.4	39 31	8.5	55.8	55
XX	44	49.9	46 12	8.5A	18.6	19	XX	39	13.7	40 36	8.7A	8.0	7
XX	45	44.0	47 06	9.0	58.1	58	XX	42	25.9	43 48	9.0	32.7	31
XX	47	45.2	49 07	8.7	31.8	32	XX	44	22.0	45 44	8.9	37.6	36
XX	47	59.6	49 22	9.4B	17.0	17	XX	45	49.2	47 10	8.5	1.6	0
XX	51	21.8	52 44	9.0A	31.2	31	XX	49	32.7	50 54	8.6A	16.9	15
XX	51	34.2	52 56	9.1B	11.9	12	XX	50	44.4	52 05	9.0	10.5	9
XX	51	39.7	53 02	9.0A	46.0	46	XX	50	53.2	52 14	7.4A	34.5	33
XX	52	33.4	53 55	8.5A	32.8	33	XX	51	32.8	52 54	9.3B	8.8	8



h	m	sec	h	m	sec	h	m	sec	h	m	sec	h	m	sec	h	m	sec
XX	6	51	55.5	6	53	16	9.0	37.5	36	XX	7	29	24.2	30	43	9.0	0.9
XX	54	31.2		55	52		8.8	49.5	48	XX	30	18.9	31	38		8.2	30.2
XX	55	19.3		56	40		8.8	15.8	16	XX	32	44.4	34	03		9.1	35.1
XX	56	9.7		57	31		8.5	41.8	41	XX	34	25.0	35	44		9.4	16.0
XX	57	13.3		58	34		8.9	19.7	18	XX	37	7.3	38	26		8.9	31.2
XX	57	20.8		58	42		9.0	54.3	53	XX	38	19.5	39	38		9.1	54.7
XX	58	37.7		59	59		9.0	42.8	41	XX	41	39.8	42	59		9.3	58.5
XX	58	53.8		00	15		8.4	28.5	27	XX	42	33.3	43	52		8.5	8.7
XX	59	22.5		0	43		9.0	25.3	24	XX	42	52.8	44	12		9.3	11.7
XX	1	0.5		2	21		9.4	11.3	20	XX	43	9.5	44	29		9.2	21.7
XX	1	9.5		2	30		9.2	17.0	16	XX	44	45.9	46	05		9.2	21.7
XX	2	43.7		4	05		9.3	4.2	3	XX	46	56.3	48	16		8.8	16.1
XX	3	4.2		4	25		8.0	49.7	48	XX	48	33.3	49	52		8.7	44.9
XX	3	5.9		4	27		9.3	50.9	49	XX	48	46.7	50	06		9.4	51.3
XX	3	37.2		4	58		8.9	54.6	53	XX	49	42.7	51	02		9.1	22.9
XX	6	50.4		8	11		8.8	34.4	33	XX	50	52.1	52	11		9.3	34.4
XX	10	11.2		11	32		9.0	34.2	33	XX	52	9.3	53	28		9.3	53.7
XX	11	8.2		12	29		9.4	25.1	23	XX	52	20.8	53	39		7.7	9.2
XX	11	10.8		12	32		8.0	7.2	5	XX	52	26.9	53	45		8.7	35.8
XX	13	39.0		14	00		9.3	50.4	48	XX	58	8.6	59	24		8.9	42.9
XX	13	55.4		14	16		9.2	55.1	53	XX	58	16.3	59	34		8.2	58.7
XX	14	28.6		15	49		9.3	27.8	26	XX	8	0 2.8	12	0		7.0	39.9
XX	15	15.4		16	36		8.9	3.7	2	XX	2	29.1	3	47		9.4	40.9
XX	15	32.4		16	53		8.4	29.5	27	XX	3	52.2	5	10		8.5	22.1
XX	15	42.8		17	04		9.2	3.8	2	XX	4	28.2	5	46		8.6	41.8
XX	16	16.2		17	37		8.7	47.3	45	XX	6	21.9	7	40		8.4	21.8
XX	16	23.3		17	44		9.1	14.0	12	XX	8	39.8	9	58		9.0	11.5
XX	17	12.4		18	33		8.9	28.5	27	XX	9	4.3	10	22		7.7	38.7
XX	18	50.1		20	11		9.0	10.7	9	XX	9	4.8	10	23		9.4	0.5
XX	20	16.2		21	37		9.0	57.6	56	XX	9	12.6	10	31		8.7	31.1
XX	20	36.4		21	59		9.3	53.1	52	XX	10	39.4	12	17		9.1	1.6
XX	21	4.2		22	25		9.1	26.0	24	XX	11	46.2	13	04		8.5	31.7
XX	21	14.2		22	35		9.3	17.2	15	XX	11	51.2	13	09		9.2	5.0
XX	22	46.2		24	07		8.5	52.7	51	XX	11	52.8	13	11		9.3	50.1
XX	26	23.5		27	44		8.7	40.3	38	XX	11	34.3	13	12		9.3	31.5
XX	27	44.5		29	05		9.0	44.9	43	XX	12	11.9	13	30		9.4	2.3
XX	27	50.9		29	12		8.9	36.4	39	XX	12	40.8	13	59		8.8	27.0
XX	28	28.8		29	30		8.7	0.8	52	XX	12	49.7	14	08		6.0	40.5
XX	28	51.4		30	12		8.7	51.8	50	XX	14	9.3	15	39		8.9	16.3



8	15	6.5	8	16	23	9.2A	6.9	53	4	XX	9	6	1.2	7	14	9.0A	13.04	9
	16	57.8		18	16	7.7A	53.5		52	XX		6	10.0	7	23	9.4A	51.3	47
XX	17	43.7	XX	19	01	8.7A	40.6	XX	58	XX	XX	7	3.5	8	16	8.7A	30.7	27
	17	59.3		19	10	8.7A	27.0	XX	24	XX	XX	7	4.2	8	17	8.5A	16.9	13
XX	20	30.8	XX	21	48	8.5A	36.4	XX	33	XX	XX	8	40.1	9	53	8.8A	5.5	1
XX	21	44.6	XX	22	59	6.4A	35.4	XX	32	XX	XX	8	55.0	10	08	9.1A	18.4	14
XX	26	19.2	XX	27	36	8.8A	6.0	XX	3	XX	XX	10	16.7	11	30	7.0A	4.0	0
XX	26	45.4	XX	28	02	9.1A	13.3	XX	10	XX	XX	12	19.7	13	33	8.5	32.6	28
XX	27	31.1	XX	28	48	8.8A	52.9	XX	50	XX	XX	13	5.0	14	18	9.0	54.2	50
XX	28	14.0	XX	29	31	6.6A	24.8	XX	22	XX	XX	17	57.5	19	10	9.3B	9.9	6
XX	28	16.0	XX	29	35	9.1A	57.4	XX	54	XX	XX	20	29.5	21	42	8.8A	25.7	22
XX	28	31.6	XX	29	49	6.4A	12.7	XX	10	XX	XX	22	7.8	23	21	9.1A	32.3	28
XX	28	48.6	XX	30	07	9.4B	13.9	XX	11	XX	XX	22	24.4	23	37	9.0A	44.9	41
XX	29	49.8	XX	31	06	9.2A	38.3	XX	35	XX	XX	22	28.2	23	41	9.3B	13.1	9
XX	30	52.4	XX	32	08	9.2A	17.5	XX	14	XX	XX	23	49.7	25	03	7.5A	44.4	0
XX	31	17.0	XX	32	33	8.8	50.4	XX	47	XX	XX	25	38.6	26	52	8.2A	57.2	53
XX	34	55.9	XX	36	12	8.8	14.6	XX	9	XX	XX	26	1.9	27	15	8.3A	57.2	53
XX	35	55.8	XX	37	12	9.0A	34.7	XX	32	XX	XX	31	6.7	32	20	8.0A	16.4	12
XX	38	0.2	XX	39	16	8.3P	27.5	XX	24	XX	XX	31	49.1	33	02	9.0A	50.3	46
XX	41	9.9	XX	42	26	9.0A	2.2	XX	50	XX	XX	32	5.1	33	18	9.0A	53.1	49
XX	44	22.1	XX	45	38	8.0A	29.5	XX	26	XX	XX	33	19.1	34	32	8.3A	46.5	42
XX	44	24.2	XX	45	40	7.3A	21.0	XX	18	XX	XX	33	41.6	34	55	8.3A	39.5	35
XX	45	37.6	XX	46	54	8.5A	36.1	XX	33	XX	XX	34	46.5	35	56	8.3A	27.6	23
XX	47	26.1	XX	48	42	9.4B	13.8	XX	11	XX	XX	36	36.3	37	46	9.3A	27.6	23
XX	49	42.9	XX	50	59	7.9B	53.4	XX	49	XX	XX	39	56.8	40	67	7.2B	33.8	29
XX	50	33.9	XX	51	50	9.0A	14.0	XX	10	XX	XX	40	52.6	42	03	9.0A	48.1	44
XX	52	43.4	XX	53	58	9.0A	19.5	XX	15	XX	XX	41	17.6	42	27	8.8A	53.1	49
XX	53	2.7	XX	54	18	7.0A	40.3	XX	36	XX	XX	42	18.2	43	28	8.7B	49.3	45
XX	54	25.1	XX	55	40	9.0A	50.9	XX	47	XX	XX	42	31.2	43	30	9.2A	37.7	33
XX	55	56.0	XX	57	11	8.4A	49.5	XX	45	XX	XX	43	8.7	44	17	8.8	16.4	12
XX	56	21.3	XX	57	36	7.3A	32.7	XX	27	XX	XX	49	22.1	50	31	8.3A	57.5	53
XX	58	28.6	XX	59	44	9.0B	2.7	XX	52	XX	XX	50	27.9	51	37	9.4A	14.5	10
XX	57	39.5	XX	58	55	8.4A	30.4	XX	46	XX	XX	51	1.6	52	10	8.7A	46.2	42
XX	57	58.4	XX	59	13	8.0A	51.5	XX	47	XX	XX	51	13.1	52	22	7.5A	49.2	49
XX	1	22.9	XX	2	48	9.0	20.2	XX	16	XX	XX	52	27.1	53	36	8.5A	5.2	0
XX	2	55.8	XX	4	09	9.2B	36.5	XX	32	XX	XX	52	31.8	53	41	9.3B	40.7	35
XX	3	6.9	XX	4	20	8.9A	37.7	XX	34	XX	XX	54	2.6	55	12	9.1A	56.5	51
XX	4	27.1	XX	5	40	8.0B	16.2	XX	14	XX	XX	55	38.9	56	48	6.5A	3.3	58
XX	4	29.0	XX	5	42	8.0B	18.4	XX	14	XX	XX	58	10.6	59	19	8.0A	55.0	50
XX	5	55.7	XX	7	08	8.0A	12.9	XX	14	XX	XX	55	10.6	59	19	8.0A	55.0	50
XX	5	55.7	XX	7	08	8.0A	12.9	XX	14	XX	XX	55	10.6	59	19	8.0A	55.0	50



XX	9	59 38.6	10 00 35	8.0A	45.2	40
XX	10	59 45.0	0 52	9.4A	39.3	29
XX	10	1 3.5	2 10	9.1A	45.2	40
		4 29.5	5 26	9.2A	15.1	11
XX	1	8 10.1	9 17	8.0	0.8	-5
XX		11 7.4	12 13	9.5B	36.9	32
XX		14 33.4	15 39	9.3A	47.4	42
XX		16 49.2	17 55	7.5A	22.0	18
XX		18 22.8	19 28	9.0	22.3	18
XX		18 47.2	19 52	9.4B	31.9	27
XX		19 38.2	20 43	9.3A	38.9	34
XX		19 57.5	21 2	8.9A	22.6	17
XX		20 13.7	21 18	9.1A	14.7	10
XX		20 18.6	21 23	9.0A	39.6	34
XX		20 49.1	21 54	9.4A	23.6	18
XX		24 23.7	25 29	9.0	28.2	23
XX		24 30.3	25 35	8.6	58.3	53
XX		25 27.8	26 32	9.0	58.3	548
XX		26 3.8	27 8	9.0B	9.1	4
XX		28 57.8	30 1	8.8	57.7	53
XX		29 15.5	30 19	8.6A	24.5	19
XX		32 19.8	33 24	7.0A	43.5	38
XX		34 17.6	35 21	9.2A	3.5	-1
XX		34 48.8	35 52	9.4A	53.9	49
XX		35 32.5	36 36	7.5A	10.3	5
XX		41 37.3	42 41	7.7A	2.9	-2
XX		43 47.5	44 51	6.2A	19.7	15
XX		43 49.5	44 52	6.1A	16.7	12
XX		45 15.4	46 18	9.0A	34.8	30
XX		45 57.9	47 00	8.8A	9.4	4
XX		47 58.2	49 00	8.5A	55.2	50
XX		48 19.6	49 21	8.5A	9.9	5
XX		48 20.2	49 22	9.0	12.3	7
XX		48 21.9	49 24	8.9A	43.9	39
XX		48 34.4	49 36	9.0	40.6	35
XX		49 25.8	50 27	8.4A	11.8	7
XX		51 11.0	52 12	8.4A	2.4	-3
XX		53 2.5	54 3	7.1A	29.7	25
XX		53 53.9	54 55	8.0B	59.2	54

XX	10	54 29.6	55 30	8.0A	4.2	-1
XX		55 35.1	56 36	9.1A	7.7	3
XX		57 24.3	58 25	7.2B	6.5	1
XX		57 55.2	58 56	8.8	59.2	54
XX		59 11.5	60 12	8.6	50.4	45
XX		59 35.3	60 35	7.2B	36.5	31

1404 stars in zone 52°

635 observations Oct 13 1972  
705 " Sept 1 1973



540

++	11 9 181	11 1 18	90.4	20.8	15.3	XX	11.57177	1158 10	78.6A	54.1	48.5
++	0 31.9	1 32	82.4	53.2	50.1	XX	58 229	59 15	80.0B	17.5	11.9
+	0 88.3	1 38	85.4	27.2	217	++	1158 252	59 10	90	43.0	37.4
++	1 19.6	2 20	71.4	53.3	47.8	XX	12 449	2 37	80.0A	29.8	24.2
+	3 6.7	4 6	70.4	56.0	50.5	++	2 0.2	2 52	70.4	12.5	7.0
+	3 50.0	4 50	94.0A	42.7	37.2	XX	2 534	3 45	91.0A	13.5	9.9
++	4 40.3	5 40	80.0A	10.0	4.5	++	8 41.4	4 33	8.3	43.7	38.1
+	11 5.4	12 5	88	27.0	22.1	XX	4 15.4	5 07	75.0A	14.0	8.4
XX	16 24.5	17 23	88	46.7	41.2	XX	4 24.5	5 16	92.0A	8.5	2.9
XX	18 2.2	19 0	93.0B	20.6	15.1	++	6 20.2	7 12	90.0A	2.2	-3.4
++	21 41.4	22 39	88.4	56.7	57.2	++	7 32.4	8 24	67.0A	15.0	8.4
++	26 7.5	27 5	83	34.7	29.2	++	7 50.9	8 42	90.0A	8.7	3.1
++	27 29.5	28 26	75.0A	22.5	17.3	++	8 6.9	8 58	94.0A	20.5	14.9
++	27 40.9	28 37	84.0A	42.0	36.5	XX	8 38.0	9 29	9.0	39.6	34.0
++	31 41.5	32 37	90.0A	34.7	29.2	XX	10 16.4	11 07	93.0A	13.4	7.8
++	33 44.3	34 40	95.0B	57.4	51.9	XX	10 20.7	11 12	61.0A	0.3	-5.3
+	34 84.6	35 30	90	25.9	20.4	XX	10 40.7	11 32	91.0A	0.3	-5.3
+	36 49.6	37 45	80.0A	28.4	22.9	XX	12 48.6	13 40	92.0A	21.8	16.2
++	37 16.1	38 11	92.0A	51.0	45.5	XX	13 6.9	13 58	85.0A	23.8	18.2
++	37 26.5	38 21	80.0A	41.5	40.0	++	13 8.8	14 00	83.0A	42.5	36.9
+	37 43.0	38 38	90.0A	43.0	37.5	XX	13 13.1	14 04	93.0B	5.2	-0.4
++	37 50.6	38 46	83.0A	35.2	28.7	XX	13 55.8	14 47	83.0A	8.5	2.9
++	39 15.7	40 10	83.0B	5.3	-0.2	XX	14 30.4	15 21	91.0A	39.2	33.6
++	40 54.7	41 50	95.0B	1.6	-3.9	XX	15 40.4	16 30	92.0A	10.1	4.5
XX	42 19.0	43 14	7.9	37.2	31.7	XX	16 50.0	17 40	75.0A	57.7	52.1
+	43 3.1	43 88	88	18.0	12.5	XX	17 12.4	18 02	91.0A	41.0	35.4
++	44 36.9	45 31	90.0A	29.2	23.7	++	17 18.9	18 09	92.0A	30.2	24.6
++	44 45.5	45 39	87.0A	35.3	29.8	XX	20 17.4	21 06	91.0A	58.1	47.5
++	45 22.0	46 16	90.0A	26.8	21.3	XX	20 45.2	21 34	95.0B	37.9	32.3
++	46 12.4	47 06	25.0B	29.6	24.1	XX	21 28.1	22 17	90.0A	54.5	48.9
++	46 37.5	47 31	92.0A	11.0	5.5	XX	22 12.0	23 01	88	27.1	-1.9
++	47 14.3	48 8	94.0B	15.1	9.6	XX	30 49.4	31 37	90.0B	33.3	27.7
++	49 31.5	50 24	92.0A	7.4	1.9	++	36 10.5	36 58	93.0B	1.6	-4.0
+	49 56.9	50 50	89.0A	21.9	15.4	++	36 57.1	37 45	89.0A	54.2	48.6
++	50 32.7	51 26	83.0A	59.8	54.3	++	37 17.3	38 05	88.0A	36.7	30.1
++	52 20.9	53 14	83	11.9	6.3	++	38 54.4	39 42	90.0B	11.1	5.5
++	52 22.7	53 16	88	0.5	-6.1	++	39 52.7	40 41	80.0A	35.3	28.7
++	53 54.4	54 47	90.0A	50.4	44.9	++	43 12	43 49	90.0A	46.5	40.9
++	54 22.8	55 23	92.0A	43.5	38.0	++	43 16.3	44 04	91.0A	41.1	45.5



540

11 XX	124659	47 45	84.0	23.8	183	<del>XX</del> 38 433	39 23	85.4	22.8	177	
<del>11</del> XX	49 56.8	50 43	62.4	53.2	477	11 X	42 340	43 19	90	37.6	325
11 XX	52 18	52 57	90.4	141	86		42 409	43 20	92.0	47.3	42.2
X XX	56 36.3	57 22	85	43.5	380	1 11	45 260	46 06	85	16.7	116
XX X	58 7.3	58 53	75.4	43.6	381	XX X	45 543	46 33	90.0	11.0	59
XX	58 27.9	59 14	75.4	37.9	324	X XX	47 31.5	48 10	83.4	27.3	222
XX X	59 31.1	0 17	92.4	47.2	417	11 XX XX	48 31.5	49 10	60.4	26.3	212
	1259 36.2	0 22	86.4	12.8	73	XX X	51 26.6	52 15	73.4	36.6	315
	130 1.3	0 47	92.0	18.8	134	11 X	52 26.3	53 05	65.4	37.6	325
X <del>130</del> 28.4	1 13	44.0	36.9	314			53 1.0	53 40	91.4	11.5	65
XXX	1 33.8	2 41	82.0	20.1	146	XX	53 18.7	53 58	7.4	17.0	12.0
X 11 X	4 11	4 46	87.4	23.8	188	1 XX	54 40	54 43	90	50.3	45.3
XX X	8 25.9	9 11	85.8	35.7	296	11 XX	55 20.0	56 00	84.4	27.3	22.4
	8 52.8	9 38	82.4	53.8	483	XXX X	56 47.6	57 26	91.0	10.7	4.8
XX X	9 25.5	10 11	85.4	17.0	115	11 X	1 39.6	74 21.8	87.0	31.9	27.2
	10 37	10 49	88.4	03	-5.2	11 X	4 27.5	5 05	88	34.7	30.0
X 11 X	12 28.1	13 13	90.4	32.2	267	1 X X	5 32.4	6 10	80.4	8.7	-1.0
XX X	14 52.5	15 37	85.4	37.2	318	1 11	7 8.7	7 46	85	54.6	49.9
11 1	15 21.0	16 05	91.4	7.7	23	11	10 56.0	11 32	88.4	7.7	30
XX X	16 35.5	17 18	90	6.7	13	XX 11 X	13 41.7	14 18	80.4	86.3	31.6
11 XX	16 59.4	17 42	84.4	28.3	229	XX X	16 36.2	17 12	80.4	33.5	29.8
X X	18 20.5	19 03	92.4	50.5	487	X	17 6.6	17 42	75.4	10.9	6.2
XX X	19 1.5	19 44	90.4	49.0	436	X	18 14	18 37	74.4	28.3	23.6
1 1 XX	19 7.7	19 50	85.4	47	-0.4	1 X	20 23.1	20 59	68.4	18.8	9.1
X 11 X	22 13.1	22 55	93.0	96	4.3		20 48.2	21 23	85.4	22.2	32.6
XX X	23 35.5	24 20	94.0	32.9	276	1 X	22 15.0	22 50	85.0	84.1	32.5
XX X	25 28.0	26 10	87.4	4.6	-0.7	X	22 28.1	22 53	85.0	84.9	30.3
11 X	26 15.0	26 57	93.4	27.3	220	X X	24 15.2	24 50	85.4	20.1	15.5
XX X	26 47.2	27 29	90.4	42.5	372	X 1 X	25 57.1	26 26	89	5.5	+0.9
XX X	27 52.0	28 34	85.4	6.7	14	X X	27 23.1	27 58	90	0.1	-4.5
11 X	28 22.1	29 04	81.0	28.6	283		30 6.5	30 40	90.4	0.5	-4.1
X X	28 58.0	29 35	92.4	50.9	507	1 X	30 27.1	31 01	92.4	4.5	-0.5
11 X	30 11.5	30 53	93.6	28.2	231	X X	33 39.2	34 13	58.4	38.8	34.3
XX	30 21.6	31 08	85	44.5	423	X	34 1.7	34 36	88.4	41.8	37.3
X 1	30 29.0	31 11	90.4	6.7	1.5	X	34 45.6	35 19	73.4	3.5	1.0
X X	36 1.0	36 43	90.4	4.2	-1.0	X	38 49.3	39 23	70.0	24.6	20.1
X X	37 34.7	38 16	90.4	45.9	40.7	X X	39 48.0	40 22	88.4	56.9	52.4
X X 11 X	37 49.0	38 30	86.4	28.4	232	X	43 13.2	43 47	90	19.1	14.6
X X	38 35.5	39 18	89.4	29.4	294	X X	44 31.1	45 04	88	6.8	2.5

John G. Wolbach Library, Harvard-Smithsonian Center for Astrophysics • Provided by the NASA Astrophysics Data System



540

144443.4	144516	137	492	449	155297	5236	90	300	271
46 8.6	46 42	9.0	32.0	287	52252	5252	88	350	321
47 135	47 46	8.3	20.7	166	54444	5511	874	542	513
48 315	49 04	9.0	7.2	29	56573	5718	704	213	184
49 52	49 42	9.0	36.8	325	56536	5721	774	564	535
49 221	49 55	8.8	14.7	105	5721	16.0132	874	473	444
51 3.4	51 36	9.3	2.8	-1.4	57.9	2.05	9.3	488	409
51 4.0	51 36	7.7	14.9	107	4 8.3	4 35	9.2	458	429
51 15.5	51 49	9.3	10.6	6.4	4 49.3	516	9.2	537	522
52 41.9	53 14	9.2	5.4	1.5	7 34.8	812	8.8	403	394
53 24.9	53 57	8.3	14.4	102	12 25.7	1252	9.0	473	446
55 15.5	55 47	7.5	25.6	21.4	16 14.9	1641	9.0	81	56
55 16.6	55 49	7.5	24.1	22.9	17 5.6	1733	9.5	249	224
1154 35.1145807	91.6	10.3	6.1		17 30.9	1757	7.7	448	423
151 41.415	213	8.9	16.0	125	18 28.4	1854	8.9	224	202
7 29.9	8 01	9.1	5.8	1.8	18 41.6	19 08	8.5	524	499
8 0.4	8 31	8.8	24.9	20.9	24 21.8	2448	9.0	840	315
8 29.9	9 01	8.4	33.8	29.8	24 31.6	2458	8.5	512	487
9 50.9	10 21	9.5	25.9	21.9	24 33.7	2500	8.8	325	300
11 24.0	11 54	8.5	18.6	13.6	29 12.4	2937	9.0	850	356
14 39.8	15 10	9.2	5.8	2.1	29 19.9	2945	8.9	574	581
17 2.8	17 33	7.3	27.0	23.3	30 34.8	31 00	8.5	129	107
18 31.9	19 02	9.0	29.9	26.2	31 13.0	3138	9.0	157	135
19 48.4	20 18	9.0	12.3	8.6	31 43.9	32 09	9.1	473	451
20 38.5	21 9	6.5	44.1	40.4	33 50.2	34 15	9.0	541	519
22 35.4	23 05	6.5	30.9	27.2	34 50.0	35 15	9.0	76	54
24 28.0	24 58	9.0	48.0	44.3	36 30.9	36 55	8.0	414	392
25 35.4	26 05	9.0	38.4	35.0	38 4.3	3829	8.5	426	404
26 35.6	27 06	8.5	28.8	25.1	38 20.4	3845	9.0	32.0	298
26 38.0	27 07	9.0	19.6	16.1	39 15.6	39 41	9.0	444	422
28 1.7	28 31	8.6	59.4	58.9	41 43.2	42 08	9.5	295	273
31 25.4	31 54	6.0	24.8	21.5	41 46.1	42 10	8.8	280	262
32 24.9	32 54	9.0	21.7	18.3	43 25.9	43 50	8.4	399	381
33 48.4	34 18	6.0	59.7	56.3	44 46.4	45 11	9.1	263	245
42 61.0	42 35	9.0	19.0	15.6	45 51.4	46 15	8.5	165	147
43 10.8	43 39	8.8	4.3	0.9	48 41.2	48 28	8.5	16	-0.2
44 57.9	45 27	9.2	6.5	3.1	48 10.7	48 35	9.3	131	113
49 23.2	49 52	8.3	18.6	15.2	48 16.6	48 41	8.5	169	151
51 46.5	52 15	8.0	27.1	23.7	48 45.6	49 10	7.0	357	333



1871

1871

1649277	49.53	80.8	492	47	1757.526	58	15	9.0B	52.8	53
49410	50.12	87.0	592	57	857.52	58	20	8.9A	17.2	17
49587	50.24	90.0	190	18	859.49	57.28	9.3A	13.2	13	
5076	52.32	88.0	395	38	1.51	18	1	28	8.9R	42.3
52411	53.4	90.0	445	43	2.40		2	27	8.6	5
53520	56.17	88	572	56	2.374		3	0	8.3A	30.0
1658427	59.8	82.8	483	47	4	12.4	4	35	9.3R	28.6
1702205	17.2.45	48.8	396	38	4	23.1	4	46	9.0	6.4
2382	3.02	89	336	32	4	26.9	4	49	9.3B	34.2
5297	6.54	85	263	25	4	59.8	5	22	9.0R	9.0
786	7.32	86.4	410	40	7	33.9	7	56	6.0A	14.6
7111	7.35	90.0	404	39	7	48.7	8	11	8.0A	31.2
7130	7.37	90.6	134	12	9	43.3	10	16	9.4A	30.4
7221	7.46	93.6	139	13	9	49.4	10	12	9.1A	43.9
9536	10.17	89.0	118	18	12	19.3	12	42	6.8R	6.1
1026	10.26	90.0	118	18	12	31.0	12	54	8.8	30.9
10588	11.23	91.0	233	22	14	8.9	14	31	8.8	42.3
13291	13.53	88.0	925	41	15	1.6	15	23	9.0A	14.3
20571	21.20	86.8	298	29	15	16.5	15	39	9.0A	17.9
22363	23.0	90.0	423	41	15	46.9	16	09	8.3H	32.4
24523	25.15	84.0	249	27	16	35.0	16	58	8.5A	33.9
26330	26.58	90.0	459	45	17	5.1	17	28	8.2A	29.8
28297	28.53	90.0	249	27	17	19.0	17	42	8.7A	14.0
28520	29.16	83.0	279	27	18	49.9	19	12	8.5H	36.8
29448	30.8	92.0	190	19	19	32.6	19	55	8.7	44.2
35456	36.9	90	102	10	20	7.2	20	30	8.1A	1.3
36585	37.21	90	279	27	20	12.8	20	35	7.1A	20.7
42425	42.6	90	379	37	20	17.9	20	40	8.2A	12.8
43108	43.34	88	06	0	21	1.4	21	23	9.3A	39.4
43393	44.2	90	165	16	22	1.0	22	24	9.2A	47.4
43540	44.17	90	140	13	22	31.1	22	54	8.8A	36.7
45116	46.38	90.8	194	19	23	19.0	23	42	9.5R	3.1
4652	47.16	60.8	140	13	24	6.9	24	29	7.2A	47.8
46868	47.19	90.8	428	42	25	9.7	25	32	9.2A	57.2
47119	47.34	88.8	900	40	27	17.7	27	40	9.4A	36.8
47196	47.42	90.8	288	28	28	42.3	29	05	9.0	46.4
47250	47.48	88	468	46	30	9.8	30	32	8.3	52.6
53205	53.48	86	80	50	31	59.5	32	22	7.8A	5.8
54391	54	75.4	414	41	32	58.5	33	21	8.7	43.7



54

18	33	24.3	33	47	8.5	49.5	50
33	57.2	34	20	7.8A	42.2	43	
37	37.5	38	00	9.2A	11.0	12	
38	6.3	38	29	8.0B	47.3	48	
39	43.4	40	06	9.2A	32.7	33	
39	49.8	40	12	9.0	43.2	44	
41	46.5	42	09	9.0A	51.1	52	
41	59.2	42	22	6.0A	44.2	45	
43	25.6	43	48	9.3A	8.2	9	
43	36.8	43	59	9.3A	8.4	9	
46	33.3	46	56	8.7A	18.2	19	
47	18.9	47	41	7.5A	8.7	9	
48	28.8	48	51	8.6	56.1	57	
48	53.2	49	18	8.2	43.7	44	
49	11.6	49	33	8.7A	9.4	10	
49	34.8	50	17	8.5B	42.5	43	
50	4.8	50	27	8.5B	42.6	43	
50	19.1	50	42	8.7	45.3	46	
51	33.8	51	56	8.8B	54.1	55	
52	25.8	52	48	9.2A	29.7	30	
52	37.2	53	00	9.3B	13.0	14	
52	55.7	53	18	9.0	2.8	3	
52	57.8	53	20	9.3B	26.0	27	
53	4.1	53	27	9.0A	30.7	31	
53	54.5	54	17	9.0	18.3	19	
54	29.6	54	52	8.8	41.2	42	
55	41.7	56	04	8.0A	41.7	42	
56	19.5	56	42	8.2A	38.7	39	
57	1.6	57	24	8.0A	26.8	27	
57	10.1	58	33	8.8	57.3	58	
59	25.5	59	48	9.0	27.8	28	
19	0	48.8	19	1	22	7.5A	9.7
1	22.8	1	46	9.3B	46.6	48	
3	58.4	4	22	8.5	9.6	11	
5	17.3	5	41	8.9	36.5	38	
5	51.8	6	15	7.8A	51.8	53	
7	8.8	7	32	8.7	36.9	38	
7	29.1	7	53	8.3	13.9	15	
7	32.9	7	56	8.9B	20.1	22	

19	8	8.6	8	32	8.5A	57.9	59
9	50.6	10	14	8.6A	55.6	57	
9	58.6	10	22	9.1A	51.9	53	
10	5.2	10	29	8.9A	51.7	53	
10	40.3	11	04	9.2A	47.7	49	
11	59.5	12	23	8.8	17.9	19	
12	9.0	12	33	7.7A	54.7	56	
12	16.9	12	40	8.2A	19.4	21	
12	47.0	13	11	7.5A	42.2	44	
12	48.5	13	22	9.5B	49.3	51	
14	64	14	30	8.0B	2.0	3	
16	24.1	16	48	6.4B	6.7	8	
17	19.9	17	43	9.3B	32.3	34	
17	47.8	18	11	8.5	0.9	2	
19	51.6	20	15	7.5A	47.4	49	
20	19.4	20	43	8.8	26.9	28	
21	35.7	21	59	9.0A	6.1	8	
21	37.3	22	01	8.5A	8.8	10	
22	2.6	22	26	8.5A	15.7	17	
22	53.6	23	17	7.3A	35.6	37	
23	39.9	24	03	8.9A	59.3	61	
24	57.8	25	21	7.3A	28.9	30	
25	42.7	26	06	9.1B	10.0	12	
25	58.5	26	22	8.5A	30.6	32	
26	0.0	26	25	9.3B	53.1	55	
27	25.0	27	53	9.0	7.8	10	
27	29.2	27	54	9.0	20.8	33	
27	49.9	28	14	9.0	45.7	48	
28	18.5	28	43	9.0	9.5	12	
28	18.5	28	43	6.6A	56.7	59	
29	10.6	29	35	8.9	10.6	13	
29	18.5	29	43	9.0B	14.4	17	
29	40.7	30	05	8.9	13.0	16	
30	57.0	31	22	8.8	7.5	10	
33	20.5	33	45	7.7B	41.1	43	
34	17.9	34	42	7.5A	37.5	40	
34	42.9	35	17	9.1B	17.8	20	
35	13.5	35	38	9.0	20.1	22	
35	26.9	35	51	9.1B	53.1	55	



$\lambda$	$m$	$acc$						$\lambda$						
X 19	36	47.8	37	12	8.7	56.0	59	20	72.0	7	29	8.9	3.8	7
	36	50.7	37	15	9.0	49.7	52	XX	737.5	8	04	8.8	3.0	3
	37	38.6	38	02	9.1B	47.9	50	XX	846.2	9	15	9.0	0.5	21
X	38	13.6	38	38	9.5B	46.9	9		9 0.4	9	27	9.1B	18.2	45
X	39	32.6	39	57	8.4	40.7	43		9 32.4	9	59	8.5	42.5	60
XX	41	58.8	42	23	8.6	40.5	43		9 35.2	10	12	8.2B	37.6	47
	42	57.6	43	22	8.3A	16.9	19	XX	9 53.5	10	20	7.0B	44.0	49
X	43	0.7	43	25	6.5A	2.9	5		10 32.8	10	59	8.8A	41.3	21
	43	17.4	43	42	8.8A	1.4	4	XX	10 55.7	11	22	8.4A	18.3	8
X	43	57.3	44	23	8.4A	50.2	53		11 38.4	12	05	9.3A	4.6	16
	46	12.6	46	38	8.5	40.0	42		11 44.0	12	11	8.9	12.7	49
	46	43.1	47	09	7.8B	17.0	19		11 50.2	12	14	8.9	45.9	51
	47	28.7	47	54	9.4B	46.6	51	XX	12 6.6	12	33	9.1A	48.4	16
	47	47.5	48	13	8.9A	38.0	40		12 35.6	13	12	9.2B	13.5	43
XX	50	18.0	50	45	9.3B	18.0	20		12 48.0	13	15	9.2A	40.5	4
	50	37.2	51	03	8.8A	16.8	19	XX	13 17.8	13	44	8.8A	1.0	17
XX	51	42.4	52	08	9.0A	23.9	26		13 37.8	14	04	8.9A	13.8	9
X	52	47.1	53	13	7.5A	38.0	40	XX	14 24.1	14	51	8.9A	5.7	8
XX	53	30.5	53	56	8.0B	37.5	40		14 50.3	15	17	6.0B	4.9	60
	53	31.8	53	57	8.3	24.4	27	XX	17 59.1	18	27	8.4B	56.6	58
	53	54.5	54	20	9.4B	0.5	3		17 59.5	18	27	9.0	54.8	48
	54	13.7	54	39	8.8B	14.2	17		18 20.6	18	48	9.1A	45.7	4
XX	54	27.7	54	53	8.4A	46.2	49		18 49.2	19	17	7.3B	0.7	31
XX	55	15.6	55	41	8.5A	46.4	49		18 51.1	19	19	8.8	28.0	18
XX	56	54.4	57	20	8.1A	47.8	50	XX	19 16.1	19	44	6.7B	15.5	15
	57	0.9	57	26	8.8B	46.7	43	XX	20 59.7	21	27	6.9A	12.4	61
	57	4.6	57	30	8.5	10.5	13	XX	20 59.8	21	27	9.0B	58.4	55
XX	57	59.5	58	25	9.0	38.9	41		21 2.0	21	30	7.3B	52.1	35
	58	36.5	59	02	8.2A	14.3	17		21 36.8	22	04	8.0A	32.3	60
	58	51.8	59	17	8.2A	16.1	18		21 46.9	22	14	7.3B	57.2	16
XX	58	58.5	59	24	8.8A	13.9	18	XX	21 58.2	22	26	7.9B	12.6	43
XX	20	0	59	7.9A	3.7	6		22 12.7	22	40	9.0	39.9	31	
XX	2	2.4	2	24	9.0	33.9	36		24 33.7	25	01	8.0A	27.8	4
XX	3	21.2	3	48	8.0A	13.7	16		26 26.8	26	54	7.3A	0.9	14
XX	4	3.0	4	30	8.5A	53.9	56		26 35.9	27	03	8.5A	11.4	33
XX	5	35.8	6	02	8.3B	33.8	37		26 43.8	27	11	8.6A	29.8	9
XX	6	28.5	6	55	8.3B	30.6	34		26 48.9	27	16	9.3B	6.2	13
XX	6	50.4	7	17	8.8	51.2	54	XX	27 13.2	27	41	8.1A	9.9	9
									27 25.5	27	53	8.9A	6.1	53



54°

20	29	31.7	30	19	9.0A	3.1	6	+	+	20	55	46.0	56	11	6.4A	38.9	42
30	32.8	31	00	9.4A	5.2	8				56	27.8	56	57	9.0A	32.4	36	
30	46.1	31	16	9.2A	45.6	48				56	55.8	57	25	8.8A	32.3	36	
31	48.6	32	17	9.0A	5.2	8				59	42.8	60	13	6.9A	39.5	43	
34	10.1	34	38	9.2A	26.3	29				21	3	0.6	3	31	7.8A	25.0	29
34	23.4	34	51	9.2B	42.6	46				3	3.7	3	34	9.1A	14.9	18	
35	29.3	35	57	8.4A	52.9	56				5	13.5	5	44	9.0A	43.0	47	
36	4.9	36	32	8.4A	44.3	48				5	16.3	5	47	8.5A	26.7	31	
36	6.3	36	34	9.0B	25.5	29				6	40.1	7	17	8.3A	40.7	45	
36	39.0	37	07	7.5A	35.6	38				6	46.2	7	17	7.3A	44.4	48	
36	44.6	37	12	8.1B	9.3	12				7	54.8	8	25	9.0A	44.6	48	
36	57.5	37	25	9.2A	53.9	57				8	2.4	8	33	8.3A	6.1	10	
37	18.7	37	46	9.0B	28.7	24				8	27.7	8	58	9.5B	57.4	61	
39	4.2	39	32	8.9A	2.0	5				8	45.2	9	16	8.3A	48.5	52	
39	12.0	39	40	9.5B	2.3	6				9	58.6	10	29	7.0A	4.0	8	
39	34.4	40	02	6.7A	46.2	49				10	50.4	11	21	7.8A	54.7	59	
39	47.3	40	15	8.9A	6.4	10				12	6.3	12	37	9.2A	46.8	51	
41	9.2	41	37	9.0	55.0	58				12	16.1	12	47	8.3	14.7	19	
41	58.9	42	26	8.5	45.4	49				12	32.3	13	03	8.6A	28.9	33	
42	34.5	43	02	9.0A	22.7	26				12	50.9	13	21	7.8A	27.2	31	
42	36.4	43	04	8.8A	20.6	24				13	38.0	14	09	7.7A	39.8	44	
42	46.7	43	08	9.0A	16.0	19				14	3.4	14	34	8.4A	28.5	32	
43	48.5	44	16	9.0	36.2	39				15	9.8	15	42	9.0A	16.2	22	
46	4.4	46	32	9.1A	19.3	22				15	16.1	15	51	7.2A	52.3	54	
46	40.9	47	09	7.2A	28.8	32				16	27.4	17	00	9.0	54.3	58	
47	5.7	47	34	9.4A	28.0	31				16	29.1	17	02	9.1B	47.6	52	
47	10.4	47	39	7.4A	56.8	60				17	14.9	17	47	9.1A	48.4	53	
47	24.3	47	53	8.8	37.8	41				17	43.7	18	16	9.0A	15.7	20	
48	5.9	48	37	8.4A	16.9	20				18	38.2	19	11	7.8A	39.9	44	
48	15.8	48	44	8.5A	5.5	9				19	11.8	19	44	7.0A	40.3	44	
48	17.1	48	46	6.8A	30.2	33				19	53.5	20	26	8.7A	59.1	63	
49	26.2	49	55	9.1B	55.0	58				20	1.3	20	34	7.3A	44.7	49	
49	36.4	50	05	8.6A	17.7	21				20	38.4	21	11	7.8A	43.5	48	
49	45.1	50	14	8.9	6.1	3				22	36.3	23	09	8.1A	58.0	62	
50	32.1	51	01	8.1A	2.8	6				24	19.8	24	52	6.1B	47.2	51	
51	23.6	51	52	8.5A	22.8	27				25	19.3	25	52	7.9B	1.0	5	
53	23.1	53	52	9.0	58.0	61				26	13.5	26	46	7.7B	46.2	50	
53	43.6	54	13	6.8A	55.6	59				26	52.2	27	25	8.7B	22.3	26	
53	54.4	54	24	9.0	32.3	43				28	0.1	28	33	8.5	20.5	25	



h m sec

h m sec

XX	21 28.3.8	28 36	8.9	3.1	7
XX	28 22.0	28 55	8.2A	4.3	50
XX	29 23.5	29 56	9.5A	22.6	27
XX	29 39.1	30 12	8.5A	32.0	36
XX	29 53.4	30 29	8.5A	26.7	31
XX	30 9.7	30 43	8.3A	2.3	7
XX	31 1.8	31 35	9.1B	24.2	29
XX	31 50.5	32 24	7.8A	10.4	15
XX	32 11.4	32 45	8.7	56.0	60
XX	32 23.0	32 57	7.5A	28.1	32
XX	33 7.1	33 41	8.5A	22.0	126
XX	34 4.1	34 38	8.2B	4.6	9
XX	34 13.9	34 47	8.8	25.2	29
XX	34 56.6	35 30	7.5B	42.7	47
XX	35 15.2	35 49	8.8	30.0	34
XX	35 56.0	36 30	8.0B	13.2	17
XX	36 4.3	36 38	7.5B	41.9	45
XX	36 7.4	36 41	8.5	24.8	29
XX	38 8.0	38 42	7.7B	51.7	56
XX	38 10.4	38 44	8.1B	32.6	37
XX	39 5.5	39 39	9.0	59.9	64
XX	39 23.9	39 57	8.9A	32.7	37
XX	39 32.9	40 06	7.7A	42.9	47
XX	41 8.0	41 42	9.4B	51.8	56
XX	41 57.8	42 31	9.0	39.7	44
XX	41 59.0	42 33	8.8A	22.8	27
XX	42 8.7	42 42	8.8A	12.0	16
XX	42 14.5	42 48	8.9A	22.9	27
XX	42 36.7	43 04	8.9A	27.8	32
XX	45 32.4	46 06	8.8	3.0	7
XX	45 41.7	46 17	9.0	33.5	38
XX	45 44.8	46 20	8.4	15.6	20
XX	45 49.9	46 25	8.6	43.9	48
XX	46 52.5	47 28	9.4B	52.9	57
XX	46 56.7	47 32	8.9	34.5	39
XX	47 26.3	48 02	6.7A	0.1	4
XX	47 36.5	48 07	9.0	37.2	42
XX	47 33.1	48 09	7.0B	21.9	26
XX	53 45.3	54 21	9.2B	7.5	12

XX	21 54 27.7	55 03	9.0	7.4	12
XX	54 58.3	55 34	7.8B	19.6	24
XX	55 8.2	55 44	9.4B	55.8	60
XX	55 12.9	55 48	9.1B	53.3	58
XX	56 7.0	56 43	9.0	41.0	45
XX	58 10.3	58 46	7.2A	10.8	15
XX	59 47.6	60 23	9.1B	22.9	27
XX	20 7 6.2	1 44	8.0A	32.8	37
XX	2 47.2	3 25	8.9A	14.3	19
XX	3 0.8	3 38	9.5B	49.8	54
XX	6 18.8	6 56	9.0B	33.0	37
XX	7 2.0	7 40	7.5B	23.1	28
XX	7 46.5	8 24	9.4B	11.8	16
XX	7 56.8	8 34	8.0B	35.6	40
XX	8 2.9	8 40	8.1B	45.3	50
XX	9 0.6	9 38	8.5B	44.1	49
XX	9 3.2	9 41	9.2B	43.3	48
XX	9 50.5	10 28	9.0	42.8	47
XX	10 36.0	11 14	8.2A	6.6	11
XX	10 37.5	11 15	8.8	25.9	30
XX	11 37.8	12 15	8.8A	5.8	10
XX	12 41.7	13 19	8.8B	33.2	38
XX	13 17.6	13 55	9.5B	33.0	38
XX	15 1.9	15 39	8.3A	57.4	62
XX	15 3.3	15 41	8.0A	7.5	12
XX	15 11.2	15 49	8.5B	33.7	38
XX	15 43.6	16 21	9.2B	49.4	54
XX	15 53.5	16 31	8.8	30.5	35
XX	16 11.0	16 49	9.1A	55.6	60
XX	16 36.2	17 14	8.5A	51.6	56
XX	16 44.2	17 22	8.7	4.3	9
XX	17 29.2	18 07	9.2A	49.6	54
XX	17 33.0	18 11	8.3A	29.8	34
XX	17 59.0	18 37	9.2A	31.1	36
XX	18 11.5	18 49	8.8A	28.4	33
XX	18 45.1	19 21	9.5B	3.9	8
XX	18 56.1	19 34	8.4B	8.0	13
XX	19 22.5	20 00	8.2A	23.5	28
XX	20 10.0	20 48	9.1A	29.7	34



140	20	20	13.2	20	52	8.5B	56.7	62	22	46	33.0	47	06	8.4	54.7	60
	39	23	23.7	24	02	9.2B	51.4	10		46	26.8	47	09	8.9	38.8	44
		23	47.2	24	26	9.0	21.5	26		46	41.0	47	24	9.2B	51.0	56
XX	25	17	49.40	25	41	8.8	9.2	14	XX	47	22.9	48	05	9.2B	51.2	57
	25	38.8		26	36	9.0	29.7	35	XX	48	12.1	48	55	8.5	37.7	44
XX	26	16.1		26	36	9.0	42.1	47	XX	50	42.9	51	25	9.0	26.3	32
	26	37.5		27	17	8.2A	27.1	32	XX	50	58.6	51	41	8.5	54.7	60
X	27	25.1		28	05	8.4A	20.9	26	XX	52	0.9	52	44	8.7	15.5	21
	27	32.4		28	12	8.8A	1.1	6	XX	53	33.5	54	37	8.9B	43.1	48
	27	33.2		28	19	9.2B	12.0	17	XX	54	29.3	55	13	8.3B	25.9	31
XX	30	19.9		31	00	9.2A	17.8	23	XX	54	55.3	55	39	8.8B	11.5	17
	30	21.9		31	02	9.0A	18.3	24	XX	55	50.7	56	34	8.8	8.1	13
	30	24.2		31	05	9.2A	19.2	25	XX	56	30.6	57	14	6.5B	27.8	33
XX	30	27.1		31	08	8.9A	21.3	27	XX	56	41.3	57	25	8.7	44.2	50
XX	31	35.8		32	16	9.1A	22.8	28	XX	57	48.3	58	33	9.0	29.8	35
	32	27.9		33	08	9.0	49.0	54	XX	58	0.2	58	44	8.8	20.0	25
XX	32	29.5		33	10	9.4B	14.4	20		58	28.8	59	13	8.0B	54.7	60
	33	8.5		33	49	8.2A	9.2	14	XX	59	5.4	59	49	9.0B	38.1	43
	33	10.8		33	51	8.2A	30.4	36	XX	23	1 47	23	1	49	8.6A	4.2
XX	33	37.7		34	18	8.0A	17.5	23	XX	1	34.3	2	19	9.4B	14.1	20
XX	33	53.9		34	34	9.1A	13.6	19	XX	5	21.0	6	06	8.9	30.7	36
	34	14.2		34	55	9.4A	48.8	54	XX	5	22.1	6	07	8.8B	56.3	62
	34	29.8		35	10	9.1A	19.5	25	XX	8	3.9	8	48	8.9	39.7	45
XX	34	34.9		35	11	8.0A	8.2A	57	X	8	32.6	9	17	8.5	9.0	14
XX	34	57.9		35	38	8.7A	15.3	21	XX	10	0.0	10	45	7.9B	24.0	29
XX	35	36.6		36	17	9.0A	38.4	44	X	10	40.0	11	25	9.5A	41.5	47
XX	37	48.5		38	30	8.7	35.1	40	XX	10	59.8	11	49	8.8B	17.9	23
XX	38	17.5		38	59	8.5	49.6	55		11	7.6	11	52	9.2A	55.1	61
XX	39	14.4		39	56	9.0	12.4	18		11	10.0	11	55	9.1A	44.6	50
XX	39	32.3		40	14	8.9	10.7	16	XX	12	2.4	12	47	9.0	25.9	31
	40	2.8		40	44	9.0A	6.0	11	XX	13	15.0	14	00	9.3R	55.3	61
	40	8.3		40	50	9.5B	46.5	52		13	22.0	14	07	9.3A	54.3	60
XX	40	9.8		40	51	8.8	24.0	29		13	56.6	14	41	8.8	43.6	49
XX	40	34.3		41	16	7.1B	6.6	12	X	14	26.8	15	11	9.4B	52.5	58
	40	38.2		41	20	8.9	9.5	15		14	42.1	15	27	8.9	24.9	30
XX	42	25.2		43	07	9.0	11.3	17	XX	15	1.9	15	46	8.0R	54.1	60
	42	44.7		43	26	8.5	21.7	27		15	5.2	15	50	8.0B	1.5	7
X	43	48.9		44	30	8.0B	3.5	9	X	16	35.7	17	20	9.0R	17.9	23
XX	46	0.4		46	43	8.6	43.6	49		17	2.5	17	47	8.7R	49.8	55



+	23	17	21.4	18	26	9.2B	51.8	57	x	23	33	44.9	34	33	7.9A	20.4	26
		17	36.3	18	22	8.7B	22.9	26			34	16.0	34	54	9.3A	12.5	18
		18	17.6	19	03	7.5B	17.9	23	XX		37	20.4	38	08	6.8B	24.3	30
XX		18	51.0	19	37	7.5A	38.2	44	x		37	27.9	38	16	7.7B	40.6	47
		19	19.6	20	05	8.5B	18.7	24			37	39.9	38	28	8.2B	34.7	41
XX		20	9.0	20	55	8.7B	11.5	17	XX		38	58.0	39	46	8.9A	13.9	20
		20	25.6	21	11	7.9A	4.2	10			38	58.9	39	47	9.0	30.8	37
		20	26.4	21	12	9.0	0.8	6			39	30.0	40	28	8.1A	21.4	27
		20	35.0	21	21	9.3A	48.5	51	XX		39	47.7	40	36	7.3A	3.8	10
		20	44.9	21	30	8.5A	24.3	30	XX		41	24.9			7.7A	50.2	36
		20	51.9	21	37	9.5B	48.0	53			41	31.4	42	20	9.1A	16.9	24
		20	56.7	21	42	9.2A	41.8	47	x		42	3.3	42	35	9.3B	11.3	17
X		21	6.7	21	52	8.8A	52.5	58	XX		42	21.5			8.2A	50.2	56
		21	36.7	22	22	9.1A	32.3	39	x		42	57.7	43	48	9.5B	18.6	25
		21	39.4	22	25	9.1B	30.4	36	XX		43	24.3	44	52	8.9B	16.7	25
		21	47.3	22	33	9.0A	35.3	41	XX		44	25.4			9.1A	14.4	20
		21	49.2	22	35	9.0	7.4	13	x		44	55.4	45	45	8.8A	38.2	45
XX		22	16.0	23	05	9.5A	56.5	62	XX		46	30.0	47	20	9.3B	4.7	11
		22	29.3	23	16	7.8A	21.4	27	x		46	48.4	47	38	9.0	38.2	44
XX		23	15.0	24	02	8.0A	28.3	34			47	20.8	48	11	8.2B	19.4	25
		23	40.7	24	28	9.4A	37.8	43	x		47	56.3	48	46	9.0	31.2	37
		23	58.3	24	35	8.6A	31.3	37	x		48	55.5	49	45	9.0	22.5	28
XX		24	18.5	25	05	9.0	55.8	61	XX		49	52.5	50	52	6.0B	54.6	27
		24	21.5	25	08	9.0	56.2	62	XX		50	21.3	50	52	8.8	21.5	27
		24	30.5	25	19	9.1A	46.5	52	x		51	32.8	52	22	8.5	34.4	30
		24	52.7	25	40	9.1B	47.1	53	+		51	42.3	52	32	5.0A	58.9	30
		25	12.5	25	59	8.8A	7.1	13	+		52	7.0	52	37	8.8	18.1	20
		25	51.5	26	39	8.5A	58.3	54	+		52	23.1	52	37	9.0	28.1	34
XX		27	20.0	28	07	7.3A	41.3	47	+		52	24.7	53	46	9.0	4.4	30
		30	13.5	31	01	9.5A	21.4	27	+		52	50.9	53	46	9.0A	54.0	00
		30	39.5	31	27	8.9B	8.9	14	+		52	58.4	53	46	8.5	38.4	44
		30	43.6	31	32	9.2A	2.8	8	XX		53	20.3	54	10	9.0A	53.9	0
		31	2.8	31	51	9.0A	58.5	62	XX		54	47.8	55	38	9.0	11.1	17
XX		31	12.5	32	00	8.5A	25.3	31	+		55	12.6	56	03	8.3A	46.9	52
		31	13.8	32	02	9.1A	16.9	22	+		56	1.9	56	52	7.8A	44.9	51
		31	35.7	32	24	8.5A	0.6	6	+		56	3.8	56	54	8.5A	15.6	20
		31	45.8	32	34	9.0	51.5	57	+		57	16.7	58	19	9.0A	21.5	27
XX		32	21.0	33	09	9.2A	29.2	35	+		58	6.3	58	56	8.9	27.5	33
XX		33	39.7	34	28	8.8A	25.3	31	+		58	12.0	59	2	7.0A	53.6	00
											58	22.5	59	59	9.0	37.4	44
											59	9.6	59	59	9.0	38.6	45
											59	32.5			9.0	5.2	11
											59	55.1	59	46	8.8A	50.0	56



[illegible]



40	11.5	41	8	8.5	0.6	7	14	15.4	15	16	8.9A	50.8	56
41	11.0	42	8	9.0	46.5	52	15	37.9	16	39	8.8A	20.7	26
42	15.4	43	12	8.8	42.2	48	15	46.6	16	48	9.0	12.7	18
43	56.1	44	53	9.0	50.2	56	15	54.2	16	56	8.0A	8.9	14
44	32.7	45	30	9.0	33.4	39	16	33.0	17	35	8.4A	12.3	17
44	54.1	45	51	9.0R	59.1	65	18	26.0	19	28	9.2A	13.1	18
44	57.6	45	55	8.3A	50.2	56	19	32.1	19	84	9.0	23.5	30
45	30.1	46	27	8.2	15.8	22	19	48.1	20	50	8.0L	31.0	36
45	43.1	46	41	7.9L	57.6	64	20	3.9	21	6	9.0	52.9	58
46	2.5	47	0	9.3B	40.7	47	20	45.7	21	48	8.4	5.8	11
47	41.2	48	39	8.1L	35.0	41	20	53.8	21	56	8.8	15.7	21
47	42.3	48	40	9.2B	34.5	40	23	56.1	24	58	9.2A	41.0	46
47	43.0	48	41	8.5	3.9	10	24	10.0	25	12	9.1A	43.4	49
48	46.5	49	44	7.2L	9.9	16	24	18.0	25	20	7.0A	12.0	17
49	13.8	50	72	9.0	39.4	45	24	26.6	25	30	9.0R	55.0	60
51	13.2	52	11	9.0A	48.4	54	25	20.5	26	23	9.3A	10.6	16
51	36.9	52	35	8.7A	30.3	36	26	52.4	27	55	9.1R	13.7	19
52	35.3	53	34	8.8A	44.8	51	26	53.5	27	56	8.4A	1.4	6
52	36.5	53	35	8.9A	36.6	53	27	50.4	28	53	8.8A	9.0	14
53	0.4	53	59	8.9A	25.8	32	28	12.5	29	15	7.3A	19.4	24
54	56.9	55	46	9.0A	15.0	21	28	22.4	29	19	9.4B	26.7	32
55	29.1	56	28	9.1A	12.5	18	28	22.4	29	25	8.6B	26.7	23
55	43.1	56	42	9.3A	17.3	23	29	21.3	30	24	8.9A	29.6	35
56	10.4	57	9	8.0A	59.9	66	29	26.8	30	30	9.0A	29.1	34
57	46.6	58	46	9.0	28.6	35	30	37.3	31	40	8.3R	53.7	59
58	41.0	59	40	5.7B	12.0	18	30	53.3	31	56	8.2A	20.2	25
59	31.0	0	30	7.7A	22.9	29	31	1.3	32	5	8.2A	0.4	11
1	2	18.0	3	18	4.8A	22.6	31	18.2	32	22	8.9A	25.9	31
4	49.1	5	49	9.0A	48.7	55	31	19.0	32	23	7.5A	12.3	17
5	32.0	6	32	9.3B	50.2	56	32	57.3	34	1	9.2A	7.8	13
7	25.4	8	25	8.0A	30.2	36	34	12.6	35	17	8.8	28.5	33
7	28.1	8	28	8.5B	46.9	53	34	21.3	35	25	8.4A	52.8	59
8	46.4	9	46	8.8	11.2	17	34	47.2	35	51	9.0A	11.9	17
8	57.4	9	57	7.5B	40.4	46	34	55.3	35	59	7.5A	9.1	14
9	45.2	10	45	9.0	26.8	33	35	38.0	36	42	8.4L	25.7	31
10	11.5	11	1	9.0	47.6	54	35	39.2	36	43	9.0A	6.2	11
11	31.0	12	31	7.4B	18.2	24	36	40.1	37	44	8.5L	36.6	42
11	44.1	12	44	7.0L	12.1	16	36	48.5	37	52	9.0A	2.2	7
12	10.0	13	11	8.9B	35.6	41	36	56.4	38	0	9.5R	13.7	19



h	37	4.6	38	9	9.4A	2.0	7	h	4	33.7	5	41	8.5	13.2	18
	38	0.9	39	5	8.6A	57.4	62		4	39.4	5	47	7.9B	38.1	43
	38	59.4	40	3	8.0A	58.3	63		5	14.5	6	22	6.9A	24.6	30
	39	31.9	40	36	8.2A	12.5	17		5	31.6	6	40	7.8A	54.8	60
	39	34.9	40	39	9.3B	26.1	31		5	48.3	6	56	8.3A	10.2	15
	39	45.1	40	49	8.9B	25.1	30		7	14.9	8	23	8.3A	12.3	17
	40	33.2	41	37	9.2B	8.9	14		8	30.7	9	39	8.1A	52.0	57
	41	4.7	42	9	8.4A	28.7	34		10	50.6	11	59	8.5A	39.0	44
	41	11.8	42	16	9.0	13.0	18		10	59.3	12	7	7.0A	44.4	49
	41	49.6	42	54	8.4A	41.0	46		11	2.3	12	10	9.0A	45.4	50
	42	0.1	43	4	7.4A	11.1	16		12	39.0	13	47	9.2B	24.9	30
	42	12.7	43	17	8.0A	13.2	18		13	50.4	14	58	6.4A	41.8	47
	42	30.3	43	34	5.7A	25.7	31		15	9.5	16	17	7.0A	35.8	41
	42	47.5	43	50	9.0	40.5	45		17	16.5	18	25	9.0	21.0	26
	42	55.7	44	0	8.6A	36.7	42		18	39.9	19	49	8.2B	19.3	24
	44	14.3	45	18	6.6A	52.9	58		19	14.8	20	24	6.5A	53.2	58
	45	16.8	46	22	9.0	0.7	7		20	2.7	21	12	7.3A	41.4	46
	46	10.2	47	15	8.0A	52.0	57		20	38.2	21	47	6.5A	54.0	59
	46	12.4	47	17	8.6A	45.9	51		20	38.4	21	47	8.5A	31.2	36
	46	34.3	47	39	8.2A	56.7	62		21	12.6	22	22	9.0	18.5	23
	48	15.9	49	21	9.2A	39.5	44		21	23.3	22	32	8.4A	38.2	43
	49	11.9	50	17	7.6A	52.3	58		21	23.7	22	34	9.0	18.5	20
	49	59.7	51	6	9.0	7.0	12		21	59.1	23	9	6.5A	48.8	54
	52	19.0	53	25	9.0B	5.4	10		22	42.7	23	53	8.0A	41.5	46
	52	47.2	53	53	8.8B	55.3	60		23	2.1	24	12	9.0A	32.5	87
	53	27.7	54	34	7.9B	31.8	37		25	52.3	27	2	8.7	54.0	59
	54	7.5	55	13	8.9	25.0	30	(X)XX	28	35.6	29	46	9.2B	34.2	39
	54	20.6	55	27	9.3B	51.7	57		29	20.4	30	30	9.0B	19.5	24
	55	0.6	56	7	8.5A	3.8	9	XX	30	0.6	31	11	8.8B	22.9	27
	55	17.9	56	24	8.9A	55.7	61		30	2.1	31	12	8.5	40.6	46
	56	8.6	57	15	8.9B	13.9	19	XX	31	1.7	32	19	8.9	32.7	37
	56	36.9	59	43	9.2B	32.6	38		31	20.2	32	31	7.3A	51.7	56
h	0	7.4	1	14	8.5	47.9	53	XX	32	45.0	33	56	6.0A	29.7	34
2	0	24.9	1	32	9.0	38.0	41	XX	34	40.1	35	51	8.0A	20.5	24
	1	35.5	2	42	9.0	14.6	20	XX	35	51.5	37	2	8.5	49.3	53
	2	1.0	3	8	9.0	16.6	22	XX	37	25.1	38	36	8.3	19.4	23
	3	9.1	4	16	8.9A	25.6	31		37	30.0	38	41	7.3A	59.3	63
	3	23.0	4	30	9.3A	26.4	31	XX	39	30.4	40	41	7.5A	53.0	57
	3	59.8	5	7	9.0	10.3	15	XX	40	27.6	41	40	7.9A	3.7	8



	h	2	41	7.6	42	20	8.8	20.9	25		3	17	2.4	18	17	8.6	40.0	44
XX		44	29.5	45	41	9.1B	25.5	29		XX	18	10.8	19	26	8.1B	2.0	6	
XX		46	25.5	47	27	7.7B	54.9	59			18	59.4	20	14	4.8A	57.2	61	
		46	27.0	47	39	8.8	37.5	41		XX	19	11.5	20	26	7.5A	52.6	57	
		47	43.4	48	55	9.0B	35.9	40			21	35.6	22	51	8.7A	41.0	45	
		49	28.5	50	40	8.0A	37.0	41	XX	XX	22	38.1	23	53	6.0A	27.7	32	
XX		49	30.1	50	42	8.5A	4.0	8	X		26	17.8	27	33	9.0	3.5	7	
		55	59.8	57	12	8.8	8.7	13	XX		26	54.0	28	9	8.3A	41.2	45	
XX		59	14.0	60	26	8.9	44.3	48	XX	XX	29	18.3	30	33	9.4B	58.4	62	
	h	0	36.5	1	48	9.4B	50.0	54	XX	XX	30	54.2	32	9	8.4	26.8A	30	
	3	1	7.8	2	21	9.5B	4.2	8			31	1.1	32	17	9.3B	7.9	11	
XX		2	2.3	3	15	8.0B	47.3	51	XX		31	4.8	32	21	8.9B	7.4	10	
		2	14.1	3	27	9.0	12.5	16	XX		34	39.5	35	55	6.5A	35.5	38	
XX		3	8.5	4	21	9.0	23.4	27	XX		34	48.9	36	5	9.5B	39.8	43	
		3	15.4	4	28	8.7	12.3	16	XX		36	34.7	37	51	8.5A	19.8	23	
XX		5	13.4	6	26	8.7B	45.9	50	XX		36	50.3	38	6	8.5A	35.5	38	
XX		7	16.2	8	30	9.0	27.1	31	XX		38	32.6	39	49	8.0A	15.8	19	
		8	5.1	9	19	8.4B	56.7	56	XX		39	31.1	40	47	7.8A	20.2	23	
XX		8	8.5	9	22	8.6	39.6	44	XX		39	38.5	40	54	8.0A	54.2	37	
		12	8.2	13	22	7.0A	42.0	46			40	5.6	41	22	8.0A	15.3	18	
		12	54.5	14	8	8.5A	4.4	8	XX		43	2.0	44	18	9.4B	28.1	31	
		13	1.2	14	15	9.3B	2.9	7	X	XX	45	27.9	46	44	9.1A	28.0	31	
		14	24.3	15	38	8.4A	9.3	13	XX		49	31.0	50	48	9.5B	2.7	6	
		<del>12</del>	<del>24.3</del>			<del>8.5B</del>	<del>15.4</del>				51	23.0	52	40	9.0	3.5	6	
		34	9.5			9.3B	59.9				52	4.4	53	21	8.7	18.6	22	
		34	18.9			8.8	53.5		XX		53	13.6	54	31	7.0A	40.2	43	
		34	37.1			9.2B	58.9				53	25.1	54	42	8.5A	35.8	39	
		34	2.4			8.3A	52.4		XX		54	22.8	55	40	9.0B	35.8	39	
		34	14.3			8.7	50.1				57	58.2	59	15	6.0A	25.9	29	
		34	51.3			8.5A	40.0				58	56.6	0	13	9.0	38.3	41	
		36	8.9			9.0	57.9				59	0.4	0	17	8.5	17.1	20	
		36	4.1			8.7	51.6				1	26.3	4	243	7.5A	2.3	5	
		36	24.4			8.8	32.7		XX		2	59.5	4	17	7.0A	8.5	11	
		36	37.4			8.8	33.5				3	45.1	5	3	8.0A	36.8	40	
		37	55.0			8.9	56.0		XX		3	54.5	5	12	8.8A	36.8	40	
		38	16.6			8.8B	47.5				6	26.8	7	45	8.2B	6.3	9	
		38	57.2			9.0	21.1		XX		7	22.2	8	40	9.0A	16.3	19	
		39	24.9			8.0A	10.2		XX		9	41.5	10	59	8.9	50.9	54	
		39	49.0			9.0A	44.6				9	57.6	11	16	9.0	56.4	59	



1883phae.proj.1708

54<sup>0</sup>

4	10	28.8	11	47	9.0	9.9	13	Xλ	4	32	19.7	53	41	8.0A	39.9	42
XX	14	0.5	15	18	9.0A	28.9	32	XL	52	46.7	54	10	8.4A	46.4	48	X
XX	14	52.1	16	10	8.9A	22.9	26	XX	54	28.7	55	50	7.8A	55.5	57	
	16	31.5	17	50	8.5A	15.7	19		54	36.9	55	58	7.2A	11.1	13	
	17	18.3	18	37	7.5A	41.7	45		54	50.4	56	11	9.0A	8.3	10	XY
+	19	39.5	20	58	9.0	45.1	48	XX	56	1.2	57	22	7.5A	47.8	50	
XX	23	49.1	25	8	9.0	1.6	5		5	2	20.0	3	41	8.5	36.0	38
XX	24	38.7	25	58	8.5	41.6	45	XX	5	11.8	6	33	7.5B	0.2	2	
XX	26	17.0	27	36	8.2B	14.7	18		5	26.0	6	47	9.4A	49.5	51	
	26	43.0	28	2	9.0	37.8	41	XX	5	58.4	7	19	8.5B	13.5	15	
+	30	18.0	31	29	8.0A	22.5	25	X	7	31.2	8	52	8.3A	46.3	48	
	30	35.4	31	54	9.5B	4.9	8	XX	8	28.5	9	49	8.0A	53.8	55	
	32	8.8	33	28	9.0	59.3	61	XX	9	30.2	10	51	6.3A	6.0	7	
XX	32	40.6	34	00	8.5B	15.4	17	XX	11	11.9	12	33	9.4B	53.6	55	
XX	34	9.5	35	28	9.3B	59.9	62		16	51.7	18	13	8.5A	49.1	50	
	34	16.9	35	36	8.8	53.5	55		17	37.9	18	59	7.5A	1.5	3	
	34	37.1	35	56	9.2B	59.9	62		18	43.8	20	05	9.5B	35.8	37	
	34	42.4	36	01	8.3A	32.4	84	-	19	36.6	20	58	7.8A	31.7	33	X
	34	44.3	36	03	8.7	50.1	52	XX	19	54.2	21	15	8.9	39.6	41	X
X	34	51.3	36	10	8.5A	48.0	56	-XX	21	20.4	22	41	9.3B	8.3	9	
	35	8.9	36	28	9.0	57.9	66	XX	21	30.8	22	52	9.4B	35.1	36	XX
+	36	4.3	37	23	8.7	51.6	54	XX	22	21.1	23	42	9.3B	51.7	53	
	36	24.4	37	43	8.8	32.7	35	+	22	41.4	24	02	8.8	36.7	38	
	36	37.4	37	56	8.8	33.5	35	XX	24	42.0	26	03	6.0A	18.5	19	
	37	55.0	39	14	8.9	56.0	58	XX	26	25.4	27	46	8.5A	51.4	52	
XX	38	16.6	40	36	8.8B	49.5	49	-	27	16.6	28	38	8.8	7.7	9	X
	38	52.2	40	16	9.0	21.1	23	XX	27	31.7	28	53	9.4A	45.0	46	
	39	24.9	40	44	8.0A	10.2	12	-	28	40.7	30	02	9.4A	27.9	29	
	39	49.0	41	8	9.0A	44.6	47	XX	29	25.7	30	47	9.0A	13.0	14	
XX	40	11.0	41	30	8.0A	39.8	42	-	30	2.0	31	23	9.3A	14.6	16	
+	41	14.6	42	34	8.0A	46.8	49	XX	30	36.7	31	58	8.5A	44.5	46	
XX	41	15.0	42	34	8.5A	16.0	18	-	31	7.2	32	28	9.2A	9.7	11	
XX	49	4.7	50	25	8.7A	21.2	23	XX	31	45.8	33	10	9.1A	21.9	23	
XX	49	6.3	50	26	8.9A	36.9	39	XX	32	1.5	33	22	7.0A	46.5	48	
XX	50	3.9	51	24	9.3A	24.2	26	XX	32	27.1	33	48	9.3B	58.8	60	
XX	50	41.4	52	1	8.8	9.9	12	-	33	12.5	34	33	8.7A	42.0	43	
	50	42.8	52	3	8.7A	38.0	40	XX	33	43.7	35	05	8.0A	0.3	1	
XX	51	27.7	52	47	7.8A	42.8	45	-	33	49.3	35	10	9.0	21.4	22	
XX	51	58.2	53	18	9.2B	32.4	34	-	35	43.1	37	03	6.5A	24.0	25	X



	5	35 44.0	5 37 00	9.5 B	35.4	54 36	XX 6	16	21.8	6 17 44	8.7 A	57.1	57
XX	36	33.8	37 56	9.4 B	42.0	43	XX	16	33.8	17 56	8.8 A	19.6	20
XX	38	7.6	39 30	9.3 B	0.1	1	XX	16	34.4	17 56	8.3 A	28.0	28
-	39	4.2	40 26	8.5	38.2	39		16	46.7	18 09	9.2 A	39.1	39
XX	41	22.7	42 45	9.0	33.7	35		17	7.4	18 29	8.0 A	50.5	50
-	43	46.3	45 08	9.0	48.9	50		17	11.8	18 34	7.9 A	41.7	42
	43	52.6	45 14	9.0	9.6	10	XX	17	12.5	18 34	8.4 A	28.0	28
	44	5.7	45 28	8.8	28.4	29	XX	17	23.2	18 45	9.0 A	23.6	24
XX	44	29.1	45 57	8.3	13.7	15	XX	17	49.9	19 12	8.7 A	52.1	52
	44	29.8	45 52	9.0	23.4	24	XX	19	35.9	20 08	8.0 A	58.1	58
XX	45	14.4	46 36	8.8	43.0	44	XX	20	11.0	21 33	8.1 A	52.1	52
XX	45	40.2	47 02	9.0	48.0	49	XX	20	21.7	21 44	7.8 A	56.5	56
XX	47	37.0	48 59	9.0 A	15.4	15	XX	21	38.3	23 00	9.0	34.3	34
XX	47	57.2	49 19	7.0 A	32.0	32	XX	21	55.8	23 18	8.9	10.2	10
XX	47	56.2	49 18	9.3 B	17.2	17	XX	23	19.9	24 42	8.0 A	10.4	10
	48	6.6	49 29	8.5 A	22.3	22	XX	23	52.7	25 15	8.3 B	41.6	42
XX	48	38.7	50 01	8.7	48.7	49	XX	27	18.8	28 41	8.9 A	1.6	2
XX	49	15.4	50 30	9.0	33.0	33	XX	27	36.5	28 59	8.8 A	3.6	4
XX	49	48.8	51 11	9.0	32.4	32	XX	27	52.8	29 15	9.0	7.5	7
XX	53	19.3	54 41	9.3 A	25.0	25	XX	29	42.0	31 04	8.8 A	8.6	9
XX	55	27.2	56 49	8.8	41.1	41	XX	30	49.4	32 11	8.3 A	33.5	33
XX	56	6.8	57 9	8.2 A	55.8	16	XX	31	24.7	32 57	7.5 B	14.7	15
XX	56	14.7	57 37	8.8	28.2	28	XX	31	27.9	32 50	9.0	7.6	8
XX	58	43.26	00 05	8.9	2.9	3	XX	31	51.4	33 13	9.0	0.2	0
XX	59	17.2	00 39	9.0	51.2	51	XX	32	20.1	33 42	9.0	50.2	50
XX	0	22.8	1 45	8.5 A	45.6	46	XX	33	34.3	34 56	8.9 B	59.7	59
XX	1	0.5	2 22	8.9 A	0.0	0	XX	33	43.9	35 05	8.5	28.7	28
XX	1	44.8	3 07	8.4 A	42.7	43	XX	35	4.4	36 26	8.8	29.1	28
XX	1	38.4	3 20	9.0 A	8.9	9	XX	35	19.8	36 42	9.1 A	15.9	15
XX	4	29.7	5 52	8.5 A	4.6	5	XX	38	8.2	39 29	8.8 A	24.5	23
XX	7	15.2	8 37	9.0	13.7	14	XX	39	15.9	40 36	7.8 A	34.6	33
XX	8	6.0	9 28	8.9 B	18.2	18	XX	39	41.3	41 02	8.5 B	21.9	21
XX	8	24.7	9 47	7.5 B	18.3	18	XX	40	40.4	42 0.	8.5 B	14.9	10
XX	9	49.5	11 12	8.9 B	30.2	30	XX	43	4.9	44 26	9.0 A	25.9	25
XX	10	14.7	11 47	8.5	42.7	43	XX	43	14.0	44 35	8.5 A	48.3	47
XX	10	59.2	12 22	9.0	8.4	8	XX	44	33.2	45 54	8.9 B	24.9	24
XX	11	42.8	13 05	8.9 A	0.4	0	XX	44	55.9	46 27	9.5 B	37.4	36
XX	13	57.8	15 20	9.0	35.9	36	XX	45	13.0	46 34	8.8	47.4	46
XX	14	21.7	15 44	8.4	25.0	25	XX	45	25.5	46 46	8.0 A	27.7	27



188phag.proj.1

542	46 23.9	47 45	8.8	39.9	39	XX	28 25.3	7 29 44	8.0A	46.8	46
47 29.4	48 50	8.9	17.4	16	XX	28 46.7	30 06	8.6A	24.6	23	
47 59.2	49 20	8.8	54.2	53	XX	30 36.3	31 55	8.8A	58.7	57	
48 35.4	49 56	8.5	38.1	27	XX	31 19.7	32 39	8.7A	56.6	55	
49 52.8	51 14	8.8	23.7	22	XX	37 17.3	38 36	8.5A	2.0	1	
51 14.9	52 36	7.5A	14.4	13	XX	39 39.3	40 58	9.0A	6.0	5	
51 19.4	52 40	7.8A	21.7	20	XX	39 40.3	40 59	6.3A	28.7	27	
54 42.7	56 04	9.0	28.6	27	XX	44 53.8	46 13	9.0A	6.6	5	
55 8.4	56 29	8.2A	42.2	41	XX	47 43.3	49 02	9.0	26.7	25	
55 19.1	57 40	9.1A	47.7	46	XX	48 14.8	49 34	9.0	42.8	41	
56 43.2	58 03	8.5A	20.7	20	XX	49 48.3	51 06	6.7A	50.4	48	
57 30.7	58 51	8.0A	14.3	13	XX	51 10.3	52 28	8.5A	53.9	52	
57 46.2	59 07	8.4B	34.9	33	XX	51 25.4	52 43	7.3A	31.5	30	
58 56.6	7 00 17	8.5	35.9	35	XX	52 13.4	53 31	8.7A	33.5	31	
59 58.4	1 18	9.0B	0.5	59	XX	53 19.3	54 39	7.0A	4.1	2	
0 2.0	1 22	8.4B	23.1	22	XX	55 6.8	56 25	9.1B	19.3	17	
0 46.2	2 06	8.8	8.0	7	XX	55 14.5	56 32	8.5	56.2	54	
1 22.7	2 43	6.8A	42.2	41	XX	55 45.8	57 04	8.0A	31.1	29	
2 30.9	3 51	9.0A	10.4	9	XX	58 11.7	59 30	8.7	41.5	39	
3 6.1	4 26	9.0	52.5	51	XX	58 14.4	59 32	8.7A	3.6	2	
5 17.3	6 37	8.6A	30.9	30	XX	59 5.2	0 23	8.9B	11.6	16	
8 18.8	9 38	8.8	17.2	16	XX	59 46.4	1 04	8.0A	40.3	37	
9 34.3	10 54	9.0	46.2	45	XX	59 56.3	1 14	6.7A	58.3	55	
12 2.4	13 22	8.0B	21.6	20	XX	8 10.0	2 27	9.5A	41.8	39	
12 31.8	13 57	8.8	48.2	47	XX	5 22.9	6 40	8.3A	31.9	29	
13 12.9	14 33	8.7	56.5	55	XX	7 6.2	8 23	6.5A	34.4	31	
17 38.1	18 58	9.2B	22.5	21	XX	8 14.4	9 31	9.3A	33.9	31	
19 45.8	20 6	9.0A	48.7	47	XX	9 25.4	10 42	6.9A	1.2	53 58	
20 30.2	21 50	9.0A	0.1	58	XX	11 15.2	12 32	9.0B	52.3	49	
21 23.4	22 43	9.0A	1.6	0	XX	13 56.3	15 13	9.1A	36.4	33	
21 24.4	22 44	9.0	54.8	53	XX	13 59.0	15 16	8.4A	58.5	55	
21 36.1	22 56	8.9	24.5	23	XX	14 6.4	15 23	7.5A	23.1	20	
22 35.8	23 56	8.3	39.8	38	XX	14 16.9	15 34	8.9A	28.1	25	
23 56.7	25 17	9.0	38.8	37	XX	15 58.9	17 16	7.8A	6.8	4	
24 12.2	25 32	8.6A	49.2	48	XX	16 6.4	17 23	9.2A	0.5	53 57	
25 29.6	26 50	7.9B	42.0	41	XX	17 48.0	19 06	8.8	15.9	13	
25 44.2	27 04	7.2A	9.3	8	XX	17 50.5	19 07	7.3A	20.5	17	
27 4.0	28 24	9.0	51.9	50	XX	19 33.7	20 50	7.2A	36.5	33	
27 42.0	29 02	7.0A	12.8	11	XX	20 3.8	21 21	8.7A	34.5	31	



XX <sup>A</sup> 20 41.5	8 21 57	9.1B 5.5	2	XX <sup>A</sup> 15 50.4	17 04	9.3B 24.6	21
XX 20 42.3	21 58	8.5A 2.5	0	XX <sup>A</sup> 18 15.5	19 29	9.2B 45.2	42
XX <sup>A</sup> 22 47.1	23 03	9.1A 11.2	8	XX 18 25.4	19 39	9.0A 50.8	48
XX <sup>A</sup> 24 52.2	26 08	8.6A 12.6	10	XX 18 28.3	19 42	8.7A 26.7	23
XX <sup>A</sup> 26 42.0	27 58	9.2B 17.4	14	XX <sup>A</sup> 19 32.4	20 46	8.5A 45.4	43
XX 27 46.1	29 02	8.5A 13.1	10	XX <sup>A</sup> 20 36.9	21 51	9.3B 42.0	39
XX 28 34.7	29 51	9.4B 33.0	30	XX 24 8.2	25 22	7.4B 41.2	38
XX 30 37.5	31 53	9.0A 11.5	8	XX 25 31.1	26 45	9.4B 25.6	23
XX 35 8.0	36 24	8.5 26.8	24	XX <sup>A</sup> 26 26.3	27 40	7.5A 46.3	43
XX <sup>A</sup> 36 59.2	38 15	8.6A 56.1	53	XX <sup>A</sup> 27 16.8	28 31	8.8A 56.4	53
XX 38 40.6	39 57	8.5 39.3	36	XX <sup>A</sup> 29 56.4	31 10	7.0A 9.1	6
XX 39 26.0	40 42	9.1B 22.4	19	XX 30 40.8	31 55	7.3A 16	0
XX 42 35.8	43 52	8.3B 16.7	14	XX 31 0.9	32 15	8.4 34.5	21
XX 43 24.7	44 41	8.8A 50.9	48	XX 31 44.4	32 58	8.8 10.5	7
XX 45 52.3	47 08	9.0A 46.0	43	XX 32 18.6	33 33	9.0 7.9	5
XX 47 53.5	49 09	8.9A 39.1	36	XX 33 1.8	34 16	9.4B 9.6	6
XX 48 37.2	49 53	8.2 57.8	55	XX 34 7.9	35 22	9.0B 25.6	22
XX 48 44.5	50 00	8.5A 31.7	29	XX 34 54.7	36 09	9.1B 32.0	29
XX 49 20.0	50 38	8.3A 20.0	16	XX 38 37.6	39 47	7.4A 55.9	52
XX 49 45.0	51 00	9.0 6.7	3	XX 38 57.0	40 7	8.3A 37.8	34
XX 50 48.5	52 03	8.3A 5.7	2	XX 42 18.6	43 22	5.0A 45.1	41
XX 53 22.7	54 38	5.8A 51.2	47	XX 46 37.3	47 46	7.0A 56.6	52
XX 55 11.8	56 27	9.0 26.3	24	XX 46 38.1	47 47	8.7A 44.2	40
XX 55 43.7	56 59	8.8 33.6	30	XX 48 42.3	49 57	9.3A 41.7	38
XX 55 49.8	57 05	9.0 52.5	48	XX 49 57.0	51 0	9.3A 5.1	0
XX 59 19.1	9 0 34	9.4B 9.1	5	XX 50 11.7	51 20	9.4A 4.1	-1
XX 3 51.2	5 06	8.8A 39.5	35	XX 51 55.6	52 3	8.5 20.2	15
XX 4 41.8	5 57	8.5B 5.4	1	XX 52 29.5	53 37	8.9A 3.4	-2
XX 5 18.9	6 34	8.6 54.7	51	XX 53 28.6	54 36	8.8A 38.9	29
XX 5 45.3	7 00	5.7A 37.5	33	XX 53 50.6	54 58	8.2A 4.0	-1
XX 8 43.8	9 59	9.2A 41.9	38	XX 54 56.1	56 4	6.2A 34.9	30
XX 11 28.5	12 43	8.5 22.3	18	XX 58 21.6	59 28	9.0 42.3	37
XX 11 40.3	12 55	8.3 13.9	16	XX 58 33.3	2 40	9.3B 0.5	-5
XX 12 12.9	13 28	9.0 11.5	7	XX 2 29.1	3 36	9.2A 12.3	7
XX 14 42.2	15 57	8.0B 0.5	53	XX 2 45.6	3 52	8.8A 55.9	51
XX 15 10.7	16 26	9.3A 44.3	46	XX 2 58.1	4 5	8.0A 12.3	7
XX 15 21.1	16 36	7.5A 39.0	35	XX 3 26.6	4 33	8.5A 12.3	7
XX 15 44.4	16 55	9.3A 19.9	16	XX 4 47.0	5 54	9.4A 51.6	47
XX 15 48.8	17 04	8.8A 21.3	17	XX 4 59.6	6 7	8.4 16.7	12



10	5	10.7	10	6	16	8.0B	29.1	24
1	9	19.6	10	24		9.0	12.8	8
+	9	35.1	10	30		8.5L	31.0	26
+	10	11.6	11	16		8.5	15.2	10
X	10	52.1	11	57		7.0L	30.9	26
+	11	7.7	12	12		6.5A	56.3	51
X	12	10.4	13	15		9.4A	50.6	46
+	13	29.8	14	25		9.2A	43.8	39
+	17	28.8	18	32		8.2A	43.0	38
+	18	28.7	19	34		8.0A	24.7	20
+	21	8.9	22	14		9.0A	27.2	22
X	23	40.8	24	45		8.3A	19.9	15
+	23	50.2	24	55		9.2A	25.2	20
X	24	38.0	25	43		6.48	14.4	9
+	25	41.3	26	46		9.4A	28.7	24
+	26	14.2	27	19		9.1A	42.8	38
+	26	24.1	27	29		8.2B	31.2	26
+	30	4.8	31	10		6.09	24.5	20
+	32	6.7	33	11		8.09	23.3	18
+	33	27.8	34	30		9.2A	51.9	47
+	34	8.4	35	10		8.9A	41.4	37
+	35	14.4	36	16		9.5B	28.5	23
+	37	27.0	38	30		8.5	33.6	29
+	39	8.3	40	13		9.4B	45.7	40
+	40	18.1	41	20		9.4B	39.4	34
+	42	19.8	43	22		8.9A	38.5	33
+	42	44.4	43	46		9.0A	49.2	44
+	43	26.9	44	28		9.2B	54.6	50
+	45	57.1	46	58		8.5A	20.9	16
+	47	57.5	48	58		8.8	28.2	23
+	51	50.1	52	57		8.9B	0.7	-5
+	52	34.8	53	35		8.9	39.5	34
+	57	21.1	58	22		7.1B	38.0	33
+	58	5.3	59	5		8.8	23.1	18
+	58	19.0	59	19		8.0L	27.7	23
+	59	52.2	59	52		9.2A	35.0	29
+	1	0						5

1424 stars in some 840

78/dec. 1/11/23



Zone 50°	1790 stars
51°	1586
52°	1588
53°	1404
54°	1424

---

$\frac{4792}{290}$  in  $49^{\circ} 50'$   $54^{\circ} 10'$   
 8082

Resumé of obs. observations Sept. 1953

50-51 =	2845
51-52 =	2276
52-53 =	1623
53-54 =	705
54-55 =	781
Outside limits	32

Obs. by Austin. About  
 $\frac{2800}{9062}$



49° 50' Beginning of 11<sup>h</sup>53° 10' Beginning of 11<sup>h</sup>

11 9 240	11 10 22	5.5 A	576	461
17 51.8	18 50	5.3 A	55.2	497
20 20.8	21 48	5.0 A	576	521
26 53	27 56	8.9	53.3	478
31 23.3	32 19	9.2 A	57.4	519
33 10.6	34 07	9.3 A	52.2	467
39 24.5	40 15	9.0	52.6	471
45 54.8	46 49	8.9 A	56.1	506
52 53.6	53 54	9.2 A	57.5	520
11 58 45.3	11 59 37	7.0 A	57.7	522
12 1 33.8	12 2 25	7.3 A	59.6	541
17 53.5	12 18 43	9.4 A	55.9	502
22 19.2	23 08	8.6 A	50.7	452
29 15.8	30 04	8.0 A	58.2	527
46 38.5	47 25	9.0 A	50.3	448
12 52 58.8	12 53 45	8.8	53.4	489
13 01 39.6	13 2 25	9.5 B	53.1	487
7 43.9	8 29	8.8 A	58.8	53.4
8 36.0	9 20	8.8 A	58.8	53.4
26 39.5	27 23	9.1 A	58.5	50.4
26 53.4	27 36	7.7 A	52.8	47.4
35 41.3	38 46	8.0	52.3	47.0
50 46.0	51 27	8.5	57.0	51.7
13 53 9.8	53 50	7.9 B	57.1	51.8
14 14 36.7	14 15 17	8.0 B	57.5	52.4
16 43.9	17 24	9.5 B	58.6	53.9
19 21.4	19 57	8.5 A	53.5	52.8
22 56.0	23 32	8.9	53.5	48.8
42 5 41.9	26 16	9.0 A	54.0	49.5
15 04 20.6	15 4 24	8.5 A	53.7	49.7
15 32	15 33	8.8 A	54.2	50.5
23 49.7	24 19	9.0	54.7	56.0
24 8.4	24 36	9.0	59.7	56.3
37 30.5	37 58	8.1 A	54.8	57.1
56 37.6	57 06	8.0	53.8	52
18 28.3	18 54	9.1 A	51.9	49
18 31.4	18 57	8.9 A	56.9	53
24 26.1	24 52	9.5 B	59.1	56
35 18.0	35 43	9.5 B	58.2	56

11 42 30.1	11 43 26	6.8 B	43	-1.2
43 49.0	44 45	8.5 A	6.3	+0.8
44 27.4	45 23	9.0 A	7.9	+2.4
11 47 2.8	47 59	8.7 B	2.8	-2.7
12 2 58.4	3 52	9.0	7.3	+1.8
3 50.2	4 44	7.8 B	10.0	+4.5
12 33.0	13 27	8.8	2.7	-2.8
35 35.9	36 29	8.8 A	0.1	-0.4
42 24.9	43 27	8.2 A	2.4	-3.1
44 29.7	45 22	8.2 B	8.7	+3.2
53 23.7	54 15	9.0 A	5.0	-0.5
54 0.6	54 53	8.3 A	0.4	-5.1
13 08 32.3	13 9 17	8.5 A	2.4	-3.1
9 41.7	10 26	7.7 A	9.9	+4.4
12 27.3	13 12	8.8	6.7	+1.2
29 54.0	30 38	9.0 A	4.5	-0.8
32 19.1	33 00	9.0 B	0.5	-4.5
40 38.6	41 19	9.4 A	6.8	+2.3
41 11.7	41 52	6.5 A	9.5	+4.2
42 44.4	43 25	9.0 B	4.2	-1.1
44 14.8	44 53	8.6 A	4.1	-1.0
56 14.0	56 52	8.5 A	3.5	-1.6
58 1.7	58 40	7.0 B	2.2	-2.9
54 0.6	20.2 14.6 5.7	8.2 B	5.6	+0.7
12 3.4	12 34	9.1 B	9.9	+5.0
24 3.4	24 37	8.8	9.6	+0.7
30 19.7	30 53	9.1 B	4.6	+0.1
48 46.1	49 18	9.2 B	6.3	+1.8
15 0 2.9 4.5 0.50	5.0	5.0 A	7.1	+3.1
13 2.3	13 32	9.4 B	7.6	+3.6
27 11.1	27 40	8.8 B	4.1	+0.7
32 12.5	32 41	6.0 B	3.2	3.
38 58.4	39 27	8.7	0.9	-2
54 22.5	54 50	5.1 A	9.8	6.
55 27.4	56 5	9.5 B	0.0	-3
16 0.6	56.6 7.25	8.8 A	3.5	0
16 3.9	16 30	8.4 A	9.3	6
30 40.6	31 6	9.0	2.6	0
59 44.8	17 0.10	8.9 A	6.5	4



49° 50'

55° 10'

10	39	16.8	16	39	50	8.8	50.4	49	17	6	38.9	17	7	03	9.0	6.1	5
16	53	+23.10				9.4B	-53.1	55	18	18.9	18	43	8.2B	4.8			5
17	0	56.3	17	120		9.1A	56.1	55	32	26.3	32	50	8.5A	5.9			5
	1	+24															
	1	23.6	1	48		9.0A	51.1	50	33	39.5	34	3	9.2B	3.6			2
	5	0.6	5	207		8.6A	56.6	55	45	29.6	45	53	8.3L	3.2			2
	6	0.1	6	24		8.3A	52.6	51	49	16.8	49	40	8.5	5.2			4
	6	46.1	7	03		9.3B	57.3	56	55	33.1	55	56	8.3A	7.6			6
	7	51.6	8	15		8.5A	52.1	51	58	47.6	57	11	9.0	2.4			1
X	7	58.6	8	20		6.2A	55.6	54	58	34.2	58	57	8.9	6.2			5
X	9	45.5	10	7		9.3A	54.5	53	18	0	47.9	1	11	9.0A	10.0		9
X	13	7.0	13	30		7.2A	52.1	51	2	33.3	2	56	7.2A	5.4			4
XX	17	42.7	18	6		8.6A	54.4	53	6	52.0	7	16	8.9A	0.0	54	59	
X	22	23 6.6	22	30		9.0A	54.9	54	14	53.1	15	19	9.0	6.8			5
XX	23	48.0	24	11		8.2B	57.9	51	19	0.2	19	24	7.4A	3.7			4
XX	27	28.3	27	51		8.8	50.9	56	26	26.2	26	40	9.1A	5.3			5
XXX	35	28.4	35	51		9.0	59.1	58	26	48.7	27	13	9.0A	3.2			4
	35	23 53.1	36	16		8.2A	58.4	51	29	36.8	30	01	8.9	3.7			5
XX	36	11.1	36	34		6.5A	51.7	51	32	44.2	33	07	9.0	9.9			10
XXX	39	52.7	40	16		8.3A	56.1	56	35	42.7	36	06	7.2A	6.9			8
	45	50.3	46	13		9.3B	57.0	57	41	23.5	41	46	9.2A	6.9			8
XX	48	6.8	48	30		8.3	55.7	55	46	35.7	46	59	8.9	1.6			2
XX	58	9.1	58	32		8.8	50.6	50	49	12.3	49	35	9.0	3.1			4
XX	59	14.8	59	38		8.0A	56.6	56	53	2.5	53	25	8.8	7.0			8
XX	18	3 1.9	18	325		8.6A	59.6	59	54	1.9	54	25	8.6	0.0			1
XX	15	27.2	16	50		8.3A	54.2	54	19	1 43.8	2	07	9.0A	9.9			10
X	17	30.2	17	53		8.8	59.2	59	1	50.4	2	13	8.2A	2.5			3
XX	19	38.7	20	02		8.0A	53.6	54	5	8.2	53	1	8.0A	9.2			9
XX	21	29.2	21	52		9.2A	66.2	57	5	22.2	54	5	7.2A	6.0			8
XX	30	49.2	31	12		8.4	50.2	57	7	41.0	8	04	8.0A	8.9			9
XX	38	37.6	39	01		8.8	59.8	0	9	23.4	9	46	7.8A	4.2			5
X	42	16.3	42	41		8.8	50.8	52	10	28.0	11	51	9.0B	7.7			8
XX	45	11.1	45	34		9.0	55.5	56	13	45.7	14	09	8.2A	8.8			19
XX	50	8.8	50	32		8.4	53.8	55	21	48.7	22	12	7.9A	4.9			6
XX	19	7 22.5	7	45		8.3	50.8	52	24	19.5	24	42	8.6A	3.8			5
XX	14	45.2	15	07		8.0A	57.8	59	27	5.7	27	29	6.3A	6.8			8
XX	19	36.5	19	59		6.6A	59.5	0	27	14.1	27	37	9.0	7.4			8
XX	20	26.7	20	50		8.9	58.5	0	35	56.6	36	15	8.7	6.3			8
XX	20	44.2	21	07		7.5A	57.0	58	38	51.9			6.8B	7.3			8
XX	22	50.9	23	14		8.6A	51.6	53	45	32.7			8.1A	3.4			8
XX	22	56.4	23	19		7.3A	51.1	53	47	12.9			7.8A	6.4			8



49° 50'

XX

XX

XX

XX

23	11.6	23	36	8.8	56.3	58
+24					+2	
27	10.6	27	35	7.8 A	53.4	55
27	29.1	27	53	6.0 A	58.6	62
28	11.2	28	35	8.3 A	51.5	53
30	45.8	31	10	9.0	58.9	61
32	3.0	32	27	7.0 A	54.8	57
32	33.7	32	58	4.9 A	53.1	55
+20					+2	
32	55.8	33	21	10.9	52.6	55
32	57.9	33	23	9.0 B	54.2	56
34	43.4	35	8	9.0	52.5	54
42	38.5	43	3	9.0	53.7	56
42	44.2	43	9	8.5 A	59.7	62
42	58.4	43	23	8.7 A	50.9	53
46	23.7	46	49	9.0	52.5	55
+26					+3	
46	46.5	47	14	7.8 L	59.1	62
51	34.8	52	01	8.9 B	51.9	55
53	54.6	54	21	8.5 A	57.5	60
54	59.5	55	25	9.0	54.1	57
56	52.0	57	18	8.5	51.0	54
59	6.8	59	33	7.0 A	53.8	57
20	2	2	27	9.2 B	50.9	54
+27					+3	
12	37.0	13	4	8.2 A	56.4	59
12	44.5	13	11	8.0 A	50.2	53
13	9.4	13	36	9.0	56.0	59
18	58.7	19	26	9.1 B	50.1	53
+27					+3	
24	3.5	24	30	9.0	58.0	56
25	1.3	25	28	7.1 A	58.6	62
25	22.6	25	50	8.4 A	50.0	53
31	10.0	31	37	7.4 A	55.1	58
+28					+3	
44	2.4	44	30	7.0 A	56.8	60
48	52.5	49	20	8.5 A	55.5	58
49	41.3	50	9	8.0 A	58.0	61
53	12.5	53	40	9.0	51.6	55
53	52.7	54	20	5.5 A	54.2	57
55	0.0	55	28	9.0	54.1	57
55	59.7	56	26	9.0 B	56.0	59
59	52.7	0	21	8.0 A	54.3	57
0	39.7	1	08	9.0 A	55.8	59
+29					+4	
2	3.0	2	32	8.8	50.4	54

55° 10'

19	57	58.3	58	26	8.8	4.3	7
20	15	20.8	15	48	8.0 A	5.3	8
+27					+3		
23	11.4	23	38	8.8	6.1		9
26	4.3	26	31	9.0	5.7		9
33	57.3	34	18	9.0	4.2		7
36	41.9	37	9	8.7 A	6.0		9
43	37.5	44	04	7.5 A	2.4		5
51	25.6	51	53	8.9	3.5		6
53	23.3	53	50	8.8 A	9.0		12
54	23.9	54	51	7.9 B	5.4		8
21	0	39.9	1	07	7.7 A	0.4	3
+27					+3		
3	27.9	3	55	9.2 B	9.9		13
5	15.4	5	42	7.8 A	6.0		9
5	33.6	6	01	9.0 B	7.2		10
14	20.8	14	48	9.1 B	1.8		5
17	29.9	17	57	8.9	2.2		5
17	53.0	18	20	8.4 A	0.4		3
18	28.8	18	56	8.3 A	1.9		5
18	39.7	19	07	8.0 A	9.4		12
+27					+3		
19	7.7	19	35	9.5 A	7.5		10
19	9.7	19	37	9.3 A	10.0		13
21	42.4	22	9	8.7 A	3.6		7
29	34.5	30	01	9.0	9.9		13
32	55.5	33	22	8.8 B	6.7		10
32	56.0	33	23	8.8 B	7.4		10
+28					+3		
34	4.0	34	32	7.5 A	8.0		11
47	7.6	47	36	7.5 B	5.8		9
47	8.2	47	36	6.0 B	7.1		10
+29					+4		
51	8.0	51	37	9.2 B	3.1		7
51	13.9	51	43	9.3 B	3.3		7
53	4.3	53	33	9.0 B	1.3		5
53	45.3	54	14	9.1 B	5.3		9
58	14.0	58	48	9.1 B	5.8		10
58	20.9	58	50	9.0 A	5.2		9
58	42.1	59	11	7.8 A	7.5		11
22	2	29.4	2	58	8.6 A	2.2	6
+29					+4		
9	3.1	9	34	8.9	6.2		10
10	10.6	10	42	7.8 B	5.9		10
38	43.4	39	14	8.3	5.8		10



49° 50'

✓ 55° 10'

h	21	5	58.5	6	29	8.7A	52.9	57	h	22	42	30.0	43	13	8.7	2.1	7
XX			+3.1														
	12	23.4		12	54	8.5A	54.5	58			43	48.4	44	31	5.9A	7.9	13
	13	18.0		13	49	9.4A	54.7	59			51	35.7	52	19	8.6A	4.0	9
	17	39.6		18	11	9.0	52.5	56			53	7.2	58	50	9.3B	3.0	8
	17	51.4		18	22	9.0	52.6	57			54	3.1	54	47	9.0	0.2	5
	+3.9																
	18	34.0		19	8	8.3A	52.7	57			55	27.1	56	11	8.9	3.2	8
XX	21	48.6		22	23	9.3A	53.0	57	h	56	33.5	57	17	8.2	3.3	8	
XX	23	22.8		23	57	8.5B	56.1	60	23	6	30	6	48	8.8	0.9	6	
	26	11.4		26	45	9.0	56.2	60			+4.0						
	26	50.3		27	24	8.8	50.0	54			8	23.2	9	8	9.4B	2.2	7
	31	2.4		31	36	7.0B	51.2	55			11	41.5	12	26	9.0	2.9	8
	+3.4										13	44.9	14	29	8.2R	0.5	6
	31	52.7		32	26	8.5A	52.3	56			20	38.8	21	5	9.5R	6.5	12
XX	31	56.5		32	30	9.0A	52.5	56			26	58.0	27	44	9.0A	8.3	14
	32	54.6		33	29	9.0A	57.2	61			30	20.7	31	7	7.0A	5.0	11
	33	30.1		34	4	9.4A	55.8	60			31	10.8	31	57	8.7	9.1	15
XX	36	39.2		37	14	9.0A	51.8	56			37	45.8	38	33	6.5B	1.1	7
XX	38	41.9		39	17	8.8	54.1	58			41	16.9	42	4	9.1B	9.0	15
	43	25.9		44	01	9.1A	55.0	59			41	42.7	42	30	9.2B	2.1	8
XX	43	56.3		44	31	7.3A	50.7	55			44	37.3	45	24	8.8A	7.4	13
	+3.6										+4.8						
	48	55.1		49	31	8.9	58.8	64			49	38.9	50	27	7.5A	2.6	8
	52	27.7		53	04	8.1A	52.5	57			50	26.3	51	14	8.8	5.4	11
	53	26.8		54	03	9.0A	52.4	57			51	45.7	52	34	8.5A	8.8	15
h	54	32.8		55	9	8.6A	52.5	58	h	51	45.7	52	34	8.5A	8.8	15	
22	5	32.7		6	9	8.5A	53.6	61	0	1	4	3.4	1	14	8.9R	4.1	10
	+3.8										5	28.6	4	55	7.4A	9.3	15
	11	43.9		12	22	8.5	50.9	56			5	28.6	6	16	8.10B	3.1	9
	14	12.4		14	50	9.0A	55.8	61			8	31.0	9	23	8.9A	3.5	9
	14	18.5		14	56	9.0A	50.9	56			10	30.0	11	22	8.7	4.7	11
	+3.8										40	19.3	41	13	8.0A	0.7	5
	19	55.2		20	33	9.4B	53.7	59			+5.8						
	22	16.9		23	55	8.9B	51.5	56			48	4.7	49	3	8.2B	2.0	7
	25	30.3		26	8	8.0A	51.1	56			5						
	27	18.9		27	57	9.3A	50.4	55									
	29	22.4		30	00	9.0	55.2	60									
	30	1.9		30	39	8.8	50.8	56									
	+4.1																
	31	35.2		32	16	8.7A	50.1	55									
	33	36.7		34	18	9.0	51.1	56									
	43	57.3		44	38	6.7B	54.9	60									
	46	23.7		47	05	7.4A	56.7	62									
	+4.3																
	46	33.8		47	17	9.4B	52.4	57									
	48	13.7		48	57	9.4B	57.6	63									



















14832246, pre 1700