

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

ΔT = 66.2 s									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
170°15.0'W	25°39.50'S	25°39.50'S	18:15:56	27°26.35'S	27°29.38'S	18:17:51	65.4	0.81	2.27
170°07.5'W	25°36.36'S	25°36.36'S	18:15:56	27°23.25'S	27°26.42'S	18:17:56	65.4	0.73	2.19
170°00.0'W	25°33.23'S	25°33.23'S	18:15:57	27°20.18'S	27°23.39'S	18:17:58	65.4	0.70	2.15
169°52.5'W	25°30.09'S	25°30.09'S	18:15:57	27°17.12'S	27°20.31'S	18:17:58	65.4	0.68	2.13
169°45.0'W	25°26.96'S	25°26.96'S	18:15:57	27°14.07'S	27°17.22'S	18:17:56	65.4	0.66	2.11
169°37.5'W	25°23.84'S	25°23.84'S	18:15:58	27°11.03'S	27°14.12'S	18:17:55	65.4	0.65	2.10
169°30.0'W	25°20.71'S	25°20.71'S	18:15:58	27°07.99'S	27°11.03'S	18:17:53	65.4	0.64	2.09
169°22.5'W	25°17.59'S	25°17.59'S	18:15:59	27°04.95'S	27°07.96'S	18:17:52	65.4	0.63	2.08
169°15.0'W	25°14.47'S	25°14.47'S	18:15:59	27°01.92'S	27°04.89'S	18:17:52	65.4	0.62	2.07
169°07.5'W	25°11.35'S	25°11.35'S	18:16:00	26°58.88'S	27°01.85'S	18:17:52	65.4	0.61	2.07
169°00.0'W	25°08.24'S	25°08.24'S	18:16:01	26°55.85'S	26°58.81'S	18:17:53	65.4	0.61	2.06
168°52.5'W	25°05.13'S	25°05.13'S	18:16:01	26°52.81'S	26°55.79'S	18:17:54	65.4	0.60	2.06
168°45.0'W	25°02.03'S	25°02.03'S	18:16:02	26°49.78'S	26°52.77'S	18:17:55	65.4	0.60	2.05
168°37.5'W	24°58.92'S	24°58.92'S	18:16:03	26°46.76'S	26°49.75'S	18:17:56	65.5	0.59	2.05
168°30.0'W	24°55.82'S	24°55.82'S	18:16:03	26°43.74'S	26°46.73'S	18:17:56	65.5	0.59	2.05
168°22.5'W	24°52.73'S	24°52.73'S	18:16:04	26°40.72'S	26°43.71'S	18:17:57	65.5	0.59	2.04
168°15.0'W	24°49.63'S	24°49.63'S	18:16:05	26°37.70'S	26°40.69'S	18:17:58	65.5	0.58	2.04
168°07.5'W	24°46.54'S	24°46.54'S	18:16:06	26°34.69'S	26°37.68'S	18:17:59	65.6	0.61	2.07
168°00.0'W	24°43.46'S	24°43.46'S	18:16:07	26°31.69'S	26°34.67'S	18:18:00	65.7	0.63	2.08
167°52.5'W	24°40.37'S	24°40.37'S	18:16:08	26°28.68'S	26°31.67'S	18:18:01	65.7	0.64	2.09
167°45.0'W	24°37.29'S	24°37.29'S	18:16:09	26°25.68'S	26°28.67'S	18:18:02	65.8	0.64	2.10
167°37.5'W	24°34.22'S	24°34.22'S	18:16:10	26°22.69'S	26°25.67'S	18:18:03	65.8	0.65	2.10
167°30.0'W	24°31.15'S	24°31.15'S	18:16:11	26°19.69'S	26°22.68'S	18:18:04	65.8	0.65	2.10
167°22.5'W	24°28.08'S	24°28.08'S	18:16:13	26°16.70'S	26°19.69'S	18:18:05	65.9	0.66	2.11
167°15.0'W	24°25.01'S	24°25.01'S	18:16:14	26°13.72'S	26°16.70'S	18:18:07	65.9	0.66	2.11
167°07.5'W	24°21.95'S	24°21.95'S	18:16:15	26°10.74'S	26°13.72'S	18:18:08	66.0	0.66	2.11
167°00.0'W	24°18.89'S	24°18.89'S	18:16:16	26°07.76'S	26°10.75'S	18:18:09	66.0	0.66	2.12
166°52.5'W	24°15.84'S	24°15.84'S	18:16:18	26°04.79'S	26°07.77'S	18:18:11	66.0	0.67	2.12
166°45.0'W	24°12.79'S	24°12.79'S	18:16:19	26°01.82'S	26°04.80'S	18:18:12	66.1	0.67	2.12
166°37.5'W	24°09.74'S	24°09.74'S	18:16:21	25°58.85'S	26°01.84'S	18:18:13	66.1	0.67	2.12
166°30.0'W	24°06.70'S	24°06.70'S	18:16:22	25°55.89'S	25°58.87'S	18:18:15	66.2	0.67	2.12
166°22.5'W	24°03.66'S	24°03.66'S	18:16:24	25°52.93'S	25°55.91'S	18:18:17	66.2	0.67	2.13
166°15.0'W	24°00.62'S	24°00.62'S	18:16:25	25°49.98'S	25°52.96'S	18:18:18	66.2	0.68	2.13
166°07.5'W	23°57.59'S	23°57.59'S	18:16:27	25°47.03'S	25°50.01'S	18:18:20	66.3	0.68	2.13
166°00.0'W	23°54.56'S	23°54.56'S	18:16:29	25°44.09'S	25°47.06'S	18:18:21	66.3	0.68	2.13
165°52.5'W	23°51.54'S	23°51.54'S	18:16:30	25°41.15'S	25°44.12'S	18:18:23	66.3	0.68	2.13
165°45.0'W	23°48.52'S	23°48.52'S	18:16:32	25°38.21'S	25°41.18'S	18:18:25	66.4	0.68	2.13
165°37.5'W	23°45.50'S	23°45.50'S	18:16:34	25°35.28'S	25°38.25'S	18:18:27	66.4	0.68	2.13
165°30.0'W	23°42.49'S	23°42.49'S	18:16:36	25°32.35'S	25°35.32'S	18:18:29	66.5	0.68	2.13
165°22.5'W	23°39.48'S	23°39.48'S	18:16:38	25°29.42'S	25°32.40'S	18:18:31	66.5	0.68	2.13
165°15.0'W	23°36.48'S	23°36.48'S	18:16:40	25°26.51'S	25°29.47'S	18:18:33	66.5	0.68	2.14
165°07.5'W	23°33.48'S	23°33.48'S	18:16:42	25°23.59'S	25°26.56'S	18:18:35	66.6	0.69	2.14
165°00.0'W	23°30.49'S	23°30.49'S	18:16:44	25°20.68'S	25°23.65'S	18:18:37	66.6	0.69	2.14
164°52.5'W	23°27.50'S	23°27.50'S	18:16:46	25°17.77'S	25°20.74'S	18:18:39	66.7	0.69	2.14
164°45.0'W	23°24.51'S	23°24.52'S	18:16:48	25°14.87'S	25°17.84'S	18:18:41	66.7	0.69	2.14
164°37.5'W	23°21.58'S	23°21.51'S	18:16:50	25°11.98'S	25°14.94'S	18:18:43	66.7	0.69	2.14
164°30.0'W	23°17.97'S	23°18.86'S	18:16:53	25°09.08'S	25°12.04'S	18:18:45	66.8	0.69	2.14
164°22.5'W	23°15.01'S	23°15.88'S	18:16:55	25°06.20'S	25°09.15'S	18:18:48	66.8	0.69	2.14
164°15.0'W	23°12.04'S	23°12.91'S	18:16:57	25°03.31'S	25°06.27'S	18:18:50	66.9	0.69	2.14
164°07.5'W	23°09.08'S	23°09.94'S	18:17:00	25°00.44'S	25°03.39'S	18:18:52	66.9	0.69	2.14
164°00.0'W	23°06.11'S	23°06.99'S	18:17:02	24°57.56'S	25°00.52'S	18:18:55	66.9	0.69	2.14

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
163°52.5'W	23°03.15'S	23°04.03'S	18:17:04	24°54.69'S	24°57.65'S	18:18:57	67.0	0.69	2.14
163°45.0'W	23°00.20'S	23°01.09'S	18:17:07	24°51.83'S	24°54.78'S	18:19:00	67.0	0.69	2.15
163°37.5'W	22°57.25'S	22°58.14'S	18:17:10	24°48.97'S	24°51.92'S	18:19:02	67.1	0.70	2.15
163°30.0'W	22°54.31'S	22°55.20'S	18:17:12	24°46.12'S	24°49.06'S	18:19:05	67.1	0.70	2.15
163°22.5'W	22°51.37'S	22°52.27'S	18:17:15	24°43.27'S	24°46.21'S	18:19:08	67.2	0.70	2.15
163°15.0'W	22°48.44'S	22°49.33'S	18:17:18	24°40.43'S	24°43.37'S	18:19:10	67.2	0.70	2.15
163°07.5'W	22°45.52'S	22°46.41'S	18:17:20	24°37.59'S	24°40.53'S	18:19:13	67.2	0.70	2.15
163°00.0'W	22°42.60'S	22°43.49'S	18:17:23	24°34.76'S	24°37.69'S	18:19:16	67.3	0.70	2.15
162°52.5'W	22°39.68'S	22°40.57'S	18:17:26	24°31.93'S	24°34.86'S	18:19:19	67.3	0.70	2.15
162°45.0'W	22°36.77'S	22°37.66'S	18:17:29	24°29.11'S	24°32.04'S	18:19:22	67.4	0.70	2.15
162°37.5'W	22°33.86'S	22°34.76'S	18:17:32	24°26.29'S	24°29.22'S	18:19:25	67.4	0.70	2.15
162°30.0'W	22°30.96'S	22°31.86'S	18:17:35	24°23.48'S	24°26.40'S	18:19:28	67.5	0.70	2.15
162°22.5'W	22°28.07'S	22°28.96'S	18:17:38	24°20.67'S	24°23.59'S	18:19:31	67.5	0.70	2.15
162°15.0'W	22°25.18'S	22°26.07'S	18:17:41	24°17.87'S	24°20.79'S	18:19:34	67.6	0.70	2.15
162°07.5'W	22°22.30'S	22°23.18'S	18:17:45	24°15.08'S	24°17.99'S	18:19:37	67.6	0.70	2.15
162°00.0'W	22°19.42'S	22°20.30'S	18:17:48	24°12.29'S	24°15.20'S	18:19:41	67.6	0.70	2.16
161°52.5'W	22°16.55'S	22°17.43'S	18:17:51	24°09.50'S	24°12.41'S	18:19:44	67.7	0.71	2.16
161°45.0'W	22°13.68'S	22°14.56'S	18:17:54	24°06.73'S	24°09.63'S	18:19:47	67.7	0.71	2.16
161°37.5'W	22°10.81'S	22°11.70'S	18:17:58	24°03.95'S	24°06.85'S	18:19:51	67.8	0.71	2.16
161°30.0'W	22°07.96'S	22°08.84'S	18:18:01	24°01.19'S	24°04.08'S	18:19:54	67.8	0.71	2.16
161°22.5'W	22°05.11'S	22°05.99'S	18:18:05	23°58.42'S	24°01.32'S	18:19:58	67.9	0.71	2.16
161°15.0'W	22°02.26'S	22°03.14'S	18:18:08	23°55.67'S	23°58.56'S	18:20:01	67.9	0.71	2.16
161°07.5'W	21°59.42'S	22°00.30'S	18:18:12	23°52.92'S	23°55.80'S	18:20:05	68.0	0.71	2.16
161°00.0'W	21°56.59'S	21°57.47'S	18:18:16	23°50.18'S	23°53.06'S	18:20:08	68.0	0.71	2.16
160°52.5'W	21°53.76'S	21°54.64'S	18:18:19	23°47.44'S	23°50.31'S	18:20:12	68.1	0.71	2.16
160°45.0'W	21°50.94'S	21°51.81'S	18:18:23	23°44.71'S	23°47.58'S	18:20:16	68.1	0.71	2.16
160°37.5'W	21°48.13'S	21°48.99'S	18:18:27	23°41.98'S	23°44.85'S	18:20:20	68.2	0.71	2.16
160°30.0'W	21°45.32'S	21°46.18'S	18:18:31	23°39.26'S	23°42.12'S	18:20:24	68.2	0.71	2.16
160°22.5'W	21°42.51'S	21°43.38'S	18:18:35	23°36.55'S	23°39.41'S	18:20:28	68.3	0.71	2.16
160°15.0'W	21°39.72'S	21°40.58'S	18:18:39	23°33.84'S	23°36.69'S	18:20:32	68.3	0.71	2.17
160°07.5'W	21°36.93'S	21°37.78'S	18:18:43	23°31.14'S	23°33.99'S	18:20:36	68.4	0.72	2.17
160°00.0'W	21°34.14'S	21°34.99'S	18:18:47	23°28.45'S	23°31.29'S	18:20:40	68.4	0.72	2.17
159°52.5'W	21°31.36'S	21°32.21'S	18:18:51	23°25.76'S	23°28.60'S	18:20:44	68.5	0.72	2.17
159°45.0'W	21°28.59'S	21°29.44'S	18:18:55	23°23.08'S	23°25.91'S	18:20:48	68.5	0.72	2.17
159°37.5'W	21°25.82'S	21°26.67'S	18:18:59	23°20.40'S	23°23.23'S	18:20:52	68.6	0.72	2.17
159°30.0'W	21°23.07'S	21°23.91'S	18:19:04	23°17.74'S	23°20.55'S	18:20:57	68.6	0.72	2.17
159°22.5'W	21°20.31'S	21°21.15'S	18:19:08	23°15.08'S	23°17.89'S	18:21:01	68.7	0.72	2.17
159°15.0'W	21°17.57'S	21°18.40'S	18:19:12	23°12.42'S	23°15.22'S	18:21:05	68.7	0.72	2.17
159°07.5'W	21°14.83'S	21°15.65'S	18:19:17	23°09.77'S	23°12.57'S	18:21:10	68.8	0.72	2.17
159°00.0'W	21°12.09'S	21°12.92'S	18:19:21	23°07.13'S	23°09.92'S	18:21:14	68.8	0.72	2.17
158°52.5'W	21°09.37'S	21°10.19'S	18:19:26	23°04.50'S	23°07.28'S	18:21:19	68.9	0.72	2.17
158°45.0'W	21°06.65'S	21°07.46'S	18:19:31	23°01.87'S	23°04.65'S	18:21:24	69.0	0.72	2.17
158°37.5'W	21°03.94'S	21°04.75'S	18:19:35	22°59.25'S	23°02.02'S	18:21:28	69.0	0.72	2.17
158°30.0'W	21°01.23'S	21°02.04'S	18:19:40	22°56.63'S	22°59.40'S	18:21:33	69.1	0.72	2.18
158°22.5'W	20°58.53'S	20°59.33'S	18:19:45	22°54.03'S	22°56.78'S	18:21:38	69.1	0.72	2.18
158°15.0'W	20°55.84'S	20°56.64'S	18:19:50	22°51.43'S	22°54.17'S	18:21:43	69.2	0.73	2.18
158°07.5'W	20°53.16'S	20°53.95'S	18:19:55	22°48.84'S	22°51.57'S	18:21:48	69.2	0.73	2.18
158°00.0'W	20°50.48'S	20°51.26'S	18:20:00	22°46.25'S	22°48.98'S	18:21:53	69.3	0.73	2.18

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

ΔT = 66.2 s									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
157°52.5'W	20°47.81'S	20°48.59'S	18:20:05	22°43.67'S	22°46.39'S	18:21:58	69.4	0.73	2.18
157°45.0'W	20°45.15'S	20°45.92'S	18:20:10	22°41.10'S	22°43.81'S	18:22:03	69.4	0.73	2.18
157°37.5'W	20°42.49'S	20°43.26'S	18:20:15	22°38.54'S	22°41.24'S	18:22:08	69.5	0.73	2.18
157°30.0'W	20°39.84'S	20°40.60'S	18:20:20	22°35.98'S	22°38.68'S	18:22:13	69.5	0.73	2.18
157°22.5'W	20°37.20'S	20°37.96'S	18:20:25	22°33.44'S	22°36.12'S	18:22:19	69.6	0.73	2.18
157°15.0'W	20°34.57'S	20°35.32'S	18:20:31	22°30.89'S	22°33.57'S	18:22:24	69.6	0.73	2.18
157°07.5'W	20°31.94'S	20°32.68'S	18:20:36	22°28.36'S	22°31.03'S	18:22:30	69.7	0.73	2.18
157°00.0'W	20°29.33'S	20°30.06'S	18:20:41	22°25.84'S	22°28.49'S	18:22:35	69.8	0.73	2.18
156°52.5'W	20°26.72'S	20°27.44'S	18:20:47	22°23.32'S	22°25.96'S	18:22:41	69.8	0.73	2.19
156°45.0'W	20°24.12'S	20°24.83'S	18:20:53	22°20.81'S	22°23.44'S	18:22:46	69.9	0.73	2.19
156°37.5'W	20°21.52'S	20°22.23'S	18:20:58	22°18.31'S	22°20.93'S	18:22:52	69.9	0.74	2.19
156°30.0'W	20°18.93'S	20°19.63'S	18:21:04	22°15.81'S	22°18.43'S	18:22:57	70.0	0.74	2.19
156°22.5'W	20°16.35'S	20°17.05'S	18:21:10	22°13.33'S	22°15.93'S	18:23:03	70.1	0.74	2.19
156°15.0'W	20°13.77'S	20°14.47'S	18:21:15	22°10.85'S	22°13.44'S	18:23:09	70.1	0.74	2.19
156°07.5'W	20°11.21'S	20°11.90'S	18:21:21	22°08.38'S	22°10.96'S	18:23:15	70.2	0.74	2.19
156°00.0'W	20°08.65'S	20°09.33'S	18:21:27	22°05.92'S	22°08.49'S	18:23:21	70.3	0.74	2.19
155°52.5'W	20°06.10'S	20°06.78'S	18:21:33	22°03.47'S	22°06.05'S	18:23:27	70.3	0.74	2.19
155°45.0'W	20°03.56'S	20°04.23'S	18:21:39	22°01.02'S	22°03.62'S	18:23:33	70.4	0.74	2.19
155°37.5'W	20°01.03'S	20°01.69'S	18:21:45	21°58.59'S	22°01.19'S	18:23:39	70.5	0.74	2.19
155°30.0'W	19°58.51'S	19°59.16'S	18:21:51	21°56.16'S	21°58.78'S	18:23:45	70.5	0.74	2.20
155°22.5'W	19°55.99'S	19°56.64'S	18:21:58	21°53.74'S	21°56.37'S	18:23:52	70.6	0.74	2.20
155°15.0'W	19°53.48'S	19°54.12'S	18:22:04	21°51.33'S	21°53.97'S	18:23:58	70.7	0.74	2.20
155°07.5'W	19°50.97'S	19°51.62'S	18:22:10	21°48.93'S	21°51.58'S	18:24:04	70.7	0.75	2.20
155°00.0'W	19°48.47'S	19°49.12'S	18:22:17	21°46.53'S	21°49.20'S	18:24:11	70.8	0.75	2.20
154°52.5'W	19°45.98'S	19°46.63'S	18:22:23	21°44.15'S	21°46.83'S	18:24:17	70.9	0.75	2.20
154°45.0'W	19°43.50'S	19°44.15'S	18:22:30	21°41.77'S	21°44.47'S	18:24:24	70.9	0.75	2.20
154°37.5'W	19°41.02'S	19°41.68'S	18:22:36	21°39.41'S	21°42.12'S	18:24:30	71.0	0.75	2.20
154°30.0'W	19°38.56'S	19°39.22'S	18:22:43	21°37.05'S	21°39.77'S	18:24:37	71.1	0.75	2.20
154°22.5'W	19°36.10'S	19°36.76'S	18:22:50	21°34.70'S	21°37.43'S	18:24:44	71.1	0.75	2.20
154°15.0'W	19°33.65'S	19°34.32'S	18:22:56	21°32.36'S	21°35.11'S	18:24:51	71.2	0.75	2.20
154°07.5'W	19°31.22'S	19°31.88'S	18:23:03	21°30.03'S	21°32.79'S	18:24:58	71.3	0.75	2.21
154°00.0'W	19°28.79'S	19°29.45'S	18:23:10	21°27.71'S	21°30.48'S	18:25:05	71.3	0.75	2.21
153°52.5'W	19°26.36'S	19°27.03'S	18:23:17	21°25.40'S	21°28.18'S	18:25:12	71.4	0.75	2.21
153°45.0'W	19°23.95'S	19°24.63'S	18:23:24	21°23.09'S	21°25.89'S	18:25:19	71.5	0.76	2.21
153°37.5'W	19°21.54'S	19°22.23'S	18:23:31	21°20.80'S	21°23.61'S	18:25:26	71.6	0.76	2.21
153°30.0'W	19°19.14'S	19°19.83'S	18:23:38	21°18.52'S	21°21.33'S	18:25:33	71.6	0.76	2.21
153°22.5'W	19°16.76'S	19°17.45'S	18:23:46	21°16.24'S	21°19.07'S	18:25:40	71.7	0.76	2.21
153°15.0'W	19°14.38'S	19°15.08'S	18:23:53	21°13.98'S	21°16.82'S	18:25:48	71.8	0.76	2.21
153°07.5'W	19°12.01'S	19°12.72'S	18:24:00	21°11.73'S	21°14.58'S	18:25:55	71.9	0.76	2.21
153°00.0'W	19°09.65'S	19°10.36'S	18:24:08	21°09.48'S	21°12.34'S	18:26:03	71.9	0.76	2.21
152°52.5'W	19°07.30'S	19°08.02'S	18:24:15	21°07.25'S	21°10.12'S	18:26:10	72.0	0.76	2.22
152°45.0'W	19°04.97'S	19°05.69'S	18:24:23	21°05.02'S	21°07.90'S	18:26:18	72.1	0.76	2.22
152°37.5'W	19°02.64'S	19°03.36'S	18:24:30	21°02.80'S	21°05.70'S	18:26:25	72.2	0.76	2.22
152°30.0'W	19°00.32'S	19°01.05'S	18:24:38	21°00.59'S	21°03.51'S	18:26:33	72.2	0.76	2.22
152°22.5'W	18°58.01'S	18°58.74'S	18:24:46	20°58.40'S	21°01.32'S	18:26:41	72.3	0.77	2.22
152°15.0'W	18°55.72'S	18°56.45'S	18:24:54	20°56.21'S	20°59.15'S	18:26:49	72.4	0.77	2.22
152°07.5'W	18°53.43'S	18°54.17'S	18:25:01	20°54.03'S	20°56.98'S	18:26:57	72.5	0.77	2.22
152°00.0'W	18°51.15'S	18°51.89'S	18:25:09	20°51.86'S	20°54.83'S	18:27:05	72.6	0.77	2.22

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

ΔT = 66.2 s									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
151°52.5'W	18°48.88'S	18°49.63'S	18:25:17	20°49.71'S	20°52.69'S	18:27:13	72.6	0.77	2.22
151°45.0'W	18°46.63'S	18°47.37'S	18:25:25	20°47.56'S	20°50.55'S	18:27:21	72.7	0.77	2.22
151°37.5'W	18°44.38'S	18°45.13'S	18:25:34	20°45.43'S	20°48.43'S	18:27:29	72.8	0.77	2.23
151°30.0'W	18°42.15'S	18°42.90'S	18:25:42	20°43.30'S	20°46.32'S	18:27:37	72.9	0.77	2.23
151°22.5'W	18°39.92'S	18°40.67'S	18:25:50	20°41.19'S	20°44.22'S	18:27:46	73.0	0.77	2.23
151°15.0'W	18°37.71'S	18°38.46'S	18:25:58	20°39.09'S	20°42.13'S	18:27:54	73.1	0.77	2.23
151°07.5'W	18°35.51'S	18°36.26'S	18:26:07	20°37.00'S	20°40.05'S	18:28:03	73.1	0.78	2.23
151°00.0'W	18°33.32'S	18°34.07'S	18:26:15	20°34.92'S	20°37.98'S	18:28:11	73.2	0.78	2.23
150°52.5'W	18°31.14'S	18°31.89'S	18:26:24	20°32.85'S	20°35.92'S	18:28:20	73.3	0.78	2.23
150°45.0'W	18°28.97'S	18°29.72'S	18:26:32	20°30.79'S	20°33.87'S	18:28:28	73.4	0.78	2.23
150°37.5'W	18°26.82'S	18°27.57'S	18:26:41	20°28.74'S	20°31.84'S	18:28:37	73.5	0.78	2.23
150°30.0'W	18°24.67'S	18°25.42'S	18:26:50	20°26.71'S	20°29.81'S	18:28:46	73.6	0.78	2.24
150°22.5'W	18°22.53'S	18°23.28'S	18:26:59	20°24.68'S	20°27.80'S	18:28:55	73.7	0.78	2.24
150°15.0'W	18°20.41'S	18°21.16'S	18:27:08	20°22.67'S	20°25.80'S	18:29:04	73.7	0.78	2.24
150°07.5'W	18°18.30'S	18°19.05'S	18:27:17	20°20.67'S	20°23.80'S	18:29:13	73.8	0.78	2.24
150°00.0'W	18°16.20'S	18°16.94'S	18:27:26	20°18.68'S	20°21.82'S	18:29:22	73.9	0.79	2.24
149°52.5'W	18°14.11'S	18°14.85'S	18:27:35	20°16.70'S	20°19.86'S	18:29:31	74.0	0.79	2.24
149°45.0'W	18°12.03'S	18°12.78'S	18:27:44	20°14.74'S	20°17.90'S	18:29:40	74.1	0.79	2.24
149°37.5'W	18°09.96'S	18°10.71'S	18:27:53	20°12.78'S	20°15.95'S	18:29:50	74.2	0.79	2.24
149°30.0'W	18°07.91'S	18°08.65'S	18:28:02	20°10.84'S	20°14.02'S	18:29:59	74.3	0.79	2.25
149°22.5'W	18°05.87'S	18°06.61'S	18:28:12	20°08.91'S	20°12.10'S	18:30:09	74.4	0.79	2.25
149°15.0'W	18°03.84'S	18°04.58'S	18:28:21	20°06.99'S	20°10.19'S	18:30:18	74.5	0.79	2.25
149°07.5'W	18°01.81'S	18°02.56'S	18:28:31	20°05.09'S	20°08.29'S	18:30:28	74.6	0.79	2.25
149°00.0'W	17°59.80'S	18°00.55'S	18:28:40	20°03.20'S	20°06.40'S	18:30:37	74.7	0.79	2.25
148°52.5'W	17°57.80'S	17°58.55'S	18:28:50	20°01.32'S	20°04.53'S	18:30:47	74.8	0.80	2.25
148°45.0'W	17°55.81'S	17°56.57'S	18:29:00	19°59.45'S	20°02.67'S	18:30:57	74.9	0.80	2.25
148°37.5'W	17°53.83'S	17°54.60'S	18:29:09	19°57.60'S	20°00.82'S	18:31:07	75.0	0.80	2.25
148°30.0'W	17°51.87'S	17°52.64'S	18:29:19	19°55.75'S	19°58.98'S	18:31:17	75.1	0.80	2.26
148°22.5'W	17°49.92'S	17°50.70'S	18:29:29	19°53.92'S	19°57.16'S	18:31:27	75.1	0.80	2.26
148°15.0'W	17°47.98'S	17°48.76'S	18:29:39	19°52.11'S	19°55.35'S	18:31:37	75.2	0.80	2.26
148°07.5'W	17°46.06'S	17°46.84'S	18:29:49	19°50.31'S	19°53.55'S	18:31:47	75.3	0.80	2.26
148°00.0'W	17°44.15'S	17°44.93'S	18:29:59	19°48.52'S	19°51.76'S	18:31:57	75.4	0.80	2.26
147°52.5'W	17°42.25'S	17°43.04'S	18:30:10	19°46.74'S	19°49.99'S	18:32:08	75.5	0.80	2.26
147°45.0'W	17°40.37'S	17°41.16'S	18:30:20	19°44.98'S	19°48.22'S	18:32:18	75.7	0.81	2.26
147°37.5'W	17°38.50'S	17°39.29'S	18:30:30	19°43.23'S	19°46.48'S	18:32:29	75.8	0.81	2.26
147°30.0'W	17°36.64'S	17°37.43'S	18:30:41	19°41.49'S	19°44.74'S	18:32:39	75.9	0.81	2.27
147°22.5'W	17°34.79'S	17°35.59'S	18:30:51	19°39.77'S	19°43.02'S	18:32:50	76.0	0.81	2.27
147°15.0'W	17°32.96'S	17°33.76'S	18:31:02	19°38.06'S	19°41.31'S	18:33:01	76.1	0.81	2.27
147°07.5'W	17°31.15'S	17°31.94'S	18:31:13	19°36.36'S	19°39.61'S	18:33:11	76.2	0.81	2.27
147°00.0'W	17°29.35'S	17°30.14'S	18:31:23	19°34.68'S	19°37.93'S	18:33:22	76.3	0.81	2.27
146°52.5'W	17°27.56'S	17°28.35'S	18:31:34	19°33.01'S	19°36.26'S	18:33:33	76.4	0.81	2.27
146°45.0'W	17°25.79'S	17°26.57'S	18:31:45	19°31.36'S	19°34.61'S	18:33:44	76.5	0.82	2.27
146°37.5'W	17°24.03'S	17°24.81'S	18:31:56	19°29.72'S	19°32.96'S	18:33:55	76.6	0.82	2.27
146°30.0'W	17°22.28'S	17°23.06'S	18:32:07	19°28.09'S	19°31.34'S	18:34:06	76.7	0.82	2.28
146°22.5'W	17°20.55'S	17°21.33'S	18:32:18	19°26.48'S	19°29.72'S	18:34:18	76.8	0.82	2.28
146°15.0'W	17°18.84'S	17°19.61'S	18:32:29	19°24.89'S	19°28.12'S	18:34:29	76.9	0.82	2.28
146°07.5'W	17°17.14'S	17°17.90'S	18:32:40	19°23.31'S	19°26.53'S	18:34:40	77.0	0.82	2.28
146°00.0'W	17°15.45'S	17°16.21'S	18:32:52	19°21.74'S	19°24.96'S	18:34:52	77.2	0.82	2.28

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
145°52.5'W	17°13.78'S	17°14.53'S	18:33:03	19°20.19'S	19°23.40'S	18:35:03	77.3	0.82	2.28
145°45.0'W	17°12.12'S	17°12.87'S	18:33:15	19°18.65'S	19°21.86'S	18:35:15	77.4	0.83	2.28
145°37.5'W	17°10.48'S	17°11.22'S	18:33:26	19°17.13'S	19°20.33'S	18:35:27	77.5	0.83	2.29
145°30.0'W	17°08.86'S	17°09.59'S	18:33:38	19°15.62'S	19°18.81'S	18:35:38	77.6	0.83	2.29
145°22.5'W	17°07.25'S	17°07.97'S	18:33:50	19°14.13'S	19°17.31'S	18:35:50	77.7	0.83	2.29
145°15.0'W	17°05.65'S	17°06.37'S	18:34:01	19°12.65'S	19°15.82'S	18:36:02	77.9	0.83	2.29
145°07.5'W	17°04.07'S	17°04.78'S	18:34:13	19°11.19'S	19°14.35'S	18:36:14	78.0	0.83	2.29
145°00.0'W	17°02.51'S	17°03.20'S	18:34:25	19°09.74'S	19°12.89'S	18:36:26	78.1	0.83	2.29
144°52.5'W	17°00.97'S	17°01.64'S	18:34:37	19°08.31'S	19°11.45'S	18:36:38	78.2	0.83	2.29
144°45.0'W	16°59.43'S	17°00.10'S	18:34:49	19°06.90'S	19°10.02'S	18:36:50	78.3	0.84	2.30
144°37.5'W	16°57.92'S	16°58.57'S	18:35:01	19°05.50'S	19°08.61'S	18:37:03	78.5	0.84	2.30
144°30.0'W	16°56.42'S	16°57.06'S	18:35:13	19°04.12'S	19°07.21'S	18:37:15	78.6	0.84	2.30
144°22.5'W	16°54.94'S	16°55.56'S	18:35:26	19°02.75'S	19°05.83'S	18:37:28	78.7	0.84	2.30
144°15.0'W	16°53.47'S	16°54.08'S	18:35:38	19°01.40'S	19°04.46'S	18:37:40	78.8	0.84	2.30
144°07.5'W	16°52.02'S	16°52.61'S	18:35:51	19°00.06'S	19°03.11'S	18:37:53	78.9	0.84	2.30
144°00.0'W	16°50.59'S	16°51.16'S	18:36:03	18°58.74'S	19°01.77'S	18:38:05	79.1	0.84	2.30
143°52.5'W	16°49.17'S	16°49.72'S	18:36:16	18°57.44'S	19°00.45'S	18:38:18	79.2	0.84	2.31
143°45.0'W	16°47.77'S	16°48.31'S	18:36:28	18°56.15'S	18°59.15'S	18:38:31	79.3	0.85	2.31
143°37.5'W	16°46.39'S	16°46.90'S	18:36:41	18°54.89'S	18°57.86'S	18:38:44	79.5	0.85	2.31
143°30.0'W	16°45.03'S	16°45.52'S	18:36:54	18°53.63'S	18°56.58'S	18:38:57	79.6	0.85	2.31
143°22.5'W	16°43.68'S	16°44.15'S	18:37:07	18°52.40'S	18°55.32'S	18:39:10	79.7	0.85	2.31
143°15.0'W	16°42.35'S	16°42.79'S	18:37:20	18°51.19'S	18°54.11'S	18:39:23	79.9	0.85	2.31
143°07.5'W	16°41.03'S	16°41.46'S	18:37:33	18°49.99'S	18°52.90'S	18:39:36	80.0	0.85	2.31
143°00.0'W	16°39.71'S	16°40.13'S	18:37:46	18°48.81'S	18°51.69'S	18:39:50	80.1	0.85	2.32
142°52.5'W	16°38.40'S	16°38.83'S	18:37:59	18°47.64'S	18°50.51'S	18:40:03	80.2	0.85	2.32
142°45.0'W	16°37.12'S	16°37.54'S	18:38:13	18°46.49'S	18°49.34'S	18:40:17	80.4	0.86	2.32
142°37.5'W	16°35.85'S	16°36.27'S	18:38:26	18°45.36'S	18°48.18'S	18:40:30	80.5	0.86	2.32
142°30.0'W	16°34.60'S	16°35.02'S	18:38:39	18°44.24'S	18°47.05'S	18:40:44	80.7	0.86	2.32
142°22.5'W	16°33.36'S	16°33.79'S	18:38:53	18°43.15'S	18°45.93'S	18:40:57	80.8	0.86	2.32
142°15.0'W	16°32.15'S	16°32.57'S	18:39:07	18°42.07'S	18°44.82'S	18:41:11	80.9	0.86	2.32
142°07.5'W	16°30.95'S	16°31.37'S	18:39:20	18°41.01'S	18°43.74'S	18:41:25	81.1	0.86	2.33
142°00.0'W	16°29.77'S	16°30.18'S	18:39:34	18°39.96'S	18°42.67'S	18:41:39	81.2	0.86	2.33
141°52.5'W	16°28.59'S	16°29.02'S	18:39:48	18°38.94'S	18°41.61'S	18:41:53	81.4	0.87	2.33
141°45.0'W	16°27.43'S	16°27.87'S	18:40:02	18°37.93'S	18°40.58'S	18:42:07	81.5	0.87	2.33
141°37.5'W	16°26.29'S	16°26.74'S	18:40:16	18°36.94'S	18°39.56'S	18:42:21	81.6	0.87	2.33
141°30.0'W	16°25.16'S	16°25.63'S	18:40:30	18°35.97'S	18°38.56'S	18:42:36	81.8	0.87	2.33
141°22.5'W	16°24.06'S	16°24.53'S	18:40:44	18°35.02'S	18°37.58'S	18:42:50	81.9	0.87	2.34
141°15.0'W	16°22.98'S	16°23.46'S	18:40:58	18°34.09'S	18°36.61'S	18:43:04	82.1	0.87	2.34
141°07.5'W	16°21.91'S	16°22.40'S	18:41:13	18°33.18'S	18°35.66'S	18:43:19	82.2	0.87	2.34
141°00.0'W	16°20.86'S	16°21.36'S	18:41:27	18°32.28'S	18°34.73'S	18:43:34	82.4	0.87	2.34
140°52.5'W	16°19.84'S	16°20.34'S	18:41:42	18°31.41'S	18°33.82'S	18:43:48	82.5	0.88	2.34
140°45.0'W	16°18.83'S	16°19.35'S	18:41:56	18°30.55'S	18°32.92'S	18:44:03	82.7	0.88	2.34
140°37.5'W	16°17.84'S	16°18.37'S	18:42:11	18°29.71'S	18°32.05'S	18:44:18	82.8	0.88	2.34
140°30.0'W	16°16.88'S	16°17.42'S	18:42:25	18°28.90'S	18°31.19'S	18:44:33	83.0	0.88	2.35
140°22.5'W	16°15.93'S	16°16.48'S	18:42:40	18°28.10'S	18°30.35'S	18:44:48	83.1	0.88	2.35
140°15.0'W	16°14.99'S	16°15.56'S	18:42:55	18°27.32'S	18°29.52'S	18:45:03	83.3	0.88	2.35
140°07.5'W	16°14.08'S	16°14.66'S	18:43:10	18°26.56'S	18°28.74'S	18:45:18	83.4	0.88	2.35
140°00.0'W	16°13.18'S	16°13.78'S	18:43:25	18°25.82'S	18°28.03'S	18:45:33	83.6	0.88	2.35

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

ΔT = 66.2 s									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
139°52.5'W	16°12.31'S	16°12.92'S	18:43:40	18°25.11'S	18°27.34'S	18:45:48	83.7	0.89	2.35
139°45.0'W	16°11.46'S	16°12.08'S	18:43:55	18°24.41'S	18°26.66'S	18:46:04	83.9	0.89	2.36
139°37.5'W	16°10.62'S	16°11.26'S	18:44:11	18°23.73'S	18°26.01'S	18:46:19	84.1	0.89	2.36
139°30.0'W	16°09.81'S	16°10.46'S	18:44:26	18°23.07'S	18°25.37'S	18:46:35	84.2	0.89	2.36
139°22.5'W	16°09.02'S	16°09.68'S	18:44:41	18°22.43'S	18°24.76'S	18:46:51	84.4	0.89	2.36
139°15.0'W	16°08.25'S	16°08.92'S	18:44:57	18°21.80'S	18°24.16'S	18:47:06	84.5	0.89	2.36
139°07.5'W	16°07.50'S	16°08.17'S	18:45:12	18°21.20'S	18°23.58'S	18:47:22	84.7	0.89	2.36
139°00.0'W	16°06.77'S	16°07.45'S	18:45:28	18°20.61'S	18°23.03'S	18:47:38	84.9	0.89	2.36
138°52.5'W	16°06.07'S	16°06.75'S	18:45:44	18°20.04'S	18°22.49'S	18:47:54	85.0	0.90	2.37
138°45.0'W	16°05.39'S	16°06.07'S	18:46:00	18°19.50'S	18°21.97'S	18:48:10	85.2	0.90	2.37
138°37.5'W	16°04.72'S	16°05.41'S	18:46:16	18°18.98'S	18°21.48'S	18:48:26	85.4	0.90	2.37
138°30.0'W	16°04.08'S	16°04.78'S	18:46:31	18°18.48'S	18°21.00'S	18:48:42	85.5	0.90	2.37
138°22.5'W	16°03.47'S	16°04.16'S	18:46:48	18°17.99'S	18°20.54'S	18:48:59	85.7	0.90	2.37
138°15.0'W	16°02.87'S	16°03.56'S	18:47:04	18°17.54'S	18°20.12'S	18:49:15	85.9	0.90	2.37
138°07.5'W	16°02.30'S	16°02.99'S	18:47:20	18°17.10'S	18°19.71'S	18:49:31	86.0	0.90	2.37
138°00.0'W	16°01.74'S	16°02.43'S	18:47:36	18°16.68'S	18°19.32'S	18:49:48	86.2	0.90	2.38
137°52.5'W	16°01.22'S	16°01.90'S	18:47:53	18°16.29'S	18°18.96'S	18:50:05	86.4	0.91	2.38
137°45.0'W	16°00.71'S	16°01.39'S	18:48:09	18°15.92'S	18°18.61'S	18:50:21	86.6	0.91	2.38
137°37.5'W	16°00.23'S	16°00.90'S	18:48:26	18°15.57'S	18°18.29'S	18:50:38	86.7	0.91	2.38
137°30.0'W	15°59.77'S	16°00.43'S	18:48:42	18°15.24'S	18°17.99'S	18:50:55	86.9	0.91	2.38
137°22.5'W	15°59.33'S	15°59.98'S	18:48:59	18°14.93'S	18°17.71'S	18:51:12	87.1	0.91	2.38
137°15.0'W	15°58.89'S	15°59.56'S	18:49:16	18°14.65'S	18°17.44'S	18:51:29	87.3	0.91	2.38
137°07.5'W	15°58.46'S	15°59.15'S	18:49:32	18°14.39'S	18°17.21'S	18:51:46	87.4	0.91	2.39
137°00.0'W	15°58.04'S	15°58.77'S	18:49:49	18°14.15'S	18°16.99'S	18:52:03	87.6	0.91	2.39
136°52.5'W	15°57.66'S	15°58.41'S	18:50:06	18°13.94'S	18°16.79'S	18:52:20	87.8	0.92	2.39
136°45.0'W	15°57.29'S	15°58.08'S	18:50:23	18°13.75'S	18°16.62'S	18:52:38	88.0	0.92	2.39
136°37.5'W	15°56.95'S	15°57.76'S	18:50:41	18°13.58'S	18°16.46'S	18:52:55	88.2	0.92	2.39
136°30.0'W	15°56.63'S	15°57.47'S	18:50:58	18°13.43'S	18°16.33'S	18:53:12	88.4	0.92	2.39
136°22.5'W	15°56.34'S	15°57.21'S	18:51:15	18°13.31'S	18°16.22'S	18:53:30	88.5	0.92	2.39
136°15.0'W	15°56.07'S	15°56.96'S	18:51:33	18°13.21'S	18°16.11'S	18:53:48	88.7	0.92	2.40
136°07.5'W	15°55.83'S	15°56.74'S	18:51:50	18°13.17'S	18°16.40'S	18:54:05	88.9	0.92	2.40
136°00.0'W	15°55.61'S	15°56.54'S	18:52:08	18°12.96'S	18°14.82'S	18:54:23	89.1	0.92	2.40
135°52.5'W	15°55.41'S	15°56.36'S	18:52:25	18°12.74'S	18°12.84'S	18:54:41	89.3	0.92	2.40
135°45.0'W	15°55.24'S	15°56.21'S	18:52:43	18°12.99'S	18°15.41'S	18:54:59	89.5	0.93	2.40
135°37.5'W	15°55.10'S	15°56.09'S	18:53:01	18°13.10'S	18°16.32'S	18:55:17	89.7	0.93	2.40
135°30.0'W	15°54.98'S	15°55.99'S	18:53:19	18°13.11'S	18°16.04'S	18:55:35	89.9	0.93	2.40
135°22.5'W	15°54.89'S	15°55.92'S	18:53:36	18°13.18'S	18°16.15'S	18:55:53	90.0	0.93	2.40
135°15.0'W	15°54.77'S	15°55.86'S	18:53:54	18°13.28'S	18°16.24'S	18:56:12	90.2	0.93	2.41
135°07.5'W	15°54.69'S	15°55.83'S	18:54:13	18°13.40'S	18°16.36'S	18:56:30	90.4	0.93	2.41
135°00.0'W	15°55.81'S	15°56.09'S	18:54:31	18°13.54'S	18°16.49'S	18:56:48	90.6	0.93	2.41
134°52.5'W	15°55.74'S	15°56.10'S	18:54:49	18°13.70'S	18°16.66'S	18:57:07	90.8	0.93	2.41
134°45.0'W	15°54.69'S	15°55.90'S	18:55:07	18°13.89'S	18°16.84'S	18:57:26	91.0	0.93	2.41
134°37.5'W	15°54.83'S	15°55.99'S	18:55:26	18°14.11'S	18°17.05'S	18:57:44	91.2	0.93	2.41
134°30.0'W	15°54.94'S	15°56.09'S	18:55:44	18°14.35'S	18°17.28'S	18:58:03	91.4	0.94	2.41
134°22.5'W	15°55.04'S	15°56.21'S	18:56:03	18°14.62'S	18°17.53'S	18:58:22	91.6	0.94	2.41
134°15.0'W	15°55.17'S	15°56.36'S	18:56:21	18°14.91'S	18°17.81'S	18:58:41	91.8	0.94	2.41
134°07.5'W	15°55.34'S	15°56.53'S	18:56:40	18°15.23'S	18°18.11'S	18:59:00	92.0	0.94	2.42
134°00.0'W	15°55.53'S	15°56.72'S	18:56:59	18°15.57'S	18°18.44'S	18:59:19	92.2	0.94	2.42

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azm °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
133°52.5'W	15°55.74'S	15°56.95'S	18:57:18	18°15.94'S	18°18.79'S	18:59:38	92.4	0.94	2.42
133°45.0'W	15°55.99'S	15°57.19'S	18:57:37	18°16.33'S	18°19.16'S	18:59:57	92.6	0.94	2.42
133°37.5'W	15°56.26'S	15°57.46'S	18:57:56	18°16.75'S	18°19.56'S	19:00:16	92.8	0.94	2.42
133°30.0'W	15°56.55'S	15°57.76'S	18:58:15	18°17.20'S	18°19.98'S	19:00:36	93.0	0.94	2.42
133°22.5'W	15°56.88'S	15°58.08'S	18:58:34	18°17.67'S	18°20.42'S	19:00:55	93.2	0.94	2.42
133°15.0'W	15°57.23'S	15°58.43'S	18:58:53	18°18.17'S	18°20.89'S	19:01:14	93.4	0.94	2.42
133°07.5'W	15°57.61'S	15°58.81'S	18:59:12	18°18.69'S	18°21.39'S	19:01:34	93.7	0.94	2.42
133°00.0'W	15°58.02'S	15°59.21'S	18:59:32	18°19.24'S	18°21.93'S	19:01:54	93.9	0.95	2.42
132°52.5'W	15°58.45'S	15°59.63'S	18:59:51	18°19.82'S	18°22.53'S	19:02:13	94.1	0.95	2.42
132°45.0'W	15°58.92'S	16°00.09'S	19:00:11	18°20.43'S	18°23.17'S	19:02:33	94.3	0.95	2.43
132°37.5'W	15°59.41'S	16°00.57'S	19:00:30	18°21.07'S	18°23.83'S	19:02:53	94.5	0.95	2.43
132°30.0'W	15°59.93'S	16°01.07'S	19:00:50	18°21.72'S	18°24.52'S	19:03:13	94.7	0.95	2.43
132°22.5'W	16°00.48'S	16°01.60'S	19:01:10	18°22.39'S	18°25.23'S	19:03:33	94.9	0.95	2.43
132°15.0'W	16°01.05'S	16°02.16'S	19:01:30	18°23.09'S	18°25.97'S	19:03:53	95.1	0.95	2.43
132°07.5'W	16°01.66'S	16°02.75'S	19:01:49	18°23.81'S	18°26.73'S	19:04:13	95.3	0.95	2.43
132°00.0'W	16°02.29'S	16°03.36'S	19:02:09	18°24.57'S	18°27.52'S	19:04:33	95.6	0.95	2.43
131°52.5'W	16°02.95'S	16°03.99'S	19:02:29	18°25.35'S	18°28.33'S	19:04:54	95.8	0.95	2.43
131°45.0'W	16°03.65'S	16°04.65'S	19:02:50	18°26.15'S	18°29.17'S	19:05:14	96.0	0.95	2.43
131°37.5'W	16°04.36'S	16°05.34'S	19:03:10	18°26.99'S	18°30.03'S	19:05:34	96.2	0.95	2.43
131°30.0'W	16°05.11'S	16°06.06'S	19:03:30	18°27.85'S	18°30.92'S	19:05:55	96.4	0.95	2.43
131°22.5'W	16°05.87'S	16°06.80'S	19:03:50	18°28.74'S	18°31.84'S	19:06:15	96.6	0.95	2.43
131°15.0'W	16°06.64'S	16°07.58'S	19:04:11	18°29.66'S	18°32.78'S	19:06:36	96.9	0.95	2.43
131°07.5'W	16°07.45'S	16°08.38'S	19:04:31	18°30.60'S	18°33.77'S	19:06:57	97.1	0.95	2.43
131°00.0'W	16°08.28'S	16°09.21'S	19:04:52	18°31.58'S	18°34.80'S	19:07:17	97.3	0.95	2.44
130°52.5'W	16°09.15'S	16°10.06'S	19:05:12	18°32.58'S	18°35.84'S	19:07:38	97.5	0.95	2.44
130°45.0'W	16°10.04'S	16°10.95'S	19:05:33	18°33.61'S	18°36.92'S	19:07:59	97.7	0.96	2.44
130°37.5'W	16°10.96'S	16°11.86'S	19:05:53	18°34.67'S	18°38.02'S	19:08:20	98.0	0.96	2.44
130°30.0'W	16°11.92'S	16°12.80'S	19:06:14	18°35.75'S	18°39.14'S	19:08:41	98.2	0.96	2.44
130°22.5'W	16°12.90'S	16°13.77'S	19:06:35	18°36.87'S	18°40.29'S	19:09:02	98.4	0.96	2.44
130°15.0'W	16°13.91'S	16°14.76'S	19:06:56	18°38.01'S	18°41.48'S	19:09:23	98.6	0.96	2.44
130°07.5'W	16°14.94'S	16°15.79'S	19:07:17	18°39.18'S	18°42.70'S	19:09:45	98.8	0.96	2.44
130°00.0'W	16°16.01'S	16°16.84'S	19:07:38	18°40.38'S	18°43.95'S	19:10:06	99.1	0.96	2.44
129°52.5'W	16°17.11'S	16°17.92'S	19:07:59	18°41.61'S	18°45.23'S	19:10:27	99.3	0.96	2.44
129°45.0'W	16°18.24'S	16°19.03'S	19:08:20	18°42.87'S	18°46.53'S	19:10:49	99.5	0.96	2.44
129°37.5'W	16°19.40'S	16°20.17'S	19:08:42	18°44.16'S	18°47.86'S	19:11:10	99.7	0.96	2.44
129°30.0'W	16°20.58'S	16°21.33'S	19:09:03	18°45.47'S	18°49.22'S	19:11:32	100.0	0.96	2.44
129°22.5'W	16°21.78'S	16°22.53'S	19:09:24	18°46.81'S	18°50.60'S	19:11:53	100.2	0.96	2.44
129°15.0'W	16°23.01'S	16°23.75'S	19:09:46	18°48.19'S	18°52.01'S	19:12:15	100.4	0.96	2.44
129°07.5'W	16°24.27'S	16°25.00'S	19:10:07	18°49.59'S	18°53.45'S	19:12:36	100.6	0.96	2.44
129°00.0'W	16°25.55'S	16°26.28'S	19:10:29	18°51.02'S	18°54.92'S	19:12:58	100.9	0.96	2.44
128°52.5'W	16°26.86'S	16°27.59'S	19:10:50	18°52.48'S	18°56.41'S	19:13:20	101.1	0.96	2.44
128°45.0'W	16°28.20'S	16°28.93'S	19:11:12	18°53.97'S	18°57.93'S	19:13:42	101.3	0.96	2.44
128°37.5'W	16°29.58'S	16°30.30'S	19:11:34	18°55.49'S	18°59.48'S	19:14:04	101.6	0.96	2.44
128°30.0'W	16°30.98'S	16°31.70'S	19:11:55	18°57.04'S	19°01.05'S	19:14:26	101.8	0.96	2.44
128°22.5'W	16°32.42'S	16°33.13'S	19:12:17	18°58.62'S	19°02.65'S	19:14:48	102.0	0.96	2.44
128°15.0'W	16°33.88'S	16°34.58'S	19:12:39	19°00.23'S	19°04.28'S	19:15:10	102.2	0.96	2.44
128°07.5'W	16°35.38'S	16°36.07'S	19:13:01	19°01.86'S	19°05.94'S	19:15:32	102.5	0.96	2.44
128°00.0'W	16°36.91'S	16°37.58'S	19:13:23	19°03.53'S	19°07.62'S	19:15:54	102.7	0.96	2.44

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

ΔT = 66.2 s									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
127°52.5'W	16°38.48'S	16°39.13'S	19:13:45	19°05.23'S	19°09.34'S	19:16:16	102.9	0.96	2.44
127°45.0'W	16°40.07'S	16°40.70'S	19:14:07	19°06.95'S	19°11.08'S	19:16:39	103.1	0.96	2.44
127°37.5'W	16°41.69'S	16°42.30'S	19:14:30	19°08.71'S	19°12.84'S	19:17:01	103.4	0.96	2.44
127°30.0'W	16°43.35'S	16°43.94'S	19:14:52	19°10.49'S	19°14.64'S	19:17:23	103.6	0.96	2.44
127°22.5'W	16°45.03'S	16°45.60'S	19:15:14	19°12.31'S	19°16.46'S	19:17:46	103.8	0.96	2.44
127°15.0'W	16°46.75'S	16°47.29'S	19:15:36	19°14.16'S	19°18.31'S	19:18:08	104.1	0.95	2.44
127°07.5'W	16°48.48'S	16°49.02'S	19:15:59	19°16.03'S	19°20.19'S	19:18:31	104.3	0.95	2.44
127°00.0'W	16°50.20'S	16°50.77'S	19:16:21	19°17.94'S	19°22.10'S	19:18:53	104.5	0.95	2.43
126°52.5'W	16°51.96'S	16°52.55'S	19:16:44	19°19.87'S	19°24.03'S	19:19:16	104.7	0.95	2.43
126°45.0'W	16°53.74'S	16°54.36'S	19:17:06	19°21.84'S	19°25.99'S	19:19:39	105.0	0.95	2.43
126°37.5'W	16°55.56'S	16°56.21'S	19:17:29	19°23.83'S	19°27.98'S	19:20:01	105.2	0.95	2.43
126°30.0'W	16°57.41'S	16°58.08'S	19:17:51	19°25.86'S	19°30.00'S	19:20:24	105.4	0.95	2.43
126°22.5'W	16°59.29'S	16°59.98'S	19:18:14	19°27.91'S	19°32.05'S	19:20:47	105.7	0.95	2.43
126°15.0'W	17°01.21'S	17°01.91'S	19:18:37	19°30.00'S	19°34.12'S	19:21:10	105.9	0.95	2.43
126°07.5'W	17°03.15'S	17°03.88'S	19:19:00	19°32.11'S	19°36.22'S	19:21:33	106.1	0.95	2.43
126°00.0'W	17°05.12'S	17°05.87'S	19:19:22	19°34.26'S	19°38.35'S	19:21:56	106.3	0.95	2.43
125°52.5'W	17°07.12'S	17°07.89'S	19:19:45	19°36.43'S	19°40.51'S	19:22:19	106.6	0.95	2.43
125°45.0'W	17°09.15'S	17°09.94'S	19:20:08	19°38.64'S	19°42.70'S	19:22:42	106.8	0.95	2.43
125°37.5'W	17°11.22'S	17°12.03'S	19:20:31	19°40.88'S	19°44.91'S	19:23:05	107.0	0.95	2.43
125°30.0'W	17°13.31'S	17°14.14'S	19:20:54	19°43.14'S	19°47.15'S	19:23:28	107.2	0.95	2.43
125°22.5'W	17°15.44'S	17°16.29'S	19:21:17	19°45.44'S	19°49.42'S	19:23:51	107.5	0.95	2.42
125°15.0'W	17°17.61'S	17°18.46'S	19:21:40	19°47.76'S	19°51.72'S	19:24:14	107.7	0.95	2.42
125°07.5'W	17°19.80'S	17°20.66'S	19:22:03	19°50.12'S	19°54.05'S	19:24:37	107.9	0.94	2.42
125°00.0'W	17°22.01'S	17°22.90'S	19:22:27	19°52.51'S	19°56.40'S	19:25:00	108.1	0.94	2.42
124°52.5'W	17°24.24'S	17°25.16'S	19:22:50	19°54.93'S	19°58.79'S	19:25:23	108.4	0.94	2.42
124°45.0'W	17°26.51'S	17°27.46'S	19:23:13	19°57.36'S	20°01.20'S	19:25:47	108.6	0.94	2.42
124°37.5'W	17°28.81'S	17°29.79'S	19:23:36	19°59.79'S	20°03.62'S	19:26:10	108.8	0.94	2.42
124°30.0'W	17°31.14'S	17°32.14'S	19:24:00	20°02.29'S	20°06.09'S	19:26:33	109.0	0.94	2.42
124°22.5'W	17°33.51'S	17°34.53'S	19:24:23	20°04.83'S	20°08.58'S	19:26:57	109.2	0.94	2.42
124°15.0'W	17°35.91'S	17°36.94'S	19:24:46	20°07.40'S	20°11.11'S	19:27:20	109.5	0.94	2.42
124°07.5'W	17°38.34'S	17°39.39'S	19:25:10	20°10.00'S	20°13.66'S	19:27:43	109.7	0.94	2.41
124°00.0'W	17°40.80'S	17°41.87'S	19:25:33	20°12.62'S	20°16.23'S	19:28:07	109.9	0.94	2.41
123°52.5'W	17°43.29'S	17°44.37'S	19:25:57	20°15.28'S	20°18.84'S	19:28:30	110.1	0.93	2.41
123°45.0'W	17°45.82'S	17°46.90'S	19:26:20	20°17.96'S	20°21.48'S	19:28:54	110.4	0.93	2.41
123°37.5'W	17°48.37'S	17°49.47'S	19:26:44	20°20.68'S	20°24.14'S	19:29:17	110.6	0.93	2.41
123°30.0'W	17°50.96'S	17°52.07'S	19:27:07	20°23.42'S	20°26.83'S	19:29:41	110.8	0.93	2.41
123°22.5'W	17°53.57'S	17°54.69'S	19:27:31	20°26.20'S	20°29.55'S	19:30:04	111.0	0.93	2.41
123°15.0'W	17°56.23'S	17°57.35'S	19:27:54	20°29.00'S	20°32.29'S	19:30:28	111.2	0.93	2.40
123°07.5'W	17°58.91'S	18°00.04'S	19:28:18	20°31.84'S	20°35.07'S	19:30:51	111.4	0.93	2.40
123°00.0'W	18°01.62'S	18°02.76'S	19:28:41	20°34.70'S	20°37.87'S	19:31:15	111.6	0.93	2.40
122°52.5'W	18°04.37'S	18°05.51'S	19:29:05	20°37.59'S	20°40.70'S	19:31:38	111.9	0.93	2.40
122°45.0'W	18°07.14'S	18°08.29'S	19:29:29	20°40.52'S	20°43.55'S	19:32:02	112.1	0.92	2.40
122°37.5'W	18°09.96'S	18°11.10'S	19:29:53	20°43.47'S	20°46.44'S	19:32:26	112.3	0.92	2.40
122°30.0'W	18°12.80'S	18°13.93'S	19:30:16	20°46.45'S	20°49.37'S	19:32:49	112.5	0.92	2.40
122°22.5'W	18°15.67'S	18°16.80'S	19:30:40	20°49.46'S	20°52.35'S	19:33:13	112.7	0.92	2.39
122°15.0'W	18°18.58'S	18°19.70'S	19:31:04	20°52.50'S	20°55.36'S	19:33:37	112.9	0.92	2.39
122°07.5'W	18°21.51'S	18°22.63'S	19:31:28	20°55.56'S	20°58.41'S	19:34:00	113.1	0.92	2.39
122°00.0'W	18°24.48'S	18°25.59'S	19:31:51	20°58.66'S	21°01.48'S	19:34:24	113.3	0.92	2.39

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

ΔT = 66.2 s									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azm °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
121°52.5'W	18°27.48'S	18°28.57'S	19:32:15	21°01.79'S	21°04.57'S	19:34:47	113.5	0.91	2.39
121°45.0'W	18°30.51'S	18°31.59'S	19:32:39	21°04.94'S	21°07.70'S	19:35:11	113.7	0.91	2.39
121°37.5'W	18°33.57'S	18°34.64'S	19:33:03	21°08.12'S	21°10.85'S	19:35:35	114.0	0.91	2.38
121°30.0'W	18°36.67'S	18°37.71'S	19:33:27	21°11.33'S	21°14.03'S	19:35:58	114.2	0.91	2.38
121°22.5'W	18°39.79'S	18°40.82'S	19:33:51	21°14.57'S	21°17.23'S	19:36:22	114.3	0.91	2.38
121°15.0'W	18°42.95'S	18°43.95'S	19:34:14	21°17.84'S	21°20.46'S	19:36:46	114.5	0.91	2.38
121°07.5'W	18°46.14'S	18°47.11'S	19:34:38	21°21.14'S	21°23.72'S	19:37:09	114.7	0.91	2.38
121°00.0'W	18°49.35'S	18°50.31'S	19:35:02	21°24.46'S	21°27.01'S	19:37:33	115.0	0.90	2.37
120°52.5'W	18°52.59'S	18°53.53'S	19:35:26	21°27.81'S	21°30.32'S	19:37:57	115.1	0.90	2.37
120°45.0'W	18°55.85'S	18°56.78'S	19:35:50	21°31.19'S	21°33.66'S	19:38:20	115.3	0.90	2.37
120°37.5'W	18°59.14'S	19°00.06'S	19:36:14	21°34.60'S	21°37.02'S	19:38:44	115.5	0.90	2.37
120°30.0'W	19°02.46'S	19°03.36'S	19:36:38	21°38.03'S	21°40.41'S	19:39:08	115.7	0.90	2.37
120°22.5'W	19°05.80'S	19°06.70'S	19:37:02	21°41.50'S	21°43.83'S	19:39:31	115.9	0.90	2.37
120°15.0'W	19°09.18'S	19°10.06'S	19:37:26	21°44.99'S	21°47.27'S	19:39:55	116.1	0.89	2.36
120°07.5'W	19°12.59'S	19°13.46'S	19:37:49	21°48.50'S	21°50.73'S	19:40:19	116.3	0.89	2.36
120°00.0'W	19°16.03'S	19°16.88'S	19:38:13	21°52.05'S	21°54.29'S	19:40:42	116.5	0.89	2.36
119°52.5'W	19°19.50'S	19°20.33'S	19:38:37	21°55.62'S	21°57.91'S	19:41:06	116.7	0.89	2.36
119°45.0'W	19°22.99'S	19°23.80'S	19:39:01	21°59.22'S	22°01.54'S	19:41:29	116.9	0.89	2.36
119°37.5'W	19°26.52'S	19°27.31'S	19:39:25	22°02.84'S	22°05.20'S	19:41:53	117.1	0.89	2.35
119°30.0'W	19°30.03'S	19°30.84'S	19:39:49	22°06.49'S	22°08.88'S	19:42:16	117.2	0.88	2.35
119°22.5'W	19°33.56'S	19°34.40'S	19:40:13	22°10.17'S	22°12.59'S	19:42:40	117.4	0.88	2.35
119°15.0'W	19°37.12'S	19°37.99'S	19:40:37	22°13.87'S	22°16.32'S	19:43:03	117.6	0.88	2.35
119°07.5'W	19°40.71'S	19°41.61'S	19:41:01	22°17.60'S	22°20.08'S	19:43:27	117.8	0.88	2.35
119°00.0'W	19°44.33'S	19°45.25'S	19:41:24	22°21.36'S	22°23.86'S	19:43:50	118.0	0.88	2.34
118°52.5'W	19°47.97'S	19°48.92'S	19:41:48	22°25.14'S	22°27.67'S	19:44:14	118.1	0.88	2.34
118°45.0'W	19°51.65'S	19°52.62'S	19:42:12	22°28.94'S	22°31.49'S	19:44:37	118.3	0.87	2.34
118°37.5'W	19°55.35'S	19°56.34'S	19:42:36	22°32.78'S	22°35.35'S	19:45:01	118.5	0.87	2.34
118°30.0'W	19°59.08'S	20°00.09'S	19:43:00	22°36.63'S	22°39.23'S	19:45:24	118.7	0.87	2.33
118°22.5'W	20°02.84'S	20°03.87'S	19:43:23	22°40.52'S	22°43.13'S	19:45:47	118.8	0.87	2.33
118°15.0'W	20°06.62'S	20°07.67'S	19:43:47	22°44.42'S	22°47.05'S	19:46:11	119.0	0.87	2.33
118°07.5'W	20°10.44'S	20°11.50'S	19:44:11	22°48.35'S	22°51.00'S	19:46:34	119.2	0.86	2.33
118°00.0'W	20°14.28'S	20°15.35'S	19:44:35	22°52.31'S	22°54.97'S	19:46:57	119.3	0.86	2.33
117°52.5'W	20°18.15'S	20°19.24'S	19:44:58	22°56.29'S	22°58.97'S	19:47:20	119.5	0.86	2.32
117°45.0'W	20°22.04'S	20°23.14'S	19:45:22	23°00.29'S	23°02.98'S	19:47:44	119.7	0.86	2.32
117°37.5'W	20°25.97'S	20°27.08'S	19:45:46	23°04.32'S	23°07.02'S	19:48:07	119.8	0.86	2.32
117°30.0'W	20°29.92'S	20°31.03'S	19:46:09	23°08.37'S	23°11.08'S	19:48:30	120.0	0.86	2.32
117°22.5'W	20°33.89'S	20°35.02'S	19:46:33	23°12.45'S	23°15.17'S	19:48:53	120.2	0.85	2.32
117°15.0'W	20°37.89'S	20°39.02'S	19:46:56	23°16.55'S	23°19.27'S	19:49:16	120.3	0.85	2.31
117°07.5'W	20°41.82'S	20°43.06'S	19:47:20	23°20.66'S	23°23.43'S	19:49:39	120.5	0.85	2.31
117°00.0'W	20°45.98'S	20°47.11'S	19:47:43	23°24.80'S	23°27.60'S	19:50:02	120.7	0.85	2.31
116°52.5'W	20°50.06'S	20°51.20'S	19:48:07	23°28.96'S	23°31.77'S	19:50:25	120.8	0.85	2.31
116°45.0'W	20°54.16'S	20°55.30'S	19:48:30	23°33.15'S	23°35.96'S	19:50:48	121.0	0.84	2.31
116°37.5'W	20°58.29'S	20°59.43'S	19:48:54	23°37.37'S	23°40.18'S	19:51:11	121.1	0.84	2.30
116°30.0'W	21°02.45'S	21°03.59'S	19:49:17	23°41.60'S	23°44.41'S	19:51:33	121.3	0.84	2.30
116°22.5'W	21°06.63'S	21°07.76'S	19:49:40	23°45.86'S	23°48.67'S	19:51:56	121.4	0.84	2.30
116°15.0'W	21°10.83'S	21°11.95'S	19:50:04	23°50.14'S	23°52.95'S	19:52:19	121.6	0.84	2.30
116°07.5'W	21°15.06'S	21°16.18'S	19:50:27	23°54.44'S	23°57.25'S	19:52:41	121.7	0.83	2.29
116°00.0'W	21°19.32'S	21°20.43'S	19:50:50	23°58.76'S	24°01.57'S	19:53:04	121.8	0.83	2.29

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azm °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
115°52.5'W	21°23.59'S	21°24.70'S	19:51:13	24°03.10'S	24°05.90'S	19:53:27	122.0	0.83	2.29
115°45.0'W	21°27.89'S	21°28.99'S	19:51:37	24°07.46'S	24°10.26'S	19:53:49	122.1	0.83	2.29
115°37.5'W	21°32.22'S	21°33.31'S	19:52:00	24°11.84'S	24°14.64'S	19:54:12	122.3	0.83	2.29
115°30.0'W	21°36.57'S	21°37.65'S	19:52:23	24°16.25'S	24°19.04'S	19:54:34	122.4	0.83	2.28
115°22.5'W	21°40.93'S	21°42.01'S	19:52:46	24°20.67'S	24°23.46'S	19:54:56	122.6	0.82	2.28
115°15.0'W	21°45.33'S	21°46.39'S	19:53:09	24°25.11'S	24°27.90'S	19:55:19	122.7	0.82	2.28
115°07.5'W	21°49.74'S	21°50.80'S	19:53:32	24°29.58'S	24°32.35'S	19:55:41	122.8	0.82	2.28
115°00.0'W	21°54.18'S	21°55.22'S	19:53:55	24°34.06'S	24°36.83'S	19:56:03	123.0	0.82	2.28
114°52.5'W	21°58.64'S	21°59.67'S	19:54:17	24°38.56'S	24°41.32'S	19:56:25	123.1	0.82	2.27
114°45.0'W	22°03.12'S	22°04.14'S	19:54:40	24°43.08'S	24°45.83'S	19:56:47	123.2	0.81	2.27
114°37.5'W	22°07.62'S	22°08.63'S	19:55:03	24°47.62'S	24°50.36'S	19:57:09	123.4	0.81	2.27
114°30.0'W	22°12.15'S	22°13.14'S	19:55:26	24°52.18'S	24°54.91'S	19:57:31	123.5	0.81	2.27
114°22.5'W	22°16.69'S	22°17.67'S	19:55:48	24°56.76'S	24°59.48'S	19:57:53	123.6	0.81	2.27
114°15.0'W	22°21.26'S	22°22.21'S	19:56:11	25°01.35'S	25°04.06'S	19:58:15	123.7	0.81	2.26
114°07.5'W	22°25.84'S	22°26.78'S	19:56:33	25°05.96'S	25°08.66'S	19:58:37	123.9	0.81	2.26
114°00.0'W	22°30.45'S	22°31.37'S	19:56:56	25°10.59'S	25°13.28'S	19:58:59	124.0	0.80	2.26
113°52.5'W	22°35.08'S	22°35.98'S	19:57:18	25°15.24'S	25°17.92'S	19:59:20	124.1	0.80	2.26
113°45.0'W	22°39.72'S	22°40.61'S	19:57:41	25°19.91'S	25°22.57'S	19:59:42	124.2	0.80	2.25
113°37.5'W	22°44.39'S	22°45.26'S	19:58:03	25°24.59'S	25°27.24'S	20:00:03	124.3	0.80	2.25
113°30.0'W	22°49.07'S	22°49.92'S	19:58:25	25°29.29'S	25°31.92'S	20:00:25	124.5	0.80	2.25
113°22.5'W	22°53.77'S	22°54.61'S	19:58:47	25°34.00'S	25°36.62'S	20:00:46	124.6	0.79	2.25
113°15.0'W	22°58.50'S	22°59.31'S	19:59:10	25°38.73'S	25°41.34'S	20:01:07	124.7	0.79	2.25
113°07.5'W	23°03.24'S	23°04.03'S	19:59:32	25°43.48'S	25°46.07'S	20:01:29	124.8	0.79	2.24
113°00.0'W	23°07.99'S	23°08.77'S	19:59:54	25°48.24'S	25°50.82'S	20:01:50	124.9	0.79	2.24
112°52.5'W	23°12.77'S	23°13.53'S	20:00:16	25°53.02'S	25°55.58'S	20:02:11	125.0	0.79	2.24
112°45.0'W	23°17.57'S	23°18.30'S	20:00:38	25°57.81'S	26°00.36'S	20:02:32	125.1	0.79	2.24
112°37.5'W	23°22.38'S	23°23.09'S	20:00:59	26°02.62'S	26°05.16'S	20:02:53	125.2	0.78	2.24
112°30.0'W	23°27.20'S	23°27.90'S	20:01:21	26°07.44'S	26°09.96'S	20:03:14	125.3	0.78	2.24
112°22.5'W	23°32.05'S	23°32.72'S	20:01:43	26°12.28'S	26°14.79'S	20:03:35	125.4	0.78	2.23
112°15.0'W	23°36.91'S	23°37.56'S	20:02:04	26°17.13'S	26°19.62'S	20:03:55	125.5	0.78	2.23
112°07.5'W	23°41.79'S	23°42.42'S	20:02:26	26°22.00'S	26°24.47'S	20:04:16	125.6	0.78	2.23
112°00.0'W	23°46.68'S	23°47.29'S	20:02:47	26°26.88'S	26°29.34'S	20:04:37	125.8	0.77	2.23
111°52.5'W	23°51.59'S	23°52.18'S	20:03:09	26°31.77'S	26°34.21'S	20:04:57	125.8	0.77	2.23
111°45.0'W	23°56.52'S	23°57.08'S	20:03:30	26°36.68'S	26°39.10'S	20:05:18	125.9	0.77	2.22
111°37.5'W	24°01.46'S	24°02.00'S	20:03:51	26°41.60'S	26°44.01'S	20:05:38	126.0	0.77	2.22
111°30.0'W	24°06.41'S	24°06.93'S	20:04:13	26°46.53'S	26°48.92'S	20:05:58	126.1	0.77	2.22
111°22.5'W	24°11.38'S	24°11.88'S	20:04:34	26°51.48'S	26°53.85'S	20:06:19	126.2	0.77	2.22
111°15.0'W	24°16.36'S	24°16.84'S	20:04:55	26°56.44'S	26°58.80'S	20:06:39	126.3	0.76	2.22
111°07.5'W	24°21.36'S	24°21.82'S	20:05:16	27°01.40'S	27°03.75'S	20:06:59	126.4	0.76	2.21
111°00.0'W	24°26.37'S	24°26.81'S	20:05:37	27°06.39'S	27°08.71'S	20:07:19	126.5	0.76	2.21
110°52.5'W	24°31.40'S	24°31.82'S	20:05:58	27°11.38'S	27°13.69'S	20:07:39	126.6	0.76	2.21
110°45.0'W	24°36.44'S	24°36.83'S	20:06:18	27°16.39'S	27°18.68'S	20:07:58	126.7	0.76	2.21
110°37.5'W	24°41.49'S	24°41.86'S	20:06:39	27°21.40'S	27°23.68'S	20:08:18	126.8	0.76	2.21
110°30.0'W	24°46.56'S	24°46.91'S	20:07:00	27°26.43'S	27°28.69'S	20:08:38	126.8	0.75	2.21
110°22.5'W	24°51.63'S	24°51.96'S	20:07:20	27°31.47'S	27°33.72'S	20:08:57	126.9	0.75	2.20
110°15.0'W	24°56.70'S	24°57.03'S	20:07:41	27°36.51'S	27°38.75'S	20:09:17	127.0	0.75	2.20
110°07.5'W	25°01.77'S	25°02.11'S	20:08:01	27°41.57'S	27°43.79'S	20:09:36	127.1	0.75	2.20
110°00.0'W	25°06.87'S	25°07.21'S	20:08:21	27°46.64'S	27°48.84'S	20:09:56	127.2	0.75	2.20

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azm °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
109°52.5'W	25°11.97'S	25°12.31'S	20:08:41	27°51.72'S	27°53.91'S	20:10:15	127.2	0.75	2.20
109°45.0'W	25°17.08'S	25°17.43'S	20:09:01	27°56.81'S	27°58.98'S	20:10:34	127.3	0.75	2.20
109°37.5'W	25°22.21'S	25°22.56'S	20:09:22	28°01.91'S	28°04.06'S	20:10:53	127.4	0.74	2.19
109°30.0'W	25°27.35'S	25°27.70'S	20:09:41	28°07.01'S	28°09.15'S	20:11:12	127.5	0.74	2.19
109°22.5'W	25°32.50'S	25°32.85'S	20:10:01	28°12.13'S	28°14.26'S	20:11:31	127.5	0.74	2.19
109°15.0'W	25°37.66'S	25°38.01'S	20:10:21	28°17.25'S	28°19.37'S	20:11:50	127.6	0.74	2.19
109°07.5'W	25°42.83'S	25°43.18'S	20:10:41	28°22.39'S	28°24.48'S	20:12:08	127.7	0.74	2.19
109°00.0'W	25°48.01'S	25°48.36'S	20:11:00	28°27.52'S	28°29.62'S	20:12:27	127.8	0.74	2.19
108°52.5'W	25°53.20'S	25°53.55'S	20:11:20	28°32.64'S	28°34.79'S	20:12:46	127.8	0.74	2.19
108°45.0'W	25°58.40'S	25°58.75'S	20:11:39	28°37.80'S	28°39.94'S	20:13:04	127.9	0.73	2.18
108°37.5'W	26°03.61'S	26°03.96'S	20:11:59	28°42.97'S	28°45.09'S	20:13:22	127.9	0.73	2.18
108°30.0'W	26°08.83'S	26°09.18'S	20:12:18	28°48.14'S	28°50.25'S	20:13:41	128.0	0.73	2.18
108°22.5'W	26°13.98'S	26°14.40'S	20:12:37	28°53.32'S	28°55.41'S	20:13:59	128.1	0.73	2.18
108°15.0'W	26°19.17'S	26°19.63'S	20:12:56	28°58.50'S	29°00.59'S	20:14:17	128.1	0.73	2.18
108°07.5'W	26°24.42'S	26°24.87'S	20:13:15	29°03.70'S	29°05.77'S	20:14:35	128.2	0.73	2.18
108°00.0'W	26°29.67'S	26°30.13'S	20:13:34	29°08.89'S	29°10.96'S	20:14:53	128.3	0.72	2.17
107°52.5'W	26°34.92'S	26°35.39'S	20:13:53	29°14.10'S	29°16.16'S	20:15:11	128.3	0.72	2.17
107°45.0'W	26°40.19'S	26°40.65'S	20:14:12	29°19.31'S	29°21.38'S	20:15:28	128.4	0.72	2.17
107°37.5'W	26°45.46'S	26°45.93'S	20:14:31	29°24.53'S	29°26.60'S	20:15:46	128.4	0.72	2.17
107°30.0'W	26°50.74'S	26°51.22'S	20:14:49	29°29.75'S	29°31.82'S	20:16:04	128.5	0.72	2.17
107°22.5'W	26°56.03'S	26°56.51'S	20:15:08	29°34.98'S	29°37.05'S	20:16:21	128.6	0.72	2.17
107°15.0'W	27°01.32'S	27°01.81'S	20:15:26	29°40.21'S	29°42.29'S	20:16:38	128.6	0.72	2.17
107°07.5'W	27°06.62'S	27°07.11'S	20:15:44	29°45.45'S	29°47.53'S	20:16:56	128.7	0.72	2.17
107°00.0'W	27°11.93'S	27°12.42'S	20:16:03	29°50.70'S	29°52.78'S	20:17:13	128.7	0.71	2.16
106°52.5'W	27°17.24'S	27°17.74'S	20:16:21	29°55.95'S	29°58.03'S	20:17:30	128.8	0.71	2.16
106°45.0'W	27°22.56'S	27°23.06'S	20:16:39	30°01.20'S	30°03.29'S	20:17:47	128.8	0.71	2.16
106°37.5'W	27°27.89'S	27°28.39'S	20:16:57	30°06.46'S	30°08.55'S	20:18:04	128.9	0.71	2.16
106°30.0'W	27°33.22'S	27°33.73'S	20:17:15	30°11.72'S	30°13.81'S	20:18:21	128.9	0.71	2.16
106°22.5'W	27°38.56'S	27°39.07'S	20:17:32	30°16.98'S	30°19.08'S	20:18:37	129.0	0.71	2.16
106°15.0'W	27°43.90'S	27°44.41'S	20:17:50	30°22.25'S	30°24.35'S	20:18:54	129.0	0.71	2.16
106°07.5'W	27°49.25'S	27°49.76'S	20:18:08	30°27.52'S	30°29.62'S	20:19:11	129.1	0.71	2.16
106°00.0'W	27°54.60'S	27°55.12'S	20:18:25	30°32.80'S	30°34.90'S	20:19:27	129.1	0.70	2.15
105°52.5'W	27°59.96'S	28°00.48'S	20:18:43	30°38.08'S	30°40.18'S	20:19:43	129.1	0.70	2.15
105°45.0'W	28°05.32'S	28°05.84'S	20:19:00	30°43.36'S	30°45.46'S	20:20:00	129.2	0.70	2.15
105°37.5'W	28°10.69'S	28°11.21'S	20:19:17	30°48.65'S	30°50.75'S	20:20:16	129.2	0.70	2.15
105°30.0'W	28°16.06'S	28°16.58'S	20:19:34	30°53.94'S	30°56.04'S	20:20:32	129.3	0.70	2.15
105°22.5'W	28°21.43'S	28°21.96'S	20:19:51	30°59.22'S	31°01.33'S	20:20:48	129.3	0.70	2.15
105°15.0'W	28°26.81'S	28°27.34'S	20:20:08	31°04.52'S	31°06.62'S	20:21:04	129.4	0.70	2.15
105°07.5'W	28°32.20'S	28°32.73'S	20:20:25	31°09.81'S	31°11.92'S	20:21:20	129.4	0.70	2.15
105°00.0'W	28°37.58'S	28°38.11'S	20:20:42	31°15.11'S	31°17.22'S	20:21:35	129.4	0.70	2.15
104°52.5'W	28°42.97'S	28°43.50'S	20:20:58	31°20.41'S	31°22.51'S	20:21:51	129.5	0.69	2.14
104°45.0'W	28°48.36'S	28°48.89'S	20:21:15	31°25.71'S	31°27.81'S	20:22:06	129.5	0.69	2.14
104°37.5'W	28°53.75'S	28°54.29'S	20:21:31	31°31.01'S	31°33.12'S	20:22:22	129.5	0.69	2.14
104°30.0'W	28°59.15'S	28°59.69'S	20:21:48	31°36.31'S	31°38.42'S	20:22:37	129.6	0.69	2.14
104°22.5'W	29°04.55'S	29°05.09'S	20:22:04	31°41.61'S	31°43.72'S	20:22:52	129.6	0.69	2.14
104°15.0'W	29°09.95'S	29°10.49'S	20:22:20	31°46.92'S	31°49.03'S	20:23:08	129.6	0.69	2.14
104°07.5'W	29°15.36'S	29°15.89'S	20:22:36	31°52.22'S	31°54.33'S	20:23:23	129.7	0.69	2.14
104°00.0'W	29°20.76'S	29°21.30'S	20:22:52	31°57.53'S	31°59.64'S	20:23:38	129.7	0.69	2.14

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
103°52.5'W	29°26.17'S	29°26.71'S	20:23:08	32°02.83'S	32°04.95'S	20:23:52	129.7	0.69	2.14
103°45.0'W	29°31.57'S	29°32.12'S	20:23:24	32°08.14'S	32°10.25'S	20:24:07	129.8	0.69	2.14
103°37.5'W	29°36.98'S	29°37.53'S	20:23:40	32°13.45'S	32°15.56'S	20:24:22	129.8	0.68	2.13
103°30.0'W	29°42.39'S	29°42.94'S	20:23:55	32°18.75'S	32°20.87'S	20:24:37	129.8	0.68	2.13
103°22.5'W	29°47.81'S	29°48.35'S	20:24:11	32°24.06'S	32°26.17'S	20:24:51	129.8	0.68	2.13
103°15.0'W	29°53.22'S	29°53.76'S	20:24:26	32°29.36'S	32°31.48'S	20:25:05	129.9	0.68	2.13
103°07.5'W	29°58.63'S	29°59.18'S	20:24:42	32°34.67'S	32°36.78'S	20:25:20	129.9	0.68	2.13
103°00.0'W	30°04.04'S	30°04.59'S	20:24:57	32°39.98'S	32°42.09'S	20:25:34	129.9	0.68	2.13
102°52.5'W	30°09.46'S	30°10.00'S	20:25:12	32°45.28'S	32°47.39'S	20:25:48	130.0	0.68	2.13
102°45.0'W	30°14.87'S	30°15.42'S	20:25:27	32°50.58'S	32°52.70'S	20:26:02	130.0	0.68	2.13
102°37.5'W	30°20.28'S	30°20.83'S	20:25:42	32°55.89'S	32°58.00'S	20:26:16	130.0	0.68	2.13
102°30.0'W	30°25.70'S	30°26.25'S	20:25:57	33°01.19'S	33°03.30'S	20:26:30	130.0	0.68	2.13
102°22.5'W	30°31.11'S	30°31.66'S	20:26:12	33°06.49'S	33°08.60'S	20:26:44	130.0	0.68	2.13
102°15.0'W	30°36.52'S	30°37.07'S	20:26:27	33°11.79'S	33°13.90'S	20:26:57	130.1	0.68	2.12
102°07.5'W	30°41.94'S	30°42.49'S	20:26:41	33°17.08'S	33°19.20'S	20:27:11	130.1	0.67	2.12
102°00.0'W	30°47.35'S	30°47.90'S	20:26:56	33°22.38'S	33°24.49'S	20:27:25	130.1	0.67	2.12
101°52.5'W	30°52.76'S	30°53.31'S	20:27:10	33°27.67'S	33°29.79'S	20:27:38	130.1	0.67	2.12
101°45.0'W	30°58.17'S	30°58.72'S	20:27:24	33°32.96'S	33°35.08'S	20:27:51	130.2	0.67	2.12
101°37.5'W	31°03.57'S	31°04.12'S	20:27:39	33°38.25'S	33°40.37'S	20:28:04	130.2	0.67	2.12
101°30.0'W	31°08.98'S	31°09.53'S	20:27:53	33°43.54'S	33°45.65'S	20:28:18	130.2	0.67	2.12
101°22.5'W	31°14.39'S	31°14.94'S	20:28:07	33°48.83'S	33°50.94'S	20:28:31	130.2	0.67	2.12
101°15.0'W	31°19.79'S	31°20.34'S	20:28:21	33°54.11'S	33°56.22'S	20:28:44	130.2	0.67	2.12
101°07.5'W	31°25.19'S	31°25.74'S	20:28:35	33°59.39'S	34°01.50'S	20:28:56	130.2	0.67	2.12
101°00.0'W	31°30.59'S	31°31.14'S	20:28:48	34°04.67'S	34°06.78'S	20:29:09	130.3	0.67	2.12
100°52.5'W	31°35.99'S	31°36.54'S	20:29:02	34°09.94'S	34°12.05'S	20:29:22	130.3	0.67	2.12
100°45.0'W	31°41.39'S	31°41.93'S	20:29:16	34°15.21'S	34°17.32'S	20:29:35	130.3	0.67	2.12
100°37.5'W	31°46.78'S	31°47.33'S	20:29:29	34°20.48'S	34°22.59'S	20:29:47	130.3	0.67	2.12
100°30.0'W	31°52.17'S	31°52.72'S	20:29:43	34°25.75'S	34°27.85'S	20:29:59	130.3	0.67	2.11
100°22.5'W	31°57.56'S	31°58.11'S	20:29:56	34°31.01'S	34°33.11'S	20:30:12	130.3	0.66	2.11
100°15.0'W	32°02.95'S	32°03.49'S	20:30:09	34°36.27'S	34°38.37'S	20:30:24	130.3	0.66	2.11
100°07.5'W	32°08.33'S	32°08.87'S	20:30:22	34°41.52'S	34°43.63'S	20:30:36	130.3	0.66	2.11
100°00.0'W	32°13.71'S	32°14.26'S	20:30:35	34°46.78'S	34°48.88'S	20:30:48	130.4	0.66	2.11
099°52.5'W	32°19.09'S	32°19.63'S	20:30:48	34°52.03'S	34°54.13'S	20:31:00	130.4	0.66	2.11
099°45.0'W	32°24.46'S	32°25.00'S	20:31:01	34°57.27'S	34°59.37'S	20:31:12	130.4	0.66	2.11
099°37.5'W	32°29.83'S	32°30.37'S	20:31:14	35°02.51'S	35°04.61'S	20:31:24	130.4	0.66	2.11
099°30.0'W	32°35.20'S	32°35.74'S	20:31:26	35°07.75'S	35°09.84'S	20:31:36	130.4	0.66	2.11
099°22.5'W	32°40.56'S	32°41.10'S	20:31:39	35°12.98'S	35°15.07'S	20:31:47	130.4	0.66	2.11
099°15.0'W	32°45.92'S	32°46.46'S	20:31:52	35°18.21'S	35°20.30'S	20:31:59	130.4	0.66	2.11
099°07.5'W	32°51.28'S	32°51.82'S	20:32:04	35°23.43'S	35°25.53'S	20:32:10	130.4	0.66	2.11
099°00.0'W	32°56.63'S	32°57.17'S	20:32:16	35°28.65'S	35°30.74'S	20:32:22	130.4	0.66	2.11
098°52.5'W	33°01.98'S	33°02.52'S	20:32:29	35°33.87'S	35°35.96'S	20:32:33	130.4	0.66	2.11
098°45.0'W	33°07.33'S	33°07.86'S	20:32:41	35°39.08'S	35°41.17'S	20:32:44	130.4	0.66	2.11
098°37.5'W	33°12.67'S	33°13.20'S	20:32:53	35°44.29'S	35°46.37'S	20:32:55	130.4	0.66	2.11
098°30.0'W	33°18.01'S	33°18.54'S	20:33:05	35°49.49'S	35°51.57'S	20:33:07	130.5	0.66	2.11
098°22.5'W	33°23.34'S	33°23.87'S	20:33:17	35°54.69'S	35°56.77'S	20:33:17	130.5	0.66	2.11
098°15.0'W	33°28.67'S	33°29.19'S	20:33:28	35°59.88'S	36°01.96'S	20:33:28	130.5	0.66	2.11
098°07.5'W	33°33.99'S	33°34.52'S	20:33:40	36°05.07'S	36°07.14'S	20:33:39	130.5	0.66	2.10
098°00.0'W	33°39.31'S	33°39.84'S	20:33:52	36°10.25'S	36°12.32'S	20:33:50	130.5	0.65	2.10

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azm °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
097°52.5'W	33°44.63'S	33°45.15'S	20:34:03	36°15.42'S	36°17.50'S	20:34:01	130.5	0.65	2.10
097°45.0'W	33°49.94'S	33°50.45'S	20:34:15	36°20.60'S	36°22.67'S	20:34:11	130.5	0.65	2.10
097°37.5'W	33°55.24'S	33°55.76'S	20:34:26	36°25.76'S	36°27.84'S	20:34:22	130.5	0.65	2.10
097°30.0'W	34°00.54'S	34°01.06'S	20:34:37	36°30.92'S	36°33.00'S	20:34:32	130.5	0.65	2.10
097°22.5'W	34°05.84'S	34°06.35'S	20:34:49	36°36.08'S	36°38.17'S	20:34:42	130.5	0.65	2.10
097°15.0'W	34°11.13'S	34°11.64'S	20:35:00	36°41.23'S	36°43.33'S	20:34:52	130.5	0.65	2.10
097°07.5'W	34°16.41'S	34°16.92'S	20:35:11	36°46.37'S	36°48.48'S	20:35:03	130.5	0.65	2.10
097°00.0'W	34°21.69'S	34°22.20'S	20:35:22	36°51.51'S	36°53.63'S	20:35:13	130.5	0.65	2.10
096°52.5'W	34°26.97'S	34°27.47'S	20:35:33	36°56.65'S	36°58.77'S	20:35:23	130.5	0.65	2.10
096°45.0'W	34°32.24'S	34°32.73'S	20:35:43	37°01.78'S	37°03.91'S	20:35:33	130.5	0.65	2.10
096°37.5'W	34°37.49'S	34°37.99'S	20:35:54	37°06.89'S	37°09.04'S	20:35:42	130.5	0.65	2.10
096°30.0'W	34°42.72'S	34°43.25'S	20:36:05	37°12.02'S	37°14.17'S	20:35:52	130.5	0.65	2.10
096°22.5'W	34°47.96'S	34°48.50'S	20:36:15	37°17.18'S	37°19.32'S	20:36:02	130.5	0.65	2.10
096°15.0'W	34°53.21'S	34°53.74'S	20:36:26	37°22.31'S	37°24.45'S	20:36:11	130.5	0.65	2.10
096°07.5'W	34°58.45'S	34°58.98'S	20:36:36	37°27.40'S	37°29.55'S	20:36:21	130.5	0.65	2.10
096°00.0'W	35°03.69'S	35°04.21'S	20:36:46	37°32.49'S	37°34.65'S	20:36:30	130.5	0.65	2.10
095°52.5'W	35°08.92'S	35°09.43'S	20:36:57	37°37.58'S	37°39.75'S	20:36:40	130.5	0.65	2.10
095°45.0'W	35°14.14'S	35°14.65'S	20:37:07	37°42.66'S	37°44.84'S	20:36:49	130.5	0.65	2.10
095°37.5'W	35°19.36'S	35°19.87'S	20:37:17	37°47.73'S	37°49.92'S	20:36:58	130.5	0.65	2.10
095°30.0'W	35°24.57'S	35°25.07'S	20:37:27	37°52.80'S	37°54.99'S	20:37:07	130.5	0.65	2.10
095°22.5'W	35°29.77'S	35°30.27'S	20:37:37	37°57.86'S	38°00.06'S	20:37:16	130.5	0.65	2.10
095°15.0'W	35°34.97'S	35°35.47'S	20:37:46	38°02.91'S	38°05.12'S	20:37:25	130.4	0.65	2.10
095°07.5'W	35°40.16'S	35°40.65'S	20:37:56	38°07.96'S	38°10.18'S	20:37:34	130.5	0.65	2.10
095°00.0'W	35°45.35'S	35°45.84'S	20:38:06	38°13.00'S	38°15.23'S	20:37:43	130.4	0.65	2.10
094°52.5'W	35°50.53'S	35°51.01'S	20:38:15	38°18.03'S	38°20.28'S	20:37:52	130.4	0.65	2.10
094°45.0'W	35°55.70'S	35°56.18'S	20:38:25	38°23.06'S	38°25.31'S	20:38:01	130.4	0.65	2.10
094°37.5'W	36°00.87'S	36°01.34'S	20:38:34	38°28.08'S	38°30.34'S	20:38:09	130.4	0.65	2.10
094°30.0'W	36°06.03'S	36°06.49'S	20:38:43	38°33.09'S	38°35.36'S	20:38:18	130.4	0.65	2.10
094°22.5'W	36°11.18'S	36°11.64'S	20:38:53	38°38.10'S	38°40.38'S	20:38:26	130.4	0.65	2.10
094°15.0'W	36°16.33'S	36°16.78'S	20:39:02	38°43.10'S	38°45.39'S	20:38:34	130.4	0.65	2.10
094°07.5'W	36°21.47'S	36°21.91'S	20:39:11	38°48.09'S	38°50.39'S	20:38:43	130.4	0.65	2.10
094°00.0'W	36°26.60'S	36°27.04'S	20:39:20	38°53.08'S	38°55.39'S	20:38:51	130.4	0.65	2.10
093°52.5'W	36°31.73'S	36°32.16'S	20:39:29	38°58.06'S	39°00.38'S	20:38:59	130.4	0.65	2.10
093°45.0'W	36°36.85'S	36°37.28'S	20:39:38	39°03.03'S	39°05.36'S	20:39:07	130.4	0.65	2.10
093°37.5'W	36°41.95'S	36°42.38'S	20:39:47	39°07.99'S	39°10.33'S	20:39:15	130.4	0.64	2.10
093°30.0'W	36°47.06'S	36°47.48'S	20:39:55	39°12.95'S	39°15.29'S	20:39:23	130.4	0.64	2.10
093°22.5'W	36°52.15'S	36°52.57'S	20:40:04	39°17.90'S	39°20.25'S	20:39:31	130.3	0.64	2.10
093°15.0'W	36°57.23'S	36°57.65'S	20:40:13	39°22.84'S	39°25.21'S	20:39:39	130.3	0.64	2.09
093°07.5'W	37°02.29'S	37°02.73'S	20:40:21	39°27.78'S	39°30.15'S	20:39:47	130.3	0.64	2.09
093°00.0'W	37°07.35'S	37°07.80'S	20:40:30	39°32.70'S	39°35.09'S	20:39:54	130.3	0.64	2.09
092°52.5'W	37°12.40'S	37°12.86'S	20:40:38	39°37.62'S	39°40.02'S	20:40:02	130.3	0.64	2.09
092°45.0'W	37°17.44'S	37°17.92'S	20:40:46	39°42.54'S	39°44.94'S	20:40:09	130.3	0.64	2.09
092°37.5'W	37°22.47'S	37°22.96'S	20:40:54	39°47.44'S	39°49.86'S	20:40:17	130.3	0.64	2.09
092°30.0'W	37°27.50'S	37°28.00'S	20:41:02	39°52.34'S	39°54.76'S	20:40:24	130.3	0.64	2.09
092°22.5'W	37°32.51'S	37°33.03'S	20:41:11	39°57.23'S	39°59.66'S	20:40:32	130.3	0.64	2.09
092°15.0'W	37°37.52'S	37°38.06'S	20:41:19	40°02.11'S	40°04.55'S	20:40:39	130.3	0.64	2.09
092°07.5'W	37°42.53'S	37°43.07'S	20:41:26	40°06.99'S	40°09.44'S	20:40:46	130.3	0.64	2.09
092°00.0'W	37°47.52'S	37°48.08'S	20:41:34	40°11.86'S	40°14.31'S	20:40:53	130.2	0.64	2.09

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azm °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
091°52.5'W	37°52.51'S	37°53.08'S	20:41:42	40°16.72'S	40°19.18'S	20:41:00	130.2	0.64	2.09
091°45.0'W	37°57.49'S	37°58.08'S	20:41:50	40°21.57'S	40°24.05'S	20:41:07	130.2	0.64	2.09
091°37.5'W	38°02.46'S	38°03.06'S	20:41:57	40°26.41'S	40°28.90'S	20:41:14	130.2	0.64	2.09
091°30.0'W	38°07.43'S	38°08.04'S	20:42:05	40°31.25'S	40°33.74'S	20:41:21	130.2	0.64	2.09
091°22.5'W	38°12.39'S	38°13.01'S	20:42:12	40°36.08'S	40°38.58'S	20:41:28	130.2	0.64	2.09
091°15.0'W	38°17.33'S	38°17.97'S	20:42:20	40°40.90'S	40°43.41'S	20:41:35	130.2	0.64	2.09
091°07.5'W	38°22.28'S	38°22.93'S	20:42:27	40°45.71'S	40°48.23'S	20:41:41	130.2	0.64	2.09
091°00.0'W	38°27.21'S	38°27.87'S	20:42:35	40°50.52'S	40°53.05'S	20:41:48	130.1	0.64	2.09
090°52.5'W	38°32.13'S	38°32.81'S	20:42:42	40°55.32'S	40°57.85'S	20:41:54	130.1	0.64	2.09
090°45.0'W	38°37.05'S	38°37.74'S	20:42:49	41°00.11'S	41°02.65'S	20:42:01	130.1	0.64	2.09
090°37.5'W	38°41.96'S	38°42.66'S	20:42:56	41°04.89'S	41°07.44'S	20:42:07	130.1	0.64	2.09
090°30.0'W	38°46.86'S	38°47.57'S	20:43:03	41°09.66'S	41°12.22'S	20:42:14	130.1	0.64	2.09
090°22.5'W	38°51.75'S	38°52.48'S	20:43:10	41°14.43'S	41°17.00'S	20:42:20	130.1	0.64	2.09
090°15.0'W	38°56.64'S	38°57.38'S	20:43:17	41°19.19'S	41°21.76'S	20:42:26	130.1	0.64	2.09
090°07.5'W	39°01.52'S	39°02.27'S	20:43:24	41°23.93'S	41°26.52'S	20:42:32	130.0	0.64	2.09
090°00.0'W	39°06.39'S	39°07.15'S	20:43:31	41°28.68'S	41°31.27'S	20:42:38	130.0	0.64	2.09
089°52.5'W	39°11.25'S	39°12.02'S	20:43:37	41°33.41'S	41°36.01'S	20:42:44	130.0	0.64	2.09
089°45.0'W	39°16.10'S	39°16.89'S	20:43:44	41°38.14'S	41°40.74'S	20:42:50	130.0	0.64	2.09
089°37.5'W	39°20.94'S	39°21.74'S	20:43:50	41°42.85'S	41°45.47'S	20:42:56	130.0	0.64	2.09
089°30.0'W	39°25.78'S	39°26.59'S	20:43:57	41°47.56'S	41°50.18'S	20:43:02	130.0	0.64	2.09
089°22.5'W	39°30.61'S	39°31.43'S	20:44:03	41°52.26'S	41°54.89'S	20:43:08	130.0	0.64	2.09
089°15.0'W	39°35.43'S	39°36.26'S	20:44:10	41°56.95'S	41°59.59'S	20:43:14	129.9	0.64	2.09
089°07.5'W	39°40.24'S	39°41.08'S	20:44:16	42°01.64'S	42°04.28'S	20:43:19	129.9	0.64	2.09
089°00.0'W	39°45.04'S	39°45.90'S	20:44:22	42°06.32'S	42°08.96'S	20:43:25	129.9	0.64	2.09
088°52.5'W	39°49.84'S	39°50.70'S	20:44:28	42°10.98'S	42°13.64'S	20:43:31	129.9	0.64	2.09
088°45.0'W	39°54.63'S	39°55.50'S	20:44:35	42°15.65'S	42°18.31'S	20:43:36	129.9	0.64	2.09
088°37.5'W	39°59.40'S	40°00.29'S	20:44:41	42°20.30'S	42°22.96'S	20:43:42	129.9	0.64	2.09
088°30.0'W	40°04.17'S	40°05.07'S	20:44:47	42°24.94'S	42°27.61'S	20:43:47	129.8	0.64	2.09
088°22.5'W	40°08.94'S	40°09.84'S	20:44:53	42°29.57'S	42°32.25'S	20:43:52	129.8	0.64	2.09
088°15.0'W	40°13.69'S	40°14.61'S	20:44:58	42°34.20'S	42°36.89'S	20:43:58	129.8	0.64	2.09
088°07.5'W	40°18.44'S	40°19.36'S	20:45:04	42°38.82'S	42°41.51'S	20:44:03	129.8	0.64	2.09
088°00.0'W	40°23.17'S	40°24.11'S	20:45:10	42°43.43'S	42°46.13'S	20:44:08	129.8	0.64	2.09
087°52.5'W	40°27.90'S	40°28.85'S	20:45:16	42°48.03'S	42°50.74'S	20:44:13	129.8	0.64	2.09
087°45.0'W	40°32.62'S	40°33.58'S	20:45:21	42°52.62'S	42°55.33'S	20:44:18	129.7	0.64	2.09
087°37.5'W	40°37.33'S	40°38.30'S	20:45:27	42°57.21'S	42°59.93'S	20:44:23	129.7	0.64	2.09
087°30.0'W	40°42.04'S	40°43.01'S	20:45:32	43°01.78'S	43°04.51'S	20:44:28	129.7	0.65	2.10
087°22.5'W	40°46.73'S	40°47.71'S	20:45:38	43°06.35'S	43°09.08'S	20:44:33	129.7	0.65	2.10
087°15.0'W	40°51.42'S	40°52.41'S	20:45:43	43°10.91'S	43°13.64'S	20:44:38	129.7	0.65	2.10
087°07.5'W	40°56.09'S	40°57.09'S	20:45:49	43°15.46'S	43°18.20'S	20:44:43	129.7	0.65	2.10
087°00.0'W	41°00.76'S	41°01.77'S	20:45:54	43°20.01'S	43°22.75'S	20:44:47	129.6	0.65	2.10
086°52.5'W	41°05.42'S	41°06.44'S	20:45:59	43°24.54'S	43°27.29'S	20:44:52	129.6	0.65	2.10
086°45.0'W	41°10.07'S	41°11.10'S	20:46:04	43°29.06'S	43°31.82'S	20:44:57	129.6	0.65	2.10
086°37.5'W	41°14.72'S	41°15.75'S	20:46:10	43°33.58'S	43°36.34'S	20:45:01	129.6	0.65	2.10
086°30.0'W	41°19.35'S	41°20.40'S	20:46:15	43°38.09'S	43°40.85'S	20:45:06	129.6	0.65	2.10
086°22.5'W	41°23.98'S	41°25.03'S	20:46:20	43°42.59'S	43°45.36'S	20:45:10	129.5	0.65	2.10
086°15.0'W	41°28.60'S	41°29.65'S	20:46:25	43°47.08'S	43°49.86'S	20:45:14	129.5	0.65	2.10
086°07.5'W	41°33.21'S	41°34.27'S	20:46:29	43°51.56'S	43°54.34'S	20:45:19	129.5	0.65	2.10
086°00.0'W	41°37.81'S	41°38.88'S	20:46:34	43°56.04'S	43°58.82'S	20:45:23	129.5	0.65	2.10

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azimuth °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
085°52.5'W	41°42.40'S	41°43.48'S	20:46:39	44°00.50'S	44°03.29'S	20:45:27	129.5	0.65	2.10
085°45.0'W	41°46.98'S	41°48.07'S	20:46:44	44°04.96'S	44°07.75'S	20:45:32	129.4	0.65	2.10
085°37.5'W	41°51.56'S	41°52.65'S	20:46:49	44°09.41'S	44°12.21'S	20:45:36	129.4	0.65	2.10
085°30.0'W	41°56.13'S	41°57.22'S	20:46:53	44°13.85'S	44°16.65'S	20:45:40	129.4	0.65	2.10
085°22.5'W	42°00.68'S	42°01.79'S	20:46:58	44°18.28'S	44°21.09'S	20:45:44	129.4	0.65	2.10
085°15.0'W	42°05.23'S	42°06.34'S	20:47:02	44°22.71'S	44°25.51'S	20:45:48	129.4	0.65	2.10
085°07.5'W	42°09.77'S	42°10.89'S	20:47:07	44°27.12'S	44°29.93'S	20:45:52	129.4	0.65	2.10
085°00.0'W	42°14.31'S	42°15.43'S	20:47:11	44°31.53'S	44°34.34'S	20:45:56	129.3	0.65	2.10
084°52.5'W	42°18.83'S	42°19.96'S	20:47:15	44°35.93'S	44°38.74'S	20:46:00	129.3	0.65	2.10
084°45.0'W	42°23.34'S	42°24.48'S	20:47:20	44°40.32'S	44°43.13'S	20:46:03	129.3	0.65	2.10
084°37.5'W	42°27.85'S	42°28.99'S	20:47:24	44°44.70'S	44°47.52'S	20:46:07	129.3	0.65	2.10
084°30.0'W	42°32.35'S	42°33.49'S	20:47:28	44°49.07'S	44°51.89'S	20:46:11	129.3	0.65	2.10
084°22.5'W	42°36.84'S	42°37.99'S	20:47:32	44°53.43'S	44°56.26'S	20:46:14	129.2	0.65	2.10
084°15.0'W	42°41.32'S	42°42.47'S	20:47:36	44°57.78'S	45°00.61'S	20:46:18	129.2	0.65	2.10
084°07.5'W	42°45.79'S	42°46.95'S	20:47:41	45°02.13'S	45°04.96'S	20:46:22	129.2	0.65	2.10
084°00.0'W	42°50.25'S	42°51.41'S	20:47:45	45°06.47'S	45°09.31'S	20:46:25	129.2	0.65	2.10
083°52.5'W	42°54.71'S	42°55.87'S	20:47:49	45°10.80'S	45°13.64'S	20:46:29	129.1	0.65	2.10
083°45.0'W	42°59.15'S	43°00.32'S	20:47:52	45°15.12'S	45°17.96'S	20:46:32	129.1	0.65	2.10
083°37.5'W	43°03.59'S	43°04.76'S	20:47:56	45°19.43'S	45°22.27'S	20:46:35	129.1	0.65	2.10
083°30.0'W	43°08.02'S	43°09.19'S	20:48:00	45°23.73'S	45°26.58'S	20:46:39	129.1	0.65	2.10
083°22.5'W	43°12.44'S	43°13.62'S	20:48:04	45°28.03'S	45°30.87'S	20:46:42	129.1	0.65	2.10
083°15.0'W	43°16.85'S	43°18.03'S	20:48:08	45°32.31'S	45°35.16'S	20:46:45	129.0	0.65	2.10
083°07.5'W	43°21.25'S	43°22.44'S	20:48:11	45°36.59'S	45°39.44'S	20:46:48	129.0	0.65	2.10
083°00.0'W	43°25.65'S	43°26.83'S	20:48:15	45°40.86'S	45°43.71'S	20:46:52	129.0	0.65	2.10
082°52.5'W	43°30.03'S	43°31.22'S	20:48:18	45°45.12'S	45°47.97'S	20:46:55	129.0	0.65	2.10
082°45.0'W	43°34.41'S	43°35.60'S	20:48:22	45°49.37'S	45°52.22'S	20:46:58	128.9	0.65	2.10
082°37.5'W	43°38.78'S	43°39.97'S	20:48:25	45°53.61'S	45°56.47'S	20:47:01	128.9	0.65	2.10
082°30.0'W	43°43.14'S	43°44.33'S	20:48:29	45°57.85'S	46°00.70'S	20:47:04	128.9	0.65	2.10
082°22.5'W	43°47.49'S	43°48.68'S	20:48:32	46°02.07'S	46°04.93'S	20:47:07	128.9	0.65	2.10
082°15.0'W	43°51.83'S	43°53.03'S	20:48:35	46°06.29'S	46°09.15'S	20:47:10	128.9	0.65	2.10
082°07.5'W	43°56.17'S	43°57.36'S	20:48:39	46°10.50'S	46°13.36'S	20:47:12	128.8	0.65	2.10
082°00.0'W	44°00.49'S	44°01.69'S	20:48:42	46°14.70'S	46°17.56'S	20:47:15	128.8	0.65	2.10
081°52.5'W	44°04.81'S	44°06.00'S	20:48:45	46°18.89'S	46°21.75'S	20:47:18	128.8	0.65	2.10
081°45.0'W	44°09.12'S	44°10.31'S	20:48:48	46°23.07'S	46°25.93'S	20:47:21	128.8	0.65	2.10
081°37.5'W	44°13.42'S	44°14.61'S	20:48:51	46°27.24'S	46°30.11'S	20:47:23	128.7	0.65	2.10
081°30.0'W	44°17.71'S	44°18.90'S	20:48:55	46°31.41'S	46°34.27'S	20:47:26	128.7	0.65	2.10
081°22.5'W	44°22.00'S	44°23.18'S	20:48:58	46°35.57'S	46°38.43'S	20:47:29	128.7	0.65	2.10
081°15.0'W	44°26.27'S	44°27.45'S	20:49:01	46°39.71'S	46°42.58'S	20:47:31	128.7	0.65	2.10
081°07.5'W	44°30.54'S	44°31.72'S	20:49:03	46°43.85'S	46°46.72'S	20:47:34	128.7	0.65	2.10
081°00.0'W	44°34.79'S	44°35.97'S	20:49:06	46°47.98'S	46°50.85'S	20:47:36	128.6	0.65	2.10
080°52.5'W	44°39.04'S	44°40.22'S	20:49:09	46°52.11'S	46°54.97'S	20:47:39	128.6	0.66	2.10
080°45.0'W	44°43.29'S	44°44.46'S	20:49:12	46°56.22'S	46°59.09'S	20:47:41	128.6	0.66	2.10
080°37.5'W	44°47.52'S	44°48.69'S	20:49:15	47°00.33'S	47°03.19'S	20:47:43	128.6	0.66	2.11
080°30.0'W	44°51.74'S	44°52.90'S	20:49:17	47°04.42'S	47°07.29'S	20:47:46	128.5	0.66	2.11
080°22.5'W	44°55.96'S	44°57.12'S	20:49:20	47°08.51'S	47°11.38'S	20:47:48	128.5	0.66	2.11
080°15.0'W	45°00.17'S	45°01.32'S	20:49:23	47°12.59'S	47°15.46'S	20:47:50	128.5	0.66	2.11
080°07.5'W	45°04.37'S	45°05.51'S	20:49:25	47°16.66'S	47°19.53'S	20:47:52	128.5	0.66	2.11
080°00.0'W	45°08.56'S	45°09.70'S	20:49:28	47°20.72'S	47°23.59'S	20:47:54	128.4	0.66	2.11

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

$\Delta T = 66.2 \text{ s}$									
Longitude	North Graze Zone		Northern	South Graze Zone		Southern	Path Azim °	Elev Fact	Scale Fact km/''
	Latitudes		Limit	Latitudes		Limit			
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
079°52.5'W	45°12.74'S	45°13.87'S	20:49:30	47°24.78'S	47°27.64'S	20:47:57	128.4	0.66	2.11
079°45.0'W	45°16.91'S	45°18.04'S	20:49:33	47°28.82'S	47°31.69'S	20:47:59	128.4	0.66	2.11
079°37.5'W	45°21.08'S	45°22.20'S	20:49:35	47°32.86'S	47°35.72'S	20:48:01	128.4	0.66	2.11
079°30.0'W	45°25.24'S	45°26.35'S	20:49:38	47°36.89'S	47°39.75'S	20:48:03	128.3	0.66	2.11
079°22.5'W	45°29.39'S	45°30.49'S	20:49:40	47°40.91'S	47°43.77'S	20:48:05	128.3	0.66	2.11
079°15.0'W	45°33.54'S	45°34.62'S	20:49:42	47°44.92'S	47°47.78'S	20:48:07	128.3	0.66	2.11
079°07.5'W	45°37.67'S	45°38.74'S	20:49:45	47°48.92'S	47°51.78'S	20:48:08	128.3	0.66	2.11
079°00.0'W	45°41.80'S	45°42.86'S	20:49:47	47°52.92'S	47°55.77'S	20:48:10	128.2	0.66	2.11
078°52.5'W	45°45.91'S	45°46.96'S	20:49:49	47°56.90'S	47°59.76'S	20:48:12	128.2	0.66	2.11
078°45.0'W	45°50.00'S	45°51.05'S	20:49:51	48°00.88'S	48°03.73'S	20:48:14	128.2	0.66	2.11
078°37.5'W	45°54.12'S	45°55.15'S	20:49:53	48°04.85'S	48°07.70'S	20:48:16	128.2	0.66	2.11
078°30.0'W	45°58.25'S	45°59.23'S	20:49:55	48°08.81'S	48°11.66'S	20:48:17	128.1	0.66	2.11
078°22.5'W	46°02.38'S	46°03.32'S	20:49:57	48°12.76'S	48°15.61'S	20:48:19	128.1	0.66	2.11
078°15.0'W	46°06.40'S	46°07.35'S	20:49:59	48°16.70'S	48°19.55'S	20:48:21	128.1	0.66	2.11
078°07.5'W	46°14.70'S	46°14.70'S	20:50:00	48°20.64'S	48°23.49'S	20:48:22	128.1	0.66	2.11
078°00.0'W	46°15.86'S	46°15.86'S	20:50:03	48°24.56'S	48°27.41'S	20:48:24	128.0	0.66	2.11
077°52.5'W	46°19.91'S	46°19.91'S	20:50:05	48°28.48'S	48°31.33'S	20:48:25	128.0	0.66	2.11
077°45.0'W	46°23.93'S	46°23.93'S	20:50:07	48°32.39'S	48°35.24'S	20:48:27	128.0	0.66	2.11
077°37.5'W	46°27.95'S	46°27.95'S	20:50:09	48°36.29'S	48°39.13'S	20:48:28	128.0	0.66	2.11
077°30.0'W	46°31.95'S	46°31.95'S	20:50:10	48°40.18'S	48°43.03'S	20:48:30	127.9	0.66	2.11
077°22.5'W	46°35.95'S	46°35.95'S	20:50:12	48°44.07'S	48°46.91'S	20:48:31	127.9	0.66	2.11
077°15.0'W	46°39.94'S	46°39.94'S	20:50:14	48°47.94'S	48°50.78'S	20:48:32	127.9	0.66	2.11
077°07.5'W	46°43.92'S	46°43.92'S	20:50:15	48°51.81'S	48°54.65'S	20:48:34	127.9	0.66	2.11
077°00.0'W	46°47.89'S	46°47.89'S	20:50:17	48°55.67'S	48°58.50'S	20:48:35	127.8	0.66	2.11
076°52.5'W	46°51.86'S	46°51.86'S	20:50:19	48°59.52'S	49°02.35'S	20:48:36	127.8	0.66	2.11
076°45.0'W	46°55.81'S	46°55.81'S	20:50:20	49°03.36'S	49°06.19'S	20:48:37	127.8	0.66	2.11
076°37.5'W	46°59.76'S	46°59.76'S	20:50:22	49°07.19'S	49°10.02'S	20:48:39	127.8	0.66	2.11
076°30.0'W	47°03.69'S	47°03.69'S	20:50:23	49°11.02'S	49°13.85'S	20:48:40	127.7	0.67	2.11
076°22.5'W	47°07.62'S	47°07.62'S	20:50:25	49°14.84'S	49°17.66'S	20:48:41	127.7	0.67	2.12
076°15.0'W	47°11.54'S	47°11.54'S	20:50:26	49°18.64'S	49°21.47'S	20:48:42	127.7	0.67	2.12
076°07.5'W	47°15.45'S	47°15.45'S	20:50:27	49°22.44'S	49°25.27'S	20:48:43	127.6	0.67	2.12
076°00.0'W	47°19.36'S	47°19.36'S	20:50:29	49°26.24'S	49°29.06'S	20:48:44	127.6	0.67	2.12
075°52.5'W	47°23.25'S	47°23.25'S	20:50:30	49°30.02'S	49°32.84'S	20:48:45	127.6	0.67	2.12
075°45.0'W	47°27.13'S	47°27.13'S	20:50:31	49°33.79'S	49°36.62'S	20:48:46	127.6	0.67	2.12
075°37.5'W	47°31.01'S	47°31.01'S	20:50:33	49°37.56'S	49°40.38'S	20:48:47	127.5	0.67	2.12
075°30.0'W	47°34.88'S	47°34.88'S	20:50:34	49°41.32'S	49°44.14'S	20:48:48	127.5	0.67	2.12
075°22.5'W	47°38.74'S	47°38.74'S	20:50:35	49°45.07'S	49°47.88'S	20:48:49	127.5	0.67	2.12
075°15.0'W	47°42.59'S	47°42.59'S	20:50:36	49°48.81'S	49°51.63'S	20:48:50	127.4	0.68	2.12
075°07.5'W	47°46.44'S	47°46.44'S	20:50:37	49°52.54'S	49°55.36'S	20:48:51	127.4	0.68	2.13
075°00.0'W	47°50.27'S	47°50.27'S	20:50:38	49°56.27'S	49°59.08'S	20:48:51	127.4	0.68	2.13
074°52.5'W	47°54.09'S	47°54.09'S	20:50:39	49°59.99'S	50°02.80'S	20:48:52	127.3	0.68	2.13
074°45.0'W	47°57.91'S	47°57.91'S	20:50:40	50°03.69'S	50°06.50'S	20:48:53	127.3	0.69	2.14
074°37.5'W	48°01.72'S	48°01.72'S	20:50:41	50°07.40'S	50°10.20'S	20:48:53	127.2	0.69	2.14
074°30.0'W	48°05.52'S	48°05.52'S	20:50:42	50°11.09'S	50°13.89'S	20:48:54	127.2	0.70	2.15
074°22.5'W	48°09.31'S	48°09.31'S	20:50:43	50°14.77'S	50°17.57'S	20:48:55	127.1	0.72	2.17
074°15.0'W	48°13.10'S	48°13.10'S	20:50:44	50°18.45'S	50°21.25'S	20:48:56	127.1	0.74	2.19
074°07.5'W	48°16.87'S	48°16.87'S	20:50:45	50°22.12'S	50°24.91'S	20:48:56	127.0	0.73	2.18
074°00.0'W	48°20.64'S	48°20.64'S	20:50:46	50°25.77'S	50°28.57'S	20:48:57	127.0	0.73	2.18

TOTAL SOLAR ECLIPSE OF 2010 JULY 11

TABLE 3.D – MAPPING COORDINATES FOR THE ZONES OF GRAZING ECLIPSE (EXTENDED)

Longitude	North Graze Zone		Northern	South Graze Zone		Southern	$\Delta T = 66.2 \text{ s}$		
	Latitudes		Limit	Latitudes		Limit	Path Azm °	Elev Fact	Scale Fact km/''
	Northern Limit	Southern Limit	Universal Time h m s	Northern Limit	Southern Limit	Universal Time h m s			
073°52.5'W	48°24.40'S	48°24.40'S	20:50:47	50°29.43'S	50°32.22'S	20:48:57	127.0	0.72	2.17
073°45.0'W	48°28.15'S	48°28.15'S	20:50:47	50°33.07'S	50°35.87'S	20:48:57	127.0	0.72	2.17
073°37.5'W	48°31.89'S	48°31.89'S	20:50:48	50°36.70'S	50°39.51'S	20:48:58	127.0	0.71	2.16
073°30.0'W	48°35.62'S	48°35.62'S	20:50:49	50°40.33'S	50°43.14'S	20:48:58	127.0	0.70	2.15
073°22.5'W	48°39.35'S	48°39.35'S	20:50:50	50°43.95'S	50°46.77'S	20:48:58	127.0	0.69	2.14
073°15.0'W	48°43.06'S	48°43.06'S	20:50:50	50°47.56'S	50°50.38'S	20:48:58	127.0	0.68	2.13
073°07.5'W	48°46.77'S	48°46.77'S	20:50:51	50°51.16'S	50°53.99'S	20:48:58	127.0	0.67	2.12
073°00.0'W	48°50.47'S	48°50.47'S	20:50:51	50°54.76'S	50°57.57'S	20:48:59	127.0	0.66	2.11
072°52.5'W	48°54.16'S	48°54.16'S	20:50:52	50°58.34'S	51°01.14'S	20:49:00	127.0	0.64	2.09
072°45.0'W	48°57.84'S	48°57.84'S	20:50:52	51°01.92'S	51°04.69'S	20:49:01	127.0	0.62	2.08
072°37.5'W	49°01.52'S	49°01.52'S	20:50:53	51°05.49'S	51°08.20'S	20:49:04	127.0	0.60	2.06
072°30.0'W	49°05.19'S	49°05.19'S	20:50:53	51°09.05'S	51°11.68'S	20:49:08	127.0	0.58	2.04
072°22.5'W	49°08.84'S	49°08.84'S	20:50:54	51°12.60'S	51°15.11'S	20:49:13	126.9	0.55	2.01
072°15.0'W	49°12.49'S	49°12.49'S	20:50:54	51°16.15'S	51°18.49'S	20:49:20	126.9	0.52	1.98
072°07.5'W	49°16.13'S	49°16.13'S	20:50:55	51°19.68'S	51°21.79'S	20:49:29	126.9	0.47	1.95
072°00.0'W	49°19.77'S	49°19.77'S	20:50:55	51°23.21'S	51°25.02'S	20:49:42	126.9	0.42	1.91
071°52.5'W	49°23.39'S	49°23.39'S	20:50:55	51°26.73'S	51°28.16'S	20:49:58	126.9	0.35	1.87
071°45.0'W	49°27.01'S	49°27.01'S	20:50:56	51°30.24'S	51°31.19'S	20:50:18	126.9	0.26	1.82
071°37.5'W	49°30.62'S	49°30.62'S	20:50:56	51°33.74'S	51°34.09'S	20:50:43	126.9	0.13	1.78