

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

ΔT = 66.0 s

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
016°00.0'E	-	05°03.11'N	06°50.34'N	05:17:35	0.4	111.4	370.3	07m10.4s
015°45.0'E		05°08.85'N	06°56.18'N	05:17:35	0.1	111.3	370.5	07m09.7s
015°52.5'E		05°05.98'N	06°53.26'N	05:17:35	0.2	111.3	370.4	07m10.0s
016°00.0'E		05°03.11'N	06°50.34'N	05:17:35	0.4	111.3	370.3	07m10.4s
016°07.5'E	08°35.78'N	05°00.25'N	06°47.43'N	05:17:35	0.5	111.4	370.1	07m10.7s
016°15.0'E	08°32.82'N	04°57.38'N	06°44.51'N	05:17:35	0.6	111.4	370.0	07m11.1s
016°22.5'E	08°29.85'N	04°54.52'N	06°41.60'N	05:17:35	0.8	111.4	369.9	07m11.4s
016°30.0'E	08°26.89'N	04°51.67'N	06°38.69'N	05:17:36	0.9	111.4	369.7	07m11.8s
016°37.5'E	08°23.94'N	04°48.81'N	06°35.78'N	05:17:36	1.1	111.4	369.6	07m12.1s
016°45.0'E	08°20.98'N	04°45.96'N	06°32.88'N	05:17:36	1.2	111.4	369.5	07m12.5s
016°52.5'E	08°18.03'N	04°43.10'N	06°29.98'N	05:17:37	1.3	111.5	369.3	07m12.8s
017°00.0'E	08°15.07'N	04°40.26'N	06°27.08'N	05:17:37	1.5	111.5	369.2	07m13.2s
017°07.5'E	08°12.13'N	04°37.41'N	06°24.18'N	05:17:38	1.6	111.5	369.1	07m13.5s
017°15.0'E	08°09.18'N	04°34.57'N	06°21.29'N	05:17:38	1.7	111.5	368.9	07m13.9s
017°22.5'E	08°06.23'N	04°31.72'N	06°18.39'N	05:17:39	1.9	111.5	368.8	07m14.3s
017°30.0'E	08°03.29'N	04°28.89'N	06°15.50'N	05:17:39	2.0	111.5	368.7	07m14.6s
017°37.5'E	08°00.35'N	04°26.05'N	06°12.61'N	05:17:40	2.1	111.5	368.5	07m15.0s
017°45.0'E	07°57.41'N	04°23.22'N	06°09.73'N	05:17:41	2.3	111.6	368.4	07m15.4s
017°52.5'E	07°54.48'N	04°20.39'N	06°06.85'N	05:17:42	2.4	111.6	368.3	07m15.7s
018°00.0'E	07°51.55'N	04°17.56'N	06°03.97'N	05:17:42	2.5	111.6	368.1	07m16.1s
018°07.5'E	07°48.62'N	04°14.73'N	06°01.09'N	05:17:43	2.7	111.6	368.0	07m16.5s
018°15.0'E	07°45.69'N	04°11.91'N	05°58.21'N	05:17:44	2.8	111.6	367.9	07m16.8s
018°22.5'E	07°42.77'N	04°09.09'N	05°55.34'N	05:17:45	3.0	111.6	367.7	07m17.2s
018°30.0'E	07°39.84'N	04°06.27'N	05°52.47'N	05:17:46	3.1	111.6	367.6	07m17.6s
018°37.5'E	07°36.92'N	04°03.46'N	05°49.61'N	05:17:47	3.2	111.6	367.5	07m18.0s
018°45.0'E	07°34.01'N	04°00.64'N	05°46.74'N	05:17:48	3.4	111.7	367.3	07m18.4s
018°52.5'E	07°31.09'N	03°57.83'N	05°43.88'N	05:17:49	3.5	111.7	367.2	07m18.7s
019°00.0'E	07°28.18'N	03°55.03'N	05°41.02'N	05:17:50	3.6	111.7	367.1	07m19.1s
019°07.5'E	07°25.27'N	03°52.22'N	05°38.17'N	05:17:52	3.8	111.7	367.0	07m19.5s
019°15.0'E	07°22.37'N	03°49.42'N	05°35.31'N	05:17:53	3.9	111.7	366.8	07m19.9s
019°22.5'E	07°19.47'N	03°46.63'N	05°32.46'N	05:17:54	4.1	111.7	366.7	07m20.3s
019°30.0'E	07°16.57'N	03°43.83'N	05°29.61'N	05:17:55	4.2	111.7	366.6	07m20.7s
019°37.5'E	07°13.67'N	03°41.04'N	05°26.77'N	05:17:57	4.3	111.8	366.4	07m21.0s
019°45.0'E	07°10.77'N	03°38.25'N	05°23.93'N	05:17:58	4.5	111.8	366.3	07m21.4s
019°52.5'E	07°07.88'N	03°35.47'N	05°21.09'N	05:18:00	4.6	111.8	366.2	07m21.8s
020°00.0'E	07°04.99'N	03°32.69'N	05°18.26'N	05:18:01	4.7	111.8	366.0	07m22.2s
020°07.5'E	07°02.11'N	03°29.91'N	05°15.42'N	05:18:03	4.9	111.8	365.9	07m22.6s
020°15.0'E	06°59.23'N	03°27.13'N	05°12.60'N	05:18:05	5.0	111.8	365.8	07m23.0s
020°22.5'E	06°56.35'N	03°24.36'N	05°09.77'N	05:18:06	5.2	111.8	365.6	07m23.4s
020°30.0'E	06°53.47'N	03°21.59'N	05°06.95'N	05:18:08	5.3	111.8	365.5	07m23.8s
020°37.5'E	06°50.60'N	03°18.82'N	05°04.13'N	05:18:10	5.4	111.9	365.4	07m24.2s
020°45.0'E	06°47.73'N	03°16.06'N	05°01.31'N	05:18:12	5.6	111.9	365.3	07m24.6s
020°52.5'E	06°44.86'N	03°13.30'N	04°58.50'N	05:18:13	5.7	111.9	365.1	07m25.0s
021°00.0'E	06°42.00'N	03°10.54'N	04°55.69'N	05:18:15	5.9	111.9	365.0	07m25.4s
021°07.5'E	06°39.14'N	03°07.79'N	04°52.88'N	05:18:17	6.0	111.9	364.9	07m25.8s
021°15.0'E	06°36.28'N	03°05.04'N	04°50.08'N	05:18:19	6.1	111.9	364.7	07m26.2s
021°22.5'E	06°33.43'N	03°02.30'N	04°47.28'N	05:18:21	6.3	111.9	364.6	07m26.6s
021°30.0'E	06°30.58'N	02°59.55'N	04°44.48'N	05:18:24	6.4	111.9	364.5	07m27.1s
021°37.5'E	06°27.73'N	02°56.82'N	04°41.69'N	05:18:26	6.6	111.9	364.3	07m27.5s
021°45.0'E	06°24.89'N	02°54.08'N	04°38.90'N	05:18:28	6.7	112.0	364.2	07m27.9s
021°52.5'E	06°22.05'N	02°51.35'N	04°36.12'N	05:18:30	6.9	112.0	364.1	07m28.3s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0$ s

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
022°00.0'E	06°19.21'N	02°48.62'N	04°33.33'N	05:18:33	7.0	112.0	364.0	07m28.7s
022°07.5'E	06°16.38'N	02°45.90'N	04°30.55'N	05:18:35	7.1	112.0	363.8	07m29.1s
022°15.0'E	06°13.55'N	02°43.18'N	04°27.78'N	05:18:37	7.3	112.0	363.7	07m29.6s
022°22.5'E	06°10.72'N	02°40.46'N	04°25.01'N	05:18:40	7.4	112.0	363.6	07m30.0s
022°30.0'E	06°07.90'N	02°37.75'N	04°22.24'N	05:18:42	7.6	112.0	363.4	07m30.4s
022°37.5'E	06°05.08'N	02°35.04'N	04°19.48'N	05:18:45	7.7	112.0	363.3	07m30.8s
022°45.0'E	06°02.27'N	02°32.33'N	04°16.72'N	05:18:48	7.8	112.0	363.2	07m31.3s
022°52.5'E	05°59.46'N	02°29.63'N	04°13.96'N	05:18:50	8.0	112.1	363.1	07m31.7s
023°00.0'E	05°56.65'N	02°26.93'N	04°11.21'N	05:18:53	8.1	112.1	362.9	07m32.1s
023°07.5'E	05°53.85'N	02°24.24'N	04°08.46'N	05:18:56	8.3	112.1	362.8	07m32.6s
023°15.0'E	05°51.05'N	02°21.55'N	04°05.72'N	05:18:59	8.4	112.1	362.7	07m33.0s
023°22.5'E	05°48.25'N	02°18.86'N	04°02.98'N	05:19:02	8.6	112.1	362.6	07m33.4s
023°30.0'E	05°45.46'N	02°16.18'N	04°00.24'N	05:19:05	8.7	112.1	362.4	07m33.9s
023°37.5'E	05°42.67'N	02°13.51'N	03°57.51'N	05:19:08	8.9	112.1	362.3	07m34.3s
023°45.0'E	05°39.89'N	02°10.83'N	03°54.78'N	05:19:11	9.0	112.1	362.2	07m34.8s
023°52.5'E	05°37.11'N	02°08.16'N	03°52.05'N	05:19:14	9.1	112.1	362.1	07m35.2s
024°00.0'E	05°34.33'N	02°05.50'N	03°49.34'N	05:19:17	9.3	112.2	361.9	07m35.7s
024°07.5'E	05°31.56'N	02°02.84'N	03°46.62'N	05:19:20	9.4	112.2	361.8	07m36.1s
024°15.0'E	05°28.80'N	02°00.18'N	03°43.91'N	05:19:23	9.6	112.2	361.7	07m36.6s
024°22.5'E	05°26.03'N	01°57.53'N	03°41.20'N	05:19:27	9.7	112.2	361.6	07m37.0s
024°30.0'E	05°23.28'N	01°54.88'N	03°38.50'N	05:19:30	9.9	112.2	361.4	07m37.5s
024°37.5'E	05°20.52'N	01°52.24'N	03°35.80'N	05:19:33	10.0	112.2	361.3	07m37.9s
024°45.0'E	05°17.77'N	01°49.60'N	03°33.10'N	05:19:37	10.2	112.2	361.2	07m38.4s
024°52.5'E	05°15.03'N	01°46.97'N	03°30.41'N	05:19:40	10.3	112.2	361.1	07m38.8s
025°00.0'E	05°12.28'N	01°44.34'N	03°27.73'N	05:19:44	10.5	112.2	360.9	07m39.3s
025°07.5'E	05°09.55'N	01°41.71'N	03°25.05'N	05:19:48	10.6	112.3	360.8	07m39.7s
025°15.0'E	05°06.82'N	01°39.09'N	03°22.37'N	05:19:51	10.7	112.3	360.7	07m40.2s
025°22.5'E	05°04.09'N	01°36.48'N	03°19.70'N	05:19:55	10.9	112.3	360.6	07m40.7s
025°30.0'E	05°01.37'N	01°33.86'N	03°17.03'N	05:19:59	11.0	112.3	360.4	07m41.1s
025°37.5'E	04°58.65'N	01°31.26'N	03°14.37'N	05:20:03	11.2	112.3	360.3	07m41.6s
025°45.0'E	04°55.93'N	01°28.66'N	03°11.71'N	05:20:07	11.3	112.3	360.2	07m42.1s
025°52.5'E	04°53.22'N	01°26.06'N	03°09.06'N	05:20:11	11.5	112.3	360.1	07m42.6s
026°00.0'E	04°50.52'N	01°23.47'N	03°06.41'N	05:20:15	11.6	112.3	360.0	07m43.0s
026°07.5'E	04°47.82'N	01°20.88'N	03°03.77'N	05:20:19	11.8	112.3	359.8	07m43.5s
026°15.0'E	04°45.13'N	01°18.30'N	03°01.13'N	05:20:23	11.9	112.4	359.7	07m44.0s
026°22.5'E	04°42.44'N	01°15.72'N	02°58.50'N	05:20:27	12.1	112.4	359.6	07m44.5s
026°30.0'E	04°39.75'N	01°13.15'N	02°55.87'N	05:20:31	12.2	112.4	359.5	07m45.0s
026°37.5'E	04°37.07'N	01°10.58'N	02°53.24'N	05:20:36	12.4	112.4	359.4	07m45.4s
026°45.0'E	04°34.40'N	01°08.02'N	02°50.63'N	05:20:40	12.5	112.4	359.2	07m45.9s
026°52.5'E	04°31.73'N	01°05.46'N	02°48.01'N	05:20:45	12.7	112.4	359.1	07m46.4s
027°00.0'E	04°29.06'N	01°02.91'N	02°45.40'N	05:20:49	12.8	112.4	359.0	07m46.9s
027°07.5'E	04°26.40'N	01°00.37'N	02°42.80'N	05:20:54	13.0	112.4	358.9	07m47.4s
027°15.0'E	04°23.75'N	00°57.82'N	02°40.20'N	05:20:58	13.1	112.4	358.8	07m47.9s
027°22.5'E	04°21.10'N	00°55.29'N	02°37.61'N	05:21:03	13.3	112.4	358.6	07m48.4s
027°30.0'E	04°18.46'N	00°52.76'N	02°35.02'N	05:21:08	13.4	112.5	358.5	07m48.9s
027°37.5'E	04°15.82'N	00°50.23'N	02°32.44'N	05:21:12	13.6	112.5	358.4	07m49.4s
027°45.0'E	04°13.18'N	00°47.71'N	02°29.87'N	05:21:17	13.7	112.5	358.3	07m49.9s
027°52.5'E	04°10.56'N	00°45.20'N	02°27.30'N	05:21:22	13.9	112.5	358.2	07m50.4s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

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ΔT = 66.0 s

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat. s
028°00.0'E	04°07.93'N	00°42.69'N	02°24.73'N	05:21:27	14.0	112.5	358.0	07m50.9s
028°07.5'E	04°05.32'N	00°40.19'N	02°22.17'N	05:21:32	14.2	112.5	357.9	07m51.4s
028°15.0'E	04°02.71'N	00°37.69'N	02°19.62'N	05:21:37	14.3	112.5	357.8	07m51.9s
028°22.5'E	04°00.10'N	00°35.20'N	02°17.07'N	05:21:42	14.5	112.5	357.7	07m52.4s
028°30.0'E	03°57.50'N	00°32.71'N	02°14.52'N	05:21:48	14.6	112.5	357.6	07m52.9s
028°37.5'E	03°54.91'N	00°30.23'N	02°11.99'N	05:21:53	14.8	112.5	357.5	07m53.4s
028°45.0'E	03°52.32'N	00°27.76'N	02°09.46'N	05:21:58	14.9	112.6	357.4	07m54.0s
028°52.5'E	03°49.74'N	00°25.29'N	02°06.93'N	05:22:04	15.1	112.6	357.2	07m54.5s
029°00.0'E	03°47.16'N	00°22.83'N	02°04.41'N	05:22:09	15.2	112.6	357.1	07m55.0s
029°07.5'E	03°44.59'N	00°20.37'N	02°01.90'N	05:22:15	15.4	112.6	357.0	07m55.5s
029°15.0'E	03°42.02'N	00°17.92'N	01°59.39'N	05:22:20	15.5	112.6	356.9	07m56.0s
029°22.5'E	03°39.47'N	00°15.48'N	01°56.89'N	05:22:26	15.7	112.6	356.8	07m56.6s
029°30.0'E	03°36.91'N	00°13.04'N	01°54.39'N	05:22:31	15.8	112.6	356.7	07m57.1s
029°37.5'E	03°34.37'N	00°10.61'N	01°51.90'N	05:22:37	16.0	112.6	356.6	07m57.6s
029°45.0'E	03°31.83'N	00°08.18'N	01°49.42'N	05:22:43	16.2	112.6	356.4	07m58.2s
029°52.5'E	03°29.29'N	00°05.76'N	01°46.94'N	05:22:49	16.3	112.6	356.3	07m58.7s
030°00.0'E	03°26.76'N	00°03.35'N	01°44.47'N	05:22:55	16.5	112.7	356.2	07m59.2s
030°07.5'E	03°24.24'N	00°00.94'N	01°42.01'N	05:23:01	16.6	112.7	356.1	07m59.8s
030°15.0'E	03°21.73'N	00°01.46'S	01°39.55'N	05:23:07	16.8	112.7	356.0	08m00.3s
030°22.5'E	03°19.22'N	00°03.85'S	01°37.10'N	05:23:13	16.9	112.7	355.9	08m00.9s
030°30.0'E	03°16.72'N	00°06.24'S	01°34.65'N	05:23:19	17.1	112.7	355.8	08m01.4s
030°37.5'E	03°14.22'N	00°08.62'S	01°32.22'N	05:23:26	17.2	112.7	355.7	08m02.0s
030°45.0'E	03°11.73'N	00°11.00'S	01°29.78'N	05:23:32	17.4	112.7	355.6	08m02.5s
030°52.5'E	03°09.25'N	00°13.36'S	01°27.36'N	05:23:38	17.5	112.7	355.5	08m03.1s
031°00.0'E	03°06.78'N	00°15.72'S	01°24.94'N	05:23:45	17.7	112.7	355.3	08m03.6s
031°07.5'E	03°04.31'N	00°18.08'S	01°22.53'N	05:23:51	17.9	112.8	355.2	08m04.2s
031°15.0'E	03°01.84'N	00°20.42'S	01°20.12'N	05:23:58	18.0	112.8	355.1	08m04.7s
031°22.5'E	02°59.39'N	00°22.77'S	01°17.73'N	05:24:05	18.2	112.8	355.0	08m05.3s
031°30.0'E	02°56.94'N	00°25.10'S	01°15.34'N	05:24:11	18.3	112.8	354.9	08m05.9s
031°37.5'E	02°54.50'N	00°27.43'S	01°12.95'N	05:24:18	18.5	112.8	354.8	08m06.4s
031°45.0'E	02°52.07'N	00°29.74'S	01°10.58'N	05:24:25	18.6	112.8	354.7	08m07.0s
031°52.5'E	02°49.64'N	00°32.06'S	01°08.21'N	05:24:32	18.8	112.8	354.6	08m07.6s
032°00.0'E	02°47.22'N	00°34.36'S	01°05.84'N	05:24:39	19.0	112.8	354.5	08m08.1s
032°07.5'E	02°44.81'N	00°36.66'S	01°03.49'N	05:24:46	19.1	112.8	354.4	08m08.7s
032°15.0'E	02°42.40'N	00°38.95'S	01°01.14'N	05:24:53	19.3	112.9	354.3	08m09.3s
032°22.5'E	02°40.00'N	00°41.23'S	00°58.80'N	05:25:00	19.4	112.9	354.2	08m09.8s
032°30.0'E	02°37.61'N	00°43.51'S	00°56.47'N	05:25:07	19.6	112.9	354.1	08m10.4s
032°37.5'E	02°35.23'N	00°45.78'S	00°54.14'N	05:25:15	19.7	112.9	354.0	08m11.0s
032°45.0'E	02°32.85'N	00°48.04'S	00°51.82'N	05:25:22	19.9	112.9	353.9	08m11.6s
032°52.5'E	02°30.49'N	00°50.29'S	00°49.51'N	05:25:30	20.1	112.9	353.8	08m12.2s
033°00.0'E	02°28.13'N	00°52.54'S	00°47.21'N	05:25:37	20.2	112.9	353.7	08m12.8s
033°07.5'E	02°25.77'N	00°54.78'S	00°44.91'N	05:25:45	20.4	112.9	353.6	08m13.4s
033°15.0'E	02°23.43'N	00°57.01'S	00°42.62'N	05:25:52	20.5	112.9	353.5	08m14.0s
033°22.5'E	02°21.09'N	00°59.23'S	00°40.34'N	05:26:00	20.7	113.0	353.4	08m14.5s
033°30.0'E	02°18.76'N	01°01.44'S	00°38.07'N	05:26:08	20.9	113.0	353.3	08m15.1s
033°37.5'E	02°16.44'N	01°03.65'S	00°35.81'N	05:26:16	21.0	113.0	353.2	08m15.7s
033°45.0'E	02°14.13'N	01°05.85'S	00°33.55'N	05:26:24	21.2	113.0	353.1	08m16.3s
033°52.5'E	02°11.82'N	01°08.04'S	00°31.30'N	05:26:32	21.3	113.0	353.0	08m17.0s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
034°00.0'E	02°09.53'N	01°10.22'S	00°29.06'N	05:26:40	21.5	113.0	352.9	08m17.6s
034°07.5'E	02°07.24'N	01°12.40'S	00°26.83'N	05:26:48	21.7	113.0	352.8	08m18.2s
034°15.0'E	02°04.96'N	01°14.56'S	00°24.61'N	05:26:56	21.8	113.0	352.7	08m18.8s
034°22.5'E	02°02.69'N	01°16.72'S	00°22.39'N	05:27:05	22.0	113.1	352.6	08m19.4s
034°30.0'E	02°00.42'N	01°18.87'S	00°20.19'N	05:27:13	22.1	113.1	352.5	08m20.0s
034°37.5'E	01°58.17'N	01°21.01'S	00°17.99'N	05:27:21	22.3	113.1	352.4	08m20.6s
034°45.0'E	01°55.92'N	01°23.14'S	00°15.80'N	05:27:30	22.5	113.1	352.3	08m21.2s
034°52.5'E	01°53.68'N	01°25.27'S	00°13.62'N	05:27:39	22.6	113.1	352.2	08m21.9s
035°00.0'E	01°51.45'N	01°27.38'S	00°11.45'N	05:27:47	22.8	113.1	352.1	08m22.5s
035°07.5'E	01°49.23'N	01°29.49'S	00°09.28'N	05:27:56	23.0	113.1	352.0	08m23.1s
035°15.0'E	01°47.02'N	01°31.59'S	00°07.13'N	05:28:05	23.1	113.1	351.9	08m23.7s
035°22.5'E	01°44.82'N	01°33.68'S	00°04.98'N	05:28:14	23.3	113.2	351.8	08m24.4s
035°30.0'E	01°42.63'N	01°35.76'S	00°02.84'N	05:28:23	23.4	113.2	351.8	08m25.0s
035°37.5'E	01°40.44'N	01°37.83'S	00°00.71'N	05:28:32	23.6	113.2	351.7	08m25.6s
035°45.0'E	01°38.27'N	01°39.89'S	00°01.41'S	05:28:41	23.8	113.2	351.6	08m26.3s
035°52.5'E	01°36.10'N	01°41.95'S	00°03.52'S	05:28:50	23.9	113.2	351.5	08m26.9s
036°00.0'E	01°33.94'N	01°43.99'S	00°05.62'S	05:28:59	24.1	113.2	351.4	08m27.6s
036°07.5'E	01°31.80'N	01°46.03'S	00°07.71'S	05:29:08	24.3	113.2	351.3	08m28.2s
036°15.0'E	01°29.66'N	01°48.05'S	00°09.79'S	05:29:18	24.4	113.3	351.2	08m28.9s
036°22.5'E	01°27.53'N	01°50.07'S	00°11.86'S	05:29:27	24.6	113.3	351.1	08m29.5s
036°30.0'E	01°25.41'N	01°52.08'S	00°13.93'S	05:29:37	24.8	113.3	351.0	08m30.2s
036°37.5'E	01°23.30'N	01°54.08'S	00°15.98'S	05:29:46	24.9	113.3	351.0	08m30.8s
036°45.0'E	01°21.20'N	01°56.06'S	00°18.03'S	05:29:56	25.1	113.3	350.9	08m31.5s
036°52.5'E	01°19.11'N	01°58.04'S	00°20.06'S	05:30:06	25.3	113.3	350.8	08m32.1s
037°00.0'E	01°17.03'N	02°00.01'S	00°22.09'S	05:30:16	25.4	113.3	350.7	08m32.8s
037°07.5'E	01°14.96'N	02°01.97'S	00°24.10'S	05:30:26	25.6	113.4	350.6	08m33.4s
037°15.0'E	01°12.90'N	02°03.92'S	00°26.11'S	05:30:36	25.8	113.4	350.5	08m34.1s
037°22.5'E	01°10.85'N	02°05.86'S	00°28.10'S	05:30:46	25.9	113.4	350.5	08m34.8s
037°30.0'E	01°08.81'N	02°07.79'S	00°30.09'S	05:30:56	26.1	113.4	350.4	08m35.5s
037°37.5'E	01°06.78'N	02°09.71'S	00°32.06'S	05:31:06	26.3	113.4	350.3	08m36.1s
037°45.0'E	01°04.76'N	02°11.62'S	00°34.03'S	05:31:16	26.4	113.4	350.2	08m36.8s
037°52.5'E	01°02.75'N	02°13.52'S	00°35.98'S	05:31:27	26.6	113.5	350.1	08m37.5s
038°00.0'E	01°00.75'N	02°15.41'S	00°37.93'S	05:31:37	26.8	113.5	350.1	08m38.2s
038°07.5'E	00°58.76'N	02°17.29'S	00°39.86'S	05:31:48	26.9	113.5	350.0	08m38.8s
038°15.0'E	00°56.78'N	02°19.16'S	00°41.78'S	05:31:58	27.1	113.5	349.9	08m39.5s
038°22.5'E	00°54.82'N	02°21.02'S	00°43.70'S	05:32:09	27.3	113.5	349.8	08m40.2s
038°30.0'E	00°52.86'N	02°22.86'S	00°45.60'S	05:32:20	27.4	113.5	349.8	08m40.9s
038°37.5'E	00°50.92'N	02°24.70'S	00°47.49'S	05:32:31	27.6	113.6	349.7	08m41.6s
038°45.0'E	00°48.98'N	02°26.53'S	00°49.37'S	05:32:42	27.8	113.6	349.6	08m42.3s
038°52.5'E	00°47.06'N	02°28.34'S	00°51.24'S	05:32:53	27.9	113.6	349.5	08m43.0s
039°00.0'E	00°45.15'N	02°30.15'S	00°53.10'S	05:33:04	28.1	113.6	349.5	08m43.7s
039°07.5'E	00°43.25'N	02°31.94'S	00°54.95'S	05:33:15	28.3	113.6	349.4	08m44.4s
039°15.0'E	00°41.36'N	02°33.72'S	00°56.78'S	05:33:26	28.4	113.7	349.3	08m45.1s
039°22.5'E	00°39.48'N	02°35.50'S	00°58.61'S	05:33:38	28.6	113.7	349.2	08m45.8s
039°30.0'E	00°37.61'N	02°37.26'S	01°00.42'S	05:33:49	28.8	113.7	349.2	08m46.5s
039°37.5'E	00°35.76'N	02°39.01'S	01°02.23'S	05:34:01	29.0	113.7	349.1	08m47.2s
039°45.0'E	00°33.91'N	02°40.74'S	01°04.02'S	05:34:12	29.1	113.7	349.0	08m47.9s
039°52.5'E	00°32.08'N	02°42.47'S	01°05.80'S	05:34:24	29.3	113.8	349.0	08m48.6s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
040°00.0'E	00°30.26'N	02°44.19'S	01°07.56'S	05:34:36	29.5	113.8	348.9	08m49.3s
040°07.5'E	00°28.45'N	02°45.89'S	01°09.32'S	05:34:48	29.6	113.8	348.8	08m50.0s
040°15.0'E	00°26.66'N	02°47.58'S	01°11.06'S	05:34:59	29.8	113.8	348.8	08m50.8s
040°22.5'E	00°24.87'N	02°49.26'S	01°12.80'S	05:35:11	30.0	113.8	348.7	08m51.5s
040°30.0'E	00°23.10'N	02°50.93'S	01°14.52'S	05:35:24	30.1	113.9	348.6	08m52.2s
040°37.5'E	00°21.34'N	02°52.59'S	01°16.23'S	05:35:36	30.3	113.9	348.6	08m52.9s
040°45.0'E	00°19.60'N	02°54.23'S	01°17.92'S	05:35:48	30.5	113.9	348.5	08m53.7s
040°52.5'E	00°17.86'N	02°55.86'S	01°19.61'S	05:36:00	30.7	113.9	348.4	08m54.4s
041°00.0'E	00°16.14'N	02°57.49'S	01°21.28'S	05:36:13	30.8	114.0	348.4	08m55.1s
041°07.5'E	00°14.43'N	02°59.09'S	01°22.94'S	05:36:25	31.0	114.0	348.3	08m55.9s
041°15.0'E	00°12.73'N	03°00.69'S	01°24.58'S	05:36:38	31.2	114.0	348.3	08m56.6s
041°22.5'E	00°11.05'N	03°02.27'S	01°26.22'S	05:36:51	31.4	114.0	348.2	08m57.3s
041°30.0'E	00°09.38'N	03°03.84'S	01°27.84'S	05:37:03	31.5	114.1	348.1	08m58.1s
041°37.5'E	00°07.72'N	03°05.40'S	01°29.45'S	05:37:16	31.7	114.1	348.1	08m58.8s
041°45.0'E	00°06.08'N	03°06.95'S	01°31.04'S	05:37:29	31.9	114.1	348.0	08m59.6s
041°52.5'E	00°04.44'N	03°08.48'S	01°32.63'S	05:37:42	32.1	114.1	348.0	09m00.3s
042°00.0'E	00°02.83'N	03°10.00'S	01°34.20'S	05:37:55	32.2	114.2	347.9	09m01.1s
042°07.5'E	00°01.22'N	03°11.51'S	01°35.75'S	05:38:09	32.4	114.2	347.8	09m01.8s
042°15.0'E	00°00.37'S	03°13.00'S	01°37.30'S	05:38:22	32.6	114.2	347.8	09m02.6s
042°22.5'E	00°01.95'S	03°14.49'S	01°38.83'S	05:38:35	32.8	114.2	347.7	09m03.3s
042°30.0'E	00°03.51'S	03°15.95'S	01°40.34'S	05:38:49	32.9	114.3	347.7	09m04.1s
042°37.5'E	00°05.06'S	03°17.41'S	01°41.85'S	05:39:02	33.1	114.3	347.6	09m04.9s
042°45.0'E	00°06.60'S	03°18.85'S	01°43.34'S	05:39:16	33.3	114.3	347.6	09m05.6s
042°52.5'E	00°08.12'S	03°20.28'S	01°44.81'S	05:39:30	33.5	114.4	347.5	09m06.4s
043°00.0'E	00°09.63'S	03°21.69'S	01°46.27'S	05:39:43	33.6	114.4	347.5	09m07.2s
043°07.5'E	00°11.12'S	03°23.09'S	01°47.72'S	05:39:57	33.8	114.4	347.4	09m07.9s
043°15.0'E	00°12.60'S	03°24.48'S	01°49.16'S	05:40:11	34.0	114.4	347.4	09m08.7s
043°22.5'E	00°14.07'S	03°25.85'S	01°50.57'S	05:40:25	34.2	114.5	347.3	09m09.5s
043°30.0'E	00°15.52'S	03°27.21'S	01°51.98'S	05:40:40	34.3	114.5	347.3	09m10.3s
043°37.5'E	00°16.96'S	03°28.56'S	01°53.37'S	05:40:54	34.5	114.5	347.2	09m11.0s
043°45.0'E	00°18.38'S	03°29.89'S	01°54.75'S	05:41:08	34.7	114.6	347.2	09m11.8s
043°52.5'E	00°19.78'S	03°31.21'S	01°56.11'S	05:41:23	34.9	114.6	347.2	09m12.6s
044°00.0'E	00°21.17'S	03°32.51'S	01°57.46'S	05:41:37	35.1	114.6	347.1	09m13.4s
044°07.5'E	00°22.55'S	03°33.80'S	01°58.79'S	05:41:52	35.2	114.7	347.1	09m14.2s
044°15.0'E	00°23.91'S	03°35.07'S	02°00.11'S	05:42:07	35.4	114.7	347.0	09m14.9s
044°22.5'E	00°25.26'S	03°36.33'S	02°01.41'S	05:42:21	35.6	114.7	347.0	09m15.7s
044°30.0'E	00°26.59'S	03°37.57'S	02°02.70'S	05:42:36	35.8	114.8	346.9	09m16.5s
044°37.5'E	00°27.90'S	03°38.80'S	02°03.97'S	05:42:51	35.9	114.8	346.9	09m17.3s
044°45.0'E	00°29.20'S	03°40.02'S	02°05.23'S	05:43:06	36.1	114.8	346.9	09m18.1s
044°52.5'E	00°30.48'S	03°41.22'S	02°06.47'S	05:43:22	36.3	114.9	346.8	09m18.9s
045°00.0'E	00°31.75'S	03°42.40'S	02°07.70'S	05:43:37	36.5	114.9	346.8	09m19.7s
045°07.5'E	00°33.00'S	03°43.57'S	02°08.91'S	05:43:52	36.7	115.0	346.8	09m20.5s
045°15.0'E	00°34.24'S	03°44.73'S	02°10.11'S	05:44:08	36.8	115.0	346.7	09m21.3s
045°22.5'E	00°35.46'S	03°45.86'S	02°11.28'S	05:44:23	37.0	115.0	346.7	09m22.1s
045°30.0'E	00°36.66'S	03°46.99'S	02°12.45'S	05:44:39	37.2	115.1	346.6	09m22.9s
045°37.5'E	00°37.85'S	03°48.09'S	02°13.60'S	05:44:55	37.4	115.1	346.6	09m23.7s
045°45.0'E	00°39.02'S	03°49.19'S	02°14.73'S	05:45:11	37.6	115.2	346.6	09m24.5s
045°52.5'E	00°40.17'S	03°50.26'S	02°15.84'S	05:45:27	37.7	115.2	346.5	09m25.3s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
046°00.0'E	00°41.31'S	03°51.32'S	02°16.94'S	05:45:43	37.9	115.2	346.5	09m26.2s
046°07.5'E	00°42.43'S	03°52.37'S	02°18.02'S	05:45:59	38.1	115.3	346.5	09m27.0s
046°15.0'E	00°43.53'S	03°53.39'S	02°19.09'S	05:46:15	38.3	115.3	346.4	09m27.8s
046°22.5'E	00°44.61'S	03°54.40'S	02°20.14'S	05:46:31	38.5	115.4	346.4	09m28.6s
046°30.0'E	00°45.68'S	03°55.40'S	02°21.17'S	05:46:48	38.7	115.4	346.4	09m29.4s
046°37.5'E	00°46.73'S	03°56.38'S	02°22.19'S	05:47:04	38.8	115.5	346.4	09m30.2s
046°45.0'E	00°47.77'S	03°57.34'S	02°23.18'S	05:47:21	39.0	115.5	346.3	09m31.0s
046°52.5'E	00°48.78'S	03°58.28'S	02°24.16'S	05:47:38	39.2	115.6	346.3	09m31.9s
047°00.0'E	00°49.78'S	03°59.21'S	02°25.13'S	05:47:55	39.4	115.6	346.3	09m32.7s
047°07.5'E	00°50.76'S	04°00.12'S	02°26.07'S	05:48:12	39.6	115.7	346.3	09m33.5s
047°15.0'E	00°51.72'S	04°01.02'S	02°27.00'S	05:48:29	39.8	115.7	346.2	09m34.3s
047°22.5'E	00°52.66'S	04°01.90'S	02°27.91'S	05:48:46	39.9	115.8	346.2	09m35.2s
047°30.0'E	00°53.59'S	04°02.76'S	02°28.81'S	05:49:03	40.1	115.8	346.2	09m36.0s
047°37.5'E	00°54.49'S	04°03.60'S	02°29.68'S	05:49:20	40.3	115.9	346.2	09m36.8s
047°45.0'E	00°55.38'S	04°04.42'S	02°30.54'S	05:49:38	40.5	115.9	346.1	09m37.7s
047°52.5'E	00°56.25'S	04°05.23'S	02°31.38'S	05:49:55	40.7	116.0	346.1	09m38.5s
048°00.0'E	00°57.10'S	04°06.02'S	02°32.20'S	05:50:13	40.9	116.0	346.1	09m39.3s
048°07.5'E	00°57.93'S	04°06.79'S	02°33.00'S	05:50:31	41.0	116.1	346.1	09m40.1s
048°15.0'E	00°58.75'S	04°07.54'S	02°33.79'S	05:50:48	41.2	116.1	346.1	09m41.0s
048°22.5'E	00°59.54'S	04°08.28'S	02°34.55'S	05:51:06	41.4	116.2	346.0	09m41.8s
048°30.0'E	01°00.31'S	04°09.00'S	02°35.30'S	05:51:24	41.6	116.3	346.0	09m42.7s
048°37.5'E	01°01.07'S	04°09.70'S	02°36.03'S	05:51:43	41.8	116.3	346.0	09m43.5s
048°45.0'E	01°01.80'S	04°10.38'S	02°36.73'S	05:52:01	42.0	116.4	346.0	09m44.3s
048°52.5'E	01°02.52'S	04°11.04'S	02°37.42'S	05:52:19	42.1	116.4	346.0	09m45.2s
049°00.0'E	01°03.21'S	04°11.68'S	02°38.09'S	05:52:38	42.3	116.5	346.0	09m46.0s
049°07.5'E	01°03.88'S	04°12.31'S	02°38.74'S	05:52:56	42.5	116.6	345.9	09m46.8s
049°15.0'E	01°04.54'S	04°12.91'S	02°39.38'S	05:53:15	42.7	116.6	345.9	09m47.7s
049°22.5'E	01°05.17'S	04°13.50'S	02°39.99'S	05:53:34	42.9	116.7	345.9	09m48.5s
049°30.0'E	01°05.79'S	04°14.06'S	02°40.58'S	05:53:52	43.1	116.8	345.9	09m49.4s
049°37.5'E	01°06.38'S	04°14.61'S	02°41.15'S	05:54:11	43.3	116.8	345.9	09m50.2s
049°45.0'E	01°06.95'S	04°15.14'S	02°41.70'S	05:54:30	43.4	116.9	345.9	09m51.0s
049°52.5'E	01°07.50'S	04°15.65'S	02°42.23'S	05:54:50	43.6	117.0	345.9	09m51.9s
050°00.0'E	01°08.03'S	04°16.14'S	02°42.74'S	05:55:09	43.8	117.1	345.8	09m52.7s
050°07.5'E	01°08.54'S	04°16.61'S	02°43.23'S	05:55:28	44.0	117.1	345.8	09m53.6s
050°15.0'E	01°09.03'S	04°17.06'S	02°43.70'S	05:55:48	44.2	117.2	345.8	09m54.4s
050°22.5'E	01°09.50'S	04°17.49'S	02°44.15'S	05:56:07	44.4	117.3	345.8	09m55.3s
050°30.0'E	01°09.94'S	04°17.90'S	02°44.58'S	05:56:27	44.6	117.4	345.8	09m56.1s
050°37.5'E	01°10.36'S	04°18.28'S	02°44.99'S	05:56:47	44.8	117.4	345.8	09m56.9s
050°45.0'E	01°10.76'S	04°18.65'S	02°45.37'S	05:57:07	44.9	117.5	345.8	09m57.8s
050°52.5'E	01°11.14'S	04°19.00'S	02°45.74'S	05:57:27	45.1	117.6	345.8	09m58.6s
051°00.0'E	01°11.50'S	04°19.33'S	02°46.08'S	05:57:47	45.3	117.7	345.8	09m59.5s
051°07.5'E	01°11.83'S	04°19.63'S	02°46.40'S	05:58:07	45.5	117.8	345.7	10m00.3s
051°15.0'E	01°12.14'S	04°19.92'S	02°46.70'S	05:58:28	45.7	117.8	345.7	10m01.2s
051°22.5'E	01°12.43'S	04°20.18'S	02°46.98'S	05:58:48	45.9	117.9	345.7	10m02.0s
051°30.0'E	01°12.70'S	04°20.42'S	02°47.23'S	05:59:09	46.1	118.0	345.7	10m02.8s
051°37.5'E	01°12.94'S	04°20.64'S	02°47.47'S	05:59:29	46.3	118.1	345.7	10m03.7s
051°45.0'E	01°13.16'S	04°20.84'S	02°47.68'S	05:59:50	46.4	118.2	345.7	10m04.5s
051°52.5'E	01°13.36'S	04°21.02'S	02°47.87'S	06:00:11	46.6	118.3	345.7	10m05.4s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat. s
052°00.0'E	01°13.53'S	04°21.18'S	02°48.03'S	06:00:32	46.8	118.4	345.7	10m06.2s
052°07.5'E	01°13.68'S	04°21.31'S	02°48.17'S	06:00:53	47.0	118.5	345.7	10m07.0s
052°15.0'E	01°13.80'S	04°21.42'S	02°48.29'S	06:01:14	47.2	118.6	345.7	10m07.9s
052°22.5'E	01°13.90'S	04°21.51'S	02°48.39'S	06:01:36	47.4	118.7	345.7	10m08.7s
052°30.0'E	01°13.98'S	04°21.58'S	02°48.46'S	06:01:57	47.6	118.8	345.7	10m09.5s
052°37.5'E	01°14.03'S	04°21.62'S	02°48.51'S	06:02:19	47.8	118.9	345.6	10m10.4s
052°45.0'E	01°14.06'S	04°21.65'S	02°48.54'S	06:02:40	48.0	119.0	345.6	10m11.2s
052°52.5'E	01°14.06'S	04°21.65'S	02°48.54'S	06:03:02	48.1	119.1	345.6	10m12.0s
053°00.0'E	01°14.04'S	04°21.62'S	02°48.52'S	06:03:24	48.3	119.2	345.6	10m12.9s
053°07.5'E	01°13.99'S	04°21.57'S	02°48.48'S	06:03:46	48.5	119.3	345.6	10m13.7s
053°15.0'E	01°13.92'S	04°21.50'S	02°48.41'S	06:04:08	48.7	119.4	345.6	10m14.5s
053°22.5'E	01°13.83'S	04°21.41'S	02°48.32'S	06:04:30	48.9	119.5	345.6	10m15.3s
053°30.0'E	01°13.70'S	04°21.29'S	02°48.20'S	06:04:52	49.1	119.6	345.6	10m16.2s
053°37.5'E	01°13.56'S	04°21.15'S	02°48.06'S	06:05:15	49.3	119.8	345.6	10m17.0s
053°45.0'E	01°13.38'S	04°20.99'S	02°47.89'S	06:05:37	49.5	119.9	345.6	10m17.8s
053°52.5'E	01°13.18'S	04°20.80'S	02°47.70'S	06:06:00	49.6	120.0	345.6	10m18.6s
054°00.0'E	01°12.96'S	04°20.59'S	02°47.48'S	06:06:23	49.8	120.1	345.6	10m19.4s
054°07.5'E	01°12.70'S	04°20.35'S	02°47.24'S	06:06:46	50.0	120.3	345.5	10m20.2s
054°15.0'E	01°12.43'S	04°20.09'S	02°46.97'S	06:07:09	50.2	120.4	345.5	10m21.1s
054°22.5'E	01°12.12'S	04°19.80'S	02°46.67'S	06:07:32	50.4	120.5	345.5	10m21.9s
054°30.0'E	01°11.79'S	04°19.49'S	02°46.35'S	06:07:55	50.6	120.6	345.5	10m22.7s
054°37.5'E	01°11.43'S	04°19.15'S	02°46.01'S	06:08:18	50.8	120.8	345.5	10m23.5s
054°45.0'E	01°11.04'S	04°18.79'S	02°45.64'S	06:08:42	51.0	120.9	345.5	10m24.3s
054°52.5'E	01°10.63'S	04°18.41'S	02°45.24'S	06:09:06	51.2	121.0	345.5	10m25.1s
055°00.0'E	01°10.19'S	04°18.00'S	02°44.82'S	06:09:29	51.3	121.2	345.5	10m25.9s
055°07.5'E	01°09.72'S	04°17.56'S	02°44.36'S	06:09:53	51.5	121.3	345.5	10m26.7s
055°15.0'E	01°09.22'S	04°17.10'S	02°43.89'S	06:10:17	51.7	121.5	345.4	10m27.4s
055°22.5'E	01°08.70'S	04°16.61'S	02°43.38'S	06:10:41	51.9	121.6	345.4	10m28.2s
055°30.0'E	01°08.14'S	04°16.10'S	02°42.85'S	06:11:05	52.1	121.8	345.4	10m29.0s
055°37.5'E	01°07.56'S	04°15.56'S	02°42.29'S	06:11:29	52.3	121.9	345.4	10m29.8s
055°45.0'E	01°06.95'S	04°14.99'S	02°41.71'S	06:11:54	52.5	122.1	345.4	10m30.6s
055°52.5'E	01°06.31'S	04°14.40'S	02°41.09'S	06:12:18	52.6	122.2	345.4	10m31.3s
056°00.0'E	01°05.64'S	04°13.78'S	02°40.45'S	06:12:43	52.8	122.4	345.3	10m32.1s
056°07.5'E	01°04.95'S	04°13.13'S	02°39.78'S	06:13:08	53.0	122.6	345.3	10m32.9s
056°15.0'E	01°04.22'S	04°12.46'S	02°39.09'S	06:13:32	53.2	122.7	345.3	10m33.6s
056°22.5'E	01°03.47'S	04°11.76'S	02°38.36'S	06:13:57	53.4	122.9	345.3	10m34.4s
056°30.0'E	01°02.68'S	04°11.03'S	02°37.61'S	06:14:22	53.6	123.1	345.3	10m35.1s
056°37.5'E	01°01.87'S	04°10.28'S	02°36.83'S	06:14:48	53.8	123.3	345.2	10m35.9s
056°45.0'E	01°01.02'S	04°09.49'S	02°36.01'S	06:15:13	53.9	123.4	345.2	10m36.6s
056°52.5'E	01°00.14'S	04°08.68'S	02°35.17'S	06:15:38	54.1	123.6	345.2	10m37.4s
057°00.0'E	00°59.24'S	04°07.85'S	02°34.31'S	06:16:04	54.3	123.8	345.2	10m38.1s
057°07.5'E	00°58.30'S	04°06.98'S	02°33.41'S	06:16:29	54.5	124.0	345.1	10m38.8s
057°15.0'E	00°57.34'S	04°06.09'S	02°32.48'S	06:16:55	54.7	124.2	345.1	10m39.6s
057°22.5'E	00°56.34'S	04°05.17'S	02°31.52'S	06:17:21	54.9	124.4	345.1	10m40.3s
057°30.0'E	00°55.31'S	04°04.22'S	02°30.54'S	06:17:47	55.1	124.6	345.0	10m41.0s
057°37.5'E	00°54.25'S	04°03.24'S	02°29.52'S	06:18:13	55.2	124.8	345.0	10m41.7s
057°45.0'E	00°53.16'S	04°02.23'S	02°28.47'S	06:18:39	55.4	125.0	345.0	10m42.4s
057°52.5'E	00°52.03'S	04°01.19'S	02°27.40'S	06:19:06	55.6	125.2	344.9	10m43.1s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
058°00.0'E	00°50.88'S	04°00.13'S	02°26.29'S	06:19:32	55.8	125.4	344.9	10m43.8s
058°07.5'E	00°49.69'S	03°59.03'S	02°25.15'S	06:19:59	56.0	125.6	344.8	10m44.5s
058°15.0'E	00°48.47'S	03°57.91'S	02°23.98'S	06:20:25	56.1	125.8	344.8	10m45.2s
058°22.5'E	00°47.22'S	03°56.75'S	02°22.78'S	06:20:52	56.3	126.0	344.8	10m45.8s
058°30.0'E	00°45.94'S	03°55.57'S	02°21.55'S	06:21:19	56.5	126.3	344.7	10m46.5s
058°37.5'E	00°44.62'S	03°54.36'S	02°20.29'S	06:21:46	56.7	126.5	344.7	10m47.2s
058°45.0'E	00°43.27'S	03°53.11'S	02°19.00'S	06:22:13	56.9	126.7	344.6	10m47.8s
058°52.5'E	00°41.89'S	03°51.84'S	02°17.67'S	06:22:41	57.0	127.0	344.6	10m48.5s
059°00.0'E	00°40.47'S	03°50.54'S	02°16.31'S	06:23:08	57.2	127.2	344.5	10m49.1s
059°07.5'E	00°39.02'S	03°49.20'S	02°14.93'S	06:23:35	57.4	127.5	344.5	10m49.8s
059°15.0'E	00°37.54'S	03°47.84'S	02°13.51'S	06:24:03	57.6	127.7	344.4	10m50.4s
059°22.5'E	00°36.02'S	03°46.44'S	02°12.05'S	06:24:31	57.7	128.0	344.4	10m51.0s
059°30.0'E	00°34.47'S	03°45.01'S	02°10.57'S	06:24:59	57.9	128.2	344.3	10m51.6s
059°37.5'E	00°32.89'S	03°43.55'S	02°09.05'S	06:25:27	58.1	128.5	344.2	10m52.2s
059°45.0'E	00°31.27'S	03°42.06'S	02°07.50'S	06:25:55	58.3	128.7	344.2	10m52.8s
059°52.5'E	00°29.62'S	03°40.54'S	02°05.92'S	06:26:23	58.4	129.0	344.1	10m53.4s
060°00.0'E	00°27.93'S	03°38.99'S	02°04.30'S	06:26:51	58.6	129.3	344.1	10m54.0s
060°07.5'E	00°26.21'S	03°37.41'S	02°02.65'S	06:27:20	58.8	129.6	344.0	10m54.6s
060°15.0'E	00°24.45'S	03°35.79'S	02°00.97'S	06:27:48	58.9	129.9	343.9	10m55.2s
060°22.5'E	00°22.65'S	03°34.14'S	01°59.25'S	06:28:17	59.1	130.1	343.8	10m55.7s
060°30.0'E	00°20.83'S	03°32.46'S	01°57.50'S	06:28:45	59.3	130.4	343.8	10m56.3s
060°37.5'E	00°18.96'S	03°30.75'S	01°55.71'S	06:29:14	59.4	130.7	343.7	10m56.8s
060°45.0'E	00°17.06'S	03°29.00'S	01°53.90'S	06:29:43	59.6	131.0	343.6	10m57.4s
060°52.5'E	00°15.13'S	03°27.22'S	01°52.04'S	06:30:12	59.8	131.3	343.5	10m57.9s
061°00.0'E	00°13.16'S	03°25.41'S	01°50.16'S	06:30:42	59.9	131.7	343.4	10m58.4s
061°07.5'E	00°11.15'S	03°23.57'S	01°48.24'S	06:31:11	60.1	132.0	343.4	10m58.9s
061°15.0'E	00°09.11'S	03°21.69'S	01°46.28'S	06:31:40	60.3	132.3	343.3	10m59.4s
061°22.5'E	00°07.03'S	03°19.78'S	01°44.29'S	06:32:10	60.4	132.6	343.2	10m59.9s
061°30.0'E	00°04.92'S	03°17.84'S	01°42.26'S	06:32:40	60.6	133.0	343.1	11m00.4s
061°37.5'E	00°02.76'S	03°15.86'S	01°40.20'S	06:33:09	60.7	133.3	343.0	11m00.9s
061°45.0'E	00°00.57'S	03°13.85'S	01°38.11'S	06:33:39	60.9	133.7	342.9	11m01.3s
061°52.5'E	00°01.65'N	03°11.81'S	01°35.97'S	06:34:09	61.1	134.0	342.8	11m01.8s
062°00.0'E	00°03.92'N	03°09.73'S	01°33.81'S	06:34:39	61.2	134.4	342.7	11m02.2s
062°07.5'E	00°06.22'N	03°07.61'S	01°31.61'S	06:35:09	61.4	134.7	342.6	11m02.7s
062°15.0'E	00°08.55'N	03°05.47'S	01°29.37'S	06:35:40	61.5	135.1	342.5	11m03.1s
062°22.5'E	00°10.93'N	03°03.29'S	01°27.09'S	06:36:10	61.7	135.5	342.4	11m03.5s
062°30.0'E	00°13.34'N	03°01.07'S	01°24.78'S	06:36:41	61.8	135.8	342.3	11m03.9s
062°37.5'E	00°15.79'N	02°58.82'S	01°22.44'S	06:37:11	62.0	136.2	342.1	11m04.3s
062°45.0'E	00°18.28'N	02°56.53'S	01°20.05'S	06:37:42	62.1	136.6	342.0	11m04.7s
062°52.5'E	00°20.81'N	02°54.21'S	01°17.63'S	06:38:13	62.2	137.0	341.9	11m05.0s
063°00.0'E	00°23.37'N	02°51.86'S	01°15.18'S	06:38:44	62.4	137.4	341.8	11m05.4s
063°07.5'E	00°25.98'N	02°49.47'S	01°12.68'S	06:39:15	62.5	137.8	341.7	11m05.8s
063°15.0'E	00°28.62'N	02°47.04'S	01°10.16'S	06:39:46	62.7	138.2	341.5	11m06.1s
063°22.5'E	00°31.30'N	02°44.58'S	01°07.59'S	06:40:17	62.8	138.7	341.4	11m06.4s
063°30.0'E	00°34.02'N	02°42.08'S	01°04.99'S	06:40:48	62.9	139.1	341.3	11m06.7s
063°37.5'E	00°36.77'N	02°39.55'S	01°02.35'S	06:41:20	63.1	139.5	341.1	11m07.1s
063°45.0'E	00°39.57'N	02°36.98'S	00°59.67'S	06:41:51	63.2	140.0	341.0	11m07.3s
063°52.5'E	00°42.40'N	02°34.38'S	00°56.95'S	06:42:23	63.3	140.4	340.9	11m07.6s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

ΔT = 66.0 s

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
064°00.0'E	00°45.28'N	02°31.74'S	00°54.20'S	06:42:55	63.5	140.9	340.7	11m07.9s
064°07.5'E	00°48.19'N	02°29.06'S	00°51.41'S	06:43:27	63.6	141.3	340.6	11m08.2s
064°15.0'E	00°51.14'N	02°26.35'S	00°48.58'S	06:43:59	63.7	141.8	340.4	11m08.4s
064°22.5'E	00°54.14'N	02°23.60'S	00°45.72'S	06:44:31	63.8	142.2	340.3	11m08.6s
064°30.0'E	00°57.17'N	02°20.81'S	00°42.81'S	06:45:03	64.0	142.7	340.1	11m08.9s
064°37.5'E	01°00.24'N	02°17.99'S	00°39.87'S	06:45:35	64.1	143.2	340.0	11m09.1s
064°45.0'E	01°03.35'N	02°15.13'S	00°36.89'S	06:46:07	64.2	143.7	339.8	11m09.3s
064°52.5'E	01°06.49'N	02°12.24'S	00°33.87'S	06:46:40	64.3	144.2	339.7	11m09.5s
065°00.0'E	01°09.68'N	02°09.31'S	00°30.82'S	06:47:12	64.4	144.7	339.5	11m09.6s
065°07.5'E	01°12.91'N	02°06.34'S	00°27.72'S	06:47:45	64.5	145.2	339.4	11m09.8s
065°15.0'E	01°16.18'N	02°03.33'S	00°24.59'S	06:48:17	64.6	145.7	339.2	11m10.0s
065°22.5'E	01°19.49'N	02°00.29'S	00°21.42'S	06:48:50	64.7	146.2	339.0	11m10.1s
065°30.0'E	01°22.84'N	01°57.21'S	00°18.21'S	06:49:23	64.8	146.7	338.9	11m10.2s
065°37.5'E	01°26.22'N	01°54.10'S	00°14.96'S	06:49:56	64.9	147.3	338.7	11m10.3s
065°45.0'E	01°29.65'N	01°50.94'S	00°11.68'S	06:50:29	65.0	147.8	338.5	11m10.4s
065°52.5'E	01°33.12'N	01°47.75'S	00°08.35'S	06:51:02	65.1	148.4	338.4	11m10.5s
066°00.0'E	01°36.63'N	01°44.52'S	00°04.99'S	06:51:35	65.2	148.9	338.2	11m10.6s
066°07.5'E	01°40.17'N	01°41.26'S	00°01.59'S	06:52:08	65.3	149.5	338.0	11m10.7s
066°15.0'E	01°43.76'N	01°37.95'S	00°01.85'N	06:52:42	65.4	150.0	337.8	11m10.7s
066°22.5'E	01°47.39'N	01°34.61'S	00°05.33'N	06:53:15	65.4	150.6	337.6	11m10.7s
066°30.0'E	01°51.05'N	01°31.24'S	00°08.85'N	06:53:49	65.5	151.1	337.5	11m10.8s
066°37.5'E	01°54.76'N	01°27.82'S	00°12.41'N	06:54:22	65.6	151.7	337.3	11m10.8s
066°45.0'E	01°58.50'N	01°24.37'S	00°16.00'N	06:54:56	65.7	152.3	337.1	11m10.8s
066°52.5'E	02°02.29'N	01°20.88'S	00°19.64'N	06:55:30	65.7	152.9	336.9	11m10.7s
067°00.0'E	02°06.12'N	01°17.35'S	00°23.31'N	06:56:03	65.8	153.5	336.7	11m10.7s
067°07.5'E	02°09.98'N	01°13.78'S	00°27.02'N	06:56:37	65.9	154.1	336.5	11m10.7s
067°15.0'E	02°13.89'N	01°10.18'S	00°30.77'N	06:57:11	65.9	154.7	336.3	11m10.6s
067°22.5'E	02°17.83'N	01°06.54'S	00°34.56'N	06:57:45	66.0	155.3	336.2	11m10.5s
067°30.0'E	02°21.82'N	01°02.86'S	00°38.39'N	06:58:19	66.0	155.9	336.0	11m10.5s
067°37.5'E	02°25.84'N	00°59.15'S	00°42.26'N	06:58:53	66.1	156.5	335.8	11m10.4s
067°45.0'E	02°29.91'N	00°55.39'S	00°46.16'N	06:59:27	66.1	157.1	335.6	11m10.3s
067°52.5'E	02°34.01'N	00°51.60'S	00°50.11'N	07:00:02	66.2	157.7	335.4	11m10.1s
068°00.0'E	02°38.15'N	00°47.77'S	00°54.09'N	07:00:36	66.2	158.4	335.2	11m10.0s
068°07.5'E	02°42.33'N	00°43.91'S	00°58.11'N	07:01:10	66.2	159.0	335.0	11m09.9s
068°15.0'E	02°46.55'N	00°40.00'S	01°02.17'N	07:01:45	66.3	159.6	334.8	11m09.7s
068°22.5'E	02°50.81'N	00°36.06'S	01°06.27'N	07:02:19	66.3	160.2	334.6	11m09.5s
068°30.0'E	02°55.11'N	00°32.08'S	01°10.40'N	07:02:54	66.3	160.9	334.4	11m09.3s
068°37.5'E	02°59.45'N	00°28.07'S	01°14.58'N	07:03:28	66.4	161.5	334.2	11m09.1s
068°45.0'E	03°03.83'N	00°24.01'S	01°18.79'N	07:04:03	66.4	162.2	334.0	11m08.9s
068°52.5'E	03°08.24'N	00°19.92'S	01°23.04'N	07:04:38	66.4	162.8	333.8	11m08.7s
069°00.0'E	03°12.69'N	00°15.79'S	01°27.32'N	07:05:12	66.4	163.4	333.6	11m08.4s
069°07.5'E	03°17.18'N	00°11.63'S	01°31.65'N	07:05:47	66.4	164.1	333.4	11m08.2s
069°15.0'E	03°21.71'N	00°07.43'S	01°36.01'N	07:06:22	66.4	164.7	333.2	11m07.9s
069°22.5'E	03°26.28'N	00°03.19'S	01°40.41'N	07:06:57	66.4	165.4	333.0	11m07.6s
069°30.0'E	03°30.89'N	00°01.09'N	01°44.85'N	07:07:32	66.4	166.0	332.8	11m07.4s
069°37.5'E	03°35.53'N	00°05.40'N	01°49.33'N	07:08:06	66.4	166.7	332.6	11m07.1s
069°45.0'E	03°40.21'N	00°09.75'N	01°53.84'N	07:08:41	66.4	167.3	332.4	11m06.7s
069°52.5'E	03°44.92'N	00°14.13'N	01°58.39'N	07:09:16	66.4	168.0	332.2	11m06.4s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
070°00.0'E	03°49.68'N	00°18.56'N	02°02.97'N	07:09:51	66.3	168.6	332.0	11m06.1s
070°07.5'E	03°54.47'N	00°23.01'N	02°07.60'N	07:10:26	66.3	169.3	331.8	11m05.7s
070°15.0'E	03°59.30'N	00°27.51'N	02°12.26'N	07:11:01	66.3	169.9	331.6	11m05.3s
070°22.5'E	04°04.16'N	00°32.04'N	02°16.95'N	07:11:36	66.3	170.6	331.4	11m05.0s
070°30.0'E	04°09.06'N	00°36.60'N	02°21.68'N	07:12:11	66.2	171.2	331.2	11m04.6s
070°37.5'E	04°13.99'N	00°41.21'N	02°26.45'N	07:12:47	66.2	171.9	331.0	11m04.2s
070°45.0'E	04°18.96'N	00°45.84'N	02°31.25'N	07:13:22	66.1	172.5	330.8	11m03.7s
070°52.5'E	04°23.97'N	00°50.52'N	02°36.09'N	07:13:57	66.1	173.2	330.6	11m03.3s
071°00.0'E	04°29.01'N	00°55.22'N	02°40.96'N	07:14:32	66.0	173.8	330.5	11m02.9s
071°07.5'E	04°34.09'N	00°59.97'N	02°45.87'N	07:15:07	66.0	174.4	330.3	11m02.4s
071°15.0'E	04°39.20'N	01°04.74'N	02°50.81'N	07:15:42	65.9	175.1	330.1	11m02.0s
071°22.5'E	04°44.34'N	01°09.56'N	02°55.79'N	07:16:17	65.9	175.7	329.9	11m01.5s
071°30.0'E	04°49.52'N	01°14.40'N	03°00.80'N	07:16:53	65.8	176.3	329.7	11m01.0s
071°37.5'E	04°54.73'N	01°19.28'N	03°05.85'N	07:17:28	65.7	177.0	329.5	11m00.5s
071°45.0'E	04°59.97'N	01°24.20'N	03°10.93'N	07:18:03	65.7	177.6	329.3	11m00.0s
071°52.5'E	05°05.25'N	01°29.15'N	03°16.04'N	07:18:38	65.6	178.2	329.2	10m59.5s
072°00.0'E	05°10.56'N	01°34.13'N	03°21.19'N	07:19:13	65.5	178.8	329.0	10m59.0s
072°07.5'E	05°15.91'N	01°39.14'N	03°26.37'N	07:19:48	65.4	179.4	328.8	10m58.4s
072°15.0'E	05°21.28'N	01°44.19'N	03°31.58'N	07:20:23	65.3	180.0	328.6	10m57.9s
072°22.5'E	05°26.69'N	01°49.27'N	03°36.82'N	07:20:59	65.3	180.6	328.4	10m57.3s
072°30.0'E	05°32.12'N	01°54.39'N	03°42.10'N	07:21:34	65.2	181.2	328.3	10m56.7s
072°37.5'E	05°37.59'N	01°59.53'N	03°47.41'N	07:22:09	65.1	181.8	328.1	10m56.1s
072°45.0'E	05°43.09'N	02°04.71'N	03°52.75'N	07:22:44	65.0	182.4	327.9	10m55.6s
072°52.5'E	05°48.62'N	02°09.92'N	03°58.12'N	07:23:19	64.9	183.0	327.8	10m55.0s
073°00.0'E	05°54.18'N	02°15.16'N	04°03.52'N	07:23:54	64.8	183.6	327.6	10m54.3s
073°07.5'E	05°59.77'N	02°20.43'N	04°08.95'N	07:24:29	64.7	184.2	327.4	10m53.7s
073°15.0'E	06°05.39'N	02°25.73'N	04°14.41'N	07:25:04	64.5	184.7	327.3	10m53.1s
073°22.5'E	06°11.03'N	02°31.07'N	04°19.90'N	07:25:39	64.4	185.3	327.1	10m52.5s
073°30.0'E	06°16.71'N	02°36.43'N	04°25.42'N	07:26:14	64.3	185.9	327.0	10m51.8s
073°37.5'E	06°22.41'N	02°41.82'N	04°30.97'N	07:26:48	64.2	186.4	326.8	10m51.1s
073°45.0'E	06°28.14'N	02°47.25'N	04°36.55'N	07:27:23	64.1	187.0	326.7	10m50.5s
073°52.5'E	06°33.90'N	02°52.70'N	04°42.15'N	07:27:58	63.9	187.5	326.5	10m49.8s
074°00.0'E	06°39.68'N	02°58.18'N	04°47.79'N	07:28:33	63.8	188.1	326.4	10m49.1s
074°07.5'E	06°45.49'N	03°03.69'N	04°53.45'N	07:29:07	63.7	188.6	326.2	10m48.4s
074°15.0'E	06°51.32'N	03°09.23'N	04°59.14'N	07:29:42	63.5	189.1	326.1	10m47.7s
074°22.5'E	06°57.18'N	03°14.79'N	05°04.85'N	07:30:16	63.4	189.6	326.0	10m47.0s
074°30.0'E	07°03.07'N	03°20.38'N	05°10.60'N	07:30:51	63.3	190.2	325.8	10m46.3s
074°37.5'E	07°08.98'N	03°26.00'N	05°16.36'N	07:31:25	63.1	190.7	325.7	10m45.6s
074°45.0'E	07°14.91'N	03°31.65'N	05°22.16'N	07:32:00	63.0	191.2	325.6	10m44.8s
074°52.5'E	07°20.87'N	03°37.32'N	05°27.98'N	07:32:34	62.8	191.7	325.4	10m44.1s
075°00.0'E	07°26.85'N	03°43.02'N	05°33.82'N	07:33:08	62.7	192.2	325.3	10m43.4s
075°07.5'E	07°32.86'N	03°48.75'N	05°39.69'N	07:33:43	62.5	192.7	325.2	10m42.6s
075°15.0'E	07°38.88'N	03°54.50'N	05°45.58'N	07:34:17	62.4	193.1	325.1	10m41.8s
075°22.5'E	07°44.93'N	04°00.27'N	05°51.49'N	07:34:51	62.2	193.6	325.0	10m41.1s
075°30.0'E	07°51.00'N	04°06.07'N	05°57.43'N	07:35:25	62.1	194.1	324.9	10m40.3s
075°37.5'E	07°57.09'N	04°11.90'N	06°03.39'N	07:35:59	61.9	194.5	324.7	10m39.5s
075°45.0'E	08°03.20'N	04°17.74'N	06°09.37'N	07:36:32	61.7	195.0	324.6	10m38.7s
075°52.5'E	08°09.33'N	04°23.61'N	06°15.37'N	07:37:06	61.6	195.5	324.5	10m38.0s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
076°00.0'E	08°15.48'N	04°29.51'N	06°21.40'N	07:37:40	61.4	195.9	324.4	10m37.2s
076°07.5'E	08°21.64'N	04°35.42'N	06°27.45'N	07:38:14	61.2	196.3	324.3	10m36.4s
076°15.0'E	08°27.83'N	04°41.36'N	06°33.51'N	07:38:47	61.1	196.8	324.3	10m35.6s
076°22.5'E	08°34.04'N	04°47.32'N	06°39.60'N	07:39:20	60.9	197.2	324.2	10m34.7s
076°30.0'E	08°40.26'N	04°53.30'N	06°45.70'N	07:39:54	60.7	197.6	324.1	10m33.9s
076°37.5'E	08°46.50'N	04°59.30'N	06°51.83'N	07:40:27	60.5	198.1	324.0	10m33.1s
076°45.0'E	08°52.76'N	05°05.32'N	06°57.97'N	07:41:00	60.3	198.5	323.9	10m32.3s
076°52.5'E	08°59.03'N	05°11.36'N	07°04.13'N	07:41:33	60.2	198.9	323.8	10m31.4s
077°00.0'E	09°05.32'N	05°17.42'N	07°10.31'N	07:42:06	60.0	199.3	323.8	10m30.6s
077°07.5'E	09°11.62'N	05°23.50'N	07°16.51'N	07:42:39	59.8	199.7	323.7	10m29.8s
077°15.0'E	09°17.94'N	05°29.60'N	07°22.72'N	07:43:12	59.6	200.1	323.6	10m28.9s
077°22.5'E	09°24.27'N	05°35.71'N	07°28.95'N	07:43:44	59.4	200.4	323.6	10m28.1s
077°30.0'E	09°30.62'N	05°41.85'N	07°35.19'N	07:44:17	59.2	200.8	323.5	10m27.2s
077°37.5'E	09°36.98'N	05°48.00'N	07°41.45'N	07:44:49	59.1	201.2	323.5	10m26.4s
077°45.0'E	09°43.36'N	05°54.17'N	07°47.73'N	07:45:22	58.9	201.6	323.4	10m25.5s
077°52.5'E	09°49.74'N	06°00.35'N	07°54.02'N	07:45:54	58.7	201.9	323.3	10m24.6s
078°00.0'E	09°56.14'N	06°06.55'N	08°00.32'N	07:46:26	58.5	202.3	323.3	10m23.8s
078°07.5'E	10°02.55'N	06°12.76'N	08°06.64'N	07:46:58	58.3	202.6	323.3	10m22.9s
078°15.0'E	10°08.97'N	06°18.99'N	08°12.97'N	07:47:30	58.1	203.0	323.2	10m22.0s
078°22.5'E	10°15.40'N	06°25.24'N	08°19.31'N	07:48:02	57.9	203.3	323.2	10m21.2s
078°30.0'E	10°21.84'N	06°31.50'N	08°25.67'N	07:48:33	57.7	203.7	323.1	10m20.3s
078°37.5'E	10°28.30'N	06°37.77'N	08°32.04'N	07:49:05	57.5	204.0	323.1	10m19.4s
078°45.0'E	10°34.76'N	06°44.06'N	08°38.42'N	07:49:36	57.3	204.3	323.1	10m18.5s
078°52.5'E	10°41.23'N	06°50.36'N	08°44.81'N	07:50:07	57.1	204.7	323.1	10m17.6s
079°00.0'E	10°47.71'N	06°56.67'N	08°51.20'N	07:50:38	56.9	205.0	323.0	10m16.8s
079°07.5'E	10°54.19'N	07°02.99'N	08°57.61'N	07:51:09	56.7	205.3	323.0	10m15.9s
079°15.0'E	11°00.69'N	07°09.32'N	09°04.03'N	07:51:40	56.5	205.6	323.0	10m15.0s
079°22.5'E	11°07.19'N	07°15.67'N	09°10.46'N	07:52:11	56.3	205.9	323.0	10m14.1s
079°30.0'E	11°13.70'N	07°22.03'N	09°16.90'N	07:52:42	56.1	206.2	323.0	10m13.2s
079°37.5'E	11°20.21'N	07°28.39'N	09°23.34'N	07:53:12	55.9	206.5	323.0	10m12.3s
079°45.0'E	11°26.73'N	07°34.77'N	09°29.80'N	07:53:43	55.7	206.8	323.0	10m11.4s
079°52.5'E	11°33.26'N	07°41.15'N	09°36.26'N	07:54:13	55.4	207.1	323.0	10m10.5s
080°00.0'E	11°39.79'N	07°47.55'N	09°42.73'N	07:54:43	55.2	207.4	323.0	10m09.6s
080°07.5'E	11°46.32'N	07°53.95'N	09°49.20'N	07:55:13	55.0	207.7	323.0	10m08.7s
080°15.0'E	11°52.86'N	08°00.36'N	09°55.68'N	07:55:43	54.8	208.0	323.0	10m07.8s
080°22.5'E	11°59.41'N	08°06.78'N	10°02.17'N	07:56:12	54.6	208.3	323.0	10m06.9s
080°30.0'E	12°05.95'N	08°13.21'N	10°08.66'N	07:56:42	54.4	208.5	323.0	10m06.0s
080°37.5'E	12°12.50'N	08°19.64'N	10°15.15'N	07:57:11	54.2	208.8	323.0	10m05.1s
080°45.0'E	12°19.06'N	08°26.08'N	10°21.65'N	07:57:40	54.0	209.1	323.0	10m04.2s
080°52.5'E	12°25.61'N	08°32.52'N	10°28.16'N	07:58:10	53.8	209.3	323.1	10m03.3s
081°00.0'E	12°32.17'N	08°38.97'N	10°34.67'N	07:58:39	53.5	209.6	323.1	10m02.4s
081°07.5'E	12°38.73'N	08°45.43'N	10°41.18'N	07:59:07	53.3	209.8	323.1	10m01.5s
081°15.0'E	12°45.29'N	08°51.89'N	10°47.70'N	07:59:36	53.1	210.1	323.1	10m00.6s
081°22.5'E	12°51.85'N	08°58.35'N	10°54.21'N	08:00:05	52.9	210.3	323.2	09m59.7s
081°30.0'E	12°58.41'N	09°04.82'N	11°00.73'N	08:00:33	52.7	210.6	323.2	09m58.9s
081°37.5'E	13°04.97'N	09°11.29'N	11°07.25'N	08:01:01	52.5	210.8	323.2	09m58.0s
081°45.0'E	13°11.53'N	09°17.77'N	11°13.78'N	08:01:29	52.3	211.1	323.3	09m57.1s
081°52.5'E	13°18.09'N	09°24.25'N	11°20.30'N	08:01:57	52.0	211.3	323.3	09m56.2s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
082°00.0'E	13°24.65'N	09°30.73'N	11°26.83'N	08:02:25	51.8	211.5	323.4	09m55.3s
082°07.5'E	13°31.21'N	09°37.21'N	11°33.35'N	08:02:53	51.6	211.8	323.4	09m54.4s
082°15.0'E	13°37.77'N	09°43.70'N	11°39.88'N	08:03:20	51.4	212.0	323.5	09m53.5s
082°22.5'E	13°44.32'N	09°50.18'N	11°46.40'N	08:03:47	51.2	212.2	323.5	09m52.6s
082°30.0'E	13°50.88'N	09°56.67'N	11°52.92'N	08:04:15	51.0	212.4	323.6	09m51.7s
082°37.5'E	13°57.43'N	10°03.16'N	11°59.45'N	08:04:42	50.7	212.6	323.6	09m50.8s
082°45.0'E	14°03.97'N	10°09.64'N	12°05.97'N	08:05:09	50.5	212.9	323.7	09m49.9s
082°52.5'E	14°10.52'N	10°16.13'N	12°12.49'N	08:05:35	50.3	213.1	323.8	09m49.0s
083°00.0'E	14°17.06'N	10°22.62'N	12°19.01'N	08:06:02	50.1	213.3	323.8	09m48.2s
083°07.5'E	14°23.60'N	10°29.11'N	12°25.52'N	08:06:28	49.9	213.5	323.9	09m47.3s
083°15.0'E	14°30.13'N	10°35.59'N	12°32.04'N	08:06:55	49.7	213.7	324.0	09m46.4s
083°22.5'E	14°36.66'N	10°42.08'N	12°38.55'N	08:07:21	49.4	213.9	324.0	09m45.5s
083°30.0'E	14°43.18'N	10°48.56'N	12°45.06'N	08:07:47	49.2	214.1	324.1	09m44.6s
083°37.5'E	14°49.70'N	10°55.04'N	12°51.56'N	08:08:12	49.0	214.3	324.2	09m43.8s
083°45.0'E	14°56.22'N	11°01.52'N	12°58.06'N	08:08:38	48.8	214.5	324.2	09m42.9s
083°52.5'E	15°02.73'N	11°07.99'N	13°04.56'N	08:09:04	48.6	214.7	324.3	09m42.0s
084°00.0'E	15°09.23'N	11°14.47'N	13°11.05'N	08:09:29	48.4	214.9	324.4	09m41.1s
084°07.5'E	15°15.73'N	11°20.93'N	13°17.53'N	08:09:54	48.1	215.1	324.5	09m40.3s
084°15.0'E	15°22.22'N	11°27.40'N	13°24.02'N	08:10:19	47.9	215.3	324.6	09m39.4s
084°22.5'E	15°28.70'N	11°33.86'N	13°30.49'N	08:10:44	47.7	215.4	324.7	09m38.5s
084°30.0'E	15°35.18'N	11°40.32'N	13°36.96'N	08:11:09	47.5	215.6	324.7	09m37.7s
084°37.5'E	15°41.65'N	11°46.77'N	13°43.43'N	08:11:33	47.3	215.8	324.8	09m36.8s
084°45.0'E	15°48.12'N	11°53.22'N	13°49.89'N	08:11:58	47.1	216.0	324.9	09m36.0s
084°52.5'E	15°54.58'N	11°59.67'N	13°56.34'N	08:12:22	46.8	216.2	325.0	09m35.1s
085°00.0'E	16°01.03'N	12°06.10'N	14°02.79'N	08:12:46	46.6	216.3	325.1	09m34.3s
085°07.5'E	16°07.47'N	12°12.54'N	14°09.23'N	08:13:10	46.4	216.5	325.2	09m33.4s
085°15.0'E	16°13.90'N	12°18.96'N	14°15.66'N	08:13:34	46.2	216.7	325.3	09m32.6s
085°22.5'E	16°20.33'N	12°25.39'N	14°22.09'N	08:13:58	46.0	216.8	325.4	09m31.7s
085°30.0'E	16°26.74'N	12°31.80'N	14°28.51'N	08:14:21	45.8	217.0	325.5	09m30.9s
085°37.5'E	16°33.15'N	12°38.21'N	14°34.92'N	08:14:44	45.5	217.2	325.6	09m30.0s
085°45.0'E	16°39.55'N	12°44.61'N	14°41.33'N	08:15:08	45.3	217.3	325.7	09m29.2s
085°52.5'E	16°45.94'N	12°51.01'N	14°47.72'N	08:15:31	45.1	217.5	325.8	09m28.4s
086°00.0'E	16°52.33'N	12°57.39'N	14°54.11'N	08:15:53	44.9	217.7	325.9	09m27.5s
086°07.5'E	16°58.70'N	13°03.77'N	15°00.49'N	08:16:16	44.7	217.8	326.1	09m26.7s
086°15.0'E	17°05.06'N	13°10.15'N	15°06.86'N	08:16:39	44.5	218.0	326.2	09m25.9s
086°22.5'E	17°11.42'N	13°16.51'N	15°13.22'N	08:17:01	44.3	218.1	326.3	09m25.0s
086°30.0'E	17°17.76'N	13°22.87'N	15°19.57'N	08:17:23	44.0	218.3	326.4	09m24.2s
086°37.5'E	17°24.09'N	13°29.22'N	15°25.92'N	08:17:45	43.8	218.4	326.5	09m23.4s
086°45.0'E	17°30.42'N	13°35.56'N	15°32.25'N	08:18:07	43.6	218.6	326.6	09m22.6s
086°52.5'E	17°36.73'N	13°41.89'N	15°38.58'N	08:18:29	43.4	218.7	326.8	09m21.8s
087°00.0'E	17°43.04'N	13°48.21'N	15°44.89'N	08:18:51	43.2	218.9	326.9	09m21.0s
087°07.5'E	17°49.33'N	13°54.53'N	15°51.20'N	08:19:12	43.0	219.0	327.0	09m20.2s
087°15.0'E	17°55.61'N	14°00.83'N	15°57.49'N	08:19:34	42.8	219.2	327.1	09m19.4s
087°22.5'E	18°01.88'N	14°07.13'N	16°03.78'N	08:19:55	42.6	219.3	327.2	09m18.6s
087°30.0'E	18°08.14'N	14°13.41'N	16°10.05'N	08:20:16	42.4	219.5	327.4	09m17.8s
087°37.5'E	18°14.39'N	14°19.69'N	16°16.31'N	08:20:37	42.1	219.6	327.5	09m17.0s
087°45.0'E	18°20.63'N	14°25.95'N	16°22.57'N	08:20:58	41.9	219.7	327.6	09m16.2s
087°52.5'E	18°26.85'N	14°32.21'N	16°28.81'N	08:21:18	41.7	219.9	327.7	09m15.4s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
088°00.0'E	18°33.07'N	14°38.46'N	16°35.04'N	08:21:39	41.5	220.0	327.9	09m14.6s
088°07.5'E	18°39.27'N	14°44.69'N	16°41.26'N	08:21:59	41.3	220.2	328.0	09m13.8s
088°15.0'E	18°45.46'N	14°50.92'N	16°47.47'N	08:22:19	41.1	220.3	328.1	09m13.0s
088°22.5'E	18°51.64'N	14°57.13'N	16°53.67'N	08:22:39	40.9	220.4	328.3	09m12.3s
088°30.0'E	18°57.81'N	15°03.33'N	16°59.86'N	08:22:59	40.7	220.6	328.4	09m11.5s
088°37.5'E	19°03.97'N	15°09.53'N	17°06.03'N	08:23:19	40.5	220.7	328.5	09m10.7s
088°45.0'E	19°10.11'N	15°15.71'N	17°12.20'N	08:23:38	40.3	220.8	328.7	09m10.0s
088°52.5'E	19°16.24'N	15°21.88'N	17°18.35'N	08:23:58	40.1	221.0	328.8	09m09.2s
089°00.0'E	19°22.36'N	15°28.04'N	17°24.49'N	08:24:17	39.9	221.1	329.0	09m08.4s
089°07.5'E	19°28.47'N	15°34.19'N	17°30.62'N	08:24:36	39.7	221.2	329.1	09m07.7s
089°15.0'E	19°34.56'N	15°40.32'N	17°36.74'N	08:24:55	39.4	221.3	329.2	09m06.9s
089°22.5'E	19°40.64'N	15°46.45'N	17°42.84'N	08:25:14	39.2	221.5	329.4	09m06.2s
089°30.0'E	19°46.71'N	15°52.56'N	17°48.93'N	08:25:33	39.0	221.6	329.5	09m05.4s
089°37.5'E	19°52.77'N	15°58.66'N	17°55.01'N	08:25:51	38.8	221.7	329.7	09m04.7s
089°45.0'E	19°58.81'N	16°04.75'N	18°01.08'N	08:26:10	38.6	221.8	329.8	09m03.9s
089°52.5'E	20°04.84'N	16°10.82'N	18°07.13'N	08:26:28	38.4	222.0	329.9	09m03.2s
090°00.0'E	20°10.86'N	16°16.89'N	18°13.17'N	08:26:46	38.2	222.1	330.1	09m02.5s
090°07.5'E	20°16.86'N	16°22.94'N	18°19.20'N	08:27:04	38.0	222.2	330.2	09m01.7s
090°15.0'E	20°22.85'N	16°28.98'N	18°25.22'N	08:27:22	37.8	222.3	330.4	09m01.0s
090°22.5'E	20°28.83'N	16°35.01'N	18°31.22'N	08:27:40	37.6	222.4	330.5	09m00.3s
090°30.0'E	20°34.80'N	16°41.02'N	18°37.21'N	08:27:58	37.4	222.6	330.7	08m59.5s
090°37.5'E	20°40.75'N	16°47.02'N	18°43.19'N	08:28:15	37.2	222.7	330.8	08m58.8s
090°45.0'E	20°46.68'N	16°53.01'N	18°49.15'N	08:28:33	37.0	222.8	331.0	08m58.1s
090°52.5'E	20°52.61'N	16°58.99'N	18°55.10'N	08:28:50	36.8	222.9	331.1	08m57.4s
091°00.0'E	20°58.52'N	17°04.95'N	19°01.04'N	08:29:07	36.6	223.0	331.3	08m56.7s
091°07.5'E	21°04.42'N	17°10.90'N	19°06.97'N	08:29:24	36.4	223.1	331.4	08m56.0s
091°15.0'E	21°10.30'N	17°16.84'N	19°12.88'N	08:29:41	36.2	223.3	331.6	08m55.3s
091°22.5'E	21°16.17'N	17°22.76'N	19°18.78'N	08:29:57	36.0	223.4	331.7	08m54.6s
091°30.0'E	21°22.03'N	17°28.67'N	19°24.66'N	08:30:14	35.8	223.5	331.9	08m53.9s
091°37.5'E	21°27.87'N	17°34.57'N	19°30.53'N	08:30:30	35.6	223.6	332.0	08m53.2s
091°45.0'E	21°33.70'N	17°40.46'N	19°36.39'N	08:30:47	35.4	223.7	332.2	08m52.5s
091°52.5'E	21°39.52'N	17°46.33'N	19°42.23'N	08:31:03	35.2	223.8	332.4	08m51.8s
092°00.0'E	21°45.32'N	17°52.19'N	19°48.06'N	08:31:19	35.1	223.9	332.5	08m51.1s
092°07.5'E	21°51.11'N	17°58.03'N	19°53.88'N	08:31:35	34.9	224.0	332.7	08m50.4s
092°15.0'E	21°56.88'N	18°03.86'N	19°59.68'N	08:31:51	34.7	224.1	332.8	08m49.8s
092°22.5'E	22°02.64'N	18°09.68'N	20°05.47'N	08:32:06	34.5	224.2	333.0	08m49.1s
092°30.0'E	22°08.39'N	18°15.48'N	20°11.25'N	08:32:22	34.3	224.3	333.1	08m48.4s
092°37.5'E	22°14.12'N	18°21.27'N	20°17.01'N	08:32:37	34.1	224.5	333.3	08m47.7s
092°45.0'E	22°19.84'N	18°27.05'N	20°22.75'N	08:32:52	33.9	224.6	333.5	08m47.1s
092°52.5'E	22°25.55'N	18°32.81'N	20°28.49'N	08:33:08	33.7	224.7	333.6	08m46.4s
093°00.0'E	22°31.24'N	18°38.56'N	20°34.21'N	08:33:23	33.5	224.8	333.8	08m45.7s
093°07.5'E	22°36.91'N	18°44.29'N	20°39.91'N	08:33:37	33.3	224.9	333.9	08m45.1s
093°15.0'E	22°42.58'N	18°50.01'N	20°45.60'N	08:33:52	33.1	225.0	334.1	08m44.4s
093°22.5'E	22°48.23'N	18°55.72'N	20°51.28'N	08:34:07	32.9	225.1	334.3	08m43.8s
093°30.0'E	22°53.86'N	19°01.41'N	20°56.95'N	08:34:21	32.7	225.2	334.4	08m43.1s
093°37.5'E	22°59.48'N	19°07.09'N	21°02.60'N	08:34:36	32.6	225.3	334.6	08m42.5s
093°45.0'E	23°05.09'N	19°12.76'N	21°08.23'N	08:34:50	32.4	225.4	334.8	08m41.8s
093°52.5'E	23°10.68'N	19°18.41'N	21°13.85'N	08:35:04	32.2	225.5	334.9	08m41.2s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
094°00.0'E	23°16.26'N	19°24.04'N	21°19.46'N	08:35:19	32.0	225.6	335.1	08m40.6s
094°07.5'E	23°21.82'N	19°29.67'N	21°25.05'N	08:35:32	31.8	225.7	335.2	08m39.9s
094°15.0'E	23°27.37'N	19°35.28'N	21°30.63'N	08:35:46	31.6	225.8	335.4	08m39.3s
094°22.5'E	23°32.91'N	19°40.87'N	21°36.20'N	08:36:00	31.4	225.9	335.6	08m38.7s
094°30.0'E	23°38.43'N	19°46.45'N	21°41.75'N	08:36:14	31.2	226.0	335.7	08m38.1s
094°37.5'E	23°43.94'N	19°52.02'N	21°47.29'N	08:36:27	31.1	226.1	335.9	08m37.4s
094°45.0'E	23°49.43'N	19°57.57'N	21°52.81'N	08:36:41	30.9	226.2	336.1	08m36.8s
094°52.5'E	23°54.91'N	20°03.11'N	21°58.32'N	08:36:54	30.7	226.3	336.2	08m36.2s
095°00.0'E	24°00.38'N	20°08.63'N	22°03.81'N	08:37:07	30.5	226.4	336.4	08m35.6s
095°07.5'E	24°05.83'N	20°14.14'N	22°09.29'N	08:37:20	30.3	226.5	336.6	08m35.0s
095°15.0'E	24°11.26'N	20°19.64'N	22°14.76'N	08:37:33	30.1	226.6	336.7	08m34.4s
095°22.5'E	24°16.69'N	20°25.12'N	22°20.21'N	08:37:46	30.0	226.7	336.9	08m33.8s
095°30.0'E	24°22.09'N	20°30.59'N	22°25.65'N	08:37:58	29.8	226.7	337.1	08m33.2s
095°37.5'E	24°27.49'N	20°36.04'N	22°31.07'N	08:38:11	29.6	226.8	337.2	08m32.6s
095°45.0'E	24°32.87'N	20°41.48'N	22°36.48'N	08:38:24	29.4	226.9	337.4	08m32.0s
095°52.5'E	24°38.24'N	20°46.90'N	22°41.87'N	08:38:36	29.2	227.0	337.6	08m31.4s
096°00.0'E	24°43.59'N	20°52.31'N	22°47.25'N	08:38:48	29.1	227.1	337.7	08m30.8s
096°07.5'E	24°48.93'N	20°57.71'N	22°52.62'N	08:39:00	28.9	227.2	337.9	08m30.2s
096°15.0'E	24°54.25'N	21°03.09'N	22°57.97'N	08:39:13	28.7	227.3	338.1	08m29.6s
096°22.5'E	24°59.56'N	21°08.46'N	23°03.31'N	08:39:24	28.5	227.4	338.2	08m29.0s
096°30.0'E	25°04.86'N	21°13.81'N	23°08.64'N	08:39:36	28.3	227.5	338.4	08m28.4s
096°37.5'E	25°10.14'N	21°19.15'N	23°13.95'N	08:39:48	28.2	227.6	338.6	08m27.9s
096°45.0'E	25°15.41'N	21°24.48'N	23°19.24'N	08:40:00	28.0	227.7	338.8	08m27.3s
096°52.5'E	25°20.66'N	21°29.79'N	23°24.52'N	08:40:11	27.8	227.8	338.9	08m26.7s
097°00.0'E	25°25.90'N	21°35.08'N	23°29.79'N	08:40:23	27.6	227.9	339.1	08m26.2s
097°07.5'E	25°31.13'N	21°40.37'N	23°35.05'N	08:40:34	27.5	227.9	339.3	08m25.6s
097°15.0'E	25°36.34'N	21°45.64'N	23°40.29'N	08:40:45	27.3	228.0	339.4	08m25.0s
097°22.5'E	25°41.54'N	21°50.89'N	23°45.51'N	08:40:57	27.1	228.1	339.6	08m24.5s
097°30.0'E	25°46.72'N	21°56.13'N	23°50.72'N	08:41:08	26.9	228.2	339.8	08m23.9s
097°37.5'E	25°51.89'N	22°01.36'N	23°55.92'N	08:41:19	26.8	228.3	339.9	08m23.4s
097°45.0'E	25°57.05'N	22°06.57'N	24°01.11'N	08:41:29	26.6	228.4	340.1	08m22.8s
097°52.5'E	26°02.19'N	22°11.77'N	24°06.27'N	08:41:40	26.4	228.5	340.3	08m22.2s
098°00.0'E	26°07.32'N	22°16.95'N	24°11.43'N	08:41:51	26.2	228.6	340.5	08m21.7s
098°07.5'E	26°12.44'N	22°22.12'N	24°16.57'N	08:42:01	26.1	228.7	340.6	08m21.2s
098°15.0'E	26°17.54'N	22°27.28'N	24°21.70'N	08:42:12	25.9	228.7	340.8	08m20.6s
098°22.5'E	26°22.63'N	22°32.42'N	24°26.81'N	08:42:22	25.7	228.8	341.0	08m20.1s
098°30.0'E	26°27.70'N	22°37.54'N	24°31.91'N	08:42:33	25.6	228.9	341.1	08m19.5s
098°37.5'E	26°32.76'N	22°42.66'N	24°37.00'N	08:42:43	25.4	229.0	341.3	08m19.0s
098°45.0'E	26°37.81'N	22°47.76'N	24°42.07'N	08:42:53	25.2	229.1	341.5	08m18.5s
098°52.5'E	26°42.84'N	22°52.84'N	24°47.13'N	08:43:03	25.0	229.2	341.7	08m17.9s
099°00.0'E	26°47.86'N	22°57.92'N	24°52.17'N	08:43:13	24.9	229.3	341.8	08m17.4s
099°07.5'E	26°52.86'N	23°02.97'N	24°57.21'N	08:43:23	24.7	229.3	342.0	08m16.9s
099°15.0'E	26°57.85'N	23°08.02'N	25°02.22'N	08:43:32	24.5	229.4	342.2	08m16.4s
099°22.5'E	27°02.83'N	23°13.05'N	25°07.23'N	08:43:42	24.4	229.5	342.4	08m15.8s
099°30.0'E	27°07.80'N	23°18.06'N	25°12.22'N	08:43:51	24.2	229.6	342.5	08m15.3s
099°37.5'E	27°12.75'N	23°23.07'N	25°17.19'N	08:44:01	24.0	229.7	342.7	08m14.8s
099°45.0'E	27°17.68'N	23°28.05'N	25°22.15'N	08:44:10	23.9	229.8	342.9	08m14.3s
099°52.5'E	27°22.61'N	23°33.03'N	25°27.10'N	08:44:20	23.7	229.9	343.0	08m13.8s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
100°00.0'E	27°27.52'N	23°37.99'N	25°32.04'N	08:44:29	23.5	229.9	343.2	08m13.3s
100°07.5'E	27°32.42'N	23°42.94'N	25°36.96'N	08:44:38	23.4	230.0	343.4	08m12.8s
100°15.0'E	27°37.30'N	23°47.87'N	25°41.87'N	08:44:47	23.2	230.1	343.6	08m12.3s
100°22.5'E	27°42.17'N	23°52.79'N	25°46.76'N	08:44:56	23.0	230.2	343.7	08m11.8s
100°30.0'E	27°47.03'N	23°57.70'N	25°51.64'N	08:45:05	22.9	230.3	343.9	08m11.3s
100°37.5'E	27°51.87'N	24°02.59'N	25°56.51'N	08:45:13	22.7	230.4	344.1	08m10.8s
100°45.0'E	27°56.70'N	24°07.47'N	26°01.36'N	08:45:22	22.5	230.4	344.3	08m10.3s
100°52.5'E	28°01.52'N	24°12.33'N	26°06.20'N	08:45:31	22.4	230.5	344.4	08m09.8s
101°00.0'E	28°06.32'N	24°17.18'N	26°11.03'N	08:45:39	22.2	230.6	344.6	08m09.3s
101°07.5'E	28°11.11'N	24°22.02'N	26°15.84'N	08:45:48	22.1	230.7	344.8	08m08.8s
101°15.0'E	28°15.89'N	24°26.85'N	26°20.64'N	08:45:56	21.9	230.8	345.0	08m08.3s
101°22.5'E	28°20.65'N	24°31.66'N	26°25.43'N	08:46:04	21.7	230.9	345.1	08m07.8s
101°30.0'E	28°25.41'N	24°36.46'N	26°30.20'N	08:46:12	21.6	230.9	345.3	08m07.4s
101°37.5'E	28°30.14'N	24°41.24'N	26°34.96'N	08:46:21	21.4	231.0	345.5	08m06.9s
101°45.0'E	28°34.87'N	24°46.01'N	26°39.71'N	08:46:29	21.3	231.1	345.7	08m06.4s
101°52.5'E	28°39.58'N	24°50.77'N	26°44.45'N	08:46:37	21.1	231.2	345.8	08m05.9s
102°00.0'E	28°44.28'N	24°55.51'N	26°49.17'N	08:46:44	20.9	231.3	346.0	08m05.5s
102°07.5'E	28°48.97'N	25°00.24'N	26°53.87'N	08:46:52	20.8	231.3	346.2	08m05.0s
102°15.0'E	28°53.64'N	25°04.96'N	26°58.57'N	08:47:00	20.6	231.4	346.3	08m04.5s
102°22.5'E	28°58.30'N	25°09.66'N	27°03.25'N	08:47:08	20.5	231.5	346.5	08m04.1s
102°30.0'E	29°02.95'N	25°14.36'N	27°07.92'N	08:47:15	20.3	231.6	346.7	08m03.6s
102°37.5'E	29°07.58'N	25°19.03'N	27°12.57'N	08:47:23	20.2	231.7	346.9	08m03.1s
102°45.0'E	29°12.20'N	25°23.70'N	27°17.22'N	08:47:30	20.0	231.8	347.0	08m02.7s
102°52.5'E	29°16.81'N	25°28.35'N	27°21.85'N	08:47:37	19.8	231.8	347.2	08m02.2s
103°00.0'E	29°21.41'N	25°32.99'N	27°26.46'N	08:47:45	19.7	231.9	347.4	08m01.8s
103°07.5'E	29°25.99'N	25°37.61'N	27°31.07'N	08:47:52	19.5	232.0	347.6	08m01.3s
103°15.0'E	29°30.56'N	25°42.23'N	27°35.66'N	08:47:59	19.4	232.1	347.7	08m00.9s
103°22.5'E	29°35.12'N	25°46.83'N	27°40.24'N	08:48:06	19.2	232.2	347.9	08m00.4s
103°30.0'E	29°39.67'N	25°51.41'N	27°44.80'N	08:48:13	19.1	232.2	348.1	08m00.0s
103°37.5'E	29°44.20'N	25°55.99'N	27°49.35'N	08:48:20	18.9	232.3	348.3	07m59.5s
103°45.0'E	29°48.72'N	26°00.55'N	27°53.89'N	08:48:27	18.8	232.4	348.4	07m59.1s
103°52.5'E	29°53.23'N	26°05.09'N	27°58.42'N	08:48:33	18.6	232.5	348.6	07m58.6s
104°00.0'E	29°57.72'N	26°09.63'N	28°02.93'N	08:48:40	18.4	232.6	348.8	07m58.2s
104°07.5'E	30°02.21'N	26°14.15'N	28°07.44'N	08:48:47	18.3	232.6	349.0	07m57.8s
104°15.0'E	30°06.68'N	26°18.66'N	28°11.93'N	08:48:53	18.1	232.7	349.1	07m57.3s
104°22.5'E	30°11.14'N	26°23.16'N	28°16.40'N	08:49:00	18.0	232.8	349.3	07m56.9s
104°30.0'E	30°15.58'N	26°27.64'N	28°20.87'N	08:49:06	17.8	232.9	349.5	07m56.5s
104°37.5'E	30°20.02'N	26°32.11'N	28°25.32'N	08:49:12	17.7	232.9	349.7	07m56.0s
104°45.0'E	30°24.44'N	26°36.57'N	28°29.76'N	08:49:19	17.5	233.0	349.8	07m55.6s
104°52.5'E	30°28.85'N	26°41.02'N	28°34.19'N	08:49:25	17.4	233.1	350.0	07m55.2s
105°00.0'E	30°33.24'N	26°45.45'N	28°38.60'N	08:49:31	17.2	233.2	350.2	07m54.7s
105°07.5'E	30°37.63'N	26°49.87'N	28°43.00'N	08:49:37	17.1	233.3	350.4	07m54.3s
105°15.0'E	30°42.00'N	26°54.28'N	28°47.39'N	08:49:43	16.9	233.3	350.5	07m53.9s
105°22.5'E	30°46.36'N	26°58.68'N	28°51.77'N	08:49:49	16.8	233.4	350.7	07m53.5s
105°30.0'E	30°50.71'N	27°03.06'N	28°56.13'N	08:49:55	16.6	233.5	350.9	07m53.1s
105°37.5'E	30°55.05'N	27°07.43'N	29°00.49'N	08:50:00	16.5	233.6	351.0	07m52.7s
105°45.0'E	30°59.37'N	27°11.79'N	29°04.83'N	08:50:06	16.3	233.6	351.2	07m52.2s
105°52.5'E	31°03.68'N	27°16.14'N	29°09.16'N	08:50:12	16.2	233.7	351.4	07m51.8s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
106°00.0'E	31°07.98'N	27°20.47'N	29°13.47'N	08:50:17	16.1	233.8	351.6	07m51.4s
106°07.5'E	31°12.27'N	27°24.79'N	29°17.78'N	08:50:23	15.9	233.9	351.7	07m51.0s
106°15.0'E	31°16.55'N	27°29.10'N	29°22.07'N	08:50:28	15.8	234.0	351.9	07m50.6s
106°22.5'E	31°20.81'N	27°33.40'N	29°26.35'N	08:50:34	15.6	234.0	352.1	07m50.2s
106°30.0'E	31°25.07'N	27°37.69'N	29°30.62'N	08:50:39	15.5	234.1	352.3	07m49.8s
106°37.5'E	31°29.31'N	27°41.96'N	29°34.87'N	08:50:44	15.3	234.2	352.4	07m49.4s
106°45.0'E	31°33.54'N	27°46.22'N	29°39.12'N	08:50:50	15.2	234.3	352.6	07m49.0s
106°52.5'E	31°37.75'N	27°50.47'N	29°43.35'N	08:50:55	15.0	234.3	352.8	07m48.6s
107°00.0'E	31°41.96'N	27°54.71'N	29°47.57'N	08:51:00	14.9	234.4	353.0	07m48.2s
107°07.5'E	31°46.15'N	27°58.93'N	29°51.78'N	08:51:05	14.7	234.5	353.1	07m47.8s
107°15.0'E	31°50.34'N	28°03.14'N	29°55.98'N	08:51:10	14.6	234.6	353.3	07m47.4s
107°22.5'E	31°54.51'N	28°07.35'N	30°00.16'N	08:51:15	14.5	234.7	353.5	07m47.0s
107°30.0'E	31°58.67'N	28°11.53'N	30°04.34'N	08:51:20	14.3	234.7	353.6	07m46.7s
107°37.5'E	32°02.82'N	28°15.71'N	30°08.50'N	08:51:25	14.2	234.8	353.8	07m46.3s
107°45.0'E	32°06.95'N	28°19.88'N	30°12.65'N	08:51:29	14.0	234.9	354.0	07m45.9s
107°52.5'E	32°11.08'N	28°24.03'N	30°16.79'N	08:51:34	13.9	235.0	354.2	07m45.5s
108°00.0'E	32°15.19'N	28°28.17'N	30°20.92'N	08:51:39	13.7	235.0	354.3	07m45.1s
108°07.5'E	32°19.29'N	28°32.30'N	30°25.03'N	08:51:43	13.6	235.1	354.5	07m44.7s
108°15.0'E	32°23.38'N	28°36.42'N	30°29.14'N	08:51:48	13.5	235.2	354.7	07m44.4s
108°22.5'E	32°27.46'N	28°40.53'N	30°33.23'N	08:51:52	13.3	235.3	354.9	07m44.0s
108°30.0'E	32°31.53'N	28°44.62'N	30°37.31'N	08:51:56	13.2	235.3	355.0	07m43.6s
108°37.5'E	32°35.59'N	28°48.71'N	30°41.38'N	08:52:01	13.0	235.4	355.2	07m43.2s
108°45.0'E	32°39.64'N	28°52.78'N	30°45.44'N	08:52:05	12.9	235.5	355.4	07m42.9s
108°52.5'E	32°43.67'N	28°56.84'N	30°49.49'N	08:52:09	12.8	235.6	355.5	07m42.5s
109°00.0'E	32°47.69'N	29°00.89'N	30°53.52'N	08:52:14	12.6	235.6	355.7	07m42.1s
109°07.5'E	32°51.71'N	29°04.93'N	30°57.55'N	08:52:18	12.5	235.7	355.9	07m41.8s
109°15.0'E	32°55.71'N	29°08.95'N	31°01.56'N	08:52:22	12.4	235.8	356.1	07m41.4s
109°22.5'E	32°59.70'N	29°12.97'N	31°05.56'N	08:52:26	12.2	235.9	356.2	07m41.0s
109°30.0'E	33°03.68'N	29°16.97'N	31°09.55'N	08:52:30	12.1	236.0	356.4	07m40.7s
109°37.5'E	33°07.65'N	29°20.97'N	31°13.53'N	08:52:34	11.9	236.0	356.6	07m40.3s
109°45.0'E	33°11.60'N	29°24.95'N	31°17.50'N	08:52:37	11.8	236.1	356.8	07m39.9s
109°52.5'E	33°15.55'N	29°28.92'N	31°21.46'N	08:52:41	11.7	236.2	356.9	07m39.6s
110°00.0'E	33°19.48'N	29°32.87'N	31°25.40'N	08:52:45	11.5	236.3	357.1	07m39.2s
110°07.5'E	33°23.41'N	29°36.82'N	31°29.34'N	08:52:49	11.4	236.3	357.3	07m38.9s
110°15.0'E	33°27.32'N	29°40.76'N	31°33.26'N	08:52:52	11.3	236.4	357.4	07m38.5s
110°22.5'E	33°31.22'N	29°44.68'N	31°37.18'N	08:52:56	11.1	236.5	357.6	07m38.2s
110°30.0'E	33°35.12'N	29°48.60'N	31°41.08'N	08:52:59	11.0	236.6	357.8	07m37.8s
110°37.5'E	33°39.00'N	29°52.50'N	31°44.97'N	08:53:03	10.9	236.6	358.0	07m37.5s
110°45.0'E	33°42.87'N	29°56.39'N	31°48.85'N	08:53:06	10.7	236.7	358.1	07m37.1s
110°52.5'E	33°46.73'N	30°00.27'N	31°52.72'N	08:53:10	10.6	236.8	358.3	07m36.8s
111°00.0'E	33°50.58'N	30°04.14'N	31°56.58'N	08:53:13	10.5	236.9	358.5	07m36.4s
111°07.5'E	33°54.42'N	30°08.00'N	32°00.43'N	08:53:16	10.3	236.9	358.6	07m36.1s
111°15.0'E	33°58.24'N	30°11.85'N	32°04.26'N	08:53:20	10.2	237.0	358.8	07m35.7s
111°22.5'E	34°02.06'N	30°15.69'N	32°08.09'N	08:53:23	10.1	237.1	359.0	07m35.4s
111°30.0'E	34°05.87'N	30°19.51'N	32°11.91'N	08:53:26	9.9	237.2	359.2	07m35.1s
111°37.5'E	34°09.67'N	30°23.33'N	32°15.71'N	08:53:29	9.8	237.2	359.3	07m34.7s
111°45.0'E	34°13.45'N	30°27.13'N	32°19.51'N	08:53:32	9.7	237.3	359.5	07m34.4s
111°52.5'E	34°17.23'N	30°30.93'N	32°23.29'N	08:53:35	9.5	237.4	359.7	07m34.0s

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
112°00.0'E	34°20.99'N	30°34.71'N	32°27.07'N	08:53:38	9.4	237.5	359.8	07m33.7s
112°07.5'E	34°24.75'N	30°38.48'N	32°30.83'N	08:53:41	9.3	237.5	360.0	07m33.4s
112°15.0'E	34°28.49'N	30°42.25'N	32°34.58'N	08:53:44	9.1	237.6	360.2	07m33.1s
112°22.5'E	34°32.23'N	30°46.00'N	32°38.32'N	08:53:47	9.0	237.7	360.3	07m32.7s
112°30.0'E	34°35.95'N	30°49.74'N	32°42.06'N	08:53:49	8.9	237.8	360.5	07m32.4s
112°37.5'E	34°39.66'N	30°53.47'N	32°45.78'N	08:53:52	8.7	237.8	360.7	07m32.1s
112°45.0'E	34°43.37'N	30°57.19'N	32°49.49'N	08:53:55	8.6	237.9	360.9	07m31.7s
112°52.5'E	34°47.06'N	31°00.90'N	32°53.19'N	08:53:57	8.5	238.0	361.0	07m31.4s
113°00.0'E	34°50.74'N	31°04.60'N	32°56.88'N	08:54:00	8.3	238.1	361.2	07m31.1s
113°07.5'E	34°54.41'N	31°08.29'N	33°00.56'N	08:54:02	8.2	238.1	361.4	07m30.8s
113°15.0'E	34°58.08'N	31°11.97'N	33°04.23'N	08:54:05	8.1	238.2	361.5	07m30.5s
113°22.5'E	35°01.73'N	31°15.63'N	33°07.89'N	08:54:07	8.0	238.3	361.7	07m30.1s
113°30.0'E	35°05.37'N	31°19.29'N	33°11.54'N	08:54:10	7.8	238.4	361.9	07m29.8s
113°37.5'E	35°09.00'N	31°22.94'N	33°15.18'N	08:54:12	7.7	238.4	362.0	07m29.5s
113°45.0'E	35°12.63'N	31°26.57'N	33°18.81'N	08:54:14	7.6	238.5	362.2	07m29.2s
113°52.5'E	35°16.24'N	31°30.20'N	33°22.43'N	08:54:17	7.5	238.6	362.4	07m28.9s
114°00.0'E	35°19.84'N	31°33.82'N	33°26.04'N	08:54:19	7.3	238.7	362.5	07m28.6s
114°07.5'E	35°23.44'N	31°37.42'N	33°29.63'N	08:54:21	7.2	238.7	362.7	07m28.2s
114°15.0'E	35°27.02'N	31°41.02'N	33°33.22'N	08:54:23	7.1	238.8	362.9	07m27.9s
114°22.5'E	35°30.59'N	31°44.61'N	33°36.80'N	08:54:25	6.9	238.9	363.1	07m27.6s
114°30.0'E	35°34.15'N	31°48.18'N	33°40.37'N	08:54:27	6.8	239.0	363.2	07m27.3s
114°37.5'E	35°37.71'N	31°51.75'N	33°43.93'N	08:54:29	6.7	239.0	363.4	07m27.0s
114°45.0'E	35°41.25'N	31°55.30'N	33°47.48'N	08:54:31	6.6	239.1	363.6	07m26.7s
114°52.5'E	35°44.78'N	31°58.85'N	33°51.02'N	08:54:33	6.4	239.2	363.7	07m26.4s
115°00.0'E	35°48.31'N	32°02.39'N	33°54.55'N	08:54:35	6.3	239.3	363.9	07m26.1s
115°07.5'E	35°51.82'N	32°05.91'N	33°58.07'N	08:54:37	6.2	239.3	364.1	07m25.8s
115°15.0'E	35°55.33'N	32°09.43'N	34°01.58'N	08:54:39	6.1	239.4	364.2	07m25.5s
115°22.5'E	35°58.82'N	32°12.93'N	34°05.08'N	08:54:41	5.9	239.5	364.4	07m25.2s
115°30.0'E	36°02.31'N	32°16.43'N	34°08.57'N	08:54:42	5.8	239.6	364.6	07m24.9s
115°37.5'E	36°05.78'N	32°19.92'N	34°12.05'N	08:54:44	5.7	239.6	364.7	07m24.6s
115°45.0'E	36°09.25'N	32°23.39'N	34°15.52'N	08:54:46	5.6	239.7	364.9	07m24.3s
115°52.5'E	36°12.71'N	32°26.86'N	34°18.98'N	08:54:47	5.5	239.8	365.1	07m24.0s
116°00.0'E	36°16.15'N	32°30.32'N	34°22.43'N	08:54:49	5.3	239.9	365.2	07m23.7s
116°07.5'E	36°19.59'N	32°33.77'N	34°25.88'N	08:54:50	5.2	239.9	365.4	07m23.4s
116°15.0'E	36°23.02'N	32°37.20'N	34°29.31'N	08:54:52	5.1	240.0	365.6	07m23.1s
116°22.5'E	36°26.44'N	32°40.63'N	34°32.73'N	08:54:53	5.0	240.1	365.7	07m22.8s
116°30.0'E	36°29.85'N	32°44.05'N	34°36.15'N	08:54:55	4.8	240.2	365.9	07m22.5s
116°37.5'E	36°33.25'N	32°47.46'N	34°39.55'N	08:54:56	4.7	240.2	366.1	07m22.3s
116°45.0'E	36°36.64'N	32°50.86'N	34°42.95'N	08:54:57	4.6	240.3	366.2	07m22.0s
116°52.5'E	36°40.02'N	32°54.25'N	34°46.33'N	08:54:59	4.5	240.4	366.4	07m21.7s
117°00.0'E	36°43.39'N	32°57.63'N	34°49.71'N	08:55:00	4.4	240.5	366.6	07m21.4s
117°07.5'E	36°46.76'N	33°01.00'N	34°53.07'N	08:55:01	4.2	240.5	366.7	07m21.1s
117°15.0'E	36°50.11'N	33°04.36'N	34°56.43'N	08:55:02	4.1	240.6	366.9	07m20.8s
117°22.5'E	36°53.46'N	33°07.71'N	34°59.78'N	08:55:04	4.0	240.7	367.1	07m20.5s
117°30.0'E	36°56.79'N	33°11.06'N	35°03.12'N	08:55:05	3.9	240.8	367.2	07m20.3s
117°37.5'E	37°00.12'N	33°14.39'N	35°06.45'N	08:55:06	3.8	240.8	367.4	07m20.0s
117°45.0'E	37°03.44'N	33°17.71'N	35°09.77'N	08:55:07	3.6	240.9	367.6	07m19.7s
117°52.5'E	37°06.74'N	33°21.03'N	35°13.08'N	08:55:08	3.5	241.0	367.7	07m19.4s

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TABLE 2.B – MAPPING COORDINATES FOR THE ANTUMBRAL PATH (EXTENDED)

$\Delta T = 66.0 \text{ s}$

Longitude	Latitude of:			Circumstances on Central Line				
	Northern Limit	Southern Limit	Central Line	Universal Time h m s	Sun Alt °	Sun Az. °	Path Width km	Central Durat.
118°00.0'E	37°10.04'N	33°24.33'N	35°16.38'N	08:55:09	3.4	241.1	367.9	07m19.2s
118°07.5'E	37°13.33'N	33°27.63'N	35°19.67'N	08:55:10	3.3	241.1	368.1	07m18.9s
118°15.0'E	37°16.61'N	33°30.92'N	35°22.96'N	08:55:11	3.2	241.2	368.2	07m18.6s
118°22.5'E	37°19.89'N	33°34.19'N	35°26.23'N	08:55:12	3.0	241.3	368.4	07m18.3s
118°30.0'E	37°23.15'N	33°37.46'N	35°29.50'N	08:55:12	2.9	241.3	368.6	07m18.1s
118°37.5'E	37°26.40'N	33°40.72'N	35°32.75'N	08:55:13	2.8	241.4	368.7	07m17.8s
118°45.0'E	37°29.65'N	33°43.97'N	35°36.00'N	08:55:14	2.7	241.5	368.9	07m17.5s
118°52.5'E	37°32.88'N	33°47.21'N	35°39.24'N	08:55:15	2.6	241.6	369.0	07m17.2s
119°00.0'E	37°36.11'N	33°50.44'N	35°42.47'N	08:55:15	2.5	241.6	369.2	07m17.0s
119°07.5'E	37°39.33'N	33°53.67'N	35°45.69'N	08:55:16	2.3	241.7	369.4	07m16.7s
119°15.0'E	37°42.54'N	33°56.88'N	35°48.90'N	08:55:17	2.2	241.8	369.5	07m16.4s
119°22.5'E	37°45.74'N	34°00.09'N	35°52.10'N	08:55:17	2.1	241.9	369.7	07m16.2s
119°30.0'E	37°48.93'N	34°03.28'N	35°55.30'N	08:55:18	2.0	241.9	369.9	07m15.9s
119°37.5'E	37°52.12'N	34°06.47'N	35°58.48'N	08:55:18	1.9	242.0	370.0	07m15.6s
119°45.0'E	37°55.29'N	34°09.65'N	36°01.66'N	08:55:19	1.8	242.1	370.2	07m15.4s
119°52.5'E	37°58.46'N	34°12.82'N	36°04.82'N	08:55:19	1.6	242.2	370.4	07m15.1s
120°00.0'E	38°01.61'N	34°15.98'N	36°07.98'N	08:55:20	1.5	242.2	370.5	07m14.9s
120°07.5'E	38°04.76'N	34°19.13'N	36°11.13'N	08:55:20	1.4	242.3	370.7	07m14.6s
120°15.0'E	38°07.90'N	34°22.27'N	36°14.27'N	08:55:21	1.3	242.4	370.9	07m14.3s
120°22.5'E	38°11.03'N	34°25.40'N	36°17.41'N	08:55:21	1.2	242.5	371.0	07m14.1s
120°30.0'E	38°14.16'N	34°28.53'N	36°20.53'N	08:55:21	1.1	242.5	371.2	07m13.8s
120°37.5'E	38°17.27'N	34°31.65'N	36°23.64'N	08:55:22	1.0	242.6	371.3	07m13.6s
120°45.0'E	38°20.38'N	34°34.75'N	36°26.75'N	08:55:22	0.8	242.7	371.5	07m13.3s
120°52.5'E	38°23.47'N	34°37.85'N	36°29.85'N	08:55:22	0.7	242.8	371.7	07m13.1s
121°00.0'E		34°40.94'N	36°32.94'N	08:55:22	0.6	242.8	371.8	07m12.8s
121°07.5'E		34°44.02'N	36°36.02'N	08:55:22	0.5	242.9	372.0	07m12.6s
121°15.0'E		34°47.10'N	36°39.09'N	08:55:22	0.4	243.0	372.2	07m12.3s
121°22.5'E		34°50.16'N	36°42.15'N	08:55:23	0.3	243.1	372.3	07m12.1s