

ANNULAR SOLAR ECLIPSE OF 2010 JANUARY 15

TABLE 2.A – MAPPING COORDINATES FOR THE ANTUMBRAL PATH

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

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.
016°00.0'E	-	05°03.11'N	06°50.34'N	05:17:35	0.4	111.4	370.3	07m10.4s
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
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
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
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
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
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
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
024°00.0'E	05°34.33'N	02°05.50'N	03°49.33'N	05:19:17	9.3	112.2	361.9	07m35.7s
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
041°00.0'E	00°16.14'N	02°57.48'S	01°21.28'S	05:36:13	30.8	114.0	348.4	08m55.1s
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
059°00.0'E	00°40.47'S	03°50.54'S	02°16.32'S	06:23:08	57.2	127.2	344.5	10m49.1s
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
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
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
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
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
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
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
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

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

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.
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
104°00.0'E	29°57.72'N	26°09.63'N	28°02.94'N	08:48:40	18.4	232.6	348.8	07m58.2s
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
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
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
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
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
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
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
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
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
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
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
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
117°00.0'E	36°43.40'N	32°57.63'N	34°49.71'N	08:55:00	4.4	240.5	366.6	07m21.4s
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
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