

Table 7

MAPPING COORDINATES FOR THE UMBRAL PATH  
TOTAL SOLAR ECLIPSE OF 2008 AUGUST 01

$\Delta T = 65.6$  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.
103°00.0'W	70°06.17'N	-	-	-	-	-	-	-
102°00.0'W	70°39.88'N	-	68°54.11'N	09:22:39	0.7	35.0	206.7	01m31.0s
101°00.0'W	71°12.92'N	-	69°26.23'N	09:22:41	1.4	36.0	207.5	01m32.0s
100°00.0'W	71°45.24'N	68°20.85'N	69°57.77'N	09:22:45	2.0	36.9	208.3	01m33.0s
099°00.0'W	72°16.80'N	68°51.11'N	70°28.68'N	09:22:50	2.6	37.9	209.1	01m33.9s
098°00.0'W	72°47.55'N	69°20.82'N	70°58.93'N	09:22:56	3.2	38.9	209.8	01m34.9s
097°00.0'W	73°17.47'N	69°49.93'N	71°28.49'N	09:23:04	3.8	39.8	210.4	01m35.8s
096°00.0'W	73°46.53'N	70°18.44'N	71°57.32'N	09:23:12	4.4	40.8	211.1	01m36.7s
095°00.0'W	74°14.70'N	70°46.30'N	72°25.41'N	09:23:21	5.0	41.8	211.7	01m37.6s
094°00.0'W	74°41.96'N	71°13.51'N	72°52.73'N	09:23:32	5.5	42.8	212.2	01m38.5s
093°00.0'W	75°08.32'N	71°40.03'N	73°19.27'N	09:23:42	6.1	43.8	212.7	01m39.3s
092°00.0'W	75°33.75'N	72°05.86'N	73°45.01'N	09:23:54	6.6	44.8	213.2	01m40.2s
091°00.0'W	75°58.26'N	72°30.99'N	74°09.96'N	09:24:06	7.1	45.9	213.7	01m41.0s
090°00.0'W	76°21.87'N	72°55.41'N	74°34.10'N	09:24:19	7.5	46.9	214.1	01m41.8s
089°00.0'W	76°44.56'N	73°19.11'N	74°57.43'N	09:24:32	8.0	47.9	214.5	01m42.5s
088°00.0'W	77°06.37'N	73°42.09'N	75°19.96'N	09:24:45	8.5	49.0	214.8	01m43.3s
087°00.0'W	77°27.31'N	74°04.35'N	75°41.71'N	09:24:59	8.9	50.0	215.2	01m44.0s
086°00.0'W	77°47.39'N	74°25.90'N	76°02.67'N	09:25:13	9.3	51.0	215.5	01m44.7s
085°00.0'W	78°06.63'N	74°46.74'N	76°22.87'N	09:25:27	9.7	52.1	215.8	01m45.4s
084°00.0'W	78°25.08'N	75°06.88'N	76°42.31'N	09:25:41	10.1	53.1	216.1	01m46.0s
083°00.0'W	78°42.74'N	75°26.34'N	77°01.01'N	09:25:55	10.5	54.2	216.4	01m46.7s
082°00.0'W	78°59.64'N	75°45.12'N	77°19.00'N	09:26:10	10.9	55.2	216.6	01m47.3s
081°00.0'W	79°15.82'N	76°03.23'N	77°36.29'N	09:26:24	11.2	56.3	216.9	01m47.9s
080°00.0'W	79°31.30'N	76°20.70'N	77°52.90'N	09:26:38	11.6	57.4	217.1	01m48.4s
079°00.0'W	79°46.10'N	76°37.54'N	78°08.85'N	09:26:52	11.9	58.4	217.3	01m49.0s
078°00.0'W	80°00.26'N	76°53.76'N	78°24.17'N	09:27:06	12.2	59.5	217.5	01m49.5s
076°00.0'W	80°26.75'N	77°24.42'N	78°53.00'N	09:27:34	12.8	61.6	217.9	01m50.6s
074°00.0'W	80°50.98'N	77°52.84'N	79°19.54'N	09:28:01	13.4	63.7	218.2	01m51.5s
072°00.0'W	81°13.15'N	78°19.14'N	79°43.98'N	09:28:28	13.9	65.8	218.5	01m52.4s
070°00.0'W	81°33.43'N	78°43.47'N	80°06.47'N	09:28:54	14.4	68.0	218.8	01m53.3s
068°00.0'W	81°52.00'N	79°05.97'N	80°27.18'N	09:29:19	14.8	70.1	219.1	01m54.1s
066°00.0'W	82°09.01'N	79°26.77'N	80°46.23'N	09:29:43	15.3	72.2	219.3	01m54.8s
064°00.0'W	82°24.61'N	79°46.00'N	81°03.77'N	09:30:07	15.7	74.3	219.5	01m55.5s
062°00.0'W	82°38.91'N	80°03.75'N	81°19.92'N	09:30:30	16.0	76.5	219.7	01m56.2s
060°00.0'W	82°52.03'N	80°20.16'N	81°34.79'N	09:30:53	16.4	78.6	219.9	01m56.8s
058°00.0'W	83°04.07'N	80°35.30'N	81°48.47'N	09:31:14	16.7	80.7	220.0	01m57.4s
056°00.0'W	83°15.11'N	80°49.27'N	82°01.07'N	09:31:35	17.0	82.8	220.2	01m58.0s
054°00.0'W	83°25.25'N	81°02.16'N	82°12.66'N	09:31:56	17.4	84.9	220.3	01m58.5s
052°00.0'W	83°34.56'N	81°14.03'N	82°23.31'N	09:32:16	17.6	87.1	220.5	01m59.0s
050°00.0'W	83°43.09'N	81°24.96'N	82°33.10'N	09:32:36	17.9	89.2	220.6	01m59.5s
048°00.0'W	83°50.90'N	81°35.01'N	82°42.09'N	09:32:55	18.2	91.3	220.7	02m00.0s
046°00.0'W	83°58.05'N	81°44.23'N	82°50.32'N	09:33:14	18.4	93.4	220.9	02m00.5s
044°00.0'W	84°04.58'N	81°52.68'N	82°57.85'N	09:33:32	18.7	95.5	221.0	02m00.9s
042°00.0'W	84°10.53'N	82°00.39'N	83°04.72'N	09:33:50	18.9	97.6	221.1	02m01.3s
040°00.0'W	84°15.93'N	82°07.41'N	83°10.97'N	09:34:08	19.2	99.7	221.2	02m01.7s
038°00.0'W	84°20.83'N	82°13.79'N	83°16.64'N	09:34:25	19.4	101.8	221.3	02m02.1s
036°00.0'W	84°25.24'N	82°19.54'N	83°21.74'N	09:34:42	19.6	103.9	221.4	02m02.5s
034°00.0'W	84°29.19'N	82°24.69'N	83°26.32'N	09:34:59	19.8	106.0	221.5	02m02.9s
032°00.0'W	84°32.70'N	82°29.28'N	83°30.40'N	09:35:16	20.0	108.1	221.6	02m03.3s

Table 7 (continued)

**MAPPING COORDINATES FOR THE UMBRAL PATH  
TOTAL SOLAR ECLIPSE OF 2008 AUGUST 01**

$\Delta T = 65.6$  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.
030°00.0'W	84°35.80'N	82°33.33'N	83°33.98'N	09:35:33	20.2	110.2	221.7	02m03.6s
028°00.0'W	84°38.49'N	82°36.85'N	83°37.11'N	09:35:49	20.4	112.3	221.7	02m04.0s
026°00.0'W	84°40.80'N	82°39.86'N	83°39.78'N	09:36:06	20.6	114.5	221.8	02m04.3s
024°00.0'W	84°42.73'N	82°42.37'N	83°42.02'N	09:36:22	20.8	116.6	221.9	02m04.7s
022°00.0'W	84°44.30'N	82°44.41'N	83°43.83'N	09:36:39	21.0	118.7	222.0	02m05.0s
020°00.0'W	84°45.51'N	82°45.96'N	83°45.22'N	09:36:55	21.2	120.8	222.1	02m05.4s
018°00.0'W	84°46.37'N	82°47.05'N	83°46.20'N	09:37:12	21.3	122.9	222.2	02m05.7s
016°00.0'W	84°46.88'N	82°47.68'N	83°46.78'N	09:37:28	21.5	125.0	222.2	02m06.0s
014°00.0'W	84°47.04'N	82°47.85'N	83°46.95'N	09:37:45	21.7	127.1	222.3	02m06.3s
012°00.0'W	84°46.86'N	82°47.56'N	83°46.72'N	09:38:02	21.9	129.2	222.4	02m06.7s
010°00.0'W	84°46.33'N	82°46.81'N	83°46.08'N	09:38:19	22.1	131.3	222.5	02m07.0s
008°00.0'W	84°45.45'N	82°45.59'N	83°45.03'N	09:38:36	22.2	133.4	222.6	02m07.3s
006°00.0'W	84°44.22'N	82°43.90'N	83°43.57'N	09:38:53	22.4	135.6	222.7	02m07.6s
004°00.0'W	84°42.64'N	82°41.73'N	83°41.69'N	09:39:11	22.6	137.7	222.7	02m08.0s
002°00.0'W	84°40.68'N	82°39.06'N	83°39.37'N	09:39:29	22.8	139.8	222.8	02m08.3s
000°00.0'E	84°38.34'N	82°35.89'N	83°36.61'N	09:39:47	23.0	141.9	222.9	02m08.6s
002°00.0'E	84°35.61'N	82°32.20'N	83°33.39'N	09:40:06	23.1	144.1	223.0	02m09.0s
004°00.0'E	84°32.48'N	82°27.97'N	83°29.70'N	09:40:26	23.3	146.2	223.1	02m09.3s
006°00.0'E	84°28.92'N	82°23.17'N	83°25.51'N	09:40:45	23.5	148.3	223.2	02m09.6s
008°00.0'E	84°24.91'N	82°17.78'N	83°20.80'N	09:41:06	23.7	150.5	223.3	02m10.0s
010°00.0'E	84°20.44'N	82°11.77'N	83°15.55'N	09:41:27	23.9	152.6	223.4	02m10.3s
012°00.0'E	84°15.47'N	82°05.11'N	83°09.72'N	09:41:49	24.1	154.8	223.5	02m10.7s
014°00.0'E	84°09.98'N	81°57.76'N	83°03.28'N	09:42:11	24.3	156.9	223.6	02m11.1s
016°00.0'E	84°03.93'N	81°49.67'N	82°56.19'N	09:42:35	24.5	159.1	223.7	02m11.4s
018°00.0'E	83°57.28'N	81°40.80'N	82°48.40'N	09:42:59	24.7	161.3	223.8	02m11.8s
020°00.0'E	83°49.98'N	81°31.09'N	82°39.87'N	09:43:25	24.9	163.5	223.9	02m12.2s
022°00.0'E	83°42.00'N	81°20.47'N	82°30.54'N	09:43:51	25.1	165.7	224.0	02m12.6s
024°00.0'E	83°33.26'N	81°08.89'N	82°20.35'N	09:44:20	25.4	167.9	224.1	02m13.0s
026°00.0'E	83°23.71'N	80°56.25'N	82°09.22'N	09:44:49	25.6	170.1	224.3	02m13.5s
028°00.0'E	83°13.27'N	80°42.48'N	81°57.07'N	09:45:21	25.9	172.3	224.4	02m13.9s
030°00.0'E	83°01.85'N	80°27.46'N	81°43.81'N	09:45:54	26.1	174.6	224.5	02m14.4s
032°00.0'E	82°49.37'N	80°11.09'N	81°29.33'N	09:46:29	26.4	176.9	224.7	02m14.9s
034°00.0'E	82°35.72'N	79°53.24'N	81°13.52'N	09:47:07	26.6	179.2	224.9	02m15.4s
036°00.0'E	82°20.76'N	79°33.75'N	80°56.23'N	09:47:47	26.9	181.5	225.1	02m15.9s
038°00.0'E	82°04.36'N	79°12.47'N	80°37.31'N	09:48:30	27.2	183.8	225.2	02m16.4s
040°00.0'E	81°46.34'N	78°49.21'N	80°16.59'N	09:49:17	27.5	186.2	225.5	02m17.0s
042°00.0'E	81°26.54'N	78°23.75'N	79°53.86'N	09:50:07	27.9	188.6	225.7	02m17.6s
044°00.0'E	81°04.72'N	77°55.85'N	79°28.90'N	09:51:02	28.2	191.0	225.9	02m18.2s
046°00.0'E	80°40.63'N	77°25.24'N	79°01.43'N	09:52:01	28.6	193.5	226.2	02m18.9s
048°00.0'E	80°13.99'N	76°51.60'N	78°31.15'N	09:53:06	28.9	196.0	226.5	02m19.5s
050°00.0'E	79°44.45'N	76°14.59'N	77°57.72'N	09:54:18	29.3	198.6	226.9	02m20.3s
052°00.0'E	79°11.65'N	75°33.80'N	77°20.75'N	09:55:36	29.7	201.3	227.3	02m21.0s
053°00.0'E	78°53.88'N	75°11.85'N	77°00.80'N	09:56:19	30.0	202.6	227.5	02m21.4s
054°00.0'E	78°35.12'N	74°48.79'N	76°39.79'N	09:57:04	30.2	204.0	227.7	02m21.7s
055°00.0'E	78°15.30'N	74°24.55'N	76°17.65'N	09:57:51	30.4	205.4	228.0	02m22.1s
056°00.0'E	77°54.36'N	73°59.07'N	75°54.33'N	09:58:40	30.6	206.8	228.2	02m22.5s
057°00.0'E	77°32.21'N	73°32.28'N	75°29.74'N	09:59:33	30.8	208.3	228.5	02m22.9s
058°00.0'E	77°08.78'N	73°04.10'N	75°03.80'N	10:00:28	31.1	209.8	228.8	02m23.3s
059°00.0'E	76°43.99'N	72°34.47'N	74°36.46'N	10:01:26	31.3	211.3	229.1	02m23.7s
060°00.0'E	76°17.74'N	72°03.31'N	74°07.61'N	10:02:28	31.5	212.8	229.5	02m24.1s

Table 7 (continued)

MAPPING COORDINATES FOR THE UMBRAL PATH  
TOTAL SOLAR ECLIPSE OF 2008 AUGUST 01

$\Delta T = 65.6$  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
061°00.0'E	75°49.95'N	71°30.54'N	73°37.17'N	10:03:34	31.7	214.4	229.9	02m24.5s
062°00.0'E	75°20.51'N	70°56.09'N	73°05.06'N	10:04:43	32.0	216.0	230.3	02m24.9s
063°00.0'E	74°49.32'N	70°19.89'N	72°31.20'N	10:05:56	32.2	217.7	230.7	02m25.3s
064°00.0'E	74°16.29'N	69°41.87'N	71°55.49'N	10:07:13	32.4	219.4	231.2	02m25.6s
065°00.0'E	73°41.31'N	69°01.97'N	71°17.86'N	10:08:35	32.6	221.1	231.7	02m26.0s
066°00.0'E	73°04.28'N	68°20.13'N	70°38.22'N	10:10:02	32.8	222.9	232.3	02m26.3s
067°00.0'E	72°25.10'N	67°36.31'N	69°56.51'N	10:11:34	33.0	224.7	232.9	02m26.5s
068°00.0'E	71°43.68'N	66°50.48'N	69°12.66'N	10:13:10	33.1	226.6	233.5	02m26.8s
069°00.0'E	70°59.94'N	66°02.63'N	68°26.64'N	10:14:52	33.3	228.5	234.2	02m27.0s
070°00.0'E	70°13.82'N	65°12.78'N	67°38.41'N	10:16:40	33.4	230.5	235.0	02m27.1s
071°00.0'E	69°25.26'N	64°20.95'N	66°47.97'N	10:18:32	33.5	232.5	235.8	02m27.2s
072°00.0'E	68°34.25'N	63°27.22'N	65°55.35'N	10:20:30	33.5	234.6	236.6	02m27.1s
073°00.0'E	67°40.79'N	62°31.70'N	65°00.61'N	10:22:34	33.5	236.7	237.6	02m27.0s
074°00.0'E	66°44.94'N	61°34.51'N	64°03.85'N	10:24:42	33.4	238.8	238.6	02m26.8s
075°00.0'E	65°46.78'N	60°35.83'N	63°05.20'N	10:26:54	33.3	241.0	239.6	02m26.5s
076°00.0'E	64°46.45'N	59°35.86'N	62°04.85'N	10:29:11	33.2	243.2	240.7	02m26.1s
077°00.0'E	63°44.13'N	58°34.83'N	61°03.01'N	10:31:32	32.9	245.4	241.8	02m25.6s
078°00.0'E	62°40.07'N	57°33.02'N	59°59.93'N	10:33:55	32.6	247.6	243.0	02m24.9s
079°00.0'E	61°34.54'N	56°30.70'N	58°55.91'N	10:36:20	32.3	249.8	244.1	02m24.1s
080°00.0'E	60°27.87'N	55°28.16'N	57°51.26'N	10:38:46	31.8	252.0	245.3	02m23.1s
081°00.0'E	59°20.40'N	54°25.68'N	56°46.29'N	10:41:12	31.3	254.2	246.4	02m22.0s
082°00.0'E	58°12.51'N	53°23.55'N	55°41.34'N	10:43:38	30.7	256.3	247.5	02m20.8s
083°00.0'E	57°04.57'N	52°22.03'N	54°36.72'N	10:46:01	30.1	258.3	248.5	02m19.5s
084°00.0'E	55°56.95'N	51°21.36'N	53°32.73'N	10:48:23	29.3	260.3	249.5	02m18.1s
085°00.0'E	54°49.97'N	50°21.75'N	52°29.63'N	10:50:40	28.6	262.2	250.2	02m16.5s
086°00.0'E	53°43.95'N	49°23.38'N	51°27.66'N	10:52:54	27.7	264.0	250.9	02m14.9s
087°00.0'E	52°39.16'N	48°26.41'N	50°27.03'N	10:55:03	26.9	265.8	251.3	02m13.2s
088°00.0'E	51°35.82'N	47°30.95'N	49°27.90'N	10:57:07	25.9	267.5	251.6	02m11.4s
089°00.0'E	50°34.12'N	46°37.09'N	48°30.40'N	10:59:06	25.0	269.1	251.6	02m09.6s
090°00.0'E	49°34.19'N	45°44.89'N	47°34.61'N	11:00:59	24.0	270.6	251.4	02m07.8s
091°00.0'E	48°36.14'N	44°54.40'N	46°40.62'N	11:02:46	23.0	272.0	251.0	02m05.9s
092°00.0'E	47°40.04'N	44°05.64'N	45°48.46'N	11:04:27	22.0	273.4	250.4	02m04.0s
093°00.0'E	46°45.91'N	43°18.60'N	44°58.14'N	11:06:02	20.9	274.7	249.5	02m02.1s
094°00.0'E	45°53.78'N	42°33.29'N	44°09.67'N	11:07:31	19.9	275.9	248.4	02m00.2s
095°00.0'E	45°03.64'N	41°49.68'N	43°23.03'N	11:08:54	18.8	277.1	247.0	01m58.3s
096°00.0'E	44°15.46'N	41°07.74'N	42°38.19'N	11:10:11	17.8	278.2	245.5	01m56.5s
097°00.0'E	43°29.21'N	40°27.44'N	41°55.12'N	11:11:22	16.7	279.2	243.7	01m54.6s
098°00.0'E	42°44.85'N	39°48.73'N	41°13.78'N	11:12:28	15.7	280.2	241.8	01m52.8s
099°00.0'E	42°02.32'N	39°11.58'N	40°34.12'N	11:13:29	14.6	281.2	239.7	01m50.9s
100°00.0'E	41°21.57'N	38°35.93'N	39°56.09'N	11:14:24	13.6	282.1	237.4	01m49.2s
101°00.0'E	40°42.54'N	38°01.75'N	39°19.64'N	11:15:15	12.5	282.9	235.0	01m47.4s
102°00.0'E	40°05.18'N	37°28.98'N	38°44.72'N	11:16:01	11.5	283.8	232.5	01m45.7s
103°00.0'E	39°29.42'N	36°57.59'N	38°11.28'N	11:16:42	10.5	284.6	229.9	01m44.0s
104°00.0'E	38°55.21'N	36°27.51'N	37°39.26'N	11:17:18	9.5	285.3	227.2	01m42.3s
105°00.0'E	38°22.50'N	35°58.72'N	37°08.61'N	11:17:51	8.4	286.0	224.5	01m40.7s
106°00.0'E	37°51.21'N	35°31.16'N	36°39.30'N	11:18:19	7.5	286.7	221.7	01m39.1s
107°00.0'E	37°21.31'N	35°04.79'N	36°11.26'N	11:18:43	6.5	287.4	218.8	01m37.5s
108°00.0'E	36°52.74'N	34°39.57'N	35°44.46'N	11:19:04	5.5	288.1	216.0	01m36.0s
109°00.0'E	36°25.45'N	34°15.47'N	35°18.84'N	11:19:21	4.5	288.7	213.1	01m34.5s
110°00.0'E	35°59.39'N	33°52.45'N	34°54.38'N	11:19:35	3.6	289.3	210.2	01m33.1s
111°00.0'E	35°34.51'N	33°30.46'N	34°31.02'N	11:19:45	2.6	289.9	207.4	01m31.7s