

TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13

TABLE 3 (EXTENDED VERSION)

PATH OF THE UMBRAL SHADOW – TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13

Universal Time	Northern Limit		Southern Limit		Central Line		Sun Alt °	Sun Path Width km	Central Durat.
	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude			
Limits	11°26.7'S	133°22.1'E	12°27.2'S	132°47.2'E	11°56.9'S	133°04.8'E	0	126	01m40.9s
20:37	14°28.4'S	141°54.6'E	14°04.4'S	137°22.0'E	14°22.7'S	139°55.1'E	7	136	01m53.3s
20:38	15°28.0'S	144°26.5'E	15°31.2'S	141°08.8'E	15°31.9'S	142°53.2'E	11	140	01m59.4s
20:39	16°16.6'S	146°26.0'E	16°31.2'S	143°37.1'E	16°25.4'S	145°04.7'E	13	143	02m04.1s
20:40	16°59.1'S	148°07.1'E	17°20.6'S	145°34.6'E	17°10.9'S	146°53.1'E	15	146	02m08.2s
20:41	17°37.3'S	149°36.0'E	18°03.7'S	147°14.4'E	17°51.4'S	148°26.9'E	17	148	02m11.8s
20:42	18°12.5'S	150°56.0'E	18°42.7'S	148°42.4'E	18°28.3'S	149°50.6'E	19	150	02m15.2s
20:43	18°45.2'S	152°09.2'E	19°18.5'S	150°01.7'E	19°02.5'S	151°06.7'E	20	152	02m18.3s
20:44	19°16.1'S	153°17.1'E	19°52.0'S	151°14.4'E	19°34.6'S	152°16.9'E	22	153	02m21.3s
20:45	19°45.3'S	154°20.5'E	20°23.5'S	152°21.8'E	20°04.9'S	153°22.2'E	23	155	02m24.1s
20:46	20°13.2'S	155°20.2'E	20°53.4'S	153°24.9'E	20°33.8'S	154°23.5'E	24	156	02m26.7s
20:47	20°39.9'S	156°16.8'E	21°21.9'S	154°24.3'E	21°01.3'S	155°21.4'E	25	157	02m29.3s
20:48	21°05.6'S	157°10.6'E	21°49.2'S	155°20.7'E	21°27.8'S	156°16.5'E	27	159	02m31.8s
20:49	21°30.4'S	158°02.1'E	22°15.5'S	156°14.3'E	21°53.3'S	157°09.0'E	28	160	02m34.2s
20:50	21°54.3'S	158°51.5'E	22°40.9'S	157°05.6'E	22°18.0'S	157°59.3'E	29	161	02m36.5s
20:51	22°17.6'S	159°38.9'E	23°05.4'S	157°54.9'E	22°41.8'S	158°47.6'E	30	162	02m38.8s
20:52	22°40.1'S	160°24.8'E	23°29.2'S	158°42.3'E	23°05.0'S	159°34.2'E	31	163	02m41.0s
20:53	23°02.1'S	161°09.1'E	23°52.3'S	159°28.1'E	23°27.5'S	160°19.2'E	32	164	02m43.1s
20:54	23°23.4'S	161°52.0'E	24°14.8'S	160°12.3'E	23°49.4'S	161°02.8'E	33	164	02m45.2s
20:55	23°44.3'S	162°33.7'E	24°36.7'S	160°55.3'E	24°10.8'S	161°45.1'E	34	165	02m47.2s
20:56	24°04.7'S	163°14.3'E	24°58.1'S	161°37.0'E	24°31.7'S	162°26.2'E	34	166	02m49.2s
20:57	24°24.6'S	163°53.8'E	25°19.0'S	162°17.6'E	24°52.1'S	163°06.3'E	35	167	02m51.2s
20:58	24°44.1'S	164°32.3'E	25°39.4'S	162°57.2'E	25°12.0'S	163°45.3'E	36	167	02m53.1s
20:59	25°03.1'S	165°10.0'E	25°59.4'S	163°35.8'E	25°31.5'S	164°23.5'E	37	168	02m54.9s
21:00	25°21.9'S	165°46.9'E	26°19.0'S	164°13.6'E	25°50.7'S	165°00.8'E	38	168	02m56.8s
21:01	25°40.2'S	166°23.0'E	26°38.2'S	164°50.6'E	26°09.4'S	165°37.3'E	39	169	02m58.6s
21:02	25°58.2'S	166°58.4'E	26°57.0'S	165°26.8'E	26°27.9'S	166°13.1'E	39	170	03m00.3s
21:03	26°15.9'S	167°33.1'E	27°15.5'S	166°02.4'E	26°45.9'S	166°48.3'E	40	170	03m02.1s
21:04	26°33.3'S	168°07.2'E	27°33.6'S	166°37.3'E	27°03.7'S	167°22.8'E	41	171	03m03.8s
21:05	26°50.3'S	168°40.7'E	27°51.5'S	167°11.6'E	27°21.2'S	167°56.7'E	42	171	03m05.4s
21:06	27°07.1'S	169°13.8'E	28°09.0'S	167°45.3'E	27°38.3'S	168°30.1'E	42	172	03m07.1s
21:07	27°23.7'S	169°46.3'E	28°26.3'S	168°18.6'E	27°55.2'S	169°02.9'E	43	172	03m08.7s
21:08	27°39.9'S	170°18.3'E	28°43.3'S	168°51.3'E	28°11.8'S	169°35.3'E	44	172	03m10.3s
21:09	27°55.9'S	170°49.9'E	29°00.0'S	169°23.6'E	28°28.2'S	170°07.3'E	44	173	03m11.8s
21:10	28°11.7'S	171°21.1'E	29°16.4'S	169°55.5'E	28°44.3'S	170°38.8'E	45	173	03m13.4s
21:11	28°27.2'S	171°51.9'E	29°32.6'S	170°26.9'E	29°00.1'S	171°09.9'E	46	174	03m14.9s
21:12	28°42.6'S	172°22.3'E	29°48.6'S	170°58.0'E	29°15.8'S	171°40.7'E	46	174	03m16.4s
21:13	28°57.6'S	172°52.4'E	30°04.4'S	171°28.8'E	29°31.2'S	172°11.1'E	47	174	03m17.8s
21:14	29°12.5'S	173°22.2'E	30°19.9'S	171°59.2'E	29°46.4'S	172°41.2'E	48	175	03m19.2s
21:15	29°27.2'S	173°51.6'E	30°35.2'S	172°29.3'E	30°01.4'S	173°10.9'E	48	175	03m20.6s
21:16	29°41.7'S	174°20.8'E	30°50.3'S	172°59.1'E	30°16.1'S	173°40.4'E	49	175	03m22.0s
21:17	29°55.9'S	174°49.7'E	31°05.1'S	173°28.6'E	30°30.7'S	174°09.6'E	49	175	03m23.4s
21:18	30°10.0'S	175°18.3'E	31°19.8'S	173°57.9'E	30°45.1'S	174°38.6'E	50	176	03m24.7s
21:19	30°23.9'S	175°46.8'E	31°34.3'S	174°27.0'E	30°59.3'S	175°07.3'E	51	176	03m26.0s

ΔT = 66.8 s

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TABLE 3 (EXTENDED VERSION)

PATH OF THE UMBRAL SHADOW – TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13

$\Delta T = 66.8 \text{ s}$

Universal Time	Northern Limit		Southern Limit		Central Line		Sun Alt °	Path Width km	Central Durat.
	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude			
21:20	30°37.6'S	176°14.9'E	31°48.6'S	174°55.8'E	31°13.3'S	175°35.8'E	51	176	03m27.3s
21:21	30°51.1'S	176°42.9'E	32°02.7'S	175°24.4'E	31°27.1'S	176°04.1'E	52	176	03m28.6s
21:22	31°04.5'S	177°10.7'E	32°16.7'S	175°52.8'E	31°40.7'S	176°32.2'E	52	177	03m29.8s
21:23	31°17.7'S	177°38.3'E	32°30.4'S	176°21.0'E	31°54.2'S	177°00.1'E	53	177	03m31.0s
21:24	31°30.7'S	178°05.7'E	32°44.0'S	176°49.1'E	32°07.5'S	177°27.8'E	53	177	03m32.2s
21:25	31°43.6'S	178°33.0'E	32°57.4'S	177°17.0'E	32°20.6'S	177°55.4'E	54	177	03m33.4s
21:26	31°56.3'S	179°00.1'E	33°10.6'S	177°44.7'E	32°33.6'S	178°22.8'E	55	177	03m34.5s
21:27	32°08.8'S	179°27.0'E	33°23.7'S	178°12.3'E	32°46.4'S	178°50.1'E	55	178	03m35.6s
21:28	32°21.2'S	179°53.8'E	33°36.6'S	178°39.8'E	32°59.0'S	179°17.3'E	56	178	03m36.7s
21:29	32°33.4'S	179°39.5'W	33°49.4'S	179°07.2'E	33°11.5'S	179°44.3'E	56	178	03m37.8s
21:30	32°45.5'S	179°12.9'W	34°02.0'S	179°34.4'E	33°23.8'S	179°48.8'W	57	178	03m38.9s
21:31	32°57.4'S	178°46.4'W	34°14.4'S	179°58.4'W	33°36.0'S	179°22.0'W	57	178	03m39.9s
21:32	33°09.2'S	178°20.0'W	34°26.7'S	179°31.3'W	33°48.0'S	178°55.2'W	57	178	03m40.9s
21:33	33°20.8'S	177°53.7'W	34°38.8'S	179°04.4'W	33°59.9'S	178°28.6'W	58	178	03m41.9s
21:34	33°32.3'S	177°27.5'W	34°50.8'S	178°37.5'W	34°11.7'S	178°02.1'W	58	178	03m42.8s
21:35	33°43.7'S	177°01.4'W	35°02.6'S	178°10.6'W	34°23.3'S	177°35.6'W	59	179	03m43.8s
21:36	33°54.9'S	176°35.3'W	35°14.3'S	177°43.9'W	34°34.7'S	177°09.2'W	59	179	03m44.7s
21:37	34°06.0'S	176°09.3'W	35°25.9'S	177°17.1'W	34°46.0'S	176°42.8'W	60	179	03m45.6s
21:38	34°16.9'S	175°43.4'W	35°37.3'S	176°50.5'W	34°57.2'S	176°16.5'W	60	179	03m46.5s
21:39	34°27.7'S	175°17.5'W	35°48.6'S	176°23.8'W	35°08.2'S	175°50.2'W	61	179	03m47.3s
21:40	34°38.4'S	174°51.6'W	35°59.7'S	175°57.2'W	35°19.1'S	175°24.0'W	61	179	03m48.1s
21:41	34°48.9'S	174°25.8'W	36°10.7'S	175°30.7'W	35°29.9'S	174°57.8'W	61	179	03m49.0s
21:42	34°59.3'S	174°00.0'W	36°21.5'S	175°04.1'W	35°40.5'S	174°31.7'W	62	179	03m49.7s
21:43	35°09.6'S	173°34.2'W	36°32.2'S	174°37.6'W	35°51.0'S	174°05.5'W	62	179	03m50.5s
21:44	35°19.7'S	173°08.5'W	36°42.8'S	174°11.0'W	36°01.3'S	173°39.4'W	63	179	03m51.2s
21:45	35°29.7'S	172°42.8'W	36°53.2'S	173°44.5'W	36°11.5'S	173°13.3'W	63	179	03m51.9s
21:46	35°39.6'S	172°17.0'W	37°03.5'S	173°18.0'W	36°21.6'S	172°47.1'W	63	179	03m52.6s
21:47	35°49.4'S	171°51.3'W	37°13.7'S	172°51.5'W	36°31.6'S	172°21.0'W	64	179	03m53.3s
21:48	35°59.0'S	171°25.6'W	37°23.8'S	172°24.9'W	36°41.4'S	171°54.9'W	64	179	03m53.9s
21:49	36°08.5'S	170°59.9'W	37°33.7'S	171°58.4'W	36°51.1'S	171°28.8'W	64	179	03m54.6s
21:50	36°17.9'S	170°34.2'W	37°43.4'S	171°31.8'W	37°00.7'S	171°02.6'W	65	179	03m55.2s
21:51	36°27.1'S	170°08.4'W	37°53.1'S	171°05.2'W	37°10.1'S	170°36.5'W	65	179	03m55.7s
21:52	36°36.2'S	169°42.7'W	38°02.6'S	170°38.6'W	37°19.4'S	170°10.3'W	65	179	03m56.3s
21:53	36°45.2'S	169°16.9'W	38°11.9'S	170°11.9'W	37°28.6'S	169°44.0'W	65	179	03m56.8s
21:54	36°54.1'S	168°51.1'W	38°21.2'S	169°45.2'W	37°37.7'S	169°17.8'W	66	179	03m57.3s
21:55	37°02.8'S	168°25.2'W	38°30.3'S	169°18.4'W	37°46.6'S	168°51.5'W	66	179	03m57.8s
21:56	37°11.4'S	167°59.3'W	38°39.3'S	168°51.6'W	37°55.4'S	168°25.2'W	66	179	03m58.2s
21:57	37°19.9'S	167°33.4'W	38°48.1'S	168°24.8'W	38°04.0'S	167°58.8'W	66	179	03m58.7s
21:58	37°28.3'S	167°07.4'W	38°56.9'S	167°57.8'W	38°12.6'S	167°32.3'W	67	179	03m59.1s
21:59	37°36.5'S	166°41.4'W	39°05.4'S	167°30.9'W	38°21.0'S	167°05.9'W	67	179	03m59.5s
22:00	37°44.7'S	166°15.4'W	39°13.9'S	167°03.8'W	38°29.3'S	166°39.3'W	67	179	03m59.8s
22:01	37°52.7'S	165°49.2'W	39°22.2'S	166°36.7'W	38°37.4'S	166°12.7'W	67	179	04m00.1s
22:02	38°00.5'S	165°23.0'W	39°30.4'S	166°09.5'W	38°45.5'S	165°46.0'W	67	179	04m00.5s
22:03	38°08.3'S	164°56.8'W	39°38.5'S	165°42.3'W	38°53.4'S	165°19.3'W	67	179	04m00.7s
22:04	38°15.9'S	164°30.5'W	39°46.4'S	165°15.0'W	39°01.1'S	164°52.5'W	67	179	04m01.0s

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$\Delta T = 66.8 \text{ s}$									
Universal Time	Northern Limit		Southern Limit		Central Line		Sun Alt °	Path Width km	Central Durat.
	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude			
22:05	38°23.4'S	164°04.1'W	39°54.2'S	164°47.5'W	39°08.8'S	164°25.6'W	68	179	04m01.2s
22:06	38°30.8'S	163°37.6'W	40°01.9'S	164°20.0'W	39°16.3'S	163°58.6'W	68	179	04m01.4s
22:07	38°38.0'S	163°11.1'W	40°09.4'S	163°52.4'W	39°23.7'S	163°31.5'W	68	179	04m01.6s
22:08	38°45.1'S	162°44.5'W	40°16.8'S	163°24.7'W	39°30.9'S	163°04.4'W	68	179	04m01.8s
22:09	38°52.1'S	162°17.8'W	40°24.1'S	162°56.9'W	39°38.1'S	162°37.2'W	68	179	04m01.9s
22:10	38°59.0'S	161°51.0'W	40°31.2'S	162°29.0'W	39°45.1'S	162°09.8'W	68	179	04m02.0s
22:11	39°05.7'S	161°24.1'W	40°38.2'S	162°01.0'W	39°51.9'S	161°42.4'W	68	179	04m02.1s
22:12	39°12.3'S	160°57.1'W	40°45.0'S	161°32.9'W	39°58.7'S	161°14.9'W	68	179	04m02.2s
22:13	39°18.8'S	160°30.1'W	40°51.8'S	161°04.7'W	40°05.3'S	160°47.2'W	68	179	04m02.2s
22:14	39°25.2'S	160°02.9'W	40°58.3'S	160°36.4'W	40°11.7'S	160°19.5'W	68	179	04m02.2s
22:15	39°31.4'S	159°35.6'W	41°04.8'S	160°07.9'W	40°18.1'S	159°51.6'W	68	179	04m02.2s
22:16	39°37.5'S	159°08.2'W	41°11.1'S	159°39.3'W	40°24.3'S	159°23.6'W	68	179	04m02.2s
22:17	39°43.5'S	158°40.7'W	41°17.3'S	159°10.6'W	40°30.3'S	158°55.6'W	68	179	04m02.1s
22:18	39°49.3'S	158°13.1'W	41°23.3'S	158°41.8'W	40°36.2'S	158°27.3'W	68	179	04m02.0s
22:19	39°55.0'S	157°45.3'W	41°29.2'S	158°12.8'W	40°42.0'S	157°59.0'W	68	178	04m01.9s
22:20	40°00.5'S	157°17.5'W	41°34.9'S	157°43.7'W	40°47.7'S	157°30.5'W	67	178	04m01.8s
22:21	40°06.0'S	156°49.5'W	41°40.5'S	157°14.5'W	40°53.2'S	157°01.9'W	67	178	04m01.6s
22:22	40°11.3'S	156°21.4'W	41°46.0'S	156°45.1'W	40°58.6'S	156°33.2'W	67	178	04m01.4s
22:23	40°16.4'S	155°53.1'W	41°51.3'S	156°15.6'W	41°03.8'S	156°04.3'W	67	178	04m01.2s
22:24	40°21.5'S	155°24.7'W	41°56.4'S	155°45.9'W	41°08.9'S	155°35.3'W	67	178	04m01.0s
22:25	40°26.3'S	154°56.2'W	42°01.5'S	155°16.0'W	41°13.8'S	155°06.1'W	67	178	04m00.7s
22:26	40°31.1'S	154°27.5'W	42°06.3'S	154°46.1'W	41°18.6'S	154°36.8'W	66	178	04m00.4s
22:27	40°35.7'S	153°58.7'W	42°11.0'S	154°15.9'W	41°23.3'S	154°07.3'W	66	178	04m00.1s
22:28	40°40.2'S	153°29.8'W	42°15.6'S	153°45.6'W	41°27.8'S	153°37.7'W	66	178	03m59.8s
22:29	40°44.5'S	153°00.6'W	42°20.0'S	153°15.1'W	41°32.2'S	153°07.9'W	66	177	03m59.4s
22:30	40°48.7'S	152°31.4'W	42°24.2'S	152°44.5'W	41°36.4'S	152°38.0'W	65	177	03m59.0s
22:31	40°52.7'S	152°01.9'W	42°28.3'S	152°13.6'W	41°40.5'S	152°07.9'W	65	177	03m58.6s
22:32	40°56.6'S	151°32.3'W	42°32.3'S	151°42.6'W	41°44.4'S	151°37.6'W	65	177	03m58.1s
22:33	41°00.3'S	151°02.6'W	42°36.1'S	151°11.4'W	41°48.1'S	151°07.1'W	65	177	03m57.7s
22:34	41°03.9'S	150°32.6'W	42°39.7'S	150°40.1'W	41°51.7'S	150°36.5'W	64	177	03m57.2s
22:35	41°07.3'S	150°02.5'W	42°43.1'S	150°08.5'W	41°55.2'S	150°05.7'W	64	177	03m56.7s
22:36	41°10.6'S	149°32.2'W	42°46.4'S	149°36.8'W	41°58.5'S	149°34.6'W	64	177	03m56.1s
22:37	41°13.7'S	149°01.7'W	42°49.5'S	149°04.8'W	42°01.6'S	149°03.4'W	63	176	03m55.5s
22:38	41°16.7'S	148°31.1'W	42°52.5'S	148°32.7'W	42°04.6'S	148°32.1'W	63	176	03m54.9s
22:39	41°19.5'S	148°00.2'W	42°55.3'S	148°00.3'W	42°07.4'S	148°00.5'W	63	176	03m54.3s
22:40	41°22.2'S	147°29.1'W	42°57.9'S	147°27.8'W	42°10.0'S	147°28.7'W	62	176	03m53.7s
22:41	41°24.7'S	146°57.9'W	43°00.3'S	146°55.0'W	42°12.5'S	146°56.7'W	62	176	03m53.0s
22:42	41°27.0'S	146°26.4'W	43°02.6'S	146°22.0'W	42°14.8'S	146°24.5'W	62	176	03m52.3s
22:43	41°29.2'S	145°54.7'W	43°04.7'S	145°48.8'W	42°16.9'S	145°52.0'W	61	175	03m51.6s
22:44	41°31.2'S	145°22.9'W	43°06.6'S	145°15.3'W	42°18.8'S	145°19.4'W	61	175	03m50.8s
22:45	41°33.0'S	144°50.7'W	43°08.3'S	144°41.7'W	42°20.6'S	144°46.5'W	60	175	03m50.1s
22:46	41°34.7'S	144°18.4'W	43°09.8'S	144°07.8'W	42°22.2'S	144°13.4'W	60	175	03m49.3s
22:47	41°36.1'S	143°45.8'W	43°11.1'S	143°33.6'W	42°23.6'S	143°40.1'W	59	175	03m48.4s
22:48	41°37.4'S	143°13.0'W	43°12.3'S	142°59.2'W	42°24.8'S	143°06.5'W	59	175	03m47.6s
22:49	41°38.6'S	142°40.0'W	43°13.2'S	142°24.6'W	42°25.9'S	142°32.6'W	59	174	03m46.7s

TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13

TABLE 3 (EXTENDED VERSION)

PATH OF THE UMBRAL SHADOW – TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13

$\Delta T = 66.8 \text{ s}$

Universal Time	Northern Limit		Southern Limit		Central Line		Sun Alt °	Path Width km	Central Durat. s
	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude			
22:50	41°39.5'S	142°06.7'W	43°14.0'S	141°49.6'W	42°26.7'S	141°58.5'W	58	174	03m45.8s
22:51	41°40.3'S	141°33.1'W	43°14.6'S	141°14.5'W	42°27.4'S	141°24.2'W	58	174	03m44.9s
22:52	41°40.8'S	140°59.3'W	43°14.9'S	140°39.0'W	42°27.8'S	140°49.6'W	57	174	03m43.9s
22:53	41°41.2'S	140°25.2'W	43°15.0'S	140°03.3'W	42°28.1'S	140°14.7'W	57	174	03m42.9s
22:54	41°41.4'S	139°50.9'W	43°15.0'S	139°27.3'W	42°28.2'S	139°39.5'W	56	173	03m41.9s
22:55	41°41.4'S	139°16.2'W	43°14.7'S	138°51.0'W	42°28.0'S	139°04.1'W	56	173	03m40.9s
22:56	41°41.2'S	138°41.3'W	43°14.2'S	138°14.4'W	42°27.7'S	138°28.3'W	55	173	03m39.8s
22:57	41°40.7'S	138°06.1'W	43°13.5'S	137°37.5'W	42°27.1'S	137°52.3'W	55	173	03m38.8s
22:58	41°40.1'S	137°30.5'W	43°12.5'S	137°00.2'W	42°26.3'S	137°15.9'W	54	172	03m37.6s
22:59	41°39.3'S	136°54.7'W	43°11.3'S	136°22.7'W	42°25.3'S	136°39.2'W	54	172	03m36.5s
23:00	41°38.2'S	136°18.5'W	43°09.9'S	135°44.8'W	42°24.1'S	136°02.2'W	53	172	03m35.3s
23:01	41°36.9'S	135°42.0'W	43°08.3'S	135°06.5'W	42°22.6'S	135°24.8'W	53	172	03m34.2s
23:02	41°35.4'S	135°05.1'W	43°06.4'S	134°27.9'W	42°20.9'S	134°47.1'W	52	171	03m33.0s
23:03	41°33.7'S	134°27.9'W	43°04.2'S	133°49.0'W	42°19.0'S	134°09.1'W	52	171	03m31.7s
23:04	41°31.7'S	133°50.4'W	43°01.8'S	133°09.7'W	42°16.8'S	133°30.6'W	51	171	03m30.4s
23:05	41°29.5'S	133°12.4'W	42°59.2'S	132°29.9'W	42°14.4'S	132°51.8'W	50	171	03m29.2s
23:06	41°27.1'S	132°34.0'W	42°56.2'S	131°49.8'W	42°11.7'S	132°12.6'W	50	170	03m27.8s
23:07	41°24.3'S	131°55.3'W	42°53.0'S	131°09.3'W	42°08.7'S	131°32.9'W	49	170	03m26.5s
23:08	41°21.4'S	131°16.1'W	42°49.5'S	130°28.3'W	42°05.5'S	130°52.9'W	49	170	03m25.1s
23:09	41°18.1'S	130°36.5'W	42°45.8'S	129°46.8'W	42°02.0'S	130°12.4'W	48	169	03m23.7s
23:10	41°14.6'S	129°56.4'W	42°41.7'S	129°04.9'W	41°58.2'S	129°31.4'W	47	169	03m22.3s
23:11	41°10.9'S	129°15.9'W	42°37.3'S	128°22.6'W	41°54.2'S	128°50.0'W	47	169	03m20.8s
23:12	41°06.8'S	128°34.8'W	42°32.6'S	127°39.7'W	41°49.8'S	128°08.0'W	46	168	03m19.4s
23:13	41°02.4'S	127°53.3'W	42°27.6'S	126°56.3'W	41°45.1'S	127°25.6'W	45	168	03m17.8s
23:14	40°57.7'S	127°11.2'W	42°22.3'S	126°12.3'W	41°40.1'S	126°42.5'W	45	167	03m16.3s
23:15	40°52.7'S	126°28.6'W	42°16.6'S	125°27.7'W	41°34.8'S	125°59.0'W	44	167	03m14.7s
23:16	40°47.4'S	125°45.4'W	42°10.6'S	124°42.6'W	41°29.1'S	125°14.8'W	43	167	03m13.1s
23:17	40°41.8'S	125°01.5'W	42°04.2'S	123°56.8'W	41°23.1'S	124°30.0'W	43	166	03m11.5s
23:18	40°35.8'S	124°17.0'W	41°57.4'S	123°10.4'W	41°16.7'S	123°44.6'W	42	166	03m09.8s
23:19	40°29.4'S	123°31.9'W	41°50.2'S	122°23.2'W	41°10.0'S	122°58.4'W	41	165	03m08.1s
23:20	40°22.7'S	122°46.0'W	41°42.6'S	121°35.3'W	41°02.8'S	122°11.6'W	41	165	03m06.4s
23:21	40°15.6'S	121°59.4'W	41°34.6'S	120°46.7'W	40°55.3'S	121°23.9'W	40	164	03m04.7s
23:22	40°08.0'S	121°12.0'W	41°26.2'S	119°57.2'W	40°47.3'S	120°35.5'W	39	164	03m02.9s
23:23	40°00.1'S	120°23.7'W	41°17.3'S	119°06.8'W	40°38.9'S	119°46.2'W	38	163	03m01.0s
23:24	39°51.7'S	119°34.6'W	41°07.8'S	118°15.4'W	40°30.0'S	118°56.0'W	37	163	02m59.2s
23:25	39°42.8'S	118°44.5'W	40°57.9'S	117°23.1'W	40°20.6'S	118°04.8'W	37	162	02m57.3s
23:26	39°33.4'S	117°53.3'W	40°47.4'S	116°29.7'W	40°10.7'S	117°12.5'W	36	162	02m55.3s
23:27	39°23.5'S	117°01.1'W	40°36.4'S	115°35.1'W	40°00.2'S	116°19.1'W	35	161	02m53.3s
23:28	39°13.1'S	116°07.7'W	40°24.7'S	114°39.3'W	39°49.2'S	115°24.5'W	34	161	02m51.3s
23:29	39°02.1'S	115°13.0'W	40°12.4'S	113°42.1'W	39°37.5'S	114°28.6'W	33	160	02m49.2s
23:30	38°50.4'S	114°16.9'W	39°59.4'S	112°43.4'W	39°25.2'S	113°31.3'W	32	159	02m47.1s
23:31	38°38.1'S	113°19.4'W	39°45.7'S	111°43.2'W	39°12.2'S	112°32.4'W	31	158	02m44.9s
23:32	38°25.1'S	112°20.2'W	39°31.1'S	110°41.1'W	38°58.4'S	111°31.8'W	30	158	02m42.7s
23:33	38°11.2'S	111°19.2'W	39°15.7'S	109°37.1'W	38°43.8'S	110°29.3'W	29	157	02m40.4s
23:34	37°56.6'S	110°16.2'W	38°59.3'S	108°30.8'W	38°28.3'S	109°24.7'W	28	156	02m38.0s

TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13

TABLE 3 (EXTENDED VERSION)

PATH OF THE UMBRAL SHADOW – TOTAL SOLAR ECLIPSE OF 2012 NOVEMBER 13

Universal Time	Northern Limit		Southern Limit		Central Line		Sun Alt °	Path Width km	Central Durat. s
	Latitude	Longitude	Latitude	Longitude	Latitude	Longitude			
23:35	37°41.0'S	109°10.9'W	38°41.8'S	107°22.1'W	38°11.8'S	108°17.8'W	27	155	02m35.6s
23:36	37°24.4'S	108°03.2'W	38°23.2'S	106°10.6'W	37°54.2'S	107°08.2'W	26	154	02m33.1s
23:37	37°06.6'S	106°52.6'W	38°03.2'S	104°55.9'W	37°35.4'S	105°55.7'W	25	153	02m30.5s
23:38	36°47.5'S	105°38.8'W	37°41.7'S	103°37.5'W	37°15.2'S	104°39.6'W	24	152	02m27.8s
23:39	36°27.0'S	104°21.1'W	37°18.5'S	102°14.6'W	36°53.4'S	103°19.5'W	22	151	02m24.9s
23:40	36°04.8'S	102°59.1'W	36°53.2'S	100°46.5'W	36°29.6'S	101°54.5'W	21	150	02m22.0s
23:41	35°40.5'S	101°31.6'W	36°25.3'S	099°11.9'W	36°03.7'S	100°23.7'W	20	148	02m18.8s
23:42	35°13.8'S	099°57.6'W	35°54.4'S	097°29.0'W	35°35.0'S	098°45.5'W	18	147	02m15.5s
23:43	34°44.0'S	098°15.1'W	35°19.3'S	095°35.1'W	35°02.8'S	096°57.8'W	16	145	02m11.9s
23:44	34°10.2'S	096°21.4'W	34°38.5'S	093°25.5'W	34°25.8'S	094°56.9'W	14	143	02m08.0s
23:45	33°30.8'S	094°11.7'W	33°48.8'S	090°51.2'W	33°41.9'S	092°36.5'W	12	141	02m03.5s
23:46	32°42.5'S	091°36.4'W	32°41.8'S	087°27.9'W	32°46.0'S	089°42.1'W	9	138	01m58.2s
23:47	31°36.7'S	088°09.7'W	-	-	31°20.5'S	085°21.4'W	5	133	01m50.6s
Limits	29°02.2'S	080°18.8'W	30°02.4'S	079°37.9'W	29°32.3'S	079°58.5'W	0	127	01m42.0s

ΔT = 66.8 s