

TABLE 4

PHYSICAL EPHEMERIS OF THE UMBRAL SHADOW  
TOTAL SOLAR ECLIPSE OF 2008 AUGUST 01

Universal Time	Central Line		Diameter Ratio	Eclipse Obscur.	Sun Alt °	Sun Azm °	Path Width km	Major Axis km	Minor Axis km	Umbra Veloc. km/s	Central Durat.
	Latitude	Longitude									
09:22.6	68°16.9'N	103°08.2'W	1.0299	1.0607	0.0	34.0	205.7	-	101.1	-	01m29.9s
09:24	73°56.9'N	091°31.6'W	1.0320	1.0650	6.8	45.3	213.4	924.4	108.0	4.654	01m40.5s
09:27	78°17.2'N	078°27.6'W	1.0336	1.0684	12.1	59.0	217.4	545.6	113.3	2.600	01m49.3s
09:30	80°58.4'N	064°37.5'W	1.0346	1.0705	15.5	73.7	219.4	437.6	116.6	2.017	01m55.3s
09:33	82°44.3'N	047°29.0'W	1.0354	1.0721	18.3	91.8	220.8	381.9	119.2	1.717	02m00.1s
09:36	83°38.8'N	026°44.8'W	1.0361	1.0735	20.5	113.7	221.8	347.0	121.3	1.528	02m04.2s
09:39	83°42.9'N	005°16.0'W	1.0366	1.0746	22.5	136.3	222.7	322.7	123.1	1.397	02m07.8s
09:42	83°06.6'N	012°59.5'E	1.0371	1.0756	24.2	155.9	223.5	304.8	124.7	1.299	02m10.9s
09:45	82°05.2'N	026°41.0'E	1.0375	1.0765	25.7	170.9	224.3	291.0	126.0	1.223	02m13.6s
09:48	80°50.6'N	036°36.7'E	1.0379	1.0772	27.0	182.2	225.1	280.2	127.1	1.163	02m16.0s
09:51	79°29.8'N	043°56.1'E	1.0382	1.0778	28.2	190.9	225.9	271.4	128.1	1.114	02m18.2s
09:54	78°06.2'N	049°31.0'E	1.0385	1.0784	29.2	198.0	226.8	264.3	129.0	1.073	02m20.1s
09:57	76°41.6'N	053°55.0'E	1.0387	1.0789	30.2	203.9	227.7	258.5	129.7	1.039	02m21.7s
10:00	75°17.1'N	057°29.8'E	1.0389	1.0793	30.9	209.0	228.7	253.7	130.4	1.010	02m23.1s
10:03	73°52.9'N	060°29.4'E	1.0390	1.0796	31.6	213.6	229.7	249.8	130.9	0.986	02m24.3s
10:06	72°29.5'N	063°03.1'E	1.0392	1.0799	32.2	217.7	230.7	246.6	131.3	0.966	02m25.3s
10:09	71°06.7'N	065°17.3'E	1.0393	1.0801	32.7	221.6	231.9	244.1	131.6	0.949	02m26.0s
10:12	69°44.7'N	067°16.6'E	1.0394	1.0803	33.0	225.2	233.0	242.1	131.9	0.935	02m26.6s
10:15	68°23.3'N	069°04.3'E	1.0394	1.0804	33.3	228.6	234.3	240.7	132.0	0.923	02m27.0s
10:18	67°02.5'N	070°43.0'E	1.0394	1.0804	33.4	231.9	235.5	239.8	132.1	0.914	02m27.1s
10:21	65°42.3'N	072°14.7'E	1.0394	1.0804	33.5	235.1	236.9	239.4	132.1	0.908	02m27.1s
10:24	64°22.4'N	073°40.7'E	1.0394	1.0803	33.5	238.1	238.2	239.5	132.0	0.903	02m26.9s
10:27	63°02.8'N	075°02.5'E	1.0393	1.0802	33.3	241.1	239.6	240.1	131.8	0.901	02m26.5s
10:30	61°43.5'N	076°21.0'E	1.0392	1.0800	33.1	244.0	241.1	241.1	131.5	0.902	02m25.9s
10:33	60°24.1'N	077°37.2'E	1.0391	1.0798	32.8	246.8	242.5	242.7	131.2	0.904	02m25.2s
10:36	59°04.7'N	078°51.9'E	1.0390	1.0795	32.3	249.5	244.0	244.8	130.8	0.910	02m24.2s
10:39	57°45.1'N	080°05.8'E	1.0388	1.0792	31.8	252.2	245.4	247.6	130.2	0.918	02m23.0s
10:42	56°25.1'N	081°19.7'E	1.0386	1.0788	31.1	254.8	246.8	251.0	129.6	0.930	02m21.7s
10:45	55°04.5'N	082°34.3'E	1.0384	1.0783	30.3	257.4	248.1	255.3	128.9	0.946	02m20.1s
10:48	53°43.1'N	083°50.3'E	1.0382	1.0778	29.5	260.0	249.3	260.6	128.0	0.967	02m18.3s
10:51	52°20.8'N	085°08.6'E	1.0379	1.0771	28.4	262.5	250.3	267.1	127.0	0.994	02m16.3s
10:54	50°57.1'N	086°30.2'E	1.0375	1.0764	27.3	264.9	251.1	275.0	125.9	1.029	02m14.1s
10:57	49°31.6'N	087°56.3'E	1.0371	1.0756	26.0	267.4	251.6	284.9	124.7	1.074	02m11.6s
11:00	48°04.0'N	089°28.2'E	1.0367	1.0747	24.5	269.8	251.6	297.5	123.3	1.132	02m08.8s
11:03	46°33.5'N	091°08.1'E	1.0362	1.0737	22.9	272.2	250.9	313.8	121.7	1.211	02m05.7s
11:06	44°59.2'N	092°58.8'E	1.0356	1.0725	21.0	274.7	249.5	335.7	119.8	1.319	02m02.2s
11:09	43°19.5'N	095°04.7'E	1.0350	1.0711	18.8	277.2	246.9	366.8	117.7	1.479	01m58.2s
11:12	41°31.9'N	097°33.5'E	1.0342	1.0695	16.1	279.8	242.6	415.3	115.0	1.734	01m53.6s
11:15	39°30.8'N	100°41.5'E	1.0331	1.0674	12.9	282.7	235.8	504.6	111.7	2.216	01m47.9s
11:18	36°59.6'N	105°18.3'E	1.0317	1.0644	8.1	286.3	223.6	760.8	107.0	3.632	01m40.2s
11:20.0	33°29.4'N	113°53.5'E	1.0292	1.0592	0.0	291.6	199.6	-	98.8	-	01m27.9s