

Astronomical Applications Dept.
U.S. Naval Observatory
Washington, DC 20392-5420

BIG TIMBER, MONTANA

⁰ ⁰
W109 57, N45 50

Altitude and Azimuth of the Sun
Jul 8, 2017

Mountain Daylight Time

		Altitude	Azimuth (E of N)
h	m	o	o
04:20		-11.0	40.7
04:30		-9.9	42.7
04:40		-8.7	44.7
04:50		-7.4	46.7
05:00		-6.2	48.6
05:10		-4.8	50.5
05:20		-3.5	52.4
05:30		-2.1	54.2
05:40		-0.1	56.0
05:50		1.2	57.8
06:00		2.6	59.6
06:10		4.0	61.3
06:20		5.5	63.1
06:30		7.0	64.8
06:40		8.6	66.5
06:50		10.2	68.2
07:00		11.8	69.8
07:10		13.5	71.5
07:20		15.1	73.2
07:30		16.8	74.8
07:40		18.5	76.5
07:50		20.1	78.1
08:00		21.9	79.8
08:10		23.6	81.5
08:20		25.3	83.2
08:30		27.0	84.9
08:40		28.8	86.6
08:50		30.5	88.3
09:00		32.2	90.1
09:10		34.0	91.9
09:20		35.7	93.8
09:30		37.4	95.7
09:40		39.2	97.6
09:50		40.9	99.7
10:00		42.6	101.7
10:10		44.3	103.9
10:20		46.0	106.1
10:30		47.6	108.5
10:40		49.3	110.9
10:50		50.9	113.5

11:00	52.5	116.2
11:10	54.0	119.1
11:20	55.5	122.2
11:30	57.0	125.4
11:40	58.3	128.9
11:50	59.7	132.6
12:00	60.9	136.5
12:10	62.0	140.7
12:20	63.1	145.2
12:30	64.0	149.9
12:40	64.8	154.9
12:50	65.5	160.2
13:00	66.0	165.7
13:10	66.4	171.4
13:20	66.5	177.1
13:30	66.5	182.9
13:40	66.4	188.7
13:50	66.0	194.4
14:00	65.5	199.8
14:10	64.8	205.1
14:20	64.0	210.1
14:30	63.1	214.9
14:40	62.0	219.3
14:50	60.9	223.5
15:00	59.6	227.5
15:10	58.3	231.1
15:20	56.9	234.6
15:30	55.5	237.8
15:40	54.0	240.9
15:50	52.4	243.7
16:00	50.9	246.5
16:10	49.2	249.0
16:20	47.6	251.5
16:30	45.9	253.8
16:40	44.3	256.1
16:50	42.6	258.2
17:00	40.9	260.3
17:10	39.1	262.3
17:20	37.4	264.3
17:30	35.7	266.2
17:40	33.9	268.0
17:50	32.2	269.9
18:00	30.4	271.6
18:10	28.7	273.4
18:20	27.0	275.1
18:30	25.2	276.8
18:40	23.5	278.5
18:50	21.8	280.2
19:00	20.1	281.8
19:10	18.4	283.5
19:20	16.7	285.2
19:30	15.0	286.8
19:40	13.4	288.5
19:50	11.8	290.1
20:00	10.1	291.8
20:10	8.6	293.5
20:20	7.0	295.2
20:30	5.4	296.9
20:40	4.0	298.6
20:50	2.5	300.4

21:00	1.1	302.1
21:10	-0.1	303.9
21:20	-2.1	305.8
21:30	-3.5	307.6
21:40	-4.9	309.5
21:50	-6.2	311.4
22:00	-7.5	313.3
22:10	-8.8	315.3
22:20	-10.0	317.3
22:30	-11.1	319.3

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