Solar Almanac 2022 — Sun GHA & Decl (UT) — 01 Jan to 20 Jan

UT	01 Jan	02 Jan	03 Jan	04 Jan	05 Jan	06 Jan	07 Jan	08 Jan	09 Jan	10 Jan
00	179° 10,5' 23° 01,2' S	179° 03,4' 22° 56,1' S	178° 56,4' 22° 50,6' S	178° 49,5' 22° 44,7' S	178° 42,7' 22° 38,2' S	178° 36,0' 22° 31,4' S	178° 29,4' 22° 24,1' S	178° 22,9' 22° 16,3' S	178° 16,6' 22° 08,1' S	178° 10,4' 21° 59,5' S
01	194° 10,2' 23° 01,0' S	194° 03,1' 22° 55,9' S	193° 56,1' 22° 50,4' S	193° 49,2' 22° 44,4' S	193° 42,4' 22° 38,0' S	193° 35,7' 22° 31,1' S	193° 29,1' 22° 23,7' S	193° 22,7' 22° 16,0' S	193° 16,4' 22° 07,7' S	193° 10,2' 21° 59,1' S
02	209° 09,9' 23° 00,8' S	209° 02,8' 22° 55,7' S	208° 55,8' 22° 50,2' S	208° 48,9' 22° 44,1' S	208° 42,1' 22° 37,7' S	208° 35,4' 22° 30,8' S	208° 28,8' 22° 23,4' S	208° 22,4' 22° 15,6' S	208° 16,1' 22° 07,4' S	208° 09,9' 21° 58,7' S
03	224° 09,6' 23° 00,6' S	224° 02,5' 22° 55,5' S	223° 55,5' 22° 49,9' S	223° 48,6' 22° 43,9' S	223° 41,8' 22° 37,4' S	223° 35,1' 22° 30,5' S	223° 28,6' 22° 23,1' S	223° 22,1' 22° 15,3' S	223° 15,8' 22° 07,0' S	223° 09,7' 21° 58,4' S
04	239° 09,3' 23° 00,4' S	239° 02,2' 22° 55,3' S	238° 55,2' 22° 49,7' S	238° 48,3' 22° 43,6' S	238° 41,5' 22° 37,1' S	238° 34,9' 22° 30,2' S	238° 28,3' 22° 22,8' S	238° 21,9' 22° 15,0' S	238° 15,6' 22° 06,7' S	238° 09,4' 21° 58,0' S
05	254° 09,0' 23° 00,2' S	254° 01,9' 22° 55,0' S	253° 54,9' 22° 49,4' S	253° 48,0' 22° 43,4' S	253° 41,3' 22° 36,8' S	253° 34,6' 22° 29,9' S	253° 28,0' 22° 22,5' S	253° 21,6' 22° 14,6' S	253° 15,3' 22° 06,3' S	253° 09,2' 21° 57,6' S
06	269° 08,7' 23° 00,0' S	269° 01,6' 22° 54,8' S	268° 54,6' 22° 49,2' S	268° 47,7' 22° 43,1' S	268° 41,0' 22° 36,6' S	268° 34,3' 22° 29,6' S	268° 27,8' 22° 22,2' S	268° 21,3' 22° 14,3' S	268° 15,1' 22° 06,0' S	268° 08,9' 21° 57,2' S
07	284° 08,4' 22° 59,8' S	284° 01,3' 22° 54,6' S	283° 54,3' 22° 48,9' S	283° 47,5' 22° 42,8' S	283° 40,7' 22° 36,3' S	283° 34,0' 22° 29,3' S	283° 27,5' 22° 21,8' S	283° 21,1' 22° 13,9' S	283° 14,8' 22° 05,6' S	283° 08,7' 21° 56,9' S
08	299° 08,1' 22° 59,6' S	299° 01,0' 22° 54,4' S	298° 54,1' 22° 48,7' S	298° 47,2' 22° 42,6' S	298° 40,4' 22° 36,0' S	298° 33,8' 22° 29,0' S	298° 27,2' 22° 21,5' S	298° 20,8' 22° 13,6' S	298° 14,5' 22° 05,3' S	298° 08,4' 21° 56,5' S
09	314° 07,8' 22° 59,4' S	314° 00,7' 22° 54,1' S	313° 53,8' 22° 48,4' S	313° 46,9' 22° 42,3' S	313° 40,1' 22° 35,7' S	313° 33,5' 22° 28,7' S	313° 26,9' 22° 21,2' S	313° 20,5' 22° 13,3' S	313° 14,3' 22° 04,9' S	313° 08,2' 21° 56,1' S
10	329° 07,5' 22° 59,2' S	329° 00,4' 22° 53,9' S	328° 53,5' 22° 48,2' S	328° 46,6' 22° 42,0' S	328° 39,9' 22° 35,4' S	328° 33,2' 22° 28,4' S	328° 26,7' 22° 20,9' S	328° 20,3' 22° 12,9' S	328° 14,0' 22° 04,6' S	328° 07,9' 21° 55,7' S
11	344° 07,2' 22° 58,9' S	344° 00,1' 22° 53,7' S	343° 53,2' 22° 48,0' S	343° 46,3' 22° 41,8' S	343° 39,6' 22° 35,1' S	343° 32,9' 22° 28,1' S	343° 26,4' 22° 20,6' S	343° 20,0' 22° 12,6' S	343° 13,8' 22° 04,2' S	343° 07,6' 21° 55,4' S
12	359° 06,9' 22° 58,7' S	358° 59,9' 22° 53,4' S	358° 52,9' 22° 47,7' S	358° 46,0' 22° 41,5' S	358° 39,3' 22° 34,9' S	358° 32,7' 22° 27,8' S	358° 26,1' 22° 20,2' S	358° 19,8' 22° 12,3' S	358° 13,5' 22° 03,8' S	358° 07,4' 21° 55,0' S
13	014° 06,6' 22° 58,5' S	013° 59,6' 22° 53,2' S	013° 52,6' 22° 47,5' S	013° 45,8' 22° 41,2' S	013° 39,0' 22° 34,6' S	013° 32,4' 22° 27,5' S	013° 25,9' 22° 19,9' S	013° 19,5' 22° 11,9' S	013° 13,2' 22° 03,5' S	013° 07,1' 21° 54,6' S
14	029° 06,3' 22° 58,3' S	028° 59,3' 22° 53,0' S	028° 52,3' 22° 47,2' S	028° 45,5' 22° 41,0' S	028° 38,7' 22° 34,3' S	028° 32,1' 22° 27,2' S	028° 25,6' 22° 19,6' S	028° 19,2' 22° 11,6' S	028° 13,0' 22° 03,1' S	028° 06,9' 21° 54,2' S
15	044° 06,0' 22° 58,1' S	043° 59,0' 22° 52,8' S	043° 52,0' 22° 47,0' S	043° 45,2' 22° 40,7' S	043° 38,5' 22° 34,0' S	043° 31,8' 22° 26,8' S	043° 25,3' 22° 19,3' S	043° 19,0' 22° 11,2' S	043° 12,7' 22° 02,8' S	043° 06,6' 21° 53,9' S
16	059° 05,7' 22° 57,9' S	058° 58,7' 22° 52,5' S	058° 51,8' 22° 46,7' S	058° 44,9' 22° 40,4' S	058° 38,2' 22° 33,7' S	058° 31,6' 22° 26,5' S	058° 25,1' 22° 18,9' S	058° 18,7' 22° 10,9' S	058° 12,5' 22° 02,4' S	058° 06,4' 21° 53,5' S
17	074° 05,4' 22° 57,7' S	073° 58,4' 22° 52,3' S	073° 51,5' 22° 46,4' S	073° 44,6' 22° 40,2' S	073° 37,9' 22° 33,4' S	073° 31,3' 22° 26,2' S	073° 24,8' 22° 18,6' S	073° 18,4' 22° 10,5' S	073° 12,2' 22° 02,0' S	073° 06,1' 21° 53,1' S
18	089° 05,1' 22° 57,5' S	088° 58,1' 22° 52,1' S	088° 51,2' 22° 46,2' S	088° 44,3' 22° 39,9' S	088° 37,6' 22° 33,1' S	088° 31,0' 22° 25,9' S	088° 24,5' 22° 18,3' S	088° 18,2' 22° 10,2' S	088° 12,0' 22° 01,7' S	088° 05,9' 21° 52,7' S
19	104° 04,8' 22° 57,2' S	103° 57,8' 22° 51,8' S	103° 50,9' 22° 45,9' S	103° 44,1' 22° 39,6' S	103° 37,3' 22° 32,8' S	103° 30,7' 22° 25,6' S	103° 24,3' 22° 17,9' S	103° 17,9' 22° 09,8' S	103° 11,7' 22° 01,3' S	103° 05,6' 21° 52,3' S
20	119° 04,5' 22° 57,0' S	118° 57,5' 22° 51,6' S	118° 50,6' 22° 45,7' S	118° 43,8' 22° 39,3' S	118° 37,1' 22° 32,5' S	118° 30,5' 22° 25,3' S	118° 24,0' 22° 17,6' S	118° 17,7' 22° 09,5' S	118° 11,5' 22° 00,9' S	118° 05,4' 21° 51,9' S
21	134° 04,2' 22° 56,8' S	133° 57,2' 22° 51,3' S	133° 50,3' 22° 45,4' S	133° 43,5' 22° 39,1' S	133° 36,8' 22° 32,3' S	133° 30,2' 22° 25,0' S	133° 23,7' 22° 17,3' S	133° 17,4' 22° 09,1' S	133° 11,2' 22° 00,6' S	133° 05,1' 21° 51,6' S
22	149° 04,0' 22° 56,6' S	148° 56,9' 22° 51,1' S	148° 50,0' 22° 45,2' S	148° 43,2' 22° 38,8' S	148° 36,5' 22° 32,0' S	148° 29,9' 22° 24,7' S	148° 23,5' 22° 17,0' S	148° 17,1' 22° 08,8' S	148° 10,9' 22° 00,2' S	148° 04,9' 21° 51,2' S
23	164° 03,7' 22° 56,4' S	163° 56,7' 22° 50,9' S	163° 49,7' 22° 44,9' S	163° 42,9' 22° 38,5' S	163° 36,2' 22° 31,7' S	163° 29,7' 22° 24,4' S	163° 23,2' 22° 16,6' S	163° 16,9' 22° 08,4' S	163° 10,7' 21° 59,8' S	163° 04,6' 21° 50,8' S

UT	11 Jan	12 Jan	13 Jan	14 Jan	15 Jan	16 Jan	17 Jan	18 Jan	19 Jan	20 Jan
00	178° 04,4' 21° 50,4' S	177° 58,5' 21° 40,9' S	177° 52,8' 21° 31,0' S	177° 47,2' 21° 20,7' S	177° 41,8' 21° 10,0' S	177° 36,6' 20° 58,8' S	177° 31,5' 20° 47,3' S	177° 26,6' 20° 35,4' S	177° 21,9' 20° 23,1' S	177° 17,4' 20° 10,4' S
01	193° 04,1' 21° 50,0' S	192° 58,3' 21° 40,5' S	192° 52,5' 21° 30,6' S	192° 47,0' 21° 20,3' S	192° 41,6' 21° 09,5' S	192° 36,4' 20° 58,4' S	192° 31,3' 20° 46,8' S	192° 26,4' 20° 34,9' S	192° 21,7' 20° 22,5' S	192° 17,2' 20° 09,8' S
02	208° 03,9' 21° 49,6' S	207° 58,0' 21° 40,1' S	207° 52,3' 21° 30,2' S	207° 46,8' 21° 19,8' S	207° 41,4' 21° 09,1' S	207° 36,1' 20° 57,9' S	207° 31,1' 20° 46,3' S	207° 26,2' 20° 34,4' S	207° 21,5' 20° 22,0' S	207° 17,0' 20° 09,3' S
03	223° 03,7' 21° 49,2' S	222° 57,8' 21° 39,7' S	222° 52,1' 21° 29,8' S	222° 46,5' 21° 19,4' S	222° 41,1' 21° 08,6' S	222° 35,9' 20° 57,4' S	222° 30,9' 20° 45,8' S	222° 26,0' 20° 33,9' S	222° 21,3' 20° 21,5' S	222° 16,8' 20° 08,7' S
04	238° 03,4' 21° 48,9' S	237° 57,5' 21° 39,3' S	237° 51,8' 21° 29,3' S	237° 46,3' 21° 18,9' S	237° 40,9' 21° 08,1' S	237° 35,7' 20° 56,9' S	237° 30,7' 20° 45,3' S	237° 25,8' 20° 33,4' S	237° 21,1' 20° 21,0' S	237° 16,6' 20° 08,2' S
05	253° 03,2' 21° 48,5' S	252° 57,3' 21° 38,9' S	252° 51,6' 21° 28,9' S	252° 46,1' 21° 18,5' S	252° 40,7' 21° 07,7' S	252° 35,5' 20° 56,5' S	252° 30,5' 20° 44,9' S	252° 25,6' 20° 32,8' S	252° 21,0' 20° 20,4' S	252° 16,5' 20° 07,7' S
06	268° 02,9' 21° 48,1' S	267° 57,1' 21° 38,5' S	267° 51,4' 21° 28,5' S	267° 45,8' 21° 18,1' S	267° 40,5' 21° 07,2' S	267° 35,3' 20° 56,0' S	267° 30,3' 20° 44,4' S	267° 25,4' 20° 32,3' S	267° 20,8' 20° 19,9' S	267° 16,3' 20° 07,1' S
07	283° 02,7' 21° 47,7' S	282° 56,8' 21° 38,1' S	282° 51,1' 21° 28,1' S	282° 45,6' 21° 17,6' S	282° 40,3' 21° 06,8' S	282° 35,1' 20° 55,5' S	282° 30,1' 20° 43,9' S	282° 25,2' 20° 31,8' S	282° 20,6' 20° 19,4' S	282° 16,1' 20° 06,6' S
08	298° 02,4' 21° 47,3' S	297° 56,6' 21° 37,7' S	297° 50,9' 21° 27,6' S	297° 45,4' 21° 17,2' S	297° 40,0' 21° 06,3' S	297° 34,9' 20° 55,0' S	297° 29,9' 20° 43,4' S	297° 25,0' 20° 31,3' S	297° 20,4' 20° 18,9' S	297° 15,9' 20° 06,0' S
09	313° 02,2' 21° 46,9' S	312° 56,3' 21° 37,3' S	312° 50,7' 21° 27,2' S	312° 45,2' 21° 16,7' S	312° 39,8' 21° 05,8' S	312° 34,7' 20° 54,6' S	312° 29,7' 20° 42,9' S	312° 24,8' 20° 30,8' S	312° 20,2' 20° 18,3' S	312° 15,7' 20° 05,5' S
10	328° 01,9' 21° 46,5' S	327° 56,1' 21° 36,9' S	327° 50,4' 21° 26,8' S	327° 44,9' 21° 16,3' S	327° 39,6' 21° 05,4' S	327° 34,4' 20° 54,1' S	327° 29,4' 20° 42,4' S	327° 24,6' 20° 30,3' S	327° 20,0' 20° 17,8' S	327° 15,5' 20° 05,0' S
11	343° 01,7' 21° 46,1' S	342° 55,9' 21° 36,4' S	342° 50,2' 21° 26,3' S	342° 44,7' 21° 15,8' S	342° 39,4' 21° 04,9' S	342° 34,2' 20° 53,6' S	342° 29,2' 20° 41,9' S	342° 24,4' 20° 29,8' S	342° 19,8' 20° 17,3' S	342° 15,4' 20° 04,4' S
12	358° 01,4' 21° 45,7' S	357° 55,6' 21° 36,0' S	357° 50,0' 21° 25,9' S	357° 44,5' 21° 15,4' S	357° 39,2' 21° 04,5' S	357° 34,0' 20° 53,1' S	357° 29,0' 20° 41,4' S	357° 24,2' 20° 29,3' S	357° 19,6' 20° 16,8' S	357° 15,2' 20° 03,9' S
13	013° 01,2' 21° 45,3' S	012° 55,4' 21° 35,6' S	012° 49,7' 21° 25,5' S	012° 44,3' 21° 14,9' S	012° 39,0' 21° 04,0' S	012° 33,8' 20° 52,6' S	012° 28,8' 20° 40,9' S	012° 24,0' 20° 28,8' S	012° 19,4' 20° 16,2' S	012° 15,0' 20° 03,3' S
14	028° 00,9' 21° 44,9' S	027° 55,2' 21° 35,2' S	027° 49,5' 21° 25,1' S	027° 44,0' 21° 14,5' S	027° 38,7' 21° 03,5' S	027° 33,6' 20° 52,2' S	027° 28,6' 20° 40,4' S	027° 23,9' 20° 28,2' S	027° 19,2' 20° 15,7' S	027° 14,8' 20° 02,8' S
15	043° 00,7' 21° 44,5' S	042° 54,9' 21° 34,8' S	042° 49,3' 21° 24,6' S	042° 43,8' 21° 14,0' S	042° 38,5' 21° 03,1' S	042° 33,4' 20° 51,7' S	042° 28,4' 20° 39,9' S	042° 23,7' 20° 27,7' S	042° 19,1' 20° 15,2' S	042° 14,6' 20° 02,2' S
16	058° 00,5' 21° 44,1' S	057° 54,7' 21° 34,4' S	057° 49,1' 21° 24,2' S	057° 43,6' 21° 13,6' S	057° 38,3' 21° 02,6' S	057° 33,2' 20° 51,2' S	057° 28,2' 20° 39,4' S	057° 23,5' 20° 27,2' S	057° 18,9' 20° 14,6' S	057° 14,5' 20° 01,7' S
17	073° 00,2' 21° 43,7' S	072° 54,4' 21° 34,0' S	072° 48,8' 21° 23,8' S	072° 43,4' 21° 13,1' S	072° 38,1' 21° 02,1' S	072° 33,0' 20° 50,7' S	072° 28,0' 20° 38,9' S	072° 23,3' 20° 26,7' S	072° 18,7' 20° 14,1' S	072° 14,3' 20° 01,1' S
18	088° 00,0' 21° 43,3' S	087° 54,2' 21° 33,5' S	087° 48,6' 21° 23,3' S	087° 43,1' 21° 12,7' S	087° 37,9' 21° 01,7' S	087° 32,8' 20° 50,2' S	087° 27,8' 20° 38,4' S	087° 23,1' 20° 26,2' S	087° 18,5' 20° 13,6' S	087° 14,1' 20° 00,6' S
19	102° 59,7' 21° 42,9' S	102° 54,0' 21° 33,1' S	102° 48,4' 21° 22,9' S	102° 42,9' 21° 12,2' S	102° 37,6' 21° 01,2' S	102° 32,5' 20° 49,7' S	102° 27,6' 20° 37,9' S	102° 22,9' 20° 25,7' S	102° 18,3' 20° 13,0' S	102° 13,9' 20° 00,0' S
20	117° 59,5' 21° 42,5' S	117° 53,7' 21° 32,7' S	117° 48,1' 21° 22,5' S	117° 42,7' 21° 11,8' S	117° 37,4' 21° 00,7' S	117° 32,3' 20° 49,3' S	117° 27,4' 20° 37,4' S	117° 22,7' 20° 25,1' S	117° 18,1' 20° 12,5' S	117° 13,7' 19° 59,5' S
21	132° 59,2' 21° 42,1' S	132° 53,5' 21° 32,3' S	132° 47,9' 21° 22,0' S	132° 42,5' 21° 11,3' S	132° 37,2' 21° 00,3' S	132° 32,1' 20° 48,8' S	132° 27,2' 20° 36,9' S	132° 22,5' 20° 24,6' S	132° 17,9' 20° 12,0' S	132° 13,6' 19° 58,9' S
22	147° 59,0' 21° 41,7' S	147° 53,3' 21° 31,9' S	147° 47,7' 21° 21,6' S	147° 42,3' 21° 10,9' S	147° 37,0' 20° 59,8' S	147° 31,9' 20° 48,3' S	147° 27,0' 20° 36,4' S	147° 22,3' 20° 24,1' S	147° 17,8' 20° 11,4' S	147° 13,4' 19° 58,4' S
23	162° 58,8' 21° 41,3' S	162° 53,0' 21° 31,4' S	162° 47,4' 21° 21,1' S	162° 42,0' 21° 10,4' S	162° 36,8' 20° 59,3' S	162° 31,7' 20° 47,8' S	162° 26,8' 20° 35,9' S	162° 22,1' 20° 23,6' S	162° 17,6' 20° 10,9' S	162° 13,2' 19° 57,8' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 21 Jan to 09 Feb

UT	21 Jan	22 Jan	23 Jan	24 Jan	25 Jan	26 Jan	27 Jan	28 Jan	29 Jan	30 Jan
00	177° 13,0' 19° 57,3' S	177° 08,9' 19° 43,8' S	177° 04,9' 19° 30,0' S	177° 01,1' 19° 15,8' S	176° 57,5' 19° 01,3' S	176° 54,1' 18° 46,4' S	176° 50,9' 18° 31,2' S	176° 47,9' 18° 15,6' S	176° 45,1' 17° 59,7' S	176° 42,5' 17° 43,5' S
01	192° 12,9' 19° 56,7' S	192° 08,7' 19° 43,3' S	192° 04,7' 19° 29,4' S	192° 01,0' 19° 15,2' S	191° 57,4' 19° 00,7' S	191° 54,0' 18° 45,8' S	191° 50,8' 18° 30,5' S	191° 47,8' 18° 15,0' S	191° 45,0' 17° 59,0' S	191° 42,4' 17° 42,8' S
02	207° 12,7' 19° 56,2' S	207° 08,5' 19° 42,7' S	207° 04,6' 19° 28,8' S	207° 00,8' 19° 14,6' S	206° 57,2' 19° 00,1' S	206° 53,9' 18° 45,2' S	206° 50,7' 18° 29,9' S	206° 47,7' 18° 14,3' S	206° 44,9' 17° 58,4' S	206° 42,3' 17° 42,1' S
03	222° 12,5' 19° 55,6' S	222° 08,4' 19° 42,1' S	222° 04,4' 19° 28,3' S	222° 00,7' 19° 14,0' S	221° 57,1' 18° 59,5' S	221° 53,7' 18° 44,5' S	221° 50,5' 18° 29,3' S	221° 47,6' 18° 13,6' S	221° 44,8' 17° 57,7' S	221° 42,2' 17° 41,4' S
04	237° 12,3' 19° 55,1' S	237° 08,2' 19° 41,6' S	237° 04,3' 19° 27,7' S	237° 00,5' 19° 13,4' S	236° 57,0' 18° 58,8' S	236° 53,6' 18° 43,9' S	236° 50,4' 18° 28,6' S	236° 47,4' 18° 13,0' S	236° 44,7' 17° 57,0' S	236° 42,1' 17° 40,8' S
05	252° 12,2' 19° 54,5' S	252° 08,0' 19° 41,0' S	252° 04,1' 19° 27,1' S	252° 00,4' 19° 12,8' S	251° 56,8' 18° 58,2' S	251° 53,5' 18° 43,3' S	251° 50,3' 18° 28,0' S	251° 47,3' 18° 12,3' S	251° 44,6' 17° 56,4' S	251° 42,0' 17° 40,1' S
06	267° 12,0' 19° 54,0' S	267° 07,9' 19° 40,4' S	267° 03,9' 19° 26,5' S	267° 00,2' 19° 12,2' S	266° 56,7' 18° 57,6' S	266° 53,3' 18° 42,6' S	266° 50,2' 18° 27,3' S	266° 47,2' 18° 11,7' S	266° 44,4' 17° 55,7' S	266° 41,9' 17° 39,4' S
07	282° 11,8' 19° 53,4' S	282° 07,7' 19° 39,8' S	282° 03,8' 19° 25,9' S	282° 00,1' 19° 11,6' S	281° 56,5' 18° 57,0' S	281° 53,2' 18° 42,0' S	281° 50,0' 18° 26,7' S	281° 47,1' 18° 11,0' S	281° 44,3' 17° 55,0' S	281° 41,8' 17° 38,7' S
08	297° 11,6' 19° 52,8' S	297° 07,5' 19° 39,3' S	297° 03,6' 19° 25,3' S	296° 59,9' 19° 11,0' S	296° 56,4' 18° 56,4' S	296° 53,0' 18° 41,4' S	296° 49,9' 18° 26,0' S	296° 47,0' 18° 10,4' S	296° 44,2' 17° 54,3' S	296° 41,7' 17° 38,0' S
09	312° 11,5' 19° 52,3' S	312° 07,4' 19° 38,7' S	312° 03,5' 19° 24,7' S	311° 59,8' 19° 10,4' S	311° 56,2' 18° 55,8' S	311° 52,9' 18° 40,7' S	311° 49,8' 18° 25,4' S	311° 46,8' 18° 09,7' S	311° 44,1' 17° 53,7' S	311° 41,6' 17° 37,3' S
10	327° 11,3' 19° 51,7' S	327° 07,2' 19° 38,1' S	327° 03,3' 19° 24,1' S	326° 59,6' 19° 09,8' S	326° 56,1' 18° 55,1' S	326° 52,8' 18° 40,1' S	326° 49,7' 18° 24,7' S	326° 46,7' 18° 09,0' S	326° 44,0' 17° 53,0' S	326° 41,5' 17° 36,6' S
11	342° 11,1' 19° 51,2' S	342° 07,0' 19° 37,5' S	342° 03,1' 19° 23,6' S	341° 59,5' 19° 09,2' S	341° 56,0' 18° 54,5' S	341° 52,6' 18° 39,5' S	341° 49,5' 18° 24,1' S	341° 46,6' 18° 08,4' S	341° 43,9' 17° 52,3' S	341° 41,4' 17° 36,0' S
12	357° 10,9' 19° 50,6' S	357° 06,9' 19° 37,0' S	357° 03,0' 19° 23,0' S	356° 59,3' 19° 08,6' S	356° 55,8' 18° 53,9' S	356° 52,5' 18° 38,8' S	356° 49,4' 18° 23,4' S	356° 46,5' 18° 07,7' S	356° 43,8' 17° 51,6' S	356° 41,3' 17° 35,3' S
13	012° 10,8' 19° 50,0' S	012° 06,7' 19° 36,4' S	012° 02,8' 19° 22,4' S	011° 59,2' 19° 08,0' S	011° 55,7' 18° 53,3' S	011° 52,4' 18° 38,2' S	011° 49,3' 18° 22,8' S	011° 46,4' 18° 07,0' S	011° 43,7' 17° 51,0' S	011° 41,2' 17° 34,6' S
14	027° 10,6' 19° 49,5' S	027° 06,5' 19° 35,8' S	027° 02,7' 19° 21,8' S	026° 59,0' 19° 07,4' S	026° 55,5' 18° 52,7' S	026° 52,2' 18° 37,6' S	026° 49,2' 18° 22,1' S	026° 46,3' 18° 06,4' S	026° 43,6' 17° 50,3' S	026° 41,1' 17° 33,9' S
15	042° 10,4' 19° 48,9' S	042° 06,4' 19° 35,2' S	042° 02,5' 19° 21,2' S	041° 58,9' 19° 06,8' S	041° 55,4' 18° 52,0' S	041° 52,1' 18° 36,9' S	041° 49,0' 18° 21,5' S	041° 46,1' 18° 05,7' S	041° 43,5' 17° 49,6' S	041° 41,0' 17° 33,2' S
16	057° 10,2' 19° 48,4' S	057° 06,2' 19° 34,7' S	057° 02,4' 19° 20,6' S	056° 58,7' 19° 06,2' S	056° 55,2' 18° 51,4' S	056° 52,0' 18° 36,3' S	056° 48,9' 18° 20,8' S	056° 46,0' 18° 05,1' S	056° 43,4' 17° 48,9' S	056° 40,9' 17° 32,5' S
17	072° 10,1' 19° 47,8' S	072° 06,0' 19° 34,1' S	072° 02,2' 19° 20,0' S	071° 58,6' 19° 05,6' S	071° 55,1' 18° 50,8' S	071° 51,8' 18° 35,7' S	071° 48,8' 18° 20,2' S	071° 45,9' 18° 04,4' S	071° 43,2' 17° 48,3' S	071° 40,8' 17° 31,8' S
18	087° 09,9' 19° 47,2' S	087° 05,9' 19° 33,5' S	087° 02,1' 19° 19,4' S	086° 58,4' 19° 05,0' S	086° 55,0' 18° 50,2' S	086° 51,7' 18° 35,0' S	086° 48,7' 18° 19,5' S	086° 45,8' 18° 03,7' S	086° 43,1' 17° 47,6' S	086° 40,7' 17° 31,1' S
19	102° 09,7' 19° 46,7' S	102° 05,7' 19° 32,9' S	102° 01,9' 19° 18,8' S	101° 58,3' 19° 04,4' S	101° 54,8' 18° 49,5' S	101° 51,6' 18° 34,4' S	101° 48,5' 18° 18,9' S	101° 45,7' 18° 03,1' S	101° 43,0' 17° 46,9' S	101° 40,6' 17° 30,4' S
20	117° 09,6' 19° 46,1' S	117° 05,6' 19° 32,3' S	117° 01,7' 19° 18,2' S	116° 58,1' 19° 03,7' S	116° 54,7' 18° 48,9' S	116° 51,5' 18° 33,7' S	116° 48,4' 18° 18,2' S	116° 45,6' 18° 02,4' S	116° 42,9' 17° 46,2' S	116° 40,5' 17° 29,7' S
21	132° 09,4' 19° 45,5' S	132° 05,4' 19° 31,8' S	132° 01,6' 19° 17,6' S	131° 58,0' 19° 03,1' S	131° 54,6' 18° 48,3' S	131° 51,3' 18° 33,1' S	131° 48,3' 18° 17,6' S	131° 45,5' 18° 01,7' S	131° 42,8' 17° 45,5' S	131° 40,4' 17° 29,0' S
22	147° 09,2' 19° 45,0' S	147° 05,2' 19° 31,2' S	147° 01,4' 19° 17,0' S	146° 57,8' 19° 02,5' S	146° 54,4' 18° 47,7' S	146° 51,2' 18° 32,5' S	146° 48,2' 18° 16,9' S	146° 45,3' 18° 01,1' S	146° 42,7' 17° 44,9' S	146° 40,3' 17° 28,3' S
23	162° 09,0' 19° 44,4' S	162° 05,1' 19° 30,6' S	162° 01,3' 19° 16,4' S	161° 57,7' 19° 01,9' S	161° 54,3' 18° 47,0' S	161° 51,1' 18° 31,8' S	161° 48,0' 18° 16,3' S	161° 45,2' 18° 00,4' S	161° 42,6' 17° 44,2' S	161° 40,2' 17° 27,7' S

UT	31 Jan	01 Feb	02 Feb	03 Feb	04 Feb	05 Feb	06 Feb	07 Feb	08 Feb	09 Feb
00	176° 40,1' 17° 27,0' S	176° 37,9' 17° 10,1' S	176° 35,9' 16° 53,0' S	176° 34,1' 16° 35,5' S	176° 32,5' 16° 17,8' S	176° 31,1' 15° 59,8' S	176° 29,9' 15° 41,5' S	176° 29,0' 15° 22,9' S	176° 28,2' 15° 04,1' S	176° 27,6' 14° 45,0' S
01	191° 40,0' 17° 26,3' S	191° 37,8' 17° 09,4' S	191° 35,8' 16° 52,2' S	191° 34,0' 16° 34,8' S	191° 32,4' 16° 17,0' S	191° 31,1' 15° 59,0' S	191° 29,9' 15° 40,7' S	191° 28,9' 15° 22,1' S	191° 28,2' 15° 03,3' S	191° 27,6' 14° 44,2' S
02	206° 39,9' 17° 25,6' S	206° 37,7' 17° 08,7' S	206° 35,7' 16° 51,5' S	206° 33,9' 16° 34,0' S	206° 32,4' 16° 16,3' S	206° 31,0' 15° 58,2' S	206° 29,8' 15° 39,9' S	206° 28,9' 15° 21,3' S	206° 28,1' 15° 02,5' S	206° 27,6' 14° 43,4' S
03	221° 39,8' 17° 24,9' S	221° 37,6' 17° 08,0' S	221° 35,7' 16° 50,8' S	221° 33,9' 16° 33,3' S	221° 32,3' 16° 15,5' S	221° 31,0' 15° 57,5' S	221° 29,8' 15° 39,1' S	221° 28,9' 15° 20,6' S	221° 28,1' 15° 01,7' S	221° 27,6' 14° 42,6' S
04	236° 39,7' 17° 24,2' S	236° 37,5' 17° 07,3' S	236° 35,6' 16° 50,1' S	236° 33,8' 16° 32,6' S	236° 32,3' 16° 14,8' S	236° 30,9' 15° 56,7' S	236° 29,8' 15° 38,4' S	236° 28,8' 15° 19,8' S	236° 28,1' 15° 00,9' S	236° 27,5' 14° 41,8' S
05	251° 39,6' 17° 23,5' S	251° 37,5' 17° 06,6' S	251° 35,5' 16° 49,3' S	251° 33,7' 16° 31,8' S	251° 32,2' 16° 14,0' S	251° 30,8' 15° 56,0' S	251° 29,7' 15° 37,6' S	251° 28,8' 15° 19,0' S	251° 28,1' 15° 00,1' S	251° 27,5' 14° 41,0' S
06	266° 39,5' 17° 22,8' S	266° 37,4' 17° 05,8' S	266° 35,4' 16° 48,6' S	266° 33,7' 16° 31,1' S	266° 32,1' 16° 13,3' S	266° 30,8' 15° 55,2' S	266° 29,7' 15° 36,8' S	266° 28,7' 15° 18,2' S	266° 28,0' 14° 59,3' S	266° 27,5' 14° 40,2' S
07	281° 39,4' 17° 22,1' S	281° 37,3' 17° 05,1' S	281° 35,3' 16° 47,9' S	281° 33,6' 16° 30,4' S	281° 32,1' 16° 12,5' S	281° 30,7' 15° 54,4' S	281° 29,6' 15° 36,1' S	281° 28,7' 15° 17,4' S	281° 28,0' 14° 58,5' S	281° 27,5' 14° 39,4' S
08	296° 39,3' 17° 21,4' S	296° 37,2' 17° 04,4' S	296° 35,3' 16° 47,2' S	296° 33,5' 16° 29,6' S	296° 32,0' 16° 11,8' S	296° 30,7' 15° 53,7' S	296° 29,6' 15° 35,3' S	296° 28,7' 15° 16,6' S	296° 28,0' 14° 57,7' S	296° 27,5' 14° 38,6' S
09	311° 39,2' 17° 20,7' S	311° 37,1' 17° 03,7' S	311° 35,2' 16° 46,4' S	311° 33,5' 16° 28,9' S	311° 32,0' 16° 11,0' S	311° 30,6' 15° 52,9' S	311° 29,5' 15° 34,5' S	311° 28,6' 15° 15,9' S	311° 28,0' 14° 56,9' S	311° 27,5' 14° 37,8' S
10	326° 39,2' 17° 20,0' S	326° 37,0' 17° 03,0' S	326° 35,1' 16° 45,7' S	326° 33,4' 16° 28,2' S	326° 31,9' 16° 10,3' S	326° 30,6' 15° 52,2' S	326° 29,5' 15° 33,8' S	326° 28,6' 15° 15,1' S	326° 27,9' 14° 56,2' S	326° 27,4' 14° 37,0' S
11	341° 39,1' 17° 19,3' S	341° 36,9' 17° 02,3' S	341° 35,0' 16° 45,0' S	341° 33,3' 16° 27,4' S	341° 31,8' 16° 09,5' S	341° 30,5' 15° 51,4' S	341° 29,5' 15° 33,0' S	341° 28,6' 15° 14,3' S	341° 27,9' 14° 55,4' S	341° 27,4' 14° 36,2' S
12	356° 39,0' 17° 18,6' S	356° 36,9' 17° 01,6' S	356° 35,0' 16° 44,3' S	356° 33,3' 16° 26,7' S	356° 31,8' 16° 08,8' S	356° 30,5' 15° 50,6' S	356° 29,4' 15° 32,2' S	356° 28,5' 15° 13,5' S	356° 27,9' 14° 54,6' S	356° 27,4' 14° 35,4' S
13	011° 38,9' 17° 17,9' S	011° 36,8' 17° 00,9' S	011° 34,9' 16° 43,5' S	011° 33,2' 16° 25,9' S	011° 31,7' 16° 08,0' S	011° 30,4' 15° 49,9' S	011° 29,4' 15° 31,4' S	011° 28,5' 15° 12,7' S	011° 27,9' 14° 53,8' S	011° 27,4' 14° 34,6' S
14	026° 38,8' 17° 17,2' S	026° 36,7' 17° 00,1' S	026° 34,8' 16° 42,8' S	026° 33,1' 16° 25,2' S	026° 31,7' 16° 07,3' S	026° 30,4' 15° 49,1' S	026° 29,3' 15° 30,7' S	026° 28,5' 15° 11,9' S	026° 27,8' 14° 53,0' S	026° 27,4' 14° 33,7' S
15	041° 38,7' 17° 16,5' S	041° 36,6' 16° 59,4' S	041° 34,7' 16° 42,1' S	041° 33,1' 16° 24,5' S	041° 31,6' 16° 06,5' S	041° 30,4' 15° 48,3' S	041° 29,3' 15° 29,9' S	041° 28,5' 15° 11,2' S	041° 27,8' 14° 52,2' S	041° 27,4' 14° 32,9' S
16	056° 38,6' 17° 15,8' S	056° 36,5' 16° 58,7' S	056° 34,7' 16° 41,4' S	056° 33,0' 16° 23,7' S	056° 31,6' 16° 05,8' S	056° 30,3' 15° 47,6' S	056° 29,3' 15° 29,1' S	056° 28,4' 15° 10,4' S	056° 27,8' 14° 51,4' S	056° 27,4' 14° 32,1' S
17	071° 38,5' 17° 15,1' S	071° 36,4' 16° 58,0' S	071° 34,6' 16° 40,6' S	071° 32,9' 16° 23,0' S	071° 31,5' 16° 05,0' S	071° 30,3' 15° 46,8' S	071° 29,2' 15° 28,3' S	071° 28,4' 15° 09,6' S	071° 27,8' 14° 50,6' S	071° 27,3' 14° 31,3' S
18	086° 38,4' 17° 14,3' S	086° 36,4' 16° 57,3' S	086° 34,5' 16° 39,9' S	086° 32,9' 16° 22,2' S	086° 31,4' 16° 04,3' S	086° 30,2' 15° 46,1' S	086° 29,2' 15° 27,6' S	086° 28,4' 15° 08,8' S	086° 27,7' 14° 49,8' S	086° 27,3' 14° 30,5' S
19	101° 38,3' 17° 13,6' S	101° 36,3' 16° 56,6' S	101° 34,4' 16° 39,2' S	101° 32,8' 16° 21,5' S	101° 31,4' 16° 03,5' S	101° 30,2' 15° 45,3' S	101° 29,1' 15° 26,8' S	101° 28,3' 15° 08,0' S	101° 27,7' 14° 49,0' S	101° 27,3' 14° 29,7' S
20	116° 38,2' 17° 12,9' S	116° 36,2' 16° 55,8' S	116° 34,4' 16° 38,4' S	116° 32,7' 16° 20,7' S	116° 31,3' 16° 02,8' S	116° 30,1' 15° 44,5' S	116° 29,1' 15° 26,0' S	116° 28,3' 15° 07,2' S	116° 27,7' 14° 48,2' S	116° 27,3' 14° 28,9' S
21	131° 38,2' 17° 12,2' S	131° 36,1' 16° 55,1' S	131° 34,3' 16° 37,7' S	131° 32,7' 16° 20,0' S	131° 31,3' 16° 02,0' S	131° 30,1' 15° 43,8' S	131° 29,1' 15° 25,2' S	131° 28,3' 15° 06,4' S	131° 27,7' 14° 47,4' S	131° 27,3' 14° 28,1' S
22	146° 38,1' 17° 11,5' S	146° 36,0' 16° 54,4' S	146° 34,2' 16° 37,0' S	146° 32,6' 16° 19,3' S	146° 31,2' 16° 01,3' S	146° 30,0' 15° 43,0' S	146° 29,0' 15° 24,4' S	146° 28,2' 15° 05,6' S	146° 27,7' 14° 46,6' S	146° 27,3' 14° 27,3' S
23	161° 38,0' 17° 10,8' S	161° 36,0' 16° 53,7' S	161° 34,2' 16° 36,2' S	161° 32,6' 16° 18,5' S	161° 31,2' 16° 00,5' S	161° 30,0' 15° 42,2' S	161° 29,0' 15° 23,7' S	161° 28,2' 15° 04,9' S	161° 27,6' 14° 45,8' S	161° 27,3' 14° 26,5' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 10 Feb to 01 Mar

UT	10 Feb	11 Feb	12 Feb	13 Feb	14 Feb	15 Feb	16 Feb	17 Feb	18 Feb	19 Feb
00	176° 27,3' 14° 25,7' S	176° 27,1' 14° 06,1' S	176° 27,1' 13° 46,3' S	176° 27,3' 13° 26,3' S	176° 27,7' 13° 06,0' S	176° 28,3' 12° 45,6' S	176° 29,1' 12° 24,9' S	176° 30,1' 12° 04,1' S	176° 31,2' 11° 43,0' S	176° 32,5' 11° 21,8' S
01	191° 27,2' 14° 24,9' S	191° 27,1' 14° 05,3' S	191° 27,1' 13° 45,5' S	191° 27,3' 13° 25,4' S	191° 27,8' 13° 05,2' S	191° 28,4' 12° 44,7' S	191° 29,1' 12° 24,1' S	191° 30,1' 12° 03,2' S	191° 31,2' 11° 42,2' S	191° 32,6' 11° 20,9' S
02	206° 27,2' 14° 24,0' S	206° 27,1' 14° 04,5' S	206° 27,1' 13° 44,6' S	206° 27,4' 13° 24,6' S	206° 27,8' 13° 04,4' S	206° 28,4' 12° 43,9' S	206° 29,2' 12° 23,2' S	206° 30,2' 12° 02,3' S	206° 31,3' 11° 41,3' S	206° 32,6' 11° 20,0' S
03	221° 27,2' 14° 23,2' S	221° 27,1' 14° 03,6' S	221° 27,1' 13° 43,8' S	221° 27,4' 13° 23,8' S	221° 27,8' 13° 03,5' S	221° 28,4' 12° 43,0' S	221° 29,2' 12° 22,3' S	221° 30,2' 12° 01,5' S	221° 31,3' 11° 40,4' S	221° 32,7' 11° 19,1' S
04	236° 27,2' 14° 22,4' S	236° 27,1' 14° 02,8' S	236° 27,1' 13° 43,0' S	236° 27,4' 13° 22,9' S	236° 27,8' 13° 02,7' S	236° 28,4' 12° 42,2' S	236° 29,3' 12° 21,5' S	236° 30,2' 12° 00,6' S	236° 31,4' 11° 39,5' S	236° 32,7' 11° 18,3' S
05	251° 27,2' 14° 21,6' S	251° 27,1' 14° 02,0' S	251° 27,1' 13° 42,2' S	251° 27,4' 13° 22,1' S	251° 27,8' 13° 01,8' S	251° 28,5' 12° 41,3' S	251° 29,3' 12° 20,6' S	251° 30,3' 11° 59,7' S	251° 31,5' 11° 38,6' S	251° 32,8' 11° 17,4' S
06	266° 27,2' 14° 20,8' S	266° 27,1' 14° 01,2' S	266° 27,1' 13° 41,3' S	266° 27,4' 13° 21,2' S	266° 27,9' 13° 01,0' S	266° 28,5' 12° 40,5' S	266° 29,3' 12° 19,7' S	266° 30,3' 11° 58,8' S	266° 31,5' 11° 37,8' S	266° 32,8' 11° 16,5' S
07	281° 27,2' 14° 20,0' S	281° 27,1' 14° 00,4' S	281° 27,2' 13° 40,5' S	281° 27,4' 13° 20,4' S	281° 27,9' 13° 00,1' S	281° 28,5' 12° 39,6' S	281° 29,4' 12° 18,9' S	281° 30,4' 11° 58,0' S	281° 31,6' 11° 36,9' S	281° 32,9' 11° 15,6' S
08	296° 27,2' 14° 19,2' S	296° 27,1' 13° 59,5' S	296° 27,2' 13° 39,7' S	296° 27,4' 13° 19,6' S	296° 27,9' 12° 59,3' S	296° 28,6' 12° 38,7' S	296° 29,4' 12° 18,0' S	296° 30,4' 11° 57,1' S	296° 31,6' 11° 36,0' S	296° 33,0' 11° 14,7' S
09	311° 27,2' 14° 18,4' S	311° 27,1' 13° 58,7' S	311° 27,2' 13° 38,8' S	311° 27,5' 13° 18,7' S	311° 27,9' 12° 58,4' S	311° 28,6' 12° 37,9' S	311° 29,4' 12° 17,1' S	311° 30,5' 11° 56,2' S	311° 31,7' 11° 35,1' S	311° 33,0' 11° 13,8' S
10	326° 27,2' 14° 17,5' S	326° 27,1' 13° 57,9' S	326° 27,2' 13° 38,0' S	326° 27,5' 13° 17,9' S	326° 28,0' 12° 57,6' S	326° 28,6' 12° 37,0' S	326° 29,5' 12° 16,3' S	326° 30,5' 11° 55,3' S	326° 31,7' 11° 34,2' S	326° 33,1' 11° 12,9' S
11	341° 27,1' 14° 16,7' S	341° 27,1' 13° 57,1' S	341° 27,2' 13° 37,2' S	341° 27,5' 13° 17,0' S	341° 28,0' 12° 56,7' S	341° 28,7' 12° 36,2' S	341° 29,5' 12° 15,4' S	341° 30,6' 11° 54,5' S	341° 31,8' 11° 33,3' S	341° 33,1' 11° 12,0' S
12	356° 27,1' 14° 15,9' S	356° 27,1' 13° 56,2' S	356° 27,2' 13° 36,3' S	356° 27,5' 13° 16,2' S	356° 28,0' 12° 55,9' S	356° 28,7' 12° 35,3' S	356° 29,6' 12° 14,5' S	356° 30,6' 11° 53,6' S	356° 31,8' 11° 32,5' S	356° 33,2' 11° 11,1' S
13	011° 27,1' 14° 15,1' S	011° 27,1' 13° 55,4' S	011° 27,2' 13° 35,5' S	011° 27,5' 13° 15,4' S	011° 28,0' 12° 55,0' S	011° 28,7' 12° 34,4' S	011° 29,6' 12° 13,7' S	011° 30,7' 11° 52,7' S	011° 31,9' 11° 31,6' S	011° 33,3' 11° 10,2' S
14	026° 27,1' 14° 14,3' S	026° 27,1' 13° 54,6' S	026° 27,2' 13° 34,7' S	026° 27,5' 13° 14,5' S	026° 28,1' 12° 54,1' S	026° 28,8' 12° 33,6' S	026° 29,6' 12° 12,8' S	026° 30,7' 11° 51,8' S	026° 31,9' 11° 30,7' S	026° 33,3' 11° 09,3' S
15	041° 27,1' 14° 13,5' S	041° 27,1' 13° 53,8' S	041° 27,2' 13° 33,8' S	041° 27,6' 13° 13,7' S	041° 28,1' 12° 53,3' S	041° 28,8' 12° 32,7' S	041° 29,7' 12° 11,9' S	041° 30,8' 11° 51,0' S	041° 32,0' 11° 29,8' S	041° 33,4' 11° 08,5' S
16	056° 27,1' 14° 12,7' S	056° 27,1' 13° 52,9' S	056° 27,2' 13° 33,0' S	056° 27,6' 13° 12,8' S	056° 28,1' 12° 52,4' S	056° 28,8' 12° 31,9' S	056° 29,7' 12° 11,1' S	056° 30,8' 11° 50,1' S	056° 32,0' 11° 28,9' S	056° 33,5' 11° 07,6' S
17	071° 27,1' 14° 11,8' S	071° 27,1' 13° 52,1' S	071° 27,2' 13° 32,2' S	071° 27,6' 13° 12,0' S	071° 28,1' 12° 51,6' S	071° 28,9' 12° 31,0' S	071° 29,8' 12° 10,2' S	071° 30,8' 11° 49,2' S	071° 32,1' 11° 28,0' S	071° 33,5' 11° 06,7' S
18	086° 27,1' 14° 11,0' S	086° 27,1' 13° 51,3' S	086° 27,3' 13° 31,3' S	086° 27,6' 13° 11,1' S	086° 28,2' 12° 50,7' S	086° 28,9' 12° 30,1' S	086° 29,8' 12° 09,3' S	086° 30,9' 11° 48,3' S	086° 32,2' 11° 27,1' S	086° 33,6' 11° 05,8' S
19	101° 27,1' 14° 10,2' S	101° 27,1' 13° 50,5' S	101° 27,3' 13° 30,5' S	101° 27,6' 13° 10,3' S	101° 28,2' 12° 49,9' S	101° 28,9' 12° 29,3' S	101° 29,9' 12° 08,5' S	101° 30,9' 11° 47,4' S	101° 32,2' 11° 26,3' S	101° 33,6' 11° 04,9' S
20	116° 27,1' 14° 09,4' S	116° 27,1' 13° 49,6' S	116° 27,3' 13° 29,6' S	116° 27,7' 13° 09,4' S	116° 28,2' 12° 49,0' S	116° 29,0' 12° 28,4' S	116° 29,9' 12° 07,6' S	116° 31,0' 11° 46,6' S	116° 32,3' 11° 25,4' S	116° 33,7' 11° 04,0' S
21	131° 27,1' 14° 08,6' S	131° 27,1' 13° 48,8' S	131° 27,3' 13° 28,8' S	131° 27,7' 13° 08,6' S	131° 28,2' 12° 48,2' S	131° 29,0' 12° 27,5' S	131° 29,9' 12° 06,7' S	131° 31,0' 11° 45,7' S	131° 32,3' 11° 24,5' S	131° 33,8' 11° 03,1' S
22	146° 27,1' 14° 07,7' S	146° 27,1' 13° 48,0' S	146° 27,3' 13° 28,0' S	146° 27,7' 13° 07,7' S	146° 28,3' 12° 47,3' S	146° 29,0' 12° 26,7' S	146° 30,0' 12° 05,8' S	146° 31,1' 11° 44,8' S	146° 32,4' 11° 23,6' S	146° 33,8' 11° 02,2' S
23	161° 27,1' 14° 06,9' S	161° 27,1' 13° 47,1' S	161° 27,3' 13° 27,1' S	161° 27,7' 13° 06,9' S	161° 28,3' 12° 46,5' S	161° 29,1' 12° 25,8' S	161° 30,0' 12° 05,0' S	161° 31,1' 11° 43,9' S	161° 32,4' 11° 22,7' S	161° 33,9' 11° 01,3' S

UT	20 Feb	21 Feb	22 Feb	23 Feb	24 Feb	25 Feb	26 Feb	27 Feb	28 Feb	01 Mar
00	176° 34,0' 11° 00,4' S	176° 35,6' 10° 38,8' S	176° 37,4' 10° 17,1' S	176° 39,3' 09° 55,2' S	176° 41,4' 09° 33,1' S	176° 43,6' 09° 10,9' S	176° 46,0' 08° 48,5' S	176° 48,5' 08° 26,1' S	176° 51,2' 08° 03,5' S	176° 53,9' 07° 40,7' S
01	191° 34,0' 10° 59,5' S	191° 35,7' 10° 37,9' S	191° 37,5' 10° 16,2' S	191° 39,4' 09° 54,3' S	191° 41,5' 09° 32,2' S	191° 43,7' 09° 10,0' S	191° 46,1' 08° 47,6' S	191° 48,6' 08° 25,1' S	191° 51,3' 08° 02,5' S	191° 54,1' 07° 39,8' S
02	206° 34,1' 10° 58,6' S	206° 35,7' 10° 37,0' S	206° 37,5' 10° 15,3' S	206° 39,5' 09° 53,3' S	206° 41,6' 09° 31,3' S	206° 43,8' 09° 09,0' S	206° 46,2' 08° 46,7' S	206° 48,7' 08° 24,2' S	206° 51,4' 08° 01,6' S	206° 54,2' 07° 38,8' S
03	221° 34,2' 10° 57,7' S	221° 35,8' 10° 36,1' S	221° 37,6' 10° 14,3' S	221° 39,6' 09° 52,4' S	221° 41,7' 09° 30,3' S	221° 43,9' 09° 08,1' S	221° 46,3' 08° 45,7' S	221° 48,8' 08° 23,2' S	221° 51,5' 08° 00,6' S	221° 54,3' 07° 37,9' S
04	236° 34,2' 10° 56,8' S	236° 35,9' 10° 35,2' S	236° 37,7' 10° 13,4' S	236° 39,7' 09° 51,5' S	236° 41,8' 09° 29,4' S	236° 44,0' 09° 07,2' S	236° 46,4' 08° 44,8' S	236° 49,0' 08° 22,3' S	236° 51,6' 07° 59,7' S	236° 54,4' 07° 36,9' S
05	251° 34,3' 10° 55,9' S	251° 36,0' 10° 34,3' S	251° 37,8' 10° 12,5' S	251° 39,7' 09° 50,6' S	251° 41,9' 09° 28,5' S	251° 44,1' 09° 06,3' S	251° 46,5' 08° 43,9' S	251° 49,1' 08° 21,4' S	251° 51,7' 07° 58,7' S	251° 54,5' 07° 36,0' S
06	266° 34,4' 10° 55,0' S	266° 36,0' 10° 33,4' S	266° 37,9' 10° 11,6' S	266° 39,8' 09° 49,7' S	266° 42,0' 09° 27,6' S	266° 44,2' 09° 05,3' S	266° 46,6' 08° 42,9' S	266° 49,2' 08° 20,4' S	266° 51,9' 07° 57,8' S	266° 54,7' 07° 35,0' S
07	281° 34,4' 10° 54,1' S	281° 36,1' 10° 32,5' S	281° 37,9' 10° 10,7' S	281° 39,9' 09° 48,7' S	281° 42,0' 09° 26,6' S	281° 44,3' 09° 04,4' S	281° 46,7' 08° 42,0' S	281° 49,3' 08° 19,5' S	281° 52,0' 07° 56,8' S	281° 54,8' 07° 34,1' S
08	296° 34,5' 10° 53,2' S	296° 36,2' 10° 31,6' S	296° 38,0' 10° 09,8' S	296° 40,0' 09° 47,8' S	296° 42,1' 09° 25,7' S	296° 44,4' 09° 03,5' S	296° 46,8' 08° 41,1' S	296° 49,4' 08° 18,5' S	296° 52,1' 07° 55,9' S	296° 54,9' 07° 33,1' S
09	311° 34,6' 10° 52,3' S	311° 36,2' 10° 30,7' S	311° 38,1' 10° 08,9' S	311° 40,1' 09° 46,9' S	311° 42,2' 09° 24,8' S	311° 44,5' 09° 02,5' S	311° 46,9' 08° 40,1' S	311° 49,5' 08° 17,6' S	311° 52,2' 07° 55,0' S	311° 55,0' 07° 32,2' S
10	326° 34,6' 10° 51,4' S	326° 36,3' 10° 29,8' S	326° 38,2' 10° 08,0' S	326° 40,2' 09° 46,0' S	326° 42,3' 09° 23,9' S	326° 44,6' 09° 01,6' S	326° 47,0' 08° 39,2' S	326° 49,6' 08° 16,7' S	326° 52,3' 07° 54,0' S	326° 55,1' 07° 31,2' S
11	341° 34,7' 10° 50,5' S	341° 36,4' 10° 28,9' S	341° 38,3' 10° 07,1' S	341° 40,3' 09° 45,1' S	341° 42,4' 09° 22,9' S	341° 44,7' 09° 00,7' S	341° 47,1' 08° 38,3' S	341° 49,7' 08° 15,7' S	341° 52,4' 07° 53,1' S	341° 55,3' 07° 30,3' S
12	356° 34,8' 10° 49,6' S	356° 36,5' 10° 28,0' S	356° 38,3' 10° 06,1' S	356° 40,3' 09° 44,2' S	356° 42,5' 09° 22,0' S	356° 44,8' 08° 59,7' S	356° 47,3' 08° 37,3' S	356° 49,8' 08° 14,8' S	356° 52,5' 07° 52,1' S	356° 55,4' 07° 29,3' S
13	011° 34,8' 10° 48,7' S	011° 36,5' 10° 27,1' S	011° 38,4' 10° 05,2' S	011° 40,4' 09° 43,2' S	011° 42,6' 09° 21,1' S	011° 44,9' 08° 58,8' S	011° 47,4' 08° 36,4' S	011° 49,9' 08° 13,8' S	011° 52,7' 07° 51,2' S	011° 55,5' 07° 28,4' S
14	026° 34,9' 10° 47,8' S	026° 36,6' 10° 26,2' S	026° 38,5' 10° 04,3' S	026° 40,5' 09° 42,3' S	026° 42,7' 09° 20,2' S	026° 45,0' 08° 57,9' S	026° 47,5' 08° 35,5' S	026° 50,1' 08° 12,9' S	026° 52,8' 07° 50,2' S	026° 55,6' 07° 27,4' S
15	041° 35,0' 10° 46,9' S	041° 36,7' 10° 25,2' S	041° 38,6' 10° 03,4' S	041° 40,6' 09° 41,4' S	041° 42,8' 09° 19,2' S	041° 45,1' 08° 56,9' S	041° 47,6' 08° 34,5' S	041° 50,2' 08° 12,0' S	041° 52,9' 07° 49,3' S	041° 55,7' 07° 26,5' S
16	056° 35,0' 10° 46,0' S	056° 36,8' 10° 24,3' S	056° 38,7' 10° 02,5' S	056° 40,7' 09° 40,5' S	056° 42,9' 09° 18,3' S	056° 45,2' 08° 56,0' S	056° 47,7' 08° 33,6' S	056° 50,3' 08° 11,0' S	056° 53,0' 07° 48,3' S	056° 55,9' 07° 25,5' S
17	071° 35,1' 10° 45,1' S	071° 36,8' 10° 23,4' S	071° 38,7' 10° 01,6' S	071° 40,8' 09° 39,6' S	071° 43,0' 09° 17,4' S	071° 45,3' 08° 55,1' S	071° 47,8' 08° 32,6' S	071° 50,4' 08° 10,1' S	071° 53,1' 07° 47,4' S	071° 56,0' 07° 24,6' S
18	086° 35,2' 10° 44,2' S	086° 36,9' 10° 22,5' S	086° 38,8' 10° 00,7' S	086° 40,9' 09° 38,6' S	086° 43,1' 09° 16,5' S	086° 45,4' 08° 54,1' S	086° 47,9' 08° 31,7' S	086° 50,5' 08° 09,1' S	086° 53,2' 07° 46,4' S	086° 56,1' 07° 23,6' S
19	101° 35,2' 10° 43,3' S	101° 37,0' 10° 21,6' S	101° 38,9' 09° 59,7' S	101° 41,0' 09° 37,7' S	101° 43,2' 09° 15,5' S	101° 45,5' 08° 53,2' S	101° 48,0' 08° 30,8' S	101° 50,6' 08° 08,2' S	101° 53,4' 07° 45,5' S	101° 56,2' 07° 22,7' S
20	116° 35,3' 10° 42,4' S	116° 37,1' 10° 20,7' S	116° 39,0' 09° 58,8' S	116° 41,1' 09° 36,8' S	116° 43,3' 09° 14,6' S	116° 45,6' 08° 52,3' S	116° 48,1' 08° 29,8' S	116° 50,7' 08° 07,2' S	116° 53,5' 07° 44,5' S	116° 56,3' 07° 21,7' S
21	131° 35,4' 10° 41,5' S	131° 37,1' 10° 19,8' S	131° 39,1' 09° 57,9' S	131° 41,1' 09° 35,9' S	131° 43,4' 09° 13,7' S	131° 45,7' 08° 51,3' S	131° 48,2' 08° 28,9' S	131° 50,8' 08° 06,3' S	131° 53,6' 07° 43,6' S	131° 56,5' 07° 20,8' S
22	146° 35,5' 10° 40,6' S	146° 37,2' 10° 18,9' S	146° 39,2' 09° 57,0' S	146° 41,2' 09° 34,9' S	146° 43,5' 09° 12,8' S	146° 45,8' 08° 50,4' S	146° 48,3' 08° 27,9' S	146° 50,9' 08° 05,3' S	146° 53,7' 07° 42,6' S	146° 56,6' 07° 19,8' S
23	161° 35,5' 10° 39,7' S	161° 37,3' 10° 18,0' S	161° 39,2' 09° 56,1' S	161° 41,3' 09° 34,0' S	161° 43,5' 09° 11,8' S	161° 45,9' 08° 49,5' S	161° 48,4' 08° 27,0' S	161° 51,1' 08° 04,4' S	161° 53,8' 07° 41,7' S	161° 56,7' 07° 18,9' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 02 Mar to 21 Mar

UT	02 Mar	03 Mar	04 Mar	05 Mar	06 Mar	07 Mar	08 Mar	09 Mar	10 Mar	11 Mar
00	176° 56,8' 07° 17,9' S	176° 59,9' 06° 55,0' S	177° 03,0' 06° 31,9' S	177° 06,3' 06° 08,8' S	177° 09,6' 05° 45,6' S	177° 13,1' 05° 22,3' S	177° 16,7' 04° 58,9' S	177° 20,4' 04° 35,5' S	177° 24,1' 04° 12,0' S	177° 28,0' 03° 48,5' S
01	191° 57,0' 07° 16,9' S	192° 00,0' 06° 54,0' S	192° 03,1' 06° 31,0' S	192° 06,4' 06° 07,8' S	192° 09,8' 05° 44,6' S	192° 13,3' 05° 21,3' S	192° 16,8' 04° 57,9' S	192° 20,5' 04° 34,5' S	192° 24,3' 04° 11,0' S	192° 28,2' 03° 47,5' S
02	206° 57,1' 07° 16,0' S	207° 00,1' 06° 53,0' S	207° 03,3' 06° 30,0' S	207° 06,5' 06° 06,8' S	207° 09,9' 05° 43,6' S	207° 13,4' 05° 20,3' S	207° 17,0' 04° 57,0' S	207° 20,7' 04° 33,5' S	207° 24,5' 04° 10,0' S	207° 28,3' 03° 46,5' S
03	221° 57,2' 07° 15,0' S	222° 00,2' 06° 52,1' S	222° 03,4' 06° 29,0' S	222° 06,7' 06° 05,9' S	222° 10,1' 05° 42,7' S	222° 13,5' 05° 19,4' S	222° 17,1' 04° 56,0' S	222° 20,8' 04° 32,5' S	222° 24,6' 04° 09,1' S	222° 28,5' 03° 45,5' S
04	236° 57,3' 07° 14,1' S	237° 00,4' 06° 51,1' S	237° 03,5' 06° 28,1' S	237° 06,8' 06° 04,9' S	237° 10,2' 05° 41,7' S	237° 13,7' 05° 18,4' S	237° 17,3' 04° 55,0' S	237° 21,0' 04° 31,6' S	237° 24,8' 04° 08,1' S	237° 28,6' 03° 44,5' S
05	251° 57,5' 07° 13,1' S	252° 00,5' 06° 50,2' S	252° 03,7' 06° 27,1' S	252° 07,0' 06° 04,0' S	252° 10,3' 05° 40,7' S	252° 13,8' 05° 17,4' S	252° 17,4' 04° 54,0' S	252° 21,1' 04° 30,6' S	252° 24,9' 04° 07,1' S	252° 28,8' 03° 43,5' S
06	266° 57,6' 07° 12,2' S	267° 00,6' 06° 49,2' S	267° 03,8' 06° 26,1' S	267° 07,1' 06° 03,0' S	267° 10,5' 05° 39,7' S	267° 14,0' 05° 16,4' S	267° 17,6' 04° 53,1' S	267° 21,3' 04° 29,6' S	267° 25,1' 04° 06,1' S	267° 29,0' 03° 42,6' S
07	281° 57,7' 07° 11,2' S	282° 00,8' 06° 48,2' S	282° 03,9' 06° 25,2' S	282° 07,2' 06° 02,0' S	282° 10,6' 05° 38,8' S	282° 14,1' 05° 15,5' S	282° 17,7' 04° 52,1' S	282° 21,5' 04° 28,6' S	282° 25,2' 04° 05,1' S	282° 29,1' 03° 41,6' S
08	296° 57,8' 07° 10,3' S	297° 00,9' 06° 47,3' S	297° 04,1' 06° 24,2' S	297° 07,4' 06° 01,1' S	297° 10,8' 05° 37,8' S	297° 14,3' 05° 14,5' S	297° 17,9' 04° 51,1' S	297° 21,6' 04° 27,7' S	297° 25,4' 04° 04,2' S	297° 29,3' 03° 40,6' S
09	311° 58,0' 07° 09,3' S	312° 01,0' 06° 46,3' S	312° 04,2' 06° 23,2' S	312° 07,5' 06° 00,1' S	312° 10,9' 05° 36,8' S	312° 14,4' 05° 13,5' S	312° 18,1' 04° 50,1' S	312° 21,8' 04° 26,7' S	312° 25,6' 04° 03,2' S	312° 29,5' 03° 39,6' S
10	326° 58,1' 07° 08,3' S	327° 01,2' 06° 45,4' S	327° 04,3' 06° 22,3' S	327° 07,7' 05° 59,1' S	327° 11,1' 05° 35,9' S	327° 14,6' 05° 12,5' S	327° 18,2' 04° 49,2' S	327° 21,9' 04° 25,7' S	327° 25,7' 04° 02,2' S	327° 29,6' 03° 38,6' S
11	341° 58,2' 07° 07,4' S	342° 01,3' 06° 44,4' S	342° 04,5' 06° 21,3' S	342° 07,8' 05° 58,2' S	342° 11,2' 05° 34,9' S	342° 14,7' 05° 11,6' S	342° 18,4' 04° 48,2' S	342° 22,1' 04° 24,7' S	342° 25,9' 04° 01,2' S	342° 29,8' 03° 37,7' S
12	356° 58,3' 07° 06,4' S	357° 01,4' 06° 43,4' S	357° 04,6' 06° 20,4' S	357° 07,9' 05° 57,2' S	357° 11,4' 05° 33,9' S	357° 14,9' 05° 10,6' S	357° 18,5' 04° 47,2' S	357° 22,2' 04° 23,7' S	357° 26,1' 04° 00,2' S	357° 30,0' 03° 36,7' S
13	011° 58,5' 07° 05,5' S	012° 01,5' 06° 42,5' S	012° 04,8' 06° 19,4' S	012° 08,1' 05° 56,2' S	012° 11,5' 05° 33,0' S	012° 15,0' 05° 09,6' S	012° 18,7' 04° 46,2' S	012° 22,4' 04° 22,8' S	012° 26,2' 03° 59,2' S	012° 30,1' 03° 35,7' S
14	026° 58,6' 07° 04,5' S	027° 01,7' 06° 41,5' S	027° 04,9' 06° 18,4' S	027° 08,2' 05° 55,2' S	027° 11,6' 05° 32,0' S	027° 15,2' 05° 08,6' S	027° 18,8' 04° 45,2' S	027° 22,6' 04° 21,8' S	027° 26,4' 03° 58,3' S	027° 30,3' 03° 34,7' S
15	041° 58,7' 07° 03,6' S	042° 01,8' 06° 40,6' S	042° 05,0' 06° 17,5' S	042° 08,4' 05° 54,3' S	042° 11,8' 05° 31,0' S	042° 15,3' 05° 07,7' S	042° 19,0' 04° 44,3' S	042° 22,7' 04° 20,8' S	042° 26,5' 03° 57,3' S	042° 30,4' 03° 33,7' S
16	056° 58,8' 07° 02,6' S	057° 01,9' 06° 39,6' S	057° 05,2' 06° 16,5' S	057° 08,5' 05° 53,3' S	057° 11,9' 05° 30,0' S	057° 15,5' 05° 06,7' S	057° 19,1' 04° 43,3' S	057° 22,9' 04° 19,8' S	057° 26,7' 03° 56,3' S	057° 30,6' 03° 32,7' S
17	071° 59,0' 07° 01,7' S	072° 02,1' 06° 38,6' S	072° 05,3' 06° 15,5' S	072° 08,6' 05° 52,3' S	072° 12,1' 05° 29,1' S	072° 15,6' 05° 05,7' S	072° 19,3' 04° 42,3' S	072° 23,0' 04° 18,8' S	072° 26,9' 03° 55,3' S	072° 30,8' 03° 31,8' S
18	086° 59,1' 07° 00,7' S	087° 02,2' 06° 37,7' S	087° 05,4' 06° 14,6' S	087° 08,8' 05° 51,4' S	087° 12,2' 05° 28,1' S	087° 15,8' 05° 04,8' S	087° 19,4' 04° 41,3' S	087° 23,2' 04° 17,9' S	087° 27,0' 03° 54,3' S	087° 30,9' 03° 30,8' S
19	101° 59,2' 06° 59,7' S	102° 02,3' 06° 36,7' S	102° 05,6' 06° 13,6' S	102° 08,9' 05° 50,4' S	102° 12,4' 05° 27,1' S	102° 15,9' 05° 03,8' S	102° 19,6' 04° 40,4' S	102° 23,3' 04° 16,9' S	102° 27,2' 03° 53,4' S	102° 31,1' 03° 29,8' S
20	116° 59,4' 06° 58,8' S	117° 02,5' 06° 35,8' S	117° 05,7' 06° 12,6' S	117° 09,1' 05° 49,4' S	117° 12,5' 05° 26,2' S	117° 16,1' 05° 02,8' S	117° 19,7' 04° 39,4' S	117° 23,5' 04° 15,9' S	117° 27,3' 03° 52,4' S	117° 31,3' 03° 28,8' S
21	131° 59,5' 06° 57,8' S	132° 02,6' 06° 34,8' S	132° 05,8' 06° 11,7' S	132° 09,2' 05° 48,5' S	132° 12,7' 05° 25,2' S	132° 16,2' 05° 01,8' S	132° 19,9' 04° 38,4' S	132° 23,7' 04° 14,9' S	132° 27,5' 03° 51,4' S	132° 31,4' 03° 27,8' S
22	146° 59,6' 06° 56,9' S	147° 02,7' 06° 33,8' S	147° 06,0' 06° 10,7' S	147° 09,3' 05° 47,5' S	147° 12,8' 05° 24,2' S	147° 16,4' 05° 00,9' S	147° 20,1' 04° 37,4' S	147° 23,8' 04° 13,9' S	147° 27,7' 03° 50,4' S	147° 31,6' 03° 26,8' S
23	161° 59,7' 06° 55,9' S	162° 02,9' 06° 32,9' S	162° 06,1' 06° 09,7' S	162° 09,5' 05° 46,5' S	162° 13,0' 05° 23,2' S	162° 16,5' 04° 59,9' S	162° 20,2' 04° 36,5' S	162° 24,0' 04° 13,0' S	162° 27,8' 03° 49,4' S	162° 31,8' 03° 25,9' S

UT	12 Mar	13 Mar	14 Mar	15 Mar	16 Mar	17 Mar	18 Mar	19 Mar	20 Mar	21 Mar
00	177° 31,9' 03° 24,9' S	177° 36,0' 03° 01,3' S	177° 40,1' 02° 37,6' S	177° 44,2' 02° 13,9' S	177° 48,4' 01° 50,2' S	177° 52,7' 01° 26,5' S	177° 57,1' 01° 02,8' S	178° 01,4' 00° 39,1' S	178° 05,8' 00° 15,4' S	178° 10,3' 00° 08,3' N
01	192° 32,1' 03° 23,9' S	192° 36,1' 03° 00,3' S	192° 40,2' 02° 36,6' S	192° 44,4' 02° 12,9' S	192° 48,6' 01° 49,2' S	192° 52,9' 01° 25,5' S	192° 57,2' 01° 01,8' S	193° 01,6' 00° 38,1' S	193° 06,0' 00° 14,4' S	193° 10,5' 00° 09,3' N
02	207° 32,3' 03° 22,9' S	207° 36,3' 02° 59,3' S	207° 40,4' 02° 35,6' S	207° 44,6' 02° 12,0' S	207° 48,8' 01° 48,3' S	207° 53,1' 01° 24,5' S	207° 57,4' 01° 00,8' S	208° 01,8' 00° 37,1' S	208° 06,2' 00° 13,4' S	208° 10,7' 00° 10,3' N
03	222° 32,4' 03° 21,9' S	222° 36,5' 02° 58,3' S	222° 40,6' 02° 34,6' S	222° 44,7' 02° 11,0' S	222° 49,0' 01° 47,3' S	222° 53,3' 01° 23,6' S	222° 57,6' 00° 59,8' S	223° 02,0' 00° 36,1' S	223° 06,4' 00° 12,4' S	223° 10,9' 00° 11,3' N
04	237° 32,6' 03° 20,9' S	237° 36,6' 02° 57,3' S	237° 40,7' 02° 33,7' S	237° 44,9' 02° 10,0' S	237° 49,2' 01° 46,3' S	237° 53,4' 01° 22,6' S	237° 57,8' 00° 58,8' S	238° 02,2' 00° 35,1' S	238° 06,6' 00° 11,4' S	238° 11,0' 00° 12,3' N
05	252° 32,8' 03° 20,0' S	252° 36,8' 02° 56,3' S	252° 40,9' 02° 32,7' S	252° 45,1' 02° 09,0' S	252° 49,3' 01° 45,3' S	252° 53,6' 01° 21,6' S	252° 58,0' 00° 57,9' S	253° 02,3' 00° 34,1' S	253° 06,8' 00° 10,4' S	253° 11,2' 00° 13,3' N
06	267° 32,9' 03° 19,0' S	267° 37,0' 02° 55,3' S	267° 41,1' 02° 31,7' S	267° 45,3' 02° 08,0' S	267° 49,5' 01° 44,3' S	267° 53,8' 01° 20,6' S	267° 58,1' 00° 56,9' S	268° 02,5' 00° 33,2' S	268° 07,0' 00° 09,4' S	268° 11,4' 00° 14,3' N
07	282° 33,1' 03° 18,0' S	282° 37,1' 02° 54,4' S	282° 41,3' 02° 30,7' S	282° 45,4' 02° 07,0' S	282° 49,7' 01° 43,3' S	282° 54,0' 01° 19,6' S	282° 58,3' 00° 55,9' S	283° 02,7' 00° 32,2' S	283° 07,1' 00° 08,5' S	283° 11,6' 00° 15,3' N
08	297° 33,3' 03° 17,0' S	297° 37,3' 02° 53,4' S	297° 41,4' 02° 29,7' S	297° 45,6' 02° 06,0' S	297° 49,9' 01° 42,3' S	297° 54,2' 01° 18,6' S	297° 58,5' 00° 54,9' S	298° 02,9' 00° 31,2' S	298° 07,3' 00° 07,5' S	298° 11,8' 00° 16,2' N
09	312° 33,4' 03° 16,0' S	312° 37,5' 02° 52,4' S	312° 41,6' 02° 28,7' S	312° 45,8' 02° 05,0' S	312° 50,0' 01° 41,3' S	312° 54,3' 01° 17,6' S	312° 58,7' 00° 53,9' S	313° 03,1' 00° 30,2' S	313° 07,5' 00° 06,5' S	313° 12,0' 00° 17,2' N
10	327° 33,6' 03° 15,0' S	327° 37,7' 02° 51,4' S	327° 41,8' 02° 27,7' S	327° 46,0' 02° 04,1' S	327° 50,2' 01° 40,4' S	327° 54,5' 01° 16,6' S	327° 58,9' 00° 52,9' S	328° 03,3' 00° 29,2' S	328° 07,7' 00° 05,5' S	328° 12,2' 00° 18,2' N
11	342° 33,8' 03° 14,1' S	342° 37,8' 02° 50,4' S	342° 42,0' 02° 26,8' S	342° 46,1' 02° 03,1' S	342° 50,4' 01° 39,4' S	342° 54,7' 01° 15,7' S	342° 59,1' 00° 51,9' S	343° 03,5' 00° 28,2' S	343° 07,9' 00° 04,5' S	343° 12,3' 00° 19,2' N
12	357° 33,9' 03° 13,1' S	357° 38,0' 02° 49,4' S	357° 42,1' 02° 25,8' S	357° 46,3' 02° 02,1' S	357° 50,6' 01° 38,4' S	357° 54,9' 01° 14,7' S	357° 59,2' 00° 50,9' S	358° 03,6' 00° 27,2' S	358° 08,1' 00° 03,5' S	358° 12,5' 00° 20,2' N
13	012° 34,1' 03° 12,1' S	012° 38,2' 02° 48,4' S	012° 42,3' 02° 24,8' S	012° 46,5' 02° 01,1' S	012° 50,8' 01° 37,4' S	012° 55,1' 01° 13,7' S	012° 59,4' 00° 50,0' S	013° 03,8' 00° 26,2' S	013° 08,3' 00° 02,5' S	013° 12,7' 00° 21,2' N
14	027° 34,3' 03° 11,1' S	027° 38,3' 02° 47,5' S	027° 42,5' 02° 23,8' S	027° 46,7' 02° 00,1' S	027° 50,9' 01° 36,4' S	027° 55,2' 01° 12,7' S	027° 59,6' 00° 49,0' S	028° 04,0' 00° 25,2' S	028° 08,4' 00° 01,5' S	028° 12,9' 00° 22,2' N
15	042° 34,4' 03° 10,1' S	042° 38,5' 02° 46,5' S	042° 42,6' 02° 22,8' S	042° 46,9' 01° 59,1' S	042° 51,1' 01° 35,4' S	042° 55,4' 01° 11,7' S	042° 59,8' 00° 48,0' S	043° 04,2' 00° 24,3' S	043° 08,6' 00° 00,5' S	043° 13,1' 00° 23,1' N
16	057° 34,6' 03° 09,1' S	057° 38,7' 02° 45,5' S	057° 42,8' 02° 21,8' S	057° 47,0' 01° 58,1' S	057° 51,3' 01° 34,4' S	057° 55,6' 01° 10,7' S	058° 00,0' 00° 47,0' S	058° 04,4' 00° 23,3' S	058° 08,8' 00° 00,4' N	058° 13,3' 00° 24,1' N
17	072° 34,8' 03° 08,1' S	072° 38,9' 02° 44,5' S	072° 43,0' 02° 20,8' S	072° 47,2' 01° 57,1' S	072° 51,5' 01° 33,4' S	072° 55,8' 01° 09,7' S	073° 00,2' 00° 46,0' S	073° 04,6' 00° 22,3' S	073° 09,0' 00° 01,4' N	073° 13,5' 00° 25,1' N
18	087° 34,9' 03° 07,2' S	087° 39,0' 02° 43,5' S	087° 43,2' 02° 19,8' S	087° 47,4' 01° 56,2' S	087° 51,6' 01° 32,4' S	087° 56,0' 01° 08,7' S	088° 00,3' 00° 45,0' S	088° 04,7' 00° 21,3' S	088° 09,2' 00° 02,4' N	088° 13,6' 00° 26,1' N
19	102° 35,1' 03° 06,2' S	102° 39,2' 02° 42,5' S	102° 43,3' 02° 18,9' S	102° 47,6' 01° 55,2' S	102° 51,8' 01° 31,5' S	102° 56,1' 01° 07,7' S	103° 00,5' 00° 44,0' S	103° 04,9' 00° 20,3' S	103° 09,4' 00° 03,4' N	103° 13,8' 00° 27,1' N
20	117° 35,3' 03° 05,2' S	117° 39,4' 02° 41,5' S	117° 43,5' 02° 17,9' S	117° 47,7' 01° 54,2' S	117° 52,0' 01° 30,5' S	117° 56,3' 01° 06,8' S	118° 00,7' 00° 43,0' S	118° 05,1' 00° 19,3' S	118° 09,6' 00° 04,4' N	118° 14,0' 00° 28,1' N
21	132° 35,5' 03° 04,2' S	132° 39,5' 02° 40,6' S	132° 43,7' 02° 16,9' S	132° 47,9' 01° 53,2' S	132° 52,2' 01° 29,5' S	132° 56,5' 01° 05,8' S	133° 00,9' 00° 42,0' S	133° 05,3' 00° 18,3' S	133° 09,7' 00° 05,4' N	133° 14,2' 00° 29,1' N
22	147° 35,6' 03° 03,2' S	147° 39,7' 02° 39,6' S	147° 43,9' 02° 15,9' S	147° 48,1' 01° 52,2' S	147° 52,4' 01° 28,5' S	147° 56,7' 01° 04,8' S	148° 01,1' 00° 41,1' S	148° 05,5' 00° 17,3' S	148° 09,9' 00° 06,4' N	148° 14,4' 00° 30,1' N
23	162° 35,8' 03° 02,2' S	162° 39,9' 02° 38,6' S	162° 44,0' 02° 14,9' S	162° 48,3' 01° 51,2' S	162° 52,5' 01° 27,5' S	162° 56,9' 01° 03,8' S	163° 01,2' 00° 40,1' S	163° 05,7' 00° 16,4' S	163° 10,1' 00° 07,4' N	163° 14,6' 00° 31,0' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 22 Mar to 10 Apr

UT	22 Mar	23 Mar	24 Mar	25 Mar	26 Mar	27 Mar	28 Mar	29 Mar	30 Mar	31 Mar
00	178° 14,8' 00° 32,0' N	178° 19,3' 00° 55,7' N	178° 23,8' 01° 19,4' N	178° 28,3' 01° 43,0' N	178° 32,8' 02° 06,6' N	178° 37,3' 02° 30,1' N	178° 41,8' 02° 53,6' N	178° 46,3' 03° 17,0' N	178° 50,8' 03° 40,4' N	178° 55,3' 04° 03,7' N
01	193° 15,0' 00° 33,0' N	193° 19,4' 00° 56,7' N	193° 24,0' 01° 20,3' N	193° 28,5' 01° 44,0' N	193° 33,0' 02° 07,5' N	193° 37,5' 02° 31,1' N	193° 42,0' 02° 54,6' N	193° 46,5' 03° 18,0' N	193° 51,0' 03° 41,4' N	193° 55,5' 04° 04,7' N
02	208° 15,1' 00° 34,0' N	208° 19,6' 00° 57,7' N	208° 24,1' 01° 21,3' N	208° 28,7' 01° 44,9' N	208° 33,2' 02° 08,5' N	208° 37,7' 02° 32,0' N	208° 42,2' 02° 55,5' N	208° 46,7' 03° 19,0' N	208° 51,2' 03° 42,3' N	208° 55,7' 04° 05,6' N
03	223° 15,3' 00° 35,0' N	223° 19,8' 00° 58,7' N	223° 24,3' 01° 22,3' N	223° 28,8' 01° 45,9' N	223° 33,4' 02° 09,5' N	223° 37,9' 02° 33,0' N	223° 42,4' 02° 56,5' N	223° 46,9' 03° 19,9' N	223° 51,4' 03° 43,3' N	223° 55,9' 04° 06,6' N
04	238° 15,5' 00° 36,0' N	238° 20,0' 00° 59,6' N	238° 24,5' 01° 23,3' N	238° 29,0' 01° 46,9' N	238° 33,6' 02° 10,5' N	238° 38,1' 02° 34,0' N	238° 42,6' 02° 57,5' N	238° 47,1' 03° 20,9' N	238° 51,6' 03° 44,3' N	238° 56,0' 04° 07,6' N
05	253° 15,7' 00° 37,0' N	253° 20,2' 01° 00,6' N	253° 24,7' 01° 24,3' N	253° 29,2' 01° 47,9' N	253° 33,7' 02° 11,5' N	253° 38,3' 02° 35,0' N	253° 42,8' 02° 58,5' N	253° 47,3' 03° 21,9' N	253° 51,8' 03° 45,2' N	253° 56,2' 04° 08,5' N
06	268° 15,9' 00° 38,0' N	268° 20,4' 01° 01,6' N	268° 24,9' 01° 25,3' N	268° 29,4' 01° 48,9' N	268° 33,9' 02° 12,4' N	268° 38,5' 02° 36,0' N	268° 43,0' 02° 59,4' N	268° 47,5' 03° 22,9' N	268° 52,0' 03° 46,2' N	268° 56,4' 04° 09,5' N
07	283° 16,1' 00° 38,9' N	283° 20,6' 01° 02,6' N	283° 25,1' 01° 26,2' N	283° 29,6' 01° 49,9' N	283° 34,1' 02° 13,4' N	283° 38,6' 02° 36,9' N	283° 43,2' 03° 00,4' N	283° 47,7' 03° 23,8' N	283° 52,1' 03° 47,2' N	283° 56,6' 04° 10,5' N
08	298° 16,3' 00° 39,9' N	298° 20,8' 01° 03,6' N	298° 25,3' 01° 27,2' N	298° 29,8' 01° 50,8' N	298° 34,3' 02° 14,4' N	298° 38,8' 02° 37,9' N	298° 43,3' 03° 01,4' N	298° 47,8' 03° 24,8' N	298° 52,3' 03° 48,2' N	298° 56,8' 04° 11,4' N
09	313° 16,4' 00° 40,9' N	313° 20,9' 01° 04,6' N	313° 25,5' 01° 28,2' N	313° 30,0' 01° 51,8' N	313° 34,5' 02° 15,4' N	313° 39,0' 02° 38,9' N	313° 43,5' 03° 02,4' N	313° 48,0' 03° 25,8' N	313° 52,5' 03° 49,1' N	313° 57,0' 04° 12,4' N
10	328° 16,6' 00° 41,9' N	328° 21,1' 01° 05,6' N	328° 25,6' 01° 29,2' N	328° 30,2' 01° 52,8' N	328° 34,7' 02° 16,4' N	328° 39,2' 02° 39,9' N	328° 43,7' 03° 03,3' N	328° 48,2' 03° 26,8' N	328° 52,7' 03° 50,1' N	328° 57,2' 04° 13,4' N
11	343° 16,8' 00° 42,9' N	343° 21,3' 01° 06,5' N	343° 25,8' 01° 30,2' N	343° 30,4' 01° 53,8' N	343° 34,9' 02° 17,3' N	343° 39,4' 02° 40,9' N	343° 43,9' 03° 04,3' N	343° 48,4' 03° 27,7' N	343° 52,9' 03° 51,1' N	343° 57,3' 04° 14,3' N
12	358° 17,0' 00° 43,9' N	358° 21,5' 01° 07,5' N	358° 26,0' 01° 31,2' N	358° 30,5' 01° 54,8' N	358° 35,1' 02° 18,3' N	358° 39,6' 02° 41,8' N	358° 44,1' 03° 05,3' N	358° 48,6' 03° 28,7' N	358° 53,1' 03° 52,0' N	358° 57,5' 04° 15,3' N
13	013° 17,2' 00° 44,9' N	013° 21,7' 01° 08,5' N	013° 26,2' 01° 32,2' N	013° 30,7' 01° 55,7' N	013° 35,3' 02° 19,3' N	013° 39,8' 02° 42,8' N	013° 44,3' 03° 06,3' N	013° 48,8' 03° 29,7' N	013° 53,3' 03° 53,0' N	013° 57,7' 04° 16,3' N
14	028° 17,4' 00° 45,8' N	028° 21,9' 01° 09,5' N	028° 26,4' 01° 33,1' N	028° 30,9' 01° 56,7' N	028° 35,4' 02° 20,3' N	028° 40,0' 02° 43,8' N	028° 44,5' 03° 07,3' N	028° 49,0' 03° 30,7' N	028° 53,4' 03° 54,0' N	028° 57,9' 04° 17,2' N
15	043° 17,6' 00° 46,8' N	043° 22,1' 01° 10,5' N	043° 26,6' 01° 34,1' N	043° 31,1' 01° 57,7' N	043° 35,6' 02° 21,3' N	043° 40,1' 02° 44,8' N	043° 44,7' 03° 08,2' N	043° 49,1' 03° 31,6' N	043° 53,6' 03° 55,0' N	043° 58,1' 04° 18,2' N
16	058° 17,8' 00° 47,8' N	058° 22,3' 01° 11,5' N	058° 26,8' 01° 35,1' N	058° 31,3' 01° 58,7' N	058° 35,8' 02° 22,2' N	058° 40,3' 02° 45,8' N	058° 44,8' 03° 09,2' N	058° 49,3' 03° 32,6' N	058° 53,8' 03° 55,9' N	058° 58,3' 04° 19,2' N
17	073° 17,9' 00° 48,8' N	073° 22,5' 01° 12,5' N	073° 27,0' 01° 36,1' N	073° 31,5' 01° 59,7' N	073° 36,0' 02° 23,2' N	073° 40,5' 02° 46,7' N	073° 45,0' 03° 10,2' N	073° 49,5' 03° 33,6' N	073° 54,0' 03° 56,9' N	073° 58,5' 04° 20,1' N
18	088° 18,1' 00° 49,8' N	088° 22,6' 01° 13,4' N	088° 27,2' 01° 37,1' N	088° 31,7' 02° 00,7' N	088° 36,2' 02° 24,2' N	088° 40,7' 02° 47,7' N	088° 45,2' 03° 11,2' N	088° 49,7' 03° 34,5' N	088° 54,2' 03° 57,9' N	088° 58,6' 04° 21,1' N
19	103° 18,3' 00° 50,8' N	103° 22,8' 01° 14,4' N	103° 27,3' 01° 38,1' N	103° 31,9' 02° 01,6' N	103° 36,4' 02° 25,2' N	103° 40,9' 02° 48,7' N	103° 45,4' 03° 12,1' N	103° 49,9' 03° 35,5' N	103° 54,4' 03° 58,8' N	103° 58,8' 04° 22,1' N
20	118° 18,5' 00° 51,8' N	118° 23,0' 01° 15,4' N	118° 27,5' 01° 39,0' N	118° 32,1' 02° 02,6' N	118° 36,6' 02° 26,2' N	118° 41,1' 02° 49,7' N	118° 45,6' 03° 13,1' N	118° 50,1' 03° 36,5' N	118° 54,6' 03° 59,8' N	118° 59,0' 04° 23,0' N
21	133° 18,7' 00° 52,7' N	133° 23,2' 01° 16,4' N	133° 27,7' 01° 40,0' N	133° 32,2' 02° 03,6' N	133° 36,8' 02° 27,1' N	133° 41,3' 02° 50,6' N	133° 45,8' 03° 14,1' N	133° 50,3' 03° 37,5' N	133° 54,7' 04° 00,8' N	133° 59,2' 04° 24,0' N
22	148° 18,9' 00° 53,7' N	148° 23,4' 01° 17,4' N	148° 27,9' 01° 41,0' N	148° 32,4' 02° 04,6' N	148° 36,9' 02° 28,1' N	148° 41,5' 02° 51,6' N	148° 46,0' 03° 15,1' N	148° 50,5' 03° 38,4' N	148° 54,9' 04° 01,7' N	148° 59,4' 04° 25,0' N
23	163° 19,1' 00° 54,7' N	163° 23,6' 01° 18,4' N	163° 28,1' 01° 42,0' N	163° 32,6' 02° 05,6' N	163° 37,1' 02° 29,1' N	163° 41,6' 02° 52,6' N	163° 46,2' 03° 16,0' N	163° 50,6' 03° 39,4' N	163° 55,1' 04° 02,7' N	163° 59,6' 04° 25,9' N

UT	01 Apr	02 Apr	03 Apr	04 Apr	05 Apr	06 Apr	07 Apr	08 Apr	09 Apr	10 Apr
00	178° 59,8' 04° 26,9' N	179° 04,2' 04° 50,1' N	179° 08,6' 05° 13,1' N	179° 12,9' 05° 36,1' N	179° 17,2' 05° 59,0' N	179° 21,5' 06° 21,7' N	179° 25,8' 06° 44,4' N	179° 29,9' 07° 06,9' N	179° 34,1' 07° 29,3' N	179° 38,1' 07° 51,6' N
01	193° 59,9' 04° 27,9' N	194° 04,4' 04° 51,0' N	194° 08,7' 05° 14,1' N	194° 13,1' 05° 37,1' N	194° 17,4' 05° 59,9' N	194° 21,7' 06° 22,7' N	194° 25,9' 06° 45,3' N	194° 30,1' 07° 07,9' N	194° 34,2' 07° 30,3' N	194° 38,3' 07° 52,6' N
02	209° 00,1' 04° 28,8' N	209° 04,5' 04° 52,0' N	209° 08,9' 05° 15,0' N	209° 13,3' 05° 38,0' N	209° 17,6' 06° 00,9' N	209° 21,9' 06° 23,6' N	209° 26,1' 06° 46,3' N	209° 30,3' 07° 08,8' N	209° 34,4' 07° 31,2' N	209° 38,5' 07° 53,5' N
03	224° 00,3' 04° 29,8' N	224° 04,7' 04° 53,0' N	224° 09,1' 05° 16,0' N	224° 13,5' 05° 39,0' N	224° 17,8' 06° 01,8' N	224° 22,1' 06° 24,6' N	224° 26,3' 06° 47,2' N	224° 30,5' 07° 09,7' N	224° 34,6' 07° 32,1' N	224° 38,6' 07° 54,4' N
04	239° 00,5' 04° 30,8' N	239° 04,9' 04° 53,9' N	239° 09,3' 05° 17,0' N	239° 13,6' 05° 39,9' N	239° 18,0' 06° 02,8' N	239° 22,2' 06° 25,5' N	239° 26,5' 06° 48,2' N	239° 30,6' 07° 10,7' N	239° 34,8' 07° 33,1' N	239° 38,8' 07° 55,3' N
05	254° 00,7' 04° 31,7' N	254° 05,1' 04° 54,9' N	254° 09,5' 05° 17,9' N	254° 13,8' 05° 40,9' N	254° 18,1' 06° 03,7' N	254° 22,4' 06° 26,5' N	254° 26,6' 06° 49,1' N	254° 30,8' 07° 11,6' N	254° 34,9' 07° 34,0' N	254° 39,0' 07° 56,3' N
06	269° 00,9' 04° 32,7' N	269° 05,3' 04° 55,8' N	269° 09,7' 05° 18,9' N	269° 14,0' 05° 41,8' N	269° 18,3' 06° 04,7' N	269° 22,6' 06° 27,4' N	269° 26,8' 06° 50,0' N	269° 31,0' 07° 12,5' N	269° 35,1' 07° 34,9' N	269° 39,2' 07° 57,2' N
07	284° 01,0' 04° 33,7' N	284° 05,5' 04° 56,8' N	284° 09,8' 05° 19,8' N	284° 14,2' 05° 42,8' N	284° 18,5' 06° 05,6' N	284° 22,8' 06° 28,4' N	284° 27,0' 06° 51,0' N	284° 31,2' 07° 13,5' N	284° 35,3' 07° 35,9' N	284° 39,3' 07° 58,1' N
08	299° 01,2' 04° 34,6' N	299° 05,6' 04° 57,8' N	299° 10,0' 05° 20,8' N	299° 14,4' 05° 43,7' N	299° 18,7' 06° 06,6' N	299° 22,9' 06° 29,3' N	299° 27,2' 06° 51,9' N	299° 31,3' 07° 14,4' N	299° 35,4' 07° 36,8' N	299° 39,5' 07° 59,0' N
09	314° 01,4' 04° 35,6' N	314° 05,8' 04° 58,7' N	314° 10,2' 05° 21,8' N	314° 14,6' 05° 44,7' N	314° 18,9' 06° 07,5' N	314° 23,1' 06° 30,2' N	314° 27,3' 06° 52,9' N	314° 31,5' 07° 15,3' N	314° 35,6' 07° 37,7' N	314° 39,7' 08° 00,0' N
10	329° 01,6' 04° 36,6' N	329° 06,0' 04° 59,7' N	329° 10,4' 05° 22,7' N	329° 14,7' 05° 45,6' N	329° 19,0' 06° 08,5' N	329° 23,3' 06° 31,2' N	329° 27,5' 06° 53,8' N	329° 31,7' 07° 16,3' N	329° 35,8' 07° 38,6' N	329° 39,8' 08° 00,9' N
11	344° 01,8' 04° 37,5' N	344° 06,2' 05° 00,6' N	344° 10,6' 05° 23,7' N	344° 14,9' 05° 46,6' N	344° 19,2' 06° 09,4' N	344° 23,5' 06° 32,1' N	344° 27,7' 06° 54,7' N	344° 31,8' 07° 17,2' N	344° 35,9' 07° 39,6' N	344° 40,0' 08° 01,8' N
12	359° 02,0' 04° 38,5' N	359° 06,4' 05° 01,6' N	359° 10,8' 05° 24,6' N	359° 15,1' 05° 47,5' N	359° 19,4' 06° 10,4' N	359° 23,6' 06° 33,1' N	359° 27,9' 06° 55,7' N	359° 32,0' 07° 18,2' N	359° 36,1' 07° 40,5' N	359° 40,2' 08° 02,7' N
13	014° 02,2' 04° 39,5' N	014° 06,6' 05° 02,6' N	014° 10,9' 05° 25,6' N	014° 15,3' 05° 48,5' N	014° 19,6' 06° 11,3' N	014° 23,8' 06° 34,0' N	014° 28,0' 06° 56,6' N	014° 32,2' 07° 19,1' N	014° 36,3' 07° 41,4' N	014° 40,3' 08° 03,6' N
14	029° 02,3' 04° 40,4' N	029° 06,7' 05° 03,5' N	029° 11,1' 05° 26,5' N	029° 15,5' 05° 49,4' N	029° 19,7' 06° 12,3' N	029° 24,0' 06° 35,0' N	029° 28,2' 06° 57,6' N	029° 32,4' 07° 20,0' N	029° 36,5' 07° 42,4' N	029° 40,5' 08° 04,6' N
15	044° 02,5' 04° 41,4' N	044° 06,9' 05° 04,5' N	044° 11,3' 05° 27,5' N	044° 15,6' 05° 50,4' N	044° 19,9' 06° 13,2' N	044° 24,2' 06° 35,9' N	044° 28,4' 06° 58,5' N	044° 32,5' 07° 21,0' N	044° 36,6' 07° 43,3' N	044° 40,7' 08° 05,5' N
16	059° 02,7' 04° 42,4' N	059° 07,1' 05° 05,4' N	059° 11,5' 05° 28,4' N	059° 15,8' 05° 51,4' N	059° 20,1' 06° 14,2' N	059° 24,4' 06° 36,9' N	059° 28,6' 06° 59,4' N	059° 32,7' 07° 21,9' N	059° 36,8' 07° 44,2' N	059° 40,8' 08° 06,4' N
17	074° 02,9' 04° 43,3' N	074° 07,3' 05° 06,4' N	074° 11,7' 05° 29,4' N	074° 16,0' 05° 52,3' N	074° 20,3' 06° 15,1' N	074° 24,5' 06° 37,8' N	074° 28,7' 07° 00,4' N	074° 32,9' 07° 22,8' N	074° 37,0' 07° 45,1' N	074° 41,0' 08° 07,3' N
18	089° 03,1' 04° 44,3' N	089° 07,5' 05° 07,4' N	089° 11,8' 05° 30,4' N	089° 16,2' 05° 53,3' N	089° 20,5' 06° 16,1' N	089° 24,7' 06° 38,7' N	089° 28,9' 07° 01,3' N	089° 33,0' 07° 23,8' N	089° 37,1' 07° 46,1' N	089° 41,2' 08° 08,3' N
19	104° 03,3' 04° 45,2' N	104° 07,7' 05° 08,3' N	104° 12,0' 05° 31,3' N	104° 16,4' 05° 54,2' N	104° 20,6' 06° 17,0' N	104° 24,9' 06° 39,7' N	104° 29,1' 07° 02,2' N	104° 33,2' 07° 24,7' N	104° 37,3' 07° 47,0' N	104° 41,3' 08° 09,2' N
20	119° 03,4' 04° 46,2' N	119° 07,8' 05° 09,3' N	119° 12,2' 05° 32,3' N	119° 16,5' 05° 55,2' N	119° 20,8' 06° 17,9' N	119° 25,1' 06° 40,6' N	119° 29,3' 07° 03,2' N	119° 33,4' 07° 25,6' N	119° 37,5' 07° 47,9' N	119° 41,5' 08° 10,1' N
21	134° 03,6' 04° 47,2' N	134° 08,0' 05° 10,2' N	134° 12,4' 05° 33,2' N	134° 16,7' 05° 56,1' N	134° 21,0' 06° 18,9' N	134° 25,2' 06° 41,6' N	134° 29,4' 07° 04,1' N	134° 33,6' 07° 26,5' N	134° 37,6' 07° 48,9' N	134° 41,7' 08° 11,0' N
22	149° 03,8' 04° 48,1' N	149° 08,2' 05° 11,2' N	149° 12,6' 05° 34,2' N	149° 16,9' 05° 57,1' N	149° 21,2' 06° 19,8' N	149° 25,4' 06° 42,5' N	149° 29,6' 07° 05,1' N	149° 33,7' 07° 27,5' N	149° 37,8' 07° 49,8' N	149° 41,8' 08° 11,9' N
23	164° 04,0' 04° 49,1' N	164° 08,4' 05° 12,2' N	164° 12,7' 05° 35,1' N	164° 17,1' 05° 58,0' N	164° 21,3' 06° 20,8' N	164° 25,6' 06° 43,4' N	164° 29,8' 07° 06,0' N	164° 33,9' 07° 28,4' N	164° 38,0' 07° 50,7' N	164° 42,0' 08° 12,9' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 11 Apr to 30 Apr

UT	11 Apr	12 Apr	13 Apr	14 Apr	15 Apr	16 Apr	17 Apr	18 Apr	19 Apr	20 Apr
00	179° 42,2' 08° 13,8' N	179° 46,1' 08° 35,8' N	179° 50,0' 08° 57,7' N	179° 53,8' 09° 19,4' N	179° 57,5' 09° 40,9' N	180° 01,1' 10° 02,3' N	180° 04,6' 10° 23,6' N	180° 08,1' 10° 44,6' N	180° 11,4' 11° 05,5' N	180° 14,6' 11° 26,2' N
01	194° 42,3' 08° 14,7' N	194° 46,3' 08° 36,7' N	194° 50,1' 08° 58,6' N	194° 53,9' 09° 20,3' N	194° 57,6' 09° 41,8' N	195° 01,2' 10° 03,2' N	195° 04,8' 10° 24,4' N	195° 08,2' 10° 45,5' N	195° 11,5' 11° 06,4' N	195° 14,8' 11° 27,1' N
02	209° 42,5' 08° 15,6' N	209° 46,4' 08° 37,6' N	209° 50,3' 08° 59,5' N	209° 54,1' 09° 21,2' N	209° 57,8' 09° 42,7' N	210° 01,4' 10° 04,1' N	210° 04,9' 10° 25,3' N	210° 08,3' 10° 46,4' N	210° 11,7' 11° 07,2' N	210° 14,9' 11° 27,9' N
03	224° 42,6' 08° 16,5' N	224° 46,6' 08° 38,5' N	224° 50,4' 09° 00,4' N	224° 54,2' 09° 22,1' N	224° 57,9' 09° 43,6' N	225° 01,5' 10° 05,0' N	225° 05,1' 10° 26,2' N	225° 08,5' 10° 47,2' N	225° 11,8' 11° 08,1' N	225° 15,0' 11° 28,8' N
04	239° 42,8' 08° 17,5' N	239° 46,7' 08° 39,5' N	239° 50,6' 09° 01,3' N	239° 54,4' 09° 23,0' N	239° 58,1' 09° 44,5' N	240° 01,7' 10° 05,9' N	240° 05,2' 10° 27,1' N	240° 08,6' 10° 48,1' N	240° 12,0' 11° 09,0' N	240° 15,2' 11° 29,6' N
05	254° 43,0' 08° 18,4' N	254° 46,9' 08° 40,4' N	254° 50,8' 09° 02,2' N	254° 54,5' 09° 23,9' N	254° 58,2' 09° 45,4' N	255° 01,8' 10° 06,8' N	255° 05,3' 10° 28,0' N	255° 08,8' 10° 49,0' N	255° 12,1' 11° 09,8' N	255° 15,3' 11° 30,5' N
06	269° 43,1' 08° 19,3' N	269° 47,1' 08° 41,3' N	269° 50,9' 09° 03,1' N	269° 54,7' 09° 24,8' N	269° 58,4' 09° 46,3' N	270° 02,0' 10° 07,7' N	270° 05,5' 10° 28,8' N	270° 08,9' 10° 49,9' N	270° 12,2' 11° 10,7' N	270° 15,4' 11° 31,4' N
07	284° 43,3' 08° 20,2' N	284° 47,2' 08° 42,2' N	284° 51,1' 09° 04,0' N	284° 54,8' 09° 25,7' N	284° 58,5' 09° 47,2' N	285° 02,1' 10° 08,5' N	285° 05,6' 10° 29,7' N	285° 09,0' 10° 50,7' N	285° 12,4' 11° 11,6' N	285° 15,6' 11° 32,2' N
08	299° 43,5' 08° 21,1' N	299° 47,4' 08° 43,1' N	299° 51,2' 09° 04,9' N	299° 55,0' 09° 26,6' N	299° 58,7' 09° 48,1' N	300° 02,3' 10° 09,4' N	300° 05,8' 10° 30,6' N	300° 09,2' 10° 51,6' N	300° 12,5' 11° 12,4' N	300° 15,7' 11° 33,1' N
09	314° 43,6' 08° 22,1' N	314° 47,5' 08° 44,0' N	314° 51,4' 09° 05,8' N	314° 55,2' 09° 27,5' N	314° 58,8' 09° 49,0' N	315° 02,4' 10° 10,3' N	315° 05,9' 10° 31,5' N	315° 09,3' 10° 52,5' N	315° 12,6' 11° 13,3' N	315° 15,8' 11° 33,9' N
10	329° 43,8' 08° 23,0' N	329° 47,7' 08° 44,9' N	329° 51,5' 09° 06,7' N	329° 55,3' 09° 28,4' N	329° 59,0' 09° 49,9' N	330° 02,6' 10° 11,2' N	330° 06,1' 10° 32,4' N	330° 09,5' 10° 53,4' N	330° 12,8' 11° 14,2' N	330° 16,0' 11° 34,8' N
11	344° 44,0' 08° 23,9' N	344° 47,9' 08° 45,8' N	344° 51,7' 09° 07,6' N	344° 55,5' 09° 29,3' N	344° 59,1' 09° 50,8' N	345° 02,7' 10° 12,1' N	345° 06,2' 10° 33,2' N	345° 09,6' 10° 54,2' N	345° 12,9' 11° 15,0' N	345° 16,1' 11° 35,6' N
12	359° 44,1' 08° 24,8' N	359° 48,0' 08° 46,8' N	359° 51,9' 09° 08,5' N	359° 55,6' 09° 30,2' N	359° 59,3' 09° 51,7' N	000° 02,9' 10° 13,0' N	000° 06,4' 10° 34,1' N	000° 09,7' 10° 55,1' N	000° 13,0' 11° 15,9' N	000° 16,2' 11° 36,5' N
13	014° 44,3' 08° 25,7' N	014° 48,2' 08° 47,7' N	014° 52,0' 09° 09,4' N	014° 55,8' 09° 31,1' N	014° 59,4' 09° 52,6' N	015° 03,0' 10° 13,9' N	015° 06,5' 10° 35,0' N	015° 09,9' 10° 56,0' N	015° 13,2' 11° 16,7' N	015° 16,4' 11° 37,3' N
14	029° 44,5' 08° 26,6' N	029° 48,4' 08° 48,6' N	029° 52,2' 09° 10,4' N	029° 55,9' 09° 32,0' N	029° 59,6' 09° 53,4' N	030° 03,2' 10° 14,7' N	030° 06,6' 10° 35,9' N	030° 10,0' 10° 56,8' N	030° 13,3' 11° 17,6' N	030° 16,5' 11° 38,2' N
15	044° 44,6' 08° 27,6' N	044° 48,5' 08° 49,5' N	044° 52,3' 09° 11,3' N	044° 56,1' 09° 32,9' N	044° 59,7' 09° 54,3' N	045° 03,3' 10° 15,6' N	045° 06,8' 10° 36,8' N	045° 10,2' 10° 57,7' N	045° 13,4' 11° 18,5' N	045° 16,6' 11° 39,1' N
16	059° 44,8' 08° 28,5' N	059° 48,7' 08° 50,4' N	059° 52,5' 09° 12,2' N	059° 56,2' 09° 33,8' N	059° 59,9' 09° 55,2' N	060° 03,5' 10° 16,5' N	060° 06,9' 10° 37,6' N	060° 10,3' 10° 58,6' N	060° 13,6' 11° 19,3' N	060° 16,7' 11° 39,9' N
17	074° 44,9' 08° 29,4' N	074° 48,8' 08° 51,3' N	074° 52,7' 09° 13,1' N	074° 56,4' 09° 34,7' N	075° 00,0' 09° 56,1' N	075° 03,6' 10° 17,4' N	075° 07,1' 10° 38,5' N	075° 10,4' 10° 59,4' N	075° 13,7' 11° 20,2' N	075° 16,9' 11° 40,8' N
18	089° 45,1' 08° 30,3' N	089° 49,0' 08° 52,2' N	089° 52,8' 09° 14,0' N	089° 56,5' 09° 35,6' N	090° 00,2' 09° 57,0' N	090° 03,7' 10° 18,3' N	090° 07,2' 10° 39,4' N	090° 10,6' 11° 00,3' N	090° 13,8' 11° 21,1' N	090° 17,0' 11° 41,6' N
19	104° 45,3' 08° 31,2' N	104° 49,2' 08° 53,1' N	104° 53,0' 09° 14,9' N	104° 56,7' 09° 36,5' N	105° 00,3' 09° 57,9' N	105° 03,9' 10° 19,2' N	105° 07,4' 10° 40,3' N	105° 10,7' 11° 01,2' N	105° 14,0' 11° 21,9' N	105° 17,1' 11° 42,5' N
20	119° 45,4' 08° 32,1' N	119° 49,3' 08° 54,0' N	119° 53,1' 09° 15,8' N	119° 56,8' 09° 37,4' N	120° 00,5' 09° 58,8' N	120° 04,0' 10° 20,0' N	120° 07,5' 10° 41,1' N	120° 10,9' 11° 02,0' N	120° 14,1' 11° 22,8' N	120° 17,3' 11° 43,3' N
21	134° 45,6' 08° 33,1' N	134° 49,5' 08° 54,9' N	134° 53,3' 09° 16,7' N	134° 57,0' 09° 38,3' N	135° 00,6' 09° 59,7' N	135° 04,2' 10° 20,9' N	135° 07,6' 10° 42,0' N	135° 11,0' 11° 02,9' N	135° 14,2' 11° 23,6' N	135° 17,4' 11° 44,2' N
22	149° 45,8' 08° 34,0' N	149° 49,6' 08° 55,8' N	149° 53,4' 09° 17,6' N	149° 57,2' 09° 39,1' N	150° 00,8' 10° 00,6' N	150° 04,3' 10° 21,8' N	150° 07,8' 10° 42,9' N	150° 11,1' 11° 03,8' N	150° 14,4' 11° 24,5' N	150° 17,5' 11° 45,0' N
23	164° 45,9' 08° 34,9' N	164° 49,8' 08° 56,8' N	164° 53,6' 09° 18,5' N	164° 57,3' 09° 40,0' N	165° 00,9' 10° 01,4' N	165° 04,5' 10° 22,7' N	165° 07,9' 10° 43,8' N	165° 11,3' 11° 04,6' N	165° 14,5' 11° 25,4' N	165° 17,6' 11° 45,9' N

UT	21 Apr	22 Apr	23 Apr	24 Apr	25 Apr	26 Apr	27 Apr	28 Apr	29 Apr	30 Apr
00	180° 17,8' 11° 46,7' N	180° 20,8' 12° 07,1' N	180° 23,7' 12° 27,2' N	180° 26,5' 12° 47,1' N	180° 29,1' 13° 06,8' N	180° 31,7' 13° 26,3' N	180° 34,1' 13° 45,6' N	180° 36,3' 14° 04,7' N	180° 38,5' 14° 23,5' N	180° 40,5' 14° 42,1' N
01	195° 17,9' 11° 47,6' N	195° 20,9' 12° 07,9' N	195° 23,8' 12° 28,0' N	195° 26,6' 12° 47,9' N	195° 29,2' 13° 07,6' N	195° 31,8' 13° 27,1' N	195° 34,2' 13° 46,4' N	195° 36,4' 14° 05,4' N	195° 38,6' 14° 24,3' N	195° 40,6' 14° 42,8' N
02	210° 18,0' 11° 48,4' N	210° 21,0' 12° 08,7' N	210° 23,9' 12° 28,8' N	210° 26,7' 12° 48,8' N	210° 29,3' 13° 08,4' N	210° 31,9' 13° 27,9' N	210° 34,3' 13° 47,2' N	210° 36,5' 14° 06,2' N	210° 38,7' 14° 25,0' N	210° 40,7' 14° 43,6' N
03	225° 18,2' 11° 49,3' N	225° 21,2' 12° 09,6' N	225° 24,0' 12° 29,7' N	225° 26,8' 12° 49,6' N	225° 29,5' 13° 09,3' N	225° 32,0' 13° 28,7' N	225° 34,4' 13° 48,0' N	225° 36,6' 14° 07,0' N	225° 38,8' 14° 25,8' N	225° 40,8' 14° 44,4' N
04	240° 18,3' 11° 50,1' N	240° 21,3' 12° 10,4' N	240° 24,2' 12° 30,5' N	240° 26,9' 12° 50,4' N	240° 29,6' 13° 10,1' N	240° 32,1' 13° 29,5' N	240° 34,5' 13° 48,8' N	240° 36,7' 14° 07,8' N	240° 38,8' 14° 26,6' N	240° 40,8' 14° 45,1' N
05	255° 18,4' 11° 51,0' N	255° 21,4' 12° 11,3' N	255° 24,3' 12° 31,3' N	255° 27,0' 12° 51,2' N	255° 29,7' 13° 10,9' N	255° 32,2' 13° 30,4' N	255° 34,6' 13° 49,6' N	255° 36,8' 14° 08,6' N	255° 38,9' 14° 27,4' N	255° 40,9' 14° 45,9' N
06	270° 18,5' 11° 51,8' N	270° 21,5' 12° 12,1' N	270° 24,4' 12° 32,2' N	270° 27,1' 12° 52,0' N	270° 29,8' 13° 11,7' N	270° 32,3' 13° 31,2' N	270° 34,7' 13° 50,4' N	270° 36,9' 14° 09,4' N	270° 39,0' 14° 28,1' N	270° 41,0' 14° 46,7' N
07	285° 18,7' 11° 52,7' N	285° 21,6' 12° 12,9' N	285° 24,5' 12° 33,0' N	285° 27,3' 12° 52,9' N	285° 29,9' 13° 12,5' N	285° 32,4' 13° 32,0' N	285° 34,7' 13° 51,2' N	285° 37,0' 14° 10,2' N	285° 39,1' 14° 28,9' N	285° 41,1' 14° 47,4' N
08	300° 18,8' 11° 53,5' N	300° 21,8' 12° 13,8' N	300° 24,6' 12° 33,8' N	300° 27,4' 12° 53,7' N	300° 30,0' 13° 13,3' N	300° 32,5' 13° 32,8' N	300° 34,8' 13° 52,0' N	300° 37,1' 14° 11,0' N	300° 39,2' 14° 29,7' N	300° 41,2' 14° 48,2' N
09	315° 18,9' 11° 54,4' N	315° 21,9' 12° 14,6' N	315° 24,7' 12° 34,7' N	315° 27,5' 12° 54,5' N	315° 30,1' 13° 14,2' N	315° 32,6' 13° 33,6' N	315° 34,9' 13° 52,8' N	315° 37,2' 14° 11,7' N	315° 39,3' 14° 30,5' N	315° 41,2' 14° 49,0' N
10	330° 19,0' 11° 55,2' N	330° 22,0' 12° 15,5' N	330° 24,9' 12° 35,5' N	330° 27,6' 12° 55,3' N	330° 30,2' 13° 15,0' N	330° 32,7' 13° 34,4' N	330° 35,0' 13° 53,6' N	330° 37,3' 14° 12,5' N	330° 39,4' 14° 31,2' N	330° 41,3' 14° 49,7' N
11	345° 19,2' 11° 56,1' N	345° 22,1' 12° 16,3' N	345° 25,0' 12° 36,3' N	345° 27,7' 12° 56,2' N	345° 30,3' 13° 15,8' N	345° 32,8' 13° 35,2' N	345° 35,1' 13° 54,4' N	345° 37,4' 14° 13,3' N	345° 39,4' 14° 32,0' N	345° 41,4' 14° 50,5' N
12	000° 19,3' 11° 56,9' N	000° 22,3' 12° 17,1' N	000° 25,1' 12° 37,2' N	000° 27,8' 12° 57,0' N	000° 30,4' 13° 16,6' N	000° 32,9' 13° 36,0' N	000° 35,2' 13° 55,2' N	000° 37,4' 14° 14,1' N	000° 39,5' 14° 32,8' N	000° 41,5' 14° 51,3' N
13	015° 19,4' 11° 57,8' N	015° 22,4' 12° 18,0' N	015° 25,2' 12° 38,0' N	015° 27,9' 12° 57,8' N	015° 30,5' 13° 17,4' N	015° 33,0' 13° 36,8' N	015° 35,3' 13° 55,9' N	015° 37,5' 14° 14,9' N	015° 39,6' 14° 33,6' N	015° 41,6' 14° 52,0' N
14	030° 19,5' 11° 58,6' N	030° 22,5' 12° 18,8' N	030° 25,3' 12° 38,8' N	030° 28,0' 12° 58,6' N	030° 30,6' 13° 18,2' N	030° 33,1' 13° 37,6' N	030° 35,4' 13° 56,7' N	030° 37,6' 14° 15,7' N	030° 39,7' 14° 34,3' N	030° 41,6' 14° 52,8' N
15	045° 19,7' 11° 59,5' N	045° 22,6' 12° 19,7' N	045° 25,4' 12° 39,7' N	045° 28,1' 12° 59,4' N	045° 30,7' 13° 19,0' N	045° 33,2' 13° 38,4' N	045° 35,5' 13° 57,5' N	045° 37,7' 14° 16,4' N	045° 39,8' 14° 35,1' N	045° 41,7' 14° 53,6' N
16	060° 19,8' 12° 00,3' N	060° 22,7' 12° 20,5' N	060° 25,6' 12° 40,5' N	060° 28,3' 13° 00,3' N	060° 30,8' 13° 19,8' N	060° 33,3' 13° 39,2' N	060° 35,6' 13° 58,3' N	060° 37,8' 14° 17,2' N	060° 39,9' 14° 35,9' N	060° 41,8' 14° 54,3' N
17	075° 19,9' 12° 01,1' N	075° 22,9' 12° 21,3' N	075° 25,7' 12° 41,3' N	075° 28,4' 13° 01,1' N	075° 30,9' 13° 20,6' N	075° 33,4' 13° 40,0' N	075° 35,7' 13° 59,1' N	075° 37,9' 14° 18,0' N	075° 39,9' 14° 36,7' N	075° 41,9' 14° 55,1' N
18	090° 20,0' 12° 02,0' N	090° 23,0' 12° 22,2' N	090° 25,8' 12° 42,1' N	090° 28,5' 13° 01,9' N	090° 31,0' 13° 21,5' N	090° 33,5' 13° 40,8' N	090° 35,8' 13° 59,9' N	090° 38,0' 14° 18,8' N	090° 40,0' 14° 37,4' N	090° 41,9' 14° 55,8' N
19	105° 20,2' 12° 02,8' N	105° 23,1' 12° 23,0' N	105° 25,9' 12° 43,0' N	105° 28,6' 13° 02,7' N	105° 31,1' 13° 22,3' N	105° 33,6' 13° 41,6' N	105° 35,9' 14° 00,7' N	105° 38,1' 14° 19,6' N	105° 40,1' 14° 38,2' N	105° 42,0' 14° 56,6' N
20	120° 20,3' 12° 03,7' N	120° 23,2' 12° 23,8' N	120° 26,0' 12° 43,8' N	120° 28,7' 13° 03,5' N	120° 31,2' 13° 23,1' N	120° 33,7' 13° 42,4' N	120° 36,0' 14° 01,5' N	120° 38,1' 14° 20,4' N	120° 40,2' 14° 39,0' N	120° 42,1' 14° 57,4' N
21	135° 20,4' 12° 04,5' N	135° 23,3' 12° 24,7' N	135° 26,1' 12° 44,6' N	135° 28,8' 13° 04,4' N	135° 31,4' 13° 23,9' N	135° 33,8' 13° 43,2' N	135° 36,1' 14° 02,3' N	135° 38,2' 14° 21,1' N	135° 40,3' 14° 39,8' N	135° 42,2' 14° 58,1' N
22	150° 20,5' 12° 05,4' N	150° 23,5' 12° 25,5' N	150° 26,2' 12° 45,4' N	150° 28,9' 13° 05,2' N	150° 31,5' 13° 24,7' N	150° 33,9' 13° 44,0' N	150° 36,2' 14° 03,1' N	150° 38,3' 14° 21,9' N	150° 40,4' 14° 40,5' N	150° 42,2' 14° 58,9' N
23	165° 20,7' 12° 06,2' N	165° 23,6' 12° 26,3' N	165° 26,4' 12° 46,3' N	165° 29,0' 13° 06,0' N	165° 31,6' 13° 25,5' N	165° 34,0' 13° 44,8' N	165° 36,3' 14° 03,9' N	165° 38,4' 14° 22,7' N	165° 40,4' 14° 41,3' N	165° 42,3' 14° 59,6' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 01 May to 20 May

UT	01 May	02 May	03 May	04 May	05 May	06 May	07 May	08 May	09 May	10 May
00	180° 42,4' 15° 00,4' N	180° 44,2' 15° 18,5' N	180° 45,8' 15° 36,3' N	180° 47,3' 15° 53,9' N	180° 48,6' 16° 11,2' N	180° 49,8' 16° 28,3' N	180° 50,9' 16° 45,1' N	180° 51,8' 17° 01,6' N	180° 52,6' 17° 17,8' N	180° 53,3' 17° 33,7' N
01	195° 42,5' 15° 01,2' N	195° 44,2' 15° 19,3' N	195° 45,8' 15° 37,1' N	195° 47,3' 15° 54,7' N	195° 48,6' 16° 12,0' N	195° 49,9' 16° 29,0' N	195° 50,9' 16° 45,8' N	195° 51,8' 17° 02,2' N	195° 52,6' 17° 18,4' N	195° 53,3' 17° 34,3' N
02	210° 42,6' 15° 01,9' N	210° 44,3' 15° 20,0' N	210° 45,9' 15° 37,8' N	210° 47,4' 15° 55,4' N	210° 48,7' 16° 12,7' N	210° 49,9' 16° 29,7' N	210° 51,0' 16° 46,5' N	210° 51,9' 17° 02,9' N	210° 52,7' 17° 19,1' N	210° 53,3' 17° 35,0' N
03	225° 42,6' 15° 02,7' N	225° 44,4' 15° 20,7' N	225° 46,0' 15° 38,6' N	225° 47,4' 15° 56,1' N	225° 48,8' 16° 13,4' N	225° 49,9' 16° 30,4' N	225° 51,0' 16° 47,1' N	225° 51,9' 17° 03,6' N	225° 52,7' 17° 19,8' N	225° 53,3' 17° 35,7' N
04	240° 42,7' 15° 03,4' N	240° 44,4' 15° 21,5' N	240° 46,0' 15° 39,3' N	240° 47,5' 15° 56,8' N	240° 48,8' 16° 14,1' N	240° 50,0' 16° 31,1' N	240° 51,0' 16° 47,8' N	240° 52,0' 17° 04,3' N	240° 52,7' 17° 20,4' N	240° 53,4' 17° 36,3' N
05	255° 42,8' 15° 04,2' N	255° 44,5' 15° 22,2' N	255° 46,1' 15° 40,0' N	255° 47,5' 15° 57,6' N	255° 48,9' 16° 14,8' N	255° 50,0' 16° 31,8' N	255° 51,1' 16° 48,5' N	255° 52,0' 17° 05,0' N	255° 52,8' 17° 21,1' N	255° 53,4' 17° 37,0' N
06	270° 42,9' 15° 05,0' N	270° 44,6' 15° 23,0' N	270° 46,2' 15° 40,8' N	270° 47,6' 15° 58,3' N	270° 48,9' 16° 15,5' N	270° 50,1' 16° 32,5' N	270° 51,1' 16° 49,2' N	270° 52,0' 17° 05,6' N	270° 52,8' 17° 21,8' N	270° 53,4' 17° 37,6' N
07	285° 42,9' 15° 05,7' N	285° 44,6' 15° 23,7' N	285° 46,2' 15° 41,5' N	285° 47,7' 15° 59,0' N	285° 49,0' 16° 16,2' N	285° 50,1' 16° 33,2' N	285° 51,2' 16° 49,9' N	285° 52,1' 17° 06,3' N	285° 52,8' 17° 22,4' N	285° 53,4' 17° 38,3' N
08	300° 43,0' 15° 06,5' N	300° 44,7' 15° 24,5' N	300° 46,3' 15° 42,2' N	300° 47,7' 15° 59,7' N	300° 49,0' 16° 17,0' N	300° 50,2' 16° 33,9' N	300° 51,2' 16° 50,6' N	300° 52,1' 17° 07,0' N	300° 52,8' 17° 23,1' N	300° 53,5' 17° 38,9' N
09	315° 43,1' 15° 07,2' N	315° 44,8' 15° 25,2' N	315° 46,3' 15° 43,0' N	315° 47,8' 16° 00,5' N	315° 49,1' 16° 17,7' N	315° 50,2' 16° 34,6' N	315° 51,2' 16° 51,3' N	315° 52,1' 17° 07,7' N	315° 52,9' 17° 23,8' N	315° 53,5' 17° 39,6' N
10	330° 43,1' 15° 08,0' N	330° 44,8' 15° 26,0' N	330° 46,4' 15° 43,7' N	330° 47,8' 16° 01,2' N	330° 49,1' 16° 18,4' N	330° 50,3' 16° 35,3' N	330° 51,3' 16° 52,0' N	330° 52,2' 17° 08,4' N	330° 52,9' 17° 24,4' N	330° 53,5' 17° 40,2' N
11	345° 43,2' 15° 08,7' N	345° 44,9' 15° 26,7' N	345° 46,5' 15° 44,4' N	345° 47,9' 16° 01,9' N	345° 49,2' 16° 19,1' N	345° 50,3' 16° 36,0' N	345° 51,3' 16° 52,7' N	345° 52,2' 17° 09,0' N	345° 52,9' 17° 25,1' N	345° 53,5' 17° 40,9' N
12	000° 43,3' 15° 09,5' N	000° 45,0' 15° 27,5' N	000° 46,5' 15° 45,2' N	000° 47,9' 16° 02,6' N	000° 49,2' 16° 19,8' N	000° 50,4' 16° 36,7' N	000° 51,4' 16° 53,4' N	000° 52,2' 17° 09,7' N	000° 53,0' 17° 25,8' N	000° 53,5' 17° 41,5' N
13	015° 43,4' 15° 10,2' N	015° 45,0' 15° 28,2' N	015° 46,6' 15° 45,9' N	015° 48,0' 16° 03,3' N	015° 49,3' 16° 20,5' N	015° 50,4' 16° 37,4' N	015° 51,4' 16° 54,0' N	015° 52,3' 17° 10,4' N	015° 53,0' 17° 26,4' N	015° 53,6' 17° 42,2' N
14	030° 43,4' 15° 11,0' N	030° 45,1' 15° 28,9' N	030° 46,6' 15° 46,6' N	030° 48,1' 16° 04,1' N	030° 49,3' 16° 21,2' N	030° 50,4' 16° 38,1' N	030° 51,4' 16° 54,7' N	030° 52,3' 17° 11,1' N	030° 53,0' 17° 27,1' N	030° 53,6' 17° 42,8' N
15	045° 43,5' 15° 11,7' N	045° 45,2' 15° 29,7' N	045° 46,7' 15° 47,4' N	045° 48,1' 16° 04,8' N	045° 49,4' 16° 21,9' N	045° 50,5' 16° 38,8' N	045° 51,5' 16° 55,4' N	045° 52,3' 17° 11,7' N	045° 53,0' 17° 27,8' N	045° 53,6' 17° 43,5' N
16	060° 43,6' 15° 12,5' N	060° 45,2' 15° 30,4' N	060° 46,8' 15° 48,1' N	060° 48,2' 16° 05,5' N	060° 49,4' 16° 22,6' N	060° 50,5' 16° 39,5' N	060° 51,5' 16° 56,1' N	060° 52,4' 17° 12,4' N	060° 53,1' 17° 28,4' N	060° 53,6' 17° 44,1' N
17	075° 43,7' 15° 13,3' N	075° 45,3' 15° 31,2' N	075° 46,8' 15° 48,8' N	075° 48,2' 16° 06,2' N	075° 49,5' 16° 23,4' N	075° 50,6' 16° 40,2' N	075° 51,6' 16° 56,8' N	075° 52,4' 17° 13,1' N	075° 53,1' 17° 29,1' N	075° 53,6' 17° 44,8' N
18	090° 43,7' 15° 14,0' N	090° 45,4' 15° 31,9' N	090° 46,9' 15° 49,6' N	090° 48,3' 16° 06,9' N	090° 49,5' 16° 24,1' N	090° 50,6' 16° 40,9' N	090° 51,6' 16° 57,5' N	090° 52,4' 17° 13,7' N	090° 53,1' 17° 29,7' N	090° 53,7' 17° 45,4' N
19	105° 43,8' 15° 14,8' N	105° 45,4' 15° 32,6' N	105° 47,0' 15° 50,3' N	105° 48,3' 16° 07,7' N	105° 49,6' 16° 24,8' N	105° 50,7' 16° 41,6' N	105° 51,6' 16° 58,2' N	105° 52,5' 17° 14,4' N	105° 53,1' 17° 30,4' N	105° 53,7' 17° 46,1' N
20	120° 43,9' 15° 15,5' N	120° 45,5' 15° 33,4' N	120° 47,0' 15° 51,0' N	120° 48,4' 16° 08,4' N	120° 49,6' 16° 25,5' N	120° 50,7' 16° 42,3' N	120° 51,7' 16° 58,8' N	120° 52,5' 17° 15,1' N	120° 53,2' 17° 31,1' N	120° 53,7' 17° 46,7' N
21	135° 43,9' 15° 16,3' N	135° 45,6' 15° 34,1' N	135° 47,1' 15° 51,7' N	135° 48,4' 16° 09,1' N	135° 49,7' 16° 26,2' N	135° 50,8' 16° 43,0' N	135° 51,7' 16° 59,5' N	135° 52,5' 17° 15,8' N	135° 53,2' 17° 31,7' N	135° 53,7' 17° 47,4' N
22	150° 44,0' 15° 17,0' N	150° 45,6' 15° 34,9' N	150° 47,1' 15° 52,5' N	150° 48,5' 16° 09,8' N	150° 49,7' 16° 26,9' N	150° 50,8' 16° 43,7' N	150° 51,7' 17° 00,2' N	150° 52,5' 17° 16,4' N	150° 53,2' 17° 32,4' N	150° 53,7' 17° 48,0' N
23	165° 44,1' 15° 17,8' N	165° 45,7' 15° 35,6' N	165° 47,2' 15° 53,2' N	165° 48,5' 16° 10,5' N	165° 49,8' 16° 27,6' N	165° 50,8' 16° 44,4' N	165° 51,8' 17° 00,9' N	165° 52,6' 17° 17,1' N	165° 53,2' 17° 33,0' N	165° 53,8' 17° 48,7' N

UT	11 May	12 May	13 May	14 May	15 May	16 May	17 May	18 May	19 May	20 May
00	180° 53,8' 17° 49,3' N	180° 54,2' 18° 04,6' N	180° 54,4' 18° 19,6' N	180° 54,5' 18° 34,3' N	180° 54,5' 18° 48,7' N	180° 54,3' 19° 02,8' N	180° 54,0' 19° 16,5' N	180° 53,5' 19° 30,0' N	180° 52,9' 19° 43,1' N	180° 52,2' 19° 55,8' N
01	195° 53,8' 17° 49,9' N	195° 54,2' 18° 05,3' N	195° 54,4' 18° 20,3' N	195° 54,5' 18° 34,9' N	195° 54,5' 18° 49,3' N	195° 54,3' 19° 03,4' N	195° 54,0' 19° 17,1' N	195° 53,5' 19° 30,5' N	195° 52,9' 19° 43,6' N	195° 52,1' 19° 56,3' N
02	210° 53,8' 17° 50,6' N	210° 54,2' 18° 05,9' N	210° 54,4' 18° 20,9' N	210° 54,5' 18° 35,5' N	210° 54,5' 18° 49,9' N	210° 54,3' 19° 04,0' N	210° 53,9' 19° 17,7' N	210° 53,5' 19° 31,1' N	210° 52,9' 19° 44,1' N	210° 52,1' 19° 56,9' N
03	225° 53,8' 17° 51,2' N	225° 54,2' 18° 06,5' N	225° 54,4' 18° 21,5' N	225° 54,5' 18° 36,2' N	225° 54,5' 18° 50,5' N	225° 54,3' 19° 04,5' N	225° 53,9' 19° 18,2' N	225° 53,5' 19° 31,6' N	225° 52,8' 19° 44,7' N	225° 52,1' 19° 57,4' N
04	240° 53,9' 17° 51,9' N	240° 54,2' 18° 07,1' N	240° 54,4' 18° 22,1' N	240° 54,5' 18° 36,8' N	240° 54,5' 18° 51,1' N	240° 54,3' 19° 05,1' N	240° 53,9' 19° 18,8' N	240° 53,4' 19° 32,2' N	240° 52,8' 19° 45,2' N	240° 52,0' 19° 57,9' N
05	255° 53,9' 17° 52,5' N	255° 54,2' 18° 07,8' N	255° 54,4' 18° 22,7' N	255° 54,5' 18° 37,4' N	255° 54,4' 18° 51,7' N	255° 54,2' 19° 05,7' N	255° 53,9' 19° 19,4' N	255° 53,4' 19° 32,7' N	255° 52,8' 19° 45,7' N	255° 52,0' 19° 58,4' N
06	270° 53,9' 17° 53,2' N	270° 54,2' 18° 08,4' N	270° 54,4' 18° 23,3' N	270° 54,5' 18° 38,0' N	270° 54,4' 18° 52,3' N	270° 54,2' 19° 06,3' N	270° 53,9' 19° 19,9' N	270° 53,4' 19° 33,3' N	270° 52,7' 19° 46,3' N	270° 52,0' 19° 59,0' N
07	285° 53,9' 17° 53,8' N	285° 54,3' 18° 09,0' N	285° 54,5' 18° 24,0' N	285° 54,5' 18° 38,6' N	285° 54,4' 18° 52,9' N	285° 54,2' 19° 06,8' N	285° 53,9' 19° 20,5' N	285° 53,4' 19° 33,8' N	285° 52,7' 19° 46,8' N	285° 51,9' 19° 59,5' N
08	300° 53,9' 17° 54,4' N	300° 54,3' 18° 09,7' N	300° 54,5' 18° 24,6' N	300° 54,5' 18° 39,2' N	300° 54,4' 18° 53,5' N	300° 54,2' 19° 07,4' N	300° 53,8' 19° 21,1' N	300° 53,3' 19° 34,4' N	300° 52,7' 19° 47,4' N	300° 51,9' 20° 00,0' N
09	315° 53,9' 17° 55,1' N	315° 54,3' 18° 10,3' N	315° 54,5' 18° 25,2' N	315° 54,5' 18° 39,8' N	315° 54,4' 18° 54,0' N	315° 54,2' 19° 08,0' N	315° 53,8' 19° 21,6' N	315° 53,3' 19° 34,9' N	315° 52,7' 19° 47,9' N	315° 51,9' 20° 00,5' N
10	330° 54,0' 17° 55,7' N	330° 54,3' 18° 10,9' N	330° 54,5' 18° 25,8' N	330° 54,5' 18° 40,4' N	330° 54,4' 18° 54,6' N	330° 54,2' 19° 08,6' N	330° 53,8' 19° 22,2' N	330° 53,3' 19° 35,5' N	330° 52,6' 19° 48,4' N	330° 51,8' 20° 01,0' N
11	345° 54,0' 17° 56,4' N	345° 54,3' 18° 11,5' N	345° 54,5' 18° 26,4' N	345° 54,5' 18° 41,0' N	345° 54,4' 18° 55,2' N	345° 54,2' 19° 09,1' N	345° 53,8' 19° 22,7' N	345° 53,3' 19° 36,0' N	345° 52,6' 19° 49,0' N	345° 51,8' 20° 01,6' N
12	000° 54,0' 17° 57,0' N	000° 54,3' 18° 12,2' N	000° 54,5' 18° 27,0' N	000° 54,5' 18° 41,6' N	000° 54,4' 18° 55,8' N	000° 54,2' 19° 09,7' N	000° 53,8' 19° 23,3' N	000° 53,2' 19° 36,6' N	000° 52,6' 19° 49,5' N	000° 51,8' 20° 02,1' N
13	015° 54,0' 17° 57,6' N	015° 54,3' 18° 12,8' N	015° 54,5' 18° 27,6' N	015° 54,5' 18° 42,2' N	015° 54,4' 18° 56,4' N	015° 54,1' 19° 10,3' N	015° 53,7' 19° 23,9' N	015° 53,2' 19° 37,1' N	015° 52,5' 19° 50,0' N	015° 51,7' 20° 02,6' N
14	030° 54,0' 17° 58,3' N	030° 54,3' 18° 13,4' N	030° 54,5' 18° 28,3' N	030° 54,5' 18° 42,8' N	030° 54,4' 18° 57,0' N	030° 54,1' 19° 10,9' N	030° 53,7' 19° 24,4' N	030° 53,2' 19° 37,6' N	030° 52,5' 19° 50,5' N	030° 51,7' 20° 03,1' N
15	045° 54,0' 17° 58,9' N	045° 54,3' 18° 14,0' N	045° 54,5' 18° 28,9' N	045° 54,5' 18° 43,4' N	045° 54,4' 18° 57,6' N	045° 54,1' 19° 11,4' N	045° 53,7' 19° 25,0' N	045° 53,2' 19° 38,2' N	045° 52,5' 19° 51,1' N	045° 51,6' 20° 03,6' N
16	060° 54,1' 17° 59,6' N	060° 54,3' 18° 14,7' N	060° 54,5' 18° 29,5' N	060° 54,5' 18° 44,0' N	060° 54,4' 18° 58,1' N	060° 54,1' 19° 12,0' N	060° 53,7' 19° 25,5' N	060° 53,1' 19° 38,7' N	060° 52,4' 19° 51,6' N	060° 51,6' 20° 04,1' N
17	075° 54,1' 18° 00,2' N	075° 54,4' 18° 15,3' N	075° 54,5' 18° 30,1' N	075° 54,5' 18° 44,6' N	075° 54,4' 18° 58,7' N	075° 54,1' 19° 12,6' N	075° 53,7' 19° 26,1' N	075° 53,1' 19° 39,3' N	075° 52,4' 19° 52,1' N	075° 51,6' 20° 04,7' N
18	090° 54,1' 18° 00,8' N	090° 54,4' 18° 15,9' N	090° 54,5' 18° 30,7' N	090° 54,5' 18° 45,2' N	090° 54,4' 18° 59,3' N	090° 54,1' 19° 13,1' N	090° 53,6' 19° 26,6' N	090° 53,1' 19° 39,8' N	090° 52,4' 19° 52,7' N	090° 51,5' 20° 05,2' N
19	105° 54,1' 18° 01,5' N	105° 54,4' 18° 16,5' N	105° 54,5' 18° 31,3' N	105° 54,5' 18° 45,8' N	105° 54,3' 18° 59,9' N	105° 54,1' 19° 13,7' N	105° 53,6' 19° 27,2' N	105° 53,1' 19° 40,4' N	105° 52,3' 19° 53,2' N	105° 51,5' 20° 05,7' N
20	120° 54,1' 18° 02,1' N	120° 54,4' 18° 17,2' N	120° 54,5' 18° 31,9' N	120° 54,5' 18° 46,4' N	120° 54,3' 19° 00,5' N	120° 54,0' 19° 14,3' N	120° 53,6' 19° 27,8' N	120° 53,0' 19° 40,9' N	120° 52,3' 19° 53,7' N	120° 51,5' 20° 06,2' N
21	135° 54,1' 18° 02,7' N	135° 54,4' 18° 17,8' N	135° 54,5' 18° 32,5' N	135° 54,5' 18° 46,9' N	135° 54,3' 19° 01,1' N	135° 54,0' 19° 14,8' N	135° 53,6' 19° 28,3' N	135° 53,0' 19° 41,4' N	135° 52,3' 19° 54,2' N	135° 51,4' 20° 06,7' N
22	150° 54,1' 18° 03,4' N	150° 54,4' 18° 18,4' N	150° 54,5' 18° 33,1' N	150° 54,5' 18° 47,5' N	150° 54,3' 19° 01,6' N	150° 54,0' 19° 15,4' N	150° 53,6' 19° 28,9' N	150° 53,0' 19° 42,0' N	150° 52,2' 19° 54,8' N	150° 51,4' 20° 07,2' N
23	165° 54,2' 18° 04,0' N	165° 54,4' 18° 19,0' N	165° 54,5' 18° 33,7' N	165° 54,5' 18° 48,1' N	165° 54,3' 19° 02,2' N	165° 54,0' 19° 16,0' N	165° 53,5' 19° 29,4' N	165° 52,9' 19° 42,5' N	165° 52,2' 19° 55,3' N	165° 51,3' 20° 07,7' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 21 May to 09 Jun

UT	21 May	22 May	23 May	24 May	25 May	26 May	27 May	28 May	29 May	30 May
00	180° 51,3' 20° 08,2' N	180° 50,3' 20° 20,3' N	180° 49,1' 20° 32,0' N	180° 47,8' 20° 43,4' N	180° 46,4' 20° 54,4' N	180° 44,9' 21° 05,1' N	180° 43,2' 21° 15,4' N	180° 41,4' 21° 25,3' N	180° 39,5' 21° 34,9' N	180° 37,5' 21° 44,1' N
01	195° 51,3' 20° 08,7' N	195° 50,2' 20° 20,8' N	195° 49,1' 20° 32,5' N	195° 47,8' 20° 43,9' N	195° 46,4' 20° 54,9' N	195° 44,8' 21° 05,5' N	195° 43,1' 21° 15,8' N	195° 41,3' 21° 25,8' N	195° 39,4' 21° 35,3' N	195° 37,4' 21° 44,5' N
02	210° 51,2' 20° 09,3' N	210° 50,2' 20° 21,3' N	210° 49,0' 20° 33,0' N	210° 47,7' 20° 44,4' N	210° 46,3' 20° 55,4' N	210° 44,7' 21° 06,0' N	210° 43,1' 21° 16,3' N	210° 41,3' 21° 26,2' N	210° 39,3' 21° 35,7' N	210° 37,3' 21° 44,8' N
03	225° 51,2' 20° 09,8' N	225° 50,1' 20° 21,8' N	225° 49,0' 20° 33,5' N	225° 47,7' 20° 44,8' N	225° 46,2' 20° 55,8' N	225° 44,7' 21° 06,4' N	225° 43,0' 21° 16,7' N	225° 41,2' 21° 26,6' N	225° 39,2' 21° 36,1' N	225° 37,2' 21° 45,2' N
04	240° 51,1' 20° 10,3' N	240° 50,1' 20° 22,3' N	240° 48,9' 20° 34,0' N	240° 47,6' 20° 45,3' N	240° 46,2' 20° 56,3' N	240° 44,6' 21° 06,9' N	240° 42,9' 21° 17,1' N	240° 41,1' 21° 27,0' N	240° 39,2' 21° 36,5' N	240° 37,1' 21° 45,6' N
05	255° 51,1' 20° 10,8' N	255° 50,1' 20° 22,8' N	255° 48,9' 20° 34,4' N	255° 47,6' 20° 45,8' N	255° 46,1' 20° 56,7' N	255° 44,5' 21° 07,3' N	255° 42,8' 21° 17,5' N	255° 41,0' 21° 27,4' N	255° 39,1' 21° 36,9' N	255° 37,0' 21° 46,0' N
06	270° 51,1' 20° 11,3' N	270° 50,0' 20° 23,3' N	270° 48,8' 20° 34,9' N	270° 47,5' 20° 46,2' N	270° 46,0' 20° 57,1' N	270° 44,5' 21° 07,7' N	270° 42,8' 21° 17,9' N	270° 40,9' 21° 27,8' N	270° 39,0' 21° 37,2' N	270° 36,9' 21° 46,3' N
07	285° 51,0' 20° 11,8' N	285° 50,0' 20° 23,8' N	285° 48,8' 20° 35,4' N	285° 47,4' 20° 46,7' N	285° 46,0' 20° 57,6' N	285° 44,4' 21° 08,2' N	285° 42,7' 21° 18,3' N	285° 40,9' 21° 28,2' N	285° 38,9' 21° 37,6' N	285° 36,9' 21° 46,7' N
08	300° 51,0' 20° 12,3' N	300° 49,9' 20° 24,3' N	300° 48,7' 20° 35,9' N	300° 47,4' 20° 47,1' N	300° 45,9' 20° 58,0' N	300° 44,3' 21° 08,6' N	300° 42,6' 21° 18,8' N	300° 40,8' 21° 28,6' N	300° 38,8' 21° 38,0' N	300° 36,8' 21° 47,1' N
09	315° 50,9' 20° 12,8' N	315° 49,9' 20° 24,8' N	315° 48,7' 20° 36,4' N	315° 47,3' 20° 47,6' N	315° 45,9' 20° 58,5' N	315° 44,3' 21° 09,0' N	315° 42,5' 21° 19,2' N	315° 40,7' 21° 29,0' N	315° 38,7' 21° 38,4' N	315° 36,7' 21° 47,4' N
10	330° 50,9' 20° 13,3' N	330° 49,8' 20° 25,2' N	330° 48,6' 20° 36,8' N	330° 47,3' 20° 48,1' N	330° 45,8' 20° 58,9' N	330° 44,2' 21° 09,4' N	330° 42,5' 21° 19,6' N	330° 40,6' 21° 29,4' N	330° 38,7' 21° 38,8' N	330° 36,6' 21° 47,8' N
11	345° 50,9' 20° 13,8' N	345° 49,8' 20° 25,7' N	345° 48,6' 20° 37,3' N	345° 47,2' 20° 48,5' N	345° 45,7' 20° 59,4' N	345° 44,1' 21° 09,9' N	345° 42,4' 21° 20,0' N	345° 40,5' 21° 29,8' N	345° 38,6' 21° 39,2' N	345° 36,5' 21° 48,2' N
12	000° 50,8' 20° 14,3' N	000° 49,7' 20° 26,2' N	000° 48,5' 20° 37,8' N	000° 47,2' 20° 49,0' N	000° 45,7' 20° 59,8' N	000° 44,1' 21° 10,3' N	000° 42,3' 21° 20,4' N	000° 40,5' 21° 30,2' N	000° 38,5' 21° 39,5' N	000° 36,4' 21° 48,5' N
13	015° 50,8' 20° 14,8' N	015° 49,7' 20° 26,7' N	015° 48,5' 20° 38,3' N	015° 47,1' 20° 49,4' N	015° 45,6' 21° 00,3' N	015° 44,0' 21° 10,7' N	015° 42,2' 21° 20,8' N	015° 40,4' 21° 30,6' N	015° 38,4' 21° 39,9' N	015° 36,3' 21° 48,9' N
14	030° 50,7' 20° 15,3' N	030° 49,6' 20° 27,2' N	030° 48,4' 20° 38,7' N	030° 47,0' 20° 49,9' N	030° 45,5' 21° 00,7' N	030° 43,9' 21° 11,2' N	030° 42,2' 21° 21,3' N	030° 40,3' 21° 31,0' N	030° 38,3' 21° 40,3' N	030° 36,2' 21° 49,3' N
15	045° 50,7' 20° 15,8' N	045° 49,6' 20° 27,7' N	045° 48,3' 20° 39,2' N	045° 47,0' 20° 50,4' N	045° 45,5' 21° 01,2' N	045° 43,8' 21° 11,6' N	045° 42,1' 21° 21,7' N	045° 40,2' 21° 31,4' N	045° 38,2' 21° 40,7' N	045° 36,2' 21° 49,6' N
16	060° 50,6' 20° 16,3' N	060° 49,5' 20° 28,2' N	060° 48,3' 20° 39,7' N	060° 46,9' 20° 50,8' N	060° 45,4' 21° 01,6' N	060° 43,8' 21° 12,0' N	060° 42,0' 21° 22,1' N	060° 40,1' 21° 31,8' N	060° 38,2' 21° 41,1' N	060° 36,1' 21° 50,0' N
17	075° 50,6' 20° 16,8' N	075° 49,5' 20° 28,7' N	075° 48,2' 20° 40,1' N	075° 46,9' 20° 51,3' N	075° 45,3' 21° 02,0' N	075° 43,7' 21° 12,4' N	075° 41,9' 21° 22,5' N	075° 40,1' 21° 32,2' N	075° 38,1' 21° 41,5' N	075° 36,0' 21° 50,4' N
18	090° 50,6' 20° 17,3' N	090° 49,4' 20° 29,1' N	090° 48,2' 20° 40,6' N	090° 46,8' 20° 51,7' N	090° 45,3' 21° 02,5' N	090° 43,6' 21° 12,9' N	090° 41,9' 21° 22,9' N	090° 40,0' 21° 32,6' N	090° 38,0' 21° 41,8' N	090° 35,9' 21° 50,7' N
19	105° 50,5' 20° 17,8' N	105° 49,4' 20° 29,6' N	105° 48,1' 20° 41,1' N	105° 46,7' 20° 52,2' N	105° 45,2' 21° 02,9' N	105° 43,6' 21° 13,3' N	105° 41,8' 21° 23,3' N	105° 39,9' 21° 32,9' N	105° 37,9' 21° 42,2' N	105° 35,8' 21° 51,1' N
20	120° 50,5' 20° 18,3' N	120° 49,3' 20° 30,1' N	120° 48,1' 20° 41,6' N	120° 46,7' 20° 52,6' N	120° 45,1' 21° 03,4' N	120° 43,5' 21° 13,7' N	120° 41,7' 21° 23,7' N	120° 39,8' 21° 33,3' N	120° 37,8' 21° 42,6' N	120° 35,7' 21° 51,5' N
21	135° 50,4' 20° 18,8' N	135° 49,3' 20° 30,6' N	135° 48,0' 20° 42,0' N	135° 46,6' 20° 53,1' N	135° 45,1' 21° 03,8' N	135° 43,4' 21° 14,1' N	135° 41,6' 21° 24,1' N	135° 39,7' 21° 33,7' N	135° 37,7' 21° 43,0' N	135° 35,6' 21° 51,8' N
22	150° 50,4' 20° 19,3' N	150° 49,2' 20° 31,1' N	150° 48,0' 20° 42,5' N	150° 46,5' 20° 53,5' N	150° 45,0' 21° 04,2' N	150° 43,3' 21° 14,6' N	150° 41,6' 21° 24,5' N	150° 39,7' 21° 34,1' N	150° 37,6' 21° 43,3' N	150° 35,5' 21° 52,2' N
23	165° 50,3' 20° 19,8' N	165° 49,2' 20° 31,6' N	165° 47,9' 20° 43,0' N	165° 46,5' 20° 54,0' N	165° 44,9' 21° 04,7' N	165° 43,3' 21° 15,0' N	165° 41,5' 21° 24,9' N	165° 39,6' 21° 34,5' N	165° 37,6' 21° 43,7' N	165° 35,4' 21° 52,5' N

UT	31 May	01 Jun	02 Jun	03 Jun	04 Jun	05 Jun	06 Jun	07 Jun	08 Jun	09 Jun
00	180° 35,3' 21° 52,9' N	180° 33,1' 22° 01,3' N	180° 30,8' 22° 09,4' N	180° 28,3' 22° 17,0' N	180° 25,8' 22° 24,3' N	180° 23,2' 22° 31,2' N	180° 20,5' 22° 37,7' N	180° 17,8' 22° 43,7' N	180° 15,0' 22° 49,4' N	180° 12,1' 22° 54,7' N
01	195° 35,2' 21° 53,3' N	195° 33,0' 22° 01,7' N	195° 30,7' 22° 09,7' N	195° 28,2' 22° 17,3' N	195° 25,7' 22° 24,6' N	195° 23,1' 22° 31,5' N	195° 20,4' 22° 37,9' N	195° 17,7' 22° 44,0' N	195° 14,8' 22° 49,7' N	195° 12,0' 22° 54,9' N
02	210° 35,2' 21° 53,6' N	210° 32,9' 22° 02,0' N	210° 30,6' 22° 10,0' N	210° 28,1' 22° 17,7' N	210° 25,6' 22° 24,9' N	210° 23,0' 22° 31,7' N	210° 20,3' 22° 38,2' N	210° 17,6' 22° 44,2' N	210° 14,7' 22° 49,9' N	210° 11,8' 22° 55,1' N
03	225° 35,1' 21° 54,0' N	225° 32,8' 22° 02,4' N	225° 30,5' 22° 10,4' N	225° 28,0' 22° 18,0' N	225° 25,5' 22° 25,2' N	225° 22,9' 22° 32,0' N	225° 20,2' 22° 38,4' N	225° 17,4' 22° 44,5' N	225° 14,6' 22° 50,1' N	225° 11,7' 22° 55,3' N
04	240° 35,0' 21° 54,3' N	240° 32,7' 22° 02,7' N	240° 30,4' 22° 10,7' N	240° 27,9' 22° 18,3' N	240° 25,4' 22° 25,5' N	240° 22,8' 22° 32,3' N	240° 20,1' 22° 38,7' N	240° 17,3' 22° 44,7' N	240° 14,5' 22° 50,3' N	240° 11,6' 22° 55,5' N
05	255° 34,9' 21° 54,7' N	255° 32,6' 22° 03,0' N	255° 30,3' 22° 11,0' N	255° 27,8' 22° 18,6' N	255° 25,3' 22° 25,8' N	255° 22,7' 22° 32,6' N	255° 20,0' 22° 39,0' N	255° 17,2' 22° 45,0' N	255° 14,4' 22° 50,6' N	255° 11,5' 22° 55,8' N
06	270° 34,8' 21° 55,0' N	270° 32,5' 22° 03,4' N	270° 30,2' 22° 11,3' N	270° 27,7' 22° 18,9' N	270° 25,2' 22° 26,1' N	270° 22,6' 22° 32,8' N	270° 19,9' 22° 39,2' N	270° 17,1' 22° 45,2' N	270° 14,2' 22° 50,8' N	270° 11,3' 22° 56,0' N
07	285° 34,7' 21° 55,4' N	285° 32,4' 22° 03,7' N	285° 30,1' 22° 11,7' N	285° 27,6' 22° 19,2' N	285° 25,1' 22° 26,4' N	285° 22,4' 22° 33,1' N	285° 19,7' 22° 39,5' N	285° 17,0' 22° 45,4' N	285° 14,1' 22° 51,0' N	285° 11,2' 22° 56,2' N
08	300° 34,6' 21° 55,8' N	300° 32,3' 22° 04,1' N	300° 30,0' 22° 12,0' N	300° 27,5' 22° 19,5' N	300° 25,0' 22° 26,6' N	300° 22,3' 22° 33,4' N	300° 19,6' 22° 39,7' N	300° 16,9' 22° 45,7' N	300° 14,0' 22° 51,2' N	300° 11,1' 22° 56,4' N
09	315° 34,5' 21° 56,1' N	315° 32,2' 22° 04,4' N	315° 29,9' 22° 12,3' N	315° 27,4' 22° 19,8' N	315° 24,9' 22° 26,9' N	315° 22,2' 22° 33,7' N	315° 19,5' 22° 40,0' N	315° 16,7' 22° 45,9' N	315° 13,9' 22° 51,4' N	315° 11,0' 22° 56,6' N
10	330° 34,4' 21° 56,5' N	330° 32,1' 22° 04,7' N	330° 29,8' 22° 12,6' N	330° 27,3' 22° 20,1' N	330° 24,7' 22° 27,2' N	330° 22,1' 22° 33,9' N	330° 19,4' 22° 40,2' N	330° 16,6' 22° 46,2' N	330° 13,8' 22° 51,7' N	330° 10,9' 22° 56,8' N
11	345° 34,3' 21° 56,8' N	345° 32,0' 22° 05,1' N	345° 29,7' 22° 12,9' N	345° 27,2' 22° 20,4' N	345° 24,6' 22° 27,5' N	345° 22,0' 22° 34,2' N	345° 19,3' 22° 40,5' N	345° 16,5' 22° 46,4' N	345° 13,6' 22° 51,9' N	345° 10,7' 22° 57,0' N
12	000° 34,2' 21° 57,2' N	000° 31,9' 22° 05,4' N	000° 29,6' 22° 13,3' N	000° 27,1' 22° 20,7' N	000° 24,5' 22° 27,8' N	000° 21,9' 22° 34,5' N	000° 19,2' 22° 40,8' N	000° 16,4' 22° 46,6' N	000° 13,5' 22° 52,1' N	000° 10,6' 22° 57,2' N
13	015° 34,1' 21° 57,5' N	015° 31,8' 22° 05,7' N	015° 29,5' 22° 13,6' N	015° 27,0' 22° 21,0' N	015° 24,4' 22° 28,1' N	015° 21,8' 22° 34,7' N	015° 19,1' 22° 41,0' N	015° 16,3' 22° 46,9' N	015° 13,4' 22° 52,3' N	015° 10,5' 22° 57,4' N
14	030° 34,0' 21° 57,9' N	030° 31,8' 22° 06,1' N	030° 29,4' 22° 13,9' N	030° 26,9' 22° 21,3' N	030° 24,3' 22° 28,4' N	030° 21,7' 22° 35,0' N	030° 18,9' 22° 41,3' N	030° 16,1' 22° 47,1' N	030° 13,3' 22° 52,6' N	030° 10,4' 22° 57,6' N
15	045° 34,0' 21° 58,2' N	045° 31,7' 22° 06,4' N	045° 29,3' 22° 14,2' N	045° 26,8' 22° 21,6' N	045° 24,2' 22° 28,6' N	045° 21,6' 22° 35,3' N	045° 18,8' 22° 41,5' N	045° 16,0' 22° 47,3' N	045° 13,2' 22° 52,8' N	045° 10,2' 22° 57,8' N
16	060° 33,9' 21° 58,6' N	060° 31,6' 22° 06,7' N	060° 29,2' 22° 14,5' N	060° 26,7' 22° 21,9' N	060° 24,1' 22° 28,9' N	060° 21,4' 22° 35,5' N	060° 18,7' 22° 41,8' N	060° 15,9' 22° 47,6' N	060° 13,0' 22° 53,0' N	060° 10,1' 22° 58,0' N
17	075° 33,8' 21° 58,9' N	075° 31,5' 22° 07,1' N	075° 29,1' 22° 14,8' N	075° 26,6' 22° 22,2' N	075° 24,0' 22° 29,2' N	075° 21,3' 22° 35,8' N	075° 18,6' 22° 42,0' N	075° 15,8' 22° 47,8' N	075° 12,9' 22° 53,2' N	075° 10,0' 22° 58,2' N
18	090° 33,7' 21° 59,3' N	090° 31,4' 22° 07,4' N	090° 29,0' 22° 15,2' N	090° 26,5' 22° 22,5' N	090° 23,9' 22° 29,5' N	090° 21,2' 22° 36,1' N	090° 18,5' 22° 42,3' N	090° 15,7' 22° 48,0' N	090° 12,8' 22° 53,4' N	090° 09,9' 22° 58,4' N
19	105° 33,6' 21° 59,6' N	105° 31,3' 22° 07,7' N	105° 28,8' 22° 15,5' N	105° 26,3' 22° 22,8' N	105° 23,8' 22° 29,8' N	105° 21,1' 22° 36,3' N	105° 18,4' 22° 42,5' N	105° 15,6' 22° 48,3' N	105° 12,7' 22° 53,6' N	105° 09,8' 22° 58,6' N
20	120° 33,5' 22° 00,0' N	120° 31,2' 22° 08,1' N	120° 28,7' 22° 15,8' N	120° 26,2' 22° 23,1' N	120° 23,7' 22° 30,1' N	120° 21,0' 22° 36,6' N	120° 18,2' 22° 42,8' N	120° 15,4' 22° 48,5' N	120° 12,6' 22° 53,9' N	120° 09,6' 22° 58,8' N
21	135° 33,4' 22° 00,3' N	135° 31,1' 22° 08,4' N	135° 28,6' 22° 16,1' N	135° 26,1' 22° 23,4' N	135° 23,5' 22° 30,3' N	135° 20,9' 22° 36,9' N	135° 18,1' 22° 43,0' N	135° 15,3' 22° 48,7' N	135° 12,4' 22° 54,1' N	135° 09,5' 22° 59,0' N
22	150° 33,3' 22° 00,6' N	150° 31,0' 22° 08,7' N	150° 28,5' 22° 16,4' N	150° 26,0' 22° 23,7' N	150° 23,4' 22° 30,6' N	150° 20,8' 22° 37,1' N	150° 18,0' 22° 43,3' N	150° 15,2' 22° 49,0' N	150° 12,3' 22° 54,3' N	150° 09,4' 22° 59,2' N
23	165° 33,2' 22° 01,0' N	165° 30,9' 22° 09,1' N	165° 28,4' 22° 16,7' N	165° 25,9' 22° 24,0' N	165° 23,3' 22° 30,9' N	165° 20,6' 22° 37,4' N	165° 17,9' 22° 43,5' N	165° 15,1' 22° 49,2' N	165° 12,2' 22° 54,5' N	165° 09,3' 22° 59,4' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 10 Jun to 29 Jun

UT	10 Jun	11 Jun	12 Jun	13 Jun	14 Jun	15 Jun	16 Jun	17 Jun	18 Jun	19 Jun
00	180° 09,1' 22° 59,6' N	180° 06,1' 23° 04,0' N	180° 03,1' 23° 08,1' N	180° 00,0' 23° 11,8' N	179° 56,9' 23° 15,0' N	179° 53,7' 23° 17,8' N	179° 50,6' 23° 20,3' N	179° 47,3' 23° 22,3' N	179° 44,1' 23° 23,9' N	179° 40,9' 23° 25,1' N
01	195° 09,0' 22° 59,8' N	195° 06,0' 23° 04,2' N	195° 03,0' 23° 08,3' N	194° 59,9' 23° 11,9' N	194° 56,8' 23° 15,1' N	194° 53,6' 23° 18,0' N	194° 50,4' 23° 20,4' N	194° 47,2' 23° 22,4' N	194° 44,0' 23° 24,0' N	194° 40,7' 23° 25,1' N
02	210° 08,9' 23° 00,0' N	210° 05,9' 23° 04,4' N	210° 02,8' 23° 08,4' N	209° 59,8' 23° 12,0' N	209° 56,6' 23° 15,3' N	209° 53,5' 23° 18,1' N	209° 50,3' 23° 20,5' N	209° 47,1' 23° 22,4' N	209° 43,8' 23° 24,0' N	209° 40,6' 23° 25,2' N
03	225° 08,8' 23° 00,2' N	225° 05,8' 23° 04,6' N	225° 02,7' 23° 08,6' N	224° 59,6' 23° 12,2' N	224° 56,5' 23° 15,4' N	224° 53,3' 23° 18,2' N	224° 50,2' 23° 20,5' N	224° 46,9' 23° 22,5' N	224° 43,7' 23° 24,1' N	224° 40,4' 23° 25,2' N
04	240° 08,6' 23° 00,3' N	240° 05,6' 23° 04,8' N	240° 02,6' 23° 08,7' N	239° 59,5' 23° 12,3' N	239° 56,4' 23° 15,5' N	239° 53,2' 23° 18,3' N	239° 50,0' 23° 20,6' N	239° 46,8' 23° 22,6' N	239° 43,6' 23° 24,1' N	239° 40,3' 23° 25,2' N
05	255° 08,5' 23° 00,5' N	255° 05,5' 23° 04,9' N	255° 02,5' 23° 08,9' N	254° 59,4' 23° 12,5' N	254° 56,2' 23° 15,6' N	254° 53,1' 23° 18,4' N	254° 49,9' 23° 20,7' N	254° 46,7' 23° 22,7' N	254° 43,4' 23° 24,2' N	254° 40,2' 23° 25,3' N
06	270° 08,4' 23° 00,7' N	270° 05,4' 23° 05,1' N	270° 02,3' 23° 09,1' N	269° 59,2' 23° 12,6' N	269° 56,1' 23° 15,8' N	269° 52,9' 23° 18,5' N	269° 49,8' 23° 20,8' N	269° 46,5' 23° 22,7' N	269° 43,3' 23° 24,2' N	269° 40,0' 23° 25,3' N
07	285° 08,3' 23° 00,9' N	285° 05,3' 23° 05,3' N	285° 02,2' 23° 09,2' N	284° 59,1' 23° 12,8' N	284° 56,0' 23° 15,9' N	284° 52,8' 23° 18,6' N	284° 49,6' 23° 20,9' N	284° 46,4' 23° 22,8' N	284° 43,2' 23° 24,3' N	284° 39,9' 23° 25,4' N
08	300° 08,1' 23° 01,1' N	300° 05,1' 23° 05,4' N	300° 02,1' 23° 09,4' N	299° 59,0' 23° 12,9' N	299° 55,8' 23° 16,0' N	299° 52,7' 23° 18,7' N	299° 49,5' 23° 21,0' N	299° 46,3' 23° 22,9' N	299° 43,0' 23° 24,3' N	299° 39,8' 23° 25,4' N
09	315° 08,0' 23° 01,3' N	315° 05,0' 23° 05,6' N	315° 02,0' 23° 09,5' N	314° 58,9' 23° 13,0' N	314° 55,7' 23° 16,1' N	314° 52,5' 23° 18,8' N	314° 49,3' 23° 21,1' N	314° 46,1' 23° 22,9' N	314° 42,9' 23° 24,4' N	314° 39,6' 23° 25,4' N
10	330° 07,9' 23° 01,5' N	330° 04,9' 23° 05,8' N	330° 01,8' 23° 09,7' N	329° 58,7' 23° 13,2' N	329° 55,6' 23° 16,2' N	329° 52,4' 23° 18,9' N	329° 49,2' 23° 21,2' N	329° 46,0' 23° 23,0' N	329° 42,8' 23° 24,4' N	329° 39,5' 23° 25,5' N
11	345° 07,8' 23° 01,7' N	345° 04,8' 23° 06,0' N	345° 01,7' 23° 09,8' N	344° 58,6' 23° 13,3' N	344° 55,5' 23° 16,4' N	344° 52,3' 23° 19,0' N	344° 49,1' 23° 21,2' N	344° 45,9' 23° 23,1' N	344° 42,6' 23° 24,5' N	344° 39,4' 23° 25,5' N
12	000° 07,6' 23° 01,9' N	000° 04,6' 23° 06,1' N	000° 01,6' 23° 10,0' N	359° 58,5' 23° 13,4' N	359° 55,3' 23° 16,5' N	359° 52,1' 23° 19,1' N	359° 48,9' 23° 21,3' N	359° 45,7' 23° 23,1' N	359° 42,5' 23° 24,5' N	359° 39,2' 23° 25,5' N
13	015° 07,5' 23° 02,0' N	015° 04,5' 23° 06,3' N	015° 01,4' 23° 10,1' N	014° 58,3' 23° 13,6' N	014° 55,2' 23° 16,6' N	014° 52,0' 23° 19,2' N	014° 48,8' 23° 21,4' N	014° 45,6' 23° 23,2' N	014° 42,3' 23° 24,6' N	014° 39,1' 23° 25,6' N
14	030° 07,4' 23° 02,2' N	030° 04,4' 23° 06,5' N	030° 01,3' 23° 10,3' N	029° 58,2' 23° 13,7' N	029° 55,1' 23° 16,7' N	029° 51,9' 23° 19,3' N	029° 48,7' 23° 21,5' N	029° 45,5' 23° 23,3' N	029° 42,2' 23° 24,6' N	029° 39,0' 23° 25,6' N
15	045° 07,3' 23° 02,4' N	045° 04,2' 23° 06,6' N	045° 01,2' 23° 10,4' N	044° 58,1' 23° 13,8' N	044° 54,9' 23° 16,8' N	044° 51,8' 23° 19,4' N	044° 48,5' 23° 21,6' N	044° 45,3' 23° 23,3' N	044° 42,1' 23° 24,7' N	044° 38,8' 23° 25,6' N
16	060° 07,1' 23° 02,6' N	060° 04,1' 23° 06,8' N	060° 01,1' 23° 10,6' N	059° 57,9' 23° 14,0' N	059° 54,8' 23° 16,9' N	059° 51,6' 23° 19,5' N	059° 48,4' 23° 21,7' N	059° 45,2' 23° 23,4' N	059° 41,9' 23° 24,7' N	059° 38,7' 23° 25,7' N
17	075° 07,0' 23° 02,8' N	075° 04,0' 23° 07,0' N	075° 00,9' 23° 10,7' N	074° 57,8' 23° 14,1' N	074° 54,7' 23° 17,1' N	074° 51,5' 23° 19,6' N	074° 48,3' 23° 21,7' N	074° 45,1' 23° 23,5' N	074° 41,8' 23° 24,8' N	074° 38,5' 23° 25,7' N
18	090° 06,9' 23° 03,0' N	090° 03,9' 23° 07,1' N	090° 00,8' 23° 10,9' N	089° 57,7' 23° 14,2' N	089° 54,5' 23° 17,2' N	089° 51,4' 23° 19,7' N	089° 48,1' 23° 21,8' N	089° 44,9' 23° 23,5' N	089° 41,7' 23° 24,8' N	089° 38,4' 23° 25,7' N
19	105° 06,8' 23° 03,1' N	105° 03,7' 23° 07,3' N	105° 00,7' 23° 11,0' N	104° 57,5' 23° 14,4' N	104° 54,4' 23° 17,3' N	104° 51,2' 23° 19,8' N	104° 48,0' 23° 21,9' N	104° 44,8' 23° 23,6' N	104° 41,5' 23° 24,9' N	104° 38,3' 23° 25,7' N
20	120° 06,6' 23° 03,3' N	120° 03,6' 23° 07,5' N	120° 00,5' 23° 11,2' N	119° 57,4' 23° 14,5' N	119° 54,3' 23° 17,4' N	119° 51,1' 23° 19,9' N	119° 47,9' 23° 22,0' N	119° 44,6' 23° 23,7' N	119° 41,4' 23° 24,9' N	119° 38,1' 23° 25,8' N
21	135° 06,5' 23° 03,5' N	135° 03,5' 23° 07,6' N	135° 00,4' 23° 11,3' N	134° 57,3' 23° 14,6' N	134° 54,1' 23° 17,5' N	134° 51,0' 23° 20,0' N	134° 47,7' 23° 22,1' N	134° 44,5' 23° 23,7' N	134° 41,3' 23° 25,0' N	134° 38,0' 23° 25,8' N
22	150° 06,4' 23° 03,7' N	150° 03,4' 23° 07,8' N	150° 00,3' 23° 11,5' N	149° 57,2' 23° 14,8' N	149° 54,0' 23° 17,6' N	149° 50,8' 23° 20,1' N	149° 47,6' 23° 22,1' N	149° 44,4' 23° 23,8' N	149° 41,1' 23° 25,0' N	149° 37,9' 23° 25,8' N
23	165° 06,3' 23° 03,9' N	165° 03,2' 23° 07,9' N	165° 00,1' 23° 11,6' N	164° 57,0' 23° 14,9' N	164° 53,9' 23° 17,7' N	164° 50,7' 23° 20,2' N	164° 47,5' 23° 22,2' N	164° 44,2' 23° 23,8' N	164° 41,0' 23° 25,0' N	164° 37,7' 23° 25,8' N

UT	20 Jun	21 Jun	22 Jun	23 Jun	24 Jun	25 Jun	26 Jun	27 Jun	28 Jun	29 Jun
00	179° 37,6' 23° 25,9' N	179° 34,3' 23° 26,2' N	179° 31,1' 23° 26,2' N	179° 27,8' 23° 25,7' N	179° 24,6' 23° 24,9' N	179° 21,3' 23° 23,6' N	179° 18,1' 23° 21,9' N	179° 15,0' 23° 19,8' N	179° 11,8' 23° 17,2' N	179° 08,8' 23° 14,3' N
01	194° 37,5' 23° 25,9' N	194° 34,2' 23° 26,2' N	194° 30,9' 23° 26,2' N	194° 27,7' 23° 25,7' N	194° 24,4' 23° 24,8' N	194° 21,2' 23° 23,5' N	194° 18,0' 23° 21,8' N	194° 14,8' 23° 19,7' N	194° 11,7' 23° 17,1' N	194° 08,6' 23° 14,2' N
02	209° 37,3' 23° 25,9' N	209° 34,1' 23° 26,2' N	209° 30,8' 23° 26,2' N	209° 27,5' 23° 25,7' N	209° 24,3' 23° 24,8' N	209° 21,1' 23° 23,4' N	209° 17,9' 23° 21,7' N	209° 14,7' 23° 19,6' N	209° 11,6' 23° 17,0' N	209° 08,5' 23° 14,1' N
03	224° 37,2' 23° 25,9' N	224° 33,9' 23° 26,3' N	224° 30,7' 23° 26,2' N	224° 27,4' 23° 25,6' N	224° 24,2' 23° 24,7' N	224° 20,9' 23° 23,4' N	224° 17,7' 23° 21,6' N	224° 14,6' 23° 19,5' N	224° 11,4' 23° 16,9' N	224° 08,4' 23° 13,9' N
04	239° 37,1' 23° 26,0' N	239° 33,8' 23° 26,3' N	239° 30,5' 23° 26,1' N	239° 27,3' 23° 25,6' N	239° 24,0' 23° 24,7' N	239° 20,8' 23° 23,3' N	239° 17,6' 23° 21,6' N	239° 14,4' 23° 19,4' N	239° 11,3' 23° 16,8' N	239° 08,2' 23° 13,8' N
05	254° 36,9' 23° 26,0' N	254° 33,6' 23° 26,3' N	254° 30,4' 23° 26,1' N	254° 27,1' 23° 25,6' N	254° 23,9' 23° 24,6' N	254° 20,7' 23° 23,3' N	254° 17,5' 23° 21,5' N	254° 14,3' 23° 19,3' N	254° 11,2' 23° 16,7' N	254° 08,1' 23° 13,7' N
06	269° 36,8' 23° 26,0' N	269° 33,5' 23° 26,3' N	269° 30,2' 23° 26,1' N	269° 27,0' 23° 25,6' N	269° 23,8' 23° 24,6' N	269° 20,5' 23° 23,2' N	269° 17,3' 23° 21,4' N	269° 14,2' 23° 19,2' N	269° 11,1' 23° 16,6' N	269° 08,0' 23° 13,5' N
07	284° 36,6' 23° 26,0' N	284° 33,4' 23° 26,3' N	284° 30,1' 23° 26,1' N	284° 26,9' 23° 25,5' N	284° 23,6' 23° 24,5' N	284° 20,4' 23° 23,1' N	284° 17,2' 23° 21,3' N	284° 14,0' 23° 19,1' N	284° 10,9' 23° 16,4' N	284° 07,9' 23° 13,4' N
08	299° 36,5' 23° 26,0' N	299° 33,2' 23° 26,3' N	299° 30,0' 23° 26,1' N	299° 26,7' 23° 25,5' N	299° 23,5' 23° 24,5' N	299° 20,3' 23° 23,1' N	299° 17,1' 23° 21,2' N	299° 13,9' 23° 19,0' N	299° 10,8' 23° 16,3' N	299° 07,7' 23° 13,3' N
09	314° 36,4' 23° 26,1' N	314° 33,1' 23° 26,3' N	314° 29,8' 23° 26,1' N	314° 26,6' 23° 25,5' N	314° 23,3' 23° 24,4' N	314° 20,1' 23° 23,0' N	314° 16,9' 23° 21,1' N	314° 13,8' 23° 18,9' N	314° 10,7' 23° 16,2' N	314° 07,6' 23° 13,1' N
10	329° 36,2' 23° 26,1' N	329° 33,0' 23° 26,3' N	329° 29,7' 23° 26,0' N	329° 26,5' 23° 25,4' N	329° 23,2' 23° 24,4' N	329° 20,0' 23° 22,9' N	329° 16,8' 23° 21,0' N	329° 13,7' 23° 18,8' N	329° 10,5' 23° 16,1' N	329° 07,5' 23° 13,0' N
11	344° 36,1' 23° 26,1' N	344° 32,8' 23° 26,3' N	344° 29,6' 23° 26,0' N	344° 26,3' 23° 25,4' N	344° 23,1' 23° 24,3' N	344° 19,9' 23° 22,8' N	344° 16,7' 23° 21,0' N	344° 13,5' 23° 18,7' N	344° 10,4' 23° 16,0' N	344° 07,4' 23° 12,8' N
12	359° 36,0' 23° 26,1' N	359° 32,7' 23° 26,3' N	359° 29,4' 23° 26,0' N	359° 26,2' 23° 25,3' N	359° 22,9' 23° 24,3' N	359° 19,7' 23° 22,8' N	359° 16,5' 23° 20,9' N	359° 13,4' 23° 18,6' N	359° 10,3' 23° 15,8' N	359° 07,2' 23° 12,7' N
13	014° 35,8' 23° 26,1' N	014° 32,6' 23° 26,3' N	014° 29,3' 23° 26,0' N	014° 26,0' 23° 25,3' N	014° 22,8' 23° 24,2' N	014° 19,6' 23° 22,7' N	014° 16,4' 23° 20,8' N	014° 13,3' 23° 18,5' N	014° 10,2' 23° 15,7' N	014° 07,1' 23° 12,6' N
14	029° 35,7' 23° 26,1' N	029° 32,4' 23° 26,3' N	029° 29,2' 23° 26,0' N	029° 25,9' 23° 25,3' N	029° 22,7' 23° 24,2' N	029° 19,5' 23° 22,6' N	029° 16,3' 23° 20,7' N	029° 13,1' 23° 18,3' N	029° 10,0' 23° 15,6' N	029° 07,0' 23° 12,4' N
15	044° 35,6' 23° 26,1' N	044° 32,3' 23° 26,3' N	044° 29,0' 23° 26,0' N	044° 25,8' 23° 25,2' N	044° 22,5' 23° 24,1' N	044° 19,3' 23° 22,6' N	044° 16,1' 23° 20,6' N	044° 13,0' 23° 18,2' N	044° 09,9' 23° 15,5' N	044° 06,9' 23° 12,3' N
16	059° 35,4' 23° 26,2' N	059° 32,2' 23° 26,3' N	059° 28,9' 23° 25,9' N	059° 25,6' 23° 25,2' N	059° 22,4' 23° 24,0' N	059° 19,2' 23° 22,5' N	059° 16,0' 23° 20,5' N	059° 12,9' 23° 18,1' N	059° 09,8' 23° 15,3' N	059° 06,7' 23° 12,1' N
17	074° 35,3' 23° 26,2' N	074° 32,0' 23° 26,2' N	074° 28,8' 23° 25,9' N	074° 25,5' 23° 25,2' N	074° 22,3' 23° 24,0' N	074° 19,1' 23° 22,4' N	074° 15,9' 23° 20,4' N	074° 12,7' 23° 18,0' N	074° 09,6' 23° 15,2' N	074° 06,6' 23° 12,0' N
18	089° 35,1' 23° 26,2' N	089° 31,9' 23° 26,2' N	089° 28,6' 23° 25,9' N	089° 25,4' 23° 25,1' N	089° 22,1' 23° 23,9' N	089° 18,9' 23° 22,3' N	089° 15,8' 23° 20,3' N	089° 12,6' 23° 17,9' N	089° 09,5' 23° 15,1' N	089° 06,5' 23° 11,9' N
19	104° 35,0' 23° 26,2' N	104° 31,7' 23° 26,2' N	104° 28,5' 23° 25,9' N	104° 25,2' 23° 25,1' N	104° 22,0' 23° 23,9' N	104° 18,8' 23° 22,3' N	104° 15,6' 23° 20,2' N	104° 12,5' 23° 17,8' N	104° 09,4' 23° 15,0' N	104° 06,4' 23° 11,7' N
20	119° 34,9' 23° 26,2' N	119° 31,6' 23° 26,2' N	119° 28,3' 23° 25,8' N	119° 25,1' 23° 25,0' N	119° 21,9' 23° 23,8' N	119° 18,7' 23° 22,2' N	119° 15,5' 23° 20,1' N	119° 12,4' 23° 17,7' N	119° 09,3' 23° 14,8' N	119° 06,2' 23° 11,6' N
21	134° 34,7' 23° 26,2' N	134° 31,5' 23° 26,2' N	134° 28,2' 23° 25,8' N	134° 25,0' 23° 25,0' N	134° 21,7' 23° 23,8' N	134° 18,5' 23° 22,1' N	134° 15,4' 23° 20,1' N	134° 12,2' 23° 17,6' N	134° 09,1' 23° 14,7' N	134° 06,1' 23° 11,4' N
22	149° 34,6' 23° 26,2' N	149° 31,3' 23° 26,2' N	149° 28,1' 23° 25,8' N	149° 24,8' 23° 24,9' N	149° 21,6' 23° 23,7' N	149° 18,4' 23° 22,0' N	149° 15,2' 23° 20,0' N	149° 12,1' 23° 17,5' N	149° 09,0' 23° 14,6' N	149° 06,0' 23° 11,3' N
23	164° 34,5' 23° 26,2' N	164° 31,2' 23° 26,2' N	164° 27,9' 23° 25,8' N	164° 24,7' 23° 24,9' N	164° 21,5' 23° 23,6' N	164° 18,3' 23° 22,0' N	164° 15,1' 23° 19,9' N	164° 12,0' 23° 17,4' N	164° 08,9' 23° 14,5' N	164° 05,9' 23° 11,1' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 30 Jun to 19 Jul

UT	30 Jun	01 Jul	02 Jul	03 Jul	04 Jul	05 Jul	06 Jul	07 Jul	08 Jul	09 Jul
00	179° 05,7' 23° 11,0' N	179° 02,8' 23° 07,2' N	178° 59,8' 23° 03,1' N	178° 57,0' 22° 58,5' N	178° 54,3' 22° 53,6' N	178° 51,6' 22° 48,2' N	178° 49,0' 22° 42,5' N	178° 46,5' 22° 36,4' N	178° 44,1' 22° 29,8' N	178° 41,8' 22° 22,9' N
01	194° 05,6' 23° 10,8' N	194° 02,6' 23° 07,1' N	193° 59,7' 23° 02,9' N	193° 56,9' 22° 58,3' N	193° 54,1' 22° 53,4' N	193° 51,5' 22° 48,0' N	193° 48,9' 22° 42,3' N	193° 46,4' 22° 36,1' N	193° 44,0' 22° 29,5' N	193° 41,7' 22° 22,6' N
02	209° 05,5' 23° 10,7' N	209° 02,5' 23° 06,9' N	208° 59,6' 23° 02,7' N	208° 56,8' 22° 58,1' N	208° 54,0' 22° 53,2' N	208° 51,4' 22° 47,8' N	208° 48,8' 22° 42,0' N	208° 46,3' 22° 35,8' N	208° 43,9' 22° 29,3' N	208° 41,6' 22° 22,3' N
03	224° 05,4' 23° 10,5' N	224° 02,4' 23° 06,7' N	223° 59,5' 23° 02,5' N	223° 56,7' 22° 57,9' N	223° 53,9' 22° 52,9' N	223° 51,3' 22° 47,5' N	223° 48,7' 22° 41,8' N	223° 46,2' 22° 35,6' N	223° 43,8' 22° 29,0' N	223° 41,5' 22° 22,0' N
04	239° 05,2' 23° 10,4' N	239° 02,3' 23° 06,6' N	238° 59,4' 23° 02,4' N	238° 56,5' 22° 57,7' N	238° 53,8' 22° 52,7' N	238° 51,1' 22° 47,3' N	238° 48,6' 22° 41,5' N	238° 46,1' 22° 35,3' N	238° 43,7' 22° 28,7' N	238° 41,4' 22° 21,7' N
05	254° 05,1' 23° 10,2' N	254° 02,1' 23° 06,4' N	253° 59,3' 23° 02,2' N	253° 56,4' 22° 57,5' N	253° 53,7' 22° 52,5' N	253° 51,0' 22° 47,1' N	253° 48,5' 22° 41,3' N	253° 46,0' 22° 35,0' N	253° 43,6' 22° 28,4' N	253° 41,4' 22° 21,4' N
06	269° 05,0' 23° 10,1' N	269° 02,0' 23° 06,2' N	268° 59,1' 23° 02,0' N	268° 56,3' 22° 57,3' N	268° 53,6' 22° 52,3' N	268° 50,9' 22° 46,8' N	268° 48,4' 22° 41,0' N	268° 45,9' 22° 34,8' N	268° 43,5' 22° 28,1' N	268° 41,3' 22° 21,1' N
07	284° 04,9' 23° 09,9' N	284° 01,9' 23° 06,1' N	283° 59,0' 23° 01,8' N	283° 56,2' 22° 57,1' N	283° 53,5' 22° 52,1' N	283° 50,8' 22° 46,6' N	283° 48,3' 22° 40,7' N	283° 45,8' 22° 34,5' N	283° 43,4' 22° 27,8' N	283° 41,2' 22° 20,8' N
08	299° 04,7' 23° 09,8' N	299° 01,8' 23° 05,9' N	298° 58,9' 23° 01,6' N	298° 56,1' 22° 56,9' N	298° 53,4' 22° 51,9' N	298° 50,7' 22° 46,4' N	298° 48,2' 22° 40,5' N	298° 45,7' 22° 34,2' N	298° 43,3' 22° 27,6' N	298° 41,1' 22° 20,5' N
09	314° 04,6' 23° 09,6' N	314° 01,7' 23° 05,7' N	313° 58,8' 23° 01,4' N	313° 56,0' 22° 56,7' N	313° 53,2' 22° 51,6' N	313° 50,6' 22° 46,1' N	313° 48,0' 22° 40,2' N	313° 45,6' 22° 34,0' N	313° 43,2' 22° 27,3' N	313° 41,0' 22° 20,2' N
10	329° 04,5' 23° 09,5' N	329° 01,5' 23° 05,6' N	328° 58,7' 23° 01,2' N	328° 55,9' 22° 56,5' N	328° 53,1' 22° 51,4' N	328° 50,5' 22° 45,9' N	328° 47,9' 22° 40,0' N	328° 45,5' 22° 33,7' N	328° 43,1' 22° 27,0' N	328° 40,9' 22° 19,9' N
11	344° 04,4' 23° 09,3' N	344° 01,4' 23° 05,4' N	343° 58,5' 23° 01,1' N	343° 55,7' 22° 56,3' N	343° 53,0' 22° 51,2' N	343° 50,4' 22° 45,7' N	343° 47,8' 22° 39,7' N	343° 45,4' 22° 33,4' N	343° 43,0' 22° 26,7' N	343° 40,8' 22° 19,6' N
12	359° 04,2' 23° 09,2' N	359° 01,3' 23° 05,2' N	358° 58,4' 23° 00,9' N	358° 55,6' 22° 56,1' N	358° 52,9' 22° 51,0' N	358° 50,3' 22° 45,4' N	358° 47,7' 22° 39,5' N	358° 45,3' 22° 33,1' N	358° 43,0' 22° 26,4' N	358° 40,7' 22° 19,3' N
13	014° 04,1' 23° 09,0' N	014° 01,2' 23° 05,0' N	013° 58,3' 23° 00,7' N	013° 55,5' 22° 55,9' N	013° 52,8' 22° 50,7' N	013° 50,2' 22° 45,2' N	013° 47,6' 22° 39,2' N	013° 45,2' 22° 32,9' N	013° 42,9' 22° 26,1' N	013° 40,6' 22° 19,0' N
14	029° 04,0' 23° 08,9' N	029° 01,1' 23° 04,9' N	028° 58,2' 23° 00,5' N	028° 55,4' 22° 55,7' N	028° 52,7' 22° 50,5' N	028° 50,1' 22° 44,9' N	028° 47,5' 22° 39,0' N	028° 45,1' 22° 32,6' N	028° 42,8' 22° 25,8' N	028° 40,5' 22° 18,7' N
15	044° 03,9' 23° 08,7' N	044° 00,9' 23° 04,7' N	043° 58,1' 23° 00,3' N	043° 55,3' 22° 55,5' N	043° 52,6' 22° 50,3' N	043° 50,0' 22° 44,7' N	043° 47,4' 22° 38,7' N	043° 45,0' 22° 32,3' N	043° 42,7' 22° 25,5' N	043° 40,4' 22° 18,4' N
16	059° 03,7' 23° 08,5' N	059° 00,8' 23° 04,5' N	058° 57,9' 23° 00,1' N	058° 55,2' 22° 55,3' N	058° 52,5' 22° 50,1' N	058° 49,8' 22° 44,5' N	058° 47,3' 22° 38,4' N	058° 44,9' 22° 32,0' N	058° 42,6' 22° 25,3' N	058° 40,4' 22° 18,1' N
17	074° 03,6' 23° 08,4' N	074° 00,7' 23° 04,3' N	073° 57,8' 22° 59,9' N	073° 55,1' 22° 55,1' N	073° 52,4' 22° 49,8' N	073° 49,7' 22° 44,2' N	073° 47,2' 22° 38,2' N	073° 44,8' 22° 31,8' N	073° 42,5' 22° 25,0' N	073° 40,3' 22° 17,8' N
18	089° 03,5' 23° 08,2' N	089° 00,6' 23° 04,2' N	088° 57,7' 22° 59,7' N	088° 54,9' 22° 54,9' N	088° 52,2' 22° 49,6' N	088° 49,6' 22° 44,0' N	088° 47,1' 22° 37,9' N	088° 44,7' 22° 31,5' N	088° 42,4' 22° 24,7' N	088° 40,2' 22° 17,5' N
19	104° 03,4' 23° 08,1' N	104° 00,4' 23° 04,0' N	103° 57,6' 22° 59,5' N	103° 54,8' 22° 54,7' N	103° 52,1' 22° 49,4' N	103° 49,5' 22° 43,7' N	103° 47,0' 22° 37,7' N	103° 44,6' 22° 31,2' N	103° 42,3' 22° 24,4' N	103° 40,1' 22° 17,2' N
20	119° 03,2' 23° 07,9' N	119° 00,3' 23° 03,8' N	118° 57,5' 22° 59,3' N	118° 54,7' 22° 54,4' N	118° 52,0' 22° 49,2' N	118° 49,4' 22° 43,5' N	118° 46,9' 22° 37,4' N	118° 44,5' 22° 30,9' N	118° 42,2' 22° 24,1' N	118° 40,0' 22° 16,8' N
21	134° 03,1' 23° 07,7' N	134° 00,2' 23° 03,6' N	133° 57,4' 22° 59,1' N	133° 54,6' 22° 54,2' N	133° 51,9' 22° 48,9' N	133° 49,3' 22° 43,2' N	133° 46,8' 22° 37,1' N	133° 44,4' 22° 30,7' N	133° 42,1' 22° 23,8' N	133° 39,9' 22° 16,5' N
22	149° 03,0' 23° 07,6' N	149° 00,1' 23° 03,5' N	148° 57,2' 22° 58,9' N	148° 54,5' 22° 54,0' N	148° 51,8' 22° 48,7' N	148° 49,2' 22° 43,0' N	148° 46,7' 22° 36,9' N	148° 44,3' 22° 30,4' N	148° 42,0' 22° 23,5' N	148° 39,8' 22° 16,2' N
23	164° 02,9' 23° 07,4' N	164° 00,0' 23° 03,3' N	163° 57,1' 22° 58,7' N	163° 54,4' 22° 53,8' N	163° 51,7' 22° 48,5' N	163° 49,1' 22° 42,7' N	163° 46,6' 22° 36,6' N	163° 44,2' 22° 30,1' N	163° 41,9' 22° 23,2' N	163° 39,7' 22° 15,9' N

UT	10 Jul	11 Jul	12 Jul	13 Jul	14 Jul	15 Jul	16 Jul	17 Jul	18 Jul	19 Jul
00	178° 39,6' 22° 15,6' N	178° 37,6' 22° 07,9' N	178° 35,6' 21° 59,8' N	178° 33,8' 21° 51,4' N	178° 32,1' 21° 42,6' N	178° 30,5' 21° 33,4' N	178° 29,0' 21° 23,8' N	178° 27,6' 21° 13,9' N	178° 26,4' 21° 03,6' N	178° 25,3' 20° 53,0' N
01	193° 39,5' 22° 15,3' N	193° 37,5' 22° 07,6' N	193° 35,5' 21° 59,5' N	193° 33,7' 21° 51,0' N	193° 32,0' 21° 42,2' N	193° 30,4' 21° 33,0' N	193° 28,9' 21° 23,4' N	193° 27,6' 21° 13,5' N	193° 26,4' 21° 03,2' N	193° 25,3' 20° 52,6' N
02	208° 39,5' 22° 15,0' N	208° 37,4' 22° 07,2' N	208° 35,5' 21° 59,1' N	208° 33,6' 21° 50,7' N	208° 31,9' 21° 41,8' N	208° 30,3' 21° 32,6' N	208° 28,9' 21° 23,0' N	208° 27,5' 21° 13,1' N	208° 26,3' 21° 02,8' N	208° 25,2' 20° 52,1' N
03	223° 39,4' 22° 14,7' N	223° 37,3' 22° 06,9' N	223° 35,4' 21° 58,8' N	223° 33,5' 21° 50,3' N	223° 31,8' 21° 41,4' N	223° 30,3' 21° 32,2' N	223° 28,8' 21° 22,6' N	223° 27,5' 21° 12,7' N	223° 26,3' 21° 02,3' N	223° 25,2' 20° 51,7' N
04	238° 39,3' 22° 14,3' N	238° 37,2' 22° 06,6' N	238° 35,3' 21° 58,5' N	238° 33,5' 21° 50,0' N	238° 31,8' 21° 41,1' N	238° 30,2' 21° 31,8' N	238° 28,7' 21° 22,2' N	238° 27,4' 21° 12,2' N	238° 26,2' 21° 01,9' N	238° 25,1' 20° 51,2' N
05	253° 39,2' 22° 14,0' N	253° 37,1' 22° 06,3' N	253° 35,2' 21° 58,1' N	253° 33,4' 21° 49,6' N	253° 31,7' 21° 40,7' N	253° 30,1' 21° 31,4' N	253° 28,7' 21° 21,8' N	253° 27,4' 21° 11,8' N	253° 26,2' 21° 01,5' N	253° 25,1' 20° 50,8' N
06	268° 39,1' 22° 13,7' N	268° 37,1' 22° 05,9' N	268° 35,1' 21° 57,8' N	268° 33,3' 21° 49,2' N	268° 31,6' 21° 40,3' N	268° 30,1' 21° 31,0' N	268° 28,6' 21° 21,4' N	268° 27,3' 21° 11,4' N	268° 26,1' 21° 01,0' N	268° 25,1' 20° 50,3' N
07	283° 39,0' 22° 13,4' N	283° 37,0' 22° 05,6' N	283° 35,1' 21° 57,4' N	283° 33,3' 21° 48,9' N	283° 31,6' 21° 39,9' N	283° 30,0' 21° 30,6' N	283° 28,6' 21° 21,0' N	283° 27,3' 21° 11,0' N	283° 26,1' 21° 00,6' N	283° 25,0' 20° 49,8' N
08	298° 38,9' 22° 13,1' N	298° 36,9' 22° 05,3' N	298° 35,0' 21° 57,1' N	298° 33,2' 21° 48,5' N	298° 31,5' 21° 39,6' N	298° 29,9' 21° 30,2' N	298° 28,5' 21° 20,6' N	298° 27,2' 21° 10,5' N	298° 26,0' 21° 00,1' N	298° 25,0' 20° 49,4' N
09	313° 38,8' 22° 12,8' N	313° 36,8' 22° 04,9' N	313° 34,9' 21° 56,7' N	313° 33,1' 21° 48,1' N	313° 31,4' 21° 39,2' N	313° 29,9' 21° 29,9' N	313° 28,5' 21° 20,2' N	313° 27,2' 21° 10,1' N	313° 26,0' 20° 59,7' N	313° 24,9' 20° 48,9' N
10	328° 38,8' 22° 12,4' N	328° 36,7' 22° 04,6' N	328° 34,8' 21° 56,4' N	328° 33,0' 21° 47,8' N	328° 31,4' 21° 38,8' N	328° 29,8' 21° 29,5' N	328° 28,4' 21° 19,7' N	328° 27,1' 21° 09,7' N	328° 25,9' 20° 59,3' N	328° 24,9' 20° 48,5' N
11	343° 38,7' 22° 12,1' N	343° 36,7' 22° 04,3' N	343° 34,8' 21° 56,0' N	343° 33,0' 21° 47,4' N	343° 31,3' 21° 38,4' N	343° 29,8' 21° 29,1' N	343° 28,3' 21° 19,3' N	343° 27,1' 21° 09,3' N	343° 25,9' 20° 58,8' N	343° 24,9' 20° 48,0' N
12	358° 38,6' 22° 11,8' N	358° 36,6' 22° 03,9' N	358° 34,7' 21° 55,7' N	358° 32,9' 21° 47,0' N	358° 31,2' 21° 38,0' N	358° 29,7' 21° 28,7' N	358° 28,3' 21° 18,9' N	358° 27,0' 21° 08,8' N	358° 25,8' 20° 58,4' N	358° 24,8' 20° 47,6' N
13	013° 38,5' 22° 11,5' N	013° 36,5' 22° 03,6' N	013° 34,6' 21° 55,3' N	013° 32,8' 21° 46,7' N	013° 31,2' 21° 37,6' N	013° 29,6' 21° 28,3' N	013° 28,2' 21° 18,5' N	013° 26,9' 21° 08,4' N	013° 25,8' 20° 57,9' N	013° 24,8' 20° 47,1' N
14	028° 38,4' 22° 11,2' N	028° 36,4' 22° 03,2' N	028° 34,5' 21° 55,0' N	028° 32,8' 21° 46,3' N	028° 31,1' 21° 37,3' N	028° 29,6' 21° 27,9' N	028° 28,2' 21° 18,1' N	028° 26,9' 21° 08,0' N	028° 25,8' 20° 57,5' N	028° 24,7' 20° 46,6' N
15	043° 38,3' 22° 10,8' N	043° 36,3' 22° 02,9' N	043° 34,4' 21° 54,6' N	043° 32,7' 21° 45,9' N	043° 31,0' 21° 36,9' N	043° 29,5' 21° 27,5' N	043° 28,1' 21° 17,7' N	043° 26,8' 21° 07,5' N	043° 25,7' 20° 57,0' N	043° 24,7' 20° 46,2' N
16	058° 38,2' 22° 10,5' N	058° 36,2' 22° 02,6' N	058° 34,4' 21° 54,3' N	058° 32,6' 21° 45,6' N	058° 31,0' 21° 36,5' N	058° 29,5' 21° 27,1' N	058° 28,1' 21° 17,3' N	058° 26,8' 21° 07,1' N	058° 25,7' 20° 56,6' N	058° 24,7' 20° 45,7' N
17	073° 38,2' 22° 10,2' N	073° 36,2' 22° 02,2' N	073° 34,3' 21° 53,9' N	073° 32,5' 21° 45,2' N	073° 30,9' 21° 36,1' N	073° 29,4' 21° 26,7' N	073° 28,0' 21° 16,9' N	073° 26,7' 21° 06,7' N	073° 25,6' 20° 56,2' N	073° 24,6' 20° 45,3' N
18	088° 38,1' 22° 09,9' N	088° 36,1' 22° 01,9' N	088° 34,2' 21° 53,5' N	088° 32,5' 21° 44,8' N	088° 30,8' 21° 35,7' N	088° 29,3' 21° 26,3' N	088° 28,0' 21° 16,4' N	088° 26,7' 21° 06,2' N	088° 25,6' 20° 55,7' N	088° 24,6' 20° 44,8' N
19	103° 38,0' 22° 09,5' N	103° 36,0' 22° 01,6' N	103° 34,1' 21° 53,2' N	103° 32,4' 21° 44,4' N	103° 30,8' 21° 35,3' N	103° 29,3' 21° 25,9' N	103° 27,9' 21° 16,0' N	103° 26,6' 21° 05,8' N	103° 25,5' 20° 55,3' N	103° 24,5' 20° 44,3' N
20	118° 37,9' 22° 09,2' N	118° 35,9' 22° 01,2' N	118° 34,1' 21° 52,8' N	118° 32,3' 21° 44,1' N	118° 30,7' 21° 34,9' N	118° 29,2' 21° 25,5' N	118° 27,8' 21° 15,6' N	118° 26,6' 21° 05,4' N	118° 25,5' 20° 54,8' N	118° 24,5' 20° 43,9' N
21	133° 37,8' 22° 08,9' N	133° 35,8' 22° 00,9' N	133° 34,0' 21° 52,5' N	133° 32,3' 21° 43,7' N	133° 30,6' 21° 34,6' N	133° 29,2' 21° 25,1' N	133° 27,8' 21° 15,2' N	133° 26,6' 21° 04,9' N	133° 25,4' 20° 54,4' N	133° 24,5' 20° 43,4' N
22	148° 37,7' 22° 08,6' N	148° 35,8' 22° 00,5' N	148° 33,9' 21° 52,1' N	148° 32,2' 21° 43,3' N	148° 30,6' 21° 34,2' N	148° 29,1' 21° 24,6' N	148° 27,7' 21° 14,8' N	148° 26,5' 21° 04,5' N	148° 25,4' 20° 53,9' N	148° 24,4' 20° 43,0' N
23	163° 37,7' 22° 08,2' N	163° 35,7' 22° 00,2' N	163° 33,8' 21° 51,8' N	163° 32,1' 21° 43,0' N	163° 30,5' 21° 33,8' N	163° 29,0' 21° 24,2' N	163° 27,7' 21° 14,3' N	163° 26,5' 21° 04,1' N	163° 25,4' 20° 53,5' N	163° 24,4' 20° 42,5' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 20 Jul to 08 Aug

UT	20 Jul	21 Jul	22 Jul	23 Jul	24 Jul	25 Jul	26 Jul	27 Jul	28 Jul	29 Jul
00	178° 24,4' 20° 42,0' N	178° 23,5' 20° 30,7' N	178° 22,8' 20° 19,0' N	178° 22,3' 20° 07,0' N	178° 21,9' 19° 54,6' N	178° 21,6' 19° 41,9' N	178° 21,5' 19° 28,9' N	178° 21,5' 19° 15,6' N	178° 21,7' 19° 01,9' N	178° 22,0' 18° 47,9' N
01	193° 24,3' 20° 41,6' N	193° 23,5' 20° 30,2' N	193° 22,8' 20° 18,5' N	193° 22,3' 20° 06,5' N	193° 21,9' 19° 54,1' N	193° 21,6' 19° 41,4' N	193° 21,5' 19° 28,4' N	193° 21,5' 19° 15,0' N	193° 21,7' 19° 01,3' N	193° 22,0' 18° 47,4' N
02	208° 24,3' 20° 41,1' N	208° 23,5' 20° 29,7' N	208° 22,8' 20° 18,0' N	208° 22,2' 20° 06,0' N	208° 21,8' 19° 53,6' N	208° 21,6' 19° 40,9' N	208° 21,5' 19° 27,8' N	208° 21,5' 19° 14,5' N	208° 21,7' 19° 00,8' N	208° 22,0' 18° 46,8' N
03	223° 24,2' 20° 40,6' N	223° 23,4' 20° 29,3' N	223° 22,8' 20° 17,5' N	223° 22,2' 20° 05,5' N	223° 21,8' 19° 53,1' N	223° 21,6' 19° 40,3' N	223° 21,5' 19° 27,3' N	223° 21,5' 19° 13,9' N	223° 21,7' 19° 00,2' N	223° 22,1' 18° 46,2' N
04	238° 24,2' 20° 40,2' N	238° 23,4' 20° 28,8' N	238° 22,7' 20° 17,0' N	238° 22,2' 20° 05,0' N	238° 21,8' 19° 52,5' N	238° 21,6' 19° 39,8' N	238° 21,5' 19° 26,7' N	238° 21,5' 19° 13,3' N	238° 21,7' 18° 59,6' N	238° 22,1' 18° 45,6' N
05	253° 24,2' 20° 39,7' N	253° 23,4' 20° 28,3' N	253° 22,7' 20° 16,5' N	253° 22,2' 20° 04,4' N	253° 21,8' 19° 52,0' N	253° 21,6' 19° 39,3' N	253° 21,5' 19° 26,2' N	253° 21,5' 19° 12,8' N	253° 21,7' 18° 59,0' N	253° 22,1' 18° 45,0' N
06	268° 24,1' 20° 39,2' N	268° 23,3' 20° 27,8' N	268° 22,7' 20° 16,0' N	268° 22,2' 20° 03,9' N	268° 21,8' 19° 51,5' N	268° 21,6' 19° 38,7' N	268° 21,5' 19° 25,6' N	268° 21,5' 19° 12,2' N	268° 21,8' 18° 58,5' N	268° 22,1' 18° 44,4' N
07	283° 24,1' 20° 38,8' N	283° 23,3' 20° 27,3' N	283° 22,7' 20° 15,5' N	283° 22,1' 20° 03,4' N	283° 21,8' 19° 51,0' N	283° 21,6' 19° 38,2' N	283° 21,5' 19° 25,1' N	283° 21,5' 19° 11,6' N	283° 21,8' 18° 57,9' N	283° 22,1' 18° 43,8' N
08	298° 24,1' 20° 38,3' N	298° 23,3' 20° 26,8' N	298° 22,6' 20° 15,0' N	298° 22,1' 20° 02,9' N	298° 21,8' 19° 50,4' N	298° 21,5' 19° 37,6' N	298° 21,5' 19° 24,5' N	298° 21,6' 19° 11,1' N	298° 21,8' 18° 57,3' N	298° 22,1' 18° 43,2' N
09	313° 24,0' 20° 37,8' N	313° 23,3' 20° 26,4' N	313° 22,6' 20° 14,5' N	313° 22,1' 20° 02,4' N	313° 21,8' 19° 49,9' N	313° 21,5' 19° 37,1' N	313° 21,5' 19° 24,0' N	313° 21,6' 19° 10,5' N	313° 21,8' 18° 56,7' N	313° 22,2' 18° 42,6' N
10	328° 24,0' 20° 37,3' N	328° 23,2' 20° 25,9' N	328° 22,6' 20° 14,0' N	328° 22,1' 20° 01,9' N	328° 21,7' 19° 49,4' N	328° 21,5' 19° 36,6' N	328° 21,5' 19° 23,4' N	328° 21,6' 19° 09,9' N	328° 21,8' 18° 56,1' N	328° 22,2' 18° 42,0' N
11	343° 24,0' 20° 36,9' N	343° 23,2' 20° 25,4' N	343° 22,6' 20° 13,5' N	343° 22,1' 20° 01,4' N	343° 21,7' 19° 48,9' N	343° 21,5' 19° 36,0' N	343° 21,5' 19° 22,8' N	343° 21,6' 19° 09,4' N	343° 21,8' 18° 55,6' N	343° 22,2' 18° 41,4' N
12	358° 23,9' 20° 36,4' N	358° 23,2' 20° 24,9' N	358° 22,5' 20° 13,0' N	358° 22,1' 20° 00,9' N	358° 21,7' 19° 48,3' N	358° 21,5' 19° 35,5' N	358° 21,5' 19° 22,3' N	358° 21,6' 19° 08,8' N	358° 21,8' 18° 55,0' N	358° 22,2' 18° 40,8' N
13	013° 23,9' 20° 35,9' N	013° 23,1' 20° 24,4' N	013° 22,5' 20° 12,5' N	013° 22,0' 20° 00,3' N	013° 21,7' 19° 47,8' N	013° 21,5' 19° 34,9' N	013° 21,5' 19° 21,7' N	013° 21,6' 19° 08,2' N	013° 21,8' 18° 54,4' N	013° 22,2' 18° 40,2' N
14	028° 23,9' 20° 35,5' N	028° 23,1' 20° 23,9' N	028° 22,5' 20° 12,0' N	028° 22,0' 19° 59,8' N	028° 21,7' 19° 47,3' N	028° 21,5' 19° 34,4' N	028° 21,5' 19° 21,2' N	028° 21,6' 19° 07,7' N	028° 21,9' 18° 53,8' N	028° 22,3' 18° 39,7' N
15	043° 23,8' 20° 35,0' N	043° 23,1' 20° 23,4' N	043° 22,5' 20° 11,5' N	043° 22,0' 19° 59,3' N	043° 21,7' 19° 46,7' N	043° 21,5' 19° 33,8' N	043° 21,5' 19° 20,6' N	043° 21,6' 19° 07,1' N	043° 21,9' 18° 53,2' N	043° 22,3' 18° 39,1' N
16	058° 23,8' 20° 34,5' N	058° 23,1' 20° 22,9' N	058° 22,5' 20° 11,0' N	058° 22,0' 19° 58,8' N	058° 21,7' 19° 46,2' N	058° 21,5' 19° 33,3' N	058° 21,5' 19° 20,1' N	058° 21,6' 19° 06,5' N	058° 21,9' 18° 52,6' N	058° 22,3' 18° 38,5' N
17	073° 23,8' 20° 34,0' N	073° 23,0' 20° 22,5' N	073° 22,4' 20° 10,5' N	073° 22,0' 19° 58,3' N	073° 21,7' 19° 45,7' N	073° 21,5' 19° 32,8' N	073° 21,5' 19° 19,5' N	073° 21,6' 19° 05,9' N	073° 21,9' 18° 52,1' N	073° 22,3' 18° 37,9' N
18	088° 23,7' 20° 33,6' N	088° 23,0' 20° 22,0' N	088° 22,4' 20° 10,0' N	088° 22,0' 19° 57,8' N	088° 21,7' 19° 45,1' N	088° 21,5' 19° 32,2' N	088° 21,5' 19° 18,9' N	088° 21,6' 19° 05,4' N	088° 21,9' 18° 51,5' N	088° 22,4' 18° 37,3' N
19	103° 23,7' 20° 33,1' N	103° 23,0' 20° 21,5' N	103° 22,4' 20° 09,5' N	103° 21,9' 19° 57,2' N	103° 21,7' 19° 44,6' N	103° 21,5' 19° 31,7' N	103° 21,5' 19° 18,4' N	103° 21,6' 19° 04,8' N	103° 21,9' 18° 50,9' N	103° 22,4' 18° 36,7' N
20	118° 23,7' 20° 32,6' N	118° 22,9' 20° 21,0' N	118° 22,4' 20° 09,0' N	118° 21,9' 19° 56,7' N	118° 21,6' 19° 44,1' N	118° 21,5' 19° 31,1' N	118° 21,5' 19° 17,8' N	118° 21,6' 19° 04,2' N	118° 21,9' 18° 50,3' N	118° 22,4' 18° 36,1' N
21	133° 23,6' 20° 32,1' N	133° 22,9' 20° 20,5' N	133° 22,3' 20° 08,5' N	133° 21,9' 19° 56,2' N	133° 21,6' 19° 43,5' N	133° 21,5' 19° 30,6' N	133° 21,5' 19° 17,3' N	133° 21,7' 19° 03,6' N	133° 22,0' 18° 49,7' N	133° 22,4' 18° 35,5' N
22	148° 23,6' 20° 31,6' N	148° 22,9' 20° 20,0' N	148° 22,3' 20° 08,0' N	148° 21,9' 19° 55,7' N	148° 21,6' 19° 43,0' N	148° 21,5' 19° 30,0' N	148° 21,5' 19° 16,7' N	148° 21,7' 19° 03,1' N	148° 22,0' 18° 49,1' N	148° 22,4' 18° 34,9' N
23	163° 23,6' 20° 31,2' N	163° 22,9' 20° 19,5' N	163° 22,3' 20° 07,5' N	163° 21,9' 19° 55,2' N	163° 21,6' 19° 42,5' N	163° 21,5' 19° 29,5' N	163° 21,5' 19° 16,1' N	163° 21,7' 19° 02,5' N	163° 22,0' 18° 48,5' N	163° 22,5' 18° 34,3' N

UT	30 Jul	31 Jul	01 Aug	02 Aug	03 Aug	04 Aug	05 Aug	06 Aug	07 Aug	08 Aug
00	178° 22,5' 18° 33,7' N	178° 23,1' 18° 19,1' N	178° 23,9' 18° 04,2' N	178° 24,8' 17° 49,0' N	178° 25,9' 17° 33,5' N	178° 27,2' 17° 17,8' N	178° 28,6' 17° 01,7' N	178° 30,1' 16° 45,4' N	178° 31,9' 16° 28,8' N	178° 33,7' 16° 12,0' N
01	193° 22,5' 18° 33,1' N	193° 23,1' 18° 18,5' N	193° 23,9' 18° 03,6' N	193° 24,9' 17° 48,4' N	193° 26,0' 17° 32,9' N	193° 27,2' 17° 17,1' N	193° 28,6' 17° 01,1' N	193° 30,2' 16° 44,7' N	193° 31,9' 16° 28,1' N	193° 33,8' 16° 11,3' N
02	208° 22,5' 18° 32,5' N	208° 23,2' 18° 17,8' N	208° 24,0' 18° 02,9' N	208° 24,9' 17° 47,7' N	208° 26,0' 17° 32,2' N	208° 27,3' 17° 16,4' N	208° 28,7' 17° 00,4' N	208° 30,3' 16° 44,1' N	208° 32,0' 16° 27,5' N	208° 33,9' 16° 10,6' N
03	223° 22,6' 18° 31,9' N	223° 23,2' 18° 17,2' N	223° 24,0' 18° 02,3' N	223° 25,0' 17° 47,1' N	223° 26,1' 17° 31,6' N	223° 27,3' 17° 15,8' N	223° 28,8' 16° 59,7' N	223° 30,4' 16° 43,4' N	223° 32,1' 16° 26,8' N	223° 34,0' 16° 09,9' N
04	238° 22,6' 18° 31,3' N	238° 23,2' 18° 16,6' N	238° 24,0' 18° 01,7' N	238° 25,0' 17° 46,4' N	238° 26,1' 17° 30,9' N	238° 27,4' 17° 15,1' N	238° 28,8' 16° 59,0' N	238° 30,4' 16° 42,7' N	238° 32,2' 16° 26,1' N	238° 34,1' 16° 09,2' N
05	253° 22,6' 18° 30,6' N	253° 23,3' 18° 16,0' N	253° 24,1' 18° 01,0' N	253° 25,1' 17° 45,8' N	253° 26,2' 17° 30,3' N	253° 27,5' 17° 14,5' N	253° 28,9' 16° 58,4' N	253° 30,5' 16° 42,0' N	253° 32,2' 16° 25,4' N	253° 34,1' 16° 08,5' N
06	268° 22,6' 18° 30,0' N	268° 23,3' 18° 15,4' N	268° 24,1' 18° 00,4' N	268° 25,1' 17° 45,2' N	268° 26,2' 17° 29,6' N	268° 27,5' 17° 13,8' N	268° 29,0' 16° 57,7' N	268° 30,6' 16° 41,3' N	268° 32,3' 16° 24,7' N	268° 34,2' 16° 07,7' N
07	283° 22,7' 18° 29,4' N	283° 23,3' 18° 14,8' N	283° 24,2' 17° 59,8' N	283° 25,1' 17° 44,5' N	283° 26,3' 17° 29,0' N	283° 27,6' 17° 13,1' N	283° 29,0' 16° 57,0' N	283° 30,6' 16° 40,6' N	283° 32,4' 16° 24,0' N	283° 34,3' 16° 07,0' N
08	298° 22,7' 18° 28,8' N	298° 23,4' 18° 14,1' N	298° 24,2' 17° 59,2' N	298° 25,2' 17° 43,9' N	298° 26,3' 17° 28,3' N	298° 27,6' 17° 12,5' N	298° 29,1' 16° 56,3' N	298° 30,7' 16° 39,9' N	298° 32,5' 16° 23,3' N	298° 34,4' 16° 06,3' N
09	313° 22,7' 18° 28,2' N	313° 23,4' 18° 13,5' N	313° 24,2' 17° 58,5' N	313° 25,2' 17° 43,2' N	313° 26,4' 17° 27,7' N	313° 27,7' 17° 11,8' N	313° 29,2' 16° 55,7' N	313° 30,8' 16° 39,2' N	313° 32,5' 16° 22,6' N	313° 34,5' 16° 05,6' N
10	328° 22,7' 18° 27,6' N	328° 23,4' 18° 12,9' N	328° 24,3' 17° 57,9' N	328° 25,3' 17° 42,6' N	328° 26,4' 17° 27,0' N	328° 27,7' 17° 11,1' N	328° 29,2' 16° 55,0' N	328° 30,8' 16° 38,5' N	328° 32,6' 16° 21,9' N	328° 34,6' 16° 04,9' N
11	343° 22,8' 18° 27,0' N	343° 23,5' 18° 12,3' N	343° 24,3' 17° 57,3' N	343° 25,3' 17° 41,9' N	343° 26,5' 17° 26,3' N	343° 27,8' 17° 10,5' N	343° 29,3' 16° 54,3' N	343° 30,9' 16° 37,9' N	343° 32,7' 16° 21,2' N	343° 34,6' 16° 04,2' N
12	358° 22,8' 18° 26,4' N	358° 23,5' 18° 11,7' N	358° 24,3' 17° 56,6' N	358° 25,4' 17° 41,3' N	358° 26,5' 17° 25,7' N	358° 27,9' 17° 09,8' N	358° 29,3' 16° 53,6' N	358° 31,0' 16° 37,2' N	358° 32,8' 16° 20,5' N	358° 34,7' 16° 03,5' N
13	013° 22,8' 18° 25,8' N	013° 23,5' 18° 11,0' N	013° 24,4' 17° 56,0' N	013° 25,4' 17° 40,7' N	013° 26,6' 17° 25,0' N	013° 27,9' 17° 09,1' N	013° 29,4' 16° 52,9' N	013° 31,1' 16° 36,5' N	013° 32,9' 16° 19,8' N	013° 34,8' 16° 02,8' N
14	028° 22,8' 18° 25,2' N	028° 23,6' 18° 10,4' N	028° 24,4' 17° 55,4' N	028° 25,5' 17° 40,0' N	028° 26,6' 17° 24,4' N	028° 28,0' 17° 08,5' N	028° 29,5' 16° 52,3' N	028° 31,1' 16° 35,8' N	028° 32,9' 16° 19,1' N	028° 34,9' 16° 02,1' N
15	043° 22,9' 18° 24,6' N	043° 23,6' 18° 09,8' N	043° 24,5' 17° 54,7' N	043° 25,5' 17° 39,4' N	043° 26,7' 17° 23,7' N	043° 28,0' 17° 07,8' N	043° 29,5' 16° 51,6' N	043° 31,2' 16° 35,1' N	043° 33,0' 16° 18,3' N	043° 35,0' 16° 01,3' N
16	058° 22,9' 18° 24,0' N	058° 23,6' 18° 09,2' N	058° 24,5' 17° 54,1' N	058° 25,5' 17° 38,7' N	058° 26,7' 17° 23,1' N	058° 28,1' 17° 07,1' N	058° 29,6' 16° 50,9' N	058° 31,3' 16° 34,4' N	058° 33,1' 16° 17,6' N	058° 35,1' 16° 00,6' N
17	073° 22,9' 18° 23,4' N	073° 23,7' 18° 08,6' N	073° 24,5' 17° 53,5' N	073° 25,6' 17° 38,1' N	073° 26,8' 17° 22,4' N	073° 28,2' 17° 06,4' N	073° 29,7' 16° 50,2' N	073° 31,3' 16° 33,7' N	073° 33,2' 16° 16,9' N	073° 35,1' 15° 59,9' N
18	088° 22,9' 18° 22,8' N	088° 23,7' 18° 07,9' N	088° 24,6' 17° 52,8' N	088° 25,6' 17° 37,4' N	088° 26,9' 17° 21,7' N	088° 28,2' 17° 05,8' N	088° 29,7' 16° 49,5' N	088° 31,4' 16° 33,0' N	088° 33,3' 16° 16,2' N	088° 35,2' 15° 59,2' N
19	103° 23,0' 18° 22,1' N	103° 23,7' 18° 07,3' N	103° 24,6' 17° 52,2' N	103° 25,7' 17° 36,8' N	103° 26,9' 17° 21,1' N	103° 28,3' 17° 05,1' N	103° 29,8' 16° 48,8' N	103° 31,5' 16° 32,3' N	103° 33,3' 16° 15,5' N	103° 35,3' 15° 58,5' N
20	118° 23,0' 18° 21,5' N	118° 23,8' 18° 06,7' N	118° 24,7' 17° 51,6' N	118° 25,7' 17° 36,1' N	118° 27,0' 17° 20,4' N	118° 28,3' 17° 04,4' N	118° 29,9' 16° 48,2' N	118° 31,6' 16° 31,6' N	118° 33,4' 16° 14,8' N	118° 35,4' 15° 57,8' N
21	133° 23,0' 18° 20,9' N	133° 23,8' 18° 06,1' N	133° 24,7' 17° 50,9' N	133° 25,8' 17° 35,5' N	133° 27,0' 17° 19,8' N	133° 28,4' 17° 03,8' N	133° 29,9' 16° 47,5' N	133° 31,6' 16° 30,9' N	133° 33,5' 16° 14,1' N	133° 35,5' 15° 57,0' N
22	148° 23,1' 18° 20,3' N	148° 23,8' 18° 05,4' N	148° 24,8' 17° 50,3' N	148° 25,8' 17° 34,8' N	148° 27,1' 17° 19,1' N	148° 28,5' 17° 03,1' N	148° 30,0' 16° 46,8' N	148° 31,7' 16° 30,2' N	148° 33,6' 16° 13,4' N	148° 35,6' 15° 56,3' N
23	163° 23,1' 18° 19,7' N	163° 23,9' 18° 04,8' N	163° 24,8' 17° 49,6' N	163° 25,9' 17° 34,2' N	163° 27,1' 17° 18,4' N	163° 28,5' 17° 02,4' N	163° 30,1' 16° 46,1' N	163° 31,8' 16° 29,5' N	163° 33,7' 16° 12,7' N	163° 35,7' 15° 55,6' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 09 Aug to 28 Aug

UT	09 Aug	10 Aug	11 Aug	12 Aug	13 Aug	14 Aug	15 Aug	16 Aug	17 Aug	18 Aug
00	178° 35,8' 15° 54,9' N	178° 37,9' 15° 37,5' N	178° 40,2' 15° 19,9' N	178° 42,7' 15° 02,1' N	178° 45,3' 14° 44,0' N	178° 48,0' 14° 25,7' N	178° 50,9' 14° 07,1' N	178° 53,9' 13° 48,4' N	178° 57,0' 13° 29,4' N	179° 00,3' 13° 10,2' N
01	193° 35,8' 15° 54,2' N	193° 38,0' 15° 36,8' N	193° 40,3' 15° 19,2' N	193° 42,8' 15° 01,3' N	193° 45,4' 14° 43,2' N	193° 48,1' 14° 24,9' N	193° 51,0' 14° 06,4' N	193° 54,0' 13° 47,6' N	193° 57,2' 13° 28,6' N	194° 00,4' 13° 09,4' N
02	208° 35,9' 15° 53,5' N	208° 38,1' 15° 36,1' N	208° 40,4' 15° 18,5' N	208° 42,9' 15° 00,6' N	208° 45,5' 14° 42,5' N	208° 48,3' 14° 24,2' N	208° 51,1' 14° 05,6' N	208° 54,1' 13° 46,8' N	208° 57,3' 13° 27,8' N	209° 00,5' 13° 08,5' N
03	223° 36,0' 15° 52,7' N	223° 38,2' 15° 35,4' N	223° 40,5' 15° 17,7' N	223° 43,0' 14° 59,8' N	223° 45,6' 14° 41,7' N	223° 48,4' 14° 23,4' N	223° 51,3' 14° 04,8' N	223° 54,3' 13° 46,0' N	223° 57,4' 13° 27,0' N	224° 00,7' 13° 07,7' N
04	238° 36,1' 15° 52,0' N	238° 38,3' 15° 34,6' N	238° 40,6' 15° 17,0' N	238° 43,1' 14° 59,1' N	238° 45,7' 14° 41,0' N	238° 48,5' 14° 22,6' N	238° 51,4' 14° 04,0' N	238° 54,4' 13° 45,2' N	238° 57,6' 13° 26,2' N	239° 00,8' 13° 06,9' N
05	253° 36,2' 15° 51,3' N	253° 38,4' 15° 33,9' N	253° 40,7' 15° 16,2' N	253° 43,2' 14° 58,3' N	253° 45,8' 14° 40,2' N	253° 48,6' 14° 21,8' N	253° 51,5' 14° 03,2' N	253° 54,5' 13° 44,4' N	253° 57,7' 13° 25,4' N	254° 01,0' 13° 06,1' N
06	268° 36,3' 15° 50,6' N	268° 38,5' 15° 33,2' N	268° 40,8' 15° 15,5' N	268° 43,3' 14° 57,6' N	268° 46,0' 14° 39,4' N	268° 48,7' 14° 21,1' N	268° 51,6' 14° 02,5' N	268° 54,7' 13° 43,6' N	268° 57,8' 13° 24,6' N	269° 01,1' 13° 05,3' N
07	283° 36,4' 15° 49,9' N	283° 38,6' 15° 32,4' N	283° 40,9' 15° 14,8' N	283° 43,4' 14° 56,8' N	283° 46,1' 14° 38,7' N	283° 48,8' 14° 20,3' N	283° 51,8' 14° 01,7' N	283° 54,8' 13° 42,8' N	283° 58,0' 13° 23,8' N	284° 01,2' 13° 04,5' N
08	298° 36,5' 15° 49,1' N	298° 38,7' 15° 31,7' N	298° 41,0' 15° 14,0' N	298° 43,5' 14° 56,1' N	298° 46,2' 14° 37,9' N	298° 49,0' 14° 19,5' N	298° 51,9' 14° 00,9' N	298° 54,9' 13° 42,1' N	298° 58,1' 13° 23,0' N	299° 01,4' 13° 03,7' N
09	313° 36,5' 15° 48,4' N	313° 38,8' 15° 31,0' N	313° 41,1' 15° 13,3' N	313° 43,7' 14° 55,3' N	313° 46,3' 14° 37,2' N	313° 49,1' 14° 18,8' N	313° 52,0' 14° 00,1' N	313° 55,0' 13° 41,3' N	313° 58,2' 13° 22,2' N	314° 01,5' 13° 02,9' N
10	328° 36,6' 15° 47,7' N	328° 38,9' 15° 30,2' N	328° 41,2' 15° 12,5' N	328° 43,8' 14° 54,6' N	328° 46,4' 14° 36,4' N	328° 49,2' 14° 18,0' N	328° 52,1' 13° 59,3' N	328° 55,2' 13° 40,5' N	328° 58,4' 13° 21,4' N	329° 01,7' 13° 02,1' N
11	343° 36,7' 15° 47,0' N	343° 39,0' 15° 29,5' N	343° 41,3' 15° 11,8' N	343° 43,9' 14° 53,8' N	343° 46,5' 14° 35,6' N	343° 49,3' 14° 17,2' N	343° 52,3' 13° 58,6' N	343° 55,3' 13° 39,7' N	343° 58,5' 13° 20,6' N	344° 01,8' 13° 01,3' N
12	358° 36,8' 15° 46,3' N	358° 39,1' 15° 28,8' N	358° 41,4' 15° 11,0' N	358° 44,0' 14° 53,1' N	358° 46,6' 14° 34,9' N	358° 49,4' 14° 16,4' N	358° 52,4' 13° 57,8' N	358° 55,4' 13° 38,9' N	358° 58,6' 13° 19,8' N	359° 01,9' 13° 00,5' N
13	013° 36,9' 15° 45,5' N	013° 39,2' 15° 28,0' N	013° 41,5' 15° 10,3' N	013° 44,1' 14° 52,3' N	013° 46,8' 14° 34,1' N	013° 49,6' 14° 15,7' N	013° 52,5' 13° 57,0' N	013° 55,6' 13° 38,1' N	013° 58,8' 13° 19,0' N	014° 02,1' 12° 59,7' N
14	028° 37,0' 15° 44,8' N	028° 39,3' 15° 27,3' N	028° 41,7' 15° 09,6' N	028° 44,2' 14° 51,6' N	028° 46,9' 14° 33,3' N	028° 49,7' 14° 14,9' N	028° 52,6' 13° 56,2' N	028° 55,7' 13° 37,3' N	028° 58,9' 13° 18,2' N	029° 02,2' 12° 58,9' N
15	043° 37,1' 15° 44,1' N	043° 39,3' 15° 26,6' N	043° 41,8' 15° 08,8' N	043° 44,3' 14° 50,8' N	043° 47,0' 14° 32,6' N	043° 49,8' 14° 14,1' N	043° 52,8' 13° 55,4' N	043° 55,8' 13° 36,5' N	043° 59,0' 13° 17,4' N	044° 02,4' 12° 58,0' N
16	058° 37,2' 15° 43,4' N	058° 39,4' 15° 25,8' N	058° 41,9' 15° 08,1' N	058° 44,4' 14° 50,1' N	058° 47,1' 14° 31,8' N	058° 49,9' 14° 13,3' N	058° 52,9' 13° 54,6' N	058° 56,0' 13° 35,7' N	058° 59,2' 13° 16,6' N	059° 02,5' 12° 57,2' N
17	073° 37,3' 15° 42,6' N	073° 39,5' 15° 25,1' N	073° 42,0' 15° 07,3' N	073° 44,5' 14° 49,3' N	073° 47,2' 14° 31,1' N	073° 50,0' 14° 12,6' N	073° 53,0' 13° 53,9' N	073° 56,1' 13° 34,9' N	073° 59,3' 13° 15,8' N	074° 02,6' 12° 56,4' N
18	088° 37,4' 15° 41,9' N	088° 39,6' 15° 24,4' N	088° 42,1' 15° 06,6' N	088° 44,6' 14° 48,6' N	088° 47,3' 14° 30,3' N	088° 50,2' 14° 11,8' N	088° 53,1' 13° 53,1' N	088° 56,2' 13° 34,1' N	088° 59,4' 13° 15,0' N	089° 02,8' 12° 55,6' N
19	103° 37,5' 15° 41,2' N	103° 39,7' 15° 23,6' N	103° 42,2' 15° 05,8' N	103° 44,7' 14° 47,8' N	103° 47,4' 14° 29,5' N	103° 50,3' 14° 11,0' N	103° 53,3' 13° 52,3' N	103° 56,4' 13° 33,3' N	103° 59,6' 13° 14,2' N	104° 02,9' 12° 54,8' N
20	118° 37,5' 15° 40,5' N	118° 39,8' 15° 22,9' N	118° 42,3' 15° 05,1' N	118° 44,8' 14° 47,0' N	118° 47,6' 14° 28,8' N	118° 50,4' 14° 10,2' N	118° 53,4' 13° 51,5' N	118° 56,5' 13° 32,6' N	118° 59,7' 13° 13,4' N	119° 03,1' 12° 54,0' N
21	133° 37,6' 15° 39,7' N	133° 39,9' 15° 22,2' N	133° 42,4' 15° 04,3' N	133° 45,0' 14° 46,3' N	133° 47,7' 14° 28,0' N	133° 50,5' 14° 09,5' N	133° 53,5' 13° 50,7' N	133° 56,6' 13° 31,8' N	133° 59,9' 13° 12,6' N	134° 03,2' 12° 53,2' N
22	148° 37,7' 15° 39,0' N	148° 40,0' 15° 21,4' N	148° 42,5' 15° 03,6' N	148° 45,1' 14° 45,5' N	148° 47,8' 14° 27,2' N	148° 50,6' 14° 08,7' N	148° 53,6' 13° 49,9' N	148° 56,8' 13° 31,0' N	149° 00,0' 13° 11,8' N	149° 03,4' 12° 52,4' N
23	163° 37,8' 15° 38,3' N	163° 40,1' 15° 20,7' N	163° 42,6' 15° 02,8' N	163° 45,2' 14° 44,8' N	163° 47,9' 14° 26,5' N	163° 50,8' 14° 07,9' N	163° 53,8' 13° 49,2' N	163° 56,9' 13° 30,2' N	164° 00,1' 13° 11,0' N	164° 03,5' 12° 51,6' N

UT	19 Aug	20 Aug	21 Aug	22 Aug	23 Aug	24 Aug	25 Aug	26 Aug	27 Aug	28 Aug
00	179° 03,6' 12° 50,7' N	179° 07,1' 12° 31,1' N	179° 10,7' 12° 11,3' N	179° 14,5' 11° 51,3' N	179° 18,3' 11° 31,1' N	179° 22,2' 11° 10,7' N	179° 26,3' 10° 50,1' N	179° 30,4' 10° 29,4' N	179° 34,6' 10° 08,5' N	179° 39,0' 09° 47,4' N
01	194° 03,8' 12° 49,9' N	194° 07,3' 12° 30,3' N	194° 10,9' 12° 10,5' N	194° 14,6' 11° 50,4' N	194° 18,4' 11° 30,2' N	194° 22,4' 11° 09,8' N	194° 26,4' 10° 49,2' N	194° 30,6' 10° 28,5' N	194° 34,8' 10° 07,6' N	194° 39,2' 09° 46,5' N
02	209° 03,9' 12° 49,1' N	209° 07,4' 12° 29,5' N	209° 11,0' 12° 09,6' N	209° 14,8' 11° 49,6' N	209° 18,6' 11° 29,4' N	209° 22,5' 11° 09,0' N	209° 26,6' 10° 48,4' N	209° 30,7' 10° 27,6' N	209° 35,0' 10° 06,7' N	209° 39,3' 09° 45,6' N
03	224° 04,1' 12° 48,3' N	224° 07,6' 12° 28,6' N	224° 11,2' 12° 08,8' N	224° 14,9' 11° 48,8' N	224° 18,8' 11° 28,5' N	224° 22,7' 11° 08,1' N	224° 26,8' 10° 47,5' N	224° 30,9' 10° 26,8' N	224° 35,2' 10° 05,8' N	224° 39,5' 09° 44,7' N
04	239° 04,2' 12° 47,5' N	239° 07,7' 12° 27,8' N	239° 11,3' 12° 08,0' N	239° 15,1' 11° 47,9' N	239° 18,9' 11° 27,7' N	239° 22,9' 11° 07,3' N	239° 26,9' 10° 46,7' N	239° 31,1' 10° 25,9' N	239° 35,4' 10° 05,0' N	239° 39,7' 09° 43,9' N
05	254° 04,4' 12° 46,7' N	254° 07,9' 12° 27,0' N	254° 11,5' 12° 07,1' N	254° 15,2' 11° 47,1' N	254° 19,1' 11° 26,8' N	254° 23,0' 11° 06,4' N	254° 27,1' 10° 45,8' N	254° 31,3' 10° 25,0' N	254° 35,5' 10° 04,1' N	254° 39,9' 09° 43,0' N
06	269° 04,5' 12° 45,9' N	269° 08,0' 12° 26,2' N	269° 11,7' 12° 06,3' N	269° 15,4' 11° 46,2' N	269° 19,3' 11° 26,0' N	269° 23,2' 11° 05,5' N	269° 27,3' 10° 44,9' N	269° 31,4' 10° 24,2' N	269° 35,7' 10° 03,2' N	269° 40,1' 09° 42,1' N
07	284° 04,6' 12° 45,0' N	284° 08,2' 12° 25,4' N	284° 11,8' 12° 05,5' N	284° 15,6' 11° 45,4' N	284° 19,4' 11° 25,1' N	284° 23,4' 11° 04,7' N	284° 27,5' 10° 44,1' N	284° 31,6' 10° 23,3' N	284° 35,9' 10° 02,3' N	284° 40,3' 09° 41,2' N
08	299° 04,8' 12° 44,2' N	299° 08,3' 12° 24,5' N	299° 12,0' 12° 04,6' N	299° 15,7' 11° 44,6' N	299° 19,6' 11° 24,3' N	299° 23,6' 11° 03,8' N	299° 27,6' 10° 43,2' N	299° 31,8' 10° 22,4' N	299° 36,1' 10° 01,4' N	299° 40,4' 09° 40,3' N
09	314° 04,9' 12° 43,4' N	314° 08,5' 12° 23,7' N	314° 12,1' 12° 03,8' N	314° 15,9' 11° 43,7' N	314° 19,7' 11° 23,4' N	314° 23,7' 11° 03,0' N	314° 27,8' 10° 42,3' N	314° 32,0' 10° 21,5' N	314° 36,3' 10° 00,6' N	314° 40,6' 09° 39,4' N
10	329° 05,1' 12° 42,6' N	329° 08,6' 12° 22,9' N	329° 12,3' 12° 03,0' N	329° 16,0' 11° 42,9' N	329° 19,9' 11° 22,6' N	329° 23,9' 11° 02,1' N	329° 28,0' 10° 41,5' N	329° 32,2' 10° 20,7' N	329° 36,4' 09° 59,7' N	329° 40,8' 09° 38,6' N
11	344° 05,2' 12° 41,8' N	344° 08,8' 12° 22,1' N	344° 12,4' 12° 02,1' N	344° 16,2' 11° 42,0' N	344° 20,1' 11° 21,7' N	344° 24,1' 11° 01,3' N	344° 28,1' 10° 40,6' N	344° 32,3' 10° 19,8' N	344° 36,6' 09° 58,8' N	344° 41,0' 09° 37,7' N
12	359° 05,4' 12° 41,0' N	359° 08,9' 12° 21,2' N	359° 12,6' 12° 01,3' N	359° 16,4' 11° 41,2' N	359° 20,2' 11° 20,9' N	359° 24,2' 11° 00,4' N	359° 28,3' 10° 39,8' N	359° 32,5' 10° 18,9' N	359° 36,8' 09° 57,9' N	359° 41,2' 09° 36,8' N
13	014° 05,5' 12° 40,1' N	014° 09,1' 12° 20,4' N	014° 12,7' 12° 00,5' N	014° 16,5' 11° 40,3' N	014° 20,4' 11° 20,0' N	014° 24,4' 10° 59,6' N	014° 28,5' 10° 38,9' N	014° 32,7' 10° 18,1' N	014° 37,0' 09° 57,1' N	014° 41,4' 09° 35,9' N
14	029° 05,7' 12° 39,3' N	029° 09,2' 12° 19,6' N	029° 12,9' 11° 59,6' N	029° 16,7' 11° 39,5' N	029° 20,6' 11° 19,2' N	029° 24,6' 10° 58,7' N	029° 28,7' 10° 38,0' N	029° 32,9' 10° 17,2' N	029° 37,2' 09° 56,2' N	029° 41,5' 09° 35,0' N
15	044° 05,8' 12° 38,5' N	044° 09,4' 12° 18,7' N	044° 13,0' 11° 58,8' N	044° 16,8' 11° 38,7' N	044° 20,7' 11° 18,3' N	044° 24,7' 10° 57,8' N	044° 28,8' 10° 37,2' N	044° 33,0' 10° 16,3' N	044° 37,3' 09° 55,3' N	044° 41,7' 09° 34,1' N
16	059° 06,0' 12° 37,7' N	059° 09,5' 12° 17,9' N	059° 13,2' 11° 58,0' N	059° 17,0' 11° 37,8' N	059° 20,9' 11° 17,5' N	059° 24,9' 10° 57,0' N	059° 29,0' 10° 36,3' N	059° 33,2' 10° 15,4' N	059° 37,5' 09° 54,4' N	059° 41,9' 09° 33,3' N
17	074° 06,1' 12° 36,9' N	074° 09,7' 12° 17,1' N	074° 13,4' 11° 57,1' N	074° 17,2' 11° 37,0' N	074° 21,1' 11° 16,6' N	074° 25,1' 10° 56,1' N	074° 29,2' 10° 35,4' N	074° 33,4' 10° 14,6' N	074° 37,7' 09° 53,5' N	074° 42,1' 09° 32,4' N
18	089° 06,2' 12° 36,0' N	089° 09,8' 12° 16,3' N	089° 13,5' 11° 56,3' N	089° 17,3' 11° 36,1' N	089° 21,2' 11° 15,8' N	089° 25,2' 10° 55,3' N	089° 29,4' 10° 34,6' N	089° 33,6' 10° 13,7' N	089° 37,9' 09° 52,7' N	089° 42,3' 09° 31,5' N
19	104° 06,4' 12° 35,2' N	104° 10,0' 12° 15,4' N	104° 13,7' 11° 55,5' N	104° 17,5' 11° 35,3' N	104° 21,4' 11° 14,9' N	104° 25,4' 10° 54,4' N	104° 29,5' 10° 33,7' N	104° 33,7' 10° 12,8' N	104° 38,1' 09° 51,8' N	104° 42,5' 09° 30,6' N
20	119° 06,5' 12° 34,4' N	119° 10,1' 12° 14,6' N	119° 13,8' 11° 54,6' N	119° 17,6' 11° 34,4' N	119° 21,6' 11° 14,1' N	119° 25,6' 10° 53,5' N	119° 29,7' 10° 32,8' N	119° 33,9' 10° 12,0' N	119° 38,2' 09° 50,9' N	119° 42,7' 09° 29,7' N
21	134° 06,7' 12° 33,6' N	134° 10,3' 12° 13,8' N	134° 14,0' 11° 53,8' N	134° 17,8' 11° 33,6' N	134° 21,7' 11° 13,2' N	134° 25,7' 10° 52,7' N	134° 29,9' 10° 32,0' N	134° 34,1' 10° 11,1' N	134° 38,4' 09° 50,0' N	134° 42,8' 09° 28,8' N
22	149° 06,8' 12° 32,8' N	149° 10,4' 12° 13,0' N	149° 14,1' 11° 52,9' N	149° 18,0' 11° 32,8' N	149° 21,9' 11° 12,4' N	149° 25,9' 10° 51,8' N	149° 30,0' 10° 31,1' N	149° 34,3' 10° 10,2' N	149° 38,6' 09° 49,1' N	149° 43,0' 09° 27,9' N
23	164° 07,0' 12° 31,9' N	164° 10,6' 12° 12,1' N	164° 14,3' 11° 52,1' N	164° 18,1' 11° 31,9' N	164° 22,1' 11° 11,5' N	164° 26,1' 10° 51,0' N	164° 30,2' 10° 30,2' N	164° 34,5' 10° 09,3' N	164° 38,8' 09° 48,3' N	164° 43,2' 09° 27,0' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 29 Aug to 17 Sep

UT	29 Aug	30 Aug	31 Aug	01 Sep	02 Sep	03 Sep	04 Sep	05 Sep	06 Sep	07 Sep
00	179° 43,4' 09° 26,2' N	179° 47,9' 09° 04,8' N	179° 52,5' 08° 43,3' N	179° 57,2' 08° 21,6' N	180° 02,0' 07° 59,8' N	180° 06,8' 07° 37,9' N	180° 11,7' 07° 15,9' N	180° 16,7' 06° 53,7' N	180° 21,8' 06° 31,4' N	180° 26,9' 06° 09,1' N
01	194° 43,6' 09° 25,3' N	194° 48,1' 09° 03,9' N	194° 52,7' 08° 42,4' N	194° 57,4' 08° 20,7' N	195° 02,2' 07° 58,9' N	195° 07,0' 07° 37,0' N	195° 11,9' 07° 14,9' N	195° 16,9' 06° 52,8' N	195° 22,0' 06° 30,5' N	195° 27,1' 06° 08,1' N
02	209° 43,8' 09° 24,4' N	209° 48,3' 09° 03,0' N	209° 52,9' 08° 41,5' N	209° 57,6' 08° 19,8' N	210° 02,4' 07° 58,0' N	210° 07,2' 07° 36,1' N	210° 12,1' 07° 14,0' N	210° 17,1' 06° 51,9' N	210° 22,2' 06° 29,6' N	210° 27,3' 06° 07,2' N
03	224° 44,0' 09° 23,5' N	224° 48,5' 09° 02,1' N	224° 53,1' 08° 40,6' N	224° 57,8' 08° 18,9' N	225° 02,6' 07° 57,1' N	225° 07,4' 07° 35,2' N	225° 12,4' 07° 13,1' N	225° 17,3' 06° 50,9' N	225° 22,4' 06° 28,6' N	225° 27,5' 06° 06,3' N
04	239° 44,1' 09° 22,6' N	239° 48,7' 09° 01,2' N	239° 53,3' 08° 39,7' N	239° 58,0' 08° 18,0' N	240° 02,8' 07° 56,2' N	240° 07,6' 07° 34,2' N	240° 12,6' 07° 12,2' N	240° 17,5' 06° 50,0' N	240° 22,6' 06° 27,7' N	240° 27,7' 06° 05,3' N
05	254° 44,3' 09° 21,7' N	254° 48,9' 09° 00,3' N	254° 53,5' 08° 38,8' N	254° 58,2' 08° 17,1' N	255° 03,0' 07° 55,3' N	255° 07,8' 07° 33,3' N	255° 12,8' 07° 11,3' N	255° 17,8' 06° 49,1' N	255° 22,8' 06° 26,8' N	255° 27,9' 06° 04,4' N
06	269° 44,5' 09° 20,8' N	269° 49,1' 08° 59,4' N	269° 53,7' 08° 37,9' N	269° 58,4' 08° 16,2' N	270° 03,2' 07° 54,4' N	270° 08,0' 07° 32,4' N	270° 13,0' 07° 10,3' N	270° 18,0' 06° 48,1' N	270° 23,0' 06° 25,9' N	270° 28,1' 06° 03,5' N
07	284° 44,7' 09° 19,9' N	284° 49,3' 08° 58,5' N	284° 53,9' 08° 37,0' N	284° 58,6' 08° 15,3' N	285° 03,4' 07° 53,4' N	285° 08,2' 07° 31,5' N	285° 13,2' 07° 09,4' N	285° 18,2' 06° 47,2' N	285° 23,2' 06° 24,9' N	285° 28,4' 06° 02,5' N
08	299° 44,9' 09° 19,1' N	299° 49,4' 08° 57,6' N	299° 54,1' 08° 36,1' N	299° 58,8' 08° 14,4' N	300° 03,6' 07° 52,5' N	300° 08,4' 07° 30,6' N	300° 13,4' 07° 08,5' N	300° 18,4' 06° 46,3' N	300° 23,5' 06° 24,0' N	300° 28,6' 06° 01,6' N
09	314° 45,1' 09° 18,2' N	314° 49,6' 08° 56,7' N	314° 54,3' 08° 35,2' N	314° 59,0' 08° 13,5' N	315° 03,8' 07° 51,6' N	315° 08,7' 07° 29,6' N	315° 13,6' 07° 07,6' N	315° 18,6' 06° 45,4' N	315° 23,7' 06° 23,1' N	315° 28,8' 06° 00,7' N
10	329° 45,3' 09° 17,3' N	329° 49,8' 08° 55,8' N	329° 54,5' 08° 34,3' N	329° 59,2' 08° 12,5' N	330° 04,0' 07° 50,7' N	330° 08,9' 07° 28,7' N	330° 13,8' 07° 06,6' N	330° 18,8' 06° 44,4' N	330° 23,9' 06° 22,1' N	330° 29,0' 05° 59,7' N
11	344° 45,5' 09° 16,4' N	344° 50,0' 08° 54,9' N	344° 54,7' 08° 33,4' N	344° 59,4' 08° 11,6' N	345° 04,2' 07° 49,8' N	345° 09,1' 07° 27,8' N	345° 14,0' 07° 05,7' N	345° 19,0' 06° 43,5' N	345° 24,1' 06° 21,2' N	345° 29,2' 05° 58,8' N
12	359° 45,6' 09° 15,5' N	359° 50,2' 08° 54,0' N	359° 54,9' 08° 32,5' N	359° 59,6' 08° 10,7' N	000° 04,4' 07° 48,9' N	000° 09,3' 07° 26,9' N	000° 14,2' 07° 04,8' N	000° 19,2' 06° 42,6' N	000° 24,3' 06° 20,3' N	000° 29,4' 05° 57,8' N
13	014° 45,8' 09° 14,6' N	014° 50,4' 08° 53,1' N	014° 55,1' 08° 31,6' N	014° 59,8' 08° 09,8' N	015° 04,6' 07° 48,0' N	015° 09,5' 07° 26,0' N	015° 14,4' 07° 03,9' N	015° 19,4' 06° 41,7' N	015° 24,5' 06° 19,3' N	015° 29,6' 05° 56,9' N
14	029° 46,0' 09° 13,7' N	029° 50,6' 08° 52,3' N	029° 55,2' 08° 30,6' N	030° 00,0' 08° 08,9' N	030° 04,8' 07° 47,0' N	030° 09,7' 07° 25,1' N	030° 14,6' 07° 02,9' N	030° 19,6' 06° 40,7' N	030° 24,7' 06° 18,4' N	030° 29,9' 05° 56,0' N
15	044° 46,2' 09° 12,8' N	044° 50,8' 08° 51,4' N	044° 55,4' 08° 29,7' N	045° 00,2' 08° 08,0' N	045° 05,0' 07° 46,1' N	045° 09,9' 07° 24,1' N	045° 14,8' 07° 02,0' N	045° 19,9' 06° 39,8' N	045° 24,9' 06° 17,5' N	045° 30,1' 05° 55,0' N
16	059° 46,4' 09° 11,9' N	059° 51,0' 08° 50,5' N	059° 55,6' 08° 28,8' N	060° 00,4' 08° 07,1' N	060° 05,2' 07° 45,2' N	060° 10,1' 07° 23,2' N	060° 15,0' 07° 01,1' N	060° 20,1' 06° 38,9' N	060° 25,2' 06° 16,5' N	060° 30,3' 05° 54,1' N
17	074° 46,6' 09° 11,0' N	074° 51,2' 08° 49,6' N	074° 55,8' 08° 27,9' N	075° 00,6' 08° 06,2' N	075° 05,4' 07° 44,3' N	075° 10,3' 07° 22,3' N	075° 15,3' 07° 00,2' N	075° 20,3' 06° 37,9' N	075° 25,4' 06° 15,6' N	075° 30,5' 05° 53,2' N
18	089° 46,8' 09° 10,1' N	089° 51,4' 08° 48,7' N	089° 56,0' 08° 27,0' N	090° 00,8' 08° 05,3' N	090° 05,6' 07° 43,4' N	090° 10,5' 07° 21,4' N	090° 15,5' 06° 59,3' N	090° 20,5' 06° 37,0' N	090° 25,6' 06° 14,7' N	090° 30,7' 05° 52,2' N
19	104° 47,0' 09° 09,3' N	104° 51,6' 08° 47,8' N	104° 56,2' 08° 26,1' N	105° 01,0' 08° 04,4' N	105° 05,8' 07° 42,5' N	105° 10,7' 07° 20,5' N	105° 15,7' 06° 58,3' N	105° 20,7' 06° 36,1' N	105° 25,8' 06° 13,7' N	105° 30,9' 05° 51,3' N
20	119° 47,2' 09° 08,4' N	119° 51,7' 08° 46,9' N	119° 56,4' 08° 25,2' N	120° 01,2' 08° 03,5' N	120° 06,0' 07° 41,6' N	120° 10,9' 07° 19,5' N	120° 15,9' 06° 57,4' N	120° 20,9' 06° 35,2' N	120° 26,0' 06° 12,8' N	120° 31,2' 05° 50,4' N
21	134° 47,3' 09° 07,5' N	134° 51,9' 08° 46,0' N	134° 56,6' 08° 24,3' N	135° 01,4' 08° 02,5' N	135° 06,2' 07° 40,6' N	135° 11,1' 07° 18,6' N	135° 16,1' 06° 56,5' N	135° 21,1' 06° 34,2' N	135° 26,2' 06° 11,9' N	135° 31,4' 05° 49,4' N
22	149° 47,5' 09° 06,6' N	149° 52,1' 08° 45,1' N	149° 56,8' 08° 23,4' N	150° 01,6' 08° 01,6' N	150° 06,4' 07° 39,7' N	150° 11,3' 07° 17,7' N	150° 16,3' 06° 55,6' N	150° 21,3' 06° 33,3' N	150° 26,4' 06° 10,9' N	150° 31,6' 05° 48,5' N
23	164° 47,7' 09° 05,7' N	164° 52,3' 08° 44,2' N	164° 57,0' 08° 22,5' N	165° 01,8' 08° 00,7' N	165° 06,6' 07° 38,8' N	165° 11,5' 07° 16,8' N	165° 16,5' 06° 54,6' N	165° 21,5' 06° 32,4' N	165° 26,6' 06° 10,0' N	165° 31,8' 05° 47,5' N

UT	08 Sep	09 Sep	10 Sep	11 Sep	12 Sep	13 Sep	14 Sep	15 Sep	16 Sep	17 Sep
00	180° 32,0' 05° 46,6' N	180° 37,2' 05° 24,0' N	180° 42,5' 05° 01,4' N	180° 47,7' 04° 38,6' N	180° 53,0' 04° 15,8' N	180° 58,4' 03° 52,9' N	181° 03,7' 03° 30,0' N	181° 09,1' 03° 06,9' N	181° 14,4' 02° 43,9' N	181° 19,8' 02° 20,7' N
01	195° 32,2' 05° 45,7' N	195° 37,4' 05° 23,1' N	195° 42,7' 05° 00,4' N	195° 48,0' 04° 37,7' N	195° 53,3' 04° 14,9' N	195° 58,6' 03° 52,0' N	196° 03,9' 03° 29,0' N	196° 09,3' 03° 06,0' N	196° 14,7' 02° 42,9' N	196° 20,0' 02° 19,8' N
02	210° 32,4' 05° 44,7' N	210° 37,6' 05° 22,2' N	210° 42,9' 04° 59,5' N	210° 48,2' 04° 36,7' N	210° 53,5' 04° 13,9' N	210° 58,8' 03° 51,0' N	211° 04,2' 03° 28,1' N	211° 09,5' 03° 05,0' N	211° 14,9' 02° 41,9' N	211° 20,3' 02° 18,8' N
03	225° 32,7' 05° 43,8' N	225° 37,9' 05° 21,2' N	225° 43,1' 04° 58,5' N	225° 48,4' 04° 35,8' N	225° 53,7' 04° 13,0' N	225° 59,0' 03° 50,1' N	226° 04,4' 03° 27,1' N	226° 09,7' 03° 04,1' N	226° 15,1' 02° 41,0' N	226° 20,5' 02° 17,8' N
04	240° 32,9' 05° 42,8' N	240° 38,1' 05° 20,3' N	240° 43,3' 04° 57,6' N	240° 48,6' 04° 34,8' N	240° 53,9' 04° 12,0' N	240° 59,3' 03° 49,1' N	241° 04,6' 03° 26,1' N	241° 10,0' 03° 03,1' N	241° 15,3' 02° 40,0' N	241° 20,7' 02° 16,9' N
05	255° 33,1' 05° 41,9' N	255° 38,3' 05° 19,3' N	255° 43,6' 04° 56,7' N	255° 48,8' 04° 33,9' N	255° 54,1' 04° 11,1' N	255° 59,5' 03° 48,2' N	256° 04,8' 03° 25,2' N	256° 10,2' 03° 02,1' N	256° 15,6' 02° 39,0' N	256° 20,9' 02° 15,9' N
06	270° 33,3' 05° 41,0' N	270° 38,5' 05° 18,4' N	270° 43,8' 04° 55,7' N	270° 49,1' 04° 32,9' N	270° 54,4' 04° 10,1' N	270° 59,7' 03° 47,2' N	271° 05,1' 03° 24,2' N	271° 10,4' 03° 01,2' N	271° 15,8' 02° 38,1' N	271° 21,2' 02° 14,9' N
07	285° 33,5' 05° 40,0' N	285° 38,7' 05° 17,4' N	285° 44,0' 04° 54,8' N	285° 49,3' 04° 32,0' N	285° 54,6' 04° 09,2' N	285° 59,9' 03° 46,2' N	286° 05,3' 03° 23,3' N	286° 10,6' 03° 00,2' N	286° 16,0' 02° 37,1' N	286° 21,4' 02° 14,0' N
08	300° 33,7' 05° 39,1' N	300° 39,0' 05° 16,5' N	300° 44,2' 04° 53,8' N	300° 49,5' 04° 31,0' N	300° 54,8' 04° 08,2' N	301° 00,1' 03° 45,3' N	301° 05,5' 03° 22,3' N	301° 10,9' 02° 59,3' N	301° 16,2' 02° 36,2' N	301° 21,6' 02° 13,0' N
09	315° 34,0' 05° 38,1' N	315° 39,2' 05° 15,6' N	315° 44,4' 04° 52,9' N	315° 49,7' 04° 30,1' N	315° 55,0' 04° 07,3' N	316° 00,4' 03° 44,3' N	316° 05,7' 03° 21,3' N	316° 11,1' 02° 58,3' N	316° 16,5' 02° 35,2' N	316° 21,8' 02° 12,0' N
10	330° 34,2' 05° 37,2' N	330° 39,4' 05° 14,6' N	330° 44,7' 04° 51,9' N	330° 49,9' 04° 29,1' N	330° 55,3' 04° 06,3' N	331° 00,6' 03° 43,4' N	331° 05,9' 03° 20,4' N	331° 11,3' 02° 57,3' N	331° 16,7' 02° 34,2' N	331° 22,1' 02° 11,1' N
11	345° 34,4' 05° 36,3' N	345° 39,6' 05° 13,7' N	345° 44,9' 04° 51,0' N	345° 50,2' 04° 28,2' N	345° 55,5' 04° 05,3' N	346° 00,8' 03° 42,4' N	346° 06,2' 03° 19,4' N	346° 11,5' 02° 56,4' N	346° 16,9' 02° 33,3' N	346° 22,3' 02° 10,1' N
12	000° 34,6' 05° 35,3' N	000° 39,8' 05° 12,7' N	000° 45,1' 04° 50,0' N	000° 50,4' 04° 27,2' N	000° 55,7' 04° 04,4' N	001° 01,0' 03° 41,5' N	001° 06,4' 03° 18,5' N	001° 11,8' 02° 55,4' N	001° 17,1' 02° 32,3' N	001° 22,5' 02° 09,1' N
13	015° 34,8' 05° 34,4' N	015° 40,0' 05° 11,8' N	015° 45,3' 04° 49,1' N	015° 50,6' 04° 26,3' N	015° 55,9' 04° 03,4' N	016° 01,3' 03° 40,5' N	016° 06,6' 03° 17,5' N	016° 12,0' 02° 54,5' N	016° 17,4' 02° 31,3' N	016° 22,7' 02° 08,2' N
14	030° 35,0' 05° 33,4' N	030° 40,3' 05° 10,8' N	030° 45,5' 04° 48,1' N	030° 50,8' 04° 25,3' N	030° 56,1' 04° 02,5' N	031° 01,5' 03° 39,6' N	031° 06,8' 03° 16,6' N	031° 12,2' 02° 53,5' N	031° 17,6' 02° 30,4' N	031° 22,9' 02° 07,2' N
15	045° 35,3' 05° 32,5' N	045° 40,5' 05° 09,9' N	045° 45,7' 04° 47,2' N	045° 51,0' 04° 24,4' N	045° 56,4' 04° 01,5' N	046° 01,7' 03° 38,6' N	046° 07,1' 03° 15,6' N	046° 12,4' 02° 52,5' N	046° 17,8' 02° 29,4' N	046° 23,2' 02° 06,2' N
16	060° 35,5' 05° 31,6' N	060° 40,7' 05° 08,9' N	060° 46,0' 04° 46,2' N	060° 51,3' 04° 23,4' N	060° 56,6' 04° 00,6' N	061° 01,9' 03° 37,6' N	061° 07,3' 03° 14,6' N	061° 12,7' 02° 51,6' N	061° 18,0' 02° 28,4' N	061° 23,4' 02° 05,3' N
17	075° 35,7' 05° 30,6' N	075° 40,9' 05° 08,0' N	075° 46,2' 04° 45,3' N	075° 51,5' 04° 22,5' N	075° 56,8' 03° 59,6' N	076° 02,2' 03° 36,7' N	076° 07,5' 03° 13,7' N	076° 12,9' 02° 50,6' N	076° 18,2' 02° 27,5' N	076° 23,6' 02° 04,3' N
18	090° 35,9' 05° 29,7' N	090° 41,1' 05° 07,1' N	090° 46,4' 04° 44,3' N	090° 51,7' 04° 21,5' N	090° 57,0' 03° 58,7' N	091° 02,4' 03° 35,7' N	091° 07,7' 03° 12,7' N	091° 13,1' 02° 49,6' N	091° 18,5' 02° 26,5' N	091° 23,8' 02° 03,3' N
19	105° 36,1' 05° 28,7' N	105° 41,4' 05° 06,1' N	105° 46,6' 04° 43,4' N	105° 51,9' 04° 20,6' N	105° 57,3' 03° 57,7' N	106° 02,6' 03° 34,8' N	106° 08,0' 03° 11,8' N	106° 13,3' 02° 48,7' N	106° 18,7' 02° 25,5' N	106° 24,1' 02° 02,4' N
20	120° 36,3' 05° 27,8' N	120° 41,6' 05° 05,2' N	120° 46,9' 04° 42,4' N	120° 52,2' 04° 19,6' N	120° 57,5' 03° 56,8' N	121° 02,8' 03° 33,8' N	121° 08,2' 03° 10,8' N	121° 13,5' 02° 47,7' N	121° 18,9' 02° 24,6' N	121° 24,3' 02° 01,4' N
21	135° 36,6' 05° 26,9' N	135° 41,8' 05° 04,2' N	135° 47,1' 04° 41,5' N	135° 52,4' 04° 18,7' N	135° 57,7' 03° 55,8' N	136° 03,0' 03° 32,8' N	136° 08,4' 03° 09,8' N	136° 13,8' 02° 46,8' N	136° 19,1' 02° 23,6' N	136° 24,5' 02° 00,4' N
22	150° 36,8' 05° 25,9' N	150° 42,0' 05° 03,3' N	150° 47,3' 04° 40,5' N	150° 52,6' 04° 17,7' N	150° 57,9' 03° 54,8' N	151° 03,3' 03° 31,9' N	151° 08,6' 03° 08,9' N	151° 14,0' 02° 45,8' N	151° 19,4' 02° 22,7' N	151° 24,7' 01° 59,5' N
23	165° 37,0' 05° 25,0' N	165° 42,2' 05° 02,3' N	165° 47,5' 04° 39,6' N	165° 52,8' 04° 16,8' N	165° 58,1' 03° 53,9' N	166° 03,5' 03° 30,9' N	166° 08,9' 03° 07,9' N	166° 14,2' 02° 44,8' N	166° 19,6' 02° 21,7' N	166° 25,0' 01° 58,5' N

Solar Almanac 2022 — Sun GHA & Decl (UT) — 18 Sep to 07 Oct

UT	18 Sep	19 Sep	20 Sep	21 Sep	22 Sep	23 Sep	24 Sep	25 Sep	26 Sep	27 Sep
00	181° 25,2' 01° 57,5' N	181° 30,5' 01° 34,3' N	181° 35,9' 01° 11,0' N	181° 41,2' 00° 47,7' N	181° 46,5' 00° 24,4' N	181° 51,8' 00° 01,0' N	181° 57,0' 00° 22,3' S	182° 02,2' 00° 45,7' S	182° 07,4' 01° 09,1' S	182° 12,5' 01° 32,4' S
01	196° 25,4' 01° 56,6' N	196° 30,8' 01° 33,3' N	196° 36,1' 01° 10,1' N	196° 41,4' 00° 46,8' N	196° 46,7' 00° 23,4' N	196° 52,0' 00° 00,1' N	196° 57,3' 00° 23,3' S	197° 02,5' 00° 46,7' S	197° 07,6' 01° 10,0' S	197° 12,7' 01° 33,4' S
02	211° 25,6' 01° 55,6' N	211° 31,0' 01° 32,4' N	211° 36,3' 01° 09,1' N	211° 41,7' 00° 45,8' N	211° 47,0' 00° 22,4' N	211° 52,2' 00° 00,9' S	211° 57,5' 00° 24,3' S	212° 02,7' 00° 47,6' S	212° 07,8' 01° 11,0' S	212° 13,0' 01° 34,4' S
03	226° 25,8' 01° 54,6' N	226° 31,2' 01° 31,4' N	226° 36,5' 01° 08,1' N	226° 41,9' 00° 44,8' N	226° 47,2' 00° 21,5' N	226° 52,4' 00° 01,9' S	226° 57,7' 00° 25,2' S	227° 02,9' 00° 48,6' S	227° 08,1' 01° 12,0' S	227° 13,2' 01° 35,4' S
04	241° 26,1' 01° 53,7' N	241° 31,4' 01° 30,4' N	241° 36,8' 01° 07,1' N	241° 42,1' 00° 43,8' N	241° 47,4' 00° 20,5' N	241° 52,7' 00° 02,8' S	241° 57,9' 00° 26,2' S	242° 03,1' 00° 49,6' S	242° 08,3' 01° 13,0' S	242° 13,4' 01° 36,3' S
05	256° 26,3' 01° 52,7' N	256° 31,7' 01° 29,5' N	256° 37,0' 01° 06,2' N	256° 42,3' 00° 42,9' N	256° 47,6' 00° 19,5' N	256° 52,9' 00° 03,8' S	256° 58,1' 00° 27,2' S	257° 03,3' 00° 50,6' S	257° 08,5' 01° 13,9' S	257° 13,6' 01° 37,3' S
06	271° 26,5' 01° 51,7' N	271° 31,9' 01° 28,5' N	271° 37,2' 01° 05,2' N	271° 42,5' 00° 41,9' N	271° 47,8' 00° 18,6' N	271° 53,1' 00° 04,8' S	271° 58,3' 00° 28,2' S	272° 03,5' 00° 51,5' S	272° 08,7' 01° 14,9' S	272° 13,8' 01° 38,3' S
07	286° 26,7' 01° 50,8' N	286° 32,1' 01° 27,5' N	286° 37,4' 01° 04,2' N	286° 42,8' 00° 40,9' N	286° 48,1' 00° 17,6' N	286° 53,3' 00° 05,8' S	286° 58,6' 00° 29,1' S	287° 03,8' 00° 52,5' S	287° 08,9' 01° 15,9' S	287° 14,0' 01° 39,3' S
08	301° 27,0' 01° 49,8' N	301° 32,3' 01° 26,5' N	301° 37,7' 01° 03,3' N	301° 43,0' 00° 40,0' N	301° 48,3' 00° 16,6' N	301° 53,5' 00° 06,7' S	301° 58,8' 00° 30,1' S	302° 04,0' 00° 53,5' S	302° 09,1' 01° 16,9' S	302° 14,2' 01° 40,2' S
09	316° 27,2' 01° 48,8' N	316° 32,5' 01° 25,6' N	316° 37,9' 01° 02,3' N	316° 43,2' 00° 39,0' N	316° 48,5' 00° 15,6' N	316° 53,8' 00° 07,7' S	316° 59,0' 00° 31,1' S	317° 04,2' 00° 54,5' S	317° 09,3' 01° 17,8' S	317° 14,4' 01° 41,2' S
10	331° 27,4' 01° 47,9' N	331° 32,8' 01° 24,6' N	331° 38,1' 01° 01,3' N	331° 43,4' 00° 38,0' N	331° 48,7' 00° 14,7' N	331° 54,0' 00° 08,7' S	331° 59,2' 00° 32,1' S	332° 04,4' 00° 55,4' S	332° 09,5' 01° 18,8' S	332° 14,7' 01° 42,2' S
11	346° 27,6' 01° 46,9' N	346° 33,0' 01° 23,6' N	346° 38,3' 01° 00,4' N	346° 43,6' 00° 37,0' N	346° 48,9' 00° 13,7' N	346° 54,2' 00° 09,7' S	346° 59,4' 00° 33,0' S	347° 04,6' 00° 56,4' S	347° 09,8' 01° 19,8' S	347° 14,9' 01° 43,1' S
12	001° 27,9' 01° 45,9' N	001° 33,2' 01° 22,7' N	001° 38,5' 00° 59,4' N	001° 43,9' 00° 36,1' N	001° 49,2' 00° 12,7' N	001° 54,4' 00° 10,6' S	001° 59,6' 00° 34,0' S	002° 04,8' 00° 57,4' S	002° 10,0' 01° 20,8' S	002° 15,1' 01° 44,1' S
13	016° 28,1' 01° 45,0' N	016° 33,4' 01° 21,7' N	016° 38,8' 00° 58,4' N	016° 44,1' 00° 35,1' N	016° 49,4' 00° 11,7' N	016° 54,6' 00° 11,6' S	016° 59,9' 00° 35,0' S	017° 05,0' 00° 58,4' S	017° 10,2' 01° 21,7' S	017° 15,3' 01° 45,1' S
14	031° 28,3' 01° 44,0' N	031° 33,7' 01° 20,7' N	031° 39,0' 00° 57,4' N	031° 44,3' 00° 34,1' N	031° 49,6' 00° 10,8' N	031° 54,9' 00° 12,6' S	032° 00,1' 00° 36,0' S	032° 05,3' 00° 59,3' S	032° 10,4' 01° 22,7' S	032° 15,5' 01° 46,1' S
15	046° 28,5' 01° 43,0' N	046° 33,9' 01° 19,8' N	046° 39,2' 00° 56,5' N	046° 44,5' 00° 33,1' N	046° 49,8' 00° 09,8' N	046° 55,1' 00° 13,6' S	047° 00,3' 00° 36,9' S	047° 05,5' 01° 00,3' S	047° 10,6' 01° 23,7' S	047° 15,7' 01° 47,0' S
16	061° 28,8' 01° 42,0' N	061° 34,1' 01° 18,8' N	061° 39,4' 00° 55,5' N	061° 44,7' 00° 32,2' N	061° 50,0' 00° 08,8' N	061° 55,3' 00° 14,5' S	062° 00,5' 00° 37,9' S	062° 05,7' 01° 01,3' S	062° 10,8' 01° 24,6' S	062° 15,9' 01° 48,0' S
17	076° 29,0' 01° 41,1' N	076° 34,3' 01° 17,8' N	076° 39,7' 00° 54,5' N	076° 45,0' 00° 31,2' N	076° 50,3' 00° 07,9' N	076° 55,5' 00° 15,5' S	077° 00,7' 00° 38,9' S	077° 05,9' 01° 02,2' S	077° 11,0' 01° 25,6' S	077° 16,1' 01° 49,0' S
18	091° 29,2' 01° 40,1' N	091° 34,5' 01° 16,8' N	091° 39,9' 00° 53,6' N	091° 45,2' 00° 30,2' N	091° 50,5' 00° 06,9' N	091° 55,7' 00° 16,5' S	092° 00,9' 00° 39,8' S	092° 06,1' 01° 03,2' S	092° 11,3' 01° 26,6' S	092° 16,3' 01° 50,0' S
19	106° 29,4' 01° 39,1' N	106° 34,8' 01° 15,9' N	106° 40,1' 00° 52,6' N	106° 45,4' 00° 29,3' N	106° 50,7' 00° 05,9' N	106° 55,9' 00° 17,5' S	107° 01,2' 00° 40,8' S	107° 06,3' 01° 04,2' S	107° 11,5' 01° 27,6' S	107° 16,6' 01° 50,9' S
20	121° 29,6' 01° 38,2' N	121° 35,0' 01° 14,9' N	121° 40,3' 00° 51,6' N	121° 45,6' 00° 28,3' N	121° 50,9' 00° 04,9' N	121° 56,2' 00° 18,4' S	122° 01,4' 00° 41,8' S	122° 06,6' 01° 05,2' S	122° 11,7' 01° 28,5' S	122° 16,8' 01° 51,9' S
21	136° 29,9' 01° 37,2' N	136° 35,2' 01° 13,9' N	136° 40,5' 00° 50,6' N	136° 45,9' 00° 27,3' N	136° 51,1' 00° 04,0' N	136° 56,4' 00° 19,4' S	137° 01,6' 00° 42,8' S	137° 06,8' 01° 06,1' S	137° 11,9' 01° 29,5' S	137° 17,0' 01° 52,9' S
22	151° 30,1' 01° 36,2' N	151° 35,4' 01° 13,0' N	151° 40,8' 00° 49,7' N	151° 46,1' 00° 26,3' N	151° 51,3' 00° 03,0' N	151° 56,6' 00° 20,4' S	152° 01,8' 00° 43,7' S	152° 07,0' 01° 07,1' S	152° 12,1' 01° 30,5' S	152° 17,2' 01° 53,9' S
23	166° 30,3' 01° 35,3' N	166° 35,7' 01° 12,0' N	166° 41,0' 00° 48,7' N	166° 46,3' 00° 25,4' N	166° 51,6' 00° 02,0' N	166° 56,8' 00° 21,3' S	167° 02,0' 00° 44,7' S	167° 07,2' 01° 08,1' S	167° 12,3' 01° 31,5' S	167° 17,4' 01° 54,8' S

UT	28 Sep	29 Sep	30 Sep	01 Oct	02 Oct	03 Oct	04 Oct	05 Oct	06 Oct	07 Oct
00	182° 17,6' 01° 55,8' S	182° 22,6' 02° 19,1' S	182° 27,6' 02° 42,5' S	182° 32,5' 03° 05,8' S	182° 37,3' 03° 29,0' S	182° 42,1' 03° 52,2' S	182° 46,8' 04° 15,4' S	182° 51,4' 04° 38,5' S	182° 55,9' 05° 01,6' S	183° 00,3' 05° 24,6' S
01	197° 17,8' 01° 56,8' S	197° 22,8' 02° 20,1' S	197° 27,8' 02° 43,4' S	197° 32,7' 03° 06,7' S	197° 37,5' 03° 30,0' S	197° 42,3' 03° 53,2' S	197° 47,0' 04° 16,4' S	197° 51,6' 04° 39,5' S	197° 56,1' 05° 02,6' S	198° 00,5' 05° 25,5' S
02	212° 18,0' 01° 57,7' S	212° 23,0' 02° 21,1' S	212° 28,0' 02° 44,4' S	212° 32,9' 03° 07,7' S	212° 37,7' 03° 31,0' S	212° 42,5' 03° 54,2' S	212° 47,2' 04° 17,3' S	212° 51,8' 04° 40,5' S	212° 56,3' 05° 03,5' S	213° 00,7' 05° 26,5' S
03	227° 18,2' 01° 58,7' S	227° 23,2' 02° 22,1' S	227° 28,2' 02° 45,4' S	227° 33,1' 03° 08,7' S	227° 37,9' 03° 31,9' S	227° 42,7' 03° 55,1' S	227° 47,3' 04° 18,3' S	227° 51,9' 04° 41,4' S	227° 56,4' 05° 04,5' S	228° 00,9' 05° 27,5' S
04	242° 18,4' 01° 59,7' S	242° 23,5' 02° 23,0' S	242° 28,4' 02° 46,4' S	242° 33,3' 03° 09,6' S	242° 38,1' 03° 32,9' S	242° 42,9' 03° 56,1' S	242° 47,5' 04° 19,3' S	242° 52,1' 04° 42,4' S	242° 56,6' 05° 05,4' S	243° 01,0' 05° 28,4' S
05	257° 18,7' 02° 00,7' S	257° 23,7' 02° 24,0' S	257° 28,6' 02° 47,3' S	257° 33,5' 03° 10,6' S	257° 38,3' 03° 33,9' S	257° 43,1' 03° 57,1' S	257° 47,7' 04° 20,2' S	257° 52,3' 04° 43,3' S	257° 56,8' 05° 06,4' S	258° 01,2' 05° 29,4' S
06	272° 18,9' 02° 01,6' S	272° 23,9' 02° 25,0' S	272° 28,8' 02° 48,3' S	272° 33,7' 03° 11,6' S	272° 38,5' 03° 34,8' S	272° 43,3' 03° 58,0' S	272° 47,9' 04° 21,2' S	272° 52,5' 04° 44,3' S	272° 57,0' 05° 07,4' S	273° 01,4' 05° 30,3' S
07	287° 19,1' 02° 02,6' S	287° 24,1' 02° 26,0' S	287° 29,0' 02° 49,3' S	287° 33,9' 03° 12,6' S	287° 38,7' 03° 35,8' S	287° 43,5' 03° 59,0' S	287° 48,1' 04° 22,2' S	287° 52,7' 04° 45,3' S	287° 57,2' 05° 08,3' S	288° 01,6' 05° 31,3' S
08	302° 19,3' 02° 03,6' S	302° 24,3' 02° 26,9' S	302° 29,2' 02° 50,2' S	302° 34,1' 03° 13,5' S	302° 38,9' 03° 36,8' S	302° 43,7' 04° 00,0' S	302° 48,3' 04° 23,1' S	302° 52,9' 04° 46,2' S	302° 57,4' 05° 09,3' S	303° 01,8' 05° 32,2' S
09	317° 19,5' 02° 04,6' S	317° 24,5' 02° 27,9' S	317° 29,4' 02° 51,2' S	317° 34,3' 03° 14,5' S	317° 39,1' 03° 37,7' S	317° 43,8' 04° 00,9' S	317° 48,5' 04° 24,1' S	317° 53,1' 04° 47,2' S	317° 57,6' 05° 10,2' S	318° 02,0' 05° 33,2' S
10	332° 19,7' 02° 05,5' S	332° 24,7' 02° 28,9' S	332° 29,6' 02° 52,2' S	332° 34,5' 03° 15,5' S	332° 39,3' 03° 38,7' S	332° 44,0' 04° 01,9' S	332° 48,7' 04° 25,1' S	332° 53,3' 04° 48,2' S	332° 57,7' 05° 11,2' S	333° 02,1' 05° 34,2' S
11	347° 19,9' 02° 06,5' S	347° 24,9' 02° 29,8' S	347° 29,8' 02° 53,1' S	347° 34,7' 03° 16,4' S	347° 39,5' 03° 39,7' S	347° 44,2' 04° 02,9' S	347° 48,9' 04° 26,0' S	347° 53,5' 04° 49,1' S	347° 57,9' 05° 12,1' S	348° 02,3' 05° 35,1' S
12	002° 20,1' 02° 07,5' S	002° 25,1' 02° 30,8' S	002° 30,0' 02° 54,1' S	002° 34,9' 03° 17,4' S	002° 39,7' 03° 40,6' S	002° 44,4' 04° 03,8' S	002° 49,1' 04° 27,0' S	002° 53,6' 04° 50,1' S	002° 58,1' 05° 13,1' S	003° 02,5' 05° 36,1' S
13	017° 20,3' 02° 08,4' S	017° 25,3' 02° 31,8' S	017° 30,2' 02° 55,1' S	017° 35,1' 03° 18,4' S	017° 39,9' 03° 41,6' S	017° 44,6' 04° 04,8' S	017° 49,3' 04° 27,9' S	017° 53,8' 04° 51,0' S	017° 58,3' 05° 14,1' S	018° 02,7' 05° 37,0' S
14	032° 20,5' 02° 09,4' S	032° 25,5' 02° 32,8' S	032° 30,5' 02° 56,1' S	032° 35,3' 03° 19,3' S	032° 40,1' 03° 42,6' S	032° 44,8' 04° 05,8' S	032° 49,5' 04° 28,9' S	032° 54,0' 04° 52,0' S	032° 58,5' 05° 15,0' S	033° 02,9' 05° 38,0' S
15	047° 20,7' 02° 10,4' S	047° 25,7' 02° 33,7' S	047° 30,7' 02° 57,0' S	047° 35,5' 03° 20,3' S	047° 40,3' 03° 43,5' S	047° 45,0' 04° 06,7' S	047° 49,7' 04° 29,9' S	047° 54,2' 04° 53,0' S	047° 58,7' 05° 16,0' S	048° 03,0' 05° 38,9' S
16	062° 21,0' 02° 11,4' S	062° 25,9' 02° 34,7' S	062° 30,9' 02° 58,0' S	062° 35,7' 03° 21,3' S	062° 40,5' 03° 44,5' S	062° 45,2' 04° 07,7' S	062° 49,8' 04° 30,8' S	062° 54,4' 04° 53,9' S	062° 58,9' 05° 16,9' S	063° 03,2' 05° 39,9' S
17	077° 21,2' 02° 12,3' S	077° 26,1' 02° 35,7' S	077° 31,1' 02° 59,0' S	077° 35,9' 03° 22,2' S	077° 40,7' 03° 45,5' S	077° 45,4' 04° 08,7' S	077° 50,0' 04° 31,8' S	077° 54,6' 04° 54,9' S	077° 59,0' 05° 17,9' S	078° 03,4' 05° 40,8' S
18	092° 21,4' 02° 13,3' S	092° 26,4' 02° 36,6' S	092° 31,3' 02° 59,9' S	092° 36,1' 03° 23,2' S	092° 40,9' 03° 46,4' S	092° 45,6' 04° 09,6' S	092° 50,2' 04° 32,8' S	092° 54,8' 04° 55,8' S	092° 59,2' 05° 18,8' S	093° 03,6' 05° 41,8' S
19	107° 21,6' 02° 14,3' S	107° 26,6' 02° 37,6' S	107° 31,5' 03° 00,9' S	107° 36,3' 03° 24,2' S	107° 41,1' 03° 47,4' S	107° 45,8' 04° 10,6' S	107° 50,4' 04° 33,7' S	107° 55,0' 04° 56,8' S	107° 59,4' 05° 19,8' S	108° 03,8' 05° 42,7' S
20	122° 21,8' 02° 15,3' S	122° 26,8' 02° 38,6' S	122° 31,7' 03° 01,9' S	122° 36,5' 03° 25,2' S	122° 41,3' 03° 48,4' S	122° 46,0' 04° 11,6' S	122° 50,6' 04° 34,7' S	122° 55,1' 04° 57,8' S	122° 59,6' 05° 20,8' S	123° 03,9' 05° 43,7' S
21	137° 22,0' 02° 16,2' S	137° 27,0' 02° 39,6' S	137° 31,9' 03° 02,9' S	137° 36,7' 03° 26,1' S	137° 41,5' 03° 49,3' S	137° 46,2' 04° 12,5' S	137° 50,8' 04° 35,6' S	137° 55,3' 04° 58,7' S	137° 59,8' 05° 21,7' S	138° 04,1' 05° 44,7' S
22	152° 22,2' 02° 17,2' S	152° 27,2' 02° 40,5' S	152° 32,1' 03° 03,8' S	152° 36,9' 03° 27,1' S	152° 41,7' 03° 50,3' S	152° 46,4' 04° 13,5' S	152° 51,0' 04° 36,6' S	152° 55,5' 04° 59,7' S	153° 00,0' 05° 22,7' S	153° 04,3' 05° 45,6' S
23	167° 22,4' 02° 18,2' S	167° 27,4' 02° 41,5' S	167° 32,3' 03° 04,8' S	167° 37,1' 03° 28,1' S	167° 41,9' 03° 51,3' S	167° 46,6' 04° 14,5' S	167° 51,2' 04° 37,6' S	167° 55,7' 05° 00,6' S	168° 00,1' 05° 23,6' S	168° 04,5' 05° 46,6' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 08 Oct to 27 Oct

UT	08 Oct	09 Oct	10 Oct	11 Oct	12 Oct	13 Oct	14 Oct	15 Oct	16 Oct	17 Oct
00	183° 04,6' 05° 47,5' S	183° 08,9' 06° 10,4' S	183° 13,0' 06° 33,1' S	183° 17,0' 06° 55,8' S	183° 20,9' 07° 18,4' S	183° 24,6' 07° 40,9' S	183° 28,2' 08° 03,3' S	183° 31,7' 08° 25,5' S	183° 35,1' 08° 47,7' S	183° 38,2' 09° 09,7' S
01	198° 04,8' 05° 48,5' S	198° 09,0' 06° 11,3' S	198° 13,2' 06° 34,1' S	198° 17,1' 06° 56,7' S	198° 21,0' 07° 19,3' S	198° 24,8' 07° 41,8' S	198° 28,4' 08° 04,2' S	198° 31,9' 08° 26,5' S	198° 35,2' 08° 48,6' S	198° 38,4' 09° 10,6' S
02	213° 05,0' 05° 49,4' S	213° 09,2' 06° 12,3' S	213° 13,3' 06° 35,0' S	213° 17,3' 06° 57,7' S	213° 21,2' 07° 20,3' S	213° 24,9' 07° 42,7' S	213° 28,5' 08° 05,1' S	213° 32,0' 08° 27,4' S	213° 35,3' 08° 49,5' S	213° 38,5' 09° 11,6' S
03	228° 05,2' 05° 50,4' S	228° 09,4' 06° 13,2' S	228° 13,5' 06° 36,0' S	228° 17,5' 06° 58,6' S	228° 21,3' 07° 21,2' S	228° 25,1' 07° 43,7' S	228° 28,7' 08° 06,1' S	228° 32,1' 08° 28,3' S	228° 35,5' 08° 50,5' S	228° 38,6' 09° 12,5' S
04	243° 05,4' 05° 51,3' S	243° 09,6' 06° 14,2' S	243° 13,7' 06° 36,9' S	243° 17,6' 06° 59,6' S	243° 21,5' 07° 22,1' S	243° 25,2' 07° 44,6' S	243° 28,8' 08° 07,0' S	243° 32,3' 08° 29,2' S	243° 35,6' 08° 51,4' S	243° 38,8' 09° 13,4' S
05	258° 05,5' 05° 52,3' S	258° 09,7' 06° 15,1' S	258° 13,8' 06° 37,9' S	258° 17,8' 07° 00,5' S	258° 21,7' 07° 23,1' S	258° 25,4' 07° 45,6' S	258° 29,0' 08° 07,9' S	258° 32,4' 08° 30,2' S	258° 35,7' 08° 52,3' S	258° 38,9' 09° 14,3' S
06	273° 05,7' 05° 53,2' S	273° 09,9' 06° 16,1' S	273° 14,0' 06° 38,8' S	273° 18,0' 07° 01,5' S	273° 21,8' 07° 24,0' S	273° 25,5' 07° 46,5' S	273° 29,1' 08° 08,8' S	273° 32,6' 08° 31,1' S	273° 35,9' 08° 53,2' S	273° 39,0' 09° 15,2' S
07	288° 05,9' 05° 54,2' S	288° 10,1' 06° 17,0' S	288° 14,2' 06° 39,8' S	288° 18,1' 07° 02,4' S	288° 22,0' 07° 25,0' S	288° 25,7' 07° 47,4' S	288° 29,3' 08° 09,8' S	288° 32,7' 08° 32,0' S	288° 36,0' 08° 54,1' S	288° 39,2' 09° 16,1' S
08	303° 06,1' 05° 55,1' S	303° 10,3' 06° 18,0' S	303° 14,3' 06° 40,7' S	303° 18,3' 07° 03,3' S	303° 22,1' 07° 25,9' S	303° 25,8' 07° 48,4' S	303° 29,4' 08° 10,7' S	303° 32,8' 08° 32,9' S	303° 36,1' 08° 55,1' S	303° 39,3' 09° 17,0' S
09	318° 06,2' 05° 56,1' S	318° 10,4' 06° 18,9' S	318° 14,5' 06° 41,6' S	318° 18,5' 07° 04,3' S	318° 22,3' 07° 26,8' S	318° 26,0' 07° 49,3' S	318° 29,6' 08° 11,6' S	318° 33,0' 08° 33,9' S	318° 36,3' 08° 56,0' S	318° 39,4' 09° 18,0' S
10	333° 06,4' 05° 57,0' S	333° 10,6' 06° 19,9' S	333° 14,7' 06° 42,6' S	333° 18,6' 07° 05,2' S	333° 22,4' 07° 27,8' S	333° 26,1' 07° 50,2' S	333° 29,7' 08° 12,6' S	333° 33,1' 08° 34,8' S	333° 36,4' 08° 56,9' S	333° 39,5' 09° 18,9' S
11	348° 06,6' 05° 58,0' S	348° 10,8' 06° 20,8' S	348° 14,8' 06° 43,5' S	348° 18,8' 07° 06,2' S	348° 22,6' 07° 28,7' S	348° 26,3' 07° 51,2' S	348° 29,8' 08° 13,5' S	348° 33,3' 08° 35,7' S	348° 36,5' 08° 57,8' S	348° 39,7' 09° 19,8' S
12	003° 06,8' 05° 58,9' S	003° 10,9' 06° 21,8' S	003° 15,0' 06° 44,5' S	003° 18,9' 07° 07,1' S	003° 22,8' 07° 29,6' S	003° 26,4' 07° 52,1' S	003° 30,0' 08° 14,4' S	003° 33,4' 08° 36,6' S	003° 36,7' 08° 58,7' S	003° 39,8' 09° 20,7' S
13	018° 06,9' 05° 59,9' S	018° 11,1' 06° 22,7' S	018° 15,2' 06° 45,4' S	018° 19,1' 07° 08,1' S	018° 22,9' 07° 30,6' S	018° 26,6' 07° 53,0' S	018° 30,1' 08° 15,3' S	018° 33,5' 08° 37,6' S	018° 36,8' 08° 59,6' S	018° 39,9' 09° 21,6' S
14	033° 07,1' 06° 00,9' S	033° 11,3' 06° 23,7' S	033° 15,3' 06° 46,4' S	033° 19,3' 07° 09,0' S	033° 23,1' 07° 31,5' S	033° 26,7' 07° 54,0' S	033° 30,3' 08° 16,3' S	033° 33,7' 08° 38,5' S	033° 36,9' 09° 00,6' S	033° 40,0' 09° 22,5' S
15	048° 07,3' 06° 01,8' S	048° 11,5' 06° 24,6' S	048° 15,5' 06° 47,3' S	048° 19,4' 07° 09,9' S	048° 23,2' 07° 32,5' S	048° 26,9' 07° 54,9' S	048° 30,4' 08° 17,2' S	048° 33,8' 08° 39,4' S	048° 37,1' 09° 01,5' S	048° 40,2' 09° 23,4' S
16	063° 07,5' 06° 02,8' S	063° 11,6' 06° 25,5' S	063° 15,7' 06° 48,3' S	063° 19,6' 07° 10,9' S	063° 23,4' 07° 33,4' S	063° 27,0' 07° 55,8' S	063° 30,6' 08° 18,1' S	063° 34,0' 08° 40,3' S	063° 37,2' 09° 02,4' S	063° 40,3' 09° 24,3' S
17	078° 07,6' 06° 03,7' S	078° 11,8' 06° 26,5' S	078° 15,8' 06° 49,2' S	078° 19,7' 07° 11,8' S	078° 23,5' 07° 34,3' S	078° 27,2' 07° 56,7' S	078° 30,7' 08° 19,1' S	078° 34,1' 08° 41,2' S	078° 37,3' 09° 03,3' S	078° 40,4' 09° 25,3' S
18	093° 07,8' 06° 04,7' S	093° 12,0' 06° 27,4' S	093° 16,0' 06° 50,1' S	093° 19,9' 07° 12,8' S	093° 23,7' 07° 35,3' S	093° 27,3' 07° 57,7' S	093° 30,9' 08° 20,0' S	093° 34,2' 08° 42,2' S	093° 37,5' 09° 04,2' S	093° 40,5' 09° 26,2' S
19	108° 08,0' 06° 05,6' S	108° 12,1' 06° 28,4' S	108° 16,2' 06° 51,1' S	108° 20,1' 07° 13,7' S	108° 23,8' 07° 36,2' S	108° 27,5' 07° 58,6' S	108° 31,0' 08° 20,9' S	108° 34,4' 08° 43,1' S	108° 37,6' 09° 05,1' S	108° 40,7' 09° 27,1' S
20	123° 08,2' 06° 06,6' S	123° 12,3' 06° 29,3' S	123° 16,3' 06° 52,0' S	123° 20,2' 07° 14,6' S	123° 24,0' 07° 37,1' S	123° 27,6' 07° 59,5' S	123° 31,1' 08° 21,8' S	123° 34,5' 08° 44,0' S	123° 37,7' 09° 06,1' S	123° 40,8' 09° 28,0' S
21	138° 08,3' 06° 07,5' S	138° 12,5' 06° 30,3' S	138° 16,5' 06° 53,0' S	138° 20,4' 07° 15,6' S	138° 24,1' 07° 38,1' S	138° 27,8' 08° 00,5' S	138° 31,3' 08° 22,8' S	138° 34,6' 08° 44,9' S	138° 37,9' 09° 07,0' S	138° 40,9' 09° 28,9' S
22	153° 08,5' 06° 08,5' S	153° 12,6' 06° 31,2' S	153° 16,7' 06° 53,9' S	153° 20,5' 07° 16,5' S	153° 24,3' 07° 39,0' S	153° 27,9' 08° 01,4' S	153° 31,4' 08° 23,7' S	153° 34,8' 08° 45,9' S	153° 38,0' 09° 07,9' S	153° 41,0' 09° 29,8' S
23	168° 08,7' 06° 09,4' S	168° 12,8' 06° 32,2' S	168° 16,8' 06° 54,9' S	168° 20,7' 07° 17,5' S	168° 24,5' 07° 39,9' S	168° 28,1' 08° 02,3' S	168° 31,6' 08° 24,6' S	168° 34,9' 08° 46,8' S	168° 38,1' 09° 08,8' S	168° 41,2' 09° 30,7' S

UT	18 Oct	19 Oct	20 Oct	21 Oct	22 Oct	23 Oct	24 Oct	25 Oct	26 Oct	27 Oct
00	183° 41,3' 09° 31,6' S	183° 44,2' 09° 53,4' S	183° 46,9' 10° 15,0' S	183° 49,5' 10° 36,5' S	183° 51,9' 10° 57,8' S	183° 54,1' 11° 19,0' S	183° 56,1' 11° 40,0' S	183° 58,0' 12° 00,8' S	183° 59,7' 12° 21,4' S	184° 01,2' 12° 41,9' S
01	198° 41,4' 09° 32,5' S	198° 44,3' 09° 54,3' S	198° 47,0' 10° 15,9' S	198° 49,6' 10° 37,4' S	198° 52,0' 10° 58,7' S	198° 54,2' 11° 19,9' S	198° 56,2' 11° 40,9' S	198° 58,1' 12° 01,7' S	198° 59,8' 12° 22,3' S	199° 01,3' 12° 42,7' S
02	213° 41,5' 09° 33,5' S	213° 44,4' 09° 55,2' S	213° 47,1' 10° 16,8' S	213° 49,7' 10° 38,3' S	213° 52,1' 10° 59,6' S	213° 54,3' 11° 20,7' S	213° 56,3' 11° 41,7' S	213° 58,2' 12° 02,5' S	213° 59,8' 12° 23,1' S	214° 01,3' 12° 43,6' S
03	228° 41,7' 09° 34,4' S	228° 44,5' 09° 56,1' S	228° 47,2' 10° 17,7' S	228° 49,8' 10° 39,2' S	228° 52,2' 11° 00,5' S	228° 54,4' 11° 21,6' S	228° 56,4' 11° 42,6' S	228° 58,2' 12° 03,4' S	228° 59,9' 12° 24,0' S	229° 01,4' 12° 44,4' S
04	243° 41,8' 09° 35,3' S	243° 44,6' 09° 57,0' S	243° 47,3' 10° 18,6' S	243° 49,9' 10° 40,1' S	243° 52,2' 11° 01,4' S	243° 54,4' 11° 22,5' S	243° 56,5' 11° 43,5' S	243° 58,3' 12° 04,3' S	244° 00,0' 12° 24,9' S	244° 01,5' 12° 45,3' S
05	258° 41,9' 09° 36,2' S	258° 44,8' 09° 57,9' S	258° 47,5' 10° 19,5' S	258° 50,0' 10° 41,0' S	258° 52,3' 11° 02,3' S	258° 54,5' 11° 23,4' S	258° 56,5' 11° 44,3' S	258° 58,4' 12° 05,1' S	259° 00,0' 12° 25,7' S	259° 01,5' 12° 46,1' S
06	273° 42,0' 09° 37,1' S	273° 44,9' 09° 58,8' S	273° 47,6' 10° 20,4' S	273° 50,1' 10° 41,9' S	273° 52,4' 11° 03,1' S	273° 54,6' 11° 24,3' S	273° 56,6' 11° 45,2' S	273° 58,5' 12° 06,0' S	274° 00,1' 12° 26,6' S	274° 01,6' 12° 47,0' S
07	288° 42,1' 09° 38,0' S	288° 45,0' 09° 59,7' S	288° 47,7' 10° 21,3' S	288° 50,2' 10° 42,7' S	288° 52,5' 11° 04,0' S	288° 54,7' 11° 25,1' S	288° 56,7' 11° 46,1' S	288° 58,5' 12° 06,8' S	289° 00,2' 12° 27,4' S	289° 01,6' 12° 47,8' S
08	303° 42,3' 09° 38,9' S	303° 45,1' 10° 00,6' S	303° 47,8' 10° 22,2' S	303° 50,3' 10° 43,6' S	303° 52,6' 11° 04,9' S	303° 54,8' 11° 26,0' S	303° 56,8' 11° 46,9' S	303° 58,6' 12° 07,7' S	304° 00,2' 12° 28,3' S	304° 01,7' 12° 48,6' S
09	318° 42,4' 09° 39,8' S	318° 45,2' 10° 01,5' S	318° 47,9' 10° 23,1' S	318° 50,4' 10° 44,5' S	318° 52,7' 11° 05,8' S	318° 54,9' 11° 26,9' S	318° 56,9' 11° 47,8' S	318° 58,7' 12° 08,6' S	319° 00,3' 12° 29,1' S	319° 01,8' 12° 49,5' S
10	333° 42,5' 09° 40,7' S	333° 45,3' 10° 02,4' S	333° 48,0' 10° 24,0' S	333° 50,5' 10° 45,4' S	333° 52,8' 11° 06,7' S	333° 55,0' 11° 27,8' S	333° 56,9' 11° 48,7' S	333° 58,7' 12° 09,4' S	334° 00,4' 12° 30,0' S	334° 01,8' 12° 50,3' S
11	348° 42,6' 09° 41,6' S	348° 45,4' 10° 03,3' S	348° 48,1' 10° 24,9' S	348° 50,6' 10° 46,3' S	348° 52,9' 11° 07,6' S	348° 55,1' 11° 28,6' S	348° 57,0' 11° 49,5' S	348° 58,8' 12° 10,3' S	349° 00,4' 12° 30,8' S	349° 01,9' 12° 51,2' S
12	003° 42,8' 09° 42,5' S	003° 45,6' 10° 04,2' S	003° 48,2' 10° 25,8' S	003° 50,7' 10° 47,2' S	003° 53,0' 11° 08,4' S	003° 55,1' 11° 29,5' S	003° 57,1' 11° 50,4' S	003° 58,9' 12° 11,1' S	004° 00,5' 12° 31,7' S	004° 01,9' 12° 52,0' S
13	018° 42,9' 09° 43,4' S	018° 45,7' 10° 05,1' S	018° 48,3' 10° 26,7' S	018° 50,8' 10° 48,1' S	018° 53,1' 11° 09,3' S	018° 55,2' 11° 30,4' S	018° 57,2' 11° 51,3' S	018° 59,0' 12° 12,0' S	019° 00,6' 12° 32,5' S	019° 02,0' 12° 52,9' S
14	033° 43,0' 09° 44,3' S	033° 45,8' 10° 06,0' S	033° 48,4' 10° 27,6' S	033° 50,9' 10° 49,0' S	033° 53,2' 11° 10,2' S	033° 55,3' 11° 31,3' S	033° 57,3' 11° 52,2' S	033° 59,0' 12° 12,9' S	034° 00,6' 12° 33,4' S	034° 02,0' 12° 53,7' S
15	048° 43,1' 09° 45,3' S	048° 45,9' 10° 06,9' S	048° 48,5' 10° 28,5' S	048° 51,0' 10° 49,9' S	048° 53,3' 11° 11,1' S	048° 55,4' 11° 32,1' S	048° 57,3' 11° 53,0' S	048° 59,1' 12° 13,7' S	049° 00,7' 12° 34,2' S	049° 02,1' 12° 54,6' S
16	063° 43,2' 09° 46,2' S	063° 46,0' 10° 07,8' S	063° 48,6' 10° 29,4' S	063° 51,1' 10° 50,7' S	063° 53,4' 11° 12,0' S	063° 55,5' 11° 33,0' S	063° 57,4' 11° 53,9' S	063° 59,2' 12° 14,6' S	064° 00,7' 12° 35,1' S	064° 02,1' 12° 55,4' S
17	078° 43,4' 09° 47,1' S	078° 46,1' 10° 08,7' S	078° 48,7' 10° 30,3' S	078° 51,2' 10° 51,6' S	078° 53,5' 11° 12,8' S	078° 55,6' 11° 33,9' S	078° 57,5' 11° 54,7' S	078° 59,2' 12° 15,4' S	079° 00,8' 12° 35,9' S	079° 02,2' 12° 56,2' S
18	093° 43,5' 09° 48,0' S	093° 46,2' 10° 09,6' S	093° 48,8' 10° 31,2' S	093° 51,3' 10° 52,5' S	093° 53,6' 11° 13,7' S	093° 55,6' 11° 34,8' S	093° 57,6' 11° 55,6' S	093° 59,3' 12° 16,3' S	094° 00,9' 12° 36,8' S	094° 02,2' 12° 57,1' S
19	108° 43,6' 09° 48,9' S	108° 46,3' 10° 10,5' S	108° 48,9' 10° 32,0' S	108° 51,4' 10° 53,4' S	108° 53,6' 11° 14,6' S	108° 55,7' 11° 35,6' S	108° 57,6' 11° 56,5' S	108° 59,4' 12° 17,2' S	109° 00,9' 12° 37,6' S	109° 02,3' 12° 57,9' S
20	123° 43,7' 09° 49,8' S	123° 46,5' 10° 11,4' S	123° 49,1' 10° 32,9' S	123° 51,5' 10° 54,3' S	123° 53,7' 11° 15,5' S	123° 55,8' 11° 36,5' S	123° 57,7' 11° 57,3' S	123° 59,4' 12° 18,0' S	124° 01,0' 12° 38,5' S	124° 02,4' 12° 58,8' S
21	138° 43,8' 09° 50,7' S	138° 46,6' 10° 12,3' S	138° 49,2' 10° 33,8' S	138° 51,6' 10° 55,2' S	138° 53,8' 11° 16,4' S	138° 55,9' 11° 37,4' S	138° 57,8' 11° 58,2' S	138° 59,5' 12° 18,9' S	139° 01,1' 12° 39,3' S	139° 02,4' 12° 59,6' S
22	153° 43,9' 09° 51,6' S	153° 46,7' 10° 13,2' S	153° 49,3' 10° 34,7' S	153° 51,7' 10° 56,1' S	153° 53,9' 11° 17,2' S	153° 56,0' 11° 38,2' S	153° 57,9' 11° 59,1' S	153° 59,6' 12° 19,7' S	154° 01,1' 12° 40,2' S	154° 02,5' 13° 00,4' S
23	168° 44,1' 09° 52,5' S	168° 46,8' 10° 14,1' S	168° 49,4' 10° 35,6' S	168° 51,8' 10° 56,9' S	168° 54,0' 11° 18,1' S	168° 56,1' 11° 39,1' S	168° 57,9' 11° 59,9' S	168° 59,6' 12° 20,6' S	169° 01,2' 12° 41,0' S	169° 02,5' 13° 01,3' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 28 Oct to 16 Nov

UT	28 Oct	29 Oct	30 Oct	31 Oct	01 Nov	02 Nov	03 Nov	04 Nov	05 Nov	06 Nov
00	184° 02,6' 13° 02,1' S	184° 03,7' 13° 22,2' S	184° 04,7' 13° 42,0' S	184° 05,4' 14° 01,6' S	184° 06,0' 14° 21,0' S	184° 06,4' 14° 40,1' S	184° 06,6' 14° 59,1' S	184° 06,6' 15° 17,7' S	184° 06,4' 15° 36,1' S	184° 06,0' 15° 54,3' S
01	199° 02,6' 13° 03,0' S	199° 03,8' 13° 23,0' S	199° 04,7' 13° 42,8' S	199° 05,5' 14° 02,4' S	199° 06,0' 14° 21,8' S	199° 06,4' 14° 40,9' S	199° 06,6' 14° 59,8' S	199° 06,6' 15° 18,5' S	199° 06,4' 15° 36,9' S	199° 05,9' 15° 55,0' S
02	214° 02,7' 13° 03,8' S	214° 03,8' 13° 23,8' S	214° 04,7' 13° 43,6' S	214° 05,5' 14° 03,2' S	214° 06,1' 14° 22,6' S	214° 06,4' 14° 41,7' S	214° 06,6' 15° 00,6' S	214° 06,6' 15° 19,3' S	214° 06,3' 15° 37,7' S	214° 05,9' 15° 55,8' S
03	229° 02,7' 13° 04,6' S	229° 03,8' 13° 24,7' S	229° 04,8' 13° 44,5' S	229° 05,5' 14° 04,0' S	229° 06,1' 14° 23,4' S	229° 06,4' 14° 42,5' S	229° 06,6' 15° 01,4' S	229° 06,6' 15° 20,0' S	229° 06,3' 15° 38,4' S	229° 05,9' 15° 56,5' S
04	244° 02,8' 13° 05,5' S	244° 03,9' 13° 25,5' S	244° 04,8' 13° 45,3' S	244° 05,5' 14° 04,9' S	244° 06,1' 14° 24,2' S	244° 06,4' 14° 43,3' S	244° 06,6' 15° 02,2' S	244° 06,6' 15° 20,8' S	244° 06,3' 15° 39,2' S	244° 05,9' 15° 57,3' S
05	259° 02,8' 13° 06,3' S	259° 03,9' 13° 26,3' S	259° 04,8' 13° 46,1' S	259° 05,6' 14° 05,7' S	259° 06,1' 14° 25,0' S	259° 06,5' 14° 44,1' S	259° 06,6' 15° 03,0' S	259° 06,6' 15° 21,6' S	259° 06,3' 15° 39,9' S	259° 05,8' 15° 58,0' S
06	274° 02,9' 13° 07,2' S	274° 04,0' 13° 27,1' S	274° 04,9' 13° 46,9' S	274° 05,6' 14° 06,5' S	274° 06,1' 14° 25,8' S	274° 06,5' 14° 44,9' S	274° 06,6' 15° 03,7' S	274° 06,5' 15° 22,4' S	274° 06,3' 15° 40,7' S	274° 05,8' 15° 58,8' S
07	289° 02,9' 13° 08,0' S	289° 04,0' 13° 28,0' S	289° 04,9' 13° 47,7' S	289° 05,6' 14° 07,3' S	289° 06,1' 14° 26,6' S	289° 06,5' 14° 45,7' S	289° 06,6' 15° 04,5' S	289° 06,5' 15° 23,1' S	289° 06,3' 15° 41,5' S	289° 05,8' 15° 59,5' S
08	304° 03,0' 13° 08,8' S	304° 04,1' 13° 28,8' S	304° 04,9' 13° 48,6' S	304° 05,7' 14° 08,1' S	304° 06,2' 14° 27,4' S	304° 06,5' 14° 46,5' S	304° 06,6' 15° 05,3' S	304° 06,5' 15° 23,9' S	304° 06,3' 15° 42,2' S	304° 05,8' 16° 00,3' S
09	319° 03,0' 13° 09,7' S	319° 04,1' 13° 29,6' S	319° 05,0' 13° 49,4' S	319° 05,7' 14° 08,9' S	319° 06,2' 14° 28,2' S	319° 06,5' 14° 47,3' S	319° 06,6' 15° 06,1' S	319° 06,5' 15° 24,7' S	319° 06,2' 15° 43,0' S	319° 05,7' 16° 01,0' S
10	334° 03,1' 13° 10,5' S	334° 04,1' 13° 30,5' S	334° 05,0' 13° 50,2' S	334° 05,7' 14° 09,7' S	334° 06,2' 14° 29,0' S	334° 06,5' 14° 48,1' S	334° 06,6' 15° 06,9' S	334° 06,5' 15° 25,4' S	334° 06,2' 15° 43,7' S	334° 05,7' 16° 01,8' S
11	349° 03,1' 13° 11,3' S	349° 04,2' 13° 31,3' S	349° 05,0' 13° 51,0' S	349° 05,7' 14° 10,5' S	349° 06,2' 14° 29,8' S	349° 06,5' 14° 48,8' S	349° 06,6' 15° 07,6' S	349° 06,5' 15° 26,2' S	349° 06,2' 15° 44,5' S	349° 05,7' 16° 02,5' S
12	004° 03,2' 13° 12,2' S	004° 04,2' 13° 32,1' S	004° 05,1' 13° 51,8' S	004° 05,8' 14° 11,3' S	004° 06,2' 14° 30,6' S	004° 06,5' 14° 49,6' S	004° 06,6' 15° 08,4' S	004° 06,5' 15° 27,0' S	004° 06,2' 15° 45,3' S	004° 05,7' 16° 03,3' S
13	019° 03,2' 13° 13,0' S	019° 04,3' 13° 32,9' S	019° 05,1' 13° 52,6' S	019° 05,8' 14° 12,1' S	019° 06,2' 14° 31,4' S	019° 06,5' 14° 50,4' S	019° 06,6' 15° 09,2' S	019° 06,5' 15° 27,7' S	019° 06,2' 15° 46,0' S	019° 05,6' 16° 04,0' S
14	034° 03,3' 13° 13,8' S	034° 04,3' 13° 33,8' S	034° 05,1' 13° 53,5' S	034° 05,8' 14° 12,9' S	034° 06,3' 14° 32,2' S	034° 06,5' 14° 51,2' S	034° 06,6' 15° 10,0' S	034° 06,5' 15° 28,5' S	034° 06,1' 15° 46,8' S	034° 05,6' 16° 04,8' S
15	049° 03,3' 13° 14,7' S	049° 04,3' 13° 34,6' S	049° 05,2' 13° 54,3' S	049° 05,8' 14° 13,7' S	049° 06,3' 14° 33,0' S	049° 06,5' 14° 52,0' S	049° 06,6' 15° 10,8' S	049° 06,5' 15° 29,3' S	049° 06,1' 15° 47,5' S	049° 05,6' 16° 05,5' S
16	064° 03,3' 13° 15,5' S	064° 04,4' 13° 35,4' S	064° 05,2' 13° 55,1' S	064° 05,8' 14° 14,6' S	064° 06,3' 14° 33,8' S	064° 06,5' 14° 52,8' S	064° 06,6' 15° 11,5' S	064° 06,5' 15° 30,0' S	064° 06,1' 15° 48,3' S	064° 05,6' 16° 06,3' S
17	079° 03,4' 13° 16,3' S	079° 04,4' 13° 36,2' S	079° 05,2' 13° 55,9' S	079° 05,9' 14° 15,4' S	079° 06,3' 14° 34,6' S	079° 06,6' 14° 53,6' S	079° 06,6' 15° 12,3' S	079° 06,4' 15° 30,8' S	079° 06,1' 15° 49,0' S	079° 05,5' 16° 07,0' S
18	094° 03,4' 13° 17,2' S	094° 04,4' 13° 37,1' S	094° 05,3' 13° 56,7' S	094° 05,9' 14° 16,2' S	094° 06,3' 14° 35,4' S	094° 06,6' 14° 54,4' S	094° 06,6' 15° 13,1' S	094° 06,4' 15° 31,6' S	094° 06,1' 15° 49,8' S	094° 05,5' 16° 07,7' S
19	109° 03,5' 13° 18,0' S	109° 04,5' 13° 37,9' S	109° 05,3' 13° 57,5' S	109° 05,9' 14° 17,0' S	109° 06,3' 14° 36,2' S	109° 06,6' 14° 55,1' S	109° 06,6' 15° 13,9' S	109° 06,4' 15° 32,3' S	109° 06,1' 15° 50,5' S	109° 05,5' 16° 08,5' S
20	124° 03,5' 13° 18,8' S	124° 04,5' 13° 38,7' S	124° 05,3' 13° 58,4' S	124° 05,9' 14° 17,8' S	124° 06,4' 14° 37,0' S	124° 06,6' 14° 55,9' S	124° 06,6' 15° 14,6' S	124° 06,4' 15° 33,1' S	124° 06,0' 15° 51,3' S	124° 05,4' 16° 09,2' S
21	139° 03,6' 13° 19,7' S	139° 04,6' 13° 39,5' S	139° 05,4' 13° 59,2' S	139° 06,0' 14° 18,6' S	139° 06,4' 14° 37,8' S	139° 06,6' 14° 56,7' S	139° 06,6' 15° 15,4' S	139° 06,4' 15° 33,9' S	139° 06,0' 15° 52,0' S	139° 05,4' 16° 10,0' S
22	154° 03,6' 13° 20,5' S	154° 04,6' 13° 40,3' S	154° 05,4' 14° 00,0' S	154° 06,0' 14° 19,4' S	154° 06,4' 14° 38,6' S	154° 06,6' 14° 57,5' S	154° 06,6' 15° 16,2' S	154° 06,4' 15° 34,6' S	154° 06,0' 15° 52,8' S	154° 05,4' 16° 10,7' S
23	169° 03,7' 13° 21,3' S	169° 04,6' 13° 41,2' S	169° 05,4' 14° 00,8' S	169° 06,0' 14° 20,2' S	169° 06,4' 14° 39,4' S	169° 06,6' 14° 58,3' S	169° 06,6' 15° 17,0' S	169° 06,4' 15° 35,4' S	169° 06,0' 15° 53,5' S	169° 05,4' 16° 11,4' S

UT	07 Nov	08 Nov	09 Nov	10 Nov	11 Nov	12 Nov	13 Nov	14 Nov	15 Nov	16 Nov
00	184° 05,3' 16° 12,2' S	184° 04,5' 16° 29,8' S	184° 03,5' 16° 47,2' S	184° 02,2' 17° 04,2' S	184° 00,7' 17° 21,0' S	183° 59,1' 17° 37,5' S	183° 57,2' 17° 53,6' S	183° 55,1' 18° 09,5' S	183° 52,7' 18° 25,0' S	183° 50,2' 18° 40,3' S
01	199° 05,3' 16° 12,9' S	199° 04,5' 16° 30,5' S	199° 03,4' 16° 47,9' S	199° 02,2' 17° 04,9' S	199° 00,7' 17° 21,7' S	198° 59,0' 17° 38,1' S	198° 57,1' 17° 54,3' S	198° 55,0' 18° 10,1' S	198° 52,6' 18° 25,7' S	198° 50,1' 18° 40,9' S
02	214° 05,3' 16° 13,7' S	214° 04,4' 16° 31,3' S	214° 03,4' 16° 48,6' S	214° 02,1' 17° 05,6' S	214° 00,6' 17° 22,4' S	213° 58,9' 17° 38,8' S	213° 57,0' 17° 55,0' S	213° 54,9' 18° 10,8' S	213° 52,5' 18° 26,3' S	213° 50,0' 18° 41,5' S
03	229° 05,2' 16° 14,4' S	229° 04,4' 16° 32,0' S	229° 03,3' 16° 49,3' S	229° 02,0' 17° 06,3' S	229° 00,5' 17° 23,1' S	228° 58,8' 17° 39,5' S	228° 56,9' 17° 55,6' S	228° 54,8' 18° 11,4' S	228° 52,4' 18° 27,0' S	228° 49,9' 18° 42,1' S
04	244° 05,2' 16° 15,1' S	244° 04,3' 16° 32,7' S	244° 03,3' 16° 50,0' S	244° 02,0' 17° 07,0' S	244° 00,5' 17° 23,7' S	243° 58,8' 17° 40,2' S	243° 56,8' 17° 56,3' S	243° 54,7' 18° 12,1' S	243° 52,3' 18° 27,6' S	243° 49,8' 18° 42,8' S
05	259° 05,2' 16° 15,9' S	259° 04,3' 16° 33,4' S	259° 03,2' 16° 50,7' S	259° 01,9' 17° 07,7' S	259° 00,4' 17° 24,4' S	258° 58,7' 17° 40,8' S	258° 56,8' 17° 57,0' S	258° 54,6' 18° 12,8' S	258° 52,2' 18° 28,2' S	258° 49,6' 18° 43,4' S
06	274° 05,1' 16° 16,6' S	274° 04,3' 16° 34,2' S	274° 03,2' 16° 51,4' S	274° 01,9' 17° 08,4' S	274° 00,3' 17° 25,1' S	273° 58,6' 17° 41,5' S	273° 56,7' 17° 57,6' S	273° 54,5' 18° 13,4' S	273° 52,1' 18° 28,9' S	273° 49,5' 18° 44,0' S
07	289° 05,1' 16° 17,4' S	289° 04,2' 16° 34,9' S	289° 03,1' 16° 52,2' S	289° 01,8' 17° 09,1' S	289° 00,3' 17° 25,8' S	288° 58,5' 17° 42,2' S	288° 56,6' 17° 58,3' S	288° 54,4' 18° 14,1' S	288° 52,0' 18° 29,5' S	288° 49,4' 18° 44,6' S
08	304° 05,1' 16° 18,1' S	304° 04,2' 16° 35,6' S	304° 03,1' 16° 52,9' S	304° 01,7' 17° 09,8' S	304° 00,2' 17° 26,5' S	303° 58,5' 17° 42,9' S	303° 56,5' 17° 58,9' S	303° 54,3' 18° 14,7' S	303° 51,9' 18° 30,1' S	303° 49,3' 18° 45,3' S
09	319° 05,0' 16° 18,8' S	319° 04,1' 16° 36,3' S	319° 03,0' 16° 53,6' S	319° 01,7' 17° 10,5' S	319° 00,1' 17° 27,2' S	318° 58,4' 17° 43,6' S	318° 56,4' 17° 59,6' S	318° 54,2' 18° 15,4' S	318° 51,8' 18° 30,8' S	318° 49,2' 18° 45,9' S
10	334° 05,0' 16° 19,6' S	334° 04,1' 16° 37,1' S	334° 03,0' 16° 54,3' S	334° 01,6' 17° 11,2' S	334° 00,1' 17° 27,9' S	333° 58,3' 17° 44,2' S	333° 56,3' 18° 00,3' S	333° 54,1' 18° 16,0' S	333° 51,7' 18° 31,4' S	333° 49,1' 18° 46,5' S
11	349° 05,0' 16° 20,3' S	349° 04,1' 16° 37,8' S	349° 02,9' 16° 55,0' S	349° 01,6' 17° 11,9' S	349° 00,0' 17° 28,6' S	348° 58,2' 17° 44,9' S	348° 56,2' 18° 00,9' S	348° 54,0' 18° 16,7' S	348° 51,6' 18° 32,1' S	348° 49,0' 18° 47,1' S
12	004° 04,9' 16° 21,0' S	004° 04,0' 16° 38,5' S	004° 02,9' 16° 55,7' S	004° 01,5' 17° 12,6' S	003° 59,9' 17° 29,3' S	003° 58,1' 17° 45,6' S	003° 56,1' 18° 01,6' S	003° 53,9' 18° 17,3' S	003° 51,5' 18° 32,7' S	003° 48,9' 18° 47,7' S
13	019° 04,9' 16° 21,8' S	019° 04,0' 16° 39,2' S	019° 02,8' 16° 56,4' S	019° 01,4' 17° 13,3' S	018° 59,9' 17° 29,9' S	018° 58,1' 17° 46,3' S	018° 56,1' 18° 02,3' S	018° 53,8' 18° 17,9' S	018° 51,4' 18° 33,3' S	018° 48,7' 18° 48,4' S
14	034° 04,9' 16° 22,5' S	034° 03,9' 16° 40,0' S	034° 02,8' 16° 57,1' S	034° 01,4' 17° 14,0' S	033° 59,8' 17° 30,6' S	033° 58,0' 17° 46,9' S	033° 56,0' 18° 02,9' S	033° 53,7' 18° 18,6' S	033° 51,3' 18° 34,0' S	033° 48,6' 18° 49,0' S
15	049° 04,8' 16° 23,2' S	049° 03,9' 16° 40,7' S	049° 02,7' 16° 57,8' S	049° 01,3' 17° 14,7' S	048° 59,7' 17° 31,3' S	048° 57,9' 17° 47,6' S	048° 55,9' 18° 03,6' S	048° 53,6' 18° 19,2' S	048° 51,2' 18° 34,6' S	048° 48,5' 18° 49,6' S
16	064° 04,8' 16° 24,0' S	064° 03,8' 16° 41,4' S	064° 02,7' 16° 58,6' S	064° 01,3' 17° 15,4' S	063° 59,7' 17° 32,0' S	063° 57,8' 17° 48,3' S	063° 55,8' 18° 04,2' S	063° 53,5' 18° 19,9' S	063° 51,1' 18° 35,2' S	063° 48,4' 18° 50,2' S
17	079° 04,8' 16° 24,7' S	079° 03,8' 16° 42,1' S	079° 02,6' 16° 59,3' S	079° 01,2' 17° 16,1' S	078° 59,6' 17° 32,7' S	078° 57,7' 17° 48,9' S	078° 55,7' 18° 04,9' S	078° 53,4' 18° 20,5' S	078° 51,0' 18° 35,9' S	078° 48,3' 18° 50,8' S
18	094° 04,7' 16° 25,4' S	094° 03,7' 16° 42,8' S	094° 02,5' 17° 00,0' S	094° 01,1' 17° 16,8' S	093° 59,5' 17° 33,4' S	093° 57,7' 17° 49,6' S	093° 55,6' 18° 05,6' S	093° 53,3' 18° 21,2' S	093° 50,9' 18° 36,5' S	093° 48,2' 18° 51,5' S
19	109° 04,7' 16° 26,2' S	109° 03,7' 16° 43,6' S	109° 02,5' 17° 00,7' S	109° 01,1' 17° 17,5' S	108° 59,4' 17° 34,0' S	108° 57,6' 17° 50,3' S	108° 55,5' 18° 06,2' S	108° 53,2' 18° 21,8' S	108° 50,7' 18° 37,1' S	108° 48,0' 18° 52,1' S
20	124° 04,7' 16° 26,9' S	124° 03,6' 16° 44,3' S	124° 02,4' 17° 01,4' S	124° 01,0' 17° 18,2' S	123° 59,4' 17° 34,7' S	123° 57,5' 17° 51,0' S	123° 55,4' 18° 06,9' S	123° 53,1' 18° 22,5' S	123° 50,6' 18° 37,7' S	123° 47,9' 18° 52,7' S
21	139° 04,6' 16° 27,6' S	139° 03,6' 16° 45,0' S	139° 02,4' 17° 02,1' S	139° 00,9' 17° 18,9' S	138° 59,3' 17° 35,4' S	138° 57,4' 17° 51,6' S	138° 55,3' 18° 07,5' S	138° 53,0' 18° 23,1' S	138° 50,5' 18° 38,4' S	138° 47,8' 18° 53,3' S
22	154° 04,6' 16° 28,4' S	154° 03,6' 16° 45,7' S	154° 02,3' 17° 02,8' S	154° 00,9' 17° 19,6' S	153° 59,2' 17° 36,1' S	153° 57,3' 17° 52,3' S	153° 55,3' 18° 08,2' S	153° 52,9' 18° 23,8' S	153° 50,4' 18° 39,0' S	153° 47,7' 18° 53,9' S
23	169° 04,5' 16° 29,1' S	169° 03,5' 16° 46,4' S	169° 02,3' 17° 03,5' S	169° 00,8' 17° 20,3' S	168° 59,1' 17° 36,8' S	168° 57,3' 17° 53,0' S	168° 55,2' 18° 08,8' S	168° 52,8' 18° 24,4' S	168° 50,3' 18° 39,6' S	168° 47,6' 18° 54,5' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 17 Nov to 06 Dec

UT	17 Nov	18 Nov	19 Nov	20 Nov	21 Nov	22 Nov	23 Nov	24 Nov	25 Nov	26 Nov
00	183° 47,4' 18° 55,2' S	183° 44,5' 19° 09,7' S	183° 41,3' 19° 23,9' S	183° 37,9' 19° 37,8' S	183° 34,3' 19° 51,3' S	183° 30,5' 20° 04,5' S	183° 26,5' 20° 17,3' S	183° 22,3' 20° 29,7' S	183° 17,9' 20° 41,7' S	183° 13,3' 20° 53,4' S
01	198° 47,3' 18° 55,8' S	198° 44,4' 19° 10,3' S	198° 41,2' 19° 24,5' S	198° 37,8' 19° 38,4' S	198° 34,2' 19° 51,9' S	198° 30,3' 20° 05,0' S	198° 26,3' 20° 17,8' S	198° 22,1' 20° 30,2' S	198° 17,7' 20° 42,2' S	198° 13,1' 20° 53,8' S
02	213° 47,2' 18° 56,4' S	213° 44,2' 19° 10,9' S	213° 41,0' 19° 25,1' S	213° 37,6' 19° 38,9' S	213° 34,0' 19° 52,4' S	213° 30,2' 20° 05,6' S	213° 26,2' 20° 18,3' S	213° 21,9' 20° 30,7' S	213° 17,5' 20° 42,7' S	213° 12,9' 20° 54,3' S
03	228° 47,1' 18° 57,0' S	228° 44,1' 19° 11,5' S	228° 40,9' 19° 25,7' S	228° 37,5' 19° 39,5' S	228° 33,8' 19° 53,0' S	228° 30,0' 20° 06,1' S	228° 26,0' 20° 18,8' S	228° 21,8' 20° 31,2' S	228° 17,3' 20° 43,2' S	228° 12,7' 20° 54,8' S
04	243° 47,0' 18° 57,6' S	243° 44,0' 19° 12,1' S	243° 40,8' 19° 26,3' S	243° 37,3' 19° 40,1' S	243° 33,7' 19° 53,5' S	243° 29,9' 20° 06,6' S	243° 25,8' 20° 19,4' S	243° 21,6' 20° 31,7' S	243° 17,2' 20° 43,7' S	243° 12,5' 20° 55,3' S
05	258° 46,8' 18° 58,2' S	258° 43,8' 19° 12,7' S	258° 40,6' 19° 26,9' S	258° 37,2' 19° 40,6' S	258° 33,5' 19° 54,1' S	258° 29,7' 20° 07,2' S	258° 25,6' 20° 19,9' S	258° 21,4' 20° 32,2' S	258° 17,0' 20° 44,2' S	258° 12,3' 20° 55,7' S
06	273° 46,7' 18° 58,8' S	273° 43,7' 19° 13,3' S	273° 40,5' 19° 27,4' S	273° 37,0' 19° 41,2' S	273° 33,4' 19° 54,6' S	273° 29,5' 20° 07,7' S	273° 25,5' 20° 20,4' S	273° 21,2' 20° 32,7' S	273° 16,8' 20° 44,7' S	273° 12,1' 20° 56,2' S
07	288° 46,6' 18° 59,4' S	288° 43,6' 19° 13,9' S	288° 40,3' 19° 28,0' S	288° 36,9' 19° 41,8' S	288° 33,2' 19° 55,2' S	288° 29,4' 20° 08,2' S	288° 25,3' 20° 20,9' S	288° 21,0' 20° 33,2' S	288° 16,6' 20° 45,2' S	288° 11,9' 20° 56,7' S
08	303° 46,5' 19° 00,0' S	303° 43,4' 19° 14,5' S	303° 40,2' 19° 28,6' S	303° 36,7' 19° 42,3' S	303° 33,1' 19° 55,7' S	303° 29,2' 20° 08,8' S	303° 25,1' 20° 21,4' S	303° 20,9' 20° 33,7' S	303° 16,4' 20° 45,6' S	303° 11,8' 20° 57,2' S
09	318° 46,4' 19° 00,7' S	318° 43,3' 19° 15,1' S	318° 40,1' 19° 29,2' S	318° 36,6' 19° 42,9' S	318° 32,9' 19° 56,3' S	318° 29,0' 20° 09,3' S	318° 25,0' 20° 22,0' S	318° 20,7' 20° 34,2' S	318° 16,2' 20° 46,1' S	318° 11,6' 20° 57,6' S
10	333° 46,2' 19° 01,3' S	333° 43,2' 19° 15,7' S	333° 39,9' 19° 29,8' S	333° 36,4' 19° 43,5' S	333° 32,8' 19° 56,8' S	333° 28,9' 20° 09,8' S	333° 24,8' 20° 22,5' S	333° 20,5' 20° 34,7' S	333° 16,0' 20° 46,6' S	333° 11,4' 20° 58,1' S
11	348° 46,1' 19° 01,9' S	348° 43,0' 19° 16,3' S	348° 39,8' 19° 30,3' S	348° 36,3' 19° 44,0' S	348° 32,6' 19° 57,4' S	348° 28,7' 20° 10,4' S	348° 24,6' 20° 23,0' S	348° 20,3' 20° 35,2' S	348° 15,8' 20° 47,1' S	348° 11,2' 20° 58,6' S
12	003° 46,0' 19° 02,5' S	003° 42,9' 19° 16,9' S	003° 39,6' 19° 30,9' S	003° 36,1' 19° 44,6' S	003° 32,4' 19° 57,9' S	003° 28,5' 20° 10,9' S	003° 24,4' 20° 23,5' S	003° 20,1' 20° 35,7' S	003° 15,6' 20° 47,6' S	003° 11,0' 20° 59,0' S
13	018° 45,9' 19° 03,1' S	018° 42,8' 19° 17,5' S	018° 39,5' 19° 31,5' S	018° 36,0' 19° 45,2' S	018° 32,3' 19° 58,5' S	018° 28,4' 20° 11,4' S	018° 24,3' 20° 24,0' S	018° 19,9' 20° 36,2' S	018° 15,4' 20° 48,1' S	018° 10,8' 20° 59,5' S
14	033° 45,7' 19° 03,7' S	033° 42,7' 19° 18,1' S	033° 39,3' 19° 32,1' S	033° 35,8' 19° 45,7' S	033° 32,1' 19° 59,0' S	033° 28,2' 20° 12,0' S	033° 24,1' 20° 24,6' S	033° 19,8' 20° 36,7' S	033° 15,3' 20° 48,6' S	033° 10,6' 21° 00,0' S
15	048° 45,6' 19° 04,3' S	048° 42,5' 19° 18,6' S	048° 39,2' 19° 32,6' S	048° 35,7' 19° 46,3' S	048° 32,0' 19° 59,6' S	048° 28,0' 20° 12,5' S	048° 23,9' 20° 25,1' S	048° 19,6' 20° 37,2' S	048° 15,1' 20° 49,0' S	048° 10,4' 21° 00,5' S
16	063° 45,5' 19° 04,9' S	063° 42,4' 19° 19,2' S	063° 39,1' 19° 33,2' S	063° 35,5' 19° 46,9' S	063° 31,8' 20° 00,1' S	063° 27,9' 20° 13,0' S	063° 23,7' 20° 25,6' S	063° 19,4' 20° 37,7' S	063° 14,9' 20° 49,5' S	063° 10,2' 21° 00,9' S
17	078° 45,4' 19° 05,5' S	078° 42,2' 19° 19,8' S	078° 38,9' 19° 33,8' S	078° 35,4' 19° 47,4' S	078° 31,6' 20° 00,7' S	078° 27,7' 20° 13,6' S	078° 23,5' 20° 26,1' S	078° 19,2' 20° 38,2' S	078° 14,7' 20° 50,0' S	078° 10,0' 21° 01,4' S
18	093° 45,2' 19° 06,1' S	093° 42,1' 19° 20,4' S	093° 38,8' 19° 34,4' S	093° 35,2' 19° 48,0' S	093° 31,5' 20° 01,2' S	093° 27,5' 20° 14,1' S	093° 23,4' 20° 26,6' S	093° 19,0' 20° 38,7' S	093° 14,5' 20° 50,5' S	093° 09,8' 21° 01,8' S
19	108° 45,1' 19° 06,7' S	108° 42,0' 19° 21,0' S	108° 38,6' 19° 34,9' S	108° 35,1' 19° 48,5' S	108° 31,3' 20° 01,8' S	108° 27,4' 20° 14,6' S	108° 23,2' 20° 27,1' S	108° 18,8' 20° 39,2' S	108° 14,3' 20° 51,0' S	108° 09,6' 21° 02,3' S
20	123° 45,0' 19° 07,3' S	123° 41,8' 19° 21,6' S	123° 38,5' 19° 35,5' S	123° 34,9' 19° 49,1' S	123° 31,2' 20° 02,3' S	123° 27,2' 20° 15,2' S	123° 23,0' 20° 27,6' S	123° 18,7' 20° 39,7' S	123° 14,1' 20° 51,5' S	123° 09,4' 21° 02,8' S
21	138° 44,9' 19° 07,9' S	138° 41,7' 19° 22,2' S	138° 38,3' 19° 36,1' S	138° 34,8' 19° 49,7' S	138° 31,0' 20° 02,9' S	138° 27,0' 20° 15,7' S	138° 22,8' 20° 28,1' S	138° 18,5' 20° 40,2' S	138° 13,9' 20° 51,9' S	138° 09,2' 21° 03,2' S
22	153° 44,7' 19° 08,5' S	153° 41,6' 19° 22,8' S	153° 38,2' 19° 36,7' S	153° 34,6' 19° 50,2' S	153° 30,8' 20° 03,4' S	153° 26,8' 20° 16,2' S	153° 22,7' 20° 28,7' S	153° 18,3' 20° 40,7' S	153° 13,7' 20° 52,4' S	153° 09,0' 21° 03,7' S
23	168° 44,6' 19° 09,1' S	168° 41,4' 19° 23,3' S	168° 38,1' 19° 37,2' S	168° 34,5' 19° 50,8' S	168° 30,7' 20° 03,9' S	168° 26,7' 20° 16,7' S	168° 22,5' 20° 29,2' S	168° 18,1' 20° 41,2' S	168° 13,5' 20° 52,9' S	168° 08,8' 21° 04,2' S

UT	27 Nov	28 Nov	29 Nov	30 Nov	01 Dec	02 Dec	03 Dec	04 Dec	05 Dec	06 Dec
00	183° 08,6' 21° 04,6' S	183° 03,6' 21° 15,5' S	182° 58,5' 21° 26,0' S	182° 53,2' 21° 36,0' S	182° 47,8' 21° 45,6' S	182° 42,1' 21° 54,9' S	182° 36,4' 22° 03,7' S	182° 30,5' 22° 12,1' S	182° 24,4' 22° 20,0' S	182° 18,2' 22° 27,5' S
01	198° 08,3' 21° 05,1' S	198° 03,4' 21° 15,9' S	197° 58,3' 21° 26,4' S	197° 53,0' 21° 36,4' S	197° 47,5' 21° 46,0' S	197° 41,9' 21° 55,2' S	197° 36,1' 22° 04,0' S	197° 30,2' 22° 12,4' S	197° 24,2' 22° 20,3' S	197° 18,0' 22° 27,8' S
02	213° 08,1' 21° 05,5' S	213° 03,2' 21° 16,4' S	212° 58,1' 21° 26,8' S	212° 52,8' 21° 36,8' S	212° 47,3' 21° 46,4' S	212° 41,7' 21° 55,6' S	212° 35,9' 22° 04,4' S	212° 30,0' 22° 12,7' S	212° 23,9' 22° 20,6' S	212° 17,7' 22° 28,1' S
03	228° 07,9' 21° 06,0' S	228° 03,0' 21° 16,8' S	227° 57,8' 21° 27,2' S	227° 52,5' 21° 37,2' S	227° 47,1' 21° 46,8' S	227° 41,4' 21° 56,0' S	227° 35,7' 22° 04,7' S	227° 29,7' 22° 13,1' S	227° 23,7' 22° 21,0' S	227° 17,5' 22° 28,4' S
04	243° 07,7' 21° 06,5' S	243° 02,8' 21° 17,3' S	242° 57,6' 21° 27,7' S	242° 52,3' 21° 37,6' S	242° 46,8' 21° 47,2' S	242° 41,2' 21° 56,4' S	242° 35,4' 22° 05,1' S	242° 29,5' 22° 13,4' S	242° 23,4' 22° 21,3' S	242° 17,2' 22° 28,7' S
05	258° 07,5' 21° 06,9' S	258° 02,6' 21° 17,7' S	257° 57,4' 21° 28,1' S	257° 52,1' 21° 38,0' S	257° 46,6' 21° 47,6' S	257° 41,0' 21° 56,7' S	257° 35,2' 22° 05,5' S	257° 29,2' 22° 13,7' S	257° 23,2' 22° 21,6' S	257° 16,9' 22° 29,0' S
06	273° 07,3' 21° 07,4' S	273° 02,3' 21° 18,1' S	272° 57,2' 21° 28,5' S	272° 51,9' 21° 38,5' S	272° 46,4' 21° 48,0' S	272° 40,7' 21° 57,1' S	272° 34,9' 22° 05,8' S	272° 29,0' 22° 14,1' S	272° 22,9' 22° 21,9' S	272° 16,7' 22° 29,3' S
07	288° 07,1' 21° 07,8' S	288° 02,1' 21° 18,6' S	287° 57,0' 21° 28,9' S	287° 51,6' 21° 38,9' S	287° 46,1' 21° 48,4' S	287° 40,5' 21° 57,5' S	287° 34,7' 22° 06,2' S	287° 28,7' 22° 14,4' S	287° 22,6' 22° 22,2' S	287° 16,4' 22° 29,6' S
08	303° 06,9' 21° 08,3' S	303° 01,9' 21° 19,0' S	302° 56,7' 21° 29,3' S	302° 51,4' 21° 39,3' S	302° 45,9' 21° 48,8' S	302° 40,2' 21° 57,9' S	302° 34,4' 22° 06,5' S	302° 28,5' 22° 14,7' S	302° 22,4' 22° 22,6' S	302° 16,2' 22° 29,9' S
09	318° 06,7' 21° 08,7' S	318° 01,7' 21° 19,5' S	317° 56,5' 21° 29,8' S	317° 51,2' 21° 39,7' S	317° 45,7' 21° 49,2' S	317° 40,0' 21° 58,2' S	317° 34,2' 22° 06,9' S	317° 28,2' 22° 15,1' S	317° 22,1' 22° 22,9' S	317° 15,9' 22° 30,2' S
10	333° 06,5' 21° 09,2' S	333° 01,5' 21° 19,9' S	332° 56,3' 21° 30,2' S	332° 51,0' 21° 40,1' S	332° 45,4' 21° 49,5' S	332° 39,8' 21° 58,6' S	332° 33,9' 22° 07,2' S	332° 28,0' 22° 15,4' S	332° 21,9' 22° 23,2' S	332° 15,6' 22° 30,5' S
11	348° 06,3' 21° 09,7' S	348° 01,3' 21° 20,3' S	347° 56,1' 21° 30,6' S	347° 50,7' 21° 40,5' S	347° 45,2' 21° 49,9' S	347° 39,5' 21° 59,0' S	347° 33,7' 22° 07,6' S	347° 27,7' 22° 15,7' S	347° 21,6' 22° 23,5' S	347° 15,4' 22° 30,8' S
12	003° 06,1' 21° 10,1' S	003° 01,1' 21° 20,8' S	002° 55,9' 21° 31,0' S	002° 50,5' 21° 40,9' S	002° 45,0' 21° 50,3' S	002° 39,3' 21° 59,3' S	002° 33,5' 22° 07,9' S	002° 27,5' 22° 16,1' S	002° 21,4' 22° 23,8' S	002° 15,1' 22° 31,1' S
13	018° 05,9' 21° 10,6' S	018° 00,9' 21° 21,2' S	017° 55,6' 21° 31,4' S	017° 50,3' 21° 41,3' S	017° 44,7' 21° 50,7' S	017° 39,0' 21° 59,7' S	017° 33,2' 22° 08,3' S	017° 27,2' 22° 16,4' S	017° 21,1' 22° 24,1' S	017° 14,8' 22° 31,4' S
14	033° 05,7' 21° 11,0' S	033° 00,6' 21° 21,6' S	032° 55,4' 21° 31,9' S	032° 50,0' 21° 41,7' S	032° 44,5' 21° 51,1' S	032° 38,8' 22° 00,1' S	032° 33,0' 22° 08,6' S	032° 27,0' 22° 16,7' S	032° 20,8' 22° 24,4' S	032° 14,6' 22° 31,7' S
15	048° 05,5' 21° 11,5' S	048° 00,4' 21° 22,1' S	047° 55,2' 21° 32,3' S	047° 49,8' 21° 42,1' S	047° 44,3' 21° 51,5' S	047° 38,6' 22° 00,4' S	047° 32,7' 22° 09,0' S	047° 26,7' 22° 17,1' S	047° 20,6' 22° 24,7' S	047° 14,3' 22° 32,0' S
16	063° 05,3' 21° 11,9' S	063° 00,2' 21° 22,5' S	062° 55,0' 21° 32,7' S	062° 49,6' 21° 42,5' S	062° 44,0' 21° 51,8' S	062° 38,3' 22° 00,8' S	062° 32,5' 22° 09,3' S	062° 26,5' 22° 17,4' S	062° 20,3' 22° 25,1' S	062° 14,0' 22° 32,3' S
17	078° 05,1' 21° 12,4' S	078° 00,0' 21° 22,9' S	077° 54,8' 21° 33,1' S	077° 49,4' 21° 42,9' S	077° 43,8' 21° 52,2' S	077° 38,1' 22° 01,2' S	077° 32,2' 22° 09,7' S	077° 26,2' 22° 17,7' S	077° 20,1' 22° 25,4' S	077° 13,8' 22° 32,6' S
18	093° 04,9' 21° 12,8' S	092° 59,8' 21° 23,4' S	092° 54,5' 21° 33,5' S	092° 49,1' 21° 43,3' S	092° 43,6' 21° 52,6' S	092° 37,8' 22° 01,5' S	092° 32,0' 22° 10,0' S	092° 26,0' 22° 18,1' S	092° 19,8' 22° 25,7' S	092° 13,5' 22° 32,9' S
19	108° 04,7' 21° 13,3' S	107° 59,6' 21° 23,8' S	107° 54,3' 21° 33,9' S	107° 48,9' 21° 43,7' S	107° 43,3' 21° 53,0' S	107° 37,6' 22° 01,9' S	107° 31,7' 22° 10,3' S	107° 25,7' 22° 18,4' S	107° 19,5' 22° 26,0' S	107° 13,3' 22° 33,1' S
20	123° 04,4' 21° 13,7' S	122° 59,4' 21° 24,2' S	122° 54,1' 21° 34,4' S	122° 48,7' 21° 44,1' S	122° 43,1' 21° 53,4' S	122° 37,4' 22° 02,2' S	122° 31,5' 22° 10,7' S	122° 25,4' 22° 18,7' S	122° 19,3' 22° 26,3' S	122° 13,0' 22° 33,4' S
21	138° 04,2' 21° 14,2' S	137° 59,1' 21° 24,7' S	137° 53,9' 21° 34,8' S	137° 48,4' 21° 44,5' S	137° 42,9' 21° 53,7' S	137° 37,1' 22° 02,6' S	137° 31,2' 22° 11,0' S	137° 25,2' 22° 19,0' S	137° 19,0' 22° 26,6' S	137° 12,7' 22° 33,7' S
22	153° 04,0' 21° 14,6' S	152° 58,9' 21° 25,1' S	152° 53,6' 21° 35,2' S	152° 48,2' 21° 44,9' S	152° 42,6' 21° 54,1' S	152° 36,9' 22° 03,0' S	152° 31,0' 22° 11,4' S	152° 24,9' 22° 19,4' S	152° 18,8' 22° 26,9' S	152° 12,5' 22° 34,0' S
23	168° 03,8' 21° 15,0' S	167° 58,7' 21° 25,5' S	167° 53,4' 21° 35,6' S	167° 48,0' 21° 45,3' S	167° 42,4' 21° 54,5' S	167° 36,6' 22° 03,3' S	167° 30,7' 22° 11,7' S	167° 24,7' 22° 19,7' S	167° 18,5' 22° 27,2' S	167° 12,2' 22° 34,3' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 07 Dec to 26 Dec

UT	07 Dec	08 Dec	09 Dec	10 Dec	11 Dec	12 Dec	13 Dec	14 Dec	15 Dec	16 Dec
00	182° 11,9' 22° 34,6' S	182° 05,5' 22° 41,2' S	181° 58,9' 22° 47,4' S	181° 52,2' 22° 53,2' S	181° 45,5' 22° 58,5' S	181° 38,6' 23° 03,3' S	181° 31,6' 23° 07,7' S	181° 24,5' 23° 11,6' S	181° 17,4' 23° 15,1' S	181° 10,2' 23° 18,1' S
01	197° 11,7' 22° 34,9' S	197° 05,2' 22° 41,5' S	196° 58,6' 22° 47,7' S	196° 52,0' 22° 53,4' S	196° 45,2' 22° 58,7' S	196° 38,3' 23° 03,5' S	196° 31,3' 23° 07,9' S	196° 24,2' 23° 11,8' S	196° 17,1' 23° 15,2' S	196° 09,9' 23° 18,2' S
02	212° 11,4' 22° 35,2' S	212° 04,9' 22° 41,8' S	211° 58,4' 22° 47,9' S	211° 51,7' 22° 53,6' S	211° 44,9' 22° 58,9' S	211° 38,0' 23° 03,7' S	211° 31,0' 23° 08,0' S	211° 23,9' 23° 11,9' S	211° 16,8' 23° 15,3' S	211° 09,6' 23° 18,3' S
03	227° 11,1' 22° 35,4' S	227° 04,7' 22° 42,0' S	226° 58,1' 22° 48,2' S	226° 51,4' 22° 53,8' S	226° 44,6' 22° 59,1' S	226° 37,7' 23° 03,9' S	226° 30,7' 23° 08,2' S	226° 23,6' 23° 12,1' S	226° 16,5' 23° 15,5' S	226° 09,3' 23° 18,4' S
04	242° 10,9' 22° 35,7' S	242° 04,4' 22° 42,3' S	241° 57,8' 22° 48,4' S	241° 51,1' 22° 54,1' S	241° 44,3' 22° 59,3' S	241° 37,4' 23° 04,1' S	241° 30,4' 23° 08,4' S	241° 23,3' 23° 12,2' S	241° 16,2' 23° 15,6' S	241° 09,0' 23° 18,5' S
05	257° 10,6' 22° 36,0' S	257° 04,1' 22° 42,5' S	256° 57,5' 22° 48,6' S	256° 50,8' 22° 54,3' S	256° 44,0' 22° 59,5' S	256° 37,1' 23° 04,2' S	256° 30,1' 23° 08,5' S	256° 23,0' 23° 12,4' S	256° 15,9' 23° 15,7' S	256° 08,7' 23° 18,6' S
06	272° 10,3' 22° 36,3' S	272° 03,9' 22° 42,8' S	271° 57,3' 22° 48,9' S	271° 50,6' 22° 54,5' S	271° 43,7' 22° 59,7' S	271° 36,8' 23° 04,4' S	271° 29,8' 23° 08,7' S	271° 22,8' 23° 12,5' S	271° 15,6' 23° 15,9' S	271° 08,4' 23° 18,8' S
07	287° 10,1' 22° 36,6' S	287° 03,6' 22° 43,1' S	286° 57,0' 22° 49,1' S	286° 50,3' 22° 54,7' S	286° 43,5' 22° 59,9' S	286° 36,5' 23° 04,6' S	286° 29,5' 23° 08,9' S	286° 22,5' 23° 12,7' S	286° 15,3' 23° 16,0' S	286° 08,1' 23° 18,9' S
08	302° 09,8' 22° 36,8' S	302° 03,3' 22° 43,3' S	301° 56,7' 22° 49,4' S	301° 50,0' 22° 55,0' S	301° 43,2' 23° 00,1' S	301° 36,3' 23° 04,8' S	301° 29,2' 23° 09,0' S	301° 22,2' 23° 12,8' S	301° 15,0' 23° 16,1' S	301° 07,7' 23° 19,0' S
09	317° 09,5' 22° 37,1' S	317° 03,0' 22° 43,6' S	316° 56,4' 22° 49,6' S	316° 49,7' 22° 55,2' S	316° 42,9' 23° 00,3' S	316° 36,0' 23° 05,0' S	316° 29,0' 23° 09,2' S	316° 21,9' 23° 13,0' S	316° 14,7' 23° 16,3' S	316° 07,4' 23° 19,1' S
10	332° 09,3' 22° 37,4' S	332° 02,8' 22° 43,9' S	331° 56,2' 22° 49,9' S	331° 49,4' 22° 55,4' S	331° 42,6' 23° 00,5' S	331° 35,7' 23° 05,2' S	331° 28,7' 23° 09,4' S	331° 21,6' 23° 13,1' S	331° 14,4' 23° 16,4' S	331° 07,1' 23° 19,2' S
11	347° 09,0' 22° 37,7' S	347° 02,5' 22° 44,1' S	346° 55,9' 22° 50,1' S	346° 49,1' 22° 55,6' S	346° 42,3' 23° 00,7' S	346° 35,4' 23° 05,4' S	346° 28,4' 23° 09,5' S	346° 21,3' 23° 13,3' S	346° 14,1' 23° 16,5' S	346° 06,8' 23° 19,3' S
12	002° 08,7' 22° 38,0' S	002° 02,2' 22° 44,4' S	001° 55,6' 22° 50,3' S	001° 48,9' 22° 55,9' S	001° 42,0' 23° 00,9' S	001° 35,1' 23° 05,5' S	001° 28,1' 23° 09,7' S	001° 21,0' 23° 13,4' S	001° 13,8' 23° 16,6' S	001° 06,5' 23° 19,4' S
13	017° 08,5' 22° 38,2' S	017° 01,9' 22° 44,6' S	016° 55,3' 22° 50,6' S	016° 48,6' 22° 56,1' S	016° 41,7' 23° 01,1' S	016° 34,8' 23° 05,7' S	016° 27,8' 23° 09,9' S	016° 20,7' 23° 13,5' S	016° 13,5' 23° 16,8' S	016° 06,2' 23° 19,5' S
14	032° 08,2' 22° 38,5' S	032° 01,7' 22° 44,9' S	031° 55,0' 22° 50,8' S	031° 48,3' 22° 56,3' S	031° 41,5' 23° 01,3' S	031° 34,5' 23° 05,9' S	031° 27,5' 23° 10,0' S	031° 20,4' 23° 13,7' S	031° 13,2' 23° 16,9' S	031° 05,9' 23° 19,6' S
15	047° 07,9' 22° 38,8' S	047° 01,4' 22° 45,1' S	046° 54,8' 22° 51,1' S	046° 48,0' 22° 56,5' S	046° 41,2' 23° 01,5' S	046° 34,2' 23° 06,1' S	046° 27,2' 23° 10,2' S	046° 20,1' 23° 13,8' S	046° 12,9' 23° 17,0' S	046° 05,6' 23° 19,7' S
16	062° 07,6' 22° 39,1' S	062° 01,1' 22° 45,4' S	061° 54,5' 22° 51,3' S	061° 47,7' 22° 56,7' S	061° 40,9' 23° 01,7' S	061° 33,9' 23° 06,3' S	061° 26,9' 23° 10,3' S	061° 19,8' 23° 14,0' S	061° 12,6' 23° 17,1' S	061° 05,3' 23° 19,8' S
17	077° 07,4' 22° 39,3' S	077° 00,8' 22° 45,7' S	076° 54,2' 22° 51,5' S	076° 47,4' 22° 57,0' S	076° 40,6' 23° 01,9' S	076° 33,6' 23° 06,4' S	076° 26,6' 23° 10,5' S	076° 19,5' 23° 14,1' S	076° 12,3' 23° 17,2' S	076° 05,0' 23° 19,9' S
18	092° 07,1' 22° 39,6' S	092° 00,6' 22° 45,9' S	091° 53,9' 22° 51,8' S	091° 47,2' 22° 57,2' S	091° 40,3' 23° 02,1' S	091° 33,3' 23° 06,6' S	091° 26,3' 23° 10,7' S	091° 19,2' 23° 14,3' S	091° 12,0' 23° 17,4' S	091° 04,7' 23° 20,0' S
19	107° 06,8' 22° 39,9' S	107° 00,3' 22° 46,2' S	106° 53,6' 22° 52,0' S	106° 46,9' 22° 57,4' S	106° 40,0' 23° 02,3' S	106° 33,1' 23° 06,8' S	106° 26,0' 23° 10,8' S	106° 18,9' 23° 14,4' S	106° 11,7' 23° 17,5' S	106° 04,4' 23° 20,1' S
20	122° 06,6' 22° 40,1' S	122° 00,0' 22° 46,4' S	121° 53,4' 22° 52,2' S	121° 46,6' 22° 57,6' S	121° 39,7' 23° 02,5' S	121° 32,8' 23° 07,0' S	121° 25,7' 23° 11,0' S	121° 18,6' 23° 14,5' S	121° 11,4' 23° 17,6' S	121° 04,1' 23° 20,2' S
21	137° 06,3' 22° 40,4' S	136° 59,7' 22° 46,7' S	136° 53,1' 22° 52,5' S	136° 46,3' 22° 57,8' S	136° 39,4' 23° 02,7' S	136° 32,5' 23° 07,2' S	136° 25,4' 23° 11,1' S	136° 18,3' 23° 14,7' S	136° 11,1' 23° 17,7' S	136° 03,8' 23° 20,3' S
22	152° 06,0' 22° 40,7' S	151° 59,5' 22° 46,9' S	151° 52,8' 22° 52,7' S	151° 46,0' 22° 58,0' S	151° 39,2' 23° 02,9' S	151° 32,2' 23° 07,3' S	151° 25,1' 23° 11,3' S	151° 18,0' 23° 14,8' S	151° 10,8' 23° 17,8' S	151° 03,5' 23° 20,4' S
23	167° 05,8' 22° 41,0' S	166° 59,2' 22° 47,2' S	166° 52,5' 22° 52,9' S	166° 45,7' 22° 58,2' S	166° 38,9' 23° 03,1' S	166° 31,9' 23° 07,5' S	166° 24,8' 23° 11,5' S	166° 17,7' 23° 14,9' S	166° 10,5' 23° 18,0' S	166° 03,2' 23° 20,5' S

UT	17 Dec	18 Dec	19 Dec	20 Dec	21 Dec	22 Dec	23 Dec	24 Dec	25 Dec	26 Dec
00	181° 02,9' 23° 20,6' S	180° 55,6' 23° 22,7' S	180° 48,2' 23° 24,3' S	180° 40,7' 23° 25,4' S	180° 33,3' 23° 26,1' S	180° 25,8' 23° 26,3' S	180° 18,3' 23° 26,0' S	180° 10,8' 23° 25,3' S	180° 03,4' 23° 24,0' S	179° 55,9' 23° 22,4' S
01	196° 02,6' 23° 20,7' S	195° 55,2' 23° 22,8' S	195° 47,9' 23° 24,3' S	195° 40,4' 23° 25,5' S	195° 33,0' 23° 26,1' S	195° 25,5' 23° 26,3' S	195° 18,0' 23° 26,0' S	195° 10,5' 23° 25,2' S	195° 03,1' 23° 24,0' S	194° 55,6' 23° 22,3' S
02	211° 02,3' 23° 20,8' S	210° 54,9' 23° 22,8' S	210° 47,5' 23° 24,4' S	210° 40,1' 23° 25,5' S	210° 32,7' 23° 26,1' S	210° 25,2' 23° 26,3' S	210° 17,7' 23° 26,0' S	210° 10,2' 23° 25,2' S	210° 02,8' 23° 23,9' S	209° 55,3' 23° 22,2' S
03	226° 02,0' 23° 20,9' S	225° 54,6' 23° 22,9' S	225° 47,2' 23° 24,5' S	225° 39,8' 23° 25,5' S	225° 32,4' 23° 26,1' S	225° 24,9' 23° 26,3' S	225° 17,4' 23° 25,9' S	225° 09,9' 23° 25,1' S	225° 02,4' 23° 23,9' S	224° 55,0' 23° 22,1' S
04	241° 01,7' 23° 21,0' S	240° 54,3' 23° 23,0' S	240° 46,9' 23° 24,5' S	240° 39,5' 23° 25,6' S	240° 32,0' 23° 26,2' S	240° 24,6' 23° 26,3' S	240° 17,1' 23° 25,9' S	240° 09,6' 23° 25,1' S	240° 02,1' 23° 23,8' S	239° 54,7' 23° 22,0' S
05	256° 01,4' 23° 21,1' S	255° 54,0' 23° 23,1' S	255° 46,6' 23° 24,6' S	255° 39,2' 23° 25,6' S	255° 31,7' 23° 26,2' S	255° 24,3' 23° 26,3' S	255° 16,8' 23° 25,9' S	255° 09,3' 23° 25,0' S	255° 01,8' 23° 23,7' S	254° 54,4' 23° 21,9' S
06	271° 01,1' 23° 21,2' S	270° 53,7' 23° 23,1' S	270° 46,3' 23° 24,6' S	270° 38,9' 23° 25,6' S	270° 31,4' 23° 26,2' S	270° 23,9' 23° 26,3' S	270° 16,5' 23° 25,9' S	270° 09,0' 23° 25,0' S	270° 01,5' 23° 23,7' S	269° 54,1' 23° 21,9' S
07	286° 00,8' 23° 21,3' S	285° 53,4' 23° 23,2' S	285° 46,0' 23° 24,7' S	285° 38,6' 23° 25,7' S	285° 31,1' 23° 26,2' S	285° 23,6' 23° 26,3' S	285° 16,2' 23° 25,8' S	285° 08,7' 23° 25,0' S	285° 01,2' 23° 23,6' S	284° 53,8' 23° 21,8' S
08	301° 00,4' 23° 21,4' S	300° 53,1' 23° 23,3' S	300° 45,7' 23° 24,7' S	300° 38,3' 23° 25,7' S	300° 30,8' 23° 26,2' S	300° 23,3' 23° 26,2' S	300° 15,8' 23° 25,8' S	300° 08,4' 23° 24,9' S	300° 00,9' 23° 23,5' S	299° 53,4' 23° 21,7' S
09	316° 00,1' 23° 21,4' S	315° 52,8' 23° 23,3' S	315° 45,4' 23° 24,8' S	315° 38,0' 23° 25,7' S	315° 30,5' 23° 26,2' S	315° 23,0' 23° 26,2' S	315° 15,5' 23° 25,8' S	315° 08,0' 23° 24,9' S	315° 00,6' 23° 23,5' S	314° 53,1' 23° 21,6' S
10	330° 59,8' 23° 21,5' S	330° 52,5' 23° 23,4' S	330° 45,1' 23° 24,8' S	330° 37,6' 23° 25,8' S	330° 30,2' 23° 26,2' S	330° 22,7' 23° 26,2' S	330° 15,2' 23° 25,8' S	330° 07,7' 23° 24,8' S	330° 00,3' 23° 23,4' S	329° 52,8' 23° 21,5' S
11	345° 59,5' 23° 21,6' S	345° 52,2' 23° 23,5' S	345° 44,8' 23° 24,9' S	345° 37,3' 23° 25,8' S	345° 29,9' 23° 26,2' S	345° 22,4' 23° 26,2' S	345° 14,9' 23° 25,7' S	345° 07,4' 23° 24,8' S	345° 00,0' 23° 23,3' S	344° 52,5' 23° 21,4' S
12	000° 59,2' 23° 21,7' S	000° 51,9' 23° 23,5' S	000° 44,5' 23° 24,9' S	000° 37,0' 23° 25,8' S	000° 29,6' 23° 26,2' S	000° 22,1' 23° 26,2' S	000° 14,6' 23° 25,7' S	000° 07,1' 23° 24,7' S	359° 59,6' 23° 23,3' S	359° 52,2' 23° 21,3' S
13	015° 58,9' 23° 21,8' S	015° 51,6' 23° 23,6' S	015° 44,1' 23° 25,0' S	015° 36,7' 23° 25,8' S	015° 29,2' 23° 26,3' S	015° 21,8' 23° 26,2' S	015° 14,3' 23° 25,7' S	015° 06,8' 23° 24,7' S	014° 59,3' 23° 23,2' S	014° 51,9' 23° 21,2' S
14	030° 58,6' 23° 21,9' S	030° 51,2' 23° 23,7' S	030° 43,8' 23° 25,0' S	030° 36,4' 23° 25,9' S	030° 28,9' 23° 26,3' S	030° 21,5' 23° 26,2' S	030° 14,0' 23° 25,6' S	030° 06,5' 23° 24,6' S	029° 59,0' 23° 23,1' S	029° 51,6' 23° 21,1' S
15	045° 58,3' 23° 22,0' S	045° 50,9' 23° 23,7' S	045° 43,5' 23° 25,1' S	045° 36,1' 23° 25,9' S	045° 28,6' 23° 26,3' S	045° 21,1' 23° 26,2' S	045° 13,7' 23° 25,6' S	045° 06,2' 23° 24,6' S	044° 58,7' 23° 23,0' S	044° 51,3' 23° 21,1' S
16	060° 58,0' 23° 22,1' S	060° 50,6' 23° 23,8' S	060° 43,2' 23° 25,1' S	060° 35,8' 23° 25,9' S	060° 28,3' 23° 26,3' S	060° 20,8' 23° 26,2' S	060° 13,3' 23° 25,6' S	060° 05,9' 23° 24,5' S	059° 58,4' 23° 23,0' S	059° 51,0' 23° 21,0' S
17	075° 57,7' 23° 22,1' S	075° 50,3' 23° 23,9' S	075° 42,9' 23° 25,1' S	075° 35,5' 23° 25,9' S	075° 28,0' 23° 26,3' S	075° 20,5' 23° 26,1' S	075° 13,0' 23° 25,5' S	075° 05,6' 23° 24,4' S	074° 58,1' 23° 22,9' S	074° 50,7' 23° 20,9' S
18	090° 57,4' 23° 22,2' S	090° 50,0' 23° 23,9' S	090° 42,6' 23° 25,2' S	090° 35,2' 23° 26,0' S	090° 27,7' 23° 26,3' S	090° 20,2' 23° 26,1' S	090° 12,7' 23° 25,5' S	090° 05,2' 23° 24,4' S	089° 57,8' 23° 22,8' S	089° 50,3' 23° 20,8' S
19	105° 57,1' 23° 22,3' S	105° 49,7' 23° 24,0' S	105° 42,3' 23° 25,2' S	105° 34,8' 23° 26,0' S	105° 27,4' 23° 26,3' S	105° 19,9' 23° 26,1' S	105° 12,4' 23° 25,5' S	105° 04,9' 23° 24,3' S	104° 57,5' 23° 22,7' S	104° 50,0' 23° 20,7' S
20	120° 56,8' 23° 22,4' S	120° 49,4' 23° 24,1' S	120° 42,0' 23° 25,3' S	120° 34,5' 23° 26,0' S	120° 27,1' 23° 26,3' S	120° 19,6' 23° 26,1' S	120° 12,1' 23° 25,4' S	120° 04,6' 23° 24,3' S	119° 57,2' 23° 22,7' S	119° 49,7' 23° 20,6' S
21	135° 56,5' 23° 22,5' S	135° 49,1' 23° 24,1' S	135° 41,7' 23° 25,3' S	135° 34,2' 23° 26,0' S	135° 26,8' 23° 26,3' S	135° 19,3' 23° 26,1' S	135° 11,8' 23° 25,4' S	135° 04,3' 23° 24,2' S	134° 56,9' 23° 22,6' S	134° 49,4' 23° 20,5' S
22	150° 56,2' 23° 22,5' S	150° 48,8' 23° 24,2' S	150° 41,4' 23° 25,4' S	150° 33,9' 23° 26,1' S	150° 26,4' 23° 26,3' S	150° 19,0' 23° 26,1' S	150° 11,5' 23° 25,3' S	150° 04,0' 23° 24,2' S	149° 56,5' 23° 22,5' S	149° 49,1' 23° 20,4' S
23	165° 55,9' 23° 22,6' S	165° 48,5' 23° 24,2' S	165° 41,1' 23° 25,4' S	165° 33,6' 23° 26,1' S	165° 26,1' 23° 26,3' S	165° 18,6' 23° 26,0' S	165° 11,2' 23° 25,3' S	165° 03,7' 23° 24,1' S	164° 56,2' 23° 22,4' S	164° 48,8' 23° 20,3' S

Solar Almanac 2022 — Sun GHA & Decl (UT) — 27 Dec to 31 Dec

UT	27 Dec	28 Dec	29 Dec	30 Dec	31 Dec	31 Dec	31 Dec	31 Dec	31 Dec	31 Dec
00	179° 48,5' 23° 20,2' S	179° 41,1' 23° 17,6' S	179° 33,8' 23° 14,5' S	179° 26,5' 23° 10,9' S	179° 19,3' 23° 06,9' S	179° 19,3' 23° 06,9' S	179° 19,3' 23° 06,9' S	179° 19,3' 23° 06,9' S	179° 19,3' 23° 06,9' S	179° 19,3' 23° 06,9' S
01	194° 48,2' 23° 20,1' S	194° 40,8' 23° 17,4' S	194° 33,5' 23° 14,3' S	194° 26,2' 23° 10,7' S	194° 19,0' 23° 06,7' S	194° 19,0' 23° 06,7' S	194° 19,0' 23° 06,7' S	194° 19,0' 23° 06,7' S	194° 19,0' 23° 06,7' S	194° 19,0' 23° 06,7' S
02	209° 47,9' 23° 20,0' S	209° 40,5' 23° 17,3' S	209° 33,2' 23° 14,2' S	209° 25,9' 23° 10,6' S	209° 18,7' 23° 06,5' S	209° 18,7' 23° 06,5' S	209° 18,7' 23° 06,5' S	209° 18,7' 23° 06,5' S	209° 18,7' 23° 06,5' S	209° 18,7' 23° 06,5' S
03	224° 47,6' 23° 19,9' S	224° 40,2' 23° 17,2' S	224° 32,9' 23° 14,0' S	224° 25,6' 23° 10,4' S	224° 18,4' 23° 06,3' S	224° 18,4' 23° 06,3' S	224° 18,4' 23° 06,3' S	224° 18,4' 23° 06,3' S	224° 18,4' 23° 06,3' S	224° 18,4' 23° 06,3' S
04	239° 47,3' 23° 19,8' S	239° 39,9' 23° 17,1' S	239° 32,6' 23° 13,9' S	239° 25,3' 23° 10,3' S	239° 18,1' 23° 06,2' S	239° 18,1' 23° 06,2' S	239° 18,1' 23° 06,2' S	239° 18,1' 23° 06,2' S	239° 18,1' 23° 06,2' S	239° 18,1' 23° 06,2' S
05	254° 47,0' 23° 19,7' S	254° 39,6' 23° 17,0' S	254° 32,3' 23° 13,8' S	254° 25,0' 23° 10,1' S	254° 17,8' 23° 06,0' S	254° 17,8' 23° 06,0' S	254° 17,8' 23° 06,0' S	254° 17,8' 23° 06,0' S	254° 17,8' 23° 06,0' S	254° 17,8' 23° 06,0' S
06	269° 46,6' 23° 19,6' S	269° 39,3' 23° 16,8' S	269° 31,9' 23° 13,6' S	269° 24,7' 23° 09,9' S	269° 17,5' 23° 05,8' S	269° 17,5' 23° 05,8' S	269° 17,5' 23° 05,8' S	269° 17,5' 23° 05,8' S	269° 17,5' 23° 05,8' S	269° 17,5' 23° 05,8' S
07	284° 46,3' 23° 19,5' S	284° 39,0' 23° 16,7' S	284° 31,6' 23° 13,5' S	284° 24,4' 23° 09,8' S	284° 17,2' 23° 05,6' S	284° 17,2' 23° 05,6' S	284° 17,2' 23° 05,6' S	284° 17,2' 23° 05,6' S	284° 17,2' 23° 05,6' S	284° 17,2' 23° 05,6' S
08	299° 46,0' 23° 19,4' S	299° 38,7' 23° 16,6' S	299° 31,3' 23° 13,3' S	299° 24,1' 23° 09,6' S	299° 16,9' 23° 05,4' S	299° 16,9' 23° 05,4' S	299° 16,9' 23° 05,4' S	299° 16,9' 23° 05,4' S	299° 16,9' 23° 05,4' S	299° 16,9' 23° 05,4' S
09	314° 45,7' 23° 19,3' S	314° 38,4' 23° 16,5' S	314° 31,0' 23° 13,2' S	314° 23,8' 23° 09,4' S	314° 16,6' 23° 05,2' S	314° 16,6' 23° 05,2' S	314° 16,6' 23° 05,2' S	314° 16,6' 23° 05,2' S	314° 16,6' 23° 05,2' S	314° 16,6' 23° 05,2' S
10	329° 45,4' 23° 19,2' S	329° 38,0' 23° 16,3' S	329° 30,7' 23° 13,0' S	329° 23,5' 23° 09,3' S	329° 16,3' 23° 05,1' S	329° 16,3' 23° 05,1' S	329° 16,3' 23° 05,1' S	329° 16,3' 23° 05,1' S	329° 16,3' 23° 05,1' S	329° 16,3' 23° 05,1' S
11	344° 45,1' 23° 19,0' S	344° 37,7' 23° 16,2' S	344° 30,4' 23° 12,9' S	344° 23,2' 23° 09,1' S	344° 16,0' 23° 04,9' S	344° 16,0' 23° 04,9' S	344° 16,0' 23° 04,9' S	344° 16,0' 23° 04,9' S	344° 16,0' 23° 04,9' S	344° 16,0' 23° 04,9' S
12	359° 44,8' 23° 18,9' S	359° 37,4' 23° 16,1' S	359° 30,1' 23° 12,7' S	359° 22,9' 23° 08,9' S	359° 15,7' 23° 04,7' S	359° 15,7' 23° 04,7' S	359° 15,7' 23° 04,7' S	359° 15,7' 23° 04,7' S	359° 15,7' 23° 04,7' S	359° 15,7' 23° 04,7' S
13	014° 44,5' 23° 18,8' S	014° 37,1' 23° 15,9' S	014° 29,8' 23° 12,6' S	014° 22,6' 23° 08,8' S	014° 15,4' 23° 04,5' S	014° 15,4' 23° 04,5' S	014° 15,4' 23° 04,5' S	014° 15,4' 23° 04,5' S	014° 15,4' 23° 04,5' S	014° 15,4' 23° 04,5' S
14	029° 44,2' 23° 18,7' S	029° 36,8' 23° 15,8' S	029° 29,5' 23° 12,4' S	029° 22,3' 23° 08,6' S	029° 15,1' 23° 04,3' S	029° 15,1' 23° 04,3' S	029° 15,1' 23° 04,3' S	029° 15,1' 23° 04,3' S	029° 15,1' 23° 04,3' S	029° 15,1' 23° 04,3' S
15	044° 43,9' 23° 18,6' S	044° 36,5' 23° 15,7' S	044° 29,2' 23° 12,3' S	044° 22,0' 23° 08,4' S	044° 14,8' 23° 04,1' S	044° 14,8' 23° 04,1' S	044° 14,8' 23° 04,1' S	044° 14,8' 23° 04,1' S	044° 14,8' 23° 04,1' S	044° 14,8' 23° 04,1' S
16	059° 43,6' 23° 18,5' S	059° 36,2' 23° 15,5' S	059° 28,9' 23° 12,1' S	059° 21,7' 23° 08,3' S	059° 14,5' 23° 03,9' S	059° 14,5' 23° 03,9' S	059° 14,5' 23° 03,9' S	059° 14,5' 23° 03,9' S	059° 14,5' 23° 03,9' S	059° 14,5' 23° 03,9' S
17	074° 43,3' 23° 18,4' S	074° 35,9' 23° 15,4' S	074° 28,6' 23° 12,0' S	074° 21,4' 23° 08,1' S	074° 14,2' 23° 03,7' S	074° 14,2' 23° 03,7' S	074° 14,2' 23° 03,7' S	074° 14,2' 23° 03,7' S	074° 14,2' 23° 03,7' S	074° 14,2' 23° 03,7' S
18	089° 43,0' 23° 18,3' S	089° 35,6' 23° 15,3' S	089° 28,3' 23° 11,8' S	089° 21,1' 23° 07,9' S	089° 13,9' 23° 03,5' S	089° 13,9' 23° 03,5' S	089° 13,9' 23° 03,5' S	089° 13,9' 23° 03,5' S	089° 13,9' 23° 03,5' S	089° 13,9' 23° 03,5' S
19	104° 42,6' 23° 18,1' S	104° 35,3' 23° 15,1' S	104° 28,0' 23° 11,7' S	104° 20,8' 23° 07,8' S	104° 13,6' 23° 03,4' S	104° 13,6' 23° 03,4' S	104° 13,6' 23° 03,4' S	104° 13,6' 23° 03,4' S	104° 13,6' 23° 03,4' S	104° 13,6' 23° 03,4' S
20	119° 42,3' 23° 18,0' S	119° 35,0' 23° 15,0' S	119° 27,7' 23° 11,5' S	119° 20,5' 23° 07,6' S	119° 13,3' 23° 03,2' S	119° 13,3' 23° 03,2' S	119° 13,3' 23° 03,2' S	119° 13,3' 23° 03,2' S	119° 13,3' 23° 03,2' S	119° 13,3' 23° 03,2' S
21	134° 42,0' 23° 17,9' S	134° 34,7' 23° 14,9' S	134° 27,4' 23° 11,4' S	134° 20,2' 23° 07,4' S	134° 13,0' 23° 03,0' S	134° 13,0' 23° 03,0' S	134° 13,0' 23° 03,0' S	134° 13,0' 23° 03,0' S	134° 13,0' 23° 03,0' S	134° 13,0' 23° 03,0' S
22	149° 41,7' 23° 17,8' S	149° 34,4' 23° 14,7' S	149° 27,1' 23° 11,2' S	149° 19,9' 23° 07,2' S	149° 12,7' 23° 02,8' S	149° 12,7' 23° 02,8' S	149° 12,7' 23° 02,8' S	149° 12,7' 23° 02,8' S	149° 12,7' 23° 02,8' S	149° 12,7' 23° 02,8' S
23	164° 41,4' 23° 17,7' S	164° 34,1' 23° 14,6' S	164° 26,8' 23° 11,1' S	164° 19,6' 23° 07,1' S	164° 12,4' 23° 02,6' S	164° 12,4' 23° 02,6' S	164° 12,4' 23° 02,6' S	164° 12,4' 23° 02,6' S	164° 12,4' 23° 02,6' S	164° 12,4' 23° 02,6' S