

2009

Moon Parallax and Semi-diameter

		Upper Limb																																									
		Altitude degrees																																									
		0			7			14			21			28			35			42			49			56			63			70			80			90					
		'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Jan 1	1	40.1 ⁻⁶	6	39.7 ⁻¹⁸	6	38.5 ⁻²⁹	5	36.4 ⁻⁴⁰	5	33.7 ⁻⁵⁰	5	30.1 ⁻⁶⁰	5	25.9 ⁻⁶⁹	4	21.1 ⁻⁷⁷	4	15.8 ⁻⁸³	3	10.0 ⁻⁸⁹	3	3.8 ⁻⁹³	2	-5.4 ⁻⁹⁶	2	-15.0																	
Jan 2	2	40.5 ⁻⁶	7	40.1 ⁻¹⁸	7	38.8 ⁻²⁹	7	36.8 ⁻⁴¹	6	34.0 ⁻⁵¹	6	30.4 ⁻⁶¹	6	26.2 ⁻⁷⁰	5	21.3 ⁻⁷⁷	5	16.0 ⁻⁸⁴	4	10.1 ⁻⁹⁰	4	3.9 ⁻⁹⁴	3	-5.5 ⁻⁹⁷	2	-15.2																	
Jan 3	3	41.0 ⁻⁶	8	40.5 ⁻¹⁸	8	39.3 ⁻³⁰	8	37.2 ⁻⁴¹	7	34.4 ⁻⁵²	7	30.8 ⁻⁶²	7	26.5 ⁻⁷¹	6	21.6 ⁻⁷⁸	6	16.1 ⁻⁸⁵	5	10.2 ⁻⁹¹	4	3.9 ⁻⁹⁵	3	-5.6 ⁻⁹⁸	2	-15.3																	
Jan 4	4	41.5 ⁻⁶	9	41.1 ⁻¹⁸	9	39.8 ⁻³⁰	9	37.7 ⁻⁴²	8	34.8 ⁻⁵²	8	31.2 ⁻⁶²	7	26.9 ⁻⁷²	7	21.9 ⁻⁸⁰	6	16.4 ⁻⁸⁶	5	10.4 ⁻⁹²	5	4.0 ⁻⁹⁷	4	-5.6 ⁻¹⁰⁰	3	-15.5																	
Jan 5	5	42.1 ⁻⁶	9	41.7 ⁻¹⁹	9	40.4 ⁻³¹	9	38.3 ⁻⁴²	9	35.3 ⁻⁵³	8	31.7 ⁻⁶³	8	27.3 ⁻⁷³	7	22.2 ⁻⁸¹	6	16.6 ⁻⁸⁸	6	10.5 ⁻⁹³	5	4.0 ⁻⁹⁸	4	-5.7 ⁻¹⁰¹	3	-15.8																	
Jan 6	6	42.8 ⁻⁶	9	42.3 ⁻¹⁹	9	41.0 ⁻³¹	9	38.9 ⁻⁴³	9	35.9 ⁻⁵⁴	8	32.1 ⁻⁶⁴	8	27.7 ⁻⁷⁴	7	22.5 ⁻⁸²	6	16.9 ⁻⁸⁹	6	10.7 ⁻⁹⁵	5	4.1 ⁻¹⁰⁰	4	-5.8 ⁻¹⁰³	3	-16.0																	
Jan 7	7	43.4 ⁻⁶	8	42.9 ⁻¹⁹	8	41.6 ⁻³¹	8	39.4 ⁻⁴³	8	36.4 ⁻⁵⁵	7	32.6 ⁻⁶⁵	7	28.1 ⁻⁷⁵	6	22.9 ⁻⁸³	6	17.1 ⁻⁹⁰	5	10.8 ⁻⁹⁶	4	4.1 ⁻¹⁰¹	3	-5.9 ⁻¹⁰⁴	2	-16.3																	
Jan 8	8	44.0 ⁻⁶	6	43.5 ⁻¹⁹	6	42.2 ⁻³²	6	39.9 ⁻⁴⁴	6	36.9 ⁻⁵⁵	5	33.0 ⁻⁶⁶	5	28.4 ⁻⁷⁶	5	23.2 ⁻⁸⁴	4	17.3 ⁻⁹¹	4	11.0 ⁻⁹⁷	3	4.2 ⁻¹⁰²	3	-6.0 ⁻¹⁰⁵	2	-16.5																	
Jan 9	9	44.4 ⁻⁷	3	43.9 ⁻¹⁹	3	42.6 ⁻³²	3	40.3 ⁻⁴⁴	3	37.2 ⁻⁵⁶	3	33.3 ⁻⁶⁶	3	28.7 ⁻⁷⁶	2	23.4 ⁻⁸⁵	2	17.5 ⁻⁹²	2	11.1 ⁻⁹⁸	2	4.2 ⁻¹⁰³	1	-6.0 ⁻¹⁰⁶	1	-16.6																	
Jan 10	10	44.6 ⁻⁷	0	44.1 ⁻¹⁹	0	42.8 ⁻³²	0	40.5 ⁻⁴⁴	0	37.4 ⁻⁵⁶	0	33.5 ⁻⁶⁷	0	28.8 ⁻⁷⁶	0	23.5 ⁻⁸⁵	0	17.6 ⁻⁹²	0	11.1 ⁻⁹⁸	0	4.3 ⁻¹⁰³	0	-6.1 ⁻¹⁰⁶	0	-16.7																	
Jan 11	11	44.6 ⁻⁷	-4	44.1 ⁻¹⁹	-4	42.8 ⁻³²	-4	40.5 ⁻⁴⁴	-3	37.4 ⁻⁵⁶	-3	33.5 ⁻⁶⁶	-3	28.8 ⁻⁷⁶	-3	23.5 ⁻⁸⁵	-3	17.6 ⁻⁹²	-2	11.1 ⁻⁹⁸	-2	4.3 ⁻¹⁰³	-2	-6.1 ⁻¹⁰⁶	-1	-16.7																	
Jan 12	12	44.3 ⁻⁶	-7	43.9 ⁻¹⁹	-7	42.5 ⁻³²	-6	40.3 ⁻⁴⁴	-6	37.2 ⁻⁵⁵	-6	33.3 ⁻⁶⁶	-6	28.7 ⁻⁷⁵	-5	23.4 ⁻⁸⁴	-5	17.5 ⁻⁹¹	-4	11.1 ⁻⁹⁷	-4	4.2 ⁻¹⁰²	-3	-6.0 ⁻¹⁰⁵	-2	-16.6																	
Jan 13	13	43.9 ⁻⁶	-9	43.4 ⁻¹⁹	-9	42.1 ⁻³¹	-9	39.9 ⁻⁴³	-8	36.8 ⁻⁵⁵	-8	33.0 ⁻⁶⁵	-7	28.4 ⁻⁷⁵	-7	23.1 ⁻⁸³	-6	17.3 ⁻⁹⁰	-5	10.9 ⁻⁹⁶	-5	4.2 ⁻¹⁰¹	-4	-6.0 ⁻¹⁰⁴	-3	-16.4																	
Jan 14	14	43.3 ⁻⁶	-10	42.8 ⁻¹⁹	-10	41.5 ⁻³¹	-10	39.3 ⁻⁴³	-9	36.3 ⁻⁵⁴	-9	32.5 ⁻⁶⁴	-8	28.0 ⁻⁷³	-8	22.8 ⁻⁸²	-7	17.0 ⁻⁸⁹	-6	10.8 ⁻⁹⁴	-5	4.1 ⁻⁹⁹	-4	-5.9 ⁻¹⁰²	-3	-16.2																	
Jan 15	15	42.6 ⁻⁶	-10	42.1 ⁻¹⁸	-10	40.8 ⁻³⁰	-10	38.7 ⁻⁴²	-10	35.7 ⁻⁵³	-9	32.0 ⁻⁶³	-9	27.5 ⁻⁷²	-8	22.4 ⁻⁸⁰	-7	16.8 ⁻⁸⁷	-6	10.6 ⁻⁹³	-5	4.1 ⁻⁹⁸	-4	-5.8 ⁻¹⁰¹	-3	-15.9																	
Jan 16	16	41.9 ⁻⁶	-10	41.4 ⁻¹⁸	-10	40.1 ⁻³⁰	-9	38.0 ⁻⁴¹	-9	35.1 ⁻⁵²	-9	31.4 ⁻⁶²	-8	27.1 ⁻⁷¹	-7	22.1 ⁻⁷⁹	-7	16.5 ⁻⁸⁶	-6	10.4 ⁻⁹¹	-5	4.0 ⁻⁹⁶	-4	-5.7 ⁻⁹⁹	-3	-15.7																	
Jan 17	17	41.2 ⁻⁶	-9	40.8 ⁻¹⁸	-8	39.5 ⁻²⁹	-8	37.4 ⁻⁴¹	-8	34.6 ⁻⁵¹	-8	30.9 ⁻⁶¹	-7	26.6 ⁻⁷⁰	-7	21.7 ⁻⁷⁸	-6	16.2 ⁻⁸⁴	-5	10.3 ⁻⁹⁰	-5	3.9 ⁻⁹⁵	-4	-5.6 ⁻⁹⁸	-2	-15.4																	
Jan 18	18	40.6 ⁻⁶	-7	40.2 ⁻¹⁸	-7	38.9 ⁻²⁹	-7	36.9 ⁻⁴⁰	-7	34.1 ⁻⁵¹	-6	30.5 ⁻⁶⁰	-6	26.3 ⁻⁶⁹	-5	21.4 ⁻⁷⁷	-5	16.0 ⁻⁸³	-4	10.1 ⁻⁸⁹	-4	3.9 ⁻⁹³	-3	-5.5 ⁻⁹⁶	-2	-15.2																	
Jan 19	19	40.1 ⁻⁶	-5	39.7 ⁻¹⁷	-5	38.5 ⁻²⁹	-5	36.4 ⁻⁴⁰	-5	33.6 ⁻⁵⁰	-5	30.1 ⁻⁶⁰	-4	25.9 ⁻⁶⁸	-4	21.1 ⁻⁷⁶	-4	15.8 ⁻⁸²	-3	10.0 ⁻⁸⁸	-3	3.8 ⁻⁹²	-2	-5.4 ⁻⁹⁵	-2	-15.0																	
Jan 20	20	39.7 ⁻⁶	-4	39.3 ⁻¹⁷	-4	38.1 ⁻²⁹	-4	36.1 ⁻³⁹	-3	33.3 ⁻⁵⁰	-3	29.9 ⁻⁵⁹	-3	25.7 ⁻⁶⁸	-3	20.9 ⁻⁷⁵	-3	15.7 ⁻⁸²	-2	9.9 ⁻⁸⁷	-2	3.8 ⁻⁹²	-2	-5.4 ⁻⁹⁵	-1	-14.9																	
Jan 21	21	39.5 ⁻⁶	-2	39.1 ⁻¹⁷	-2	37.9 ⁻²⁸	-2	35.9 ⁻³⁹	-2	33.1 ⁻⁴⁹	-2	29.7 ⁻⁵⁹	-2	25.5 ⁻⁶⁷	-2	20.8 ⁻⁷⁵	-1	15.6 ⁻⁸¹	-1	9.8 ⁻⁸⁷	-1	3.8 ⁻⁹¹	-1	-5.4 ⁻⁹⁴	-1	-14.8																	
Jan 22	22	39.3 ⁻⁶	-1	38.9 ⁻¹⁷	-1	37.7 ⁻²⁸	-1	35.7 ⁻³⁹	-1	33.0 ⁻⁴⁹	-1	29.6 ⁻⁵⁹	-1	25.4 ⁻⁶⁷	-1	20.7 ⁻⁷⁵	0	15.5 ⁻⁸¹	0	9.8 ⁻⁸⁶	0	3.8 ⁻⁹¹	0	-5.3 ⁻⁹⁴	0	-14.7																	
Jan 23	23	39.3 ⁻⁶	1	38.9 ⁻¹⁷	1	37.7 ⁻²⁸	1	35.7 ⁻³⁹	1	33.0 ⁻⁴⁹	1	29.5 ⁻⁵⁹	0	25.4 ⁻⁶⁷	0	20.7 ⁻⁷⁵	0	15.5 ⁻⁸¹	0	9.8 ⁻⁸⁶	0	3.8 ⁻⁹¹	0	-5.3 ⁻⁹⁴	0	-14.7																	
Jan 24	24	39.3 ⁻⁶	2	38.9 ⁻¹⁷	2	37.7 ⁻²⁸	2	35.7 ⁻³⁹	2	33.0 ⁻⁴⁹	1	29.5 ⁻⁵⁹	1	25.4 ⁻⁶⁷	1	20.7 ⁻⁷⁵	1	15.5 ⁻⁸¹	1	9.8 ⁻⁸⁷	1	3.8 ⁻⁹¹	1	-5.3 ⁻⁹⁴	0	-14.7																	
Jan 25	25	39.4 ⁻⁶	3	39.0 ⁻¹⁷	2	37.8 ⁻²⁸	2	35.8 ⁻³⁹	2	33.1 ⁻⁵⁰	2	29.6 ⁻⁵⁹	2	25.5 ⁻⁶⁸	2	20.8 ⁻⁷⁵	2	15.5 ⁻⁸²	2	9.8 ⁻⁸⁷	1	3.8 ⁻⁹¹	1	-5.4 ⁻⁹⁴	1	-14.8																	
Jan 26	26	39.6 ⁻⁶	3	39.2 ⁻¹⁷	3	38.0 ⁻²⁹	3	36.0 ⁻³⁹	3	33.2 ⁻⁵⁰	3	29.8 ⁻⁵⁹	3	25.6 ⁻⁶⁸	2	20.9 ⁻⁷⁶	2	15.6 ⁻⁸²	2	9.9 ⁻⁸⁷	2	3.8 ⁻⁹²	1	-5.4 ⁻⁹⁵	1	-14.8																	
Jan 27	27	39.8 ⁻⁶	4	39.4 ⁻¹⁷	4	38.2 ⁻²⁹	4	36.2 ⁻⁴⁰	4	33.4 ⁻⁵⁰	3	29.9 ⁻⁶⁰	3	25.8 ⁻⁶⁸	3	21.0 ⁻⁷⁶	3	15.7 ⁻⁸³	2	9.9 ⁻⁸⁸	2	3.8 ⁻⁹²	2	-5.4 ⁻⁹⁵	1	-14.9																	
Jan 28	28	40.1 ⁻⁶	4	39.7 ⁻¹⁸	4	38.5 ⁻²⁹	4	36.4 ⁻⁴⁰	4	33.6 ⁻⁵⁰	4	30.1 ⁻⁶⁰	4	25.9 ⁻⁶⁹	3	21.1 ⁻⁷⁷	3	15.8 ⁻⁸³	3	10.0 ⁻⁸⁸	2	3.8 ⁻⁹³	2	-5.4 ⁻⁹⁶	1	-15.0																	
Jan 29	29	40.4 ⁻⁶	5	40.0 ⁻¹⁸	5	38.8 ⁻²⁹	5	36.7 ⁻⁴⁰	5	33.9 ⁻⁵¹	4	30.4 ⁻⁶¹	4	26.1 ⁻⁶⁹	4	21.3 ⁻⁷⁷	4	15.9 ⁻⁸⁴	3	10.1 ⁻⁸⁹	3	3.9 ⁻⁹⁴	2	-5.5 ⁻⁹⁷	1	-15.1																	
Jan 30	30	40.7 ⁻⁶	6	40.3 ⁻¹⁸	6	39.1 ⁻³⁰	5	37.0 ⁻⁴¹	5	34.2 ⁻⁵¹	5	30.6 ⁻⁶¹	5	26.4 ⁻⁷⁰	4	21.5 ⁻⁷⁸	4	16.1 ⁻⁸⁵	3	10.2 ⁻⁹⁰	3	3.9 ⁻⁹⁵	2	-5.5 ⁻⁹⁸	2	-15.3																	
Jan 31	31	41.1 ⁻⁶	6	40.7 ⁻¹⁸	6	39.5 ⁻³⁰	6	37.4 ⁻⁴¹	6	34.5 ⁻⁵²	6	30.9 ⁻⁶²	5	26.6 ⁻⁷¹	5	21.7 ⁻⁷⁹	4	16.2 ⁻⁸⁵	4	10.3 ⁻⁹¹	3	3.9 ⁻⁹⁶	3	-5.6 ⁻⁹⁹	2	-15.4																	
Feb 1	1	41.6 ⁻⁶	7	41.1 ⁻¹⁸	7	39.9 ⁻³⁰	7	37.8 ⁻⁴²	6	34.9 ⁻⁵²	6	31.2 ⁻⁶²	6	26.9 ⁻⁷¹	5	21.9 ⁻⁸⁰	5	16.4 ⁻⁸⁶	4	10.4 ⁻⁹²	4	4.0 ⁻⁹⁷	3	-5.6 ⁻¹⁰⁰	2	-15.6																	
Feb 2	2	42.0 ⁻⁶	7	41.6 ⁻¹⁸	7	40.3 ⁻³⁰	7	38.2 ⁻⁴²	7	35.3 ⁻⁵³	6	31.6 ⁻⁶³	6	27.2 ⁻⁷²	5	22.2 ⁻⁸⁰	5	16.6 ⁻⁸⁷	4	10.5 ⁻⁹³	4	4.0 ⁻⁹⁸	3	-5.7 ⁻¹⁰¹	2	-15.7																	
Feb 3	3	42.5 ⁻⁶	7	42.1 ⁻¹⁹	7	40.8 ⁻³¹	7	38.6 ⁻⁴³	7	35.7 ⁻⁵⁴	6	32.0 ⁻⁶⁴	6	27.5 ⁻⁷³	5	22.4 ⁻⁸¹	5	16.8 ⁻⁸⁸	4	10.6 ⁻⁹⁴	4	4.1 ⁻⁹⁹	3	-5.8 ⁻¹⁰²	2	-15.9																	
Feb 4	4	43.0 ⁻⁶	7	42.6 ⁻¹⁹	6	41.3 ⁻³¹	6	39.1 ⁻⁴³	6	36.1 ⁻⁵⁴	6	32.3 ⁻⁶⁵	5	27.8 ⁻⁷⁴	5	22.7 ⁻⁸²	5	16.9 ⁻⁸⁹	4	10.7 ⁻⁹⁵	3	4.1 ⁻¹⁰⁰	3	-5.8 ⁻¹⁰³	2	-16.1																	
Feb 5	5	43.5 ⁻⁶	5	43.0 ⁻¹⁹	5	41.7 ⁻³¹	5	39.5 ⁻⁴³	5	36.5 ⁻⁵⁵	5	32.7 ⁻⁶⁵	4	28.1 ⁻⁷⁵	4	22.9 ⁻⁸³	4	17.1 ⁻⁹⁰	3	10.8 ⁻⁹⁶	3	4.2 ⁻¹⁰¹	2	-5.9 ⁻¹⁰⁴	2	-16.3																	
Feb 6	6	43.8 ⁻⁶	3	43.4 ⁻¹⁹	3	42.0 ⁻³²	3	39.8 ⁻⁴⁴	3	36.8 ⁻⁵⁵	3	32.9 ⁻⁶⁶	3	28.3 ⁻⁷⁵	3	23.1 ⁻⁸⁴	2	17.3 ⁻⁹¹	2	10.9 ⁻⁹⁷	2	4.2 ⁻¹⁰²	1	-6.0 ⁻¹⁰⁵	1	-16.4																	
Feb 7	7	44.1 ⁻⁶	1	43.6 ⁻¹⁹	1	42.3 ⁻³²	1	40.0 ⁻⁴⁴	1	37.0 ⁻⁵⁵	1	33.1 ⁻⁶⁶	1	28.5 ⁻⁷⁵	1	23.2 ⁻⁸⁴	1	17.4 ⁻⁹¹	1	11.0 ⁻⁹⁷	0	4.2 ⁻¹⁰²	0	-6.0 ⁻¹⁰⁵	0	-16.5																	
Feb 8	8	44.1 ⁻⁶	-2	43.7 ⁻¹⁹	-2	42.3 ⁻³²	-2	40.1 ⁻⁴⁴	-2	37.0 ⁻⁵⁵	-2	33.2 ⁻⁶⁶	-2	28.5 ⁻⁷⁵	-1	23.3 ⁻⁸⁴	-1	17.4 ⁻⁹¹	-1	11.0 ⁻⁹⁷	-1	4.2 ⁻¹⁰²	-1	-6.0 ⁻¹⁰⁵	-1	-16.5																	
Feb 9	9	44.0 ⁻⁶	-5	43.5 ⁻¹⁹	-5	42.2 ⁻³²	-4	40.0 ⁻⁴⁴	-4	36.9 ⁻⁵⁵	-4	33.1 ⁻⁶⁵	-4	28.5 ⁻⁷⁵	-4	23.2 ⁻⁸³	-3	17.3 ⁻⁹¹	-3	11.0 ⁻⁹⁶	-2	4.2 ⁻¹⁰¹	-2	-6.0 ⁻¹⁰⁵	-1	-16.5																	
Feb 10	10	43.7 ⁻⁶	-7	43.2 ⁻¹⁹	-7	41.9 ⁻³¹	-7	39.7 ⁻⁴³	-7	36.6 ⁻⁵⁴	-6	32.8 ⁻⁶⁵	-6	28.3 ⁻⁷⁴	-5																												

Lower Limb																																													
Altitude degrees																																													
	0			7			14			21			28			35			42			49			56			63			70			80			90								
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Feb 16	70.3	⁻⁶	₋₆	69.9	⁻¹⁷	₋₆	68.7	⁻²⁹	₋₅	66.7	⁻⁴⁰	₋₅	63.9	⁻⁵⁰	₋₅	60.3	⁻⁶⁰	₋₅	56.1	⁻⁶⁸	₋₄	51.3	⁻⁷⁶	₋₄	46.0	⁻⁸³	₋₃	40.2	⁻⁸⁸	₋₃	34.0	⁻⁹³	₋₂	24.7	⁻⁹⁶	₋₂	15.1								
Feb 17	69.7	⁻⁶	₋₄	69.2	⁻¹⁷	₋₄	68.0	⁻²⁹	₋₄	66.0	⁻³⁹	₋₄	63.2	⁻⁵⁰	₋₃	59.8	⁻⁵⁹	₋₃	55.6	⁻⁶⁸	₋₃	50.8	⁻⁷⁵	₋₃	45.5	⁻⁸²	₋₂	39.8	⁻⁸⁷	₋₂	33.6	⁻⁹²	₋₂	24.4	⁻⁹⁵	₋₁	14.9								
Feb 18	69.2	⁻⁶	₋₂	68.8	⁻¹⁷	₋₂	67.6	⁻²⁸	₋₂	65.6	⁻³⁹	₋₂	62.8	⁻⁴⁹	₋₂	59.3	⁻⁵⁹	₋₂	55.2	⁻⁶⁸	₋₂	50.5	⁻⁷⁵	₋₁	45.2	⁻⁸²	₋₁	39.5	⁻⁸⁷	₋₁	33.4	⁻⁹¹	₋₁	24.3	⁻⁹⁴	₋₁	14.8								
Feb 19	68.9	⁻⁶	₀	68.5	⁻¹⁷	₀	67.3	⁻²⁸	₀	65.3	⁻³⁹	₀	62.6	⁻⁴⁹	₀	59.1	⁻⁵⁹	₀	55.0	⁻⁶⁷	₀	50.3	⁻⁷⁵	₀	45.1	⁻⁸¹	₀	39.4	⁻⁸⁷	₀	33.3	⁻⁹¹	₀	24.2	⁻⁹⁴	₀	14.8								
Feb 20	68.9	⁻⁶	₁	68.5	⁻¹⁷	₁	67.3	⁻²⁸	₁	65.3	⁻³⁹	₁	62.5	⁻⁴⁹	₁	59.1	⁻⁵⁹	₁	55.0	⁻⁶⁷	₁	50.3	⁻⁷⁵	₁	45.0	⁻⁸¹	₁	39.3	⁻⁸⁷	₁	33.3	⁻⁹¹	₁	24.2	⁻⁹⁴	₀	14.8								
Feb 21	69.0	⁻⁶	₃	68.6	⁻¹⁷	₃	67.4	⁻²⁹	₂	65.4	⁻³⁹	₂	62.7	⁻⁵⁰	₂	59.2	⁻⁵⁹	₂	55.1	⁻⁶⁸	₂	50.4	⁻⁷⁵	₂	45.1	⁻⁸²	₂	39.4	⁻⁸⁷	₁	33.3	⁻⁹²	₁	24.2	⁻⁹⁴	₁	14.8								
Feb 22	69.3	⁻⁶	₄	68.9	⁻¹⁷	₄	67.7	⁻²⁹	₄	65.7	⁻⁴⁰	₃	63.0	⁻⁵⁰	₃	59.5	⁻⁵⁹	₃	55.3	⁻⁶⁸	₃	50.6	⁻⁷⁶	₃	45.3	⁻⁸²	₂	39.6	⁻⁸⁷	₂	33.5	⁻⁹²	₂	24.3	⁻⁹⁵	₁	14.8								
Feb 23	69.8	⁻⁶	₄	69.4	⁻¹⁷	₄	68.2	⁻²⁹	₄	66.1	⁻⁴⁰	₄	63.4	⁻⁵⁰	₄	59.9	⁻⁶⁰	₄	55.7	⁻⁶⁸	₃	50.9	⁻⁷⁶	₃	45.6	⁻⁸³	₃	39.8	⁻⁸⁸	₂	33.7	⁻⁹³	₂	24.5	⁻⁹⁶	₁	14.9								
Feb 24	70.3	⁻⁶	₅	69.9	⁻¹⁸	₅	68.7	⁻²⁹	₅	66.6	⁻⁴⁰	₅	63.8	⁻⁵¹	₄	60.3	⁻⁶⁰	₄	56.1	⁻⁶⁹	₄	51.3	⁻⁷⁷	₃	46.0	⁻⁸³	₃	40.1	⁻⁸⁹	₃	34.0	⁻⁹³	₂	24.7	⁻⁹⁶	₁	15.1								
Feb 25	70.9	⁻⁶	₅	70.5	⁻¹⁸	₅	69.2	⁻²⁹	₅	67.2	⁻⁴⁰	₅	64.4	⁻⁵¹	₅	60.8	⁻⁶¹	₄	56.6	⁻⁷⁰	₄	51.7	⁻⁷⁷	₄	46.3	⁻⁸⁴	₃	40.5	⁻⁹⁰	₃	34.2	⁻⁹⁴	₂	24.9	⁻⁹⁷	₁	15.2								
Feb 26	71.5	⁻⁶	₅	71.1	⁻¹⁸	₅	69.9	⁻³⁰	₅	67.8	⁻⁴¹	₅	64.9	⁻⁵¹	₅	61.4	⁻⁶¹	₄	57.1	⁻⁷⁰	₄	52.2	⁻⁷⁸	₄	46.7	⁻⁸⁵	₃	40.8	⁻⁹⁰	₃	34.5	⁻⁹⁵	₂	25.1	⁻⁹⁸	₁	15.3								
Feb 27	72.2	⁻⁶	₅	71.7	⁻¹⁸	₅	70.5	⁻³⁰	₅	68.4	⁻⁴¹	₅	65.5	⁻⁵²	₅	61.9	⁻⁶²	₄	57.6	⁻⁷¹	₄	52.6	⁻⁷⁹	₄	47.2	⁻⁸⁶	₃	41.2	⁻⁹¹	₃	34.8	⁻⁹⁶	₂	25.3	⁻⁹⁹	₁	15.4								
Feb 28	72.8	⁻⁶	₅	72.3	⁻¹⁸	₅	71.1	⁻³⁰	₅	69.0	⁻⁴²	₅	66.1	⁻⁵²	₄	62.4	⁻⁶²	₄	58.1	⁻⁷¹	₄	53.1	⁻⁷⁹	₃	47.6	⁻⁸⁶	₃	41.5	⁻⁹²	₃	35.1	⁻⁹⁷	₂	25.5	⁻¹⁰⁰	₁	15.6								
Mar 1	73.4	⁻⁶	₅	72.9	⁻¹⁸	₅	71.7	⁻³⁰	₅	69.5	⁻⁴²	₄	66.6	⁻⁵³	₄	62.9	⁻⁶³	₄	58.6	⁻⁷²	₄	53.5	⁻⁸⁰	₃	47.9	⁻⁸⁷	₃	41.9	⁻⁹³	₃	35.4	⁻⁹⁷	₂	25.7	⁻¹⁰¹	₁	15.7								
Mar 2	73.9	⁻⁶	₅	73.5	⁻¹⁹	₄	72.2	⁻³¹	₄	70.1	⁻⁴²	₄	67.1	⁻⁵³	₄	63.4	⁻⁶³	₄	59.0	⁻⁷³	₃	54.0	⁻⁸¹	₃	48.3	⁻⁸⁸	₃	42.2	⁻⁹³	₂	35.7	⁻⁹⁸	₂	25.9	⁻¹⁰¹	₁	15.8								
Mar 3	74.5	⁻⁶	₄	74.0	⁻¹⁹	₄	72.7	⁻³¹	₄	70.6	⁻⁴²	₄	67.6	⁻⁵⁴	₄	63.9	⁻⁶⁴	₃	59.4	⁻⁷³	₃	54.3	⁻⁸¹	₃	48.7	⁻⁸⁸	₃	42.5	⁻⁹⁴	₂	36.0	⁻⁹⁹	₂	26.1	⁻¹⁰²	₁	15.9								
Mar 4	75.0	⁻⁶	₄	74.5	⁻¹⁹	₄	73.2	⁻³¹	₄	71.1	⁻⁴³	₃	68.1	⁻⁵⁴	₃	64.3	⁻⁶⁴	₃	59.8	⁻⁷⁴	₃	54.7	⁻⁸²	₃	49.0	⁻⁸⁹	₂	42.8	⁻⁹⁵	₂	36.2	⁻¹⁰⁰	₂	26.3	⁻¹⁰³	₁	16.1								
Mar 5	75.4	⁻⁶	₃	75.0	⁻¹⁹	₃	73.7	⁻³¹	₃	71.5	⁻⁴³	₃	68.5	⁻⁵⁴	₃	64.7	⁻⁶⁵	₂	60.2	⁻⁷⁴	₂	55.0	⁻⁸²	₂	49.3	⁻⁸⁹	₂	43.1	⁻⁹⁵	₂	36.4	⁻¹⁰⁰	₁	26.4	⁻¹⁰³	₁	16.2								
Mar 6	75.8	⁻⁶	₂	75.3	⁻¹⁹	₂	74.0	⁻³¹	₂	71.8	⁻⁴³	₂	68.8	⁻⁵⁴	₂	65.0	⁻⁶⁵	₁	60.5	⁻⁷⁴	₁	55.3	⁻⁸³	₁	49.5	⁻⁹⁰	₁	43.3	⁻⁹⁵	₁	36.6	⁻¹⁰⁰	₁	26.6	⁻¹⁰⁴	₀	16.2								
Mar 7	76.0	⁻⁶	₀	75.5	⁻¹⁹	₀	74.2	⁻³¹	₀	72.0	⁻⁴³	₀	69.0	⁻⁵⁴	₀	65.2	⁻⁶⁵	₀	60.6	⁻⁷⁴	₀	55.4	⁻⁸³	₀	49.7	⁻⁹⁰	₀	43.4	⁻⁹⁶	₀	36.7	⁻¹⁰¹	₀	26.6	⁻¹⁰⁴	₀	16.3								
Mar 8	76.0	⁻⁶	₋₂	75.6	⁻¹⁹	₋₂	74.2	⁻³¹	₋₂	72.0	⁻⁴³	₋₁	69.0	⁻⁵⁴	₋₁	65.2	⁻⁶⁵	₋₁	60.7	⁻⁷⁴	₋₁	55.5	⁻⁸³	₋₁	49.7	⁻⁹⁰	₋₁	43.4	⁻⁹⁵	₋₁	36.7	⁻¹⁰⁰	₋₁	26.6	⁻¹⁰⁴	₀	16.3								
Mar 9	75.8	⁻⁶	₋₃	75.4	⁻¹⁹	₋₃	74.0	⁻³¹	₋₃	71.9	⁻⁴³	₋₃	68.8	⁻⁵⁴	₋₃	65.0	⁻⁶⁵	₋₃	60.5	⁻⁷⁴	₋₃	55.3	⁻⁸²	₋₂	49.6	⁻⁸⁹	₋₂	43.3	⁻⁹⁵	₋₂	36.6	⁻¹⁰⁰	₋₁	26.6	⁻¹⁰³	₋₁	16.2								
Mar 10	75.4	⁻⁶	₋₅	75.0	⁻¹⁹	₋₅	73.6	⁻³¹	₋₅	71.5	⁻⁴³	₋₅	68.5	⁻⁵⁴	₋₅	64.7	⁻⁶⁴	₋₄	60.2	⁻⁷³	₋₄	55.0	⁻⁸²	₋₄	49.3	⁻⁸⁹	₋₃	43.0	⁻⁹⁴	₋₃	36.4	⁻⁹⁹	₋₂	26.4	⁻¹⁰²	₋₁	16.1								
Mar 11	74.8	⁻⁶	₋₇	74.3	⁻¹⁹	₋₇	73.0	⁻³¹	₋₆	70.9	⁻⁴²	₋₆	67.9	⁻⁵³	₋₆	64.1	⁻⁶³	₋₆	59.7	⁻⁷³	₋₅	54.6	⁻⁸¹	₋₅	48.9	⁻⁸⁸	₋₄	42.7	⁻⁹³	₋₄	36.1	⁻⁹⁸	₋₃	26.2	⁻¹⁰¹	₋₂	16.0								
Mar 12	74.0	⁻⁶	₋₈	73.5	⁻¹⁸	₋₈	72.2	⁻³⁰	₋₇	70.1	⁻⁴²	₋₇	67.2	⁻⁵³	₋₇	63.4	⁻⁶³	₋₆	59.0	⁻⁷²	₋₆	54.0	⁻⁸⁰	₋₅	48.3	⁻⁸⁷	₋₅	42.2	⁻⁹²	₋₄	35.7	⁻⁹⁷	₋₃	25.9	⁻¹⁰⁰	₋₂	15.8								
Mar 13	73.0	⁻⁶	₋₈	72.6	⁻¹⁸	₋₈	71.3	⁻³⁰	₋₈	69.2	⁻⁴¹	₋₇	66.3	⁻⁵²	₋₇	62.7	⁻⁶²	₋₇	58.3	⁻⁷¹	₋₆	53.3	⁻⁷⁹	₋₅	47.7	⁻⁸⁶	₋₅	41.7	⁻⁹¹	₋₄	35.3	⁻⁹⁶	₋₃	25.6	⁻⁹⁹	₋₂	15.6								
Mar 14	72.1	⁻⁶	₋₈	71.7	⁻¹⁸	₋₇	70.4	⁻³⁰	₋₇	68.3	⁻⁴¹	₋₇	65.5	⁻⁵¹	₋₇	61.8	⁻⁶¹	₋₆	57.5	⁻⁷⁰	₋₆	52.6	⁻⁷⁸	₋₅	47.1	⁻⁸⁵	₋₅	41.2	⁻⁹⁰	₋₄	34.8	⁻⁹⁵	₋₃	25.3	⁻⁹⁸	₋₂	15.4								
Mar 15	71.2	⁻⁶	₋₇	70.8	⁻¹⁸	₋₇	69.5	⁻²⁹	₋₆	67.5	⁻⁴⁰	₋₆	64.6	⁻⁵¹	₋₆	61.1	⁻⁶⁰	₋₆	56.8	⁻⁶⁹	₋₅	51.9	⁻⁷⁷	₋₅	46.5	⁻⁸⁴	₋₄	40.6	⁻⁸⁹	₋₄	34.4	⁻⁹⁴	₋₃	25.0	⁻⁹⁷	₋₂	15.2								
Mar 16	70.4	⁻⁶	₋₅	70.0	⁻¹⁸	₋₅	68.7	⁻²⁹	₋₅	66.7	⁻⁴⁰	₋₅	63.9	⁻⁵⁰	₋₅	60.4	⁻⁶⁰	₋₄	56.2	⁻⁶⁹	₋₄	51.4	⁻⁷⁶	₋₄	46.0	⁻⁸³	₋₃	40.2	⁻⁸⁸	₋₃	34.0	⁻⁹³	₋₂	24.7	⁻⁹⁶	₋₂	15.1								
Mar 17	69.7	⁻⁶	₋₄	69.3	⁻¹⁷	₋₄	68.1	⁻²⁹	₋₄	66.1	⁻⁴⁰	₋₃	63.3	⁻⁵⁰	₋₃	59.8	⁻⁵⁹	₋₃	55.7	⁻⁶⁸	₋₃	50.9	⁻⁷⁶	₋₃	45.6	⁻⁸²	₋₂	39.8	⁻⁸⁷	₋₂	33.7	⁻⁹²	₋₂	24.4	⁻⁹⁵	₋₁	14.9								
Mar 18	69.3	⁻⁶	₋₂	68.9	⁻¹⁷	₋₂	67.7	⁻²⁹	₋₂	65.7	⁻³⁹	₋₂	62.9	⁻⁵⁰	₋₂	59.4	⁻⁵⁹	₋₂	55.3	⁻⁶⁸	₋₁	50.6	⁻⁷⁵	₋₁	45.3	⁻⁸²	₋₁	39.6	⁻⁸⁷	₋₁	33.5	⁻⁹²	₋₁												

2009

Moon Parallax and Semi-diameter

Upper Limb																																										
Altitude degrees																																										
	0			7			14			21			28			35			42			49			56			63			70			80			90					
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Feb 16	40.2	⁻⁶	₋₆	39.8	⁻¹⁷	₋₆	38.6	⁻²⁹	₋₅	36.5	⁻⁴⁰	₋₅	33.7	⁻⁵⁰	₋₅	30.2	⁻⁶⁰	₋₅	26.0	⁻⁶⁸	₋₄	21.2	⁻⁷⁶	₋₄	15.8	⁻⁸³	₋₃	10.0	⁻⁸⁸	₋₃	3.8	⁻⁹³	₋₂	-5.5	⁻⁹⁶	₋₂	-15.1					
Feb 17	39.8	⁻⁶	₋₄	39.4	⁻¹⁷	₋₄	38.2	⁻²⁹	₋₄	36.2	⁻³⁹	₋₄	33.4	⁻⁵⁰	₋₃	29.9	⁻⁵⁹	₋₃	25.8	⁻⁶⁸	₋₃	21.0	⁻⁷⁵	₋₃	15.7	⁻⁸²	₋₂	9.9	⁻⁸⁷	₋₂	3.8	⁻⁹²	₋₂	-5.4	⁻⁹⁵	₋₁	-14.9					
Feb 18	39.6	⁻⁶	₋₂	39.1	⁻¹⁷	₋₂	37.9	⁻²⁸	₋₂	35.9	⁻³⁹	₋₂	33.2	⁻⁴⁹	₋₂	29.7	⁻⁵⁹	₋₂	25.6	⁻⁶⁸	₋₂	20.9	⁻⁷⁵	₋₁	15.6	⁻⁸²	₋₁	9.9	⁻⁸⁷	₋₁	3.8	⁻⁹¹	₋₁	-5.4	⁻⁹⁴	₋₁	-14.8					
Feb 19	39.4	⁻⁶	₀	39.0	⁻¹⁷	₀	37.8	⁻²⁸	₀	35.8	⁻³⁹	₀	33.1	⁻⁴⁹	₀	29.6	⁻⁵⁹	₀	25.5	⁻⁶⁷	₀	20.8	⁻⁷⁵	₀	15.5	⁻⁸¹	₀	9.8	⁻⁸⁷	₀	3.8	⁻⁹¹	₀	-5.4	⁻⁹⁴	₀	-14.8					
Feb 20	39.4	⁻⁶	₁	39.0	⁻¹⁷	₁	37.8	⁻²⁸	₁	35.8	⁻³⁹	₁	33.0	⁻⁴⁹	₁	29.6	⁻⁵⁹	₁	25.5	⁻⁶⁷	₁	20.8	⁻⁷⁵	₁	15.5	⁻⁸¹	₁	9.8	⁻⁸⁷	₁	3.8	⁻⁹¹	₁	-5.4	⁻⁹⁴	₀	-14.8					
Feb 21	39.5	⁻⁶	₃	39.1	⁻¹⁷	₃	37.9	⁻²⁹	₂	35.9	⁻³⁹	₂	33.1	⁻⁵⁰	₂	29.7	⁻⁵⁹	₂	25.5	⁻⁶⁸	₂	20.8	⁻⁷⁵	₂	15.6	⁻⁸²	₂	9.8	⁻⁸⁷	₁	3.8	⁻⁹²	₁	-5.4	⁻⁹⁴	₁	-14.8					
Feb 22	39.6	⁻⁶	₄	39.2	⁻¹⁷	₄	38.0	⁻²⁹	₄	36.0	⁻⁴⁰	₃	33.3	⁻⁵⁰	₃	29.8	⁻⁵⁹	₃	25.6	⁻⁶⁸	₃	20.9	⁻⁷⁶	₃	15.6	⁻⁸²	₂	9.9	⁻⁸⁷	₂	3.8	⁻⁹²	₂	-5.4	⁻⁹⁵	₁	-14.8					
Feb 23	39.9	⁻⁶	₄	39.5	⁻¹⁷	₄	38.3	⁻²⁹	₄	36.3	⁻⁴⁰	₄	33.5	⁻⁵⁰	₄	30.0	⁻⁶⁰	₄	25.8	⁻⁶⁸	₃	21.0	⁻⁷⁶	₃	15.7	⁻⁸³	₃	10.0	⁻⁸⁸	₂	3.8	⁻⁹³	₂	-5.4	⁻⁹⁶	₁	-14.9					
Feb 24	40.2	⁻⁶	₅	39.8	⁻¹⁸	₅	38.6	⁻²⁹	₅	36.5	⁻⁴⁰	₅	33.7	⁻⁵¹	₄	30.2	⁻⁶⁰	₄	26.0	⁻⁶⁹	₄	21.2	⁻⁷⁷	₃	15.8	⁻⁸³	₃	10.0	⁻⁸⁹	₃	3.8	⁻⁹³	₂	-5.5	⁻⁹⁶	₁	-15.1					
Feb 25	40.5	⁻⁶	₅	40.1	⁻¹⁸	₅	38.9	⁻²⁹	₅	36.8	⁻⁴⁰	₅	34.0	⁻⁵¹	₅	30.5	⁻⁶¹	₄	26.2	⁻⁷⁰	₄	21.4	⁻⁷⁷	₄	16.0	⁻⁸⁴	₃	10.1	⁻⁹⁰	₃	3.9	⁻⁹⁴	₂	-5.5	⁻⁹⁷	₁	-15.2					
Feb 26	40.9	⁻⁶	₅	40.5	⁻¹⁸	₅	39.2	⁻³⁰	₅	37.2	⁻⁴¹	₅	34.3	⁻⁵¹	₅	30.7	⁻⁶¹	₄	26.5	⁻⁷⁰	₄	21.6	⁻⁷⁸	₄	16.1	⁻⁸⁵	₃	10.2	⁻⁹⁰	₃	3.9	⁻⁹⁵	₂	-5.6	⁻⁹⁸	₁	-15.3					
Feb 27	41.2	⁻⁶	₅	40.8	⁻¹⁸	₅	39.6	⁻³⁰	₅	37.5	⁻⁴¹	₅	34.6	⁻⁵²	₅	31.0	⁻⁶²	₄	26.7	⁻⁷¹	₄	21.7	⁻⁷⁹	₄	16.3	⁻⁸⁶	₃	10.3	⁻⁹¹	₃	3.9	⁻⁹⁶	₂	-5.6	⁻⁹⁹	₁	-15.4					
Feb 28	41.6	⁻⁶	₅	41.2	⁻¹⁸	₅	39.9	⁻³⁰	₅	37.8	⁻⁴²	₅	34.9	⁻⁵²	₄	31.3	⁻⁶²	₄	26.9	⁻⁷¹	₄	21.9	⁻⁷⁹	₃	16.4	⁻⁸⁶	₃	10.4	⁻⁹²	₃	4.0	⁻⁹⁷	₂	-5.7	⁻¹⁰⁰	₁	-15.6					
Mar 1	41.9	⁻⁶	₅	41.5	⁻¹⁸	₅	40.2	⁻³⁰	₅	38.1	⁻⁴²	₄	35.2	⁻⁵³	₄	31.5	⁻⁶³	₄	27.1	⁻⁷²	₄	22.1	⁻⁸⁰	₃	16.5	⁻⁸⁷	₃	10.5	⁻⁹³	₃	4.0	⁻⁹⁷	₂	-5.7	⁻¹⁰¹	₁	-15.7					
Mar 2	42.3	⁻⁶	₅	41.8	⁻¹⁹	₄	40.5	⁻³¹	₄	38.4	⁻⁴²	₄	35.5	⁻⁵³	₄	31.8	⁻⁶³	₄	27.3	⁻⁷³	₃	22.3	⁻⁸¹	₃	16.7	⁻⁸⁸	₃	10.5	⁻⁹³	₂	4.0	⁻⁹⁸	₂	-5.7	⁻¹⁰¹	₁	-15.8					
Mar 3	42.6	⁻⁶	₄	42.1	⁻¹⁹	₄	40.8	⁻³¹	₄	38.7	⁻⁴²	₄	35.7	⁻⁵⁴	₄	32.0	⁻⁶⁴	₃	27.5	⁻⁷³	₃	22.4	⁻⁸¹	₃	16.8	⁻⁸⁸	₃	10.6	⁻⁹⁴	₂	4.1	⁻⁹⁹	₂	-5.8	⁻¹⁰²	₁	-15.9					
Mar 4	42.9	⁻⁶	₄	42.4	⁻¹⁹	₄	41.1	⁻³¹	₄	39.0	⁻⁴³	₃	36.0	⁻⁵⁴	₃	32.2	⁻⁶⁴	₃	27.7	⁻⁷⁴	₃	22.6	⁻⁸²	₃	16.9	⁻⁸⁹	₂	10.7	⁻⁹⁵	₂	4.1	⁻¹⁰⁰	₂	-5.8	⁻¹⁰³	₁	-16.1					
Mar 5	43.1	⁻⁶	₃	42.7	⁻¹⁹	₃	41.4	⁻³¹	₃	39.2	⁻⁴³	₃	36.2	⁻⁵⁴	₃	32.4	⁻⁶⁵	₂	27.9	⁻⁷⁴	₂	22.7	⁻⁸²	₂	17.0	⁻⁸⁹	₂	10.8	⁻⁹⁵	₂	4.1	⁻¹⁰⁰	₁	-5.9	⁻¹⁰³	₁	-16.2					
Mar 6	43.3	⁻⁶	₂	42.9	⁻¹⁹	₂	41.5	⁻³¹	₂	39.4	⁻⁴³	₂	36.3	⁻⁵⁴	₂	32.5	⁻⁶⁵	₁	28.0	⁻⁷⁴	₁	22.8	⁻⁸³	₁	17.1	⁻⁹⁰	₁	10.8	⁻⁹⁵	₁	4.1	⁻¹⁰⁰	₁	-5.9	⁻¹⁰⁴	₀	-16.2					
Mar 7	43.4	⁻⁶	₀	43.0	⁻¹⁹	₀	41.7	⁻³¹	₀	39.5	⁻⁴³	₀	36.4	⁻⁵⁴	₀	32.6	⁻⁶⁵	₀	28.1	⁻⁷⁴	₀	22.9	⁻⁸³	₀	17.1	⁻⁹⁰	₀	10.8	⁻⁹⁶	₀	4.2	⁻¹⁰¹	₀	-5.9	⁻¹⁰⁴	₀	-16.3					
Mar 8	43.5	⁻⁶	₋₂	43.0	⁻¹⁹	₋₂	41.7	⁻³¹	₋₂	39.5	⁻⁴³	₋₁	36.5	⁻⁵⁴	₋₁	32.6	⁻⁶⁵	₋₁	28.1	⁻⁷⁴	₋₁	22.9	⁻⁸³	₋₁	17.1	⁻⁹⁰	₋₁	10.8	⁻⁹⁵	₋₁	4.2	⁻¹⁰⁰	₋₁	-5.9	⁻¹⁰⁴	₀	-16.3					
Mar 9	43.3	⁻⁶	₋₃	42.9	⁻¹⁹	₋₃	41.6	⁻³¹	₋₃	39.4	⁻⁴³	₋₃	36.4	⁻⁵⁴	₋₃	32.6	⁻⁶⁵	₋₃	28.0	⁻⁷⁴	₋₃	22.9	⁻⁸²	₋₂	17.1	⁻⁸⁹	₋₂	10.8	⁻⁹⁵	₋₂	4.1	⁻¹⁰⁰	₋₁	-5.9	⁻¹⁰³	₋₁	-16.2					
Mar 10	43.1	⁻⁶	₋₅	42.7	⁻¹⁹	₋₅	41.3	⁻³¹	₋₅	39.2	⁻⁴³	₋₅	36.2	⁻⁵⁴	₋₅	32.4	⁻⁶⁴	₋₄	27.9	⁻⁷³	₋₄	22.7	⁻⁸²	₋₄	17.0	⁻⁸⁹	₋₃	10.8	⁻⁹⁴	₋₃	4.1	⁻⁹⁹	₋₂	-5.9	⁻¹⁰²	₋₁	-16.1					
Mar 11	42.7	⁻⁶	₋₇	42.3	⁻¹⁹	₋₇	41.0	⁻³¹	₋₆	38.8	⁻⁴²	₋₆	35.9	⁻⁵³	₋₆	32.1	⁻⁶³	₋₆	27.7	⁻⁷³	₋₅	22.5	⁻⁸¹	₋₅	16.8	⁻⁸⁸	₋₄	10.7	⁻⁹³	₋₄	4.1	⁻⁹⁸	₋₃	-5.8	⁻¹⁰¹	₋₂	-16.0					
Mar 12	42.3	⁻⁶	₋₈	41.8	⁻¹⁸	₋₈	40.6	⁻³⁰	₋₇	38.4	⁻⁴²	₋₇	35.5	⁻⁵³	₋₇	31.8	⁻⁶³	₋₆	27.4	⁻⁷²	₋₆	22.3	⁻⁸⁰	₋₅	16.7	⁻⁸⁷	₋₅	10.5	⁻⁹²	₋₄	4.0	⁻⁹⁷	₋₃	-5.7	⁻¹⁰⁰	₋₂	-15.8					
Mar 13	41.8	⁻⁶	₋₈	41.3	⁻¹⁸	₋₈	40.1	⁻³⁰	₋₈	37.9	⁻⁴¹	₋₇	35.0	⁻⁵²	₋₇	31.4	⁻⁶²	₋₇	27.0	⁻⁷¹	₋₆	22.0	⁻⁷⁹	₋₅	16.5	⁻⁸⁶	₋₅	10.4	⁻⁹¹	₋₄	4.0	⁻⁹⁶	₋₃	-5.7	⁻⁹⁹	₋₂	-15.6					
Mar 14	41.2	⁻⁶	₋₈	40.8	⁻¹⁸	₋₇	39.5	⁻³⁰	₋₇	37.5	⁻⁴¹	₋₇	34.6	⁻⁵¹	₋₇	31.0	⁻⁶¹	₋₆	26.7	⁻⁷⁰	₋₆	21.7	⁻⁷⁸	₋₅	16.2	⁻⁸⁵	₋₅	10.3	⁻⁹⁰	₋₄	3.9	⁻⁹⁵	₋₃	-5.6	⁻⁹⁸	₋₂	-15.4					
Mar 15	40.7	⁻⁶	₋₇	40.3	⁻¹⁸	₋₇	39.0	⁻²⁹	₋₆	37.0	⁻⁴⁰	₋₆	34.1	⁻⁵¹	₋₆	30.6	⁻⁶⁰	₋₆	26.3	⁻⁶⁹	₋₅	21.5	⁻⁷⁷	₋₅	16.0	⁻⁸⁴	₋₄	10.2	⁻⁸⁹	₋₄	3.9	⁻⁹⁴	₋₃	-5.5	⁻⁹⁷	₋₂	-15.2					
Mar 16	40.2	⁻⁶	₋₅	39.8	⁻¹⁸	₋₅	38.6	⁻²⁹	₋₅	36.6	⁻⁴⁰	₋₅	33.8	⁻⁵⁰	₋₅	30.2	⁻⁶⁰	₋₄	26.0	⁻⁶⁹	₋₄	21.2	⁻⁷⁶	₋₄	15.9	⁻⁸³	₋₃	10.0	⁻⁸⁸	₋₃	3.8	⁻⁹³	₋₂	-5.5	⁻⁹⁶	₋₂	-15.1					
Mar 17	39.9	⁻⁶	₋₄	39.5	⁻¹⁷	₋₄	38.2	⁻²⁹	₋₄	36.2	⁻⁴⁰	₋₃	33.5	⁻⁵⁰	₋₃	30.0	⁻⁵⁹	₋₃	25.8	⁻⁶⁸	₋₃	21.0	⁻⁷⁶	₋₃	15.7	⁻⁸²	₋₂	9.9	⁻⁸⁷	₋₂	3.8	⁻⁹²	₋₂	-5.4	⁻⁹⁵	₋₁	-14.9					
Mar 18	39.6	⁻⁶	₋₂	39.2	⁻¹⁷	₋₂	38.0	⁻²⁹	₋₂	36.0	⁻³⁹	₋₂	33.2	⁻⁵⁰	₋₂	29.8	⁻⁵⁹	₋₂	25.6	⁻⁶⁸	₋₁	20.9	⁻⁷⁵	₋₁	15.6	⁻⁸²	₋₁	9.9	⁻⁸⁷	₋₁	3.8	⁻⁹²	₋₁	-5.4	⁻⁹⁴	₋₁	-14.8					
Mar 19	39.5	⁻⁶	₀	39.																																						

2009

Moon Parallax and Semi-diameter

Lower Limb																																													
Altitude degrees																																													
	0			7			14			21			28			35			42			49			56			63			70			80			90								
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Apr 3	75.4	⁻⁶	₋₁	74.9	⁻¹⁹	₋₁	73.6	⁻³¹	₋₁	71.4	⁻⁴³	₋₁	68.4	⁻⁵⁴	₋₁	64.7	⁻⁶⁴	₋₁	60.1	⁻⁷⁴	₋₁	55.0	⁻⁸²	₋₁	49.3	⁻⁸⁹	₋₁	43.0	⁻⁹⁵	₋₁	36.4	⁻¹⁰⁰	₀	26.4	⁻¹⁰³	₀	16.1								
Apr 4	75.2	⁻⁶	₋₂	74.8	⁻¹⁹	₋₂	73.5	⁻³¹	₋₂	71.3	⁻⁴³	₋₂	68.3	⁻⁵⁴	₋₂	64.5	⁻⁶⁴	₋₂	60.0	⁻⁷³	₋₂	54.9	⁻⁸²	₋₁	49.2	⁻⁸⁹	₋₁	42.9	⁻⁹⁴	₋₁	36.3	⁻⁹⁹	₋₁	26.4	⁻¹⁰²	₋₁	16.1								
Apr 5	75.0	⁻⁶	₋₃	74.6	⁻¹⁹	₋₃	73.2	⁻³¹	₋₃	71.1	⁻⁴³	₋₃	68.1	⁻⁵⁴	₋₃	64.3	⁻⁶⁴	₋₂	59.9	⁻⁷³	₋₂	54.7	⁻⁸¹	₋₂	49.0	⁻⁸⁸	₋₂	42.8	⁻⁹⁴	₋₂	36.2	⁻⁹⁹	₋₁	26.3	⁻¹⁰²	₋₁	16.1								
Apr 6	74.6	⁻⁶	₋₄	74.2	⁻¹⁹	₋₄	72.9	⁻³¹	₋₄	70.8	⁻⁴²	₋₃	67.8	⁻⁵³	₋₃	64.0	⁻⁶⁴	₋₃	59.6	⁻⁷³	₋₃	54.5	⁻⁸¹	₋₃	48.8	⁻⁸⁸	₋₂	42.6	⁻⁹⁴	₋₂	36.0	⁻⁹⁸	₋₂	26.2	⁻¹⁰²	₋₁	16.0								
Apr 7	74.2	⁻⁶	₋₅	73.8	⁻¹⁸	₋₅	72.5	⁻³⁰	₋₄	70.3	⁻⁴²	₋₄	67.4	⁻⁵³	₋₄	63.6	⁻⁶³	₋₄	59.2	⁻⁷²	₋₄	54.1	⁻⁸⁰	₋₃	48.5	⁻⁸⁷	₋₃	42.4	⁻⁹³	₋₂	35.8	⁻⁹⁸	₋₂	26.0	⁻¹⁰¹	₋₁	15.9								
Apr 8	73.6	⁻⁶	₋₅	73.2	⁻¹⁸	₋₅	71.9	⁻³⁰	₋₅	69.8	⁻⁴²	₋₅	66.9	⁻⁵³	₋₅	63.2	⁻⁶³	₋₅	58.8	⁻⁷²	₋₄	53.7	⁻⁸⁰	₋₄	48.1	⁻⁸⁷	₋₃	42.0	⁻⁹²	₋₃	35.6	⁻⁹⁷	₋₂	25.8	⁻¹⁰⁰	₋₂	15.8								
Apr 9	73.0	⁻⁶	₋₆	72.6	⁻¹⁸	₋₆	71.3	⁻³⁰	₋₆	69.2	⁻⁴¹	₋₆	66.3	⁻⁵²	₋₅	62.6	⁻⁶²	₋₅	58.2	⁻⁷¹	₋₅	53.3	⁻⁷⁹	₋₄	47.7	⁻⁸⁶	₋₄	41.7	⁻⁹¹	₋₃	35.2	⁻⁹⁶	₋₂	25.6	⁻⁹⁹	₋₂	15.6								
Apr 10	72.3	⁻⁶	₋₆	71.8	⁻¹⁸	₋₆	70.6	⁻³⁰	₋₆	68.5	⁻⁴¹	₋₆	65.6	⁻⁵¹	₋₅	62.0	⁻⁶¹	₋₅	57.7	⁻⁷⁰	₋₅	52.7	⁻⁷⁸	₋₄	47.2	⁻⁸⁵	₋₄	41.3	⁻⁹⁰	₋₃	34.9	⁻⁹⁵	₋₃	25.3	⁻⁹⁸	₋₂	15.5								
Apr 11	71.5	⁻⁶	₋₆	71.1	⁻¹⁸	₋₆	69.8	⁻²⁹	₋₆	67.8	⁻⁴⁰	₋₆	64.9	⁻⁵¹	₋₅	61.4	⁻⁶¹	₋₅	57.1	⁻⁷⁰	₋₅	52.2	⁻⁷⁷	₋₄	46.7	⁻⁸⁴	₋₄	40.8	⁻⁸⁹	₋₃	34.5	⁻⁹⁴	₋₃	25.1	⁻⁹⁷	₋₂	15.3								
Apr 12	70.8	⁻⁶	₋₅	70.4	⁻¹⁸	₋₅	69.1	⁻²⁹	₋₅	67.1	⁻⁴⁰	₋₅	64.3	⁻⁵⁰	₋₅	60.7	⁻⁶⁰	₋₄	56.5	⁻⁶⁹	₋₄	51.7	⁻⁷⁷	₋₄	46.3	⁻⁸³	₋₃	40.4	⁻⁸⁹	₋₃	34.2	⁻⁹³	₋₂	24.8	⁻⁹⁶	₋₂	15.2								
Apr 13	70.1	⁻⁶	₋₄	69.7	⁻¹⁷	₋₄	68.5	⁻²⁹	₋₄	66.5	⁻⁴⁰	₋₄	63.7	⁻⁵⁰	₋₄	60.2	⁻⁶⁰	₋₄	56.0	⁻⁶⁸	₋₃	51.2	⁻⁷⁶	₋₃	45.8	⁻⁸³	₋₃	40.0	⁻⁸⁸	₋₂	33.9	⁻⁹²	₋₂	24.6	⁻⁹⁵	₋₁	15.0								
Apr 14	69.6	⁻⁶	₋₃	69.2	⁻¹⁷	₋₃	68.0	⁻²⁹	₋₃	66.0	⁻³⁹	₋₃	63.2	⁻⁵⁰	₋₃	59.7	⁻⁵⁹	₋₃	55.6	⁻⁶⁸	₋₂	50.8	⁻⁷⁵	₋₂	45.5	⁻⁸²	₋₂	39.7	⁻⁸⁷	₋₂	33.6	⁻⁹²	₋₁	24.4	⁻⁹⁵	₋₁	14.9								
Apr 15	69.2	⁻⁶	₋₂	68.8	⁻¹⁷	₋₂	67.6	⁻²⁹	₋₁	65.6	⁻³⁹	₋₁	62.9	⁻⁵⁰	₋₁	59.4	⁻⁵⁹	₋₁	55.3	⁻⁶⁸	₋₁	50.5	⁻⁷⁵	₋₁	45.2	⁻⁸²	₋₁	39.5	⁻⁸⁷	₋₁	33.4	⁻⁹¹	₋₁	24.3	⁻⁹⁴	₀	14.8								
Apr 16	69.0	⁻⁶	₀	68.6	⁻¹⁷	₀	67.4	⁻²⁸	₀	65.4	⁻³⁹	₀	62.7	⁻⁴⁹	₀	59.2	⁻⁵⁹	₀	55.1	⁻⁶⁸	₀	50.4	⁻⁷⁵	₀	45.1	⁻⁸²	₀	39.4	⁻⁸⁷	₀	33.3	⁻⁹¹	₀	24.2	⁻⁹⁴	₀	14.8								
Apr 17	69.1	⁻⁶	₂	68.7	⁻¹⁷	₂	67.5	⁻²⁹	₂	65.5	⁻³⁹	₂	62.7	⁻⁵⁰	₂	59.3	⁻⁵⁹	₂	55.1	⁻⁶⁸	₂	50.4	⁻⁷⁵	₁	45.1	⁻⁸²	₁	39.4	⁻⁸⁷	₁	33.4	⁻⁹²	₁	24.2	⁻⁹⁴	₁	14.8								
Apr 18	69.3	⁻⁶	₄	68.9	⁻¹⁷	₄	67.7	⁻²⁹	₄	65.7	⁻⁴⁰	₄	62.9	⁻⁵⁰	₃	59.5	⁻⁵⁹	₃	55.3	⁻⁶⁸	₃	50.6	⁻⁷⁶	₃	45.3	⁻⁸²	₂	39.6	⁻⁸⁷	₂	33.5	⁻⁹²	₂	24.3	⁻⁹⁵	₁	14.8								
Apr 19	69.8	⁻⁶	₅	69.4	⁻¹⁸	₅	68.1	⁻²⁹	₅	66.1	⁻⁴⁰	₅	63.4	⁻⁵⁰	₅	59.9	⁻⁶⁰	₅	55.7	⁻⁶⁹	₄	50.9	⁻⁷⁶	₄	45.6	⁻⁸³	₃	39.8	⁻⁸⁸	₃	33.7	⁻⁹³	₂	24.5	⁻⁹⁶	₂	14.9								
Apr 20	70.4	⁻⁶	₇	70.0	⁻¹⁸	₇	68.8	⁻²⁹	₇	66.8	⁻⁴⁰	₆	64.0	⁻⁵¹	₆	60.4	⁻⁶⁰	₆	56.2	⁻⁶⁹	₅	51.4	⁻⁷⁷	₅	46.0	⁻⁸⁴	₄	40.2	⁻⁸⁹	₄	34.0	⁻⁹⁴	₃	24.7	⁻⁹⁷	₂	15.1								
Apr 21	71.3	⁻⁶	₈	70.8	⁻¹⁸	₈	69.6	⁻³⁰	₇	67.5	⁻⁴¹	₇	64.7	⁻⁵¹	₇	61.1	⁻⁶¹	₆	56.9	⁻⁷⁰	₆	52.0	⁻⁷⁸	₅	46.6	⁻⁸⁵	₅	40.7	⁻⁹⁰	₄	34.4	⁻⁹⁵	₃	25.0	⁻⁹⁸	₂	15.3								
Apr 22	72.2	⁻⁶	₈	71.8	⁻¹⁸	₈	70.5	⁻³⁰	₈	68.4	⁻⁴¹	₈	65.5	⁻⁵²	₇	61.9	⁻⁶²	₇	57.6	⁻⁷¹	₆	52.7	⁻⁷⁹	₆	47.2	⁻⁸⁶	₅	41.2	⁻⁹¹	₄	34.9	⁻⁹⁶	₃	25.3	⁻⁹⁹	₂	15.5								
Apr 23	73.2	⁻⁶	₈	72.7	⁻¹⁸	₈	71.5	⁻³⁰	₈	69.3	⁻⁴²	₇	66.4	⁻⁵³	₇	62.8	⁻⁶³	₇	58.4	⁻⁷²	₆	53.4	⁻⁸⁰	₅	47.8	⁻⁸⁷	₅	41.8	⁻⁹³	₄	35.3	⁻⁹⁷	₃	25.6	⁻¹⁰⁰	₂	15.7								
Apr 24	74.1	⁻⁶	₇	73.7	⁻¹⁹	₇	72.4	⁻³¹	₇	70.2	⁻⁴²	₆	67.3	⁻⁵³	₆	63.6	⁻⁶⁴	₆	59.1	⁻⁷³	₅	54.1	⁻⁸¹	₅	48.4	⁻⁸⁸	₄	42.3	⁻⁹⁴	₄	35.8	⁻⁹⁹	₃	26.0	⁻¹⁰²	₂	15.9								
Apr 25	74.9	⁻⁶	₅	74.5	⁻¹⁹	₅	73.2	⁻³¹	₅	71.0	⁻⁴³	₅	68.1	⁻⁵⁴	₅	64.3	⁻⁶⁴	₅	59.8	⁻⁷⁴	₄	54.7	⁻⁸²	₄	49.0	⁻⁸⁹	₃	42.8	⁻⁹⁵	₃	36.2	⁻¹⁰⁰	₂	26.3	⁻¹⁰³	₂	16.0								
Apr 26	75.6	⁻⁶	₄	75.2	⁻¹⁹	₄	73.8	⁻³¹	₃	71.7	⁻⁴³	₃	68.6	⁻⁵⁴	₃	64.9	⁻⁶⁵	₃	60.3	⁻⁷⁴	₃	55.2	⁻⁸²	₂	49.4	⁻⁹⁰	₂	43.2	⁻⁹⁵	₂	36.5	⁻¹⁰⁰	₁	26.5	⁻¹⁰³	₁	16.2								
Apr 27	76.0	⁻⁶	₂	75.6	⁻¹⁹	₂	74.3	⁻³¹	₁	72.1	⁻⁴³	₁	69.0	⁻⁵⁵	₁	65.2	⁻⁶⁵	₁	60.7	⁻⁷⁴	₁	55.5	⁻⁸³	₁	49.7	⁻⁹⁰	₁	43.4	⁻⁹⁶	₁	36.7	⁻¹⁰¹	₁	26.7	⁻¹⁰⁴	₀	16.3								
Apr 28	76.2	⁻⁶	₀	75.8	⁻¹⁹	₀	74.4	⁻³¹	₀	72.2	⁻⁴³	₀	69.2	⁻⁵⁵	₀	65.4	⁻⁶⁵	₀	60.8	⁻⁷⁴	₀	55.6	⁻⁸³	₀	49.8	⁻⁹⁰	₀	43.5	⁻⁹⁶	₀	36.8	⁻¹⁰¹	₀	26.7	⁻¹⁰⁴	₀	16.3								
Apr 29	76.2	⁻⁶	₋₂	75.7	⁻¹⁹	₋₂	74.4	⁻³¹	₋₂	72.2	⁻⁴³	₋₂	69.2	⁻⁵⁴	₋₂	65.3	⁻⁶⁵	₋₂	60.8	⁻⁷⁴	₋₂	55.6	⁻⁸³	₋₁	49.8	⁻⁹⁰	₋₁	43.5	⁻⁹⁶	₋₁	36.8	⁻¹⁰¹	₋₁	26.7	⁻¹⁰⁴	₋₁	16.3								
Apr 30	75.9	⁻⁶	₋₃	75.5	⁻¹⁹	₋₃	74.1	⁻³¹	₋₃	71.9	⁻⁴³	₋₃	68.9	⁻⁵⁴	₋₃	65.1	⁻⁶⁵	₋₃	60.6	⁻⁷⁴	₋₃	55.4	⁻⁸²	₋₂	49.6	⁻⁸⁹	₋₂	43.3	⁻⁹⁵	₋₂	36.7	⁻¹⁰⁰	₋₁	26.6	⁻¹⁰³	₋₁	16.3								
May 1	75.5	⁻⁶	₋₄	75.1	⁻¹⁹	₋₄	73.7	⁻³¹	₋₄	71.6	⁻⁴³	₋₄	68.6	⁻⁵⁴	₋₄	64.8	⁻⁶⁴	₋₃	60.3	⁻⁷⁴	₋₃	55.1	⁻⁸²	₋₃	49.3	⁻⁸⁹	₋₃	43.1	⁻⁹⁵	₋₂	36.5	⁻¹⁰⁰	₋₂	26.5	⁻¹⁰³	₋₁	16.2								
May 2	75.0	⁻⁶	₋₅	74.6	⁻¹⁹	₋₅	73.3	⁻³¹	₋₅	71.1	⁻⁴²	₋₄	68.1	⁻⁵⁴	₋₄	64.3	⁻⁶⁴	₋₄	59.9	⁻⁷³	₋₄	54.7	⁻⁸¹	₋₃	49.0	⁻⁸⁸	₋₃	42.8	⁻⁹⁴	₋₃	36.2	⁻⁹⁹	₋₂	26.3	⁻¹⁰²	₋₁	16.1								
May 3	74.4	⁻⁶	₋₅	74.0	⁻¹⁹	₋₅	72.7	⁻³¹	₋₅	70.5	⁻⁴²	₋₅	67.6	⁻⁵³	₋₄	63.9	⁻⁶³	₋₄	59.4	⁻⁷²	₋₄	54.3	⁻⁸¹	₋₃	48.6	⁻⁸⁸	₋₃	42.5	⁻⁹³	₋₃	35.9	⁻⁹⁸	₋₂												

2009

Moon Parallax and Semi-diameter

Upper Limb																																													
Altitude degrees																																													
	0			7			14			21			28			35			42			49			56			63			70			80			90								
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Apr 3	43.1	⁻⁶	₋₁	42.6	⁻¹⁹	₋₁	41.3	⁻³¹	₋₁	39.1	⁻⁴³	₋₁	36.2	⁻⁵⁴	₋₁	32.4	⁻⁶⁴	₋₁	27.9	⁻⁷⁴	₋₁	22.7	⁻⁸²	₋₁	17.0	⁻⁸⁹	₋₁	10.7	⁻⁹⁵	₋₁	4.1	⁻¹⁰⁰	₀	-5.9	⁻¹⁰³	₀	-16.1								
Apr 4	43.0	⁻⁶	₋₂	42.6	⁻¹⁹	₋₂	41.2	⁻³¹	₋₂	39.1	⁻⁴³	₋₂	36.1	⁻⁵⁴	₋₂	32.3	⁻⁶⁴	₋₂	27.8	⁻⁷³	₋₂	22.7	⁻⁸²	₋₁	16.9	⁻⁸⁹	₋₁	10.7	⁻⁹⁴	₋₁	4.1	⁻⁹⁹	₋₁	-5.8	⁻¹⁰²	₋₁	-16.1								
Apr 5	42.9	⁻⁶	₋₃	42.4	⁻¹⁹	₋₃	41.1	⁻³¹	₋₃	39.0	⁻⁴³	₋₃	36.0	⁻⁵⁴	₋₃	32.2	⁻⁶⁴	₋₂	27.7	⁻⁷³	₋₂	22.6	⁻⁸¹	₋₂	16.9	⁻⁸⁸	₋₂	10.7	⁻⁹⁴	₋₂	4.1	⁻⁹⁹	₋₁	-5.8	⁻¹⁰²	₋₁	-16.1								
Apr 6	42.7	⁻⁶	₋₄	42.2	⁻¹⁹	₋₄	40.9	⁻³¹	₋₄	38.8	⁻⁴²	₋₃	35.8	⁻⁵³	₋₃	32.1	⁻⁶⁴	₋₃	27.6	⁻⁷³	₋₃	22.5	⁻⁸¹	₋₃	16.8	⁻⁸⁸	₋₂	10.6	⁻⁹⁴	₋₂	4.1	⁻⁹⁸	₋₂	-5.8	⁻¹⁰²	₋₁	-16.0								
Apr 7	42.4	⁻⁶	₋₅	42.0	⁻¹⁸	₋₅	40.7	⁻³⁰	₋₄	38.5	⁻⁴²	₋₄	35.6	⁻⁵³	₋₄	31.9	⁻⁶³	₋₄	27.4	⁻⁷²	₋₄	22.4	⁻⁸⁰	₋₃	16.7	⁻⁸⁷	₋₃	10.6	⁻⁹³	₋₂	4.1	⁻⁹⁸	₋₂	-5.8	⁻¹⁰¹	₋₁	-15.9								
Apr 8	42.1	⁻⁶	₋₅	41.7	⁻¹⁸	₋₅	40.4	⁻³⁰	₋₅	38.3	⁻⁴²	₋₅	35.3	⁻⁵³	₋₅	31.6	⁻⁶³	₋₅	27.2	⁻⁷²	₋₄	22.2	⁻⁸⁰	₋₄	16.6	⁻⁸⁷	₋₃	10.5	⁻⁹²	₋₃	4.0	⁻⁹⁷	₋₂	-5.7	⁻¹⁰⁰	₋₂	-15.8								
Apr 9	41.7	⁻⁶	₋₆	41.3	⁻¹⁸	₋₆	40.0	⁻³⁰	₋₆	37.9	⁻⁴¹	₋₆	35.0	⁻⁵²	₋₅	31.3	⁻⁶²	₋₅	27.0	⁻⁷¹	₋₅	22.0	⁻⁷⁹	₋₄	16.4	⁻⁸⁶	₋₄	10.4	⁻⁹¹	₋₃	4.0	⁻⁹⁶	₋₂	-5.7	⁻⁹⁹	₋₂	-15.6								
Apr 10	41.3	⁻⁶	₋₆	40.9	⁻¹⁸	₋₆	39.6	⁻³⁰	₋₆	37.5	⁻⁴¹	₋₆	34.7	⁻⁵¹	₋₅	31.0	⁻⁶¹	₋₅	26.7	⁻⁷⁰	₋₅	21.8	⁻⁷⁸	₋₄	16.3	⁻⁸⁵	₋₄	10.3	⁻⁹⁰	₋₃	3.9	⁻⁹⁵	₋₃	-5.6	⁻⁹⁸	₋₂	-15.5								
Apr 11	40.9	⁻⁶	₋₆	40.5	⁻¹⁸	₋₆	39.2	⁻²⁹	₋₆	37.2	⁻⁴⁰	₋₆	34.3	⁻⁵¹	₋₅	30.7	⁻⁶¹	₋₅	26.4	⁻⁷⁰	₋₅	21.6	⁻⁷⁷	₋₄	16.1	⁻⁸⁴	₋₄	10.2	⁻⁸⁹	₋₃	3.9	⁻⁹⁴	₋₃	-5.6	⁻⁹⁷	₋₂	-15.3								
Apr 12	40.5	⁻⁶	₋₅	40.1	⁻¹⁸	₋₅	38.8	⁻²⁹	₋₅	36.8	⁻⁴⁰	₋₅	34.0	⁻⁵⁰	₋₅	30.4	⁻⁶⁰	₋₄	26.2	⁻⁶⁹	₋₄	21.3	⁻⁷⁷	₋₄	15.9	⁻⁸³	₋₃	10.1	⁻⁸⁹	₋₃	3.9	⁻⁹³	₋₂	-5.5	⁻⁹⁶	₋₂	-15.2								
Apr 13	40.1	⁻⁶	₋₄	39.7	⁻¹⁷	₋₄	38.5	⁻²⁹	₋₄	36.4	⁻⁴⁰	₋₄	33.6	⁻⁵⁰	₋₄	30.1	⁻⁶⁰	₋₄	25.9	⁻⁶⁸	₋₃	21.1	⁻⁷⁶	₋₃	15.8	⁻⁸³	₋₃	10.0	⁻⁸⁸	₋₂	3.8	⁻⁹²	₋₂	-5.4	⁻⁹⁵	₋₁	-15.0								
Apr 14	39.8	⁻⁶	₋₃	39.4	⁻¹⁷	₋₃	38.2	⁻²⁹	₋₃	36.2	⁻³⁹	₋₃	33.4	⁻⁵⁰	₋₃	29.9	⁻⁵⁹	₋₃	25.7	⁻⁶⁸	₋₂	21.0	⁻⁷⁵	₋₂	15.7	⁻⁸²	₋₂	9.9	⁻⁸⁷	₋₂	3.8	⁻⁹²	₋₁	-5.4	⁻⁹⁵	₋₁	-14.9								
Apr 15	39.6	⁻⁶	₋₂	39.2	⁻¹⁷	₋₂	38.0	⁻²⁹	₋₁	36.0	⁻³⁹	₋₁	33.2	⁻⁵⁰	₋₁	29.7	⁻⁵⁹	₋₁	25.6	⁻⁶⁸	₋₁	20.9	⁻⁷⁵	₋₁	15.6	⁻⁸²	₋₁	9.9	⁻⁸⁷	₋₁	3.8	⁻⁹¹	₋₁	-5.4	⁻⁹⁴	₀	-14.8								
Apr 16	39.5	⁻⁶	₀	39.1	⁻¹⁷	₀	37.9	⁻²⁸	₀	35.9	⁻³⁹	₀	33.1	⁻⁴⁹	₀	29.7	⁻⁵⁹	₀	25.5	⁻⁶⁸	₀	20.8	⁻⁷⁵	₀	15.6	⁻⁸²	₀	9.8	⁻⁸⁷	₀	3.8	⁻⁹¹	₀	-5.4	⁻⁹⁴	₀	-14.8								
Apr 17	39.5	⁻⁶	₂	39.1	⁻¹⁷	₂	37.9	⁻²⁹	₂	35.9	⁻³⁹	₂	33.1	⁻⁵⁰	₂	29.7	⁻⁵⁹	₂	25.5	⁻⁶⁸	₂	20.8	⁻⁷⁵	₁	15.6	⁻⁸²	₁	9.9	⁻⁸⁷	₁	3.8	⁻⁹²	₁	-5.4	⁻⁹⁴	₁	-14.8								
Apr 18	39.6	⁻⁶	₄	39.2	⁻¹⁷	₄	38.0	⁻²⁹	₄	36.0	⁻⁴⁰	₄	33.3	⁻⁵⁰	₃	29.8	⁻⁵⁹	₃	25.6	⁻⁶⁸	₃	20.9	⁻⁷⁶	₃	15.6	⁻⁸²	₂	9.9	⁻⁸⁷	₂	3.8	⁻⁹²	₂	-5.4	⁻⁹⁵	₁	-14.8								
Apr 19	39.9	⁻⁶	₅	39.5	⁻¹⁸	₅	38.3	⁻²⁹	₅	36.2	⁻⁴⁰	₅	33.5	⁻⁵⁰	₅	30.0	⁻⁶⁰	₅	25.8	⁻⁶⁹	₄	21.0	⁻⁷⁶	₄	15.7	⁻⁸³	₃	10.0	⁻⁸⁸	₃	3.8	⁻⁹³	₂	-5.4	⁻⁹⁶	₂	-14.9								
Apr 20	40.3	⁻⁶	₇	39.9	⁻¹⁸	₇	38.6	⁻²⁹	₇	36.6	⁻⁴⁰	₆	33.8	⁻⁵¹	₆	30.3	⁻⁶⁰	₆	26.0	⁻⁶⁹	₅	21.2	⁻⁷⁷	₅	15.9	⁻⁸⁴	₄	10.0	⁻⁸⁹	₄	3.8	⁻⁹⁴	₃	-5.5	⁻⁹⁷	₂	-15.1								
Apr 21	40.7	⁻⁶	₈	40.3	⁻¹⁸	₈	39.1	⁻³⁰	₇	37.0	⁻⁴¹	₇	34.2	⁻⁵¹	₇	30.6	⁻⁶¹	₆	26.4	⁻⁷⁰	₆	21.5	⁻⁷⁸	₅	16.1	⁻⁸⁵	₅	10.2	⁻⁹⁰	₄	3.9	⁻⁹⁵	₃	-5.5	⁻⁹⁸	₂	-15.3								
Apr 22	41.3	⁻⁶	₈	40.8	⁻¹⁸	₈	39.6	⁻³⁰	₈	37.5	⁻⁴¹	₈	34.6	⁻⁵²	₇	31.0	⁻⁶²	₇	26.7	⁻⁷¹	₆	21.8	⁻⁷⁹	₆	16.3	⁻⁸⁶	₅	10.3	⁻⁹¹	₄	3.9	⁻⁹⁶	₃	-5.6	⁻⁹⁹	₂	-15.5								
Apr 23	41.8	⁻⁶	₈	41.4	⁻¹⁸	₈	40.1	⁻³⁰	₈	38.0	⁻⁴²	₇	35.1	⁻⁵³	₇	31.4	⁻⁶³	₇	27.1	⁻⁷²	₆	22.1	⁻⁸⁰	₅	16.5	⁻⁸⁷	₅	10.4	⁻⁹³	₄	4.0	⁻⁹⁷	₃	-5.7	⁻¹⁰⁰	₂	-15.7								
Apr 24	42.4	⁻⁶	₇	41.9	⁻¹⁹	₇	40.6	⁻³¹	₇	38.5	⁻⁴²	₆	35.5	⁻⁵³	₆	31.8	⁻⁶⁴	₆	27.4	⁻⁷³	₅	22.3	⁻⁸¹	₅	16.7	⁻⁸⁸	₄	10.6	⁻⁹⁴	₄	4.0	⁻⁹⁹	₃	-5.8	⁻¹⁰²	₂	-15.9								
Apr 25	42.8	⁻⁶	₅	42.4	⁻¹⁹	₅	41.1	⁻³¹	₅	38.9	⁻⁴³	₅	36.0	⁻⁵⁴	₅	32.2	⁻⁶⁴	₅	27.7	⁻⁷⁴	₄	22.6	⁻⁸²	₄	16.9	⁻⁸⁹	₃	10.7	⁻⁹⁵	₃	4.1	⁻¹⁰⁰	₂	-5.8	⁻¹⁰³	₂	-16.0								
Apr 26	43.2	⁻⁶	₄	42.8	⁻¹⁹	₄	41.5	⁻³¹	₃	39.3	⁻⁴³	₃	36.3	⁻⁵⁴	₃	32.5	⁻⁶⁵	₃	28.0	⁻⁷⁴	₃	22.8	⁻⁸²	₂	17.0	⁻⁹⁰	₂	10.8	⁻⁹⁵	₂	4.1	⁻¹⁰⁰	₁	-5.9	⁻¹⁰³	₁	-16.2								
Apr 27	43.5	⁻⁶	₂	43.0	⁻¹⁹	₂	41.7	⁻³¹	₁	39.5	⁻⁴³	₁	36.5	⁻⁵⁵	₁	32.7	⁻⁶⁵	₁	28.1	⁻⁷⁴	₁	22.9	⁻⁸³	₁	17.1	⁻⁹⁰	₁	10.8	⁻⁹⁶	₁	4.2	⁻¹⁰¹	₁	-5.9	⁻¹⁰⁴	₀	-16.3								
Apr 28	43.6	⁻⁶	₀	43.1	⁻¹⁹	₀	41.8	⁻³¹	₀	39.6	⁻⁴³	₀	36.6	⁻⁵⁵	₀	32.7	⁻⁶⁵	₀	28.2	⁻⁷⁴	₀	23.0	⁻⁸³	₀	17.2	⁻⁹⁰	₀	10.9	⁻⁹⁶	₀	4.2	⁻¹⁰¹	₀	-5.9	⁻¹⁰⁴	₀	-16.3								
Apr 29	43.5	⁻⁶	₋₂	43.1	⁻¹⁹	₋₂	41.8	⁻³¹	₋₂	39.6	⁻⁴³	₋₂	36.5	⁻⁵⁴	₋₂	32.7	⁻⁶⁵	₋₂	28.2	⁻⁷⁴	₋₂	23.0	⁻⁸³	₋₁	17.2	⁻⁹⁰	₋₁	10.9	⁻⁹⁶	₋₁	4.2	⁻¹⁰¹	₋₁	-5.9	⁻¹⁰⁴	₋₁	-16.3								
Apr 30	43.4	⁻⁶	₋₃	43.0	⁻¹⁹	₋₃	41.6	⁻³¹	₋₃	39.4	⁻⁴³	₋₃	36.4	⁻⁵⁴	₋₃	32.6	⁻⁶⁵	₋₃	28.1	⁻⁷⁴	₋₃	22.9	⁻⁸²	₋₂	17.1	⁻⁸⁹	₋₂	10.8	⁻⁹⁵	₋₂	4.1	⁻¹⁰⁰	₋₁	-5.9	⁻¹⁰³	₋₁	-16.3								
May 1	43.2	⁻⁶	₋₄	42.7	⁻¹⁹	₋₄	41.4	⁻³¹	₋₄	39.2	⁻⁴³	₋₄	36.2	⁻⁵⁴	₋₄	32.4	⁻⁶⁴	₋₃	27.9	⁻⁷⁴	₋₃	22.8	⁻⁸²	₋₃	17.0	⁻⁸⁹	₋₃	10.8	⁻⁹⁵	₋₂	4.1	⁻¹⁰⁰	₋₂	-5.9	⁻¹⁰³	₋₁	-16.2								
May 2	42.9	⁻⁶	₋₅	42.4	⁻¹⁹	₋₅	41.1	⁻³¹	₋₅	39.0	⁻⁴²	₋₄	36.0	⁻⁵⁴	₋₄	32.2	⁻⁶⁴	₋₄	27.7	⁻⁷³	₋₄	22.6	⁻⁸¹	₋₃	16.9	⁻⁸⁸	₋₃	10.7	⁻⁹⁴	₋₃	4.1	⁻⁹⁹	₋₂	-5.8	⁻¹⁰²	₋₁	-16.1								
May 3	42.6	⁻⁶	₋₅	42.1	⁻¹⁹	₋₅	40.8	⁻³¹	₋₅	38.7	⁻⁴²	₋₅	35.7	⁻⁵³	₋₄	32.0	⁻⁶³	₋₄	27.5	⁻⁷²	₋₄	22.4	⁻⁸¹	₋₃	16.8	⁻⁸⁸	₋₃	10.6	⁻⁹³	₋₃	4.1	⁻⁹⁸	₋₂	-5.8	⁻¹⁰¹	₋₁	-15.9								
May 4	42.2																																												

2009

Moon Parallax and Semi-diameter

Lower Limb																																										
Altitude degrees																																										
	0			7			14			21			28			35			42			49			56			63			70			80			90					
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
May 19	71.3	⁻⁶	₉	70.9	⁻¹⁸	₈	69.7	⁻³⁰	₈	67.6	⁻⁴¹	₈	64.8	⁻⁵¹	₈	61.2	⁻⁶¹	₇	56.9	⁻⁷⁰	₇	52.0	⁻⁷⁸	₆	46.6	⁻⁸⁵	₅	40.7	⁻⁹⁰	₅	34.4	⁻⁹⁵	₄	25.0	⁻⁹⁸	₂	15.3					
May 20	72.3	⁻⁶	₉	71.9	⁻¹⁸	₉	70.7	⁻³⁰	₉	68.6	⁻⁴¹	₉	65.7	⁻⁵²	₈	62.1	⁻⁶²	₈	57.7	⁻⁷¹	₇	52.8	⁻⁷⁹	₆	47.3	⁻⁸⁶	₆	41.3	⁻⁹²	₅	34.9	⁻⁹⁶	₄	25.4	⁻⁹⁹	₃	15.5					
May 21	73.5	⁻⁶	₉	73.0	⁻¹⁸	₉	71.7	⁻³¹	₉	69.6	⁻⁴²	₉	66.7	⁻⁵³	₈	63.0	⁻⁶³	₈	58.6	⁻⁷²	₇	53.6	⁻⁸¹	₆	48.0	⁻⁸⁷	₆	41.9	⁻⁹³	₅	35.5	⁻⁹⁸	₄	25.8	⁻¹⁰¹	₃	15.7					
May 22	74.6	⁻⁶	₉	74.2	⁻¹⁹	₈	72.8	⁻³¹	₈	70.7	⁻⁴³	₈	67.7	⁻⁵⁴	₈	64.0	⁻⁶⁴	₇	59.5	⁻⁷³	₇	54.4	⁻⁸²	₆	48.7	⁻⁸⁹	₅	42.6	⁻⁹⁴	₅	36.0	⁻⁹⁹	₄	26.1	⁻¹⁰²	₂	16.0					
May 23	75.6	⁻⁶	₇	75.2	⁻¹⁹	₇	73.9	⁻³¹	₇	71.7	⁻⁴³	₇	68.7	⁻⁵⁴	₆	64.9	⁻⁶⁵	₆	60.4	⁻⁷⁴	₅	55.2	⁻⁸³	₅	49.4	⁻⁹⁰	₄	43.2	⁻⁹⁶	₄	36.5	⁻¹⁰¹	₃	26.5	⁻¹⁰⁴	₂	16.2					
May 24	76.5	⁻⁶	₅	76.0	⁻¹⁹	₅	74.7	⁻³²	₅	72.5	⁻⁴⁴	₄	69.4	⁻⁵⁵	₄	65.6	⁻⁶⁵	₄	61.0	⁻⁷⁵	₄	55.8	⁻⁸³	₃	50.0	⁻⁹¹	₃	43.7	⁻⁹⁶	₂	36.9	⁻¹⁰²	₂	26.8	⁻¹⁰⁵	₁	16.4					
May 25	77.0	⁻⁶	₂	76.6	⁻¹⁹	₂	75.2	⁻³²	₂	73.0	⁻⁴⁴	₂	69.9	⁻⁵⁵	₂	66.1	⁻⁶⁶	₂	61.5	⁻⁷⁵	₁	56.2	⁻⁸⁴	₁	50.3	⁻⁹¹	₁	44.0	⁻⁹⁷	₁	37.2	⁻¹⁰²	₁	27.0	⁻¹⁰⁵	₁	16.5					
May 26	77.3	⁻⁶	₋₁	76.8	⁻¹⁹	₋₁	75.5	⁻³²	₋₁	73.2	⁻⁴⁴	₋₁	70.1	⁻⁵⁵	₋₁	66.3	⁻⁶⁶	₋₁	61.7	⁻⁷⁵	₋₁	56.4	⁻⁸⁴	₋₁	50.5	⁻⁹¹	₋₁	44.1	⁻⁹⁷	₋₁	37.3	⁻¹⁰²	₀	27.1	⁻¹⁰⁵	₀	16.5					
May 27	77.1	⁻⁶	₋₄	76.7	⁻¹⁹	₋₃	75.3	⁻³²	₋₃	73.1	⁻⁴⁴	₋₃	70.0	⁻⁵⁵	₋₃	66.2	⁻⁶⁶	₋₃	61.6	⁻⁷⁵	₋₃	56.3	⁻⁸⁴	₋₂	50.4	⁻⁹¹	₋₂	44.0	⁻⁹⁷	₋₂	37.2	⁻¹⁰²	₋₁	27.0	⁻¹⁰⁵	₋₁	16.5					
May 28	76.7	⁻⁶	₋₅	76.3	⁻¹⁹	₋₅	74.9	⁻³¹	₋₅	72.7	⁻⁴³	₋₅	69.7	⁻⁵⁵	₋₅	65.8	⁻⁶⁵	₋₅	61.2	⁻⁷⁵	₋₄	56.0	⁻⁸³	₋₄	50.1	⁻⁹⁰	₋₃	43.8	⁻⁹⁶	₋₃	37.0	⁻¹⁰¹	₋₂	26.9	⁻¹⁰⁴	₋₂	16.4					
May 29	76.1	⁻⁶	₋₇	75.6	⁻¹⁹	₋₇	74.3	⁻³¹	₋₆	72.1	⁻⁴³	₋₆	69.1	⁻⁵⁴	₋₆	65.2	⁻⁶⁵	₋₆	60.7	⁻⁷⁴	₋₅	55.5	⁻⁸²	₋₅	49.7	⁻⁸⁹	₋₄	43.4	⁻⁹⁵	₋₄	36.7	⁻¹⁰⁰	₋₃	26.7	⁻¹⁰³	₋₂	16.3					
May 30	75.2	⁻⁶	₋₇	74.8	⁻¹⁹	₋₇	73.5	⁻³¹	₋₇	71.3	⁻⁴³	₋₇	68.3	⁻⁵⁴	₋₆	64.6	⁻⁶⁴	₋₆	60.1	⁻⁷³	₋₆	54.9	⁻⁸¹	₋₅	49.2	⁻⁸⁸	₋₄	43.0	⁻⁹⁴	₋₄	36.3	⁻⁹⁹	₋₃	26.4	⁻¹⁰²	₋₂	16.1					
May 31	74.4	⁻⁶	₋₇	73.9	⁻¹⁸	₋₇	72.6	⁻³⁰	₋₇	70.5	⁻⁴²	₋₇	67.5	⁻⁵³	₋₇	63.8	⁻⁶³	₋₆	59.4	⁻⁷²	₋₆	54.3	⁻⁸⁰	₋₅	48.6	⁻⁸⁷	₋₅	42.5	⁻⁹³	₋₄	35.9	⁻⁹⁸	₋₃	26.1	⁻¹⁰¹	₋₂	15.9					
Jun 1	73.5	⁻⁶	₋₇	73.1	⁻¹⁸	₋₇	71.8	⁻³⁰	₋₇	69.7	⁻⁴²	₋₇	66.7	⁻⁵²	₋₆	63.0	⁻⁶²	₋₆	58.7	⁻⁷¹	₋₅	53.6	⁻⁷⁹	₋₅	48.0	⁻⁸⁶	₋₄	42.0	⁻⁹²	₋₄	35.5	⁻⁹⁷	₋₃	25.8	⁻¹⁰⁰	₋₂	15.7					
Jun 2	72.6	⁻⁶	₋₆	72.2	⁻¹⁸	₋₆	70.9	⁻³⁰	₋₆	68.8	⁻⁴¹	₋₆	66.0	⁻⁵²	₋₆	62.3	⁻⁶²	₋₅	58.0	⁻⁷¹	₋₅	53.0	⁻⁷⁹	₋₄	47.5	⁻⁸⁵	₋₄	41.5	⁻⁹¹	₋₃	35.1	⁻⁹⁶	₋₃	25.5	⁻⁹⁹	₋₂	15.6					
Jun 3	71.9	⁻⁶	₋₆	71.4	⁻¹⁸	₋₆	70.2	⁻²⁹	₋₆	68.1	⁻⁴¹	₋₅	65.3	⁻⁵¹	₋₅	61.6	⁻⁶¹	₋₅	57.4	⁻⁷⁰	₋₄	52.4	⁻⁷⁸	₋₄	47.0	⁻⁸⁴	₋₄	41.0	⁻⁹⁰	₋₃	34.7	⁻⁹⁵	₋₂	25.2	⁻⁹⁸	₋₂	15.4					
Jun 4	71.2	⁻⁶	₋₅	70.7	⁻¹⁸	₋₅	69.5	⁻²⁹	₋₅	67.5	⁻⁴⁰	₋₅	64.6	⁻⁵¹	₋₅	61.1	⁻⁶⁰	₋₄	56.8	⁻⁶⁹	₋₄	51.9	⁻⁷⁷	₋₄	46.5	⁻⁸⁴	₋₃	40.6	⁻⁸⁹	₋₃	34.4	⁻⁹⁴	₋₂	24.9	⁻⁹⁷	₋₁	15.2					
Jun 5	70.6	⁻⁶	₋₄	70.1	⁻¹⁸	₋₄	68.9	⁻²⁹	₋₄	66.9	⁻⁴⁰	₋₄	64.1	⁻⁵⁰	₋₄	60.5	⁻⁶⁰	₋₄	56.3	⁻⁶⁹	₋₃	51.5	⁻⁷⁶	₋₃	46.1	⁻⁸³	₋₃	40.3	⁻⁸⁸	₋₂	34.1	⁻⁹³	₋₂	24.7	⁻⁹⁶	₋₁	15.1					
Jun 6	70.0	⁻⁶	₋₄	69.6	⁻¹⁷	₋₄	68.4	⁻²⁹	₋₄	66.4	⁻⁴⁰	₋₃	63.6	⁻⁵⁰	₋₃	60.1	⁻⁶⁰	₋₃	55.9	⁻⁶⁸	₋₃	51.1	⁻⁷⁶	₋₃	45.8	⁻⁸²	₋₂	40.0	⁻⁸⁸	₋₂	33.8	⁻⁹²	₋₂	24.5	⁻⁹⁵	₋₁	15.0					
Jun 7	69.6	⁻⁶	₋₃	69.2	⁻¹⁷	₋₃	67.9	⁻²⁹	₋₃	65.9	⁻³⁹	₋₃	63.2	⁻⁵⁰	₋₃	59.7	⁻⁵⁹	₋₂	55.5	⁻⁶⁸	₋₂	50.8	⁻⁷⁵	₋₂	45.5	⁻⁸²	₋₂	39.7	⁻⁸⁷	₋₂	33.6	⁻⁹²	₋₁	24.4	⁻⁹⁵	₋₁	14.9					
Jun 8	69.2	⁻⁶	₋₂	68.8	⁻¹⁷	₋₂	67.6	⁻²⁸	₋₂	65.6	⁻³⁹	₋₂	62.8	⁻⁴⁹	₋₂	59.4	⁻⁵⁹	₋₂	55.2	⁻⁶⁸	₋₂	50.5	⁻⁷⁵	₋₂	45.2	⁻⁸²	₋₁	39.5	⁻⁸⁷	₋₁	33.4	⁻⁹¹	₋₁	24.3	⁻⁹⁴	₋₁	14.8					
Jun 9	68.9	⁻⁶	₋₁	68.5	⁻¹⁷	₋₁	67.3	⁻²⁸	₋₁	65.3	⁻³⁹	₋₁	62.6	⁻⁴⁹	₋₁	59.1	⁻⁵⁹	₋₁	55.0	⁻⁶⁷	₋₁	50.3	⁻⁷⁵	₋₁	45.1	⁻⁸¹	₋₁	39.4	⁻⁸⁷	₋₁	33.3	⁻⁹¹	₋₁	24.2	⁻⁹⁴	₀	14.8					
Jun 10	68.8	⁻⁶	₀	68.4	⁻¹⁷	₀	67.2	⁻²⁸	₀	65.2	⁻³⁹	₀	62.5	⁻⁴⁹	₀	59.0	⁻⁵⁹	₀	54.9	⁻⁶⁷	₀	50.2	⁻⁷⁵	₀	45.0	⁻⁸¹	₀	39.3	⁻⁸⁶	₀	33.2	⁻⁹¹	₀	24.1	⁻⁹⁴	₀	14.7					
Jun 11	68.8	⁻⁶	₁	68.4	⁻¹⁷	₁	67.2	⁻²⁸	₁	65.2	⁻³⁹	₁	62.4	⁻⁴⁹	₁	59.0	⁻⁵⁹	₁	54.9	⁻⁶⁷	₁	50.2	⁻⁷⁵	₁	44.9	⁻⁸¹	₁	39.3	⁻⁸⁷	₁	33.2	⁻⁹¹	₀	24.1	⁻⁹⁴	₀	14.7					
Jun 12	68.9	⁻⁶	₂	68.5	⁻¹⁷	₂	67.3	⁻²⁸	₂	65.3	⁻³⁹	₂	62.6	⁻⁴⁹	₂	59.1	⁻⁵⁹	₂	55.0	⁻⁶⁸	₂	50.3	⁻⁷⁵	₂	45.0	⁻⁸²	₂	39.3	⁻⁸⁷	₁	33.3	⁻⁹¹	₁	24.2	⁻⁹⁴	₁	14.8					
Jun 13	69.2	⁻⁶	₄	68.8	⁻¹⁷	₄	67.6	⁻²⁹	₄	65.6	⁻³⁹	₄	62.8	⁻⁵⁰	₄	59.4	⁻⁵⁹	₃	55.2	⁻⁶⁸	₃	50.5	⁻⁷⁶	₃	45.2	⁻⁸²	₂	39.5	⁻⁸⁷	₂	33.4	⁻⁹²	₂	24.3	⁻⁹⁵	₁	14.8					
Jun 14	69.7	⁻⁶	₆	69.3	⁻¹⁷	₆	68.1	⁻²⁹	₅	66.0	⁻⁴⁰	₅	63.3	⁻⁵⁰	₅	59.8	⁻⁶⁰	₅	55.6	⁻⁶⁸	₄	50.8	⁻⁷⁶	₄	45.5	⁻⁸³	₃	39.8	⁻⁸⁸	₃	33.6	⁻⁹³	₂	24.4	⁻⁹⁶	₂	14.9					
Jun 15	70.4	⁻⁶	₇	69.9	⁻¹⁸	₇	68.7	⁻²⁹	₇	66.7	⁻⁴⁰	₇	63.9	⁻⁵¹	₆	60.4	⁻⁶⁰	₆	56.2	⁻⁶⁹	₅	51.3	⁻⁷⁷	₅	46.0	⁻⁸⁴	₄	40.2	⁻⁸⁹	₄	34.0	⁻⁹⁴	₃	24.7	⁻⁹⁷	₂	15.1					
Jun 16	71.2	⁻⁶	₉	70.8	⁻¹⁸	₈	69.6	⁻³⁰	₈	67.5	⁻⁴¹	₈	64.7	⁻⁵¹	₈	61.1	⁻⁶¹	₇	56.8	⁻⁷⁰	₇	52.0	⁻⁷⁸	₆	46.5	⁻⁸⁵	₅	40.7	⁻⁹⁰	₅	34.4	⁻⁹⁵	₄	25.0	⁻⁹⁸	₂	15.2					
Jun 17	72.2	⁻⁶	₁₀	71.8	⁻¹⁸	₉	70.6	⁻³⁰	₉	68.5	⁻⁴¹	₉	65.6	⁻⁵²	₈	62.0	⁻⁶²	₈	57.7	⁻⁷¹	₇	52.7	⁻⁷⁹	₇	47.2	⁻⁸⁶	₆	41.2	⁻⁹²	₅	34.9	⁻⁹⁶	₄	25.3	⁻⁹⁹	₃	15.5					
Jun 18	73.4	⁻⁶	₁₀	73.0	⁻¹⁸	₁₀	71.7	⁻³¹	₁₀	69.6	⁻⁴²	₉	66.6	⁻⁵³	₉	63.0	⁻⁶³	₈	58.6	⁻⁷²	₈	53.6	⁻⁸⁰	₇	48.0	⁻⁸⁷	₆	41.9	⁻⁹³	₅	35.4	⁻⁹⁸	₄	25.7	⁻							

Upper Limb																																										
Altitude degrees																																										
	0			7			14			21			28			35			42			49			56			63			70			80			90					
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
May 19	40.8	⁻⁶ ₉	40.4	⁻¹⁸ ₈	39.1	⁻³⁰ ₈	37.0	⁻⁴¹ ₈	34.2	⁻⁵¹ ₈	30.6	⁻⁶¹ ₇	26.4	⁻⁷⁰ ₇	21.5	⁻⁷⁸ ₆	16.1	⁻⁸⁵ ₅	10.2	⁻⁹⁰ ₅	3.9	⁻⁹⁵ ₄	-5.5	⁻⁹⁸ ₂	-15.3																	
May 20	41.4	⁻⁶ ₉	40.9	⁻¹⁸ ₉	39.7	⁻³⁰ ₉	37.6	⁻⁴¹ ₉	34.7	⁻⁵² ₈	31.1	⁻⁶² ₈	26.8	⁻⁷¹ ₇	21.8	⁻⁷⁹ ₆	16.3	⁻⁸⁶ ₆	10.3	⁻⁹² ₅	4.0	⁻⁹⁶ ₄	-5.6	⁻⁹⁹ ₃	-15.5																	
May 21	42.0	⁻⁶ ₉	41.6	⁻¹⁸ ₉	40.3	⁻³¹ ₉	38.2	⁻⁴² ₉	35.2	⁻⁵³ ₈	31.6	⁻⁶³ ₈	27.2	⁻⁷² ₇	22.1	⁻⁸¹ ₆	16.6	⁻⁸⁷ ₆	10.5	⁻⁹³ ₅	4.0	⁻⁹⁸ ₄	-5.7	⁻¹⁰¹ ₃	-15.7																	
May 22	42.6	⁻⁶ ₉	42.2	⁻¹⁹ ₈	40.9	⁻³¹ ₈	38.7	⁻⁴³ ₈	35.8	⁻⁵⁴ ₈	32.0	⁻⁶⁴ ₇	27.6	⁻⁷³ ₇	22.5	⁻⁸² ₆	16.8	⁻⁸⁹ ₅	10.6	⁻⁹⁴ ₅	4.1	⁻⁹⁹ ₄	-5.8	⁻¹⁰² ₂	-16.0																	
May 23	43.2	⁻⁶ ₇	42.8	⁻¹⁹ ₇	41.5	⁻³¹ ₇	39.3	⁻⁴³ ₇	36.3	⁻⁵⁴ ₆	32.5	⁻⁶⁵ ₆	28.0	⁻⁷⁴ ₅	22.8	⁻⁸³ ₅	17.0	⁻⁹⁰ ₄	10.8	⁻⁹⁶ ₄	4.1	⁻¹⁰¹ ₃	-5.9	⁻¹⁰⁴ ₂	-16.2																	
May 24	43.7	⁻⁶ ₅	43.3	⁻¹⁹ ₅	41.9	⁻³² ₅	39.7	⁻⁴⁴ ₄	36.7	⁻⁵⁵ ₄	32.8	⁻⁶⁵ ₄	28.3	⁻⁷⁵ ₄	23.0	⁻⁸³ ₃	17.2	⁻⁹¹ ₃	10.9	⁻⁹⁶ ₂	4.2	⁻¹⁰² ₂	-5.9	⁻¹⁰⁵ ₁	-16.4																	
May 25	44.0	⁻⁶ ₂	43.6	⁻¹⁹ ₂	42.2	⁻³² ₂	40.0	⁻⁴⁴ ₂	36.9	⁻⁵⁵ ₂	33.1	⁻⁶⁶ ₂	28.5	⁻⁷⁵ ₁	23.2	⁻⁸⁴ ₁	17.4	⁻⁹¹ ₁	11.0	⁻⁹⁷ ₁	4.2	⁻¹⁰² ₁	-6.0	⁻¹⁰⁵ ₁	-16.5																	
May 26	44.2	⁻⁶ ₋₁	43.7	⁻¹⁹ ₋₁	42.4	⁻³² ₋₁	40.1	⁻⁴⁴ ₋₁	37.1	⁻⁵⁵ ₋₁	33.2	⁻⁶⁶ ₋₁	28.6	⁻⁷⁵ ₋₁	23.3	⁻⁸⁴ ₋₁	17.4	⁻⁹¹ ₋₁	11.0	⁻⁹⁷ ₋₁	4.2	⁻¹⁰² ₀	-6.0	⁻¹⁰⁵ ₀	-16.5																	
May 27	44.1	⁻⁶ ₋₄	43.6	⁻¹⁹ ₋₃	42.3	⁻³² ₋₃	40.1	⁻⁴⁴ ₋₃	37.0	⁻⁵⁵ ₋₃	33.1	⁻⁶⁶ ₋₃	28.5	⁻⁷⁵ ₋₃	23.2	⁻⁸⁴ ₋₂	17.4	⁻⁹¹ ₋₂	11.0	⁻⁹⁷ ₋₂	4.2	⁻¹⁰² ₋₁	-6.0	⁻¹⁰⁵ ₋₁	-16.5																	
May 28	43.9	⁻⁶ ₋₅	43.4	⁻¹⁹ ₋₅	42.1	⁻³¹ ₋₅	39.9	⁻⁴³ ₋₅	36.8	⁻⁵⁵ ₋₅	33.0	⁻⁶⁵ ₋₅	28.4	⁻⁷⁵ ₋₄	23.1	⁻⁸³ ₋₄	17.3	⁻⁹⁰ ₋₃	10.9	⁻⁹⁶ ₋₃	4.2	⁻¹⁰¹ ₋₂	-6.0	⁻¹⁰⁴ ₋₂	-16.4																	
May 29	43.5	⁻⁶ ₋₇	43.0	⁻¹⁹ ₋₇	41.7	⁻³¹ ₋₆	39.5	⁻⁴³ ₋₆	36.5	⁻⁵⁴ ₋₆	32.7	⁻⁶⁵ ₋₆	28.1	⁻⁷⁴ ₋₅	22.9	⁻⁸² ₋₅	17.1	⁻⁸⁹ ₋₄	10.8	⁻⁹⁵ ₋₄	4.2	⁻¹⁰⁰ ₋₃	-5.9	⁻¹⁰³ ₋₂	-16.3																	
May 30	43.0	⁻⁶ ₋₇	42.6	⁻¹⁹ ₋₇	41.3	⁻³¹ ₋₇	39.1	⁻⁴³ ₋₇	36.1	⁻⁵⁴ ₋₆	32.3	⁻⁶⁴ ₋₆	27.8	⁻⁷³ ₋₆	22.7	⁻⁸¹ ₋₅	17.0	⁻⁸⁸ ₋₄	10.7	⁻⁹⁴ ₋₄	4.1	⁻⁹⁹ ₋₃	-5.8	⁻¹⁰² ₋₂	-16.1																	
May 31	42.5	⁻⁶ ₋₇	42.1	⁻¹⁸ ₋₇	40.8	⁻³⁰ ₋₇	38.6	⁻⁴² ₋₇	35.7	⁻⁵³ ₋₇	31.9	⁻⁶³ ₋₆	27.5	⁻⁷² ₋₆	22.4	⁻⁸⁰ ₋₅	16.8	⁻⁸⁷ ₋₅	10.6	⁻⁹³ ₋₄	4.1	⁻⁹⁸ ₋₃	-5.8	⁻¹⁰¹ ₋₂	-15.9																	
Jun 1	42.0	⁻⁶ ₋₇	41.6	⁻¹⁸ ₋₇	40.3	⁻³⁰ ₋₇	38.2	⁻⁴² ₋₇	35.3	⁻⁵² ₋₆	31.6	⁻⁶² ₋₆	27.2	⁻⁷¹ ₋₅	22.1	⁻⁷⁹ ₋₅	16.6	⁻⁸⁶ ₋₄	10.5	⁻⁹² ₋₄	4.0	⁻⁹⁷ ₋₃	-5.7	⁻¹⁰⁰ ₋₂	-15.7																	
Jun 2	41.5	⁻⁶ ₋₆	41.1	⁻¹⁸ ₋₆	39.8	⁻³⁰ ₋₆	37.7	⁻⁴¹ ₋₆	34.8	⁻⁵² ₋₆	31.2	⁻⁶² ₋₅	26.9	⁻⁷¹ ₋₅	21.9	⁻⁷⁹ ₋₄	16.4	⁻⁸⁵ ₋₄	10.4	⁻⁹¹ ₋₃	4.0	⁻⁹⁶ ₋₃	-5.6	⁻⁹⁹ ₋₂	-15.6																	
Jun 3	41.1	⁻⁶ ₋₆	40.7	⁻¹⁸ ₋₆	39.4	⁻²⁹ ₋₆	37.3	⁻⁴¹ ₋₅	34.5	⁻⁵¹ ₋₅	30.9	⁻⁶¹ ₋₅	26.6	⁻⁷⁰ ₋₄	21.7	⁻⁷⁸ ₋₄	16.2	⁻⁸⁴ ₋₄	10.2	⁻⁹⁰ ₋₃	3.9	⁻⁹⁵ ₋₂	-5.6	⁻⁹⁸ ₋₂	-15.4																	
Jun 4	40.7	⁻⁶ ₋₅	40.3	⁻¹⁸ ₋₅	39.0	⁻²⁹ ₋₅	37.0	⁻⁴⁰ ₋₅	34.1	⁻⁵¹ ₋₅	30.6	⁻⁶⁰ ₋₄	26.3	⁻⁶⁹ ₋₄	21.4	⁻⁷⁷ ₋₄	16.0	⁻⁸⁴ ₋₃	10.1	⁻⁸⁹ ₋₃	3.9	⁻⁹⁴ ₋₂	-5.5	⁻⁹⁷ ₋₁	-15.2																	
Jun 5	40.3	⁻⁶ ₋₄	39.9	⁻¹⁸ ₋₄	38.7	⁻²⁹ ₋₄	36.7	⁻⁴⁰ ₋₄	33.8	⁻⁵⁰ ₋₄	30.3	⁻⁶⁰ ₋₄	26.1	⁻⁶⁹ ₋₃	21.3	⁻⁷⁶ ₋₃	15.9	⁻⁸³ ₋₃	10.1	⁻⁸⁸ ₋₂	3.9	⁻⁹³ ₋₂	-5.5	⁻⁹⁶ ₋₁	-15.1																	
Jun 6	40.0	⁻⁶ ₋₄	39.6	⁻¹⁷ ₋₄	38.4	⁻²⁹ ₋₄	36.4	⁻⁴⁰ ₋₃	33.6	⁻⁵⁰ ₋₃	30.1	⁻⁶⁰ ₋₃	25.9	⁻⁶⁸ ₋₃	21.1	⁻⁷⁶ ₋₃	15.8	⁻⁸² ₋₂	10.0	⁻⁸⁸ ₋₂	3.8	⁻⁹² ₋₂	-5.4	⁻⁹⁵ ₋₁	-15.0																	
Jun 7	39.8	⁻⁶ ₋₃	39.4	⁻¹⁷ ₋₃	38.1	⁻²⁹ ₋₃	36.1	⁻³⁹ ₋₃	33.4	⁻⁵⁰ ₋₃	29.9	⁻⁵⁹ ₋₂	25.7	⁻⁶⁸ ₋₂	21.0	⁻⁷⁵ ₋₂	15.7	⁻⁸² ₋₂	9.9	⁻⁸⁷ ₋₂	3.8	⁻⁹² ₋₁	-5.4	⁻⁹⁵ ₋₁	-14.9																	
Jun 8	39.6	⁻⁶ ₋₂	39.2	⁻¹⁷ ₋₂	38.0	⁻²⁸ ₋₂	36.0	⁻³⁹ ₋₂	33.2	⁻⁴⁹ ₋₂	29.7	⁻⁵⁹ ₋₂	25.6	⁻⁶⁸ ₋₂	20.9	⁻⁷⁵ ₋₂	15.6	⁻⁸² ₋₁	9.9	⁻⁸⁷ ₋₁	3.8	⁻⁹¹ ₋₁	-5.4	⁻⁹⁴ ₋₁	-14.8																	
Jun 9	39.4	⁻⁶ ₋₁	39.0	⁻¹⁷ ₋₁	37.8	⁻²⁸ ₋₁	35.8	⁻³⁹ ₋₁	33.1	⁻⁴⁹ ₋₁	29.6	⁻⁵⁹ ₋₁	25.5	⁻⁶⁷ ₋₁	20.8	⁻⁷⁵ ₋₁	15.5	⁻⁸¹ ₋₁	9.8	⁻⁸⁷ ₋₁	3.8	⁻⁹¹ ₋₁	-5.4	⁻⁹⁴ ₀	-14.8																	
Jun 10	39.3	⁻⁶ ₀	38.9	⁻¹⁷ ₀	37.7	⁻²⁸ ₀	35.7	⁻³⁹ ₀	33.0	⁻⁴⁹ ₀	29.6	⁻⁵⁹ ₀	25.4	⁻⁶⁷ ₀	20.7	⁻⁷⁵ ₀	15.5	⁻⁸¹ ₀	9.8	⁻⁸⁶ ₀	3.8	⁻⁹¹ ₀	-5.3	⁻⁹⁴ ₀	-14.7																	
Jun 11	39.3	⁻⁶ ₁	38.9	⁻¹⁷ ₁	37.7	⁻²⁸ ₁	35.7	⁻³⁹ ₁	33.0	⁻⁴⁹ ₁	29.5	⁻⁵⁹ ₁	25.4	⁻⁶⁷ ₁	20.7	⁻⁷⁵ ₁	15.5	⁻⁸¹ ₁	9.8	⁻⁸⁷ ₁	3.8	⁻⁹¹ ₀	-5.3	⁻⁹⁴ ₀	-14.7																	
Jun 12	39.4	⁻⁶ ₂	39.0	⁻¹⁷ ₂	37.8	⁻²⁸ ₂	35.8	⁻³⁹ ₂	33.1	⁻⁴⁹ ₂	29.6	⁻⁵⁹ ₂	25.5	⁻⁶⁸ ₂	20.8	⁻⁷⁵ ₂	15.5	⁻⁸² ₂	9.8	⁻⁸⁷ ₁	3.8	⁻⁹¹ ₁	-5.4	⁻⁹⁴ ₁	-14.8																	
Jun 13	39.6	⁻⁶ ₄	39.2	⁻¹⁷ ₄	37.9	⁻²⁹ ₄	35.9	⁻³⁹ ₄	33.2	⁻⁵⁰ ₄	29.7	⁻⁵⁹ ₃	25.6	⁻⁶⁸ ₃	20.9	⁻⁷⁶ ₃	15.6	⁻⁸² ₂	9.9	⁻⁸⁷ ₂	3.8	⁻⁹² ₂	-5.4	⁻⁹⁵ ₁	-14.8																	
Jun 14	39.8	⁻⁶ ₆	39.4	⁻¹⁷ ₆	38.2	⁻²⁹ ₅	36.2	⁻⁴⁰ ₅	33.4	⁻⁵⁰ ₅	29.9	⁻⁶⁰ ₅	25.8	⁻⁶⁸ ₄	21.0	⁻⁷⁶ ₄	15.7	⁻⁸³ ₃	9.9	⁻⁸⁸ ₃	3.8	⁻⁹³ ₂	-5.4	⁻⁹⁶ ₂	-14.9																	
Jun 15	40.2	⁻⁶ ₇	39.8	⁻¹⁸ ₇	38.6	⁻²⁹ ₇	36.5	⁻⁴⁰ ₇	33.7	⁻⁵¹ ₆	30.2	⁻⁶⁰ ₆	26.0	⁻⁶⁹ ₅	21.2	⁻⁷⁷ ₅	15.8	⁻⁸⁴ ₄	10.0	⁻⁸⁹ ₄	3.8	⁻⁹⁴ ₃	-5.5	⁻⁹⁷ ₂	-15.1																	
Jun 16	40.7	⁻⁶ ₉	40.3	⁻¹⁸ ₈	39.0	⁻³⁰ ₈	37.0	⁻⁴¹ ₈	34.2	⁻⁵¹ ₈	30.6	⁻⁶¹ ₇	26.3	⁻⁷⁰ ₇	21.5	⁻⁷⁸ ₆	16.0	⁻⁸⁵ ₅	10.2	⁻⁹⁰ ₅	3.9	⁻⁹⁵ ₄	-5.5	⁻⁹⁸ ₂	-15.2																	
Jun 17	41.3	⁻⁶ ₁₀	40.9	⁻¹⁸ ₉	39.6	⁻³⁰ ₉	37.5	⁻⁴¹ ₉	34.7	⁻⁵² ₈	31.0	⁻⁶² ₈	26.7	⁻⁷¹ ₇	21.8	⁻⁷⁹ ₇	16.3	⁻⁸⁶ ₆	10.3	⁻⁹² ₅	3.9	⁻⁹⁶ ₄	-5.6	⁻⁹⁹ ₃	-15.5																	
Jun 18	42.0	⁻⁶ ₁₀	41.5	⁻¹⁸ ₁₀	40.2	⁻³¹ ₁₀	38.1	⁻⁴² ₉	35.2	⁻⁵³ ₉	31.5	⁻⁶³ ₈	27.1	⁻⁷² ₈	22.1	⁻⁸⁰ ₇	16.5	⁻⁸⁷ ₆	10.5	⁻⁹³ ₅	4.0	⁻⁹⁸ ₄	-5.7	⁻¹⁰¹ ₃	-15.7																	
Jun 19	42.6	⁻⁶ ₁₀	42.2	⁻¹⁹ ₁₀	40.9	⁻³¹ ₉	38.8	⁻⁴³ ₉	35.8	⁻⁵⁴ ₉	32.0	⁻⁶⁴ ₈	27.6	⁻⁷⁴ ₇	22.5	⁻⁸² ₇	16.8	⁻⁸⁹ ₆	10.6	⁻⁹⁵ ₅	4.1	⁻⁹⁹ ₄	-5.8	⁻¹⁰³ ₃	-16.0																	
Jun 20	43.3	⁻⁶ ₈	42.9	⁻¹⁹ ₈	41.5	⁻³¹ ₈	39.4	⁻⁴³ ₈	36.3	⁻⁵⁵ ₇	32.5	⁻⁶⁵ ₇	28.0	⁻⁷⁵ ₆	22.8	⁻⁸³ ₆	17.1	⁻⁹⁰ ₅	10.8	⁻⁹⁶ ₄	4.1	⁻¹⁰¹ ₄	-5.9	⁻¹⁰⁴ ₂	-16.2																	
Jun 21	43.9	⁻⁶ ₆	43.4	⁻¹⁹ ₆	42.1	⁻³² ₆	39.9	⁻⁴⁴ ₆	36.8	⁻⁵⁵ ₅	33.0	⁻⁶⁶ ₅	28.4	⁻⁷⁵ ₅	23.1	⁻⁸⁴ ₄	17.3	⁻⁹¹ ₄	10.9	⁻⁹⁷ ₃	4.2	⁻¹⁰² ₃	-6.0	⁻¹⁰⁵ ₂	-16.4																	
Jun 22	44.3	⁻⁷ ₃	43.9	⁻¹⁹ ₃	42.5	⁻³² ₃	40.3	⁻⁴⁴ ₃	37.2	⁻⁵⁶ ₃	33.3	⁻⁶⁶ ₃	28.7	⁻⁷⁶ ₂	23.4	⁻⁸⁵ ₂	17.5	⁻⁹² ₂	11.1	⁻⁹⁸ ₂	4.2	⁻¹⁰³ ₁	-6.0	⁻¹⁰⁶ ₁	-16.6																	
Jun 23	44.5	⁻⁷ ₀	44.1	⁻¹⁹ ₀	42.7	⁻³² ₀	40.5	⁻⁴⁴ ₀	37.4	⁻⁵⁶ ₀	33.5	⁻⁶⁶ ₀	28.8	⁻⁷⁶ ₀																												

2009

Moon Parallax and Semi-diameter

		Lower Limb																																									
		Altitude degrees																																									
		0			7			14			21			28			35			42			49			56			63			70			80			90					
		'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Jul 4	4	69.6	-6	-3	69.1	-17	-3	67.9	-29	-3	65.9	-39	-3	63.2	-50	-3	59.7	-59	-3	55.5	-68	-3	50.8	-75	-2	45.5	-82	-2	39.7	-87	-2	33.6	-92	-1	24.4	-95	-1	14.9					
Jul 5	5	69.2	-6	-2	68.8	-17	-2	67.5	-28	-2	65.6	-39	-2	62.8	-49	-2	59.3	-59	-2	55.2	-67	-2	50.5	-75	-2	45.2	-82	-1	39.5	-87	-1	33.4	-91	-1	24.2	-94	-1	14.8					
Jul 6	6	68.9	-6	-1	68.5	-17	-1	67.3	-28	-1	65.3	-39	-1	62.6	-49	-1	59.1	-59	-1	55.0	-67	-1	50.3	-75	-1	45.0	-81	-1	39.3	-86	-1	33.3	-91	-1	24.2	-94	0	14.8					
Jul 7	7	68.7	-6	0	68.3	-17	0	67.1	-28	0	65.1	-39	0	62.4	-49	0	59.0	-59	0	54.9	-67	0	50.2	-75	0	44.9	-81	0	39.2	-86	0	33.2	-91	0	24.1	-94	0	14.7					
Jul 8	8	68.7	-6	1	68.3	-17	1	67.1	-28	1	65.1	-39	1	62.4	-49	1	58.9	-59	0	54.8	-67	0	50.1	-75	0	44.9	-81	0	39.2	-86	0	33.2	-91	0	24.1	-94	0	14.7					
Jul 9	9	68.8	-6	2	68.4	-17	2	67.2	-28	2	65.2	-39	1	62.4	-49	1	59.0	-59	1	54.9	-67	1	50.2	-75	1	44.9	-81	1	39.3	-87	1	33.2	-91	1	24.1	-94	0	14.7					
Jul 10	10	69.0	-6	3	68.5	-17	3	67.3	-28	3	65.4	-39	3	62.6	-50	2	59.2	-59	2	55.0	-68	2	50.3	-75	2	45.1	-82	2	39.4	-87	1	33.3	-91	1	24.2	-94	1	14.8					
Jul 11	11	69.3	-6	4	68.9	-17	4	67.7	-29	4	65.7	-40	4	62.9	-50	3	59.4	-59	3	55.3	-68	3	50.5	-76	3	45.3	-82	2	39.5	-87	2	33.5	-92	2	24.3	-95	1	14.8					
Jul 12	12	69.7	-6	5	69.3	-18	5	68.1	-29	5	66.1	-40	5	63.3	-50	5	59.8	-60	4	55.7	-68	4	50.9	-76	4	45.6	-83	3	39.8	-88	3	33.7	-93	2	24.5	-96	1	14.9					
Jul 13	13	70.4	-6	7	70.0	-18	6	68.7	-29	6	66.7	-40	6	63.9	-51	6	60.4	-60	5	56.2	-69	5	51.3	-77	5	46.0	-84	4	40.2	-89	3	34.0	-94	3	24.7	-97	2	15.1					
Jul 14	14	71.2	-6	8	70.7	-18	8	69.5	-30	8	67.4	-41	7	64.6	-51	7	61.0	-61	6	56.8	-70	6	51.9	-78	5	46.5	-85	5	40.6	-90	4	34.4	-95	3	24.9	-98	2	15.2					
Jul 15	15	72.1	-6	9	71.7	-18	9	70.4	-30	9	68.3	-41	8	65.5	-52	8	61.8	-62	7	57.5	-71	7	52.6	-79	6	47.1	-86	5	41.2	-91	5	34.8	-96	4	25.3	-99	3	15.4					
Jul 16	16	73.2	-6	10	72.7	-18	9	71.5	-30	9	69.3	-42	9	66.4	-53	8	62.8	-63	8	58.4	-72	7	53.4	-80	7	47.8	-87	6	41.8	-93	5	35.3	-98	4	25.6	-101	3	15.7					
Jul 17	17	74.3	-6	10	73.9	-19	9	72.6	-31	9	70.4	-43	9	67.5	-54	8	63.7	-64	8	59.3	-73	7	54.2	-81	7	48.6	-88	6	42.4	-94	5	35.9	-99	4	26.1	-102	3	15.9					
Jul 18	18	75.5	-6	9	75.0	-19	9	73.7	-31	8	71.5	-43	8	68.5	-54	8	64.7	-65	7	60.2	-74	7	55.1	-83	6	49.3	-90	5	43.1	-96	5	36.4	-101	4	26.5	-104	2	16.2					
Jul 19	19	76.5	-6	7	76.1	-19	7	74.7	-32	7	72.5	-44	7	69.5	-55	6	65.6	-66	6	61.1	-75	5	55.8	-84	5	50.0	-91	4	43.7	-97	4	37.0	-102	3	26.8	-105	2	16.4					
Jul 20	20	77.4	-6	4	76.9	-19	4	75.6	-32	4	73.3	-44	4	70.3	-56	4	66.4	-66	4	61.8	-76	3	56.5	-84	3	50.6	-92	3	44.2	-98	2	37.4	-103	2	27.1	-106	1	16.6					
Jul 21	21	77.9	-7	1	77.5	-19	1	76.1	-32	1	73.8	-44	1	70.7	-56	1	66.8	-67	1	62.2	-76	1	56.9	-85	1	50.9	-92	1	44.5	-98	1	37.6	-103	0	27.3	-106	0	16.7					
Jul 22	22	78.1	-7	-2	77.6	-19	-2	76.2	-32	-2	74.0	-44	-2	70.9	-56	-2	67.0	-66	-2	62.3	-76	-2	57.0	-85	-2	51.0	-92	-1	44.6	-98	-1	37.7	-103	-1	27.4	-106	-1	16.7					
Jul 23	23	77.8	-6	-5	77.3	-19	-5	76.0	-32	-5	73.7	-44	-5	70.6	-55	-5	66.7	-66	-5	62.1	-76	-4	56.8	-84	-4	50.8	-91	-3	44.4	-97	-3	37.6	-102	-2	27.3	-106	-2	16.7					
Jul 24	24	77.1	-6	-8	76.7	-19	-8	75.3	-32	-8	73.1	-44	-7	70.0	-55	-7	66.2	-65	-7	61.5	-75	-6	56.3	-83	-6	50.4	-91	-5	44.0	-96	-4	37.2	-101	-3	27.0	-105	-2	16.5					
Jul 25	25	76.2	-6	-9	75.7	-19	-9	74.4	-31	-9	72.2	-43	-9	69.2	-54	-8	65.3	-65	-8	60.8	-74	-7	55.6	-82	-7	49.8	-89	-6	43.5	-95	-5	36.8	-100	-4	26.7	-103	-3	16.3					
Jul 26	26	75.0	-6	-10	74.6	-19	-10	73.3	-31	-10	71.1	-42	-9	68.1	-53	-9	64.4	-64	-8	59.9	-73	-8	54.7	-81	-7	49.0	-88	-6	42.8	-94	-5	36.2	-98	-4	26.3	-102	-3	16.1					
Jul 27	27	73.8	-6	-10	73.4	-18	-10	72.1	-30	-9	70.0	-42	-9	67.0	-52	-9	63.3	-62	-8	58.9	-72	-7	53.9	-80	-7	48.2	-86	-6	42.1	-92	-5	35.6	-97	-4	25.9	-100	-3	15.8					
Jul 28	28	72.6	-6	-9	72.2	-18	-9	70.9	-30	-9	68.9	-41	-8	66.0	-52	-8	62.3	-62	-7	58.0	-71	-7	53.0	-78	-6	47.5	-85	-5	41.5	-91	-5	35.1	-95	-4	25.5	-98	-3	15.6					
Jul 29	29	71.6	-6	-8	71.2	-18	-7	69.9	-29	-7	67.8	-40	-7	65.0	-51	-7	61.4	-61	-6	57.1	-70	-6	52.2	-77	-5	46.8	-84	-5	40.9	-89	-4	34.6	-94	-3	25.1	-97	-2	15.3					
Jul 30	30	70.7	-6	-6	70.3	-18	-6	69.0	-29	-6	67.0	-40	-6	64.2	-50	-5	60.6	-60	-5	56.4	-69	-5	51.6	-76	-4	46.2	-83	-4	40.3	-88	-3	34.1	-93	-3	24.8	-96	-2	15.1					
Jul 31	31	69.9	-6	-5	69.5	-17	-5	68.3	-29	-4	66.3	-40	-4	63.5	-50	-4	60.0	-59	-4	55.8	-68	-4	51.0	-76	-3	45.7	-82	-3	39.9	-88	-2	33.8	-92	-2	24.5	-95	-1	15.0					
Aug 1	1	69.4	-6	-3	69.0	-17	-3	67.8	-29	-3	65.8	-39	-3	63.0	-50	-3	59.5	-59	-3	55.4	-68	-2	50.6	-75	-2	45.3	-82	-2	39.6	-87	-2	33.5	-92	-1	24.3	-94	-1	14.9					
Aug 2	2	69.0	-6	-2	68.6	-17	-2	67.4	-28	-2	65.4	-39	-2	62.7	-49	-2	59.2	-59	-1	55.1	-67	-1	50.4	-75	-1	45.1	-81	-1	39.4	-87	-1	33.3	-91	-1	24.2	-94	-1	14.8					
Aug 3	3	68.8	-6	-1	68.4	-17	-1	67.2	-28	-1	65.2	-39	-1	62.5	-49	-1	59.0	-59	0	54.9	-67	0	50.2	-75	0	45.0	-81	0	39.3	-86	0	33.2	-91	0	24.1	-94	0	14.7					
Aug 4	4	68.7	-6	0	68.3	-17	0	67.1	-28	0	65.1	-39	0	62.4	-49	0	59.0	-59	0	54.8	-67	0	50.1	-75	0	44.9	-81	0	39.2	-86	0	33.2	-91	0	24.1	-94	0	14.7					
Aug 5	5	68.8	-6	1	68.4	-17	1	67.2	-28	1	65.2	-39	1	62.5	-49	1	59.0	-59	1	54.9	-67	1	50.2	-75	1	45.0	-81	1	39.3	-87	1	33.2	-91	1	24.1	-94	0	14.7					
Aug 6	6	69.0	-6	2	68.5	-17	2	67.3	-28	2	65.4	-39	2	62.6	-49	2	59.2	-59	2	55.0	-68	2	50.3	-75	2	45.1	-82	1	39.4	-87	1	33.3	-91	1	24.2	-94	1	14.8					
Aug 7	7	69.2	-6	3	68.8	-17	3	67.6	-29	3	65.6	-39	3	62.9	-50	3	59.4	-59	3	55.3	-68	2	50.5	-75	2	45.2	-82	2	39.5	-87	2	33.4	-92	1	24.3	-95	1	14.8					
Aug 8	8	69.6	-6	4	69.2	-17	4	68.0	-29	4	66.0	-40	4	63.2	-50	4	59.7	-60	3	55.6	-68	3	50.8	-76	3	45.5	-82	2	39.7	-88	2	33.6	-92	2	24.4	-95	1	14.9					
Aug 9	9	70.1	-6	5	69.7	-18	5	68.5	-29	5	66.4	-40	5	63.6	-50	4	60.1	-60	4	55.9	-69	4	51.1	-77	3	45.8	-83	3	40.0	-88	3	33.8	-93	2	24.6	-96	1	15.0					
Aug 10	10	70.7	-6	6	70.3	-18	6	69.0	-29	6	67.0	-40	5	64.2	-51	5	60.6	-61	5	56.4	-69	4	51.6	-77	4	46.2	-84	4	40.3	-89	3	34.1	-94	2	24.8	-97	2	15.1					
Aug 11	11	71.4	-6	7	70.9	-18	7	69.7	-30	6	67.6	-41	6	64.8	-51	6	61.2	-61	6	57.0	-70	5	52.1	-78	5	46.6	-85	4	40.7	-90	4	34.5	-95	3	25.0	-98	2	15.3					
Aug 12	12	72.2	-6	7	71.7	-18	7	70.5	-30	7	68.4	-41	7	65.5	-52	7	61.9	-62	6	57.6	-71	6	52.7	-79	5	47.2	-86	5	41.2	-91	4	34.8	-96	3	25.3	-99	2	15.5					
Aug 13	13	73.1	-6	8	72.6	-18	8	71.4	-30	8	69.2	-42																															

2009

Moon Parallax and Semi-diameter

		Upper Limb																																									
		Altitude degrees																																									
		0			7			14			21			28			35			42			49			56			63			70			80			90					
		'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Jul 4	4	39.8	⁻⁶	₋₃	39.4	⁻¹⁷	₋₃	38.1	⁻²⁹	₋₃	36.1	⁻³⁹	₋₃	33.4	⁻⁵⁰	₋₃	29.9	⁻⁵⁹	₋₃	25.7	⁻⁶⁸	₋₃	21.0	⁻⁷⁵	₋₂	15.7	⁻⁸²	₋₂	9.9	⁻⁸⁷	₋₂	3.8	⁻⁹²	₋₁	-5.4	⁻⁹⁵	₋₁	-14.9					
Jul 5	5	39.5	⁻⁶	₋₂	39.1	⁻¹⁷	₋₂	37.9	⁻²⁸	₋₂	35.9	⁻³⁹	₋₂	33.2	⁻⁴⁹	₋₂	29.7	⁻⁵⁹	₋₂	25.6	⁻⁶⁷	₋₂	20.8	⁻⁷⁵	₋₂	15.6	⁻⁸²	₋₁	9.9	⁻⁸⁷	₋₁	3.8	⁻⁹¹	₋₁	-5.4	⁻⁹⁴	₋₁	-14.8					
Jul 6	6	39.4	⁻⁶	₋₁	39.0	⁻¹⁷	₋₁	37.8	⁻²⁸	₋₁	35.8	⁻³⁹	₋₁	33.0	⁻⁴⁹	₋₁	29.6	⁻⁵⁹	₋₁	25.5	⁻⁶⁷	₋₁	20.8	⁻⁷⁵	₋₁	15.5	⁻⁸¹	₋₁	9.8	⁻⁸⁶	₋₁	3.8	⁻⁹¹	₋₁	-5.4	⁻⁹⁴	₀	-14.8					
Jul 7	7	39.3	⁻⁶	₀	38.9	⁻¹⁷	₀	37.7	⁻²⁸	₀	35.7	⁻³⁹	₀	33.0	⁻⁴⁹	₀	29.5	⁻⁵⁹	₀	25.4	⁻⁶⁷	₀	20.7	⁻⁷⁵	₀	15.5	⁻⁸¹	₀	9.8	⁻⁸⁶	₀	3.8	⁻⁹¹	₀	-5.3	⁻⁹⁴	₀	-14.7					
Jul 8	8	39.3	⁻⁶	₁	38.9	⁻¹⁷	₁	37.7	⁻²⁸	₁	35.7	⁻³⁹	₁	32.9	⁻⁴⁹	₁	29.5	⁻⁵⁹	₀	25.4	⁻⁶⁷	₀	20.7	⁻⁷⁵	₀	15.5	⁻⁸¹	₀	9.8	⁻⁸⁶	₀	3.8	⁻⁹¹	₀	-5.3	⁻⁹⁴	₀	-14.7					
Jul 9	9	39.3	⁻⁶	₂	38.9	⁻¹⁷	₂	37.7	⁻²⁸	₂	35.7	⁻³⁹	₁	33.0	⁻⁴⁹	₁	29.5	⁻⁵⁹	₁	25.4	⁻⁶⁷	₁	20.7	⁻⁷⁵	₁	15.5	⁻⁸¹	₁	9.8	⁻⁸⁷	₁	3.8	⁻⁹¹	₁	-5.3	⁻⁹⁴	₀	-14.7					
Jul 10	10	39.4	⁻⁶	₃	39.0	⁻¹⁷	₃	37.8	⁻²⁸	₃	35.8	⁻³⁹	₃	33.1	⁻⁵⁰	₂	29.6	⁻⁵⁹	₂	25.5	⁻⁶⁸	₂	20.8	⁻⁷⁵	₂	15.5	⁻⁸²	₂	9.8	⁻⁸⁷	₁	3.8	⁻⁹¹	₁	-5.4	⁻⁹⁴	₁	-14.8					
Jul 11	11	39.6	⁻⁶	₄	39.2	⁻¹⁷	₄	38.0	⁻²⁹	₄	36.0	⁻⁴⁰	₄	33.2	⁻⁵⁰	₃	29.8	⁻⁵⁹	₃	25.6	⁻⁶⁸	₃	20.9	⁻⁷⁶	₃	15.6	⁻⁸²	₂	9.9	⁻⁸⁷	₂	3.8	⁻⁹²	₂	-5.4	⁻⁹⁵	₁	-14.8					
Jul 12	12	39.9	⁻⁶	₅	39.5	⁻¹⁸	₅	38.2	⁻²⁹	₅	36.2	⁻⁴⁰	₅	33.5	⁻⁵⁰	₅	30.0	⁻⁶⁰	₄	25.8	⁻⁶⁸	₄	21.0	⁻⁷⁶	₄	15.7	⁻⁸³	₃	9.9	⁻⁸⁸	₃	3.8	⁻⁹³	₂	-5.4	⁻⁹⁶	₁	-14.9					
Jul 13	13	40.2	⁻⁶	₇	39.8	⁻¹⁸	₆	38.6	⁻²⁹	₆	36.6	⁻⁴⁰	₆	33.8	⁻⁵¹	₆	30.2	⁻⁶⁰	₅	26.0	⁻⁶⁹	₅	21.2	⁻⁷⁷	₅	15.9	⁻⁸⁴	₄	10.0	⁻⁸⁹	₃	3.8	⁻⁹⁴	₃	-5.5	⁻⁹⁷	₂	-15.1					
Jul 14	14	40.7	⁻⁶	₈	40.3	⁻¹⁸	₈	39.0	⁻³⁰	₈	37.0	⁻⁴¹	₇	34.1	⁻⁵¹	₇	30.6	⁻⁶¹	₆	26.3	⁻⁷⁰	₆	21.4	⁻⁷⁸	₅	16.0	⁻⁸⁵	₅	10.1	⁻⁹⁰	₄	3.9	⁻⁹⁵	₃	-5.5	⁻⁹⁸	₂	-15.2					
Jul 15	15	41.2	⁻⁶	₉	40.8	⁻¹⁸	₉	39.5	⁻³⁰	₉	37.5	⁻⁴¹	₈	34.6	⁻⁵²	₈	31.0	⁻⁶²	₇	26.7	⁻⁷¹	₇	21.7	⁻⁷⁹	₆	16.2	⁻⁸⁶	₅	10.3	⁻⁹¹	₅	3.9	⁻⁹⁶	₄	-5.6	⁻⁹⁹	₃	-15.4					
Jul 16	16	41.8	⁻⁶	₁₀	41.4	⁻¹⁸	₉	40.1	⁻³⁰	₉	38.0	⁻⁴²	₉	35.1	⁻⁵³	₈	31.4	⁻⁶³	₈	27.1	⁻⁷²	₇	22.1	⁻⁸⁰	₇	16.5	⁻⁸⁷	₆	10.4	⁻⁹³	₅	4.0	⁻⁹⁸	₄	-5.7	⁻¹⁰¹	₃	-15.7					
Jul 17	17	42.5	⁻⁶	₁₀	42.0	⁻¹⁹	₉	40.7	⁻³¹	₉	38.6	⁻⁴³	₉	35.6	⁻⁵⁴	₈	31.9	⁻⁶⁴	₈	27.5	⁻⁷³	₇	22.4	⁻⁸¹	₇	16.7	⁻⁸⁸	₆	10.6	⁻⁹⁴	₅	4.1	⁻⁹⁹	₄	-5.8	⁻¹⁰²	₃	-15.9					
Jul 18	18	43.1	⁻⁶	₉	42.7	⁻¹⁹	₉	41.4	⁻³¹	₈	39.2	⁻⁴³	₈	36.2	⁻⁵⁴	₈	32.4	⁻⁶⁵	₇	27.9	⁻⁷⁴	₇	22.7	⁻⁸³	₆	17.0	⁻⁹⁰	₅	10.8	⁻⁹⁶	₅	4.1	⁻¹⁰¹	₄	-5.9	⁻¹⁰⁴	₂	-16.2					
Jul 19	19	43.7	⁻⁶	₇	43.3	⁻¹⁹	₇	42.0	⁻³²	₇	39.8	⁻⁴⁴	₇	36.7	⁻⁵⁵	₆	32.9	⁻⁶⁶	₆	28.3	⁻⁷⁵	₅	23.1	⁻⁸⁴	₅	17.2	⁻⁹¹	₄	10.9	⁻⁹⁷	₄	4.2	⁻¹⁰²	₃	-5.9	⁻¹⁰⁵	₂	-16.4					
Jul 20	20	44.2	⁻⁶	₄	43.8	⁻¹⁹	₄	42.4	⁻³²	₄	40.2	⁻⁴⁴	₄	37.1	⁻⁵⁶	₄	33.2	⁻⁶⁶	₄	28.6	⁻⁷⁶	₃	23.3	⁻⁸⁴	₃	17.4	⁻⁹²	₃	11.0	⁻⁹⁸	₂	4.2	⁻¹⁰³	₂	-6.0	⁻¹⁰⁶	₁	-16.6					
Jul 21	21	44.5	⁻⁷	₁	44.1	⁻¹⁹	₁	42.7	⁻³²	₁	40.5	⁻⁴⁴	₁	37.4	⁻⁵⁶	₁	33.5	⁻⁶⁷	₁	28.8	⁻⁷⁶	₁	23.5	⁻⁸⁵	₁	17.6	⁻⁹²	₁	11.1	⁻⁹⁸	₁	4.3	⁻¹⁰³	₀	-6.1	⁻¹⁰⁶	₀	-16.7					
Jul 22	22	44.6	⁻⁷	₋₂	44.2	⁻¹⁹	₋₂	42.8	⁻³²	₋₂	40.5	⁻⁴⁴	₋₂	37.4	⁻⁵⁶	₋₂	33.5	⁻⁶⁶	₋₂	28.9	⁻⁷⁶	₋₂	23.5	⁻⁸⁵	₋₂	17.6	⁻⁹²	₋₁	11.1	⁻⁹⁸	₋₁	4.3	⁻¹⁰³	₋₁	-6.1	⁻¹⁰⁶	₋₁	-16.7					
Jul 23	23	44.5	⁻⁶	₋₅	44.0	⁻¹⁹	₋₅	42.6	⁻³²	₋₅	40.4	⁻⁴⁴	₋₅	37.3	⁻⁵⁵	₋₅	33.4	⁻⁶⁶	₋₅	28.8	⁻⁷⁶	₋₄	23.4	⁻⁸⁴	₋₄	17.5	⁻⁹¹	₋₃	11.1	⁻⁹⁷	₋₃	4.2	⁻¹⁰²	₋₂	-6.0	⁻¹⁰⁶	₋₂	-16.7					
Jul 24	24	44.1	⁻⁶	₋₈	43.6	⁻¹⁹	₋₈	42.3	⁻³²	₋₈	40.1	⁻⁴⁴	₋₇	37.0	⁻⁵⁵	₋₇	33.1	⁻⁶⁵	₋₇	28.5	⁻⁷⁵	₋₆	23.2	⁻⁸³	₋₆	17.4	⁻⁹¹	₋₅	11.0	⁻⁹⁶	₋₄	4.2	⁻¹⁰¹	₋₃	-6.0	⁻¹⁰⁵	₋₂	-16.5					
Jul 25	25	43.5	⁻⁶	₋₉	43.1	⁻¹⁹	₋₉	41.8	⁻³¹	₋₉	39.6	⁻⁴³	₋₉	36.5	⁻⁵⁴	₋₈	32.7	⁻⁶⁵	₋₈	28.2	⁻⁷⁴	₋₇	23.0	⁻⁸²	₋₇	17.2	⁻⁸⁹	₋₆	10.9	⁻⁹⁵	₋₅	4.2	⁻¹⁰⁰	₋₄	-5.9	⁻¹⁰³	₋₃	-16.3					
Jul 26	26	42.9	⁻⁶	₋₁₀	42.4	⁻¹⁹	₋₁₀	41.1	⁻³¹	₋₁₀	39.0	⁻⁴²	₋₉	36.0	⁻⁵³	₋₉	32.2	⁻⁶⁴	₋₈	27.7	⁻⁷³	₋₈	22.6	⁻⁸¹	₋₇	16.9	⁻⁸⁸	₋₆	10.7	⁻⁹⁴	₋₅	4.1	⁻⁹⁸	₋₄	-5.8	⁻¹⁰²	₋₃	-16.1					
Jul 27	27	42.2	⁻⁶	₋₁₀	41.8	⁻¹⁸	₋₁₀	40.5	⁻³⁰	₋₉	38.3	⁻⁴²	₋₉	35.4	⁻⁵²	₋₉	31.7	⁻⁶²	₋₈	27.3	⁻⁷²	₋₇	22.2	⁻⁸⁰	₋₇	16.6	⁻⁸⁶	₋₆	10.5	⁻⁹²	₋₅	4.0	⁻⁹⁷	₋₄	-5.7	⁻¹⁰⁰	₋₃	-15.8					
Jul 28	28	41.5	⁻⁶	₋₉	41.1	⁻¹⁸	₋₉	39.8	⁻³⁰	₋₉	37.7	⁻⁴¹	₋₈	34.8	⁻⁵²	₋₈	31.2	⁻⁶²	₋₇	26.9	⁻⁷¹	₋₇	21.9	⁻⁷⁸	₋₆	16.4	⁻⁸⁵	₋₅	10.4	⁻⁹¹	₋₅	4.0	⁻⁹⁵	₋₄	-5.6	⁻⁹⁸	₋₃	-15.6					
Jul 29	29	40.9	⁻⁶	₋₈	40.5	⁻¹⁸	₋₇	39.2	⁻²⁹	₋₇	37.2	⁻⁴⁰	₋₇	34.3	⁻⁵¹	₋₇	30.7	⁻⁶¹	₋₆	26.5	⁻⁷⁰	₋₆	21.6	⁻⁷⁷	₋₅	16.1	⁻⁸⁴	₋₅	10.2	⁻⁸⁹	₋₄	3.9	⁻⁹⁴	₋₃	-5.6	⁻⁹⁷	₋₂	-15.3					
Jul 30	30	40.4	⁻⁶	₋₆	40.0	⁻¹⁸	₋₆	38.7	⁻²⁹	₋₆	36.7	⁻⁴⁰	₋₆	33.9	⁻⁵⁰	₋₅	30.4	⁻⁶⁰	₋₅	26.1	⁻⁶⁹	₋₅	21.3	⁻⁷⁶	₋₄	15.9	⁻⁸³	₋₄	10.1	⁻⁸⁸	₋₃	3.9	⁻⁹³	₋₃	-5.5	⁻⁹⁶	₋₂	-15.1					
Jul 31	31	40.0	⁻⁶	₋₅	39.6	⁻¹⁷	₋₅	38.3	⁻²⁹	₋₄	36.3	⁻⁴⁰	₋₄	33.5	⁻⁵⁰	₋₄	30.0	⁻⁵⁹	₋₄	25.9	⁻⁶⁸	₋₄	21.1	⁻⁷⁶	₋₃	15.8	⁻⁸²	₋₃	10.0	⁻⁸⁸	₋₂	3.8	⁻⁹²	₋₂	-5.4	⁻⁹⁵	₋₁	-15.0					
Aug 1	1	39.7	⁻⁶	₋₃	39.3	⁻¹⁷	₋₃	38.0	⁻²⁹	₋₃	36.0	⁻³⁹	₋₃	33.3	⁻⁵⁰	₋₃	29.8	⁻⁵⁹	₋₃	25.7	⁻⁶⁸	₋₂	20.9	⁻⁷⁵	₋₂	15.6	⁻⁸²	₋₂	9.9	⁻⁸⁷	₋₂	3.8	⁻⁹²	₋₁	-5.4	⁻⁹⁴	₋₁	-14.9					
Aug 2	2	39.4	⁻⁶	₋₂	39.0	⁻¹⁷	₋₂	37.8	⁻²⁸	₋₂	35.8	⁻³⁹	₋₂	33.1	⁻⁴⁹	₋₂	29.6	⁻⁵⁹	₋₁	25.5	⁻⁶⁷	₋₁	20.8	⁻⁷⁵	₋₁	15.5	⁻⁸¹	₋₁	9.8	⁻⁸⁷	₋₁	3.8	⁻⁹¹	₋₁	-5.4	⁻⁹⁴	₋₁	-14.8					
Aug 3	3	39.3	⁻⁶	₋₁	38.9	⁻¹⁷	₋₁	37.7	⁻²⁸	₋₁	35.7	⁻³⁹	₋₁	33.0	⁻⁴⁹	₋₁	29.5	⁻⁵⁹	₀	25																							

Lower Limb																																										
Altitude degrees																																										
	0			7			14			21			28			35			42			49			56			63			70			80			90					
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Aug 19	77.6	⁻⁶	₋₁	77.1	⁻¹⁹	₋₁	75.8	⁻³²	₋₁	73.5	⁻⁴⁴	₋₁	70.4	⁻⁵⁶	₋₁	66.6	⁻⁶⁶	₋₁	61.9	⁻⁷⁶	₋₁	56.6	⁻⁸⁴	₋₁	50.7	⁻⁹²	₋₁	44.3	⁻⁹⁷	₀	37.5	⁻¹⁰³	₀	27.2	⁻¹⁰⁶	₀	16.6					
Aug 20	77.5	⁻⁶	₋₄	77.0	⁻¹⁹	₋₄	75.7	⁻³²	₋₄	73.4	⁻⁴⁴	₋₄	70.3	⁻⁵⁵	₋₄	66.5	⁻⁶⁶	₋₃	61.8	⁻⁷⁶	₋₃	56.5	⁻⁸⁴	₋₃	50.6	⁻⁹¹	₋₂	44.2	⁻⁹⁷	₋₂	37.4	⁻¹⁰²	₋₂	27.2	⁻¹⁰⁵	₋₁	16.6					
Aug 21	77.0	⁻⁶	₋₇	76.5	⁻¹⁹	₋₇	75.2	⁻³²	₋₆	73.0	⁻⁴⁴	₋₆	69.9	⁻⁵⁵	₋₆	66.0	⁻⁶⁵	₋₆	61.4	⁻⁷⁵	₋₅	56.2	⁻⁸³	₋₅	50.3	⁻⁹⁰	₋₄	43.9	⁻⁹⁶	₋₄	37.2	⁻¹⁰¹	₋₃	27.0	⁻¹⁰⁴	₋₂	16.5					
Aug 22	76.2	⁻⁶	₋₉	75.7	⁻¹⁹	₋₉	74.4	⁻³¹	₋₈	72.2	⁻⁴³	₋₈	69.2	⁻⁵⁴	₋₈	65.4	⁻⁶⁵	₋₇	60.8	⁻⁷⁴	₋₇	55.6	⁻⁸²	₋₆	49.8	⁻⁸⁹	₋₅	43.5	⁻⁹⁵	₋₅	36.8	⁻¹⁰⁰	₋₄	26.7	⁻¹⁰³	₋₂	16.3					
Aug 23	75.1	⁻⁶	₋₁₀	74.7	⁻¹⁹	₋₁₀	73.4	⁻³¹	₋₉	71.2	⁻⁴²	₋₉	68.2	⁻⁵³	₋₉	64.5	⁻⁶⁴	₋₈	60.0	⁻⁷³	₋₇	54.8	⁻⁸¹	₋₇	49.1	⁻⁸⁸	₋₆	42.9	⁻⁹⁴	₋₅	36.3	⁻⁹⁹	₋₄	26.3	⁻¹⁰²	₋₃	16.1					
Aug 24	74.0	⁻⁶	₋₁₀	73.6	⁻¹⁸	₋₁₀	72.3	⁻³⁰	₋₉	70.1	⁻⁴²	₋₉	67.2	⁻⁵³	₋₉	63.5	⁻⁶³	₋₈	59.0	⁻⁷²	₋₇	54.0	⁻⁸⁰	₋₇	48.4	⁻⁸⁷	₋₆	42.2	⁻⁹²	₋₅	35.7	⁻⁹⁷	₋₄	25.9	⁻¹⁰⁰	₋₃	15.8					
Aug 25	72.8	⁻⁶	₋₉	72.4	⁻¹⁸	₋₉	71.1	⁻³⁰	₋₉	69.0	⁻⁴¹	₋₈	66.1	⁻⁵²	₋₈	62.5	⁻⁶²	₋₈	58.1	⁻⁷¹	₋₇	53.1	⁻⁷⁹	₋₆	47.6	⁻⁸⁵	₋₆	41.6	⁻⁹¹	₋₅	35.2	⁻⁹⁶	₋₄	25.5	⁻⁹⁹	₋₃	15.6					
Aug 26	71.7	⁻⁶	₋₈	71.3	⁻¹⁸	₋₈	70.0	⁻²⁹	₋₈	68.0	⁻⁴⁰	₋₇	65.1	⁻⁵¹	₋₇	61.5	⁻⁶¹	₋₇	57.2	⁻⁷⁰	₋₆	52.3	⁻⁷⁷	₋₆	46.9	⁻⁸⁴	₋₅	40.9	⁻⁹⁰	₋₄	34.6	⁻⁹⁴	₋₃	25.1	⁻⁹⁷	₋₂	15.4					
Aug 27	70.8	⁻⁶	₋₆	70.3	⁻¹⁸	₋₆	69.1	⁻²⁹	₋₆	67.1	⁻⁴⁰	₋₆	64.2	⁻⁵⁰	₋₆	60.7	⁻⁶⁰	₋₅	56.5	⁻⁶⁹	₋₅	51.6	⁻⁷⁷	₋₄	46.2	⁻⁸³	₋₄	40.4	⁻⁸⁸	₋₃	34.2	⁻⁹³	₋₃	24.8	⁻⁹⁶	₋₂	15.2					
Aug 28	70.0	⁻⁶	₋₅	69.6	⁻¹⁷	₋₅	68.3	⁻²⁹	₋₅	66.3	⁻⁴⁰	₋₄	63.5	⁻⁵⁰	₋₄	60.0	⁻⁵⁹	₋₄	55.9	⁻⁶⁸	₋₄	51.1	⁻⁷⁶	₋₃	45.7	⁻⁸²	₋₃	40.0	⁻⁸⁸	₋₃	33.8	⁻⁹²	₋₂	24.5	⁻⁹⁵	₋₁	15.0					
Aug 29	69.4	⁻⁶	₋₃	69.0	⁻¹⁷	₋₃	67.8	⁻²⁹	₋₃	65.8	⁻³⁹	₋₃	63.0	⁻⁵⁰	₋₃	59.5	⁻⁵⁹	₋₃	55.4	⁻⁶⁸	₋₂	50.6	⁻⁷⁵	₋₂	45.4	⁻⁸²	₋₂	39.6	⁻⁸⁷	₋₂	33.5	⁻⁹²	₋₁	24.3	⁻⁹⁴	₋₁	14.9					
Aug 30	69.0	⁻⁶	₋₁	68.6	⁻¹⁷	₋₁	67.4	⁻²⁸	₋₁	65.4	⁻³⁹	₋₁	62.7	⁻⁴⁹	₋₁	59.2	⁻⁵⁹	₋₁	55.1	⁻⁶⁷	₋₁	50.4	⁻⁷⁵	₋₁	45.1	⁻⁸¹	₋₁	39.4	⁻⁸⁷	₋₁	33.3	⁻⁹¹	₋₁	24.2	⁻⁹⁴	₀	14.8					
Aug 31	68.9	⁻⁶	₀	68.5	⁻¹⁷	₀	67.3	⁻²⁸	₀	65.3	⁻³⁹	₀	62.5	⁻⁴⁹	₀	59.1	⁻⁵⁹	₀	55.0	⁻⁶⁷	₀	50.2	⁻⁷⁵	₀	45.0	⁻⁸¹	₀	39.3	⁻⁸⁷	₀	33.3	⁻⁹¹	₀	24.1	⁻⁹⁴	₀	14.7					
Sep 1	68.9	⁻⁶	₁	68.5	⁻¹⁷	₁	67.3	⁻²⁸	₁	65.3	⁻³⁹	₁	62.5	⁻⁴⁹	₁	59.1	⁻⁵⁹	₁	55.0	⁻⁶⁷	₁	50.3	⁻⁷⁵	₁	45.0	⁻⁸¹	₁	39.3	⁻⁸⁷	₁	33.3	⁻⁹¹	₁	24.1	⁻⁹⁴	₀	14.7					
Sep 2	69.0	⁻⁶	₂	68.6	⁻¹⁷	₂	67.4	⁻²⁹	₂	65.4	⁻³⁹	₂	62.7	⁻⁵⁰	₂	59.2	⁻⁵⁹	₂	55.1	⁻⁶⁸	₂	50.4	⁻⁷⁵	₂	45.1	⁻⁸²	₁	39.4	⁻⁸⁷	₁	33.3	⁻⁹²	₁	24.2	⁻⁹⁴	₁	14.8					
Sep 3	69.3	⁻⁶	₃	68.9	⁻¹⁷	₃	67.7	⁻²⁹	₃	65.7	⁻⁴⁰	₃	62.9	⁻⁵⁰	₃	59.5	⁻⁵⁹	₃	55.3	⁻⁶⁸	₃	50.6	⁻⁷⁶	₂	45.3	⁻⁸²	₂	39.6	⁻⁸⁷	₂	33.5	⁻⁹²	₁	24.3	⁻⁹⁵	₁	14.8					
Sep 4	69.7	⁻⁶	₄	69.3	⁻¹⁷	₄	68.1	⁻²⁹	₄	66.1	⁻⁴⁰	₄	63.3	⁻⁵⁰	₄	59.8	⁻⁶⁰	₃	55.6	⁻⁶⁸	₃	50.9	⁻⁷⁶	₃	45.6	⁻⁸³	₂	39.8	⁻⁸⁸	₂	33.7	⁻⁹³	₂	24.4	⁻⁹⁵	₁	14.9					
Sep 5	70.2	⁻⁶	₄	69.8	⁻¹⁸	₄	68.6	⁻²⁹	₄	66.5	⁻⁴⁰	₄	63.7	⁻⁵⁰	₄	60.2	⁻⁶⁰	₄	56.0	⁻⁶⁹	₃	51.2	⁻⁷⁷	₃	45.9	⁻⁸³	₃	40.1	⁻⁸⁹	₂	33.9	⁻⁹³	₂	24.6	⁻⁹⁶	₁	15.0					
Sep 6	70.7	⁻⁶	₅	70.3	⁻¹⁸	₅	69.1	⁻²⁹	₅	67.0	⁻⁴⁰	₅	64.2	⁻⁵¹	₄	60.7	⁻⁶¹	₄	56.5	⁻⁶⁹	₄	51.6	⁻⁷⁷	₃	46.2	⁻⁸⁴	₃	40.4	⁻⁸⁹	₃	34.2	⁻⁹⁴	₂	24.8	⁻⁹⁷	₁	15.1					
Sep 7	71.3	⁻⁶	₅	70.9	⁻¹⁸	₅	69.7	⁻³⁰	₅	67.6	⁻⁴¹	₅	64.8	⁻⁵¹	₅	61.2	⁻⁶¹	₄	56.9	⁻⁷⁰	₄	52.0	⁻⁷⁸	₄	46.6	⁻⁸⁵	₃	40.7	⁻⁹⁰	₃	34.4	⁻⁹⁵	₂	25.0	⁻⁹⁸	₁	15.3					
Sep 8	72.0	⁻⁶	₆	71.5	⁻¹⁸	₅	70.3	⁻³⁰	₅	68.2	⁻⁴¹	₅	65.3	⁻⁵²	₅	61.7	⁻⁶²	₅	57.4	⁻⁷¹	₄	52.5	⁻⁷⁹	₄	47.0	⁻⁸⁵	₃	41.1	⁻⁹¹	₃	34.7	⁻⁹⁶	₂	25.2	⁻⁹⁹	₂	15.4					
Sep 9	72.6	⁻⁶	₆	72.2	⁻¹⁸	₆	70.9	⁻³⁰	₆	68.8	⁻⁴¹	₅	65.9	⁻⁵²	₅	62.3	⁻⁶²	₅	58.0	⁻⁷¹	₄	53.0	⁻⁷⁹	₄	47.5	⁻⁸⁶	₄	41.5	⁻⁹²	₃	35.1	⁻⁹⁷	₂	25.5	⁻¹⁰⁰	₂	15.6					
Sep 10	73.3	⁻⁶	₆	72.9	⁻¹⁸	₆	71.6	⁻³⁰	₆	69.5	⁻⁴²	₆	66.6	⁻⁵³	₅	62.9	⁻⁶³	₅	58.5	⁻⁷²	₄	53.5	⁻⁸⁰	₄	47.9	⁻⁸⁷	₄	41.9	⁻⁹³	₃	35.4	⁻⁹⁷	₂	25.7	⁻¹⁰¹	₂	15.7					
Sep 11	74.0	⁻⁶	₆	73.6	⁻¹⁹	₆	72.3	⁻³¹	₆	70.2	⁻⁴²	₅	67.2	⁻⁵³	₅	63.5	⁻⁶³	₅	59.1	⁻⁷³	₅	54.0	⁻⁸¹	₄	48.4	⁻⁸⁸	₄	42.3	⁻⁹³	₃	35.7	⁻⁹⁸	₂	26.0	⁻¹⁰¹	₂	15.9					
Sep 12	74.7	⁻⁶	₆	74.3	⁻¹⁹	₆	73.0	⁻³¹	₅	70.8	⁻⁴³	₅	67.9	⁻⁵⁴	₅	64.1	⁻⁶⁴	₅	59.6	⁻⁷³	₄	54.5	⁻⁸²	₄	48.8	⁻⁸⁹	₃	42.7	⁻⁹⁴	₃	36.1	⁻⁹⁹	₂	26.2	⁻¹⁰²	₂	16.0					
Sep 13	75.4	⁻⁶	₅	75.0	⁻¹⁹	₅	73.6	⁻³¹	₅	71.5	⁻⁴³	₄	68.5	⁻⁵⁴	₄	64.7	⁻⁶⁵	₄	60.2	⁻⁷⁴	₄	55.0	⁻⁸²	₃	49.3	⁻⁸⁹	₃	43.0	⁻⁹⁵	₃	36.4	⁻¹⁰⁰	₂	26.4	⁻¹⁰³	₁	16.1					
Sep 14	76.0	⁻⁶	₄	75.5	⁻¹⁹	₄	74.2	⁻³¹	₃	72.0	⁻⁴³	₃	69.0	⁻⁵⁵	₃	65.2	⁻⁶⁵	₃	60.6	⁻⁷⁵	₃	55.4	⁻⁸³	₂	49.7	⁻⁹⁰	₂	43.4	⁻⁹⁶	₂	36.7	⁻¹⁰¹	₁	26.6	⁻¹⁰⁴	₁	16.3					
Sep 15	76.4	⁻⁶	₂	76.0	⁻¹⁹	₂	74.6	⁻³²	₂	72.4	⁻⁴⁴	₂	69.4	⁻⁵⁵	₂	65.6	⁻⁶⁵	₁	61.0	⁻⁷⁵	₁	55.8	⁻⁸³	₁	49.9	⁻⁹⁰	₁	43.6	⁻⁹⁶	₁	36.9	⁻¹⁰¹	₁	26.8	⁻¹⁰⁴	₁	16.4					
Sep 16	76.6	⁻⁶	₀	76.2	⁻¹⁹	₀	74.8	⁻³²	₀	72.6	⁻⁴⁴	₀	69.6	⁻⁵⁵	₀	65.7	⁻⁶⁵	₀	61.2	⁻⁷⁵	₀	55.9	⁻⁸³	₀	50.1	⁻⁹⁰	₀	43.7	⁻⁹⁶	₀	37.0	⁻¹⁰¹	₀	26.9	⁻¹⁰⁵	₀	16.4					
Sep 17	76.6	⁻⁶	₋₃	76.1	⁻¹⁹	₋₃	74.8	⁻³²	₋₃	72.6	⁻⁴³	₋₃	69.5	⁻⁵⁵	₋₂	65.7	⁻⁶⁵	₋₂	61.1	⁻⁷⁵	₋₂	55.9	⁻⁸³	₋₂	50.1	⁻⁹⁰	₋₂	43.7	⁻⁹⁶	₋₁	37.0	⁻¹⁰¹	₋₁	26.8	⁻¹⁰⁴	₋₁	16.4					
Sep 18	76.2	⁻⁶	₋₅	75.8	⁻¹⁹	₋₅	74.5	⁻³¹	₋₅	72.3	⁻⁴³	₋₅	69.2	⁻⁵⁴	₋₅	65.4	⁻⁶⁵	₋₄	60.9	⁻⁷⁴	₋₄	55.6	⁻⁸³	₋₄	49.8	⁻⁹⁰	₋₃	43.5	⁻⁹⁵	₋₃	36.8	⁻¹⁰⁰	₋₂	26.								

Upper Limb																																										
Altitude degrees																																										
	0			7			14			21			28			35			42			49			56			63			70			80			90					
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Aug 19	44.4	⁻⁶	₋₁	43.9	⁻¹⁹	₋₁	42.5	⁻³²	₋₁	40.3	⁻⁴⁴	₋₁	37.2	⁻⁵⁶	₋₁	33.3	⁻⁶⁶	₋₁	28.7	⁻⁷⁶	₋₁	23.4	⁻⁸⁴	₋₁	17.5	⁻⁹²	₋₁	11.1	⁻⁹⁷	₀	4.2	⁻¹⁰³	₀	-6.0	⁻¹⁰⁶	₀	-16.6					
Aug 20	44.3	⁻⁶	₋₄	43.8	⁻¹⁹	₋₄	42.5	⁻³²	₋₄	40.2	⁻⁴⁴	₋₄	37.2	⁻⁵⁵	₋₄	33.3	⁻⁶⁶	₋₃	28.7	⁻⁷⁶	₋₃	23.3	⁻⁸⁴	₋₃	17.5	⁻⁹¹	₋₂	11.0	⁻⁹⁷	₋₂	4.2	⁻¹⁰²	₋₂	-6.0	⁻¹⁰⁵	₋₁	-16.6					
Aug 21	44.0	⁻⁶	₋₇	43.6	⁻¹⁹	₋₇	42.2	⁻³²	₋₆	40.0	⁻⁴⁴	₋₆	36.9	⁻⁵⁵	₋₆	33.1	⁻⁶⁵	₋₆	28.5	⁻⁷⁵	₋₅	23.2	⁻⁸³	₋₅	17.3	⁻⁹⁰	₋₄	11.0	⁻⁹⁶	₋₄	4.2	⁻¹⁰¹	₋₃	-6.0	⁻¹⁰⁴	₋₂	-16.5					
Aug 22	43.5	⁻⁶	₋₉	43.1	⁻¹⁹	₋₉	41.8	⁻³¹	₋₈	39.6	⁻⁴³	₋₈	36.5	⁻⁵⁴	₋₈	32.7	⁻⁶⁵	₋₇	28.2	⁻⁷⁴	₋₇	23.0	⁻⁸²	₋₆	17.2	⁻⁸⁹	₋₅	10.9	⁻⁹⁵	₋₅	4.2	⁻¹⁰⁰	₋₄	-5.9	⁻¹⁰³	₋₂	-16.3					
Aug 23	43.0	⁻⁶	₋₁₀	42.5	⁻¹⁹	₋₁₀	41.2	⁻³¹	₋₉	39.0	⁻⁴²	₋₉	36.0	⁻⁵³	₋₉	32.3	⁻⁶⁴	₋₈	27.8	⁻⁷³	₋₇	22.6	⁻⁸¹	₋₇	16.9	⁻⁸⁸	₋₆	10.7	⁻⁹⁴	₋₅	4.1	⁻⁹⁹	₋₄	-5.8	⁻¹⁰²	₋₃	-16.1					
Aug 24	42.3	⁻⁶	₋₁₀	41.9	⁻¹⁸	₋₁₀	40.6	⁻³⁰	₋₉	38.4	⁻⁴²	₋₉	35.5	⁻⁵³	₋₉	31.8	⁻⁶³	₋₈	27.4	⁻⁷²	₋₇	22.3	⁻⁸⁰	₋₇	16.7	⁻⁸⁷	₋₆	10.6	⁻⁹²	₋₅	4.0	⁻⁹⁷	₋₄	-5.7	⁻¹⁰⁰	₋₃	-15.8					
Aug 25	41.6	⁻⁶	₋₉	41.2	⁻¹⁸	₋₉	39.9	⁻³⁰	₋₉	37.8	⁻⁴¹	₋₈	34.9	⁻⁵²	₋₈	31.3	⁻⁶²	₋₈	26.9	⁻⁷¹	₋₇	21.9	⁻⁷⁹	₋₆	16.4	⁻⁸⁵	₋₆	10.4	⁻⁹¹	₋₅	4.0	⁻⁹⁶	₋₄	-5.7	⁻⁹⁹	₋₃	-15.6					
Aug 26	41.0	⁻⁶	₋₈	40.6	⁻¹⁸	₋₈	39.3	⁻²⁹	₋₈	37.3	⁻⁴⁰	₋₇	34.4	⁻⁵¹	₋₇	30.8	⁻⁶¹	₋₇	26.5	⁻⁷⁰	₋₆	21.6	⁻⁷⁷	₋₆	16.2	⁻⁸⁴	₋₅	10.2	⁻⁹⁰	₋₄	3.9	⁻⁹⁴	₋₃	-5.6	⁻⁹⁷	₋₂	-15.4					
Aug 27	40.5	⁻⁶	₋₆	40.0	⁻¹⁸	₋₆	38.8	⁻²⁹	₋₆	36.8	⁻⁴⁰	₋₆	33.9	⁻⁵⁰	₋₆	30.4	⁻⁶⁰	₋₅	26.2	⁻⁶⁹	₋₅	21.3	⁻⁷⁷	₋₄	15.9	⁻⁸³	₋₄	10.1	⁻⁸⁸	₋₃	3.9	⁻⁹³	₋₃	-5.5	⁻⁹⁶	₋₂	-15.2					
Aug 28	40.0	⁻⁶	₋₅	39.6	⁻¹⁷	₋₅	38.4	⁻²⁹	₋₅	36.4	⁻⁴⁰	₋₄	33.6	⁻⁵⁰	₋₄	30.1	⁻⁵⁹	₋₄	25.9	⁻⁶⁸	₋₄	21.1	⁻⁷⁶	₋₃	15.8	⁻⁸²	₋₃	10.0	⁻⁸⁸	₋₃	3.8	⁻⁹²	₋₂	-5.4	⁻⁹⁵	₋₁	-15.0					
Aug 29	39.7	⁻⁶	₋₃	39.3	⁻¹⁷	₋₃	38.1	⁻²⁹	₋₃	36.1	⁻³⁹	₋₃	33.3	⁻⁵⁰	₋₃	29.8	⁻⁵⁹	₋₃	25.7	⁻⁶⁸	₋₂	20.9	⁻⁷⁵	₋₂	15.6	⁻⁸²	₋₂	9.9	⁻⁸⁷	₋₂	3.8	⁻⁹²	₋₁	-5.4	⁻⁹⁴	₋₁	-14.9					
Aug 30	39.5	⁻⁶	₋₁	39.1	⁻¹⁷	₋₁	37.9	⁻²⁸	₋₁	35.9	⁻³⁹	₋₁	33.1	⁻⁴⁹	₋₁	29.7	⁻⁵⁹	₋₁	25.5	⁻⁶⁷	₋₁	20.8	⁻⁷⁵	₋₁	15.6	⁻⁸¹	₋₁	9.8	⁻⁸⁷	₋₁	3.8	⁻⁹¹	₋₁	-5.4	⁻⁹⁴	₀	-14.8					
Aug 31	39.4	⁻⁶	₀	39.0	⁻¹⁷	₀	37.8	⁻²⁸	₀	35.8	⁻³⁹	₀	33.0	⁻⁴⁹	₀	29.6	⁻⁵⁹	₀	25.5	⁻⁶⁷	₀	20.8	⁻⁷⁵	₀	15.5	⁻⁸¹	₀	9.8	⁻⁸⁷	₀	3.8	⁻⁹¹	₀	-5.3	⁻⁹⁴	₀	-14.7					
Sep 1	39.4	⁻⁶	₁	39.0	⁻¹⁷	₁	37.8	⁻²⁸	₁	35.8	⁻³⁹	₁	33.0	⁻⁴⁹	₁	29.6	⁻⁵⁹	₁	25.5	⁻⁶⁷	₁	20.8	⁻⁷⁵	₁	15.5	⁻⁸¹	₁	9.8	⁻⁸⁷	₁	3.8	⁻⁹¹	₁	-5.3	⁻⁹⁴	₀	-14.7					
Sep 2	39.5	⁻⁶	₂	39.1	⁻¹⁷	₂	37.9	⁻²⁹	₂	35.9	⁻³⁹	₂	33.1	⁻⁵⁰	₂	29.7	⁻⁵⁹	₂	25.5	⁻⁶⁸	₂	20.8	⁻⁷⁵	₂	15.6	⁻⁸²	₁	9.8	⁻⁸⁷	₁	3.8	⁻⁹²	₁	-5.4	⁻⁹⁴	₁	-14.8					
Sep 3	39.6	⁻⁶	₃	39.2	⁻¹⁷	₃	38.0	⁻²⁹	₃	36.0	⁻⁴⁰	₃	33.3	⁻⁵⁰	₃	29.8	⁻⁵⁹	₃	25.6	⁻⁶⁸	₃	20.9	⁻⁷⁶	₂	15.6	⁻⁸²	₂	9.9	⁻⁸⁷	₂	3.8	⁻⁹²	₁	-5.4	⁻⁹⁵	₁	-14.8					
Sep 4	39.9	⁻⁶	₄	39.5	⁻¹⁷	₄	38.2	⁻²⁹	₄	36.2	⁻⁴⁰	₄	33.4	⁻⁵⁰	₄	30.0	⁻⁶⁰	₃	25.8	⁻⁶⁸	₃	21.0	⁻⁷⁶	₃	15.7	⁻⁸³	₂	9.9	⁻⁸⁸	₂	3.8	⁻⁹³	₂	-5.4	⁻⁹⁵	₁	-14.9					
Sep 5	40.1	⁻⁶	₄	39.7	⁻¹⁸	₄	38.5	⁻²⁹	₄	36.5	⁻⁴⁰	₄	33.7	⁻⁵⁰	₄	30.2	⁻⁶⁰	₄	26.0	⁻⁶⁹	₃	21.2	⁻⁷⁷	₃	15.8	⁻⁸³	₃	10.0	⁻⁸⁹	₂	3.8	⁻⁹³	₂	-5.5	⁻⁹⁶	₁	-15.0					
Sep 6	40.4	⁻⁶	₅	40.0	⁻¹⁸	₅	38.8	⁻²⁹	₅	36.7	⁻⁴⁰	₅	33.9	⁻⁵¹	₄	30.4	⁻⁶¹	₄	26.2	⁻⁶⁹	₄	21.3	⁻⁷⁷	₃	15.9	⁻⁸⁴	₃	10.1	⁻⁸⁹	₃	3.9	⁻⁹⁴	₂	-5.5	⁻⁹⁷	₁	-15.1					
Sep 7	40.8	⁻⁶	₅	40.4	⁻¹⁸	₅	39.1	⁻³⁰	₅	37.1	⁻⁴¹	₅	34.2	⁻⁵¹	₅	30.6	⁻⁶¹	₄	26.4	⁻⁷⁰	₄	21.5	⁻⁷⁸	₄	16.1	⁻⁸⁵	₃	10.2	⁻⁹⁰	₃	3.9	⁻⁹⁵	₂	-5.5	⁻⁹⁸	₁	-15.3					
Sep 8	41.1	⁻⁶	₆	40.7	⁻¹⁸	₅	39.5	⁻³⁰	₅	37.4	⁻⁴¹	₅	34.5	⁻⁵²	₅	30.9	⁻⁶²	₅	26.6	⁻⁷¹	₄	21.7	⁻⁷⁹	₄	16.2	⁻⁸⁵	₃	10.3	⁻⁹¹	₃	3.9	⁻⁹⁶	₂	-5.6	⁻⁹⁹	₂	-15.4					
Sep 9	41.5	⁻⁶	₆	41.1	⁻¹⁸	₆	39.8	⁻³⁰	₆	37.7	⁻⁴¹	₅	34.8	⁻⁵²	₅	31.2	⁻⁶²	₅	26.9	⁻⁷¹	₄	21.9	⁻⁷⁹	₄	16.4	⁻⁸⁶	₄	10.4	⁻⁹²	₃	4.0	⁻⁹⁷	₂	-5.6	⁻¹⁰⁰	₂	-15.6					
Sep 10	41.9	⁻⁶	₆	41.5	⁻¹⁸	₆	40.2	⁻³⁰	₆	38.1	⁻⁴²	₆	35.2	⁻⁵³	₅	31.5	⁻⁶³	₅	27.1	⁻⁷²	₅	22.1	⁻⁸⁰	₄	16.5	⁻⁸⁷	₄	10.5	⁻⁹³	₃	4.0	⁻⁹⁷	₂	-5.7	⁻¹⁰¹	₂	-15.7					
Sep 11	42.3	⁻⁶	₆	41.9	⁻¹⁹	₆	40.6	⁻³¹	₆	38.5	⁻⁴²	₆	35.5	⁻⁵³	₅	31.8	⁻⁶³	₅	27.4	⁻⁷³	₅	22.3	⁻⁸¹	₄	16.7	⁻⁸⁸	₄	10.6	⁻⁹³	₃	4.0	⁻⁹⁸	₂	-5.8	⁻¹⁰¹	₂	-15.9					
Sep 12	42.7	⁻⁶	₆	42.3	⁻¹⁹	₆	41.0	⁻³¹	₅	38.8	⁻⁴³	₅	35.9	⁻⁵⁴	₅	32.1	⁻⁶⁴	₅	27.6	⁻⁷³	₄	22.5	⁻⁸²	₄	16.8	⁻⁸⁹	₃	10.7	⁻⁹⁴	₃	4.1	⁻⁹⁹	₂	-5.8	⁻¹⁰²	₂	-16.0					
Sep 13	43.1	⁻⁶	₅	42.7	⁻¹⁹	₅	41.3	⁻³¹	₅	39.2	⁻⁴³	₄	36.2	⁻⁵⁴	₄	32.4	⁻⁶⁵	₄	27.9	⁻⁷⁴	₄	22.7	⁻⁸²	₃	17.0	⁻⁸⁹	₃	10.8	⁻⁹⁵	₃	4.1	⁻¹⁰⁰	₂	-5.9	⁻¹⁰³	₁	-16.1					
Sep 14	43.4	⁻⁶	₄	43.0	⁻¹⁹	₄	41.7	⁻³¹	₃	39.5	⁻⁴³	₃	36.5	⁻⁵⁵	₃	32.6	⁻⁶⁵	₃	28.1	⁻⁷⁵	₃	22.9	⁻⁸³	₂	17.1	⁻⁹⁰	₂	10.8	⁻⁹⁶	₂	4.2	⁻¹⁰¹	₁	-5.9	⁻¹⁰⁴	₁	-16.3					
Sep 15	43.7	⁻⁶	₂	43.2	⁻¹⁹	₂	41.9	⁻³²	₂	39.7	⁻⁴⁴	₂	36.7	⁻⁵⁵	₂	32.8	⁻⁶⁵	₁	28.3	⁻⁷⁵	₁	23.0	⁻⁸³	₁	17.2	⁻⁹⁰	₁	10.9	⁻⁹⁶	₁	4.2	⁻¹⁰¹	₁	-5.9	⁻¹⁰⁴	₁	-16.4					
Sep 16	43.8	⁻⁶	₀	43.4	⁻¹⁹	₀	42.0	⁻³²	₀	39.8	⁻⁴⁴	₀	36.8	⁻⁵⁵	₀	32.9	⁻⁶⁵	₀	28.3	⁻⁷⁵	₀	23.1	⁻⁸³	₀	17.3	⁻⁹⁰	₀	10.9	⁻⁹⁶	₀	4.2	⁻¹⁰¹	₀	-6.0	⁻¹⁰⁵	₀	-16.4					
Sep 17	43.8	⁻⁶	₋₃	43.3	⁻¹⁹	₋₃	42.0	⁻³²	₋₃	39.8	⁻⁴³	₋₃	36.7	⁻⁵⁵	₋₂	32.9	⁻⁶⁵	₋₂	28.3	⁻⁷⁵	₋₂	23.1	⁻⁸³	₋₂	17.3	⁻⁹⁰	₋₂	10.9	⁻⁹⁶	₋₁	4.2	⁻¹⁰¹	₋₁	-5.9	⁻¹⁰⁴	₋₁	-16.4					
Sep 18	43.6	⁻⁶	₋₅	43.1	⁻¹⁹	₋₅	41.8	⁻³¹	₋₅	39.6	⁻⁴³	₋₅	36.6	⁻⁵⁴	₋₅	32.8	⁻⁶⁵	₋₄	28.2	⁻⁷⁴	₋₄	23.0	⁻⁸³	₋₄	17.2	⁻⁹⁰	₋₃	10.9	⁻⁹⁵	₋₃	4.2	⁻¹⁰⁰	₋₂	-5.9	⁻¹⁰⁴	₋₁	-16.3					
Sep 19	43.2	⁻⁶																																								

		Lower Limb																																									
		Altitude degrees																																									
		0			7			14			21			28			35			42			49			56			63			70			80			90					
		'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Oct 4	4	71.6	-6	6	71.2	-18	6	69.9	-30	5	67.9	-41	5	65.0	-52	5	61.4	-61	5	57.1	-70	4	52.2	-78	4	46.8	-85	3	40.9	-90	3	34.6	-95	2	25.1	-98	2	15.3					
Oct 5	5	72.3	-6	5	71.9	-18	5	70.6	-30	5	68.5	-41	5	65.6	-52	5	62.0	-62	4	57.7	-71	4	52.7	-79	4	47.2	-86	3	41.3	-91	3	34.9	-96	2	25.3	-99	2	15.5					
Oct 6	6	72.9	-6	5	72.5	-18	5	71.2	-30	5	69.1	-42	5	66.2	-52	4	62.6	-62	4	58.2	-72	4	53.2	-80	3	47.7	-86	3	41.6	-92	3	35.2	-97	2	25.6	-100	1	15.6					
Oct 7	7	73.5	-6	4	73.1	-18	4	71.8	-30	4	69.7	-42	4	66.8	-53	4	63.1	-63	4	58.7	-72	3	53.6	-80	3	48.1	-87	3	42.0	-93	2	35.5	-98	2	25.8	-101	1	15.7					
Oct 8	8	74.1	-6	4	73.6	-19	4	72.3	-31	4	70.2	-42	4	67.2	-53	3	63.5	-63	3	59.1	-73	3	54.0	-81	3	48.4	-88	2	42.3	-93	2	35.8	-98	2	26.0	-101	1	15.9					
Oct 9	9	74.5	-6	3	74.1	-19	3	72.8	-31	3	70.6	-42	3	67.7	-54	3	63.9	-64	3	59.5	-73	3	54.4	-81	2	48.7	-88	2	42.5	-94	2	36.0	-99	1	26.1	-102	1	16.0					
Oct 10	10	74.9	-6	3	74.5	-19	3	73.2	-31	3	71.0	-43	2	68.0	-54	2	64.3	-64	2	59.8	-73	2	54.7	-82	2	49.0	-89	2	42.8	-94	1	36.2	-99	1	26.3	-102	1	16.0					
Oct 11	11	75.2	-6	2	74.8	-19	2	73.5	-31	2	71.3	-43	2	68.3	-54	2	64.5	-64	2	60.0	-74	1	54.9	-82	1	49.2	-89	1	42.9	-95	1	36.3	-100	1	26.4	-103	1	16.1					
Oct 12	12	75.5	-6	1	75.0	-19	1	73.7	-31	1	71.5	-43	1	68.5	-54	1	64.7	-64	1	60.2	-74	1	55.1	-82	1	49.3	-89	1	43.1	-95	1	36.4	-100	0	26.5	-103	0	16.2					
Oct 13	13	75.6	-6	0	75.2	-19	0	73.8	-31	0	71.6	-43	0	68.6	-54	0	64.8	-65	0	60.3	-74	0	55.2	-82	0	49.4	-89	0	43.2	-95	0	36.5	-100	0	26.5	-103	0	16.2					
Oct 14	14	75.6	-6	-1	75.2	-19	-1	73.8	-31	-1	71.6	-43	-1	68.6	-54	-1	64.8	-64	-1	60.3	-74	-1	55.2	-82	-1	49.4	-89	-1	43.2	-95	-1	36.5	-100	-1	26.5	-103	0	16.2					
Oct 15	15	75.4	-6	-3	75.0	-19	-3	73.7	-31	-3	71.5	-43	-3	68.5	-54	-2	64.7	-64	-2	60.2	-74	-2	55.0	-82	-2	49.3	-89	-2	43.1	-95	-1	36.4	-100	-1	26.4	-103	-1	16.2					
Oct 16	16	75.1	-6	-4	74.7	-19	-4	73.4	-31	-4	71.2	-43	-4	68.2	-54	-4	64.4	-64	-3	59.9	-73	-3	54.8	-81	-3	49.1	-88	-3	42.9	-94	-2	36.3	-99	-2	26.3	-102	-1	16.1					
Oct 17	17	74.6	-6	-6	74.2	-19	-5	72.9	-31	-5	70.7	-42	-5	67.7	-53	-5	64.0	-63	-5	59.5	-73	-4	54.4	-81	-4	48.8	-88	-3	42.6	-93	-3	36.0	-98	-2	26.2	-101	-2	16.0					
Oct 18	18	73.9	-6	-7	73.5	-18	-6	72.2	-30	-6	70.1	-42	-6	67.1	-53	-6	63.4	-63	-5	59.0	-72	-5	54.0	-80	-5	48.3	-87	-4	42.2	-92	-3	35.7	-97	-3	25.9	-100	-2	15.8					
Oct 19	19	73.2	-6	-7	72.7	-18	-7	71.5	-30	-7	69.3	-41	-7	66.4	-52	-6	62.8	-62	-6	58.4	-71	-5	53.4	-79	-5	47.8	-86	-4	41.8	-91	-4	35.3	-96	-3	25.6	-99	-2	15.7					
Oct 20	20	72.3	-6	-7	71.9	-18	-7	70.6	-30	-7	68.5	-41	-7	65.7	-51	-6	62.0	-61	-6	57.7	-70	-5	52.8	-78	-5	47.3	-85	-4	41.3	-90	-4	34.9	-95	-3	25.4	-98	-2	15.5					
Oct 21	21	71.5	-6	-7	71.0	-18	-7	69.8	-29	-6	67.7	-40	-6	64.9	-51	-6	61.3	-61	-5	57.0	-69	-5	52.1	-77	-5	46.7	-84	-4	40.8	-89	-3	34.5	-94	-3	25.0	-97	-2	15.3					
Oct 22	22	70.7	-6	-6	70.2	-18	-6	69.0	-29	-5	67.0	-40	-5	64.2	-50	-5	60.6	-60	-5	56.4	-69	-4	51.6	-76	-4	46.2	-83	-3	40.3	-88	-3	34.1	-93	-2	24.8	-96	-2	15.1					
Oct 23	23	70.0	-6	-4	69.6	-17	-4	68.3	-29	-4	66.3	-40	-4	63.5	-50	-4	60.0	-59	-4	55.8	-68	-3	51.1	-76	-3	45.7	-82	-3	39.9	-88	-2	33.8	-92	-2	24.5	-95	-1	15.0					
Oct 24	24	69.5	-6	-3	69.0	-17	-3	67.8	-29	-3	65.8	-39	-2	63.1	-50	-2	59.6	-59	-2	55.4	-68	-2	50.7	-75	-2	45.4	-82	-2	39.7	-87	-1	33.5	-92	-1	24.4	-95	-1	14.9					
Oct 25	25	69.1	-6	-1	68.7	-17	-1	67.5	-28	-1	65.5	-39	-1	62.8	-49	-1	59.3	-59	-1	55.2	-68	-1	50.4	-75	-1	45.2	-82	-1	39.5	-87	0	33.4	-91	0	24.2	-94	0	14.8					
Oct 26	26	69.0	-6	1	68.6	-17	1	67.4	-28	1	65.4	-39	1	62.7	-49	1	59.2	-59	1	55.1	-68	1	50.4	-75	1	45.1	-82	1	39.4	-87	1	33.3	-91	0	24.2	-94	0	14.8					
Oct 27	27	69.1	-6	3	68.7	-17	3	67.5	-29	3	65.5	-39	3	62.8	-50	2	59.3	-59	2	55.2	-68	2	50.5	-75	2	45.2	-82	2	39.5	-87	1	33.4	-92	1	24.2	-95	1	14.8					
Oct 28	28	69.5	-6	4	69.1	-17	4	67.9	-29	4	65.9	-40	4	63.1	-50	4	59.6	-60	4	55.5	-68	3	50.7	-76	3	45.4	-82	3	39.7	-88	2	33.6	-92	2	24.4	-95	1	14.9					
Oct 29	29	70.0	-6	6	69.6	-18	6	68.4	-29	6	66.4	-40	5	63.6	-50	5	60.1	-60	5	55.9	-69	4	51.1	-77	4	45.8	-83	4	40.0	-88	3	33.8	-93	2	24.5	-96	2	15.0					
Oct 30	30	70.7	-6	7	70.3	-18	7	69.1	-29	6	67.0	-40	6	64.2	-51	6	60.7	-61	6	56.4	-70	5	51.6	-77	5	46.2	-84	4	40.4	-89	4	34.1	-94	3	24.8	-97	2	15.1					
Oct 31	31	71.5	-6	7	71.1	-18	7	69.8	-30	7	67.8	-41	7	64.9	-52	6	61.4	-61	6	57.1	-70	6	52.2	-78	5	46.7	-85	4	40.8	-90	4	34.5	-95	3	25.1	-98	2	15.3					
Nov 1	1	72.4	-6	7	72.0	-18	7	70.7	-30	7	68.6	-41	7	65.7	-52	6	62.1	-62	6	57.8	-71	5	52.8	-79	5	47.3	-86	4	41.3	-92	4	35.0	-96	3	25.4	-99	2	15.5					
Nov 2	2	73.2	-6	7	72.8	-18	6	71.5	-30	6	69.4	-42	6	66.5	-53	6	62.8	-63	5	58.5	-72	5	53.4	-80	5	47.9	-87	4	41.8	-93	3	35.4	-97	3	25.7	-100	2	15.7					
Nov 3	3	74.0	-6	5	73.6	-19	5	72.3	-31	5	70.2	-42	5	67.2	-53	5	63.5	-63	5	59.1	-73	4	54.0	-81	4	48.4	-88	3	42.3	-93	3	35.8	-98	2	26.0	-101	2	15.9					
Nov 4	4	74.7	-6	4	74.3	-19	4	73.0	-31	4	70.8	-43	4	67.8	-54	4	64.1	-64	3	59.6	-73	3	54.5	-82	3	48.8	-89	3	42.6	-94	2	36.1	-99	2	26.2	-102	1	16.0					
Nov 5	5	75.2	-6	3	74.8	-19	3	73.4	-31	2	71.3	-43	2	68.3	-54	2	64.5	-64	2	60.0	-74	2	54.9	-82	2	49.1	-89	2	42.9	-95	1	36.3	-100	1	26.4	-103	1	16.1					
Nov 6	6	75.5	-6	1	75.1	-19	1	73.7	-31	1	71.6	-43	1	68.6	-54	1	64.8	-64	1	60.3	-74	1	55.1	-82	1	49.3	-89	1	43.1	-95	1	36.5	-100	0	26.5	-103	0	16.2					
Nov 7	7	75.6	-6	0	75.2	-19	0	73.9	-31	0	71.7	-43	0	68.7	-54	0	64.9	-65	0	60.4	-74	0	55.2	-82	0	49.4	-89	0	43.2	-95	0	36.5	-100	0	26.5	-103	0	16.2					
Nov 8	8	75.6	-6	-1	75.2	-19	-1	73.8	-31	-1	71.7	-43	-1	68.7	-54	-1	64.9	-64	-1	60.3	-74	-1	55.2	-82	-1	49.4	-89	-1	43.2	-95	-1	36.5	-100	-1	26.5	-103	0	16.2					
Nov 9	9	75.5	-6	-2	75.0	-19	-2	73.7	-31	-2	71.5	-43	-2	68.5	-54	-2	64.7	-64	-2	60.2	-74	-2	55.1	-82	-1	49.3	-89	-1	43.1	-95	-1	36.4	-100	-1	26.5	-103	-1	16.2					
Nov 10	10	75.2	-6	-3	74.8	-19	-3	73.4	-31	-3	71.3	-43	-3	68.3	-54	-2	64.5	-64	-2	60.0	-73	-2	54.9	-82	-2	49.1	-89	-2	42.9	-94	-1	36.3	-99	-1	26.4	-102	-1	16.1					
Nov 11	11	74.9	-6	-3	74.4	-19	-3	73.1	-31	-3	71.0	-42	-3	68.0	-53	-3	64.2	-64	-3	59.7	-73	-3	54.6	-81	-2	48.9	-88	-2	42.7	-94	-2	36.1	-99	-1	26.2	-102	-1	16.0					
Nov 12	12	74.5	-6	-4	74.0	-19	-4	72.7	-31	-4	70.6	-42	-4	67.6	-53	-3	63.9	-63	-3	59.4	-73	-3	54.3	-81	-3	48.7	-88	-2	42.5	-93	-2	36.0	-98	-2	26.1	-101	-1	15.9					
Nov 13	13	74.0	-6	-4	73.5	-18	-4	72.3	-30	-4																																	

		Upper Limb																																									
		Altitude degrees																																									
		0			7			14			21			28			35			42			49			56			63			70			80			90					
		'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Oct 4	4	40.9 ⁻⁶ ₆	40.5 ⁻¹⁸ ₆	39.3 ⁻³⁰ ₅	37.2 ⁻⁴¹ ₅	34.3 ⁻⁵² ₅	30.8 ⁻⁶¹ ₅	26.5 ⁻⁷⁰ ₄	21.6 ⁻⁷⁸ ₄	16.1 ⁻⁸⁵ ₃	10.2 ⁻⁹⁰ ₃	3.9 ⁻⁹⁵ ₂	5.6 ⁻⁹⁸ ₂	15.3 ⁻¹⁰¹ ₂																													
Oct 5	5	41.3 ⁻⁶ ₅	40.9 ⁻¹⁸ ₅	39.6 ⁻³⁰ ₅	37.5 ⁻⁴¹ ₅	34.7 ⁻⁵² ₅	31.0 ⁻⁶² ₄	26.7 ⁻⁷¹ ₄	21.8 ⁻⁷⁹ ₄	16.3 ⁻⁸⁶ ₃	10.3 ⁻⁹¹ ₃	3.9 ⁻⁹⁶ ₂	5.6 ⁻⁹⁹ ₂	15.5 ⁻¹⁰² ₂																													
Oct 6	6	41.7 ⁻⁶ ₅	41.3 ⁻¹⁸ ₅	40.0 ⁻³⁰ ₅	37.9 ⁻⁴² ₅	35.0 ⁻⁵² ₄	31.3 ⁻⁶² ₄	27.0 ⁻⁷² ₄	22.0 ⁻⁸⁰ ₃	16.4 ⁻⁸⁶ ₃	10.4 ⁻⁹² ₃	4.0 ⁻⁹⁷ ₂	5.7 ⁻¹⁰⁰ ₁	15.6 ⁻¹⁰³ ₁																													
Oct 7	7	42.0 ⁻⁶ ₄	41.6 ⁻¹⁸ ₄	40.3 ⁻³⁰ ₄	38.2 ⁻⁴² ₄	35.3 ⁻⁵³ ₄	31.6 ⁻⁶³ ₄	27.2 ⁻⁷² ₃	22.2 ⁻⁸⁰ ₃	16.6 ⁻⁸⁷ ₃	10.5 ⁻⁹³ ₂	4.0 ⁻⁹⁸ ₂	5.7 ⁻¹⁰¹ ₁	15.7 ⁻¹⁰⁴ ₁																													
Oct 8	8	42.3 ⁻⁶ ₄	41.9 ⁻¹⁹ ₄	40.6 ⁻³¹ ₄	38.5 ⁻⁴² ₄	35.5 ⁻⁵³ ₃	31.8 ⁻⁶³ ₃	27.4 ⁻⁷³ ₃	22.3 ⁻⁸¹ ₃	16.7 ⁻⁸⁸ ₂	10.6 ⁻⁹³ ₂	4.0 ⁻⁹⁸ ₂	5.8 ⁻¹⁰¹ ₁	15.9 ⁻¹⁰⁴ ₁																													
Oct 9	9	42.6 ⁻⁶ ₃	42.2 ⁻¹⁹ ₃	40.9 ⁻³¹ ₃	38.7 ⁻⁴² ₃	35.7 ⁻⁵⁴ ₃	32.0 ⁻⁶⁴ ₃	27.6 ⁻⁷³ ₃	22.5 ⁻⁸¹ ₂	16.8 ⁻⁸⁸ ₂	10.6 ⁻⁹⁴ ₂	4.1 ⁻⁹⁹ ₁	5.8 ⁻¹⁰² ₁	16.0 ⁻¹⁰⁵ ₁																													
Oct 10	10	42.8 ⁻⁶ ₃	42.4 ⁻¹⁹ ₃	41.1 ⁻³¹ ₃	38.9 ⁻⁴³ ₂	35.9 ⁻⁵⁴ ₂	32.2 ⁻⁶⁴ ₂	27.7 ⁻⁷³ ₂	22.6 ⁻⁸² ₂	16.9 ⁻⁸⁹ ₂	10.7 ⁻⁹⁴ ₁	4.1 ⁻⁹⁹ ₁	5.8 ⁻¹⁰² ₁	16.0 ⁻¹⁰⁵ ₁																													
Oct 11	11	43.0 ⁻⁶ ₂	42.6 ⁻¹⁹ ₂	41.3 ⁻³¹ ₂	39.1 ⁻⁴³ ₂	36.1 ⁻⁵⁴ ₂	32.3 ⁻⁶⁴ ₂	27.8 ⁻⁷⁴ ₁	22.7 ⁻⁸² ₁	16.9 ⁻⁸⁹ ₁	10.7 ⁻⁹⁵ ₁	4.1 ⁻¹⁰⁰ ₁	5.8 ⁻¹⁰³ ₁	16.1 ⁻¹⁰⁶ ₁																													
Oct 12	12	43.1 ⁻⁶ ₁	42.7 ⁻¹⁹ ₁	41.4 ⁻³¹ ₁	39.2 ⁻⁴³ ₁	36.2 ⁻⁵⁴ ₁	32.4 ⁻⁶⁴ ₁	27.9 ⁻⁷⁴ ₁	22.7 ⁻⁸² ₁	17.0 ⁻⁸⁹ ₁	10.8 ⁻⁹⁵ ₁	4.1 ⁻¹⁰⁰ ₀	5.9 ⁻¹⁰³ ₀	16.2 ⁻¹⁰⁶ ₀																													
Oct 13	13	43.2 ⁻⁶ ₀	42.8 ⁻¹⁹ ₀	41.5 ⁻³¹ ₀	39.3 ⁻⁴³ ₀	36.3 ⁻⁵⁴ ₀	32.5 ⁻⁶⁵ ₀	28.0 ⁻⁷⁴ ₀	22.8 ⁻⁸² ₀	17.0 ⁻⁸⁹ ₀	10.8 ⁻⁹⁵ ₀	4.1 ⁻¹⁰⁰ ₀	5.9 ⁻¹⁰³ ₀	16.2 ⁻¹⁰⁶ ₀																													
Oct 14	14	43.2 ⁻⁶ ₋₁	42.8 ⁻¹⁹ ₋₁	41.5 ⁻³¹ ₋₁	39.3 ⁻⁴³ ₋₁	36.3 ⁻⁵⁴ ₋₁	32.5 ⁻⁶⁴ ₋₁	28.0 ⁻⁷⁴ ₋₁	22.8 ⁻⁸² ₋₁	17.0 ⁻⁸⁹ ₋₁	10.8 ⁻⁹⁵ ₋₁	4.1 ⁻¹⁰⁰ ₋₁	5.9 ⁻¹⁰³ ₀	16.2 ⁻¹⁰⁶ ₀																													
Oct 15	15	43.1 ⁻⁶ ₋₃	42.7 ⁻¹⁹ ₋₃	41.4 ⁻³¹ ₋₃	39.2 ⁻⁴³ ₋₃	36.2 ⁻⁵⁴ ₋₂	32.4 ⁻⁶⁴ ₋₂	27.9 ⁻⁷⁴ ₋₂	22.7 ⁻⁸² ₋₂	17.0 ⁻⁸⁹ ₋₂	10.8 ⁻⁹⁵ ₋₁	4.1 ⁻¹⁰⁰ ₋₁	5.9 ⁻¹⁰³ ₋₁	16.2 ⁻¹⁰⁶ ₋₁																													
Oct 16	16	42.9 ⁻⁶ ₋₄	42.5 ⁻¹⁹ ₋₄	41.2 ⁻³¹ ₋₄	39.0 ⁻⁴³ ₋₄	36.0 ⁻⁵⁴ ₋₄	32.3 ⁻⁶⁴ ₋₃	27.8 ⁻⁷³ ₋₃	22.6 ⁻⁸¹ ₋₃	16.9 ⁻⁸⁸ ₋₃	10.7 ⁻⁹⁴ ₋₂	4.1 ⁻⁹⁹ ₋₂	5.8 ⁻¹⁰² ₋₁	16.1 ⁻¹⁰⁵ ₋₁																													
Oct 17	17	42.7 ⁻⁶ ₋₆	42.2 ⁻¹⁹ ₋₅	40.9 ⁻³¹ ₋₅	38.8 ⁻⁴² ₋₅	35.8 ⁻⁵³ ₋₅	32.0 ⁻⁶³ ₋₅	27.6 ⁻⁷³ ₋₄	22.5 ⁻⁸¹ ₋₄	16.8 ⁻⁸⁸ ₋₃	10.6 ⁻⁹³ ₋₃	4.1 ⁻⁹⁸ ₋₂	5.8 ⁻¹⁰¹ ₋₂	16.0 ⁻¹⁰⁴ ₋₂																													
Oct 18	18	42.3 ⁻⁶ ₋₇	41.8 ⁻¹⁸ ₋₆	40.5 ⁻³⁰ ₋₆	38.4 ⁻⁴² ₋₆	35.5 ⁻⁵³ ₋₆	31.8 ⁻⁶³ ₋₅	27.3 ⁻⁷² ₋₅	22.3 ⁻⁸⁰ ₋₅	16.7 ⁻⁸⁷ ₋₄	10.5 ⁻⁹² ₋₃	4.0 ⁻⁹⁷ ₋₃	5.7 ⁻¹⁰⁰ ₋₂	15.8 ⁻¹⁰³ ₋₂																													
Oct 19	19	41.8 ⁻⁶ ₋₇	41.4 ⁻¹⁸ ₋₇	40.1 ⁻³⁰ ₋₇	38.0 ⁻⁴¹ ₋₇	35.1 ⁻⁵² ₋₆	31.4 ⁻⁶² ₋₆	27.1 ⁻⁷¹ ₋₅	22.1 ⁻⁷⁹ ₋₅	16.5 ⁻⁸⁶ ₋₄	10.4 ⁻⁹¹ ₋₄	4.0 ⁻⁹⁶ ₋₃	5.7 ⁻⁹⁹ ₋₂	15.7 ⁻¹⁰² ₋₂																													
Oct 20	20	41.3 ⁻⁶ ₋₇	40.9 ⁻¹⁸ ₋₇	39.6 ⁻³⁰ ₋₇	37.6 ⁻⁴¹ ₋₇	34.7 ⁻⁵¹ ₋₆	31.1 ⁻⁶¹ ₋₆	26.7 ⁻⁷⁰ ₋₅	21.8 ⁻⁷⁸ ₋₅	16.3 ⁻⁸⁵ ₋₄	10.3 ⁻⁹⁰ ₋₄	4.0 ⁻⁹⁵ ₋₃	5.6 ⁻⁹⁸ ₋₂	15.5 ⁻¹⁰¹ ₋₂																													
Oct 21	21	40.8 ⁻⁶ ₋₇	40.4 ⁻¹⁸ ₋₇	39.2 ⁻²⁹ ₋₆	37.1 ⁻⁴⁰ ₋₆	34.3 ⁻⁵¹ ₋₆	30.7 ⁻⁶¹ ₋₅	26.4 ⁻⁶⁹ ₋₅	21.5 ⁻⁷⁷ ₋₅	16.1 ⁻⁸⁴ ₋₄	10.2 ⁻⁸⁹ ₋₃	3.9 ⁻⁹⁴ ₋₃	5.6 ⁻⁹⁷ ₋₂	15.3 ⁻¹⁰⁰ ₋₂																													
Oct 22	22	40.4 ⁻⁶ ₋₆	40.0 ⁻¹⁸ ₋₆	38.7 ⁻²⁹ ₋₅	36.7 ⁻⁴⁰ ₋₅	33.9 ⁻⁵⁰ ₋₅	30.4 ⁻⁶⁰ ₋₅	26.1 ⁻⁶⁹ ₋₄	21.3 ⁻⁷⁶ ₋₄	15.9 ⁻⁸³ ₋₃	10.1 ⁻⁸⁸ ₋₃	3.9 ⁻⁹³ ₋₂	5.5 ⁻⁹⁶ ₋₂	15.1 ⁻⁹⁹ ₋₂																													
Oct 23	23	40.0 ⁻⁶ ₋₄	39.6 ⁻¹⁷ ₋₄	38.4 ⁻²⁹ ₋₄	36.4 ⁻⁴⁰ ₋₄	33.6 ⁻⁵⁰ ₋₄	30.1 ⁻⁵⁹ ₋₄	25.9 ⁻⁶⁸ ₋₃	21.1 ⁻⁷⁶ ₋₃	15.8 ⁻⁸² ₋₃	10.0 ⁻⁸⁸ ₋₂	3.8 ⁻⁹² ₋₂	5.4 ⁻⁹⁵ ₋₁	15.0 ⁻⁹⁸ ₋₁																													
Oct 24	24	39.7 ⁻⁶ ₋₃	39.3 ⁻¹⁷ ₋₃	38.1 ⁻²⁹ ₋₃	36.1 ⁻³⁹ ₋₂	33.3 ⁻⁵⁰ ₋₂	29.8 ⁻⁵⁹ ₋₂	25.7 ⁻⁶⁸ ₋₂	20.9 ⁻⁷⁵ ₋₂	15.6 ⁻⁸² ₋₂	9.9 ⁻⁸⁷ ₋₁	3.8 ⁻⁹² ₋₁	5.4 ⁻⁹⁵ ₋₁	14.9 ⁻⁹⁷ ₋₁																													
Oct 25	25	39.5 ⁻⁶ ₋₁	39.1 ⁻¹⁷ ₋₁	37.9 ⁻²⁸ ₋₁	35.9 ⁻³⁹ ₋₁	33.2 ⁻⁴⁹ ₋₁	29.7 ⁻⁵⁹ ₋₁	25.6 ⁻⁶⁸ ₋₁	20.8 ⁻⁷⁵ ₋₁	15.6 ⁻⁸² ₋₁	9.9 ⁻⁸⁷ ₀	3.8 ⁻⁹¹ ₀	5.4 ⁻⁹⁴ ₀	14.8 ⁻⁹⁶ ₀																													
Oct 26	26	39.5 ⁻⁶ ₁	39.1 ⁻¹⁷ ₁	37.9 ⁻²⁸ ₁	35.9 ⁻³⁹ ₁	33.1 ⁻⁴⁹ ₁	29.7 ⁻⁵⁹ ₁	25.5 ⁻⁶⁸ ₁	20.8 ⁻⁷⁵ ₁	15.6 ⁻⁸² ₁	9.8 ⁻⁸⁷ ₁	3.8 ⁻⁹¹ ₀	5.4 ⁻⁹⁴ ₀	14.8 ⁻⁹⁶ ₀																													
Oct 27	27	39.5 ⁻⁶ ₃	39.1 ⁻¹⁷ ₃	37.9 ⁻²⁹ ₃	35.9 ⁻³⁹ ₃	33.2 ⁻⁵⁰ ₂	29.7 ⁻⁵⁹ ₂	25.6 ⁻⁶⁸ ₂	20.8 ⁻⁷⁵ ₂	15.6 ⁻⁸² ₂	9.9 ⁻⁸⁷ ₁	3.8 ⁻⁹² ₁	5.4 ⁻⁹⁵ ₁	14.8 ⁻⁹⁶ ₁																													
Oct 28	28	39.7 ⁻⁶ ₄	39.3 ⁻¹⁷ ₄	38.1 ⁻²⁹ ₄	36.1 ⁻⁴⁰ ₄	33.3 ⁻⁵⁰ ₄	29.8 ⁻⁶⁰ ₄	25.7 ⁻⁶⁸ ₃	20.9 ⁻⁷⁶ ₃	15.7 ⁻⁸² ₃	9.9 ⁻⁸⁸ ₂	3.8 ⁻⁹² ₂	5.4 ⁻⁹⁵ ₁	14.9 ⁻⁹⁷ ₁																													
Oct 29	29	40.0 ⁻⁶ ₆	39.6 ⁻¹⁸ ₆	38.4 ⁻²⁹ ₆	36.4 ⁻⁴⁰ ₅	33.6 ⁻⁵⁰ ₅	30.1 ⁻⁶⁰ ₅	25.9 ⁻⁶⁹ ₄	21.1 ⁻⁷⁷ ₄	15.8 ⁻⁸³ ₄	10.0 ⁻⁸⁸ ₃	3.8 ⁻⁹³ ₂	5.4 ⁻⁹⁶ ₂	15.0 ⁻⁹⁷ ₂																													
Oct 30	30	40.4 ⁻⁶ ₇	40.0 ⁻¹⁸ ₇	38.8 ⁻²⁹ ₆	36.7 ⁻⁴⁰ ₆	33.9 ⁻⁵¹ ₆	30.4 ⁻⁶¹ ₆	26.2 ⁻⁷⁰ ₅	21.3 ⁻⁷⁷ ₅	15.9 ⁻⁸⁴ ₄	10.1 ⁻⁸⁹ ₄	3.9 ⁻⁹⁴ ₃	5.5 ⁻⁹⁷ ₂	15.1 ⁻⁹⁸ ₂																													
Oct 31	31	40.9 ⁻⁶ ₇	40.5 ⁻¹⁸ ₇	39.2 ⁻³⁰ ₇	37.2 ⁻⁴¹ ₇	34.3 ⁻⁵² ₆	30.7 ⁻⁶¹ ₆	26.4 ⁻⁷⁰ ₆	21.6 ⁻⁷⁸ ₅	16.1 ⁻⁸⁵ ₄	10.2 ⁻⁹⁰ ₄	3.9 ⁻⁹⁵ ₃	5.6 ⁻⁹⁸ ₂	15.3 ⁻⁹⁹ ₂																													
Nov 1	1	41.4 ⁻⁶ ₇	41.0 ⁻¹⁸ ₇	39.7 ⁻³⁰ ₇	37.6 ⁻⁴¹ ₇	34.7 ⁻⁵² ₆	31.1 ⁻⁶² ₆	26.8 ⁻⁷¹ ₅	21.8 ⁻⁷⁹ ₅	16.3 ⁻⁸⁶ ₄	10.3 ⁻⁹² ₄	4.0 ⁻⁹⁶ ₃	5.6 ⁻⁹⁹ ₂	15.5 ⁻¹⁰⁰ ₂																													
Nov 2	2	41.9 ⁻⁶ ₇	41.4 ⁻¹⁸ ₆	40.2 ⁻³⁰ ₆	38.1 ⁻⁴² ₆	35.1 ⁻⁵³ ₆	31.5 ⁻⁶³ ₅	27.1 ⁻⁷² ₅	22.1 ⁻⁸⁰ ₅	16.5 ⁻⁸⁷ ₄	10.4 ⁻⁹³ ₃	4.0 ⁻⁹⁷ ₃	5.7 ⁻¹⁰⁰ ₂	15.7 ⁻¹⁰¹ ₂																													
Nov 3	3	42.3 ⁻⁶ ₅	41.9 ⁻¹⁹ ₅	40.6 ⁻³¹ ₅	38.5 ⁻⁴² ₅	35.5 ⁻⁵³ ₅	31.8 ⁻⁶³ ₅	27.4 ⁻⁷³ ₄	22.3 ⁻⁸¹ ₄	16.7 ⁻⁸⁸ ₃	10.6 ⁻⁹³ ₃	4.0 ⁻⁹⁸ ₂	5.8 ⁻¹⁰¹ ₂	15.9 ⁻¹⁰² ₂																													
Nov 4	4	42.7 ⁻⁶ ₄	42.3 ⁻¹⁹ ₄	41.0 ⁻³¹ ₄	38.8 ⁻⁴³ ₄	35.8 ⁻⁵⁴ ₄	32.1 ⁻⁶⁴ ₃	27.6 ⁻⁷³ ₃	22.5 ⁻⁸² ₃	16.8 ⁻⁸⁹ ₃	10.7 ⁻⁹⁴ ₂	4.1 ⁻⁹⁹ ₂	5.8 ⁻¹⁰² ₁	16.0 ⁻¹⁰³ ₂																													
Nov 5	5	43.0 ⁻⁶ ₃	42.5 ⁻¹⁹ ₃	41.2 ⁻³¹ ₂	39.1 ⁻⁴³ ₂	36.1 ⁻⁵⁴ ₂	32.3 ⁻⁶⁴ ₂	27.8 ⁻⁷⁴ ₂	22.7 ⁻⁸² ₂	16.9 ⁻⁸⁹ ₂	10.7 ⁻⁹⁵ ₁	4.1 ⁻¹⁰⁰ ₁	5.8 ⁻¹⁰³ ₁	16.1 ⁻¹⁰⁴ ₂																													
Nov 6	6	43.2 ⁻⁶ ₁	42.7 ⁻¹⁹ ₁	41.4 ⁻³¹ ₁	39.2 ⁻⁴³ ₁	36.2 ⁻⁵⁴ ₁	32.4 ⁻⁶⁴ ₁	27.9 ⁻⁷⁴ ₁	22.8 ⁻⁸² ₁	17.0 ⁻⁸⁹ ₁	10.8 ⁻⁹⁵ ₁	4.1 ⁻¹⁰⁰ ₀	5.9 ⁻¹⁰³ ₀	16.2 ⁻¹⁰⁵ ₂																													
Nov 7	7	43.2 ⁻⁶ ₀	42.8 ⁻¹⁹ ₀	41.5 ⁻³¹ ₀	39.3 ⁻⁴³ ₀	36.3 ⁻⁵⁴ ₀	32.5 ⁻⁶⁵ ₀	28.0 ⁻⁷⁴ ₀	22.8 ⁻⁸² ₀	17.0 ⁻⁸⁹ ₀	10.8 ⁻⁹⁵ ₀	4.1 ⁻¹⁰⁰ ₀	5.9 ⁻¹⁰³ ₀	16.2 ⁻¹⁰⁵ ₂																													
Nov 8	8	43.2 ⁻⁶ ₋₁	42.8 ⁻¹⁹ ₋₁	41.5 ⁻³¹ ₋₁	39.3 ⁻⁴³ ₋₁	36.3 ⁻⁵⁴ ₋₁	32.5 ⁻⁶⁴ ₋₁	28.0 ⁻⁷⁴ ₋₁	22.8 ⁻⁸² ₋₁	17.0 ⁻⁸⁹ ₋₁	10.8 ⁻⁹⁵ ₋₁	4.1 ⁻¹⁰⁰ ₋₁	5.9 ⁻¹⁰³ ₀	16.2 ⁻¹⁰⁵ ₂																													
Nov 9	9	43.1 ⁻⁶ ₋₂	42.7 ⁻¹⁹ ₋₂	41.4 ⁻³¹ ₋₂	39.2 ⁻⁴³ ₋₂	36.2 ⁻⁵⁴ ₋₂	32.4 ⁻⁶⁴ ₋₂	27.9 ⁻⁷⁴ ₋₂	22.7 ⁻⁸² ₋₁	17.0 ⁻⁸⁹ ₋₁	10.8 ⁻⁹⁵ ₋₁	4.1 ⁻¹⁰⁰ ₋₁	5.9 ⁻¹⁰³ ₋₁	16.2 ⁻¹⁰⁵ ₂																													
Nov 10	10	43.0 ⁻⁶ ₋₃	42.5 ⁻¹⁹ ₋₃	41.2 ⁻³¹ ₋₃	39.1 ⁻⁴³ ₋₃	36.1 ⁻⁵⁴ ₋₂	32.3 ⁻⁶⁴ ₋₂	27.8 ⁻⁷³ ₋₂	22.7 ⁻⁸² ₋₂	16.9 ⁻⁸⁹ ₋₂	10.7 ⁻⁹⁴ ₋₁	4.1 ⁻⁹⁹ ₋₁	5.8 ⁻¹⁰² ₋₁	16.1 ⁻¹⁰⁴ ₂																													
Nov 11	11	42.8 ⁻⁶ ₋₃	42.4 ⁻¹⁹ ₋₃	41.0 ⁻³¹ ₋₃	38.9 ⁻⁴² ₋₃	35.9 ⁻⁵³ ₋₃	32.2 ⁻⁶⁴ ₋₃	27.7 ⁻⁷³ ₋₃	22.6 ⁻⁸¹ ₋₂	16.9 ⁻⁸⁸ ₋₂	10.7 ⁻⁹⁴																																

2009

Moon Parallax and Semi-diameter

Lower Limb																																										
Altitude degrees																																										
	0			7			14			21			28			35			42			49			56			63			70			80			90					
	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t	'	a	t
Nov 19	70.2	⁻⁶ ₋₅	69.8	⁻¹⁷ ₋₄	68.6	⁻²⁹ ₋₄	66.6	⁻⁴⁰ ₋₄	63.8	⁻⁵⁰ ₋₄	60.3	⁻⁶⁰ ₋₄	56.1	⁻⁶⁸ ₋₃	51.2	⁻⁷⁶ ₋₃	45.9	⁻⁸³ ₋₃	40.1	⁻⁸⁸ ₋₂	33.9	⁻⁹³ ₋₂	24.6	⁻⁹⁵ ₋₁	15.0																	
Nov 20	69.7	⁻⁶ ₋₃	69.3	⁻¹⁷ ₋₃	68.1	⁻²⁹ ₋₃	66.0	⁻³⁹ ₋₃	63.3	⁻⁵⁰ ₋₃	59.8	⁻⁵⁹ ₋₃	55.6	⁻⁶⁸ ₋₃	50.9	⁻⁷⁶ ₋₂	45.5	⁻⁸² ₋₂	39.8	⁻⁸⁷ ₋₂	33.7	⁻⁹² ₋₁	24.4	⁻⁹⁵ ₋₁	14.9																	
Nov 21	69.3	⁻⁶ ₋₂	68.9	⁻¹⁷ ₋₂	67.6	⁻²⁹ ₋₂	65.7	⁻³⁹ ₋₂	62.9	⁻⁵⁰ ₋₂	59.4	⁻⁵⁹ ₋₂	55.3	⁻⁶⁸ ₋₂	50.5	⁻⁷⁵ ₋₁	45.3	⁻⁸² ₋₁	39.5	⁻⁸⁷ ₋₁	33.4	⁻⁹¹ ₋₁	24.3	⁻⁹⁴ ₋₁	14.8																	
Nov 22	69.0	⁻⁶ ₋₁	68.6	⁻¹⁷ ₋₁	67.4	⁻²⁸ ₋₁	65.4	⁻³⁹ ₋₁	62.7	⁻⁴⁹ ₋₁	59.2	⁻⁵⁹ ₀	55.1	⁻⁶⁷ ₀	50.4	⁻⁷⁵ ₀	45.1	⁻⁸¹ ₀	39.4	⁻⁸⁷ ₀	33.3	⁻⁹¹ ₀	24.2	⁻⁹⁴ ₀	14.8																	
Nov 23	68.9	⁻⁶ ₁	68.5	⁻¹⁷ ₁	67.3	⁻²⁸ ₁	65.3	⁻³⁹ ₁	62.6	⁻⁴⁹ ₁	59.1	⁻⁵⁹ ₁	55.0	⁻⁶⁷ ₁	50.3	⁻⁷⁵ ₁	45.1	⁻⁸² ₁	39.4	⁻⁸⁷ ₁	33.3	⁻⁹¹ ₀	24.2	⁻⁹⁴ ₀	14.8																	
Nov 24	69.1	⁻⁶ ₃	68.7	⁻¹⁷ ₃	67.5	⁻²⁹ ₃	65.5	⁻³⁹ ₃	62.7	⁻⁵⁰ ₃	59.3	⁻⁵⁹ ₃	55.1	⁻⁶⁸ ₂	50.4	⁻⁷⁵ ₂	45.1	⁻⁸² ₂	39.4	⁻⁸⁷ ₂	33.4	⁻⁹² ₁	24.2	⁻⁹⁵ ₁	14.8																	
Nov 25	69.4	⁻⁶ ₅	69.0	⁻¹⁷ ₅	67.8	⁻²⁹ ₅	65.8	⁻⁴⁰ ₄	63.1	⁻⁵⁰ ₄	59.6	⁻⁶⁰ ₄	55.4	⁻⁶⁸ ₄	50.7	⁻⁷⁶ ₃	45.4	⁻⁸² ₃	39.6	⁻⁸⁸ ₃	33.5	⁻⁹² ₂	24.3	⁻⁹⁵ ₁	14.9																	
Nov 26	70.0	⁻⁶ ₆	69.6	⁻¹⁸ ₆	68.4	⁻²⁹ ₆	66.4	⁻⁴⁰ ₆	63.6	⁻⁵⁰ ₆	60.1	⁻⁶⁰ ₅	55.9	⁻⁶⁹ ₅	51.1	⁻⁷⁷ ₅	45.8	⁻⁸³ ₄	40.0	⁻⁸⁹ ₃	33.8	⁻⁹³ ₃	24.5	⁻⁹⁶ ₂	15.0																	
Nov 27	70.8	⁻⁶ ₈	70.4	⁻¹⁸ ₈	69.2	⁻²⁹ ₈	67.1	⁻⁴¹ ₇	64.3	⁻⁵¹ ₇	60.7	⁻⁶¹ ₇	56.5	⁻⁷⁰ ₆	51.7	⁻⁷⁸ ₅	46.3	⁻⁸⁴ ₅	40.4	⁻⁹⁰ ₄	34.2	⁻⁹⁴ ₃	24.8	⁻⁹⁷ ₂	15.2																	
Nov 28	71.7	⁻⁶ ₉	71.3	⁻¹⁸ ₉	70.1	⁻³⁰ ₈	68.0	⁻⁴¹ ₈	65.1	⁻⁵² ₈	61.6	⁻⁶² ₇	57.3	⁻⁷¹ ₇	52.4	⁻⁷⁹ ₆	46.9	⁻⁸⁵ ₅	41.0	⁻⁹¹ ₅	34.6	⁻⁹⁶ ₄	25.2	⁻⁹⁹ ₂	15.4																	
Nov 29	72.8	⁻⁶ ₉	72.4	⁻¹⁸ ₉	71.1	⁻³⁰ ₉	69.0	⁻⁴² ₈	66.1	⁻⁵³ ₈	62.5	⁻⁶³ ₇	58.1	⁻⁷² ₇	53.1	⁻⁸⁰ ₆	47.6	⁻⁸⁷ ₆	41.6	⁻⁹² ₅	35.2	⁻⁹⁷ ₄	25.5	⁻¹⁰⁰ ₃	15.6																	
Nov 30	73.9	⁻⁶ ₈	73.4	⁻¹⁹ ₈	72.2	⁻³¹ ₈	70.0	⁻⁴² ₈	67.1	⁻⁵³ ₇	63.4	⁻⁶³ ₇	59.0	⁻⁷³ ₆	53.9	⁻⁸¹ ₆	48.3	⁻⁸⁸ ₅	42.2	⁻⁹⁴ ₄	35.7	⁻⁹⁸ ₄	25.9	⁻¹⁰² ₂	15.8																	
Dec 1	74.9	⁻⁶ ₇	74.5	⁻¹⁹ ₇	73.1	⁻³¹ ₇	71.0	⁻⁴³ ₇	68.0	⁻⁵⁴ ₆	64.2	⁻⁶⁴ ₆	59.8	⁻⁷⁴ ₅	54.6	⁻⁸² ₅	48.9	⁻⁸⁹ ₄	42.8	⁻⁹⁵ ₄	36.2	⁻¹⁰⁰ ₃	26.3	⁻¹⁰³ ₂	16.0																	
Dec 2	75.8	⁻⁶ ₅	75.3	⁻¹⁹ ₅	74.0	⁻³¹ ₅	71.8	⁻⁴³ ₅	68.8	⁻⁵⁴ ₅	65.0	⁻⁶⁵ ₄	60.5	⁻⁷⁴ ₄	55.3	⁻⁸³ ₄	49.5	⁻⁹⁰ ₃	43.2	⁻⁹⁶ ₃	36.6	⁻¹⁰¹ ₂	26.6	⁻¹⁰⁴ ₁	16.2																	
Dec 3	76.4	⁻⁶ ₃	75.9	⁻¹⁹ ₃	74.6	⁻³² ₃	72.4	⁻⁴⁴ ₃	69.4	⁻⁵⁵ ₂	65.5	⁻⁶⁵ ₂	61.0	⁻⁷⁵ ₂	55.7	⁻⁸³ ₂	49.9	⁻⁹⁰ ₂	43.6	⁻⁹⁶ ₁	36.9	⁻¹⁰¹ ₁	26.8	⁻¹⁰⁴ ₁	16.4																	
Dec 4	76.7	⁻⁶ ₀	76.3	⁻¹⁹ ₀	74.9	⁻³² ₀	72.7	⁻⁴⁴ ₀	69.7	⁻⁵⁵ ₀	65.8	⁻⁶⁵ ₀	61.2	⁻⁷⁵ ₀	56.0	⁻⁸³ ₀	50.1	⁻⁹¹ ₀	43.8	⁻⁹⁶ ₀	37.0	⁻¹⁰² ₀	26.9	⁻¹⁰⁵ ₀	16.4																	
Dec 5	76.7	⁻⁶ ₋₂	76.3	⁻¹⁹ ₋₂	75.0	⁻³² ₋₂	72.7	⁻⁴⁴ ₋₂	69.7	⁻⁵⁵ ₋₂	65.8	⁻⁶⁵ ₋₂	61.3	⁻⁷⁵ ₋₂	56.0	⁻⁸³ ₋₁	50.2	⁻⁹⁰ ₋₁	43.8	⁻⁹⁶ ₋₁	37.1	⁻¹⁰¹ ₋₁	26.9	⁻¹⁰⁵ ₋₁	16.4																	
Dec 6	76.5	⁻⁶ ₋₄	76.1	⁻¹⁹ ₋₄	74.7	⁻³¹ ₋₄	72.5	⁻⁴³ ₋₄	69.5	⁻⁵⁵ ₋₃	65.6	⁻⁶⁵ ₋₃	61.1	⁻⁷⁵ ₋₃	55.8	⁻⁸³ ₋₃	50.0	⁻⁹⁰ ₋₂	43.7	⁻⁹⁶ ₋₂	36.9	⁻¹⁰¹ ₋₂	26.8	⁻¹⁰⁴ ₋₁	16.4																	
Dec 7	76.0	⁻⁶ ₋₅	75.6	⁻¹⁹ ₋₅	74.3	⁻³¹ ₋₅	72.1	⁻⁴³ ₋₅	69.0	⁻⁵⁴ ₋₅	65.2	⁻⁶⁵ ₋₄	60.7	⁻⁷⁴ ₋₄	55.5	⁻⁸² ₋₄	49.7	⁻⁸⁹ ₋₃	43.4	⁻⁹⁵ ₋₃	36.7	⁻¹⁰⁰ ₋₂	26.7	⁻¹⁰³ ₋₁	16.3																	
Dec 8	75.4	⁻⁶ ₋₆	75.0	⁻¹⁹ ₋₆	73.6	⁻³¹ ₋₆	71.5	⁻⁴³ ₋₅	68.5	⁻⁵⁴ ₋₅	64.7	⁻⁶⁴ ₋₅	60.2	⁻⁷³ ₋₅	55.0	⁻⁸² ₋₄	49.3	⁻⁸⁹ ₋₄	43.0	⁻⁹⁴ ₋₃	36.4	⁻⁹⁹ ₋₂	26.4	⁻¹⁰² ₋₂	16.1																	
Dec 9	74.7	⁻⁶ ₋₆	74.3	⁻¹⁹ ₋₆	73.0	⁻³¹ ₋₆	70.8	⁻⁴² ₋₆	67.8	⁻⁵³ ₋₅	64.1	⁻⁶³ ₋₅	59.6	⁻⁷³ ₋₅	54.5	⁻⁸¹ ₋₄	48.8	⁻⁸⁸ ₋₄	42.6	⁻⁹³ ₋₃	36.1	⁻⁹⁸ ₋₃	26.2	⁻¹⁰¹ ₋₂	16.0																	
Dec 10	74.0	⁻⁶ ₋₆	73.5	⁻¹⁸ ₋₆	72.2	⁻³⁰ ₋₆	70.1	⁻⁴² ₋₆	67.2	⁻⁵³ ₋₅	63.5	⁻⁶³ ₋₅	59.0	⁻⁷² ₋₅	54.0	⁻⁸⁰ ₋₄	48.3	⁻⁸⁷ ₋₄	42.2	⁻⁹³ ₋₃	35.7	⁻⁹⁷ ₋₃	25.9	⁻¹⁰⁰ ₋₂	15.8																	
Dec 11	73.2	⁻⁶ ₋₆	72.8	⁻¹⁸ ₋₆	71.5	⁻³⁰ ₋₆	69.4	⁻⁴¹ ₋₅	66.5	⁻⁵² ₋₅	62.8	⁻⁶² ₋₅	58.4	⁻⁷¹ ₋₄	53.4	⁻⁷⁹ ₋₄	47.9	⁻⁸⁶ ₋₄	41.8	⁻⁹² ₋₃	35.4	⁻⁹⁶ ₋₂	25.7	⁻⁹⁹ ₋₂	15.7																	
Dec 12	72.5	⁻⁶ ₋₆	72.1	⁻¹⁸ ₋₅	70.8	⁻³⁰ ₋₅	68.7	⁻⁴¹ ₋₅	65.9	⁻⁵² ₋₅	62.2	⁻⁶² ₋₅	57.9	⁻⁷¹ ₋₄	52.9	⁻⁷⁹ ₋₄	47.4	⁻⁸⁵ ₋₃	41.4	⁻⁹¹ ₋₃	35.0	⁻⁹⁶ ₋₂	25.4	⁻⁹⁹ ₋₂	15.5																	
Dec 13	71.9	⁻⁶ ₋₅	71.4	⁻¹⁸ ₋₅	70.2	⁻²⁹ ₋₅	68.1	⁻⁴¹ ₋₅	65.3	⁻⁵¹ ₋₅	61.7	⁻⁶¹ ₋₄	57.4	⁻⁷⁰ ₋₄	52.4	⁻⁷⁸ ₋₄	47.0	⁻⁸⁵ ₋₃	41.0	⁻⁹⁰ ₋₃	34.7	⁻⁹⁵ ₋₂	25.2	⁻⁹⁸ ₋₁	15.4																	
Dec 14	71.2	⁻⁶ ₋₅	70.8	⁻¹⁸ ₋₅	69.6	⁻²⁹ ₋₅	67.5	⁻⁴⁰ ₋₄	64.7	⁻⁵¹ ₋₄	61.1	⁻⁶¹ ₋₄	56.9	⁻⁶⁹ ₋₄	52.0	⁻⁷⁷ ₋₃	46.6	⁻⁸⁴ ₋₃	40.7	⁻⁸⁹ ₋₃	34.4	⁻⁹⁴ ₋₂	25.0	⁻⁹⁷ ₋₁	15.3																	
Dec 15	70.7	⁻⁶ ₋₄	70.3	⁻¹⁸ ₋₄	69.0	⁻²⁹ ₋₄	67.0	⁻⁴⁰ ₋₄	64.2	⁻⁵⁰ ₋₄	60.6	⁻⁶⁰ ₋₄	56.4	⁻⁶⁹ ₋₃	51.6	⁻⁷⁷ ₋₃	46.2	⁻⁸³ ₋₃	40.3	⁻⁸⁸ ₋₂	34.1	⁻⁹³ ₋₂	24.8	⁻⁹⁶ ₋₁	15.1																	
Dec 16	70.1	⁻⁶ ₋₄	69.7	⁻¹⁷ ₋₄	68.5	⁻²⁹ ₋₄	66.5	⁻⁴⁰ ₋₄	63.7	⁻⁵⁰ ₋₃	60.2	⁻⁶⁰ ₋₃	56.0	⁻⁶⁸ ₋₃	51.2	⁻⁷⁶ ₋₃	45.8	⁻⁸³ ₋₂	40.0	⁻⁸⁸ ₋₂	33.9	⁻⁹² ₋₂	24.6	⁻⁹⁵ ₋₁	15.0																	
Dec 17	69.7	⁻⁶ ₋₃	69.3	⁻¹⁷ ₋₃	68.0	⁻²⁹ ₋₃	66.0	⁻³⁹ ₋₃	63.3	⁻⁵⁰ ₋₃	59.8	⁻⁵⁹ ₋₃	55.6	⁻⁶⁸ ₋₃	50.8	⁻⁷⁶ ₋₂	45.5	⁻⁸² ₋₂	39.8	⁻⁸⁷ ₋₂	33.6	⁻⁹² ₋₁	24.4	⁻⁹⁵ ₋₁	14.9																	
Dec 18	69.3	⁻⁶ ₋₂	68.9	⁻¹⁷ ₋₂	67.7	⁻²⁸ ₋₂	65.7	⁻³⁹ ₋₂	62.9	⁻⁵⁰ ₋₂	59.4	⁻⁵⁹ ₋₂	55.3	⁻⁶⁸ ₋₂	50.5	⁻⁷⁵ ₋₂	45.3	⁻⁸² ₋₂	39.5	⁻⁸⁷ ₋₁	33.4	⁻⁹¹ ₋₁	24.3	⁻⁹⁴ ₋₁	14.8																	
Dec 19	69.0	⁻⁶ ₋₁	68.6	⁻¹⁷ ₋₁	67.4	⁻²⁸ ₋₁	65.4	⁻³⁹ ₋₁	62.6	⁻⁴⁹ ₋₁	59.2	⁻⁵⁹ ₋₁	55.0	⁻⁶⁷ ₋₁	50.3	⁻⁷⁵ ₋₁	45.1	⁻⁸¹ ₋₁	39.4	⁻⁸⁷ ₋₁	33.3	⁻⁹¹ ₋₁	24.2	⁻⁹⁴ ₀	14.8																	
Dec 20	68.8	⁻⁶ ₀	68.4	⁻¹⁷ ₀	67.2	⁻²⁸ ₀	65.2	⁻³⁹ ₀	62.5	⁻⁴⁹ ₀	59.0	⁻⁵⁹ ₀	54.9	⁻⁶⁷ ₀	50.2	⁻⁷⁵ ₀	45.0	⁻⁸¹ ₀	39.3	⁻⁸⁶ ₀	33.2	⁻⁹¹ ₀	24.1	⁻⁹⁴ ₀	14.7																	
Dec 21	68.8	⁻⁶ ₁	68.4	⁻¹⁷ ₁	67.2	⁻²⁸ ₁	65.2	⁻³⁹ ₁	62.5	⁻⁴⁹ ₁	59.0	⁻⁵⁹ ₁	54.9	⁻⁶⁷ ₁	50.2	⁻⁷⁵ ₁	45.0	⁻⁸¹ ₁	39.3	⁻⁸⁷ ₁	33.2	⁻⁹¹ ₁	24.1	⁻⁹⁴ ₀	14.7																	
Dec 22	68.9	⁻⁶ ₃	68.5	⁻¹⁷ ₃	67.3	⁻²⁸ ₃	65.3	⁻³⁹ ₃	62.6	⁻⁵⁰ ₃	59.1	⁻⁵⁹ ₂	55.0	⁻⁶⁸ ₂	50.3	⁻⁷⁵ ₂	45.1	⁻⁸² ₂	39.4	⁻⁸⁷ ₂	33.3	⁻⁹¹ ₁	24.2	⁻⁹⁴ ₁	14.8																	
Dec 23	69.3	⁻⁶ ₅	68.9	⁻¹⁷ ₅	67.7	⁻²⁹ ₅	65.7	⁻⁴⁰ ₄	62.9	⁻⁵⁰ ₄	59.4	⁻⁵⁹ ₄	55.3	⁻⁶⁸ ₄	50.6	⁻⁷⁶ ₃	45.3	⁻⁸² ₃	39.6	⁻⁸⁷ ₂	33.5	⁻⁹² ₂	24.3	⁻⁹⁵ ₁	14.8																	
Dec 24	69.9	⁻⁶ ₆	69.4	⁻¹⁸ ₆	68.2	⁻²⁹ ₆	66.2	⁻⁴⁰ ₆	63.4	⁻⁵																																

