2012 Moon Parallax and Semi-diameter

Lower Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
Jan 1	69.3	-6	-2	68.9	-17	-2	67.7	-29	-2	65.7	-39	-2	63.0	-50	-2	59.5	-59	-2	55.3	-68	-2	50.6	-75	-2	45.3	-82	-2	39.6	-87	-1	33.5	-92	-1	24.3	-94	-1	14.8
Jan 2	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	0	50.4	-75	0	45.1	-81	0	39.4	-87	0	33.3	-91	0	24.2	-94	0	14.8
Jan 3	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	-82	1	39.4	-87	1	33.3	-91	0	24.2	-94	0	14.8
Jan 4	69.1	-6	3	68.7	-17	3	67.5	-29	3	65.5	-39	3	62.7	-50	2	59.3	-59	2	55.2	-68	2	50.4	-75	2	45.2	-82	2	39.4	-87	1	33.4	-92	1	24.2	-95	1	14.8
Jan 5	69.4	-6	4	69.0	-17	4	67.8	-29	4	65.8	-40	4	63.0	-50	4	59.6	-59	3	55.4	-68	3	50.7	-76	3	45.4	-82	2	39.6	-88	2	33.5	-92	2	24.3	-95	1	14.9
Jan 6	69.9	-6	5	69.5	-18	5	68.3	-29	5	66.3	-40	5	63.5	-50	4	60.0	-60	4	55.8	-69	4	51.0	-76	4	45.7	-83	3	39.9	-88	3	33.8	-93	2	24.5	-96	1	15.0
Jan 7	70.5	-6	6	70.1	-18	6	68.9	-29	5	66.8	-40	5	64.0	-51	5	60.5	-60	5	56.3	-69	4	51.5	-77	4	46.1	-84	3	40.3	-89	3	34.1	-94	2	24.7	-97	2	15.1
Jan 8	71.2	-6	6	70.8	-18	6	69.6	-30	6	67.5	-41	6	64.7	-51	5	61.1	-61	5	56.8	-70	5	52.0	-78	4	46.5	-85	4	40.7	-90	3	34.4	-95	2	25.0	-98	2	15.2
Jan 9	71.9	-6	6	71.5	-18	6	70.3	-30	6	68.2	-41	5	65.3	-52	5	61.7	-62	5	57.4	-71	4	52.5	-79	4	47.0	-85	4	41.1	-91	3	34.7	-96	2	25.2	-99	2	15.4
Jan 10	72.6	-6	5	72.2	-18	5	70.9	-30	5	68.8	-41	5	65.9	-52	5	62.3	-62	4	58.0	-71	4	53.0	-79	4	47.5	-86	3	41.5	-92	3	35.1	-97	2	25.5	-100	2	15.6
Jan 11	73.3	-6	5	72.8	-18	5	71.6	-30	5	69.5	-42	4	66.5	-53	4	62.9	-63	4	58.5	-72	4	53.5	-80	3	47.9	-87	3	41.8	-92	3	35.4	-97	2	25.7	-100	1	15.7
Jan 12	73.8	-6	4	73.4	-19	4	72.1	-31	4	70.0	-42	4	67.1	-53	4	63.4	-63	3	58.9	-72	3	53.9	-81	3	48.3	-88	2	42.2	-93	2	35.7	-98	2	25.9	-101	1	15.8
Jan 13	74.3	-6	3	73.9	-19	3	72.6	-31	3	70.5	-42	3	67.5	-53	3	63.8	-64	3	59.3	-73	3	54.2	-81	2	48.6	-88	2	42.4	-94	2	35.9	-99	1	26.1	-102	1	15.9
Jan 14	74.7	-6	3	74.3	-19	3	73.0	-31	2	70.8	-43	2	67.9	-54	2	64.1	-64	2	59.6	-73	2	54.5	-81	2	48.8	-88	2	42.7	-94	1	36.1	-99	1	26.2	-102	1	16.0
Jan 15	75.0	-6	2	74.6	-19	2	73.3	-31	2	71.1	-43	2	68.1	-54	2	64.4	-64	2	59.9	-73	1	54.8	-82	1	49.0	-89	1	42.8	-94	1	36.2	-99	1	26.3	-103	1	16.1
Jan 16	75.3	-6	1	74.8	-19	1	73.5	-31	1	71.3	-43	1	68.3	-54	1	64.6	-64	1	60.1	-74	1	54.9	-82	1	49.2	-89	1	43.0	-95	1	36.3	-100	0	26.4	-103	0	16.1
Jan 17	75.4	-6	0	75.0	-19	0	73.6	-31	0	71.5	-43	0	68.5	-54	0	64.7	-64	0	60.2	-74	0	55.0	-82	0	49.3	-89	0	43.0	-95	0	36.4	-100	0	26.4	-103	0	16.1
Jan 18	75.4	-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	0	55.0	-82	0	49.3	-89	0	43.1	-95	0	36.4	-100	0	26.4	-103	0	16.2
Jan 19	75.4	-6	-2	74.9	-19	-2	73.6	-31	-2	71.4	-43	-2	68.4	-54	-2	64.7	-64	-1	60.2	-74	-1	55.0	-82	-1	49.3	-89	-1	43.0	-95	-1	36.4	-100	-1	26.4	-103	-1	16.1
Jan 20	75.2	-6	-3	74.7	-19	-3	73.4	-31	-3	71.2	-43	-3	68.2	-54	-3	64.5	-64	-3	60.0	-73	-2	54.8	-82	-2	49.1	-89	-2	42.9	-94	-2	36.3	-99	-1	26.3	-102	-1	16.1
Jan 21	74.8	-6	-4	74.4	-19	-4	73.0	-31	-4	70.9	-42	-4	67.9	-53	-4	64.2	-64	-4	59.7	-73	-3	54.6	-81	-3	48.9	-88	-3	42.7	-94	-2	36.1	-99	-2	26.2	-102	-1	16.0
Jan 22	74.3	-6	-6	73.8	-18	-5	72.5	-30	-5	70.4	-42	-5	67.4	-53	-5	63.7	-63	-5	59.3	-72	-4	54.2	-80	-4	48.5	-87	-3	42.4	-93	-3	35.9	-98	-2	26.0	-101	-2	15.9
Jan 23	73.6	-6	-6	73.2	-18	-6	71.9	-30	-6	69.8	-42	-6	66.8	-52	-6	63.1	-62	-5	58.7	-72	-5	53.7	-80	-4	48.1	-86	-4	42.0	-92	-3	35.5	-97	-3	25.8	-100	-2	15.8
Jan 24	72.8	-6	-7	72.4	-18	-7	71.1	-30	-7	69.0	-41	-6	66.1	-52	-6	62.5	-62	-6	58.1	-71	-5	53.1	-79	-5	47.6	-86	-4	41.6	-91	-4	35.2	-96	-3	25.5	-99	-2	15.6
Jan 25	72.0	-6	-7	71.6	-18	-7	70.3	-30	-7	68.3	-41	-6	65.4	-51	-6	61.8	-61	-6	57.5	-70	-5	52.5	-78	-5	47.1	-85	-4	41.1	-90	-4	34.8	-95	-3	25.2	-98	-2	15.4
Jan 26	71.2	-6	-6	70.8	-18	-6	69.5	-29	-6	67.5	-40	-6	64.6	-51	-6	61.1	-60	-5	56.8	-69	-5	51.9	-77	-4	46.5	-84	-4	40.6	-89	-3	34.4	-94	-3	25.0	-97	-2	15.2
Jan 27	70.4	-6	-5	70.0	-18	-5	68.8	-29	-5	66.8	-40	-5	64.0	-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	-1	15.1
Jan 28	69.8	-6	-4	69.4	-17	-4	68.2	-29	-4	66.2	-40	-4	63.4	-50	-3	59.9	-59	-3	55.7	-68	-3	50.9	-76	-3	45.6	-82	-2	39.9	-87	-2	33.7	-92	-2	24.5	-95	-1	14.9
Jan 29	69.3	-6	-2	68.9	-17	-2	67.7	-29	-2	65.7	-39	-2	63.0	-50	-2	59.5	-59	-2	55.3	-68	-2	50.6	-75	-2	45.3	-82	-1	39.6	-87	-1	33.5	-92	-1	24.3	-94	-1	14.8
Jan 30	69.1	-6	0	68.7	-17	0	67.5	-28	0	65.5	-39	0	62.7	-49	0	59.2	-59	0	55.1	-67	0	50.4	-75	0	45.1	-82	0	39.4	-87	0	33.4	-91	0	24.2	-94	0	14.8
Jan 31	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	1	24.2	-94	0	14.8
Feb 1	69.2	-6	3	68.8	-17	3	67.6	-29	3	65.6	-39	3	62.8	-50	3	59.4	-59	3	55.2	-68	2	50.5	-75	2	45.2	-82	2	39.5	-87	2	33.4	-92	1	24.3	-95	1	14.8
Feb 2	69.6	-6	5	69.2	-17	5	68.0	-29	5	65.9	-40	5	63.2	-50	4	59.7	-60	4	55.5	-68	4	50.8	-76	3	45.5	-83	3	39.7	-88	3	33.6	-92	2	24.4	-95	1	14.9
Feb 3	70.2	-6	6	69.8	-18	6	68.5	-29	6	66.5	-40	6	63.7	-51	6	60.2	-60	5	56.0	-69	5	51.2	-77	4	45.9	-83	4	40.1	-89	3	33.9	-93	3	24.6	-96	2	15.0
Feb 4	70.9	-6	7	70.5	-18	7	69.3	-29	7	67.2	-41	7	64.4	-51	6	60.8	-61	6	56.6	-70	6	51.7	-78	5	46.3	-84	4	40.5	-90	4	34.2	-94	3	24.9	-97	2	15.2
Feb 5	71.8	-6	8	71.4	-18	8	70.1	-30	7	68.0	-41	7	65.2	-52	7	61.6	-62	6	57.3	-71	6	52.4	-79	5	46.9	-85	5	41.0	-91	4	34.7	-96	3	25.2	-99	2	15.4
Feb 6	72.7	-6	7	72.3	-18	7	71.0	-30	7	68.9	-42	7	66.0	-52	7	62.4	-62	6	58.0	-72	6	53.1	-80	5	47.5	-86	5	41.5	-92	4	35.1	-97	3	25.5	-100	2	15.6
Feb 7	73.6	-6	7	73.2	-18	7	71.9	-31	6	69.8	-42	6	66.8	-53	6	63.1	-63	6	58.7	-72	5	53.7	-80	5	48.1	-87	4	42.0	-93	4	35.5	-98	3	25.8	-101	2	15.8
Feb 8	74.4	-6	5	74.0	-19	5	72.7	-31	5	70.5	-42	5	67.6	-54	5	63.8	-64	5	59.4	-73	4	54.3	-81	4	48.6	-88	3	42.5	-94	3	35.9	-99	2	26.1	-102	2	15.9
Feb 9	75.1	-6	4	74.6	-19	4	73.3	-31	4	71.2	-43	4	68.2	-54	3	64.4	-64	3	59.9	-74	3	54.8	-82	3	49.1	-89	2	42.9	-95	2	36.3	-100	2	26.3	-103	1	16.1
Feb 10	75.5	-6	2	75.1	-19	2	73.8	-31	2	71.6	-43	2	68.6	-54	2	64.8	-65	2	60.3	-74	2	55.1	-82	1	49.4	-89	1	43.1	-95	1	36.5	-100	1	26.5	-103	1	16.2
Feb 11	75.8	-6	0	75.3	-19	0	74.0	-31	0	71.8	-43	0	68.8	-54	0	65.0	-65	0	60.5	-74	0	55.3	-82	0	49.5	-90	0	43.3	-95	0	36.6	-100	0	26.6	-103	0	16.2
Feb 12	75.8	-6	-1	75.4	-19	-1	74.1	-31	-1	71.9	-43	-1	68.9	-54	-1	65.1	-65	-1	60.5	-74	-1	55.3	-82	-1	49.6	-90	-1	43.3	-95	-1	36.6	-100	0	26.6	-103	0	16.2
Feb 13	75.7	-6	-2	75.3	-19	-2	74.0	-31	-2	71.8	-43	-2	68.8	-54	-2	65.0	-65	-2	60.4	-74	-2	55.3	-82	-1	49.5	-89	-1	43.2	-95	-1	36.6	-100	-1	26.5	-103	-1	16.2
Feb 14	75.5	-6	-3	75.0	-19	-3	73.7	-31	-3	71.5	-43	-3	68.5	-54	-3	64.7	-64	-2	60.2	-74	-2	55.1	-82	-2	49.3	-89	-2	43.1	-95	-2	36.4	-100	-1	26.5	-103	-1	16.2
Feb 15	75.1	-6	-4	74.7	-19	-4	73.4	-31	-3	71.2	-43	-3	68.2	-54	-3	64.4	-64	-3	59.9	-73	-3	54.8	-81	-2	49.1	-88	-2	42.9	-94	-2	36.3	-99	-1	26.3	-102	-1	16.1

2012 Moon Parallax and Semi-diameter

Upper Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
Jan 1	39.6	-6	-2	39.2	-17	-2	38.0	-29	-2	36.0	-39	-2	33.3	-50	-2	29.8	-59	-2	25.6	-68	-2	20.9	-75	-2	15.6	-82	-2	9.9	-87	-1	3.8	-92	-1	-5.4	-94	-1	-14.8
Jan 2	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	0	20.8	-75	0	15.6	-81	0	9.8	-87	0	3.8	-91	0	-5.4	-94	0	-14.8
Jan 3	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	-82	1	9.8	-87	1	3.8	-91	0	-5.4	-94	0	-14.8
Jan 4	39.5	-6	3	39.1	-17	3	37.9	-29	3	35.9	-39	3	33.1	-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
Jan 5	39.7	-6	4	39.3	-17	4	38.1	-29	4	36.1	-40	4	33.3	-50	4	29.8	-59	3	25.7	-68	3	20.9	-76	3	15.6	-82	2	9.9	-88	2	3.8	-92	2	-5.4	-95	1	-14.9
Jan 6	40.0	-6	5	39.6	-18	5	38.3	-29	5	36.3	-40	5	33.5	-50	4	30.0	-60	4	25.9	-69	4	21.1	-76	4	15.8	-83	3	10.0	-88	3	3.8	-93	2	-5.4	-96	1	-15.0
Jan 7	40.3	-6	6	39.9	-18	6	38.7	-29	5	36.6	-40	5	33.8	-51	5	30.3	-60	5	26.1	-69	4	21.3	-77	4	15.9	-84	3	10.1	-89	3	3.9	-94	2	-5.5	-97	2	-15.1
Jan 8	40.7	-6	6	40.3	-18	6	39.1	-30	6	37.0	-41	6	34.2	-51	5	30.6	-61	5	26.3	-70	5	21.5	-78	4	16.0	-85	4	10.2	-90	3	3.9	-95	2	-5.5	-98	2	-15.2
Jan 9	41.1	-6	6	40.7	-18	6	39.4	-30	6	37.4	-41	5	34.5	-52	5	30.9	-62	5	26.6	-71	4	21.7	-79	4	16.2	-85	4	10.3	-91	3	3.9	-96	2	-5.6	-99	2	-15.4
Jan 10	41.5	-6	5	41.1	-18	5	39.8	-30	5	37.7	-41	5	34.8	-52	5	31.2	-62	4	26.9	-71	4	21.9	-79	4	16.4	-86	3	10.4	-92	3	4.0	-97	2	-5.6	-100	2	-15.6
Jan 11	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	-92	3	4.0	-97	2	-5.7	-100	1	-15.7
Jan 12	42.2	-6	4	41.8	-19	4	40.5	-31	4	38.4	-42	4	35.4	-53	4	31.7	-63	3	27.3	-72	3	22.3	-81	3	16.6	-88	2	10.5	-93	2	4.0	-98	2	-5.7	-101	1	-15.8
Jan 13	42.5	-6	3	42.1	-19	3	40.8	-31	3	38.6	-42	3	35.7	-53	3	31.9	-64	3	27.5	-73	3	22.4	-81	2	16.7	-88	2	10.6	-94	2	4.1	-99	1	-5.8	-102	1	-15.9
Jan 14	42.7	-6	3	42.3	-19	3	41.0	-31	2	38.8	-43	2	35.8	-54	2	32.1	-64	2	27.6	-73	2	22.5	-81	2	16.8	-88	2	10.7	-94	1	4.1	-99	1	-5.8	-102	1	-16.0
Jan 15	42.9	-6	2	42.5	-19	2	41.1	-31	2	39.0	-43	2	36.0	-54	2	32.2	-64	2	27.8	-73	1	22.6	-82	1	16.9	-89	1	10.7	-94	1	4.1	-99	1	-5.8	-103	1	-16.1
Jan 16	43.0	-6	1	42.6	-19	1	41.3	-31	1	39.1	-43	1	36.1	-54	1	32.3	-64	1	27.8	-74	1	22.7	-82	1	17.0	-89	1	10.7	-95	1	4.1	-100	0	-5.8	-103	0	-16.1
Jan 17	43.1	-6	0	42.7	-19	0	41.3	-31	0	39.2	-43	0	36.2	-54	0	32.4	-64	0	27.9	-74	0	22.7	-82	0	17.0	-89	0	10.8	-95	0	4.1	-100	0	-5.9	-103	0	-16.1
Jan 18	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	0	22.7	-82	0	17.0	-89	0	10.8	-95	0	4.1	-100	0	-5.9	-103	0	-16.2
Jan 19	43.1	-6	-2	42.6	-19	-2	41.3	-31	-2	39.2	-43	-2	36.2	-54	-2	32.4	-64	-1	27.9	-74	-1	22.7	-82	-1	17.0	-89	-1	10.7	-95	-1	4.1	-100	-1	-5.9	-103	-1	-16.1
Jan 20	43.0	-6	-3	42.5	-19	-3	41.2	-31	-3	39.0	-43	-3	36.1	-54	-3	32.3	-64	-3	27.8	-73	-2	22.7	-82	-2	16.9	-89	-2	10.7	-94	-2	4.1	-99	-1	-5.8	-102	-1	-16.1
Jan 21	42.8	-6	-4	42.3	-19	-4	41.0	-31	-4	38.9	-42	-4	35.9	-53	-4	32.1	-64	-4	27.7	-73	-3	22.5	-81	-3	16.8	-88	-3	10.7	-94	-2	4.1	-99	-2	-5.8	-102	-1	-16.0
Jan 22	42.5	-6	-6	42.0	-18	-5	40.7	-30	-5	38.6	-42	-5	35.6	-53	-5	31.9	-63	-5	27.5	-72	-4	22.4	-80	-4	16.7	-87	-3	10.6	-93	-3	4.1	-98	-2	-5.8	-101	-2	-15.9
Jan 23	42.1	-6	-6	41.6	-18	-6	40.4	-30	-6	38.2	-42	-6	35.3	-52	-6	31.6	-62	-5	27.2	-72	-5	22.2	-80	-4	16.6	-86	-4	10.5	-92	-3	4.0	-97	-3	-5.7	-100	-2	-15.8
Jan 24	41.6	-6	-7	41.2	-18	-7	39.9	-30	-7	37.8	-41	-6	34.9	-52	-6	31.3	-62	-6	26.9	-71	-5	22.0	-79	-5	16.4	-86	-4	10.4	-91	-4	4.0	-96	-3	-5.7	-99	-2	-15.6
Jan 25	41.2	-6	-7	40.7	-18	-7	39.5	-30	-7	37.4	-41	-6	34.5	-51	-6	30.9	-61	-6	26.6	-70	-5	21.7	-78	-5	16.2	-85	-4	10.3	-90	-4	3.9	-95	-3	-5.6	-98	-2	-15.4
Jan 26	40.7	-6	-6	40.3	-18	-6	39.0	-29	-6	37.0	-40	-6	34.2	-51	-6	30.6	-60	-5	26.3	-69	-5	21.5	-77	-4	16.0	-84	-4	10.2	-89	-3	3.9	-94	-3	-5.5	-97	-2	-15.2
Jan 27	40.3	-6	-5	39.9	-18	-5	38.6	-29	-5	36.6	-40	-5	33.8	-50	-5	30.3	-60	-4	26.1	-69	-4	21.2	-76	-4	15.9	-83	-3	10.0	-88	-3	3.8	-93	-2	-5.5	-96	-1	-15.1
Jan 28	39.9	-6	-4	39.5	-17	-4	38.3	-29	-4	36.3	-40	-4	33.5	-50	-3	30.0	-59	-3	25.8	-68	-3	21.0	-76	-3	15.7	-82	-2	10.0	-87	-2	3.8	-92	-2	-5.4	-95	-1	-14.9
Jan 29	39.6	-6	-2	39.2	-17	-2	38.0	-29	-2	36.0	-39	-2	33.3	-50	-2	29.8	-59	-2	25.6	-68	-2	20.9	-75	-2	15.6	-82	-1	9.9	-87	-1	3.8	-92	-1	-5.4	-94	-1	-14.8
Jan 30	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	-67	0	20.8	-75	0	15.6	-82	0	9.8	-87	0	3.8	-91	0	-5.4	-94	0	-14.8
Jan 31	39.5	-6	1	39.0	-17	1	37.8	-28	1	35.9	-39	1	33.1	-49	1	29.6	-59	1	25.5	-68	1	20.8	-75	1	15.5	-82	1	9.8	-87	1	3.8	-91	1	-5.4	-94	0	-14.8
Feb 1	39.6	-6	3	39.1	-17	3	37.9	-29	3	35.9	-39	3	33.2	-50	3	29.7	-59	3	25.6	-68	2	20.9	-75	2	15.6	-82	2	9.9	-87	2	3.8	-92	1	-5.4	-95	1	-14.8
Feb 2	39.8	-6	5	39.4	-17	5	38.2	-29	5	36.1	-40	5	33.4	-50	4	29.9	-60	4	25.7	-68	4	21.0	-76	3	15.7	-83	3	9.9	-88	3	3.8	-92	2	-5.4	-95	1	-14.9
Feb 3	40.1	-6	6	39.7	-18	6	38.5	-29	6	36.4	-40	6	33.7	-51	6	30.1	-60	5	25.9	-69	5	21.1	-77	4	15.8	-83	4	10.0	-89	3	3.8	-93	3	-5.5	-96	2	-15.0
Feb 4	40.5	-6	7	40.1	-18	7	38.9	-29	7	36.8	-41	7	34.0	-51	6	30.5	-61	6	26.2	-70	6	21.4	-78	5	16.0	-84	4	10.1	-90	4	3.9	-94	3	-5.5	-97	2	-15.2
Feb 5	41.0	-6	8	40.6	-18	8	39.4	-30	7	37.3	-41	7	34.4	-52	7	30.8	-62	6	26.5	-71	6	21.6	-79	5	16.2	-85	5	10.2	-91	4	3.9	-96	3	-5.6	-99	2	-15.4
Feb 6	41.6	-6	7	41.1	-18	7	39.9	-30	7	37.8	-42	7	34.9	-52	7	31.2	-62	6	26.9	-72	6	21.9	-80	5	16.4	-86	5	10.4	-92	4	4.0	-97	3	-5.6	-100	2	-15.6
Feb 7	42.1	-6	7	41.6	-18	7	40.4	-31	6	38.2	-42	6	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	-15.8
Feb 8	42.5	-6	5	42.1	-19	5	40.8	-31	5	38.7	-42	5	35.7	-54	5	32.0	-64	5	27.5	-73	4	22.4	-81	4	16.8	-88	3	10.6	-94	3	4.1	-99	2	-5.8	-102	2	-15.9
Feb 9	42.9	-6	4	42.5	-19	4	41.2	-31	4	39.0	-43	4	36.0	-54	3	32.2	-64	3	27.8	-74	3	22.6	-82	3	16.9	-89	2	10.7	-95	2	4.1	-100	2	-5.8	-103	1	-16.1
Feb 10	43.2	-6	2	42.7	-19	2	41.4	-31	2	39.2	-43	2	36.2	-54	2	32.4	-65	2	27.9	-74	2	22.8	-82	1	17.0	-89	1	10.8	-95	1	4.1	-100	1	-5.9	-103	1	-16.2
Feb 11	43.3	-6	0	42.9	-19	0	41.6	-31	0	39.4	-43	0	36.4	-54	0	32.6	-65	0	28.0	-74	0	22.8	-82	0	17.1	-90	0	10.8	-95	0	4.1	-100	0	-5.9	-103	0	-16.2
Feb 12	43.4	-6	-1	42.9	-19	-1	41.6	-31	-1	39.4	-43	-1	36.4	-54	-1	32.6	-65	-1	28.0	-74	-1	22.9	-82	-1	17.1	-90	-1	10.8	-95	-1	4.1	-100	0	-5.9	-103	0	-16.2
Feb 13	43.3	-6	-2	42.8	-19	-2	41.5	-31	-2	39.3	-43	-2	36.3	-54	-2	32.5	-65	-2	28.0	-74	-2	22.8	-82	-1	17.1	-89	-1	10.8	-95	-1	4.1	-100	-1	-5.9	-103	-1	-16.2
Feb 14	43.1	-6	-3	42.7	-19	-3	41.4	-31	-3	39.2	-43	-3	36.2	-54	-3	32.4	-64	-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
Feb 15	42.9	-6	-4	42.5	-19	-4	41.2	-31	-3	39.0	-43	-3	36.0	-54	-3	32.3	-64	-3	27.8	-73	-3	22.6	-81	-2	16.9	-88	-2	10.7	-94	-2	4.1	-99	-1	-5.8	-102	-1	-16.1

2012 Moon Parallax and Semi-diameter

Lower Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
Feb 16	74.7	-6	-4	74.2	-19	-4	72.9	-31	-4	70.8	-42	-4	67.8	-53	-4	64.1	-64	-3	59.6	-73	-3	54.5	-81	-3	48.8	-88	-2	42.6	-94	-2	36.1	-98	-2	26.2	-102	-1	16.0
Feb 17	74.2	-6	-4	73.8	-18	-4	72.5	-30	-4	70.3	-42	-4	67.4	-53	-4	63.7	-63	-4	59.2	-72	-3	54.1	-80	-3	48.5	-87	-3	42.4	-93	-2	35.8	-98	-2	26.0	-101	-1	15.9
Feb 18	73.7	-6	-5	73.2	-18	-5	71.9	-30	-5	69.8	-42	-4	66.9	-53	-4	63.2	-63	-4	58.8	-72	-4	53.8	-80	-3	48.1	-87	-3	42.1	-92	-3	35.6	-97	-2	25.8	-100	-1	15.8
Feb 19	73.1	-6	-5	72.7	-18	-5	71.4	-30	-5	69.3	-41	-5	66.4	-52	-4	62.7	-62	-4	58.3	-71	-4	53.3	-79	-3	47.8	-86	-3	41.7	-92	-3	35.3	-96	-2	25.6	-99	-1	15.7
Feb 20	72.5	-6	-5	72.1	-18	-5	70.8	-30	-5	68.7	-41	-5	65.8	-52	-5	62.2	-62	-4	57.9	-71	-4	52.9	-78	-4	47.4	-85	-3	41.4	-91	-3	35.0	-95	-2	25.4	-98	-1	15.5
Feb 21	71.9	-6	-5	71.4	-18	-5	70.2	-29	-5	68.1	-41	-5	65.2	-51	-5	61.6	-61	-4	57.4	-70	-4	52.4	-78	-4	47.0	-84	-3	41.0	-90	-3	34.7	-95	-2	25.2	-98	-2	15.4
Feb 22	71.2	-6	-5	70.8	-18	-5	69.6	-29	-5	67.5	-40	-5	64.7	-51	-5	61.1	-61	-4	56.8	-69	-4	52.0	-77	-4	46.5	-84	-3	40.7	-89	-3	34.4	-94	-2	25.0	-97	-1	15.2
Feb 23	70.6	-6	-5	70.2	-18	-5	68.9	-29	-5	66.9	-40	-4	64.1	-50	-4	60.6	-60	-4	56.3	-69	-4	51.5	-76	-3	46.1	-83	-3	40.3	-88	-3	34.1	-93	-2	24.7	-96	-1	15.1
Feb 24	70.0	-6	-4	69.6	-17	-4	68.4	-29	-4	66.4	-40	-4	63.6	-50	-4	60.1	-60	-3	55.9	-68	-3	51.1	-76	-3	45.8	-82	-3	40.0	-88	-2	33.8	-92	-2	24.5	-95	-1	15.0
Feb 25	69.5	-6	-3	69.1	-17	-3	67.9	-29	-3	65.9	-39	-3	63.1	-50	-3	59.6	-59	-3	55.5	-68	-2	50.7	-75	-2	45.4	-82	-2	39.7	-87	-2	33.6	-92	-1	24.4	-95	-1	14.9
Feb 26	69.2	-6	-2	68.7	-17	-2	67.5	-28	-2	65.5	-39	-2	62.8	-49	-2	59.3	-59	-1	55.2	-68	-1	50.5	-75	-1	45.2	-82	-1	39.5	-87	-1	33.4	-91	-1	24.2	-94	0	14.8
Feb 27	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 28	68.9	-6	2	68.5	-17	2	67.3	-28	2	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	1	24.2	-94	0	14.8
Feb 29	69.1	-6	3	68.7	-17	3	67.5	-29	3	65.5	-39	3	62.8	-50	3	59.3	-59	3	55.2	-68	3	50.4	-75	2	45.2	-82	2	39.5	-87	2	33.4	-92	1	24.2	-95	1	14.8
Mar 1	69.5	-6	5	69.1	-17	5	67.9	-29	5	65.9	-40	5	63.1	-50	5	59.7	-60	4	55.5	-68	4	50.7	-76	4	45.4	-82	3	39.7	-88	3	33.6	-92	2	24.4	-95	1	14.9
Mar 2	70.2	-6	7	69.8	-18	7	68.5	-29	7	66.5	-40	6	63.7	-51	6	60.2	-60	6	56.0	-69	5	51.2	-77	5	45.9	-83	4	40.1	-89	4	33.9	-93	3	24.6	-96	2	15.0
Mar 3	71.0	-6	8	70.6	-18	8	69.3	-29	8	67.3	-41	8	64.5	-51	7	60.9	-61	7	56.7	-70	6	51.8	-78	6	46.4	-84	5	40.5	-90	4	34.3	-95	3	24.9	-98	2	15.2
Mar 4	72.0	-6	9	71.5	-18	9	70.3	-30	9	68.2	-41	8	65.3	-52	8	61.7	-62	7	57.4	-71	7	52.5	-79	6	47.0	-86	6	41.1	-91	5	34.8	-96	4	25.2	-99	3	15.4
Mar 5	73.1	-6	9	72.6	-18	9	71.3	-30	9	69.2	-42	9	66.3	-53	8	62.7	-63	8	58.3	-72	7	53.3	-80	6	47.7	-87	6	41.7	-93	5	35.3	-97	4	25.6	-100	3	15.6
Mar 6	74.2	-6	9	73.7	-19	8	72.4	-31	8	70.3	-42	8	67.3	-53	8	63.6	-64	7	59.2	-73	7	54.1	-81	6	48.5	-88	5	42.3	-94	5	35.8	-99	4	26.0	-102	2	15.9
Mar 7	75.2	-6	7	74.8	-19	7	73.4	-31	7	71.3	-43	7	68.3	-54	6	64.5	-65	6	60.0	-74	6	54.9	-82	5	49.1	-89	4	42.9	-95	4	36.3	-100	3	26.4	-103	2	16.1
Mar 8	76.1	-6	5	75.6	-19	5	74.3	-31	5	72.1	-43	5	69.1	-55	4	65.3	-65	4	60.7	-75	4	55.5	-83	4	49.7	-90	3	43.4	-96	3	36.7	-101	2	26.7	-104	1	16.3
Mar 9	76.7	-6	2	76.2	-19	2	74.9	-32	2	72.7	-44	2	69.6	-55	2	65.8	-66	2	61.2	-75	2	55.9	-84	2	50.1	-91	2	43.8	-97	1	37.0	-102	1	26.9	-105	1	16.4
Mar 10	77.0	-6	0	76.5	-19	0	75.2	-32	0	73.0	-44	0	69.9	-55	0	66.0	-66	0	61.4	-75	0	56.2	-84	0	50.3	-91	0	43.9	-97	0	37.2	-102	0	27.0	-105	0	16.5
Mar 11	76.9	-6	-3	76.5	-19	-3	75.2	-32	-3	72.9	-44	-2	69.9	-55	-2	66.0	-66	-2	61.4	-75	-2	56.1	-84	-2	50.3	-91	-2	43.9	-97	-1	37.2	-102	-1	27.0	-105	-1	16.5
Mar 12	76.6	-6	-5	76.2	-19	-4	74.8	-31	-4	72.6	-43	-4	69.6	-55	-4	65.7	-65	-4	61.2	-75	-3	55.9	-83	-3	50.1	-90	-3	43.7	-96	-2	37.0	-101	-2	26.9	-104	-1	16.4
Mar 13	76.1	-6	-6	75.6	-19	-6	74.3	-31	-6	72.1	-43	-5	69.1	-54	-5	65.3	-65	-5	60.7	-74	-4	55.5	-82	-4	49.7	-89	-4	43.4	-95	-3	36.7	-100	-2	26.7	-103	-2	16.3
Mar 14	75.4	-6	-7	74.9	-19	-6	73.6	-31	-6	71.4	-43	-6	68.4	-54	-6	64.7	-64	-5	60.2	-73	-5	55.0	-82	-5	49.3	-89	-4	43.0	-94	-3	36.4	-99	-3	26.4	-102	-2	16.1
Mar 15	74.6	-6	-7	74.2	-19	-7	72.9	-31	-6	70.7	-42	-6	67.7	-53	-6	64.0	-63	-6	59.5	-73	-5	54.4	-81	-5	48.8	-88	-4	42.6	-93	-4	36.0	-98	-3	26.2	-101	-2	16.0
Mar 16	73.8	-6	-7	73.4	-18	-6	72.1	-30	-6	69.9	-42	-6	67.0	-53	-6	63.3	-63	-5	58.9	-72	-5	53.8	-80	-5	48.2	-87	-4	42.1	-92	-3	35.6	-97	-3	25.9	-100	-2	15.8
Mar 17	73.0	-6	-6	72.6	-18	-6	71.3	-30	-6	69.2	-41	-6	66.3	-52	-5	62.6	-62	-5	58.3	-71	-5	53.3	-79	-4	47.7	-86	-4	41.7	-91	-3	35.3	-96	-3	25.6	-99	-2	15.6
Mar 18	72.3	-6	-6	71.8	-18	-6	70.6	-30	-5	68.5	-41	-5	65.6	-52	-5	62.0	-61	-5	57.7	-70	-4	52.7	-78	-4	47.2	-85	-3	41.3	-90	-3	34.9	-95	-2	25.3	-98	-2	15.5
Mar 19	71.6	-6	-5	71.2	-18	-5	69.9	-29	-5	67.8	-41	-5	65.0	-51	-5	61.4	-61	-4	57.1	-70	-4	52.2	-78	-4	46.8	-84	-3	40.9	-90	-3	34.6	-94	-2	25.1	-97	-1	15.3
Mar 20	71.0	-6	-5	70.5	-18	-5	69.3	-29	-5	67.3	-40	-4	64.4	-51	-4	60.9	-60	-4	56.6	-69	-4	51.8	-77	-3	46.4	-83	-3	40.5	-89	-2	34.3	-94	-2	24.9	-96	-1	15.2
Mar 21	70.4	-6	-4	70.0	-18	-4	68.7	-29	-4	66.7	-40	-4	63.9	-50	-4	60.4	-60	-3	56.2	-69	-3	51.4	-76	-3	46.0	-83	-3	40.2	-88	-2	34.0	-93	-2	24.7	-96	-1	15.1
Mar 22	69.9	-6	-4	69.5	-17	-4	68.3	-29	-3	66.2	-40	-3	63.5	-50	-3	60.0	-59	-3	55.8	-68	-3	51.0	-76	-2	45.7	-82	-2	39.9	-88	-2	33.7	-92	-1	24.5	-95	-1	15.0
Mar 23	69.5	-6	-3	69.1	-17	-3	67.8	-29	-3	65.8	-39	-3	63.1	-50	-3	59.6	-59	-2	55.4	-68	-2	50.7	-75	-2	45.4	-82	-2	39.7	-87	-2	33.5	-92	-1	24.4	-95	-1	14.9
Mar 24	69.1	-6	-2	68.7	-17	-2	67.5	-28	-2	65.5	-39	-2	62.8	-49	-2	59.3	-59	-2	55.2	-67	-2	50.4	-75	-1	45.2	-81	-1	39.5	-87	-1	33.4	-91	-1	24.2	-94	-1	14.8
Mar 25	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	0	33.3	-91	0	24.1	-94	0	14.7
Mar 26	68.8	-6	0	68.4	-17	0	67.2	-28	0	65.2	-39	0	62.4	-49	0	59.0	-59	0	54.9	-67	0	50.2	-75	0	44.9	-81	0	39.3	-86	0	33.2	-91	0	24.1	-94	0	14.7
Mar 27	68.8	-6	2	68.4	-17	2	67.2	-28	2	65.2	-39	2	62.5	-49	2	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	1	14.7
Mar 28	69.0	-6	3	68.6	-17	3	67.4	-29	3	65.4	-39	3	62.7	-50	3	59.2	-59	3	55.1	-68	3	50.4	-75	2	45.1	-82	2	39.4	-87	2	33.3	-92	1	24.2	-94	1	14.8
Mar 29	69.4	-6	5	69.0	-17	5	67.8	-29	5	65.8	-40	5	63.0	-50	4	59.6	-60	4	55.4	-68	4	50.7	-76	4	45.4	-82	3	39.6	-88	3	33.5	-92	2	24.3	-95	1	14.9
Mar 30	70.0	-6	7	69.6	-18	7	68.4	-29	7	66.4	-40	6	63.6	-50	6	60.1	-60	6	55.9	-69	5	51.1	-77	5	45.8	-83	4	40.0	-89	4	33.8	-93	3	24.6	-96	2	15.0
Mar 31	70.8	-6	8	70.4	-18	8	69.2	-29	8	67.2	-41	8	64.3	-51	7	60.8	-61	7	56.5	-70	6	51.7	-78	6	46.3	-84	5	40.4	-90	4	34.2	-94	3	24.8	-97	2	15.2
Apr 1	71.8	-6	9	71.4	-18	9	70.2	-30	9	68.1	-41	9	65.2	-52	8	61.6	-62	8	57.3	-71	7	52.4	-79	7	47.0	-86	6	41.0	-91	5	34.7	-96	4	25.2	-99	3	15.4

2012 Moon Parallax and Semi-diameter

Upper Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
Feb 16	42.7	-6	-4	42.3	-19	-4	41.0	-31	-4	38.8	-42	-4	35.8	-53	-4	32.1	-64	-3	27.6	-73	-3	22.5	-81	-3	16.8	-88	-2	10.7	-94	-2	4.1	-98	-2	-5.8	-102	-1	-16.0
Feb 17	42.4	-6	-4	42.0	-18	-4	40.7	-30	-4	38.5	-42	-4	35.6	-53	-4	31.9	-63	-4	27.4	-72	-3	22.4	-80	-3	16.7	-87	-3	10.6	-93	-2	4.1	-98	-2	-5.8	-101	-1	-15.9
Feb 18	42.1	-6	-5	41.7	-18	-5	40.4	-30	-5	38.3	-42	-4	35.3	-53	-4	31.6	-63	-4	27.2	-72	-4	22.2	-80	-3	16.6	-87	-3	10.5	-92	-3	4.0	-97	-2	-5.7	-100	-1	-15.8
Feb 19	41.8	-6	-5	41.4	-18	-5	40.1	-30	-5	38.0	-41	-5	35.1	-52	-4	31.4	-62	-4	27.0	-71	-4	22.0	-79	-3	16.5	-86	-3	10.4	-92	-3	4.0	-96	-2	-5.7	-99	-1	-15.7
Feb 20	41.4	-6	-5	41.0	-18	-5	39.8	-30	-5	37.7	-41	-5	34.8	-52	-5	31.1	-62	-4	26.8	-71	-4	21.8	-78	-4	16.3	-85	-3	10.3	-91	-3	4.0	-95	-2	-5.6	-98	-1	-15.5
Feb 21	41.1	-6	-5	40.7	-18	-5	39.4	-29	-5	37.3	-41	-5	34.5	-51	-5	30.9	-61	-4	26.6	-70	-4	21.7	-78	-4	16.2	-84	-3	10.2	-90	-3	3.9	-95	-2	-5.6	-98	-2	-15.4
Feb 22	40.7	-6	-5	40.3	-18	-5	39.0	-29	-5	37.0	-40	-5	34.2	-51	-5	30.6	-61	-4	26.3	-69	-4	21.5	-77	-4	16.0	-84	-3	10.2	-89	-3	3.9	-94	-2	-5.5	-97	-1	-15.2
Feb 23	40.4	-6	-5	39.9	-18	-5	38.7	-29	-5	36.7	-40	-4	33.9	-50	-4	30.3	-60	-4	26.1	-69	-4	21.3	-76	-3	15.9	-83	-3	10.1	-88	-3	3.9	-93	-2	-5.5	-96	-1	-15.1
Feb 24	40.0	-6	-4	39.6	-17	-4	38.4	-29	-4	36.4	-40	-4	33.6	-50	-4	30.1	-60	-3	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
Feb 25	39.7	-6	-3	39.3	-17	-3	38.1	-29	-3	36.1	-39	-3	33.3	-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
Feb 26	39.5	-6	-2	39.1	-17	-2	37.9	-28	-2	35.9	-39	-2	33.2	-49	-2	29.7	-59	-1	25.6	-68	-1	20.8	-75	-1	15.6	-82	-1	9.9	-87	-1	3.8	-91	-1	-5.4	-94	0	-14.8
Feb 27	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 28	39.4	-6	2	39.0	-17	2	37.8	-28	2	35.8	-39	1	33.1	-49	1	29.6	-59	1	25.5	-67	1	20.8	-75	1	15.5	-82	1	9.8	-87	1	3.8	-91	1	-5.4	-94	0	-14.8
Feb 29	39.5	-6	3	39.1	-17	3	37.9	-29	3	35.9	-39	3	33.2	-50	3	29.7	-59	3	25.6	-68	3	20.8	-75	2	15.6	-82	2	9.9	-87	2	3.8	-92	1	-5.4	-95	1	-14.8
Mar 1	39.8	-6	5	39.3	-17	5	38.1	-29	5	36.1	-40	5	33.4	-50	5	29.9	-60	4	25.7	-68	4	21.0	-76	4	15.7	-82	3	9.9	-88	3	3.8	-92	2	-5.4	-95	1	-14.9
Mar 2	40.1	-6	7	39.7	-18	7	38.5	-29	7	36.4	-40	6	33.7	-51	6	30.1	-60	6	25.9	-69	5	21.1	-77	5	15.8	-83	4	10.0	-89	4	3.8	-93	3	-5.4	-96	2	-15.0
Mar 3	40.6	-6	8	40.2	-18	8	38.9	-29	8	36.9	-41	8	34.1	-51	7	30.5	-61	7	26.3	-70	6	21.4	-78	6	16.0	-84	5	10.1	-90	4	3.9	-95	3	-5.5	-98	2	-15.2
Mar 4	41.1	-6	9	40.7	-18	9	39.5	-30	9	37.4	-41	8	34.5	-52	8	30.9	-62	7	26.6	-71	7	21.7	-79	6	16.2	-86	6	10.3	-91	5	3.9	-96	4	-5.6	-99	3	-15.4
Mar 5	41.8	-6	9	41.3	-18	9	40.1	-30	9	38.0	-42	9	35.0	-53	8	31.4	-63	8	27.0	-72	7	22.0	-80	6	16.5	-87	6	10.4	-93	5	4.0	-97	4	-5.7	-100	3	-15.6
Mar 6	42.4	-6	9	42.0	-19	8	40.7	-31	8	38.5	-42	8	35.6	-53	8	31.9	-64	7	27.4	-73	7	22.4	-81	6	16.7	-88	5	10.6	-94	5	4.1	-99	4	-5.8	-102	2	-15.9
Mar 7	43.0	-6	7	42.5	-19	7	41.2	-31	7	39.1	-43	7	36.1	-54	6	32.3	-65	6	27.8	-74	6	22.7	-82	5	16.9	-89	4	10.7	-95	4	4.1	-100	3	-5.8	-103	2	-16.1
Mar 8	43.5	-6	5	43.0	-19	5	41.7	-31	5	39.5	-43	5	36.5	-55	4	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	1	-16.3
Mar 9	43.8	-6	2	43.4	-19	2	42.0	-32	2	39.8	-44	2	36.8	-55	2	32.9	-66	2	28.4	-75	2	23.1	-84	2	17.3	-91	2	10.9	-97	1	4.2	-102	1	-6.0	-105	1	-16.4
Mar 10	44.0	-6	0	43.6	-19	0	42.2	-32	0	40.0	-44	0	36.9	-55	0	33.1	-66	0	28.5	-75	0	23.2	-84	0	17.3	-91	0	11.0	-97	0	4.2	-102	0	-6.0	-105	0	-16.5
Mar 11	44.0	-6	-3	43.5	-19	-3	42.2	-32	-3	40.0	-44	-2	36.9	-55	-2	33.1	-66	-2	28.5	-75	-2	23.2	-84	-2	17.3	-91	-2	11.0	-97	-1	4.2	-102	-1	-6.0	-105	-1	-16.5
Mar 12	43.8	-6	-5	43.4	-19	-4	42.0	-31	-4	39.8	-43	-4	36.8	-55	-4	32.9	-65	-4	28.3	-75	-3	23.1	-83	-3	17.3	-90	-3	10.9	-96	-2	4.2	-101	-2	-6.0	-104	-1	-16.4
Mar 13	43.5	-6	-6	43.1	-19	-6	41.7	-31	-6	39.5	-43	-5	36.5	-54	-5	32.7	-65	-5	28.1	-74	-4	22.9	-82	-4	17.1	-89	-4	10.9	-95	-3	4.2	-100	-2	-5.9	-103	-2	-16.3
Mar 14	43.1	-6	-7	42.7	-19	-6	41.3	-31	-6	39.2	-43	-6	36.2	-54	-6	32.4	-64	-5	27.9	-73	-5	22.7	-82	-5	17.0	-89	-4	10.8	-94	-3	4.1	-99	-3	-5.9	-102	-2	-16.1
Mar 15	42.6	-6	-7	42.2	-19	-7	40.9	-31	-6	38.8	-42	-6	35.8	-53	-6	32.0	-63	-6	27.6	-73	-5	22.5	-81	-5	16.8	-88	-4	10.6	-93	-4	4.1	-98	-3	-5.8	-101	-2	-16.0
Mar 16	42.2	-6	-7	41.8	-18	-6	40.5	-30	-6	38.3	-42	-6	35.4	-53	-6	31.7	-63	-5	27.3	-72	-5	22.2	-80	-5	16.6	-87	-4	10.5	-92	-3	4.0	-97	-3	-5.7	-100	-2	-15.8
Mar 17	41.7	-6	-6	41.3	-18	-6	40.0	-30	-6	37.9	-41	-6	35.0	-52	-5	31.4	-62	-5	27.0	-71	-5	22.0	-79	-4	16.4	-86	-4	10.4	-91	-3	4.0	-96	-3	-5.7	-99	-2	-15.6
Mar 18	41.3	-6	-6	40.9	-18	-6	39.6	-30	-5	37.5	-41	-5	34.7	-52	-5	31.0	-61	-5	26.7	-70	-4	21.8	-78	-4	16.3	-85	-3	10.3	-90	-3	3.9	-95	-2	-5.6	-98	-2	-15.5
Mar 19	40.9	-6	-5	40.5	-18	-5	39.3	-29	-5	37.2	-41	-5	34.3	-51	-5	30.7	-61	-4	26.5	-70	-4	21.6	-78	-4	16.1	-84	-3	10.2	-90	-3	3.9	-94	-2	-5.6	-97	-1	-15.3
Mar 20	40.6	-6	-5	40.1	-18	-5	38.9	-29	-5	36.9	-40	-4	34.0	-51	-4	30.5	-60	-4	26.2	-69	-4	21.4	-77	-3	16.0	-83	-3	10.1	-89	-2	3.9	-94	-2	-5.5	-96	-1	-15.2
Mar 21	40.2	-6	-4	39.8	-18	-4	38.6	-29	-4	36.6	-40	-4	33.8	-50	-4	30.2	-60	-3	26.0	-69	-3	21.2	-76	-3	15.9	-83	-3	10.0	-88	-2	3.8	-93	-2	-5.5	-96	-1	-15.1
Mar 22	40.0	-6	-4	39.5	-17	-4	38.3	-29	-3	36.3	-40	-3	33.5	-50	-3	30.0	-59	-3	25.8	-68	-3	21.1	-76	-2	15.7	-82	-2	10.0	-88	-2	3.8	-92	-1	-5.4	-95	-1	-15.0
Mar 23	39.7	-6	-3	39.3	-17	-3	38.1	-29	-3	36.1	-39	-3	33.3	-50	-3	29.8	-59	-2	25.7	-68	-2	20.9	-75	-2	15.6	-82	-2	9.9	-87	-2	3.8	-92	-1	-5.4	-95	-1	-14.9
Mar 24	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	-1	15.6	-81	-1	9.9	-87	-1	3.8	-91	-1	-5.4	-94	-1	-14.8
Mar 25	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	0	3.8	-91	0	-5.4	-94	0	-14.7
Mar 26	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
Mar 27	39.3	-6	2	38.9	-17	2	37.7	-28	2	35.7	-39	2	33.0	-49	2	29.6	-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	1	-14.7
Mar 28	39.5	-6	3	39.1	-17	3	37.8	-29	3	35.9	-39	3	33.1	-50	3	29.6	-59	3	25.5	-68	3	20.8	-75	2	15.5	-82	2	9.8	-87	2	3.8	-92	1	-5.4	-94	1	-14.8
Mar 29	39.7	-6	5	39.3	-17	5	38.1	-29	5	36.1	-40	5	33.3	-50	4	29.8	-60	4	25.7	-68	4	20.9	-76	4	15.6	-82	3	9.9	-88	3	3.8	-92	2	-5.4	-95	1	-14.9
Mar 30	40.0	-6	7	39.6	-18	7	38.4	-29	7	36.4	-40	6	33.6	-50	6	30.1	-60	6	25.9	-69	5	21.1	-77	5	15.8	-83	4	10.0	-89	4	3.8	-93	3	-5.4	-96	2	-15.0
Mar 31	40.5	-6	8	40.1	-18	8	38.8	-29	8	36.8	-41	8	34.0	-51	7	30.4	-61	7	26.2	-70	6	21.4	-78	6	16.0	-84	5	10.1	-90	4	3.9	-94	3	-5.5	-97	2	-15.2
Apr 1	41.1	-6	9	40.7	-18	9	39.4	-30	9	37.3	-41	9	34.5	-52	8	30.9	-62	8	26.6	-71	7	21.7	-79	7	16.2	-86	6	10.2	-91	5	3.9	-96	4	-5.6	-99	3	-15.4

2012 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	'
Apr 2	73.0	-6	10	72.6	-18	10	71.3	-30	10	69.2	-42	9	66.3	-53	9	62.6	-63	8	58.2	-72	8	53.3	-80	7	47.7	-87	6	41.7	-93	5	35.2	-97	4	25.6	-100	3	15.6
Apr 3	74.2	-6	10	73.8	-19	10	72.5	-31	10	70.3	-43	9	67.4	-54	9	63.6	-64	8	59.2	-73	8	54.1	-81	7	48.5	-88	6	42.4	-94	5	35.8	-99	4	26.0	-102	3	15.9
Apr 4	75.4	-6	9	75.0	-19	9	73.6	-31	9	71.5	-43	8	68.5	-54	8	64.7	-65	7	60.2	-74	7	55.0	-83	6	49.3	-90	5	43.0	-95	5	36.4	-100	4	26.4	-104	3	16.1
Apr 5	76.5	-6	7	76.0	-19	7	74.7	-32	7	72.5	-44	6	69.4	-55	6	65.6	-66	6	61.0	-75	5	55.8	-84	5	50.0	-91	4	43.7	-97	4	36.9	-102	3	26.8	-105	2	16.4
Apr 6	77.3	-6	4	76.8	-19	4	75.5	-32	4	73.3	-44	4	70.2	-56	4	66.3	-66	3	61.7	-76	3	56.4	-84	3	50.5	-92	2	44.1	-97	2	37.3	-103	2	27.1	-106	1	16.5
Apr 7	77.8	-7	1	77.3	-19	1	76.0	-32	1	73.7	-44	1	70.6	-56	1	66.7	-66	1	62.1	-76	1	56.7	-85	1	50.8	-92	0	44.4	-98	0	37.6	-103	0	27.3	-106	0	16.7
Apr 8	77.9	-7	-3	77.4	-19	-3	76.0	-32	-2	73.8	-44	-2	70.7	-56	-2	66.8	-66	-2	62.1	-76	-2	56.8	-85	-2	50.9	-92	-2	44.4	-98	-1	37.6	-103	-1	27.3	-106	-1	16.7
Apr 9	77.5	-6	-5	77.1	-19	-5	75.7	-32	-5	73.5	-44	-5	70.4	-55	-5	66.5	-66	-4	61.9	-76	-4	56.6	-84	-4	50.7	-91	-3	44.3	-97	-3	37.4	-102	-2	27.2	-105	-2	16.6
Apr 10	76.9	-6	-7	76.5	-19	-7	75.1	-32	-7	72.9	-43	-7	69.8	-55	-7	66.0	-65	-6	61.4	-75	-6	56.1	-83	-5	50.3	-90	-5	43.9	-96	-4	37.1	-101	-3	27.0	-104	-2	16.5
Apr 11	76.0	-6	-9	75.6	-19	-8	74.2	-31	-8	72.0	-43	-8	69.0	-54	-8	65.2	-64	-7	60.7	-74	-7	55.5	-82	-6	49.7	-89	-5	43.4	-95	-5	36.7	-100	-4	26.6	-103	-2	16.3
Apr 12	75.0	-6	-9	74.5	-19	-9	73.2	-31	-9	71.1	-42	-8	68.1	-53	-8	64.3	-64	-7	59.8	-73	-7	54.7	-81	-6	49.0	-88	-5	42.8	-94	-5	36.2	-98	-4	26.3	-102	-3	16.1
Apr 13	73.9	-6	-9	73.5	-18	-9	72.2	-30	-8	70.0	-42	-8	67.1	-53	-8	63.4	-63	-7	59.0	-72	-7	53.9	-80	-6	48.3	-87	-5	42.2	-92	-5	35.7	-97	-4	25.9	-100	-2	15.8
Apr 14	72.9	-6	-8	72.4	-18	-8	71.2	-30	-8	69.1	-41	-7	66.2	-52	-7	62.5	-62	-7	58.2	-71	-6	53.2	-79	-5	47.6	-86	-5	41.6	-91	-4	35.2	-96	-3	25.5	-99	-2	15.6
Apr 15	71.9	-6	-7	71.5	-18	-7	70.2	-29	-7	68.2	-41	-6	65.3	-51	-6	61.7	-61	-6	57.4	-70	-5	52.5	-78	-5	47.0	-84	-4	41.1	-90	-4	34.7	-95	-3	25.2	-98	-2	15.4
Apr 16	71.1	-6	-6	70.7	-18	-6	69.4	-29	-6	67.4	-40	-5	64.6	-51	-5	61.0	-60	-5	56.7	-69	-4	51.9	-77	-4	46.5	-84	-4	40.6	-89	-3	34.3	-94	-2	24.9	-97	-2	15.2
Apr 17	70.4	-6	-5	70.0	-18	-5	68.7	-29	-5	66.7	-40	-4	63.9	-50	-4	60.4	-60	-4	56.2	-69	-4	51.4	-76	-3	46.0	-83	-3	40.2	-88	-3	34.0	-93	-2	24.7	-96	-1	15.1
Apr 18	69.8	-6	-4	69.4	-17	-4	68.2	-29	-4	66.2	-40	-4	63.4	-50	-3	59.9	-59	-3	55.7	-68	-3	50.9	-76	-3	45.6	-82	-2	39.9	-87	-2	33.7	-92	-2	24.5	-95	-1	15.0
Apr 19	69.4	-6	-3	69.0	-17	-3	67.7	-29	-3	65.7	-39	-3	63.0	-50	-2	59.5	-59	-2	55.4	-68	-2	50.6	-75	-2	45.3	-82	-2	39.6	-87	-1	33.5	-92	-1	24.3	-94	-1	14.9
Apr 20	69.0	-6	-2	68.6	-17	-2	67.4	-28	-2	65.4	-39	-2	62.7	-49	-2	59.2	-59	-2	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
Apr 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	-86	-1	33.2	-91	0	24.1	-94	0	14.7
Apr 22	68.7	-6	0	68.3	-17	0	67.1	-28	0	65.1	-39	0	62.4	-49	0	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
Apr 23	68.7	-6	1	68.3	-17	1	67.1	-28	1	65.1	-39	1	62.3	-49	1	58.9	-59	1	54.8	-67	1	50.1	-75	1	44.9	-81	1	39.2	-86	0	33.2	-91	0	24.1	-94	0	14.7
Apr 24	68.8	-6	2	68.4	-17	2	67.2	-28	2	65.2	-39	2	62.4	-49	2	59.0	-59	2	54.9	-67	2	50.2	-75	1	45.0	-81	1	39.3	-87	1	33.2	-91	1	24.1	-94	1	14.7
Apr 25	69.0	-6	3	68.6	-17	3	67.4	-29	3	65.4	-39	3	62.7	-50	3	59.2	-59	3	55.1	-68	3	50.4	-75	2	45.1	-82	2	39.4	-87	2	33.3	-92	1	24.2	-94	1	14.8
Apr 26	69.4	-6	5	69.0	-17	5	67.8	-29	5	65.8	-40	4	63.0	-50	4	59.6	-59	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
Apr 27	70.0	-6	6	69.6	-18	6	68.4	-29	6	66.4	-40	6	63.6	-50	5	60.1	-60	5	55.9	-69	5	51.1	-77	4	45.8	-83	4	40.0	-88	3	33.8	-93	3	24.5	-96	2	15.0
Apr 28	70.8	-6	8	70.3	-18	8	69.1	-29	7	67.1	-40	7	64.2	-51	7	60.7	-61	6	56.5	-70	6	51.6	-77	5	46.2	-84	5	40.4	-90	4	34.2	-94	3	24.8	-97	2	15.1
Apr 29	71.7	-6	9	71.2	-18	9	70.0	-30	9	67.9	-41	8	65.1	-52	8	61.5	-62	7	57.2	-71	7	52.3	-79	6	46.8	-85	5	40.9	-91	5	34.6	-96	4	25.1	-99	3	15.3
Apr 30	72.7	-6	10	72.3	-18	10	71.0	-30	9	68.9	-42	9	66.0	-53	9	62.4	-63	8	58.0	-72	7	53.1	-80	7	47.5	-87	6	41.5	-92	5	35.1	-97	4	25.5	-100	3	15.6
May 1	73.9	-6	10	73.5	-19	10	72.2	-31	10	70.0	-42	9	67.1	-53	9	63.4	-64	8	59.0	-73	8	53.9	-81	7	48.3	-88	6	42.2	-94	5	35.7	-99	4	25.9	-102	3	15.8
May 2	75.1	-6	10	74.7	-19	9	73.4	-31	9	71.2	-43	9	68.2	-54	8	64.4	-65	8	59.9	-74	7	54.8	-82	7	49.1	-89	6	42.9	-95	5	36.3	-100	4	26.3	-103	3	16.1
May 3	76.3	-6	8	75.8	-19	8	74.5	-32	8	72.3	-44	7	69.2	-55	7	65.4	-65	7	60.9	-75	6	55.6	-83	6	49.8	-91	5	43.5	-96	4	36.8	-102	3	26.7	-105	2	16.3
May 4	77.2	-6	6	76.8	-19	5	75.4	-32	5	73.2	-44	5	70.1	-56	5	66.2	-66	5	61.6	-76	4	56.3	-84	4	50.5	-92	3	44.1	-97	3	37.3	-103	2	27.1	-106	2	16.5
May 5	77.9	-7	2	77.4	-19	2	76.1	-32	2	73.8	-44	2	70.7	-56	2	66.8	-67	2	62.2	-76	2	56.8	-85	2	50.9	-92	1	44.5	-98	1	37.6	-103	1	27.3	-106	1	16.7
May 6	78.2	-7	-1	77.7	-20	-1	76.3	-32	-1	74.1	-44	-1	71.0	-56	-1	67.1	-67	-1	62.4	-76	-1	57.0	-85	-1	51.1	-92	-1	44.6	-98	-1	37.7	-103	-1	27.4	-107	0	16.7
May 7	78.0	-7	-5	77.6	-19	-5	76.2	-32	-4	73.9	-44	-4	70.8	-56	-4	66.9	-66	-4	62.3	-76	-4	56.9	-85	-3	51.0	-92	-3	44.5	-98	-2	37.7	-103	-2	27.4	-106	-1	16.7
May 8	77.5	-6	-7	77.0	-19	-7	75.6	-32	-7	73.4	-44	-7	70.3	-55	-7	66.4	-66	-6	61.8	-75	-6	56.5	-84	-5	50.6	-91	-5	44.2	-97	-4	37.4	-102	-3	27.2	-105	-2	16.6
May 9	76.6	-6	-9	76.1	-19	-9	74.8	-31	-9	72.6	-43	-9	69.5	-54	-8	65.7	-65	-8	61.1	-74	-7	55.9	-83	-6	50.0	-90	-6	43.7	-96	-5	37.0	-101	-4	26.8	-104	-3	16.4
May 10	75.5	-6	-10	75.0	-19	-10	73.7	-31	-10	71.5	-43	-9	68.5	-54	-9	64.7	-64	-8	60.2	-73	-8	55.1	-81	-7	49.3	-88	-6	43.1	-94	-5	36.4	-99	-4	26.5	-102	-3	16.2
May 11	74.3	-6	-10	73.8	-18	-10	72.5	-30	-10	70.4	-42	-9	67.4	-53	-9	63.7	-63	-8	59.3	-72	-8	54.2	-80	-7	48.5	-87	-6	42.4	-93	-5	35.9	-97	-4	26.0	-101	-3	15.9
May 12	73.1	-6	-9	72.6	-18	-9	71.4	-30	-9	69.3	-41	-9	66.4	-52	-8	62.7	-62	-8	58.3	-71	-7	53.3	-79	-6	47.8	-86	-6	41.7	-91	-5	35.3	-96	-4	25.6	-99	-3	15.6
May 13	72.0	-6	-8	71.6	-18	-8	70.3	-29	-8	68.2	-41	-7	65.4	-51	-7	61.7	-61	-7	57.4	-70	-6	52.5	-78	-6	47.0	-84	-5	41.1	-90	-4	34.8	-95	-3	25.2	-98	-2	15.4
May 14	71.0	-6	-7	70.6	-18	-7	69.3	-29	-6	67.3	-40	-6	64.5	-51	-6	60.9	-60	-6	56.7	-69	-5	51.8	-77	-5	46.4	-83	-4	40.5	-89	-4	34.3	-93	-3	24.9	-96	-2	15.2
May 15	70.2	-6	-5	69.8	-17	-5	68.6	-29	-5	66.5	-40	-5	63.7	-50	-5	60.2	-60	-4	56.0	-68	-4	51.2	-76	-4	45.9	-83	-3	40.1	-88	-3	33.9	-92	-2	24.6	-95	-1	15.0
May 16	69.6	-6	-4	69.2	-17	-4	68.0	-29	-4	65.9	-39	-4	63.2	-50	-3	59.7	-59	-3	55.5	-68	-3	50.8	-75	-3	45.5	-82	-2	39.7	-87	-2	33.6	-92	-2	24.4	-95	-1	14.9
May 17	69.1	-6	-2	68.7	-17	-2	67.5	-28	-2	65.5	-39	-2	62.8	-49	-2	59.3	-59	-2	55.2	-67	-2	50.4	-75	-2	45.2	-81	-2	39.5	-87	-1	33.4	-91	-1	24.2	-94	-1	14.8

2012 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	'
Apr 2	41.7	-6	10	41.3	-18	10	40.0	-30	10	37.9	-42	9	35.0	-53	9	31.4	-63	8	27.0	-72	8	22.0	-80	7	16.4	-87	6	10.4	-93	5	4.0	-97	4	-5.7	-100	3	-15.6
Apr 3	42.4	-6	10	42.0	-19	10	40.7	-31	10	38.5	-43	9	35.6	-54	9	31.9	-64	8	27.4	-73	8	22.4	-81	7	16.7	-88	6	10.6	-94	5	4.1	-99	4	-5.8	-102	3	-15.9
Apr 4	43.1	-6	9	42.7	-19	9	41.3	-31	9	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	-95	5	4.1	-100	4	-5.9	-104	3	-16.1
Apr 5	43.7	-6	7	43.3	-19	7	41.9	-32	7	39.7	-44	6	36.7	-55	6	32.8	-66	6	28.3	-75	5	23.0	-84	5	17.2	-91	4	10.9	-97	4	4.2	-102	3	-5.9	-105	2	-16.4
Apr 6	44.2	-6	4	43.7	-19	4	42.4	-32	4	40.1	-44	4	37.1	-56	4	33.2	-66	3	28.6	-76	3	23.3	-84	3	17.4	-92	2	11.0	-97	2	4.2	-103	2	-6.0	-106	1	-16.5
Apr 7	44.5	-7	1	44.0	-19	1	42.6	-32	1	40.4	-44	1	37.3	-56	1	33.4	-66	1	28.8	-76	1	23.4	-85	1	17.5	-92	0	11.1	-98	0	4.2	-103	0	-6.0	-106	0	-16.7
Apr 8	44.5	-7	-3	44.1	-19	-3	42.7	-32	-2	40.4	-44	-2	37.3	-56	-2	33.4	-66	-2	28.8	-76	-2	23.5	-85	-2	17.5	-92	-2	11.1	-98	-1	4.3	-103	-1	-6.0	-106	-1	-16.7
Apr 9	44.3	-6	-5	43.9	-19	-5	42.5	-32	-5	40.3	-44	-5	37.2	-55	-5	33.3	-66	-4	28.7	-76	-4	23.4	-84	-4	17.5	-91	-3	11.1	-97	-3	4.2	-102	-2	-6.0	-105	-2	-16.6
Apr 10	44.0	-6	-7	43.5	-19	-7	42.2	-32	-7	39.9	-43	-7	36.9	-55	-7	33.0	-65	-6	28.4	-75	-6	23.2	-83	-5	17.3	-90	-5	11.0	-96	-4	4.2	-101	-3	-6.0	-104	-2	-16.5
Apr 11	43.5	-6	-9	43.0	-19	-8	41.7	-31	-8	39.5	-43	-8	36.5	-54	-8	32.7	-64	-7	28.1	-74	-7	22.9	-82	-6	17.1	-89	-5	10.8	-95	-5	4.2	-100	-4	-5.9	-103	-2	-16.3
Apr 12	42.9	-6	-9	42.4	-19	-9	41.1	-31	-9	38.9	-42	-8	36.0	-53	-8	32.2	-64	-7	27.7	-73	-7	22.6	-81	-6	16.9	-88	-5	10.7	-94	-5	4.1	-98	-4	-5.8	-102	-3	-16.1
Apr 13	42.3	-6	-9	41.8	-18	-9	40.5	-30	-8	38.4	-42	-8	35.5	-53	-8	31.7	-63	-7	27.3	-72	-7	22.3	-80	-6	16.6	-87	-5	10.5	-92	-5	4.0	-97	-4	-5.7	-100	-2	-15.8
Apr 14	41.7	-6	-8	41.2	-18	-8	40.0	-30	-8	37.9	-41	-7	35.0	-52	-7	31.3	-62	-7	27.0	-71	-6	22.0	-79	-5	16.4	-86	-5	10.4	-91	-4	4.0	-96	-3	-5.7	-99	-2	-15.6
Apr 15	41.1	-6	-7	40.7	-18	-7	39.4	-29	-7	37.4	-41	-6	34.5	-51	-6	30.9	-61	-6	26.6	-70	-5	21.7	-78	-5	16.2	-84	-4	10.3	-90	-4	3.9	-95	-3	-5.6	-98	-2	-15.4
Apr 16	40.6	-6	-6	40.2	-18	-6	39.0	-29	-6	36.9	-40	-5	34.1	-51	-5	30.5	-60	-5	26.3	-69	-4	21.4	-77	-4	16.0	-84	-4	10.1	-89	-3	3.9	-94	-2	-5.5	-97	-2	-15.2
Apr 17	40.2	-6	-5	39.8	-18	-5	38.6	-29	-5	36.6	-40	-4	33.8	-50	-4	30.2	-60	-4	26.0	-69	-4	21.2	-76	-3	15.9	-83	-3	10.0	-88	-3	3.8	-93	-2	-5.5	-96	-1	-15.1
Apr 18	39.9	-6	-4	39.5	-17	-4	38.3	-29	-4	36.3	-40	-4	33.5	-50	-3	30.0	-59	-3	25.8	-68	-3	21.0	-76	-3	15.7	-82	-2	10.0	-87	-2	3.8	-92	-2	-5.4	-95	-1	-15.0
Apr 19	39.7	-6	-3	39.2	-17	-3	38.0	-29	-3	36.0	-39	-3	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	-94	-1	-14.9
Apr 20	39.5	-6	-2	39.1	-17	-2	37.8	-28	-2	35.9	-39	-2	33.1	-49	-2	29.7	-59	-2	25.5	-67	-1	20.8	-75	-1	15.6	-81	-1	9.8	-87	-1	3.8	-91	-1	-5.4	-94	-1	-14.8
Apr 21	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	-1	15.5	-81	-1	9.8	-86	-1	3.8	-91	0	-5.3	-94	0	-14.7
Apr 22	39.3	-6	0	38.9	-17	0	37.7	-28	0	35.7	-39	0	32.9	-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
Apr 23	39.3	-6	1	38.9	-17	1	37.7	-28	1	35.7	-39	1	32.9	-49	1	29.5	-59	1	25.4	-67	1	20.7	-75	1	15.5	-81	1	9.8	-86	0	3.8	-91	0	-5.3	-94	0	-14.7
Apr 24	39.3	-6	2	38.9	-17	2	37.7	-28	2	35.7	-39	2	33.0	-49	2	29.5	-59	2	25.4	-67	2	20.7	-75	1	15.5	-81	1	9.8	-87	1	3.8	-91	1	-5.3	-94	1	-14.7
Apr 25	39.5	-6	3	39.1	-17	3	37.9	-29	3	35.9	-39	3	33.1	-50	3	29.7	-59	3	25.5	-68	3	20.8	-75	2	15.6	-82	2	9.8	-87	2	3.8	-92	1	-5.4	-94	1	-14.8
Apr 26	39.7	-6	5	39.3	-17	5	38.1	-29	5	36.1	-40	4	33.3	-50	4	29.8	-59	4	25.7	-68	4	20.9	-76	3	15.6	-82	3	9.9	-88	3	3.8	-92	2	-5.4	-95	1	-14.9
Apr 27	40.0	-6	6	39.6	-18	6	38.4	-29	6	36.4	-40	6	33.6	-50	5	30.1	-60	5	25.9	-69	5	21.1	-77	4	15.8	-83	4	10.0	-88	3	3.8	-93	3	-5.4	-96	2	-15.0
Apr 28	40.4	-6	8	40.0	-18	8	38.8	-29	7	36.8	-40	7	33.9	-51	7	30.4	-61	6	26.2	-70	6	21.3	-77	5	15.9	-84	5	10.1	-90	4	3.9	-94	3	-5.5	-97	2	-15.1
Apr 29	41.0	-6	9	40.6	-18	9	39.3	-30	9	37.2	-41	8	34.4	-52	8	30.8	-62	7	26.5	-71	7	21.6	-79	6	16.1	-85	5	10.2	-91	5	3.9	-96	4	-5.6	-99	3	-15.3
Apr 30	41.6	-6	10	41.2	-18	10	39.9	-30	9	37.8	-42	9	34.9	-53	9	31.2	-63	8	26.9	-72	7	21.9	-80	7	16.4	-87	6	10.4	-92	5	4.0	-97	4	-5.6	-100	3	-15.6
May 1	42.2	-6	10	41.8	-19	10	40.5	-31	10	38.4	-42	9	35.5	-53	9	31.7	-64	8	27.3	-73	8	22.3	-81	7	16.6	-88	6	10.5	-94	5	4.0	-99	4	-5.7	-102	3	-15.8
May 2	42.9	-6	10	42.5	-19	9	41.2	-31	9	39.0	-43	9	36.0	-54	8	32.3	-65	8	27.8	-74	7	22.6	-82	7	16.9	-89	6	10.7	-95	5	4.1	-100	4	-5.8	-103	3	-16.1
May 3	43.6	-6	8	43.1	-19	8	41.8	-32	8	39.6	-44	7	36.6	-55	7	32.8	-65	7	28.2	-75	6	23.0	-83	6	17.2	-91	5	10.9	-96	4	4.2	-102	3	-5.9	-105	2	-16.3
May 4	44.1	-6	6	43.7	-19	5	42.3	-32	5	40.1	-44	5	37.0	-56	5	33.2	-66	5	28.6	-76	4	23.3	-84	4	17.4	-92	3	11.0	-97	3	4.2	-103	2	-6.0	-106	2	-16.5
May 5	44.5	-7	2	44.1	-19	2	42.7	-32	2	40.5	-44	2	37.4	-56	2	33.5	-67	2	28.8	-76	2	23.5	-85	2	17.5	-92	1	11.1	-98	1	4.3	-103	1	-6.0	-106	1	-16.7
May 6	44.7	-7	-1	44.2	-20	-1	42.9	-32	-1	40.6	-44	-1	37.5	-56	-1	33.6	-67	-1	28.9	-76	-1	23.6	-85	-1	17.6	-92	-1	11.1	-98	-1	4.3	-103	-1	-6.1	-107	0	-16.7
May 7	44.6	-7	-5	44.1	-19	-5	42.8	-32	-4	40.5	-44	-4	37.4	-56	-4	33.5	-66	-4	28.9	-76	-4	23.5	-85	-3	17.6	-92	-3	11.1	-98	-2	4.3	-103	-2	-6.1	-106	-1	-16.7
May 8	44.3	-6	-7	43.8	-19	-7	42.5	-32	-7	40.2	-44	-7	37.2	-55	-7	33.3	-66	-6	28.6	-75	-6	23.3	-84	-5	17.4	-91	-5	11.0	-97	-4	4.2	-102	-3	-6.0	-105	-2	-16.6
May 9	43.8	-6	-9	43.3	-19	-9	42.0	-31	-9	39.8	-43	-9	36.7	-54	-8	32.9	-65	-8	28.3	-74	-7	23.1	-83	-6	17.3	-90	-6	10.9	-96	-5	4.2	-101	-4	-5.9	-104	-3	-16.4
May 10	43.1	-6	-10	42.7	-19	-10	41.4	-31	-10	39.2	-43	-9	36.2	-54	-9	32.4	-64	-8	27.9	-73	-8	22.7	-81	-7	17.0	-88	-6	10.8	-94	-5	4.1	-99	-4	-5.9	-102	-3	-16.2
May 11	42.5	-6	-10	42.0	-18	-10	40.7	-30	-10	38.6	-42	-9	35.6	-53	-9	31.9	-63	-8	27.5	-72	-8	22.4	-80	-7	16.7	-87	-6	10.6	-93	-5	4.1	-97	-4	-5.8	-101	-3	-15.9
May 12	41.8	-6	-9	41.3	-18	-9	40.1	-30	-9	38.0	-41	-9	35.1	-52	-8	31.4	-62	-8	27.0	-71	-7	22.0	-79	-6	16.5	-86	-6	10.4	-91	-5	4.0	-96	-4	-5.7	-99	-3	-15.6
May 13	41.1	-6	-8	40.7	-18	-8	39.5	-29	-8	37.4	-41	-7	34.5	-51	-7	30.9	-61	-7	26.6	-70	-6	21.7	-78	-6	16.2	-84	-5	10.3	-90	-4	3.9	-95	-3	-5.6	-98	-2	-15.4
May 14	40.6	-6	-7	40.2	-18	-7	38.9	-29	-6	36.9	-40	-6	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
May 15	40.1	-6	-5	39.7	-17	-5	38.5	-29	-5	36.5	-40	-5	33.7	-50	-5	30.2	-60	-4	26.0	-68	-4	21.2	-76	-4	15.8	-83	-3	10.0	-88	-3	3.8	-92	-2	-5.5	-95	-1	-15.0
May 16	39.8	-6	-4	39.4	-17	-4	38.2	-29	-4	36.1	-39	-4	33.4	-50	-3	29.9	-59	-3	25.7	-68	-3	21.0	-75	-3	15.7	-82	-2	9.9	-87	-2	3.8	-92	-2	-5.4	-95	-1	-14.9
May 17	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	-81	-2	9.9	-87	-1	3.8	-91	-1	-5.4	-94	-1	-14.8

2012 Moon Parallax and Semi-diameter

Lower Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
May 18	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	-86	-1	33.2	-91	-1	24.1	-94	0	14.7
May 19	68.7	-6	0	68.3	-17	0	67.1	-28	0	65.1	-39	0	62.4	-49	0	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
May 20	68.7	-6	1	68.3	-17	1	67.1	-28	1	65.1	-39	1	62.3	-49	1	58.9	-59	1	54.8	-67	1	50.1	-75	1	44.9	-81	0	39.2	-86	0	33.2	-91	0	24.1	-94	0	14.7
May 21	68.8	-6	2	68.3	-17	2	67.1	-28	2	65.2	-39	2	62.4	-49	2	59.0	-59	1	54.9	-67	1	50.2	-75	1	44.9	-81	1	39.2	-87	1	33.2	-91	1	24.1	-94	0	14.7
May 22	69.0	-6	3	68.6	-17	3	67.3	-28	3	65.4	-39	2	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
May 23	69.3	-6	4	68.9	-17	3	67.7	-29	3	65.7	-39	3	62.9	-50	3	59.4	-59	3	55.3	-68	3	50.5	-76	2	45.3	-82	2	39.5	-87	2	33.4	-92	1	24.3	-95	1	14.8
May 24	69.7	-6	5	69.3	-17	4	68.1	-29	4	66.1	-40	4	63.3	-50	4	59.8	-60	4	55.6	-68	3	50.9	-76	3	45.5	-83	3	39.8	-88	2	33.7	-93	2	24.4	-95	1	14.9
May 25	70.2	-6	6	69.8	-18	5	68.6	-29	5	66.6	-40	5	63.8	-51	5	60.3	-60	5	56.1	-69	4	51.3	-77	4	45.9	-83	3	40.1	-89	3	33.9	-93	2	24.6	-96	2	15.0
May 26	70.9	-6	7	70.5	-18	7	69.3	-29	6	67.2	-41	6	64.4	-51	6	60.8	-61	5	56.6	-70	5	51.7	-78	5	46.3	-84	4	40.5	-90	3	34.2	-94	3	24.9	-97	2	15.2
May 27	71.7	-6	8	71.3	-18	8	70.0	-30	7	68.0	-41	7	65.1	-52	7	61.5	-62	6	57.2	-71	6	52.3	-78	5	46.9	-85	5	40.9	-91	4	34.6	-95	3	25.1	-98	2	15.4
May 28	72.6	-6	8	72.2	-18	8	70.9	-30	8	68.8	-42	8	65.9	-52	7	62.3	-62	7	58.0	-71	6	53.0	-80	6	47.5	-86	5	41.5	-92	4	35.1	-97	4	25.5	-100	2	15.5
May 29	73.6	-6	9	73.2	-19	9	71.9	-31	8	69.8	-42	8	66.9	-53	8	63.2	-63	7	58.8	-73	7	53.7	-81	6	48.1	-88	5	42.0	-93	5	35.6	-98	4	25.8	-101	2	15.8
May 30	74.7	-6	9	74.2	-19	9	72.9	-31	8	70.8	-43	8	67.8	-54	8	64.1	-64	7	59.6	-74	7	54.5	-82	6	48.8	-89	5	42.6	-95	5	36.1	-100	4	26.2	-103	2	16.0
May 31	75.7	-6	8	75.3	-19	8	74.0	-31	7	71.8	-43	7	68.8	-55	7	65.0	-65	6	60.4	-74	6	55.3	-83	5	49.5	-90	5	43.2	-96	4	36.6	-101	3	26.5	-104	2	16.2
Jun 1	76.7	-6	6	76.2	-19	6	74.9	-32	6	72.7	-44	6	69.6	-55	5	65.8	-66	5	61.2	-75	5	55.9	-84	4	50.1	-91	4	43.8	-97	3	37.0	-102	2	26.9	-105	2	16.4
Jun 2	77.4	-6	3	76.9	-19	3	75.6	-32	3	73.3	-44	3	70.3	-56	3	66.4	-66	3	61.8	-76	3	56.5	-84	2	50.6	-92	2	44.2	-98	2	37.4	-103	1	27.1	-106	1	16.6
Jun 3	77.8	-7	0	77.3	-19	0	76.0	-32	0	73.7	-44	0	70.6	-56	0	66.7	-66	0	62.1	-76	0	56.7	-85	0	50.8	-92	0	44.4	-98	0	37.6	-103	0	27.3	-106	0	16.7
Jun 4	77.8	-6	-3	77.3	-19	-3	76.0	-32	-3	73.7	-44	-3	70.6	-56	-3	66.7	-66	-3	62.1	-76	-2	56.8	-84	-2	50.8	-92	-2	44.4	-98	-2	37.6	-103	-1	27.3	-106	-1	16.7
Jun 5	77.4	-6	-6	77.0	-19	-6	75.6	-32	-6	73.4	-44	-6	70.3	-55	-5	66.4	-66	-5	61.8	-75	-5	56.5	-84	-4	50.6	-91	-4	44.2	-97	-3	37.4	-102	-3	27.1	-105	-2	16.6
Jun 6	76.7	-6	-8	76.2	-19	-8	74.9	-31	-8	72.7	-43	-8	69.6	-55	-7	65.8	-65	-7	61.2	-74	-6	56.0	-83	-6	50.1	-90	-5	43.8	-96	-4	37.0	-101	-3	26.9	-104	-2	16.4
Jun 7	75.7	-6	-10	75.2	-19	-10	73.9	-31	-9	71.7	-43	-9	68.7	-54	-9	64.9	-64	-8	60.4	-73	-7	55.2	-82	-7	49.5	-89	-6	43.2	-94	-5	36.5	-99	-4	26.5	-102	-3	16.2
Jun 8	74.5	-6	-10	74.1	-18	-10	72.8	-30	-10	70.6	-42	-9	67.7	-53	-9	63.9	-63	-8	59.5	-72	-8	54.4	-80	-7	48.7	-87	-6	42.5	-93	-5	36.0	-98	-4	26.1	-101	-3	16.0
Jun 9	73.3	-6	-10	72.9	-18	-9	71.6	-30	-9	69.5	-41	-9	66.6	-52	-9	62.9	-62	-8	58.5	-71	-7	53.5	-79	-7	47.9	-86	-6	41.9	-91	-5	35.4	-96	-4	25.7	-99	-3	15.7
Jun 10	72.2	-6	-9	71.7	-18	-8	70.5	-30	-8	68.4	-41	-8	65.5	-51	-8	61.9	-61	-7	57.6	-70	-7	52.7	-78	-6	47.2	-85	-5	41.2	-90	-5	34.8	-95	-4	25.3	-98	-2	15.5
Jun 11	71.1	-6	-7	70.7	-18	-7	69.5	-29	-7	67.4	-40	-7	64.6	-51	-6	61.0	-60	-6	56.8	-69	-5	51.9	-77	-5	46.5	-84	-4	40.6	-89	-4	34.3	-94	-3	24.9	-96	-2	15.2
Jun 12	70.3	-6	-6	69.9	-17	-5	68.6	-29	-5	66.6	-40	-5	63.8	-50	-5	60.3	-60	-5	56.1	-68	-4	51.3	-76	-4	45.9	-83	-3	40.1	-88	-3	33.9	-93	-2	24.6	-95	-2	15.0
Jun 13	69.6	-6	-4	69.2	-17	-4	68.0	-29	-4	66.0	-39	-4	63.2	-50	-3	59.7	-59	-3	55.5	-68	-3	50.8	-75	-3	45.5	-82	-2	39.7	-87	-2	33.6	-92	-2	24.4	-95	-1	14.9
Jun 14	69.1	-6	-2	68.7	-17	-2	67.5	-28	-2	65.5	-39	-2	62.8	-49	-2	59.3	-59	-2	55.2	-67	-2	50.4	-75	-2	45.2	-81	-1	39.5	-87	-1	33.4	-91	-1	24.2	-94	-1	14.8
Jun 15	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	50.2	-75	-1	45.0	-81	0	39.3	-86	0	33.3	-91	0	24.1	-94	0	14.7
Jun 16	68.8	-6	1	68.4	-17	1	67.2	-28	1	65.2	-39	1	62.4	-49	0	59.0	-59	0	54.9	-67	0	50.2	-75	0	44.9	-81	0	39.3	-86	0	33.2	-91	0	24.1	-94	0	14.7
Jun 17	68.8	-6	2	68.4	-17	2	67.2	-28	2	65.2	-39	2	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
Jun 18	69.0	-6	3	68.6	-17	3	67.4	-29	3	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
Jun 19	69.3	-6	3	68.9	-17	3	67.7	-29	3	65.7	-40	3	63.0	-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
Jun 20	69.8	-6	4	69.3	-17	4	68.1	-29	4	66.1	-40	4	63.3	-50	4	59.8	-60	3	55.7	-68	3	50.9	-76	3	45.6	-83	2	39.8	-88	2	33.7	-93	2	24.5	-96	1	14.9
Jun 21	70.2	-6	5	69.8	-18	5	68.6	-29	4	66.6	-40	4	63.8	-51	4	60.3	-60	4	56.1	-69	4	51.3	-77	3	45.9	-83	3	40.1	-89	2	33.9	-93	2	24.6	-96	1	15.0
Jun 22	70.8	-6	5	70.4	-18	5	69.2	-29	5	67.1	-40	5	64.3	-51	5	60.7	-61	4	56.5	-70	4	51.7	-77	4	46.3	-84	3	40.4	-89	3	34.2	-94	2	24.8	-97	1	15.2
Jun 23	71.4	-6	6	71.0	-18	6	69.8	-30	5	67.7	-41	5	64.9	-51	5	61.3	-61	5	57.0	-70	4	52.1	-78	4	46.7	-85	3	40.8	-90	3	34.5	-95	2	25.0	-98	2	15.3
Jun 24	72.1	-6	6	71.7	-18	6	70.4	-30	6	68.3	-41	6	65.5	-52	5	61.9	-62	5	57.6	-71	5	52.6	-79	4	47.1	-86	4	41.2	-91	3	34.8	-96	3	25.3	-99	2	15.4
Jun 25	72.9	-6	7	72.4	-18	6	71.2	-30	6	69.1	-42	6	66.2	-52	6	62.5	-63	5	58.1	-72	5	53.2	-80	5	47.6	-87	4	41.6	-92	3	35.2	-97	3	25.5	-100	2	15.6
Jun 26	73.6	-6	7	73.2	-18	7	71.9	-31	7	69.8	-42	6	66.9	-53	6	63.2	-63	6	58.8	-72	5	53.7	-81	5	48.1	-87	4	42.0	-93	4	35.6	-98	3	25.8	-101	2	15.8
Jun 27	74.5	-6	7	74.0	-19	7	72.7	-31	6	70.6	-43	6	67.6	-54	6	63.9	-64	5	59.4	-73	5	54.3	-81	5	48.7	-88	4	42.5	-94	3	36.0	-99	3	26.1	-102	2	15.9
Jun 28	75.3	-6	6	74.8	-19	6	73.5	-31	6	71.3	-43	6	68.3	-54	5	64.6	-65	5	60.1	-74	5	54.9	-82	4	49.2	-89	4	43.0	-95	3	36.3	-100	3	26.4	-103	2	16.1
Jun 29	76.0	-6	5	75.5	-19	5	74.2	-31	5	72.0	-43	4	69.0	-55	4	65.2	-65	4	60.6	-75	4	55.4	-83	3	49.7	-90	3	43.4	-96	3	36.7	-101	2	26.6	-104	1	16.3
Jun 30	76.6	-6	3	76.1	-19	3	74.8	-32	3	72.6	-44	3	69.5	-55	3	65.7	-65	2	61.1	-75	2	55.9	-83	2	50.0	-91	2	43.7	-96	2	37.0	-102	1	26.8	-105	1	16.4
Jul 1	76.9	-6	1	76.5	-19	1	75.1	-32	1	72.9	-44	1	69.8	-55	1	66.0	-66	1	61.4	-75	0	56.1	-84	0	50.3	-91	0	43.9	-97	0	37.1	-102	0	27.0	-105	0	16.5
Jul 2	77.0	-6	-2	76.5	-19	-2	75.2	-32	-2	73.0	-44	-2	69.9	-55	-2	66.0	-66	-2	61.4	-75	-2	56.2	-84	-1	50.3	-91	-1	44.0	-97	-1	37.2	-102	-1	27.0	-105	-1	16.5

2012 Moon Parallax and Semi-diameter

Upper Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
May 18	39.4	-6	-1	38.9	-17	-1	37.7	-28	-1	35.8	-39	-1	33.0	-49	-1	29.6	-59	-1	25.5	-67	-1	20.7	-75	-1	15.5	-81	-1	9.8	-86	-1	3.8	-91	-1	-5.3	-94	0	-14.7
May 19	39.3	-6	0	38.9	-17	0	37.7	-28	0	35.7	-39	0	32.9	-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
May 20	39.3	-6	1	38.8	-17	1	37.6	-28	1	35.7	-39	1	32.9	-49	1	29.5	-59	1	25.4	-67	1	20.7	-75	1	15.5	-81	0	9.8	-86	0	3.8	-91	0	-5.3	-94	0	-14.7
May 21	39.3	-6	2	38.9	-17	2	37.7	-28	2	35.7	-39	2	33.0	-49	2	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
May 22	39.4	-6	3	39.0	-17	3	37.8	-28	3	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
May 23	39.6	-6	4	39.2	-17	3	38.0	-29	3	36.0	-39	3	33.2	-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
May 24	39.8	-6	5	39.4	-17	4	38.2	-29	4	36.2	-40	4	33.4	-50	4	29.9	-60	4	25.8	-68	3	21.0	-76	3	15.7	-83	3	9.9	-88	2	3.8	-93	2	-5.4	-95	1	-14.9
May 25	40.2	-6	6	39.7	-18	5	38.5	-29	5	36.5	-40	5	33.7	-51	5	30.2	-60	5	26.0	-69	4	21.2	-77	4	15.8	-83	3	10.0	-89	3	3.8	-93	2	-5.5	-96	2	-15.0
May 26	40.5	-6	7	40.1	-18	7	38.9	-29	6	36.8	-41	6	34.0	-51	6	30.5	-61	5	26.2	-70	5	21.4	-78	5	16.0	-84	4	10.1	-90	3	3.9	-94	3	-5.5	-97	2	-15.2
May 27	41.0	-6	8	40.6	-18	8	39.3	-30	7	37.2	-41	7	34.4	-52	7	30.8	-62	6	26.5	-71	6	21.6	-78	5	16.2	-85	5	10.2	-91	4	3.9	-95	3	-5.6	-98	2	-15.4
May 28	41.5	-6	8	41.1	-18	8	39.8	-30	8	37.7	-42	8	34.8	-52	7	31.2	-62	7	26.9	-71	6	21.9	-80	6	16.4	-86	5	10.4	-92	4	4.0	-97	4	-5.6	-100	2	-15.5
May 29	42.1	-6	9	41.7	-19	9	40.4	-31	8	38.2	-42	8	35.3	-53	8	31.6	-63	7	27.2	-73	7	22.2	-81	6	16.6	-88	5	10.5	-93	5	4.0	-98	4	-5.7	-101	2	-15.8
May 30	42.7	-6	9	42.3	-19	9	41.0	-31	8	38.8	-43	8	35.8	-54	8	32.1	-64	7	27.6	-74	7	22.5	-82	6	16.8	-89	5	10.7	-95	5	4.1	-100	4	-5.8	-103	2	-16.0
May 31	43.3	-6	8	42.8	-19	8	41.5	-31	7	39.3	-43	7	36.3	-55	7	32.5	-65	6	28.0	-74	6	22.8	-83	5	17.1	-90	5	10.8	-96	4	4.1	-101	3	-5.9	-104	2	-16.2
Jun 1	43.8	-6	6	43.4	-19	6	42.0	-32	6	39.8	-44	6	36.8	-55	5	32.9	-66	5	28.3	-75	5	23.1	-84	4	17.3	-91	4	10.9	-97	3	4.2	-102	2	-6.0	-105	2	-16.4
Jun 2	44.2	-6	3	43.8	-19	3	42.4	-32	3	40.2	-44	3	37.1	-56	3	33.2	-66	3	28.6	-76	3	23.3	-84	2	17.4	-92	2	11.0	-98	2	4.2	-103	1	-6.0	-106	1	-16.6
Jun 3	44.5	-7	0	44.0	-19	0	42.6	-32	0	40.4	-44	0	37.3	-56	0	33.4	-66	0	28.8	-76	0	23.4	-85	0	17.5	-92	0	11.1	-98	0	4.2	-103	0	-6.0	-106	0	-16.7
Jun 4	44.5	-6	-3	44.0	-19	-3	42.7	-32	-3	40.4	-44	-3	37.3	-56	-3	33.4	-66	-3	28.8	-76	-2	23.4	-84	-2	17.5	-92	-2	11.1	-98	-2	4.2	-103	-1	-6.0	-106	-1	-16.7
Jun 5	44.3	-6	-6	43.8	-19	-6	42.5	-32	-6	40.2	-44	-6	37.1	-55	-5	33.3	-66	-5	28.6	-75	-5	23.3	-84	-4	17.4	-91	-4	11.0	-97	-3	4.2	-102	-3	-6.0	-105	-2	-16.6
Jun 6	43.8	-6	-8	43.4	-19	-8	42.1	-31	-8	39.8	-43	-8	36.8	-55	-7	32.9	-65	-7	28.4	-74	-6	23.1	-83	-6	17.3	-90	-5	10.9	-96	-4	4.2	-101	-3	-6.0	-104	-2	-16.4
Jun 7	43.3	-6	-10	42.8	-19	-10	41.5	-31	-9	39.3	-43	-9	36.3	-54	-9	32.5	-64	-8	28.0	-73	-7	22.8	-82	-7	17.1	-89	-6	10.8	-94	-5	4.1	-99	-4	-5.9	-102	-3	-16.2
Jun 8	42.6	-6	-10	42.2	-18	-10	40.9	-30	-10	38.7	-42	-9	35.7	-53	-9	32.0	-63	-8	27.6	-72	-8	22.5	-80	-7	16.8	-87	-6	10.6	-93	-5	4.1	-98	-4	-5.8	-101	-3	-16.0
Jun 9	41.9	-6	-10	41.5	-18	-9	40.2	-30	-9	38.1	-41	-9	35.2	-52	-9	31.5	-62	-8	27.1	-71	-7	22.1	-79	-7	16.5	-86	-6	10.5	-91	-5	4.0	-96	-4	-5.7	-99	-3	-15.7
Jun 10	41.3	-6	-9	40.8	-18	-8	39.6	-30	-8	37.5	-41	-8	34.6	-51	-8	31.0	-61	-7	26.7	-70	-7	21.8	-78	-6	16.3	-85	-5	10.3	-90	-5	3.9	-95	-4	-5.6	-98	-2	-15.5
Jun 11	40.7	-6	-7	40.2	-18	-7	39.0	-29	-7	37.0	-40	-7	34.1	-51	-6	30.6	-60	-6	26.3	-69	-5	21.4	-77	-5	16.0	-84	-4	10.1	-89	-4	3.9	-94	-3	-5.5	-96	-2	-15.2
Jun 12	40.2	-6	-6	39.8	-17	-5	38.5	-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	-95	-2	-15.0
Jun 13	39.8	-6	-4	39.4	-17	-4	38.2	-29	-4	36.2	-39	-4	33.4	-50	-3	29.9	-59	-3	25.7	-68	-3	21.0	-75	-3	15.7	-82	-2	9.9	-87	-2	3.8	-92	-2	-5.4	-95	-1	-14.9
Jun 14	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	-81	-1	9.9	-87	-1	3.8	-91	-1	-5.4	-94	-1	-14.8
Jun 15	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	0	9.8	-86	0	3.8	-91	0	-5.3	-94	0	-14.7
Jun 16	39.3	-6	1	38.9	-17	1	37.7	-28	1	35.7	-39	1	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
Jun 17	39.3	-6	2	38.9	-17	2	37.7	-28	2	35.8	-39	2	33.0	-49	1	29.6	-59	1	25.5	-67	1	20.7	-75	1	15.5	-81	1	9.8	-87	1	3.8	-91	1	-5.3	-94	0	-14.7
Jun 18	39.5	-6	3	39.1	-17	3	37.9	-29	3	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
Jun 19	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
Jun 20	39.9	-6	4	39.5	-17	4	38.3	-29	4	36.2	-40	4	33.5	-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	-96	1	-14.9
Jun 21	40.2	-6	5	39.7	-18	5	38.5	-29	4	36.5	-40	4	33.7	-51	4	30.2	-60	4	26.0	-69	4	21.2	-77	3	15.8	-83	3	10.0	-89	2	3.8	-93	2	-5.5	-96	1	-15.0
Jun 22	40.5	-6	5	40.1	-18	5	38.8	-29	5	36.8	-40	5	34.0	-51	5	30.4	-61	4	26.2	-70	4	21.3	-77	4	16.0	-84	3	10.1	-89	3	3.9	-94	2	-5.5	-97	1	-15.2
Jun 23	40.8	-6	6	40.4	-18	6	39.2	-30	5	37.1	-41	5	34.3	-51	5	30.7	-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
Jun 24	41.2	-6	6	40.8	-18	6	39.5	-30	6	37.5	-41	6	34.6	-52	5	31.0	-62	5	26.7	-71	5	21.7	-79	4	16.2	-86	4	10.3	-91	3	3.9	-96	3	-5.6	-99	2	-15.4
Jun 25	41.6	-6	7	41.2	-18	6	39.9	-30	6	37.8	-42	6	34.9	-52	6	31.3	-63	5	26.9	-72	5	22.0	-80	5	16.4	-87	4	10.4	-92	3	4.0	-97	3	-5.7	-100	2	-15.6
Jun 26	42.1	-6	7	41.7	-18	7	40.4	-31	7	38.3	-42	6	35.3	-53	6	31.6	-63	6	27.2	-72	5	22.2	-81	5	16.6	-87	4	10.5	-93	4	4.0	-98	3	-5.7	-101	2	-15.8
Jun 27	42.6	-6	7	42.1	-19	7	40.8	-31	6	38.7	-43	6	35.7	-54	6	32.0	-64	5	27.5	-73	5	22.4	-81	5	16.8	-88	4	10.6	-94	3	4.1	-99	3	-5.8	-102	2	-15.9
Jun 28	43.0	-6	6	42.6	-19	6	41.3	-31	6	39.1	-43	6	36.1	-54	5	32.3	-65	5	27.8	-74	5	22.7	-82	4	17.0	-89	4	10.7	-95	3	4.1	-100	3	-5.8	-103	2	-16.1
Jun 29	43.4	-6	5	43.0	-19	5	41.7	-31	5	39.5	-43	4	36.4	-55	4	32.6	-65	4	28.1	-75	4	22.9	-83	3	17.1	-90	3	10.8	-96	3	4.2	-101	2	-5.9	-104	1	-16.3
Jun 30	43.8	-6	3	43.3	-19	3	42.0	-32	3	39.8	-44	3	36.7	-55	3	32.9	-65	2	28.3	-75	2	23.1	-83	2	17.2	-91	2	10.9	-96	2	4.2	-102	1	-5.9	-105	1	-16.4
Jul 1	44.0	-6	1	43.5	-19	1	42.2	-32	1	40.0	-44	1	36.9	-55	1	33.0	-66	1	28.4	-75	0	23.2	-84	0	17.3	-91	0	11.0	-97	0	4.2	-102	0	-6.0	-105	0	-16.5
Jul 2	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	-2	23.2	-84	-1	17.3	-91	-1	11.0	-97	-1	4.2	-102	-1	-6.0	-105	-1	-16.5

2012 Moon Parallax and Semi-diameter

Lower Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
Jul 3	76.8	-6	-5	76.3	-19	-5	75.0	-32	-4	72.7	-43	-4	69.7	-55	-4	65.8	-65	-4	61.3	-75	-3	56.0	-83	-3	50.2	-90	-3	43.8	-96	-2	37.1	-101	-2	26.9	-104	-1	16.4
Jul 4	76.2	-6	-7	75.8	-19	-7	74.4	-31	-7	72.2	-43	-6	69.2	-54	-6	65.4	-65	-6	60.8	-74	-5	55.6	-82	-5	49.8	-90	-4	43.5	-95	-4	36.8	-100	-3	26.7	-103	-2	16.3
Jul 5	75.4	-6	-8	74.9	-19	-8	73.6	-31	-8	71.5	-43	-8	68.5	-54	-7	64.7	-64	-7	60.2	-73	-6	55.0	-81	-6	49.3	-88	-5	43.0	-94	-4	36.4	-99	-3	26.4	-102	-2	16.1
Jul 6	74.4	-6	-9	74.0	-18	-9	72.7	-30	-9	70.5	-42	-8	67.5	-53	-8	63.8	-63	-8	59.4	-72	-7	54.3	-80	-6	48.6	-87	-6	42.5	-93	-5	35.9	-98	-4	26.1	-101	-3	15.9
Jul 7	73.3	-6	-9	72.9	-18	-9	71.6	-30	-9	69.5	-41	-8	66.6	-52	-8	62.9	-62	-7	58.5	-71	-7	53.5	-79	-6	47.9	-86	-6	41.8	-91	-5	35.4	-96	-4	25.7	-99	-3	15.7
Jul 8	72.2	-6	-8	71.8	-18	-8	70.5	-30	-8	68.4	-41	-8	65.6	-51	-7	62.0	-61	-7	57.6	-70	-6	52.7	-78	-6	47.2	-85	-5	41.2	-90	-4	34.9	-95	-3	25.3	-98	-2	15.5
Jul 9	71.2	-6	-7	70.8	-18	-7	69.6	-29	-7	67.5	-40	-7	64.7	-51	-6	61.1	-60	-6	56.8	-69	-5	52.0	-77	-5	46.5	-84	-4	40.7	-89	-4	34.4	-94	-3	25.0	-97	-2	15.3
Jul 10	70.4	-6	-6	70.0	-17	-5	68.7	-29	-5	66.7	-40	-5	63.9	-50	-5	60.4	-60	-5	56.2	-68	-4	51.3	-76	-4	46.0	-83	-3	40.2	-88	-3	34.0	-93	-2	24.7	-96	-2	15.1
Jul 11	69.7	-6	-4	69.3	-17	-4	68.1	-29	-4	66.1	-39	-4	63.3	-50	-3	59.8	-59	-3	55.6	-68	-3	50.9	-76	-3	45.6	-82	-2	39.8	-87	-2	33.7	-92	-2	24.4	-95	-1	14.9
Jul 12	69.2	-6	-2	68.8	-17	-2	67.6	-28	-2	65.6	-39	-2	62.9	-50	-2	59.4	-59	-2	55.3	-68	-2	50.5	-75	-1	45.2	-82	-1	39.5	-87	-1	33.4	-91	-1	24.3	-94	-1	14.8
Jul 13	69.0	-6	0	68.6	-17	0	67.4	-28	0	65.4	-39	0	62.6	-49	0	59.2	-59	0	55.1	-67	0	50.3	-75	0	45.1	-81	0	39.4	-87	0	33.3	-91	0	24.2	-94	0	14.8
Jul 14	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	1	24.2	-94	0	14.8
Jul 15	69.1	-6	3	68.7	-17	3	67.5	-29	3	65.5	-39	2	62.7	-50	2	59.3	-59	2	55.1	-68	2	50.4	-75	2	45.2	-82	2	39.4	-87	1	33.4	-92	1	24.2	-94	1	14.8
Jul 16	69.4	-6	4	69.0	-17	4	67.8	-29	4	65.8	-40	3	63.0	-50	3	59.5	-59	3	55.4	-68	3	50.6	-76	3	45.4	-82	2	39.6	-88	2	33.5	-92	2	24.3	-95	1	14.9
Jul 17	69.9	-6	5	69.4	-18	4	68.2	-29	4	66.2	-40	4	63.4	-50	4	59.9	-60	4	55.8	-69	3	51.0	-76	3	45.7	-83	3	39.9	-88	2	33.7	-93	2	24.5	-96	1	15.0
Jul 18	70.4	-6	5	70.0	-18	5	68.8	-29	5	66.7	-40	5	63.9	-51	4	60.4	-60	4	56.2	-69	4	51.4	-77	4	46.0	-84	3	40.2	-89	3	34.0	-94	2	24.7	-96	1	15.1
Jul 19	71.0	-6	5	70.6	-18	5	69.3	-29	5	67.3	-41	5	64.5	-51	5	60.9	-61	4	56.7	-70	4	51.8	-78	4	46.4	-84	3	40.5	-90	3	34.3	-94	2	24.9	-97	2	15.2
Jul 20	71.6	-6	5	71.2	-18	5	70.0	-30	5	67.9	-41	5	65.1	-52	5	61.5	-61	4	57.2	-70	4	52.3	-78	4	46.8	-85	3	40.9	-90	3	34.6	-95	2	25.1	-98	2	15.3
Jul 21	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	52.8	-79	4	47.2	-86	3	41.3	-91	3	34.9	-96	2	25.3	-99	1	15.5
Jul 22	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
Jul 23	73.5	-6	5	73.1	-18	5	71.8	-30	5	69.7	-42	4	66.8	-53	4	63.1	-63	4	58.7	-72	4	53.7	-80	3	48.1	-87	3	42.0	-93	3	35.5	-98	2	25.8	-101	1	15.7
Jul 24	74.1	-6	4	73.7	-19	4	72.4	-31	4	70.2	-42	4	67.3	-53	4	63.6	-63	4	59.1	-73	3	54.1	-81	3	48.4	-88	3	42.3	-93	2	35.8	-98	2	26.0	-101	1	15.9
Jul 25	74.6	-6	4	74.2	-19	4	72.9	-31	4	70.7	-43	4	67.8	-54	3	64.0	-64	3	59.6	-73	3	54.5	-81	3	48.8	-88	2	42.6	-94	2	36.0	-99	2	26.2	-102	1	16.0
Jul 26	75.1	-6	3	74.7	-19	3	73.4	-31	3	71.2	-43	3	68.2	-54	3	64.4	-64	3	59.9	-74	3	54.8	-82	2	49.1	-89	2	42.9	-95	2	36.3	-100	1	26.3	-103	1	16.1
Jul 27	75.5	-6	2	75.1	-19	2	73.7	-31	2	71.6	-43	2	68.6	-54	2	64.8	-65	2	60.3	-74	2	55.1	-82	2	49.3	-89	1	43.1	-95	1	36.5	-100	1	26.5	-103	1	16.2
Jul 28	75.8	-6	1	75.4	-19	1	74.0	-31	1	71.8	-43	1	68.8	-54	1	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
Jul 29	75.9	-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	49.6	-90	0	43.4	-95	0	36.7	-100	0	26.6	-104	0	16.3
Jul 30	75.9	-6	-2	75.5	-19	-2	74.1	-31	-2	72.0	-43	-2	68.9	-54	-2	65.1	-65	-2	60.6	-74	-1	55.4	-82	-1	49.6	-90	-1	43.3	-95	-1	36.7	-100	-1	26.6	-103	-1	16.3
Jul 31	75.7	-6	-4	75.2	-19	-4	73.9	-31	-4	71.7	-43	-3	68.7	-54	-3	64.9	-64	-3	60.4	-74	-3	55.2	-82	-3	49.5	-89	-2	43.2	-95	-2	36.5	-100	-2	26.5	-103	-1	16.2
Aug 1	75.2	-6	-5	74.8	-19	-5	73.5	-31	-5	71.3	-43	-5	68.3	-54	-5	64.5	-64	-4	60.0	-73	-4	54.9	-81	-4	49.2	-88	-3	42.9	-94	-3	36.3	-99	-2	26.4	-102	-2	16.1
Aug 2	74.6	-6	-7	74.1	-19	-7	72.8	-31	-6	70.7	-42	-6	67.7	-53	-6	64.0	-63	-6	59.5	-73	-5	54.4	-81	-5	48.7	-88	-4	42.6	-93	-4	36.0	-98	-3	26.1	-101	-2	16.0
Aug 3	73.8	-6	-7	73.4	-18	-7	72.1	-30	-7	69.9	-42	-7	67.0	-53	-7	63.3	-63	-6	58.9	-72	-6	53.8	-80	-5	48.2	-87	-5	42.1	-92	-4	35.6	-97	-3	25.9	-100	-2	15.8
Aug 4	72.9	-6	-8	72.5	-18	-8	71.2	-30	-7	69.1	-41	-7	66.2	-52	-7	62.5	-62	-6	58.2	-71	-6	53.2	-79	-5	47.6	-86	-5	41.6	-91	-4	35.2	-96	-3	25.6	-99	-2	15.6
Aug 5	72.0	-6	-7	71.5	-18	-7	70.3	-29	-7	68.2	-41	-7	65.3	-51	-6	61.7	-61	-6	57.4	-70	-6	52.5	-78	-5	47.0	-84	-4	41.1	-90	-4	34.7	-95	-3	25.2	-98	-2	15.4
Aug 6	71.1	-6	-6	70.7	-18	-6	69.4	-29	-6	67.4	-40	-6	64.5	-51	-6	61.0	-60	-5	56.7	-69	-5	51.9	-77	-4	46.5	-84	-4	40.6	-89	-3	34.3	-94	-3	24.9	-96	-2	15.2
Aug 7	70.3	-6	-5	69.9	-17	-5	68.7	-29	-5	66.6	-40	-5	63.8	-50	-5	60.3	-60	-4	56.1	-68	-4	51.3	-76	-4	46.0	-83	-3	40.1	-88	-3	34.0	-93	-2	24.7	-96	-1	15.1
Aug 8	69.7	-6	-3	69.3	-17	-3	68.1	-29	-3	66.1	-40	-3	63.3	-50	-3	59.8	-59	-3	55.6	-68	-3	50.9	-76	-2	45.6	-82	-2	39.8	-87	-2	33.7	-92	-1	24.4	-95	-1	14.9
Aug 9	69.3	-6	-2	68.9	-17	-2	67.7	-29	-2	65.7	-39	-2	62.9	-50	-2	59.4	-59	-1	55.3	-68	-1	50.6	-75	-1	45.3	-82	-1	39.6	-87	-1	33.5	-92	-1	24.3	-94	0	14.8
Aug 10	69.1	-6	0	68.7	-17	0	67.5	-28	0	65.5	-39	0	62.7	-49	0	59.3	-59	0	55.1	-68	0	50.4	-75	0	45.1	-82	0	39.4	-87	0	33.4	-91	0	24.2	-94	0	14.8
Aug 11	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	1	50.4	-75	1	45.2	-82	1	39.4	-87	1	33.4	-92	1	24.2	-94	1	14.8
Aug 12	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
Aug 13	69.7	-6	5	69.3	-17	5	68.1	-29	5	66.1	-40	4	63.3	-50	4	59.8	-60	4	55.6	-68	4	50.9	-76	3	45.6	-83	3	39.8	-88	3	33.7	-93	2	24.4	-96	1	14.9
Aug 14	70.3	-6	6	69.9	-18	6	68.7	-29	6	66.6	-40	5	63.8	-51	5	60.3	-60	5	56.1	-69	4	51.3	-77	4	45.9	-83	4	40.1	-89	3	33.9	-93	2	24.6	-96	2	15.1
Aug 15	71.0	-6	6	70.6	-18	6	69.3	-29	6	67.3	-41	6	64.5	-51	6	60.9	-61	5	56.7	-70	5	51.8	-78	4	46.4	-84	4	40.5	-90	3	34.3	-94	3	24.9	-97	2	15.2
Aug 16	71.8	-6	7	71.4	-18	7	70.1	-30	6	68.0	-41	6	65.2	-52	6	61.6	-62	5	57.3	-71	5	52.4	-78	5	46.9	-85	4	41.0	-91	3	34.7	-95	3	25.2	-98	2	15.4
Aug 17	72.6	-6	6	72.1	-18	6	70.9	-30	6	68.8	-41	6	65.9	-52	6	62.3	-62	5	57.9	-71	5	53.0	-79	4	47.4	-86	4	41.4	-92	3	35.0	-97	3	25.4	-100	2	15.5

2012 Moon Parallax and Semi-diameter

Upper Limb

Altitude degrees

	0		7		14		21		28		35		42		49		56		63		70		80		90
	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'
Jul 3	43.9	-6 -5	43.4	-19 -5	42.1	-32 -4	39.9	-43 -4	36.8	-55 -4	33.0	-65 -4	28.4	-75 -3	23.1	-83 -3	17.3	-90 -3	10.9	-96 -2	4.2	-101 -2	-6.0	-104 -1	-16.4
Jul 4	43.6	-6 -7	43.1	-19 -7	41.8	-31 -7	39.6	-43 -6	36.6	-54 -6	32.7	-65 -6	28.2	-74 -5	23.0	-82 -5	17.2	-90 -4	10.9	-95 -4	4.2	-100 -3	-5.9	-103 -2	-16.3
Jul 5	43.1	-6 -8	42.7	-19 -8	41.3	-31 -8	39.2	-43 -8	36.2	-54 -7	32.4	-64 -7	27.9	-73 -6	22.7	-81 -6	17.0	-88 -5	10.8	-94 -4	4.1	-99 -3	-5.9	-102 -2	-16.1
Jul 6	42.5	-6 -9	42.1	-18 -9	40.8	-30 -9	38.6	-42 -8	35.7	-53 -8	32.0	-63 -8	27.5	-72 -7	22.4	-80 -6	16.8	-87 -6	10.6	-93 -5	4.1	-98 -4	-5.8	-101 -3	-15.9
Jul 7	41.9	-6 -9	41.5	-18 -9	40.2	-30 -9	38.1	-41 -8	35.2	-52 -8	31.5	-62 -7	27.1	-71 -7	22.1	-79 -6	16.5	-86 -6	10.5	-91 -5	4.0	-96 -4	-5.7	-99 -3	-15.7
Jul 8	41.3	-6 -8	40.9	-18 -8	39.6	-30 -8	37.5	-41 -8	34.6	-51 -7	31.0	-61 -7	26.7	-70 -6	21.8	-78 -6	16.3	-85 -5	10.3	-90 -4	3.9	-95 -3	-5.6	-98 -2	-15.5
Jul 9	40.7	-6 -7	40.3	-18 -7	39.1	-29 -7	37.0	-40 -7	34.2	-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	-15.3
Jul 10	40.2	-6 -6	39.8	-17 -5	38.6	-29 -5	36.6	-40 -5	33.8	-50 -5	30.2	-60 -5	26.0	-68 -4	21.2	-76 -4	15.9	-83 -3	10.0	-88 -3	3.8	-93 -2	-5.5	-96 -2	-15.1
Jul 11	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	-76 -3	15.7	-82 -2	9.9	-87 -2	3.8	-92 -2	-5.4	-95 -1	-14.9
Jul 12	39.6	-6 -2	39.2	-17 -2	38.0	-28 -2	36.0	-39 -2	33.2	-50 -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
Jul 13	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
Jul 14	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	-82 1	9.8	-87 1	3.8	-91 1	-5.4	-94 0	-14.8
Jul 15	39.5	-6 3	39.1	-17 3	37.9	-29 3	35.9	-39 2	33.1	-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	-94 1	-14.8
Jul 16	39.7	-6 4	39.3	-17 4	38.1	-29 4	36.1	-40 3	33.3	-50 3	29.8	-59 3	25.7	-68 3	20.9	-76 3	15.6	-82 2	9.9	-88 2	3.8	-92 2	-5.4	-95 1	-14.9
Jul 17	39.9	-6 5	39.5	-18 4	38.3	-29 4	36.3	-40 4	33.5	-50 4	30.0	-60 4	25.8	-69 3	21.1	-76 3	15.7	-83 3	10.0	-88 2	3.8	-93 2	-5.4	-96 1	-15.0
Jul 18	40.2	-6 5	39.8	-18 5	38.6	-29 5	36.6	-40 5	33.8	-51 4	30.2	-60 4	26.0	-69 4	21.2	-77 4	15.9	-84 3	10.0	-89 3	3.8	-94 2	-5.5	-96 1	-15.1
Jul 19	40.6	-6 5	40.2	-18 5	38.9	-29 5	36.9	-41 5	34.1	-51 5	30.5	-61 4	26.3	-70 4	21.4	-78 4	16.0	-84 3	10.1	-90 3	3.9	-94 2	-5.5	-97 2	-15.2
Jul 20	41.0	-6 5	40.5	-18 5	39.3	-30 5	37.2	-41 5	34.4	-52 5	30.8	-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 2	-15.3
Jul 21	41.3	-6 5	40.9	-18 5	39.6	-30 5	37.6	-41 5	34.7	-52 5	31.1	-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 1	-15.5
Jul 22	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
Jul 23	42.0	-6 5	41.6	-18 5	40.3	-30 5	38.2	-42 4	35.3	-53 4	31.6	-63 4	27.2	-72 4	22.2	-80 3	16.6	-87 3	10.5	-93 3	4.0	-98 2	-5.7	-101 1	-15.7
Jul 24	42.4	-6 4	41.9	-19 4	40.6	-31 4	38.5	-42 4	35.5	-53 4	31.8	-63 4	27.4	-73 3	22.3	-81 3	16.7	-88 3	10.6	-93 2	4.0	-98 2	-5.8	-101 1	-15.9
Jul 25	42.7	-6 4	42.2	-19 4	40.9	-31 4	38.8	-43 4	35.8	-54 3	32.1	-64 3	27.6	-73 3	22.5	-81 3	16.8	-88 2	10.6	-94 2	4.1	-99 2	-5.8	-102 1	-16.0
Jul 26	42.9	-6 3	42.5	-19 3	41.2	-31 3	39.0	-43 3	36.0	-54 3	32.3	-64 3	27.8	-74 3	22.6	-82 2	16.9	-89 2	10.7	-95 2	4.1	-100 1	-5.8	-103 1	-16.1
Jul 27	43.2	-6 2	42.7	-19 2	41.4	-31 2	39.2	-43 2	36.2	-54 2	32.4	-65 2	27.9	-74 2	22.8	-82 2	17.0	-89 1	10.8	-95 1	4.1	-100 1	-5.9	-103 1	-16.2
Jul 28	43.3	-6 1	42.9	-19 1	41.6	-31 1	39.4	-43 1	36.4	-54 1	32.6	-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
Jul 29	43.4	-6 0	43.0	-19 0	41.6	-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	-95 0	4.1	-100 0	-5.9	-104 0	-16.3
Jul 30	43.4	-6 -2	43.0	-19 -2	41.6	-31 -2	39.4	-43 -2	36.4	-54 -2	32.6	-65 -2	28.1	-74 -1	22.9	-82 -1	17.1	-90 -1	10.8	-95 -1	4.1	-100 -1	-5.9	-103 -1	-16.3
Jul 31	43.3	-6 -4	42.8	-19 -4	41.5	-31 -4	39.3	-43 -3	36.3	-54 -3	32.5	-64 -3	28.0	-74 -3	22.8	-82 -3	17.1	-89 -2	10.8	-95 -2	4.1	-100 -2	-5.9	-103 -1	-16.2
Aug 1	43.0	-6 -5	42.6	-19 -5	41.3	-31 -5	39.1	-43 -5	36.1	-54 -5	32.3	-64 -4	27.8	-73 -4	22.7	-81 -4	16.9	-88 -3	10.7	-94 -3	4.1	-99 -2	-5.8	-102 -2	-16.1
Aug 2	42.6	-6 -7	42.2	-19 -7	40.9	-31 -6	38.7	-42 -6	35.8	-53 -6	32.0	-63 -6	27.6	-73 -5	22.5	-81 -5	16.8	-88 -4	10.6	-93 -4	4.1	-98 -3	-5.8	-101 -2	-16.0
Aug 3	42.2	-6 -7	41.7	-18 -7	40.5	-30 -7	38.3	-42 -7	35.4	-53 -7	31.7	-63 -6	27.3	-72 -6	22.2	-80 -5	16.6	-87 -5	10.5	-92 -4	4.0	-97 -3	-5.7	-100 -2	-15.8
Aug 4	41.7	-6 -8	41.2	-18 -8	40.0	-30 -7	37.9	-41 -7	35.0	-52 -7	31.3	-62 -6	27.0	-71 -6	22.0	-79 -5	16.4	-86 -5	10.4	-91 -4	4.0	-96 -3	-5.7	-99 -2	-15.6
Aug 5	41.1	-6 -7	40.7	-18 -7	39.5	-29 -7	37.4	-41 -7	34.5	-51 -6	30.9	-61 -6	26.6	-70 -6	21.7	-78 -5	16.2	-84 -4	10.3	-90 -4	3.9	-95 -3	-5.6	-98 -2	-15.4
Aug 6	40.6	-6 -6	40.2	-18 -6	39.0	-29 -6	36.9	-40 -6	34.1	-51 -6	30.5	-60 -5	26.3	-69 -5	21.4	-77 -4	16.0	-84 -4	10.1	-89 -3	3.9	-94 -3	-5.5	-96 -2	-15.2
Aug 7	40.2	-6 -5	39.8	-17 -5	38.6	-29 -5	36.5	-40 -5	33.7	-50 -5	30.2	-60 -4	26.0	-68 -4	21.2	-76 -4	15.8	-83 -3	10.0	-88 -3	3.8	-93 -2	-5.5	-96 -1	-15.1
Aug 8	39.8	-6 -3	39.4	-17 -3	38.2	-29 -3	36.2	-40 -3	33.4	-50 -3	29.9	-59 -3	25.8	-68 -3	21.0	-76 -2	15.7	-82 -2	9.9	-87 -2	3.8	-92 -1	-5.4	-95 -1	-14.9
Aug 9	39.6	-6 -2	39.2	-17 -2	38.0	-29 -2	36.0	-39 -2	33.2	-50 -2	29.8	-59 -1	25.6	-68 -1	20.9	-75 -1	15.6	-82 -1	9.9	-87 -1	3.8	-92 -1	-5.4	-94 0	-14.8
Aug 10	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	9.9	-87 0	3.8	-91 0	-5.4	-94 0	-14.8
Aug 11	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 1	20.8	-75 1	15.6	-82 1	9.9	-87 1	3.8	-92 1	-5.4	-94 1	-14.8
Aug 12	39.6	-6 3	39.2	-17 3	38.0	-29 3	36.0	-40 3	33.2	-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
Aug 13	39.9	-6 5	39.5	-17 5	38.2	-29 5	36.2	-40 4	33.4	-50 4	30.0	-60 4	25.8	-68 4	21.0	-76 3	15.7	-83 3	9.9	-88 3	3.8	-93 2	-5.4	-96 1	-14.9
Aug 14	40.2	-6 6	39.8	-18 6	38.5	-29 6	36.5	-40 5	33.7	-51 5	30.2	-60 5	26.0	-69 4	21.2	-77 4	15.8	-83 4	10.0	-89 3	3.8	-93 2	-5.5	-96 2	-15.1
Aug 15	40.6	-6 6	40.2	-18 6	38.9	-29 6	36.9	-41 6	34.1	-51 6	30.5	-61 5	26.3	-70 5	21.4	-78 4	16.0	-84 4	10.1	-90 3	3.9	-94 3	-5.5	-97 2	-15.2
Aug 16	41.0	-6 7	40.6	-18 7	39.4	-30 6	37.3	-41 6	34.4	-52 6	30.8	-62 5	26.5	-71 5	21.6	-78 5	16.2	-85 4	10.2	-91 3	3.9	-95 3	-5.6	-98 2	-15.4
Aug 17	41.5	-6 6	41.1	-18 6	39.8	-30 6	37.7	-41 6	34.8	-52 6	31.2	-62 5	26.8	-71 5	21.9	-79 4	16.3	-86 4	10.4	-92 3	4.0	-97 3	-5.6	-100 2	-15.5

2012 Moon Parallax and Semi-diameter

Lower Limb

Altitude degrees

	0		7		14		21		28		35		42		49		56		63		70		80		90
	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'
Aug 18	73.3	-6 6	72.9	-18 6	71.6	-30 5	69.5	-42 5	66.6	-53 5	62.9	-63 5	58.5	-72 4	53.5	-80 4	47.9	-87 3	41.9	-93 3	35.4	-97 2	25.7	-101 2	15.7
Aug 19	74.0	-6 5	73.6	-19 5	72.3	-31 4	70.1	-42 4	67.2	-53 4	63.5	-63 4	59.1	-73 4	54.0	-81 3	48.4	-88 3	42.3	-93 2	35.7	-98 2	25.9	-101 1	15.8
Aug 20	74.6	-6 4	74.1	-19 3	72.8	-31 3	70.7	-43 3	67.7	-54 3	64.0	-64 3	59.5	-73 3	54.4	-81 2	48.7	-88 2	42.6	-94 2	36.0	-99 1	26.1	-102 1	16.0
Aug 21	75.0	-6 2	74.6	-19 2	73.2	-31 2	71.1	-43 2	68.1	-54 2	64.3	-64 2	59.9	-73 2	54.7	-82 2	49.0	-89 1	42.8	-94 1	36.2	-99 1	26.3	-103 1	16.1
Aug 22	75.3	-6 1	74.8	-19 1	73.5	-31 1	71.3	-43 1	68.3	-54 1	64.6	-64 1	60.1	-74 1	54.9	-82 1	49.2	-89 1	43.0	-95 1	36.3	-100 1	26.4	-103 0	16.1
Aug 23	75.4	-6 0	75.0	-19 0	73.7	-31 0	71.5	-43 0	68.5	-54 0	64.7	-64 0	60.2	-74 0	55.0	-82 0	49.3	-89 0	43.1	-95 0	36.4	-100 0	26.4	-103 0	16.2
Aug 24	75.5	-6 -1	75.0	-19 -1	73.7	-31 -1	71.5	-43 -1	68.5	-54 -1	64.7	-64 0	60.2	-74 0	55.1	-82 0	49.3	-89 0	43.1	-95 0	36.4	-100 0	26.5	-103 0	16.2
Aug 25	75.4	-6 -1	74.9	-19 -1	73.6	-31 -1	71.5	-43 -1	68.5	-54 -1	64.7	-64 -1	60.2	-74 -1	55.0	-82 -1	49.3	-89 -1	43.0	-95 -1	36.4	-100 -1	26.4	-103 0	16.1
Aug 26	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 -2	49.2	-89 -1	42.9	-94 -1	36.3	-99 -1	26.4	-102 -1	16.1
Aug 27	74.9	-6 -3	74.5	-19 -3	73.2	-31 -3	71.0	-42 -3	68.0	-54 -3	64.3	-64 -3	59.8	-73 -2	54.7	-81 -2	49.0	-88 -2	42.8	-94 -2	36.2	-99 -1	26.3	-102 -1	16.0
Aug 28	74.6	-6 -4	74.1	-19 -4	72.8	-31 -4	70.7	-42 -4	67.7	-53 -4	64.0	-63 -3	59.5	-73 -3	54.4	-81 -3	48.7	-88 -2	42.6	-93 -2	36.0	-98 -2	26.1	-101 -1	16.0
Aug 29	74.1	-6 -5	73.7	-18 -5	72.4	-30 -5	70.2	-42 -4	67.3	-53 -4	63.6	-63 -4	59.1	-72 -4	54.1	-80 -3	48.4	-87 -3	42.3	-93 -3	35.8	-98 -2	26.0	-101 -1	15.9
Aug 30	73.5	-6 -6	73.1	-18 -5	71.8	-30 -5	69.7	-42 -5	66.7	-52 -5	63.1	-62 -5	58.7	-72 -4	53.6	-80 -4	48.0	-86 -3	42.0	-92 -3	35.5	-97 -2	25.8	-100 -2	15.7
Aug 31	72.8	-6 -6	72.4	-18 -6	71.1	-30 -6	69.0	-41 -6	66.1	-52 -5	62.5	-62 -5	58.1	-71 -5	53.1	-79 -4	47.6	-86 -4	41.6	-91 -3	35.2	-96 -3	25.5	-99 -2	15.6
Sep 1	72.1	-6 -6	71.7	-18 -6	70.4	-30 -6	68.4	-41 -6	65.5	-51 -5	61.9	-61 -5	57.6	-70 -5	52.6	-78 -4	47.1	-85 -4	41.2	-90 -3	34.8	-95 -3	25.3	-98 -2	15.4
Sep 2	71.4	-6 -6	71.0	-18 -6	69.7	-29 -6	67.7	-40 -5	64.8	-51 -5	61.2	-61 -5	57.0	-69 -5	52.1	-77 -4	46.7	-84 -4	40.7	-89 -3	34.5	-94 -2	25.0	-97 -2	15.3
Sep 3	70.7	-6 -5	70.3	-18 -5	69.0	-29 -5	67.0	-40 -5	64.2	-50 -5	60.6	-60 -4	56.4	-69 -4	51.6	-77 -4	46.2	-83 -3	40.3	-88 -3	34.1	-93 -2	24.8	-96 -1	15.1
Sep 4	70.0	-6 -4	69.6	-17 -4	68.4	-29 -4	66.4	-40 -4	63.6	-50 -4	60.1	-60 -4	55.9	-68 -3	51.1	-76 -3	45.8	-82 -3	40.0	-88 -2	33.8	-92 -2	24.6	-95 -1	15.0
Sep 5	69.5	-6 -3	69.1	-17 -3	67.9	-29 -3	65.9	-39 -3	63.1	-50 -3	59.6	-59 -2	55.5	-68 -2	50.7	-75 -2	45.4	-82 -2	39.7	-87 -2	33.6	-92 -1	24.4	-95 -1	14.9
Sep 6	69.2	-6 -1	68.8	-17 -1	67.6	-28 -1	65.6	-39 -1	62.8	-49 -1	59.4	-59 -1	55.2	-68 -1	50.5	-75 -1	45.2	-82 -1	39.5	-87 -1	33.4	-91 -1	24.3	-94 0	14.8
Sep 7	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
Sep 8	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 2	45.2	-82 1	39.4	-87 1	33.4	-92 1	24.2	-94 1	14.8
Sep 9	69.4	-6 4	69.0	-17 4	67.7	-29 4	65.7	-40 4	63.0	-50 4	59.5	-59 3	55.4	-68 3	50.6	-76 3	45.3	-82 2	39.6	-87 2	33.5	-92 2	24.3	-95 1	14.9
Sep 10	69.8	-6 6	69.4	-18 6	68.2	-29 5	66.2	-40 5	63.4	-50 5	59.9	-60 5	55.7	-69 4	51.0	-76 4	45.6	-83 3	39.9	-88 3	33.7	-93 2	24.5	-96 2	15.0
Sep 11	70.5	-6 7	70.1	-18 7	68.9	-29 7	66.8	-40 7	64.0	-51 6	60.5	-61 6	56.3	-69 5	51.5	-77 5	46.1	-84 4	40.3	-89 4	34.1	-94 3	24.7	-97 2	15.1
Sep 12	71.4	-6 8	70.9	-18 8	69.7	-30 8	67.6	-41 7	64.8	-51 7	61.2	-61 7	57.0	-70 6	52.1	-78 5	46.6	-85 5	40.7	-90 4	34.5	-95 3	25.0	-98 2	15.3
Sep 13	72.3	-6 8	71.9	-18 8	70.6	-30 8	68.5	-41 8	65.7	-52 7	62.0	-62 7	57.7	-71 6	52.8	-79 6	47.3	-86 5	41.3	-92 4	34.9	-96 3	25.4	-99 2	15.5
Sep 14	73.3	-6 8	72.9	-18 8	71.6	-30 8	69.5	-42 7	66.6	-53 7	62.9	-63 7	58.5	-72 6	53.5	-80 5	47.9	-87 5	41.8	-93 4	35.4	-98 3	25.7	-101 2	15.7
Sep 15	74.3	-6 7	73.8	-19 7	72.5	-31 7	70.4	-42 6	67.4	-53 6	63.7	-64 6	59.3	-73 5	54.2	-81 5	48.5	-88 4	42.4	-94 4	35.9	-99 3	26.0	-102 2	15.9
Sep 16	75.1	-6 5	74.6	-19 5	73.3	-31 5	71.2	-43 5	68.2	-54 5	64.4	-64 4	59.9	-74 4	54.8	-82 4	49.1	-89 3	42.9	-95 3	36.3	-100 2	26.3	-103 2	16.1
Sep 17	75.7	-6 3	75.3	-19 3	74.0	-31 3	71.8	-43 3	68.8	-54 3	65.0	-65 3	60.4	-74 3	55.3	-83 2	49.5	-90 2	43.2	-95 2	36.6	-100 1	26.5	-104 1	16.2
Sep 18	76.1	-6 1	75.7	-19 1	74.4	-31 1	72.2	-43 1	69.1	-55 1	65.3	-65 1	60.8	-75 1	55.6	-83 1	49.8	-90 1	43.5	-96 1	36.8	-101 1	26.7	-104 0	16.3
Sep 19	76.3	-6 -1	75.8	-19 -1	74.5	-31 -1	72.3	-43 -1	69.3	-55 -1	65.4	-65 -1	60.9	-75 -1	55.7	-83 -1	49.9	-90 0	43.5	-96 0	36.8	-101 0	26.7	-104 0	16.3
Sep 20	76.2	-6 -2	75.7	-19 -2	74.4	-31 -2	72.2	-43 -2	69.2	-54 -2	65.4	-65 -2	60.8	-74 -2	55.6	-83 -2	49.8	-90 -1	43.5	-96 -1	36.8	-101 -1	26.7	-104 -1	16.3
Sep 21	75.9	-6 -4	75.5	-19 -4	74.1	-31 -3	71.9	-43 -3	68.9	-54 -3	65.1	-65 -3	60.6	-74 -3	55.4	-82 -3	49.6	-89 -2	43.3	-95 -2	36.7	-100 -2	26.6	-103 -1	16.3
Sep 22	75.5	-6 -4	75.0	-19 -4	73.7	-31 -4	71.5	-43 -4	68.5	-54 -4	64.7	-64 -4	60.2	-74 -3	55.1	-82 -3	49.3	-89 -3	43.1	-95 -2	36.4	-100 -2	26.5	-103 -1	16.2
Sep 23	74.9	-6 -5	74.5	-19 -5	73.2	-31 -5	71.0	-42 -5	68.0	-53 -4	64.3	-64 -4	59.8	-73 -4	54.7	-81 -3	49.0	-88 -3	42.8	-94 -3	36.2	-99 -2	26.3	-102 -1	16.0
Sep 24	74.3	-6 -5	73.9	-18 -5	72.6	-31 -5	70.5	-42 -5	67.5	-53 -5	63.8	-63 -4	59.3	-72 -4	54.2	-81 -4	48.6	-87 -3	42.4	-93 -3	35.9	-98 -2	26.1	-101 -1	15.9
Sep 25	73.7	-6 -5	73.3	-18 -5	72.0	-30 -5	69.9	-42 -5	66.9	-53 -5	63.2	-63 -4	58.8	-72 -4	53.8	-80 -4	48.2	-87 -3	42.1	-92 -3	35.6	-97 -2	25.8	-100 -1	15.8
Sep 26	73.1	-6 -5	72.7	-18 -5	71.4	-30 -5	69.3	-41 -5	66.4	-52 -5	62.7	-62 -4	58.3	-71 -4	53.3	-79 -4	47.8	-86 -3	41.7	-91 -3	35.3	-96 -2	25.6	-99 -1	15.7
Sep 27	72.5	-6 -5	72.0	-18 -5	70.8	-30 -5	68.7	-41 -5	65.8	-52 -5	62.2	-62 -4	57.8	-71 -4	52.9	-78 -4	47.4	-85 -3	41.4	-91 -3	35.0	-95 -2	25.4	-98 -1	15.5
Sep 28	71.8	-6 -5	71.4	-18 -5	70.2	-29 -5	68.1	-41 -5	65.2	-51 -5	61.6	-61 -4	57.3	-70 -4	52.4	-78 -4	46.9	-84 -3	41.0	-90 -3	34.7	-95 -2	25.2	-98 -1	15.4
Sep 29	71.2	-6 -5	70.8	-18 -5	69.6	-29 -5	67.5	-40 -5	64.7	-51 -4	61.1	-61 -4	56.8	-69 -4	52.0	-77 -3	46.5	-84 -3	40.7	-89 -3	34.4	-94 -2	25.0	-97 -1	15.2
Sep 30	70.6	-6 -5	70.2	-18 -4	69.0	-29 -4	66.9	-40 -4	64.1	-50 -4	60.6	-60 -4	56.4	-69 -3	51.5	-77 -3	46.2	-83 -3	40.3	-88 -2	34.1	-93 -2	24.8	-96 -1	15.1
Oct 1	70.1	-6 -4	69.7	-17 -4	68.4	-29 -4	66.4	-40 -4	63.6	-50 -4	60.1	-60 -3	55.9	-68 -3	51.1	-76 -3	45.8	-82 -2	40.0	-88 -2	33.8	-92 -2	24.6	-95 -1	15.0
Oct 2	69.6	-6 -3	69.2	-17 -3	68.0	-29 -3	66.0	-39 -3	63.2	-50 -3	59.7	-59 -3	55.5	-68 -2	50.8	-75 -2	45.5	-82 -2	39.7	-87 -2	33.6	-92 -1	24.4	-95 -1	14.9

2012 Moon Parallax and Semi-diameter

Upper Limb

Altitude degrees

	0		7		14		21		28		35		42		49		56		63		70		80		90
	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'
Aug 18	41.9	-6 6	41.5	-18 6	40.2	-30 5	38.1	-42 5	35.2	-53 5	31.5	-63 5	27.1	-72 4	22.1	-80 4	16.5	-87 3	10.5	-93 3	4.0	-97 2	-5.7	-101 2	-15.7
Aug 19	42.3	-6 5	41.9	-19 5	40.6	-31 4	38.4	-42 4	35.5	-53 4	31.8	-63 4	27.4	-73 4	22.3	-81 3	16.7	-88 3	10.6	-93 2	4.0	-98 2	-5.7	-101 1	-15.8
Aug 20	42.6	-6 4	42.2	-19 3	40.9	-31 3	38.7	-43 3	35.8	-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
Aug 21	42.9	-6 2	42.4	-19 2	41.1	-31 2	39.0	-43 2	36.0	-54 2	32.2	-64 2	27.7	-73 2	22.6	-82 2	16.9	-89 1	10.7	-94 1	4.1	-99 1	-5.8	-103 1	-16.1
Aug 22	43.0	-6 1	42.6	-19 1	41.3	-31 1	39.1	-43 1	36.1	-54 1	32.3	-64 1	27.8	-74 1	22.7	-82 1	17.0	-89 1	10.7	-95 1	4.1	-100 1	-5.8	-103 0	-16.1
Aug 23	43.1	-6 0	42.7	-19 0	41.4	-31 0	39.2	-43 0	36.2	-54 0	32.4	-64 0	27.9	-74 0	22.7	-82 0	17.0	-89 0	10.8	-95 0	4.1	-100 0	-5.9	-103 0	-16.2
Aug 24	43.1	-6 -1	42.7	-19 -1	41.4	-31 -1	39.2	-43 -1	36.2	-54 -1	32.4	-64 0	27.9	-74 0	22.7	-82 0	17.0	-89 0	10.8	-95 0	4.1	-100 0	-5.9	-103 0	-16.2
Aug 25	43.1	-6 -1	42.7	-19 -1	41.3	-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 -1	-5.9	-103 0	-16.1
Aug 26	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 -2	16.9	-89 -1	10.7	-94 -1	4.1	-99 -1	-5.8	-102 -1	-16.1
Aug 27	42.8	-6 -3	42.4	-19 -3	41.1	-31 -3	38.9	-42 -3	35.9	-54 -3	32.2	-64 -3	27.7	-73 -2	22.6	-81 -2	16.9	-88 -2	10.7	-94 -2	4.1	-99 -1	-5.8	-102 -1	-16.0
Aug 28	42.6	-6 -4	42.2	-19 -4	40.9	-31 -4	38.7	-42 -4	35.8	-53 -4	32.0	-63 -3	27.6	-73 -3	22.5	-81 -3	16.8	-88 -2	10.6	-93 -2	4.1	-98 -2	-5.8	-101 -1	-16.0
Aug 29	42.4	-6 -5	41.9	-18 -5	40.6	-30 -5	38.5	-42 -4	35.5	-53 -4	31.8	-63 -4	27.4	-72 -4	22.3	-80 -3	16.7	-87 -3	10.6	-93 -3	4.0	-98 -2	-5.8	-101 -1	-15.9
Aug 30	42.0	-6 -6	41.6	-18 -5	40.3	-30 -5	38.2	-42 -5	35.3	-52 -5	31.6	-62 -5	27.2	-72 -4	22.2	-80 -4	16.6	-86 -3	10.5	-92 -3	4.0	-97 -2	-5.7	-100 -2	-15.7
Aug 31	41.6	-6 -6	41.2	-18 -6	39.9	-30 -6	37.8	-41 -6	34.9	-52 -5	31.3	-62 -5	26.9	-71 -5	22.0	-79 -4	16.4	-86 -4	10.4	-91 -3	4.0	-96 -3	-5.7	-99 -2	-15.6
Sep 1	41.2	-6 -6	40.8	-18 -6	39.5	-30 -6	37.5	-41 -6	34.6	-51 -5	31.0	-61 -5	26.7	-70 -5	21.7	-78 -4	16.2	-85 -4	10.3	-90 -3	3.9	-95 -3	-5.6	-98 -2	-15.4
Sep 2	40.8	-6 -6	40.4	-18 -6	39.1	-29 -6	37.1	-40 -5	34.2	-51 -5	30.7	-61 -5	26.4	-69 -5	21.5	-77 -4	16.1	-84 -4	10.2	-89 -3	3.9	-94 -2	-5.5	-97 -2	-15.3
Sep 3	40.4	-6 -5	40.0	-18 -5	38.8	-29 -5	36.7	-40 -5	33.9	-50 -5	30.4	-60 -4	26.1	-69 -4	21.3	-77 -4	15.9	-83 -3	10.1	-88 -3	3.9	-93 -2	-5.5	-96 -1	-15.1
Sep 4	40.0	-6 -4	39.6	-17 -4	38.4	-29 -4	36.4	-40 -4	33.6	-50 -4	30.1	-60 -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
Sep 5	39.8	-6 -3	39.3	-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
Sep 6	39.6	-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	20.9	-75 -1	15.6	-82 -1	9.9	-87 -1	3.8	-91 -1	-5.4	-94 0	-14.8
Sep 7	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
Sep 8	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	9.9	-87 1	3.8	-92 1	-5.4	-94 1	-14.8
Sep 9	39.7	-6 4	39.2	-17 4	38.0	-29 4	36.0	-40 4	33.3	-50 4	29.8	-59 3	25.7	-68 3	20.9	-76 3	15.6	-82 2	9.9	-87 2	3.8	-92 2	-5.4	-95 1	-14.9
Sep 10	39.9	-6 6	39.5	-18 6	38.3	-29 5	36.3	-40 5	33.5	-50 5	30.0	-60 5	25.8	-69 4	21.1	-76 4	15.7	-83 3	10.0	-88 3	3.8	-93 2	-5.4	-96 2	-15.0
Sep 11	40.3	-6 7	39.9	-18 7	38.7	-29 7	36.6	-40 7	33.8	-51 6	30.3	-61 6	26.1	-69 5	21.3	-77 5	15.9	-84 4	10.1	-89 4	3.9	-94 3	-5.5	-97 2	-15.1
Sep 12	40.8	-6 8	40.4	-18 8	39.1	-30 8	37.1	-41 7	34.2	-51 7	30.7	-61 7	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
Sep 13	41.3	-6 8	40.9	-18 8	39.7	-30 8	37.6	-41 8	34.7	-52 7	31.1	-62 7	26.7	-71 6	21.8	-79 6	16.3	-86 5	10.3	-92 4	4.0	-96 3	-5.6	-99 2	-15.5
Sep 14	41.9	-6 8	41.5	-18 8	40.2	-30 8	38.1	-42 7	35.2	-53 7	31.5	-63 7	27.1	-72 6	22.1	-80 5	16.5	-87 5	10.5	-93 4	4.0	-98 3	-5.7	-101 2	-15.7
Sep 15	42.5	-6 7	42.0	-19 7	40.7	-31 7	38.6	-42 6	35.6	-53 6	31.9	-64 6	27.5	-73 5	22.4	-81 5	16.7	-88 4	10.6	-94 4	4.1	-99 3	-5.8	-102 2	-15.9
Sep 16	42.9	-6 5	42.5	-19 5	41.2	-31 5	39.0	-43 5	36.0	-54 5	32.3	-64 4	27.8	-74 4	22.6	-82 4	16.9	-89 3	10.7	-95 3	4.1	-100 2	-5.8	-103 2	-16.1
Sep 17	43.3	-6 3	42.8	-19 3	41.5	-31 3	39.3	-43 3	36.3	-54 3	32.5	-65 3	28.0	-74 3	22.8	-83 2	17.1	-90 2	10.8	-95 2	4.1	-100 1	-5.9	-104 1	-16.2
Sep 18	43.5	-6 1	43.1	-19 1	41.7	-31 1	39.5	-43 1	36.5	-55 1	32.7	-65 1	28.2	-75 1	22.9	-83 1	17.2	-90 1	10.9	-96 1	4.2	-101 1	-5.9	-104 0	-16.3
Sep 19	43.6	-6 -1	43.2	-19 -1	41.8	-31 -1	39.6	-43 -1	36.6	-55 -1	32.8	-65 -1	28.2	-75 -1	23.0	-83 -1	17.2	-90 0	10.9	-96 0	4.2	-101 0	-5.9	-104 0	-16.3
Sep 20	43.6	-6 -2	43.1	-19 -2	41.8	-31 -2	39.6	-43 -2	36.6	-54 -2	32.7	-65 -2	28.2	-74 -2	23.0	-83 -2	17.2	-90 -1	10.9	-96 -1	4.2	-101 -1	-5.9	-104 -1	-16.3
Sep 21	43.4	-6 -4	43.0	-19 -4	41.6	-31 -3	39.4	-43 -3	36.4	-54 -3	32.6	-65 -3	28.1	-74 -3	22.9	-82 -3	17.1	-89 -2	10.8	-95 -2	4.1	-100 -2	-5.9	-103 -1	-16.3
Sep 22	43.1	-6 -4	42.7	-19 -4	41.4	-31 -4	39.2	-43 -4	36.2	-54 -4	32.4	-64 -4	27.9	-74 -3	22.7	-82 -3	17.0	-89 -3	10.8	-95 -2	4.1	-100 -2	-5.9	-103 -1	-16.2
Sep 23	42.8	-6 -5	42.4	-19 -5	41.1	-31 -5	38.9	-42 -5	35.9	-53 -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	-16.0
Sep 24	42.5	-6 -5	42.1	-18 -5	40.8	-31 -5	38.6	-42 -5	35.7	-53 -5	31.9	-63 -4	27.5	-72 -4	22.4	-81 -4	16.7	-87 -3	10.6	-93 -3	4.1	-98 -2	-5.8	-101 -1	-15.9
Sep 25	42.1	-6 -5	41.7	-18 -5	40.4	-30 -5	38.3	-42 -5	35.4	-53 -5	31.7	-63 -4	27.3	-72 -4	22.2	-80 -4	16.6	-87 -3	10.5	-92 -3	4.0	-97 -2	-5.7	-100 -1	-15.8
Sep 26	41.8	-6 -5	41.4	-18 -5	40.1	-30 -5	38.0	-41 -5	35.1	-52 -5	31.4	-62 -4	27.0	-71 -4	22.0	-79 -4	16.5	-86 -3	10.4	-91 -3	4.0	-96 -2	-5.7	-99 -1	-15.7
Sep 27	41.4	-6 -5	41.0	-18 -5	39.7	-30 -5	37.6	-41 -5	34.8	-52 -5	31.1	-62 -4	26.8	-71 -4	21.8	-78 -4	16.3	-85 -3	10.3	-91 -3	4.0	-95 -2	-5.6	-98 -1	-15.5
Sep 28	41.1	-6 -5	40.6	-18 -5	39.4	-29 -5	37.3	-41 -5	34.5	-51 -5	30.9	-61 -4	26.6	-70 -4	21.6	-78 -4	16.2	-84 -3	10.2	-90 -3	3.9	-95 -2	-5.6	-98 -1	-15.4
Sep 29	40.7	-6 -5	40.3	-18 -5	39.0	-29 -5	37.0	-40 -5	34.2	-51 -4	30.6	-61 -4	26.3	-69 -4	21.5	-77 -3	16.0	-84 -3	10.2	-89 -3	3.9	-94 -2	-5.5	-97 -1	-15.2
Sep 30	40.4	-6 -5	40.0	-18 -4	38.7	-29 -4	36.7	-40 -4	33.9	-50 -4	30.3	-60 -4	26.1	-69 -3	21.3	-77 -3	15.9	-83 -3	10.1	-88 -2	3.9	-93 -2	-5.5	-96 -1	-15.1
Oct 1	40.1	-6 -4	39.7	-17 -4	38.4	-29 -4	36.4	-40 -4	33.6	-50 -4	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
Oct 2	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

2012 Moon Parallax and Semi-diameter

Lower Limb

Altitude degrees

	0		7		14		21		28		35		42		49		56		63		70		80		90
	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'	at	'
Oct 3	69.2	-6 -2	68.8	-17 -2	67.6	-28 -2	65.6	-39 -2	62.9	-49 -2	59.4	-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
Oct 4	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 0	39.4	-87 0	33.3	-91 0	24.2	-94 0	14.8
Oct 5	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 0	39.3	-87 0	33.3	-91 0	24.1	-94 0	14.7
Oct 6	69.0	-6 2	68.6	-17 2	67.4	-28 2	65.4	-39 2	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
Oct 7	69.3	-6 4	68.9	-17 4	67.6	-29 4	65.6	-40 4	62.9	-50 4	59.4	-59 3	55.3	-68 3	50.5	-76 3	45.3	-82 3	39.5	-87 2	33.4	-92 2	24.3	-95 1	14.8
Oct 8	69.8	-6 6	69.4	-18 6	68.1	-29 6	66.1	-40 6	63.3	-50 5	59.8	-60 5	55.7	-69 5	50.9	-76 4	45.6	-83 4	39.8	-88 3	33.7	-93 2	24.5	-96 2	14.9
Oct 9	70.5	-6 8	70.1	-18 7	68.8	-29 7	66.8	-40 7	64.0	-51 7	60.5	-61 6	56.3	-69 6	51.4	-77 5	46.1	-84 5	40.2	-89 4	34.0	-94 3	24.7	-97 2	15.1
Oct 10	71.4	-6 9	71.0	-18 9	69.7	-30 8	67.7	-41 8	64.8	-52 8	61.2	-61 7	57.0	-70 7	52.1	-78 6	46.7	-85 5	40.8	-90 5	34.5	-95 4	25.0	-98 2	15.3
Oct 11	72.4	-6 10	72.0	-18 9	70.8	-30 9	68.7	-42 9	65.8	-52 8	62.1	-62 8	57.8	-71 7	52.9	-79 7	47.3	-86 6	41.4	-92 5	35.0	-97 4	25.4	-100 3	15.5
Oct 12	73.6	-6 10	73.2	-19 9	71.9	-31 9	69.7	-42 9	66.8	-53 8	63.1	-63 8	58.7	-73 7	53.7	-81 7	48.1	-88 6	42.0	-93 5	35.5	-98 4	25.8	-101 3	15.8
Oct 13	74.7	-6 9	74.3	-19 9	73.0	-31 8	70.8	-43 8	67.9	-54 8	64.1	-64 7	59.6	-74 7	54.5	-82 6	48.8	-89 5	42.7	-95 5	36.1	-100 4	26.2	-103 2	16.0
Oct 14	75.8	-6 7	75.3	-19 7	74.0	-31 7	71.8	-43 6	68.8	-55 6	65.0	-65 6	60.5	-75 5	55.3	-83 5	49.5	-90 4	43.3	-96 4	36.6	-101 3	26.6	-104 2	16.2
Oct 15	76.6	-6 5	76.2	-19 4	74.8	-32 4	72.6	-44 4	69.6	-55 4	65.7	-66 4	61.2	-75 3	55.9	-84 3	50.1	-91 3	43.7	-97 2	37.0	-102 2	26.9	-105 1	16.4
Oct 16	77.2	-6 2	76.7	-19 2	75.4	-32 2	73.1	-44 1	70.1	-55 1	66.2	-66 1	61.6	-76 1	56.3	-84 1	50.4	-91 1	44.1	-97 1	37.3	-102 1	27.1	-105 0	16.5
Oct 17	77.4	-6 -1	76.9	-19 -1	75.6	-32 -1	73.3	-44 -1	70.2	-55 -1	66.4	-66 -1	61.7	-76 -1	56.4	-84 -1	50.6	-91 -1	44.2	-97 -1	37.4	-102 -1	27.1	-105 0	16.6
Oct 18	77.2	-6 -4	76.7	-19 -4	75.4	-32 -4	73.2	-44 -4	70.1	-55 -3	66.2	-66 -3	61.6	-75 -3	56.3	-84 -3	50.5	-91 -2	44.1	-97 -2	37.3	-102 -2	27.1	-105 -1	16.5
Oct 19	76.7	-6 -6	76.3	-19 -6	74.9	-31 -6	72.7	-43 -5	69.7	-55 -5	65.8	-65 -5	61.2	-75 -4	56.0	-83 -4	50.1	-90 -4	43.8	-96 -3	37.1	-101 -2	26.9	-104 -2	16.4
Oct 20	76.0	-6 -7	75.6	-19 -7	74.3	-31 -7	72.1	-43 -7	69.0	-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
Oct 21	75.2	-6 -8	74.7	-19 -7	73.4	-31 -7	71.3	-42 -7	68.3	-54 -7	64.5	-64 -6	60.0	-73 -6	54.9	-81 -5	49.1	-88 -5	42.9	-94 -4	36.3	-99 -3	26.4	-102 -2	16.1
Oct 22	74.3	-6 -8	73.8	-18 -7	72.5	-30 -7	70.4	-42 -7	67.4	-53 -7	63.7	-63 -6	59.3	-72 -6	54.2	-80 -5	48.5	-87 -5	42.4	-93 -4	35.9	-98 -3	26.0	-101 -2	15.9
Oct 23	73.4	-6 -7	72.9	-18 -7	71.6	-30 -7	69.5	-41 -7	66.6	-52 -6	62.9	-62 -6	58.6	-71 -5	53.5	-79 -5	47.9	-86 -4	41.9	-92 -4	35.4	-97 -3	25.7	-100 -2	15.7
Oct 24	72.5	-6 -6	72.1	-18 -6	70.8	-30 -6	68.7	-41 -6	65.8	-52 -6	62.2	-62 -5	57.9	-71 -5	52.9	-78 -4	47.4	-85 -4	41.4	-91 -3	35.0	-95 -3	25.4	-98 -2	15.5
Oct 25	71.7	-6 -6	71.3	-18 -6	70.1	-29 -6	68.0	-41 -5	65.1	-51 -5	61.5	-61 -5	57.3	-70 -4	52.3	-78 -4	46.9	-84 -4	41.0	-90 -3	34.6	-94 -2	25.1	-97 -2	15.4
Oct 26	71.0	-6 -5	70.6	-18 -5	69.4	-29 -5	67.3	-40 -5	64.5	-51 -4	60.9	-60 -4	56.7	-69 -4	51.8	-77 -3	46.4	-84 -3	40.6	-89 -3	34.3	-94 -2	24.9	-97 -1	15.2
Oct 27	70.4	-6 -4	70.0	-18 -4	68.8	-29 -4	66.8	-40 -4	64.0	-50 -4	60.4	-60 -4	56.2	-69 -3	51.4	-76 -3	46.0	-83 -3	40.2	-88 -2	34.0	-93 -2	24.7	-96 -1	15.1
Oct 28	69.9	-6 -4	69.5	-17 -4	68.3	-29 -3	66.3	-40 -3	63.5	-50 -3	60.0	-59 -3	55.8	-68 -3	51.0	-76 -2	45.7	-82 -2	39.9	-88 -2	33.8	-92 -2	24.5	-95 -1	15.0
Oct 29	69.5	-6 -3	69.1	-17 -3	67.9	-29 -3	65.9	-39 -3	63.1	-50 -3	59.6	-59 -2	55.5	-68 -2	50.7	-75 -2	45.4	-82 -2	39.7	-87 -2	33.6	-92 -1	24.4	-95 -1	14.9
Oct 30	69.1	-6 -2	68.7	-17 -2	67.5	-28 -2	65.5	-39 -2	62.8	-49 -2	59.3	-59 -2	55.2	-67 -2	50.5	-75 -1	45.2	-82 -1	39.5	-87 -1	33.4	-91 -1	24.2	-94 -1	14.8
Oct 31	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	-87 -1	33.3	-91 -1	24.2	-94 0	14.8
Nov 1	68.7	-6 0	68.3	-17 0	67.1	-28 0	65.2	-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
Nov 2	68.7	-6 1	68.3	-17 1	67.1	-28 1	65.1	-39 1	62.4	-49 1	59.0	-59 1	54.9	-67 1	50.2	-75 1	44.9	-81 1	39.2	-86 1	33.2	-91 0	24.1	-94 0	14.7
Nov 3	68.9	-6 2	68.5	-17 2	67.3	-28 2	65.3	-39 2	62.5	-49 2	59.1	-59 2	55.0	-67 2	50.2	-75 2	45.0	-82 2	39.3	-87 1	33.3	-91 1	24.1	-94 1	14.7
Nov 4	69.2	-6 4	68.8	-17 4	67.5	-29 4	65.5	-39 4	62.8	-50 4	59.3	-59 3	55.2	-68 3	50.5	-75 3	45.2	-82 2	39.5	-87 2	33.4	-92 2	24.2	-95 1	14.8
Nov 5	69.6	-6 6	69.2	-17 6	68.0	-29 5	66.0	-40 5	63.2	-50 5	59.7	-60 5	55.6	-68 4	50.8	-76 4	45.5	-83 3	39.8	-88 3	33.6	-93 2	24.4	-95 2	14.9
Nov 6	70.3	-6 7	69.9	-18 7	68.7	-29 7	66.6	-40 7	63.8	-51 6	60.3	-60 6	56.1	-69 6	51.3	-77 5	46.0	-84 4	40.1	-89 4	34.0	-94 3	24.7	-97 2	15.1
Nov 7	71.2	-6 9	70.8	-18 9	69.5	-30 8	67.5	-41 8	64.6	-51 8	61.1	-61 7	56.8	-70 7	51.9	-78 6	46.5	-85 5	40.6	-90 5	34.4	-95 4	25.0	-98 2	15.2
Nov 8	72.2	-6 10	71.8	-18 10	70.5	-30 9	68.5	-41 9	65.6	-52 9	62.0	-62 8	57.6	-71 7	52.7	-79 7	47.2	-86 6	41.2	-92 5	34.9	-96 4	25.3	-99 3	15.5
Nov 9	73.4	-6 10	73.0	-18 10	71.7	-31 10	69.6	-42 10	66.7	-53 9	63.0	-63 9	58.6	-72 8	53.6	-80 7	48.0	-87 6	41.9	-93 5	35.4	-98 4	25.7	-101 3	15.7
Nov 10	74.6	-6 10	74.2	-19 10	72.9	-31 10	70.7	-43 9	67.8	-54 9	64.0	-64 8	59.6	-74 8	54.5	-82 7	48.8	-89 6	42.6	-95 5	36.0	-100 4	26.2	-103 3	16.0
Nov 11	75.8	-6 9	75.4	-19 9	74.1	-31 8	71.9	-43 8	68.9	-55 8	65.1	-65 7	60.5	-75 7	55.3	-83 6	49.6	-90 5	43.3	-96 5	36.6	-101 4	26.6	-104 2	16.2
Nov 12	76.9	-6 6	76.4	-19 6	75.1	-32 6	72.9	-44 6	69.8	-55 6	66.0	-66 5	61.4	-76 5	56.1	-84 4	50.2	-91 4	43.9	-97 3	37.1	-102 3	27.0	-105 2	16.5
Nov 13	77.6	-7 3	77.2	-19 3	75.8	-32 3	73.6	-44 3	70.5	-56 3	66.6	-66 3	62.0	-76 3	56.7	-85 2	50.7	-92 2	44.3	-98 2	37.5	-103 1	27.2	-106 1	16.6
Nov 14	78.0	-7 0	77.6	-19 0	76.2	-32 0	74.0	-44 0	70.9	-56 0	66.9	-67 0	62.3	-76 0	56.9	-85 0	51.0	-92 0	44.6	-98 0	37.7	-103 0	27.4	-106 0	16.7
Nov 15	78.0	-7 -4	77.6	-19 -4	76.2	-32 -4	73.9	-44 -3	70.8	-56 -3	66.9	-66 -3	62.3	-76 -3	56.9	-85 -3	51.0	-92 -2	44.5	-98 -2	37.7	-103 -2	27.3	-106 -1	16.7
Nov 16	77.6	-6 -6	77.1	-19 -6	75.8	-32 -6	73.5	-44 -6	70.4	-55 -6	66.5	-66 -5	61.9	-75 -5	56.6	-84 -5	50.7	-91 -4	44.3	-97 -3	37.5	-102 -3	27.2	-105 -2	16.6
Nov 17	76.8	-6 -8	76.3	-19 -8	75.0	-31 -8	72.8	-43 -8	69.7	-55 -7	65.9	-65 -7	61.3	-75 -6	56.0	-83 -6	50.2	-90 -5	43.8	-96 -4	37.1	-101 -4	26.9	-104 -2	16.4

2012 Moon Parallax and Semi-diameter

Upper Limb

Altitude degrees

	0			7			14			21			28			35			42			49			56			63			70			80			90
	'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'	at		'
Oct 3	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	-1	15.6	-82	-1	9.9	-87	-1	3.8	-91	-1	-5.4	-94	-1	-14.8
Oct 4	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	0	9.8	-87	0	3.8	-91	0	-5.4	-94	0	-14.8
Oct 5	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	0	9.8	-87	0	3.8	-91	0	-5.3	-94	0	-14.7
Oct 6	39.4	-6	2	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
Oct 7	39.6	-6	4	39.2	-17	4	38.0	-29	4	36.0	-40	4	33.2	-50	4	29.8	-59	3	25.6	-68	3	20.9	-76	3	15.6	-82	3	9.9	-87	2	3.8	-92	2	-5.4	-95	1	-14.8
Oct 8	39.9	-6	6	39.5	-18	6	38.3	-29	6	36.2	-40	6	33.5	-50	5	30.0	-60	5	25.8	-69	5	21.0	-76	4	15.7	-83	4	9.9	-88	3	3.8	-93	2	-5.4	-96	2	-14.9
Oct 9	40.3	-6	8	39.9	-18	7	38.6	-29	7	36.6	-40	7	33.8	-51	7	30.3	-61	6	26.1	-69	6	21.2	-77	5	15.9	-84	5	10.1	-89	4	3.9	-94	3	-5.5	-97	2	-15.1
Oct 10	40.8	-6	9	40.4	-18	9	39.1	-30	8	37.1	-41	8	34.2	-52	8	30.7	-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
Oct 11	41.4	-6	10	41.0	-18	9	39.7	-30	9	37.6	-42	9	34.8	-52	8	31.1	-62	8	26.8	-71	7	21.8	-79	7	16.3	-86	6	10.3	-92	5	4.0	-97	4	-5.6	-100	3	-15.5
Oct 12	42.1	-6	10	41.6	-19	9	40.4	-31	9	38.2	-42	9	35.3	-53	8	31.6	-63	8	27.2	-73	7	22.2	-81	7	16.6	-88	6	10.5	-93	5	4.0	-98	4	-5.7	-101	3	-15.8
Oct 13	42.7	-6	9	42.3	-19	9	41.0	-31	8	38.8	-43	8	35.9	-54	8	32.1	-64	7	27.6	-74	7	22.5	-82	6	16.8	-89	5	10.7	-95	5	4.1	-100	4	-5.8	-103	2	-16.0
Oct 14	43.3	-6	7	42.9	-19	7	41.6	-31	7	39.4	-43	6	36.4	-55	6	32.6	-65	6	28.0	-75	5	22.8	-83	5	17.1	-90	4	10.8	-96	4	4.1	-101	3	-5.9	-104	2	-16.2
Oct 15	43.8	-6	5	43.4	-19	4	42.0	-32	4	39.8	-44	4	36.8	-55	4	32.9	-66	4	28.3	-75	3	23.1	-84	3	17.3	-91	3	10.9	-97	2	4.2	-102	2	-6.0	-105	1	-16.4
Oct 16	44.1	-6	2	43.7	-19	2	42.3	-32	2	40.1	-44	1	37.0	-55	1	33.1	-66	1	28.5	-76	1	23.3	-84	1	17.4	-91	1	11.0	-97	1	4.2	-102	1	-6.0	-105	0	-16.5
Oct 17	44.2	-6	-1	43.8	-19	-1	42.4	-32	-1	40.2	-44	-1	37.1	-55	-1	33.2	-66	-1	28.6	-76	-1	23.3	-84	-1	17.4	-91	-1	11.0	-97	-1	4.2	-102	-1	-6.0	-105	0	-16.6
Oct 18	44.1	-6	-4	43.7	-19	-4	42.3	-32	-4	40.1	-44	-4	37.0	-55	-3	33.2	-66	-3	28.6	-75	-3	23.3	-84	-3	17.4	-91	-2	11.0	-97	-2	4.2	-102	-2	-6.0	-105	-1	-16.5
Oct 19	43.9	-6	-6	43.4	-19	-6	42.1	-31	-6	39.9	-43	-5	36.8	-55	-5	33.0	-65	-5	28.4	-75	-4	23.1	-83	-4	17.3	-90	-4	10.9	-96	-3	4.2	-101	-2	-6.0	-104	-2	-16.4
Oct 20	43.5	-6	-7	43.0	-19	-7	41.7	-31	-7	39.5	-43	-7	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
Oct 21	43.0	-6	-8	42.5	-19	-7	41.2	-31	-7	39.1	-42	-7	36.1	-54	-7	32.3	-64	-6	27.8	-73	-6	22.7	-81	-5	16.9	-88	-5	10.7	-94	-4	4.1	-99	-3	-5.8	-102	-2	-16.1
Oct 22	42.5	-6	-8	42.0	-18	-7	40.7	-30	-7	38.6	-42	-7	35.6	-53	-7	31.9	-63	-6	27.5	-72	-6	22.4	-80	-5	16.7	-87	-5	10.6	-93	-4	4.1	-98	-3	-5.8	-101	-2	-15.9
Oct 23	41.9	-6	-7	41.5	-18	-7	40.2	-30	-7	38.1	-41	-7	35.2	-52	-6	31.5	-62	-6	27.1	-71	-5	22.1	-79	-5	16.5	-86	-4	10.5	-92	-4	4.0	-97	-3	-5.7	-100	-2	-15.7
Oct 24	41.5	-6	-6	41.0	-18	-6	39.8	-30	-6	37.7	-41	-6	34.8	-52	-6	31.1	-62	-5	26.8	-71	-5	21.9	-78	-4	16.3	-85	-4	10.3	-91	-3	4.0	-95	-3	-5.6	-98	-2	-15.5
Oct 25	41.0	-6	-6	40.6	-18	-6	39.3	-29	-6	37.3	-41	-5	34.4	-51	-5	30.8	-61	-5	26.5	-70	-4	21.6	-78	-4	16.2	-84	-4	10.2	-90	-3	3.9	-94	-2	-5.6	-97	-2	-15.4
Oct 26	40.6	-6	-5	40.2	-18	-5	39.0	-29	-5	36.9	-40	-5	34.1	-51	-4	30.5	-60	-4	26.3	-69	-4	21.4	-77	-3	16.0	-84	-3	10.1	-89	-3	3.9	-94	-2	-5.5	-97	-1	-15.2
Oct 27	40.3	-6	-4	39.9	-18	-4	38.6	-29	-4	36.6	-40	-4	33.8	-50	-4	30.3	-60	-4	26.1	-69	-3	21.2	-76	-3	15.9	-83	-3	10.0	-88	-2	3.8	-93	-2	-5.5	-96	-1	-15.1
Oct 28	40.0	-6	-4	39.6	-17	-4	38.3	-29	-3	36.3	-40	-3	33.5	-50	-3	30.0	-59	-3	25.9	-68	-3	21.1	-76	-2	15.8	-82	-2	10.0	-88	-2	3.8	-92	-2	-5.4	-95	-1	-15.0
Oct 29	39.7	-6	-3	39.3	-17	-3	38.1	-29	-3	36.1	-39	-3	33.3	-50	-3	29.9	-59	-2	25.7	-68	-2	20.9	-75	-2	15.7	-82	-2	9.9	-87	-2	3.8	-92	-1	-5.4	-95	-1	-14.9
Oct 30	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	-1	15.6	-82	-1	9.9	-87	-1	3.8	-91	-1	-5.4	-94	-1	-14.8
Oct 31	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
Nov 1	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
Nov 2	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	-86	1	3.8	-91	0	-5.3	-94	0	-14.7
Nov 3	39.4	-6	2	39.0	-17	2	37.8	-28	2	35.8	-39	2	33.0	-49	2	29.6	-59	2	25.5	-67	2	20.8	-75	2	15.5	-82	2	9.8	-87	1	3.8	-91	1	-5.3	-94	1	-14.7
Nov 4	39.5	-6	4	39.1	-17	4	37.9	-29	4	35.9	-39	4	33.2	-50	4	29.7	-59	3	25.6	-68	3	20.8	-75	3	15.6	-82	2	9.9	-87	2	3.8	-92	2	-5.4	-95	1	-14.8
Nov 5	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	-95	2	-14.9
Nov 6	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	6	21.2	-77	5	15.8	-84	4	10.0	-89	4	3.8	-94	3	-5.5	-97	2	-15.1
Nov 7	40.7	-6	9	40.3	-18	9	39.0	-30	8	37.0	-41	8	34.1	-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
Nov 8	41.3	-6	10	40.9	-18	10	39.6	-30	9	37.5	-41	9	34.6	-52	9	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
Nov 9	42.0	-6	10	41.5	-18	10	40.2	-31	10	38.1	-42	10	35.2	-53	9	31.5	-63	9	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
Nov 10	42.7	-6	10	42.2	-19	10	40.9	-31	10	38.8	-43	9	35.8	-54	9	32.1	-64	8	27.6	-74	8	22.5	-82	7	16.8	-89	6	10.6	-95	5	4.1	-100	4	-5.8	-103	3	-16.0
Nov 11	43.4	-6	9	42.9	-19	9	41.6	-31	8	39.4	-43	8	36.4	-55	8	32.6	-65	7	28.0	-75	7	22.9	-83	6	17.1	-90	5	10.8	-96	5	4.1	-101	4	-5.9	-104	2	-16.2
Nov 12	44.0	-6	6	43.5	-19	6	42.2	-32	6	39.9	-44	6	36.9	-55	6	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
Nov 13	44.4	-7	3	43.9	-19	3	42.6	-32	3	40.3	-44	3	37.2	-56	3	33.4	-66	3	28.7	-76	3	23.4	-85	2	17.5	-92	2	11.1	-98	2	4.2	-103	1	-6.0	-106	1	-16.6
Nov 14	44.6	-7	0	44.2	-19	0	42.8	-32	0	40.5	-44	0	37.4	-56	0	33.5	-67	0	28.9	-76	0	23.5	-85	0	17.6	-92	0	11.1	-98	0	4.3	-103	0	-6.1	-106	0	-16.7
Nov 15	44.6	-7	-4	44.1	-19	-4	42.8	-32	-4	40.5	-44	-3	37.4	-56	-3	33.5	-66	-3	28.9	-76	-3	23.5	-85	-3	17.6	-92	-2	11.1	-98	-2	4.3	-103	-2	-6.1	-106	-1	-16.7
Nov 16	44.3	-6	-6	43.9	-19	-6	42.5	-32	-6	40.3	-44	-6	37.2	-55	-6	33.3	-66	-5	28.7	-75	-5	23.4	-84	-5	17.5	-91	-4	11.1	-97	-3	4.2	-102	-3	-6.0	-105	-2	-16.6
Nov 17	43.9	-6	-8	43.4	-19	-8	42.1	-31	-8	39.9	-43	-8	36.8	-55	-7	33.0	-65	-7	28.4	-75	-6	23.1	-83	-6	17.3	-90	-5	11.0	-96	-4	4.2	-101	-4	-6.0	-104	-2	-16.4

2012 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	'
Nov 18	75.8	-6	-9	75.3	-19	-9	74.0	-31	-9	71.8	-43	-9	68.8	-54	-8	65.0	-64	-8	60.5	-74	-7	55.3	-82	-7	49.5	-89	-6	43.3	-95	-5	36.6	-100	-4	26.6	-103	-3	16.2
Nov 19	74.6	-6	-9	74.2	-19	-9	72.9	-31	-9	70.7	-42	-9	67.8	-53	-8	64.0	-63	-8	59.6	-72	-7	54.5	-81	-7	48.8	-87	-6	42.6	-93	-5	36.0	-98	-4	26.2	-101	-3	16.0
Nov 20	73.5	-6	-9	73.1	-18	-9	71.8	-30	-9	69.7	-41	-8	66.7	-52	-8	63.1	-62	-7	58.7	-71	-7	53.6	-79	-6	48.0	-86	-5	42.0	-92	-5	35.5	-97	-4	25.8	-100	-3	15.7
Nov 21	72.4	-6	-8	72.0	-18	-8	70.7	-30	-8	68.6	-41	-7	65.8	-52	-7	62.1	-61	-7	57.8	-70	-6	52.8	-78	-6	47.3	-85	-5	41.3	-90	-4	35.0	-95	-3	25.4	-98	-2	15.5
Nov 22	71.5	-6	-7	71.0	-18	-7	69.8	-29	-7	67.7	-40	-6	64.9	-51	-6	61.3	-61	-6	57.0	-69	-5	52.1	-77	-5	46.7	-84	-4	40.8	-89	-4	34.5	-94	-3	25.1	-97	-2	15.3
Nov 23	70.7	-6	-6	70.2	-18	-5	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
Nov 24	70.0	-6	-4	69.6	-17	-4	68.4	-29	-4	66.3	-40	-4	63.5	-50	-4	60.0	-60	-4	55.9	-68	-3	51.1	-76	-3	45.7	-82	-3	40.0	-88	-2	33.8	-92	-2	24.5	-95	-1	15.0
Nov 25	69.5	-6	-3	69.1	-17	-3	67.9	-29	-3	65.8	-39	-3	63.1	-50	-3	59.6	-59	-3	55.4	-68	-2	50.7	-75	-2	45.4	-82	-2	39.7	-87	-2	33.5	-92	-1	24.4	-95	-1	14.9
Nov 26	69.1	-6	-2	68.7	-17	-2	67.5	-28	-2	65.5	-39	-2	62.7	-49	-2	59.3	-59	-2	55.1	-67	-2	50.4	-75	-1	45.2	-81	-1	39.4	-87	-1	33.4	-91	-1	24.2	-94	-1	14.8
Nov 27	68.8	-6	-1	68.4	-17	-1	67.2	-28	-1	65.2	-39	-1	62.5	-49	-1	59.1	-59	-1	54.9	-67	-1	50.2	-75	-1	45.0	-81	-1	39.3	-86	-1	33.2	-91	0	24.1	-94	0	14.7
Nov 28	68.7	-6	0	68.3	-17	0	67.1	-28	0	65.1	-39	0	62.4	-49	0	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
Nov 29	68.7	-6	1	68.3	-17	1	67.1	-28	1	65.1	-39	1	62.3	-49	1	58.9	-59	1	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
Nov 30	68.7	-6	2	68.3	-17	2	67.1	-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	39.2	-87	1	33.2	-91	1	24.1	-94	0	14.7
Dec 1	68.9	-6	3	68.5	-17	3	67.3	-28	3	65.3	-39	2	62.6	-49	2	59.1	-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
Dec 2	69.2	-6	4	68.8	-17	4	67.6	-29	4	65.6	-39	3	62.9	-50	3	59.4	-59	3	55.3	-68	3	50.5	-76	3	45.3	-82	2	39.5	-87	2	33.4	-92	2	24.3	-95	1	14.8
Dec 3	69.7	-6	5	69.3	-17	5	68.1	-29	5	66.1	-40	5	63.3	-50	4	59.8	-60	4	55.6	-68	4	50.9	-76	3	45.6	-83	3	39.8	-88	3	33.7	-93	2	24.4	-96	1	14.9
Dec 4	70.3	-6	6	69.9	-18	6	68.7	-29	6	66.6	-40	6	63.8	-51	6	60.3	-60	5	56.1	-69	5	51.3	-77	4	45.9	-83	4	40.1	-89	3	33.9	-94	3	24.6	-96	2	15.1
Dec 5	71.1	-6	8	70.6	-18	8	69.4	-29	7	67.4	-41	7	64.5	-51	7	61.0	-61	6	56.7	-70	6	51.9	-78	5	46.4	-84	5	40.6	-90	4	34.3	-95	3	24.9	-98	2	15.2
Dec 6	72.0	-6	9	71.6	-18	9	70.3	-30	8	68.2	-41	8	65.4	-52	8	61.7	-62	7	57.4	-71	7	52.5	-79	6	47.0	-86	5	41.1	-91	5	34.8	-96	4	25.2	-99	2	15.4
Dec 7	73.0	-6	10	72.6	-18	9	71.3	-30	9	69.2	-42	9	66.3	-53	8	62.7	-63	8	58.3	-72	7	53.3	-80	7	47.7	-87	6	41.7	-93	5	35.3	-97	4	25.6	-100	3	15.6
Dec 8	74.2	-6	10	73.7	-19	10	72.4	-31	9	70.3	-43	9	67.4	-54	9	63.6	-64	8	59.2	-73	7	54.1	-81	7	48.5	-88	6	42.3	-94	5	35.8	-99	4	26.0	-102	3	15.9
Dec 9	75.3	-6	9	74.9	-19	9	73.6	-31	9	71.4	-43	8	68.4	-54	8	64.6	-65	8	60.1	-74	7	55.0	-83	6	49.2	-90	6	43.0	-95	5	36.4	-100	4	26.4	-104	3	16.1
Dec 10	76.4	-6	8	76.0	-19	7	74.7	-32	7	72.5	-44	7	69.4	-55	7	65.6	-66	6	61.0	-75	6	55.8	-84	5	50.0	-91	5	43.6	-97	4	36.9	-102	3	26.8	-105	2	16.4
Dec 11	77.3	-6	5	76.9	-19	5	75.5	-32	5	73.3	-44	5	70.2	-56	4	66.4	-66	4	61.7	-76	4	56.4	-84	3	50.6	-92	3	44.2	-98	3	37.4	-103	2	27.1	-106	1	16.6
Dec 12	77.9	-7	2	77.5	-19	2	76.1	-32	2	73.9	-44	2	70.8	-56	1	66.9	-67	1	62.2	-76	1	56.9	-85	1	50.9	-92	1	44.5	-98	1	37.6	-103	1	27.3	-106	0	16.7
Dec 13	78.1	-7	-2	77.7	-19	-2	76.3	-32	-2	74.1	-44	-2	71.0	-56	-2	67.0	-67	-2	62.4	-76	-1	57.0	-85	-1	51.1	-92	-1	44.6	-98	-1	37.7	-103	-1	27.4	-106	-1	16.7
Dec 14	77.9	-6	-5	77.5	-19	-5	76.1	-32	-5	73.8	-44	-5	70.7	-56	-5	66.8	-66	-4	62.2	-76	-4	56.9	-84	-4	50.9	-92	-3	44.5	-98	-3	37.6	-103	-2	27.3	-106	-2	16.7
Dec 15	77.3	-6	-8	76.8	-19	-8	75.5	-32	-8	73.2	-44	-7	70.2	-55	-7	66.3	-66	-7	61.7	-75	-6	56.4	-84	-6	50.5	-91	-5	44.1	-97	-4	37.3	-102	-3	27.1	-105	-2	16.5
Dec 16	76.3	-6	-10	75.9	-19	-10	74.5	-31	-9	72.3	-43	-9	69.3	-54	-9	65.5	-65	-8	60.9	-74	-7	55.7	-82	-7	49.9	-89	-6	43.6	-95	-5	36.9	-100	-4	26.8	-103	-3	16.3
Dec 17	75.2	-6	-10	74.7	-19	-10	73.4	-31	-10	71.2	-42	-10	68.2	-53	-9	64.5	-64	-9	60.0	-73	-8	54.8	-81	-7	49.1	-88	-6	42.9	-94	-5	36.3	-99	-4	26.3	-102	-3	16.1
Dec 18	73.9	-6	-10	73.5	-18	-10	72.2	-30	-10	70.1	-42	-9	67.1	-53	-9	63.4	-63	-8	59.0	-72	-8	53.9	-80	-7	48.3	-87	-6	42.2	-92	-5	35.7	-97	-4	25.9	-100	-3	15.8
Dec 19	72.7	-6	-9	72.3	-18	-9	71.0	-30	-9	68.9	-41	-9	66.0	-52	-8	62.4	-62	-8	58.0	-71	-7	53.0	-78	-6	47.5	-85	-6	41.5	-91	-5	35.1	-95	-4	25.5	-98	-3	15.6
Dec 20	71.6	-6	-8	71.2	-18	-8	69.9	-29	-8	67.9	-40	-7	65.0	-51	-7	61.4	-61	-7	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
Dec 21	70.7	-6	-6	70.2	-18	-6	69.0	-29	-6	67.0	-40	-6	64.2	-50	-6	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
Dec 22	69.9	-6	-5	69.5	-17	-5	68.3	-29	-5	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
Dec 23	69.3	-6	-3	68.9	-17	-3	67.7	-29	-3	65.7	-39	-3	63.0	-50	-3	59.5	-59	-3	55.3	-68	-2	50.6	-75	-2	45.3	-82	-2	39.6	-87	-2	33.5	-91	-1	24.3	-94	-1	14.8
Dec 24	69.0	-6	-2	68.6	-17	-2	67.4	-28	-2	65.4	-39	-2	62.6	-49	-2	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 25	68.8	-6	0	68.4	-17	0	67.2	-28	0	65.2	-39	0	62.4	-49	0	59.0	-59	0	54.9	-67	0	50.2	-75	0	44.9	-81	0	39.3	-86	0	33.2	-91	0	24.1	-94	0	14.7
Dec 26	68.7	-6	1	68.3	-17	1	67.1	-28	1	65.1	-39	1	62.4	-49	1	58.9	-59	1	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
Dec 27	68.8	-6	2	68.4	-17	2	67.2	-28	2	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 28	69.0	-6	2	68.6	-17	2	67.4	-28	2	65.4	-39	2	62.6	-50	2	59.2	-59	2	55.1	-68	2	50.3	-75	2	45.1	-82	1	39.4	-87	1	33.3	-91	1	24.2	-94	1	14.8
Dec 29	69.3	-6	3	68.9	-17	3	67.6	-29	3	65.6	-39	3	62.9	-50	3	59.4	-59	3	55.3	-68	2	50.5	-76	2	45.3	-82	2	39.5	-87	2	33.4	-92	1	24.3	-95	1	14.8
Dec 30	69.6	-6	4	69.2	-17	4	68.0	-29	4	66.0	-40	4	63.2	-50	3	59.7	-60	3	55.6	-68	3	50.8	-76	3	45.5	-83	2	39.8	-88	2	33.6	-92	2	24.4	-95	1	14.9
Dec 31	70.1	-6	5	69.7	-18	5	68.5	-29	4	66.4	-40	4	63.7	-50	4	60.1	-60	4	56.0	-69	4	51.2	-76	3	45.8	-83	3	40.0	-88	2	33.9	-93	2	24.6	-96	1	15.0

2012 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	'
Nov 18	43.3	-6	-9	42.9	-19	-9	41.5	-31	-9	39.4	-43	-9	36.3	-54	-8	32.5	-64	-8	28.0	-74	-7	22.8	-82	-7	17.1	-89	-6	10.8	-95	-5	4.1	-100	-4	-5.9	-103	-3	-16.2
Nov 19	42.7	-6	-9	42.2	-19	-9	40.9	-31	-9	38.8	-42	-9	35.8	-53	-8	32.1	-63	-8	27.6	-72	-7	22.5	-81	-7	16.8	-87	-6	10.6	-93	-5	4.1	-98	-4	-5.8	-101	-3	-16.0
Nov 20	42.0	-6	-9	41.6	-18	-9	40.3	-30	-9	38.2	-41	-8	35.3	-52	-8	31.6	-62	-7	27.2	-71	-7	22.2	-79	-6	16.6	-86	-5	10.5	-92	-5	4.0	-97	-4	-5.7	-100	-3	-15.7
Nov 21	41.4	-6	-8	41.0	-18	-8	39.7	-30	-8	37.6	-41	-7	34.7	-52	-7	31.1	-61	-7	26.8	-70	-6	21.8	-78	-6	16.3	-85	-5	10.3	-90	-4	4.0	-95	-3	-5.6	-98	-2	-15.5
Nov 22	40.9	-6	-7	40.4	-18	-7	39.2	-29	-7	37.1	-40	-6	34.3	-51	-6	30.7	-61	-6	26.4	-69	-5	21.5	-77	-5	16.1	-84	-4	10.2	-89	-4	3.9	-94	-3	-5.6	-97	-2	-15.3
Nov 23	40.4	-6	-6	40.0	-18	-5	38.7	-29	-5	36.7	-40	-5	33.9	-50	-5	30.3	-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
Nov 24	40.0	-6	-4	39.6	-17	-4	38.4	-29	-4	36.4	-40	-4	33.6	-50	-4	30.1	-60	-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
Nov 25	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	15.7	-82	-2	9.9	-87	-2	3.8	-92	-1	-5.4	-95	-1	-14.9
Nov 26	39.5	-6	-2	39.1	-17	-2	37.9	-28	-2	35.9	-39	-2	33.1	-49	-2	29.7	-59	-2	25.6	-67	-2	20.8	-75	-1	15.6	-81	-1	9.9	-87	-1	3.8	-91	-1	-5.4	-94	-1	-14.8
Nov 27	39.4	-6	-1	39.0	-17	-1	37.7	-28	-1	35.8	-39	-1	33.0	-49	-1	29.6	-59	-1	25.5	-67	-1	20.7	-75	-1	15.5	-81	-1	9.8	-86	-1	3.8	-91	0	-5.3	-94	0	-14.7
Nov 28	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
Nov 29	39.3	-6	1	38.9	-17	1	37.7	-28	1	35.7	-39	1	32.9	-49	1	29.5	-59	1	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
Nov 30	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
Dec 1	39.4	-6	3	39.0	-17	3	37.8	-28	3	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
Dec 2	39.6	-6	4	39.2	-17	4	38.0	-29	4	36.0	-39	3	33.2	-50	3	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
Dec 3	39.8	-6	5	39.4	-17	5	38.2	-29	5	36.2	-40	5	33.4	-50	4	29.9	-60	4	25.8	-68	4	21.0	-76	3	15.7	-83	3	9.9	-88	3	3.8	-93	2	-5.4	-96	1	-14.9
Dec 4	40.2	-6	6	39.8	-18	6	38.5	-29	6	36.5	-40	6	33.7	-51	6	30.2	-60	5	26.0	-69	5	21.2	-77	4	15.8	-83	4	10.0	-89	3	3.8	-94	3	-5.5	-96	2	-15.1
Dec 5	40.6	-6	8	40.2	-18	8	39.0	-29	7	36.9	-41	7	34.1	-51	7	30.5	-61	6	26.3	-70	6	21.4	-78	5	16.0	-84	5	10.1	-90	4	3.9	-95	3	-5.5	-98	2	-15.2
Dec 6	41.1	-6	9	40.7	-18	9	39.5	-30	8	37.4	-41	8	34.5	-52	8	30.9	-62	7	26.6	-71	7	21.7	-79	6	16.2	-86	5	10.3	-91	5	3.9	-96	4	-5.6	-99	2	-15.4
Dec 7	41.8	-6	10	41.3	-18	9	40.0	-30	9	37.9	-42	9	35.0	-53	8	31.4	-63	8	27.0	-72	7	22.0	-80	7	16.5	-87	6	10.4	-93	5	4.0	-97	4	-5.7	-100	3	-15.6
Dec 8	42.4	-6	10	42.0	-19	10	40.7	-31	9	38.5	-43	9	35.6	-54	9	31.9	-64	8	27.4	-73	7	22.4	-81	7	16.7	-88	6	10.6	-94	5	4.1	-99	4	-5.8	-102	3	-15.9
Dec 9	43.1	-6	9	42.6	-19	9	41.3	-31	9	39.1	-43	8	36.1	-54	8	32.4	-65	8	27.9	-74	7	22.7	-83	6	17.0	-90	6	10.7	-95	5	4.1	-100	4	-5.9	-104	3	-16.1
Dec 10	43.7	-6	8	43.3	-19	7	41.9	-32	7	39.7	-44	7	36.7	-55	7	32.8	-66	6	28.3	-75	6	23.0	-84	5	17.2	-91	5	10.9	-97	4	4.2	-102	3	-5.9	-105	2	-16.4
Dec 11	44.2	-6	5	43.8	-19	5	42.4	-32	5	40.2	-44	5	37.1	-56	4	33.2	-66	4	28.6	-76	4	23.3	-84	3	17.4	-92	3	11.0	-98	3	4.2	-103	2	-6.0	-106	1	-16.6
Dec 12	44.6	-7	2	44.1	-19	2	42.7	-32	2	40.5	-44	2	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	1	-6.1	-106	0	-16.7
Dec 13	44.7	-7	-2	44.2	-19	-2	42.8	-32	-2	40.6	-44	-2	37.5	-56	-2	33.6	-67	-2	28.9	-76	-1	23.6	-85	-1	17.6	-92	-1	11.1	-98	-1	4.3	-103	-1	-6.1	-106	-1	-16.7
Dec 14	44.5	-6	-5	44.1	-19	-5	42.7	-32	-5	40.5	-44	-5	37.4	-56	-5	33.5	-66	-4	28.8	-76	-4	23.5	-84	-4	17.6	-92	-3	11.1	-98	-3	4.3	-103	-2	-6.1	-106	-2	-16.7
Dec 15	44.2	-6	-8	43.7	-19	-8	42.4	-32	-8	40.1	-44	-7	37.1	-55	-7	33.2	-66	-7	28.6	-75	-6	23.3	-84	-6	17.4	-91	-5	11.0	-97	-4	4.2	-102	-3	-6.0	-105	-2	-16.5
Dec 16	43.6	-6	-10	43.2	-19	-10	41.8	-31	-9	39.6	-43	-9	36.6	-54	-9	32.8	-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
Dec 17	43.0	-6	-10	42.5	-19	-10	41.2	-31	-10	39.0	-42	-10	36.1	-53	-9	32.3	-64	-9	27.8	-73	-8	22.7	-81	-7	16.9	-88	-6	10.7	-94	-5	4.1	-99	-4	-5.8	-102	-3	-16.1
Dec 18	42.3	-6	-10	41.8	-18	-10	40.5	-30	-10	38.4	-42	-9	35.5	-53	-9	31.8	-63	-8	27.3	-72	-8	22.3	-80	-7	16.7	-87	-6	10.5	-92	-5	4.0	-97	-4	-5.7	-100	-3	-15.8
Dec 19	41.6	-6	-9	41.1	-18	-9	39.9	-30	-9	37.8	-41	-9	34.9	-52	-8	31.2	-62	-8	26.9	-71	-7	21.9	-78	-6	16.4	-85	-6	10.4	-91	-5	4.0	-95	-4	-5.6	-98	-3	-15.6
Dec 20	40.9	-6	-8	40.5	-18	-8	39.3	-29	-8	37.2	-40	-7	34.3	-51	-7	30.8	-61	-7	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
Dec 21	40.4	-6	-6	40.0	-18	-6	38.7	-29	-6	36.7	-40	-6	33.9	-50	-6	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
Dec 22	40.0	-6	-5	39.6	-17	-5	38.3	-29	-5	36.3	-40	-4	33.5	-50	-4	30.0	-59	-4	25.9	-68	-4	21.1	-76	-3	15.7	-82	-3	10.0	-88	-2	3.8	-92	-2	-5.4	-95	-1	-15.0
Dec 23	39.6	-6	-3	39.2	-17	-3	38.0	-29	-3	36.0	-39	-3	33.3	-50	-3	29.8	-59	-3	25.6	-68	-2	20.9	-75	-2	15.6	-82	-2	9.9	-87	-2	3.8	-91	-1	-5.4	-94	-1	-14.8
Dec 24	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	0	-14.8
Dec 25	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
Dec 26	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	0	20.7	-75	0	15.5	-81	0	9.8	-86	0	3.8	-91	0	-5.3	-94	0	-14.7
Dec 27	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
Dec 28	39.4	-6	2	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	1	9.8	-87	1	3.8	-91	1	-5.4	-94	1	-14.8
Dec 29	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
Dec 30	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
Dec 31	40.1	-6	5	39.7	-18	5	38.4	-29	4	36.4	-40	4	33.6	-50	4	30.1	-60	4	25.9	-69	4	21.1	-76	3	15.8	-83	3	10.0	-88	2	3.8	-93	2	-5.4	-96	1	-15.0