

Solar and Lunar Eclipses January 2016 through December 2050

Solar or Lunar	Type	Date	Universal Time	Zodiac Position	Saros #	Saros Series	Magnitude (Umbral)	Duration	Hrs./Min.	
									Total	Partial
Solar	Total	Mar 9 2016	1:54:26 AM	18°Pi55'41"	130	18 South	1.045	4:09		
Lunar	Appulse	Mar 23 2016	12:00:47 PM	03°Li17'14"	142		0.307		0:00	0:00
Lunar	Appulse	Aug 18 2016	9:26:30 AM	25°Aq51'41"	109		0.993		0:00	0:00
Solar	Annular	Sep 1 2016	9:03:02 AM	09°Vi21'10"	135	19 North	0.974	3:06		
Lunar	Appulse	Sep 16 2016	7:05:01 PM	24°Pi19'56"	147		0.058		0:00	0:00
Lunar	Appulse	Feb 11 2017	12:32:48 AM	22°Le28'06"	114		0.03		0:00	0:00
Solar	Annular	Feb 26 2017	2:58:18 PM	08°Pi12'06"	140	19 South	0.992	0:44		
Lunar	Partial	Aug 7 2017	6:10:32 PM	15°Aq25'10"	119		0.251		0:00	0:58
Solar	Total	Aug 21 2017	6:30:06 PM	28°Le52'56"	145	1 North	1.031	2:40		
Lunar	Total	Jan 31 2018	1:26:38 PM	11°Le37'03"	124		1.321		0:38	1:42
Solar	Partial	Feb 15 2018	9:05:07 PM	27°Aq07'49"	150	1 South	0.599	0:00		
Solar	Partial	Jul 13 2018	2:47:46 AM	20°Cn41'14"	117	2 North	0.337	0:00		
Lunar	Total	Jul 27 2018	8:20:15 PM	04°Aq44'53"	129		1.614		0:52	1:58
Solar	Partial	Aug 11 2018	9:57:38 AM	18°Le41'41"	155	2 North	0.736	0:00		
Solar	Partial	Jan 6 2019	1:28:04 AM	15°Cp25'02"	122	2 South	0.715	0:00		
Lunar	Total	Jan 21 2019	5:15:58 AM	00°Le51'34"	134		1.201		0:31	1:39
Solar	Total	Jul 2 2019	7:16:05 PM	10°Cn37'33"	127	3 North	1.046	4:33		
Lunar	Partial	Jul 16 2019	9:38:05 PM	24°Cp04'09"	139		0.658		0:00	1:29
Solar	Annular	Dec 26 2019	5:12:59 AM	04°Cp06'51"	132	3 South	0.97	3:39		
Lunar	Appulse	Jan 10 2020	7:21:10 PM	20°Cn00'13"	144		0.111		0:00	0:00
Lunar	Appulse	Jun 5 2020	7:12:14 PM	15°Sg34'02"	111		0.399		0:00	0:00
Solar	Annular	Jun 21 2020	6:41:18 AM	00°Cn21'23"	137	4 North	0.994	0:38		
Lunar	Appulse	Jul 5 2020	4:44:16 AM	13°Cp37'47"	149		0.638		0:00	0:00
Lunar	Appulse	Nov 30 2020	9:29:31 AM	08°Ge38'01"	116		0.257		0:00	0:00
Solar	Total	Dec 14 2020	4:16:25 PM	23°Sg08'14"	142	4 South	1.025	2:10		
Lunar	Total	May 26 2021	11:13:43 AM	05°Sg25'45"	121		1.016		0:09	1:34
Solar	Annular	Jun 10 2021	10:52:28 AM	19°Ge47'06"	147	5 North	0.943	3:51		
Lunar	Partial	Nov 19 2021	8:57:17 AM	27°Ta14'28"	126		0.979		0:00	1:45
Solar	Total	Dec 4 2021	7:42:50 AM	12°Sg22'02"	152	5 South	1.037	1:54		

Solar	Partial	Apr 30 2022	8:27:54 PM	10°Ta28'23"	119	6 North	0.639	0:00		
Lunar	Total	May 16 2022	4:13:57 AM	25°Sc17'59"	131		1.419		0:43	1:44
Solar	Partial	Oct 25 2022	10:48:30 AM	02°Sc00'06"	124	6 South	0.861	0:00		
Lunar	Total	Nov 8 2022	11:01:56 AM	16°Ta00'53"	136		1.364		0:43	1:50
Solar	Hybrid	Apr 20 2023	4:12:19 AM	29°Ar50'11"	129	7 North	1.013	1:16		
Lunar	Appulse	May 5 2023	5:33:50 PM	14°Sc58'11"	141		0.041		0:00	0:00
Solar	Annular	Oct 14 2023	5:54:55 PM	21°Li07'33"	134	7 South	0.952	5:17		
Lunar	Partial	Oct 28 2023	8:23:49 PM	05°Ta09'04"	146		0.127		0:00	0:40
Lunar	Appulse	Mar 25 2024	7:00:05 AM	05°Li07'14"	113		0.128		0:00	0:00
Solar	Total	Apr 8 2024	6:20:37 PM	19°Ar24'01"	139	8 North	1.057	4:28		
Lunar	Partial	Sep 18 2024	2:34:13 AM	25°Pi40'45"	118		0.091		0:00	0:32
Solar	Annular	Oct 2 2024	6:49:01 PM	10°Li03'48"	144	8 South	0.933	7:25		
Lunar	Total	Mar 14 2025	6:54:23 AM	23°Vi56'32"	123		1.183		0:33	1:49
Solar	Partial	Mar 29 2025	10:57:34 AM	09°Ar00'05"	149	9 North	0.936	0:00		
Lunar	Total	Sep 7 2025	6:08:37 PM	15°Pi22'30"	128		1.368		0:41	1:45
Solar	Partial	Sep 21 2025	7:53:51 PM	29°Vi05'09"	154	9 South	0.853	0:00		
Solar	Annular	Feb 17 2026	12:00:51 PM	28°Aq49'43"	121	10 North	0.963	2:20		
Lunar	Total	Mar 3 2026	11:37:36 AM	12°Vi53'53"	133		1.156		0:30	1:44
Solar	Total	Aug 12 2026	5:36:26 PM	20°Le01'58"	126	10 South	1.039	2:18		
Lunar	Partial	Aug 28 2026	4:18:13 AM	04°Pi54'07"	138		0.935		0:00	1:39
Solar	Annular	Feb 6 2027	3:55:48 PM	17°Aq37'37"	131	11 North	0.928	7:51		
Lunar	Appulse	Feb 20 2027	11:23:20 PM	02°Vi05'35"	143		0.052		0:00	0:00
Lunar	Appulse	Jul 18 2027	3:44:36 PM	25°Cp48'45"	110		1.063		0:00	0:00
Solar	Total	Aug 2 2027	10:04:54 AM	09°Le55'02"	136	11 South	1.079	6:23		
Lunar	Appulse	Aug 17 2027	7:28:22 AM	24°Aq11'48"	148		0.521		0:00	0:00
Lunar	Partial	Jan 12 2028	4:02:44 AM	21°Cn27'31"	115		0.072		0:00	0:29
Solar	Annular	Jan 26 2028	3:12:10 PM	06°Aq11'01"	141	12 North	0.921	10:27		
Lunar	Partial	Jul 6 2028	6:10:28 PM	15°Cp11'08"	120		0.394		0:00	1:11
Solar	Total	Jul 22 2028	3:01:22 AM	29°Cn50'45"	146	12 South	1.056	5:10		
Lunar	Total	Dec 31 2028	4:48:09 PM	10°Cn32'49"	125		1.252		0:36	1:45
Solar	Partial	Jan 14 2029	5:24:09 PM	24°Cp50'21"	151	13 North	0.871	0:00		
Solar	Partial	Jun 12 2029	3:50:10 AM	21°Ge29'05"	118	13 South	0.458	0:00		
Lunar	Total	Jun 26 2029	3:21:58 AM	04°Cp49'51"	130		1.849		0:51	1:50
Solar	Partial	Jul 11 2029	3:50:41 PM	19°Cn37'44"	156	13 South	0.23	0:00		

Solar	Partial	Dec 5 2029	2:51:45 PM	13°Sg45'27"	123	14 North	0.891	0:00		
Lunar	Total	Dec 20 2029	10:46:08 PM	29°Ge20'39"	135		1.122		0:27	1:47
Solar	Annular	Jun 1 2030	6:20:57 AM	10°Ge49'55"	128	14 South	0.944	5:21		
Lunar	Partial	Jun 15 2030	6:40:37 PM	24°Sg43'02"	140		0.508		0:00	1:13
Solar	Total	Nov 25 2030	6:46:05 AM	03°Sg02'04"	133	15 North	1.047	3:44		
Lunar	Appulse	Dec 9 2030	10:40:03 PM	17°Ge53'59"	145		0.159		0:00	0:00
Lunar	Appulse	May 7 2031	3:39:28 AM	16°Sc24'54"	112		0.085		0:00	0:00
Solar	Annular	May 21 2031	7:16:48 AM	00°Ge04'23"	138	15 South	0.959	5:26		
Lunar	Appulse	Jun 5 2031	11:58:07 AM	14°Sg39'22"	150		0.814		0:00	0:00
Lunar	Appulse	Oct 30 2031	7:32:16 AM	06°Ta40'36"	117		0.315		0:00	0:00
Solar	Hybrid	Nov 14 2031	9:09:12 PM	22°Sc17'30"	143	16 North	1.011	1:08		
Lunar	Total	Apr 25 2032	3:09:15 PM	05°Sc58'02"	122		1.197		0:33	1:46
Solar	Annular	May 9 2032	1:35:18 PM	19°Ta29'02"	148	16 South	0.996	0:22		
Lunar	Total	Oct 18 2032	6:57:41 PM	25°Ar56'58"	127		1.108		0:24	1:38
Solar	Partial	Nov 3 2032	5:44:30 AM	11°Sc21'30"	153	17 North	0.855	0:00		
Solar	Total	Mar 30 2033	5:51:11 PM	10°Ar20'32"	120	17 South	1.046	2:37		
Lunar	Total	Apr 14 2033	7:16:55 PM	25°Li09'17"	132		1.099		0:25	1:48
Solar	Partial	Sep 23 2033	1:39:18 PM	00°Li50'54"	125	18 North	0.689	0:00		
Lunar	Total	Oct 8 2033	10:57:40 AM	15°Ar28'56"	137		1.355		0:40	1:42
Solar	Total	Mar 20 2034	10:14:06 AM	29°Pi52'25"	130	18 South	1.046	4:09		
Lunar	Appulse	Apr 3 2034	7:18:24 PM	14°Li06'20"	142		0.223		0:00	0:00
Solar	Annular	Sep 12 2034	4:13:19 PM	19°Vi58'51"	135	19 North	0.974	2:58		
Lunar	Partial	Sep 28 2034	2:56:20 AM	05°Ar04'19"	147		0.02		0:00	0:16
Lunar	Appulse	Feb 22 2035	8:53:25 AM	03°Vi33'13"	114		0.048		0:00	0:00
Solar	Annular	Mar 9 2035	11:08:58 PM	19°Pi12'17"	140	19 South	0.992	0:48		
Lunar	Partial	Aug 19 2035	12:59:48 AM	25°Aq55'16"	119		0.109		0:00	0:39
Solar	Total	Sep 2 2035	1:59:02 AM	09°Vi27'55"	145	1 North	1.032	2:54		
Lunar	Total	Feb 11 2036	10:08:11 PM	22°Le45'26"	124		1.305		0:38	1:41
Solar	Partial	Feb 27 2036	4:58:45 AM	08°Pi10'25"	150	1 South	0.628	0:00		
Solar	Partial	Jul 23 2036	10:16:29 AM	01°Le09'01"	117	2 North	0.199	0:00		
Lunar	Total	Aug 7 2036	2:48:24 AM	15°Aq11'58"	129		1.459		0:48	1:56
Solar	Partial	Aug 21 2036	5:34:49 PM	29°Le14'20"	155	2 North	0.861	0:00		
Solar	Partial	Jan 16 2037	9:33:52 AM	26°Cp35'29"	122	2 South	0.705	0:00		
Lunar	Total	Jan 31 2037	2:03:37 PM	12°Le02'10"	134		1.213		0:32	1:39

Solar	Total	Jul 13 2037	2:31:15 AM	21°Cn03'56"	127	3 North	1.041	3:58		
Lunar	Partial	Jul 27 2037	4:14:36 AM	04°Aq29'51"	139		0.814		0:00	1:37
Solar	Annular	Jan 5 2038	1:40:48 PM	15°Cp18'27"	132	3 South	0.973	3:18		
Lunar	Appulse	Jan 21 2038	3:59:24 AM	01°Le11'41"	144		0.109		0:00	0:00
Lunar	Appulse	Jun 17 2038	2:29:58 AM	26°Sg02'15"	111		0.522		0:00	0:00
Solar	Annular	Jul 2 2038	1:31:35 PM	10°Cn47'13"	137	4 North	0.991	1:00		
Lunar	Appulse	Jul 16 2038	11:47:41 AM	24°Cp04'08"	149		0.49		0:00	0:00
Lunar	Appulse	Dec 11 2038	5:29:50 PM	19°Ge45'45"	116		0.285		0:00	0:00
Solar	Total	Dec 26 2038	1:01:23 AM	04°Cp19'48"	142	4 South	1.027	2:18		
Lunar	Partial	Jun 6 2039	6:47:06 PM	15°Sg56'18"	121		0.891		0:00	1:30
Solar	Annular	Jun 21 2039	5:20:51 PM	00°Cn12'53"	147	5 North	0.945	4:05		
Lunar	Partial	Nov 30 2039	4:48:58 PM	08°Ge19'41"	126		0.947		0:00	1:43
Solar	Total	Dec 15 2039	4:31:26 PM	23°Sg32'45"	152	5 South	1.036	1:51		
Solar	Partial	May 11 2040	3:27:15 AM	21°Ta03'39"	119	6 North	0.53	0:00		
Lunar	Total	May 26 2040	11:46:28 AM	05°Sg50'23"	131		1.541		0:46	1:46
Solar	Partial	Nov 4 2040	6:55:21 PM	12°Sc58'13"	124	6 South	0.807	0:00		
Lunar	Total	Nov 18 2040	7:05:31 PM	27°Ta03'25"	136		1.402		0:44	1:51
Solar	Total	Apr 30 2041	11:45:41 AM	10°Ta30'22"	129	7 North	1.019	1:51		
Lunar	Partial	May 16 2041	12:51:44 AM	25°Sc32'54"	141		0.07		0:00	0:30
Solar	Annular	Oct 25 2041	1:29:40 AM	02°Sc00'43"	134	7 South	0.947	6:07		
Lunar	Partial	Nov 8 2041	4:42:50 AM	16°Ta08'59"	146		0.175		0:00	0:46
Lunar	Appulse	Apr 5 2042	2:15:16 PM	15°Li55'36"	113		0.213		0:00	0:00
Solar	Total	Apr 20 2042	2:18:39 AM	00°Ta08'56"	139	8 North	1.061	4:51		
Lunar	Partial	Sep 29 2042	10:33:38 AM	06°Ar25'30"	118		0.003		0:00	0:06
Solar	Annular	Oct 14 2042	2:02:27 AM	20°Li51'56"	144	8 South	0.93	7:44		
Lunar	Appulse	Oct 28 2042	7:47:42 PM	05°Ta31'18"	156		0.974		0:00	0:00
Lunar	Total	Mar 25 2043	2:25:36 PM	04°Li50'08"	123		1.119		0:27	1:48
Solar	Total	Apr 9 2043	7:05:57 PM	19°Ar49'46"	149	9 North	1.041	0:00		
Lunar	Total	Sep 19 2043	1:46:23 AM	26°Pi02'19"	128		1.261		0:36	1:43
Solar	Annular	Oct 3 2043	3:11:28 AM	09°Li48'54"	154	9 South	0.943	0:00		
Solar	Annular	Feb 28 2044	8:11:40 PM	09°Pi53'07"	121	10 North	0.96	2:27		
Lunar	Total	Mar 13 2044	7:40:28 PM	23°Vi52'36"	133		1.208		0:34	1:45
Solar	Total	Aug 23 2044	1:05:17 AM	00°Vi34'11"	126	10 South	1.036	2:04		
Lunar	Total	Sep 7 2044	11:23:42 AM	15°Pi29'25"	138		1.05		0:18	1:43

Solar	Annular	Feb 16 2045	11:50:25 PM	28°Aq42'58"	131	11 North	0.928	7:47		
Lunar	Appulse	Mar 3 2045	7:51:56 AM	13°Vi08'25"	143		0.012		0:00	0:00
Solar	Total	Aug 12 2045	5:38:31 PM	20°Le25'21"	136	11 South	1.077	6:06		
Lunar	Appulse	Aug 27 2045	2:06:56 PM	04°Pi43'09"	148		0.388		0:00	0:00
Lunar	Partial	Jan 22 2046	12:50:34 PM	02°Le39'11"	115		0.059		0:00	0:27
Solar	Annular	Feb 5 2046	11:08:58 PM	17°Aq18'34"	141	12 North	0.923	9:42		
Lunar	Partial	Jul 18 2046	12:54:17 AM	25°Cp37'05"	120		0.251		0:00	0:58
Solar	Total	Aug 2 2046	10:24:44 AM	10°Le19'33"	146	12 South	1.053	4:51		
Lunar	Total	Jan 12 2047	1:20:35 AM	21°Cn44'05"	125		1.239		0:35	1:45
Solar	Partial	Jan 26 2047	1:43 AM	06°Aq00'09"	151	13 North	0.89	0:00		
Solar	Partial	Jun 23 2047	10:35:03 AM	01°Cn55'50"	118	13 South	0.313	0:00		
Lunar	Total	Jul 7 2047	10:33:03 AM	15°Cp16'48"	130		1.757		0:51	1:50
Solar	Partial	Jul 22 2047	10:48:33 PM	00°Le04'31"	156	13 South	0.36	0:00		
Solar	Partial	Dec 16 2047	11:37:27 PM	24°Sg55'50"	123	14 North	0.882	0:00		
Lunar	Total	Jan 1 2048	6:56:17 AM	10°Cn31'09"	135		1.132		0:28	1:47
Solar	Annular	Jun 11 2048	12:49:08 PM	21°Ge16'50"	128	14 South	0.944	4:58		
Lunar	Partial	Jun 26 2048	2:07:17 AM	05°Cp10'32"	140		0.644		0:00	1:20
Solar	Total	Dec 5 2048	3:29:18 PM	14°Sg10'27"	133	15 North	1.044	3:28		
Lunar	Appulse	Dec 20 2048	6:38:22 AM	29°Ge03'02"	145		0.14		0:00	0:00
Lunar	Appulse	May 17 2049	11:12:56 AM	26°Sc59'52"	112		0.203		0:00	0:00
Solar	Annular	May 31 2049	1:59:17 PM	10°Ge33'53"	138	15 South	0.963	4:45		
Lunar	Appulse	Jun 15 2049	7:25:57 PM	25°Sg08'03"	150		0.693		0:00	0:00
Lunar	Appulse	Nov 9 2049	3:37:04 PM	17°Ta40'31"	117		0.35		0:00	0:00
Solar	Hybrid	Nov 25 2049	5:34:51 AM	03°Sg22'52"	143	16 North	1.006	0:38		
Lunar	Total	May 6 2050	10:25:13 PM	16°Sc35'23"	122		1.082		0:22	1:43
Solar	Hybrid	May 20 2050	8:50:09 PM	00°Ge02'24"	148	16 South	1.004	0:21		
Lunar	Total	Oct 30 2050	3:15:02 AM	06°Ta53'50"	127		1.06		0:18	1:37
Solar	Partial	Nov 14 2050	1:40:31 PM	22°Sc22'34"	153	17 North	0.887	0:00		