

Solar Eclipses for Wending, 1234 BC-1250 BC. Wu Yi 1250 BC-1285 BC.

	Sep-27	Apr-27	Nov-27	Oct-27	May-27	Nov-27	May-27	Nov-27
	1500	1500	1500	1500	1500	1500	1500	1500
BC	1234	1234	1235	1235	1235	1236	1236	1237
	266	266	265	265	265	264	264	263
	97156.5	97156.5	96791.25	96791.25	96791.25	96426	96426	96060.75
	97156	97156	96791	96791	96791	96426	96426	96060
	1619.267	1619.267	1613.183	1613.183	1613.183	1607.1	1607.1	1601
	0.267	0.267	0.183	0.183	0.183	0.1	0.1	1
	16.02	16.02	10.98	10.98	10.98	6	6	60
	29	29	29	29	29	29	29	29
	28	28	28	28	28	28	28	28
	31	31	31	31	31	31	31	31
	30	30	30	30	30	30	30	30
	31	31	31	31	31	31	31	31
	30	30	30	30	30	30	30	30
	31	31	31	31	31	31	31	31
	31	31	31	31	31	31	31	31
	30	30	30	30	30	30	30	30
	31	31	31	31	31	31	31	31
	30	30	30	30	30	30	30	30
	31	31	31	31	31	31	31	31
j	45.02	45.02	39.98	39.98	39.98	35	35	89
f	73.02	73.02	67.98	67.98	67.98	63	63	117
m	104.02	104.02	98.98	98.98	98.98	94	94	148
a	134.02	134.02	128.98	128.98	128.98	124	124	178
m	165.02	165.02	159.98	159.98	159.98	155	155	209
j	195.02	195.02	189.98	189.98	189.98	185	185	239
j	226.02	226.02	220.98	220.98	220.98	216	216	270
a	257.02	257.02	251.98	251.98	251.98	247	247	301
s	287.02	287.02	281.98	281.98	281.98	277	277	331
o	318.02	318.02	312.98	312.98	312.98	308	308	362
n	348.02	348.02	342.98	342.98	342.98	338	338	392
d	379.02	379.02	373.98	373.98	373.98	369	369	423
	257.02	104.02	312.98	281.98	128.98	308	124	362
	30	5	9	10	15	19	26	30
	287.02	109.02	321.98	291.98	143.98	327	150	392
	240	80	300	240	120	300	120	360
	47.02	29.02	21.98	51.98	23.98	27	30	32
					24			
				not visible		visible	not visible	

Jun-27	Dec-27	Jul-27	Jun-27	Dec-27	Jul-27	Feb-27	Aug-27	Feb-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1237	1238	1238	1238	1239	1239	1239	1240	1240
263	262	262	262	261	261	261	260	260
96060.75	95695.5	95695.5	95695.5	95330.25	95330.25	95330.25	94965	94965
96060	95695	95695	95695	95330	95330	95330	94965	94965
1601	1594.917	1594.917	1594.917	1588.833	1588.833	1588.833	1582.75	1582.75
1	0.917	0.917	0.917	0.833	0.8333	0.8333	0.75	0.75
60	55.02	55.02	55.02	49.98	49.998	49.998	45	45
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
89	84.02	84.02	84.02	78.98	78.998	78.998	74	74
117	112.02	112.02	112.02	106.98	106.998	106.998	102	102
148	143.02	143.02	143.02	137.98	137.998	137.998	133	133
178	173.02	173.02	173.02	167.98	167.998	167.998	163	163
209	204.02	204.02	204.02	198.98	198.998	198.998	194	194
239	234.02	234.02	234.02	228.98	228.998	228.998	224	224
270	265.02	265.02	265.02	259.98	259.998	259.998	255	255
301	296.02	296.02	296.02	290.98	290.998	290.998	286	286
331	326.02	326.02	326.02	320.98	320.998	320.998	316	316
362	357.02	357.02	357.02	351.98	351.998	351.998	347	347
392	387.02	387.02	387.02	381.98	381.998	381.998	377	377
423	418.02	418.02	418.02	412.98	412.998	412.998	408	408
209	387.02	234.02	204.02	381.98	228.998	78.998	255	74
6	11	17	18	22	27	1	7	11
215	398.02	251.02	222.02	403.98	255.998	79.998	262	85
200	360	240	180	360	240	60	240	60
15	38.02	11.02	42.02	43.98	15.998	19.998	22	25
					16	20		
			not visible		barely visible			not visible

Aug-27	Feb-27	Sep-27	Aug-27	Apr-27	Mar-27	Oct-27	Apr-27	Oct-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1241	1241	1242	1242	1242	1242	1243	1243	1244
259	259	258	258	258	258	257	257	256
94599.75	94599.75	94234.5	94234.5	94234.5	94234.5	93869.25	93869.25	93504
94599	94599	94234	94234	94234	94234	93869	93869	93504
1576.65	1576.65	1570.567	1570.567	1570.567	1570.567	1564.483	1564.483	1558.4
0.65	0.65	0.567	0.567	0.567	0.567	0.483	0.483	0.4
39	39	34.02	34.02	34.02	34.02	28.98	28.98	24
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
68	68	63.02	63.02	63.02	63.02	57.98	57.98	53
96	96	91.02	91.02	91.02	91.02	85.98	85.98	81
127	127	122.02	122.02	122.02	122.02	116.98	116.98	112
157	157	152.02	152.02	152.02	152.02	146.98	146.98	142
188	188	183.02	183.02	183.02	183.02	177.98	177.98	173
218	218	213.02	213.02	213.02	213.02	207.98	207.98	203
249	249	244.02	244.02	244.02	244.02	238.98	238.98	234
280	280	275.02	275.02	275.02	275.02	269.98	269.98	265
310	310	305.02	305.02	305.02	305.02	299.98	299.98	295
341	341	336.02	336.02	336.02	336.02	330.98	330.98	326
371	371	366.02	366.02	366.02	366.02	360.98	360.98	356
402	402	397.02	397.02	397.02	397.02	391.98	391.98	387
249	68	275.02	244.02	122.02	91.02	299.98	116.98	295
17	23	28	29	4	5	9	14	19
266	91	303.02	273.02	126.02	96.02	308.98	130.98	314
240	60	300	240	120	60	300	120	300
26	31	3.02	33.02	6.02	36.02	8.98	10.98	14

not visible visible

Apr-27	Oct-27	May-27	Dec-27	Nov-27	Jun-27	Dec-27	Jun-27	Dec-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1244	1245	1245	1246	1246	1246	1247	1247	1248
256	255	255	254	254	254	253	253	252
93504	93138.75	93138.75	92773.5	92773.5	92773.5	92408.25	92408.25	92043
93504	93138	93138	92773	92773	92773	92408	92408	92043
1558.4	1552.3	1552.3	1546.217	1546.217	1546.217	1540.133	1540.133	1534.05
0.4	0.3	0.3	0.217	0.217	0.217	0.133	0.133	0.05
24	18	18	13.02	13.02	13.02	7.98	7.98	3
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
53	47	47	42.02	42.02	42.02	36.98	36.98	32
81	75	75	70.02	70.02	70.02	64.98	64.98	60
112	106	106	101.02	101.02	101.02	95.98	95.98	91
142	136	136	131.02	131.02	131.02	125.98	125.98	121
173	167	167	162.02	162.02	162.02	156.98	156.98	152
203	197	197	192.02	192.02	192.02	186.98	186.98	182
234	228	228	223.02	223.02	223.02	217.98	217.98	213
265	259	259	254.02	254.02	254.02	248.98	248.98	244
295	289	289	284.02	284.02	284.02	278.98	278.98	274
326	320	320	315.02	315.02	315.02	309.98	309.98	305
356	350	350	345.02	345.02	345.02	339.98	339.98	335
387	381	381	376.02	376.02	376.02	370.98	370.98	366
112	289	136	345.02	315.02	162.02	339.98	156.98	335
25	30	6	10	10	16	20	27	31
137	319	142	355.02	325.02	178.02	359.98	183.98	366
120	300	120	300	300	120	300	180	360
17	19	22	55.02	25.02	58.02	59.98	3.98	6
17								6

not visible not visible

not visible

barely visib

Jul-27	Jan-27	Aug-27	Jul-27	Feb-27	Jan-27	Aug-27	Mar-27	Sep-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1248	1248	1249	1249	1249	1249	1250	1250	1251
252	252	251	251	251	251	250	250	249
92043	92043	91677.75	91677.75	91677.75	91677.75	91312.5	91312.5	90947.25
92043	92043	91677	91677	91677	91677	91312	91312	90947
1534.05	1534.05	1527.95	1527.95	1527.95	1527.95	1521.867	1521.867	1515.783
0.05	0.05	0.95	0.95	0.95	0.95	0.867	0.867	0.783
3	3	57	57	57	57	52.02	52.02	46.98
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
32	32	86	86	86	86	81.02	81.02	75.98
60	60	114	114	114	114	109.02	109.02	103.98
91	91	145	145	145	145	140.02	140.02	134.98
121	121	175	175	175	175	170.02	170.02	164.98
152	152	206	206	206	206	201.02	201.02	195.98
182	182	236	236	236	236	231.02	231.02	225.98
213	213	267	267	267	267	262.02	262.02	256.98
244	244	298	298	298	298	293.02	293.02	287.98
274	274	328	328	328	328	323.02	323.02	317.98
305	305	359	359	359	359	354.02	354.02	348.98
335	335	389	389	389	389	384.02	384.02	378.98
366	366	420	420	420	420	415.02	415.02	409.98
182	3	267	236	86	57	262.02	109.02	287.98
7	11	16	17	22	23	27	4	7
189	14	283	253	108	80	289.02	113.02	294.98
180	0	240	240	60	60	240	60	240
9	14	43	13	48	20	49.02	53.02	54.98
		42					53	

le

not visible

total

Solar> Wending > <WuYi

Apr-27	Sep-27	Mar-27	Oct-27	Sep-27	May-27	Apr-27	Nov-27	May-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1251	1252	1252	1253	1253	1253	1253	1254	1254
249	248	248	247	247	247	247	246	246
90947.25	90582	90582	90216.75	90216.75	90216.75	90216.75	89851.5	89851.5
90947	90582	90582	90216	90216	90216	90216	89851	89851
1515.783	1509.7	1509.7	1503.6	1503.6	1503.6	1503.6	1497.517	1497.517
0.783	0.7	0.7	0.6	0.6	0.6	0.6	0.517	0.517
46.98	42	42	36	36	36	36	31.02	31.02
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
75.98	71	71	65	65	65	65	60.02	60.02
103.98	99	99	93	93	93	93	88.02	88.02
134.98	130	130	124	124	124	124	119.02	119.02
164.98	160	160	154	154	154	154	149.02	149.02
195.98	191	191	185	185	185	185	180.02	180.02
225.98	221	221	215	215	215	215	210.02	210.02
256.98	252	252	246	246	246	246	241.02	241.02
287.98	283	283	277	277	277	277	272.02	272.02
317.98	313	313	307	307	307	307	302.02	302.02
348.98	344	344	338	338	338	338	333.02	333.02
378.98	374	374	368	368	368	368	363.02	363.02
409.98	405	405	399	399	399	399	394.02	394.02
103.98	283	99	307	277	154	124	333.02	149.02
14	18	25	28	29	4	4	9	16
117.98	301	124	335	306	158	128	342.02	165.02
60	300	120	300	300	120	120	300	120
57.98	1	4	35	6	38	8	42.02	45.02
							42	
	visible				possibly visible		Not visible	

Nov-27	May-27	Nov-27	Jul-27	Jun-27	Dec-27	Jul-27	Jan-27	Jul-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1255	1255	1256	1256	1256	1257	1257	1257	1258
245	245	244	244	244	243	243	243	242
89486.25	89486.25	89121	89121	89121	88755.75	88755.75	88755.75	88390.5
89486	89486	89121	89121	89121	88755	88755	88755	88390
1491.433	1491.433	1485.35	1485.35	1485.35	1479.25	1479.25	1479.25	1473.167
0.433	0.433	0.35	0.35	0.35	0.25	0.25	0.25	0.167
25.98	25.98	21	21	21	15	15	15	10.02
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
54.98	54.98	50	50	50	44	44	44	39.02
82.98	82.98	78	78	78	72	72	72	67.02
113.98	113.98	109	109	109	103	103	103	98.02
143.98	143.98	139	139	139	133	133	133	128.02
174.98	174.98	170	170	170	164	164	164	159.02
204.98	204.98	200	200	200	194	194	194	189.02
235.98	235.98	231	231	231	225	225	225	220.02
266.98	266.98	262	262	262	256	256	256	251.02
296.98	296.98	292	292	292	286	286	286	281.02
327.98	327.98	323	323	323	317	317	317	312.02
357.98	357.98	353	353	353	347	347	347	342.02
388.98	388.98	384	384	384	378	378	378	373.02
327.98	143.98	323	200	170	347	194	15	189.02
19	27	30	6	6	11	16	21	27
346.98	170.98	353	206	176	358	210	36	216.02
300	120	300	180	120	300	180	0	180
46.98	50.98	53	26	56	58	30	36	36.02
47	51	54						
not visible	barely poss	not visible			30% visible		barely visib	
	54 dateline							

Feb-27	Aug-27	Feb-27	Sep-27	Aug-27	Mar-27	Feb-27	Sep-27	Apr-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1258	1259	1259	1260	1260	1260	1260	1261	1261
242	241	241	240	240	240	240	239	239
88390.5	88025.25	88025.25	87660	87660	87660	87660	87294.75	87294.75
88390	88025	88025	87660	87660	87660	87660	87294	87294
1473.167	1467.083	1467.083	1461	1461	1461	1461	1454.9	1454.9
0.167	0.083	0.083	1	1	1	1	0.9	0.9
10.02	4.98	4.98	60	60	60	60	54	54

29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31

39.02	33.98	33.98	89	89	89	89	83	83
67.02	61.98	61.98	117	117	117	117	111	111
98.02	92.98	92.98	148	148	148	148	142	142
128.02	122.98	122.98	178	178	178	178	172	172
159.02	153.98	153.98	209	209	209	209	203	203
189.02	183.98	183.98	239	239	239	239	233	233
220.02	214.98	214.98	270	270	270	270	264	264
251.02	245.98	245.98	301	301	301	301	295	295
281.02	275.98	275.98	331	331	331	331	325	325
312.02	306.98	306.98	362	362	362	362	356	356
342.02	336.98	336.98	392	392	392	392	386	386
373.02	367.98	367.98	423	423	423	423	417	417

39.02	214.98	33.98	301	270	117	89	295	142
1	7	12	16	18	23	22	27	3
40.02	221.98	45.98	317	288	140	111	322	145
0	180	0	300	240	120	60	300	120
40.02	41.98	45.98	17	48	20	51	22	25
	42	46	17			51		

barely visib not visible

not visible

barely visib possibly vis not visible

Oct-27	Apr-27	Oct-27	Apr-27	Nov-27	Oct-27	Jun-27	Dec-27	Jun-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1262	1262	1263	1263	1264	1264	1264	1265	1265
238	238	237	237	236	236	236	235	235
86929.5	86929.5	86564.25	86564.25	86199	86199	86199	85833.75	85833.75
86929	86929	86564	86564	86199	86199	86199	85833	85833
1448.817	1448.817	1442.733	1442.733	1436.65	1436.65	1436.65	1430.55	1430.55
0.817	0.817	0.733	0.733	0.65	0.65	0.65	0.55	0.55
49.02	49.02	43.98	43.98	39	39	39	33	33

29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31

78.02	78.02	72.98	72.98	68	68	68	62	62
106.02	106.02	100.98	100.98	96	96	96	90	90
137.02	137.02	131.98	131.98	127	127	127	121	121
167.02	167.02	161.98	161.98	157	157	157	151	151
198.02	198.02	192.98	192.98	188	188	188	182	182
228.02	228.02	222.98	222.98	218	218	218	212	212
259.02	259.02	253.98	253.98	249	249	249	243	243
290.02	290.02	284.98	284.98	280	280	280	274	274
320.02	320.02	314.98	314.98	310	310	310	304	304
351.02	351.02	345.98	345.98	341	341	341	335	335
381.02	381.02	375.98	375.98	371	371	371	365	365
412.02	412.02	406.98	406.98	402	402	402	396	396

320.02	137.02	314.98	131.98	341	310	188	365	182
9	14	19	25	28	30	5	9	15
329.02	151.02	333.98	156.98	369	340	193	374	197
300	120	300	120	360	300	180	360	180
29.02	31.02	33.98	36.98	9	40	13	14	17
29		34	37					

30% visible not visible not visible not visible not visible

visible not visible

Dec-27	Jun-27	Jan-27	Aug-27	Jul-27	Jan-27	Aug-27	Feb-27	Aug-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1266	1266	1266	1267	1267	1267	1268	1268	1269
234	234	234	233	233	233	232	232	231
85468.5	85468.5	85468.5	85103.25	85103.25	85103.25	84738	84738	84372.75
85468	85468	85468	85103	85103	85103	84738	84738	84372
1424.467	1424.467	1424.467	1418.383	1418.383	1418.383	1412.3	1412.3	1406.2
0.467	0.467	0.467	0.383	0.383	0.383	0.3	0.3	0.2
28.02	28.02	28.02	22.98	22.98	22.98	18	18	12
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
57.02	57.02	57.02	51.98	51.98	51.98	47	47	41
85.02	85.02	85.02	79.98	79.98	79.98	75	75	69
116.02	116.02	116.02	110.98	110.98	110.98	106	106	100
146.02	146.02	146.02	140.98	140.98	140.98	136	136	130
177.02	177.02	177.02	171.98	171.98	171.98	167	167	161
207.02	207.02	207.02	201.98	201.98	201.98	197	197	191
238.02	238.02	238.02	232.98	232.98	232.98	228	228	222
269.02	269.02	269.02	263.98	263.98	263.98	259	259	253
299.02	299.02	299.02	293.98	293.98	293.98	289	289	283
330.02	330.02	330.02	324.98	324.98	324.98	320	320	314
360.02	360.02	360.02	354.98	354.98	354.98	350	350	344
391.02	391.02	391.02	385.98	385.98	385.98	381	381	375
360.02	177.02	28.02	232.98	201.98	22.98	228	47	222
21	27	1	5	7	12	16	21	27
381.02	204.02	29.02	237.98	208.98	34.98	244	68	249
360	180	0	180	180	0	240	60	240
21.02	24.02	29.02	57.98	28.98	34.98	4	8	9
			58	29	35			

barely visible

total

Mar-27	Sep-27	Mar-27	Oct-27	Sep-27	Apr-27	Mar-27	Oct-27	May-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1269	1270	1270	1271	1271	1271	1271	1272	1272
231	230	230	229	229	229	229	228	228
84372.75	84007.5	84007.5	83642.25	83642.25	83642.25	83642.25	83277	83277
84372	84007	84007	83642	83642	83642	83642	83277	83277
1406.2	1400.117	1400.117	1394.033	1394.033	1394.033	1394.033	1387.95	1387.95
0.2	0.117	0.117	0.033	0.033	0.033	0.033	0.95	0.95
12	7.02	7.02	1.98	1.98	1.98	1.98	57	57
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
41	36.02	36.02	30.98	30.98	30.98	30.98	86	86
69	64.02	64.02	58.98	58.98	58.98	58.98	114	114
100	95.02	95.02	89.98	89.98	89.98	89.98	145	145
130	125.02	125.02	119.98	119.98	119.98	119.98	175	175
161	156.02	156.02	150.98	150.98	150.98	150.98	206	206
191	186.02	186.02	180.98	180.98	180.98	180.98	236	236
222	217.02	217.02	211.98	211.98	211.98	211.98	267	267
253	248.02	248.02	242.98	242.98	242.98	242.98	298	298
283	278.02	278.02	272.98	272.98	272.98	272.98	328	328
314	309.02	309.02	303.98	303.98	303.98	303.98	359	359
344	339.02	339.02	333.98	333.98	333.98	333.98	389	389
375	370.02	370.02	364.98	364.98	364.98	364.98	420	420
69	248.02	64.02	272.98	242.98	89.98	58.98	328	175
3	8	14	18	19	24	25	29	5
72	256.02	78.02	290.98	261.98	113.98	83.98	357	180
60	240	60	240	240	60	60	300	120
12	16.02	18.02	50.98	21.98	53.98	23.98	57	60
			51	22	54	24		

barely visib not visible not visible

Nov-27	May-27	Nov-27	May-27	Nov-27	Jul-27	Jan-27	Jul-27	Jan-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1273	1273	1274	1274	1275	1275	1275	1276	1276
227	227	226	226	225	225	225	224	224
82911.75	82911.75	82546.5	82546.5	82181.25	82181.25	82181.25	81816	81816
82911	82911	82546	82546	82181	82181	82181	81816	81816
1381.85	1381.85	1375.767	1375.767	1369.683	1369.683	1369.683	1363.6	1363.6
0.85	0.85	0.767	0.767	0.683	0.683	0.683	0.6	0.6
51	51	46.02	46.02	40.98	40.98	40.98	36	36
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
80	80	75.02	75.02	69.98	69.98	69.98	65	65
108	108	103.02	103.02	97.98	97.98	97.98	93	93
139	139	134.02	134.02	128.98	128.98	128.98	124	124
169	169	164.02	164.02	158.98	158.98	158.98	154	154
200	200	195.02	195.02	189.98	189.98	189.98	185	185
230	230	225.02	225.02	219.98	219.98	219.98	215	215
261	261	256.02	256.02	250.98	250.98	250.98	246	246
292	292	287.02	287.02	281.98	281.98	281.98	277	277
322	322	317.02	317.02	311.98	311.98	311.98	307	307
353	353	348.02	348.02	342.98	342.98	342.98	338	338
383	383	378.02	378.02	372.98	372.98	372.98	368	368
414	414	409.02	409.02	403.98	403.98	403.98	399	399
353	169	348.02	164.02	342.98	219.98	40.98	215	36
8	15	19	27	30	6	10	16	21
361	184	367.02	191.02	372.98	225.98	50.98	231	57
360	180	360	180	360	180	0	180	0
1	4	7.02	11.02	12.98	45.98	50.98	51	57
				13	46	51		

not visible visible
80%
correct

Jul-27	Feb-27	Sep-27	Aug-27	Mar-27	Feb-27	Sep-27	Mar-27	Sep-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1277	1277	1278	1278	1278	1278	1279	1279	1280
223	223	222	222	222	222	221	221	220
81450.75	81450.75	81085.5	81085.5	81085.5	81085.5	80720.25	80720.25	80355
81450	81450	81085	81085	81085	81085	80720	80720	80355
1357.5	1357.5	1351.417	1351.417	1351.417	1351.417	1345.333	1345.333	1339.25
0.5	0.5	0.417	0.417	0.417	0.417	0.333	0.333	0.25
30	30	25.02	25.02	25.02	25.02	19.98	19.98	15
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
59	59	54.02	54.02	54.02	54.02	48.98	48.98	44
87	87	82.02	82.02	82.02	82.02	76.98	76.98	72
118	118	113.02	113.02	113.02	113.02	107.98	107.98	103
148	148	143.02	143.02	143.02	143.02	137.98	137.98	133
179	179	174.02	174.02	174.02	174.02	168.98	168.98	164
209	209	204.02	204.02	204.02	204.02	198.98	198.98	194
240	240	235.02	235.02	235.02	235.02	229.98	229.98	225
271	271	266.02	266.02	266.02	266.02	260.98	260.98	256
301	301	296.02	296.02	296.02	296.02	290.98	290.98	286
332	332	327.02	327.02	327.02	327.02	321.98	321.98	317
362	362	357.02	357.02	357.02	357.02	351.98	351.98	347
393	393	388.02	388.02	388.02	388.02	382.98	382.98	378
209	59	266.02	235.02	82.02	54.02	260.98	76.98	256
27	1	6	7	13	12	17	23	28
236	60	272.02	242.02	95.02	66.02	277.98	99.98	284
180	0	240	240	60	60	240	60	240
56	60	32.02	2.02	35.02	6.02	37.98	39.98	44
						38	40	

possibly visible

visible

Apr-27	Oct-27	Apr-27	Nov-27	Oct-27	May-27	Apr-27	Nov-27	Jun-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1280	1281	1281	1282	1282	1282	1282	1283	1283
220	219	219	218	218	218	218	217	217
80355	79989.75	79989.75	79624.5	79624.5	79624.5	79624.5	79259.25	79259.25
80355	79989	79989	79624	79624	79624	79624	79259	79259
1339.25	1333.15	1333.15	1327.067	1327.067	1327.067	1327.067	1320.983	1320.983
0.25	0.15	0.15	0.067	0.067	0.067	0.067	0.985	0.985
15	9	9	4.02	4.02	4.02	4.02	59.1	59.1
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
44	38	38	33.02	33.02	33.02	33.02	88.1	88.1
72	66	66	61.02	61.02	61.02	61.02	116.1	116.1
103	97	97	92.02	92.02	92.02	92.02	147.1	147.1
133	127	127	122.02	122.02	122.02	122.02	177.1	177.1
164	158	158	153.02	153.02	153.02	153.02	208.1	208.1
194	188	188	183.02	183.02	183.02	183.02	238.1	238.1
225	219	219	214.02	214.02	214.02	214.02	269.1	269.1
256	250	250	245.02	245.02	245.02	245.02	300.1	300.1
286	280	280	275.02	275.02	275.02	275.02	330.1	330.1
317	311	311	306.02	306.02	306.02	306.02	361.1	361.1
347	341	341	336.02	336.02	336.02	336.02	391.1	391.1
378	372	372	367.02	367.02	367.02	367.02	422.1	422.1
103	280	97	306.02	275.02	122.02	92.02	361.1	208.1
3	8	14	18	19	25	26	29	5
106	288	111	324.02	294.02	147.02	118.02	390.1	213.1
60	240	60	300	240	120	60	360	180
46	48	51	24.02	54.02	27.02	58.02	30.1	33.1
		51			27			

visible barely visible not visible not visible possibly vis
80%
just 6 days

Dec-27	Jun-27	Dec-27	Jul-27	Jun-27	Jan-27	Jan-27	Jan-27	Jan-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1284	1284	1285	1285	1285	1285	1285	1285	1285
216	216	215	215	215	215	215	215	215
78894	78894	78528.75	78528.75	78528.75	78528.75	78528.75	78528.75	78528.75
78894	78894	78528	78528	78528	78528	78528	78528	78528
1314.9	1314.9	1308.8	1308.8	1308.8	1308.8	1308.8	1308.8	1308.8
0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8
54	54	48	48	48	48	48	48	48
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
83	83	77	77	77	77	77	77	77
111	111	105	105	105	105	105	105	105
142	142	136	136	136	136	136	136	136
172	172	166	166	166	166	166	166	166
203	203	197	197	197	197	197	197	197
233	233	227	227	227	227	227	227	227
264	264	258	258	258	258	258	258	258
295	295	289	289	289	289	289	289	289
325	325	319	319	319	319	319	319	319
356	356	350	350	350	350	350	350	350
386	386	380	380	380	380	380	380	380
417	417	411	411	411	411	411	411	411
386	203	380	227	380	48	48	48	48
9	15	21	25	26	1	1	1	1
395	218	401	252	406	49	49	49	49
360	180	360	180	360	0	0	0	0
35	38	41	72	46	49	49	49	49

ible
barely visible
total
sunset

Jan-27	Jan-27	Jan-27	Jan-27	Jan-27	Jan-27	Jan-27	Jan-27	Jan-27
1500	1500	1500	1500	1500	1500	1500	1500	1500
1285	1285	1285	1285	1285	1285	1285	1285	1285
215	215	215	215	215	215	215	215	215
78528.75	78528.75	78528.75	78528.75	78528.75	78528.75	78528.75	78528.75	78528.75
78528	78528	78528	78528	78528	78528	78528	78528	78528
1308.8	1308.8	1308.8	1308.8	1308.8	1308.8	1308.8	1308.8	1308.8
0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
48	48	48	48	48	48	48	48	48
29	29	29	29	29	29	29	29	29
28	28	28	28	28	28	28	28	28
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
30	30	30	30	30	30	30	30	30
31	31	31	31	31	31	31	31	31
77	77	77	77	77	77	77	77	77
105	105	105	105	105	105	105	105	105
136	136	136	136	136	136	136	136	136
166	166	166	166	166	166	166	166	166
197	197	197	197	197	197	197	197	197
227	227	227	227	227	227	227	227	227
258	258	258	258	258	258	258	258	258
289	289	289	289	289	289	289	289	289
319	319	319	319	319	319	319	319	319
350	350	350	350	350	350	350	350	350
380	380	380	380	380	380	380	380	380
411	411	411	411	411	411	411	411	411
48	48	48	48	48	48	48	48	48
1	1	1	1	1	1	1	1	1
49	49	49	49	49	49	49	49	49
0	0	0	0	0	0	0	0	0
49	49	49	49	49	49	49	49	49

before
day 52
3 days
darkness

Jan-27
1500
1285
215
78528.75
78528
1308.8
0.8
48

29
28
31
30
31
30
31
31
30
31
30
31

77
105
136
166
197
227
258
289
319
350
380
411

48
1
49
0
49