

\*\*\*\*\*

## Jupiter Events

All times are in UT

As ALL events are listed, some may not be visible from your location!

Altitude (Alt) is as viewed from Adelaide so may not be applicable.

\*\*\*\*\*

-----  
IO Start Eclipse                   2024/11/1 2:58, Alt = -56  
IO End Occultation               2024/11/1 5:55, Alt = -75  
IO End Eclipse                    2024/11/1 5:55, Alt = -75  
-----

IO Start Shadow Transit         2024/11/2 0:06, Alt = -22  
IO Start Transit                 2024/11/2 0:51, Alt = -31  
IO End Shadow Transit            2024/11/2 2:17, Alt = -49  
IO End Transit                   2024/11/2 3:02, Alt = -58  
Europa Start Eclipse             2024/11/2 8:29, Alt = -46  
Europa End Occultation          2024/11/2 12:36, Alt = 2  
Europa End Eclipse               2024/11/2 12:36, Alt = 2  
IO Start Eclipse                 2024/11/2 21:26, Alt = 7  
-----

IO End Occultation               2024/11/3 0:22, Alt = -26  
IO End Eclipse                   2024/11/3 0:22, Alt = -26  
Ganymede Start Shadow Transit   2024/11/3 2:47, Alt = -56  
Ganymede End Shadow Transit     2024/11/3 4:51, Alt = -76  
Ganymede Start Transit          2024/11/3 6:07, Alt = -72  
Ganymede End Transit             2024/11/3 8:04, Alt = -50  
IO Start Shadow Transit         2024/11/3 18:35, Alt = 29  
IO Start Transit                 2024/11/3 19:17, Alt = 25  
IO End Shadow Transit            2024/11/3 20:46, Alt = 13  
IO End Transit                   2024/11/3 21:28, Alt = 6  
-----

Europa Start Shadow Transit     2024/11/4 3:39, Alt = -66  
Europa Start Transit             2024/11/4 5:11, Alt = -77  
Europa End Shadow Transit        2024/11/4 6:11, Alt = -71  
Europa End Transit               2024/11/4 7:42, Alt = -54  
IO Start Eclipse                 2024/11/4 15:55, Alt = 30  
IO End Occultation               2024/11/4 18:48, Alt = 27  
IO End Eclipse                   2024/11/4 18:48, Alt = 27  
-----

IO Start Shadow Transit         2024/11/5 13:03, Alt = 9  
IO Start Transit                 2024/11/5 13:44, Alt = 16  
IO End Shadow Transit            2024/11/5 15:14, Alt = 27  
IO End Transit                   2024/11/5 15:54, Alt = 30  
Europa Start Eclipse             2024/11/5 21:47, Alt = 1  
-----

Europa End Occultation          2024/11/6 1:46, Alt = -46  
Europa End Eclipse               2024/11/6 1:46, Alt = -46  
IO Start Eclipse                 2024/11/6 10:24, Alt = -19  
IO End Occultation               2024/11/6 13:14, Alt = 12  
IO End Eclipse                   2024/11/6 13:14, Alt = 12  
Ganymede Start Eclipse          2024/11/6 16:36, Alt = 32  
Ganymede End Eclipse            2024/11/6 18:43, Alt = 27  
Ganymede Start Occultation      2024/11/6 19:39, Alt = 20  
Ganymede End Occultation        2024/11/6 21:37, Alt = 2  
-----

IO Start Shadow Transit         2024/11/7 7:32, Alt = -53  
IO Start Transit                 2024/11/7 8:10, Alt = -45  
IO End Shadow Transit            2024/11/7 9:43, Alt = -26  
IO End Transit                   2024/11/7 10:21, Alt = -18  
Europa Start Shadow Transit     2024/11/7 16:57, Alt = 32

Europa Start Transit	2024/11/7 18:20, Alt = 29
Europa End Shadow Transit	2024/11/7 19:29, Alt = 21
Europa End Transit	2024/11/7 20:51, Alt = 9
-----	
IO Start Eclipse	2024/11/8 4:52, Alt = -77
IO End Occultation	2024/11/8 7:41, Alt = -50
IO End Eclipse	2024/11/8 7:41, Alt = -50
-----	
IO Start Shadow Transit	2024/11/9 2:00, Alt = -51
IO Start Transit	2024/11/9 2:36, Alt = -58
IO End Shadow Transit	2024/11/9 4:12, Alt = -75
IO End Transit	2024/11/9 4:47, Alt = -77
Europa Start Eclipse	2024/11/9 11:05, Alt = -8
Europa End Occultation	2024/11/9 14:54, Alt = 27
Europa End Eclipse	2024/11/9 14:54, Alt = 27
IO Start Eclipse	2024/11/9 23:21, Alt = -20
-----	
IO End Occultation	2024/11/10 2:07, Alt = -54
IO End Eclipse	2024/11/10 2:07, Alt = -54
Ganymede Start Shadow Transit	2024/11/10 6:47, Alt = -59
Ganymede End Shadow Transit	2024/11/10 8:53, Alt = -34
Ganymede Start Transit	2024/11/10 9:30, Alt = -26
Ganymede End Transit	2024/11/10 11:27, Alt = -3
IO Start Shadow Transit	2024/11/10 20:29, Alt = 10
IO Start Transit	2024/11/10 21:02, Alt = 5
IO End Shadow Transit	2024/11/10 22:40, Alt = -12
IO End Transit	2024/11/10 23:13, Alt = -19
-----	
Europa Start Shadow Transit	2024/11/11 6:15, Alt = -65
Europa Start Transit	2024/11/11 7:29, Alt = -50
Europa End Shadow Transit	2024/11/11 8:48, Alt = -34
Europa End Transit	2024/11/11 10:00, Alt = -19
IO Start Eclipse	2024/11/11 17:50, Alt = 30
IO End Occultation	2024/11/11 20:33, Alt = 9
IO End Eclipse	2024/11/11 20:33, Alt = 9
-----	
IO Start Shadow Transit	2024/11/12 14:58, Alt = 28
IO Start Transit	2024/11/12 15:29, Alt = 30
IO End Shadow Transit	2024/11/12 17:09, Alt = 32
IO End Transit	2024/11/12 17:39, Alt = 30
-----	
Europa Start Eclipse	2024/11/13 0:23, Alt = -35
Europa End Occultation	2024/11/13 4:03, Alt = -76
Europa End Eclipse	2024/11/13 4:03, Alt = -76
IO Start Eclipse	2024/11/13 12:18, Alt = 7
IO End Occultation	2024/11/13 14:59, Alt = 29
IO End Eclipse	2024/11/13 14:59, Alt = 29
Ganymede Start Eclipse	2024/11/13 20:36, Alt = 7
Ganymede End Eclipse	2024/11/13 22:44, Alt = -16
Ganymede Start Occultation	2024/11/13 23:01, Alt = -19
-----	
Ganymede End Occultation	2024/11/14 0:59, Alt = -43
IO Start Shadow Transit	2024/11/14 9:26, Alt = -23
IO Start Transit	2024/11/14 9:55, Alt = -18
IO End Shadow Transit	2024/11/14 11:38, Alt = 1
IO End Transit	2024/11/14 12:06, Alt = 6
Europa Start Shadow Transit	2024/11/14 19:34, Alt = 16
Europa Start Transit	2024/11/14 20:37, Alt = 6
Europa End Shadow Transit	2024/11/14 22:06, Alt = -9
Europa End Transit	2024/11/14 23:08, Alt = -21
-----	
IO Start Eclipse	2024/11/15 6:47, Alt = -55
IO End Occultation	2024/11/15 9:25, Alt = -23
IO End Eclipse	2024/11/15 9:25, Alt = -23

-----  
IO Start Shadow Transit 2024/11/16 3:55, Alt = -76  
IO Start Transit 2024/11/16 4:21, Alt = -77  
IO End Shadow Transit 2024/11/16 6:06, Alt = -62  
IO End Transit 2024/11/16 6:32, Alt = -57  
Europa Start Eclipse 2024/11/16 13:41, Alt = 22  
Europa End Occultation 2024/11/16 17:11, Alt = 31  
Europa End Eclipse 2024/11/16 17:11, Alt = 31  
-----

IO Start Eclipse 2024/11/17 1:16, Alt = -49  
IO End Occultation 2024/11/17 3:51, Alt = -76  
IO End Eclipse 2024/11/17 3:51, Alt = -76  
Ganymede Start Shadow Transit 2024/11/17 10:46, Alt = -5  
Ganymede Start Transit 2024/11/17 12:50, Alt = 15  
Ganymede End Shadow Transit 2024/11/17 12:53, Alt = 16  
Ganymede End Transit 2024/11/17 14:47, Alt = 29  
IO Start Shadow Transit 2024/11/17 22:24, Alt = -15  
IO Start Transit 2024/11/17 22:47, Alt = -20  
-----

IO End Shadow Transit 2024/11/18 0:35, Alt = -42  
IO End Transit 2024/11/18 0:58, Alt = -47  
Europa Start Shadow Transit 2024/11/18 8:52, Alt = -27  
Europa Start Transit 2024/11/18 9:45, Alt = -16  
Europa End Shadow Transit 2024/11/18 11:24, Alt = 2  
Europa End Transit 2024/11/18 12:16, Alt = 11  
IO Start Eclipse 2024/11/18 19:44, Alt = 12  
IO End Occultation 2024/11/18 22:17, Alt = -15  
IO End Eclipse 2024/11/18 22:17, Alt = -15  
-----

IO Start Shadow Transit 2024/11/19 16:52, Alt = 31  
IO Start Transit 2024/11/19 17:13, Alt = 30  
IO End Shadow Transit 2024/11/19 19:04, Alt = 17  
IO End Transit 2024/11/19 19:24, Alt = 14  
-----

Europa Start Eclipse 2024/11/20 2:59, Alt = -72  
Europa End Occultation 2024/11/20 6:18, Alt = -56  
Europa End Eclipse 2024/11/20 6:18, Alt = -56  
IO Start Eclipse 2024/11/20 14:13, Alt = 27  
IO End Occultation 2024/11/20 16:43, Alt = 31  
IO End Eclipse 2024/11/20 16:43, Alt = 31  
-----

Ganymede Start Eclipse 2024/11/21 0:37, Alt = -45  
Ganymede End Occultation 2024/11/21 4:18, Alt = -76  
Ganymede End Eclipse 2024/11/21 4:18, Alt = -76  
IO Start Shadow Transit 2024/11/21 11:21, Alt = 4  
IO Start Transit 2024/11/21 11:39, Alt = 7  
IO End Shadow Transit 2024/11/21 13:32, Alt = 24  
IO End Transit 2024/11/21 13:50, Alt = 26  
Europa Start Shadow Transit 2024/11/21 22:10, Alt = -16  
Europa Start Transit 2024/11/21 22:53, Alt = -25  
-----

Europa End Shadow Transit 2024/11/22 0:43, Alt = -47  
Europa End Transit 2024/11/22 1:23, Alt = -55  
IO Start Eclipse 2024/11/22 8:42, Alt = -25  
IO End Occultation 2024/11/22 11:09, Alt = 2  
IO End Eclipse 2024/11/22 11:09, Alt = 2  
-----

IO Start Shadow Transit 2024/11/23 5:49, Alt = -59  
IO Start Transit 2024/11/23 6:05, Alt = -56  
IO End Shadow Transit 2024/11/23 8:01, Alt = -32  
IO End Transit 2024/11/23 8:16, Alt = -29  
Europa Start Eclipse 2024/11/23 16:17, Alt = 32  
Europa End Occultation 2024/11/23 19:26, Alt = 11  
Europa End Eclipse 2024/11/23 19:26, Alt = 11

-----  
IO Start Eclipse 2024/11/24 3:10, Alt = -75  
IO End Occulation 2024/11/24 5:35, Alt = -61  
IO End Eclipse 2024/11/24 5:35, Alt = -61  
Ganymede Start Shadow Transit 2024/11/24 14:45, Alt = 31  
Ganymede Start Transit 2024/11/24 16:06, Alt = 32  
Ganymede End Shadow Transit 2024/11/24 16:54, Alt = 30  
Ganymede End Transit 2024/11/24 18:04, Alt = 23  
-----

IO Start Shadow Transit 2024/11/25 0:18, Alt = -45  
IO Start Transit 2024/11/25 0:31, Alt = -47  
IO End Shadow Transit 2024/11/25 2:30, Alt = -70  
IO End Transit 2024/11/25 2:41, Alt = -72  
Europa Start Shadow Transit 2024/11/25 11:28, Alt = 8  
Europa Start Transit 2024/11/25 12:00, Alt = 13  
Europa End Shadow Transit 2024/11/25 14:01, Alt = 28  
Europa End Transit 2024/11/25 14:30, Alt = 30  
IO Start Eclipse 2024/11/25 21:39, Alt = -13  
-----

IO End Occulation 2024/11/26 0:01, Alt = -42  
IO End Eclipse 2024/11/26 0:01, Alt = -42  
IO Start Shadow Transit 2024/11/26 18:47, Alt = 15  
IO Start Transit 2024/11/26 18:56, Alt = 14  
IO End Shadow Transit 2024/11/26 20:58, Alt = -6  
IO End Transit 2024/11/26 21:07, Alt = -8  
-----

Europa Start Eclipse 2024/11/27 5:35, Alt = -59  
Europa End Occulation 2024/11/27 8:33, Alt = -22  
Europa End Eclipse 2024/11/27 8:33, Alt = -22  
IO Start Eclipse 2024/11/27 16:08, Alt = 31  
IO End Occulation 2024/11/27 18:27, Alt = 18  
IO End Eclipse 2024/11/27 18:27, Alt = 18  
-----

Ganymede Start Eclipse 2024/11/28 4:37, Alt = -69  
Ganymede End Occulation 2024/11/28 7:34, Alt = -33  
Ganymede End Eclipse 2024/11/28 7:34, Alt = -33  
IO Start Shadow Transit 2024/11/28 13:15, Alt = 25  
IO Start Transit 2024/11/28 13:22, Alt = 26  
IO End Shadow Transit 2024/11/28 15:27, Alt = 32  
IO End Transit 2024/11/28 15:33, Alt = 32  
-----

Europa Start Shadow Transit 2024/11/29 0:46, Alt = -54  
Europa Start Transit 2024/11/29 1:07, Alt = -58  
Europa End Shadow Transit 2024/11/29 3:19, Alt = -77  
Europa End Transit 2024/11/29 3:38, Alt = -76  
IO Start Eclipse 2024/11/29 10:36, Alt = 2  
IO End Occulation 2024/11/29 12:53, Alt = 23  
IO End Eclipse 2024/11/29 12:53, Alt = 23  
-----

IO Start Shadow Transit 2024/11/30 7:44, Alt = -29  
IO Start Transit 2024/11/30 7:48, Alt = -29  
IO End Shadow Transit 2024/11/30 9:56, Alt = -3  
IO End Transit 2024/11/30 9:59, Alt = -3  
Europa Start Eclipse 2024/11/30 18:53, Alt = 12  
Europa End Occulation 2024/11/30 21:40, Alt = -18  
Europa End Eclipse 2024/11/30 21:40, Alt = -18  
-----

IO Start Eclipse 2024/12/1 5:05, Alt = -61  
IO End Occulation 2024/12/1 7:19, Alt = -34  
IO End Eclipse 2024/12/1 7:19, Alt = -34  
Ganymede Start Shadow Transit 2024/12/1 18:45, Alt = 12  
Ganymede Start Transit 2024/12/1 19:22, Alt = 6  
Ganymede End Shadow Transit 2024/12/1 20:55, Alt = -10  
Ganymede End Transit 2024/12/1 21:19, Alt = -15

-----  
IO Start Shadow Transit 2024/12/2 2:13, Alt = -73  
IO Start Transit 2024/12/2 2:14, Alt = -73  
IO End Shadow Transit 2024/12/2 4:24, Alt = -68  
IO End Transit 2024/12/2 4:25, Alt = -68  
Europa Start Shadow Transit 2024/12/2 14:04, Alt = 31  
Europa Start Transit 2024/12/2 14:14, Alt = 31  
Europa End Shadow Transit 2024/12/2 16:37, Alt = 28  
Europa End Transit 2024/12/2 16:44, Alt = 27  
IO Start Occultation 2024/12/2 23:33, Alt = -43  
-----

IO End Occultation 2024/12/3 1:45, Alt = -69  
IO End Eclipse 2024/12/3 1:45, Alt = -69  
IO Start Transit 2024/12/3 20:40, Alt = -9  
IO Start Shadow Transit 2024/12/3 20:41, Alt = -9  
IO End Transit 2024/12/3 22:51, Alt = -35  
IO End Shadow Transit 2024/12/3 22:53, Alt = -36  
-----

Europa Start Eclipse 2024/12/4 8:11, Alt = -20  
Europa End Occultation 2024/12/4 10:47, Alt = 8  
Europa End Eclipse 2024/12/4 10:47, Alt = 8  
IO Start Occultation 2024/12/4 17:59, Alt = 17  
IO End Eclipse 2024/12/4 20:14, Alt = -5  
-----

Ganymede Start Eclipse 2024/12/5 8:37, Alt = -14  
Ganymede End Occultation 2024/12/5 10:50, Alt = 9  
Ganymede End Eclipse 2024/12/5 10:50, Alt = 9  
IO Start Transit 2024/12/5 15:06, Alt = 32  
IO Start Shadow Transit 2024/12/5 15:10, Alt = 32  
IO End Transit 2024/12/5 17:17, Alt = 22  
IO End Shadow Transit 2024/12/5 17:22, Alt = 22  
-----

Europa Start Transit 2024/12/6 3:20, Alt = -75  
Europa Start Shadow Transit 2024/12/6 3:22, Alt = -74  
Europa End Transit 2024/12/6 5:51, Alt = -47  
Europa End Shadow Transit 2024/12/6 5:55, Alt = -46  
IO Start Occultation 2024/12/6 12:25, Alt = 24  
IO End Eclipse 2024/12/6 14:43, Alt = 33  
-----

IO Start Transit 2024/12/7 9:32, Alt = -2  
IO Start Shadow Transit 2024/12/7 9:39, Alt = -1  
IO End Transit 2024/12/7 11:43, Alt = 19  
IO End Shadow Transit 2024/12/7 11:51, Alt = 20  
Europa Start Occultation 2024/12/7 21:22, Alt = -21  
-----

Europa End Eclipse 2024/12/8 0:04, Alt = -54  
IO Start Occultation 2024/12/8 6:51, Alt = -33  
IO End Eclipse 2024/12/8 9:11, Alt = -5  
Ganymede Start Transit 2024/12/8 22:36, Alt = -37  
Ganymede Start Shadow Transit 2024/12/8 22:45, Alt = -39  
-----

Ganymede End Transit 2024/12/9 0:35, Alt = -61  
Ganymede End Shadow Transit 2024/12/9 0:56, Alt = -65  
IO Start Transit 2024/12/9 3:57, Alt = -67  
IO Start Shadow Transit 2024/12/9 4:07, Alt = -65  
IO End Transit 2024/12/9 6:09, Alt = -41  
IO End Shadow Transit 2024/12/9 6:19, Alt = -39  
Europa Start Transit 2024/12/9 16:27, Alt = 26  
Europa Start Shadow Transit 2024/12/9 16:40, Alt = 25  
Europa End Transit 2024/12/9 18:58, Alt = 4  
Europa End Shadow Transit 2024/12/9 19:13, Alt = 1  
-----

IO Start Occultation 2024/12/10 1:17, Alt = -69  
IO End Eclipse 2024/12/10 3:40, Alt = -69

IO Start Transit	2024/12/10 22:23, Alt = -36
IO Start Shadow Transit	2024/12/10 22:36, Alt = -39
-----	
IO End Transit	2024/12/11 0:34, Alt = -62
IO End Shadow Transit	2024/12/11 0:48, Alt = -65
Europa Start Occultation	2024/12/11 10:29, Alt = 10
Europa End Eclipse	2024/12/11 13:22, Alt = 31
IO Start Occultation	2024/12/11 19:43, Alt = -5
IO End Eclipse	2024/12/11 22:09, Alt = -34
-----	
Ganymede Start Occultation	2024/12/12 12:04, Alt = 24
Ganymede End Eclipse	2024/12/12 14:49, Alt = 32
IO Start Transit	2024/12/12 16:49, Alt = 22
IO Start Shadow Transit	2024/12/12 17:05, Alt = 20
IO End Transit	2024/12/12 19:00, Alt = 1
IO End Shadow Transit	2024/12/12 19:17, Alt = -1
-----	
Europa Start Transit	2024/12/13 5:34, Alt = -44
Europa Start Shadow Transit	2024/12/13 5:58, Alt = -39
Europa End Transit	2024/12/13 8:05, Alt = -13
Europa End Shadow Transit	2024/12/13 8:31, Alt = -8
IO Start Occultation	2024/12/13 14:09, Alt = 33
IO End Eclipse	2024/12/13 16:37, Alt = 23
-----	
IO Start Transit	2024/12/14 11:15, Alt = 19
IO Start Shadow Transit	2024/12/14 11:33, Alt = 22
IO End Transit	2024/12/14 13:26, Alt = 32
IO End Shadow Transit	2024/12/14 13:45, Alt = 32
Europa Start Occultation	2024/12/14 23:36, Alt = -54
-----	
Europa End Eclipse	2024/12/15 2:41, Alt = -74
IO Start Occultation	2024/12/15 8:34, Alt = -6
IO End Eclipse	2024/12/15 11:06, Alt = 19
-----	
Ganymede Start Transit	2024/12/16 1:51, Alt = -76
Ganymede Start Shadow Transit	2024/12/16 2:46, Alt = -73
Ganymede End Transit	2024/12/16 3:51, Alt = -62
Ganymede End Shadow Transit	2024/12/16 4:58, Alt = -49
IO Start Transit	2024/12/16 5:41, Alt = -40
IO Start Shadow Transit	2024/12/16 6:02, Alt = -35
IO End Transit	2024/12/16 7:52, Alt = -13
IO End Shadow Transit	2024/12/16 8:14, Alt = -9
Europa Start Transit	2024/12/16 18:41, Alt = 1
Europa Start Shadow Transit	2024/12/16 19:15, Alt = -4
Europa End Transit	2024/12/16 21:12, Alt = -27
Europa End Shadow Transit	2024/12/16 21:49, Alt = -34
-----	
IO Start Occultation	2024/12/17 3:00, Alt = -70
IO End Eclipse	2024/12/17 5:34, Alt = -40
-----	
IO Start Transit	2024/12/18 0:07, Alt = -63
IO Start Shadow Transit	2024/12/18 0:31, Alt = -68
IO End Transit	2024/12/18 2:18, Alt = -75
IO End Shadow Transit	2024/12/18 2:43, Alt = -72
Europa Start Occultation	2024/12/18 12:44, Alt = 31
Europa End Eclipse	2024/12/18 15:59, Alt = 25
IO Start Occultation	2024/12/18 21:26, Alt = -31
-----	
IO End Eclipse	2024/12/19 0:03, Alt = -63
Ganymede Start Occultation	2024/12/19 15:18, Alt = 28
IO Start Transit	2024/12/19 18:33, Alt = 1
Ganymede End Eclipse	2024/12/19 18:49, Alt = -1
IO Start Shadow Transit	2024/12/19 18:59, Alt = -3
IO End Transit	2024/12/19 20:44, Alt = -24

IO End Shadow Transit	2024/12/19 21:11, Alt = -29
-----	
Europa Start Transit	2024/12/20 7:48, Alt = -11
Europa Start Shadow Transit	2024/12/20 8:33, Alt = -2
Europa End Transit	2024/12/20 10:19, Alt = 15
Europa End Shadow Transit	2024/12/20 11:07, Alt = 22
IO Start Occultation	2024/12/20 15:52, Alt = 25
IO End Eclipse	2024/12/20 18:32, Alt = 0
-----	
IO Start Transit	2024/12/21 12:59, Alt = 32
IO Start Shadow Transit	2024/12/21 13:28, Alt = 33
IO End Transit	2024/12/21 15:10, Alt = 28
IO End Shadow Transit	2024/12/21 15:40, Alt = 25
-----	
Europa Start Occultation	2024/12/22 1:51, Alt = -76
Europa End Eclipse	2024/12/22 5:18, Alt = -39
IO Start Occultation	2024/12/22 10:18, Alt = 16
IO End Eclipse	2024/12/22 13:00, Alt = 32
-----	
Ganymede Start Transit	2024/12/23 5:07, Alt = -40
Ganymede Start Shadow Transit	2024/12/23 6:46, Alt = -20
Ganymede End Transit	2024/12/23 7:09, Alt = -16
IO Start Transit	2024/12/23 7:25, Alt = -12
IO Start Shadow Transit	2024/12/23 7:57, Alt = -6
Ganymede End Shadow Transit	2024/12/23 8:59, Alt = 4
IO End Transit	2024/12/23 9:36, Alt = 11
IO End Shadow Transit	2024/12/23 10:09, Alt = 16
Europa Start Transit	2024/12/23 20:55, Alt = -30
Europa Start Shadow Transit	2024/12/23 21:51, Alt = -41
Europa End Transit	2024/12/23 23:26, Alt = -60
-----	
Europa End Shadow Transit	2024/12/24 0:25, Alt = -71
IO Start Occultation	2024/12/24 4:44, Alt = -44
IO End Eclipse	2024/12/24 7:29, Alt = -11
-----	
IO Start Transit	2024/12/25 1:51, Alt = -75
IO Start Shadow Transit	2024/12/25 2:25, Alt = -70
IO End Transit	2024/12/25 4:02, Alt = -52
IO End Shadow Transit	2024/12/25 4:37, Alt = -45
Europa Start Occultation	2024/12/25 14:59, Alt = 28
Europa End Eclipse	2024/12/25 18:37, Alt = -4
IO Start Occultation	2024/12/25 23:10, Alt = -59
-----	
IO End Eclipse	2024/12/26 1:58, Alt = -73
Ganymede Start Occultation	2024/12/26 18:35, Alt = -5
IO Start Transit	2024/12/26 20:17, Alt = -25
IO Start Shadow Transit	2024/12/26 20:54, Alt = -32
IO End Transit	2024/12/26 22:29, Alt = -52
Ganymede End Eclipse	2024/12/26 22:50, Alt = -56
IO End Shadow Transit	2024/12/26 23:06, Alt = -59
-----	
Europa Start Transit	2024/12/27 10:03, Alt = 18
Europa Start Shadow Transit	2024/12/27 11:09, Alt = 26
Europa End Transit	2024/12/27 12:34, Alt = 32
Europa End Shadow Transit	2024/12/27 13:43, Alt = 32
IO Start Occultation	2024/12/27 17:37, Alt = 4
IO End Eclipse	2024/12/27 20:26, Alt = -27
-----	
IO Start Transit	2024/12/28 14:44, Alt = 28
IO Start Shadow Transit	2024/12/28 15:23, Alt = 24
IO End Transit	2024/12/28 16:55, Alt = 11
IO End Shadow Transit	2024/12/28 17:35, Alt = 4
-----	
Europa Start Occultation	2024/12/29 4:07, Alt = -47

Europa End Eclipse	2024/12/29 7:55, Alt = -2
IO Start Occultation	2024/12/29 12:03, Alt = 31
IO End Eclipse	2024/12/29 14:55, Alt = 27
-----	
Ganymede Start Transit	2024/12/30 8:25, Alt = 4
IO Start Transit	2024/12/30 9:10, Alt = 11
IO Start Shadow Transit	2024/12/30 9:51, Alt = 18
Ganymede End Transit	2024/12/30 10:29, Alt = 23
Ganymede Start Shadow Transit	2024/12/30 10:45, Alt = 25
IO End Transit	2024/12/30 11:21, Alt = 28
IO End Shadow Transit	2024/12/30 12:04, Alt = 31
Ganymede End Shadow Transit	2024/12/30 13:00, Alt = 33
Europa Start Transit	2024/12/30 23:11, Alt = -63
-----	
Europa Start Shadow Transit	2024/12/31 0:26, Alt = -75
Europa End Transit	2024/12/31 1:42, Alt = -73
Europa End Shadow Transit	2024/12/31 3:00, Alt = -59
IO Start Occultation	2024/12/31 6:29, Alt = -16
IO End Eclipse	2024/12/31 9:23, Alt = 14
-----	
IO Start Transit	2025/1/1 3:36, Alt = -51
IO Start Shadow Transit	2025/1/1 4:20, Alt = -42
IO End Transit	2025/1/1 5:48, Alt = -24
IO End Shadow Transit	2025/1/1 6:32, Alt = -15
Europa Start Occultation	2025/1/1 17:16, Alt = 4
Europa End Eclipse	2025/1/1 21:14, Alt = -42
-----	
IO Start Occultation	2025/1/2 0:55, Alt = -76
IO End Eclipse	2025/1/2 3:52, Alt = -47
Ganymede Start Occultation	2025/1/2 21:54, Alt = -51
IO Start Transit	2025/1/2 22:03, Alt = -53
IO Start Shadow Transit	2025/1/2 22:49, Alt = -62
-----	
Ganymede End Occultation	2025/1/3 0:00, Alt = -74
IO End Transit	2025/1/3 0:14, Alt = -75
Ganymede Start Eclipse	2025/1/3 0:35, Alt = -76
IO End Shadow Transit	2025/1/3 1:01, Alt = -76
Ganymede End Eclipse	2025/1/3 2:51, Alt = -58
Europa Start Transit	2025/1/3 12:19, Alt = 33
Europa Start Shadow Transit	2025/1/3 13:44, Alt = 31
Europa End Transit	2025/1/3 14:50, Alt = 25
Europa End Shadow Transit	2025/1/3 16:18, Alt = 12
IO Start Occultation	2025/1/3 19:22, Alt = -21
IO End Eclipse	2025/1/3 22:21, Alt = -57
-----	
IO Start Transit	2025/1/4 16:29, Alt = 10
IO Start Shadow Transit	2025/1/4 17:17, Alt = 2
IO End Transit	2025/1/4 18:41, Alt = -13
IO End Shadow Transit	2025/1/4 19:30, Alt = -23
-----	
Europa Start Occultation	2025/1/5 6:25, Alt = -13
Europa End Eclipse	2025/1/5 10:32, Alt = 26
IO Start Occultation	2025/1/5 13:48, Alt = 30
IO End Eclipse	2025/1/5 16:49, Alt = 6
-----	
IO Start Transit	2025/1/6 10:56, Alt = 29
IO Start Shadow Transit	2025/1/6 11:46, Alt = 32
Ganymede Start Transit	2025/1/6 11:46, Alt = 32
IO End Transit	2025/1/6 13:07, Alt = 32
Ganymede End Transit	2025/1/6 13:52, Alt = 29
IO End Shadow Transit	2025/1/6 13:58, Alt = 29
Ganymede Start Shadow Transit	2025/1/6 14:45, Alt = 24
Ganymede End Shadow Transit	2025/1/6 17:01, Alt = 3
-----	



Europa Start Transit	2025/1/7 1:28, Alt = -70
Europa Start Shadow Transit	2025/1/7 3:02, Alt = -52
Europa End Transit	2025/1/7 3:59, Alt = -41
Europa End Shadow Transit	2025/1/7 5:36, Alt = -21
IO Start Occultation	2025/1/7 8:15, Alt = 8
IO End Eclipse	2025/1/7 11:18, Alt = 31
-----	
IO Start Transit	2025/1/8 5:22, Alt = -23
IO Start Shadow Transit	2025/1/8 6:15, Alt = -12
IO End Transit	2025/1/8 7:34, Alt = 2
IO End Shadow Transit	2025/1/8 8:27, Alt = 11
Europa Start Occultation	2025/1/8 19:35, Alt = -28
Europa End Eclipse	2025/1/8 23:51, Alt = -75
-----	
IO Start Occultation	2025/1/9 2:41, Alt = -55
IO End Eclipse	2025/1/9 5:46, Alt = -17
IO Start Transit	2025/1/9 23:49, Alt = -76
-----	
IO Start Shadow Transit	2025/1/10 0:43, Alt = -74
Ganymede Start Occultation	2025/1/10 1:18, Alt = -70
IO End Transit	2025/1/10 2:00, Alt = -62
IO End Shadow Transit	2025/1/10 2:56, Alt = -51
Ganymede End Occultation	2025/1/10 3:26, Alt = -45
Ganymede Start Eclipse	2025/1/10 4:35, Alt = -31
Ganymede End Eclipse	2025/1/10 6:53, Alt = -3
Europa Start Transit	2025/1/10 14:37, Alt = 23
Europa Start Shadow Transit	2025/1/10 16:19, Alt = 7
Europa End Transit	2025/1/10 17:09, Alt = -1
Europa End Shadow Transit	2025/1/10 18:54, Alt = -21
IO Start Occultation	2025/1/10 21:08, Alt = -48
-----	
IO End Eclipse	2025/1/11 0:15, Alt = -76
IO Start Transit	2025/1/11 18:15, Alt = -14
IO Start Shadow Transit	2025/1/11 19:12, Alt = -26
IO End Transit	2025/1/11 20:27, Alt = -41
IO End Shadow Transit	2025/1/11 21:25, Alt = -53
-----	
Europa Start Occultation	2025/1/12 8:45, Alt = 16
Europa End Eclipse	2025/1/12 13:10, Alt = 30
IO Start Occultation	2025/1/12 15:34, Alt = 13
IO End Eclipse	2025/1/12 18:44, Alt = -21
-----	
IO Start Transit	2025/1/13 12:42, Alt = 32
IO Start Shadow Transit	2025/1/13 13:41, Alt = 28
IO End Transit	2025/1/13 14:54, Alt = 19
Ganymede Start Transit	2025/1/13 15:11, Alt = 16
IO End Shadow Transit	2025/1/13 15:53, Alt = 10
Ganymede End Transit	2025/1/13 17:18, Alt = -5
Ganymede Start Shadow Transit	2025/1/13 18:44, Alt = -22
Ganymede End Shadow Transit	2025/1/13 21:02, Alt = -50
-----	
Europa Start Transit	2025/1/14 3:47, Alt = -37
Europa Start Shadow Transit	2025/1/14 5:37, Alt = -15
Europa End Transit	2025/1/14 6:19, Alt = -7
Europa End Shadow Transit	2025/1/14 8:11, Alt = 12
IO Start Occultation	2025/1/14 10:01, Alt = 27
IO End Eclipse	2025/1/14 13:12, Alt = 30
-----	
IO Start Transit	2025/1/15 7:09, Alt = 3
IO Start Shadow Transit	2025/1/15 8:09, Alt = 13
IO End Transit	2025/1/15 9:21, Alt = 23
IO End Shadow Transit	2025/1/15 10:22, Alt = 29
Europa Start Occultation	2025/1/15 21:56, Alt = -62
-----	

Europa End Eclipse	2025/1/16 2:29, Alt = -51
IO Start Occultation	2025/1/16 4:28, Alt = -27
IO End Eclipse	2025/1/16 7:41, Alt = 9
-----	
IO Start Transit	2025/1/17 1:36, Alt = -61
IO Start Shadow Transit	2025/1/17 2:38, Alt = -49
IO End Transit	2025/1/17 3:48, Alt = -34
Ganymede Start Occultation	2025/1/17 4:46, Alt = -22
IO End Shadow Transit	2025/1/17 4:51, Alt = -21
Ganymede End Occultation	2025/1/17 6:56, Alt = 2
Ganymede Start Eclipse	2025/1/17 8:35, Alt = 18
Ganymede End Eclipse	2025/1/17 10:54, Alt = 32
Europa Start Transit	2025/1/17 16:57, Alt = -4
Europa Start Shadow Transit	2025/1/17 18:54, Alt = -27
Europa End Transit	2025/1/17 19:29, Alt = -34
Europa End Shadow Transit	2025/1/17 21:29, Alt = -59
IO Start Occultation	2025/1/17 22:55, Alt = -73
-----	
IO End Eclipse	2025/1/18 2:09, Alt = -54
IO Start Transit	2025/1/18 20:03, Alt = -42
IO Start Shadow Transit	2025/1/18 21:07, Alt = -55
IO End Transit	2025/1/18 22:15, Alt = -68
IO End Shadow Transit	2025/1/18 23:19, Alt = -76
-----	
Europa Start Occultation	2025/1/19 11:07, Alt = 33
Europa End Eclipse	2025/1/19 15:47, Alt = 6
IO Start Occultation	2025/1/19 17:22, Alt = -10
IO End Eclipse	2025/1/19 20:38, Alt = -50
-----	
IO Start Transit	2025/1/20 14:30, Alt = 18
IO Start Shadow Transit	2025/1/20 15:36, Alt = 7
IO End Transit	2025/1/20 16:42, Alt = -3
IO End Shadow Transit	2025/1/20 17:48, Alt = -16
Ganymede Start Transit	2025/1/20 18:41, Alt = -27
Ganymede End Transit	2025/1/20 20:50, Alt = -53
Ganymede Start Shadow Transit	2025/1/20 22:44, Alt = -74
-----	
Ganymede End Shadow Transit	2025/1/21 1:03, Alt = -64
Europa Start Transit	2025/1/21 6:08, Alt = -3
Europa Start Shadow Transit	2025/1/21 8:12, Alt = 17
Europa End Transit	2025/1/21 8:40, Alt = 21
Europa End Shadow Transit	2025/1/21 10:47, Alt = 32
IO Start Occultation	2025/1/21 11:49, Alt = 33
IO End Eclipse	2025/1/21 15:07, Alt = 12
-----	
IO Start Transit	2025/1/22 8:57, Alt = 24
IO Start Shadow Transit	2025/1/22 10:04, Alt = 30
IO End Transit	2025/1/22 11:09, Alt = 33
IO End Shadow Transit	2025/1/22 12:17, Alt = 31
-----	
Europa Start Occultation	2025/1/23 0:19, Alt = -70
Europa End Eclipse	2025/1/23 5:06, Alt = -13
IO Start Occultation	2025/1/23 6:16, Alt = 0
IO End Eclipse	2025/1/23 9:35, Alt = 28
-----	
IO Start Transit	2025/1/24 3:25, Alt = -33
IO Start Shadow Transit	2025/1/24 4:33, Alt = -19
IO End Transit	2025/1/24 5:37, Alt = -7
IO End Shadow Transit	2025/1/24 6:46, Alt = 5
Ganymede Start Occultation	2025/1/24 8:18, Alt = 20
Ganymede End Occultation	2025/1/24 10:30, Alt = 32
Ganymede Start Eclipse	2025/1/24 12:34, Alt = 29
Ganymede End Eclipse	2025/1/24 14:55, Alt = 12
Europa Start Transit	2025/1/24 19:19, Alt = -38

Europa Start Shadow Transit	2025/1/24 21:29, Alt = -64
Europa End Transit	2025/1/24 21:52, Alt = -68
-----	
Europa End Shadow Transit	2025/1/25 0:04, Alt = -71
IO Start Occultation	2025/1/25 0:43, Alt = -65
IO End Eclipse	2025/1/25 4:04, Alt = -24
IO Start Transit	2025/1/25 21:52, Alt = -69
IO Start Shadow Transit	2025/1/25 23:02, Alt = -76
-----	
IO End Transit	2025/1/26 0:04, Alt = -71
IO End Shadow Transit	2025/1/26 1:14, Alt = -58
Europa Start Occultation	2025/1/26 13:32, Alt = 23
Europa End Eclipse	2025/1/26 18:25, Alt = -29
IO Start Occultation	2025/1/26 19:11, Alt = -38
IO End Eclipse	2025/1/26 22:32, Alt = -75
-----	
IO Start Transit	2025/1/27 16:19, Alt = -5
IO Start Shadow Transit	2025/1/27 17:30, Alt = -18
IO End Transit	2025/1/27 18:31, Alt = -31
IO End Shadow Transit	2025/1/27 19:43, Alt = -45
Ganymede Start Transit	2025/1/27 22:15, Alt = -74
-----	
Ganymede End Transit	2025/1/28 0:27, Alt = -65
Ganymede Start Shadow Transit	2025/1/28 2:44, Alt = -38
Ganymede End Shadow Transit	2025/1/28 5:04, Alt = -10
Europa Start Transit	2025/1/28 8:31, Alt = 24
Europa Start Shadow Transit	2025/1/28 10:46, Alt = 33
Europa End Transit	2025/1/28 11:04, Alt = 33
Europa End Shadow Transit	2025/1/28 13:22, Alt = 23
IO Start Occultation	2025/1/28 13:38, Alt = 21
IO End Eclipse	2025/1/28 17:01, Alt = -13
-----	
IO Start Transit	2025/1/29 10:47, Alt = 33
IO Start Shadow Transit	2025/1/29 11:59, Alt = 31
IO End Transit	2025/1/29 12:59, Alt = 25
IO End Shadow Transit	2025/1/29 14:12, Alt = 15
-----	
Europa Start Occultation	2025/1/30 2:45, Alt = -36
Europa End Eclipse	2025/1/30 7:44, Alt = 18
IO Start Occultation	2025/1/30 8:05, Alt = 21
IO End Eclipse	2025/1/30 11:29, Alt = 32
-----	
IO Start Transit	2025/1/31 5:14, Alt = -6
IO Start Shadow Transit	2025/1/31 6:28, Alt = 7
IO End Transit	2025/1/31 7:27, Alt = 17
IO End Shadow Transit	2025/1/31 8:41, Alt = 26
Ganymede Start Occultation	2025/1/31 11:54, Alt = 30
Ganymede End Occultation	2025/1/31 14:08, Alt = 15
Ganymede Start Eclipse	2025/1/31 16:33, Alt = -10
Ganymede End Eclipse	2025/1/31 18:55, Alt = -39
Europa Start Transit	2025/1/31 21:44, Alt = -72
-----	
Europa Start Shadow Transit	2025/2/1 0:04, Alt = -67
Europa End Transit	2025/2/1 0:17, Alt = -64
IO Start Occultation	2025/2/1 2:33, Alt = -37
Europa End Shadow Transit	2025/2/1 2:39, Alt = -36
IO End Eclipse	2025/2/1 5:58, Alt = 2
IO Start Transit	2025/2/1 23:42, Alt = -70
-----	
IO Start Shadow Transit	2025/2/2 0:57, Alt = -56
IO End Transit	2025/2/2 1:54, Alt = -44
IO End Shadow Transit	2025/2/2 3:09, Alt = -29
Europa Start Occultation	2025/2/2 15:59, Alt = -5
IO Start Occultation	2025/2/2 21:00, Alt = -65

Europa End Eclipse 2025/2/2 21:03, Alt = -66

-----  
IO End Eclipse 2025/2/3 0:27, Alt = -61  
IO Start Transit 2025/2/3 18:10, Alt = -32  
IO Start Shadow Transit 2025/2/3 19:25, Alt = -48  
IO End Transit 2025/2/3 20:22, Alt = -59  
IO End Shadow Transit 2025/2/3 21:38, Alt = -72  
-----

PS C:\Users\Kosh>