

# Simultaneous Transits of Galilean Satellites During 2009

During 2009 Earth experiences 30 dual transits of Galilean satellites of Jupiter. Transits on January 16-17th and April 14th last entirely during transits of Io and Europa, respectively. On June 9th around 11:40 UT Ganymede begins transit a minute after transit of Io has ended. Shortest and longest dual transits and complete list of dual transits during 2009 are listed below:

Shortest Dual Transit = 2009 Sep 17 = 00h 00m 28s (Europa and Ganymede)  
 Longest Dual Transit = 2009 Apr 14 = 02h 57m 28s (Europa and Callisto)

Begin	End	Duration	Satellites	
Jan 01 00:55:44	Jan 01 01:24:51	00:29:07	Io	Europa
Jan 04 13:56:32	Jan 04 14:50:56	00:54:24	Io	Europa
Jan 08 02:57:24	Jan 08 04:18:03	01:20:39	Io	Europa
Jan 11 15:58:16	Jan 11 17:44:19	01:46:03	Io	Europa
Jan 15 04:59:11	Jan 15 07:11:34	02:12:23	Io	Europa
Jan 16 23:29:39	Jan 17 01:51:02	02:21:23	Io	Ganymede
Jan 18 18:00:08	Jan 18 20:38:01	02:37:53	Io	Europa
Jan 22 07:10:03	Jan 22 09:22:26	02:12:23	Io	Europa
Jan 24 02:41:00	Jan 24 03:52:18	01:11:18	Io	Ganymede
Jan 25 20:33:16	Jan 25 22:21:01	01:47:45	Io	Europa
Jan 29 10:01:21	Jan 29 11:22:37	01:21:16	Io	Europa
Feb 01 23:27:36	Feb 02 00:23:33	00:55:57	Io	Europa
Feb 05 12:54:31	Feb 05 13:24:25	00:29:54	Io	Europa
Feb 09 02:20:26	Feb 09 02:25:09	00:04:43	Io	Europa
Apr 14 03:40:39	Apr 14 06:38:07	02:57:28	Europa	Callisto
May 19 03:41:13	May 19 03:51:47	00:10:34	Io	Ganymede
May 26 05:34:16	May 26 07:47:54	02:13:38	Io	Ganymede
Jun 02 07:52:34	Jun 02 09:48:11	01:55:37	Io	Ganymede
Jul 23 14:28:10	Jul 23 15:18:00	00:49:50	Io	Callisto
Aug 05 19:01:13	Aug 05 19:16:58	00:15:45	Europa	Ganymede
Aug 12 21:14:21	Aug 12 22:33:15	00:18:54	Europa	Ganymede
Aug 19 23:27:28	Aug 20 01:49:51	02:22:23	Europa	Ganymede
Aug 27 01:41:01	Aug 27 04:36:33	02:55:32	Europa	Ganymede
Sep 03 04:38:44	Sep 03 06:51:05	02:12:21	Europa	Ganymede
Sep 10 07:59:34	Sep 10 09:06:57	01:07:23	Europa	Ganymede
Sep 17 11:24:04	Sep 17 11:24:32	00:00:28	Europa	Ganymede
Sep 27 23:59:05	Sep 28 01:21:58	01:22:53	Europa	Callisto
Oct 14 17:16:01	Oct 14 17:31:17	00:15:16	Io	Callisto
Nov 13 19:20:53	Nov 13 21:16:18	01:55:25	Io	Ganymede
Nov 20 21:34:50	Nov 20 23:39:39	02:04:49	Io	Ganymede

All times are in Coordinated Universal Time ( $\Delta T = 66.2s$ ) and correspond to the first and last instants at which two satellite disks are in transit. Ephemeris generated by [NASA/JPL's HORIZONS](#) system through one minute intervals were interpolated. Jupiter was assumed oblate spheroid with flattening of 0.06487, axial tilt was neglected for simplification of contact times computation.