## List of Conjunctions

Subjects: Astronomy \& Astrophysics
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This is a list of the Solar System's recent and forthcoming planetary conjunctions (in other words, when two planets look close together). In astronomy, a conjunction is an event, defined only when using either an equatorial or an ecliptic celestial coordinate system, in which any two astronomical objects (e.g. asteroids, moons, planets, stars) have the same celestial longitude, normally as when observed from the Earth (geocentric). In the case of a geocentric conjunction of two of the Solar System's planets, since the Solar System's planets appear to travel "along the same line" (the ecliptic), the two planets appear to an Earthbound observer as being near one another in the sky around the time of the conjunction. The list below presents instances during the period 2005-2020 in which two Solar System's planets are in conjunction according to the equatorial coordinate system (in which the celestial longitude is termed right ascension).

Keywords: two planets ; equatorial ; astronomical objects

1. Conjunctions of Planets in Right Ascension 2005-2020

2005

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 4, 2005 | 07:04:06 | Venus | $7^{\circ} 27$ ' south of | Pluto | 20,8 ${ }^{\circ}$ West |
| January 5, 2005 | 00:58:49 | Mercury | $6^{\circ} 59$ ' south of | Pluto | 21,6 ${ }^{\circ}$ West |
| January 14, 2005 | 00:40:51 | Mercury | 21' south of | Venus | $18.5^{\circ}$ West |
| January 29, 2005 | 07:05:35 | Mars | $8^{\circ} 15^{\prime}$ south of | Pluto | 45,5 ${ }^{\circ}$ West |
| February 8, 2005 | 01:29:22 | Mercury | $2^{\circ} 04{ }^{\prime}$ south of | Neptune | 4.2 ${ }^{\circ}$ West |
| February 14, 2005 | 19:15:10 | Venus | 58' south of | Neptune | 10.7 ${ }^{\circ}$ West |
| February 20, 2005 | 00:46:34 | Mercury | $1^{\circ} 00{ }^{\prime}$ south of | Uranus | $4.9^{\circ}$ East |
| March 4, 2005 | 03:31:36 | Venus | 41' south of | Uranus | 6.6 ${ }^{\circ}$ West |
| March 28, 2005 | 22:31:53 | Mercury | $4^{\circ} 49^{\prime}$ north of | Venus | $1.5^{\circ}$ West |
| April 13, 2005 | 00:26:23 | Mars | $1^{\circ} 15^{\prime}$ south of | Neptune | $66.0^{\circ}$ West |
| May 14, 2005 | 20:24:10 | Mars | $1^{\circ} 11{ }^{\prime}$ south of | Uranus | $73.8{ }^{\circ}$ West |
| June 19, 2005 | 21:22:52 | Venus | $1^{\circ} 18{ }^{\prime}$ north of | Saturn | $22.8{ }^{\circ}$ East |
| June 26, 2005 | 06:13:43 | Mercury | $1^{\circ} 25^{\prime}$ north of | Saturn | $22.5{ }^{\circ}$ East |
| June 27, 2005 | 20:18:55 | Mercury | 5 ' south of | Venus | $23.3{ }^{\circ}$ East |
| July 7, 2005 | 08:21:22 | Mercury | $1^{\circ} 38{ }^{\prime}$ south of | Venus | $25.8{ }^{\circ}$ East |
| September 2, 2005 | 12:05:52 | Venus | $1^{\circ} \mathbf{2 2}^{\prime}$ south of | Jupiter | $38.7{ }^{\circ}$ East |
| October 6, 2005 | 07:01:37 | Mercury | $\mathbf{1}^{\circ} \mathbf{2 8}^{\prime}$ south of | Jupiter | $12.6{ }^{\circ}$ East |
| October 29, 2005 | 16:11:20 | Venus | $11^{\circ} 08{ }^{\prime}$ south of | Pluto | 46,8 ${ }^{\circ}$ East |
| December 31, 2005 | 15:55:12 | Mercury | $7^{\circ} 36$ ' south of | Pluto | 14,9 ${ }^{\circ}$ West |


| January 17, 2006 | 02:23:03 | Mercury | $7^{\circ} 53$ 'south of | Venus | $6.5^{\circ}$ West |
| :---: | :---: | :---: | :---: | :---: | :---: |
| February 1, 2006 | 12:13:51 | Mercury | $1^{\circ} 57{ }^{\prime}$ north of | Neptune | $4.5^{\circ}$ East |
| February 14, 2006 | 15:40:57 | Mercury | 2' north of | Uranus | $14.1{ }^{\circ}$ East |
| March 26, 2006 | 21:02:41 | Venus | $1^{\circ} 52{ }^{\prime}$ north of | Neptune | $46.5^{\circ}$ West |
| April 18, 2006 | 12:27:31 | Venus | 19' north of | Uranus | $45.0^{\circ}$ West |
| June 17, 2006 | 22:50:40 | Mars | 35' north of | Saturn | $42.0^{\circ}$ East |
| August 20, 2006 | 22:40:10 | Mercury | 31' north of | Saturn | $11.2^{\circ}$ West |
| August 26, 2006 | 23:09:47 | Venus | 4' north of | Saturn | $16.3^{\circ}$ West |
| September 15, 2006 | 20:32:28 | Mercury | 10' south of | Mars | $12.1{ }^{\circ}$ East |
| October 24, 2006 | 19:44:11 | Venus | 43' north of | Mars | $0.6{ }^{\circ}$ West |
| October 25, 2006 | 21:42:16 | Mercury | $3^{\circ} 56$ ' south of | Jupiter | $21.2^{\circ}$ East |
| October 28, 2006 | 16:32:15 | Mercury | $3^{\circ} 43$ ' south of | Jupiter | 19.1 ${ }^{\circ}$ East |
| November 7, 2006 | 13:36:58 | Mercury | $1^{\circ} 14$ ' south of | Venus | $2.8{ }^{\circ}$ East |
| November 11, 2006 | 17:51:38 | Mercury | 39' north of | Mars | $6.2^{\circ}$ West |
| November 15, 2006 | 22:52:15 | Venus | 27' south of | Jupiter | $4.8{ }^{\circ}$ East |
| December 9, 2006 | 20:17:18 | Mercury | $1^{\circ} 02{ }^{\prime}$ north of | Mars | $15.1{ }^{\circ}$ West |
| December 10, 2006 | 16:31:09 | Mercury | 8' north of | Jupiter | $14.8{ }^{\circ}$ West |
| December 11, 2006 | 23:34:02 | Mars | 49' south of | Jupiter | $15.7{ }^{\circ}$ West |

2007

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 18, 2007 | 18:10:50 | Venus | $1^{\circ} 25{ }^{\prime}$ south of | Neptune | $20.1{ }^{\circ}$ East |
| January 26, 2007 | 06:46:07 | Mercury | $1^{\circ} 28{ }^{\prime}$ south of | Neptune | $12.7^{\circ}$ East |
| February 7, 2007 | 13:13:57 | Venus | 44' south of | Uranus | $24.6{ }^{\circ}$ East |
| March 25, 2007 | 07:23:59 | Mars | $1^{\circ} 000$ south of | Neptune | $43.2{ }^{\circ}$ West |
| April 1, 2007 | 06:59:14 | Mercury | $1^{\circ} 37{ }^{\prime}$ south of | Uranus | 25.0 ${ }^{\circ}$ West |
| April 28, 2007 | 18:57:38 | Mars | 44' south of | Uranus | 50.6 ${ }^{\circ}$ West |
| July 2, 2007 | 00:44:38 | Venus | 46' south of | Saturn | $42.6^{\circ}$ East |
| August 9, 2007 | 08:46:28 | Venus | $8^{\circ} 29$ ' south of | Saturn | $10.6{ }^{\circ}$ East |
| August 15, 2007 | 22:59:23 | Mercury | $10^{\circ} 04^{\prime}$ north of | Venus | $1.8{ }^{\circ}$ East |
| August 18, 2007 | 11:30:22 | Mercury | 30' north of | Saturn | $3.2{ }^{\circ}$ East |
| October 15, 2007 | 14:05:43 | Venus | $2^{\circ} 56$ ' south of | Saturn | 45, $8^{\circ}$ West |
| December 20, 2007 | 21:46:21 | Mercury | $1^{\circ} 48$ ' south of | Jupiter | 1,9 ${ }^{\circ}$ East |

2008

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 23, 2008 | 04:14:53 | Mercury | 20' north of | Neptune | $18.5^{\circ}$ East |
| February 1, 2008 | 04:14:53 | Mercury | $3^{\circ} 11{ }^{\prime}$ north of | Neptune | $9^{\circ}$ East |
| February 1, 2008 | 12:35:21 | Venus | 35' north of | Jupiter | $32^{\circ}$ West |
| February 26, 2008 | 02:34:04 | Mercury | $1^{\circ} 20{ }^{\prime}$ north of | Venus | 26.1 ${ }^{\circ}$ West |
| March 6, 2008 | 20:14:29 | Venus | 36' south of | Neptune | $24^{\circ}$ West |


| March 9, 2008 | 02:48:02 | Mercury | 56' south of | Neptune | 26.2 ${ }^{\circ}$ West |
| :---: | :---: | :---: | :---: | :---: | :---: |
| March 23, 2008 | 10:13:50 | Mercury | $1^{\circ} 03{ }^{\prime}$ south of | Venus | 20.3 ${ }^{\circ}$ West |
| March 27, 2008 | 17:00:46 | Venus | 45' south of | Uranus | $18.6^{\circ}$ West |
| June 8, 2008 | 00:51:42 | Mercury | $2^{\circ} 59$ ' south of | Venus | 0.3 ${ }^{\circ}$ West |
| July 11, 2008 | 06:27:25 | Mars | 42' south of | Saturn | 46.2 ${ }^{\circ}$ East |
| August 13, 2008 | 19:02:26 | Venus | 14' south of | Saturn | $18^{\circ}$ East |
| August 16, 2008 | 00:03:43 | Mercury | 42' south of | Saturn | $16.1^{\circ}$ East |
| August 23, 2008 | 05:08:57 | Mercury | $1^{\circ} 15{ }^{\prime}$ south of | Venus | $20.5{ }^{\circ}$ East |
| September 11, 2008 | 04:50:56 | Mercury | $3^{\circ} 34{ }^{\prime}$ south of | Venus | 25.4 ${ }^{\circ}$ East |
| September 11, 2008 | 20:36:33 | Venus | 20' north of | Mars | $25.5{ }^{\circ}$ East |
| September 12, 2008 | 20:59:16 | Mercury | $3^{\circ} 26{ }^{\prime}$ south of | Mars | $25.3{ }^{\circ}$ East |
| September 19, 2008 | 05:13:06 | Mercury | $4^{\circ} 08{ }^{\prime}$ south of | Mars | 23.3 ${ }^{\circ}$ East |
| December 1, 2008 | 00:36:13 | Venus | $2^{\circ} 02{ }^{\prime}$ south of | Jupiter | $42.7^{\circ}$ East |
| December 27, 2008 | 01:50:46 | Venus | $1^{\circ} 45{ }^{\prime}$ south of | Neptune | 46.2 ${ }^{\circ}$ East |
| December 31, 2008 | 05:54:23 | Mercury | $1^{\circ} 17{ }^{\prime}$ south of | Jupiter | $18.6^{\circ}$ East |

2009

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 18, 2009 | 06:19:19 | Mercury | $3^{\circ} 15{ }^{\prime}$ north of | Jupiter | 4.7 ${ }^{\circ}$ East |
| January 23, 2009 | 15:34:10 | Venus | $1^{\circ} 24{ }^{\prime}$ north of | Uranus | 46.3 ${ }^{\circ}$ East |
| January 26, 2009 | 18:23:39 | Mercury | $4^{\circ} 25^{\prime}$ north of | Mars | $13.5{ }^{\circ}$ West |
| February 17, 2009 | 09:35:27 | Mars | 35' south of | Jupiter | $18.8{ }^{\circ}$ West |
| February 24, 2009 | 03:08:31 | Mercury | 37' north of | Jupiter | 24.1 ${ }^{\circ}$ West |
| March 1, 2009 | 20:21:59 | Mercury | 36' south of | Mars | $21.8{ }^{\circ}$ West |
| March 5, 2009 | 00:52:04 | Mercury | $1^{\circ} 39^{\prime}$ south of | Neptune | $19.9{ }^{\circ}$ West |
| March 8, 2009 | 04:18:03 | Mars | 48' south of | Neptune | 22.9 ${ }^{\circ}$ West |
| March 21, 2009 | 21:36:59 | Mercury | $1^{\circ} 24^{\prime}$ south of | Uranus | $8.3^{\circ}$ West |
| March 27, 2009 | 11:31:44 | Mercury | $10^{\circ} 37$ ' south of | Venus | $4^{\circ}$ West |
| April 15, 2009 | 03:46:10 | Mars | 28' south of | Uranus | $30.9{ }^{\circ}$ West |
| April 18, 2009 | 16:22:43 | Venus | $5^{\circ} 36{ }^{\prime}$ north of | Mars | 29.8 ${ }^{\circ}$ West |
| May 25, 2009 | 14:20:29 | Jupiter | 24' south of | Neptune | $98^{\circ}$ West |
| June 19, 2009 | 14:16:32 | Venus | $2^{\circ} 02^{\prime}$ south of | Mars | $44.6{ }^{\circ}$ West |
| July 13, 2009 | 17:22:12 | Jupiter | 37' south of | Neptune | $145.5^{\circ}$ West |
| August 18, 2009 | 21:20:26 | Mercury | $3^{\circ} 27{ }^{\prime}$ south of | Saturn | 25.4 ${ }^{\circ}$ East |
| September 20, 2009 | 12:26:59 | Mercury | $5^{\circ} 24^{\prime}$ south of | Saturn | $3^{\circ}$ West |
| October 8, 2009 | 09:19:27 | Mercury | 19 ' south of | Saturn | $17.6^{\circ}$ West |
| October 13, 2009 | 15:39:41 | Venus | 34' south of | Saturn | 22.1 ${ }^{\circ}$ West |
| December 20, 2009 | 05:35:39 | Jupiter | 34' south of | Neptune | $55.6^{\circ}$ East |


| January 5, 2010 | 07:30:46 | Mercury | $3^{\circ} 26{ }^{\prime}$ north of | Venus | 1.7 ${ }^{\circ}$ West |
| :---: | :---: | :---: | :---: | :---: | :---: |
| February 7, 2010 | 22:43:25 | Venus | $1^{\circ} 04{ }^{\prime}$ south of | Neptune | 6.6 ${ }^{\circ}$ East |
| February 16, 2010 | 21:09:36 | Venus | 35' south of | Jupiter | 8.8 ${ }^{\circ}$ East |
| February 27, 2010 | 05:07:37 | Mercury | $1^{\circ} 48$ ' south of | Neptune | $11.9{ }^{\circ}$ West |
| March 3, 2010 | 22:43:19 | Venus | 40' south of | Uranus | $12.4{ }^{\circ}$ East |
| March 7, 2010 | 19:00:44 | Mercury | $1^{\circ} 11{ }^{\prime}$ south of | Jupiter | 5.7 ${ }^{\circ}$ West |
| March 15, 2010 | 17:56:56 | Mercury | 44' south of | Uranus | $1.6^{\circ}$ East |
| June 6, 2010 | 18:30:37 | Jupiter | 28' south of | Uranus | 75.7 ${ }^{\circ}$ West |
| August 1, 2010 | 19:41:06 | Mars | $1^{\circ} 56$ ' south of | Saturn | $51.5^{\circ}$ East |
| August 10, 2010 | 01:44:26 | Venus | $3^{\circ} 8^{\prime}$ south of | Saturn | $44.4{ }^{\circ}$ East |
| August 23, 2010 | 21:29:05 | Venus | $2^{\circ} 27$ ' south of | Mars | $44.9{ }^{\circ}$ East |
| September 22, 2010 | 19:53:12 | Jupiter | 53 ' south of | Uranus | $177.8^{\circ}$ East |
| September 29, 2010 | 06:21:23 | Venus | $6^{\circ} 30^{\prime}$ south of | Mars | $33.7^{\circ}$ East |
| October 8, 2010 | 14:57:51 | Mercury | 35 ' south of | Saturn | $6.5^{\circ}$ West |
| October 24, 2010 | 11:04:41 | Mercury | $7^{\circ} 11$ ' north of | Venus | $4.9^{\circ}$ East |
| November 21, 2010 | 00:50:16 | Mercury | $1^{\circ} 41$ ' south of | Mars | $18.7^{\circ}$ East |
| December 14, 2010 | 03:33:06 | Mercury | $1^{\circ} 02{ }^{\prime}$ north of | Mars | $12.7^{\circ}$ East |

2011

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 2, 2011 | 13:41:09 | Jupiter | 34' south of | Uranus | $75^{\circ}$ East |
| February 20, 2011 | 13:50:48 | Mercury | $1^{\circ} 044^{\text {s }}$ south of | Mars | $3.7^{\circ}$ West |
| February 20, 2011 | 17:08:01 | Mercury | $1^{\circ} 41$ south of | Neptune | $3.2{ }^{\circ}$ West |
| February 20, 2011 | 21:28:33 | Mars | 38' south of | Neptune | 3.4 ${ }^{\circ}$ West |
| March 9, 2011 | 18:00:45 | Mercury | 22' north of | Uranus | 11.1 ${ }^{\circ}$ East |
| March 16, 2011 | 17:25:56 | Mercury | $\mathbf{2}^{\circ} \mathbf{2} 0^{\prime}$ north of | Jupiter | $15.7^{\circ}$ West |
| March 27, 2011 | 00:37:44 | Venus | 9' south of | Neptune | $36.3{ }^{\circ}$ West |
| April 3, 2011 | 17:42:55 | Mars | 14 ' south of | Uranus | $12.4{ }^{\circ}$ West |
| April 10, 2011 | 20:05:01 | Mercury | $3^{\circ} 31{ }^{\prime}$ north of | Jupiter | 2.8 ${ }^{\circ}$ West |
| April 19, 2011 | 08:23:49 | Mercury | 47' north of | Mars | $15.4{ }^{\circ}$ West |
| April 22, 2011 | 18:50:51 | Venus | 55' south of | Uranus | $30^{\circ}$ West |
| May 1, 2011 | 11:04:55 | Mars | 24' north of | Jupiter | $18.2^{\circ}$ West |
| May 10, 2011 | 22:46:50 | Mercury | $2^{\circ} 12^{\prime}$ south of | Jupiter | 25.3 ${ }^{\circ}$ West |
| May 11, 2011 | 09:14:56 | Venus | 37' south of | Jupiter | 25.7 ${ }^{\circ}$ West |
| May 20, 2011 | 01:17:23 | Mercury | $2^{\circ} 21{ }^{\prime}$ south of | Mars | 22.2 ${ }^{\circ}$ West |
| May 22, 2011 | 15:13:00 | Venus | $1^{\circ} 03{ }^{\prime}$ south of | Mars | 22.7 ${ }^{\circ}$ West |
| August 15, 2011 | 23:17:56 | Mercury | $6^{\circ} 21^{\prime}$ south of | Venus | $1.3^{\circ}$ West |
| September 30, 2011 | 11:07:16 | Venus | $1^{\circ} 24^{\prime}$ south of | Saturn | $11.8{ }^{\circ}$ East |
| October 7, 2011 | 08:58:32 | Mercury | $1^{\circ} 52^{\prime}$ south of | Saturn | 6.1 ${ }^{\circ}$ East |


| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 13, 2012 | 07:07:30 | Venus | $1^{\circ} 10^{\prime}$ south of | Neptune | $36.4{ }^{\circ}$ East |
| February 10, 2012 | 05:19:14 | Venus | 20' north of | Uranus | $41.3^{\circ}$ East |
| February 14, 2012 | 00:40:40 | Mercury | $1^{\circ} 18$ ' south of | Neptune | $5.5^{\circ}$ East |
| March 6, 2012 | 23:35:54 | Mercury | $3^{\circ} 05^{\prime}$ north of | Uranus | 16.7 ${ }^{\circ}$ East |
| March 15, 2012 | 10:37:46 | Venus | $3^{\circ} 16{ }^{\prime}$ north of | Jupiter | $44.6{ }^{\circ}$ East |
| March 16, 2012 | 02:11:51 | Mercury | $4^{\circ} 36{ }^{\prime}$ north of | Uranus | 8.2 ${ }^{\circ}$ East |
| April 22, 2012 | 02:00:45 | Mercury | $2^{\circ} 08{ }^{\prime}$ south of | Uranus | $26.3^{\circ}$ West |
| May 22, 2012 | 07:12:01 | Mercury | 24' north of | Jupiter | $6.3^{\circ}$ West |
| June 1, 2012 | 20:40:22 | Mercury | 12' north of | Venus | $6.7^{\circ}$ East |
| August 17, 2012 | 08:46:15 | Mars | $2^{\circ} 54{ }^{\prime}$ south of | Saturn | $60.1{ }^{\circ}$ East |
| October 6, 2012 | 07:06:36 | Mercury | $3^{\circ} 29$ ' north of | Saturn | $16.8{ }^{\circ}$ East |
| November 27, 2012 | 05:14:02 | Venus | 34' south of | Saturn | $29.0^{\circ}$ West |

## 2013

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| February 4, 2013 | 16:05:34 | Mars | 26' south of | Neptune | $16.1^{\circ}$ East |
| February 6, 2013 | 20:41:22 | Mercury | 28' south of | Neptune | $13.9{ }^{\circ}$ East |
| February 8, 2013 | 21:09:19 | Mercury | 18' north of | Mars | $15.1{ }^{\circ}$ East |
| February 24, 2013 | 22:31:25 | Mercury | $4^{\circ} 15^{\prime}$ north of | Mars | $11.6^{\circ}$ East |
| February 28, 2013 | 08:10:56 | Venus | 46' south of | Neptune | $6.8^{\circ}$ West |
| March 6, 2013 | 07:21:59 | Mercury | $5^{\circ} 20^{\prime}$ north of | Venus | $5^{\circ}$ West |
| March 22, 2013 | 18:23:53 | Mars | 1' north of | Uranus | $5.9^{\circ}$ East |
| March 28, 2013 | 17:14:45 | Venus | 43' south of | Uranus | $0.7^{\circ}$ East |
| April 6, 2013 | 15:45:52 | Venus | 42' south of | Mars | 2.6 ${ }^{\circ}$ East |
| April 19, 2013 | 21:11:39 | Mercury | $2^{\circ} 02{ }^{\prime}$ south of | Uranus | 20.3 ${ }^{\circ}$ West |
| May 7, 2013 | 22:16:22 | Mercury | 26' south of | Mars | 4.6 ${ }^{\circ}$ West |
| May 25, 2013 | 03:52:17 | Mercury | $1^{\circ} 22^{\prime}$ north of | Venus | $15^{\circ}$ West |
| May 27, 2013 | 09:47:09 | Mercury | $2^{\circ} 22^{\prime}$ north of | Jupiter | $17^{\circ}$ East |
| May 28, 2013 | 20:39:31 | Venus | $1^{\circ}$ north of | Jupiter | $15.9{ }^{\circ}$ East |
| June 20, 2013 | 17:37:02 | Mercury | $1^{\circ} 57{ }^{\prime}$ south of | Venus | $22^{\circ}$ East |
| July 22, 2013 | 05:45:11 | Mars | 47' north of | Jupiter | 23.7 ${ }^{\circ}$ West |
| September 20, 2013 | 00:14:06 | Venus | $3^{\circ} 45{ }^{\prime}$ south of | Saturn | 41.7 ${ }^{\circ}$ East |
| October 10, 2013 | 18:40:54 | Mercury | $5^{\circ} 24{ }^{\prime}$ north of | Saturn | $23.6{ }^{\circ}$ East |
| October 28, 2013 | 21:00:50 | Mercury | $4^{\circ} 06^{\prime}$ north of | Saturn | $7.9^{\circ}$ East |
| November 26, 2013 | 03:39:41 | Mercury | 20' south of | Saturn | $17.5^{\circ}$ West |


| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| ---: | :---: | :---: | :---: | :---: | :---: | :---: |
| January 7, 2014 | $10: 28: 53$ | Mercury | $6^{\circ} 27^{\prime}$ south of | Venus | $5.9^{\circ}$ East |


| March 22, 2014 | 11:38:46 | Mercury | $1^{\circ} 15$ ' south of | Neptune | 25.7 ${ }^{\circ}$ West |
| :---: | :---: | :---: | :---: | :---: | :---: |
| April 12, 2014 | 08:19:49 | Venus | 42' north of | Neptune | 45.4 ${ }^{\circ}$ West |
| April 14, 2014 | 16:11:35 | Mercury | $1^{\circ} 23{ }^{\prime}$ south of | Uranus | $11.5{ }^{\circ}$ West |
| May 15, 2014 | 13:14:02 | Venus | $1^{\circ} 16{ }^{\prime}$ south of | Uranus | $39.9{ }^{\circ}$ West |
| August 2, 2014 | 16:39:29 | Mercury | 58' north of | Jupiter | $6.5^{\circ}$ West |
| August 18, 2014 | 04:08:26 | Venus | 12' north of | Jupiter | $17.9^{\circ}$ West |
| August 27, 2014 | 13:16:34 | Mars | $3^{\circ} 34{ }^{\prime}$ south of | Saturn | $73.6{ }^{\circ}$ East |
| October 17, 2014 | 08:02:46 | Mercury | $2^{\circ} 44{ }^{\prime}$ south of | Venus | $1.7^{\circ}$ West |
| November 13, 2014 | 09:04:07 | Venus | $1^{\circ} 36^{\prime}$ south of | Saturn | $4.8{ }^{\circ}$ East |
| December 2, 2014 | 09:01:16 | Mercury | $1^{\circ} 43$ ' south of | Saturn | $6.8^{\circ}$ West |
| December 30, 2014 | 07:25:46 | Mercury | $3^{\circ} 44$ ' south of | Venus | $12.6^{\circ}$ East |

2015

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 5, 2015 | 16:30:15 | Mercury | $1^{\circ} 40$ ' south of | Venus | $16.1^{\circ}$ East |
| January 19, 2015 | 21:33:54 | Mars | 14 ' south of | Neptune | $36.4{ }^{\circ}$ East |
| February 1, 2015 | 11:31:23 | Venus | 50 ' south of | Neptune | $23.8{ }^{\circ}$ East |
| February 21, 2015 | 19:43:28 | Venus | 28' south of | Mars | $28.4{ }^{\circ}$ East |
| March 4, 2015 | 19:30:15 | Venus | 6' north of | Uranus | $30.8{ }^{\circ}$ East |
| March 11, 2015 | 19:50:33 | Mars | 17' north of | Uranus | $24.1{ }^{\circ}$ East |
| March 17, 2015 | 23:40:08 | Mercury | $1^{\circ} 36{ }^{\prime}$ south of | Neptune | 19.1 ${ }^{\circ}$ West |
| April 8, 2015 | 09:55:57 | Mercury | 31' south of | Uranus | $1.8^{\circ}$ West |
| April 23, 2015 | 07:09:00 | Mercury | $1^{1} 233^{\prime}$ north of | Mars | $13.7{ }^{\circ}$ East |
| May 27, 2015 | 15:20:33 | Mercury | $1^{\circ} 41{ }^{\prime}$ south of | Mars | $4.8{ }^{\circ}$ East |
| July 1, 2015 | 14:17:16 | Venus | 24' south of | Jupiter | $42.2^{\circ}$ East |
| July 16, 2015 | 04:29:03 | Mercury | 8' south of | Mars | $8.9^{\circ}$ West |
| July 31, 2015 | 19:47:59 | Venus | $6^{\circ} 26{ }^{\prime}$ south of | Jupiter | $19.5{ }^{\circ}$ East |
| August 5, 2015 | 08:52:16 | Mercury | $8^{\circ} 111^{\prime}$ north of | Venus | $13.1{ }^{\circ}$ East |
| August 7, 2015 | 04:04:09 | Mercury | 35' north of | Jupiter | $14.6{ }^{\circ}$ East |
| August 29, 2015 | 05:18:53 | Venus | $9^{\circ} 25^{\prime}$ south of | Mars | 21.3 ${ }^{\circ}$ West |
| October 17, 2015 | 13:50:10 | Mars | 24' north of | Jupiter | $39.8{ }^{\circ}$ West |
| October 26, 2015 | 08:14:32 | Venus | $1^{\circ} 04{ }^{\prime}$ south of | Jupiter | 46.4 ${ }^{\circ}$ West |
| November 3, 2015 | 16:08:44 | Venus | 42' south of | Mars | $46.2{ }^{\circ}$ West |
| November 25, 2015 | 12:33:25 | Mercury | $2^{\circ} 46$ ' south of | Saturn | $4.3^{\circ}$ East |

2016

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 9, 2016 | 03:57:19 | Venus | 5' north of | Saturn | $36.3{ }^{\circ}$ West |
| March 10, 2016 | 22:12:11 | Mercury | $1^{\circ} 30$ south of | Neptune | $10.9{ }^{\circ}$ West |
| March 20, 2016 | 13:51:16 | Venus | 32' south of | Neptune | 20.1 ${ }^{\circ}$ West |
| March 31, 2016 | 23:41:55 | Mercury | 38' north of | Uranus | $8.3^{\circ}$ East |


| April 22, 2016 | $14: 17: 27$ | Venus | $52^{\prime}$ south of | Uranus | $11.7^{\circ}$ West |
| :--- | :--- | :--- | :--- | :--- | :--- |
| May 13, 2016 | $20: 49: 07$ | Mercury | $26^{\prime}$ south of | Venus | $6.5^{\circ}$ West |
| July 16, 2016 | $17: 39: 09$ | Mercury | $3^{\prime}$ north of | Venus | $10.9^{\circ}$ East |
| August 25, 2016 | $17: 52: 42$ | Mars | $4^{\circ} 23^{\prime}$ south of | Saturn | $97^{\circ}$ East |
| August 27, 2016 | $04: 57: 57$ | Mercury | $5^{\circ} 16^{\prime}$ south of | Venus | $22.1^{\circ}$ East |
| August 27, 2016 | $21: 47: 56$ | Venus | $4^{\prime}$ north of | Jupiter | $22.3^{\circ}$ East |
| October 11, 2016 | $04: 17: 47$ | Mercury | $5^{\prime}$ north of | Jupiter | $11.5^{\circ}$ West |
| October 30, 2016 | $08: 25: 30$ | Venus | $3^{\circ} 02^{\prime}$ south of | Saturn | $36.9^{\circ}$ East |
| November 24, 2016 | $00: 38: 02$ | Mercury | $3^{\circ} 28^{\prime}$ south of | Saturn | $14.8^{\circ}$ East |

2017

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 1, 2017 | 06:46:46 | Mars | 1' south of | Neptune | $58.7^{\circ}$ East |
| January 13, 2017 | 01:46:45 | Venus | 25' north of | Neptune | $47^{\circ}$ East |
| February 27, 2017 | 08:20:34 | Mars | 37' north of | Uranus | $43.1{ }^{\circ}$ East |
| March 4, 2017 | 05:34:17 | Mercury | $1^{\circ} 08{ }^{\prime}$ south of | Neptune | 2.2 ${ }^{\circ}$ West |
| March 16, 2017 | 23:21:32 | Mercury | $9^{\circ} 33{ }^{\prime}$ south of | Venus | $9.5^{\circ}$ East |
| March 27, 2017 | 05:55:27 | Mercury | $2^{\circ} 25^{\prime}$ north of | Uranus | $16.7^{\circ}$ East |
| April 28, 2017 | 17:52:58 | Mercury | 9' south of | Uranus | $13.4{ }^{\circ}$ West |
| May 7, 2017 | 23:22:48 | Mercury | $2^{\circ} 14$ ' south of | Uranus | 21.8 ${ }^{\circ}$ West |
| June 2, 2017 | 14:41:15 | Venus | $1^{\circ} 47{ }^{\prime}$ south of | Uranus | $45.2{ }^{\circ}$ West |
| June 28, 2017 | 18:17:30 | Mercury | 47' north of | Mars | $8.7^{\circ}$ East |
| September 2, 2017 | 00:07:46 | Mercury | $4^{\circ} 06^{\prime}$ south of | Mars | $10.8{ }^{\circ}$ West |
| September 16, 2017 | 18:23:28 | Mercury | 3 ' north of | Mars | $16.9^{\circ}$ West |
| October 5, 2017 | 13:25:48 | Venus | 13' north of | Mars | 23.4 ${ }^{\circ}$ West |
| October 18, 2017 | 14:56:38 | Mercury | $1^{\circ} 01{ }^{\prime}$ south of | Jupiter | 6.4 ${ }^{\circ}$ East |
| November 13, 2017 | 06:10:03 | Venus | 17' north of | Jupiter | $13.8{ }^{\circ}$ West |
| November 28, 2017 | 09:36:06 | Mercury | $3^{\circ} 03{ }^{\prime}$ south of | Saturn | 21.1 ${ }^{\circ}$ East |
| December 6, 2017 | 11:29:41 | Mercury | $1^{\circ} 21{ }^{\prime}$ south of | Saturn | $13.9{ }^{\circ}$ East |
| December 15, 2017 | 16:04:48 | Mercury | $2^{\circ} 14{ }^{\prime}$ north of | Venus | $5.9^{\circ}$ West |
| December 25, 2017 | 17:49:20 | Venus | $1^{\circ} 08{ }^{\prime}$ south of | Saturn | $3.5{ }^{\circ}$ West |

2018

| Date | Time UTC | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 7, 2018 | 03:40:50 | Mars | 13' south of | Jupiter | $58.8{ }^{\circ}$ West |
| February 21, 2018 | 14:19:55 | Venus | 35' south of | Neptune | $10.5^{\circ}$ East |
| February 25, 2018 | 10:07:00 | Mercury | 29' south of | Neptune | 6.9 ${ }^{\circ}$ East |
| March 5, 2018 | 18:28:59 | Mercury | $1^{\circ} 24^{\prime}$ north of | Venus | $13.4{ }^{\circ}$ East |
| March 18, 2018 | 01:16:29 | Mercury | $3^{\circ} 53{ }^{\prime}$ north of | Venus | $16.4{ }^{\circ}$ East |
| March 29, 2018 | 0:13:21 | Venus | 4' south of | Uranus | $19^{\circ}$ East |
| April 2, 2018 | 11:53:07 | Mars | $1^{\circ} 16{ }^{\prime}$ south of | Saturn | 93.7 ${ }^{\circ}$ West |


| May 12, 2018 | $21: 01: 21$ |
| :--- | :--- |
| October 14, 2018 | $15: 20: 14$ |
| October 30, 2018 | $03: 38: 40$ |
| December 7, 2018 | $14: 55: 51$ |
| December 21, 2018 | $14: 43: 16$ |


| Mercury | $\mathbf{2}^{\circ} \mathbf{2 4}$ ' south of |
| :--- | :--- |
| Mercury | $6^{\circ} 49$ ' north of |
| Mercury | $3^{\circ} 16^{\prime}$ south of |
| Mars | $2^{\prime}$ south of |
| Mercury | $52^{\prime}$ north of |


| Uranus | $22.2^{\circ}$ West |
| :--- | :--- |
| Venus | $15.8^{\circ}$ East |
| Jupiter | $21.3^{\circ}$ East |
| Neptune | $88.3^{\circ}$ East |
| Jupiter | $20.1^{\circ}$ West |

2019

| Date | Time GMT | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 13, 2019 | 10:48:09 | Mercury | $1^{\circ} 43$ ' south of | Saturn | 10.1 ${ }^{\circ}$ West |
| January 22, 2019 | 05:47:42 | Venus | $2^{\circ} 26{ }^{\prime}$ north of | Jupiter | $45.9^{\circ}$ West |
| February 13, 2019 | 20:06:54 | Mars | $1^{\circ} 03{ }^{\prime}$ north of | Uranus | $64.4{ }^{\circ}$ East |
| February 18, 2019 | 13:54:15 | Venus | $1^{\circ} 05{ }^{\prime}$ north of | Saturn | 42.7 ${ }^{\circ}$ West |
| February 19, 2019 | 11:09:52 | Mercury | 46' north of | Neptune | $15.1{ }^{\circ}$ East |
| March 22, 2019 | 06:18:30 | Mercury | $3^{\circ} 24{ }^{\prime}$ north of | Neptune | $13.5{ }^{\circ}$ West |
| April 2, 2019 | 18:54:11 | Mercury | 23' north of | Neptune | $25.5{ }^{\circ}$ West |
| April 10, 2019 | 03:52:24 | Venus | 18' south of | Neptune | $32.6{ }^{\circ}$ West |
| May 8, 2019 | 08:12:50 | Mercury | $1^{\circ} 23{ }^{\prime}$ south of | Uranus | $14.1{ }^{\circ}$ West |
| May 18, 2019 | 08:12:13 | Venus | $1^{\circ} 09{ }^{\prime}$ south of | Uranus | 23.2 ${ }^{\circ}$ West |
| June 19, 2019 | 14:34:40 | Mercury | 14' north of | Mars | 24.4 ${ }^{\circ}$ East |
| July 7, 2019 | 13:33:33 | Mercury | $3^{\circ} 50$ south of | Mars | $18.4{ }^{\circ}$ East |
| July 24, 2019 | 10:32:05 | Mercury | $5^{\circ} 43$ ' south of | Venus | $5.8^{\circ}$ West |
| August 24, 2019 | 12:34:05 | Venus | 19' north of | Mars | $3.1{ }^{\circ}$ East |
| September 3, 2019 | 10:44:25 | Mercury | 42' north of | Mars | $1.1^{\circ}$ West |
| September 13, 2019 | 21:35:21 | Mercury | 20' south of | Venus | $8.5^{\circ}$ East |
| October 30, 2019 | 08:29:03 | Mercury | $\mathbf{2}^{\circ} 433^{\prime}$ south of | Venus | 20.3 ${ }^{\circ}$ East |
| November 24, 2019 | 14:00:35 | Venus | $1^{\circ} 24^{\prime}$ south of | Jupiter | 26.2 ${ }^{\circ}$ East |
| December 11, 2019 | 04:42:34 | Venus | $1^{\circ} 49$ ' south of | Saturn | $30^{\circ}$ East |

2020

| Date | Time GMT | Planet | Angle distance | Planet | Elongation to Sun |
| :---: | :---: | :---: | :---: | :---: | :---: |
| January 27, 2020 | 19:21 | Venus | $0^{\circ} 04{ }^{\prime}$ south of | Neptune | $39.5{ }^{\circ}$ East |
| March 9, 2020 | 14:36 | Venus | $2^{\circ} 24{ }^{\prime}$ north of | Uranus | $45.4{ }^{\circ}$ East |
| March 20, 2020 | 06:21 | Mars | $0^{\circ} 42$ south of | Jupiter | $67.4{ }^{\circ}$ West |
| March 31, 2020 | 11:56 | Mars | $0^{\circ} 55{ }^{\prime}$ south of | Saturn | $70.6{ }^{\circ}$ West |
| April 3, 2020 | 16:17 | Mercury | $1^{\circ} 24$ south of | Neptune | 25.9 ${ }^{\circ}$ West |
| May 22, 2020 | 08:44 | Mercury | $0^{\circ} 53$ south of | Venus | $18.4{ }^{\circ}$ East |
| June 12, 2020 | 13:18 | Mars | $1^{\circ} 44$ ' south of | Neptune | $91.5^{\circ}$ east |
| December 21, 2020 | 18:20 ${ }^{[1]}$ | Jupiter | $0^{\circ} 06{ }^{\prime}$ north of | Saturn | $31^{\circ}$ East |

## References

1. Jones, Graham. "The December 2020 Great Conjunction" (in en). https://www.timeanddate.com/astronomy/planets/great-conjunction.

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