

November 01, 2020 12:00:00 PM MST

Object	Right ascens	Declination	Earth distance	Sun distance
Sun	14h 29m 37.9s	-14° 45' 21"	0	0
Mercury	13h 39m 18.0s	-08° 56' 42"	114,352,901	46,006,523
Venus	12h 23m 36.6s	-00° 47' 15"	190,871,999	107,474,382
Mars	01h 02m 26.8s	+04° 49' 06"	70,302,155	214,704,580
Ceres	22h 23m 11.5s	-23° 37' 26"	373,994,677	445,801,655
Jupiter	19h 31m 46.2s	-22° 12' 59"	799,876,948	765,414,715
Saturn	19h 53m 20.8s	-21° 13' 48"	1,523,233,297	1,495,419,616
Uranus	02h 25m 38.8s	+13° 55' 58"	2,810,648,535	2,959,057,422
Neptune	23h 18m 57.6s	-05° 37' 12"	4,383,158,132	4,477,150,748
Pluto	19h 38m 45.9s	-22° 38' 32"	5,150,890,717	5,109,134,843
Moon	03h 22m 45.4s	+15° 20' 23"	405,100	0

(Distances in km)

Object	Rise:	Tran	Set:	Phase	Constl	Magnitud
Sun	06:28	11:43	16:57	0.00%	Lib	unknown
Mercury	05:21	10:53	16:25	17.46%	Vir	1.2
Venus	03:36	09:37	15:37	81.62%	Vir	-4.0
Mars	15:56	22:14	04:36	98.04%	Psc	-2.1
Ceres	14:58	19:36	00:18	99.50%	Aqr	8.8
Jupiter	12:00	16:44	21:28	99.15%	Sgr	-2.2
Saturn	12:18	17:06	21:53	99.77%	Sgr	0.6
Uranus	16:48	23:37	06:30	100.00%	Ari	5.7
Neptune	14:47	20:31	02:18	99.98%	Aqr	7.8
Pluto	12:08	16:50	21:32	99.98%	Sgr	14.4
Moon	17:49	00:16	07:19	98.73%	Ari	unknown

Meteor Radiant Report

Name	Month/Day	RA	Decl	Hourly Rate
Southern Taurids	11/03	3.4	13.6	7
Pegasids	11/12	22.3	21.0	5
Northern Taurids	11/13	3.9	22.3	7
Leonids	11/17	10.2	22.2	15
Andromedids	11/27	1.7	44.0	100

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Date	Moonrise	Moonset	Sunrise	Sunset	Begin Twilight	End Twilight
11/1/20	17:49	07:20	06:28	16:57	04:57	18:28
11/2/20	17:21	07:20	05:30	15:56	03:58	17:27
11/3/20	17:59	08:19	05:31	15:55	03:59	17:26
11/4/20	18:43	09:18	05:32	15:54	04:00	17:25
11/5/20	19:35	10:13	05:33	15:53	04:01	17:24
11/6/20	20:33	11:03	05:34	15:52	04:02	17:23
11/7/20	21:37	11:48	05:35	15:51	04:03	17:23
11/8/20	22:45	12:27	05:36	15:50	04:04	17:22
11/9/20	23:55	13:03	05:38	15:49	04:05	17:21
11/10/20	-----	13:35	05:39	15:48	04:06	17:20
11/11/20	01:07	14:04	05:40	15:47	04:07	17:19
11/12/20	02:20	14:34	05:41	15:46	04:08	17:19
11/13/20	03:36	15:06	05:42	15:45	04:09	17:18
11/14/20	04:52	15:41	05:43	15:44	04:10	17:17
11/15/20	06:10	16:21	05:44	15:44	04:11	17:17
11/16/20	07:28	17:09	05:45	15:43	04:12	17:16
11/17/20	08:39	18:03	05:47	15:42	04:13	17:16
11/18/20	09:42	19:04	05:48	15:41	04:13	17:15
11/19/20	10:35	20:09	05:49	15:41	04:14	17:15
11/20/20	11:18	21:14	05:50	15:40	04:15	17:14
11/21/20	11:54	22:18	05:51	15:40	04:16	17:14
11/22/20	12:23	23:20	05:52	15:39	04:17	17:13
11/23/20	12:50	-----	05:53	15:39	04:18	17:13
11/24/20	13:14	00:19	05:54	15:38	04:19	17:13
11/25/20	13:37	01:17	05:55	15:38	04:20	17:12
11/26/20	14:00	02:15	05:56	15:37	04:21	17:12
11/27/20	14:24	03:13	05:57	15:37	04:22	17:12
11/28/20	14:51	04:12	05:58	15:37	04:23	17:12
11/29/20	15:23	05:12	05:59	15:36	04:24	17:12
11/30/20	15:58	06:12	06:00	15:36	04:24	17:11

'-----' means the event does not occur on this date.