

November 01, 2017 12:00:00 PM MDT

Object	Right ascens	Declination	Earth distance	Sun distance
Sun	14h 28m 26s	-14° 39' 26"	0	0
Mercury	15h 25m 03s	-20° 12' 53"	202,340,378	69,597,584
Venus	13h 26m 40s	-07° 30' 06"	241,027,541	107,712,962
Mars	12h 24m 56s	-01° 27' 34"	359,310,679	248,785,385
Ceres	09h 03m 03s	+22° 33' 33"	366,515,783	390,450,443
Jupiter	14h 11m 36s	-12° 10' 27"	961,728,190	813,887,681
Saturn	17h 37m 00s	-22° 20' 27"	1,606,418,012	1,505,471,768
Uranus	01h 37m 18s	+09° 28' 57"	2,833,833,895	2,978,368,156
Neptune	22h 53m 30s	-08° 04' 48"	4,399,241,603	4,479,830,409
Pluto	19h 14m 00s	-21° 47' 10"	5,056,788,206	5,002,178,880
Moon	00h 30m 20s	-01° 20' 17"	374,948	0

(Distances in km)

Object	Rise:	Tran	Set:	Phase	Constl	Magnitud
Sun	07:29	12:44	17:58	0.00%	Lib	unknown
Mercury	08:47	13:40	18:33	92.17%	Lib	-0.4
Venus	06:03	11:42	17:20	95.89%	Vir	-3.9
Mars	04:42	10:40	16:38	97.25%	Vir	1.8
Ceres	00:54	08:20	15:52	99.50%	Cnc	8.5
Jupiter	07:05	12:27	17:48	99.99%	Vir	-1.7
Saturn	11:08	15:51	20:35	99.88%	Oph	0.6
Uranus	17:17	23:50	06:28	100.00%	Psc	5.7
Neptune	15:32	21:07	02:46	99.98%	Aqr	7.9
Pluto	12:42	17:27	22:12	99.98%	Sgr	14.3
Moon	16:54	23:05	04:21	91.86%	Cet	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
11/1/17	16:54	04:21	07:29	17:58	05:58	19:29
11/2/17	17:29	05:28	07:30	17:57	05:59	19:28
11/3/17	18:06	06:37	07:31	17:56	06:00	19:27
11/4/17	18:47	07:49	07:32	17:55	06:00	19:26
11/5/17	19:34	09:00	07:33	17:54	06:01	19:25
11/6/17	19:26	09:11	06:34	16:52	05:02	18:24
11/7/17	20:24	10:16	06:35	16:51	05:03	18:23
11/8/17	21:28	11:16	06:36	16:50	05:04	18:22
11/9/17	22:33	12:08	06:37	16:49	05:05	18:21
11/10/17	23:39	12:53	06:39	16:48	05:06	18:21
11/11/17	-----	13:32	06:40	16:48	05:07	18:20
11/12/17	00:43	14:07	06:41	16:47	05:08	18:19
11/13/17	01:47	14:39	06:42	16:46	05:09	18:19
11/14/17	02:48	15:10	06:43	16:45	05:10	18:18
11/15/17	03:49	15:40	06:44	16:44	05:11	18:17
11/16/17	04:48	16:10	06:45	16:43	05:12	18:17
11/17/17	05:47	16:43	06:47	16:43	05:13	18:16
11/18/17	06:44	17:18	06:48	16:42	05:14	18:16
11/19/17	07:41	17:56	06:49	16:41	05:15	18:15
11/20/17	08:35	18:38	06:50	16:41	05:16	18:15
11/21/17	09:26	19:25	06:51	16:40	05:17	18:14
11/22/17	10:13	20:14	06:52	16:40	05:18	18:14
11/23/17	10:57	21:07	06:53	16:39	05:19	18:14
11/24/17	11:37	22:02	06:54	16:39	05:20	18:13
11/25/17	12:13	23:00	06:55	16:38	05:21	18:13
11/26/17	12:46	24:00	06:56	16:38	05:22	18:13
11/27/17	13:19	-----	06:58	16:37	05:23	18:12
11/28/17	13:51	01:02	06:59	16:37	05:24	18:12
11/29/17	14:23	02:06	07:00	16:37	05:25	18:12
11/30/17	14:58	03:13	07:01	16:36	05:25	18:12