

November 01, 2021 12:00:00 PM MDT

Object	Right ascens	Declination	Earth distance	Sun distance
Sun	14h 28m 21.4s	-14° 39' 10"	0	0
Mercury	13h 29m 49.1s	-07° 12' 18"	174,798,151	52,404,047
Venus	17h 43m 49.0s	-27° 07' 28"	96,599,704	108,706,257
Mars	13h 57m 42.8s	-11° 32' 26"	386,485,916	240,398,142
Ceres	04h 36m 57.0s	+16° 22' 25"	279,748,018	414,386,102
Jupiter	21h 41m 37.0s	-15° 00' 25"	700,976,066	748,923,852
Saturn	20h 39m 34.0s	-19° 14' 37"	1,484,176,771	1,485,847,994
Uranus	02h 42m 24.5s	+15° 18' 41"	2,803,528,429	2,951,741,201
Neptune	23h 27m 27.9s	-04° 46' 34"	4,377,096,690	4,476,174,147
Pluto	19h 46m 50.9s	-22° 52' 13"	5,181,750,609	5,145,309,402
Moon	11h 53m 39.6s	+05° 16' 36"	373,488	0

(Distances in km)

Object	Rise:	Tran	Set:	Phase	Constl	Magnitud
Sun	07:29	12:44	17:58	0.00%	Lib	unknown
Mercury	06:05	11:45	17:24	80.71%	Vir	-0.8
Venus	11:35	15:59	20:23	47.88%	Oph	-4.4
Mars	06:49	12:13	17:36	99.81%	Vir	1.7
Ceres	19:52	02:55	09:53	99.50%	Tau	7.7
Jupiter	14:44	19:55	01:10	99.06%	Cap	-2.5
Saturn	13:58	18:53	23:49	99.75%	Cap	0.6
Uranus	18:01	00:59	07:53	100.00%	Ari	5.6
Neptune	15:55	21:41	03:31	99.98%	Aqr	7.8
Pluto	13:19	17:59	22:40	99.98%	Sgr	14.4
Moon	03:30	10:07	16:34	13.69%	Vir	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
11/1/21	03:30	16:34	07:29	17:58	05:58	19:29
11/2/21	04:40	17:01	07:30	17:57	05:59	19:28
11/3/21	05:53	17:30	07:31	17:56	06:00	19:27
11/4/21	07:09	18:01	07:32	17:55	06:01	19:26
11/5/21	08:27	18:38	07:33	17:54	06:01	19:25
11/6/21	09:47	19:23	07:35	17:53	06:02	19:24
11/7/21	11:03	20:17	07:36	17:52	06:03	19:24
11/8/21	11:11	20:20	06:36	16:50	05:04	18:22
11/9/21	12:08	21:30	06:37	16:49	05:05	18:21
11/10/21	12:55	22:40	06:39	16:48	05:06	18:21
11/11/21	13:32	23:50	06:40	16:48	05:07	18:20
11/12/21	14:02	-----	06:41	16:47	05:08	18:19
11/13/21	14:28	00:56	06:42	16:46	05:09	18:19
11/14/21	14:52	02:00	06:43	16:45	05:10	18:18
11/15/21	15:15	03:01	06:44	16:44	05:11	18:17
11/16/21	15:38	04:02	06:45	16:43	05:12	18:17
11/17/21	16:02	05:02	06:47	16:43	05:13	18:16
11/18/21	16:28	06:03	06:48	16:42	05:14	18:16
11/19/21	16:59	07:04	06:49	16:41	05:15	18:15
11/20/21	17:35	08:04	06:50	16:41	05:16	18:15
11/21/21	18:16	09:03	06:51	16:40	05:17	18:14
11/22/21	19:05	09:57	06:52	16:40	05:18	18:14
11/23/21	19:59	10:46	06:53	16:39	05:19	18:14
11/24/21	20:59	11:30	06:54	16:39	05:20	18:13
11/25/21	22:01	12:06	06:55	16:38	05:21	18:13
11/26/21	23:06	12:39	06:57	16:38	05:22	18:13
11/27/21	-----	13:07	06:58	16:37	05:23	18:12
11/28/21	00:11	13:34	06:59	16:37	05:24	18:12
11/29/21	01:18	14:00	07:00	16:37	05:25	18:12
11/30/21	02:27	14:26	07:01	16:36	05:25	18:12

Note: Time differences on 11/07 and 11/08 shift from DST to Standard Time.  
'-----' means the event does not occur on this date.