

October 01, 2021 12:00:00 PM MDT

Object	Right ascens	Declination	Earth distance	Sun distance
Sun	12h 32m 05.1s	-03° 27' 46"	0	0
Mercury	13h 24m 28.0s	-12° 44' 48"	104,211,020	57,204,828
Venus	15h 22m 37.4s	-20° 51' 01"	131,980,770	108,941,484
Mars	12h 41m 01.2s	-03° 39' 13"	394,075,473	244,501,707
Ceres	04h 44m 03.6s	+15° 59' 46"	329,115,316	417,378,059
Jupiter	21h 42m 06.8s	-15° 02' 04"	638,193,479	750,056,214
Saturn	20h 38m 16.4s	-19° 19' 33"	1,410,103,655	1,486,770,333
Uranus	02h 47m 01.1s	+15° 39' 34"	2,828,954,850	2,952,381,693
Neptune	23h 29m 56.9s	-04° 31' 07"	4,333,179,138	4,476,262,549
Pluto	19h 46m 09.1s	-22° 52' 41"	5,099,993,413	5,142,228,028
Moon	08h 47m 12.2s	+22° 19' 23"	390,914	0

(Distances in km)

Object	Rise:	Tran	Set:	Phase	Constl	Magnitud
Sun	06:56	12:49	18:42	0.00%	Vir	unknown
Mercury	08:23	13:41	19:00	15.23%	Vir	1.7
Venus	10:50	15:40	20:30	61.93%	Lib	-4.2
Mars	07:08	12:58	18:48	99.99%	Vir	1.7
Ceres	22:03	05:05	12:01	99.50%	Tau	8.4
Jupiter	16:47	21:58	03:13	99.48%	Cap	-2.7
Saturn	15:59	20:54	01:53	99.80%	Cap	0.5
Uranus	20:06	03:06	10:01	99.98%	Ari	5.7
Neptune	17:58	23:45	05:36	100.00%	Aqr	7.8
Pluto	15:20	20:01	00:45	99.98%	Sgr	14.3
Moon	01:22	09:01	16:33	25.41%	Cnc	unknown

Meteor Radiant Report

Name	Month/Day	RA	Decl	Hourly Rate
Southern Annual Andromedids	10/03	0.3	8.0	13
Northern Annual Andromedids	10/03	1.3	34.0	10
October Draconids/Giacobinids	10/09	17.5	54.1	2
Northern Piscids	10/12	1.7	14.0	6
Epsilon Geminids	10/19	6.9	27.0	5
Orionids	10/21	6.3	15.8	30
Leo Minorids	10/24	10.8	37.0	3

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

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