

January 01, 2019 12:00:00 PM MST

Object	Right ascens	Declination	Earth distance	Sun distance
Sun	18h 48m 07.1s	-22° 58' 36"	0	0
Mercury	17h 38m 16.3s	-23° 19' 06"	195,270,124	67,513,542
Venus	15h 31m 07.2s	-15° 29' 53"	95,844,109	107,489,823
Mars	00h 02m 09.8s	-00° 04' 23"	189,642,556	217,582,649
Ceres	15h 21m 18.1s	-11° 51' 19"	474,225,250	396,434,357
Jupiter	16h 42m 04.8s	-21° 35' 41"	925,583,194	800,301,051
Saturn	18h 49m 42.2s	-22° 27' 37"	1,652,091,222	1,505,000,428
Uranus	01h 47m 07.0s	+10° 28' 51"	2,923,668,852	2,971,315,245
Neptune	23h 02m 54.4s	-07° 09' 05"	4,543,531,216	4,478,752,409
Pluto	19h 29m 15.3s	-21° 57' 28"	5,188,368,511	5,043,368,553
Moon	15h 23m 20.0s	-14° 30' 15"	390,142	0

(Distances in km)

Object	Rise:	Tran	Set:	Phase	Constl	Magnitud
Sun	07:20	12:04	16:47	0.00%	Sgr	unknown
Mercury	06:13	10:54	15:34	89.91%	Oph	-0.4
Venus	03:36	08:47	13:57	47.81%	Lib	-4.5
Mars	11:15	17:17	23:20	87.36%	Psc	0.5
Ceres	03:16	08:38	14:00	99.50%	Lib	8.9
Jupiter	05:12	09:58	14:44	99.80%	Oph	-1.8
Saturn	07:22	12:05	16:48	100.00%	Sgr	0.5
Uranus	12:24	19:01	01:42	99.94%	Psc	5.8
Neptune	10:39	16:18	21:56	99.98%	Aqr	7.9
Pluto	07:59	12:43	17:28	100.00%	Sgr	14.3
Moon	03:06	08:34	13:56	17.06%	Lib	unknown

Meteor Radiant Report

Name	Month/Day	RA	Decl	Hourly Rate
Quadrantids	01/03	15.3	48.5	80
Coma Berenicids	01/10	11.7	25.0	8
Delta Cancrids	01/16	8.4	20.0	7

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