

August 01, 2022 12:00:00 PM MDT

Object	Right ascens	Declination	Earth distance	Sun distance
Sun	08h 47m 39.2s	+17° 52' 47"	0	0
Mercury	09h 53m 28.4s	+14° 16' 57"	188,498,040	60,173,906
Venus	07h 17m 04.6s	+22° 14' 35"	233,131,511	107,788,871
Mars	03h 06m 17.4s	+15° 43' 59"	168,745,627	208,446,370
Ceres	08h 29m 20.5s	+24° 13' 47"	535,560,377	385,962,506
Jupiter	00h 34m 13.3s	+02° 06' 54"	652,683,900	741,937,544
Saturn	21h 42m 32.8s	-15° 06' 27"	1,328,827,730	1,476,931,645
Uranus	03h 05m 24.6s	+17° 02' 16"	2,966,470,939	2,945,939,705
Neptune	23h 44m 03.5s	-03° 02' 22"	4,367,915,701	4,475,344,532
Pluto	19h 58m 12.8s	-22° 51' 24"	5,024,238,505	5,172,518,272
Moon	11h 49m 30.4s	+05° 16' 31"	393,625	0

(Distances in km)

Object	Rise:	Tran	Set:	Phase	Constl	Magnitud
Sun	05:59	13:06	20:13	0.00%	Cnc	unknown
Mercury	07:19	14:12	21:04	85.49%	Leo	-0.6
Venus	04:12	11:36	18:59	92.69%	Gem	-3.9
Mars	00:29	07:25	14:22	84.73%	Ari	0.2
Ceres	05:19	12:49	20:19	99.50%	Cnc	8.5
Jupiter	22:41	04:54	11:03	99.22%	Cet	-2.7
Saturn	20:48	01:59	07:13	99.99%	Cap	0.4
Uranus	00:24	07:25	14:26	99.94%	Ari	5.8
Neptune	22:08	04:00	09:56	99.99%	Psc	7.8
Pluto	19:33	00:13	04:58	100.00%	Sgr	14.3
Moon	09:40	16:12	22:34	14.93%	Vir	unknown

Meteor Radiant Report

Name	Month/Day	RA	Decl	Hourly Rate
Southern Iota Aquarids	08/05	22.2	-14.7	15
Perseids	08/12	3.1	57.4	95
Northern Delta Aquarids	08/12	22.6	-5.0	20
Kappa Cygnids	08/18	19.1	59.0	5

Equinox/Solstice Report

Vernal equinox: 3/20/22 8:34 AM STD
Summer solstice: 6/21/22 2:14 AM STD
Autumnal equinox: 9/22/22 6:05 PM STD
Winter solstice: 12/21/22 2:49 PM STD

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

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