

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Eqn (min.)	Noon declination (deg.)	9 PM Lunar Illum. (pct.)
		Astro-nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	End Astro-nomical Twilight					
12/01/2018	Sat	5:24:56	5:42:14	5:59:46	6:35:49	7:08:14		11:42:17	16:16:04	16:48:29	17:24:32	17:42:03	17:59:20	9:07:51	10.903	-21.874	27	
12/02/2018	Sun	5:25:53	5:43:12	6:00:45	6:36:51	7:09:20		11:42:40	16:15:45	16:48:14	17:24:19	17:41:52	17:59:10	9:06:25	10.520	-22.022	18	
12/03/2018	M	5:26:49	5:44:09	6:01:43	6:37:52	7:10:25		11:43:04	16:15:28	16:48:01	17:24:09	17:41:44	17:59:03	9:05:03	10.126	-22.164	11	
12/04/2018	Tu	5:27:44	5:45:04	6:02:40	6:38:52	7:11:28		11:43:28	16:15:14	16:47:50	17:24:02	17:41:37	17:58:57	9:03:46	9.722	-22.298	5	
12/05/2018	W	5:28:38	5:45:59	6:03:36	6:39:51	7:12:30		11:43:53	16:15:02	16:47:42	17:23:56	17:41:33	17:58:54	9:02:32	9.308	-22.425	1	
12/06/2018	Th	5:29:31	5:46:53	6:04:31	6:40:48	7:13:31		11:44:19	16:14:53	16:47:36	17:23:53	17:41:31	17:58:52	9:01:22	8.885	-22.545	0	
12/07/2018	F	5:30:23	5:47:46	6:05:24	6:41:44	7:14:30		11:44:44	16:14:47	16:47:32	17:23:52	17:41:31	17:58:53	9:00:16	8.454	-22.658	1	
12/08/2018	Sat	5:31:13	5:48:37	6:06:16	6:42:39	7:15:28		11:45:11	16:14:42	16:47:31	17:23:54	17:41:33	17:58:56	8:59:15	8.014	-22.763	3	
12/09/2018	Sun	5:32:03	5:49:27	6:07:07	6:43:32	7:16:24		11:45:38	16:14:41	16:47:33	17:23:57	17:41:37	17:59:01	8:58:17	7.567	-22.861	8	
12/10/2018	M	5:32:51	5:50:16	6:07:57	6:44:24	7:17:18		11:46:05	16:14:42	16:47:36	17:24:03	17:41:44	17:59:09	8:57:24	7.113	-22.951	14	
12/11/2018	Tu	5:33:38	5:51:03	6:08:45	6:45:14	7:18:10		11:46:32	16:14:46	16:47:42	17:24:11	17:41:53	17:59:18	8:56:35	6.652	-23.034	21	
12/12/2018	W	5:34:23	5:51:49	6:09:32	6:46:02	7:19:01		11:47:00	16:14:52	16:47:51	17:24:21	17:42:04	17:59:30	8:55:51	6.186	-23.109	29	
12/13/2018	Th	5:35:07	5:52:34	6:10:17	6:46:49	7:19:50		11:47:29	16:15:01	16:48:02	17:24:34	17:42:17	17:59:43	8:55:11	5.714	-23.176	38	
12/14/2018	F	5:35:50	5:53:17	6:11:00	6:47:34	7:20:36		11:47:57	16:15:12	16:48:15	17:24:48	17:42:32	17:59:59	8:54:36	5.237	-23.236	47	
12/15/2018	Sat	5:36:31	5:53:58	6:11:42	6:48:17	7:21:21		11:48:26	16:15:26	16:48:30	17:25:05	17:42:49	18:00:16	8:54:05	4.756	-23.288	57	
12/16/2018	Sun	5:37:10	5:54:38	6:12:23	6:48:58	7:22:04		11:48:55	16:15:43	16:48:48	17:25:24	17:43:08	18:00:36	8:53:39	4.271	-23.332	66	
12/17/2018	M	5:37:48	5:55:16	6:13:01	6:49:38	7:22:44		11:49:25	16:16:02	16:49:08	17:25:44	17:43:29	18:00:57	8:53:17	3.783	-23.368	76	
12/18/2018	Tu	5:38:25	5:55:53	6:13:38	6:50:15	7:23:23		11:49:54	16:16:23	16:49:30	17:26:07	17:43:53	18:01:21	8:53:00	3.293	-23.397	84	
12/19/2018	W	5:38:59	5:56:28	6:14:13	6:50:51	7:23:59		11:50:24	16:16:47	16:49:54	17:26:32	17:44:18	18:01:46	8:52:48	2.800	-23.417	91	
12/20/2018	Th	5:39:32	5:57:01	6:14:46	6:51:25	7:24:33		11:50:53	16:17:13	16:50:21	17:26:59	17:44:45	18:02:13	8:52:40	2.306	-23.430	96	
12/21/2018	F	5:40:04	5:57:32	6:15:18	6:51:56	7:25:04		11:51:23	16:17:42	16:50:50	17:27:28	17:45:14	18:02:42	8:52:37	1.810	-23.435	99	
12/22/2018	Sat	5:40:33	5:58:02	6:15:47	6:52:26	7:25:34		11:51:53	16:18:13	16:51:21	17:27:59	17:45:45	18:03:13	8:52:39	1.314	-23.433	100	
12/23/2018	Sun	5:41:01	5:58:29	6:16:15	6:52:53	7:26:01		11:52:23	16:18:46	16:51:54	17:28:32	17:46:17	18:03:46	8:52:46	0.818	-23.422	97	
12/24/2018	M	5:41:27	5:58:55	6:16:40	6:53:18	7:26:25		11:52:52	16:19:22	16:52:29	17:29:07	17:46:52	18:04:20	8:52:57	0.322	-23.403	92	
12/25/2018	Tu	5:41:51	5:59:19	6:17:04	6:53:41	7:26:48		11:53:22	16:20:00	16:53:06	17:29:43	17:47:28	18:04:56	8:53:12	-0.172	-23.377	84	
12/26/2018	W	5:42:13	5:59:41	6:17:26	6:54:02	7:27:07		11:53:52	16:20:40	16:53:45	17:30:22	17:48:06	18:05:34	8:53:33	-0.666	-23.343	74	
12/27/2018	Th	5:42:34	6:00:01	6:17:46	6:54:21	7:27:25		11:54:21	16:21:22	16:54:27	17:31:02	17:48:46	18:06:14	8:53:58	-1.158	-23.301	64	
12/28/2018	F	5:42:52	6:00:19	6:18:03	6:54:37	7:27:40		11:54:50	16:22:07	16:55:10	17:31:44	17:49:28	18:06:55	8:54:27	-1.647	-23.251	53	
12/29/2018	Sat	5:43:09	6:00:36	6:18:19	6:54:51	7:27:52		11:55:20	16:22:54	16:55:55	17:32:27	17:50:11	18:07:37	8:55:01	-2.133	-23.194	42	
12/30/2018	Sun	5:43:24	6:00:50	6:18:32	6:55:03	7:28:02		11:55:49	16:23:42	16:56:42	17:33:13	17:50:56	18:08:22	8:55:40	-2.616	-23.128	31	
12/31/2018	M	5:43:36	6:01:02	6:18:44	6:55:13	7:28:10		11:56:17	16:24:33	16:57:30	17:34:00	17:51:42	18:09:07	8:56:23	-3.095	-23.055	22	
01/01/2019	Tu	5:43:47	6:01:12	6:18:53	6:55:20	7:28:15		11:56:46	16:25:26	16:58:21	17:34:48	17:52:30	18:09:55	8:57:11	-3.570	-22.975	14	
01/02/2019	W	5:43:56	6:01:20	6:19:00	6:55:25	7:28:18		11:57:14	16:26:20	16:59:13	17:35:38	17:53:19	18:10:43	8:58:03	-4.039	-22.886	8	
01/03/2019	Th	5:44:02	6:01:26	6:19:05	6:55:28	7:28:18		11:57:42	16:27:17	17:00:07	17:36:30	17:54:09	18:11:33	8:58:59	-4.502	-22.790	3	
01/04/2019	F	5:44:07	6:01:29	6:19:08	6:55:29	7:28:15		11:58:09	16:28:15	17:01:02	17:37:23	17:55:01	18:12:24	9:00:00	-4.960	-22.687	1	
01/05/2019	Sat	5:44:09	6:01:31	6:19:09	6:55:27	7:28:10		11:58:36	16:29:15	17:01:59	17:38:17	17:55:55	18:13:17	9:01:05	-5.410	-22.576	0	
01/06/2019	Sun	5:44:09	6:01:30	6:19:07	6:55:22	7:28:03		11:59:03	16:30:16	17:02:57	17:39:13	17:56:49	18:14:11	9:02:14	-5.853	-22.457	1	
01/07/2019	M	5:44:07	6:01:28	6:19:03	6:55:16	7:27:52		11:59:29	16:31:20	17:03:57	17:40:09	17:57:45	18:15:06	9:03:27	-6.288	-22.332	4	
01/08/2019	Tu	5:44:03	6:01:23	6:18:57	6:55:07	7:27:40		11:59:55	16:32:24	17:04:58	17:41:07	17:58:42	18:16:02	9:04:44	-6.714	-22.198	8	
01/09/2019	W	5:43:57	6:01:16	6:18:49	6:54:55	7:27:25		12:00:20	16:33:30	17:06:00	17:42:07	17:59:40	18:16:59	9:06:06	-7.132	-22.058	14	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
01/10/2019	Th	5:43:49	6:01:06	6:18:38	6:54:41	7:27:07		12:00:44		16:34:38	17:07:04	17:43:07	18:00:39	18:17:57	9:07:31	-7.541	-21.910	22
01/11/2019	F	5:43:38	6:00:55	6:18:26	6:54:25	7:26:47		12:01:08		16:35:46	17:08:08	17:44:09	18:01:40	18:18:56	9:08:59	-7.939	-21.756	30
01/12/2019	Sat	5:43:26	6:00:41	6:18:11	6:54:07	7:26:24		12:01:31		16:36:56	17:09:14	17:45:11	18:02:41	18:19:56	9:10:32	-8.328	-21.594	39
01/13/2019	Sun	5:43:11	6:00:25	6:17:53	6:53:46	7:25:59		12:01:54		16:38:08	17:10:21	17:46:14	18:03:43	18:20:57	9:12:08	-8.705	-21.425	49
01/14/2019	M	5:42:54	6:00:07	6:17:34	6:53:23	7:25:32		12:02:16		16:39:20	17:11:29	17:47:19	18:04:46	18:21:59	9:13:48	-9.072	-21.250	59
01/15/2019	Tu	5:42:35	5:59:47	6:17:12	6:52:57	7:25:02		12:02:37		16:40:33	17:12:38	17:48:24	18:05:50	18:23:02	9:15:31	-9.428	-21.067	69
01/16/2019	W	5:42:13	5:59:24	6:16:48	6:52:30	7:24:29		12:02:58		16:41:47	17:13:48	17:49:30	18:06:54	18:24:05	9:17:18	-9.772	-20.878	79
01/17/2019	Th	5:41:50	5:58:59	6:16:22	6:52:00	7:23:55		12:03:18		16:43:03	17:14:58	17:50:37	18:08:00	18:25:10	9:19:08	-10.104	-20.682	87
01/18/2019	F	5:41:24	5:58:32	6:15:53	6:51:27	7:23:18		12:03:37		16:44:19	17:16:10	17:51:44	18:09:06	18:26:15	9:21:01	-10.424	-20.480	94
01/19/2019	Sat	5:40:56	5:58:03	6:15:23	6:50:53	7:22:38		12:03:56		16:45:36	17:17:22	17:52:53	18:10:13	18:27:20	9:22:58	-10.732	-20.271	98
01/20/2019	Sun	5:40:26	5:57:32	6:14:50	6:50:16	7:21:57		12:04:13		16:46:54	17:18:35	17:54:02	18:11:20	18:28:27	9:24:57	-11.027	-20.056	100
01/21/2019	M	5:39:54	5:56:59	6:14:15	6:49:37	7:21:13		12:04:30		16:48:12	17:19:48	17:55:11	18:12:28	18:29:34	9:26:59	-11.310	-19.835	99
01/22/2019	Tu	5:39:20	5:56:23	6:13:38	6:48:56	7:20:27		12:04:46		16:49:31	17:21:03	17:56:21	18:13:37	18:30:41	9:29:04	-11.580	-19.607	94
01/23/2019	W	5:38:43	5:55:46	6:12:59	6:48:13	7:19:39		12:05:02		16:50:51	17:22:17	17:57:32	18:14:46	18:31:49	9:31:12	-11.837	-19.374	87
01/24/2019	Th	5:38:05	5:55:06	6:12:18	6:47:28	7:18:48		12:05:17		16:52:11	17:23:33	17:58:43	18:15:56	18:32:58	9:33:23	-12.082	-19.134	79
01/25/2019	F	5:37:24	5:54:24	6:11:35	6:46:40	7:17:56		12:05:30		16:53:32	17:24:48	17:59:55	18:17:06	18:34:07	9:35:36	-12.314	-18.889	69
01/26/2019	Sat	5:36:42	5:53:40	6:10:49	6:45:51	7:17:01		12:05:44		16:54:53	17:26:05	18:01:07	18:18:17	18:35:16	9:37:52	-12.533	-18.638	58
01/27/2019	Sun	5:35:57	5:52:55	6:10:02	6:44:59	7:16:05		12:05:56		16:56:15	17:27:21	18:02:20	18:19:28	18:36:26	9:40:10	-12.738	-18.381	47
01/28/2019	M	5:35:10	5:52:07	6:09:13	6:44:06	7:15:07		12:06:08		16:57:37	17:28:38	18:03:33	18:20:40	18:37:37	9:42:30	-12.931	-18.118	37
01/29/2019	Tu	5:34:22	5:51:17	6:08:22	6:43:11	7:14:06		12:06:18		16:59:00	17:29:56	18:04:46	18:21:52	18:38:48	9:44:53	-13.110	-17.851	27
01/30/2019	W	5:33:31	5:50:25	6:07:28	6:42:14	7:13:04		12:06:28		17:00:22	17:31:14	18:06:00	18:23:04	18:39:59	9:47:18	-13.277	-17.577	19
01/31/2019	Th	5:32:38	5:49:32	6:06:33	6:41:14	7:12:00		12:06:37		17:01:45	17:32:32	18:07:14	18:24:17	18:41:11	9:49:45	-13.429	-17.299	12
02/01/2019	F	5:31:44	5:48:36	6:05:36	6:40:13	7:10:54		12:06:46		17:03:08	17:33:50	18:08:28	18:25:30	18:42:23	9:52:14	-13.569	-17.016	6
02/02/2019	Sat	5:30:47	5:47:38	6:04:38	6:39:11	7:09:46		12:06:53		17:04:32	17:35:08	18:09:43	18:26:43	18:43:35	9:54:45	-13.695	-16.727	3
02/03/2019	Sun	5:29:49	5:46:39	6:03:37	6:38:06	7:08:37		12:07:00		17:05:55	17:36:27	18:10:58	18:27:57	18:44:48	9:57:18	-13.807	-16.434	0
02/04/2019	M	5:28:49	5:45:38	6:02:34	6:37:00	7:07:26		12:07:06		17:07:19	17:37:46	18:12:13	18:29:10	18:46:01	9:59:53	-13.906	-16.136	0
02/05/2019	Tu	5:27:46	5:44:35	6:01:30	6:35:52	7:06:13		12:07:11		17:08:42	17:39:05	18:13:28	18:30:24	18:47:14	10:02:30	-13.992	-15.833	2
02/06/2019	W	5:26:42	5:43:30	6:00:24	6:34:42	7:04:58		12:07:15		17:10:06	17:40:24	18:14:43	18:31:38	18:48:27	10:05:08	-14.064	-15.526	5
02/07/2019	Th	5:25:36	5:42:23	5:59:16	6:33:30	7:03:42		12:07:19		17:11:30	17:41:43	18:15:59	18:32:53	18:49:41	10:07:47	-14.122	-15.214	10
02/08/2019	F	5:24:29	5:41:15	5:58:06	6:32:17	7:02:25		12:07:22		17:12:53	17:43:02	18:17:14	18:34:07	18:50:55	10:10:28	-14.167	-14.898	16
02/09/2019	Sat	5:23:19	5:40:05	5:56:55	6:31:03	7:01:06		12:07:24		17:14:16	17:44:21	18:18:30	18:35:22	18:52:09	10:13:11	-14.199	-14.578	24
02/10/2019	Sun	5:22:08	5:38:53	5:55:42	6:29:47	6:59:45		12:07:25		17:15:40	17:45:40	18:19:46	18:36:37	18:53:23	10:15:55	-14.217	-14.254	32
02/11/2019	M	5:20:55	5:37:39	5:54:28	6:28:29	6:58:23		12:07:25		17:17:03	17:46:58	18:21:02	18:37:51	18:54:37	10:18:40	-14.223	-13.926	42
02/12/2019	Tu	5:19:40	5:36:24	5:53:12	6:27:09	6:56:59		12:07:25		17:18:26	17:48:17	18:22:17	18:39:06	18:55:51	10:21:26	-14.215	-13.594	53
02/13/2019	W	5:18:24	5:35:07	5:51:54	6:25:49	6:55:35		12:07:23		17:19:49	17:49:36	18:23:33	18:40:21	18:57:06	10:24:14	-14.194	-13.258	63
02/14/2019	Th	5:17:06	5:33:49	5:50:35	6:24:27	6:54:08		12:07:21		17:21:11	17:50:55	18:24:49	18:41:36	18:58:21	10:27:03	-14.161	-12.919	73
02/15/2019	F	5:15:46	5:32:28	5:49:14	6:23:03	6:52:41		12:07:19		17:22:34	17:52:13	18:26:05	18:42:52	18:59:36	10:29:53	-14.115	-12.576	83
02/16/2019	Sat	5:14:25	5:31:07	5:47:51	6:21:38	6:51:12		12:07:15		17:23:56	17:53:32	18:27:21	18:44:07	19:00:51	10:32:44	-14.057	-12.230	91
02/17/2019	Sun	5:13:02	5:29:44	5:46:28	6:20:12	6:49:42		12:07:11		17:25:18	17:54:50	18:28:37	18:45:22	19:02:06	10:35:35	-13.987	-11.881	97
02/18/2019	M	5:11:37	5:28:19	5:45:03	6:18:44	6:48:11		12:07:06		17:26:39	17:56:08	18:29:52	18:46:37	19:03:21	10:38:28	-13.905	-11.528	100

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
02/19/2019	Tu	5:10:11	5:26:53	5:43:36	6:17:15	6:46:39		12:07:00	17:28:01	17:57:26	18:31:08	18:47:53	19:04:37	10:41:22	-13.812	-11.173	100	
02/20/2019	W	5:08:44	5:25:26	5:42:08	6:15:45	6:45:06		12:06:54	17:29:22	17:58:44	18:32:24	18:49:08	19:05:52	10:44:16	-13.708	-10.815	96	
02/21/2019	Th	5:07:15	5:23:57	5:40:39	6:14:14	6:43:31		12:06:47	17:30:43	18:00:02	18:33:40	18:50:24	19:07:08	10:47:11	-13.592	-10.454	91	
02/22/2019	F	5:05:44	5:22:27	5:39:09	6:12:42	6:41:56		12:06:40	17:32:03	18:01:19	18:34:56	18:51:40	19:08:24	10:50:07	-13.467	-10.090	83	
02/23/2019	Sat	5:04:12	5:20:55	5:37:37	6:11:09	6:40:20		12:06:32	17:33:24	18:02:37	18:36:12	18:52:56	19:09:40	10:53:04	-13.331	-9.724	74	
02/24/2019	Sun	5:02:39	5:19:22	5:36:04	6:09:34	6:38:42		12:06:23	17:34:44	18:03:54	18:37:28	18:54:11	19:10:57	10:56:01	-13.186	-9.355	64	
02/25/2019	M	5:01:05	5:17:48	5:34:30	6:07:59	6:37:04		12:06:14	17:36:04	18:05:11	18:38:44	18:55:28	19:12:13	10:58:59	-13.031	-8.983	53	
02/26/2019	Tu	4:59:29	5:16:13	5:32:55	6:06:22	6:35:25		12:06:04	17:37:23	18:06:29	18:40:00	18:56:44	19:13:30	11:01:58	-12.867	-8.610	43	
02/27/2019	W	4:57:52	5:14:36	5:31:18	6:04:45	6:33:46		12:05:53	17:38:43	18:07:46	18:41:16	18:58:00	19:14:47	11:04:57	-12.694	-8.234	34	
02/28/2019	Th	4:56:13	5:12:59	5:29:41	6:03:07	6:32:05		12:05:42	17:40:02	18:09:02	18:42:32	18:59:16	19:16:04	11:07:57	-12.512	-7.857	25	
03/01/2019	F	4:54:33	5:11:20	5:28:02	6:01:28	6:30:24		12:05:31	17:41:20	18:10:19	18:43:48	19:00:33	19:17:22	11:10:57	-12.322	-7.477	17	
03/02/2019	Sat	4:52:52	5:09:40	5:26:23	5:59:47	6:28:42		12:05:19	17:42:39	18:11:36	18:45:04	19:01:50	19:18:40	11:13:57	-12.123	-7.096	11	
03/03/2019	Sun	4:51:10	5:07:59	5:24:42	5:58:07	6:26:59		12:05:07	17:43:57	18:12:52	18:46:20	19:03:07	19:19:58	11:16:58	-11.917	-6.713	6	
03/04/2019	M	4:49:27	5:06:17	5:23:01	5:56:25	6:25:16		12:04:54	17:45:15	18:14:09	18:47:37	19:04:24	19:21:16	11:20:00	-11.703	-6.328	2	
03/05/2019	Tu	4:47:43	5:04:33	5:21:18	5:54:42	6:23:32		12:04:41	17:46:33	18:15:25	18:48:53	19:05:41	19:22:35	11:23:01	-11.482	-5.942	0	
03/06/2019	W	4:45:57	5:02:49	5:19:35	5:52:59	6:21:47		12:04:27	17:47:50	18:16:41	18:50:10	19:06:58	19:23:53	11:26:03	-11.253	-5.555	0	
03/07/2019	Th	4:44:10	5:01:04	5:17:51	5:51:15	6:20:02		12:04:13	17:49:07	18:17:57	18:51:26	19:08:16	19:25:12	11:29:05	-11.018	-5.166	2	
03/08/2019	F	4:42:23	4:59:18	5:16:06	5:49:31	6:18:16		12:03:58	17:50:24	18:19:13	18:52:43	19:09:33	19:26:32	11:32:08	-10.777	-4.776	6	
03/09/2019	Sat	4:40:34	4:57:31	5:14:20	5:47:45	6:16:30		12:03:43	17:51:41	18:20:29	18:53:59	19:10:51	19:27:52	11:35:11	-10.529	-4.385	11	
03/10/2019	Sun*	5:38:44	5:55:43	6:12:33	6:46:00	7:14:44		13:03:28	18:52:57	19:21:45	19:55:16	20:12:09	20:29:12	11:38:14	-10.275	-3.993	18	
03/11/2019	M*	5:36:53	5:53:54	6:10:45	6:44:13	7:12:56		13:03:13	18:54:13	19:23:00	19:56:33	20:13:28	20:30:32	11:41:17	-10.015	-3.601	27	
03/12/2019	Tu*	5:35:01	5:52:04	6:08:57	6:42:26	7:11:09		13:02:57	18:55:29	19:24:16	19:57:50	20:14:46	20:31:53	11:44:20	-9.750	-3.207	36	
03/13/2019	W*	5:33:08	5:50:13	6:07:08	6:40:39	7:09:21		13:02:41	18:56:45	19:25:31	19:59:07	20:16:05	20:33:14	11:47:24	-9.480	-2.813	47	
03/14/2019	Th*	5:31:15	5:48:22	6:05:18	6:38:51	7:07:33		13:02:24	18:58:00	19:26:46	20:00:24	20:17:24	20:34:35	11:50:27	-9.205	-2.419	58	
03/15/2019	F*	5:29:20	5:46:30	6:03:28	6:37:02	7:05:45		13:02:07	18:59:15	19:28:02	20:01:41	20:18:43	20:35:57	11:53:31	-8.926	-2.024	69	
03/16/2019	Sat*	5:27:24	5:44:37	6:01:37	6:35:13	7:03:56		13:01:50	19:00:30	19:29:17	20:02:59	20:20:02	20:37:19	11:56:35	-8.642	-1.629	79	
03/17/2019	Sun*	5:25:28	5:42:43	5:59:45	6:33:24	7:02:07		13:01:33	19:01:45	19:30:32	20:04:17	20:21:22	20:38:41	11:59:38	-8.355	-1.234	88	
03/18/2019	M*	5:23:31	5:40:49	5:57:53	6:31:34	7:00:18		13:01:16	19:03:00	19:31:47	20:05:34	20:22:42	20:40:04	12:02:42	-8.065	-0.839	94	
03/19/2019	Tu*	5:21:33	5:38:54	5:56:00	6:29:44	6:58:28		13:00:58	19:04:14	19:33:02	20:06:52	20:24:02	20:41:28	12:05:46	-7.771	-0.444	99	
03/20/2019	W*	5:19:34	5:36:58	5:54:07	6:27:54	6:56:39		13:00:40	19:05:28	19:34:17	20:08:10	20:25:23	20:42:52	12:08:49	-7.475	-0.049	100	
03/21/2019	Th*	5:17:34	5:35:02	5:52:13	6:26:03	6:54:49	7:02:48	13:00:22	18:56:32	19:06:42	19:35:33	20:09:29	20:26:44	12:11:53	-7.177	0.346	98	
03/22/2019	F*	5:15:34	5:33:05	5:50:19	6:24:12	6:53:00	7:04:08	13:00:04	18:54:37	19:07:56	19:36:48	20:10:47	20:28:05	12:14:57	-6.877	0.741	94	
03/23/2019	Sat*	5:13:33	5:31:08	5:48:24	6:22:21	6:51:10	7:05:27	12:59:46	18:52:41	19:09:10	19:38:03	20:12:06	20:29:27	12:18:00	-6.576	1.135	87	
03/24/2019	Sun*	5:11:32	5:29:10	5:46:29	6:20:30	6:49:20	7:06:47	12:59:28	18:50:46	19:10:23	19:39:18	20:13:26	20:30:49	12:21:03	-6.274	1.529	79	
03/25/2019	M*	5:09:29	5:27:11	5:44:34	6:18:39	6:47:30	7:08:06	12:59:10	18:48:50	19:11:37	19:40:34	20:14:45	20:32:12	12:24:07	-5.972	1.922	70	
03/26/2019	Tu*	5:07:27	5:25:13	5:42:38	6:16:47	6:45:41	7:09:25	12:58:52	18:46:55	19:12:51	19:41:49	20:16:05	20:33:35	12:27:10	-5.669	2.314	60	
03/27/2019	W*	5:05:23	5:23:13	5:40:42	6:14:56	6:43:51	7:10:44	12:58:34	18:45:00	19:14:04	19:43:04	20:17:25	20:34:58	12:30:13	-5.367	2.706	51	
03/28/2019	Th*	5:03:19	5:21:14	5:38:46	6:13:04	6:42:02	7:12:03	12:58:16	18:43:05	19:15:17	19:44:20	20:18:45	20:36:22	12:33:16	-5.065	3.096	41	
03/29/2019	F*	5:01:15	5:19:14	5:36:50	6:11:12	6:40:12	7:13:22	12:57:58	18:41:11	19:16:31	19:45:36	20:20:06	20:37:47	12:36:18	-4.764	3.486	32	
03/30/2019	Sat*	4:59:10	5:17:13	5:34:53	6:09:21	6:38:23	7:14:41	12:57:40	18:39:16	19:17:44	19:46:52	20:21:27	20:39:12	12:39:21	-4.465	3.875	23	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End Civil	End Nautical	End 15-deg.	End Astro-nomical	Length of Day	Noon Eqn (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro-nomical Twilight	Begin 15-deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight													
09/07/2019	Sat*	4:41:38	5:00:17	5:18:24	5:53:32	6:22:57	7:14:28	12:51:12	18:27:59	19:18:40	19:47:59	20:22:58	20:41:00	20:59:33	12:55:43	1.993	5.962	70
09/08/2019	Sun*	4:43:06	5:01:39	5:19:42	5:54:44	6:24:05	7:12:33	12:50:52	18:29:13	19:16:50	19:46:06	20:20:59	20:38:57	20:57:24	12:52:45	2.337	5.587	78
09/09/2019	M*	4:44:34	5:03:01	5:21:00	5:55:55	6:25:14	7:10:38	12:50:31	18:30:27	19:15:00	19:44:13	20:19:00	20:36:54	20:55:15	12:49:47	2.685	5.210	86
09/10/2019	Tu*	4:46:01	5:04:23	5:22:17	5:57:07	6:26:22	7:08:42	12:50:10	18:31:40	19:13:10	19:42:20	20:17:01	20:34:50	20:53:07	12:46:48	3.035	4.832	92
09/11/2019	W*	4:47:27	5:05:44	5:23:34	5:58:18	6:27:30	7:06:46	12:49:49	18:32:54	19:11:19	19:40:27	20:15:02	20:32:48	20:50:59	12:43:49	3.387	4.452	96
09/12/2019	Th*	4:48:53	5:07:05	5:24:51	5:59:29	6:28:39	7:04:49	12:49:27	18:34:08	19:09:29	19:38:33	20:13:03	20:30:45	20:48:51	12:40:50	3.742	4.071	99
09/13/2019	F*	4:50:18	5:08:25	5:26:07	6:00:40	6:29:47	7:02:53	12:49:06	18:35:22	19:07:38	19:36:40	20:11:05	20:28:43	20:46:44	12:37:50	4.098	3.689	100
09/14/2019	Sat*	4:51:42	5:09:44	5:27:23	6:01:51	6:30:56	7:00:56	12:48:45	18:36:37	19:05:46	19:34:46	20:09:06	20:26:41	20:44:38	12:34:51	4.455	3.306	99
09/15/2019	Sun*	4:53:06	5:11:04	5:28:39	6:03:02	6:32:04	6:58:59	12:48:23	18:37:51	19:03:55	19:32:52	20:07:08	20:24:39	20:42:32	12:31:51	4.813	2.922	96
09/16/2019	M*	4:54:29	5:12:22	5:29:54	6:04:13	6:33:13	6:57:02	12:48:02	18:39:05	19:02:04	19:30:59	20:05:10	20:22:38	20:40:26	12:28:51	5.171	2.537	92
09/17/2019	Tu*	4:55:51	5:13:41	5:31:09	6:05:23	6:34:21	6:55:04	12:47:40	18:40:20	19:00:12	19:29:05	20:03:12	20:20:37	20:38:21	12:25:51	5.530	2.151	86
09/18/2019	W*	4:57:13	5:14:59	5:32:24	6:06:34	6:35:30	6:53:07	12:47:19	18:41:34	18:58:20	19:27:12	20:01:15	20:18:36	20:36:17	12:22:50	5.888	1.764	79
09/19/2019	Th*	4:58:35	5:16:16	5:33:39	6:07:44	6:36:39	6:51:10	12:46:57	18:42:49	18:56:29	19:25:19	19:59:18	20:16:36	20:34:13	12:19:50	6.246	1.377	70
09/20/2019	F*	4:59:56	5:17:33	5:34:53	6:08:55	6:37:48	6:49:12	12:46:36	18:44:04	18:54:37	19:23:26	19:57:21	20:14:37	20:32:10	12:16:49	6.602	0.989	60
09/21/2019	Sat*	5:01:16	5:18:50	5:36:07	6:10:05	6:38:57	6:47:15	12:46:14	18:45:20	18:52:45	19:21:33	19:55:25	20:12:38	20:30:08	12:13:48	6.957	0.601	50
09/22/2019	Sun*	5:02:36	5:20:07	5:37:21	6:11:16	6:40:07	6:45:18	12:45:53	18:46:35	18:50:54	19:19:40	19:53:29	20:10:40	20:28:06	12:10:47	7.310	0.212	39
09/23/2019	M*	5:03:55	5:21:23	5:38:35	6:12:26	6:41:16		12:45:32		18:49:03	19:17:48	19:51:34	20:08:42	20:26:05	12:07:47	7.661	-0.177	29
09/24/2019	Tu*	5:05:14	5:22:39	5:39:48	6:13:37	6:42:26		12:45:11		18:47:11	19:15:56	19:49:39	20:06:45	20:24:05	12:04:46	8.010	-0.567	19
09/25/2019	W*	5:06:33	5:23:54	5:41:01	6:14:47	6:43:35		12:44:50		18:45:20	19:14:04	19:47:44	20:04:48	20:22:05	12:01:45	8.356	-0.956	10
09/26/2019	Th*	5:07:51	5:25:10	5:42:14	6:15:58	6:44:45		12:44:30		18:43:29	19:12:13	19:45:51	20:02:52	20:20:06	11:58:44	8.699	-1.345	4
09/27/2019	F*	5:09:09	5:26:25	5:43:27	6:17:09	6:45:56		12:44:10		18:41:38	19:10:22	19:43:57	20:00:57	20:18:09	11:55:43	9.038	-1.735	1
09/28/2019	Sat*	5:10:26	5:27:39	5:44:40	6:18:19	6:47:06		12:43:49		18:39:48	19:08:31	19:42:05	19:59:02	20:16:11	11:52:42	9.374	-2.124	0
09/29/2019	Sun*	5:11:43	5:28:54	5:45:53	6:19:30	6:48:17		12:43:29		18:37:58	19:06:41	19:40:13	19:57:08	20:14:15	11:49:41	9.706	-2.513	3
09/30/2019	M*	5:13:00	5:30:08	5:47:05	6:20:41	6:49:28		12:43:10		18:36:08	19:04:51	19:38:21	19:55:15	20:12:20	11:46:40	10.034	-2.901	8
10/01/2019	Tu*	5:14:16	5:31:22	5:48:18	6:21:52	6:50:39		12:42:50		18:34:18	19:03:02	19:36:30	19:53:23	20:10:25	11:43:39	10.358	-3.289	16
10/02/2019	W*	5:15:32	5:32:36	5:49:30	6:23:02	6:51:50		12:42:31		18:32:29	19:01:13	19:34:40	19:51:32	20:08:32	11:40:39	10.677	-3.676	24
10/03/2019	Th*	5:16:47	5:33:49	5:50:42	6:24:13	6:53:01		12:42:12		18:30:40	18:59:24	19:32:51	19:49:41	20:06:39	11:37:38	10.991	-4.063	34
10/04/2019	F*	5:18:03	5:35:03	5:51:54	6:25:24	6:54:13		12:41:54		18:28:51	18:57:37	19:31:02	19:47:51	20:04:48	11:34:38	11.299	-4.449	44
10/05/2019	Sat*	5:19:18	5:36:16	5:53:06	6:26:36	6:55:25		12:41:36		18:27:03	18:55:49	19:29:14	19:46:02	20:02:57	11:31:38	11.602	-4.833	54
10/06/2019	Sun*	5:20:32	5:37:29	5:54:18	6:27:47	6:56:37		12:41:18		18:25:16	18:54:03	19:27:27	19:44:14	20:01:07	11:28:38	11.899	-5.217	64
10/07/2019	M*	5:21:46	5:38:41	5:55:30	6:28:58	6:57:50		12:41:00		18:23:29	18:52:17	19:25:41	19:42:27	19:59:19	11:25:39	12.190	-5.600	73
10/08/2019	Tu*	5:23:00	5:39:54	5:56:41	6:30:09	6:59:02		12:40:43		18:21:42	18:50:32	19:23:56	19:40:41	19:57:31	11:22:40	12.474	-5.981	81
10/09/2019	W*	5:24:14	5:41:06	5:57:53	6:31:21	7:00:15		12:40:27		18:19:56	18:48:48	19:22:11	19:38:56	19:55:45	11:19:41	12.752	-6.362	88
10/10/2019	Th*	5:25:27	5:42:18	5:59:04	6:32:33	7:01:28		12:40:11		18:18:11	18:47:04	19:20:28	19:37:12	19:54:00	11:16:42	13.021	-6.740	93
10/11/2019	F*	5:26:41	5:43:31	6:00:16	6:33:44	7:02:42		12:39:55		18:16:26	18:45:21	19:18:45	19:35:29	19:52:16	11:13:44	13.284	-7.118	97
10/12/2019	Sat*	5:27:54	5:44:43	6:01:27	6:34:56	7:03:56		12:39:40		18:14:42	18:43:39	19:17:04	19:33:47	19:50:33	11:10:46	13.538	-7.493	99
10/13/2019	Sun*	5:29:07	5:45:54	6:02:39	6:36:08	7:05:10		12:39:25		18:12:59	18:41:58	19:15:23	19:32:06	19:48:51	11:07:49	13.783	-7.867	100
10/14/2019	M*	5:30:19	5:47:06	6:03:50	6:37:21	7:06:24		12:39:11		18:11:16	18:40:17	19:13:44	19:30:26	19:47:11	11:04:52	14.020	-8.239	98
10/15/2019	Tu*	5:31:32	5:48:18	6:05:02	6:38:33	7:07:39		12:38:57		18:09:34	18:38:38	19:12:06	19:28:47	19:45:31	11:01:55	14.248	-8.609	95
10/16/2019	W*	5:32:44	5:49:30	6:06:13	6:39:46	7:08:54		12:38:44		18:07:53	18:36:59	19:10:28	19:27:10	19:43:54	10:59:00	14.466	-8.977	90

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Eqn (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
10/17/2019	Th*	5:33:56	5:50:41	6:07:25	6:40:58	7:10:09	12:38:31		18:06:13	18:35:22	19:08:52	19:25:34	19:42:17	10:56:04	14.675	-9.343	83	
10/18/2019	F*	5:35:08	5:51:53	6:08:37	6:42:11	7:11:25	12:38:19		18:04:34	18:33:46	19:07:17	19:23:59	19:40:42	10:53:09	14.873	-9.707	75	
10/19/2019	Sat*	5:36:20	5:53:04	6:09:48	6:43:25	7:12:41	12:38:08		18:02:56	18:32:10	19:05:44	19:22:26	19:39:08	10:50:15	15.061	-10.069	65	
10/20/2019	Sun*	5:37:32	5:54:16	6:11:00	6:44:38	7:13:57	12:37:58		18:01:19	18:30:36	19:04:11	19:20:53	19:37:35	10:47:21	15.238	-10.428	55	
10/21/2019	M*	5:38:44	5:55:28	6:12:12	6:45:52	7:15:14	12:37:48		17:59:43	18:29:03	19:02:40	19:19:23	19:36:04	10:44:28	15.403	-10.784	43	
10/22/2019	Tu*	5:39:55	5:56:39	6:13:24	6:47:05	7:16:31	12:37:38		17:58:07	18:27:31	19:01:10	19:17:53	19:34:35	10:41:36	15.558	-11.138	32	
10/23/2019	W*	5:41:07	5:57:51	6:14:35	6:48:19	7:17:48	12:37:30		17:56:33	18:26:00	18:59:42	19:16:25	19:33:07	10:38:45	15.701	-11.489	22	
10/24/2019	Th*	5:42:18	5:59:02	6:15:47	6:49:34	7:19:06	12:37:22		17:55:00	18:24:31	18:58:14	19:14:58	19:31:40	10:35:54	15.832	-11.838	13	
10/25/2019	F*	5:43:30	6:00:13	6:16:59	6:50:48	7:20:24	12:37:15		17:53:28	18:23:03	18:56:49	19:13:33	19:30:15	10:33:04	15.951	-12.183	6	
10/26/2019	Sat*	5:44:41	6:01:25	6:18:11	6:52:03	7:21:42	12:37:08		17:51:58	18:21:36	18:55:24	19:12:09	19:28:52	10:30:15	16.057	-12.525	2	
10/27/2019	Sun*	5:45:52	6:02:36	6:19:24	6:53:17	7:23:01	12:37:03		17:50:28	18:20:10	18:54:01	19:10:47	19:27:30	10:27:28	16.152	-12.864	0	
10/28/2019	M*	5:47:03	6:03:48	6:20:36	6:54:32	7:24:19	12:36:58		17:49:00	18:18:46	18:52:40	19:09:27	19:26:10	10:24:41	16.234	-13.200	1	
10/29/2019	Tu*	5:48:14	6:04:59	6:21:48	6:55:47	7:25:38	12:36:54		17:47:33	18:17:23	18:51:20	19:08:08	19:24:51	10:21:55	16.303	-13.532	5	
10/30/2019	W*	5:49:25	6:06:10	6:23:00	6:57:02	7:26:58	12:36:50		17:46:08	18:16:01	18:50:02	19:06:50	19:23:34	10:19:10	16.360	-13.861	11	
10/31/2019	Th*	5:50:35	6:07:21	6:24:12	6:58:17	7:28:17	12:36:48		17:44:43	18:14:42	18:48:45	19:05:34	19:22:19	10:16:27	16.404	-14.186	19	
11/01/2019	F*	5:51:46	6:08:32	6:25:24	6:59:33	7:29:36	12:36:46		17:43:21	18:13:23	18:47:30	19:04:20	19:21:05	10:13:44	16.434	-14.508	28	
11/02/2019	Sat*	5:52:56	6:09:43	6:26:36	7:00:48	7:30:56	12:36:45		17:41:59	18:12:06	18:46:16	19:03:08	19:19:53	10:11:03	16.452	-14.825	37	
11/03/2019	Sun	4:54:07	5:10:54	5:27:48	6:02:03	6:32:16	11:36:44		16:40:39	17:10:51	17:45:04	18:01:57	18:18:43	10:08:24	16.457	-15.138	48	
11/04/2019	M	4:55:17	5:12:05	5:29:00	6:03:19	6:33:36	11:36:45		16:39:21	17:09:37	17:43:54	18:00:48	18:17:35	10:05:46	16.448	-15.447	57	
11/05/2019	Tu	4:56:26	5:13:16	5:30:12	6:04:34	6:34:56	11:36:46		16:38:04	17:08:25	17:42:45	17:59:40	18:16:28	10:03:09	16.426	-15.752	66	
11/06/2019	W	4:57:36	5:14:26	5:31:23	6:05:49	6:36:15	11:36:48		16:36:49	17:07:14	17:41:39	17:58:35	18:15:24	10:00:34	16.390	-16.053	75	
11/07/2019	Th	4:58:46	5:15:37	5:32:35	6:07:04	6:37:35	11:36:51		16:35:36	17:06:06	17:40:34	17:57:31	18:14:21	9:58:00	16.340	-16.349	83	
11/08/2019	F	4:59:55	5:16:47	5:33:46	6:08:20	6:38:55	11:36:55		16:34:24	17:04:59	17:39:30	17:56:29	18:13:20	9:55:29	16.277	-16.640	89	
11/09/2019	Sat	5:01:04	5:17:57	5:34:57	6:09:35	6:40:15	11:37:00		16:33:14	17:03:53	17:38:29	17:55:29	18:12:21	9:52:59	16.200	-16.927	94	
11/10/2019	Sun	5:02:13	5:19:06	5:36:09	6:10:50	6:41:35	11:37:05		16:32:06	17:02:50	17:37:30	17:54:31	18:11:24	9:50:31	16.109	-17.209	98	
11/11/2019	M	5:03:21	5:20:16	5:37:19	6:12:04	6:42:55	11:37:12		16:30:59	17:01:48	17:36:32	17:53:35	18:10:29	9:48:04	16.004	-17.486	100	
11/12/2019	Tu	5:04:29	5:21:25	5:38:30	6:13:19	6:44:14	11:37:19		16:29:54	17:00:49	17:35:36	17:52:40	18:09:35	9:45:40	15.885	-17.758	100	
11/13/2019	W	5:05:37	5:22:34	5:39:40	6:14:33	6:45:33	11:37:27		16:28:52	16:59:51	17:34:43	17:51:48	18:08:44	9:43:18	15.751	-18.025	97	
11/14/2019	Th	5:06:45	5:23:43	5:40:51	6:15:47	6:46:52	11:37:36		16:27:51	16:58:55	17:33:51	17:50:58	18:07:55	9:40:58	15.603	-18.287	93	
11/15/2019	F	5:07:52	5:24:51	5:42:00	6:17:01	6:48:11	11:37:45		16:26:52	16:58:01	17:33:01	17:50:10	18:07:08	9:38:41	15.442	-18.543	87	
11/16/2019	Sat	5:08:59	5:25:59	5:43:10	6:18:15	6:49:30	11:37:56		16:25:55	16:57:09	17:32:13	17:49:23	18:06:23	9:36:25	15.265	-18.794	78	
11/17/2019	Sun	5:10:06	5:27:07	5:44:19	6:19:28	6:50:48	11:38:07		16:25:00	16:56:20	17:31:28	17:48:39	18:05:40	9:34:12	15.075	-19.040	69	
11/18/2019	M	5:11:12	5:28:14	5:45:28	6:20:41	6:52:06	11:38:20		16:24:08	16:55:32	17:30:44	17:47:57	18:04:59	9:32:02	14.870	-19.280	58	
11/19/2019	Tu	5:12:18	5:29:21	5:46:36	6:21:53	6:53:23	11:38:33		16:23:17	16:54:46	17:30:02	17:47:17	18:04:20	9:29:54	14.651	-19.514	47	
11/20/2019	W	5:13:23	5:30:28	5:47:44	6:23:06	6:54:40	11:38:47		16:22:29	16:54:03	17:29:23	17:46:39	18:03:43	9:27:49	14.419	-19.742	36	
11/21/2019	Th	5:14:28	5:31:34	5:48:52	6:24:17	6:55:57	11:39:02		16:21:43	16:53:22	17:28:46	17:46:03	18:03:09	9:25:46	14.172	-19.964	25	
11/22/2019	F	5:15:32	5:32:40	5:49:59	6:25:28	6:57:12	11:39:17		16:20:59	16:52:43	17:28:11	17:45:30	18:02:36	9:23:47	13.911	-20.180	16	
11/23/2019	Sat	5:16:36	5:33:45	5:51:05	6:26:38	6:58:27	11:39:34		16:20:17	16:52:06	17:27:38	17:44:58	18:02:06	9:21:50	13.638	-20.390	8	
11/24/2019	Sun	5:17:40	5:34:49	5:52:11	6:27:48	6:59:42	11:39:51		16:19:38	16:51:31	17:27:07	17:44:29	18:01:38	9:19:56	13.350	-20.594	3	
11/25/2019	M	5:18:42	5:35:53	5:53:17	6:28:57	7:00:56	11:40:09		16:19:01	16:50:59	17:26:39	17:44:02	18:01:12	9:18:05	13.050	-20.792	0	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
11/26/2019	Tu	5:19:44	5:36:56	5:54:21	6:30:05	7:02:08		11:40:28	16:18:26	16:50:29	17:26:13	17:43:37	18:00:49	9:16:18	12.738	-20.983	0	
11/27/2019	W	5:20:46	5:37:58	5:55:25	6:31:13	7:03:20		11:40:47	16:17:54	16:50:01	17:25:49	17:43:15	18:00:27	9:14:34	12.413	-21.167	3	
11/28/2019	Th	5:21:46	5:39:00	5:56:28	6:32:20	7:04:31		11:41:07	16:17:24	16:49:36	17:25:27	17:42:54	18:00:08	9:12:53	12.076	-21.345	8	
11/29/2019	F	5:22:46	5:40:01	5:57:30	6:33:25	7:05:41		11:41:28	16:16:57	16:49:13	17:25:07	17:42:36	17:59:51	9:11:15	11.727	-21.516	14	
11/30/2019	Sat	5:23:45	5:41:01	5:58:31	6:34:30	7:06:50		11:41:50	16:16:32	16:48:52	17:24:50	17:42:20	17:59:36	9:09:42	11.368	-21.680	22	
12/01/2019	Sun	5:24:43	5:42:00	5:59:32	6:35:34	7:07:58		11:42:12	16:16:09	16:48:33	17:24:35	17:42:06	17:59:23	9:08:11	10.997	-21.837	30	
12/02/2019	M	5:25:40	5:42:58	6:00:31	6:36:36	7:09:04		11:42:35	16:15:49	16:48:17	17:24:22	17:41:55	17:59:12	9:06:45	10.617	-21.988	40	
12/03/2019	Tu	5:26:36	5:43:55	6:01:29	6:37:38	7:10:09		11:42:58	16:15:32	16:48:03	17:24:11	17:41:45	17:59:04	9:05:22	10.226	-22.131	49	
12/04/2019	W	5:27:31	5:44:51	6:02:26	6:38:38	7:11:13		11:43:22	16:15:17	16:47:52	17:24:03	17:41:38	17:58:58	9:04:04	9.825	-22.267	58	
12/05/2019	Th	5:28:25	5:45:46	6:03:23	6:39:37	7:12:16		11:43:47	16:15:04	16:47:43	17:23:57	17:41:33	17:58:54	9:02:49	9.416	-22.396	67	
12/06/2019	F	5:29:18	5:46:40	6:04:17	6:40:34	7:13:17		11:44:12	16:14:55	16:47:37	17:23:53	17:41:30	17:58:52	9:01:38	8.997	-22.518	76	
12/07/2019	Sat	5:30:10	5:47:33	6:05:11	6:41:31	7:14:16		11:44:38	16:14:47	16:47:32	17:23:52	17:41:30	17:58:52	9:00:31	8.570	-22.632	84	
12/08/2019	Sun	5:31:01	5:48:24	6:06:03	6:42:25	7:15:14		11:45:04	16:14:42	16:47:31	17:23:52	17:41:31	17:58:55	8:59:29	8.135	-22.739	90	
12/09/2019	M	5:31:50	5:49:14	6:06:55	6:43:19	7:16:10		11:45:30	16:14:40	16:47:31	17:23:55	17:41:35	17:58:59	8:58:30	7.693	-22.838	95	
12/10/2019	Tu	5:32:39	5:50:03	6:07:44	6:44:11	7:17:04		11:45:57	16:14:41	16:47:34	17:24:00	17:41:41	17:59:06	8:57:36	7.243	-22.930	99	
12/11/2019	W	5:33:25	5:50:51	6:08:33	6:45:01	7:17:57		11:46:25	16:14:44	16:47:39	17:24:08	17:41:49	17:59:14	8:56:47	6.787	-23.015	100	
12/12/2019	Th	5:34:11	5:51:37	6:09:19	6:45:50	7:18:48		11:46:52	16:14:49	16:47:47	17:24:17	17:42:00	17:59:25	8:56:01	6.324	-23.091	99	
12/13/2019	F	5:34:55	5:52:22	6:10:05	6:46:37	7:19:37		11:47:21	16:14:57	16:47:57	17:24:29	17:42:12	17:59:38	8:55:20	5.855	-23.161	96	
12/14/2019	Sat	5:35:38	5:53:05	6:10:49	6:47:22	7:20:24		11:47:49	16:15:08	16:48:10	17:24:43	17:42:26	17:59:53	8:54:44	5.382	-23.222	90	
12/15/2019	Sun	5:36:19	5:53:47	6:11:31	6:48:05	7:21:09		11:48:18	16:15:21	16:48:25	17:24:59	17:42:43	18:00:10	8:54:12	4.903	-23.276	82	
12/16/2019	M	5:36:59	5:54:27	6:12:11	6:48:47	7:21:52		11:48:47	16:15:37	16:48:42	17:25:17	17:43:02	18:00:29	8:53:45	4.419	-23.322	73	
12/17/2019	Tu	5:37:38	5:55:06	6:12:50	6:49:27	7:22:33		11:49:16	16:15:55	16:49:01	17:25:38	17:43:22	18:00:50	8:53:22	3.932	-23.360	62	
12/18/2019	W	5:38:14	5:55:43	6:13:28	6:50:05	7:23:12		11:49:45	16:16:16	16:49:23	17:26:00	17:43:45	18:01:13	8:53:04	3.441	-23.391	51	
12/19/2019	Th	5:38:50	5:56:18	6:14:03	6:50:41	7:23:49		11:50:15	16:16:39	16:49:47	17:26:25	17:44:10	18:01:38	8:52:50	2.948	-23.413	39	
12/20/2019	F	5:39:23	5:56:52	6:14:37	6:51:15	7:24:23		11:50:45	16:17:05	16:50:13	17:26:51	17:44:37	18:02:05	8:52:42	2.452	-23.428	28	
12/21/2019	Sat	5:39:55	5:57:24	6:15:09	6:51:48	7:24:56		11:51:15	16:17:33	16:50:41	17:27:20	17:45:05	18:02:34	8:52:38	1.954	-23.435	19	
12/22/2019	Sun	5:40:25	5:57:54	6:15:39	6:52:18	7:25:26		11:51:45	16:18:04	16:51:12	17:27:50	17:45:36	18:03:04	8:52:38	1.455	-23.435	11	
12/23/2019	M	5:40:54	5:58:22	6:16:08	6:52:46	7:25:54		11:52:15	16:18:37	16:51:45	17:28:23	17:46:08	18:03:37	8:52:43	0.956	-23.426	5	
12/24/2019	Tu	5:41:20	5:58:49	6:16:34	6:53:12	7:26:19		11:52:44	16:19:12	16:52:20	17:28:57	17:46:43	18:04:11	8:52:53	0.457	-23.409	1	
12/25/2019	W	5:41:45	5:59:13	6:16:58	6:53:36	7:26:42		11:53:14	16:19:50	16:52:56	17:29:34	17:47:19	18:04:47	8:53:08	-0.042	-23.385	0	
12/26/2019	Th	5:42:08	5:59:36	6:17:21	6:53:57	7:27:03		11:53:44	16:20:30	16:53:35	17:30:12	17:47:57	18:05:24	8:53:27	-0.539	-23.353	1	
12/27/2019	F	5:42:29	5:59:57	6:17:41	6:54:17	7:27:21		11:54:14	16:21:12	16:54:16	17:30:52	17:48:36	18:06:04	8:53:51	-1.034	-23.313	4	
12/28/2019	Sat	5:42:48	6:00:16	6:18:00	6:54:34	7:27:37		11:54:43	16:21:56	16:54:59	17:31:33	17:49:17	18:06:45	8:54:19	-1.526	-23.265	9	
12/29/2019	Sun	5:43:06	6:00:32	6:18:16	6:54:49	7:27:50		11:55:13	16:22:42	16:55:44	17:32:17	17:50:00	18:07:27	8:54:52	-2.015	-23.209	15	
12/30/2019	M	5:43:21	6:00:47	6:18:30	6:55:01	7:28:01		11:55:42	16:23:30	16:56:30	17:33:02	17:50:45	18:08:11	8:55:30	-2.500	-23.146	23	
12/31/2019	Tu	5:43:34	6:01:00	6:18:42	6:55:11	7:28:09		11:56:11	16:24:21	16:57:18	17:33:48	17:51:30	18:08:56	8:56:12	-2.981	-23.075	31	
01/01/2020	W	5:43:45	6:01:10	6:18:52	6:55:19	7:28:15		11:56:39	16:25:13	16:58:08	17:34:36	17:52:18	18:09:43	8:56:58	-3.456	-22.996	40	
01/02/2020	Th	5:43:54	6:01:19	6:18:59	6:55:25	7:28:18		11:57:07	16:26:07	16:59:00	17:35:26	17:53:07	18:10:31	8:57:49	-3.926	-22.910	50	
01/03/2020	F	5:44:01	6:01:25	6:19:05	6:55:28	7:28:18		11:57:35	16:27:03	16:59:53	17:36:17	17:53:57	18:11:21	8:58:45	-4.390	-22.815	59	
01/04/2020	Sat	5:44:06	6:01:29	6:19:08	6:55:29	7:28:16		11:58:03	16:28:01	17:00:48	17:37:09	17:54:49	18:12:12	8:59:44	-4.847	-22.714	69	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
01/05/2020	Sun	5:44:09	6:01:31	6:19:09	6:55:28	7:28:12		11:58:30	16:29:00	17:01:44	17:38:03	17:55:41	18:13:04	9:00:48	-5.297	-22.605	77	
01/06/2020	M	5:44:10	6:01:31	6:19:08	6:55:24	7:28:05		11:58:56	16:30:01	17:02:42	17:38:58	17:56:36	18:13:57	9:01:56	-5.739	-22.488	85	
01/07/2020	Tu	5:44:08	6:01:28	6:19:04	6:55:18	7:27:55		11:59:22	16:31:03	17:03:41	17:39:55	17:57:31	18:14:52	9:03:08	-6.174	-22.364	92	
01/08/2020	W	5:44:04	6:01:24	6:18:59	6:55:09	7:27:43		11:59:48	16:32:08	17:04:42	17:40:52	17:58:27	18:15:47	9:04:25	-6.600	-22.233	97	
01/09/2020	Th	5:43:59	6:01:17	6:18:51	6:54:58	7:27:28		12:00:13	16:33:13	17:05:44	17:41:51	17:59:25	18:16:44	9:05:45	-7.017	-22.094	99	
01/10/2020	F	5:43:51	6:01:08	6:18:41	6:54:45	7:27:11		12:00:37	16:34:20	17:06:47	17:42:51	18:00:24	18:17:42	9:07:09	-7.425	-21.948	100	
01/11/2020	Sat	5:43:41	6:00:57	6:18:28	6:54:29	7:26:51		12:01:01	16:35:28	17:07:51	17:43:52	18:01:24	18:18:41	9:08:37	-7.824	-21.795	98	
01/12/2020	Sun	5:43:28	6:00:44	6:18:14	6:54:11	7:26:29		12:01:25	16:36:38	17:08:57	17:44:54	18:02:25	18:19:40	9:10:08	-8.213	-21.635	93	
01/13/2020	M	5:43:14	6:00:28	6:17:57	6:53:51	7:26:05		12:01:47	16:37:49	17:10:03	17:45:57	18:03:26	18:20:41	9:11:44	-8.592	-21.468	85	
01/14/2020	Tu	5:42:57	6:00:11	6:17:38	6:53:28	7:25:38		12:02:10	16:39:01	17:11:11	17:47:01	18:04:29	18:21:43	9:13:23	-8.960	-21.294	76	
01/15/2020	W	5:42:39	5:59:51	6:17:17	6:53:03	7:25:08		12:02:31	16:40:14	17:12:19	17:48:06	18:05:33	18:22:45	9:15:05	-9.318	-21.113	66	
01/16/2020	Th	5:42:18	5:59:29	6:16:53	6:52:36	7:24:37		12:02:52	16:41:28	17:13:29	17:49:12	18:06:37	18:23:48	9:16:51	-9.666	-20.926	54	
01/17/2020	F	5:41:55	5:59:05	6:16:28	6:52:06	7:24:03		12:03:12	16:42:43	17:14:40	17:50:19	18:07:42	18:24:53	9:18:40	-10.002	-20.732	43	
01/18/2020	Sat	5:41:30	5:58:38	6:16:00	6:51:35	7:23:26		12:03:31	16:43:59	17:15:51	17:51:27	18:08:48	18:25:58	9:20:33	-10.326	-20.531	32	
01/19/2020	Sun	5:41:03	5:58:10	6:15:30	6:51:01	7:22:48		12:03:50	16:45:16	17:17:03	17:52:35	18:09:55	18:27:03	9:22:28	-10.640	-20.324	23	
01/20/2020	M	5:40:33	5:57:39	6:14:58	6:50:25	7:22:07		12:04:08	16:46:34	17:18:16	17:53:44	18:11:03	18:28:09	9:24:27	-10.941	-20.110	14	
01/21/2020	Tu	5:40:02	5:57:07	6:14:24	6:49:47	7:21:24		12:04:26	16:47:52	17:19:30	17:54:53	18:12:11	18:29:16	9:26:29	-11.230	-19.890	8	
01/22/2020	W	5:39:28	5:56:32	6:13:47	6:49:06	7:20:38		12:04:42	16:49:11	17:20:44	17:56:04	18:13:20	18:30:24	9:28:33	-11.506	-19.664	3	
01/23/2020	Th	5:38:52	5:55:55	6:13:09	6:48:24	7:19:51		12:04:58	16:50:31	17:21:59	17:57:14	18:14:29	18:31:32	9:30:40	-11.770	-19.432	1	
01/24/2020	F	5:38:15	5:55:16	6:12:28	6:47:39	7:19:01		12:05:13	16:51:51	17:23:14	17:58:26	18:15:39	18:32:41	9:32:50	-12.021	-19.194	0	
01/25/2020	Sat	5:37:35	5:54:35	6:11:46	6:46:52	7:18:09		12:05:27	16:53:12	17:24:30	17:59:38	18:16:49	18:33:50	9:35:03	-12.259	-18.950	2	
01/26/2020	Sun	5:36:53	5:53:52	6:11:01	6:46:04	7:17:15		12:05:41	16:54:34	17:25:46	18:00:50	18:18:00	18:35:00	9:37:18	-12.483	-18.700	5	
01/27/2020	M	5:36:09	5:53:06	6:10:14	6:45:13	7:16:20		12:05:54	16:55:55	17:27:03	18:02:02	18:19:11	18:36:10	9:39:36	-12.694	-18.444	10	
01/28/2020	Tu	5:35:23	5:52:19	6:09:26	6:44:20	7:15:22		12:06:05	16:57:18	17:28:20	18:03:16	18:20:23	18:37:20	9:41:56	-12.891	-18.183	16	
01/29/2020	W	5:34:34	5:51:30	6:08:35	6:43:25	7:14:22		12:06:16	16:58:40	17:29:38	18:04:29	18:21:35	18:38:31	9:44:18	-13.075	-17.917	24	
01/30/2020	Th	5:33:44	5:50:39	6:07:42	6:42:28	7:13:20		12:06:27	17:00:03	17:30:55	18:05:43	18:22:47	18:39:42	9:46:43	-13.245	-17.645	32	
01/31/2020	F	5:32:52	5:49:46	6:06:48	6:41:30	7:12:16		12:06:36	17:01:26	17:32:13	18:06:57	18:24:00	18:40:54	9:49:09	-13.400	-17.368	41	
02/01/2020	Sat	5:31:58	5:48:50	6:05:51	6:40:29	7:11:11		12:06:44	17:02:49	17:33:31	18:08:11	18:25:13	18:42:06	9:51:38	-13.542	-17.085	51	
02/02/2020	Sun	5:31:02	5:47:53	6:04:53	6:39:27	7:10:04		12:06:52	17:04:12	17:34:50	18:09:25	18:26:26	18:43:18	9:54:08	-13.670	-16.798	61	
02/03/2020	M	5:30:04	5:46:54	6:03:52	6:38:22	7:08:54		12:06:59	17:05:35	17:36:08	18:10:40	18:27:39	18:44:30	9:56:41	-13.784	-16.506	70	
02/04/2020	Tu	5:29:04	5:45:53	6:02:50	6:37:16	7:07:44		12:07:05	17:06:59	17:37:27	18:11:55	18:28:53	18:45:43	9:59:15	-13.884	-16.209	79	
02/05/2020	W	5:28:02	5:44:51	6:01:46	6:36:09	7:06:31		12:07:10	17:08:22	17:38:46	18:13:10	18:30:06	18:46:56	10:01:51	-13.971	-15.908	87	
02/06/2020	Th	5:26:58	5:43:46	6:00:40	6:34:59	7:05:17		12:07:15	17:09:46	17:40:04	18:14:25	18:31:20	18:48:09	10:04:29	-14.044	-15.601	94	
02/07/2020	F	5:25:53	5:42:40	5:59:33	6:33:48	7:04:01		12:07:18	17:11:09	17:41:23	18:15:40	18:32:34	18:49:23	10:07:08	-14.103	-15.291	98	
02/08/2020	Sat	5:24:45	5:41:32	5:58:23	6:32:35	7:02:44		12:07:21	17:12:32	17:42:42	18:16:56	18:33:49	18:50:36	10:09:49	-14.148	-14.976	100	
02/09/2020	Sun	5:23:36	5:40:22	5:57:13	6:31:21	7:01:25		12:07:23	17:13:55	17:44:01	18:18:11	18:35:03	18:51:50	10:12:31	-14.181	-14.657	99	
02/10/2020	M	5:22:25	5:39:10	5:56:00	6:30:05	7:00:04		12:07:24	17:15:19	17:45:20	18:19:27	18:36:18	18:53:04	10:15:14	-14.201	-14.334	95	
02/11/2020	Tu	5:21:13	5:37:57	5:54:46	6:28:47	6:58:43		12:07:24	17:16:42	17:46:38	18:20:42	18:37:32	18:54:18	10:17:59	-14.207	-14.007	88	
02/12/2020	W	5:19:58	5:36:42	5:53:30	6:27:28	6:57:19		12:07:24	17:18:05	17:47:57	18:21:58	18:38:47	18:55:32	10:20:45	-14.202	-13.676	80	
02/13/2020	Th	5:18:42	5:35:25	5:52:12	6:26:08	6:55:55		12:07:23	17:19:27	17:49:16	18:23:14	18:40:02	18:56:47	10:23:33	-14.184	-13.341	69	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
02/14/2020	F	5:17:24	5:34:07	5:50:54	6:24:46	6:54:29		12:07:21	17:20:50	17:50:34	18:24:29	18:41:17	18:58:02	10:26:21	-14.153	-13.003	59	
02/15/2020	Sat	5:16:05	5:32:48	5:49:33	6:23:23	6:53:02		12:07:19	17:22:13	17:51:53	18:25:45	18:42:32	18:59:16	10:29:11	-14.111	-12.661	48	
02/16/2020	Sun	5:14:44	5:31:27	5:48:11	6:21:58	6:51:34		12:07:15	17:23:35	17:53:12	18:27:01	18:43:48	19:00:32	10:32:01	-14.058	-12.316	37	
02/17/2020	M	5:13:22	5:30:04	5:46:48	6:20:33	6:50:04		12:07:11	17:24:57	17:54:30	18:28:17	18:45:03	19:01:47	10:34:53	-13.992	-11.967	27	
02/18/2020	Tu	5:11:58	5:28:40	5:45:23	6:19:06	6:48:33		12:07:07	17:26:19	17:55:48	18:29:33	18:46:19	19:03:02	10:37:46	-13.916	-11.616	18	
02/19/2020	W	5:10:32	5:27:14	5:43:57	6:17:37	6:47:01		12:07:02	17:27:41	17:57:07	18:30:49	18:47:34	19:04:18	10:40:39	-13.828	-11.261	11	
02/20/2020	Th	5:09:05	5:25:47	5:42:30	6:16:08	6:45:28		12:06:56	17:29:02	17:58:25	18:32:05	18:48:50	19:05:34	10:43:33	-13.729	-10.903	6	
02/21/2020	F	5:07:37	5:24:19	5:41:01	6:14:37	6:43:55		12:06:49	17:30:23	17:59:43	18:33:22	18:50:06	19:06:50	10:46:29	-13.620	-10.542	2	
02/22/2020	Sat	5:06:07	5:22:49	5:39:31	6:13:05	6:42:20		12:06:42	17:31:44	18:01:01	18:34:38	18:51:22	19:08:06	10:49:24	-13.499	-10.179	0	
02/23/2020	Sun	5:04:35	5:21:18	5:38:00	6:11:32	6:40:44		12:06:34	17:33:05	18:02:18	18:35:54	18:52:38	19:09:22	10:52:21	-13.369	-9.813	0	
02/24/2020	M	5:03:03	5:19:45	5:36:27	6:09:58	6:39:07		12:06:26	17:34:25	18:03:36	18:37:10	18:53:54	19:10:39	10:55:18	-13.228	-9.444	2	
02/25/2020	Tu	5:01:28	5:18:12	5:34:53	6:08:23	6:37:29		12:06:17	17:35:45	18:04:53	18:38:26	18:55:10	19:11:55	10:58:16	-13.077	-9.074	6	
02/26/2020	W	4:59:53	5:16:37	5:33:19	6:06:47	6:35:50		12:06:07	17:37:05	18:06:11	18:39:42	18:56:26	19:13:12	11:01:15	-12.917	-8.700	11	
02/27/2020	Th	4:58:16	5:15:01	5:31:43	6:05:09	6:34:11		12:05:57	17:38:24	18:07:28	18:40:58	18:57:42	19:14:29	11:04:14	-12.747	-8.325	18	
02/28/2020	F	4:56:38	5:13:23	5:30:05	6:03:31	6:32:30		12:05:46	17:39:43	18:08:45	18:42:14	18:58:59	19:15:47	11:07:13	-12.568	-7.948	25	
02/29/2020	Sat	4:54:58	5:11:45	5:28:27	6:01:52	6:30:49		12:05:35	17:41:02	18:10:02	18:43:31	19:00:15	19:17:04	11:10:13	-12.379	-7.569	34	
03/01/2020	Sun	4:53:18	5:10:05	5:26:48	6:00:13	6:29:07		12:05:23	17:42:21	18:11:18	18:44:47	19:01:32	19:18:22	11:13:14	-12.183	-7.188	44	
03/02/2020	M	4:51:36	5:08:24	5:25:07	5:58:32	6:27:25		12:05:11	17:43:39	18:12:35	18:46:03	19:02:49	19:19:40	11:16:15	-11.977	-6.805	54	
03/03/2020	Tu	4:49:53	5:06:42	5:23:26	5:56:50	6:25:41		12:04:58	17:44:57	18:13:51	18:47:19	19:04:06	19:20:58	11:19:16	-11.764	-6.421	64	
03/04/2020	W	4:48:09	5:04:59	5:21:44	5:55:08	6:23:57		12:04:44	17:46:15	18:15:07	18:48:35	19:05:23	19:22:16	11:22:17	-11.542	-6.035	74	
03/05/2020	Th	4:46:23	5:03:15	5:20:01	5:53:25	6:22:13		12:04:31	17:47:32	18:16:23	18:49:52	19:06:40	19:23:35	11:25:19	-11.314	-5.648	83	
03/06/2020	F	4:44:37	5:01:30	5:18:16	5:51:41	6:20:28		12:04:17	17:48:49	18:17:39	18:51:08	19:07:57	19:24:54	11:28:21	-11.078	-5.260	90	
03/07/2020	Sat	4:42:49	4:59:44	5:16:31	5:49:56	6:18:42		12:04:02	17:50:06	18:18:55	18:52:24	19:09:15	19:26:13	11:31:24	-10.835	-4.871	96	
03/08/2020	Sun*	5:41:00	5:57:57	6:14:46	6:48:11	7:16:56		13:03:47	18:51:22	19:20:10	19:53:41	20:10:32	20:27:32	11:34:26	-10.586	-4.480	99	
03/09/2020	M*	5:39:11	5:56:09	6:12:59	6:46:25	7:15:09		13:03:32	18:52:39	19:21:26	19:54:57	20:11:50	20:28:52	11:37:29	-10.331	-4.089	100	
03/10/2020	Tu*	5:37:20	5:54:20	6:11:11	6:44:39	7:13:22		13:03:16	18:53:55	19:22:41	19:56:14	20:13:08	20:30:12	11:40:32	-10.071	-3.697	97	
03/11/2020	W*	5:35:28	5:52:31	6:09:23	6:42:52	7:11:35		13:03:00	18:55:10	19:23:57	19:57:31	20:14:26	20:31:32	11:43:35	-9.805	-3.304	91	
03/12/2020	Th*	5:33:36	5:50:40	6:07:34	6:41:05	7:09:47		13:02:44	18:56:26	19:25:12	19:58:48	20:15:45	20:32:53	11:46:39	-9.535	-2.910	84	
03/13/2020	F*	5:31:42	5:48:49	6:05:45	6:39:17	7:07:59		13:02:28	18:57:41	19:26:27	20:00:05	20:17:04	20:34:14	11:49:42	-9.260	-2.516	74	
03/14/2020	Sat*	5:29:48	5:46:57	6:03:54	6:37:28	7:06:11		13:02:11	18:58:56	19:27:43	20:01:22	20:18:23	20:35:36	11:52:46	-8.981	-2.121	64	
03/15/2020	Sun*	5:27:52	5:45:04	6:02:04	6:35:39	7:04:22		13:01:54	19:00:11	19:28:58	20:02:39	20:19:42	20:36:58	11:55:49	-8.699	-1.726	53	
03/16/2020	M*	5:25:56	5:43:11	6:00:12	6:33:50	7:02:33		13:01:37	19:01:26	19:30:13	20:03:57	20:21:02	20:38:21	11:58:53	-8.414	-1.331	43	
03/17/2020	Tu*	5:23:59	5:41:17	5:58:20	6:32:01	7:00:44		13:01:19	19:02:41	19:31:28	20:05:15	20:22:22	20:39:44	12:01:57	-8.125	-0.936	33	
03/18/2020	W*	5:22:01	5:39:22	5:56:28	6:30:11	6:58:55		13:01:02	19:03:56	19:32:44	20:06:33	20:23:42	20:41:07	12:05:01	-7.835	-0.541	24	
03/19/2020	Th*	5:20:03	5:37:26	5:54:35	6:28:21	6:57:05		13:00:44	19:05:10	19:33:59	20:07:51	20:25:03	20:42:31	12:08:04	-7.541	-0.145	16	
03/20/2020	F*	5:18:04	5:35:30	5:52:41	6:26:30	6:55:16	7:02:29	13:00:27	19:06:24	19:35:14	20:09:10	20:26:24	20:43:56	12:11:08	-7.246	0.250	10	
03/21/2020	Sat*	5:16:04	5:33:34	5:50:47	6:24:39	6:53:26	7:03:49	13:00:09	19:07:38	19:36:30	20:10:29	20:27:46	20:45:21	12:14:12	-6.949	0.645	5	
03/22/2020	Sun*	5:14:03	5:31:37	5:48:53	6:22:48	6:51:37	7:05:08	12:59:51	19:08:52	19:37:45	20:11:48	20:29:08	20:46:46	12:17:16	-6.651	1.039	2	
03/23/2020	M*	5:12:02	5:29:39	5:46:58	6:20:57	6:49:47	7:06:28	12:59:33	19:10:06	19:39:01	20:13:07	20:30:30	20:48:12	12:20:19	-6.352	1.433	0	
03/24/2020	Tu*	5:10:00	5:27:41	5:45:03	6:19:06	6:47:57	7:07:48	12:59:15	19:11:20	19:40:16	20:14:26	20:31:53	20:49:39	12:23:23	-6.052	1.827	1	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End Civil	End				Length of Day	Noon Eqn (min.)	Noon sun declination (deg.)	9 PM Lunar Illum. (pct.)
		Astro-nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight							End Nautical Twilight	End 15- deg. Twilight	Astro-nomical Twilight					
09/01/2020	Tu*	4:33:42	4:52:53	5:11:27	5:47:12	6:16:57	7:24:25	12:52:56	18:21:31	19:28:07	19:57:46	20:33:22	20:51:49	21:10:53	13:11:10	0.248	7.900	100	
09/02/2020	W*	4:35:14	4:54:19	5:12:47	5:48:24	6:18:05	7:22:32	12:52:37	18:22:45	19:26:20	19:55:55	20:31:23	20:49:45	21:08:43	13:08:14	0.574	7.535	99	
09/03/2020	Th*	4:36:45	4:55:44	5:14:07	5:49:37	6:19:14	7:20:38	12:52:17	18:23:59	19:24:32	19:54:03	20:29:24	20:47:41	21:06:33	13:05:18	0.903	7.167	96	
09/04/2020	F*	4:38:16	4:57:08	5:15:26	5:50:49	6:20:22	7:18:44	12:51:57	18:25:12	19:22:43	19:52:11	20:27:25	20:45:37	21:04:22	13:02:21	1.237	6.798	92	
09/05/2020	Sat*	4:39:46	4:58:32	5:16:45	5:52:01	6:21:31	7:16:50	12:51:37	18:26:26	19:20:55	19:50:18	20:25:25	20:43:33	21:02:13	12:59:24	1.574	6.426	86	
09/06/2020	Sun*	4:41:15	4:59:55	5:18:04	5:53:13	6:22:39	7:14:55	12:51:16	18:27:40	19:19:05	19:48:26	20:23:26	20:41:30	21:00:03	12:56:27	1.915	6.053	79	
09/07/2020	M*	4:42:43	5:01:18	5:19:22	5:54:25	6:23:47	7:13:00	12:50:56	18:28:54	19:17:16	19:46:33	20:21:27	20:39:26	20:57:54	12:53:29	2.259	5.678	71	
09/08/2020	Tu*	4:44:11	5:02:40	5:20:40	5:55:37	6:24:56	7:11:05	12:50:35	18:30:08	19:15:26	19:44:40	20:19:28	20:37:23	20:55:45	12:50:30	2.605	5.302	62	
09/09/2020	W*	4:45:39	5:04:02	5:21:57	5:56:48	6:26:04	7:09:09	12:50:14	18:31:21	19:13:36	19:42:47	20:17:29	20:35:19	20:53:37	12:47:32	2.954	4.924	53	
09/10/2020	Th*	4:47:05	5:05:23	5:23:15	5:58:00	6:27:13	7:07:13	12:49:53	18:32:36	19:11:45	19:40:53	20:15:30	20:33:17	20:51:29	12:44:33	3.304	4.545	43	
09/11/2020	F*	4:48:31	5:06:44	5:24:32	5:59:11	6:28:21	7:05:17	12:49:32	18:33:50	19:09:55	19:39:00	20:13:31	20:31:14	20:49:21	12:41:34	3.656	4.164	33	
09/12/2020	Sat*	4:49:56	5:08:05	5:25:48	6:00:22	6:29:30	7:03:20	12:49:10	18:35:04	19:08:04	19:37:06	20:11:33	20:29:12	20:47:14	12:38:34	4.010	3.782	23	
09/13/2020	Sun*	4:51:21	5:09:25	5:27:04	6:01:33	6:30:38	7:01:24	12:48:49	18:36:18	19:06:13	19:35:13	20:09:34	20:27:10	20:45:08	12:35:34	4.364	3.399	15	
09/14/2020	M*	4:52:45	5:10:44	5:28:20	6:02:44	6:31:47	6:59:27	12:48:28	18:37:33	19:04:22	19:33:20	20:07:36	20:25:08	20:43:02	12:32:34	4.720	3.015	8	
09/15/2020	Tu*	4:54:08	5:12:03	5:29:36	6:03:55	6:32:56	6:57:30	12:48:07	18:38:47	19:02:30	19:31:26	20:05:38	20:23:07	20:40:56	12:29:34	5.075	2.630	3	
09/16/2020	W*	4:55:31	5:13:22	5:30:51	6:05:06	6:34:05	6:55:32	12:47:45	18:40:02	19:00:39	19:29:33	20:03:41	20:21:06	20:38:51	12:26:34	5.431	2.244	0	
09/17/2020	Th*	4:56:54	5:14:40	5:32:06	6:06:17	6:35:14	6:53:35	12:47:24	18:41:17	18:58:47	19:27:39	20:01:43	20:19:05	20:36:47	12:23:33	5.787	1.857	1	
09/18/2020	F*	4:58:15	5:15:58	5:33:21	6:07:28	6:36:23	6:51:38	12:47:03	18:42:32	18:56:56	19:25:46	19:59:46	20:17:05	20:34:43	12:20:33	6.142	1.469	4	
09/19/2020	Sat*	4:59:37	5:17:15	5:34:36	6:08:39	6:37:32	6:49:41	12:46:41	18:43:47	18:55:04	19:23:53	19:57:49	20:15:06	20:32:40	12:17:32	6.497	1.081	11	
09/20/2020	Sun*	5:00:57	5:18:33	5:35:50	6:09:49	6:38:41	6:47:43	12:46:20	18:45:02	18:53:13	19:22:00	19:55:53	20:13:07	20:30:37	12:14:31	6.851	0.693	19	
09/21/2020	M*	5:02:18	5:19:49	5:37:04	6:11:00	6:39:51	6:45:46	12:45:59	18:46:18	18:51:21	19:20:08	19:53:57	20:11:08	20:28:35	12:11:30	7.204	0.304	29	
09/22/2020	Tu*	5:03:37	5:21:06	5:38:18	6:12:10	6:41:00		12:45:38		18:49:29	19:18:15	19:52:02	20:09:10	20:26:34	12:08:29	7.556	-0.085	40	
09/23/2020	W*	5:04:56	5:22:21	5:39:31	6:13:21	6:42:10		12:45:17		18:47:38	19:16:23	19:50:07	20:07:13	20:24:34	12:05:28	7.905	-0.475	51	
09/24/2020	Th*	5:06:15	5:23:37	5:40:45	6:14:31	6:43:20		12:44:56		18:45:47	19:14:31	19:48:12	20:05:16	20:22:34	12:02:27	8.253	-0.864	61	
09/25/2020	F*	5:07:33	5:24:52	5:41:58	6:15:42	6:44:29		12:44:35		18:43:56	19:12:39	19:46:18	20:03:20	20:20:35	11:59:26	8.598	-1.253	71	
09/26/2020	Sat*	5:08:51	5:26:07	5:43:11	6:16:52	6:45:39		12:44:15		18:42:05	19:10:48	19:44:24	20:01:24	20:18:37	11:56:25	8.940	-1.642	80	
09/27/2020	Sun*	5:10:08	5:27:22	5:44:23	6:18:03	6:46:50		12:43:54		18:40:14	19:08:57	19:42:31	19:59:30	20:16:39	11:53:25	9.279	-2.031	87	
09/28/2020	M*	5:11:25	5:28:36	5:45:36	6:19:13	6:48:00		12:43:34		18:38:24	19:07:07	19:40:39	19:57:35	20:14:43	11:50:24	9.614	-2.420	93	
09/29/2020	Tu*	5:12:42	5:29:50	5:46:48	6:20:24	6:49:11		12:43:14		18:36:34	19:05:17	19:38:47	19:55:42	20:12:47	11:47:23	9.946	-2.808	97	
09/30/2020	W*	5:13:58	5:31:04	5:48:00	6:21:34	6:50:21		12:42:55		18:34:44	19:03:27	19:36:56	19:53:50	20:10:52	11:44:22	10.273	-3.196	99	
10/01/2020	Th*	5:15:13	5:32:18	5:49:12	6:22:45	6:51:32		12:42:35		18:32:54	19:01:38	19:35:06	19:51:58	20:08:59	11:41:22	10.595	-3.583	100	
10/02/2020	F*	5:16:29	5:33:31	5:50:24	6:23:56	6:52:44		12:42:16		18:31:05	18:59:50	19:33:17	19:50:07	20:07:06	11:38:22	10.913	-3.970	98	
10/03/2020	Sat*	5:17:44	5:34:44	5:51:36	6:25:07	6:53:55		12:41:58		18:29:17	18:58:02	19:31:28	19:48:17	20:05:14	11:35:22	11.224	-4.356	95	
10/04/2020	Sun*	5:18:59	5:35:57	5:52:48	6:26:18	6:55:07		12:41:39		18:27:28	18:56:15	19:29:40	19:46:28	20:03:23	11:32:22	11.530	-4.740	91	
10/05/2020	M*	5:20:13	5:37:10	5:54:00	6:27:29	6:56:19		12:41:21		18:25:41	18:54:28	19:27:52	19:44:39	20:01:33	11:29:22	11.829	-5.124	85	
10/06/2020	Tu*	5:21:28	5:38:23	5:55:11	6:28:40	6:57:31		12:41:04		18:23:54	18:52:42	19:26:06	19:42:52	19:59:44	11:26:22	12.122	-5.507	77	
10/07/2020	W*	5:22:42	5:39:35	5:56:23	6:29:51	6:58:44		12:40:47		18:22:07	18:50:57	19:24:21	19:41:06	19:57:57	11:23:23	12.408	-5.889	69	
10/08/2020	Th*	5:23:55	5:40:48	5:57:35	6:31:03	6:59:57		12:40:30		18:20:21	18:49:12	19:22:36	19:39:20	19:56:10	11:20:24	12.686	-6.270	59	
10/09/2020	F*	5:25:09	5:42:00	5:58:46	6:32:14	7:01:10		12:40:14		18:18:35	18:47:28	19:20:52	19:37:36	19:54:24	11:17:26	12.957	-6.649	49	
10/10/2020	Sat*	5:26:22	5:43:12	5:59:58	6:33:26	7:02:23		12:39:58		18:16:51	18:45:45	19:19:10	19:35:53	19:52:40	11:14:27	13.220	-7.026	39	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun declination (deg.)	9 PM Lunar Illum. (pct.)
		Astro-nomical Twilight	Begin 15-deg.	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15-deg.	End Astro-nomical Twilight					
10/11/2020	Sun*	5:27:36	5:44:25	6:01:10	6:34:38	7:03:37		12:39:43		18:15:07	18:44:03	19:17:28	19:34:11	19:50:57	11:11:29	13.474	-7.403	29
10/12/2020	M*	5:28:49	5:45:37	6:02:21	6:35:51	7:04:51		12:39:28		18:13:23	18:42:22	19:15:47	19:32:30	19:49:15	11:08:32	13.720	-7.777	19
10/13/2020	Tu*	5:30:01	5:46:49	6:03:33	6:37:03	7:06:06		12:39:14		18:11:40	18:40:41	19:14:08	19:30:50	19:47:34	11:05:34	13.956	-8.150	11
10/14/2020	W*	5:31:14	5:48:01	6:04:45	6:38:16	7:07:21		12:39:00		18:09:59	18:39:02	19:12:29	19:29:11	19:45:55	11:02:38	14.184	-8.521	5
10/15/2020	Th*	5:32:27	5:49:13	6:05:56	6:39:28	7:08:36		12:38:47		18:08:18	18:37:23	19:10:52	19:27:33	19:44:17	10:59:42	14.402	-8.890	1
10/16/2020	F*	5:33:39	5:50:24	6:07:08	6:40:41	7:09:52		12:38:34		18:06:37	18:35:45	19:09:15	19:25:57	19:42:40	10:56:46	14.610	-9.257	0
10/17/2020	Sat*	5:34:51	5:51:36	6:08:20	6:41:54	7:11:07		12:38:23		18:04:58	18:34:09	19:07:40	19:24:22	19:41:05	10:53:51	14.808	-9.621	3
10/18/2020	Sun*	5:36:04	5:52:48	6:09:32	6:43:08	7:12:24		12:38:11		18:03:20	18:32:33	19:06:06	19:22:48	19:39:30	10:50:56	14.996	-9.984	8
10/19/2020	M*	5:37:16	5:54:00	6:10:44	6:44:21	7:13:40		12:38:01		18:01:42	18:30:59	19:04:33	19:21:16	19:37:58	10:48:02	15.174	-10.343	16
10/20/2020	Tu*	5:38:27	5:55:11	6:11:56	6:45:35	7:14:57		12:37:51		18:00:06	18:29:25	19:03:02	19:19:44	19:36:26	10:45:09	15.342	-10.701	25
10/21/2020	W*	5:39:39	5:56:23	6:13:07	6:46:49	7:16:14		12:37:41		17:58:30	18:27:53	19:01:32	19:18:15	19:34:56	10:42:17	15.498	-11.055	35
10/22/2020	Th*	5:40:51	5:57:34	6:14:19	6:48:03	7:17:31		12:37:32		17:56:56	18:26:22	19:00:03	19:16:46	19:33:28	10:39:25	15.644	-11.407	46
10/23/2020	F*	5:42:02	5:58:46	6:15:31	6:49:17	7:18:48		12:37:24		17:55:23	18:24:52	18:58:35	19:15:19	19:32:01	10:36:34	15.779	-11.756	56
10/24/2020	Sat*	5:43:13	5:59:57	6:16:43	6:50:31	7:20:06		12:37:17		17:53:50	18:23:24	18:57:09	19:13:54	19:30:36	10:33:44	15.902	-12.102	66
10/25/2020	Sun*	5:44:25	6:01:09	6:17:55	6:51:46	7:21:24		12:37:10		17:52:19	18:21:56	18:55:44	19:12:29	19:29:12	10:30:55	16.014	-12.445	75
10/26/2020	M*	5:45:36	6:02:20	6:19:07	6:53:00	7:22:43		12:37:04		17:50:49	18:20:30	18:54:21	19:11:07	19:27:49	10:28:07	16.113	-12.785	83
10/27/2020	Tu*	5:46:47	6:03:31	6:20:19	6:54:15	7:24:01		12:36:59		17:49:21	18:19:06	18:52:59	19:09:46	19:26:29	10:25:20	16.201	-13.121	89
10/28/2020	W*	5:47:57	6:04:42	6:21:31	6:55:29	7:25:20		12:36:55		17:47:54	18:17:42	18:51:39	19:08:26	19:25:10	10:22:34	16.276	-13.454	94
10/29/2020	Th*	5:49:08	6:05:53	6:22:43	6:56:44	7:26:39		12:36:51		17:46:28	18:16:20	18:50:20	19:07:08	19:23:52	10:19:49	16.338	-13.783	98
10/30/2020	F*	5:50:18	6:07:04	6:23:54	6:57:59	7:27:58		12:36:48		17:45:03	18:15:00	18:49:03	19:05:52	19:22:36	10:17:05	16.388	-14.109	100
10/31/2020	Sat*	5:51:29	6:08:15	6:25:06	6:59:14	7:29:17		12:36:46		17:43:40	18:13:41	18:47:47	19:04:37	19:21:22	10:14:23	16.424	-14.431	100
11/01/2020	Sun	4:52:39	5:09:26	5:26:18	6:00:29	6:30:36		11:36:44		16:42:18	17:12:24	17:46:33	18:03:24	18:20:10	10:11:42	16.447	-14.749	98
11/02/2020	M	4:53:49	5:10:37	5:27:30	6:01:44	6:31:56		11:36:44		16:40:58	17:11:08	17:45:21	18:02:13	18:18:59	10:09:02	16.457	-15.063	94
11/03/2020	Tu	4:54:59	5:11:47	5:28:42	6:03:00	6:33:16		11:36:44		16:39:39	17:09:54	17:44:10	18:01:03	18:17:50	10:06:24	16.452	-15.373	89
11/04/2020	W	4:56:09	5:12:58	5:29:53	6:04:15	6:34:35		11:36:45		16:38:22	17:08:41	17:43:01	17:59:56	18:16:43	10:03:47	16.435	-15.679	82
11/05/2020	Th	4:57:18	5:14:08	5:31:05	6:05:30	6:35:55		11:36:47		16:37:06	17:07:30	17:41:54	17:58:50	18:15:38	10:01:11	16.402	-15.981	74
11/06/2020	F	4:58:28	5:15:19	5:32:17	6:06:45	6:37:15		11:36:50		16:35:52	17:06:21	17:40:48	17:57:45	18:14:35	9:58:37	16.356	-16.278	65
11/07/2020	Sat	4:59:37	5:16:29	5:33:28	6:08:01	6:38:35		11:36:53		16:34:40	17:05:14	17:39:45	17:56:43	18:13:34	9:56:05	16.296	-16.570	54
11/08/2020	Sun	5:00:46	5:17:39	5:34:39	6:09:16	6:39:55		11:36:58		16:33:30	17:04:08	17:38:43	17:55:43	18:12:34	9:53:35	16.221	-16.858	44
11/09/2020	M	5:01:55	5:18:49	5:35:51	6:10:31	6:41:15		11:37:03		16:32:21	17:03:04	17:37:43	17:54:44	18:11:37	9:51:06	16.132	-17.142	33
11/10/2020	Tu	5:03:04	5:19:59	5:37:02	6:11:46	6:42:35		11:37:09		16:31:14	17:02:02	17:36:45	17:53:47	18:10:41	9:48:39	16.028	-17.420	23
11/11/2020	W	5:04:12	5:21:08	5:38:13	6:13:01	6:43:54		11:37:17		16:30:09	17:01:02	17:35:49	17:52:53	18:09:48	9:46:15	15.910	-17.694	14
11/12/2020	Th	5:05:21	5:22:17	5:39:23	6:14:15	6:45:14		11:37:24		16:29:06	17:00:04	17:34:55	17:52:00	18:08:56	9:43:52	15.777	-17.962	6
11/13/2020	F	5:06:29	5:23:26	5:40:34	6:15:30	6:46:33		11:37:33		16:28:05	16:59:08	17:34:03	17:51:09	18:08:06	9:41:31	15.630	-18.225	2
11/14/2020	Sat	5:07:36	5:24:35	5:41:44	6:16:44	6:47:53		11:37:43		16:27:06	16:58:14	17:33:13	17:50:21	18:07:19	9:39:13	15.469	-18.483	0
11/15/2020	Sun	5:08:43	5:25:43	5:42:54	6:17:58	6:49:11		11:37:53		16:26:09	16:57:22	17:32:24	17:49:34	18:06:33	9:36:57	15.294	-18.736	1
11/16/2020	M	5:09:50	5:26:51	5:44:03	6:19:11	6:50:30		11:38:05		16:25:13	16:56:31	17:31:38	17:48:50	18:05:50	9:34:43	15.104	-18.983	6
11/17/2020	Tu	5:10:57	5:27:59	5:45:12	6:20:24	6:51:48		11:38:17		16:24:20	16:55:43	17:30:54	17:48:07	18:05:09	9:32:32	14.901	-19.224	12
11/18/2020	W	5:12:03	5:29:06	5:46:21	6:21:37	6:53:06		11:38:30		16:23:29	16:54:57	17:30:12	17:47:27	18:04:29	9:30:24	14.684	-19.460	20
11/19/2020	Th	5:13:08	5:30:13	5:47:29	6:22:49	6:54:23		11:38:44		16:22:40	16:54:13	17:29:33	17:46:48	18:03:52	9:28:18	14.454	-19.689	30

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
11/20/2020	F	5:14:13	5:31:19	5:48:37	6:24:01	6:55:39		11:38:58	16:21:54	16:53:32	17:28:55	17:46:12	18:03:17	9:26:14	14.210	-19.913	40	
11/21/2020	Sat	5:15:18	5:32:25	5:49:44	6:25:12	6:56:55		11:39:14	16:21:09	16:52:52	17:28:19	17:45:38	18:02:44	9:24:14	13.954	-20.131	50	
11/22/2020	Sun	5:16:22	5:33:30	5:50:50	6:26:22	6:58:10		11:39:30	16:20:27	16:52:14	17:27:46	17:45:06	18:02:13	9:22:17	13.684	-20.342	60	
11/23/2020	M	5:17:25	5:34:34	5:51:56	6:27:32	6:59:25		11:39:47	16:19:47	16:51:39	17:27:14	17:44:36	18:01:45	9:20:22	13.402	-20.547	69	
11/24/2020	Tu	5:18:28	5:35:38	5:53:02	6:28:41	7:00:39		11:40:05	16:19:09	16:51:06	17:26:45	17:44:08	18:01:18	9:18:31	13.107	-20.746	77	
11/25/2020	W	5:19:30	5:36:41	5:54:06	6:29:50	7:01:51		11:40:23	16:18:34	16:50:36	17:26:18	17:43:43	18:00:54	9:16:43	12.800	-20.939	85	
11/26/2020	Th	5:20:31	5:37:44	5:55:10	6:30:57	7:03:03		11:40:42	16:18:01	16:50:07	17:25:54	17:43:20	18:00:32	9:14:58	12.481	-21.124	91	
11/27/2020	F	5:21:32	5:38:45	5:56:13	6:32:04	7:04:14		11:41:02	16:17:31	16:49:41	17:25:31	17:42:59	18:00:12	9:13:16	12.150	-21.304	95	
11/28/2020	Sat	5:22:31	5:39:46	5:57:15	6:33:09	7:05:24		11:41:23	16:17:02	16:49:17	17:25:11	17:42:40	17:59:54	9:11:38	11.807	-21.476	99	
11/29/2020	Sun	5:23:30	5:40:46	5:58:16	6:34:14	7:06:33		11:41:44	16:16:37	16:48:56	17:24:53	17:42:23	17:59:38	9:10:04	11.453	-21.642	100	
11/30/2020	M	5:24:28	5:41:45	5:59:17	6:35:18	7:07:41		11:42:06	16:16:14	16:48:37	17:24:37	17:42:08	17:59:25	9:08:33	11.088	-21.801	99	
12/01/2020	Tu	5:25:25	5:42:43	6:00:16	6:36:20	7:08:48		11:42:28	16:15:53	16:48:20	17:24:24	17:41:56	17:59:14	9:07:05	10.712	-21.952	97	
12/02/2020	W	5:26:22	5:43:40	6:01:14	6:37:22	7:09:53		11:42:52	16:15:35	16:48:05	17:24:13	17:41:46	17:59:05	9:05:42	10.326	-22.097	93	
12/03/2020	Th	5:27:17	5:44:37	6:02:12	6:38:22	7:10:57		11:43:15	16:15:19	16:47:53	17:24:04	17:41:38	17:58:58	9:04:22	9.929	-22.235	87	
12/04/2020	F	5:28:11	5:45:32	6:03:08	6:39:21	7:12:00		11:43:40	16:15:06	16:47:44	17:23:57	17:41:33	17:58:53	9:03:06	9.523	-22.366	79	
12/05/2020	Sat	5:29:04	5:46:26	6:04:03	6:40:19	7:13:01		11:44:05	16:14:55	16:47:37	17:23:53	17:41:30	17:58:51	9:01:55	9.107	-22.489	70	
12/06/2020	Sun	5:29:57	5:47:19	6:04:57	6:41:16	7:14:01		11:44:30	16:14:47	16:47:32	17:23:51	17:41:29	17:58:51	9:00:47	8.682	-22.605	60	
12/07/2020	M	5:30:48	5:48:11	6:05:50	6:42:11	7:14:59		11:44:56	16:14:42	16:47:30	17:23:51	17:41:30	17:58:53	8:59:43	8.248	-22.714	49	
12/08/2020	Tu	5:31:37	5:49:01	6:06:41	6:43:05	7:15:55		11:45:23	16:14:39	16:47:30	17:23:53	17:41:33	17:58:57	8:58:44	7.806	-22.815	37	
12/09/2020	W	5:32:26	5:49:51	6:07:31	6:43:57	7:16:50		11:45:50	16:14:39	16:47:32	17:23:58	17:41:38	17:59:03	8:57:49	7.356	-22.909	27	
12/10/2020	Th	5:33:13	5:50:39	6:08:20	6:44:48	7:17:44		11:46:17	16:14:42	16:47:37	17:24:05	17:41:46	17:59:11	8:56:58	6.899	-22.996	17	
12/11/2020	F	5:34:00	5:51:25	6:09:08	6:45:37	7:18:35		11:46:45	16:14:47	16:47:44	17:24:14	17:41:56	17:59:22	8:56:11	6.435	-23.074	9	
12/12/2020	Sat	5:34:44	5:52:11	6:09:53	6:46:25	7:19:25		11:47:13	16:14:54	16:47:54	17:24:25	17:42:08	17:59:34	8:55:29	5.965	-23.145	3	
12/13/2020	Sun	5:35:28	5:52:54	6:10:38	6:47:11	7:20:12		11:47:42	16:15:04	16:48:06	17:24:39	17:42:22	17:59:49	8:54:52	5.490	-23.209	0	
12/14/2020	M	5:36:10	5:53:37	6:11:21	6:47:55	7:20:58		11:48:11	16:15:17	16:48:20	17:24:55	17:42:38	18:00:06	8:54:19	5.009	-23.265	0	
12/15/2020	Tu	5:36:50	5:54:18	6:12:02	6:48:37	7:21:42		11:48:40	16:15:32	16:48:37	17:25:12	17:42:57	18:00:24	8:53:50	4.524	-23.313	3	
12/16/2020	W	5:37:29	5:54:57	6:12:42	6:49:18	7:22:24		11:49:09	16:15:50	16:48:56	17:25:32	17:43:17	18:00:45	8:53:27	4.036	-23.353	8	
12/17/2020	Th	5:38:06	5:55:34	6:13:19	6:49:57	7:23:03		11:49:38	16:16:11	16:49:17	17:25:54	17:43:39	18:01:08	8:53:07	3.544	-23.385	15	
12/18/2020	F	5:38:42	5:56:10	6:13:55	6:50:33	7:23:41		11:50:08	16:16:33	16:49:41	17:26:18	17:44:04	18:01:32	8:52:53	3.050	-23.410	23	
12/19/2020	Sat	5:39:16	5:56:44	6:14:30	6:51:08	7:24:16		11:50:38	16:16:59	16:50:06	17:26:45	17:44:30	18:01:58	8:52:43	2.554	-23.427	33	
12/20/2020	Sun	5:39:48	5:57:17	6:15:02	6:51:41	7:24:49		11:51:08	16:17:26	16:50:34	17:27:13	17:44:58	18:02:27	8:52:37	2.057	-23.436	42	
12/21/2020	M	5:40:19	5:57:47	6:15:33	6:52:11	7:25:19		11:51:38	16:17:56	16:51:04	17:27:43	17:45:28	18:02:57	8:52:37	1.559	-23.437	52	
12/22/2020	Tu	5:40:47	5:58:16	6:16:01	6:52:40	7:25:48		11:52:07	16:18:28	16:51:36	17:28:15	17:46:00	18:03:29	8:52:41	1.061	-23.430	61	
12/23/2020	W	5:41:14	5:58:43	6:16:28	6:53:06	7:26:14		11:52:37	16:19:03	16:52:11	17:28:49	17:46:34	18:04:02	8:52:50	0.564	-23.415	70	
12/24/2020	Th	5:41:40	5:59:08	6:16:53	6:53:30	7:26:37		11:53:07	16:19:40	16:52:47	17:29:24	17:47:10	18:04:38	8:53:03	0.068	-23.393	78	
12/25/2020	F	5:42:03	5:59:31	6:17:16	6:53:52	7:26:58		11:53:37	16:20:19	16:53:25	17:30:02	17:47:47	18:05:15	8:53:21	-0.427	-23.362	86	
12/26/2020	Sat	5:42:24	5:59:52	6:17:36	6:54:12	7:27:17		11:54:06	16:21:01	16:54:05	17:30:41	17:48:26	18:05:53	8:53:44	-0.919	-23.324	92	
12/27/2020	Sun	5:42:44	6:00:11	6:17:55	6:54:29	7:27:33		11:54:36	16:21:44	16:54:48	17:31:22	17:49:06	18:06:34	8:54:11	-1.409	-23.278	96	
12/28/2020	M	5:43:01	6:00:28	6:18:11	6:54:45	7:27:46		11:55:05	16:22:30	16:55:32	17:32:05	17:49:49	18:07:16	8:54:43	-1.896	-23.224	99	
12/29/2020	Tu	5:43:17	6:00:43	6:18:26	6:54:58	7:27:58		11:55:34	16:23:17	16:56:17	17:32:49	17:50:32	18:07:59	8:55:20	-2.379	-23.163	100	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
12/30/2020	W	5:43:30	6:00:56	6:18:38	6:55:08	7:28:06		11:56:03	16:24:07	16:57:05	17:33:35	17:51:18	18:08:44	8:56:01	-2.858	-23.093	99	
12/31/2020	Th	5:43:41	6:01:07	6:18:48	6:55:17	7:28:12		11:56:31	16:24:59	16:57:55	17:34:23	17:52:05	18:09:30	8:56:46	-3.332	-23.016	96	
01/01/2021	F	5:43:51	6:01:16	6:18:56	6:55:23	7:28:16		11:56:59	16:25:52	16:58:46	17:35:12	17:52:53	18:10:18	8:57:36	-3.801	-22.932	90	
01/02/2021	Sat	5:43:58	6:01:22	6:19:02	6:55:26	7:28:17		11:57:27	16:26:47	16:59:38	17:36:03	17:53:43	18:11:07	8:58:30	-4.265	-22.840	83	
01/03/2021	Sun	5:44:04	6:01:27	6:19:06	6:55:28	7:28:16		11:57:55	16:27:45	17:00:33	17:36:55	17:54:34	18:11:58	8:59:29	-4.723	-22.740	74	
01/04/2021	M	5:44:07	6:01:29	6:19:08	6:55:27	7:28:12		11:58:22	16:28:44	17:01:29	17:37:48	17:55:27	18:12:49	9:00:32	-5.174	-22.633	64	
01/05/2021	Tu	5:44:08	6:01:30	6:19:07	6:55:24	7:28:05		11:58:48	16:29:44	17:02:26	17:38:43	17:56:21	18:13:42	9:01:39	-5.619	-22.518	53	
01/06/2021	W	5:44:07	6:01:28	6:19:04	6:55:18	7:27:56		11:59:15	16:30:46	17:03:25	17:39:39	17:57:16	18:14:37	9:02:50	-6.056	-22.396	41	
01/07/2021	Th	5:44:04	6:01:24	6:18:59	6:55:10	7:27:45		11:59:40	16:31:50	17:04:25	17:40:37	17:58:12	18:15:32	9:04:05	-6.486	-22.266	30	
01/08/2021	F	5:43:59	6:01:18	6:18:52	6:55:00	7:27:31		12:00:06	16:32:56	17:05:27	17:41:35	17:59:10	18:16:29	9:05:24	-6.907	-22.129	20	
01/09/2021	Sat	5:43:52	6:01:10	6:18:42	6:54:47	7:27:15		12:00:30	16:34:02	17:06:30	17:42:35	18:00:08	18:17:26	9:06:48	-7.320	-21.985	12	
01/10/2021	Sun	5:43:42	6:00:59	6:18:31	6:54:32	7:26:56		12:00:55	16:35:10	17:07:34	17:43:36	18:01:08	18:18:25	9:08:15	-7.724	-21.834	5	
01/11/2021	M	5:43:31	6:00:47	6:18:17	6:54:15	7:26:34		12:01:18	16:36:20	17:08:40	17:44:38	18:02:09	18:19:25	9:09:46	-8.119	-21.675	1	
01/12/2021	Tu	5:43:17	6:00:32	6:18:01	6:53:55	7:26:11		12:01:41	16:37:31	17:09:46	17:45:41	18:03:11	18:20:25	9:11:20	-8.503	-21.510	0	
01/13/2021	W	5:43:01	6:00:15	6:17:42	6:53:33	7:25:44		12:02:04	16:38:42	17:10:54	17:46:45	18:04:13	18:21:27	9:12:58	-8.877	-21.338	1	
01/14/2021	Th	5:42:43	5:59:56	6:17:22	6:53:09	7:25:16		12:02:26	16:39:55	17:12:02	17:47:50	18:05:17	18:22:30	9:14:40	-9.240	-21.159	5	
01/15/2021	F	5:42:23	5:59:34	6:16:59	6:52:43	7:24:45		12:02:47	16:41:09	17:13:12	17:48:56	18:06:21	18:23:33	9:16:25	-9.592	-20.973	10	
01/16/2021	Sat	5:42:01	5:59:11	6:16:34	6:52:14	7:24:11		12:03:07	16:42:24	17:14:22	17:50:03	18:07:26	18:24:37	9:18:13	-9.932	-20.780	17	
01/17/2021	Sun	5:41:36	5:58:45	6:16:07	6:51:43	7:23:35		12:03:27	16:43:40	17:15:33	17:51:10	18:08:32	18:25:42	9:20:05	-10.260	-20.581	25	
01/18/2021	M	5:41:09	5:58:17	6:15:37	6:51:09	7:22:57		12:03:46	16:44:57	17:16:45	17:52:18	18:09:39	18:26:47	9:22:00	-10.576	-20.375	34	
01/19/2021	Tu	5:40:40	5:57:47	6:15:06	6:50:34	7:22:17		12:04:04	16:46:14	17:17:58	17:53:27	18:10:46	18:27:53	9:23:58	-10.880	-20.163	43	
01/20/2021	W	5:40:09	5:57:15	6:14:32	6:49:56	7:21:34		12:04:21	16:47:33	17:19:11	17:54:36	18:11:54	18:29:00	9:25:59	-11.171	-19.945	53	
01/21/2021	Th	5:39:36	5:56:40	6:13:56	6:49:16	7:20:49		12:04:38	16:48:52	17:20:25	17:55:46	18:13:03	18:30:07	9:28:02	-11.449	-19.720	62	
01/22/2021	F	5:39:01	5:56:04	6:13:18	6:48:34	7:20:02		12:04:54	16:50:11	17:21:40	17:56:57	18:14:12	18:31:15	9:30:09	-11.713	-19.489	71	
01/23/2021	Sat	5:38:23	5:55:25	6:12:38	6:47:50	7:19:13		12:05:09	16:51:31	17:22:55	17:58:08	18:15:21	18:32:24	9:32:18	-11.965	-19.252	79	
01/24/2021	Sun	5:37:44	5:54:44	6:11:56	6:47:03	7:18:21		12:05:23	16:52:52	17:24:11	17:59:19	18:16:31	18:33:32	9:34:30	-12.203	-19.010	87	
01/25/2021	M	5:37:02	5:54:02	6:11:11	6:46:15	7:17:28		12:05:37	16:54:13	17:25:27	18:00:31	18:17:42	18:34:42	9:36:45	-12.428	-18.761	93	
01/26/2021	Tu	5:36:19	5:53:17	6:10:25	6:45:24	7:16:32		12:05:50	16:55:34	17:26:43	18:01:44	18:18:53	18:35:52	9:39:02	-12.639	-18.507	97	
01/27/2021	W	5:35:33	5:52:30	6:09:37	6:44:32	7:15:35		12:06:01	16:56:56	17:28:00	18:02:56	18:20:04	18:37:02	9:41:21	-12.837	-18.248	99	
01/28/2021	Th	5:34:45	5:51:41	6:08:46	6:43:37	7:14:35		12:06:12	16:58:18	17:29:17	18:04:09	18:21:16	18:38:12	9:43:43	-13.021	-17.983	100	
01/29/2021	F	5:33:55	5:50:50	6:07:54	6:42:41	7:13:34		12:06:23	16:59:41	17:30:35	18:05:23	18:22:28	18:39:23	9:46:07	-13.191	-17.712	98	
01/30/2021	Sat	5:33:04	5:49:57	6:07:00	6:41:43	7:12:31		12:06:32	17:01:04	17:31:52	18:06:37	18:23:40	18:40:35	9:48:33	-13.348	-17.436	93	
01/31/2021	Sun	5:32:10	5:49:02	6:06:04	6:40:43	7:11:26		12:06:41	17:02:26	17:33:10	18:07:51	18:24:53	18:41:46	9:51:01	-13.492	-17.156	86	
02/01/2021	M	5:31:14	5:48:06	6:05:06	6:39:41	7:10:19		12:06:49	17:03:50	17:34:29	18:09:05	18:26:06	18:42:58	9:53:31	-13.622	-16.870	78	
02/02/2021	Tu	5:30:17	5:47:07	6:04:06	6:38:37	7:09:10		12:06:56	17:05:13	17:35:47	18:10:20	18:27:19	18:44:11	9:56:03	-13.739	-16.579	68	
02/03/2021	W	5:29:17	5:46:07	6:03:04	6:37:31	7:07:59		12:07:02	17:06:36	17:37:06	18:11:34	18:28:32	18:45:23	9:58:37	-13.843	-16.283	57	
02/04/2021	Th	5:28:16	5:45:05	6:02:00	6:36:24	7:06:47		12:07:07	17:08:00	17:38:24	18:12:49	18:29:46	18:46:36	10:01:12	-13.933	-15.983	45	
02/05/2021	F	5:27:13	5:44:00	6:00:55	6:35:15	7:05:34		12:07:12	17:09:23	17:39:43	18:14:05	18:31:00	18:47:49	10:03:49	-14.010	-15.678	34	
02/06/2021	Sat	5:26:07	5:42:55	5:59:48	6:34:04	7:04:18		12:07:16	17:10:47	17:41:02	18:15:20	18:32:14	18:49:03	10:06:28	-14.075	-15.368	24	
02/07/2021	Sun	5:25:01	5:41:47	5:58:39	6:32:52	7:03:01		12:07:19	17:12:10	17:42:21	18:16:35	18:33:29	18:50:16	10:09:09	-14.126	-15.054	15	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Eqn (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
02/08/2021	M	5:23:52	5:40:38	5:57:29	6:31:38	7:01:43	12:07:21		17:13:34	17:43:40	18:17:51	18:34:43	18:51:30	10:11:51	-14.165	-14.736	8	
02/09/2021	Tu	5:22:42	5:39:27	5:56:17	6:30:23	7:00:23	12:07:23		17:14:57	17:44:59	18:19:07	18:35:58	18:52:44	10:14:34	-14.190	-14.414	3	
02/10/2021	W	5:21:30	5:38:14	5:55:03	6:29:06	6:59:02	12:07:23		17:16:20	17:46:18	18:20:23	18:37:13	18:53:59	10:17:19	-14.203	-14.088	1	
02/11/2021	Th	5:20:16	5:37:00	5:53:48	6:27:47	6:57:39	12:07:23		17:17:44	17:47:37	18:21:39	18:38:28	18:55:13	10:20:04	-14.203	-13.757	0	
02/12/2021	F	5:19:00	5:35:44	5:52:31	6:26:27	6:56:15	12:07:23		17:19:07	17:48:56	18:22:54	18:39:43	18:56:28	10:22:52	-14.190	-13.424	2	
02/13/2021	Sat	5:17:43	5:34:26	5:51:12	6:25:06	6:54:49	12:07:21		17:20:29	17:50:15	18:24:10	18:40:58	18:57:43	10:25:40	-14.165	-13.086	6	
02/14/2021	Sun	5:16:24	5:33:07	5:49:52	6:23:43	6:53:23	12:07:19		17:21:52	17:51:34	18:25:26	18:42:14	18:58:58	10:28:29	-14.127	-12.745	12	
02/15/2021	M	5:15:04	5:31:46	5:48:31	6:22:19	6:51:55	12:07:16		17:23:14	17:52:52	18:26:42	18:43:29	19:00:13	10:31:20	-14.077	-12.400	19	
02/16/2021	Tu	5:13:42	5:30:24	5:47:08	6:20:53	6:50:25	12:07:12		17:24:37	17:54:11	18:27:59	18:44:44	19:01:28	10:34:11	-14.015	-12.052	26	
02/17/2021	W	5:12:18	5:29:00	5:45:44	6:19:26	6:48:55	12:07:08		17:25:59	17:55:29	18:29:15	18:46:00	19:02:44	10:37:04	-13.941	-11.701	35	
02/18/2021	Th	5:10:53	5:27:35	5:44:18	6:17:58	6:47:23	12:07:02		17:27:20	17:56:47	18:30:31	18:47:15	19:03:59	10:39:57	-13.855	-11.347	44	
02/19/2021	F	5:09:26	5:26:08	5:42:51	6:16:29	6:45:51	12:06:57		17:28:42	17:58:05	18:31:47	18:48:31	19:05:15	10:42:51	-13.758	-10.990	54	
02/20/2021	Sat	5:07:58	5:24:40	5:41:22	6:14:58	6:44:17	12:06:50		17:30:03	17:59:23	18:33:02	18:49:47	19:06:31	10:45:46	-13.649	-10.630	63	
02/21/2021	Sun	5:06:28	5:23:10	5:39:52	6:13:27	6:42:42	12:06:43		17:31:24	18:00:41	18:34:18	18:51:02	19:07:47	10:48:42	-13.530	-10.267	72	
02/22/2021	M	5:04:57	5:21:39	5:38:21	6:11:54	6:41:06	12:06:35		17:32:44	18:01:59	18:35:34	18:52:18	19:09:03	10:51:38	-13.399	-9.902	81	
02/23/2021	Tu	5:03:24	5:20:07	5:36:49	6:10:20	6:39:29	12:06:27		17:34:04	18:03:16	18:36:50	18:53:34	19:10:19	10:54:35	-13.258	-9.534	88	
02/24/2021	W	5:01:50	5:18:34	5:35:15	6:08:45	6:37:52	12:06:18		17:35:24	18:04:33	18:38:06	18:54:50	19:11:36	10:57:33	-13.107	-9.164	94	
02/25/2021	Th	5:00:15	5:16:59	5:33:41	6:07:09	6:36:13	12:06:08		17:36:44	18:05:50	18:39:22	18:56:06	19:12:52	11:00:31	-12.947	-8.792	98	
02/26/2021	F	4:58:38	5:15:23	5:32:05	6:05:32	6:34:34	12:05:58		17:38:03	18:07:07	18:40:38	18:57:22	19:14:09	11:03:30	-12.776	-8.417	100	
02/27/2021	Sat	4:57:00	5:13:46	5:30:28	6:03:54	6:32:53	12:05:47		17:39:22	18:08:24	18:41:54	18:58:38	19:15:26	11:06:29	-12.597	-8.041	99	
02/28/2021	Sun	4:55:21	5:12:07	5:28:50	6:02:15	6:31:12	12:05:36		17:40:41	18:09:41	18:43:10	18:59:55	19:16:43	11:09:29	-12.409	-7.662	95	
03/01/2021	M	4:53:41	5:10:28	5:27:11	6:00:35	6:29:30	12:05:24		17:42:00	18:10:57	18:44:26	19:01:11	19:18:01	11:12:29	-12.212	-7.282	89	
03/02/2021	Tu	4:51:59	5:08:47	5:25:30	5:58:55	6:27:48	12:05:12		17:43:18	18:12:14	18:45:42	19:02:28	19:19:18	11:15:30	-12.007	-6.900	81	
03/03/2021	W	4:50:16	5:07:05	5:23:49	5:57:13	6:26:05	12:04:59		17:44:36	18:13:30	18:46:58	19:03:45	19:20:36	11:18:31	-11.795	-6.516	71	
03/04/2021	Th	4:48:32	5:05:23	5:22:07	5:55:31	6:24:21	12:04:46		17:45:53	18:14:46	18:48:14	19:05:02	19:21:55	11:21:32	-11.576	-6.131	60	
03/05/2021	F	4:46:47	5:03:39	5:20:24	5:53:48	6:22:37	12:04:32		17:47:11	18:16:02	18:49:31	19:06:19	19:23:13	11:24:34	-11.349	-5.744	49	
03/06/2021	Sat	4:45:01	5:01:54	5:18:40	5:52:05	6:20:52	12:04:18		17:48:28	18:17:18	18:50:47	19:07:36	19:24:32	11:27:36	-11.116	-5.356	38	
03/07/2021	Sun	4:43:14	5:00:08	5:16:56	5:50:20	6:19:06	12:04:04		17:49:45	18:18:34	18:52:03	19:08:54	19:25:51	11:30:39	-10.877	-4.967	28	
03/08/2021	M	4:41:25	4:58:22	5:15:10	5:48:35	6:17:21	12:03:49		17:51:02	18:19:50	18:53:20	19:10:11	19:27:11	11:33:41	-10.631	-4.577	19	
03/09/2021	Tu	4:39:36	4:56:34	5:13:24	5:46:50	6:15:34	12:03:34		17:52:18	18:21:06	18:54:37	19:11:29	19:28:31	11:36:44	-10.380	-4.185	11	
03/10/2021	W	4:37:46	4:54:46	5:11:36	5:45:04	6:13:47	12:03:19		17:53:34	18:22:21	18:55:54	19:12:47	19:29:51	11:39:47	-10.123	-3.793	5	
03/11/2021	Th	4:35:54	4:52:56	5:09:49	5:43:17	6:12:00	12:03:03		17:54:51	18:23:37	18:57:11	19:14:06	19:31:11	11:42:50	-9.862	-3.400	2	
03/12/2021	F	4:34:02	4:51:06	5:08:00	5:41:30	6:10:12	12:02:47		17:56:06	18:24:53	18:58:28	19:15:25	19:32:32	11:45:54	-9.595	-3.006	0	
03/13/2021	Sat	4:32:09	4:49:15	5:06:11	5:39:42	6:08:24	12:02:31		17:57:22	18:26:08	18:59:45	19:16:44	19:33:54	11:48:57	-9.324	-2.612	1	
03/14/2021	Sun*	5:30:15	5:47:23	6:04:20	6:37:54	7:06:36	13:02:14		18:58:37	19:27:24	20:01:02	20:18:03	20:35:15	11:52:01	-9.048	-2.217	3	
03/15/2021	M*	5:28:20	5:45:31	6:02:30	6:36:05	7:04:48	13:01:57		18:59:53	19:28:39	20:02:20	20:19:22	20:36:37	11:55:05	-8.768	-1.822	7	
03/16/2021	Tu*	5:26:24	5:43:38	6:00:39	6:34:16	7:02:59	13:01:40		19:01:08	19:29:54	20:03:37	20:20:42	20:38:00	11:58:09	-8.485	-1.427	13	
03/17/2021	W*	5:24:27	5:41:44	5:58:47	6:32:27	7:01:10	13:01:23		19:02:22	19:31:10	20:04:55	20:22:02	20:39:23	12:01:12	-8.198	-1.031	19	
03/18/2021	Th*	5:22:29	5:39:49	5:56:54	6:30:37	6:59:21	13:01:06		19:03:37	19:32:25	20:06:13	20:23:22	20:40:46	12:04:16	-7.908	-0.636	27	
03/19/2021	F*	5:20:31	5:37:54	5:55:01	6:28:47	6:57:31	13:00:48		19:04:51	19:33:40	20:07:32	20:24:43	20:42:10	12:07:20	-7.615	-0.241	36	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
10/06/2021	W*	5:21:10	5:38:06	5:54:55	6:28:24	6:57:15	12:41:09		18:24:20	18:53:08	19:26:32	19:43:18	20:00:11	11:27:05	12.044	-5.416	1	
10/07/2021	Th*	5:22:25	5:39:19	5:56:07	6:29:35	6:58:27	12:40:52		18:22:33	18:51:23	19:24:47	19:41:32	19:58:23	11:24:06	12.329	-5.798	4	
10/08/2021	F*	5:23:39	5:40:32	5:57:19	6:30:47	6:59:40	12:40:35		18:20:47	18:49:38	19:23:02	19:39:46	19:56:36	11:21:07	12.608	-6.179	10	
10/09/2021	Sat*	5:24:53	5:41:44	5:58:30	6:31:58	7:00:54	12:40:19		18:19:02	18:47:54	19:21:18	19:38:02	19:54:51	11:18:08	12.879	-6.559	18	
10/10/2021	Sun*	5:26:06	5:42:56	5:59:42	6:33:10	7:02:07	12:40:03		18:17:17	18:46:11	19:19:35	19:36:18	19:53:06	11:15:09	13.143	-6.937	28	
10/11/2021	M*	5:27:19	5:44:09	6:00:54	6:34:22	7:03:21	12:39:47		18:15:32	18:44:28	19:17:53	19:34:36	19:51:23	11:12:11	13.399	-7.314	39	
10/12/2021	Tu*	5:28:32	5:45:21	6:02:05	6:35:35	7:04:35	12:39:32		18:13:49	18:42:47	19:16:12	19:32:54	19:49:40	11:09:14	13.647	-7.689	50	
10/13/2021	W*	5:29:45	5:46:33	6:03:17	6:36:47	7:05:49	12:39:18		18:12:06	18:41:06	19:14:32	19:31:14	19:47:59	11:06:16	13.887	-8.062	61	
10/14/2021	Th*	5:30:58	5:47:45	6:04:29	6:37:59	7:07:04	12:39:04		18:10:24	18:39:26	19:12:53	19:29:35	19:46:19	11:03:20	14.119	-8.433	71	
10/15/2021	F*	5:32:10	5:48:56	6:05:40	6:39:12	7:08:19	12:38:51		18:08:42	18:37:47	19:11:15	19:27:57	19:44:41	11:00:23	14.341	-8.802	80	
10/16/2021	Sat*	5:33:23	5:50:08	6:06:52	6:40:25	7:09:34	12:38:38		18:07:02	18:36:09	19:09:39	19:26:21	19:43:04	10:57:28	14.554	-9.169	88	
10/17/2021	Sun*	5:34:35	5:51:20	6:08:03	6:41:38	7:10:50	12:38:26		18:05:22	18:34:32	19:08:03	19:24:45	19:41:28	10:54:32	14.757	-9.534	94	
10/18/2021	M*	5:35:47	5:52:31	6:09:15	6:42:51	7:12:06	12:38:14		18:03:44	18:32:56	19:06:29	19:23:11	19:39:53	10:51:38	14.951	-9.897	98	
10/19/2021	Tu*	5:36:59	5:53:43	6:10:27	6:44:04	7:13:22	12:38:03		18:02:06	18:31:22	19:04:56	19:21:38	19:38:20	10:48:44	15.134	-10.257	100	
10/20/2021	W*	5:38:10	5:54:54	6:11:38	6:45:17	7:14:38	12:37:53		18:00:29	18:29:48	19:03:24	19:20:06	19:36:48	10:45:51	15.307	-10.615	100	
10/21/2021	Th*	5:39:22	5:56:06	6:12:50	6:46:31	7:15:55	12:37:43		17:58:53	18:28:15	19:01:53	19:18:36	19:35:18	10:42:58	15.468	-10.970	98	
10/22/2021	F*	5:40:33	5:57:17	6:14:02	6:47:45	7:17:12	12:37:34		17:57:18	18:26:44	19:00:24	19:17:07	19:33:49	10:40:07	15.619	-11.322	94	
10/23/2021	Sat*	5:41:44	5:58:28	6:15:13	6:48:59	7:18:29	12:37:26		17:55:45	18:25:14	18:58:56	19:15:40	19:32:22	10:37:16	15.758	-11.672	89	
10/24/2021	Sun*	5:42:56	5:59:39	6:16:25	6:50:13	7:19:47	12:37:18		17:54:12	18:23:45	18:57:30	19:14:14	19:30:56	10:34:25	15.885	-12.018	83	
10/25/2021	M*	5:44:07	6:00:51	6:17:37	6:51:27	7:21:05	12:37:11		17:52:41	18:22:17	18:56:05	19:12:49	19:29:32	10:31:36	16.000	-12.362	75	
10/26/2021	Tu*	5:45:18	6:02:02	6:18:49	6:52:41	7:22:23	12:37:05		17:51:11	18:20:51	18:54:41	19:11:26	19:28:09	10:28:48	16.102	-12.702	66	
10/27/2021	W*	5:46:29	6:03:13	6:20:01	6:53:56	7:23:41	12:37:00		17:49:42	18:19:26	18:53:19	19:10:05	19:26:48	10:26:01	16.192	-13.039	57	
10/28/2021	Th*	5:47:40	6:04:24	6:21:13	6:55:11	7:25:00	12:36:55		17:48:14	18:18:02	18:51:58	19:08:45	19:25:28	10:23:14	16.270	-13.373	47	
10/29/2021	F*	5:48:50	6:05:35	6:22:25	6:56:26	7:26:19	12:36:51		17:46:48	18:16:40	18:50:39	19:07:27	19:24:10	10:20:29	16.334	-13.703	37	
10/30/2021	Sat*	5:50:01	6:06:47	6:23:37	6:57:41	7:27:38	12:36:48		17:45:23	18:15:19	18:49:21	19:06:10	19:22:54	10:17:45	16.385	-14.030	28	
10/31/2021	Sun*	5:51:11	6:07:58	6:24:49	6:58:56	7:28:58	12:36:46		17:44:00	18:14:00	18:48:05	19:04:55	19:21:40	10:15:02	16.422	-14.353	18	
11/01/2021	M*	5:52:22	6:09:09	6:26:01	7:00:11	7:30:17	12:36:45		17:42:38	18:12:42	18:46:51	19:03:42	19:20:27	10:12:21	16.447	-14.673	11	
11/02/2021	Tu*	5:53:32	6:10:20	6:27:13	7:01:26	7:31:37	12:36:44		17:41:17	18:11:26	18:45:38	19:02:30	19:19:16	10:09:40	16.457	-14.988	5	
11/03/2021	W*	5:54:42	6:11:31	6:28:25	7:02:42	7:32:57	12:36:44		17:39:58	18:10:12	18:44:27	19:01:20	19:18:07	10:07:01	16.454	-15.299	1	
11/04/2021	Th*	5:55:52	6:12:41	6:29:37	7:03:57	7:34:17	12:36:45		17:38:41	18:08:59	18:43:18	19:00:12	19:17:00	10:04:24	16.437	-15.606	0	
11/05/2021	F*	5:57:02	6:13:52	6:30:49	7:05:13	7:35:37	12:36:47		17:37:25	18:07:48	18:42:10	18:59:06	19:15:54	10:01:48	16.406	-15.909	2	
11/06/2021	Sat*	5:58:12	6:15:03	6:32:00	7:06:28	7:36:57	12:36:50		17:36:11	18:06:38	18:41:04	18:58:01	19:14:51	9:59:14	16.361	-16.208	7	
11/07/2021	Sun	4:59:22	5:16:13	5:33:12	6:07:43	6:38:17	11:36:53		16:34:58	17:05:30	17:40:00	17:56:58	18:13:49	9:56:41	16.303	-16.501	15	
11/08/2021	M	5:00:31	5:17:23	5:34:23	6:08:59	6:39:37	11:36:58		16:33:47	17:04:24	17:38:58	17:55:58	18:12:49	9:54:10	16.230	-16.791	25	
11/09/2021	Tu	5:01:40	5:18:33	5:35:35	6:10:14	6:40:57	11:37:03		16:32:38	17:03:20	17:37:58	17:54:59	18:11:51	9:51:41	16.144	-17.075	35	
11/10/2021	W	5:02:49	5:19:43	5:36:46	6:11:29	6:42:17	11:37:09		16:31:31	17:02:18	17:36:59	17:54:01	18:10:55	9:49:14	16.044	-17.355	46	
11/11/2021	Th	5:03:57	5:20:52	5:37:57	6:12:44	6:43:36	11:37:16		16:30:25	17:01:17	17:36:03	17:53:06	18:10:01	9:46:49	15.931	-17.630	57	
11/12/2021	F	5:05:05	5:22:02	5:39:07	6:13:58	6:44:56	11:37:23		16:29:22	17:00:18	17:35:08	17:52:13	18:09:09	9:44:26	15.803	-17.899	67	
11/13/2021	Sat	5:06:13	5:23:11	5:40:18	6:15:13	6:46:15	11:37:32		16:28:20	16:59:22	17:34:15	17:51:22	18:08:18	9:42:05	15.662	-18.163	76	
11/14/2021	Sun	5:07:21	5:24:19	5:41:28	6:16:27	6:47:34	11:37:41		16:27:20	16:58:27	17:33:25	17:50:33	18:07:30	9:39:46	15.506	-18.422	84	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
11/15/2021	M	5:08:28	5:25:27	5:42:37	6:17:40	6:48:53		11:37:51	16:26:22	16:57:34	17:32:36	17:49:45	18:06:44	9:37:29	15.337	-18.676	91	
11/16/2021	Tu	5:09:35	5:26:35	5:43:47	6:18:54	6:50:11		11:38:02	16:25:26	16:56:43	17:31:49	17:49:00	18:06:00	9:35:15	15.154	-18.924	96	
11/17/2021	W	5:10:41	5:27:43	5:44:56	6:20:07	6:51:29		11:38:14	16:24:33	16:55:54	17:31:05	17:48:17	18:05:18	9:33:03	14.958	-19.166	99	
11/18/2021	Th	5:11:47	5:28:50	5:46:04	6:21:19	6:52:47		11:38:27	16:23:41	16:55:08	17:30:22	17:47:36	18:04:38	9:30:54	14.747	-19.403	100	
11/19/2021	F	5:12:52	5:29:56	5:47:12	6:22:31	6:54:04		11:38:40	16:22:52	16:54:23	17:29:42	17:46:57	18:04:00	9:28:48	14.523	-19.634	99	
11/20/2021	Sat	5:13:57	5:31:03	5:48:20	6:23:43	6:55:20		11:38:54	16:22:04	16:53:41	17:29:03	17:46:20	18:03:25	9:26:44	14.285	-19.859	97	
11/21/2021	Sun	5:15:02	5:32:08	5:49:27	6:24:54	6:56:36		11:39:09	16:21:19	16:53:01	17:28:27	17:45:45	18:02:51	9:24:43	14.034	-20.078	93	
11/22/2021	M	5:16:06	5:33:13	5:50:33	6:26:05	6:57:51		11:39:25	16:20:36	16:52:23	17:27:53	17:45:13	18:02:20	9:22:45	13.769	-20.291	88	
11/23/2021	Tu	5:17:09	5:34:18	5:51:39	6:27:14	6:59:06		11:39:42	16:19:56	16:51:47	17:27:21	17:44:42	18:01:51	9:20:50	13.491	-20.498	81	
11/24/2021	W	5:18:12	5:35:22	5:52:45	6:28:24	7:00:20		11:39:59	16:19:18	16:51:13	17:26:51	17:44:14	18:01:24	9:18:58	13.200	-20.698	73	
11/25/2021	Th	5:19:14	5:36:25	5:53:49	6:29:32	7:01:33		11:40:18	16:18:42	16:50:42	17:26:24	17:43:48	18:00:59	9:17:09	12.896	-20.892	64	
11/26/2021	F	5:20:15	5:37:28	5:54:53	6:30:40	7:02:45		11:40:37	16:18:08	16:50:13	17:25:59	17:43:24	18:00:36	9:15:23	12.580	-21.080	54	
11/27/2021	Sat	5:21:16	5:38:29	5:55:57	6:31:47	7:03:56		11:40:56	16:17:37	16:49:46	17:25:36	17:43:03	18:00:16	9:13:41	12.250	-21.260	43	
11/28/2021	Sun	5:22:16	5:39:31	5:56:59	6:32:53	7:05:07		11:41:17	16:17:08	16:49:22	17:25:15	17:42:43	17:59:57	9:12:02	11.909	-21.435	33	
11/29/2021	M	5:23:15	5:40:31	5:58:01	6:33:58	7:06:16		11:41:38	16:16:42	16:49:00	17:24:57	17:42:26	17:59:41	9:10:26	11.556	-21.602	23	
11/30/2021	Tu	5:24:14	5:41:30	5:59:01	6:35:02	7:07:24		11:42:00	16:16:18	16:48:40	17:24:40	17:42:11	17:59:27	9:08:54	11.192	-21.763	14	
12/01/2021	W	5:25:11	5:42:29	6:00:01	6:36:05	7:08:31		11:42:22	16:15:57	16:48:23	17:24:26	17:41:59	17:59:16	9:07:26	10.816	-21.917	7	
12/02/2021	Th	5:26:08	5:43:27	6:01:00	6:37:07	7:09:37		11:42:46	16:15:38	16:48:08	17:24:15	17:41:48	17:59:06	9:06:01	10.429	-22.063	2	
12/03/2021	F	5:27:04	5:44:23	6:01:58	6:38:08	7:10:42		11:43:09	16:15:22	16:47:56	17:24:05	17:41:40	17:58:59	9:04:41	10.032	-22.203	0	
12/04/2021	Sat	5:27:58	5:45:19	6:02:55	6:39:07	7:11:45		11:43:34	16:15:09	16:47:46	17:23:58	17:41:34	17:58:54	9:03:24	9.626	-22.336	1	
12/05/2021	Sun	5:28:52	5:46:13	6:03:50	6:40:06	7:12:47		11:43:59	16:14:58	16:47:38	17:23:53	17:41:30	17:58:51	9:02:11	9.210	-22.461	5	
12/06/2021	M	5:29:45	5:47:07	6:04:45	6:41:03	7:13:47		11:44:24	16:14:49	16:47:33	17:23:51	17:41:29	17:58:51	9:01:02	8.785	-22.579	12	
12/07/2021	Tu	5:30:36	5:47:59	6:05:38	6:41:59	7:14:46		11:44:50	16:14:43	16:47:30	17:23:51	17:41:29	17:58:52	8:59:58	8.352	-22.689	20	
12/08/2021	W	5:31:26	5:48:50	6:06:30	6:42:53	7:15:43		11:45:17	16:14:40	16:47:30	17:23:52	17:41:32	17:58:56	8:58:57	7.911	-22.793	30	
12/09/2021	Th	5:32:15	5:49:39	6:07:20	6:43:46	7:16:38		11:45:44	16:14:39	16:47:31	17:23:57	17:41:37	17:59:01	8:58:01	7.463	-22.888	41	
12/10/2021	F	5:33:03	5:50:28	6:08:09	6:44:37	7:17:32		11:46:11	16:14:41	16:47:36	17:24:03	17:41:44	17:59:09	8:57:09	7.008	-22.976	51	
12/11/2021	Sat	5:33:49	5:51:15	6:08:57	6:45:26	7:18:23		11:46:39	16:14:45	16:47:42	17:24:11	17:41:53	17:59:19	8:56:22	6.548	-23.057	61	
12/12/2021	Sun	5:34:34	5:52:00	6:09:43	6:46:14	7:19:13		11:47:07	16:14:52	16:47:51	17:24:22	17:42:05	17:59:31	8:55:39	6.081	-23.130	71	
12/13/2021	M	5:35:17	5:52:44	6:10:28	6:47:00	7:20:01		11:47:35	16:15:01	16:48:03	17:24:35	17:42:18	17:59:45	8:55:00	5.609	-23.195	79	
12/14/2021	Tu	5:36:00	5:53:27	6:11:11	6:47:45	7:20:47		11:48:03	16:15:13	16:48:16	17:24:50	17:42:34	18:00:01	8:54:26	5.133	-23.253	86	
12/15/2021	W	5:36:40	5:54:08	6:11:52	6:48:27	7:21:32		11:48:32	16:15:28	16:48:32	17:25:07	17:42:52	18:00:19	8:53:56	4.652	-23.302	92	
12/16/2021	Th	5:37:19	5:54:47	6:12:32	6:49:08	7:22:13		11:49:01	16:15:45	16:48:50	17:25:27	17:43:11	18:00:39	8:53:31	4.168	-23.344	96	
12/17/2021	F	5:37:57	5:55:25	6:13:10	6:49:47	7:22:53		11:49:31	16:16:04	16:49:11	17:25:48	17:43:33	18:01:01	8:53:11	3.680	-23.379	99	
12/18/2021	Sat	5:38:33	5:56:01	6:13:46	6:50:24	7:23:31		11:50:00	16:16:26	16:49:34	17:26:11	17:43:57	18:01:25	8:52:55	3.190	-23.405	100	
12/19/2021	Sun	5:39:07	5:56:35	6:14:21	6:50:59	7:24:07		11:50:30	16:16:51	16:49:59	17:26:37	17:44:22	18:01:51	8:52:44	2.697	-23.424	99	
12/20/2021	M	5:39:39	5:57:08	6:14:53	6:51:32	7:24:40		11:50:59	16:17:18	16:50:26	17:27:04	17:44:50	18:02:18	8:52:38	2.203	-23.434	96	
12/21/2021	Tu	5:40:10	5:57:39	6:15:24	6:52:03	7:25:11		11:51:29	16:17:47	16:50:55	17:27:34	17:45:19	18:02:48	8:52:36	1.707	-23.437	92	
12/22/2021	W	5:40:39	5:58:08	6:15:53	6:52:32	7:25:40		11:51:59	16:18:19	16:51:27	17:28:05	17:45:51	18:03:19	8:52:39	1.211	-23.433	86	
12/23/2021	Th	5:41:07	5:58:35	6:16:20	6:52:58	7:26:06		11:52:28	16:18:53	16:52:00	17:28:39	17:46:24	18:03:52	8:52:47	0.715	-23.420	79	
12/24/2021	F	5:41:32	5:59:00	6:16:46	6:53:23	7:26:30		11:52:58	16:19:29	16:52:36	17:29:14	17:46:59	18:04:27	8:52:59	0.219	-23.399	70	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End				Length of Day	Noon Time (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro- nomical Twilight	Begin 15- deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight						End Civil Twilight	End 15- deg. Twilight	Astro- nomical Twilight					
12/25/2021	Sat	5:41:56	5:59:24	6:17:09	6:53:46	7:26:52		11:53:28	16:20:08	16:53:14	17:29:51	17:47:36	18:05:04	8:53:16	-0.276	-23.371	60	
12/26/2021	Sun	5:42:18	5:59:45	6:17:30	6:54:06	7:27:11		11:53:58	16:20:49	16:53:54	17:30:30	17:48:14	18:05:42	8:53:38	-0.770	-23.335	49	
12/27/2021	M	5:42:38	6:00:05	6:17:49	6:54:24	7:27:28		11:54:27	16:21:32	16:54:35	17:31:10	17:48:55	18:06:22	8:54:04	-1.262	-23.291	39	
12/28/2021	Tu	5:42:56	6:00:23	6:18:06	6:54:40	7:27:42		11:54:56	16:22:17	16:55:19	17:31:53	17:49:37	18:07:04	8:54:34	-1.751	-23.239	28	
12/29/2021	W	5:43:12	6:00:38	6:18:21	6:54:54	7:27:54		11:55:26	16:23:04	16:56:05	17:32:37	17:50:20	18:07:47	8:55:10	-2.237	-23.179	18	
12/30/2021	Th	5:43:26	6:00:52	6:18:34	6:55:05	7:28:04		11:55:55	16:23:53	16:56:52	17:33:23	17:51:05	18:08:31	8:55:50	-2.719	-23.112	10	
12/31/2021	F	5:43:38	6:01:04	6:18:45	6:55:14	7:28:11		11:56:23	16:24:45	16:57:41	17:34:10	17:51:52	18:09:18	8:56:34	-3.198	-23.037	4	
01/01/2022	Sat	5:43:48	6:01:13	6:18:54	6:55:21	7:28:15		11:56:52	16:25:38	16:58:32	17:34:59	17:52:40	18:10:05	8:57:23	-3.671	-22.954	1	
01/02/2022	Sun	5:43:56	6:01:20	6:19:01	6:55:25	7:28:17		11:57:20	16:26:33	16:59:25	17:35:50	17:53:30	18:10:54	8:58:16	-4.139	-22.864	0	
01/03/2022	M	5:44:02	6:01:26	6:19:05	6:55:27	7:28:16		11:57:47	16:27:30	17:00:19	17:36:41	17:54:21	18:11:45	8:59:14	-4.601	-22.766	3	
01/04/2022	Tu	5:44:06	6:01:29	6:19:07	6:55:27	7:28:13		11:58:15	16:28:29	17:01:15	17:37:35	17:55:13	18:12:36	9:00:15	-5.057	-22.660	8	
01/05/2022	W	5:44:08	6:01:30	6:19:07	6:55:25	7:28:07		11:58:42	16:29:29	17:02:12	17:38:29	17:56:07	18:13:29	9:01:21	-5.505	-22.547	16	
01/06/2022	Th	5:44:08	6:01:29	6:19:05	6:55:20	7:27:59		11:59:08	16:30:31	17:03:10	17:39:25	17:57:02	18:14:23	9:02:32	-5.945	-22.427	25	
01/07/2022	F	5:44:05	6:01:25	6:19:01	6:55:12	7:27:48		11:59:34	16:31:34	17:04:10	17:40:22	17:57:58	18:15:18	9:03:46	-6.377	-22.299	34	
01/08/2022	Sat	5:44:01	6:01:20	6:18:54	6:55:03	7:27:35		11:59:59	16:32:39	17:05:12	17:41:21	17:58:55	18:16:15	9:05:04	-6.800	-22.164	44	
01/09/2022	Sun	5:43:54	6:01:12	6:18:45	6:54:50	7:27:19		12:00:24	16:33:46	17:06:14	17:42:20	17:59:54	18:17:12	9:06:27	-7.214	-22.022	54	
01/10/2022	M	5:43:45	6:01:02	6:18:34	6:54:36	7:27:01		12:00:49	16:34:53	17:07:18	17:43:21	18:00:53	18:18:10	9:07:53	-7.619	-21.872	64	
01/11/2022	Tu	5:43:34	6:00:50	6:18:20	6:54:19	7:26:40		12:01:12	16:36:02	17:08:23	17:44:22	18:01:53	18:19:10	9:09:23	-8.013	-21.715	73	
01/12/2022	W	5:43:20	6:00:35	6:18:05	6:54:00	7:26:16		12:01:35	16:37:12	17:09:29	17:45:25	18:02:55	18:20:10	9:10:56	-8.397	-21.552	81	
01/13/2022	Th	5:43:05	6:00:19	6:17:47	6:53:38	7:25:51		12:01:58	16:38:24	17:10:36	17:46:29	18:03:57	18:21:11	9:12:33	-8.771	-21.381	87	
01/14/2022	F	5:42:47	6:00:00	6:17:26	6:53:15	7:25:22		12:02:19	16:39:36	17:11:44	17:47:33	18:05:00	18:22:13	9:14:14	-9.134	-21.204	93	
01/15/2022	Sat	5:42:27	5:59:39	6:17:04	6:52:49	7:24:52		12:02:41	16:40:50	17:12:53	17:48:39	18:06:04	18:23:16	9:15:58	-9.485	-21.020	97	
01/16/2022	Sun	5:42:05	5:59:16	6:16:39	6:52:20	7:24:19		12:03:01	16:42:04	17:14:03	17:49:45	18:07:09	18:24:20	9:17:46	-9.825	-20.829	99	
01/17/2022	M	5:41:41	5:58:50	6:16:13	6:51:49	7:23:43		12:03:21	16:43:20	17:15:14	17:50:52	18:08:14	18:25:24	9:19:37	-10.154	-20.631	100	
01/18/2022	Tu	5:41:15	5:58:23	6:15:44	6:51:16	7:23:06		12:03:40	16:44:36	17:16:26	17:51:59	18:09:21	18:26:29	9:21:31	-10.470	-20.427	99	
01/19/2022	W	5:40:46	5:57:53	6:15:12	6:50:41	7:22:26		12:03:58	16:45:53	17:17:38	17:53:08	18:10:28	18:27:35	9:23:28	-10.775	-20.217	95	
01/20/2022	Th	5:40:16	5:57:21	6:14:39	6:50:04	7:21:43		12:04:15	16:47:11	17:18:51	17:54:17	18:11:35	18:28:41	9:25:28	-11.067	-20.000	90	
01/21/2022	F	5:39:43	5:56:47	6:14:04	6:49:25	7:20:59		12:04:32	16:48:30	17:20:05	17:55:27	18:12:44	18:29:48	9:27:31	-11.347	-19.777	83	
01/22/2022	Sat	5:39:08	5:56:11	6:13:26	6:48:43	7:20:12		12:04:48	16:49:49	17:21:19	17:56:37	18:13:52	18:30:56	9:29:37	-11.614	-19.548	75	
01/23/2022	Sun	5:38:31	5:55:33	6:12:47	6:47:59	7:19:24		12:05:04	16:51:09	17:22:34	17:57:48	18:15:02	18:32:04	9:31:45	-11.869	-19.313	65	
01/24/2022	M	5:37:52	5:54:53	6:12:05	6:47:13	7:18:33		12:05:18	16:52:30	17:23:50	17:58:59	18:16:12	18:33:13	9:33:57	-12.111	-19.072	55	
01/25/2022	Tu	5:37:11	5:54:11	6:11:21	6:46:26	7:17:40		12:05:32	16:53:51	17:25:06	18:00:11	18:17:22	18:34:23	9:36:11	-12.340	-18.825	43	
01/26/2022	W	5:36:28	5:53:27	6:10:35	6:45:36	7:16:45		12:05:45	16:55:12	17:26:22	18:01:24	18:18:33	18:35:32	9:38:27	-12.557	-18.572	32	
01/27/2022	Th	5:35:43	5:52:40	6:09:48	6:44:44	7:15:48		12:05:57	16:56:34	17:27:39	18:02:37	18:19:45	18:36:43	9:40:46	-12.760	-18.314	22	
01/28/2022	F	5:34:56	5:51:52	6:08:58	6:43:50	7:14:49		12:06:08	16:57:56	17:28:57	18:03:50	18:20:56	18:37:53	9:43:07	-12.950	-18.050	13	
01/29/2022	Sat	5:34:07	5:51:02	6:08:06	6:42:54	7:13:48		12:06:19	16:59:19	17:30:14	18:05:03	18:22:08	18:39:04	9:45:31	-13.127	-17.780	6	
01/30/2022	Sun	5:33:16	5:50:10	6:07:13	6:41:56	7:12:46		12:06:29	17:00:42	17:31:32	18:06:17	18:23:21	18:40:16	9:47:56	-13.290	-17.506	2	
01/31/2022	M	5:32:23	5:49:15	6:06:17	6:40:57	7:11:41		12:06:38	17:02:05	17:32:50	18:07:32	18:24:34	18:41:28	9:50:24	-13.440	-17.226	0	
02/01/2022	Tu	5:31:27	5:48:19	6:05:19	6:39:55	7:10:35		12:06:46	17:03:28	17:34:09	18:08:46	18:25:47	18:42:40	9:52:54	-13.576	-16.941	1	
02/02/2022	W	5:30:30	5:47:21	6:04:20	6:38:52	7:09:27		12:06:53	17:04:52	17:35:27	18:10:01	18:27:00	18:43:52	9:55:25	-13.699	-16.651	5	

HVO -103.297529, 44.108178, Time Zone = MST/MDT

Date	DoW	Begin				Sunrise	Sun East	Local Noon	Sun West	Sunset	End Civil Twilight	End Nautical Twilight	End 15-deg. Twilight	End Astro-nomical Twilight	Length of Day	Noon Eqn (min.)	Noon sun decli- nation (deg.)	9 PM Lunar Illum. (pct.)
		Astro-nomical Twilight	Begin 15-deg. Twilight	Begin Nautical Twilight	Begin Civil Twilight													
12/20/2022	Tu	5:39:32	5:57:00	6:14:46	6:51:24	7:24:32	11:50:52		16:17:11	16:50:19	17:26:57	17:44:43	18:02:11	8:52:39	2.330	-23.433	7	
12/21/2022	W	5:40:03	5:57:32	6:15:17	6:51:56	7:25:04	11:51:22		16:17:40	16:50:48	17:27:27	17:45:12	18:02:41	8:52:36	1.832	-23.438	2	
12/22/2022	Th	5:40:33	5:58:01	6:15:47	6:52:25	7:25:33	11:51:52		16:18:11	16:51:19	17:27:58	17:45:43	18:03:12	8:52:38	1.333	-23.435	0	
12/23/2022	F	5:41:01	5:58:29	6:16:15	6:52:53	7:26:01	11:52:22		16:18:45	16:51:53	17:28:31	17:46:16	18:03:45	8:52:44	0.834	-23.424	1	
12/24/2022	Sat	5:41:27	5:58:55	6:16:41	6:53:18	7:26:25	11:52:52		16:19:21	16:52:28	17:29:06	17:46:51	18:04:19	8:52:55	0.335	-23.406	5	
12/25/2022	Sun	5:41:51	5:59:19	6:17:04	6:53:41	7:26:48	11:53:22		16:19:59	16:53:05	17:29:42	17:47:28	18:04:56	8:53:11	-0.163	-23.379	11	
12/26/2022	M	5:42:14	5:59:41	6:17:26	6:54:02	7:27:08	11:53:51		16:20:39	16:53:45	17:30:21	17:48:06	18:05:34	8:53:32	-0.658	-23.345	20	
12/27/2022	Tu	5:42:34	6:00:02	6:17:46	6:54:21	7:27:25	11:54:21		16:21:22	16:54:26	17:31:01	17:48:46	18:06:13	8:53:57	-1.151	-23.303	30	
12/28/2022	W	5:42:53	6:00:20	6:18:04	6:54:38	7:27:40	11:54:50		16:22:07	16:55:09	17:31:43	17:49:27	18:06:54	8:54:26	-1.641	-23.253	40	
12/29/2022	Th	5:43:09	6:00:36	6:18:19	6:54:52	7:27:53	11:55:20		16:22:53	16:55:54	17:32:27	17:50:10	18:07:37	8:55:01	-2.128	-23.195	51	
12/30/2022	F	5:43:24	6:00:50	6:18:33	6:55:04	7:28:03	11:55:49		16:23:42	16:56:41	17:33:12	17:50:55	18:08:21	8:55:39	-2.610	-23.129	62	
12/31/2022	Sat	5:43:36	6:01:02	6:18:44	6:55:13	7:28:10	11:56:17		16:24:33	16:57:30	17:33:59	17:51:41	18:09:07	8:56:23	-3.087	-23.056	71	

* Days when daylight time is in effect are marked with an asterisk.

eqn_time3.py ver 161025a gplib version 181207a delta-T data 12/06/2018