

# NOAA Global Monitoring Laboratory

Global Radiation Group

<https://gml.noaa.gov/grad/solcalc>

## Sunrise Table for 2022

**Location: Latitude 42.33300 Longitude -83.05000**

**Time Zone Offset: America/Detroit -4.0**

All times are in local time. Cells with light green color indicate when daylight saving time is in effect.

| Day | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1   | 08:01 | 07:46 | 07:07 | 07:15 | 06:27 | 05:58 | 05:59 | 06:25 | 06:57 | 07:29 | 08:05 | 07:42 |
| 2   | 08:01 | 07:45 | 07:06 | 07:13 | 06:26 | 05:58 | 06:00 | 06:26 | 06:59 | 07:30 | 08:07 | 07:43 |
| 3   | 08:01 | 07:43 | 07:04 | 07:11 | 06:25 | 05:57 | 06:00 | 06:27 | 07:00 | 07:32 | 08:08 | 07:44 |
| 4   | 08:01 | 07:42 | 07:03 | 07:09 | 06:23 | 05:57 | 06:01 | 06:28 | 07:01 | 07:33 | 08:09 | 07:45 |
| 5   | 08:01 | 07:41 | 07:01 | 07:08 | 06:22 | 05:56 | 06:02 | 06:29 | 07:02 | 07:34 | 08:10 | 07:46 |
| 6   | 08:01 | 07:40 | 06:59 | 07:06 | 06:21 | 05:56 | 06:02 | 06:30 | 07:03 | 07:35 | 07:12 | 07:47 |
| 7   | 08:01 | 07:39 | 06:58 | 07:04 | 06:20 | 05:56 | 06:03 | 06:31 | 07:04 | 07:36 | 07:13 | 07:48 |
| 8   | 08:01 | 07:38 | 06:56 | 07:03 | 06:18 | 05:56 | 06:04 | 06:32 | 07:05 | 07:37 | 07:14 | 07:49 |
| 9   | 08:01 | 07:36 | 06:54 | 07:01 | 06:17 | 05:55 | 06:04 | 06:33 | 07:06 | 07:38 | 07:15 | 07:50 |
| 10  | 08:00 | 07:35 | 06:53 | 06:59 | 06:16 | 05:55 | 06:05 | 06:34 | 07:07 | 07:39 | 07:17 | 07:50 |
| 11  | 08:00 | 07:34 | 06:51 | 06:58 | 06:15 | 05:55 | 06:06 | 06:35 | 07:08 | 07:40 | 07:18 | 07:51 |
| 12  | 08:00 | 07:33 | 06:49 | 06:56 | 06:14 | 05:55 | 06:06 | 06:36 | 07:09 | 07:42 | 07:19 | 07:52 |
| 13  | 07:59 | 07:31 | 07:47 | 06:54 | 06:13 | 05:55 | 06:07 | 06:37 | 07:10 | 07:43 | 07:20 | 07:53 |
| 14  | 07:59 | 07:30 | 07:46 | 06:53 | 06:12 | 05:55 | 06:08 | 06:38 | 07:11 | 07:44 | 07:22 | 07:54 |
| 15  | 07:59 | 07:29 | 07:44 | 06:51 | 06:11 | 05:55 | 06:09 | 06:39 | 07:12 | 07:45 | 07:23 | 07:54 |
| 16  | 07:58 | 07:27 | 07:42 | 06:50 | 06:10 | 05:55 | 06:10 | 06:41 | 07:13 | 07:46 | 07:24 | 07:55 |
| 17  | 07:58 | 07:26 | 07:41 | 06:48 | 06:09 | 05:55 | 06:11 | 06:42 | 07:14 | 07:47 | 07:25 | 07:56 |
| 18  | 07:57 | 07:24 | 07:39 | 06:46 | 06:08 | 05:55 | 06:11 | 06:43 | 07:15 | 07:49 | 07:27 | 07:56 |
| 19  | 07:56 | 07:23 | 07:37 | 06:45 | 06:07 | 05:55 | 06:12 | 06:44 | 07:16 | 07:50 | 07:28 | 07:57 |
| 20  | 07:56 | 07:21 | 07:35 | 06:43 | 06:06 | 05:55 | 06:13 | 06:45 | 07:17 | 07:51 | 07:29 | 07:57 |
| 21  | 07:55 | 07:20 | 07:34 | 06:42 | 06:05 | 05:56 | 06:14 | 06:46 | 07:19 | 07:52 | 07:30 | 07:58 |
| 22  | 07:54 | 07:18 | 07:32 | 06:40 | 06:04 | 05:56 | 06:15 | 06:47 | 07:20 | 07:53 | 07:31 | 07:58 |
| 23  | 07:54 | 07:17 | 07:30 | 06:39 | 06:04 | 05:56 | 06:16 | 06:48 | 07:21 | 07:54 | 07:33 | 07:59 |
| 24  | 07:53 | 07:15 | 07:28 | 06:37 | 06:03 | 05:56 | 06:17 | 06:49 | 07:22 | 07:56 | 07:34 | 07:59 |
| 25  | 07:52 | 07:14 | 07:27 | 06:36 | 06:02 | 05:57 | 06:18 | 06:50 | 07:23 | 07:57 | 07:35 | 08:00 |
| 26  | 07:51 | 07:12 | 07:25 | 06:34 | 06:01 | 05:57 | 06:19 | 06:51 | 07:24 | 07:58 | 07:36 | 08:00 |
| 27  | 07:50 | 07:11 | 07:23 | 06:33 | 06:01 | 05:57 | 06:20 | 06:52 | 07:25 | 07:59 | 07:37 | 08:00 |
| 28  | 07:50 | 07:09 | 07:21 | 06:32 | 06:00 | 05:58 | 06:21 | 06:53 | 07:26 | 08:01 | 07:38 | 08:01 |
| 29  | 07:49 |       | 07:20 | 06:30 | 06:00 | 05:58 | 06:22 | 06:54 | 07:27 | 08:02 | 07:40 | 08:01 |
| 30  | 07:48 |       | 07:18 | 06:29 | 05:59 | 05:59 | 06:23 | 06:55 | 07:28 | 08:03 | 07:41 | 08:01 |
| 31  | 07:47 |       | 07:16 |       | 05:59 |       | 06:24 | 06:56 |       | 08:04 |       | 08:01 |

## Sunset Table for 2022

**Location: Latitude 42.33300 Longitude -83.05000**

**Time Zone Offset: America/Detroit -4.0**

All times are in local time. Cells with light green color indicate when daylight saving time is in effect.

| Day | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   |
|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1   | 17:10 | 17:46 | 18:22 | 19:58 | 20:32 | 21:03 | 21:13 | 20:52 | 20:06 | 19:14 | 18:25 | 17:01 |
| 2   | 17:11 | 17:48 | 18:23 | 19:59 | 20:33 | 21:03 | 21:13 | 20:50 | 20:04 | 19:12 | 18:24 | 17:00 |
| 3   | 17:12 | 17:49 | 18:25 | 20:00 | 20:34 | 21:04 | 21:12 | 20:49 | 20:03 | 19:10 | 18:23 | 17:00 |
| 4   | 17:13 | 17:50 | 18:26 | 20:01 | 20:35 | 21:05 | 21:12 | 20:48 | 20:01 | 19:08 | 18:22 | 17:00 |
| 5   | 17:14 | 17:52 | 18:27 | 20:03 | 20:36 | 21:05 | 21:12 | 20:47 | 19:59 | 19:07 | 18:20 | 17:00 |
| 6   | 17:15 | 17:53 | 18:28 | 20:04 | 20:37 | 21:06 | 21:12 | 20:45 | 19:58 | 19:05 | 17:19 | 17:00 |
| 7   | 17:16 | 17:54 | 18:29 | 20:05 | 20:38 | 21:07 | 21:11 | 20:44 | 19:56 | 19:03 | 17:18 | 17:00 |
| 8   | 17:17 | 17:56 | 18:31 | 20:06 | 20:40 | 21:07 | 21:11 | 20:43 | 19:54 | 19:02 | 17:17 | 17:00 |
| 9   | 17:18 | 17:57 | 18:32 | 20:07 | 20:41 | 21:08 | 21:10 | 20:42 | 19:52 | 19:00 | 17:16 | 17:00 |
| 10  | 17:19 | 17:58 | 18:33 | 20:08 | 20:42 | 21:08 | 21:10 | 20:40 | 19:51 | 18:58 | 17:15 | 17:00 |
| 11  | 17:20 | 18:00 | 18:34 | 20:09 | 20:43 | 21:09 | 21:09 | 20:39 | 19:49 | 18:57 | 17:14 | 17:00 |
| 12  | 17:22 | 18:01 | 18:35 | 20:10 | 20:44 | 21:09 | 21:09 | 20:37 | 19:47 | 18:55 | 17:13 | 17:00 |
| 13  | 17:23 | 18:02 | 19:36 | 20:12 | 20:45 | 21:10 | 21:08 | 20:36 | 19:45 | 18:53 | 17:12 | 17:00 |
| 14  | 17:24 | 18:03 | 19:38 | 20:13 | 20:46 | 21:10 | 21:08 | 20:35 | 19:44 | 18:52 | 17:11 | 17:00 |
| 15  | 17:25 | 18:05 | 19:39 | 20:14 | 20:47 | 21:11 | 21:07 | 20:33 | 19:42 | 18:50 | 17:10 | 17:00 |
| 16  | 17:26 | 18:06 | 19:40 | 20:15 | 20:48 | 21:11 | 21:06 | 20:32 | 19:40 | 18:49 | 17:09 | 17:01 |
| 17  | 17:27 | 18:07 | 19:41 | 20:16 | 20:49 | 21:11 | 21:06 | 20:30 | 19:38 | 18:47 | 17:08 | 17:01 |
| 18  | 17:29 | 18:08 | 19:42 | 20:17 | 20:50 | 21:12 | 21:05 | 20:29 | 19:36 | 18:45 | 17:08 | 17:01 |
| 19  | 17:30 | 18:10 | 19:43 | 20:18 | 20:51 | 21:12 | 21:04 | 20:27 | 19:35 | 18:44 | 17:07 | 17:02 |
| 20  | 17:31 | 18:11 | 19:44 | 20:20 | 20:52 | 21:12 | 21:03 | 20:26 | 19:33 | 18:42 | 17:06 | 17:02 |
| 21  | 17:32 | 18:12 | 19:46 | 20:21 | 20:53 | 21:13 | 21:03 | 20:24 | 19:31 | 18:41 | 17:05 | 17:03 |
| 22  | 17:34 | 18:14 | 19:47 | 20:22 | 20:54 | 21:13 | 21:02 | 20:22 | 19:29 | 18:39 | 17:05 | 17:03 |
| 23  | 17:35 | 18:15 | 19:48 | 20:23 | 20:55 | 21:13 | 21:01 | 20:21 | 19:28 | 18:38 | 17:04 | 17:04 |
| 24  | 17:36 | 18:16 | 19:49 | 20:24 | 20:56 | 21:13 | 21:00 | 20:19 | 19:26 | 18:36 | 17:04 | 17:04 |
| 25  | 17:37 | 18:17 | 19:50 | 20:25 | 20:57 | 21:13 | 20:59 | 20:18 | 19:24 | 18:35 | 17:03 | 17:05 |
| 26  | 17:39 | 18:18 | 19:51 | 20:26 | 20:58 | 21:13 | 20:58 | 20:16 | 19:22 | 18:33 | 17:03 | 17:06 |
| 27  | 17:40 | 18:20 | 19:52 | 20:27 | 20:58 | 21:13 | 20:57 | 20:14 | 19:21 | 18:32 | 17:02 | 17:06 |
| 28  | 17:41 | 18:21 | 19:54 | 20:28 | 20:59 | 21:13 | 20:56 | 20:13 | 19:19 | 18:31 | 17:02 | 17:07 |
| 29  | 17:43 |       | 19:55 | 20:30 | 21:00 | 21:13 | 20:55 | 20:11 | 19:17 | 18:29 | 17:01 | 17:08 |
| 30  | 17:44 |       | 19:56 | 20:31 | 21:01 | 21:13 | 20:54 | 20:09 | 19:15 | 18:28 | 17:01 | 17:09 |
| 31  | 17:45 |       | 19:57 |       | 21:02 |       | 20:53 | 20:08 |       | 18:27 |       | 17:09 |

## Solar Noon Table for 2022

**Location: Latitude 42.33300 Longitude -83.05000**

**Time Zone Offset: America/Detroit -4.0**

All times are in local time. Cells with light green color indicate when daylight saving time is in effect.

| Day | Jan      | Feb      | Mar      | Apr      | May      | Jun      | Jul      | Aug      | Sep      | Oct      | Nov      | Dec      |
|-----|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1   | 12:35:38 | 12:45:45 | 12:44:34 | 13:36:07 | 13:29:20 | 13:30:01 | 13:36:02 | 13:38:34 | 13:32:19 | 13:21:58 | 13:15:45 | 12:21:07 |
| 2   | 12:36:06 | 12:45:53 | 12:44:23 | 13:35:50 | 13:29:13 | 13:30:10 | 13:36:14 | 13:38:30 | 13:31:59 | 13:21:39 | 13:15:43 | 12:21:30 |
| 3   | 12:36:34 | 12:46:00 | 12:44:10 | 13:35:32 | 13:29:07 | 13:30:20 | 13:36:25 | 13:38:26 | 13:31:40 | 13:21:20 | 13:15:43 | 12:21:53 |
| 4   | 12:37:01 | 12:46:06 | 12:43:57 | 13:35:15 | 13:29:01 | 13:30:30 | 13:36:36 | 13:38:21 | 13:31:20 | 13:21:01 | 13:15:43 | 12:22:17 |
| 5   | 12:37:28 | 12:46:11 | 12:43:44 | 13:34:57 | 13:28:56 | 13:30:40 | 13:36:46 | 13:38:15 | 13:31:01 | 13:20:43 | 13:15:44 | 12:22:42 |
| 6   | 12:37:55 | 12:46:16 | 12:43:30 | 13:34:40 | 13:28:51 | 13:30:51 | 13:36:57 | 13:38:09 | 13:30:40 | 13:20:24 | 12:15:46 | 12:23:07 |
| 7   | 12:38:21 | 12:46:19 | 12:43:16 | 13:34:23 | 13:28:47 | 13:31:02 | 13:37:07 | 13:38:02 | 13:30:20 | 13:20:07 | 12:15:49 | 12:23:32 |
| 8   | 12:38:47 | 12:46:22 | 12:43:01 | 13:34:07 | 13:28:43 | 13:31:13 | 13:37:16 | 13:37:54 | 13:30:00 | 13:19:50 | 12:15:53 | 12:23:58 |
| 9   | 12:39:12 | 12:46:24 | 12:42:46 | 13:33:50 | 13:28:40 | 13:31:25 | 13:37:25 | 13:37:46 | 13:29:39 | 13:19:33 | 12:15:57 | 12:24:25 |
| 10  | 12:39:37 | 12:46:26 | 12:42:31 | 13:33:34 | 13:28:37 | 13:31:37 | 13:37:34 | 13:37:37 | 13:29:18 | 13:19:16 | 12:16:03 | 12:24:52 |
| 11  | 12:40:01 | 12:46:26 | 12:42:15 | 13:33:18 | 13:28:36 | 13:31:49 | 13:37:42 | 13:37:28 | 13:28:57 | 13:19:00 | 12:16:09 | 12:25:19 |
| 12  | 12:40:24 | 12:46:26 | 12:42:00 | 13:33:03 | 13:28:34 | 13:32:01 | 13:37:50 | 13:37:18 | 13:28:36 | 13:18:45 | 12:16:16 | 12:25:47 |
| 13  | 12:40:47 | 12:46:25 | 13:41:43 | 13:32:47 | 13:28:33 | 13:32:14 | 13:37:57 | 13:37:08 | 13:28:15 | 13:18:30 | 12:16:24 | 12:26:15 |
| 14  | 12:41:09 | 12:46:23 | 13:41:27 | 13:32:32 | 13:28:33 | 13:32:26 | 13:38:04 | 13:36:57 | 13:27:54 | 13:18:15 | 12:16:33 | 12:26:43 |
| 15  | 12:41:31 | 12:46:20 | 13:41:10 | 13:32:18 | 13:28:34 | 13:32:39 | 13:38:11 | 13:36:45 | 13:27:32 | 13:18:02 | 12:16:42 | 12:27:12 |
| 16  | 12:41:52 | 12:46:17 | 13:40:53 | 13:32:03 | 13:28:35 | 13:32:52 | 13:38:16 | 13:36:33 | 13:27:11 | 13:17:48 | 12:16:53 | 12:27:41 |
| 17  | 12:42:12 | 12:46:13 | 13:40:36 | 13:31:49 | 13:28:36 | 13:33:05 | 13:38:22 | 13:36:21 | 13:26:49 | 13:17:35 | 12:17:04 | 12:28:10 |
| 18  | 12:42:31 | 12:46:08 | 13:40:19 | 13:31:36 | 13:28:38 | 13:33:18 | 13:38:27 | 13:36:08 | 13:26:28 | 13:17:23 | 12:17:16 | 12:28:39 |
| 19  | 12:42:50 | 12:46:03 | 13:40:01 | 13:31:23 | 13:28:41 | 13:33:31 | 13:38:31 | 13:35:54 | 13:26:07 | 13:17:12 | 12:17:30 | 12:29:09 |
| 20  | 12:43:08 | 12:45:57 | 13:39:43 | 13:31:10 | 13:28:44 | 13:33:44 | 13:38:35 | 13:35:40 | 13:25:45 | 13:17:01 | 12:17:43 | 12:29:39 |
| 21  | 12:43:26 | 12:45:50 | 13:39:26 | 13:30:58 | 13:28:47 | 13:33:57 | 13:38:38 | 13:35:25 | 13:25:24 | 13:16:50 | 12:17:58 | 12:30:08 |
| 22  | 12:43:42 | 12:45:43 | 13:39:08 | 13:30:46 | 13:28:52 | 13:34:10 | 13:38:41 | 13:35:11 | 13:25:03 | 13:16:41 | 12:18:14 | 12:30:38 |
| 23  | 12:43:58 | 12:45:35 | 13:38:50 | 13:30:34 | 13:28:56 | 13:34:23 | 13:38:43 | 13:34:55 | 13:24:42 | 13:16:32 | 12:18:30 | 12:31:08 |
| 24  | 12:44:13 | 12:45:26 | 13:38:32 | 13:30:23 | 13:29:02 | 13:34:36 | 13:38:44 | 13:34:39 | 13:24:20 | 13:16:24 | 12:18:47 | 12:31:38 |
| 25  | 12:44:28 | 12:45:17 | 13:38:14 | 13:30:13 | 13:29:07 | 13:34:49 | 13:38:45 | 13:34:23 | 13:24:00 | 13:16:16 | 12:19:05 | 12:32:07 |
| 26  | 12:44:41 | 12:45:07 | 13:37:55 | 13:30:03 | 13:29:14 | 13:35:01 | 13:38:45 | 13:34:06 | 13:23:39 | 13:16:09 | 12:19:23 | 12:32:37 |
| 27  | 12:44:54 | 12:44:57 | 13:37:37 | 13:29:53 | 13:29:20 | 13:35:14 | 13:38:45 | 13:33:49 | 13:23:18 | 13:16:03 | 12:19:43 | 12:33:06 |
| 28  | 12:45:06 | 12:44:46 | 13:37:19 | 13:29:44 | 13:29:28 | 13:35:26 | 13:38:44 | 13:33:32 | 13:22:58 | 13:15:58 | 12:20:03 | 12:33:36 |
| 29  | 12:45:17 |          | 13:37:01 | 13:29:36 | 13:29:35 | 13:35:39 | 13:38:43 | 13:33:14 | 13:22:38 | 13:15:53 | 12:20:24 | 12:34:05 |
| 30  | 12:45:27 |          | 13:36:43 | 13:29:28 | 13:29:43 | 13:35:50 | 13:38:40 | 13:32:56 | 13:22:18 | 13:15:50 | 12:20:45 | 12:34:34 |
| 31  | 12:45:36 |          | 13:36:25 |          | 13:29:52 |          | 13:38:38 | 13:32:37 |          | 13:15:47 |          | 12:35:03 |