

57.2: Time

The way we measure time for civil use (years, months, days, weeks, etc.) is not particularly convenient for astronomical calculations. A more convenient way to measure time is with the Julian day. The Julian Day is simply a count of the total number of days that have elapsed since noon on Monday, January 1, 4713 B.C. (by the old Julian calendar). (Notice that the Julian Day begins at noon, not at midnight as on our civil calendar.) As an example, December 1, 2010 (midnight, beginning of December 1) is Julian Day 2455531.5.

The calendar date may be converted to and from the Julian Day using some fairly simple, well-known algorithms (see e.g. Meeus, 1991), or by the use of pre-computed tables.

The Julian day makes it very easy to find the number of days between two dates: just convert both dates to their corresponding Julian day, and subtract. This is how computer programs like spreadsheets deal with dates: they store dates internally as Julian Days, and use standard algorithms to convert to and from the calendar date that is displayed on the screen.

57.2: Time is shared under a [CC BY-NC-SA 4.0](https://creativecommons.org/licenses/by-nc-sa/4.0/) license and was authored, remixed, and/or curated by LibreTexts.