Overview

Understand Julian Dates, how they are used, how they were founded.
What is a Julian Date

Julian Dates (abbreviated JD) are a continuous count of days, and fractions of days, since noon Universal Time on January 1, 4713 BC (on the Julian calendar).

Due to this origin day, the numbers for JD are large.

The calendar started at 0 at noon on January 1st 4713 B.C.

Each day adds 1 to the count with partial days adding a partial count. For example:

- 12 hours adds .5 to the count
- 3 hours adds .125
- 18 hours and 30 min. adds .77083

As an example, July 11, 2018 at 12:00 UTC is: 2458311.000.
6 hours later it was: 2458311.250
What is Julian Date

Online Resources

United States Navy Julian Date Converter:
http://aa.usno.navy.mil/data/docs/JulianDate.php
Modified Julian Calendar (MJD)

Developed by the Smithsonian Astrophysical Observatory in 1957 to record the orbit of Sputnik on an older computer.

The modified Julian calendar has 2 primary benefits
  - The Julian day number is reduced in length by at least 2 digits
  - The day begins at midnight instead of noon

The modified Julian calendar day equals the Julian calendar day minus 2400000.5
Zero is now midnight Nov. 17, 1858
All dates there after are consecutive just like the Julian Calendar
Summary

Double Stars and RA/Dec coordinate positions still use JD as a primary format.

Other areas of astronomical science that need more precision have resorted to other methods as opposed to the JD system.
What is Julian Date

Questions?