



What should my ephemeris file look like?

Sarah Wood - 2023-11-01 - General ALMA Queries

An ephemeris file gives the RA and DEC as a function of time. All positions should be in ICRS (J2000)

The ephemeris file should cover the entire potential time span of the project (up to the entire Cycle), and may have up to ~90,000 entries.

The PI should use horizons web interface if possible. <https://ssd.jpl.nasa.gov/horizons.cgi>

For Current Settings use exactly the following inputs on the Horizons web interface, substituting for your Target, Time span, and Step as needed.

- Ephemeris Type: OBSERVER
- Target Body [change] : Mars [499]
- Observer Location: Atacama Large mm/sub-mm Array (ALMA) Center of Array [-7] (292°14'43.1"E, 23°01'45.0"S, 5076.71 m)
- Time Span [change] : Start=2015-10-01, Stop=2016-09-30, Step=1 h
- Table Settings: QUANTITIES=1,20; extra precision=YES
- Display/Output: plain text

If you have a solar project, you can use the ALMA Solar Ephemeris Generator, found at <http://celestialscenes.com/alma/coords/CoordTool.html>

You can reach the site from the ALMA science portal ([Tools] -> [Solar Ephemeris]). [ALMA Solar Ephemeris Generator](#)

Please read the [User Manual](#).