# IMAP Transfer Trajectory Initial State

- **The initial launch vehicle release state provided in the table below is representative of IMAP launch vehicle release point for L1 transfer**
- **This is a single reference state intended to only be used to facilitate common comparative design of IMAP ride-share proposals**
- **IMAP is the primary payload; the launch date and transfer conditions will be designed and adjusted to meet the needs of the IMAP mission**
  - **IMAP will be released prior to secondary payloads**
  - **Launch period dates will change depending on final IMAP schedule**
- **IMAP L1 transfer state will vary due to launch date changes and the selected launch vehicle**
  - **Dependent on launch date, the transfer trajectory insertion (TTI) will occur either after the ascending node (in order to enter a class I L1 orbit) or after the descending node (to enter a class II L1 orbit)**
  - **The state below is for a transfer that will enter a class I orbit at L1**

| **Post Launch Vehicle Transfer Trajectory Insertion (TTI)**<br>- State representative of a nominal IMAP release at the beginning of the current planned launch period<br>- Transfers to class I orbit at L1 (Actual release launch date dependent) | |
|---|---|
| Date (mm/dd/yyyy) | 10/1/2024 |
| UTC (hh:mm:ss) | 12:42:17 |
| C3 ($km^2/s^2$) | -0.665 |
| Cartesian state (km, km/s, EME2000) | [6104.326, 2403.702, 66.367, -3.254397, 8.119686, 6.657585] |