SPACEX

5 May 2025

ORBITAL PARAMETER MESSAGE INSTRUCTIONS

Orbit Parameter Message (OPM)

For Transporter missions, SpaceX provides a multi-payload OPM file with state vectors for of all deployed payloads with identifications.
- State vectors will be provided at deploy epochs for each payload
  - File lists both **mean** elements (not osculating) and ECEF state vector
  - It is recommended to only use ECEF state vectors for serious work.
- File is in a machine-friendly format (YAML)
- Will aid identification of objects from CSpOC
- **Deployment times may be adjusted** leading up to launch as we receive mass and separation energy updates

Launch Window considerations
- Mission Time and ECEF state vectors in OPM are launch-time agnostic
  - Regardless of when mission launches within window, these parameters do not change
- UTC dates in OPM are valid for particular MLTAN
  - If launch slips within window, one must adjust UTC dates accordingly given true T0 and Mission Time