Launch Accommodation Worksheet for Heliophysics Flight Opportunities in Research and Technology

This launch accommodation worksheet must be filled out and included as part of the proposal pdf by proposers to [B.11 H-FORT](https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7bDBCE844C-1D0B-D36A-12A6-86FC953F1B6C%7d&path=&method=init) requesting a cubesat or small sat.

Compilation from SMD ESPA RUG 5/10/20

|  |  |  |
| --- | --- | --- |
| Payload dimensions and mass | Proposal section/page | Comments |
| x (cm): outward from ring interface plane, includes separation system |   |   |
| y (cm): along LV thrust direction  |   |   |
| z (cm) |   |   |
| Does the payload protrude into the central volume (x<0)? |   |   |
| Page reference for dimensioned rendering of spacecraft, coordinates x,y,z as in Rideshare Users Guide |   |   |
| Wet Mass (kg) |   |   |
| Where is the center of gravity of the spacecraft (coordinates x,y,z)? |   |   |
| Peak line load across interface with ESPA ring? (lbs/in or kg/cm) |   |   |
| First fixed-free fundamental frequencies above 75Hz? (y/n) |   |   |

Continued…

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| --- | --- | --- | --- |
| Orbital Requirements |  | preferred | acceptable |
| LEO: orbit altitude |   |   |   |
| LEO: orbit inclination |   |   |   |
| Sun Synchronous Orbit: Equatorial Crossing time |   |   |   |
| GEO: longitude |   |   |   |
| Other orbit requirements |   |   |   |

|  |  |  |  |
| --- | --- | --- | --- |
| Payload Cleanliness |  |  |  |
| Payload complies with ISO Level 8 (Class 100,000) cleanliness (Y/explain) |   |   |
| Payload needs no more than ISO Level 8 (Class 100,000) cleanliness (Y/explain) |   |   |
| Constraints on level of cleaning? |   |   |
| No-touch/no-clean areas? |   |   |
| Other cleaning or cleanliness requirements? |   |   |

|  |  |  |  |
| --- | --- | --- | --- |
| Pre-launch do-no-harm Requirements |  |  |  |
| Constraints on level of thermal vacuum bakeout? |   |   |
| Radiated emission at the pad (2019 Helio ESPA RUG 5.4.7.3)? |   |   |

Continued…

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| --- | --- | --- | --- |
| Pre-launch Constraints and Requirements |  |  |  |
| Security requirements? |   |   |
| Thermal requirements before encapsulation |   |   |
| Thermal requirements after encapsulation |   |   |
| Magnetic sensitivity?  |   |   |
| Sensitive to helium? Silicon? Other? |   |   |
| Need for access post encapsulation in the fairing? If yes, describe. |   |   |
| GN2 purge up till launch? If yes, identify flow rate and purity required. |   |   |
| Battery charging/maintenance after encapsulation? |   |   |
| Monitoring requirements for spacecraft health? |   |   |
| Facilities needed to fuel or pressurize a propulsion system before flight? |   |   |
| Propellant: none, green, hazardous, etc. |   |   |
| Other pre-launch requirements? |   |   |

Continued…

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| --- | --- | --- | --- |
| Launch and Deploy Requirements |  |  |  |
| Requirements on launch timing? |   |   |
| Requirements for electrical interface with LV (IFD, etc.)? |   |   |
| Launch environment constraints (e.g. vibration)? |   |   |
| Powered on during ascent (Y/N)? |   |   |
| Wake-up mechanism after deployment? |   |   |
| Requirements for downrange telemetry after deployment? |   |   |
| Other deployment requirements? |   |   |

|  |  |  |  |
| --- | --- | --- | --- |
| Post-launch do-no-harm Requirements |  |  |  |
| Plans to delay deployment of solar arrays, antenna, booms etc., after release?  |   |   |
| Plans to prevent RF transmission until safely away from upper stage, other spacecraft |   |   |

Questions regarding this launch accommodation worksheet may be directed to Dan Moses and Amy Winebarger.