



EXHIBIT B

Orbital Debris Assessment Report (ODAR)

Pelican V1 Satellite at Insertion Orbits Up To 610 km

This report is presented in compliance with NASA-STD-8719.14C, APPENDIX A

Report Version: 7.1

July 20, 2026

DAS Software Version Used in Analysis: v3.2.7

A handwritten signature in blue ink, appearing to be "BL", on a white background.

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Document Data is Not Export Controlled.

Table of Contents

Self-assessment of the ODAR using the format in Appendix A.2 of NASA-STD-8719.14:...	4
Assessment Report Format:.....	5
ODAR Section 1: Program Management and Mission Overview.....	6
ODAR Section 2: Spacecraft Description.....	8
ODAR Section 3: Assessment of Spacecraft Debris Released during Normal Operations. 9	
ODAR Section 4: Assessment of Spacecraft Intentional Breakups and Potential for Explosions.....	10
ODAR Section 5: Assessment of Spacecraft Potential for On-Orbit Collisions.....	14
ODAR Section 6: Assessment of Spacecraft Post-mission Disposal Plans and Procedures 18	
ODAR Section 7: Assessment of Spacecraft Reentry Hazards.....	25
ODAR Section 8: Assessment for Tether Missions.....	27
APPENDIX A.....	28
DAS Logs.....	28
Sun-Synchronous Operational and Transfer Orbits.....	28
440 km x 440 km x 97° (SSO) DAS GUI Results.....	28
440 km x 440 km x 97° (SSO) DAS Logs (Operational Orbit).....	28
610 km x 440 km x 97° (SSO) DAS Logs (Transfer Orbit).....	73
Sun-Synchronous Injection Orbit.....	75
610 km x 610 km x 97° (SSO) DAS GUI Results.....	75
610 km x 610 km x 97° (SSO) DAS Logs (Injection Orbit).....	76
53° Operational and Transfer Orbits.....	122
440 km x 440 km x 53° DAS GUI Results.....	122
440 km x 440 km x 53° DAS Logs (Operational Orbit).....	122
610 km x 440 km x 53° DAS Logs (Transfer Orbit).....	167
53° Injection Orbit.....	169
610 km x 610 km x 53° DAS GUI Results.....	169
610 km x 610 km x 53° DAS Logs (Injection Orbit).....	169

Self-assessment of the ODAR using the format in Appendix A.2 of NASA-STD-8719.14:

A self assessment is provided below in accordance with the assessment format provided in Appendix A.2 of NASA-STD-8719.14.

Orbital Debris Self-Assessment Report Evaluation: Pelican

Rqmnt #	Spacecraft			Comments
	Compliant	Not Compliant	Incomplete	
4.3-1.a	☒	☐	☐	No Debris Released in LEO.
4.3-1.b	☒	☐	☐	No Debris Released in LEO.
4.3-2	☒	☐	☐	No Debris Released in GEO.
4.4-1	☒	☐	☐	Compliant.
4.4-2	☒	☐	☐	Compliant.
4.4-3	☒	☐	☐	No Planned Breakups.
4.4-4	☒	☐	☐	No Planned Breakups.
4.5-1	☒	☐	☐	Compliant.
4.5-2	☒	☐	☐	No Critical Subsystems Needed for EOM Disposal.
4.6-1	☒	☐	☐	Atmospheric Entry.
4.6-2	☒	☐	☐	No Disposal Near GEO.
4.6-3	☒	☐	☐	No Disposal Between LEO and GEO.
4.6-4	☒	☐	☐	Compliant.
4.7-1	☒	☐	☐	Compliant.
4.8-1	☒	☐	☐	No Tethers Used.

Assessment Report Format:

ODAR Technical Sections Format Requirements:

This ODAR follows the format recommended in NASA-STD-8719.14C, Appendix A.1 and includes the content indicated at a minimum in each section 2 through 8 below for the Pelican V1 spacecraft with an injection orbit up to 610 km. Sections 9 through 14 apply to the launch platform and are not covered here.

ODAR Section 1: Program Management and Mission Overview

Project Manager: Planet Labs, PBC (“Planet”)

Foreign government or space agency participation: None

Initial Launch: Nov. 11, 2023; launch of an additional V1 spacecraft planned for NET Q42026

Mission Overview:

Due to a change from Planet’s rideshare partner, the last of Planet’s planned Pelican V1 satellites will be inserted at up to 610 km instead of the up to 535 km insertion orbit of the previous V1 Pelicans. Planet therefore provides this updated ODAR to demonstrate compliance with the Commission’s rules at the higher insertion orbit.

After launch, the Pelican spacecraft will be commissioned. During this period, 3-axis control and transmitters will be enabled and the solar arrays will be deployed.

Subsequently, the satellite will use onboard propulsion to maneuver to a target, operational 440 km +/- 25 km circular altitude. At the end of life, the satellite will enter a coarsely controlled attitude state and re-enter the atmosphere under the influence of natural orbital decay.

Planet eventually plans to launch a fleet of 23 simultaneously operating Pelican spacecraft (nine V1 Pelicans and fourteen V2 Pelicans). Planet provides this updated ODAR only with respect to the last V1 Pelican spacecraft intended to be launched under the initial design to reflect an updated insertion orbit of up to 610 km. The planned orbit information for this V1 Pelican satellite is shown in Table 1.

Table 1 - Planned orbital inclinations for last Pelican V1 deployment

Range of insertion altitude (km)	Nominal operational altitude (km)	Inclination (°)	Number of Spacecraft
590-610	440	53 or SSO	1

ODAR Summary: No debris is released in normal operations; no credible scenario for breakups; the collision probability with other objects is compliant with NASA standards; and the estimated nominal decay lifetime due to atmospheric drag is under 5 years following end of mission operations (as calculated by DAS 3.2.7) under all cases.

Mission duration:

Nominal mission duration per spacecraft is 5 years.

Launch and deployment profile, including all parking, transfer, and operational orbits with apogee, perigee, and inclination:

A maximum semi-major axis of 6988 km (610 km above sea level) in both a Sun-synchronous orbit (97°) and 53° inclined orbit is considered as a worst-case insertion orbit. The satellite will transfer from the insertion orbit to the nominal 440 km +/- 25 km circular operational attitude using onboard electric propulsion. There are no parking orbits.

Protection of the International Space Station (“ISS”): Planet’s proposed nominal operating orbit for the V1 Pelican satellites is above the orbital altitude of the ISS and will eventually require transiting through the ISS’s orbit at end-of-mission. The Pelican satellites use a propulsion system and have the ability to make collision avoidance maneuvers. Planet has routinely worked with the relevant ISS parties to assess and manage close approaches for many years and will also do so for Pelican flight operations. Planet has established processes that monitor conjunction data messages for potential close approaches and will initiate collision avoidance maneuvers as necessary. Planet also routinely screens and adjusts all maneuvers to minimize conjunction probability prior to scheduling their upload and execution on spacecraft. Planet certifies that upon receipt of a space situational awareness conjunction warning (related to the ISS or any other spacecraft), Planet will review the warning and take all possible steps to assess and, if necessary, to mitigate collision risk, including by contacting the operator of any active spacecraft involved in such a warning; sharing ephemeris data and other appropriate operational information with any such operator; and modifying space station attitude and/or operations.

ODAR Section 2: Spacecraft Description

Physical description of the spacecraft:

The Pelican V1 satellites are optical Earth imaging smallsats with a launch mass of no greater than 195 kg. Basic physical dimensions are 3000 mm x 1200 mm x 800 mm in the deployed configuration. There are two deployable solar arrays, each with dimensions 1200 mm x 850 mm.

Total satellite mass at launch, including all propellants and fluids: 195 kg

Dry mass of satellite at launch, excluding solid rocket motor propellants: 183 kg

Description of all propulsion systems (cold gas, mono-propellant, bi-propellant, electric, nuclear):

Electric propulsion, particularly, Hall Effect Thruster with xenon propellant.

Identification, including mass and pressure, of all fluids (liquids and gasses) planned to be on board and a description of the fluid loading plan or strategies, excluding fluids in sealed heat pipes:

Compressed xenon propellant maintained in a supercritical gaseous state using heaters. 12.3 kg of xenon propellant stored in two tanks that are pressurized to 205 atmospheres (absolute).

Fluids in Pressurized Batteries:

None. The satellites use unpressurized, standard COTS Lithium-Ion battery cells. Each battery has a height of 65mm, a diameter of 19mm, and a mass of 49 grams.

Description of attitude control system and indication of the normal attitude of the spacecraft with respect to the velocity vector:

The satellite's attitude control system consists of magnetorquers, reaction wheels, star cameras, magnetometers, photodiodes, and rate gyros. The nominal imaging attitude will be nadir +/- 30 degrees about the X and Y axes.

Description of any range safety or other pyrotechnic devices:

No pyrotechnic devices are used.

Description of the electrical generation and storage system:

Lithium-Ion battery cells are charged before payload integration and provide electrical energy during the mission. The cells are recharged by InGaAs solar cells mounted on the deployable and body mounted arrays. A battery cell protection circuit manages the charging cycle, performs battery balancing, and protects against over and undercharge conditions.

Identification of any other sources of stored energy not noted above:

Two deployable solar arrays with small mechanical springs. Actively restrained at launch using a mechanical hold-down actuator.

Identification of any radioactive materials on board: None.

ODAR Section 3: Assessment of Spacecraft Debris Released during Normal Operations

Identification of any object (>1 mm) expected to be released from the spacecraft any time after launch, including object dimensions, mass, and material:

There are no intentional releases.

Rationale/necessity for release of each object:

N/A.

Time of release of each object, relative to launch time:

N/A.

Release velocity of each object with respect to spacecraft:

N/A.

Expected orbital parameters (apogee, perigee, and inclination) of each object after release:

N/A.

Calculated orbital lifetime of each object, including time spent in Low Earth Orbit (LEO):

N/A.

Assessment of spacecraft compliance with Requirements 4.3-1 and 4.3-2 (per DAS v3.2.7)

4.3-1, Mission Related Debris Passing Through LEO:

COMPLIANT

4.3-2, Mission Related Debris Passing Near GEO:

COMPLIANT

ODAR Section 4: Assessment of Spacecraft Intentional Breakups and Potential for Explosions.

Potential causes of spacecraft breakup during deployment and mission operations:

There is no credible scenario that would result in spacecraft breakup during normal deployment and operations.

Summary of failure modes and effects analyses of all credible failure modes which may lead to an accidental explosion:

In-mission failure of a battery cell protection circuit could lead to a short circuit resulting in overheating and a very remote possibility of battery cell explosion. The battery safety systems discussed in the FMEA (see requirement 4.4-1 below) describe the combined faults that must occur for any of seven (7) independent, mutually exclusive failure modes to lead to explosion.

The deployment of the solar arrays will feature a simple spring and burn wire system with deployment commanded after launch during the commissioning period. The probability of detachment is negligible.

Detailed plan for any designed spacecraft breakup, including explosions and intentional collisions:

There are no planned breakups.

List of components which shall be passivated at End of Mission (EOM) including method of passivation and amount which cannot be passivated:

The batteries will be passivated at End of Mission by sending a command to disable battery charging.

At the start of the mission, there will be up to 12.3 kg of xenon onboard which will deplete over time as the propulsion system is used to maintain altitude. Any remaining xenon has minimal stored energy.

Rationale for all items which are required to be passivated, but cannot be due to their design:

The battery charge circuits include overcharge protection and a parallel design to limit the risk of battery failure. However, in the unlikely event that a battery cell does explosively rupture, the small size, mass, and potential energy of these small batteries is such that while the spacecraft could be expected to vent gasses, debris from the battery rupture should be contained within the vessel due to the lack of penetration energy.

Assessment of spacecraft compliance with Requirements 4.4-1 through 4.4-4:

Requirement 4.4-1: Limiting the risk to other space systems from accidental explosions during deployment and mission operations while in orbit about Earth or the Moon:

For each spacecraft and launch vehicle orbital stage employed for a mission, the program or project shall demonstrate, via failure mode and effects analyses or equivalent analyses, that the integrated probability of explosion for all credible failure modes of each spacecraft and launch vehicle is less than 0.001 (excluding small particle impacts).

Compliance statement:

Required Probability: 0.001

Expected probability: 0.000

Supporting Rationale and FMEA details:

Battery explosion:

Effect: All failure modes below might theoretically result in battery explosion with the possibility of orbital debris generation. However, in the unlikely event that a battery cell does explosively rupture, the small size, mass, and potential energy, of the selected COTS batteries is such that while the spacecraft could be expected to vent gasses, most debris from the battery rupture should be contained within the vessel due to the lack of penetration energy.

Probability: Extremely Low. It is believed to be a much less than 0.1% probability that multiple independent (not common mode) faults must occur for each failure mode to cause the ultimate effect (explosion).

Failure Mode 1: Internal short circuit.

Mitigation 1: Qualification and acceptance shock, vibration, thermal cycling, and vacuum tests followed by maximum system rate-limited charge and discharge to prove that no internal short circuit sensitivity exists, performed by Planet.

Combined faults required for realized failure: Environmental testing **AND** functional charge/discharge tests must both be ineffective to realize this failure mode.

Failure Mode 2: Internal thermal rise due to high load discharge rate.

Mitigation 2: Cells are tested in the lab for high-load discharge rates in a variety of flight-like configurations to determine the likelihood and impact of an out of control thermal rise in the cell. Cells are also tested in a hot environment to test the upper limit of the cells' capability. Cell selection and pack thermal design avoids potential failure from thermal rise.

Combined faults required for realized failure: Battery pack thermal design must be incorrect **AND** spacecraft thermal design must be incorrect **AND** external over-current detection and disconnect function must all fail to realize this failure mode.

Failure Mode 3: Excessive discharge rate or short circuit due to external device failure or terminal contact with conductors not at battery voltage levels (due to abrasion or inadequate proximity separation).

Mitigation 3: This failure mode is negated by a) qualification-tested short circuit protection on each external circuit, b) design of battery packs and insulators such that no contact with nearby board traces is possible without being caused by some other mechanical failure, c) obviation of such other mechanical failures by proto-qualification and acceptance environmental tests (shock, vibration, thermal cycling, and thermal-vacuum tests).

Combined faults required for realized failure: An external load must fail/short-circuit **AND** external over-current detection and disconnect function failure must all occur to realize this failure mode.

Failure Mode 4: Inoperable vents.

Mitigation 4: Internal battery vents are not blocked or inhibited by the battery pack design or the spacecraft.

Combined effects required for realized failure: Vents fail to burst **AND** battery assembler fails to manufacture battery per the design in such a way that the vents are blocked.

Failure Mode 5: Crushing.

Mitigation 5: This mode is negated by spacecraft design. There are no moving parts in the proximity of the batteries.

Combined faults required for realized failure: A catastrophic failure must occur in an external system **AND** the failure must cause a collision sufficient to crush the batteries leading to an internal short circuit **AND** the satellite must be in a naturally sustained orbit at the time the crushing occurs.

Failure Mode 6: Low level current leakage or short-circuit through battery pack case or due to moisture-based degradation of insulators.

Mitigation 6: These modes are negated by a) battery holder/case design made of non-conductive plastic, and b) operation in vacuum such that no moisture can affect insulators.

Combined faults required for realized failure: Abrasion or piercing failure of circuit board coating or wire insulators **AND** dislocation of battery packs **AND** failure of battery terminal insulators **AND** failure to detect such failure modes in environmental tests must occur to realize this failure mode.

Failure Mode 7: Excess temperatures due to orbital environment and high discharge combined.

Mitigation 7: The spacecraft thermal design will negate this possibility. Thermal rise will be analyzed in combination with space environment temperatures to show that batteries do not exceed normal allowable operating temperatures and are well below temperatures of concern for explosions.

Combined faults required for realized failure: Thermal analysis **AND** thermal design **AND** mission simulations in thermal-vacuum chamber testing **AND** over-current monitoring and control must all fail to realize this failure mode.

Requirement 4.4-2: Design for passivation after completion of mission operations while in orbit about Earth or the Moon:

Design of all spacecraft and launch vehicle orbital stages shall include the ability to deplete all onboard sources of stored energy and disconnect all energy generation sources when they are no longer required for mission operations or post-mission disposal or control to a level which cannot cause an explosion or deflagration large enough to release orbital debris or break up the spacecraft.

Compliance statement:

The battery charge circuits include overcharge protection and a parallel design to limit the risk of battery failure. However, in the unlikely event that a battery cell does explosively rupture, the small size, mass, and potential energy, of these small batteries is such that while the spacecraft could be expected to vent gasses, most debris from the battery rupture should be contained within the vessel due to the lack of penetration energy. The batteries will be passivated at the end of operations by transmission of commands that disable battery charging.

The propulsion is an electric ion system with a gaseous propellant that ionizes only upon application of high voltage electrical power. In an inert state, there is no plausible mechanism for an uncontrolled release of energy and no passivation method is required. Planet plans, however, to fully deplete the propellant tanks before end of mission.

Requirement 4.4-3. Limiting the long-term risk to other space systems from planned breakups:

Compliance statement:

This requirement is not applicable. There are no planned breakups.

Requirement 4.4-4: Limiting the short-term risk to other space systems from planned breakups:

Compliance statement:

This requirement is not applicable. There are no planned breakups.

ODAR Section 5: Assessment of Spacecraft Potential for On-Orbit Collisions

Assessment of spacecraft compliance with Requirements 4.5-1 and 4.5-2 (per DAS v3.2.7, and calculation methods provided in NASA-STD-8719.14, section 4.5.4):

Requirement 4.5-1: Limiting debris generated by collisions with large objects when operating in Earth orbit:

For each spacecraft and launch vehicle orbital stage, the program or project shall demonstrate that, during the orbital lifetime of each spacecraft and orbital stage, the probability of accidental collision with space objects larger than 10 cm in diameter is less than 0.001. For the purpose of this assessment, 100 years is used as the maximum orbital lifetime for the storage disposal option.

Large Object Impact and Debris Generation Probability:

Individual Collision Probability

The collision probability (P_c) for the satellite in its injection orbit shown in Table 2 and is COMPLIANT. This collision probability is calculated using NASA's DAS 3.2.7 software.

Table 2 - Calculated collision probability for Pelican V1 spacecraft in its injection orbit of 610 km

Orbit Inclination (°)	P_c
97	4.02E-04
53	2.70E-04

Table 3 shows the collision probabilities in the relevant operational orbits. The Pelican V1 satellite will fly in its operational orbit of 440 km x 440 km for around 4.5 years of its 5-year lifetime. The satellite will spend approximately three to six months in a low thrust spiral from its injection orbit to its operational orbit. The collision probabilities for this lowering phase are also presented in Table 3. Values for these probabilities are calculated using DAS and are shown in Table 3 and in the logs in the Appendices.

Table 3 - Calculated collision probability for Pelican V1 spacecraft in its lowering and operational orbits of 440 km

Orbit Inclination (°)	P _c lowering	P _c operational	P _c cumulative
97	5.10E-05	4.79E-05	9.89E-05
53	3.46E-05	2.92E-05	6.38E-05

Note that these collision probabilities assume no collision avoidance maneuvers. However, collision avoidance will be a nominal part of operations for the five-year mission duration. The probability of collision for each satellite should be treated as zero when accounting for the propulsion system, as determined by the FCC.¹ Planet expects to maintain the apogee/perigee of the Pelican satellites within +/- 25 km and the inclination within +/- 2°. The right ascension of the ascending node(s) (RAAN) for the SSO satellites will depend on the launch and will precess at a constant rate of approximately 1°/day to maintain sun synchronous orbit.

See DAS Analysis log at the end of this ODAR

Supporting Deployment and Collision Risk Analysis

The above collision probability is calculated using NASA's DAS 3.2.7 software.

Requirement 4.5-2: Limiting debris generated by collisions with small objects when operating in Earth or lunar orbit:

For each spacecraft, the program or project shall demonstrate that, during the mission of the spacecraft, the probability of accidental collision with orbital debris and meteoroids sufficient to prevent compliance with the applicable post-mission disposal requirements is less than 0.01.

The Pelican V1 satellite will be deployed into low Earth orbits, and will be operated at low altitudes where the density of resident space objects is low, and therefore the probability of collisions, is low. Our expected insertion altitude range is 250-610 km, and the nominal operational orbit is 440 km.

Small debris penetrations will not cause the satellite to break up but may cause the loss of function of the satellite. From an initial injection altitude of 610 km, the Pelican spacecraft will re-enter in approximately 18.98 - 19.53 years (depending on inclination) from an inert, uncontrolled state. Pelican satellites will use a series of propulsive

¹ See *Mitigation of Orbital Debris in the New Space Age*, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd. 4156 ¶ 35 (2020); see also 85 Fed. Reg. 52,455 (Aug. 25, 2020).

maneuvers within the first approximately six months of mission operations to lower from insertion orbit to an operational circular orbit of 440 km. From the Pelican operational orbit at 440 km at the end of imaging lifetime in 2031, the Pelican spacecraft will re-enter in 2.53 -2.56 years. Figures 1 through 4 demonstrate the evolution of the spacecraft altitude in such a state.

In order to meet the 5-year post-mission deorbit requirement the satellite will rely on the early orbit lowering campaign described above to reach the nominal operational altitude of 440 km. We have assessed the probability of success for the spacecraft to execute the six-month lowering campaign required to be 99.42%.

This probability is calculated using the mean time before failures (MTBF) of all the spacecraft systems required to perform these lowering maneuvers. These MTBF values are based on empirical data from previous Planet missions, as well as vendor on-orbit data. The Pelican V1 architecture includes both active and passive redundancy in mission critical systems. Failures are assumed to be independent and random, with probabilities determined by constant failure rate, λ . Redundancy is contained within the subsystem. The probability of success at six months is calculated for each subsystem based on its redundancy strategy.

Active Redundancy, m of n must be working²:

$$P(t) = \sum_{k=m}^n \frac{n!}{k!(n-m)!} (e^{-\lambda t})^k (1 - e^{-\lambda t})^{(n-k)}$$

Passive Redundancy, m of n must be working³:

$$P(t) = e^{-m\lambda t} \sum_{k=m}^n \frac{(m\lambda t)^k}{k!}$$

The spacecraft is assumed to be a single function serial system (chain) of subsystems. The total lowering campaign probability of success is the product of the probability of success of each subsystem.

$$P(t) = \prod_n^n P_n(t)$$

These systems are flight proven on previous Planet Pelican spacecraft. Additionally, Planet performs rigorous functional testing and environmental stress screening on all

² Klion, Jerome, *A Redundancy Notebook*, Rome Air Development Center Griffiss AFB NY (Dec. 1977), <https://apps.dtic.mil/sti/citations/ADA050837>.

³ *Id.*

spacecraft subsystems. The spacecraft will also be able to perform collision avoidance maneuvers during this lowering campaign.

Identification of all systems or components required to accomplish any post-mission disposal operation, including passivation and maneuvering:

None.

If possible, we will attempt to de-orbit the satellite at a faster rate using any remaining propellant and capability of the electric propulsion system. However, de-orbit within the estimated lifetime presented in this report is not dependent on a functional propulsion system.

ODAR Section 6: Assessment of Spacecraft Post-mission Disposal Plans and Procedures

6.1 Description of spacecraft disposal option selected:

The satellite will deorbit naturally by atmospheric re-entry.

6.2 Plan for any spacecraft maneuvers required to accomplish post-mission disposal:

No maneuvers are required for post-mission disposal.

At satellite end of life, the satellite may remain in a stable attitude given its aerodynamic features designed for LEO operations and therefore, no assumption for increased drag or tumbling through de-orbit is made. If possible, any remaining operational capability of the propulsion system will be used to accelerate the rate of decay, but de-orbit within the estimated lifetime presented in this report is not dependent on a functional propulsion system at end of life.

6.3 Calculation of area-to-mass ratio after post-mission disposal, if the controlled reentry option is not selected:

Table 4 - Area to Mass Ratio Calculations for Pelican V1

	Pelican V1
EOL Mass (kg)	182
Average Cross Sectional Area (m ²)	2.055
Area to Mass Ratio (m ² /kg)	0.0114

6.4 Assessment of spacecraft compliance with Requirements 4.6-1 through 4.6-5 (per DAS v 3.2.7 and NASA-STD-8719.14 section):

Requirement 4.6-1: Disposal for space structures passing through LEO:

Requirement 4.6-1. Natural reentry, direct reentry, or direct retrieval shall comply with the following:

- Natural reentry: Leave the space structure in an orbit in which, using conservative projections for solar activity, atmospheric drag will limit the orbital lifetime to as short as practicable but no more than 25 years after the completion of mission.*
- Direct reentry: Maneuver the space structure into a controlled de-orbit trajectory as soon as practical after completion of mission.*
- Direct retrieval: Retrieve the space structure and remove it from orbit preferably at completion of mission, but no more than 5 years after completion of mission*

A summary of the expected lifetimes for the spacecraft in their injection and operational orbits is shown in Table 5. Plots following this show apogee and perigee altitude histories for the proposed injection and operational orbits at both SSO and 53 degree inclination. As shown in Table 5, for a 440 km operational orbit, the Pelican V1 design re-enters in less than four years, meeting the FCC's requirement to be less than five years, but as short as practicable from the end of mission life.

Table 5 - Expected Orbital Lifetimes from Injection and Operational Orbits for Pelican V1

Orbit Altitude (km)	Conditions	Orbit Inclination (°)	Re-entry Lifetime (years)
610 x 610	2026 End of Mission Injection orbit with propulsion failure	97	18.98
		53	19.53
440 x 440	2031 End of Imaging Mission	97	2.53
		53	2.56

Projected Re-entry Lifetime for Pelican V1

Maximum Insertion Orbit - 610 km, SSO

BOL Orbit: 610 × 610 km, 97° (SSO)

Mission duration: N/A

Orbit Lifetime: 18.98 years (*worst case propulsion failure*)

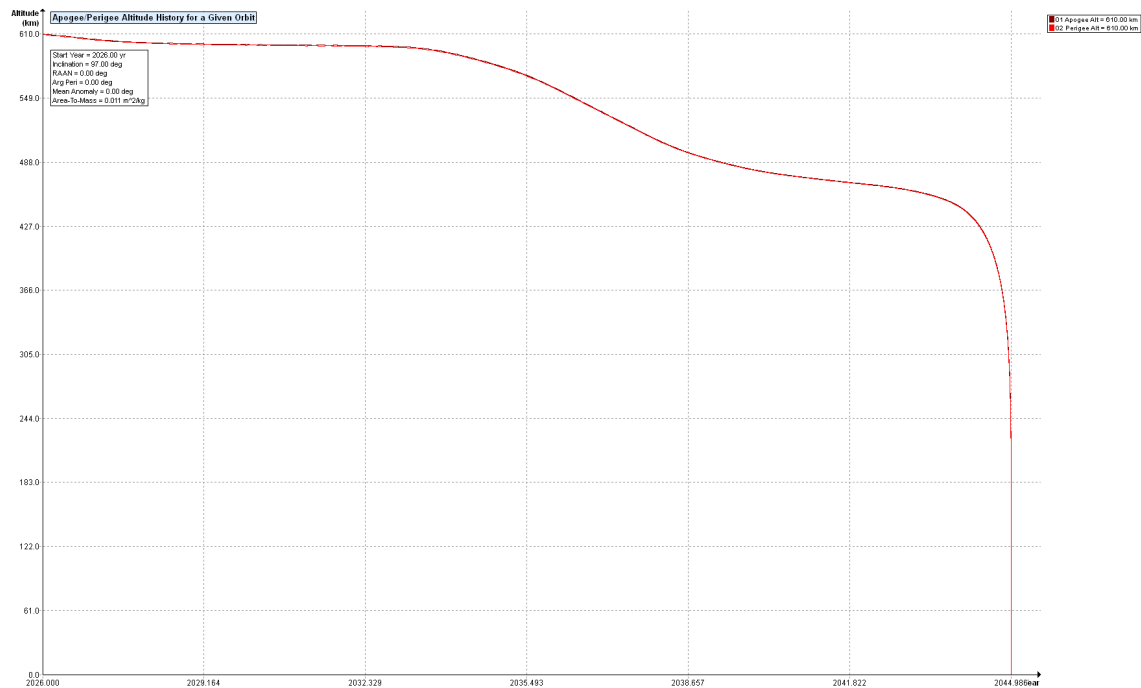


Figure 1 - Apogee and Perigee Lifetime History from 610 km Insertion Orbit, SSO

Maximum Insertion Orbit - 610 km, 53°

BOL Orbit: 610 × 610 km, 53°

Mission duration: N/A

Orbit Lifetime: 19.53 years (*worst case propulsion failure*)

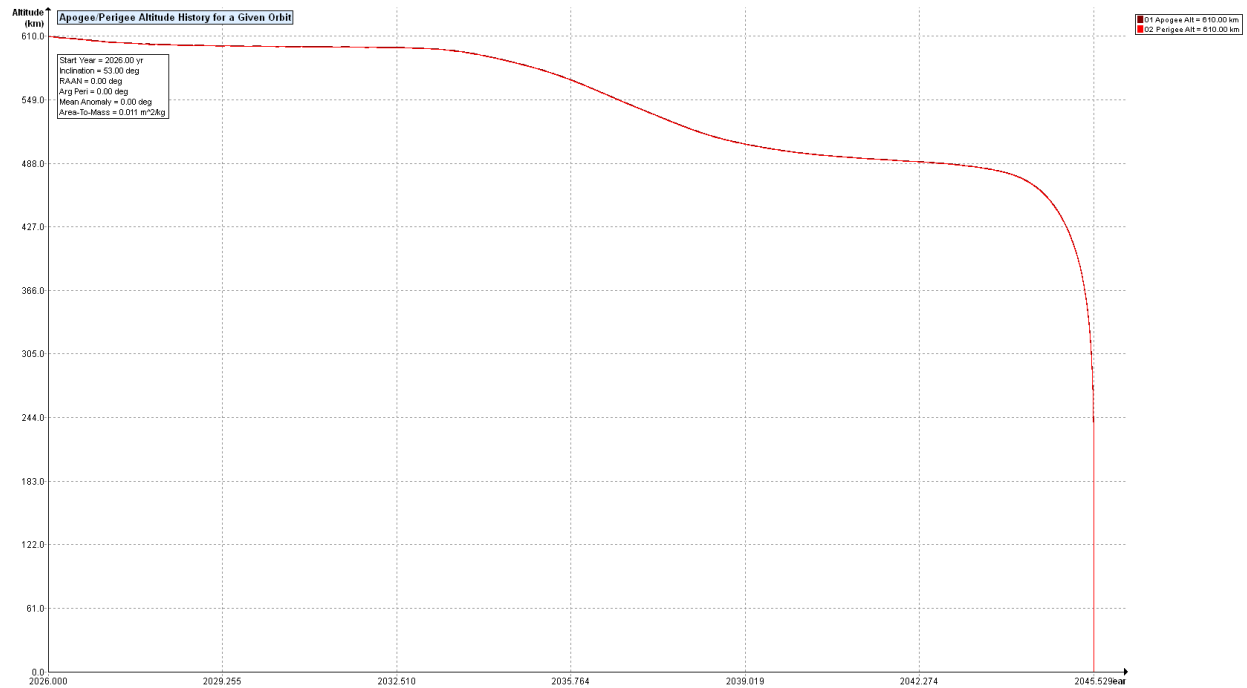


Figure 2 - Apogee and Perigee Lifetime History from 610 km Insertion Orbit, 53°

Requested Operational Orbit - 440km, 97° (SSO)

EOL Orbit: 440 km x 440 km x 97°

Mission Duration: 5 years (with propulsion)

Orbit Lifetime: 2.53 years (Following propellant depletion)

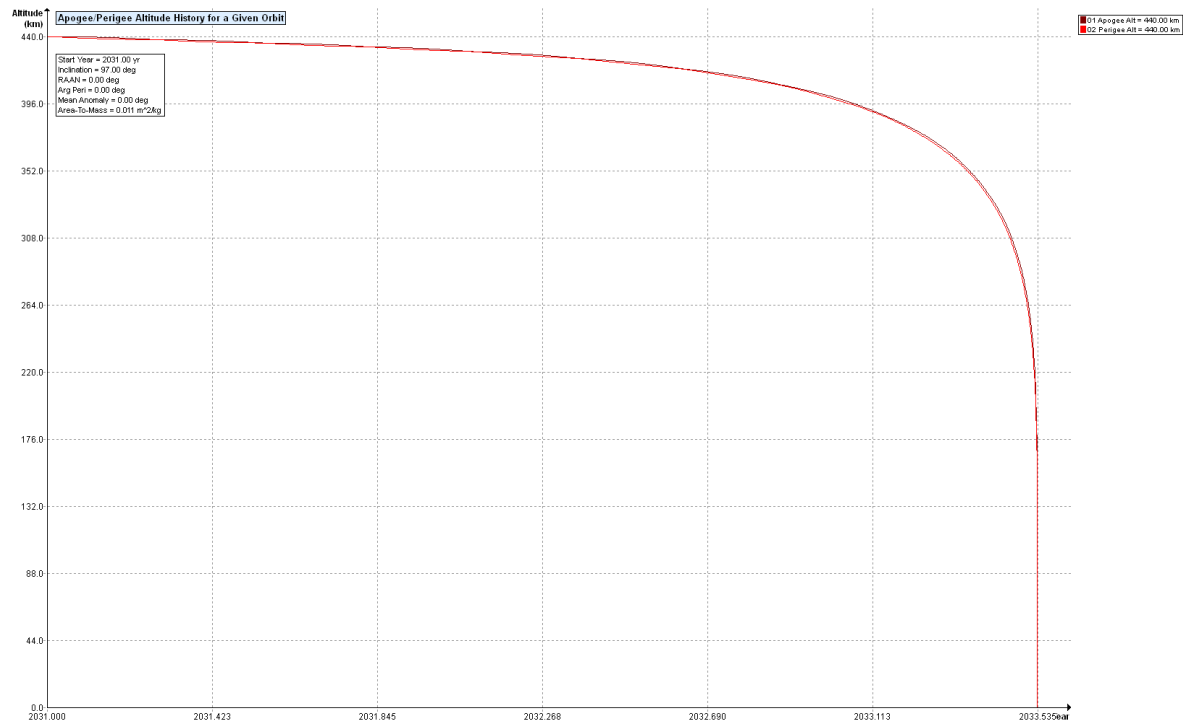


Figure 3 - Apogee and Perigee Lifetime History from 440 km Operational Orbit, SSO

Requested Operational Orbit - 440km, 53°

EOL Orbit: 440 km x 440 km x 53°

Mission Duration: 5 years (with propulsion)

Orbit Lifetime: 2.56 years (Following propellant depletion)

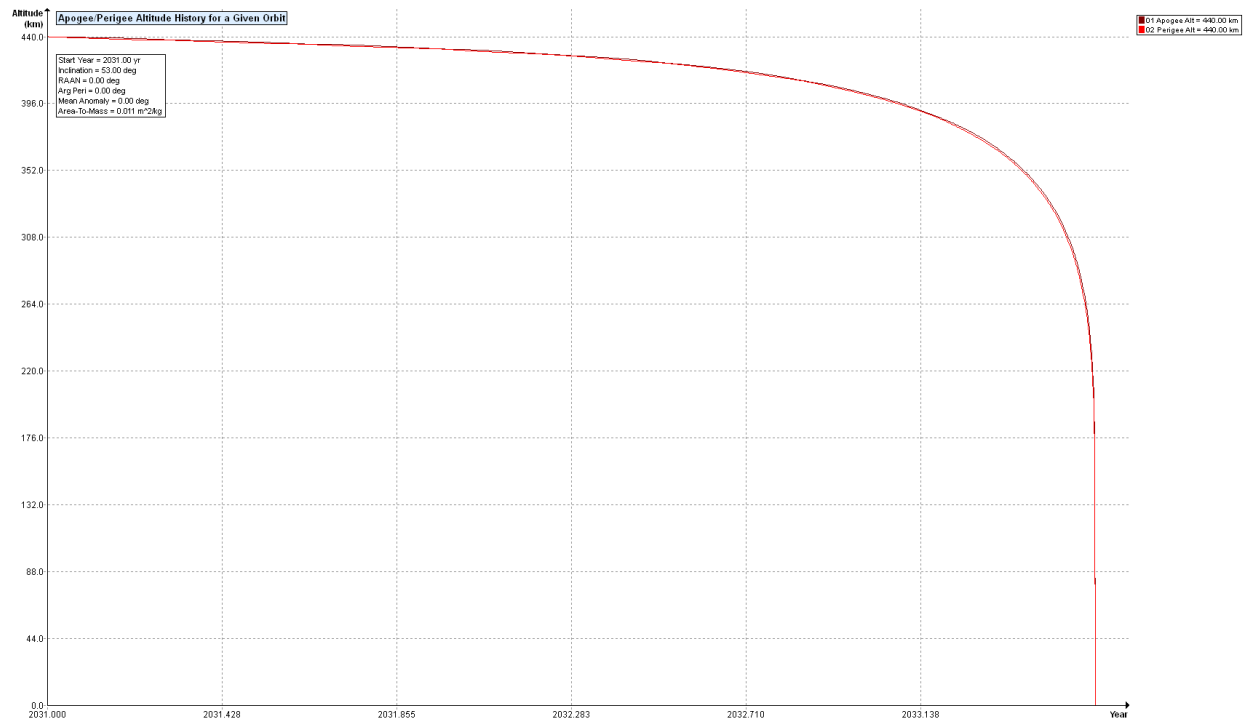


Figure 4 - Apogee and Perigee Lifetime History from 440 km Operational Orbit, 53°

DAS Analysis: The Pelican satellite re-entry is COMPLIANT for the proposed operational orbits.

From Pelican's operational orbit, re-entry lifetime is projected to be approximately 2.5 years as shown in Table 5, meeting the intent of the FCC rule to be less than five years and as short as practicable.⁴ From an insertion orbit, the re-entry timeline is calculated to be approximately 19 years or less. Spacecraft failure is the only envisioned reason that a Pelican spacecraft would not be lowered to its operational orbit.

Requirement 4.6-2. Storage and Earth escape.

Analysis: Not applicable.

Requirement 4.6-3. Long-term re-entry for space structures in MEO, Tundra Orbits, highly inclined GEO, and other orbits.

Analysis: Not applicable.

Requirement 4.6-4. Reliability of Post-mission Disposal Operations

Analysis: Not applicable.

⁴ 47 C.F.R. § 25.114(d)(14)(vii)(D)(1).

ODAR Section 7: Assessment of Spacecraft Reentry Hazards

Assessment of spacecraft compliance with Requirement 4.7-1:

Requirement 4.7-1: Limit the risk of human casualty:

The potential for human casualty is assumed for any object with an impacting kinetic energy in excess of 15 joules:

- a) *For uncontrolled reentry, the risk of human casualty from surviving debris shall not exceed 0.0001 (1:10,000).*

Probability of Risk to Human Casualty:

Planet has evaluated the risk of human casualty from surviving debris for the Pelican V1 satellite from both an insertion orbit of up to 610 km and an operational orbit of 440 km, for both SSO and 53° inclination. The results demonstrate that the anticipated casualty risk of the Pelican V1 satellite at the proposed new insertion orbit of up to 610 km, for both SSO and 53° inclination, remains compliant with the Commission's rules.

The results of the updated DAS analyses are summarized in Table 6 and full DAS logs are attached in the appendices.

Table 6: Updated Casualty Risk of Pelican V1 using DAS 3.2.7

Orbit	Pelican 2 - Pelican 10
Injection Orbit 610 km, SSO	1:28,200
Injection Orbit 610 km, 53°	1:19,300
Operational Orbit 440 km, SSO	1:30,300
Operational Orbit 440 km, 53°	1:20:600

As Table 6 shows, the casualty probability for a single Pelican V1 spacecraft launched meets the 1:10,000 requirement.

The difference in projected casualty rates of a higher altitude orbit compared to a lower altitude orbit is driven by differing global population projections based on the extra time required to de-orbit. Inclined orbits similarly increase the projected casualty rates due to global population densities being higher along the track of the satellite while the number of components above the energy threshold stays the same.

Requirements 4.7-1b, and 4.7-1c are non-applicable requirements as the Pelican satellite does not use controlled reentry.

ODAR Section 8: Assessment for Tether Missions

Not applicable. There are no tethers in the Pelican mission.

END of ODAR

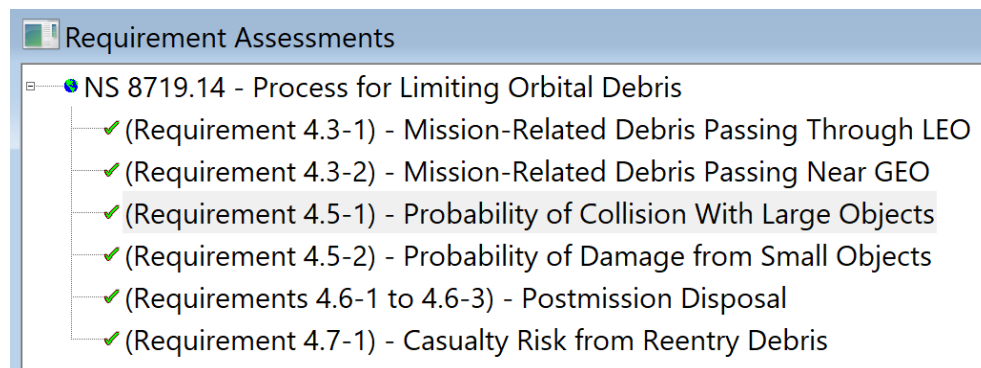
(DAS Logs start next page)

APPENDIX A

DAS Logs

Sun-Synchronous Operational and Transfer Orbits

440 km x 440 km x 97° (SSO) DAS GUI Results



440 km x 440 km x 97° (SSO) DAS Logs (Operational Orbit)

```
07 15 2026; 16:16:32PM    Activity Log Started
07 15 2026; 16:16:32PM    Opened Project
C:\Users\dominic\Documents\DAS3.2.7\Pelican_V1 Nested\
07 15 2026; 16:16:39PM    Project Data Saved To File
07 15 2026; 16:16:40PM    Project Data Saved To File
07 15 2026; 16:16:44PM    Project Data Saved To File
07 15 2026; 16:16:46PM    Project Data Saved To File
07 15 2026; 16:16:47PM    Project Data Saved To File
07 15 2026; 16:16:47PM    Project Data Saved To File
07 15 2026; 16:16:56PM    Mission Editor Changes Applied
07 15 2026; 16:16:56PM    Project Data Saved To File
07 15 2026; 16:16:56PM    Project Data Saved To File
07 15 2026; 16:16:58PM    Processing Requirement 4.3-1:    Return Status : Not Run
```

```
=====
No Project Data Available
=====
```

```
===== End of Requirement 4.3-1 =====
07 15 2026; 16:16:59PM    Processing Requirement 4.3-2: Return Status : Passed
```

=====
No Project Data Available
=====

=====
07 15 2026; 16:28:47PM Processing Requirement 4.5-1: Return Status : Passed
=====

=====
Run Data
=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload
Perigee Altitude = 440.000 (km)
Apogee Altitude = 440.000 (km)
Inclination = 97.000 (deg)
RAAN = 0.000 (deg)
Argument of Perigee = 0.000 (deg)
Mean Anomaly = 0.000 (deg)
Final Area-To-Mass Ratio = 0.0114 (m²/kg)
Start Year = 2026.000 (yr)
Initial Mass = 195.500 (kg)
Final Mass = 182.500 (kg)
Duration = 5.000 (yr)
Station-Kept = True
Abandoned = True
Long-Term Reentry = False

****OUTPUT****

Collision Probability = 4.7886E-05
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

=====

=====
07 15 2026; 16:28:50PM Project Data Saved To File
07 15 2026; 16:28:51PM Requirement 4.5-2: Compliant

===== End of Requirement 4.5-2 =====

07 15 2026; 16:28:52PM Processing Requirement 4.6 Return Status : Passed

=====

Project Data

=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload

Perigee Altitude = 440.000000 (km)
Apogee Altitude = 440.000000 (km)
Inclination = 97.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.011400 (m²/kg)
Start Year = 2026.000000 (yr)
Initial Mass = 195.500000 (kg)
Final Mass = 182.500000 (kg)
Duration = 5.000000 (yr)
Station Kept = True
Abandoned = True
PMD Perigee Altitude = 440.000000 (km)
PMD Apogee Altitude = 440.000000 (km)
PMD Inclination = 97.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)
Long-Term Reentry = False

****OUTPUT****

Suggested Perigee Altitude = 440.000000 (km)
Suggested Apogee Altitude = 440.000000 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2033 (yr)
Requirement = 61
Compliance Status = Pass

=====

===== End of Requirement 4.6 =====

07 15 2026; 16:29:10PM *****Processing Requirement 4.7-1

Return Status : Passed

*****INPUT****

Item Number = 1

name = Pelican

quantity = 1

parent = 0

materialID = 5

type = Box

Aero Mass = 182.500000

Thermal Mass = 182.500000

Diameter/Width = 0.600000

Length = 1.000000

Height = 0.600000

name = LVI Structure Deck

quantity = 1

parent = 1

materialID = 8

type = Box

Aero Mass = 9.220000

Thermal Mass = 9.220000

Diameter/Width = 0.550000

Length = 0.550000

Height = 0.012000

name = Structural Brackets

quantity = 16

parent = 1

materialID = 8

type = Box

Aero Mass = 0.218000

Thermal Mass = 0.218000

Diameter/Width = 0.050000

Length = 0.080000

Height = 0.021000

name = Avionics Deck

quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 2.600000
Thermal Mass = 2.600000
Diameter/Width = 0.600000
Length = 0.600000
Height = 0.050000

name = Structural Panels
quantity = 4
parent = 1
materialID = 8
type = Box
Aero Mass = 3.050000
Thermal Mass = 2.200000
Diameter/Width = 0.600000
Length = 0.800000
Height = 0.030000

name = Hardware
quantity = 200
parent = 5
materialID = 54
type = Cylinder
Aero Mass = 0.017000
Thermal Mass = 0.017000
Diameter/Width = 0.012000
Length = 0.020000

name = Avionics Brackets
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.797000
Thermal Mass = 0.797000
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.025000

name = SA Release Mechanism
quantity = 2

parent = 1
materialID = 5
type = Box
Aero Mass = 0.388000
Thermal Mass = 0.388000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = GSE Interface Panel
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 0.067000
Thermal Mass = 0.067000
Diameter/Width = 0.065000
Length = 0.065000

name = MLI Blankets
quantity = 5
parent = 1
materialID = 44
type = Flat Plate
Aero Mass = 0.142000
Thermal Mass = 0.142000
Diameter/Width = 0.100000
Length = 0.200000

name = Heat Straps
quantity = 4
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.130000
Thermal Mass = 0.130000
Diameter/Width = 0.020000
Length = 0.050000

name = Heaters
quantity = 20
parent = 1
materialID = 19
type = Flat Plate

Aero Mass = 0.026000
Thermal Mass = 0.026000
Diameter/Width = 0.025000
Length = 0.050000

name = Temp Sensors
quantity = 25
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.010000
Length = 0.020000

name = LVI Ring
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.704000
Thermal Mass = 0.704000
Diameter/Width = 0.375000
Length = 0.375000

name = Battery Pack
quantity = 4
parent = 1
materialID = 8
type = Box
Aero Mass = 1.460000
Thermal Mass = 1.460000
Diameter/Width = 0.078000
Length = 0.172000
Height = 0.052000

name = Solar Panel +Z+Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.260000
Thermal Mass = 2.260000
Diameter/Width = 0.550000

Length = 0.950000

name = Solar Panel +Z-Y

quantity = 1

parent = 1

materialID = 5

type = Flat Plate

Aero Mass = 2.260000

Thermal Mass = 2.260000

Diameter/Width = 0.550000

Length = 0.950000

name = Solar Panel +Y

quantity = 1

parent = 1

materialID = 5

type = Flat Plate

Aero Mass = 2.890000

Thermal Mass = 2.890000

Diameter/Width = 0.625000

Length = 0.950000

name = Solar Panel -Y

quantity = 1

parent = 1

materialID = 5

type = Flat Plate

Aero Mass = 2.890000

Thermal Mass = 2.890000

Diameter/Width = 0.625000

Length = 0.950000

name = Power Electronics

quantity = 1

parent = 1

materialID = 8

type = Box

Aero Mass = 2.250000

Thermal Mass = 1.500000

Diameter/Width = 0.300000

Length = 0.300000

Height = 0.100000

name = RW Board

quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Prop Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Power Control Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Peak Power Tracker
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.000000
Diameter/Width = 0.200000
Length = 0.200000
Height = 0.150000

name = Peak Power Tracker Boards

quantity = 2
parent = 24
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Box
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 8.780000
Thermal Mass = 6.530000
Diameter/Width = 0.150000
Length = 0.325000
Height = 0.050000

name = Magnetics Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Flight Computer
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = TTC Board

quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Nav Board
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = C Band Radio Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Switch Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Payload Box

quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 7.820000
Thermal Mass = 5.820000
Diameter/Width = 0.150000
Length = 0.300000
Height = 0.050000

name = Storage Manager Board
quantity = 1
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = SSD Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Ka Radio Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Edge Compute Board

quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Payload Switch Board
quantity = 1
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = RF TTC Antennas
quantity = 10
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.040000
Length = 0.050000

name = RF Payload Antenna
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 1.440000
Thermal Mass = 1.440000
Diameter/Width = 0.125000
Length = 0.350000

name = RF Harness
quantity = 12
parent = 1

materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000
Length = 0.500000

name = RF Brackets
quantity = 6
parent = 1
materialID = 8
type = Box
Aero Mass = 0.390000
Thermal Mass = 0.390000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = RF C Band Rx Antenna LGA
quantity = 3
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.082000
Thermal Mass = 0.082000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Rx Antenna HGA
quantity = 1
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.104000
Thermal Mass = 0.104000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Tx Antenna
quantity = 1
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.084000

Thermal Mass = 0.084000
Diameter/Width = 0.030000
Length = 0.030000

name = GPS Antennas
quantity = 2
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.050000
Length = 0.075000

name = C Band Upconverter
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.600000
Thermal Mass = 0.600000
Diameter/Width = 0.050000
Length = 0.100000
Height = 0.050000

name = C Band Power Amplifier
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.200000
Thermal Mass = 1.200000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.050000

name = L Band Transceiver
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.100000
Thermal Mass = 1.100000
Diameter/Width = 0.065000

Length = 0.100000
Height = 0.065000

name = L Band Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000
Length = 0.500000

name = L Band Bracket
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.200000
Thermal Mass = 0.200000
Diameter/Width = 0.080000
Length = 0.200000
Height = 0.010000

name = L Band Antenna
quantity = 1
parent = 1
materialID = 77
type = Box
Aero Mass = 0.085000
Thermal Mass = 0.085000
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.010000

name = Reaction Wheels
quantity = 4
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 3.174000
Thermal Mass = 1.100000
Diameter/Width = 0.120000
Length = 0.105000

name = RW Flywheel
quantity = 4
parent = 53
materialID = 58
type = Cylinder
Aero Mass = 1.800000
Thermal Mass = 1.800000
Diameter/Width = 0.100000
Length = 0.030000

name = RW Electronics
quantity = 4
parent = 53
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.085000
Height = 0.020000

name = RW Bearings
quantity = 8
parent = 53
materialID = 54
type = Flat Plate
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.040000
Length = 0.040000

name = RW Bracket
quantity = 4
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 0.509000
Thermal Mass = 0.509000
Diameter/Width = 0.080000
Length = 0.040000

name = Magnetorquer
quantity = 3

parent = 1
materialID = 59
type = Cylinder
Aero Mass = 0.910000
Thermal Mass = 0.910000
Diameter/Width = 0.030000
Length = 0.225000

name = ST
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 0.310000
Thermal Mass = 0.310000
Diameter/Width = 0.050000
Length = 0.050000
Height = 0.050000

name = ST Bracket
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 0.170000
Thermal Mass = 0.170000
Diameter/Width = 0.050000
Length = 0.051000
Height = 0.025000

name = IMU
quantity = 3
parent = 1
materialID = 19
type = Box
Aero Mass = 0.010000
Thermal Mass = 0.010000
Diameter/Width = 0.010000
Length = 0.024000
Height = 0.010000

name = Magnetometers
quantity = 2
parent = 1

materialID = 5
type = Box
Aero Mass = 0.037000
Thermal Mass = 0.037000
Diameter/Width = 0.040000
Length = 0.050000
Height = 0.025000

name = ST Compute
quantity = 4
parent = 1
materialID = 23
type = Box
Aero Mass = 0.277000
Thermal Mass = 0.277000
Diameter/Width = 0.075000
Length = 0.075000
Height = 0.030000

name = PPU
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.037500

name = Tanks
quantity = 2
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 4.110000
Thermal Mass = 4.110000
Diameter/Width = 0.265000
Length = 0.750000

name = Plumbing
quantity = 18
parent = 1
materialID = 58

type = Cylinder
Aero Mass = 0.004000
Thermal Mass = 0.004000
Diameter/Width = 0.005000
Length = 0.050000

name = Brackets
quantity = 8
parent = 1
materialID = 5
type = Box
Aero Mass = 0.134000
Thermal Mass = 0.134000
Diameter/Width = 0.040000
Length = 0.050000
Height = 0.030000

name = Thruster
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.870000
Thermal Mass = 0.870000
Diameter/Width = 0.090000
Length = 0.040000

name = Radiator
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 0.410000
Thermal Mass = 0.410000
Diameter/Width = 0.125000
Length = 0.125000

name = Pressure Components
quantity = 4
parent = 1
materialID = 58
type = Cylinder
Aero Mass = 0.251000
Thermal Mass = 0.251000

Diameter/Width = 0.025000
Length = 0.075000

name = Mechanical Misc
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.143000
Thermal Mass = 0.143000
Diameter/Width = 0.050000
Length = 0.050000
Height = 0.025000

name = Prop Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.033000
Thermal Mass = 0.033000
Diameter/Width = 0.005000
Length = 0.200000

name = Payload Deck
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.463000
Thermal Mass = 0.463000
Diameter/Width = 0.550000
Length = 0.550000
Height = 0.015000

name = Payload Closeout Panels
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 1.206000
Thermal Mass = 1.206000
Diameter/Width = 0.520000
Length = 0.570000

Height = 0.030000

name = Payload Bracket

quantity = 1

parent = 1

materialID = 8

type = Box

Aero Mass = 4.910000

Thermal Mass = 4.910000

Diameter/Width = 0.100000

Length = 0.250000

Height = 0.075000

name = Payload Support Structure

quantity = 2

parent = 1

materialID = 8

type = Box

Aero Mass = 2.090000

Thermal Mass = 2.090000

Diameter/Width = 0.060000

Length = 0.250000

Height = 0.055000

name = M1

quantity = 1

parent = 1

materialID = 71

type = Box

Aero Mass = 12.775000

Thermal Mass = 12.775000

Diameter/Width = 0.375000

Length = 0.375000

Height = 0.036000

name = Actuator Bar

quantity = 9

parent = 1

materialID = 66

type = Box

Aero Mass = 0.002000

Thermal Mass = 0.002000

Diameter/Width = 0.030000

Length = 0.080000

Height = 0.000400

name = M1 Flexure

quantity = 9

parent = 1

materialID = 66

type = Box

Aero Mass = 0.041300

Thermal Mass = 0.041300

Diameter/Width = 0.020000

Length = 0.070000

Height = 0.010000

name = AI Actuator Base

quantity = 9

parent = 1

materialID = 5

type = Box

Aero Mass = 0.095700

Thermal Mass = 0.095700

Diameter/Width = 0.030000

Length = 0.080000

Height = 0.020000

name = Telescope Main Tube

quantity = 1

parent = 1

materialID = 5

type = Cylinder

Aero Mass = 11.934000

Thermal Mass = 11.934000

Diameter/Width = 0.500000

Length = 0.500000

name = Telescope Main Back Rib

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 7.375000

Thermal Mass = 7.375000

Diameter/Width = 0.600000

Length = 0.600000

Height = 0.100000

name = Metering Rods

quantity = 3

parent = 1

materialID = 71

type = Cylinder

Aero Mass = 0.381900

Thermal Mass = 0.381900

Diameter/Width = 0.025000

Length = 0.502000

name = Spider Main Chassis

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 1.016000

Thermal Mass = 1.016000

Diameter/Width = 0.200000

Length = 0.200000

Height = 0.010000

name = Spider Hood

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 0.000000

Thermal Mass = 0.000000

Diameter/Width = 0.150000

Length = 0.150000

Height = 0.040000

name = M2

quantity = 1

parent = 1

materialID = 71

type = Box

Aero Mass = 0.795900

Thermal Mass = 0.795900

Diameter/Width = 0.110000

Length = 0.110000

Height = 0.030000

name = Spider Cover
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.062400
Thermal Mass = 0.062400
Diameter/Width = 0.152000
Length = 0.152000
Height = 0.002000

name = M2 Front Support
quantity = 1
parent = 1
materialID = 72
type = Box
Aero Mass = 0.045600
Thermal Mass = 0.045600
Diameter/Width = 0.015000
Length = 0.026000
Height = 0.015000

name = M1 Heater Plate
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.711000
Thermal Mass = 1.711000
Diameter/Width = 0.350000
Length = 0.350000
Height = 0.006000

name = Bipod Flexures
quantity = 3
parent = 1
materialID = 66
type = Box
Aero Mass = 0.282700
Thermal Mass = 0.282700
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.008000

name = Tail Back Cover
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 3.000000
Thermal Mass = 3.000000
Diameter/Width = 0.537000
Length = 0.537000
Height = 0.004000

name = Center Hood
quantity = 1
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 0.215600
Thermal Mass = 0.215600
Diameter/Width = 0.136000
Length = 0.230000

name = Tail Chassis
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 7.000700
Thermal Mass = 2.228900
Diameter/Width = 0.190000
Length = 0.374000
Height = 0.012000

name = Fold Mirror Chassis
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.325900
Thermal Mass = 0.417100
Diameter/Width = 0.109000
Length = 0.146000
Height = 0.010000

name = Fold Mirror

quantity = 2
parent = 94
materialID = 71
type = Box
Aero Mass = 0.314800
Thermal Mass = 0.314800
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.016000

name = Fold Mirror Housing
quantity = 2
parent = 94
materialID = 5
type = Box
Aero Mass = 0.086800
Thermal Mass = 0.086800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Fold Mirror Cover
quantity = 2
parent = 94
materialID = 5
type = Box
Aero Mass = 0.052800
Thermal Mass = 0.052800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Lens Assembly
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.063500
Thermal Mass = 0.196800
Diameter/Width = 0.060000
Length = 0.075000
Height = 0.031000

name = Lens 1

quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.135000
Thermal Mass = 0.135000
Diameter/Width = 0.092000
Length = 0.092000
Height = 0.010000

name = Lens 2 Housing
quantity = 1
parent = 98
materialID = 5
type = Box
Aero Mass = 0.219000
Thermal Mass = 0.219000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.014000

name = Lens 2
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.123600
Thermal Mass = 0.123600
Diameter/Width = 0.077000
Length = 0.077000
Height = 0.013600

name = Lens 3
quantity = 1
parent = 98
materialID = -2
type = Box
Aero Mass = 0.230700
Thermal Mass = 0.230700
Diameter/Width = 0.085400
Length = 0.085400
Height = 0.016000

name = Lens 3 Housing

quantity = 1
parent = 98
materialID = 5
type = Box
Aero Mass = 0.054900
Thermal Mass = 0.054900
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.012500

name = Lens 4
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.103500
Thermal Mass = 0.103500
Diameter/Width = 0.089000
Length = 0.089000
Height = 0.006900

name = Focus House
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.099400
Thermal Mass = 0.099400
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.015000

name = Detector
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.783000
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det and Lens Cover

quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.058600
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det House Flex
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 1.389900
Thermal Mass = 1.389900
Diameter/Width = 0.160000
Length = 0.388000
Height = 0.010000

name = Det Window House
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.035900
Thermal Mass = 0.035900
Diameter/Width = 0.106000
Length = 0.106000
Height = 0.009000

name = Rod Det Flex
quantity = 2
parent = 106
materialID = -4
type = Box
Aero Mass = 0.120000
Thermal Mass = 0.120000
Diameter/Width = 0.060000
Length = 0.141000
Height = 0.005000

name = Focus Mechanism

quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.500000
Thermal Mass = 0.500000
Diameter/Width = 0.078000
Length = 0.088000
Height = 0.030000

name = Star Tracker Base
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.258300
Thermal Mass = 0.258300
Diameter/Width = 0.101000
Length = 0.120000
Height = 0.010000

*****OUTPUT****

Item Number = 1

name = Pelican
Demise Altitude = 78.003301
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = LVI Structure Deck
Demise Altitude = 70.643604
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Brackets
Demise Altitude = 75.579774
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Deck
Demise Altitude = 76.424548

Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Panels
Demise Altitude = 77.020464
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Hardware
Demise Altitude = 72.688352
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Brackets
Demise Altitude = 73.357059
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SA Release Mechanism
Demise Altitude = 74.246442
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GSE Interface Panel
Demise Altitude = 76.775286
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = MLI Blankets
Demise Altitude = 77.794350
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Heat Straps
Demise Altitude = 74.371263
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Heaters
Demise Altitude = 77.117325
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Temp Sensors
Demise Altitude = 76.726748
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = LVI Ring
Demise Altitude = 77.098695
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Battery Pack
Demise Altitude = 73.151971
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Z+Y
Demise Altitude = 76.988434
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Z-Y
Demise Altitude = 76.988434
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Y
Demise Altitude = 76.777085
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel -Y
Demise Altitude = 76.777085
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Electronics
Demise Altitude = 76.324784
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Board
Demise Altitude = 74.913637
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Board
Demise Altitude = 74.913637
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Control Board
Demise Altitude = 74.913637
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker
Demise Altitude = 76.535821
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker Boards
Demise Altitude = 75.213613
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Box
Demise Altitude = 68.466999

Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetism Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Flight Computer
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = TTC Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Nav Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Radio Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Switch Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Box
Demise Altitude = 68.900839
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Storage Manager Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SSD Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Ka Radio Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Edge Compute Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Switch Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF TTC Antennas
Demise Altitude = 76.573250
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Payload Antenna
Demise Altitude = 74.267558
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Harness
Demise Altitude = 77.635500
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Brackets
Demise Altitude = 74.297762
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna LGA
Demise Altitude = 75.545420
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna HGA
Demise Altitude = 74.929921
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Tx Antenna
Demise Altitude = 75.492440
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GPS Antennas
Demise Altitude = 77.160584
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Upconverter
Demise Altitude = 74.271913
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Power Amplifier
Demise Altitude = 71.890782

Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Transceiver
Demise Altitude = 72.659208
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Harness
Demise Altitude = 77.635500
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Bracket
Demise Altitude = 77.036112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Antenna
Demise Altitude = 77.742843
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheels
Demise Altitude = 73.168419
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Flywheel
Demise Altitude = 55.790550
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Electronics
Demise Altitude = 71.130439
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bearings
Demise Altitude = 72.634841
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bracket
Demise Altitude = 71.667991
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetorquer
Demise Altitude = 69.979788
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST
Demise Altitude = 74.443627
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Bracket
Demise Altitude = 75.269429
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = IMU
Demise Altitude = 77.321543
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetometers
Demise Altitude = 77.325658
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Compute
Demise Altitude = 75.495093
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = PPU
Demise Altitude = 72.161180
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tanks
Demise Altitude = 77.185078
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Plumbing
Demise Altitude = 77.309208
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Brackets
Demise Altitude = 75.813722
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Thruster
Demise Altitude = 64.183061
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Radiator
Demise Altitude = 75.339978
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Pressure Components
Demise Altitude = 69.525516

Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Mechanical Misc
Demise Altitude = 75.643570
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Harness
Demise Altitude = 77.317418
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Deck
Demise Altitude = 77.677429
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Closeout Panels
Demise Altitude = 77.178162
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Bracket
Demise Altitude = 69.078385
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Support Structure
Demise Altitude = 72.330938
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1
Demise Altitude = 0.000000
Debris Casualty Area = 0.740365
Impact Kinetic Energy = 22254.138824

name = Actuator Bar
Demise Altitude = 77.905609
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1 Flexure
Demise Altitude = 75.986661
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = AI Actuator Base
Demise Altitude = 76.578767
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Telescope Main Tube
Demise Altitude = 73.462933
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Telescope Main Back Rib
Demise Altitude = 73.821590
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Metering Rods
Demise Altitude = 75.086965
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Main Chassis
Demise Altitude = 74.945107
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Hood
Demise Altitude = 78.003301
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2
Demise Altitude = 69.557766
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Cover
Demise Altitude = 77.708480
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2 Front Support
Demise Altitude = 74.946044
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1 Heater Plate
Demise Altitude = 75.591388
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Bipod Flexures
Demise Altitude = 72.975138
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Back Cover
Demise Altitude = 75.599605
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Center Hood
Demise Altitude = 77.436094

Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Chassis
Demise Altitude = 74.619781
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Chassis
Demise Altitude = 72.558102
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror
Demise Altitude = 67.334105
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Housing
Demise Altitude = 71.874154
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Cover
Demise Altitude = 72.146533
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens Assembly
Demise Altitude = 72.877883
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 1
Demise Altitude = 0.000000
Debris Casualty Area = 0.377404
Impact Kinetic Energy = 40.037508

name = Lens 2 Housing
Demise Altitude = 71.186933
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 2
Demise Altitude = 0.000000
Debris Casualty Area = 0.363084
Impact Kinetic Energy = 43.128982

name = Lens 3
Demise Altitude = 71.548079
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 3 Housing
Demise Altitude = 72.389762
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 4
Demise Altitude = 0.000000
Debris Casualty Area = 0.372572
Impact Kinetic Energy = 26.491181

name = Focus House
Demise Altitude = 73.757419
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Detector
Demise Altitude = 74.177537
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det and Lens Cover
Demise Altitude = 73.722127
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det House Flex
Demise Altitude = 71.477949
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det Window House
Demise Altitude = 73.913750
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Rod Det Flex
Demise Altitude = 0.000000
Debris Casualty Area = 0.752354
Impact Kinetic Energy = 36.034057

name = Focus Mechanism
Demise Altitude = 70.783042
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Star Tracker Base
Demise Altitude = 76.268109
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

===== End of Requirement 4.7-1 =====
07 15 2026; 16:29:10PM Project Data Saved To File

610 km x 440 km x 97° (SSO) DAS Logs (Transfer Orbit)

07 15 2026; 16:48:18PM Activity Log Started

07 15 2026; 16:48:18PM Opened Project
C:\Users\dominic\Documents\DAS3.2.7\Pelican_V1 Nested\
07 15 2026; 16:48:28PM Project Data Saved To File
07 15 2026; 16:48:30PM Project Data Saved To File
07 15 2026; 16:48:31PM Project Data Saved To File
07 15 2026; 16:48:35PM Project Data Saved To File
07 15 2026; 16:48:35PM Project Data Saved To File
07 15 2026; 16:48:36PM Mission Editor Changes Applied
07 15 2026; 16:48:36PM Project Data Saved To File
07 15 2026; 16:48:36PM Project Data Saved To File
07 15 2026; 16:48:41PM Processing Requirement 4.3-1: Return Status : Not Run

=====
No Project Data Available
=====

=====
End of Requirement 4.3-1 =====
07 15 2026; 16:48:44PM Processing Requirement 4.3-2: Return Status : Passed

=====
No Project Data Available
=====

=====
End of Requirement 4.3-2 =====
07 15 2026; 16:59:03PM Processing Requirement 4.5-1: Return Status : Passed

=====
Run Data
=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload
Perigee Altitude = 535.000 (km)
Apogee Altitude = 535.000 (km)
Inclination = 97.000 (deg)
RAAN = 0.000 (deg)
Argument of Perigee = 0.000 (deg)
Mean Anomaly = 0.000 (deg)
Final Area-To-Mass Ratio = 0.0114 (m²/kg)
Start Year = 2026.000 (yr)
Initial Mass = 195.500 (kg)
Final Mass = 182.500 (kg)

Duration = 0.250 (yr)
Station-Kept = False
Abandoned = True
Long-Term Reentry = False

****OUTPUT****

Collision Probability = 8.9415E-05
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

=====

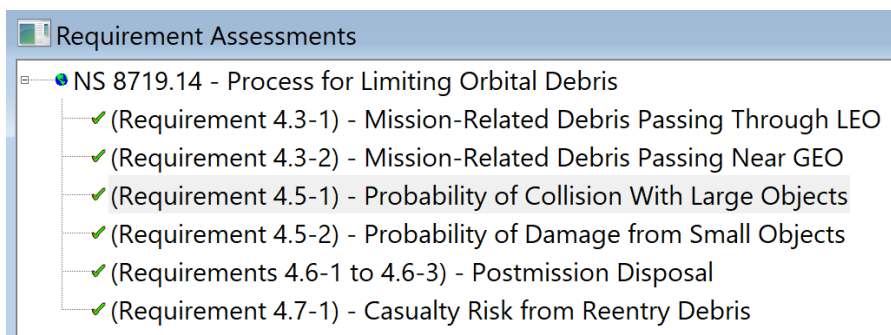
===== End of Requirement 4.5-1 =====

07 15 2026; 16:59:07PM Project Data Saved To File
07 15 2026; 16:59:08PM Requirement 4.5-2: Compliant

===== End of Requirement 4.5-2 =====

Sun-Synchronous Injection Orbit

610 km x 610 km x 97° (SSO) DAS GUI Results



610 km x 610 km x 97° (SSO) DAS Logs (Injection Orbit):

07 15 2026; 15:39:12PM Activity Log Started
07 15 2026; 15:39:12PM Opened Project
C:\Users\dominic\Documents\DAS3.2.7\Pelican_V1 Nested\
07 15 2026; 15:39:22PM Processing Requirement 4.3-1: Return Status : Not Run

=====
No Project Data Available
=====

=====
End of Requirement 4.3-1
07 15 2026; 15:39:24PM Processing Requirement 4.3-2: Return Status : Passed

=====
No Project Data Available
=====

=====
End of Requirement 4.3-2
07 15 2026; 15:51:15PM Processing Requirement 4.5-1: Return Status : Passed

=====
Run Data
=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload
Perigee Altitude = 610.000 (km)
Apogee Altitude = 610.000 (km)
Inclination = 97.000 (deg)
RAAN = 0.000 (deg)
Argument of Perigee = 0.000 (deg)
Mean Anomaly = 0.000 (deg)
Final Area-To-Mass Ratio = 0.0114 (m²/kg)
Start Year = 2026.000 (yr)
Initial Mass = 195.500 (kg)
Final Mass = 182.500 (kg)
Duration = 0.250 (yr)
Station-Kept = False
Abandoned = True
Long-Term Reentry = False

****OUTPUT****

Collision Probability = 4.0215E-04
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

=====

===== End of Requirement 4.5-1 =====

07 15 2026; 15:51:31PM Project Data Saved To File
07 15 2026; 15:51:32PM Requirement 4.5-2: Compliant

===== End of Requirement 4.5-2 =====

07 15 2026; 15:51:33PM Processing Requirement 4.6 Return Status : Passed

=====

Project Data

=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload

Perigee Altitude = 610.000000 (km)
Apogee Altitude = 610.000000 (km)
Inclination = 97.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.011400 (m²/kg)
Start Year = 2026.000000 (yr)
Initial Mass = 195.500000 (kg)
Final Mass = 182.500000 (kg)
Duration = 0.250000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 608.413614 (km)
PMD Apogee Altitude = 608.878548 (km)
PMD Inclination = 97.007766 (deg)
PMD RAAN = 80.307087 (deg)

PMD Argument of Perigee = 109.224483 (deg)
PMD Mean Anomaly = 0.000000 (deg)
Long-Term Reentry = False

****OUTPUT****

Suggested Perigee Altitude = 608.413614 (km)
Suggested Apogee Altitude = 608.878548 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2045 (yr)
Requirement = 61
Compliance Status = Pass

=====

===== End of Requirement 4.6 =====

07 15 2026; 15:51:40PM *****Processing Requirement 4.7-1

Return Status : Passed

*******INPUT*******

Item Number = 1

name = Pelican
quantity = 1
parent = 0
materialID = 5
type = Box
Aero Mass = 182.500000
Thermal Mass = 182.500000
Diameter/Width = 0.600000
Length = 1.000000
Height = 0.600000

name = LVI Structure Deck
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 9.220000
Thermal Mass = 9.220000
Diameter/Width = 0.550000
Length = 0.550000
Height = 0.012000

name = Structural Brackets
quantity = 16
parent = 1
materialID = 8
type = Box
Aero Mass = 0.218000
Thermal Mass = 0.218000
Diameter/Width = 0.050000
Length = 0.080000
Height = 0.021000

name = Avionics Deck
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 2.600000
Thermal Mass = 2.600000
Diameter/Width = 0.600000
Length = 0.600000
Height = 0.050000

name = Structural Panels
quantity = 4
parent = 1
materialID = 8
type = Box
Aero Mass = 3.050000
Thermal Mass = 2.200000
Diameter/Width = 0.600000
Length = 0.800000
Height = 0.030000

name = Hardware
quantity = 200
parent = 5
materialID = 54
type = Cylinder
Aero Mass = 0.017000
Thermal Mass = 0.017000
Diameter/Width = 0.012000
Length = 0.020000

name = Avionics Brackets
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.797000
Thermal Mass = 0.797000
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.025000

name = SA Release Mechanism
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.388000
Thermal Mass = 0.388000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = GSE Interface Panel
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 0.067000
Thermal Mass = 0.067000
Diameter/Width = 0.065000
Length = 0.065000

name = MLI Blankets
quantity = 5
parent = 1
materialID = 44
type = Flat Plate
Aero Mass = 0.142000
Thermal Mass = 0.142000
Diameter/Width = 0.100000
Length = 0.200000

name = Heat Straps
quantity = 4

parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.130000
Thermal Mass = 0.130000
Diameter/Width = 0.020000
Length = 0.050000

name = Heaters
quantity = 20
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.026000
Thermal Mass = 0.026000
Diameter/Width = 0.025000
Length = 0.050000

name = Temp Sensors
quantity = 25
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.010000
Length = 0.020000

name = LVI Ring
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.704000
Thermal Mass = 0.704000
Diameter/Width = 0.375000
Length = 0.375000

name = Battery Pack
quantity = 4
parent = 1
materialID = 8
type = Box
Aero Mass = 1.460000

Thermal Mass = 1.460000
Diameter/Width = 0.078000
Length = 0.172000
Height = 0.052000

name = Solar Panel +Z+Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.260000
Thermal Mass = 2.260000
Diameter/Width = 0.550000
Length = 0.950000

name = Solar Panel +Z-Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.260000
Thermal Mass = 2.260000
Diameter/Width = 0.550000
Length = 0.950000

name = Solar Panel +Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.890000
Thermal Mass = 2.890000
Diameter/Width = 0.625000
Length = 0.950000

name = Solar Panel -Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.890000
Thermal Mass = 2.890000
Diameter/Width = 0.625000
Length = 0.950000

name = Power Electronics
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 2.250000
Thermal Mass = 1.500000
Diameter/Width = 0.300000
Length = 0.300000
Height = 0.100000

name = RW Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Prop Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Power Control Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Peak Power Tracker
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.000000
Diameter/Width = 0.200000
Length = 0.200000
Height = 0.150000

name = Peak Power Tracker Boards
quantity = 2
parent = 24
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Box
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 8.780000
Thermal Mass = 6.530000
Diameter/Width = 0.150000
Length = 0.325000
Height = 0.050000

name = Magnetics Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Flight Computer
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = TTC Board
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Nav Board
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = C Band Radio Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Switch Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Payload Box
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 7.820000
Thermal Mass = 5.820000
Diameter/Width = 0.150000
Length = 0.300000
Height = 0.050000

name = Storage Manager Board
quantity = 1
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = SSD Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Ka Radio Board

quantity = 2

parent = 33

materialID = 23

type = Box

Aero Mass = 0.250000

Thermal Mass = 0.250000

Diameter/Width = 0.080000

Length = 0.215000

Height = 0.010000

name = Edge Compute Board

quantity = 2

parent = 33

materialID = 23

type = Box

Aero Mass = 0.250000

Thermal Mass = 0.250000

Diameter/Width = 0.080000

Length = 0.215000

Height = 0.010000

name = Payload Switch Board

quantity = 1

parent = 33

materialID = 23

type = Box

Aero Mass = 0.250000

Thermal Mass = 0.250000

Diameter/Width = 0.080000

Length = 0.215000

Height = 0.010000

name = RF TTC Antennas

quantity = 10

parent = 1

materialID = 19

type = Flat Plate

Aero Mass = 0.060000

Thermal Mass = 0.060000

Diameter/Width = 0.040000

Length = 0.050000

name = RF Payload Antenna
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 1.440000
Thermal Mass = 1.440000
Diameter/Width = 0.125000
Length = 0.350000

name = RF Harness
quantity = 12
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000
Length = 0.500000

name = RF Brackets
quantity = 6
parent = 1
materialID = 8
type = Box
Aero Mass = 0.390000
Thermal Mass = 0.390000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = RF C Band Rx Antenna LGA
quantity = 3
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.082000
Thermal Mass = 0.082000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Rx Antenna HGA
quantity = 1
parent = 1

materialID = 19
type = Cylinder
Aero Mass = 0.104000
Thermal Mass = 0.104000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Tx Antenna
quantity = 1
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.084000
Thermal Mass = 0.084000
Diameter/Width = 0.030000
Length = 0.030000

name = GPS Antennas
quantity = 2
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.050000
Length = 0.075000

name = C Band Upconverter
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.600000
Thermal Mass = 0.600000
Diameter/Width = 0.050000
Length = 0.100000
Height = 0.050000

name = C Band Power Amplifier
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.200000

Thermal Mass = 1.200000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.050000

name = L Band Transceiver
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.100000
Thermal Mass = 1.100000
Diameter/Width = 0.065000
Length = 0.100000
Height = 0.065000

name = L Band Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000
Length = 0.500000

name = L Band Bracket
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.200000
Thermal Mass = 0.200000
Diameter/Width = 0.080000
Length = 0.200000
Height = 0.010000

name = L Band Antenna
quantity = 1
parent = 1
materialID = 77
type = Box
Aero Mass = 0.085000
Thermal Mass = 0.085000

Diameter/Width = 0.090000
Length = 0.090000
Height = 0.010000

name = Reaction Wheels
quantity = 4
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 3.174000
Thermal Mass = 1.100000
Diameter/Width = 0.120000
Length = 0.105000

name = RW Flywheel
quantity = 4
parent = 53
materialID = 58
type = Cylinder
Aero Mass = 1.800000
Thermal Mass = 1.800000
Diameter/Width = 0.100000
Length = 0.030000

name = RW Electronics
quantity = 4
parent = 53
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.085000
Height = 0.020000

name = RW Bearings
quantity = 8
parent = 53
materialID = 54
type = Flat Plate
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.040000
Length = 0.040000

name = RW Bracket
quantity = 4
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 0.509000
Thermal Mass = 0.509000
Diameter/Width = 0.080000
Length = 0.040000

name = Magnetorquer
quantity = 3
parent = 1
materialID = 59
type = Cylinder
Aero Mass = 0.910000
Thermal Mass = 0.910000
Diameter/Width = 0.030000
Length = 0.225000

name = ST
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 0.310000
Thermal Mass = 0.310000
Diameter/Width = 0.050000
Length = 0.050000
Height = 0.050000

name = ST Bracket
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 0.170000
Thermal Mass = 0.170000
Diameter/Width = 0.050000
Length = 0.051000
Height = 0.025000

name = IMU

quantity = 3
parent = 1
materialID = 19
type = Box
Aero Mass = 0.010000
Thermal Mass = 0.010000
Diameter/Width = 0.010000
Length = 0.024000
Height = 0.010000

name = Magnetometers
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.037000
Thermal Mass = 0.037000
Diameter/Width = 0.040000
Length = 0.050000
Height = 0.025000

name = ST Compute
quantity = 4
parent = 1
materialID = 23
type = Box
Aero Mass = 0.277000
Thermal Mass = 0.277000
Diameter/Width = 0.075000
Length = 0.075000
Height = 0.030000

name = PPU
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.037500

name = Tanks

quantity = 2
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 4.110000
Thermal Mass = 4.110000
Diameter/Width = 0.265000
Length = 0.750000

name = Plumbing
quantity = 18
parent = 1
materialID = 58
type = Cylinder
Aero Mass = 0.004000
Thermal Mass = 0.004000
Diameter/Width = 0.005000
Length = 0.050000

name = Brackets
quantity = 8
parent = 1
materialID = 5
type = Box
Aero Mass = 0.134000
Thermal Mass = 0.134000
Diameter/Width = 0.040000
Length = 0.050000
Height = 0.030000

name = Thruster
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.870000
Thermal Mass = 0.870000
Diameter/Width = 0.090000
Length = 0.040000

name = Radiator
quantity = 1
parent = 1
materialID = 5

type = Flat Plate
Aero Mass = 0.410000
Thermal Mass = 0.410000
Diameter/Width = 0.125000
Length = 0.125000

name = Pressure Components
quantity = 4
parent = 1
materialID = 58
type = Cylinder
Aero Mass = 0.251000
Thermal Mass = 0.251000
Diameter/Width = 0.025000
Length = 0.075000

name = Mechanical Misc
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.143000
Thermal Mass = 0.143000
Diameter/Width = 0.050000
Length = 0.050000
Height = 0.025000

name = Prop Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.033000
Thermal Mass = 0.033000
Diameter/Width = 0.005000
Length = 0.200000

name = Payload Deck
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.463000
Thermal Mass = 0.463000

Diameter/Width = 0.550000
Length = 0.550000
Height = 0.015000

name = Payload Closeout Panels
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 1.206000
Thermal Mass = 1.206000
Diameter/Width = 0.520000
Length = 0.570000
Height = 0.030000

name = Payload Bracket
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 4.910000
Thermal Mass = 4.910000
Diameter/Width = 0.100000
Length = 0.250000
Height = 0.075000

name = Payload Support Structure
quantity = 2
parent = 1
materialID = 8
type = Box
Aero Mass = 2.090000
Thermal Mass = 2.090000
Diameter/Width = 0.060000
Length = 0.250000
Height = 0.055000

name = M1
quantity = 1
parent = 1
materialID = 71
type = Box
Aero Mass = 12.775000
Thermal Mass = 12.775000

Diameter/Width = 0.375000
Length = 0.375000
Height = 0.036000

name = Actuator Bar
quantity = 9
parent = 1
materialID = 66
type = Box
Aero Mass = 0.002000
Thermal Mass = 0.002000
Diameter/Width = 0.030000
Length = 0.080000
Height = 0.000400

name = M1 Flexure
quantity = 9
parent = 1
materialID = 66
type = Box
Aero Mass = 0.041300
Thermal Mass = 0.041300
Diameter/Width = 0.020000
Length = 0.070000
Height = 0.010000

name = AI Actuator Base
quantity = 9
parent = 1
materialID = 5
type = Box
Aero Mass = 0.095700
Thermal Mass = 0.095700
Diameter/Width = 0.030000
Length = 0.080000
Height = 0.020000

name = Telescope Main Tube
quantity = 1
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 11.934000
Thermal Mass = 11.934000

Diameter/Width = 0.500000
Length = 0.500000

name = Telescope Main Back Rib
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 7.375000
Thermal Mass = 7.375000
Diameter/Width = 0.600000
Length = 0.600000
Height = 0.100000

name = Metering Rods
quantity = 3
parent = 1
materialID = 71
type = Cylinder
Aero Mass = 0.381900
Thermal Mass = 0.381900
Diameter/Width = 0.025000
Length = 0.502000

name = Spider Main Chassis
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.016000
Thermal Mass = 1.016000
Diameter/Width = 0.200000
Length = 0.200000
Height = 0.010000

name = Spider Hood
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.000000
Thermal Mass = 0.000000
Diameter/Width = 0.150000
Length = 0.150000

Height = 0.040000

name = M2

quantity = 1

parent = 1

materialID = 71

type = Box

Aero Mass = 0.795900

Thermal Mass = 0.795900

Diameter/Width = 0.110000

Length = 0.110000

Height = 0.030000

name = Spider Cover

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 0.062400

Thermal Mass = 0.062400

Diameter/Width = 0.152000

Length = 0.152000

Height = 0.002000

name = M2 Front Support

quantity = 1

parent = 1

materialID = 72

type = Box

Aero Mass = 0.045600

Thermal Mass = 0.045600

Diameter/Width = 0.015000

Length = 0.026000

Height = 0.015000

name = M1 Heater Plate

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 1.711000

Thermal Mass = 1.711000

Diameter/Width = 0.350000

Length = 0.350000

Height = 0.006000

name = Bipod Flexures

quantity = 3

parent = 1

materialID = 66

type = Box

Aero Mass = 0.282700

Thermal Mass = 0.282700

Diameter/Width = 0.100000

Length = 0.100000

Height = 0.008000

name = Tail Back Cover

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 3.000000

Thermal Mass = 3.000000

Diameter/Width = 0.537000

Length = 0.537000

Height = 0.004000

name = Center Hood

quantity = 1

parent = 1

materialID = 5

type = Cylinder

Aero Mass = 0.215600

Thermal Mass = 0.215600

Diameter/Width = 0.136000

Length = 0.230000

name = Tail Chassis

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 7.000700

Thermal Mass = 2.228900

Diameter/Width = 0.190000

Length = 0.374000

Height = 0.012000

name = Fold Mirror Chassis
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.325900
Thermal Mass = 0.417100
Diameter/Width = 0.109000
Length = 0.146000
Height = 0.010000

name = Fold Mirror
quantity = 2
parent = 94
materialID = 71
type = Box
Aero Mass = 0.314800
Thermal Mass = 0.314800
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.016000

name = Fold Mirror Housing
quantity = 2
parent = 94
materialID = 5
type = Box
Aero Mass = 0.086800
Thermal Mass = 0.086800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Fold Mirror Cover
quantity = 2
parent = 94
materialID = 5
type = Box
Aero Mass = 0.052800
Thermal Mass = 0.052800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Lens Assembly
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.063500
Thermal Mass = 0.196800
Diameter/Width = 0.060000
Length = 0.075000
Height = 0.031000

name = Lens 1
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.135000
Thermal Mass = 0.135000
Diameter/Width = 0.092000
Length = 0.092000
Height = 0.010000

name = Lens 2 Housing
quantity = 1
parent = 98
materialID = 5
type = Box
Aero Mass = 0.219000
Thermal Mass = 0.219000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.014000

name = Lens 2
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.123600
Thermal Mass = 0.123600
Diameter/Width = 0.077000
Length = 0.077000
Height = 0.013600

name = Lens 3
quantity = 1
parent = 98
materialID = -2
type = Box
Aero Mass = 0.230700
Thermal Mass = 0.230700
Diameter/Width = 0.085400
Length = 0.085400
Height = 0.016000

name = Lens 3 Housing
quantity = 1
parent = 98
materialID = 5
type = Box
Aero Mass = 0.054900
Thermal Mass = 0.054900
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.012500

name = Lens 4
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.103500
Thermal Mass = 0.103500
Diameter/Width = 0.089000
Length = 0.089000
Height = 0.006900

name = Focus House
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.099400
Thermal Mass = 0.099400
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.015000

name = Detector
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.783000
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det and Lens Cover
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.058600
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det House Flex
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 1.389900
Thermal Mass = 1.389900
Diameter/Width = 0.160000
Length = 0.388000
Height = 0.010000

name = Det Window House
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.035900
Thermal Mass = 0.035900
Diameter/Width = 0.106000
Length = 0.106000
Height = 0.009000

name = Rod Det Flex
quantity = 2
parent = 106
materialID = -4
type = Box
Aero Mass = 0.120000
Thermal Mass = 0.120000
Diameter/Width = 0.060000
Length = 0.141000
Height = 0.005000

name = Focus Mechanism
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.500000
Thermal Mass = 0.500000
Diameter/Width = 0.078000
Length = 0.088000
Height = 0.030000

name = Star Tracker Base
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.258300
Thermal Mass = 0.258300
Diameter/Width = 0.101000
Length = 0.120000
Height = 0.010000

*****OUTPUT****

Item Number = 1

name = Pelican
Demise Altitude = 78.003301
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = LVI Structure Deck

Demise Altitude = 70.643604
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Brackets
Demise Altitude = 75.579774
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Deck
Demise Altitude = 76.424548
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Panels
Demise Altitude = 77.020464
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Hardware
Demise Altitude = 72.688352
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Brackets
Demise Altitude = 73.357059
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SA Release Mechanism
Demise Altitude = 74.246442
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GSE Interface Panel
Demise Altitude = 76.775286
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = MLI Blankets
Demise Altitude = 77.794350
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Heat Straps
Demise Altitude = 74.371263
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Heaters
Demise Altitude = 77.117325
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Temp Sensors
Demise Altitude = 76.726748
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = LVI Ring
Demise Altitude = 77.098695
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Battery Pack
Demise Altitude = 73.151971
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Z+Y
Demise Altitude = 76.988434
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Z-Y
Demise Altitude = 76.988434
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Y
Demise Altitude = 76.777085
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel -Y
Demise Altitude = 76.777085
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Electronics
Demise Altitude = 76.324784
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Board
Demise Altitude = 74.913637
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Board
Demise Altitude = 74.913637
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Control Board
Demise Altitude = 74.913637
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker

Demise Altitude = 76.535821
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker Boards
Demise Altitude = 75.213613
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Box
Demise Altitude = 68.466999
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetism Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Flight Computer
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = TTC Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Nav Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Radio Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Avionics Switch Board
Demise Altitude = 67.352112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Box
Demise Altitude = 68.900839
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Storage Manager Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SSD Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Ka Radio Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Edge Compute Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Switch Board
Demise Altitude = 67.776884
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF TTC Antennas
Demise Altitude = 76.573250
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Payload Antenna
Demise Altitude = 74.267558
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Harness
Demise Altitude = 77.635500
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Brackets
Demise Altitude = 74.297762
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna LGA
Demise Altitude = 75.545420
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna HGA
Demise Altitude = 74.929921
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Tx Antenna
Demise Altitude = 75.492440
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GPS Antennas

Demise Altitude = 77.160584
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Upconverter
Demise Altitude = 74.271913
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Power Amplifier
Demise Altitude = 71.890782
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Transceiver
Demise Altitude = 72.659208
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Harness
Demise Altitude = 77.635500
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Bracket
Demise Altitude = 77.036112
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Antenna
Demise Altitude = 77.742843
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheels
Demise Altitude = 73.168419
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = RW Flywheel
Demise Altitude = 55.790550
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Electronics
Demise Altitude = 71.130439
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bearings
Demise Altitude = 72.634841
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bracket
Demise Altitude = 71.667991
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetorquer
Demise Altitude = 69.979788
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST
Demise Altitude = 74.443627
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Bracket
Demise Altitude = 75.269429
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = IMU
Demise Altitude = 77.321543
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetometers
Demise Altitude = 77.325658
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Compute
Demise Altitude = 75.495093
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = PPU
Demise Altitude = 72.161180
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tanks
Demise Altitude = 77.185078
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Plumbing
Demise Altitude = 77.309208
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Brackets
Demise Altitude = 75.813722
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Thruster

Demise Altitude = 64.183061
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Radiator
Demise Altitude = 75.339978
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Pressure Components
Demise Altitude = 69.525516
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Mechanical Misc
Demise Altitude = 75.643570
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Harness
Demise Altitude = 77.317418
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Deck
Demise Altitude = 77.677429
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Closeout Panels
Demise Altitude = 77.178162
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Bracket
Demise Altitude = 69.078385
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Payload Support Structure

Demise Altitude = 72.330938

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = M1

Demise Altitude = 0.000000

Debris Casualty Area = 0.740365

Impact Kinetic Energy = 22254.138824

name = Actuator Bar

Demise Altitude = 77.905609

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = M1 Flexure

Demise Altitude = 75.986661

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = AI Actuator Base

Demise Altitude = 76.578767

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Telescope Main Tube

Demise Altitude = 73.462933

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Telescope Main Back Rib

Demise Altitude = 73.821590

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Metering Rods
Demise Altitude = 75.086965
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Main Chassis
Demise Altitude = 74.945107
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Hood
Demise Altitude = 78.003301
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2
Demise Altitude = 69.557766
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Cover
Demise Altitude = 77.708480
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2 Front Support
Demise Altitude = 74.946044
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1 Heater Plate
Demise Altitude = 75.591388
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Bipod Flexures

Demise Altitude = 72.975138
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Back Cover
Demise Altitude = 75.599605
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Center Hood
Demise Altitude = 77.436094
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Chassis
Demise Altitude = 74.619781
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Chassis
Demise Altitude = 72.558102
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror
Demise Altitude = 67.334105
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Housing
Demise Altitude = 71.874154
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Cover
Demise Altitude = 72.146533
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens Assembly

Demise Altitude = 72.877883

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 1

Demise Altitude = 0.000000

Debris Casualty Area = 0.377404

Impact Kinetic Energy = 40.037508

name = Lens 2 Housing

Demise Altitude = 71.186933

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 2

Demise Altitude = 0.000000

Debris Casualty Area = 0.363084

Impact Kinetic Energy = 43.128982

name = Lens 3

Demise Altitude = 71.548079

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 3 Housing

Demise Altitude = 72.389762

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 4

Demise Altitude = 0.000000

Debris Casualty Area = 0.372572

Impact Kinetic Energy = 26.491181

name = Focus House
Demise Altitude = 73.757419
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Detector
Demise Altitude = 74.177537
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det and Lens Cover
Demise Altitude = 73.722127
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det House Flex
Demise Altitude = 71.477949
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det Window House
Demise Altitude = 73.913750
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Rod Det Flex
Demise Altitude = 0.000000
Debris Casualty Area = 0.752354
Impact Kinetic Energy = 36.034057

name = Focus Mechanism
Demise Altitude = 70.783042
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

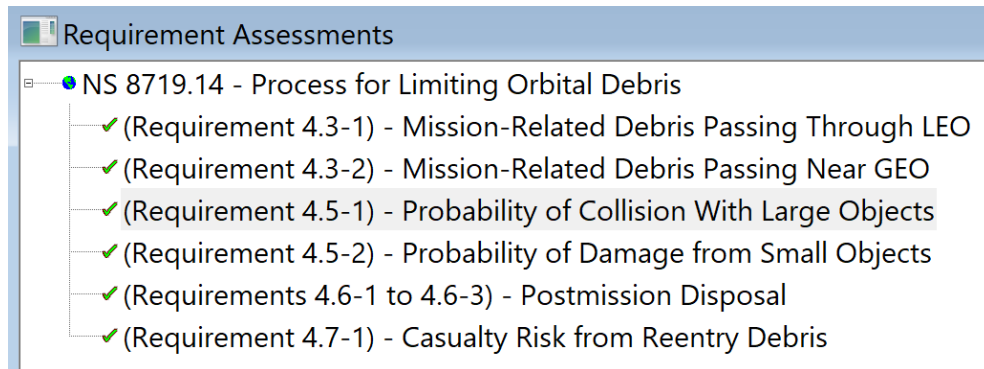
name = Star Tracker Base

Demise Altitude = 76.268109
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

===== End of Requirement 4.7-1 =====
07 15 2026; 15:51:40PM Project Data Saved To File

53° Operational and Transfer Orbits

440 km x 440 km x 53° DAS GUI Results



440 km x 440 km x 53° DAS Logs (Operational Orbit)

```
07 15 2026; 16:37:56PM    Activity Log Started
07 15 2026; 16:37:56PM    Opened Project
C:\Users\dominic\Documents\DAS3.2.7\Pelican_V1 Nested\
07 15 2026; 16:38:19PM    Project Data Saved To File
07 15 2026; 16:38:19PM    Mission Editor Changes Applied
07 15 2026; 16:38:19PM    Project Data Saved To File
07 15 2026; 16:38:19PM    Project Data Saved To File
07 15 2026; 16:38:22PM    Processing Requirement 4.3-1:    Return Status : Not Run
```

```
=====
No Project Data Available
=====
```

```
===== End of Requirement 4.3-1 =====
07 15 2026; 16:38:24PM    Processing Requirement 4.3-2: Return Status : Passed
```

```
=====
No Project Data Available
=====
```

```
===== End of Requirement 4.3-2 =====
07 15 2026; 16:45:40PM    Processing Requirement 4.5-1:    Return Status : Passed
```

```
=====
Run Data
=====
```

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload
Perigee Altitude = 440.000 (km)
Apogee Altitude = 440.000 (km)
Inclination = 53.000 (deg)
RAAN = 0.000 (deg)
Argument of Perigee = 0.000 (deg)
Mean Anomaly = 0.000 (deg)
Final Area-To-Mass Ratio = 0.0114 (m²/kg)
Start Year = 2026.000 (yr)
Initial Mass = 195.500 (kg)
Final Mass = 182.500 (kg)
Duration = 5.000 (yr)
Station-Kept = True
Abandoned = True
Long-Term Reentry = False

****OUTPUT****

Collision Probability = 2.9175E-05
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

=====

===== End of Requirement 4.5-1 =====

07 15 2026; 16:45:43PM Project Data Saved To File
07 15 2026; 16:45:44PM Requirement 4.5-2: Compliant

===== End of Requirement 4.5-2 =====

07 15 2026; 16:45:45PM Processing Requirement 4.6 Return Status : Passed

=====

Project Data

=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload

Perigee Altitude = 440.000000 (km)
Apogee Altitude = 440.000000 (km)
Inclination = 53.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.011400 (m²/kg)
Start Year = 2026.000000 (yr)
Initial Mass = 195.500000 (kg)
Final Mass = 182.500000 (kg)
Duration = 5.000000 (yr)
Station Kept = True
Abandoned = True
PMD Perigee Altitude = 440.000000 (km)
PMD Apogee Altitude = 440.000000 (km)
PMD Inclination = 53.000000 (deg)
PMD RAAN = 0.000000 (deg)
PMD Argument of Perigee = 0.000000 (deg)
PMD Mean Anomaly = 0.000000 (deg)
Long-Term Reentry = False

****OUTPUT****

Suggested Perigee Altitude = 440.000000 (km)
Suggested Apogee Altitude = 440.000000 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2033 (yr)
Requirement = 61
Compliance Status = Pass

=====

===== End of Requirement 4.6 =====
07 15 2026; 16:45:53PM *****Processing Requirement 4.7-1
Return Status : Passed

*******INPUT******

Item Number = 1

name = Pelican
quantity = 1
parent = 0

materialID = 5
type = Box
Aero Mass = 182.500000
Thermal Mass = 182.500000
Diameter/Width = 0.600000
Length = 1.000000
Height = 0.600000

name = LVI Structure Deck
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 9.220000
Thermal Mass = 9.220000
Diameter/Width = 0.550000
Length = 0.550000
Height = 0.012000

name = Structural Brackets
quantity = 16
parent = 1
materialID = 8
type = Box
Aero Mass = 0.218000
Thermal Mass = 0.218000
Diameter/Width = 0.050000
Length = 0.080000
Height = 0.021000

name = Avionics Deck
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 2.600000
Thermal Mass = 2.600000
Diameter/Width = 0.600000
Length = 0.600000
Height = 0.050000

name = Structural Panels
quantity = 4
parent = 1

materialID = 8
type = Box
Aero Mass = 3.050000
Thermal Mass = 2.200000
Diameter/Width = 0.600000
Length = 0.800000
Height = 0.030000

name = Hardware
quantity = 200
parent = 5
materialID = 54
type = Cylinder
Aero Mass = 0.017000
Thermal Mass = 0.017000
Diameter/Width = 0.012000
Length = 0.020000

name = Avionics Brackets
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.797000
Thermal Mass = 0.797000
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.025000

name = SA Release Mechanism
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.388000
Thermal Mass = 0.388000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = GSE Interface Panel
quantity = 1
parent = 1
materialID = 5

type = Flat Plate
Aero Mass = 0.067000
Thermal Mass = 0.067000
Diameter/Width = 0.065000
Length = 0.065000

name = MLI Blankets
quantity = 5
parent = 1
materialID = 44
type = Flat Plate
Aero Mass = 0.142000
Thermal Mass = 0.142000
Diameter/Width = 0.100000
Length = 0.200000

name = Heat Straps
quantity = 4
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.130000
Thermal Mass = 0.130000
Diameter/Width = 0.020000
Length = 0.050000

name = Heaters
quantity = 20
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.026000
Thermal Mass = 0.026000
Diameter/Width = 0.025000
Length = 0.050000

name = Temp Sensors
quantity = 25
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.010000

Length = 0.020000

name = LVI Ring

quantity = 1

parent = 1

materialID = 8

type = Flat Plate

Aero Mass = 0.704000

Thermal Mass = 0.704000

Diameter/Width = 0.375000

Length = 0.375000

name = Battery Pack

quantity = 4

parent = 1

materialID = 8

type = Box

Aero Mass = 1.460000

Thermal Mass = 1.460000

Diameter/Width = 0.078000

Length = 0.172000

Height = 0.052000

name = Solar Panel +Z+Y

quantity = 1

parent = 1

materialID = 5

type = Flat Plate

Aero Mass = 2.260000

Thermal Mass = 2.260000

Diameter/Width = 0.550000

Length = 0.950000

name = Solar Panel +Z-Y

quantity = 1

parent = 1

materialID = 5

type = Flat Plate

Aero Mass = 2.260000

Thermal Mass = 2.260000

Diameter/Width = 0.550000

Length = 0.950000

name = Solar Panel +Y

quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.890000
Thermal Mass = 2.890000
Diameter/Width = 0.625000
Length = 0.950000

name = Solar Panel -Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.890000
Thermal Mass = 2.890000
Diameter/Width = 0.625000
Length = 0.950000

name = Power Electronics
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 2.250000
Thermal Mass = 1.500000
Diameter/Width = 0.300000
Length = 0.300000
Height = 0.100000

name = RW Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Prop Board
quantity = 1
parent = 20

materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Power Control Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Peak Power Tracker
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.000000
Diameter/Width = 0.200000
Length = 0.200000
Height = 0.150000

name = Peak Power Tracker Boards
quantity = 2
parent = 24
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Box
quantity = 1
parent = 1

materialID = 8
type = Box
Aero Mass = 8.780000
Thermal Mass = 6.530000
Diameter/Width = 0.150000
Length = 0.325000
Height = 0.050000

name = Magnetism Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Flight Computer
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = TTC Board
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Nav Board
quantity = 2
parent = 26

materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = C Band Radio Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Switch Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Payload Box
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 7.820000
Thermal Mass = 5.820000
Diameter/Width = 0.150000
Length = 0.300000
Height = 0.050000

name = Storage Manager Board
quantity = 1
parent = 33

materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = SSD Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Ka Radio Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Edge Compute Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Payload Switch Board
quantity = 1
parent = 33

materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = RF TTC Antennas
quantity = 10
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.040000
Length = 0.050000

name = RF Payload Antenna
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 1.440000
Thermal Mass = 1.440000
Diameter/Width = 0.125000
Length = 0.350000

name = RF Harness
quantity = 12
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000
Length = 0.500000

name = RF Brackets
quantity = 6
parent = 1
materialID = 8
type = Box
Aero Mass = 0.390000

Thermal Mass = 0.390000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = RF C Band Rx Antenna LGA
quantity = 3
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.082000
Thermal Mass = 0.082000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Rx Antenna HGA
quantity = 1
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.104000
Thermal Mass = 0.104000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Tx Antenna
quantity = 1
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.084000
Thermal Mass = 0.084000
Diameter/Width = 0.030000
Length = 0.030000

name = GPS Antennas
quantity = 2
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.050000
Length = 0.075000

name = C Band Upconverter
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.600000
Thermal Mass = 0.600000
Diameter/Width = 0.050000
Length = 0.100000
Height = 0.050000

name = C Band Power Amplifier
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.200000
Thermal Mass = 1.200000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.050000

name = L Band Transceiver
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.100000
Thermal Mass = 1.100000
Diameter/Width = 0.065000
Length = 0.100000
Height = 0.065000

name = L Band Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000
Length = 0.500000

name = L Band Bracket
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.200000
Thermal Mass = 0.200000
Diameter/Width = 0.080000
Length = 0.200000
Height = 0.010000

name = L Band Antenna
quantity = 1
parent = 1
materialID = 77
type = Box
Aero Mass = 0.085000
Thermal Mass = 0.085000
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.010000

name = Reaction Wheels
quantity = 4
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 3.174000
Thermal Mass = 1.100000
Diameter/Width = 0.120000
Length = 0.105000

name = RW Flywheel
quantity = 4
parent = 53
materialID = 58
type = Cylinder
Aero Mass = 1.800000
Thermal Mass = 1.800000
Diameter/Width = 0.100000
Length = 0.030000

name = RW Electronics
quantity = 4

parent = 53
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.085000
Height = 0.020000

name = RW Bearings
quantity = 8
parent = 53
materialID = 54
type = Flat Plate
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.040000
Length = 0.040000

name = RW Bracket
quantity = 4
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 0.509000
Thermal Mass = 0.509000
Diameter/Width = 0.080000
Length = 0.040000

name = Magnetorquer
quantity = 3
parent = 1
materialID = 59
type = Cylinder
Aero Mass = 0.910000
Thermal Mass = 0.910000
Diameter/Width = 0.030000
Length = 0.225000

name = ST
quantity = 4
parent = 1
materialID = 5
type = Box

Aero Mass = 0.310000
Thermal Mass = 0.310000
Diameter/Width = 0.050000
Length = 0.050000
Height = 0.050000

name = ST Bracket
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 0.170000
Thermal Mass = 0.170000
Diameter/Width = 0.050000
Length = 0.051000
Height = 0.025000

name = IMU
quantity = 3
parent = 1
materialID = 19
type = Box
Aero Mass = 0.010000
Thermal Mass = 0.010000
Diameter/Width = 0.010000
Length = 0.024000
Height = 0.010000

name = Magnetometers
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.037000
Thermal Mass = 0.037000
Diameter/Width = 0.040000
Length = 0.050000
Height = 0.025000

name = ST Compute
quantity = 4
parent = 1
materialID = 23
type = Box

Aero Mass = 0.277000
Thermal Mass = 0.277000
Diameter/Width = 0.075000
Length = 0.075000
Height = 0.030000

name = PPU
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.037500

name = Tanks
quantity = 2
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 4.110000
Thermal Mass = 4.110000
Diameter/Width = 0.265000
Length = 0.750000

name = Plumbing
quantity = 18
parent = 1
materialID = 58
type = Cylinder
Aero Mass = 0.004000
Thermal Mass = 0.004000
Diameter/Width = 0.005000
Length = 0.050000

name = Brackets
quantity = 8
parent = 1
materialID = 5
type = Box
Aero Mass = 0.134000
Thermal Mass = 0.134000

Diameter/Width = 0.040000
Length = 0.050000
Height = 0.030000

name = Thruster
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.870000
Thermal Mass = 0.870000
Diameter/Width = 0.090000
Length = 0.040000

name = Radiator
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 0.410000
Thermal Mass = 0.410000
Diameter/Width = 0.125000
Length = 0.125000

name = Pressure Components
quantity = 4
parent = 1
materialID = 58
type = Cylinder
Aero Mass = 0.251000
Thermal Mass = 0.251000
Diameter/Width = 0.025000
Length = 0.075000

name = Mechanical Misc
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.143000
Thermal Mass = 0.143000
Diameter/Width = 0.050000
Length = 0.050000
Height = 0.025000

name = Prop Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.033000
Thermal Mass = 0.033000
Diameter/Width = 0.005000
Length = 0.200000

name = Payload Deck
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.463000
Thermal Mass = 0.463000
Diameter/Width = 0.550000
Length = 0.550000
Height = 0.015000

name = Payload Closeout Panels
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 1.206000
Thermal Mass = 1.206000
Diameter/Width = 0.520000
Length = 0.570000
Height = 0.030000

name = Payload Bracket
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 4.910000
Thermal Mass = 4.910000
Diameter/Width = 0.100000
Length = 0.250000
Height = 0.075000

name = Payload Support Structure
quantity = 2
parent = 1
materialID = 8
type = Box
Aero Mass = 2.090000
Thermal Mass = 2.090000
Diameter/Width = 0.060000
Length = 0.250000
Height = 0.055000

name = M1
quantity = 1
parent = 1
materialID = 71
type = Box
Aero Mass = 12.775000
Thermal Mass = 12.775000
Diameter/Width = 0.375000
Length = 0.375000
Height = 0.036000

name = Actuator Bar
quantity = 9
parent = 1
materialID = 66
type = Box
Aero Mass = 0.002000
Thermal Mass = 0.002000
Diameter/Width = 0.030000
Length = 0.080000
Height = 0.000400

name = M1 Flexure
quantity = 9
parent = 1
materialID = 66
type = Box
Aero Mass = 0.041300
Thermal Mass = 0.041300
Diameter/Width = 0.020000
Length = 0.070000
Height = 0.010000

name = AI Actuator Base
quantity = 9
parent = 1
materialID = 5
type = Box
Aero Mass = 0.095700
Thermal Mass = 0.095700
Diameter/Width = 0.030000
Length = 0.080000
Height = 0.020000

name = Telescope Main Tube
quantity = 1
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 11.934000
Thermal Mass = 11.934000
Diameter/Width = 0.500000
Length = 0.500000

name = Telescope Main Back Rib
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 7.375000
Thermal Mass = 7.375000
Diameter/Width = 0.600000
Length = 0.600000
Height = 0.100000

name = Metering Rods
quantity = 3
parent = 1
materialID = 71
type = Cylinder
Aero Mass = 0.381900
Thermal Mass = 0.381900
Diameter/Width = 0.025000
Length = 0.502000

name = Spider Main Chassis
quantity = 1

parent = 1
materialID = 5
type = Box
Aero Mass = 1.016000
Thermal Mass = 1.016000
Diameter/Width = 0.200000
Length = 0.200000
Height = 0.010000

name = Spider Hood
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.000000
Thermal Mass = 0.000000
Diameter/Width = 0.150000
Length = 0.150000
Height = 0.040000

name = M2
quantity = 1
parent = 1
materialID = 71
type = Box
Aero Mass = 0.795900
Thermal Mass = 0.795900
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.030000

name = Spider Cover
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.062400
Thermal Mass = 0.062400
Diameter/Width = 0.152000
Length = 0.152000
Height = 0.002000

name = M2 Front Support
quantity = 1

parent = 1
materialID = 72
type = Box
Aero Mass = 0.045600
Thermal Mass = 0.045600
Diameter/Width = 0.015000
Length = 0.026000
Height = 0.015000

name = M1 Heater Plate
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.711000
Thermal Mass = 1.711000
Diameter/Width = 0.350000
Length = 0.350000
Height = 0.006000

name = Bipod Flexures
quantity = 3
parent = 1
materialID = 66
type = Box
Aero Mass = 0.282700
Thermal Mass = 0.282700
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.008000

name = Tail Back Cover
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 3.000000
Thermal Mass = 3.000000
Diameter/Width = 0.537000
Length = 0.537000
Height = 0.004000

name = Center Hood
quantity = 1

parent = 1
materialID = 5
type = Cylinder
Aero Mass = 0.215600
Thermal Mass = 0.215600
Diameter/Width = 0.136000
Length = 0.230000

name = Tail Chassis
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 7.000700
Thermal Mass = 2.228900
Diameter/Width = 0.190000
Length = 0.374000
Height = 0.012000

name = Fold Mirror Chassis
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.325900
Thermal Mass = 0.417100
Diameter/Width = 0.109000
Length = 0.146000
Height = 0.010000

name = Fold Mirror
quantity = 2
parent = 94
materialID = 71
type = Box
Aero Mass = 0.314800
Thermal Mass = 0.314800
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.016000

name = Fold Mirror Housing
quantity = 2
parent = 94

materialID = 5
type = Box
Aero Mass = 0.086800
Thermal Mass = 0.086800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Fold Mirror Cover
quantity = 2
parent = 94
materialID = 5
type = Box
Aero Mass = 0.052800
Thermal Mass = 0.052800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Lens Assembly
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.063500
Thermal Mass = 0.196800
Diameter/Width = 0.060000
Length = 0.075000
Height = 0.031000

name = Lens 1
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.135000
Thermal Mass = 0.135000
Diameter/Width = 0.092000
Length = 0.092000
Height = 0.010000

name = Lens 2 Housing
quantity = 1
parent = 98

materialID = 5
type = Box
Aero Mass = 0.219000
Thermal Mass = 0.219000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.014000

name = Lens 2
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.123600
Thermal Mass = 0.123600
Diameter/Width = 0.077000
Length = 0.077000
Height = 0.013600

name = Lens 3
quantity = 1
parent = 98
materialID = -2
type = Box
Aero Mass = 0.230700
Thermal Mass = 0.230700
Diameter/Width = 0.085400
Length = 0.085400
Height = 0.016000

name = Lens 3 Housing
quantity = 1
parent = 98
materialID = 5
type = Box
Aero Mass = 0.054900
Thermal Mass = 0.054900
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.012500

name = Lens 4
quantity = 1
parent = 98

materialID = -3
type = Box
Aero Mass = 0.103500
Thermal Mass = 0.103500
Diameter/Width = 0.089000
Length = 0.089000
Height = 0.006900

name = Focus House
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.099400
Thermal Mass = 0.099400
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.015000

name = Detector
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.783000
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det and Lens Cover
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.058600
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det House Flex
quantity = 1
parent = 106

materialID = 5
type = Box
Aero Mass = 1.389900
Thermal Mass = 1.389900
Diameter/Width = 0.160000
Length = 0.388000
Height = 0.010000

name = Det Window House
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.035900
Thermal Mass = 0.035900
Diameter/Width = 0.106000
Length = 0.106000
Height = 0.009000

name = Rod Det Flex
quantity = 2
parent = 106
materialID = -4
type = Box
Aero Mass = 0.120000
Thermal Mass = 0.120000
Diameter/Width = 0.060000
Length = 0.141000
Height = 0.005000

name = Focus Mechanism
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.500000
Thermal Mass = 0.500000
Diameter/Width = 0.078000
Length = 0.088000
Height = 0.030000

name = Star Tracker Base
quantity = 2
parent = 1

materialID = 5
type = Box
Aero Mass = 0.258300
Thermal Mass = 0.258300
Diameter/Width = 0.101000
Length = 0.120000
Height = 0.010000

*****OUTPUT****

Item Number = 1

name = Pelican
Demise Altitude = 78.000344
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = LVI Structure Deck
Demise Altitude = 69.134974
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Brackets
Demise Altitude = 75.263805
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Deck
Demise Altitude = 76.150653
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Panels
Demise Altitude = 76.859471
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Hardware
Demise Altitude = 71.445270
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Avionics Brackets

Demise Altitude = 72.736673

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = SA Release Mechanism

Demise Altitude = 73.782517

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = GSE Interface Panel

Demise Altitude = 76.615290

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = MLI Blankets

Demise Altitude = 77.761621

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Heat Straps

Demise Altitude = 73.891636

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Heaters

Demise Altitude = 76.985060

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Temp Sensors

Demise Altitude = 76.551271

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = LVI Ring
Demise Altitude = 76.948245
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Battery Pack
Demise Altitude = 72.534383
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Z+Y
Demise Altitude = 76.812750
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Z-Y
Demise Altitude = 76.812750
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel +Y
Demise Altitude = 76.562714
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Solar Panel -Y
Demise Altitude = 76.562714
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Electronics
Demise Altitude = 76.079480
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Board

Demise Altitude = 74.388640
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Board
Demise Altitude = 74.388640
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Control Board
Demise Altitude = 74.388640
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker
Demise Altitude = 76.329164
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker Boards
Demise Altitude = 74.767583
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Box
Demise Altitude = 67.255217
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetics Board
Demise Altitude = 65.920564
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Flight Computer
Demise Altitude = 65.920564
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = TTC Board

Demise Altitude = 65.920564

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Nav Board

Demise Altitude = 65.920564

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = C Band Radio Board

Demise Altitude = 65.920564

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Avionics Switch Board

Demise Altitude = 65.920564

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Payload Box

Demise Altitude = 67.749973

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Storage Manager Board

Demise Altitude = 66.417597

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = SSD Board

Demise Altitude = 66.417597

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Ka Radio Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Edge Compute Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Switch Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF TTC Antennas
Demise Altitude = 76.361062
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Payload Antenna
Demise Altitude = 73.727578
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Harness
Demise Altitude = 77.581296
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Brackets
Demise Altitude = 73.834471
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna LGA

Demise Altitude = 75.207029
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna HGA
Demise Altitude = 74.513321
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Tx Antenna
Demise Altitude = 75.142297
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GPS Antennas
Demise Altitude = 77.027852
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Upconverter
Demise Altitude = 73.817753
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Power Amplifier
Demise Altitude = 71.105628
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Transceiver
Demise Altitude = 72.013782
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Harness
Demise Altitude = 77.581296
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = L Band Bracket
Demise Altitude = 76.905318
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Antenna
Demise Altitude = 77.711189
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheels
Demise Altitude = 72.621427
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Flywheel
Demise Altitude = 53.222837
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Electronics
Demise Altitude = 70.301595
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bearings
Demise Altitude = 72.008158
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bracket
Demise Altitude = 70.905529
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetorquer
Demise Altitude = 68.723748
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST
Demise Altitude = 74.003998
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Bracket
Demise Altitude = 74.922885
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = IMU
Demise Altitude = 77.222098
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetometers
Demise Altitude = 77.237098
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Compute
Demise Altitude = 75.147290
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = PPU
Demise Altitude = 71.405924
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tanks

Demise Altitude = 77.082878
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Plumbing
Demise Altitude = 77.165754
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Brackets
Demise Altitude = 75.538205
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Thruster
Demise Altitude = 62.764242
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Radiator
Demise Altitude = 74.968421
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Pressure Components
Demise Altitude = 68.201819
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Mechanical Misc
Demise Altitude = 75.344165
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Harness
Demise Altitude = 77.223387
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Payload Deck
Demise Altitude = 77.622028
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Closeout Panels
Demise Altitude = 77.043584
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Bracket
Demise Altitude = 67.967695
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Support Structure
Demise Altitude = 71.620715
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1
Demise Altitude = 0.000000
Debris Casualty Area = 0.740365
Impact Kinetic Energy = 22248.250709

name = Actuator Bar
Demise Altitude = 77.882088
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1 Flexure
Demise Altitude = 75.635303
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = AI Actuator Base
Demise Altitude = 76.404777
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Telescope Main Tube
Demise Altitude = 72.843804
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Telescope Main Back Rib
Demise Altitude = 73.036170
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Metering Rods
Demise Altitude = 74.652754
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Main Chassis
Demise Altitude = 74.495632
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Hood
Demise Altitude = 78.000344
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2
Demise Altitude = 68.148851
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Cover

Demise Altitude = 77.669111
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2 Front Support
Demise Altitude = 74.546453
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1 Heater Plate
Demise Altitude = 75.203498
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Bipod Flexures
Demise Altitude = 71.623883
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Back Cover
Demise Altitude = 75.171973
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Center Hood
Demise Altitude = 77.357010
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Chassis
Demise Altitude = 74.198121
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Chassis
Demise Altitude = 71.868604
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Fold Mirror

Demise Altitude = 65.246566

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Fold Mirror Housing

Demise Altitude = 71.062010

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Fold Mirror Cover

Demise Altitude = 71.382997

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens Assembly

Demise Altitude = 72.242705

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 1

Demise Altitude = 0.000000

Debris Casualty Area = 0.377404

Impact Kinetic Energy = 40.023956

name = Lens 2 Housing

Demise Altitude = 70.287622

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 2

Demise Altitude = 0.000000

Debris Casualty Area = 0.363084

Impact Kinetic Energy = 43.111614

name = Lens 3
Demise Altitude = 70.722580
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 3 Housing
Demise Altitude = 71.680708
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 4
Demise Altitude = 0.000000
Debris Casualty Area = 0.372572
Impact Kinetic Energy = 26.483386

name = Focus House
Demise Altitude = 73.214238
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Detector
Demise Altitude = 73.703620
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det and Lens Cover
Demise Altitude = 73.200391
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det House Flex
Demise Altitude = 70.548191
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Det Window House

Demise Altitude = 73.402314
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Rod Det Flex
Demise Altitude = 0.000000
Debris Casualty Area = 0.752354
Impact Kinetic Energy = 36.022545

name = Focus Mechanism
Demise Altitude = 69.821742
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Star Tracker Base
Demise Altitude = 76.034135
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

===== End of Requirement 4.7-1 =====
07 15 2026; 16:45:53PM Project Data Saved To File

610 km x 440 km x 53° DAS Logs (Transfer Orbit)

07 20 2026; 09:08:39AM Activity Log Started
07 20 2026; 09:08:39AM Opened Project
C:\Users\dominic\Documents\DAS3.2.7\Pelican_V1 Nested\
07 20 2026; 09:09:05AM Project Data Saved To File
07 20 2026; 09:09:18AM Mission Editor Changes Applied
07 20 2026; 09:09:18AM Project Data Saved To File
07 20 2026; 09:09:18AM Project Data Saved To File
07 20 2026; 09:09:35AM Processing Requirement 4.3-1: Return Status : Not Run

=====

No Project Data Available

=====

===== End of Requirement 4.3-1 =====
07 20 2026; 09:09:36AM Processing Requirement 4.3-2: Return Status : Passed

=====
No Project Data Available
=====

=====
07 20 2026; 09:20:03AM Processing Requirement 4.5-1: Return Status : Passed
=====

=====
Run Data
=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload
Perigee Altitude = 440.000 (km)
Apogee Altitude = 610.000 (km)
Inclination = 53.000 (deg)
RAAN = 0.000 (deg)
Argument of Perigee = 0.000 (deg)
Mean Anomaly = 0.000 (deg)
Final Area-To-Mass Ratio = 0.0114 (m²/kg)
Start Year = 2026.000 (yr)
Initial Mass = 195.500 (kg)
Final Mass = 182.500 (kg)
Duration = 0.750 (yr)
Station-Kept = False
Abandoned = True
Long-Term Reentry = False

****OUTPUT****

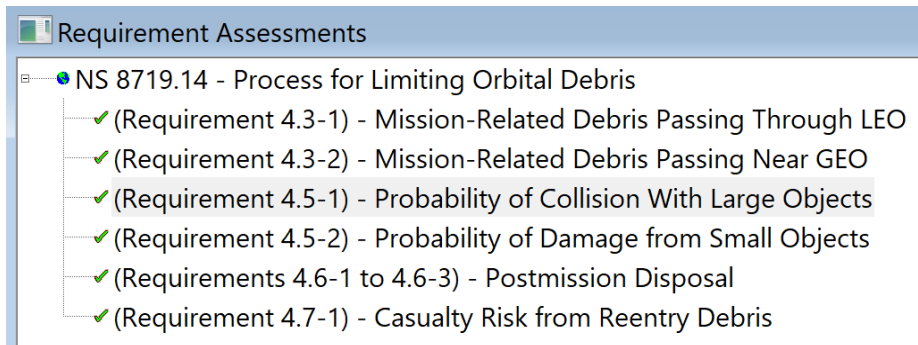
Collision Probability = 3.4621E-05
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

=====

=====
End of Requirement 4.5-1
=====

53° Injection Orbit

610 km x 610 km x 53° DAS GUI Results



610 km x 610 km x 53° DAS Logs (Injection Orbit):

07 15 2026; 15:52:32PM Activity Log Started
07 15 2026; 15:52:32PM Opened Project
C:\Users\dominic\Documents\DAS3.2.7\Pelican_V1 Nested\
07 15 2026; 15:52:40PM Project Data Saved To File
07 15 2026; 15:52:40PM Mission Editor Changes Applied
07 15 2026; 15:52:40PM Project Data Saved To File
07 15 2026; 15:52:40PM Project Data Saved To File
07 15 2026; 15:52:54PM Processing Requirement 4.3-1: Return Status : Not Run

=====
No Project Data Available
=====

===== End of Requirement 4.3-1 =====
07 15 2026; 15:52:57PM Processing Requirement 4.3-2: Return Status : Passed

=====
No Project Data Available
=====

===== End of Requirement 4.3-2 =====
07 15 2026; 16:12:07PM Processing Requirement 4.5-1: Return Status : Passed

=====
Run Data
=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload
Perigee Altitude = 610.000 (km)
Apogee Altitude = 610.000 (km)
Inclination = 53.000 (deg)
RAAN = 0.000 (deg)
Argument of Perigee = 0.000 (deg)
Mean Anomaly = 0.000 (deg)
Final Area-To-Mass Ratio = 0.0114 (m²/kg)
Start Year = 2026.000 (yr)
Initial Mass = 195.500 (kg)
Final Mass = 182.500 (kg)
Duration = 0.250 (yr)
Station-Kept = False
Abandoned = True
Long-Term Reentry = False

****OUTPUT****

Collision Probability = 2.7028E-04
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

=====

===== End of Requirement 4.5-1 =====

07 15 2026; 16:12:11PM Project Data Saved To File
07 15 2026; 16:12:13PM Requirement 4.5-2: Compliant

===== End of Requirement 4.5-2 =====

07 15 2026; 16:12:46PM Processing Requirement 4.6 Return Status : Passed

=====

Project Data
=====

****INPUT****

Space Structure Name = Pelican
Space Structure Type = Payload

Perigee Altitude = 610.000000 (km)
Apogee Altitude = 610.000000 (km)
Inclination = 53.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.011400 (m²/kg)
Start Year = 2026.000000 (yr)
Initial Mass = 195.500000 (kg)
Final Mass = 182.500000 (kg)
Duration = 0.250000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 608.370910 (km)
PMD Apogee Altitude = 609.071713 (km)
PMD Inclination = 52.999597 (deg)
PMD RAAN = 321.963090 (deg)
PMD Argument of Perigee = 45.806158 (deg)
PMD Mean Anomaly = 0.000000 (deg)
Long-Term Reentry = False

****OUTPUT****

Suggested Perigee Altitude = 608.370910 (km)
Suggested Apogee Altitude = 609.071713 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2045 (yr)
Requirement = 61
Compliance Status = Pass

=====

===== End of Requirement 4.6 =====

07 15 2026; 16:12:54PM *****Processing Requirement 4.7-1
Return Status : Passed

*******INPUT******

Item Number = 1

name = Pelican

quantity = 1
parent = 0
materialID = 5
type = Box
Aero Mass = 182.500000
Thermal Mass = 182.500000
Diameter/Width = 0.600000
Length = 1.000000
Height = 0.600000

name = LVI Structure Deck
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 9.220000
Thermal Mass = 9.220000
Diameter/Width = 0.550000
Length = 0.550000
Height = 0.012000

name = Structural Brackets
quantity = 16
parent = 1
materialID = 8
type = Box
Aero Mass = 0.218000
Thermal Mass = 0.218000
Diameter/Width = 0.050000
Length = 0.080000
Height = 0.021000

name = Avionics Deck
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 2.600000
Thermal Mass = 2.600000
Diameter/Width = 0.600000
Length = 0.600000
Height = 0.050000

name = Structural Panels

quantity = 4
parent = 1
materialID = 8
type = Box
Aero Mass = 3.050000
Thermal Mass = 2.200000
Diameter/Width = 0.600000
Length = 0.800000
Height = 0.030000

name = Hardware
quantity = 200
parent = 5
materialID = 54
type = Cylinder
Aero Mass = 0.017000
Thermal Mass = 0.017000
Diameter/Width = 0.012000
Length = 0.020000

name = Avionics Brackets
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.797000
Thermal Mass = 0.797000
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.025000

name = SA Release Mechanism
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.388000
Thermal Mass = 0.388000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = GSE Interface Panel
quantity = 1

parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 0.067000
Thermal Mass = 0.067000
Diameter/Width = 0.065000
Length = 0.065000

name = MLI Blankets
quantity = 5
parent = 1
materialID = 44
type = Flat Plate
Aero Mass = 0.142000
Thermal Mass = 0.142000
Diameter/Width = 0.100000
Length = 0.200000

name = Heat Straps
quantity = 4
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.130000
Thermal Mass = 0.130000
Diameter/Width = 0.020000
Length = 0.050000

name = Heaters
quantity = 20
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.026000
Thermal Mass = 0.026000
Diameter/Width = 0.025000
Length = 0.050000

name = Temp Sensors
quantity = 25
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.012000

Thermal Mass = 0.012000
Diameter/Width = 0.010000
Length = 0.020000

name = LVI Ring
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.704000
Thermal Mass = 0.704000
Diameter/Width = 0.375000
Length = 0.375000

name = Battery Pack
quantity = 4
parent = 1
materialID = 8
type = Box
Aero Mass = 1.460000
Thermal Mass = 1.460000
Diameter/Width = 0.078000
Length = 0.172000
Height = 0.052000

name = Solar Panel +Z+Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.260000
Thermal Mass = 2.260000
Diameter/Width = 0.550000
Length = 0.950000

name = Solar Panel +Z-Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.260000
Thermal Mass = 2.260000
Diameter/Width = 0.550000
Length = 0.950000

name = Solar Panel +Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.890000
Thermal Mass = 2.890000
Diameter/Width = 0.625000
Length = 0.950000

name = Solar Panel -Y
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 2.890000
Thermal Mass = 2.890000
Diameter/Width = 0.625000
Length = 0.950000

name = Power Electronics
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 2.250000
Thermal Mass = 1.500000
Diameter/Width = 0.300000
Length = 0.300000
Height = 0.100000

name = RW Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Prop Board

quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Power Control Board
quantity = 1
parent = 20
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Peak Power Tracker
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.000000
Diameter/Width = 0.200000
Length = 0.200000
Height = 0.150000

name = Peak Power Tracker Boards
quantity = 2
parent = 24
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Box

quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 8.780000
Thermal Mass = 6.530000
Diameter/Width = 0.150000
Length = 0.325000
Height = 0.050000

name = Magnetics Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Flight Computer
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = TTC Board
quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Nav Board

quantity = 2
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = C Band Radio Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Avionics Switch Board
quantity = 1
parent = 26
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Payload Box
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 7.820000
Thermal Mass = 5.820000
Diameter/Width = 0.150000
Length = 0.300000
Height = 0.050000

name = Storage Manager Board

quantity = 1
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = SSD Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Ka Radio Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Edge Compute Board
quantity = 2
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = Payload Switch Board

quantity = 1
parent = 33
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.215000
Height = 0.010000

name = RF TTC Antennas
quantity = 10
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.040000
Length = 0.050000

name = RF Payload Antenna
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 1.440000
Thermal Mass = 1.440000
Diameter/Width = 0.125000
Length = 0.350000

name = RF Harness
quantity = 12
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000
Length = 0.500000

name = RF Brackets
quantity = 6
parent = 1
materialID = 8

type = Box
Aero Mass = 0.390000
Thermal Mass = 0.390000
Diameter/Width = 0.050000
Length = 0.060000
Height = 0.050000

name = RF C Band Rx Antenna LGA
quantity = 3
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.082000
Thermal Mass = 0.082000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Rx Antenna HGA
quantity = 1
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.104000
Thermal Mass = 0.104000
Diameter/Width = 0.030000
Length = 0.030000

name = RF C Band Tx Antenna
quantity = 1
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.084000
Thermal Mass = 0.084000
Diameter/Width = 0.030000
Length = 0.030000

name = GPS Antennas
quantity = 2
parent = 1
materialID = 19
type = Flat Plate
Aero Mass = 0.060000
Thermal Mass = 0.060000

Diameter/Width = 0.050000
Length = 0.075000

name = C Band Upconverter
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.600000
Thermal Mass = 0.600000
Diameter/Width = 0.050000
Length = 0.100000
Height = 0.050000

name = C Band Power Amplifier
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.200000
Thermal Mass = 1.200000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.050000

name = L Band Transceiver
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.100000
Thermal Mass = 1.100000
Diameter/Width = 0.065000
Length = 0.100000
Height = 0.065000

name = L Band Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.030000
Thermal Mass = 0.030000
Diameter/Width = 0.003000

Length = 0.500000

name = L Band Bracket

quantity = 1

parent = 1

materialID = 8

type = Box

Aero Mass = 0.200000

Thermal Mass = 0.200000

Diameter/Width = 0.080000

Length = 0.200000

Height = 0.010000

name = L Band Antenna

quantity = 1

parent = 1

materialID = 77

type = Box

Aero Mass = 0.085000

Thermal Mass = 0.085000

Diameter/Width = 0.090000

Length = 0.090000

Height = 0.010000

name = Reaction Wheels

quantity = 4

parent = 1

materialID = 8

type = Cylinder

Aero Mass = 3.174000

Thermal Mass = 1.100000

Diameter/Width = 0.120000

Length = 0.105000

name = RW Flywheel

quantity = 4

parent = 53

materialID = 58

type = Cylinder

Aero Mass = 1.800000

Thermal Mass = 1.800000

Diameter/Width = 0.100000

Length = 0.030000

name = RW Electronics
quantity = 4
parent = 53
materialID = 23
type = Box
Aero Mass = 0.250000
Thermal Mass = 0.250000
Diameter/Width = 0.080000
Length = 0.085000
Height = 0.020000

name = RW Bearings
quantity = 8
parent = 53
materialID = 54
type = Flat Plate
Aero Mass = 0.012000
Thermal Mass = 0.012000
Diameter/Width = 0.040000
Length = 0.040000

name = RW Bracket
quantity = 4
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 0.509000
Thermal Mass = 0.509000
Diameter/Width = 0.080000
Length = 0.040000

name = Magnetorquer
quantity = 3
parent = 1
materialID = 59
type = Cylinder
Aero Mass = 0.910000
Thermal Mass = 0.910000
Diameter/Width = 0.030000
Length = 0.225000

name = ST
quantity = 4
parent = 1

materialID = 5
type = Box
Aero Mass = 0.310000
Thermal Mass = 0.310000
Diameter/Width = 0.050000
Length = 0.050000
Height = 0.050000

name = ST Bracket
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 0.170000
Thermal Mass = 0.170000
Diameter/Width = 0.050000
Length = 0.051000
Height = 0.025000

name = IMU
quantity = 3
parent = 1
materialID = 19
type = Box
Aero Mass = 0.010000
Thermal Mass = 0.010000
Diameter/Width = 0.010000
Length = 0.024000
Height = 0.010000

name = Magnetometers
quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.037000
Thermal Mass = 0.037000
Diameter/Width = 0.040000
Length = 0.050000
Height = 0.025000

name = ST Compute
quantity = 4
parent = 1

materialID = 23
type = Box
Aero Mass = 0.277000
Thermal Mass = 0.277000
Diameter/Width = 0.075000
Length = 0.075000
Height = 0.030000

name = PPU
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.500000
Thermal Mass = 1.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.037500

name = Tanks
quantity = 2
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 4.110000
Thermal Mass = 4.110000
Diameter/Width = 0.265000
Length = 0.750000

name = Plumbing
quantity = 18
parent = 1
materialID = 58
type = Cylinder
Aero Mass = 0.004000
Thermal Mass = 0.004000
Diameter/Width = 0.005000
Length = 0.050000

name = Brackets
quantity = 8
parent = 1
materialID = 5
type = Box

Aero Mass = 0.134000
Thermal Mass = 0.134000
Diameter/Width = 0.040000
Length = 0.050000
Height = 0.030000

name = Thruster
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.870000
Thermal Mass = 0.870000
Diameter/Width = 0.090000
Length = 0.040000

name = Radiator
quantity = 1
parent = 1
materialID = 5
type = Flat Plate
Aero Mass = 0.410000
Thermal Mass = 0.410000
Diameter/Width = 0.125000
Length = 0.125000

name = Pressure Components
quantity = 4
parent = 1
materialID = 58
type = Cylinder
Aero Mass = 0.251000
Thermal Mass = 0.251000
Diameter/Width = 0.025000
Length = 0.075000

name = Mechanical Misc
quantity = 6
parent = 1
materialID = 5
type = Box
Aero Mass = 0.143000
Thermal Mass = 0.143000
Diameter/Width = 0.050000

Length = 0.050000
Height = 0.025000

name = Prop Harness
quantity = 2
parent = 1
materialID = 19
type = Cylinder
Aero Mass = 0.033000
Thermal Mass = 0.033000
Diameter/Width = 0.005000
Length = 0.200000

name = Payload Deck
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.463000
Thermal Mass = 0.463000
Diameter/Width = 0.550000
Length = 0.550000
Height = 0.015000

name = Payload Closeout Panels
quantity = 4
parent = 1
materialID = 5
type = Box
Aero Mass = 1.206000
Thermal Mass = 1.206000
Diameter/Width = 0.520000
Length = 0.570000
Height = 0.030000

name = Payload Bracket
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 4.910000
Thermal Mass = 4.910000
Diameter/Width = 0.100000
Length = 0.250000

Height = 0.075000

name = Payload Support Structure

quantity = 2

parent = 1

materialID = 8

type = Box

Aero Mass = 2.090000

Thermal Mass = 2.090000

Diameter/Width = 0.060000

Length = 0.250000

Height = 0.055000

name = M1

quantity = 1

parent = 1

materialID = 71

type = Box

Aero Mass = 12.775000

Thermal Mass = 12.775000

Diameter/Width = 0.375000

Length = 0.375000

Height = 0.036000

name = Actuator Bar

quantity = 9

parent = 1

materialID = 66

type = Box

Aero Mass = 0.002000

Thermal Mass = 0.002000

Diameter/Width = 0.030000

Length = 0.080000

Height = 0.000400

name = M1 Flexure

quantity = 9

parent = 1

materialID = 66

type = Box

Aero Mass = 0.041300

Thermal Mass = 0.041300

Diameter/Width = 0.020000

Length = 0.070000

Height = 0.010000

name = AI Actuator Base

quantity = 9

parent = 1

materialID = 5

type = Box

Aero Mass = 0.095700

Thermal Mass = 0.095700

Diameter/Width = 0.030000

Length = 0.080000

Height = 0.020000

name = Telescope Main Tube

quantity = 1

parent = 1

materialID = 5

type = Cylinder

Aero Mass = 11.934000

Thermal Mass = 11.934000

Diameter/Width = 0.500000

Length = 0.500000

name = Telescope Main Back Rib

quantity = 1

parent = 1

materialID = 5

type = Box

Aero Mass = 7.375000

Thermal Mass = 7.375000

Diameter/Width = 0.600000

Length = 0.600000

Height = 0.100000

name = Metering Rods

quantity = 3

parent = 1

materialID = 71

type = Cylinder

Aero Mass = 0.381900

Thermal Mass = 0.381900

Diameter/Width = 0.025000

Length = 0.502000

name = Spider Main Chassis
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.016000
Thermal Mass = 1.016000
Diameter/Width = 0.200000
Length = 0.200000
Height = 0.010000

name = Spider Hood
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.000000
Thermal Mass = 0.000000
Diameter/Width = 0.150000
Length = 0.150000
Height = 0.040000

name = M2
quantity = 1
parent = 1
materialID = 71
type = Box
Aero Mass = 0.795900
Thermal Mass = 0.795900
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.030000

name = Spider Cover
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 0.062400
Thermal Mass = 0.062400
Diameter/Width = 0.152000
Length = 0.152000
Height = 0.002000

name = M2 Front Support
quantity = 1
parent = 1
materialID = 72
type = Box
Aero Mass = 0.045600
Thermal Mass = 0.045600
Diameter/Width = 0.015000
Length = 0.026000
Height = 0.015000

name = M1 Heater Plate
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 1.711000
Thermal Mass = 1.711000
Diameter/Width = 0.350000
Length = 0.350000
Height = 0.006000

name = Bipod Flexures
quantity = 3
parent = 1
materialID = 66
type = Box
Aero Mass = 0.282700
Thermal Mass = 0.282700
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.008000

name = Tail Back Cover
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 3.000000
Thermal Mass = 3.000000
Diameter/Width = 0.537000
Length = 0.537000
Height = 0.004000

name = Center Hood
quantity = 1
parent = 1
materialID = 5
type = Cylinder
Aero Mass = 0.215600
Thermal Mass = 0.215600
Diameter/Width = 0.136000
Length = 0.230000

name = Tail Chassis
quantity = 1
parent = 1
materialID = 5
type = Box
Aero Mass = 7.000700
Thermal Mass = 2.228900
Diameter/Width = 0.190000
Length = 0.374000
Height = 0.012000

name = Fold Mirror Chassis
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.325900
Thermal Mass = 0.417100
Diameter/Width = 0.109000
Length = 0.146000
Height = 0.010000

name = Fold Mirror
quantity = 2
parent = 94
materialID = 71
type = Box
Aero Mass = 0.314800
Thermal Mass = 0.314800
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.016000

name = Fold Mirror Housing

quantity = 2
parent = 94
materialID = 5
type = Box
Aero Mass = 0.086800
Thermal Mass = 0.086800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Fold Mirror Cover
quantity = 2
parent = 94
materialID = 5
type = Box
Aero Mass = 0.052800
Thermal Mass = 0.052800
Diameter/Width = 0.110000
Length = 0.110000
Height = 0.005000

name = Lens Assembly
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.063500
Thermal Mass = 0.196800
Diameter/Width = 0.060000
Length = 0.075000
Height = 0.031000

name = Lens 1
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.135000
Thermal Mass = 0.135000
Diameter/Width = 0.092000
Length = 0.092000
Height = 0.010000

name = Lens 2 Housing

quantity = 1
parent = 98
materialID = 5
type = Box
Aero Mass = 0.219000
Thermal Mass = 0.219000
Diameter/Width = 0.100000
Length = 0.100000
Height = 0.014000

name = Lens 2
quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.123600
Thermal Mass = 0.123600
Diameter/Width = 0.077000
Length = 0.077000
Height = 0.013600

name = Lens 3
quantity = 1
parent = 98
materialID = -2
type = Box
Aero Mass = 0.230700
Thermal Mass = 0.230700
Diameter/Width = 0.085400
Length = 0.085400
Height = 0.016000

name = Lens 3 Housing
quantity = 1
parent = 98
materialID = 5
type = Box
Aero Mass = 0.054900
Thermal Mass = 0.054900
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.012500

name = Lens 4

quantity = 1
parent = 98
materialID = -3
type = Box
Aero Mass = 0.103500
Thermal Mass = 0.103500
Diameter/Width = 0.089000
Length = 0.089000
Height = 0.006900

name = Focus House
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.099400
Thermal Mass = 0.099400
Diameter/Width = 0.090000
Length = 0.090000
Height = 0.015000

name = Detector
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 1.783000
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det and Lens Cover
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.058600
Thermal Mass = 0.058600
Diameter/Width = 0.010000
Length = 0.300000
Height = 0.010000

name = Det House Flex

quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 1.389900
Thermal Mass = 1.389900
Diameter/Width = 0.160000
Length = 0.388000
Height = 0.010000

name = Det Window House
quantity = 1
parent = 106
materialID = 5
type = Box
Aero Mass = 0.035900
Thermal Mass = 0.035900
Diameter/Width = 0.106000
Length = 0.106000
Height = 0.009000

name = Rod Det Flex
quantity = 2
parent = 106
materialID = -4
type = Box
Aero Mass = 0.120000
Thermal Mass = 0.120000
Diameter/Width = 0.060000
Length = 0.141000
Height = 0.005000

name = Focus Mechanism
quantity = 1
parent = 93
materialID = 5
type = Box
Aero Mass = 0.500000
Thermal Mass = 0.500000
Diameter/Width = 0.078000
Length = 0.088000
Height = 0.030000

name = Star Tracker Base

quantity = 2
parent = 1
materialID = 5
type = Box
Aero Mass = 0.258300
Thermal Mass = 0.258300
Diameter/Width = 0.101000
Length = 0.120000
Height = 0.010000

*****OUTPUT****

Item Number = 1

name = Pelican
Demise Altitude = 78.000344
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = LVI Structure Deck
Demise Altitude = 69.134974
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Brackets
Demise Altitude = 75.263805
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Deck
Demise Altitude = 76.150653
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Structural Panels
Demise Altitude = 76.859471
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Hardware

Demise Altitude = 71.445270
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Brackets
Demise Altitude = 72.736673
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SA Release Mechanism
Demise Altitude = 73.782517
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GSE Interface Panel
Demise Altitude = 76.615290
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = MLI Blankets
Demise Altitude = 77.761621
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Heat Straps
Demise Altitude = 73.891636
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Heaters
Demise Altitude = 76.985060
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Temp Sensors
Demise Altitude = 76.551271
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = LVI Ring

Demise Altitude = 76.948245

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Battery Pack

Demise Altitude = 72.534383

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Solar Panel +Z+Y

Demise Altitude = 76.812750

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Solar Panel +Z-Y

Demise Altitude = 76.812750

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Solar Panel +Y

Demise Altitude = 76.562714

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Solar Panel -Y

Demise Altitude = 76.562714

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Power Electronics

Demise Altitude = 76.079480

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = RW Board
Demise Altitude = 74.388640
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Board
Demise Altitude = 74.388640
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Control Board
Demise Altitude = 74.388640
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker
Demise Altitude = 76.329164
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Peak Power Tracker Boards
Demise Altitude = 74.767583
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Box
Demise Altitude = 67.255217
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetism Board
Demise Altitude = 65.920564
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Flight Computer

Demise Altitude = 65.920564
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = TTC Board
Demise Altitude = 65.920564
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Nav Board
Demise Altitude = 65.920564
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Radio Board
Demise Altitude = 65.920564
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Avionics Switch Board
Demise Altitude = 65.920564
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Box
Demise Altitude = 67.749973
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Storage Manager Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SSD Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Ka Radio Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Edge Compute Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Switch Board
Demise Altitude = 66.417597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF TTC Antennas
Demise Altitude = 76.361062
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Payload Antenna
Demise Altitude = 73.727578
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Harness
Demise Altitude = 77.581296
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF Brackets
Demise Altitude = 73.834471
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna LGA
Demise Altitude = 75.207029
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Rx Antenna HGA
Demise Altitude = 74.513321
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RF C Band Tx Antenna
Demise Altitude = 75.142297
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GPS Antennas
Demise Altitude = 77.027852
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Upconverter
Demise Altitude = 73.817753
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = C Band Power Amplifier
Demise Altitude = 71.105628
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Transceiver
Demise Altitude = 72.013782
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Harness

Demise Altitude = 77.581296
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Bracket
Demise Altitude = 76.905318
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = L Band Antenna
Demise Altitude = 77.711189
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheels
Demise Altitude = 72.621427
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Flywheel
Demise Altitude = 53.222837
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Electronics
Demise Altitude = 70.301595
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bearings
Demise Altitude = 72.008158
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = RW Bracket
Demise Altitude = 70.905529
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Magnetorquer
Demise Altitude = 68.723748
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST
Demise Altitude = 74.003998
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Bracket
Demise Altitude = 74.922885
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = IMU
Demise Altitude = 77.222098
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Magnetometers
Demise Altitude = 77.237098
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = ST Compute
Demise Altitude = 75.147290
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = PPU
Demise Altitude = 71.405924
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tanks
Demise Altitude = 77.082878
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Plumbing
Demise Altitude = 77.165754
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Brackets
Demise Altitude = 75.538205
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Thruster
Demise Altitude = 62.764242
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Radiator
Demise Altitude = 74.968421
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Pressure Components
Demise Altitude = 68.201819
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Mechanical Misc
Demise Altitude = 75.344165
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Prop Harness

Demise Altitude = 77.223387
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Deck
Demise Altitude = 77.622028
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Closeout Panels
Demise Altitude = 77.043584
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Bracket
Demise Altitude = 67.967695
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Payload Support Structure
Demise Altitude = 71.620715
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1
Demise Altitude = 0.000000
Debris Casualty Area = 0.740365
Impact Kinetic Energy = 22248.250709

name = Actuator Bar
Demise Altitude = 77.882088
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1 Flexure
Demise Altitude = 75.635303
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = AI Actuator Base
Demise Altitude = 76.404777
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Telescope Main Tube
Demise Altitude = 72.843804
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Telescope Main Back Rib
Demise Altitude = 73.036170
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Metering Rods
Demise Altitude = 74.652754
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Main Chassis
Demise Altitude = 74.495632
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Hood
Demise Altitude = 78.000344
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2
Demise Altitude = 68.148851
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Spider Cover
Demise Altitude = 77.669111
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M2 Front Support
Demise Altitude = 74.546453
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = M1 Heater Plate
Demise Altitude = 75.203498
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Bipod Flexures
Demise Altitude = 71.623883
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Back Cover
Demise Altitude = 75.171973
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Center Hood
Demise Altitude = 77.357010
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Tail Chassis
Demise Altitude = 74.198121
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Chassis

Demise Altitude = 71.868604
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror
Demise Altitude = 65.246566
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Housing
Demise Altitude = 71.062010
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Fold Mirror Cover
Demise Altitude = 71.382997
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens Assembly
Demise Altitude = 72.242705
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 1
Demise Altitude = 0.000000
Debris Casualty Area = 0.377404
Impact Kinetic Energy = 40.023956

name = Lens 2 Housing
Demise Altitude = 70.287622
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Lens 2
Demise Altitude = 0.000000
Debris Casualty Area = 0.363084

Impact Kinetic Energy = 43.111614

name = Lens 3

Demise Altitude = 70.722580

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 3 Housing

Demise Altitude = 71.680708

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Lens 4

Demise Altitude = 0.000000

Debris Casualty Area = 0.372572

Impact Kinetic Energy = 26.483386

name = Focus House

Demise Altitude = 73.214238

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Detector

Demise Altitude = 73.703620

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Det and Lens Cover

Demise Altitude = 73.200391

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Det House Flex

Demise Altitude = 70.548191

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Det Window House
Demise Altitude = 73.402314
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Rod Det Flex
Demise Altitude = 0.000000
Debris Casualty Area = 0.752354
Impact Kinetic Energy = 36.022545

name = Focus Mechanism
Demise Altitude = 69.821742
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Star Tracker Base
Demise Altitude = 76.034135
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

===== End of Requirement 4.7-1 =====

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