

11 01 2013; 13:40:13PM DAS Application Started  
11 01 2013; 13:40:13PM Opened Project C:\DAS 2.0\project\  
11 01 2013; 13:40:29PM Processing Requirement 4.3-1: Return Status :  
Passed

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Project Data  
=====

Objects Passing Through LEO = True  
Number of Objects = 1

\*\*INPUT\*\*

Quantity = 10  
Final Area-To-Mass Ratio = 0.089000 (m<sup>2</sup>/kg)  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = -1.000000 (deg)  
Argument of Perigee = -1.000000 (deg)  
Mean Anomaly = -1.000000 (deg)  
Released Year = 2013.000000 (yr)

\*\*OUTPUT\*\*

Perigee Altitude = -6378.136000 (km)  
Apogee Altitude = -6378.136000 (km)  
Inclination = 0.000000 (deg)  
Lifetime = 2.255137 (yr)  
Object Reentered within 25 years of Release = True  
Object-Time = 22.176591 (obj-yrs)  
Total Object-Time = 22.176591 (obj-yrs)  
Status = Pass  
Returned Error Message - Normal Processing

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11 01 2013; 13:40:35PM Processing Requirement 4.3-2: Return Status :  
Passed

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No Project Data Available  
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11 01 2013; 13:40:38PM Requirement 4.4-3: Compliant

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=====  
11 01 2013; 13:41:06PM Processing Requirement 4.5-1: Return Status :  
Passed

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

\*\*INPUT\*\*

Space Structure Name = AC5 complete  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.008000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 2.100000 (kg)  
Final Mass = 2.100000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000001  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Battery bracket  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.105000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.012000 (kg)  
Final Mass = 0.012000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)

PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Reaction wheel block  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.054000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.015000 (kg)  
Final Mass = 0.015000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Antenna  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)

Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.047000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.016000 (kg)  
Final Mass = 0.007000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Battery  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.031000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.017000 (kg)  
Final Mass = 0.017000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = AVO  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.040000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.023000 (kg)  
Final Mass = 0.023000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Circuit Boards  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.037000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.030000 (kg)  
Final Mass = 0.030000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)

PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = ADIS  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.023000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.049000 (kg)  
Final Mass = 0.049000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = AC5 Lids  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)

Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.042000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.086000 (kg)  
Final Mass = 0.086000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Payload interface plate  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.038000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 469.000000 (kg)  
Final Mass = 0.092000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000

Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = STIM  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.016000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.110000 (kg)  
Final Mass = 0.110000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Pea Placer  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.014000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.117000 (kg)  
Final Mass = 0.117000 (kg)  
Duration = 1.000000 (yr)



Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = EM Assembly  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.018000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.275000 (kg)  
Final Mass = 0.275000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Payload Assembly

Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.016000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.573000 (kg)  
Final Mass = 0.573000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Body Structure  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.026000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.582000 (kg)  
Final Mass = 0.582000 (kg)  
Duration = 1.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = CSTT Cover  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 0.110000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.040000 (kg)  
Final Mass = 0.040000 (kg)  
Duration = 2.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000000  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Tether  
Space Structure Type = Payload  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Final Area-To-Mass Ratio = 17.420000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)

Initial Mass = 0.020000 (kg)  
Final Mass = 0.020000 (kg)  
Duration = 2.000000 (yr)  
Station-Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Collision Probability = 0.000001  
Returned Error Message: Normal Processing  
Date Range Error Message: Normal Date Range  
Status = Pass

=====

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

11 01 2013; 13:41:12PM Requirement 4.5-2: Compliant

11 01 2013; 13:41:14PM Processing Requirement 4.6 Return Status :  
Passed

=====

Project Data

=====

\*\*INPUT\*\*

Space Structure Name = AC5 complete  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.008000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 2.100000 (kg)  
Final Mass = 2.100000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 472.563244 (km)  
PMD Apogee Altitude = 957.848205 (km)  
PMD Inclination = 119.993419 (deg)  
PMD RAAN = 174.648861 (deg)  
PMD Argument of Perigee = 310.520109 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 472.563244 (km)  
Suggested Apogee Altitude = 957.848205 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2037 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Battery bracket  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.105000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.012000 (kg)  
Final Mass = 0.012000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 457.696451 (km)  
PMD Apogee Altitude = 820.264934 (km)  
PMD Inclination = 119.987949 (deg)  
PMD RAAN = 195.789402 (deg)  
PMD Argument of Perigee = 315.817168 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 457.696451 (km)  
Suggested Apogee Altitude = 820.264934 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2014 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Reaction wheel block  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.054000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.015000 (kg)  
Final Mass = 0.015000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 466.570131 (km)  
PMD Apogee Altitude = 898.064604 (km)  
PMD Inclination = 119.991205 (deg)  
PMD RAAN = 184.060780 (deg)  
PMD Argument of Perigee = 312.833575 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 466.570131 (km)  
Suggested Apogee Altitude = 898.064604 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2019 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Antenna  
Space Structure Type = Payload  
  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.047000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.016000 (kg)  
Final Mass = 0.007000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 471.058870 (km)  
PMD Apogee Altitude = 942.263645 (km)  
PMD Inclination = 119.992870 (deg)

PMD RAAN = 177.129116 (deg)  
PMD Argument of Perigee = 311.123979 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 471.058870 (km)  
Suggested Apogee Altitude = 942.263645 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Battery  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.031000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.017000 (kg)  
Final Mass = 0.017000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 469.739009 (km)  
PMD Apogee Altitude = 928.918552 (km)  
PMD Inclination = 119.992383 (deg)  
PMD RAAN = 179.238892 (deg)  
PMD Argument of Perigee = 311.640803 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 469.739009 (km)  
Suggested Apogee Altitude = 928.918552 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = AVO  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.040000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.023000 (kg)  
Final Mass = 0.023000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 468.545057 (km)  
PMD Apogee Altitude = 917.094852 (km)  
PMD Inclination = 119.991947 (deg)  
PMD RAAN = 181.096256 (deg)  
PMD Argument of Perigee = 312.098420 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

**\*\*OUTPUT\*\***

Suggested Perigee Altitude = 468.545057 (km)  
Suggested Apogee Altitude = 917.094852 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

**\*\*INPUT\*\***

Space Structure Name = Circuit Boards  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.037000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.030000 (kg)  
Final Mass = 0.030000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True



PMD Perigee Altitude = 468.949242 (km)  
PMD Apogee Altitude = 921.070004 (km)  
PMD Inclination = 119.992096 (deg)  
PMD RAAN = 180.473091 (deg)  
PMD Argument of Perigee = 311.944652 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

**\*\*OUTPUT\*\***

Suggested Perigee Altitude = 468.949242 (km)  
Suggested Apogee Altitude = 921.070004 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

**\*\*INPUT\*\***

Space Structure Name = ADIS  
Space Structure Type = Payload  
  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.023000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.049000 (kg)  
Final Mass = 0.049000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 470.756638 (km)  
PMD Apogee Altitude = 939.180159 (km)  
PMD Inclination = 119.992757 (deg)  
PMD RAAN = 177.617697 (deg)  
PMD Argument of Perigee = 311.243344 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

**\*\*OUTPUT\*\***

Suggested Perigee Altitude = 470.756638 (km)  
Suggested Apogee Altitude = 939.180159 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2023 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = AC5 Lids  
Space Structure Type = Payload  
  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.042000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.086000 (kg)  
Final Mass = 0.086000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 468.272072 (km)  
PMD Apogee Altitude = 914.426014 (km)  
PMD Inclination = 119.991845 (deg)  
PMD RAAN = 181.514009 (deg)  
PMD Argument of Perigee = 312.201648 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 468.272072 (km)  
Suggested Apogee Altitude = 914.426014 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.  
  
Released Year = 2021 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Payload interface plate  
Space Structure Type = Payload  
  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.038000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 469.000000 (kg)  
Final Mass = 0.092000 (kg)

Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 473.477274 (km)  
PMD Apogee Altitude = 967.512961 (km)  
PMD Inclination = 119.993747 (deg)  
PMD RAAN = 173.102473 (deg)  
PMD Argument of Perigee = 310.145515 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 473.477274 (km)  
Suggested Apogee Altitude = 967.512961 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = STIM  
Space Structure Type = Payload  
  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.016000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.110000 (kg)  
Final Mass = 0.110000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 471.615305 (km)  
PMD Apogee Altitude = 947.981644 (km)  
PMD Inclination = 119.993076 (deg)  
PMD RAAN = 176.221117 (deg)  
PMD Argument of Perigee = 310.902522 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 471.615305 (km)  
Suggested Apogee Altitude = 947.981644 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2025 (yr)

Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Pea Placer  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.014000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.117000 (kg)  
Final Mass = 0.117000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 471.855524 (km)  
PMD Apogee Altitude = 950.466795 (km)  
PMD Inclination = 119.993164 (deg)  
PMD RAAN = 175.825713 (deg)  
PMD Argument of Perigee = 310.806235 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 471.855524 (km)  
Suggested Apogee Altitude = 950.466795 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2028 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = EM Assembly  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.018000 (m<sup>2</sup>/kg)

Start Year = 2013.000000 (yr)  
Initial Mass = 0.275000 (kg)  
Final Mass = 0.275000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 471.372829 (km)  
PMD Apogee Altitude = 945.483082 (km)  
PMD Inclination = 119.992986 (deg)  
PMD RAAN = 176.618132 (deg)  
PMD Argument of Perigee = 310.999291 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

**\*\*OUTPUT\*\***

Suggested Perigee Altitude = 471.372829 (km)  
Suggested Apogee Altitude = 945.483082 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2024 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

**\*\*INPUT\*\***

Space Structure Name = Payload Assembly  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.016000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.573000 (kg)  
Final Mass = 0.573000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 471.615305 (km)  
PMD Apogee Altitude = 947.981644 (km)  
PMD Inclination = 119.993076 (deg)  
PMD RAAN = 176.221117 (deg)  
PMD Argument of Perigee = 310.902522 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

**\*\*OUTPUT\*\***

Suggested Perigee Altitude = 471.615305 (km)  
Suggested Apogee Altitude = 947.981644 (km)

Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2025 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Body Structure  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.026000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.582000 (kg)  
Final Mass = 0.582000 (kg)  
Duration = 1.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = 470.379653 (km)  
PMD Apogee Altitude = 935.358403 (km)  
PMD Inclination = 119.992620 (deg)  
PMD RAAN = 178.222483 (deg)  
PMD Argument of Perigee = 311.391428 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 470.379653 (km)  
Suggested Apogee Altitude = 935.358403 (km)  
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2022 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = CSTT Cover  
Space Structure Type = Payload

Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)

Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 0.110000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.040000 (kg)  
Final Mass = 0.040000 (kg)  
Duration = 2.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 469.000000 (km)  
Suggested Apogee Altitude = 972.000000 (km)  
Returned Error Message = Reentry during mission (no PMD req.).

Released Year = 2014 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

\*\*INPUT\*\*

Space Structure Name = Tether  
Space Structure Type = Payload  
  
Perigee Altitude = 469.000000 (km)  
Apogee Altitude = 972.000000 (km)  
Inclination = 120.000000 (deg)  
RAAN = 0.000000 (deg)  
Argument of Perigee = 0.000000 (deg)  
Mean Anomaly = 0.000000 (deg)  
Area-To-Mass Ratio = 17.420000 (m<sup>2</sup>/kg)  
Start Year = 2013.000000 (yr)  
Initial Mass = 0.020000 (kg)  
Final Mass = 0.020000 (kg)  
Duration = 2.000000 (yr)  
Station Kept = False  
Abandoned = True  
PMD Perigee Altitude = -1.000000 (km)  
PMD Apogee Altitude = -1.000000 (km)  
PMD Inclination = 0.000000 (deg)  
PMD RAAN = 0.000000 (deg)  
PMD Argument of Perigee = 0.000000 (deg)  
PMD Mean Anomaly = 0.000000 (deg)

\*\*OUTPUT\*\*

Suggested Perigee Altitude = 469.000000 (km)  
Suggested Apogee Altitude = 972.000000 (km)  
Returned Error Message = Reentry during mission (no PMD req.).

Released Year = 2013 (yr)  
Requirement = 61  
Compliance Status = Pass

=====

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

11 01 2013; 13:41:24PM \*\*\*\*\*Processing Requirement 4.7-1

Return Status : Passed

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 1

name = AC5 complete  
quantity = 1  
parent = 0  
materialID = 8  
type = Box  
Aero Mass = 2.100000  
Thermal Mass = 2.100000  
Diameter/Width = 0.100000  
Length = 0.150000  
Height = 0.100000

name = AC5 complete  
quantity = 1  
parent = 1  
materialID = 8  
type = Box  
Aero Mass = 2.100000  
Thermal Mass = 2.100000  
Diameter/Width = 0.100000  
Length = 0.150000  
Height = 0.100000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 1

name = AC5 complete  
Demise Altitude = 77.994762  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = AC5 complete  
Demise Altitude = 67.464542  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000



\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 2

name = Battery bracket  
quantity = 1  
parent = 0  
materialID = 8  
type = Box  
Aero Mass = 0.012000  
Thermal Mass = 0.012000  
Diameter/Width = 0.026000  
Length = 0.090000  
Height = 0.013000

name = Battery bracket  
quantity = 1  
parent = 1  
materialID = 8  
type = Box  
Aero Mass = 0.012000  
Thermal Mass = 0.012000  
Diameter/Width = 0.026000  
Length = 0.090000  
Height = 0.013000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 2

name = Battery bracket  
Demise Altitude = 77.990980  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Battery bracket  
Demise Altitude = 73.122285  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 3

name = Reaction wheel block  
quantity = 1  
parent = 0  
materialID = 8  
type = Box  
Aero Mass = 0.015000  
Thermal Mass = 0.015000  
Diameter/Width = 0.028000

Length = 0.029000  
Height = 0.028000

name = Reaction wheel block  
quantity = 1  
parent = 1  
materialID = 8  
type = Box  
Aero Mass = 0.015000  
Thermal Mass = 0.015000  
Diameter/Width = 0.028000  
Length = 0.029000  
Height = 0.028000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 3

name = Reaction wheel block  
Demise Altitude = 77.986574  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Reaction wheel block  
Demise Altitude = 73.709980  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 4

name = Antenna  
quantity = 1  
parent = 0  
materialID = 1  
type = Flat Plate  
Aero Mass = 0.007000  
Thermal Mass = 0.007000  
Diameter/Width = 0.040000  
Length = 0.050000

name = Antenna  
quantity = 1  
parent = 1  
materialID = 1  
type = Flat Plate  
Aero Mass = 0.007000  
Thermal Mass = 0.007000  
Diameter/Width = 0.040000  
Length = 0.050000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 4

name = Antenna  
Demise Altitude = 77.996441  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Antenna  
Demise Altitude = 0.000000  
Debris Casualty Area = 0.415666  
Impact Kinetic Energy = 0.399731

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 5

name = Battery  
quantity = 1  
parent = 0  
materialID = 56  
type = Cylinder  
Aero Mass = 0.017000  
Thermal Mass = 0.017000  
Diameter/Width = 0.016000

name = Battery  
quantity = 1  
parent = 1  
materialID = 56  
type = Cylinder  
Aero Mass = 0.017000  
Thermal Mass = 0.017000  
Diameter/Width = 0.016000  
Length = 0.033000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 5

name = Battery  
Demise Altitude = 77.991246  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Battery  
Demise Altitude = 68.929245  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 6

name = AVO  
quantity = 1  
parent = 0  
materialID = 56  
type = Cylinder  
Aero Mass = 0.023000  
Thermal Mass = 0.023000  
Diameter/Width = 0.026000

name = AVO  
quantity = 1  
parent = 1  
materialID = 56  
type = Cylinder  
Aero Mass = 0.023000  
Thermal Mass = 0.023000  
Diameter/Width = 0.026000  
Length = 0.040000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 6

name = AVO  
Demise Altitude = 77.995316  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = AVO  
Demise Altitude = 0.000000  
Debris Casualty Area = 0.399739  
Impact Kinetic Energy = 4.963423

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 7

name = Circuit Boards  
quantity = 1  
parent = 0  
materialID = 23  
type = Flat Plate  
Aero Mass = 0.030000  
Thermal Mass = 0.030000  
Diameter/Width = 0.056000  
Length = 0.056000

name = Circuit Boards  
quantity = 1  
parent = 1  
materialID = 23

type = Flat Plate  
Aero Mass = 0.030000  
Thermal Mass = 0.030000  
Diameter/Width = 0.056000  
Length = 0.056000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 7

name = Circuit Boards  
Demise Altitude = 77.992472  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Circuit Boards  
Demise Altitude = 74.073191  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 8

name = ADIS  
quantity = 1  
parent = 0  
materialID = 8  
type = Box  
Aero Mass = 0.049000  
Thermal Mass = 0.049000  
Diameter/Width = 0.044000  
Length = 0.047000  
Height = 0.014000

name = ADIS  
quantity = 1  
parent = 1  
materialID = 8  
type = Box  
Aero Mass = 0.049000  
Thermal Mass = 0.049000  
Diameter/Width = 0.044000  
Length = 0.047000  
Height = 0.014000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 8

name = ADIS  
Demise Altitude = 77.994308  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

```
*****
name = ADIS
Demise Altitude = 72.455027
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
*****
```

```
*****INPUT****
Item Number = 9
```

```
name = AC5 Lids
quantity = 1
parent = 0
materialID = 8
type = Flat Plate
Aero Mass = 0.086000
Thermal Mass = 0.086000
Diameter/Width = 0.096000
Length = 0.105000
```

```
name = AC5 Lids
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.086000
Thermal Mass = 0.086000
Diameter/Width = 0.096000
Length = 0.105000
```

```
*****OUTPUT****
Item Number = 9
```

```
name = AC5 Lids
Demise Altitude = 77.987894
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
*****
```

```
name = AC5 Lids
Demise Altitude = 71.265136
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
*****
```

```
*****INPUT****
Item Number = 10
```

```
name = Payload interface plate
quantity = 1
parent = 0
```

materialID = 8  
type = Flat Plate  
Aero Mass = 0.092000  
Thermal Mass = 0.092000  
Diameter/Width = 0.097000  
Length = 0.097000

name = Payload interface plate  
quantity = 1  
parent = 1  
materialID = 8  
type = Flat Plate  
Aero Mass = 0.092000  
Thermal Mass = 0.092000  
Diameter/Width = 0.097000  
Length = 0.097000

\*\*\*\*\*OUTPUT\*\*\*\*  
Item Number = 10

name = Payload interface plate  
Demise Altitude = 77.989512  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*  
name = Payload interface plate  
Demise Altitude = 71.224683  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*  
Item Number = 11

name = STIM  
quantity = 1  
parent = 0  
materialID = 8  
type = Box  
Aero Mass = 0.110000  
Thermal Mass = 0.110000  
Diameter/Width = 0.048000  
Length = 0.053000  
Height = 0.026000

name = STIM  
quantity = 1  
parent = 1  
materialID = 8  
type = Box  
Aero Mass = 0.110000  
Thermal Mass = 0.110000

Diameter/Width = 0.048000  
Length = 0.053000  
Height = 0.026000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 11

name = STIM  
Demise Altitude = 77.990637  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = STIM  
Demise Altitude = 71.782800  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 12

name = Pea Placer  
quantity = 1  
parent = 0  
materialID = 8  
type = Cylinder  
Aero Mass = 0.117000  
Thermal Mass = 0.117000  
Diameter/Width = 0.037000

name = Pea Placer  
quantity = 1  
parent = 1  
materialID = 8  
type = Cylinder  
Aero Mass = 0.117000  
Thermal Mass = 0.117000  
Diameter/Width = 0.037000  
Length = 0.043000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 12

name = Pea Placer  
Demise Altitude = 77.996707  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Pea Placer  
Demise Altitude = 71.968488  
Debris Casualty Area = 0.000000



Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 13

name = EM Assembly  
quantity = 1  
parent = 0  
materialID = 23  
type = Box  
Aero Mass = 0.275000  
Thermal Mass = 0.275000  
Diameter/Width = 0.078000  
Length = 0.089000  
Height = 0.047000

name = EM Assembly  
quantity = 1  
parent = 1  
materialID = 23  
type = Box  
Aero Mass = 0.275000  
Thermal Mass = 0.275000  
Diameter/Width = 0.078000  
Length = 0.089000  
Height = 0.047000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 13

name = EM Assembly  
Demise Altitude = 77.999613  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = EM Assembly  
Demise Altitude = 73.208488  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 14

name = Payload Assembly  
quantity = 1  
parent = 0  
materialID = 8  
type = Box  
Aero Mass = 0.573000

Thermal Mass = 0.573000  
Diameter/Width = 0.097000  
Length = 0.097000  
Height = 0.092000

name = Payload Assembly  
quantity = 1  
parent = 1  
materialID = 8  
type = Box  
Aero Mass = 0.573000  
Thermal Mass = 0.573000  
Diameter/Width = 0.097000  
Length = 0.097000  
Height = 0.092000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 14

name = Payload Assembly  
Demise Altitude = 77.992660  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Payload Assembly  
Demise Altitude = 70.116386  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 15

name = Body Structure  
quantity = 1  
parent = 0  
materialID = 8  
type = Box  
Aero Mass = 0.582000  
Thermal Mass = 0.582000  
Diameter/Width = 0.105000  
Length = 0.165000  
Height = 0.105000

name = Body Structure  
quantity = 1  
parent = 1  
materialID = 8  
type = Box  
Aero Mass = 0.582000  
Thermal Mass = 0.582000  
Diameter/Width = 0.105000

Length = 0.165000  
Height = 0.105000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 15

name = Body Structure  
Demise Altitude = 77.989785  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Body Structure  
Demise Altitude = 71.902894  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 16

name = CSTT Cover  
quantity = 1  
parent = 0  
materialID = 8  
type = Flat Plate  
Aero Mass = 0.040000  
Thermal Mass = 0.040000  
Diameter/Width = 0.083000  
Length = 0.100000

name = CSTT Cover  
quantity = 1  
parent = 1  
materialID = 8  
type = Flat Plate  
Aero Mass = 0.040000  
Thermal Mass = 0.040000  
Diameter/Width = 0.083000  
Length = 0.100000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 16

name = CSTT Cover  
Demise Altitude = 77.987941  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = CSTT Cover  
Demise Altitude = 70.667480  
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 17

name = Tether  
quantity = 1  
parent = 0  
materialID = 8  
type = Flat Plate  
Aero Mass = 0.020000  
Thermal Mass = 0.020000  
Diameter/Width = 0.100000  
Length = 12.000000

name = Tether  
quantity = 1  
parent = 1  
materialID = 8  
type = Flat Plate  
Aero Mass = 0.020000  
Thermal Mass = 0.020000  
Diameter/Width = 0.100000  
Length = 12.000000

\*\*\*\*\*OUTPUT\*\*\*\*

Item Number = 17

name = Tether  
Demise Altitude = 77.992926  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = Tether  
Demise Altitude = 0.000000  
Debris Casualty Area = 2.874534  
Impact Kinetic Energy = 0.005436

\*\*\*\*\*

\*\*\*\*\*INPUT\*\*\*\*

Item Number = 18

name = pea  
quantity = 10  
parent = 0  
materialID = 14  
type = Cylinder  
Aero Mass = 0.001200  
Thermal Mass = 0.001200  
Diameter/Width = 0.008000

name = pea  
quantity = 10  
parent = 1  
materialID = 14  
type = Cylinder  
Aero Mass = 0.001200  
Thermal Mass = 0.001200  
Diameter/Width = 0.008000  
Length = 0.013000

\*\*\*\*\*OUTPUT\*\*\*\*  
Item Number = 18

name = pea  
Demise Altitude = 77.993847  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

name = pea  
Demise Altitude = 76.499472  
Debris Casualty Area = 0.000000  
Impact Kinetic Energy = 0.000000

\*\*\*\*\*

===== End of Requirement 4.7-1 =====