

09 11 2015; 09:25:18AM DAS Application Started
09 11 2015; 09:25:18AM Opened Project C:\DAS 2.0\aerocube DAS\ac7 das\
09 11 2015; 09:25:51AM Processing Requirement 4.6 Return Status :
Passed

=====
Project Data
=====

INPUT

Space Structure Name = Wing Assembly
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.159619 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.055000 (kg)
Final Mass = 0.055000 (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

Suggested Perigee Altitude = 450.000000 (km)
Suggested Apogee Altitude = 720.000000 (km)
Returned Error Message = Reentry during mission (no PMD req.).

Released Year = 2017 (yr)
Requirement = 61
Compliance Status = Pass

=====

INPUT

Space Structure Name = Anti-Nadir Lid Assembly
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)

RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.097202 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.058300 (kg)
Final Mass = 0.058300 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 432.775622 (km)
PMD Apogee Altitude = 590.960502 (km)
PMD Inclination = 97.990959 (deg)
PMD RAAN = 18.181916 (deg)
PMD Argument of Perigee = 204.086193 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 432.775622 (km)
Suggested Apogee Altitude = 590.960502 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2018 (yr)
Requirement = 61
Compliance Status = Pass

=====

INPUT

Space Structure Name = Camera Lens (Xenoplan/Schneider)
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.015845 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.087200 (kg)
Final Mass = 0.087200 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 453.993371 (km)
PMD Apogee Altitude = 697.532721 (km)
PMD Inclination = 98.003275 (deg)
PMD RAAN = 12.597099 (deg)
PMD Argument of Perigee = 225.464815 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 453.993371 (km)
Suggested Apogee Altitude = 697.532721 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

INPUT

Space Structure Name = Rate Gyro Assembly
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.029592 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.095000 (kg)
Final Mass = 0.095000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 451.643742 (km)
PMD Apogee Altitude = 682.741379 (km)
PMD Inclination = 98.001548 (deg)
PMD RAAN = 13.402918 (deg)
PMD Argument of Perigee = 222.460933 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 451.643742 (km)
Suggested Apogee Altitude = 682.741379 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

INPUT

Space Structure Name = Nadir Lid Assembly
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.031117 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.187000 (kg)
Final Mass = 0.187000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 451.364490 (km)
PMD Apogee Altitude = 681.046962 (km)
PMD Inclination = 98.001350 (deg)
PMD RAAN = 13.494819 (deg)
PMD Argument of Perigee = 222.117077 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 451.364490 (km)
Suggested Apogee Altitude = 681.046962 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

INPUT

Space Structure Name = Laser Comm Plate
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.032464 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.220700 (kg)
Final Mass = 0.220700 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 451.114221 (km)
PMD Apogee Altitude = 679.539377 (km)
PMD Inclination = 98.001175 (deg)
PMD RAAN = 13.576510 (deg)

PMD Argument of Perigee = 221.811196 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 451.114221 (km)
Suggested Apogee Altitude = 679.539377 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

INPUT

Space Structure Name = Laser Isolator
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.007987 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.227000 (kg)
Final Mass = 0.227000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 455.215519 (km)
PMD Apogee Altitude = 705.628070 (km)
PMD Inclination = 98.004223 (deg)
PMD RAAN = 12.153692 (deg)
PMD Argument of Perigee = 227.109749 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 455.215519 (km)
Suggested Apogee Altitude = 705.628070 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

INPUT

Space Structure Name = Body Assembly
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.052167 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.450000 (kg)
Final Mass = 0.450000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 447.035307 (km)
PMD Apogee Altitude = 656.333218 (km)
PMD Inclination = 97.998481 (deg)
PMD RAAN = 14.823596 (deg)
PMD Argument of Perigee = 217.112531 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 447.035307 (km)
Suggested Apogee Altitude = 656.333218 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

****INPUT****

Space Structure Name = Electronics module with batteries
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.017121 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.514000 (kg)
Final Mass = 0.514000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 453.787175 (km)

PMD Apogee Altitude = 696.194944 (km)
PMD Inclination = 98.003118 (deg)
PMD RAAN = 12.670224 (deg)
PMD Argument of Perigee = 225.193017 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 453.787175 (km)
Suggested Apogee Altitude = 696.194944 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

INPUT

Space Structure Name = AC7 Propulsion Unit
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.044400 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.131000 (kg)
Final Mass = 0.131000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 448.745033 (km)
PMD Apogee Altitude = 665.759406 (km)
PMD Inclination = 97.999574 (deg)
PMD RAAN = 14.319552 (deg)
PMD Argument of Perigee = 219.018518 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 448.745033 (km)
Suggested Apogee Altitude = 665.759406 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

=====

INPUT

Space Structure Name = AeroCube7 complete
Space Structure Type = Payload

Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.008000 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 2.500000 (kg)
Final Mass = 2.500000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 455.213589 (km)
PMD Apogee Altitude = 705.615059 (km)
PMD Inclination = 98.004221 (deg)
PMD RAAN = 12.154406 (deg)
PMD Argument of Perigee = 227.107105 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 455.213589 (km)
Suggested Apogee Altitude = 705.615059 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

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

09 11 2015; 09:25:59AM Processing Requirement 4.3-1: Return Status :
Not Run

=====

No Project Data Available

=====

===== End of Requirement 4.3-1 =====

09 11 2015; 09:26:31AM Processing Requirement 4.3-2: Return Status :
Passed

=====

No Project Data Available

=====

===== End of Requirement 4.3-2 =====

09 11 2015; 09:26:46AM Requirement 4.4-3: Compliant

===== End of Requirement 4.4-3 =====

09 11 2015; 09:27:08AM Processing Requirement 4.5-1: Return Status :
Passed

=====

Run Data

=====

INPUT

Space Structure Name = Wing Assembly
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.159619 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.055000 (kg)
Final Mass = 0.055000 (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 = Anti-Nadir Lid Assembly
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)

Final Area-To-Mass Ratio = 0.097202 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.058300 (kg)
Final Mass = 0.058300 (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 = Camera Lens (Xenoplan/Schneider)
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.015845 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.087200 (kg)
Final Mass = 0.087200 (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 = Rate Gyro Assembly
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.029592 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.095000 (kg)
Final Mass = 0.095000 (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 = Nadir Lid Assembly
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.031117 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.187000 (kg)
Final Mass = 0.187000 (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 = Laser Comm Plate
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.032464 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.220700 (kg)
Final Mass = 0.220700 (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 = Laser Isolator
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)

RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.007987 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.227000 (kg)
Final Mass = 0.227000 (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 Assembly
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.052167 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.450000 (kg)
Final Mass = 0.450000 (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 = Electronics module with batteries
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.017121 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.514000 (kg)
Final Mass = 0.514000 (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 = AC7 Propulsion Unit
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.044400 (m²/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 0.131000 (kg)
Final Mass = 0.131000 (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 = AeroCube7 complete
Space Structure Type = Payload
Perigee Altitude = 450.000000 (km)
Apogee Altitude = 720.000000 (km)
Inclination = 98.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.008000 (m^2/kg)
Start Year = 2016.000000 (yr)
Initial Mass = 2.500000 (kg)
Final Mass = 2.500000 (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
```

=====

```
===== End of Requirement 4.5-1 =====
09 11 2015; 09:27:40AM Requirement 4.5-2: Compliant
09 11 2015; 09:27:51AM *****Processing Requirement 4.7-1
Return Status : Passed
```

*****INPUT****

Item Number = 1

name = Wing Assembly
quantity = 2
parent = 0
materialID = 8
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.079000
Length = 0.150000
Height = 0.025000

name = Wing Assembly
quantity = 2
parent = 1
materialID = 8
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.079000
Length = 0.150000
Height = 0.025000

*****OUTPUT****

Item Number = 1

name = Wing Assembly
Demise Altitude = 77.992441
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Wing Assembly
Demise Altitude = 0.000000
Debris Casualty Area = 0.947562
Impact Kinetic Energy = 4.371142

*****INPUT****

Item Number = 2

name = Anti-Nadir Lid Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.058300
Thermal Mass = 0.058300
Diameter/Width = 0.103000
Length = 0.108000

Height = 0.002000

name = Anti-Nadir Lid Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.058300
Thermal Mass = 0.058300
Diameter/Width = 0.103000
Length = 0.108000
Height = 0.002000

*****OUTPUT****
Item Number = 2

name = Anti-Nadir Lid Assembly
Demise Altitude = 77.987066
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Anti-Nadir Lid Assembly
Demise Altitude = 66.743698
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****
Item Number = 3

name = Camera Lens (Xenoplan/Schneider)
quantity = 1
parent = 0
materialID = 9
type = Cylinder
Aero Mass = 0.087200
Thermal Mass = 0.087200
Diameter/Width = 0.032000

name = Camera Lens (Xenoplan/Schneider)
quantity = 1
parent = 1
materialID = 9
type = Cylinder
Aero Mass = 0.087200
Thermal Mass = 0.087200
Diameter/Width = 0.032000
Length = 0.039000

*****OUTPUT****
Item Number = 3

name = Camera Lens (Xenoplan/Schneider)
Demise Altitude = 77.994121
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Camera Lens (Xenoplan/Schneider)
Demise Altitude = 72.171480
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****
Item Number = 4

name = Rate Gyro Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.095000
Thermal Mass = 0.095000
Diameter/Width = 0.048000
Length = 0.060000
Height = 0.025000

name = Rate Gyro Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.095000
Thermal Mass = 0.095000
Diameter/Width = 0.048000
Length = 0.060000
Height = 0.025000

*****OUTPUT****
Item Number = 4

name = Rate Gyro Assembly
Demise Altitude = 77.997980
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Rate Gyro Assembly
Demise Altitude = 72.042167
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 5

name = Nadir Lid Assembly
quantity = 1
parent = 0
materialID = 8
type = Flat Plate
Aero Mass = 0.187000
Thermal Mass = 0.187000
Diameter/Width = 0.102000
Length = 0.108000

name = Nadir Lid Assembly
quantity = 1
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.187000
Thermal Mass = 0.187000
Diameter/Width = 0.102000
Length = 0.108000

*****OUTPUT****

Item Number = 5

name = Nadir Lid Assembly
Demise Altitude = 77.990199
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Nadir Lid Assembly
Demise Altitude = 69.956269
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 6

name = Laser Comm Plate
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.220700
Thermal Mass = 0.220700
Diameter/Width = 0.102000
Length = 0.103000
Height = 0.019000

name = Laser Comm Plate

quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.220700
Thermal Mass = 0.220700
Diameter/Width = 0.102000
Length = 0.103000
Height = 0.019000

*****OUTPUT****

Item Number = 6

name = Laser Comm Plate
Demise Altitude = 77.995691
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Laser Comm Plate
Demise Altitude = 69.941308
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 7

name = Laser Isolator
quantity = 1
parent = 0
materialID = -1
type = Cylinder
Aero Mass = 0.227000
Thermal Mass = 0.227000
Diameter/Width = 0.027000

name = Laser Isolator
quantity = 1
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 0.227000
Thermal Mass = 0.227000
Diameter/Width = 0.027000
Length = 0.072000

*****OUTPUT****

Item Number = 7

name = Laser Isolator
Demise Altitude = 77.998035
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Laser Isolator
Demise Altitude = 71.501496
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 8

name = Body Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.450000
Thermal Mass = 0.450000
Diameter/Width = 0.113000
Length = 0.160000
Height = 0.106000

name = Body Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.450000
Thermal Mass = 0.450000
Diameter/Width = 0.113000
Length = 0.160000
Height = 0.106000

*****OUTPUT****

Item Number = 8

name = Body Assembly
Demise Altitude = 77.992894
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Body Assembly
Demise Altitude = 71.627253
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 9

name = Electronics module with batteries
quantity = 1
parent = 0
materialID = 23
type = Box
Aero Mass = 0.514000
Thermal Mass = 0.514000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.070000

name = Electronics module with batteries
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.514000
Thermal Mass = 0.514000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.070000

*****OUTPUT****

Item Number = 9

name = Electronics module with batteries
Demise Altitude = 77.996894
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Electronics module with batteries
Demise Altitude = 71.817332
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 10

name = AC7 Propulsion Unit
quantity = 1
parent = 0
materialID = 76
type = Box
Aero Mass = 0.131000
Thermal Mass = 0.131000
Diameter/Width = 0.057150
Length = 0.088900
Height = 0.044950

name = AC7 Propulsion Unit
quantity = 1

parent = 1
materialID = 76
type = Box
Aero Mass = 0.131000
Thermal Mass = 0.131000
Diameter/Width = 0.057150
Length = 0.088900
Height = 0.044950

*****OUTPUT****

Item Number = 10

name = AC7 Propulsion Unit
Demise Altitude = 77.989488
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = AC7 Propulsion Unit
Demise Altitude = 76.931168
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

*****INPUT****

Item Number = 11

name = AeroCube7 complete
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 2.500000
Thermal Mass = 2.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

name = AeroCube7 complete
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 2.500000
Thermal Mass = 2.500000
Diameter/Width = 0.100000
Length = 0.150000
Height = 0.100000

*****OUTPUT****

Item Number = 11

name = AeroCube7 complete

Demise Altitude = 77.993449
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = AeroCube7 complete
Demise Altitude = 65.615120
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

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