09 01 2016; 10:26:33AM DAS Application Started
09 01 2016; 10:26:33AM Opened Project C:\DAS 2.0\tomsat\
09 01 2016; 10:27:30AM Mission Editor Changes Applied
09 01 2016; 10:27:35AM Processing Requirement 4.3-1: Return Status : Not Run

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

========== End of Requirement 4.3-1 ==========
09 01 2016; 10:27:38AM Processing Requirement 4.3-2: Return Status : Passed

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

========== End of Requirement 4.3-2 ==========
09 01 2016; 10:27:40AM Requirement 4.4-3: Compliant

========== End of Requirement 4.4-3 ==========
09 01 2016; 10:28:00AM Processing Requirement 4.5-1: Return Status : Passed

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

INPUT

Space Structure Name = TOMSAT Complete
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.010750 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 5.000000 (kg)
Final Mass = 5.000000 (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 = Full Body Only
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.043712 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.644200 (kg)
Final Mass = 0.644200 (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 = Frame Part 1 (2001)
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)

Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.043995 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.298130 (kg)
Final Mass = 0.298130 (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 = Frame Part 2 (4001)
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.054262 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.346070 (kg)
Final Mass = 0.346070 (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 = Bus Electronics
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.012604 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.627060 (kg)
Final Mass = 0.627060 (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 Wheels
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.012760 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.225010 (kg)
Final Mass = 0.225010 (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 = Star Tracker
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.017369 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.054800 (kg)
Final Mass = 0.054800 (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 = Single Torque Rod
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.034161 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.018440 (kg)
Final Mass = 0.018440 (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 = Zenith Lid Assembly
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.035553 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.141260 (kg)
Final Mass = 0.141260 (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 Zenith
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.037208 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.015900 (kg)
Final Mass = 0.015900 (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 = Wing Assembly
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)

Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.054297 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.148130 (kg)
Final Mass = 0.148130 (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 = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.044140 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.099590 (kg)
Final Mass = 0.099590 (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 Nadir
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.037208 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.015900 (kg)
Final Mass = 0.015900 (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 = Uplink Receiver
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)

Final Area-To-Mass Ratio = 0.035037 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.027960 (kg)
Final Mass = 0.027960 (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 = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.006980 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 1.311400 (kg)
Final Mass = 1.311400 (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 = 18267
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.071468 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.016690 (kg)
Final Mass = 0.016690 (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 = 18265
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.048369 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.010920 (kg)
Final Mass = 0.010920 (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 = 18264
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.067530 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.012320 (kg)
Final Mass = 0.012320 (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 = 18268
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.024134 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.004040 (kg)
Final Mass = 0.004040 (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 = 18266
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.015816 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.010280 (kg)
Final Mass = 0.010280 (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 = 18263
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.041225 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.001280 (kg)
Final Mass = 0.001280 (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 = 18270
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)

Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.069232 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.000740 (kg)
Final Mass = 0.000740 (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
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.013244 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.352850 (kg)
Final Mass = 0.352850 (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 210 IMU
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.017272 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.115730 (kg)
Final Mass = 0.115730 (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 01 2016; 10:28:12AM Requirement 4.5-2: Compliant
09 01 2016; 10:28:13AM Processing Requirement 4.6 Return Status : Passed

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

INPUT

Space Structure Name = TOMSAT Complete
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.010750 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 5.000000 (kg)
Final Mass = 5.000000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 495.686931 (km)
PMD Apogee Altitude = 495.686931 (km)
PMD Inclination = 84.999772 (deg)
PMD RAAN = 117.071516 (deg)
PMD Argument of Perigee = 318.092471 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 495.686931 (km)
Suggested Apogee Altitude = 495.686931 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Full Body Only
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.043712 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.644200 (kg)
Final Mass = 0.644200 (kg)
Duration = 1.000000 (yr)
Station Kept = False

Abandoned = True
PMD Perigee Altitude = 468.646763 (km)
PMD Apogee Altitude = 489.939472 (km)
PMD Inclination = 84.996926 (deg)
PMD RAAN = 115.952401 (deg)
PMD Argument of Perigee = 53.726904 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 468.646763 (km)
Suggested Apogee Altitude = 489.939472 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Frame Part 1 (2001)
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.043995 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.298130 (kg)
Final Mass = 0.298130 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 468.577491 (km)
PMD Apogee Altitude = 489.661822 (km)
PMD Inclination = 84.996897 (deg)
PMD RAAN = 115.941185 (deg)
PMD Argument of Perigee = 54.198981 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 468.577491 (km)
Suggested Apogee Altitude = 489.661822 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)

Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Frame Part 2 (4001)
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.054262 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.346070 (kg)
Final Mass = 0.346070 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 461.762281 (km)
PMD Apogee Altitude = 483.739555 (km)
PMD Inclination = 84.995810 (deg)
PMD RAAN = 115.536667 (deg)
PMD Argument of Perigee = 55.535161 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 461.762281 (km)
Suggested Apogee Altitude = 483.739555 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2020 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

Space Structure Name = Bus Electronics
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)

Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.012604 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.627060 (kg)
Final Mass = 0.627060 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 482.026152 (km)
PMD Apogee Altitude = 507.678154 (km)
PMD Inclination = 84.999622 (deg)
PMD RAAN = 117.012477 (deg)
PMD Argument of Perigee = 115.000663 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 482.026152 (km)
Suggested Apogee Altitude = 507.678154 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Reaction Wheels
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.012760 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.225010 (kg)
Final Mass = 0.225010 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 481.215873 (km)
PMD Apogee Altitude = 508.350501 (km)
PMD Inclination = 84.999609 (deg)
PMD RAAN = 117.007563 (deg)
PMD Argument of Perigee = 107.921015 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 481.215873 (km)
Suggested Apogee Altitude = 508.350501 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Star Tracker
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.017369 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.054800 (kg)
Final Mass = 0.054800 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 478.731489 (km)
PMD Apogee Altitude = 506.748387 (km)
PMD Inclination = 84.999250 (deg)
PMD RAAN = 116.862533 (deg)
PMD Argument of Perigee = 79.455494 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 478.731489 (km)
Suggested Apogee Altitude = 506.748387 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Single Torque Rod

Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.034161 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.018440 (kg)
Final Mass = 0.018440 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 472.350969 (km)
PMD Apogee Altitude = 496.860116 (km)
PMD Inclination = 84.997832 (deg)
PMD RAAN = 116.302615 (deg)
PMD Argument of Perigee = 59.246940 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 472.350969 (km)
Suggested Apogee Altitude = 496.860116 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

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

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.035553 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.141260 (kg)
Final Mass = 0.141260 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True

PMD Perigee Altitude = 469.607548 (km)
PMD Apogee Altitude = 498.182718 (km)
PMD Inclination = 84.997699 (deg)
PMD RAAN = 116.254658 (deg)
PMD Argument of Perigee = 83.189185 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 469.607548 (km)
Suggested Apogee Altitude = 498.182718 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Antenna Zenith
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.037208 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.015900 (kg)
Final Mass = 0.015900 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 470.864268 (km)
PMD Apogee Altitude = 495.095091 (km)
PMD Inclination = 84.997552 (deg)
PMD RAAN = 116.193838 (deg)
PMD Argument of Perigee = 57.988189 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 470.864268 (km)
Suggested Apogee Altitude = 495.095091 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2021 (yr)
Requirement = 61

Compliance Status = Pass

==========

INPUT

Space Structure Name = Wing Assembly
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.054297 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.148130 (kg)
Final Mass = 0.148130 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 461.742688 (km)
PMD Apogee Altitude = 483.712948 (km)
PMD Inclination = 84.995806 (deg)
PMD RAAN = 115.535235 (deg)
PMD Argument of Perigee = 55.524546 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 461.742688 (km)
Suggested Apogee Altitude = 483.712948 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

Released Year = 2020 (yr)
Requirement = 61
Compliance Status = Pass

==========

INPUT

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

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)

Area-To-Mass Ratio = 0.044140 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.099590 (kg)
Final Mass = 0.099590 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 468.535275 (km)
PMD Apogee Altitude = 489.525424 (km)
PMD Inclination = 84.996882 (deg)
PMD RAAN = 115.935407 (deg)
PMD Argument of Perigee = 54.471031 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 468.535275 (km)
Suggested Apogee Altitude = 489.525424 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Antenna Nadir
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.037208 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.015900 (kg)
Final Mass = 0.015900 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 470.864268 (km)
PMD Apogee Altitude = 495.095091 (km)
PMD Inclination = 84.997552 (deg)
PMD RAAN = 116.193838 (deg)
PMD Argument of Perigee = 57.988189 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 470.864268 (km)
Suggested Apogee Altitude = 495.095091 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Uplink Receiver
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.035037 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.027960 (kg)
Final Mass = 0.027960 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 471.958304 (km)
PMD Apogee Altitude = 496.329049 (km)
PMD Inclination = 84.997753 (deg)
PMD RAAN = 116.271669 (deg)
PMD Argument of Perigee = 58.923553 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 471.958304 (km)
Suggested Apogee Altitude = 496.329049 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Payload Assembly
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.006980 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 1.311400 (kg)
Final Mass = 1.311400 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 497.255163 (km)
PMD Apogee Altitude = 497.255163 (km)
PMD Inclination = 85.000051 (deg)
PMD RAAN = 117.184596 (deg)
PMD Argument of Perigee = 325.360616 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 497.255163 (km)
Suggested Apogee Altitude = 497.255163 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = 18267
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.071468 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.016690 (kg)
Final Mass = 0.016690 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 451.047016 (km)

PMD Apogee Altitude = 468.362329 (km)
PMD Inclination = 84.993665 (deg)
PMD RAAN = 114.765990 (deg)
PMD Argument of Perigee = 52.545834 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 451.047016 (km)
Suggested Apogee Altitude = 468.362329 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = 18265
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.048369 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.010920 (kg)
Final Mass = 0.010920 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 465.553037 (km)
PMD Apogee Altitude = 487.465190 (km)
PMD Inclination = 84.996451 (deg)
PMD RAAN = 115.773650 (deg)
PMD Argument of Perigee = 56.503349 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 465.553037 (km)
Suggested Apogee Altitude = 487.465190 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = 18264
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.067530 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.012320 (kg)
Final Mass = 0.012320 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 453.844947 (km)
PMD Apogee Altitude = 472.220930 (km)
PMD Inclination = 84.994207 (deg)
PMD RAAN = 114.955495 (deg)
PMD Argument of Perigee = 51.292470 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 453.844947 (km)
Suggested Apogee Altitude = 472.220930 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = 18268
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.024134 (m^2/kg)

Start Year = 2017.000000 (yr)
Initial Mass = 0.004040 (kg)
Final Mass = 0.004040 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 476.528340 (km)
PMD Apogee Altitude = 502.715992 (km)
PMD Inclination = 84.998701 (deg)
PMD RAAN = 116.644339 (deg)
PMD Argument of Perigee = 62.152522 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 476.528340 (km)
Suggested Apogee Altitude = 502.715992 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = 18266
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.015816 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.010280 (kg)
Final Mass = 0.010280 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 479.508900 (km)
PMD Apogee Altitude = 507.372265 (km)
PMD Inclination = 84.999372 (deg)
PMD RAAN = 116.911912 (deg)
PMD Argument of Perigee = 100.598747 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 479.508900 (km)
Suggested Apogee Altitude = 507.372265 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = 18263
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.041225 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.001280 (kg)
Final Mass = 0.001280 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 467.893971 (km)
PMD Apogee Altitude = 493.627601 (km)
PMD Inclination = 84.997169 (deg)
PMD RAAN = 116.046948 (deg)
PMD Argument of Perigee = 67.020697 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 467.893971 (km)
Suggested Apogee Altitude = 493.627601 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = 18270
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.069232 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.000740 (kg)
Final Mass = 0.000740 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 452.678558 (km)
PMD Apogee Altitude = 470.563794 (km)
PMD Inclination = 84.993977 (deg)
PMD RAAN = 114.874519 (deg)
PMD Argument of Perigee = 51.703181 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 452.678558 (km)
Suggested Apogee Altitude = 470.563794 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = Laser
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.013244 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.352850 (kg)
Final Mass = 0.352850 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 481.060215 (km)
PMD Apogee Altitude = 508.086133 (km)

PMD Inclination = 84.999572 (deg)
PMD RAAN = 116.992558 (deg)
PMD Argument of Perigee = 107.985415 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 481.060215 (km)
Suggested Apogee Altitude = 508.086133 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

INPUT

Space Structure Name = STIM 210 IMU
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 85.000000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.017272 (m^2/kg)
Start Year = 2017.000000 (yr)
Initial Mass = 0.115730 (kg)
Final Mass = 0.115730 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 478.769001 (km)
PMD Apogee Altitude = 506.797825 (km)
PMD Inclination = 84.999257 (deg)
PMD RAAN = 116.865604 (deg)
PMD Argument of Perigee = 79.625801 (deg)
PMD Mean Anomaly = 0.000000 (deg)

OUTPUT

Suggested Perigee Altitude = 478.769001 (km)
Suggested Apogee Altitude = 506.797825 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

==========

========== End of Requirement 4.6 ==========
09 01 2016; 10:28:23AM   *********Processing Requirement 4.7-1
     Return Status : Passed

**********INPUT****
 Item Number = 1

name = TOMSAT Complete
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 5.000000
Thermal Mass = 5.000000
Diameter/Width = 0.100000
Length = 0.330000
Height = 0.100000

name = TOMSAT Complete
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 5.000000
Thermal Mass = 5.000000
Diameter/Width = 0.100000
Length = 0.330000
Height = 0.100000

**********OUTPUT****
Item Number = 1

name = TOMSAT Complete
Demise Altitude = 77.998191
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = TOMSAT Complete
Demise Altitude = 64.785566
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****

**********INPUT****
 Item Number = 2

name = Full Body Only
quantity = 1

```
parent = 0
materialID = 8
type = Box
Aero Mass = 0.644200
Thermal Mass = 0.644200
Diameter/Width = 0.110900
Length = 0.340500
Height = 0.103494

name = Full Body Only
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.644200
Thermal Mass = 0.644200
Diameter/Width = 0.110900
Length = 0.340500
Height = 0.103494

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

name = Full Body Only
Demise Altitude = 77.997058
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Full Body Only
Demise Altitude = 71.855667
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

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

name = Frame Part 1 (2001)
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.298130
Thermal Mass = 0.298130
Diameter/Width = 0.110900
Length = 0.130000
Height = 0.103494

name = Frame Part 1 (2001)
quantity = 1
```

```
parent = 1
materialID = 8
type = Box
Aero Mass = 0.298130
Thermal Mass = 0.298130
Diameter/Width = 0.110900
Length = 0.130000
Height = 0.103494

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

name = Frame Part 1 (2001)
Demise Altitude = 77.988871
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Frame Part 1 (2001)
Demise Altitude = 71.208589
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

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

name = Frame Part 2 (4001)
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.346070
Thermal Mass = 0.346070
Diameter/Width = 0.110900
Length = 0.209230
Height = 0.103494

name = Frame Part 2 (4001)
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.346070
Thermal Mass = 0.346070
Diameter/Width = 0.110900
Length = 0.209230
Height = 0.103494

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

```
name = Frame Part 2 (4001)
Demise Altitude = 77.989230
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Frame Part 2 (4001)
Demise Altitude = 72.054792
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

**********INPUT****
 Item Number = 5

name = Bus Electronics
quantity = 1
parent = 0
materialID = 23
type = Box
Aero Mass = 0.627060
Thermal Mass = 0.627060
Diameter/Width = 0.085046
Length = 0.097050
Height = 0.084882

name = Bus Electronics
quantity = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.627060
Thermal Mass = 0.627060
Diameter/Width = 0.085046
Length = 0.097050
Height = 0.084882

**************OUTPUT****
Item Number = 5

name = Bus Electronics
Demise Altitude = 77.994972
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Bus Electronics
Demise Altitude = 71.933527
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
************************************

***********INPUT****
 Item Number = 6

name = Reaction Wheels
quantity = 1
parent = 0
materialID = 54
type = Box
Aero Mass = 0.225010
Thermal Mass = 0.225010
Diameter/Width = 0.052832
Length = 0.071102
Height = 0.039192

name = Reaction Wheels
quantity = 1
parent = 1
materialID = 54
type = Box
Aero Mass = 0.225010
Thermal Mass = 0.225010
Diameter/Width = 0.052832
Length = 0.071102
Height = 0.039192

*************OUTPUT****
Item Number = 6

name = Reaction Wheels
Demise Altitude = 77.990707
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Reaction Wheels
Demise Altitude = 0.000000
Debris Casualty Area = 0.431908
Impact Kinetic Energy = 149.537155

************************************

***********INPUT****
 Item Number = 7

name = Star Tracker
quantity = 2
parent = 0
materialID = 8
type = Box
```

```
Aero Mass = 0.054800
Thermal Mass = 0.054800
Diameter/Width = 0.026670
Length = 0.041829
Height = 0.025400

name = Star Tracker
quantity = 2
parent = 1
materialID = 8
type = Box
Aero Mass = 0.054800
Thermal Mass = 0.054800
Diameter/Width = 0.026670
Length = 0.041829
Height = 0.025400

**************OUTPUT****
Item Number = 7

name = Star Tracker
Demise Altitude = 77.995871
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Star Tracker
Demise Altitude = 72.862183
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 8

name = Single Torque Rod
quantity = 9
parent = 0
materialID = -1
type = Cylinder
Aero Mass = 0.018440
Thermal Mass = 0.018440
Diameter/Width = 0.008000

name = Single Torque Rod
quantity = 9
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 0.018440
Thermal Mass = 0.018440
```

```
Diameter/Width = 0.008000
Length = 0.078740

**************OUTPUT****
Item Number = 8

name = Single Torque Rod
Demise Altitude = 77.989894
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Single Torque Rod
Demise Altitude = 74.688566
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

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

name = Zenith Lid Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.141260
Thermal Mass = 0.141260
Diameter/Width = 0.103494
Length = 0.110900
Height = 0.016740

name = Antenna Zenith sub
quantity = 1
parent = 1
materialID = 40
type = Box
Aero Mass = 0.015900
Thermal Mass = 0.015900
Diameter/Width = 0.038099
Length = 0.039878
Height = 0.005000

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

name = Zenith Lid Assembly
Demise Altitude = 77.991676
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000
```

```
************************************
name = Antenna Zenith sub
Demise Altitude = 71.860183
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

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

name = Antenna Zenith
quantity = 1
parent = 0
materialID = 40
type = Box
Aero Mass = 0.015900
Thermal Mass = 0.015900
Diameter/Width = 0.038099
Length = 0.039878
Height = 0.005000

name = Antenna Zenith
quantity = 1
parent = 1
materialID = 40
type = Box
Aero Mass = 0.015900
Thermal Mass = 0.015900
Diameter/Width = 0.038099
Length = 0.039878
Height = 0.005000

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

name = Antenna Zenith
Demise Altitude = 77.986887
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Antenna Zenith
Demise Altitude = 68.422925
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

**********INPUT****
 Item Number = 11
```

```
name = Wing Assembly
quantity = 2
parent = 0
materialID = 8
type = Flat Plate
Aero Mass = 0.148130
Thermal Mass = 0.148130
Diameter/Width = 0.073660
Length = 0.313500

name = Wing Assembly
quantity = 2
parent = 1
materialID = 8
type = Flat Plate
Aero Mass = 0.148130
Thermal Mass = 0.148130
Diameter/Width = 0.073660
Length = 0.313500

**************OUTPUT****
Item Number = 11

name = Wing Assembly
Demise Altitude = 77.986988
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Wing Assembly
Demise Altitude = 66.885363
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 12

name = Nadir Lid Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.099590
Thermal Mass = 0.099590
Diameter/Width = 0.103494
Length = 0.110900
Height = 0.007977

name = Antenna Nadir sub
quantity = 1
```

```
parent = 1
materialID = 40
type = Box
Aero Mass = 0.015900
Thermal Mass = 0.015900
Diameter/Width = 0.038099
Length = 0.039878
Height = 0.005000

**************OUTPUT****
Item Number = 12

name = Nadir Lid Assembly
Demise Altitude = 77.990613
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Antenna Nadir sub
Demise Altitude = 68.977816
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 13

name = Antenna Nadir
quantity = 1
parent = 0
materialID = 40
type = Box
Aero Mass = 0.015900
Thermal Mass = 0.015900
Diameter/Width = 0.038099
Length = 0.039878
Height = 0.005000

name = Antenna Nadir
quantity = 1
parent = 1
materialID = 40
type = Box
Aero Mass = 0.015900
Thermal Mass = 0.015900
Diameter/Width = 0.038099
Length = 0.039878
Height = 0.005000

**************OUTPUT****
Item Number = 13
```

```
name = Antenna Nadir
Demise Altitude = 77.986887
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Antenna Nadir
Demise Altitude = 68.422925
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 14

name = Uplink Receiver
quantity = 1
parent = 0
materialID = 8
type = Cylinder
Aero Mass = 0.027960
Thermal Mass = 0.027960
Diameter/Width = 0.031000

name = Uplink Receiver
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.027960
Thermal Mass = 0.027960
Diameter/Width = 0.031000
Length = 0.031601

*************OUTPUT****
Item Number = 14

name = Uplink Receiver
Demise Altitude = 77.996660
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Uplink Receiver
Demise Altitude = 73.961207
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
```

```
**********INPUT****
 Item Number = 15

name = Payload Assembly
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 1.311400
Thermal Mass = 1.311400
Diameter/Width = 0.082444
Length = 0.164580
Height = 0.056238

name = 18267 sub
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.016690
Thermal Mass = 0.016690
Diameter/Width = 0.032000
Length = 0.037275

name = 18265 sub
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.010920
Thermal Mass = 0.010920
Diameter/Width = 0.016506
Length = 0.032000

name = 18264 sub
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.012320
Thermal Mass = 0.012320
Diameter/Width = 0.025999
Length = 0.032000

name = 18268 sub
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.004040
Thermal Mass = 0.004040
Diameter/Width = 0.025000
```

```
Length = 0.039000

name = 18266 sub
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.010280
Thermal Mass = 0.010280
Diameter/Width = 0.050810
Length = 0.032000

name = 18263 sub
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.001280
Thermal Mass = 0.001280
Diameter/Width = 0.016490
Length = 0.032000

name = 18270 sub
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.000740
Thermal Mass = 0.000740
Diameter/Width = 0.016010
Length = 0.032000

**************OUTPUT****
Item Number = 15

name = Payload Assembly
Demise Altitude = 77.999894
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = 18267 sub
Demise Altitude = 0.000000
Debris Casualty Area = 0.402637
Impact Kinetic Energy = 2.189265

************************************
name = 18265 sub
Demise Altitude = 0.000000
Debris Casualty Area = 0.388107
Impact Kinetic Energy = 2.261483
```

```
************************************
name = 18264 sub
Demise Altitude = 0.000000
Debris Casualty Area = 0.395445
Impact Kinetic Energy = 1.725148

************************************
name = 18268 sub
Demise Altitude = 0.000000
Debris Casualty Area = 0.398445
Impact Kinetic Energy = 0.163474

************************************
name = 18266 sub
Demise Altitude = 0.000000
Debris Casualty Area = 0.410013
Impact Kinetic Energy = 0.535933

************************************
name = 18263 sub
Demise Altitude = 0.000000
Debris Casualty Area = 0.388093
Impact Kinetic Energy = 0.031079

************************************
name = 18270 sub
Demise Altitude = 0.000000
Debris Casualty Area = 0.387674
Impact Kinetic Energy = 0.010730

************************************

**********INPUT****
 Item Number = 16

name = 18267
quantity = 1
parent = 0
materialID = 66
type = Cylinder
Aero Mass = 0.016690
Thermal Mass = 0.016690
Diameter/Width = 0.032000

name = 18267
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.016690
Thermal Mass = 0.016690
Diameter/Width = 0.032000
```

```
Length = 0.037275

**************OUTPUT****
Item Number = 16

name = 18267
Demise Altitude = 77.987199
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = 18267
Demise Altitude = 0.000000
Debris Casualty Area = 0.402637
Impact Kinetic Energy = 2.189214

************************************

***********INPUT****
 Item Number = 17

name = 18265
quantity = 1
parent = 0
materialID = 66
type = Cylinder
Aero Mass = 0.010920
Thermal Mass = 0.010920
Diameter/Width = 0.016506

name = 18265
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.010920
Thermal Mass = 0.010920
Diameter/Width = 0.016506
Length = 0.032000

**************OUTPUT****
Item Number = 17

name = 18265
Demise Altitude = 77.992527
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = 18265
Demise Altitude = 0.000000
Debris Casualty Area = 0.388107
```

Impact Kinetic Energy = 2.261433

****

**********INPUT****
 Item Number = 18

name = 18264
quantity = 1
parent = 0
materialID = 66
type = Cylinder
Aero Mass = 0.012320
Thermal Mass = 0.012320
Diameter/Width = 0.025999

name = 18264
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.012320
Thermal Mass = 0.012320
Diameter/Width = 0.025999
Length = 0.032000

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

name = 18264
Demise Altitude = 77.988996
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

****
name = 18264
Demise Altitude = 0.000000
Debris Casualty Area = 0.395445
Impact Kinetic Energy = 1.725225

****

**********INPUT****
 Item Number = 19

name = 18268
quantity = 1
parent = 0
materialID = 66
type = Cylinder
Aero Mass = 0.004040
Thermal Mass = 0.004040

```
Diameter/Width = 0.025000

name = 18268
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.004040
Thermal Mass = 0.004040
Diameter/Width = 0.025000
Length = 0.039000

**************OUTPUT****
Item Number = 19

name = 18268
Demise Altitude = 77.990418
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = 18268
Demise Altitude = 0.000000
Debris Casualty Area = 0.398445
Impact Kinetic Energy = 0.163468

************************************

***********INPUT****
 Item Number = 20

name = 18266
quantity = 1
parent = 0
materialID = 66
type = Cylinder
Aero Mass = 0.010280
Thermal Mass = 0.010280
Diameter/Width = 0.050810

name = 18266
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.010280
Thermal Mass = 0.010280
Diameter/Width = 0.050810
Length = 0.032000

**************OUTPUT****
Item Number = 20
```

```
name = 18266
Demise Altitude = 77.987793
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = 18266
Demise Altitude = 0.000000
Debris Casualty Area = 0.410013
Impact Kinetic Energy = 0.535938

************************************

**********INPUT****
 Item Number = 21

name = 18263
quantity = 1
parent = 0
materialID = 66
type = Cylinder
Aero Mass = 0.001280
Thermal Mass = 0.001280
Diameter/Width = 0.016490

name = 18263
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.001280
Thermal Mass = 0.001280
Diameter/Width = 0.016490
Length = 0.032000

**********OUTPUT****
Item Number = 21

name = 18263
Demise Altitude = 77.998957
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = 18263
Demise Altitude = 0.000000
Debris Casualty Area = 0.388093
Impact Kinetic Energy = 0.031079

************************************
```

```
**********INPUT****
 Item Number = 22

name = 18270
quantity = 1
parent = 0
materialID = 66
type = Cylinder
Aero Mass = 0.000740
Thermal Mass = 0.000740
Diameter/Width = 0.016010

name = 18270
quantity = 1
parent = 1
materialID = 66
type = Cylinder
Aero Mass = 0.000740
Thermal Mass = 0.000740
Diameter/Width = 0.016010
Length = 0.032000

**********OUTPUT****
Item Number = 22

name = 18270
Demise Altitude = 77.990207
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = 18270
Demise Altitude = 0.000000
Debris Casualty Area = 0.387674
Impact Kinetic Energy = 0.010731

************************************

**********INPUT****
 Item Number = 23

name = Laser
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.352850
Thermal Mass = 0.352850
Diameter/Width = 0.082245
Length = 0.120650
Height = 0.020192
```

```
name = Laser
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.352850
Thermal Mass = 0.352850
Diameter/Width = 0.082245
Length = 0.120650
Height = 0.020192

**************OUTPUT****
Item Number = 23

name = Laser
Demise Altitude = 77.993863
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = Laser
Demise Altitude = 69.520269
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

***********INPUT****
 Item Number = 24

name = STIM 210 IMU
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 0.115730
Thermal Mass = 0.115730
Diameter/Width = 0.048260
Length = 0.064770
Height = 0.025400

name = STIM 210 IMU
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.115730
Thermal Mass = 0.115730
Diameter/Width = 0.048260
Length = 0.064770
Height = 0.025400
```

```
**************OUTPUT****
Item Number = 24

name = STIM 210 IMU
Demise Altitude = 77.998129
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************
name = STIM 210 IMU
Demise Altitude = 71.667113
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

************************************

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