

04 30 2019; 17:51:49PM DAS Application Started
04 30 2019; 17:51:51PM Opened Project C:\Users\jrw29289\Desktop\AeroCubes\AC15\
04 30 2019; 17:51:59PM Processing Requirement 4.3-1: Return Status : Not Run

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No Project Data Available
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End of Requirement 4.3-1
04 30 2019; 17:52:01PM Processing Requirement 4.3-2: Return Status : Passed

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No Project Data Available
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End of Requirement 4.3-2
04 30 2019; 17:52:03PM Requirement 4.4-3: Compliant

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End of Requirement 4.4-3
04 30 2019; 17:52:06PM Processing Requirement 4.5-1: Return Status : Passed

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Run Data
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****INPUT****

Space Structure Name = AC15
Space Structure Type = Payload
Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Final Area-To-Mass Ratio = 0.033661 (m²/kg)
Start Year = 2020.000000 (yr)
Initial Mass = 3.674000 (kg)
Final Mass = 3.674000 (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

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

04 30 2019; 17:52:10PM Requirement 4.5-2: Compliant
04 30 2019; 17:52:11PM Processing Requirement 4.6 Return Status : Passed

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Project Data

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****INPUT****

Space Structure Name = AC15
Space Structure Type = Payload

Perigee Altitude = 500.000000 (km)
Apogee Altitude = 500.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.033661 (m²/kg)
Start Year = 2020.000000 (yr)
Initial Mass = 3.674000 (kg)
Final Mass = 3.674000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 460.328424 (km)
PMD Apogee Altitude = 478.918379 (km)
PMD Inclination = 51.596252 (deg)
PMD RAAN = 56.379706 (deg)
PMD Argument of Perigee = 109.354795 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 460.328424 (km)
Suggested Apogee Altitude = 478.918379 (km)
Returned Error Message = Passes LEO reentry orbit criteria.

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

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

04 30 2019; 17:52:15PM *****Processing Requirement 4.7-1

Return Status : Passed

*****INPUT*****

Item Number = 1

name = AC15
quantity = 1
parent = 0
materialID = 8
type = Box
Aero Mass = 3.674000
Thermal Mass = 3.674000
Diameter/Width = 0.110200
Length = 0.340500
Height = 0.103000

name = Full Body
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.770000
Thermal Mass = 0.010000
Diameter/Width = 0.110200
Length = 0.340500
Height = 0.103000

name = Base Plate
quantity = 1
parent = 2
materialID = 8
type = Box
Aero Mass = 0.300000
Thermal Mass = 0.300000
Diameter/Width = 0.102300
Length = 0.340500
Height = 0.016700

name = U Frame

quantity = 1
parent = 2
materialID = 8
type = Box
Aero Mass = 0.460000
Thermal Mass = 0.460000
Diameter/Width = 0.103000
Length = 0.340500
Height = 0.099000

name = Zenith Lid
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.386000
Thermal Mass = 0.075000
Diameter/Width = 0.103500
Length = 0.110200
Height = 0.008000

name = Antenna (Zenith)
quantity = 2
parent = 5
materialID = 40
type = Box
Aero Mass = 0.011000
Thermal Mass = 0.011000
Diameter/Width = 0.038100
Length = 0.039900
Height = 0.003200

name = STIM 210 IMU
quantity = 1
parent = 5
materialID = 8
type = Box
Aero Mass = 0.115000
Thermal Mass = 0.115000
Diameter/Width = 0.048300
Length = 0.064800
Height = 0.025400

name = Sensor Block
quantity = 4
parent = 5
materialID = 8
type = Box

Aero Mass = 0.016000
Thermal Mass = 0.016000
Diameter/Width = 0.015200
Length = 0.044400
Height = 0.009000

name = Star Tracker
quantity = 2
parent = 5
materialID = 8
type = Box
Aero Mass = 0.055000
Thermal Mass = 0.055000
Diameter/Width = 0.026700
Length = 0.041800
Height = 0.025400

name = Bus Electronics
quantity = 7
parent = 1
materialID = 23
type = Box
Aero Mass = 0.050000
Thermal Mass = 0.050000
Diameter/Width = 0.080000
Length = 0.080000
Height = 0.005000

name = Avionics Bracket
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.090000
Thermal Mass = 0.090000
Diameter/Width = 0.080000
Length = 0.095000
Height = 0.080000

name = Reaction Wheels
quantity = 1
parent = 1
materialID = 54
type = Box
Aero Mass = 0.255000
Thermal Mass = 0.010000
Diameter/Width = 0.052800
Length = 0.071100

Height = 0.039200

name = Motor with Wheels
quantity = 3
parent = 12
materialID = 54
type = Cylinder
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.025000
Length = 0.042400

name = Base
quantity = 1
parent = 12
materialID = 8
type = Box
Aero Mass = 0.065000
Thermal Mass = 0.065000
Diameter/Width = 0.042800
Length = 0.096800
Height = 0.029200

name = Single Torque Rod
quantity = 9
parent = 1
materialID = -1
type = Cylinder
Aero Mass = 0.018000
Thermal Mass = 0.018000
Diameter/Width = 0.008000
Length = 0.078700

name = Battery
quantity = 4
parent = 1
materialID = 54
type = Cylinder
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.019000
Length = 0.065000

name = Nadir Lid
quantity = 1
parent = 1
materialID = 8
type = Box

Aero Mass = 0.070000
Thermal Mass = 0.070000
Diameter/Width = 0.102600
Length = 0.107700
Height = 0.003200

name = Antenna (Nadir)
quantity = 1
parent = 1
materialID = 40
type = Box
Aero Mass = 0.015000
Thermal Mass = 0.015000
Diameter/Width = 0.038100
Length = 0.039900
Height = 0.004000

name = Wing Panel
quantity = 2
parent = 1
materialID = 23
type = Box
Aero Mass = 0.150000
Thermal Mass = 0.150000
Diameter/Width = 0.030000
Length = 0.313500
Height = 0.010000

name = Access Panels
quantity = 3
parent = 1
materialID = 8
type = Box
Aero Mass = 0.040000
Thermal Mass = 0.040000
Diameter/Width = 0.081900
Length = 0.141400
Height = 0.002000

name = Thermal Strap 1
quantity = 1
parent = 1
materialID = 19
type = Box
Aero Mass = 0.064000
Thermal Mass = 0.064000
Diameter/Width = 0.076200
Length = 0.088900

Height = 0.006200

name = Thermal Strap 2
quantity = 1
parent = 1
materialID = 19
type = Box
Aero Mass = 0.022000
Thermal Mass = 0.022000
Diameter/Width = 0.039400
Length = 0.041900
Height = 0.002500

name = NFOV Star Tracker
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.120000
Thermal Mass = 0.120000
Diameter/Width = 0.046000
Length = 0.110000

name = Payload
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.325000
Thermal Mass = 0.325000
Diameter/Width = 0.060000
Length = 0.134100

name = Laser Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.360000
Thermal Mass = 0.360000
Diameter/Width = 0.082200
Length = 0.141700
Height = 0.020200

name = Context Camera
quantity = 1
parent = 1
materialID = 8

type = Cylinder
Aero Mass = 0.025000
Thermal Mass = 0.025000
Diameter/Width = 0.030000
Length = 0.034100

*****OUTPUT*****

Item Number = 1

name = AC15
Demise Altitude = 77.999691
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Full Body
Demise Altitude = 77.969972
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Base Plate
Demise Altitude = 75.642285
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = U Frame
Demise Altitude = 76.064957
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Zenith Lid
Demise Altitude = 76.595215
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Antenna (Zenith)
Demise Altitude = 75.233996
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = STIM 210 IMU
Demise Altitude = 72.510519
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Sensor Block

Demise Altitude = 74.620019

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Star Tracker

Demise Altitude = 73.193160

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Bus Electronics

Demise Altitude = 76.817660

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Avionics Bracket

Demise Altitude = 76.777629

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Reaction Wheels

Demise Altitude = 75.774293

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Motor with Wheels

Demise Altitude = 66.977784

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Base

Demise Altitude = 74.146238

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Single Torque Rod

Demise Altitude = 73.886316

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Battery

Demise Altitude = 69.306824

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Nadir Lid

Demise Altitude = 76.341832

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Antenna (Nadir)

Demise Altitude = 76.172636

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Wing Panel

Demise Altitude = 76.329761

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Access Panels

Demise Altitude = 77.168136

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Thermal Strap 1

Demise Altitude = 76.292058

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Thermal Strap 2

Demise Altitude = 76.311824

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = NFOV Star Tracker

Demise Altitude = 75.168840

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Payload

Demise Altitude = 72.949230

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Laser Assembly

Demise Altitude = 72.499261

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Context Camera

Demise Altitude = 75.964519

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

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