

04 11 2019; 10:31:00AM DAS Application Started
04 11 2019; 10:31:02AM Opened Project C:\Users\jrw29289\Desktop\AeroCubes\AC14\
04 11 2019; 10:31:05AM Opened Project C:\Users\jrw29289\Desktop\AeroCubes\AC14\
04 11 2019; 10:31:08AM 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 11 2019; 10:31:10AM 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 11 2019; 10:31:12AM Requirement 4.4-3: Compliant

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End of Requirement 4.4-3
04 11 2019; 10:31:16AM Processing Requirement 4.5-1: Return Status : Passed

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Run Data
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****INPUT****

Space Structure Name = AC14
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 = 0.035722 (m²/kg)
Start Year = 2019.000000 (yr)
Initial Mass = 3.462000 (kg)
Final Mass = 3.462000 (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 11 2019; 10:31:20AM Requirement 4.5-2: Compliant
04 11 2019; 10:31:21AM Processing Requirement 4.6 Return Status : Passed

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Project Data

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****INPUT****

Space Structure Name = AC14
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 = 0.035722 (m²/kg)
Start Year = 2019.000000 (yr)
Initial Mass = 3.462000 (kg)
Final Mass = 3.462000 (kg)
Duration = 1.000000 (yr)
Station Kept = False
Abandoned = True
PMD Perigee Altitude = 485.086537 (km)
PMD Apogee Altitude = 506.018128 (km)
PMD Inclination = 51.598929 (deg)
PMD RAAN = 60.883973 (deg)
PMD Argument of Perigee = 110.343292 (deg)
PMD Mean Anomaly = 0.000000 (deg)

****OUTPUT****

Suggested Perigee Altitude = 485.086537 (km)
Suggested Apogee Altitude = 506.018128 (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 11 2019; 10:31:26AM *****Processing Requirement 4.7-1

Return Status : Passed

*****INPUT*****

Item Number = 1

name = AC14

quantity = 1

parent = 0

materialID = 8

type = Box

Aero Mass = 3.462000

Thermal Mass = 3.462000

Diameter/Width = 0.110200

Length = 0.340500

Height = 0.103000

name = Full Body

quantity = 1

parent = 1

materialID = 8

type = Box

Aero Mass = 0.694000

Thermal Mass = 0.001000

Diameter/Width = 0.110200

Length = 0.340500

Height = 0.103000

name = Body Base Plate

quantity = 1

parent = 2

materialID = 8

type = Box

Aero Mass = 0.250000

Thermal Mass = 0.250000

Diameter/Width = 0.102800

Length = 0.330100

Height = 0.011200

name = Frame
quantity = 1
parent = 2
materialID = 8
type = Box
Aero Mass = 0.443000
Thermal Mass = 0.443000
Diameter/Width = 0.103000
Length = 0.330100
Height = 0.099000

name = Nadir Lid Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.442000
Thermal Mass = 0.141000
Diameter/Width = 0.103500
Length = 0.110200
Height = 0.008000

name = Antenna (Nadir)
quantity = 1
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 = 0.116000
Thermal Mass = 0.116000
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 = 1
parent = 1
materialID = 23
type = Box
Aero Mass = 0.627000
Thermal Mass = 0.627000
Diameter/Width = 0.085000
Length = 0.097100
Height = 0.084900

name = Reaction Wheels
quantity = 1
parent = 1
materialID = 54
type = Box
Aero Mass = 0.256000
Thermal Mass = 0.001000
Diameter/Width = 0.052800
Length = 0.071100
Height = 0.039200

name = Motor with Wheels
quantity = 3
parent = 11
materialID = 54
type = Cylinder
Aero Mass = 0.060000
Thermal Mass = 0.060000
Diameter/Width = 0.025000

Length = 0.042400

name = Base

quantity = 1

parent = 11

materialID = 8

type = Box

Aero Mass = 0.075000

Thermal Mass = 0.075000

Diameter/Width = 0.042800

Length = 0.096800

Height = 0.029200

name = 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 = 0.018000

Length = 0.065000

name = Zenith Lid Assembly

quantity = 1

parent = 1

materialID = 8

type = Box

Aero Mass = 0.132000

Thermal Mass = 0.100000

Diameter/Width = 0.103500

Length = 0.110900

Height = 0.016700

name = Antenna (Zenith)

quantity = 2

parent = 16

materialID = 40

type = Box
Aero Mass = 0.016000
Thermal Mass = 0.016000
Diameter/Width = 0.038100
Length = 0.040000
Height = 0.005000

name = Wing Assembly
quantity = 2
parent = 1
materialID = 8
type = Box
Aero Mass = 0.148000
Thermal Mass = 0.148000
Diameter/Width = 0.073700
Length = 0.313500
Height = 0.002700

name = Side-Mounted Module
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.115000
Thermal Mass = 0.115000
Diameter/Width = 0.049900
Length = 0.086800
Height = 0.023300

name = CNT Heater
quantity = 1
parent = 1
materialID = 27
type = Box
Aero Mass = 0.043000
Thermal Mass = 0.043000
Diameter/Width = 0.044500
Length = 0.076200
Height = 0.012700

name = Thermal Strap
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.064000
Thermal Mass = 0.064000
Diameter/Width = 0.076200

Length = 0.088900
Height = 0.006200

name = Deployable Baffle
quantity = 1
parent = 1
materialID = 8
type = Cylinder
Aero Mass = 0.213000
Thermal Mass = 0.213000
Diameter/Width = 0.095300
Length = 0.056600

name = Paint Experiment
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.001800
Thermal Mass = 0.001800
Diameter/Width = 0.040600
Length = 0.082500
Height = 0.004400

name = CSAC
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.159000
Thermal Mass = 0.159000
Diameter/Width = 0.071100
Length = 0.078700
Height = 0.017200

*****OUTPUT****

Item Number = 1

name = AC14
Demise Altitude = 77.994613
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Full Body
Demise Altitude = 77.994613
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Body Base Plate
Demise Altitude = 75.829363
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Frame
Demise Altitude = 76.078933
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Nadir Lid Assembly
Demise Altitude = 75.297425
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Antenna (Nadir)
Demise Altitude = 73.917222
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = STIM 210 IMU
Demise Altitude = 71.080199
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Sensor Block
Demise Altitude = 73.315675
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Star Tracker
Demise Altitude = 71.873550
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Bus Electronics
Demise Altitude = 72.849285
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheels
Demise Altitude = 76.982160
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Motor with Wheels
Demise Altitude = 67.854722
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Base
Demise Altitude = 75.054629
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Torque Rod
Demise Altitude = 73.882894
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Battery
Demise Altitude = 69.170441
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Zenith Lid Assembly
Demise Altitude = 76.095050
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Antenna (Zenith)
Demise Altitude = 73.413363
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Wing Assembly
Demise Altitude = 76.062840
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Side-Mounted Module
Demise Altitude = 74.672957
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = CNT Heater
Demise Altitude = 77.570035
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Thermal Strap
Demise Altitude = 75.927597
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Deployable Baffle
Demise Altitude = 73.843511
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Paint Experiment
Demise Altitude = 77.914574
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = CSAC
Demise Altitude = 73.224886
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

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