

03 18 2021; 15:14:38PM Activity Log Started
03 18 2021; 15:15:13PM Mission Editor Changes Applied
03 18 2021; 15:15:16PM Project Data Saved To File
03 18 2021; 15:15:29PM 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
03 18 2021; 15:15:31PM 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
03 18 2021; 15:19:06PM Processing Requirement 4.5-1: Return Status :
Passed

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Run Data
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INPUT

Space Structure Name = DAILI
Space Structure Type = Payload
Perigee Altitude = 410.000 (km)
Apogee Altitude = 410.000 (km)
Inclination = 51.600 (deg)
RAAN = 0.000 (deg)
Argument of Perigee = 0.000 (deg)
Mean Anomaly = 0.000 (deg)
Final Area-To-Mass Ratio = 0.0100 (m²/kg)
Start Year = 2022.000 (yr)
Initial Mass = 5.782 (kg)
Final Mass = 5.782 (kg)
Duration = 1.000 (yr)
Station-Kept = False
Abandoned = True

OUTPUT

Collision Probability = 1.6750E-08
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

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End of Requirement 4.5-1
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03 18 2021; 15:19:07PM Processing Requirement 4.6 Return Status :
Passed

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Project Data
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INPUT

Space Structure Name = DAILI
Space Structure Type = Payload

Perigee Altitude = 410.000000 (km)
Apogee Altitude = 410.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Mean Anomaly = 0.000000 (deg)
Area-To-Mass Ratio = 0.009970 (m²/kg)
Start Year = 2022.000000 (yr)
Initial Mass = 5.782000 (kg)
Final Mass = 5.782000 (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 = 410.000000 (km)
Suggested Apogee Altitude = 410.000000 (km)
Returned Error Message = Reentry during mission (no PMD req.).

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

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End of Requirement 4.6
03 18 2021; 15:19:25PM *****Processing Requirement 4.7-1
Return Status : Passed

*****INPUT****

Item Number = 1

name = DAILI
quantity = 1

parent = 0
materialID = 8
type = Box
Aero Mass = 5.782000
Thermal Mass = 5.782000
Diameter/Width = 0.146000
Length = 0.765000
Height = 0.109000

name = Nadir Lid Assembly
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 0.323000
Thermal Mass = 0.259000
Diameter/Width = 0.106000
Length = 0.112000
Height = 0.052000

name = GPS+ADV Antenna
quantity = 2
parent = 2
materialID = 40
type = Box
Aero Mass = 0.032000
Thermal Mass = 0.032000
Diameter/Width = 0.044000
Length = 0.044000
Height = 0.007000

name = Backplate
quantity = 1
parent = 1
materialID = 8
type = Box
Aero Mass = 5.459000
Thermal Mass = 0.346000
Diameter/Width = 0.104000
Length = 0.394000
Height = 0.022000

name = SDR Antenna
quantity = 1
parent = 4
materialID = 40
type = Box
Aero Mass = 0.014000
Thermal Mass = 0.014000
Diameter/Width = 0.044000
Length = 0.044000
Height = 0.007000

name = NFOV Star Camera

quantity = 2
parent = 4
materialID = 8
type = Box
Aero Mass = 0.117000
Thermal Mass = 0.117000
Diameter/Width = 0.045000
Length = 0.095000
Height = 0.045000

name = Power Module
quantity = 1
parent = 4
materialID = 8
type = Box
Aero Mass = 0.745000
Thermal Mass = 0.350000
Diameter/Width = 0.082000
Length = 0.880000
Height = 0.030000

name = Bus Electronics
quantity = 1
parent = 7
materialID = 23
type = Box
Aero Mass = 0.395000
Thermal Mass = 0.329000
Diameter/Width = 0.073000
Length = 0.073000
Height = 0.072000

name = Torque Rod
quantity = 3
parent = 8
materialID = -1
type = Cylinder
Aero Mass = 0.022000
Thermal Mass = 0.022000
Diameter/Width = 0.008000
Length = 0.079000

name = Walls
quantity = 2
parent = 4
materialID = 8
type = Box
Aero Mass = 1.027500
Thermal Mass = 0.209000
Diameter/Width = 0.090000
Length = 0.394000
Height = 0.009000

name = Reaction Wheel (Wall)

quantity = 1
parent = 10
materialID = 54
type = Cylinder
Aero Mass = 0.082000
Thermal Mass = 0.082000
Diameter/Width = 0.028000
Length = 0.044000

name = Roof
quantity = 1
parent = 10
materialID = 8
type = Box
Aero Mass = 0.282000
Thermal Mass = 0.118000
Diameter/Width = 0.086000
Length = 0.247000
Height = 0.010000

name = Reaction Wheel (Roof)
quantity = 2
parent = 12
materialID = 54
type = Cylinder
Aero Mass = 0.082000
Thermal Mass = 0.082000
Diameter/Width = 0.028000
Length = 0.044000

name = Sunshade
quantity = 1
parent = 10
materialID = 8
type = Box
Aero Mass = 1.273000
Thermal Mass = 1.273000
Diameter/Width = 0.110000
Length = 0.362000
Height = 0.109000

name = Wing Assembly
quantity = 2
parent = 4
materialID = 23
type = Box
Aero Mass = 0.335000
Thermal Mass = 0.335000
Diameter/Width = 0.163000
Length = 0.485000
Height = 0.003000

name = Instrument
quantity = 1

parent = 4
materialID = 8
type = Box
Aero Mass = 1.395000
Thermal Mass = 1.395000
Diameter/Width = 0.111000
Length = 0.177000
Height = 0.055000

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

name = DAILI
Demise Altitude = 77.991447
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Nadir Lid Assembly
Demise Altitude = 73.813362
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GPS+ADV Antenna
Demise Altitude = 68.909592
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Backplate
Demise Altitude = 75.629417
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SDR Antenna
Demise Altitude = 74.130447
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = NFOV Star Camera
Demise Altitude = 72.989517
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Module
Demise Altitude = 74.377625
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Bus Electronics
Demise Altitude = 69.231033
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Torque Rod
Demise Altitude = 62.013767
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Walls
Demise Altitude = 73.875549
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheel (Wall)
Demise Altitude = 62.827084
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Roof
Demise Altitude = 72.397255
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Reaction Wheel (Roof)
Demise Altitude = 57.003746
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Sunshade
Demise Altitude = 68.088272
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Wing Assembly
Demise Altitude = 74.167824
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Instrument
Demise Altitude = 63.275951
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

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03 18 2021; 15:19:29PM Project Data Saved To File
03 18 2021; 15:19:37PM Science and Engineering - Orbit Lifetime/Dwell
Time

INPUT

Start Year = 2022.000000 (yr)
Perigee Altitude = 410.000000 (km)
Apogee Altitude = 410.000000 (km)
Inclination = 51.600000 (deg)
RAAN = 0.000000 (deg)
Argument of Perigee = 0.000000 (deg)
Area-To-Mass Ratio = 0.009970 (m²/kg)

OUTPUT

Orbital Lifetime from Startyr = 0.432580 (yr)
Time Spent in LEO during Lifetime = 0.432580 (yr)
Last year of Propagation = 2022 (yr)
Returned Error Message: Object reentered