

06 30 2021; 18:15:01PM Activity Log Started
07 01 2021; 11:26:39AM Activity Log Started
07 01 2021; 11:26:43AM Opened Project H:\DAS\DAS
3.0\DAS3.1.0\project\DAILI\
07 01 2021; 11:27:09AM Mission Editor Changes Applied
07 01 2021; 11:27:13AM Project Data Saved To File
07 01 2021; 11:30:14AM 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 =====
07 01 2021; 11:30:17AM 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 =====
07 01 2021; 11:33:35AM 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 = 420.000 (km)
Apogee Altitude = 420.000 (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 = 2.0305E-08
Returned Message: Normal Processing
Date Range Message: Normal Date Range
Status = Pass

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

07 01 2021; 11:33:37AM 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 = 420.000000 (km)
Apogee Altitude = 420.000000 (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 = 420.000000 (km)
Suggested Apogee Altitude = 420.000000 (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 =====

07 01 2021; 11:33:45AM *****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 = 77.991455
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Nadir Lid Assembly
Demise Altitude = 73.813988
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = GPS+ADV Antenna
Demise Altitude = 68.924339
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Backplate
Demise Altitude = 75.617485
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = SDR Antenna
Demise Altitude = 74.118629
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = NFOV Star Camera
Demise Altitude = 72.969795
Debris Casualty Area = 0.000000
Impact Kinetic Energy = 0.000000

name = Power Module
Demise Altitude = 74.370010
Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Bus Electronics

Demise Altitude = 69.222618

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Torque Rod

Demise Altitude = 62.011082

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Walls

Demise Altitude = 73.856499

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Reaction Wheel (Wall)

Demise Altitude = 62.808449

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Roof

Demise Altitude = 72.373428

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Reaction Wheel (Roof)

Demise Altitude = 56.961163

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Sunshade

Demise Altitude = 68.053215

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Wing Assembly

Demise Altitude = 74.152145

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

name = Instrument

Demise Altitude = 63.258713

Debris Casualty Area = 0.000000

Impact Kinetic Energy = 0.000000

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

07 01 2021; 11:33:47AM Project Data Saved To File

07 01 2021; 11:34:07AM Science and Engineering - Orbit Lifetime/Dwell
Time

INPUT

Start Year = 2022.000000 (yr)

Perigee Altitude = 425.000000 (km)

Apogee Altitude = 425.000000 (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 = 0.553046 (yr)

Time Spent in LEO during Lifetime = 0.553046 (yr)

Last year of Propagation = 2022 (yr)

Returned Error Message: Object reentered