ASEN 6020 HW 2 Problem 11 Main Script

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Housekeeping

Define constants and solution space

Constants

Solve Lambert's Problem for every r, dTheta combo

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Finding transfers for solution space
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Plot Pareto Front

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Plotting Pareto Front
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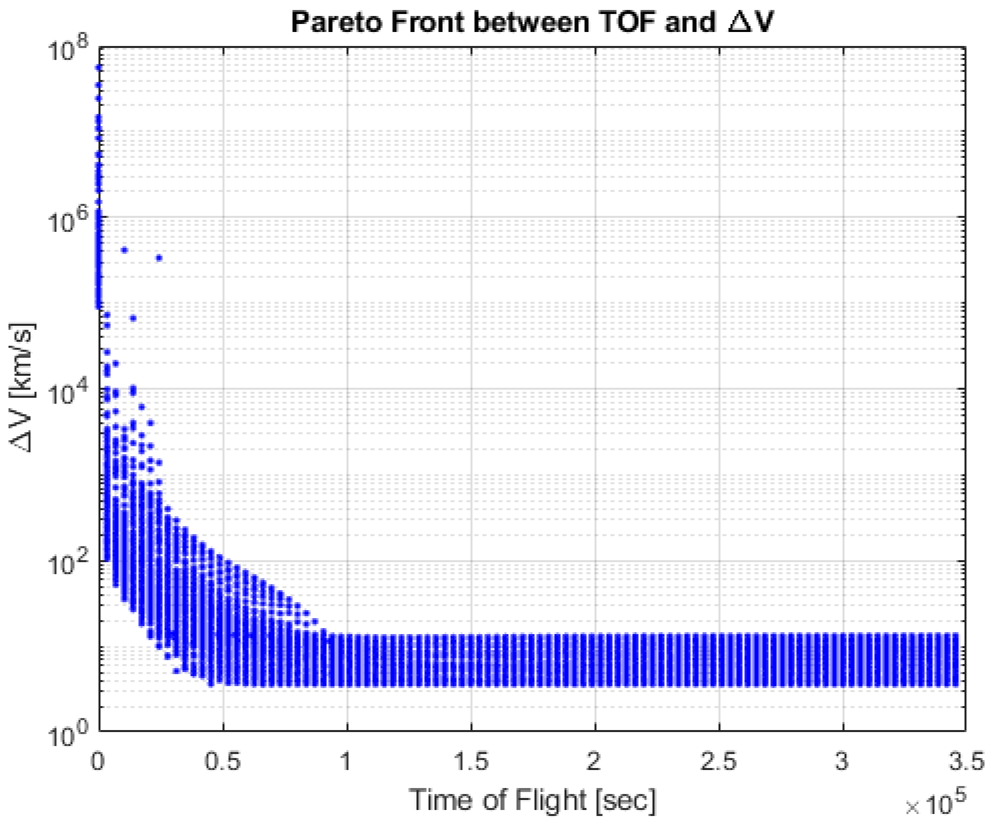

Plot transfers

Plotting Transfers
Warning: Error creating or updating Surface
Error in value of property <a
href="matlab:matlab.internal.doc.reference.showPropertyHelp('matlab.graphics.
primitive.Surface','ZData');")">ZData
Array is wrong shape or size
Warning: Error creating or updating Surface
Error in value of property <a
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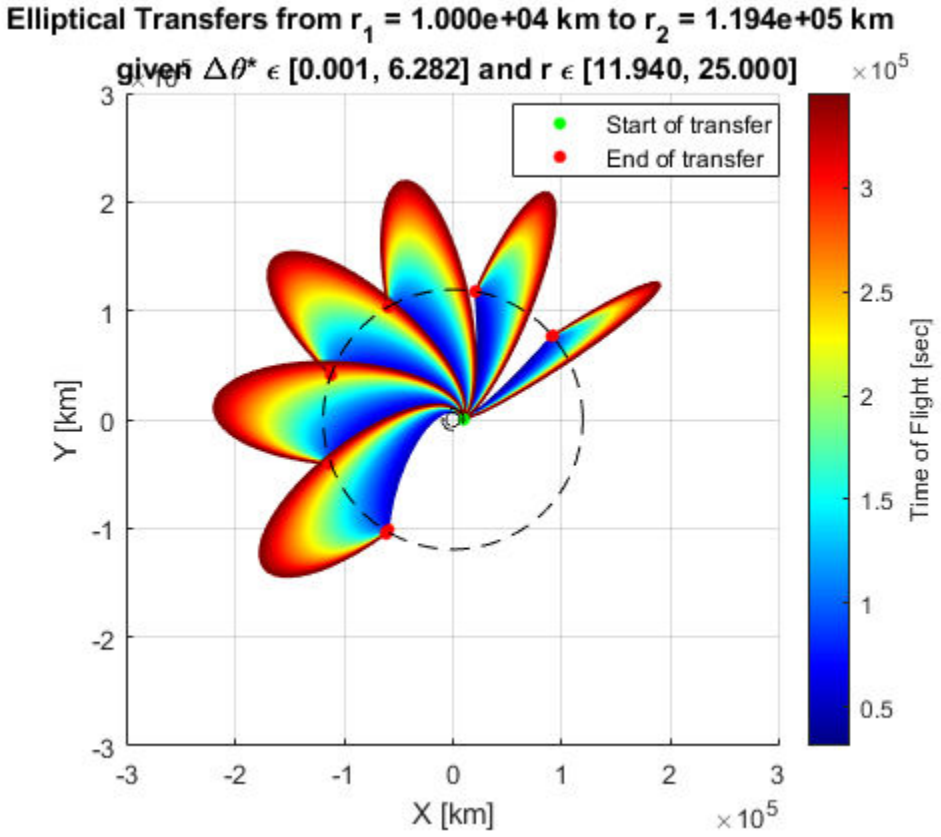
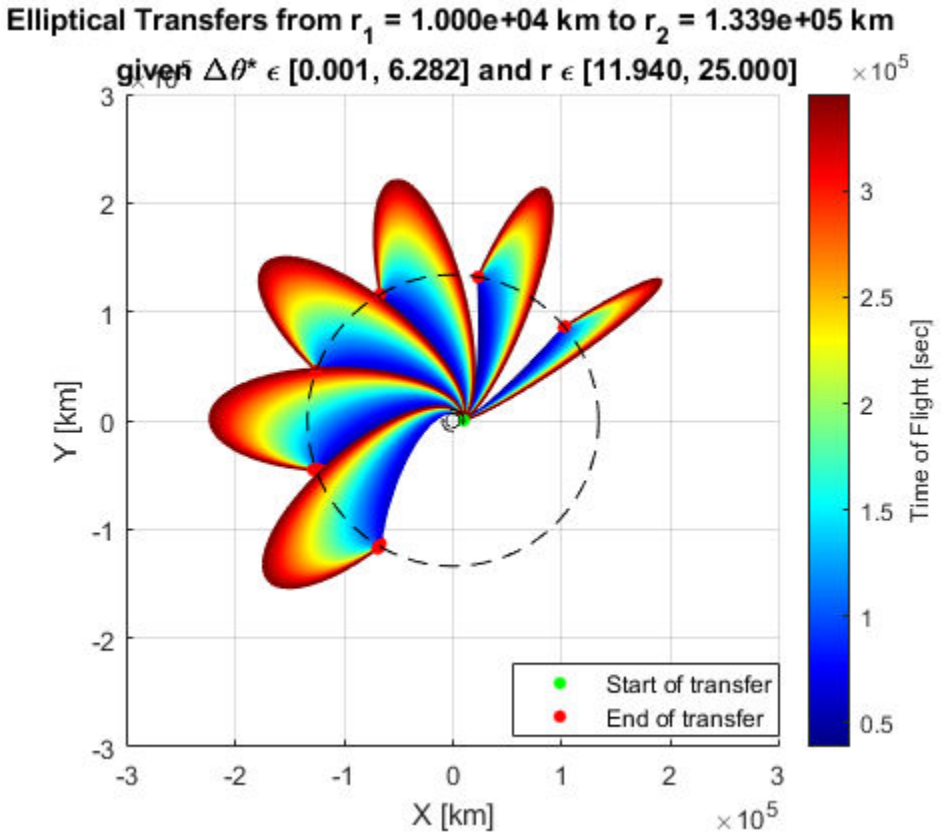
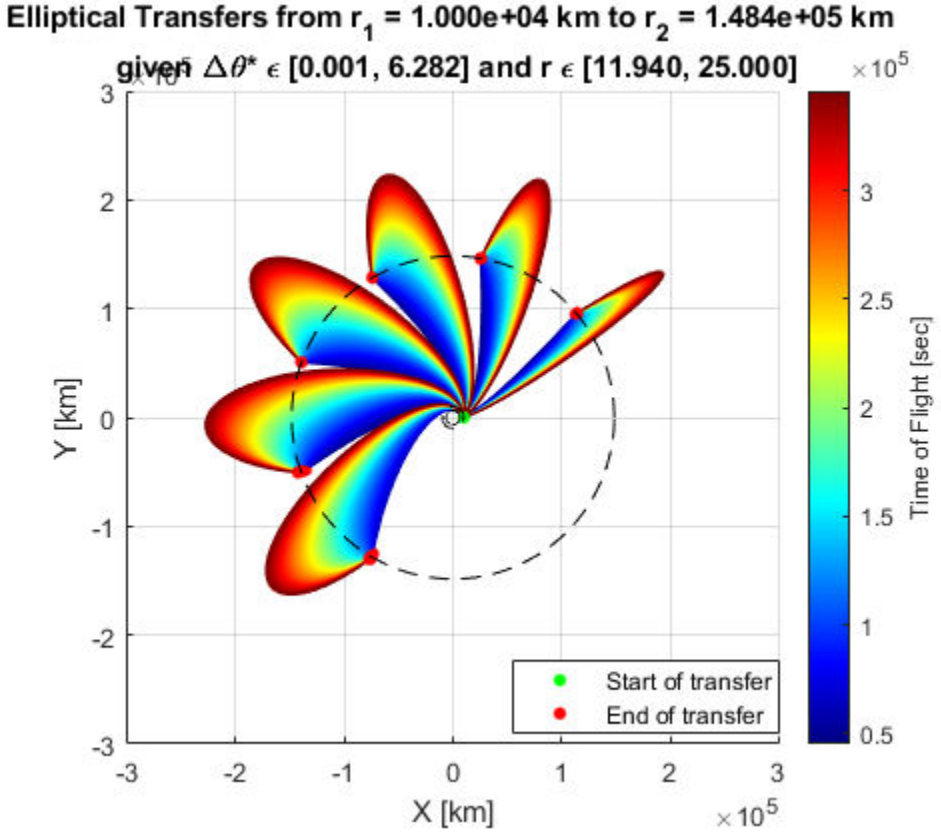
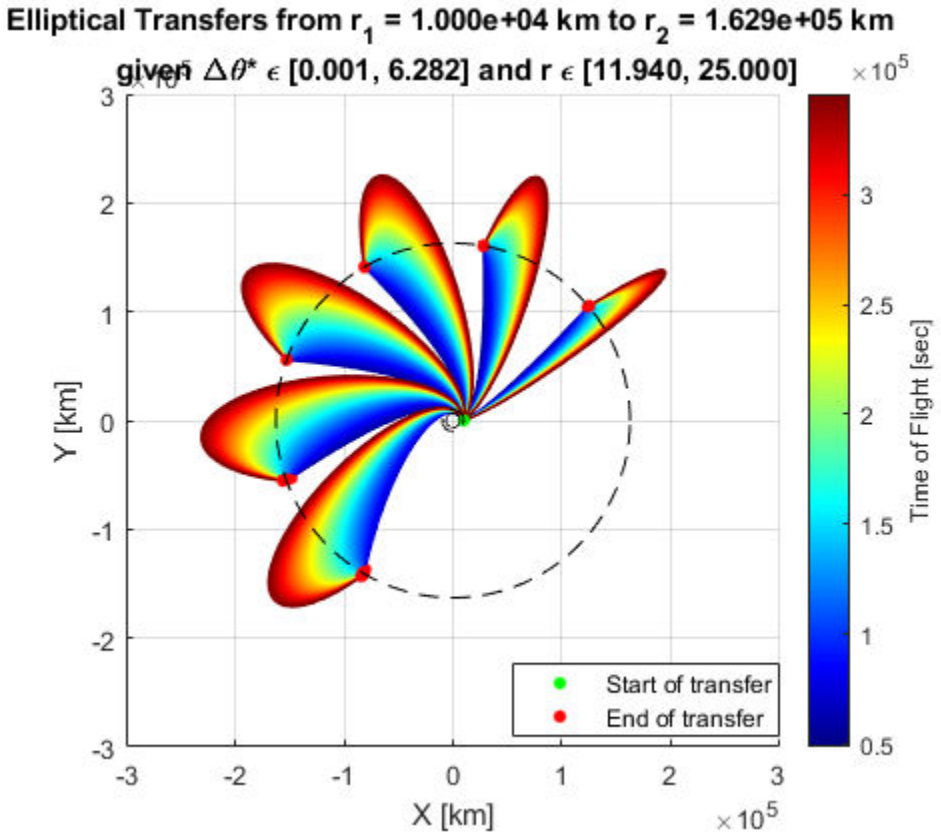
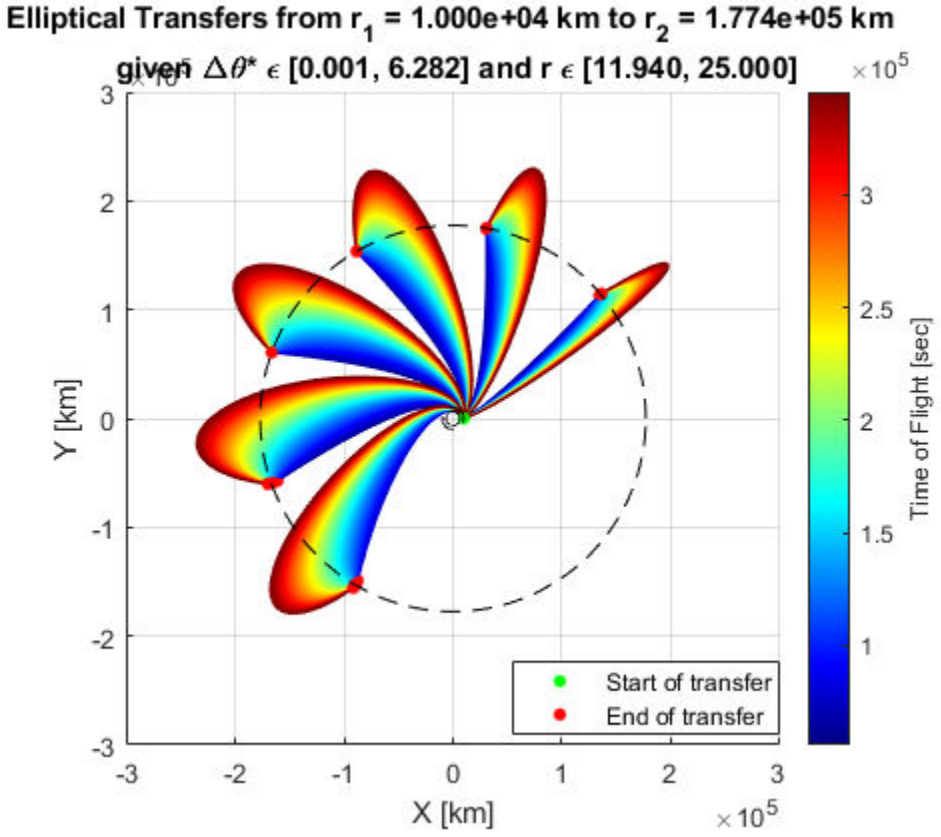
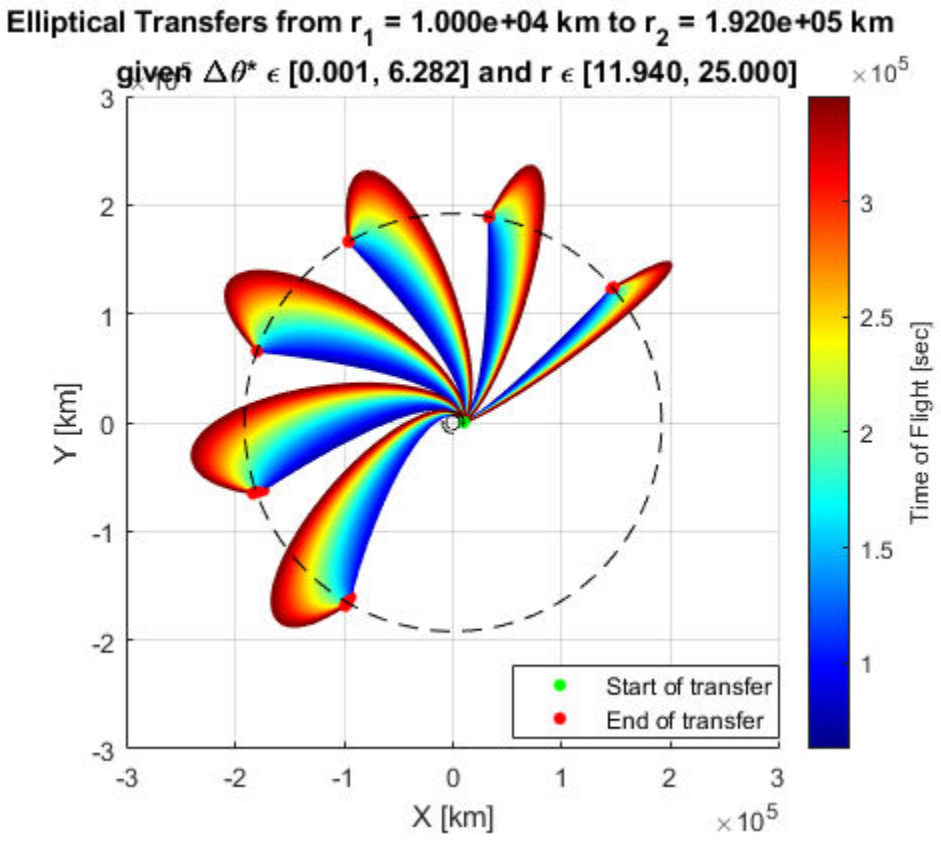


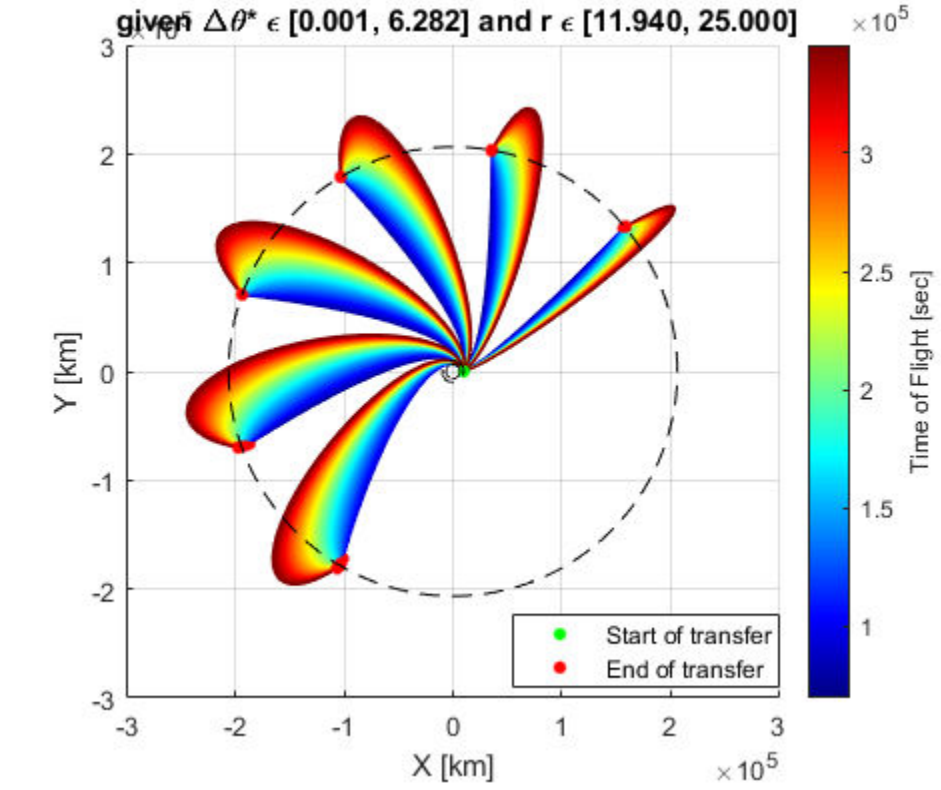

Elliptical Transfers from r1 = 1.000e+04 km to r2 = 1.339e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
Time of Flight [sec]
Start of transfer
End of transfer

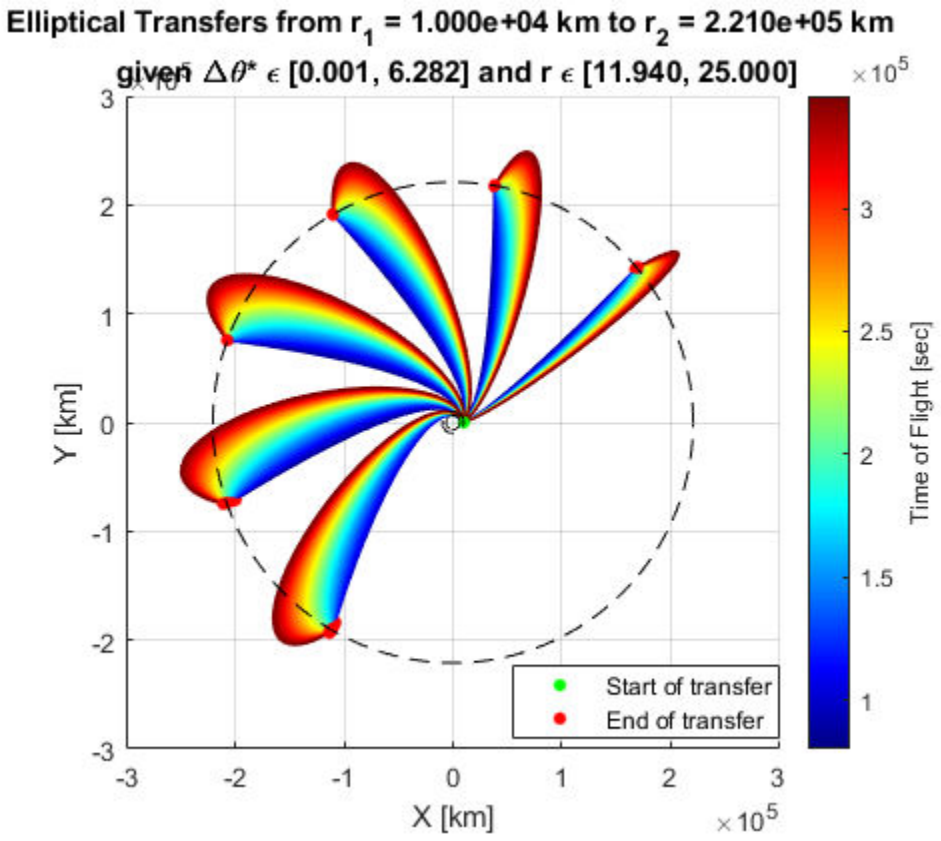

Elliptical Transfers from r1 = 1.000e+04 km to r2 = 1.484e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
Time of Flight [sec]
Start of transfer
End of transfer

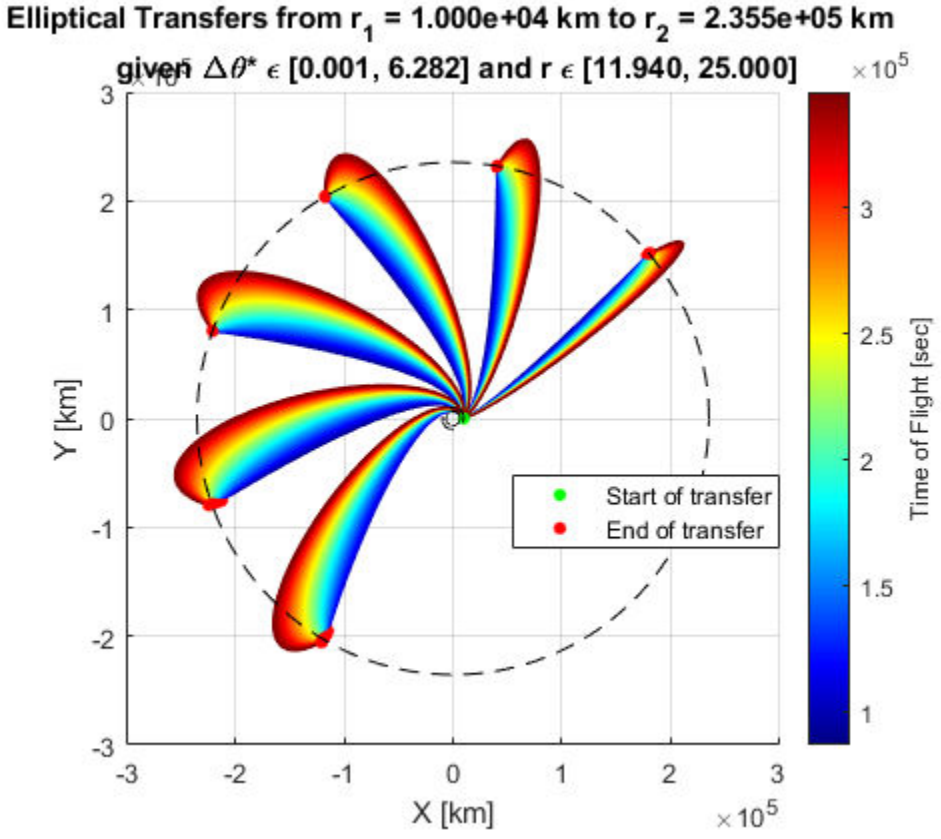

Elliptical Transfers from r1 = 1.000e+04 km to r2 = 1.629e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
×10^5
Time of Flight [sec]
Start of transfer
End of transfer

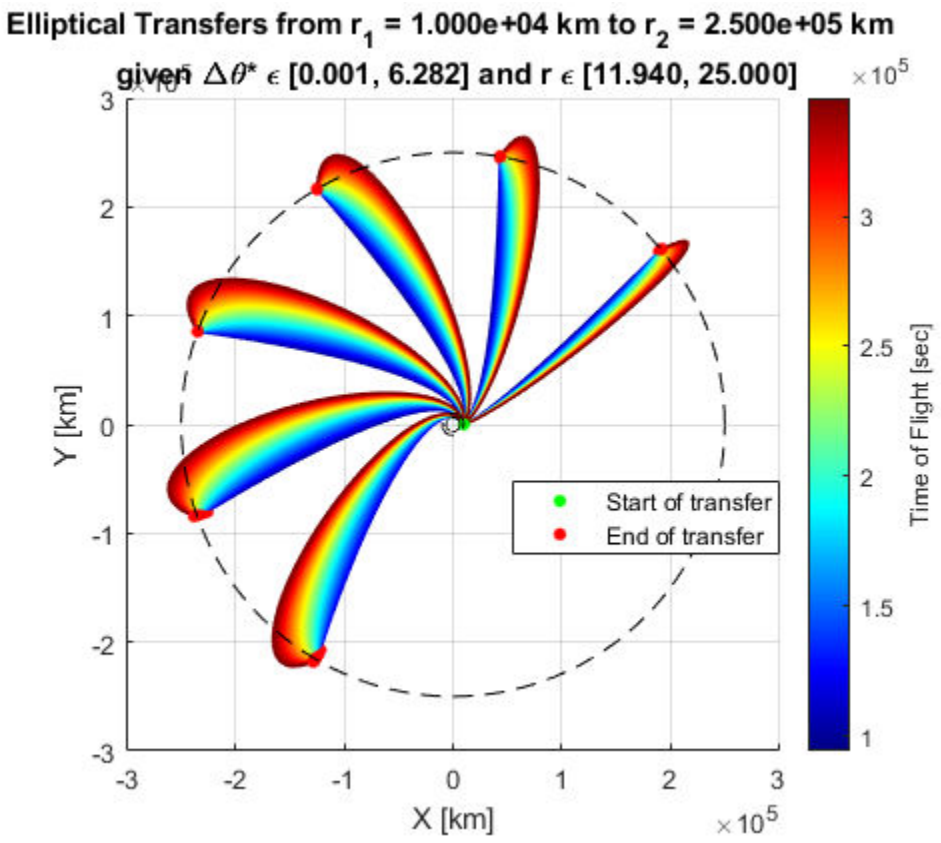

Elliptical Transfers from r1 = 1.000e+04 km to r2 = 1.774e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
×10^5
Time of Flight [sec]
Start of transfer
End of transfer


Elliptical Transfers from r1 = 1.000e+04 km to r2 = 1.920e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
×10^5
Time of Flight [sec]
Start of transfer
End of transfer


Elliptical Transfers from r1 = 1.000e+04 km to r2 = 2.065e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
×10^5
Time of Flight [sec]
Start of transfer
End of transfer


Elliptical Transfers from r1 = 1.000e+04 km to r2 = 2.210e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
Time of Flight [sec]
Start of transfer
End of transfer


Elliptical Transfers from r1 = 1.000e+04 km to r2 = 2.355e+05 km
given Δθ* ϵ [0.001, 6.282] and r ϵ [11.940, 25.000]
×10^5
Y [km]
X [km]
Time of Flight [sec]
Start of transfer
End of transfer



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