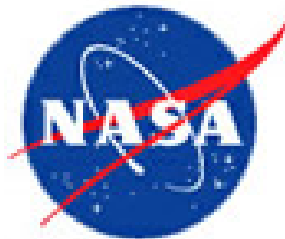


# Plots of Conflict Resolution Maneuver Time Steps



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The following plots show time steps of a sample conflict and a maneuver to resolve it. Stepping through the stack of plots creates the effect of a “movie” that can be viewed in discrete frames or time steps. For some encounters, this capability provides more insight than a single plot showing a snapshot at the time of minimum separation ratio.

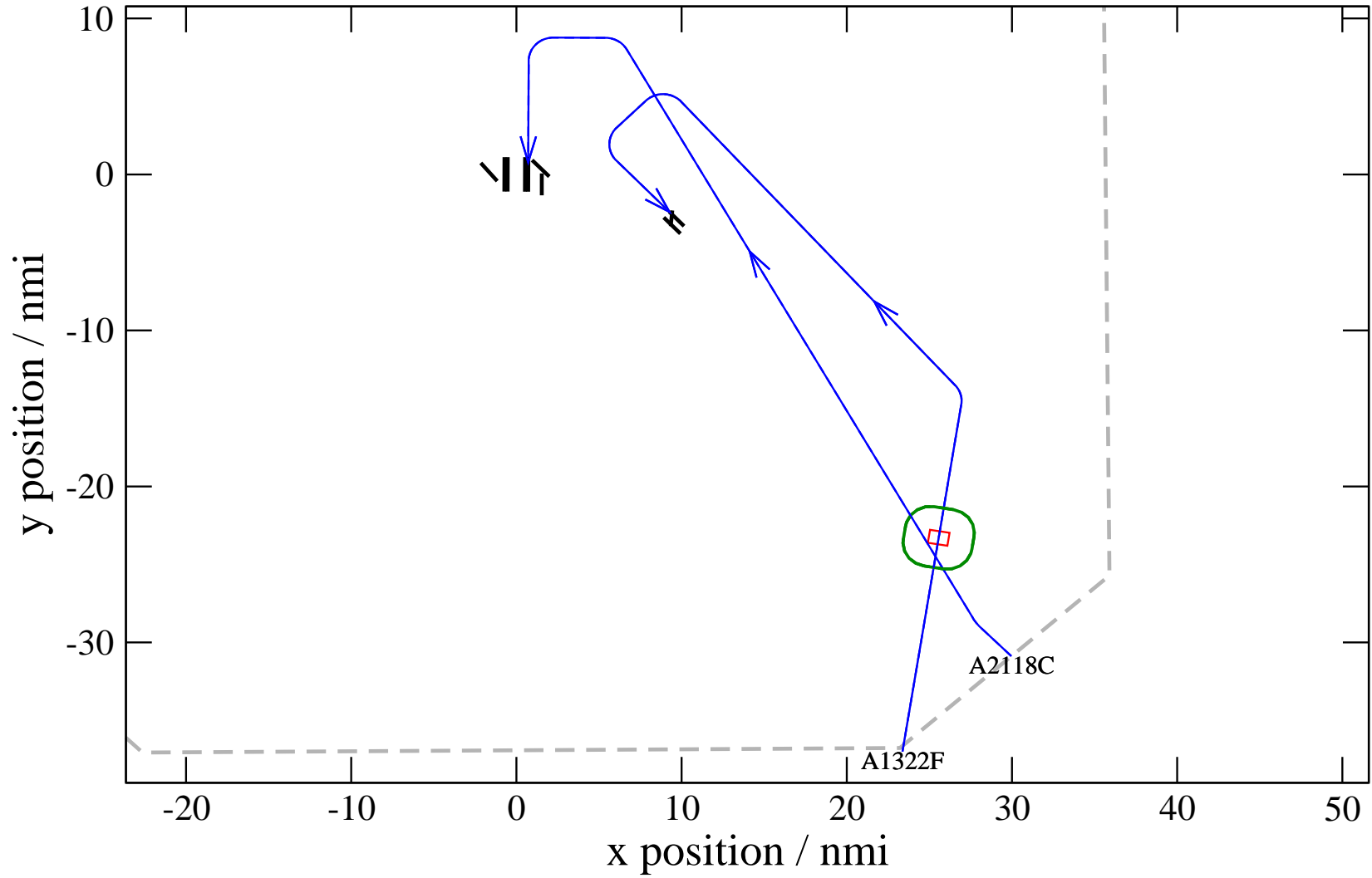
The subtitle of each plot starts with the time relative to the time of the minimum separation ratio, followed by the horizontal (H) and vertical (V) separation ratios in square brackets. These values are the ratio of the separation at the given time to the corresponding separation standard (3 nmi horiz. or 1,000 feet vert.). When either of these ratios is greater than or equal to 1.0, the separation is sufficient. (To save on computation, these ratios are not computed exactly when the separation is substantially larger than the minimum required.)

The red rectangles represent the horizontal bounding areas at the given time of the plot, and the green ovals represent the buffered bounding areas (which touch when the horizontal separation ratio is 1.0). The dashed green oval represents the buffered bounding area of the maneuvered flight if it had not been maneuvered. If there is a reroute, the dashed line represents the original route.

The time-step plots are followed by a blank page and then three final plots showing (1) a planview at the time of minimum separation ratio, (2) the altitude profiles, and (3) profiles of the separation ratios.

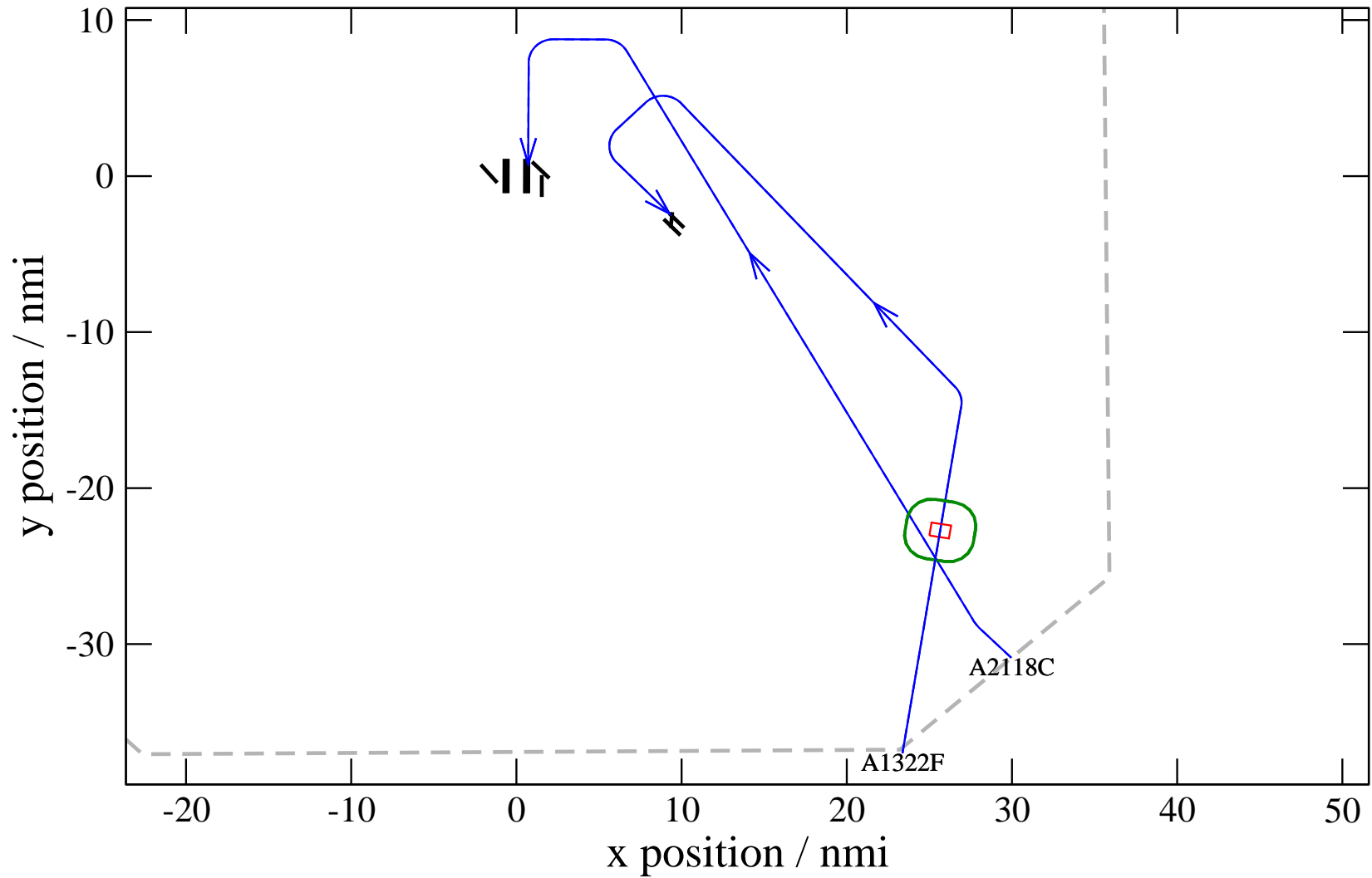
# Maneuver Time Steps

-11:10 [2.00H/-1.00V] A2118C speed dec 32 kn



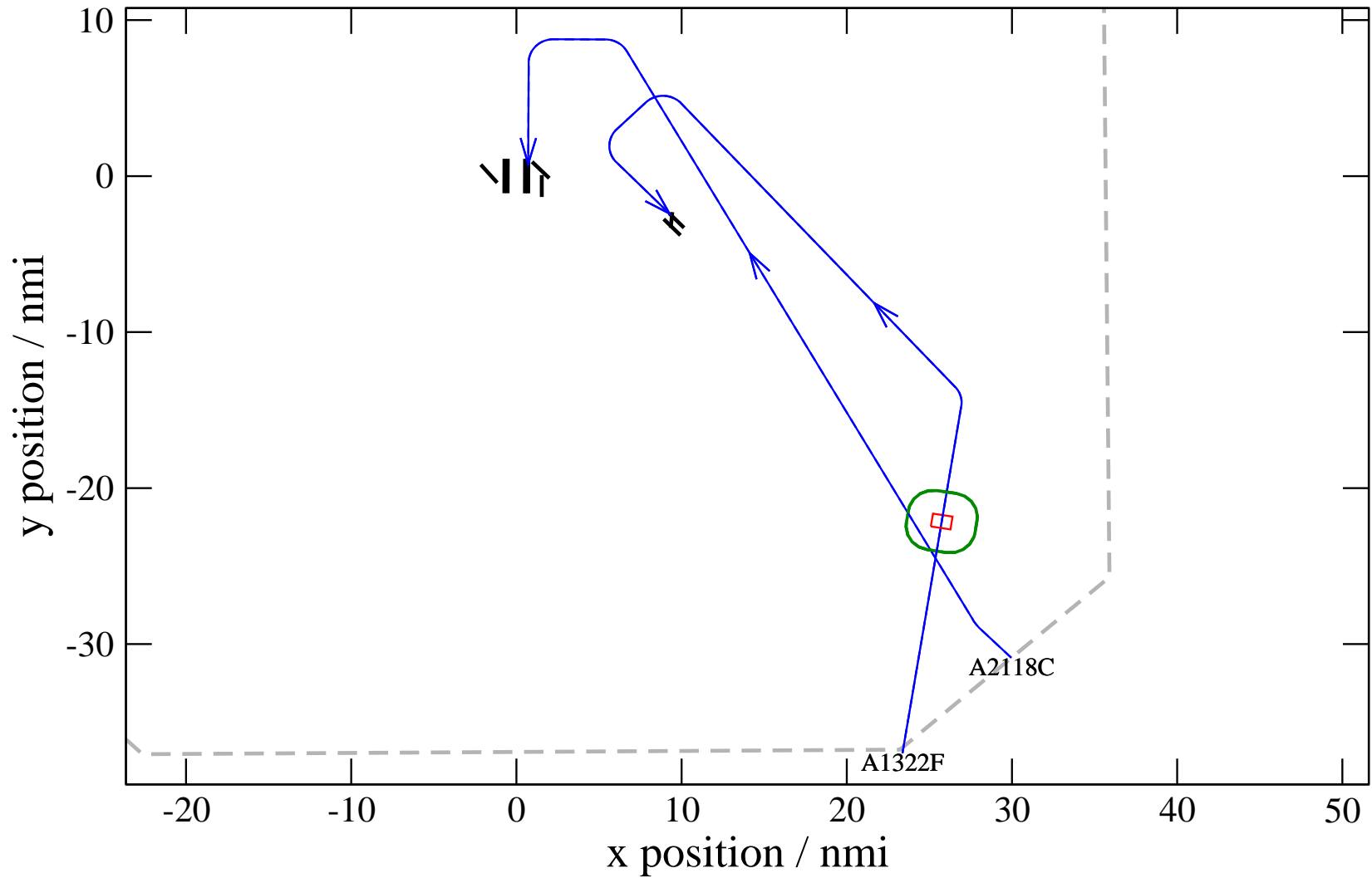
# Maneuver Time Steps

-11:00 [2.00H/-1.00V] A2118C speed dec 32 kn



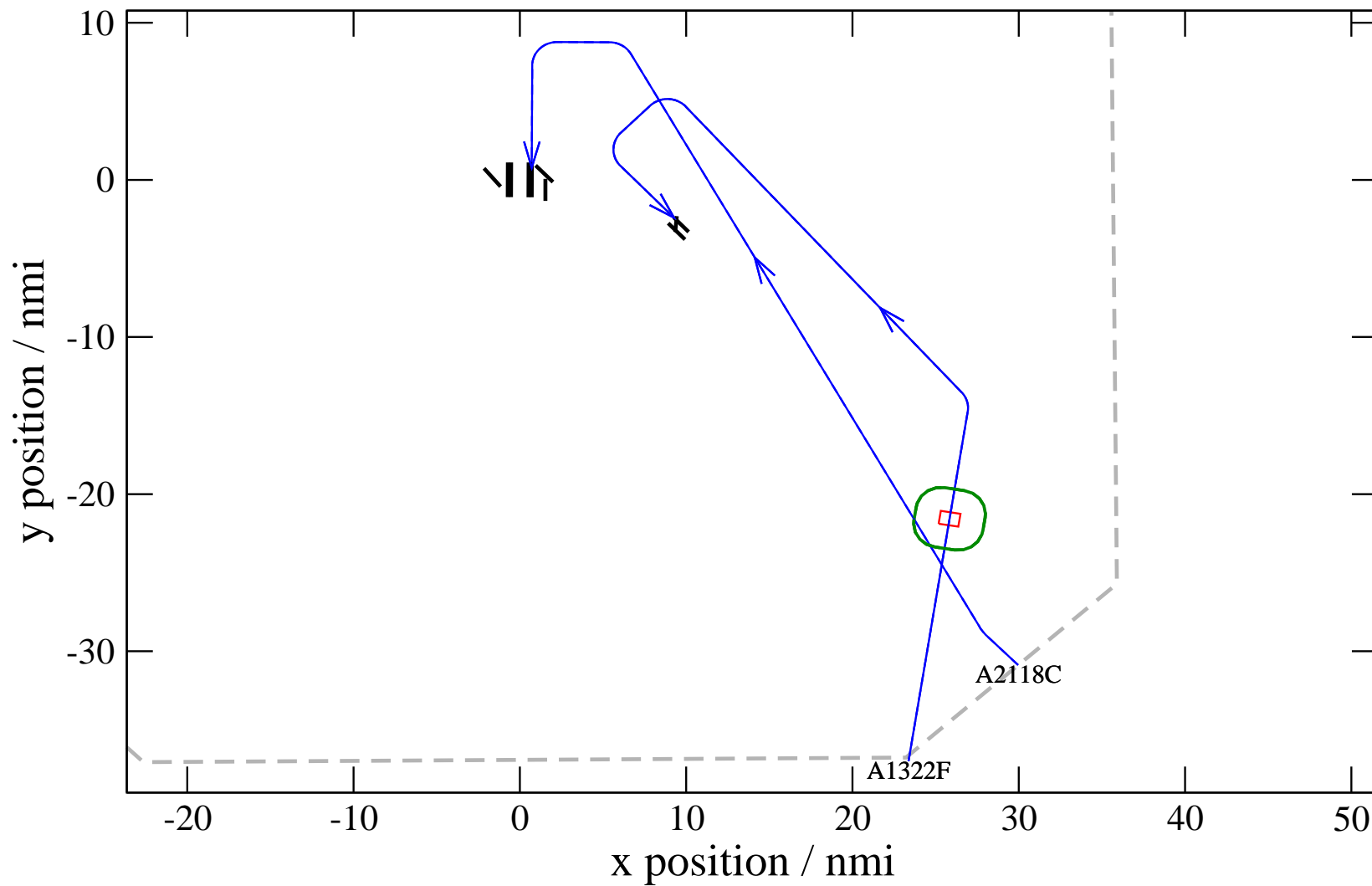
# Maneuver Time Steps

-10:50 [2.00H/-1.00V] A2118C speed dec 32 kn



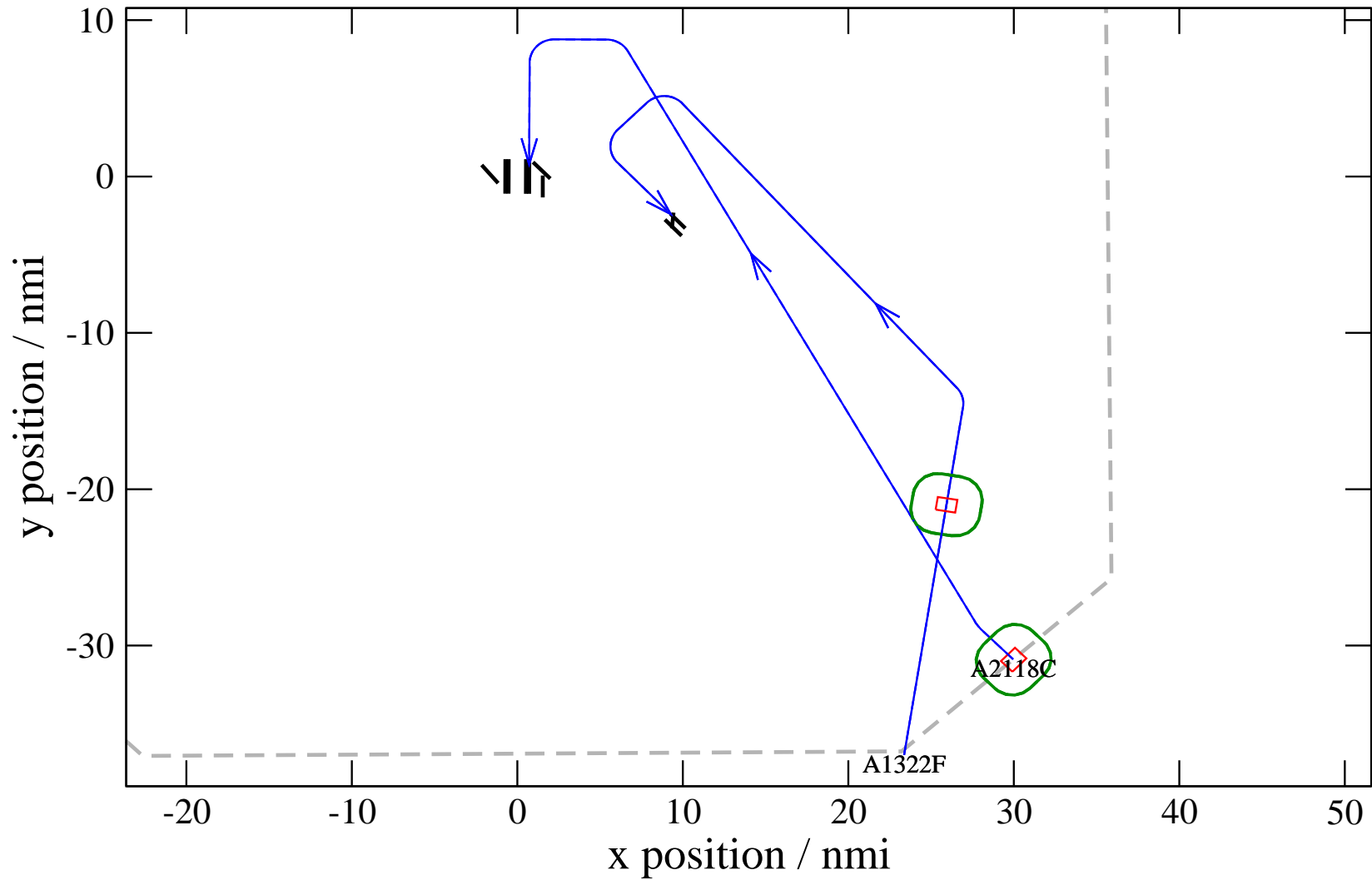
# Maneuver Time Steps

-10:40 [2.00H/-1.00V] A2118C speed dec 32 kn



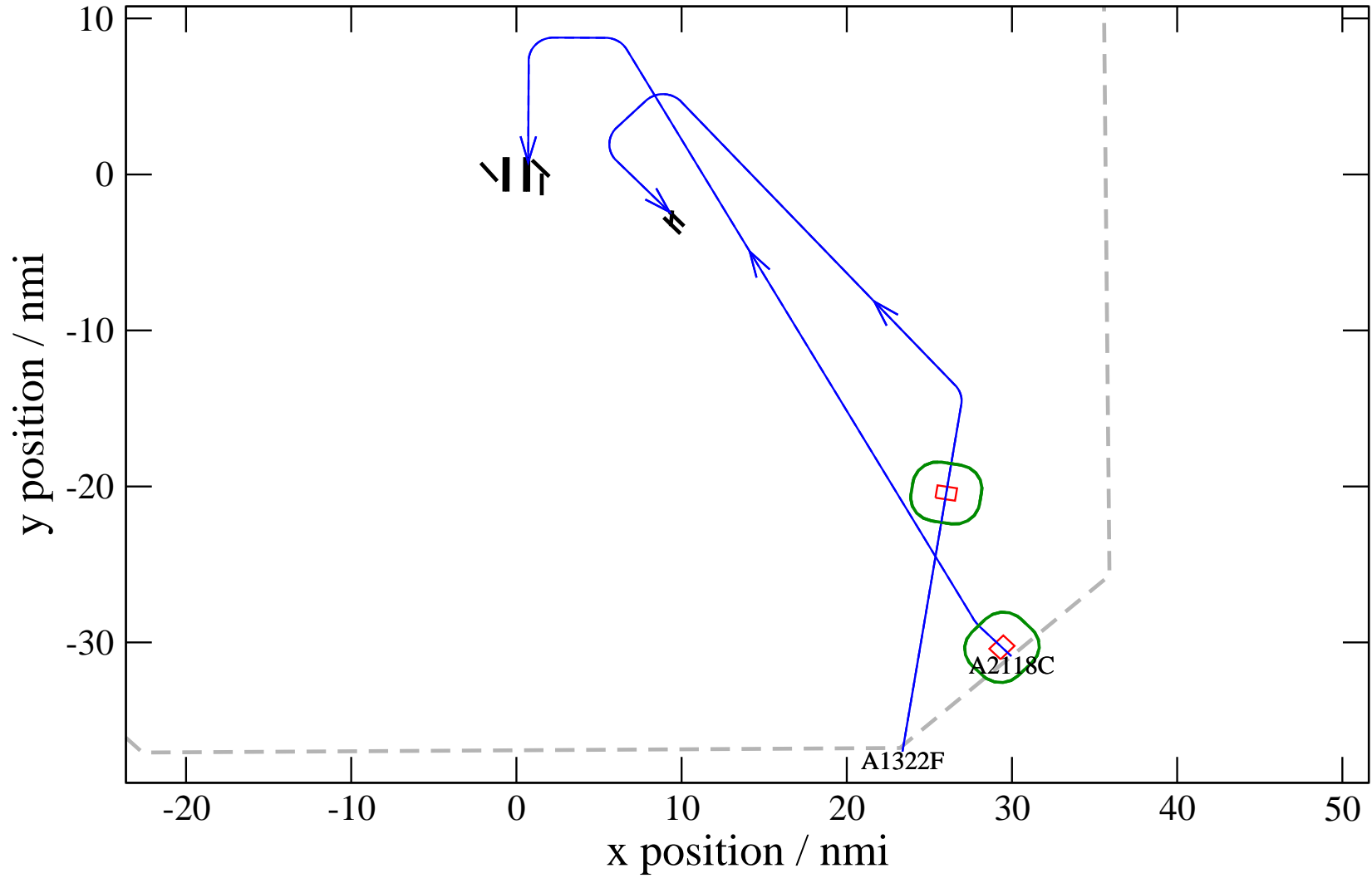
# Maneuver Time Steps

-10:30 [2.00H/-1.00V] A2118C speed dec 32 kn



# Maneuver Time Steps

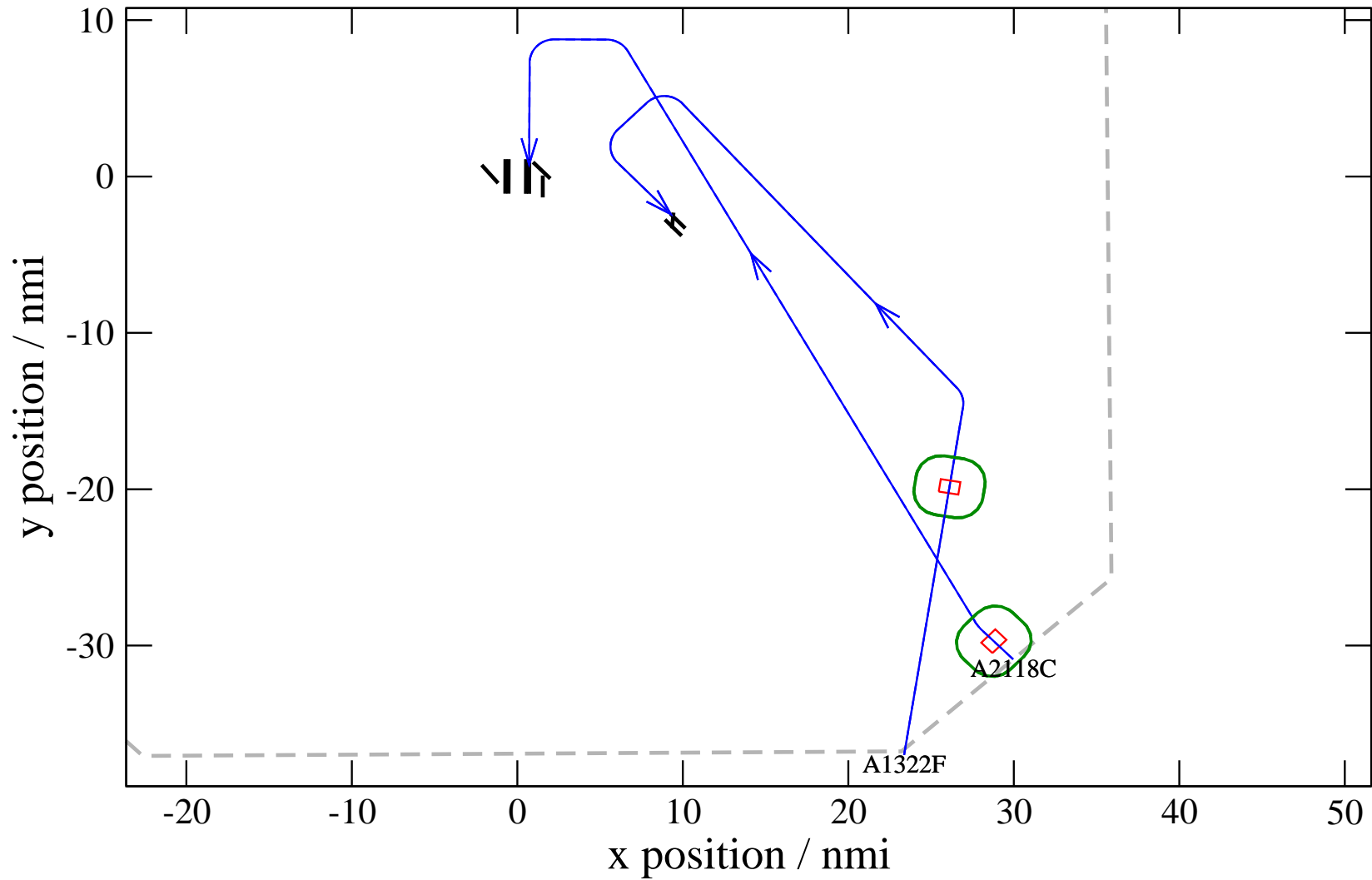
-10:20 [2.00H/-1.00V] A2118C speed dec 32 kn





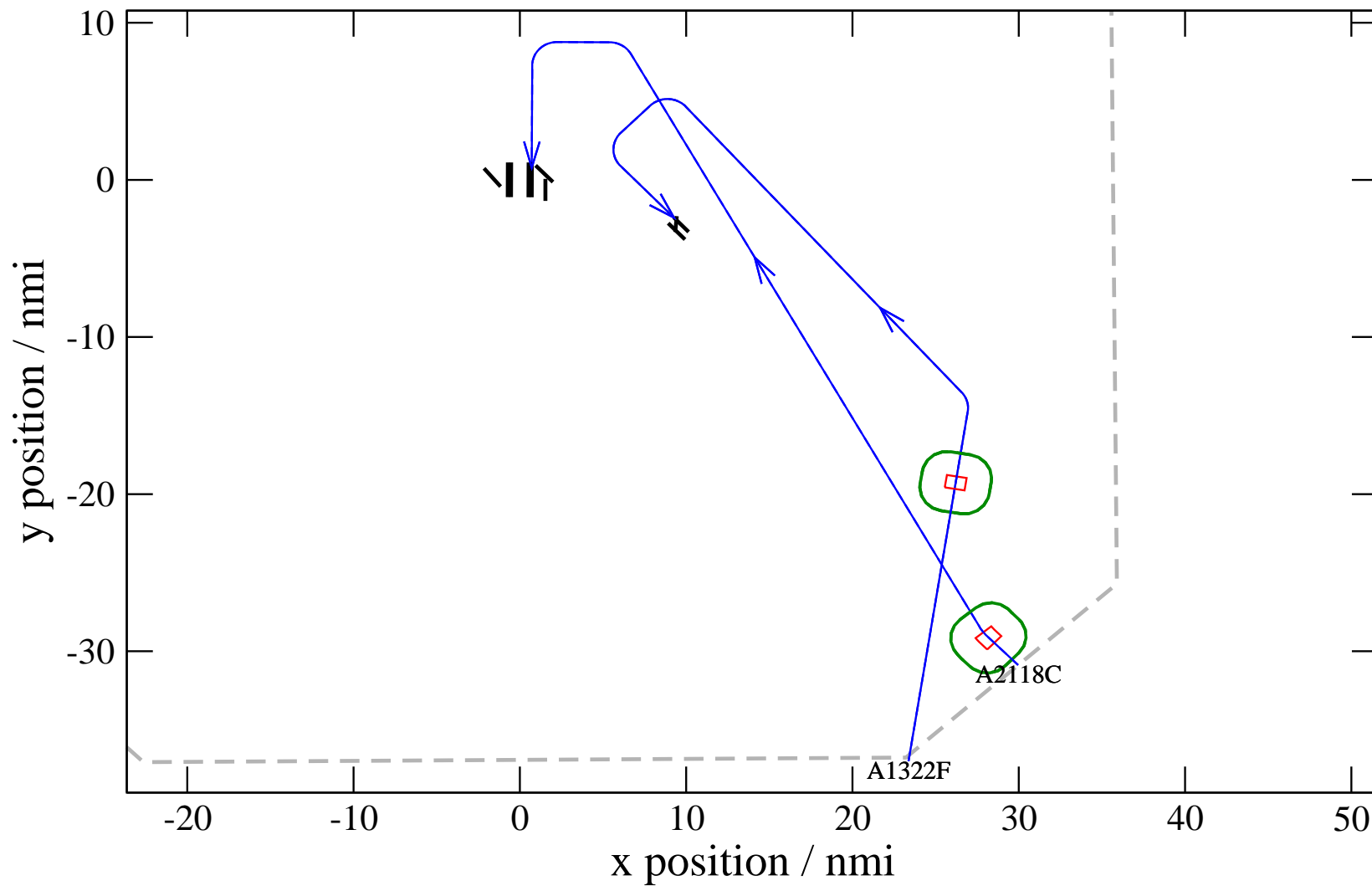
# Maneuver Time Steps

-10:10 [2.00H/-1.00V] A2118C speed dec 32 kn



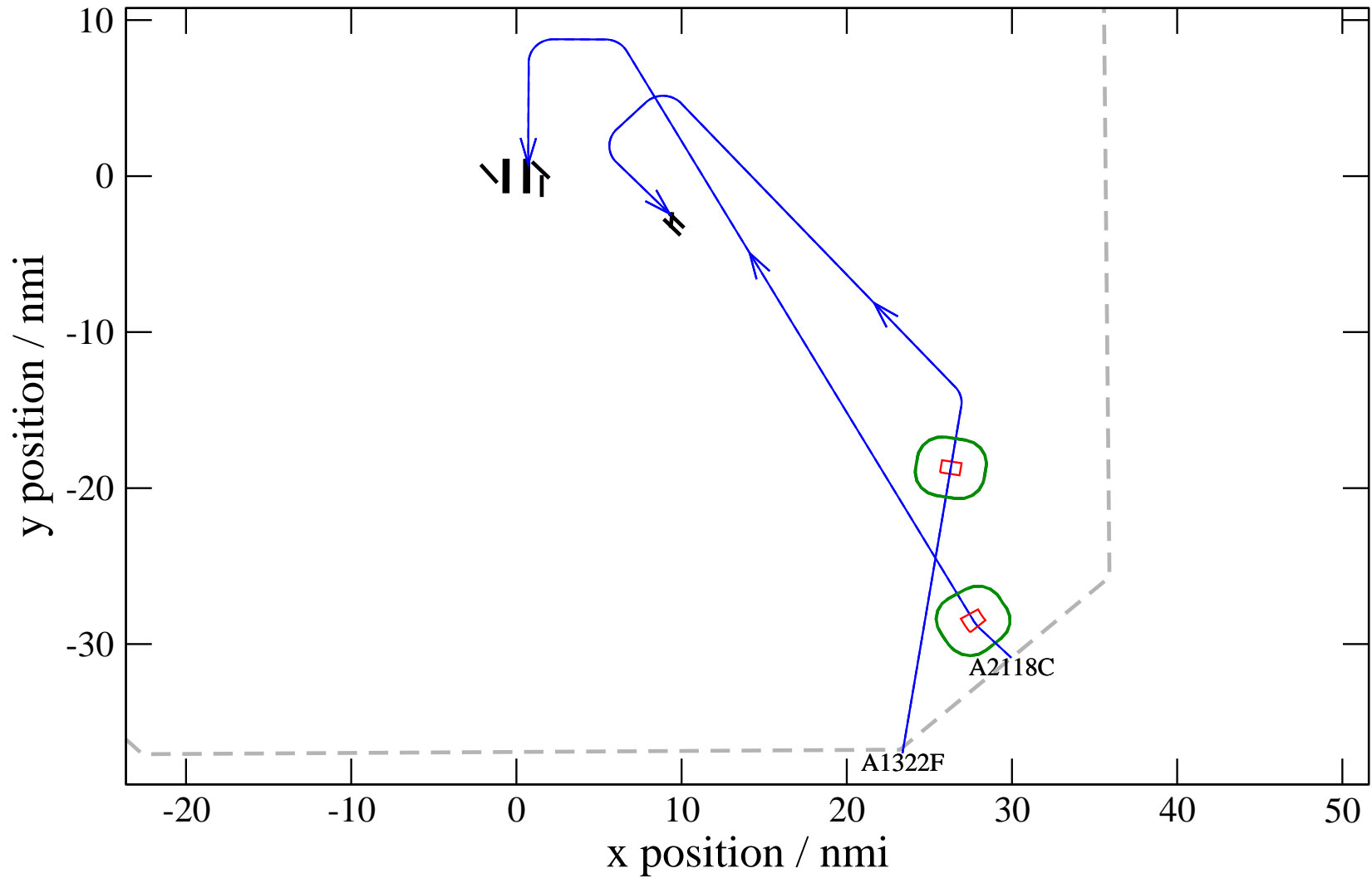
# Maneuver Time Steps

-10:00 [2.00H/-1.00V] A2118C speed dec 32 kn



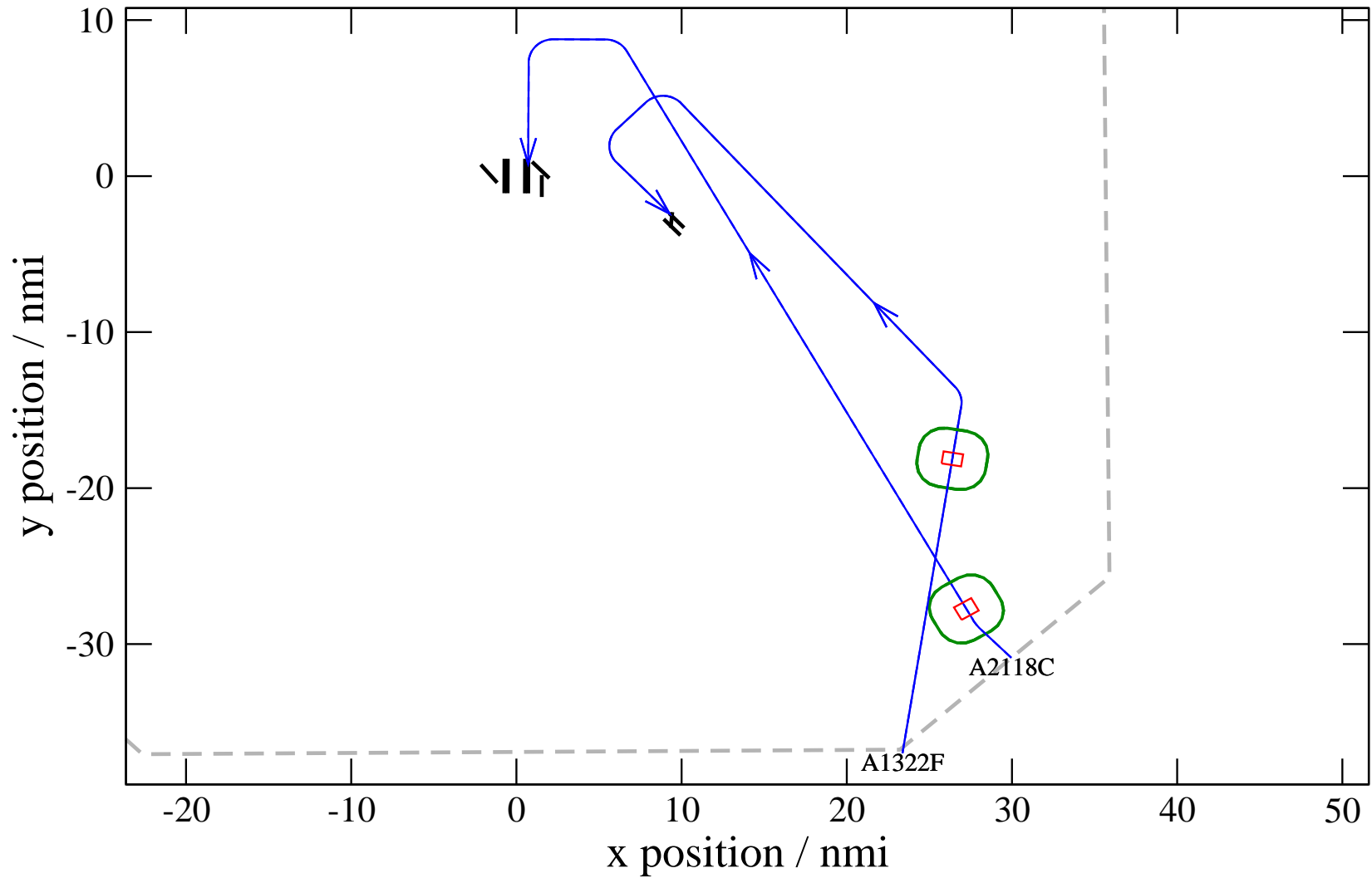
# Maneuver Time Steps

-9:50 [2.00H/-1.00V] A2118C speed dec 32 kn



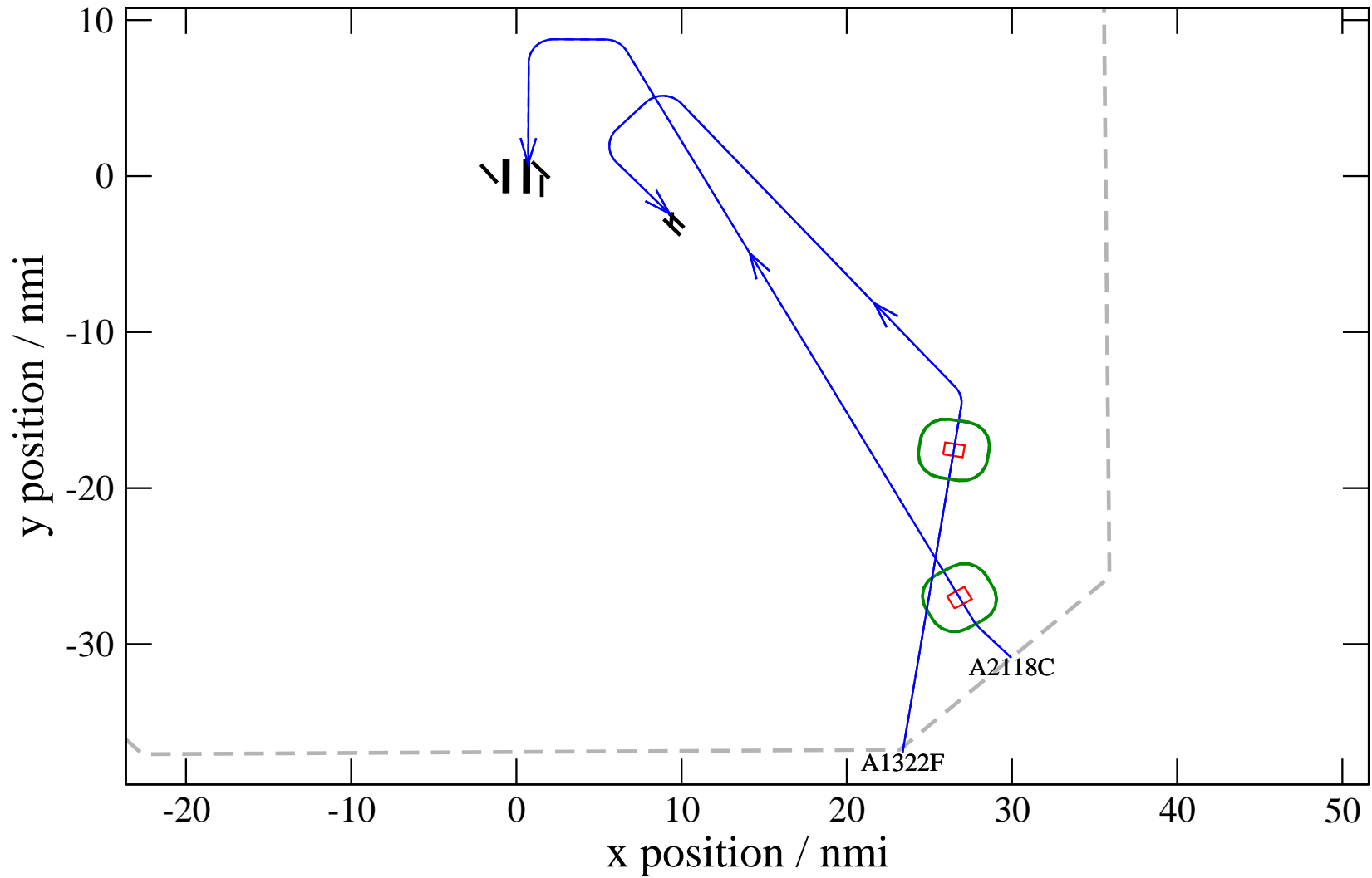
# Maneuver Time Steps

-9:40 [2.82H/-1.00V] A2118C speed dec 32 kn



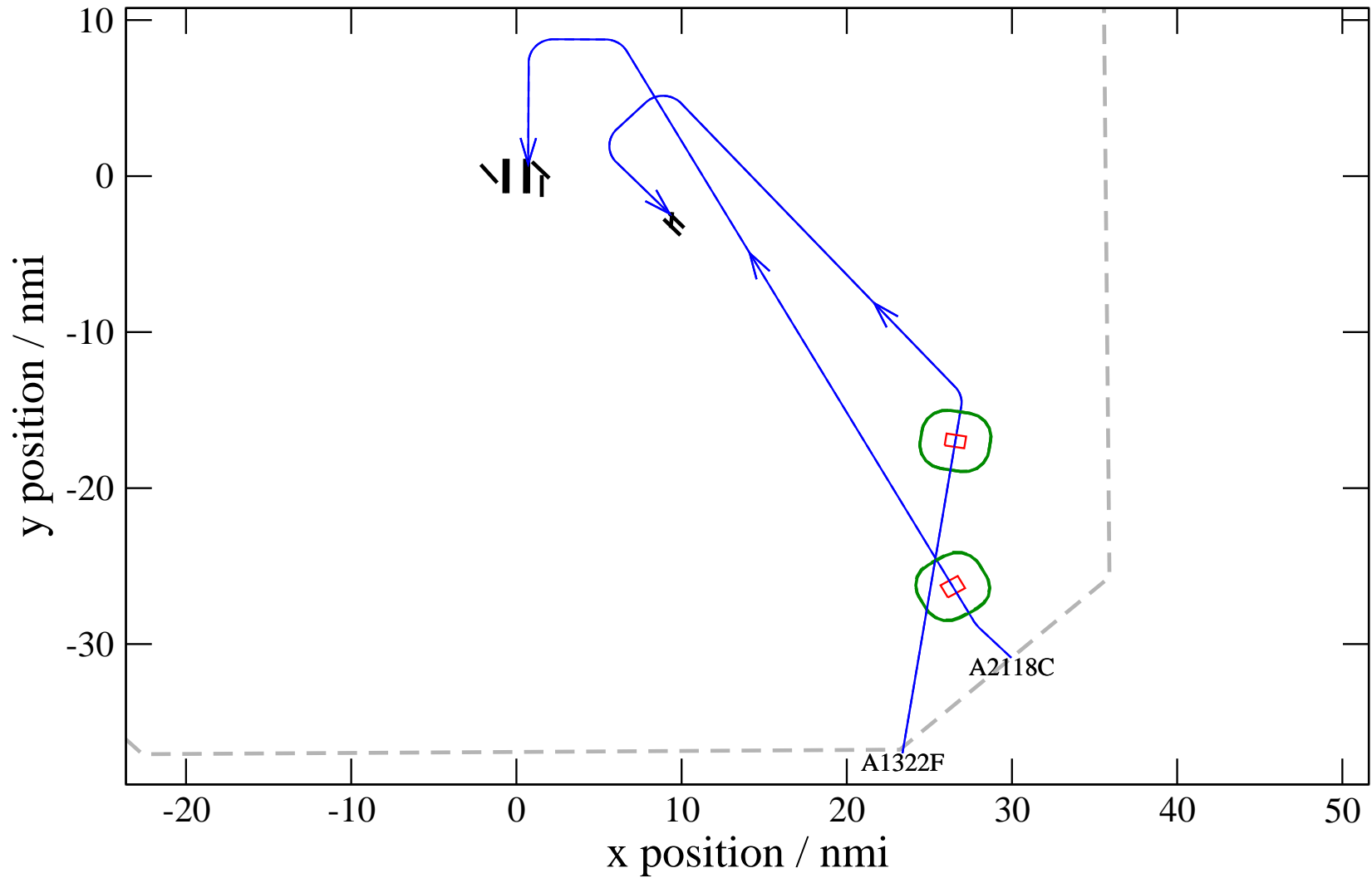
# Maneuver Time Steps

-9:30 [2.77H/-1.00V] A2118C speed dec 32 kn



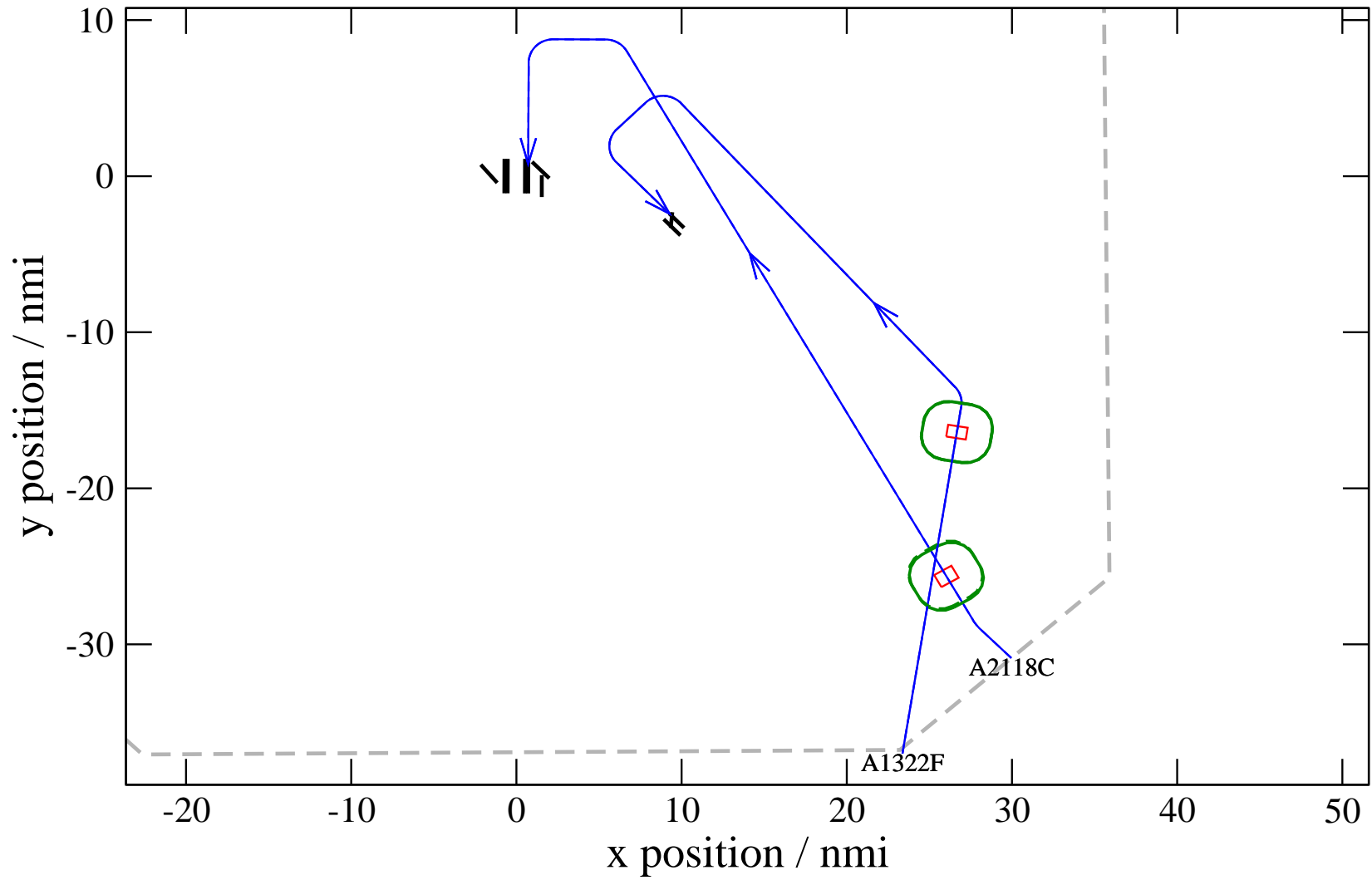
# Maneuver Time Steps

-9:20 [2.73H/-1.00V] A2118C speed dec 32 kn



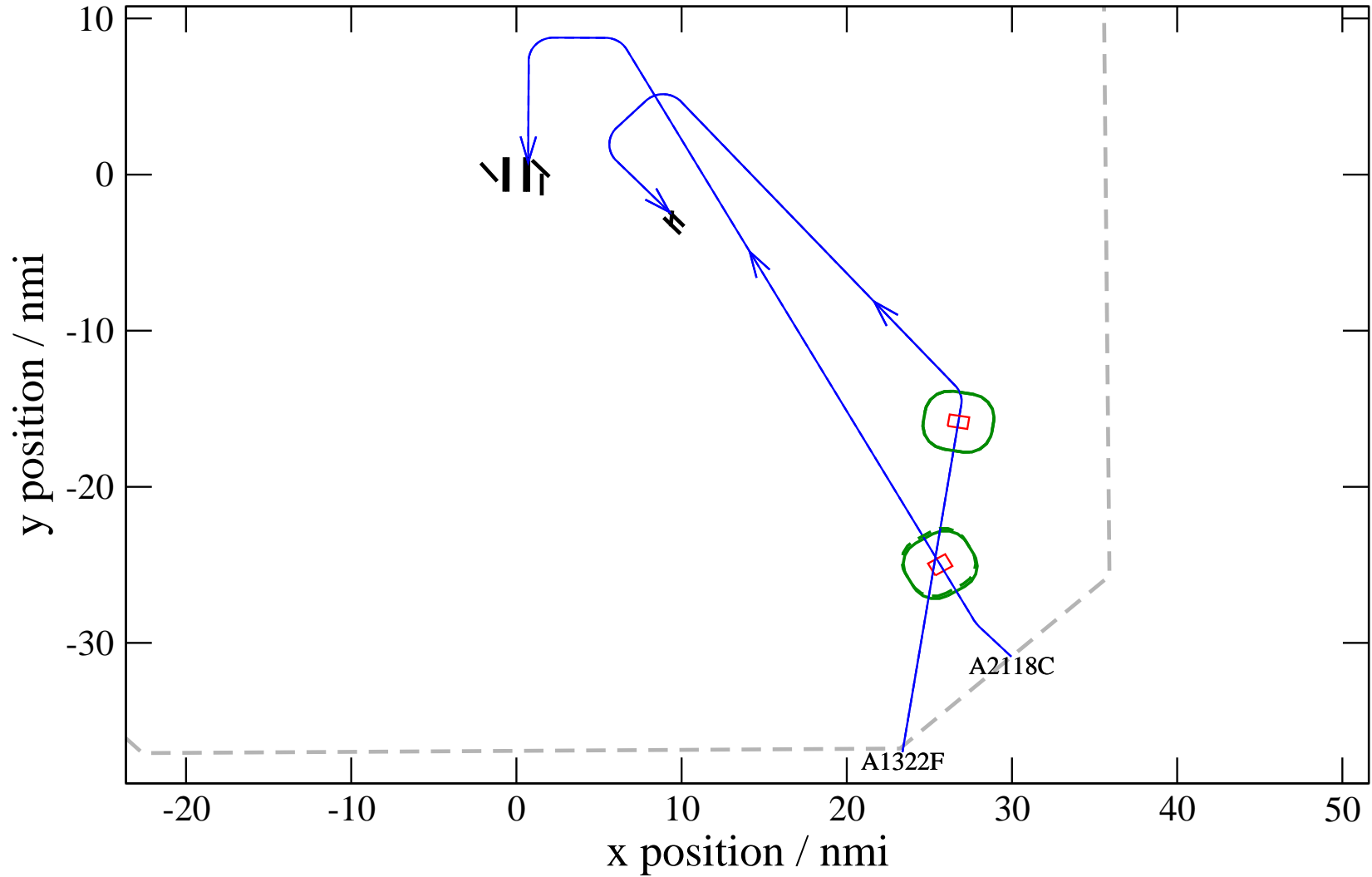
# Maneuver Time Steps

-9:10 [2.71H/-1.00V] A2118C speed dec 32 kn



# Maneuver Time Steps

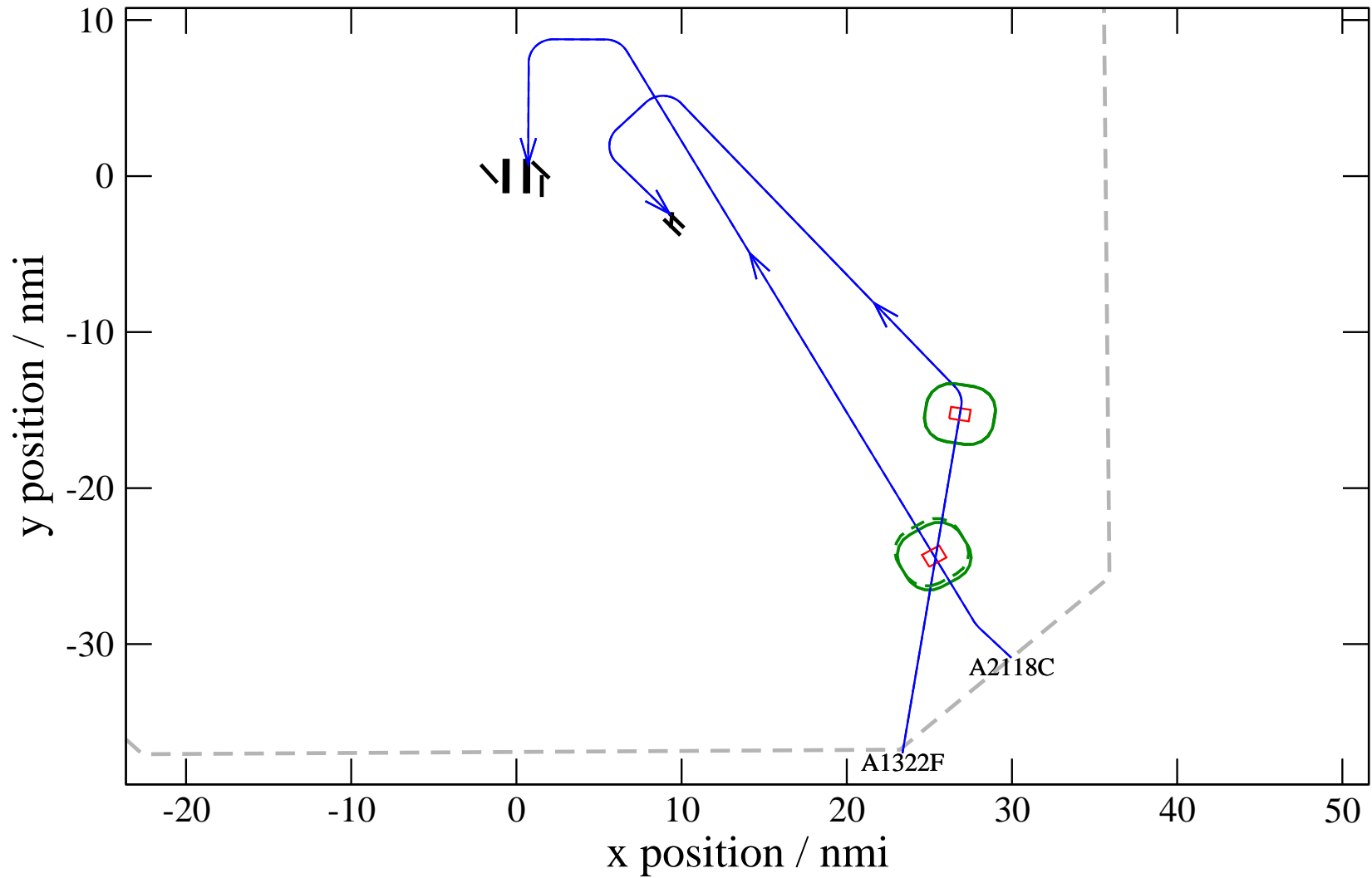
-9:00 [2.71H/-1.00V] A2118C speed dec 32 kn





# Maneuver Time Steps

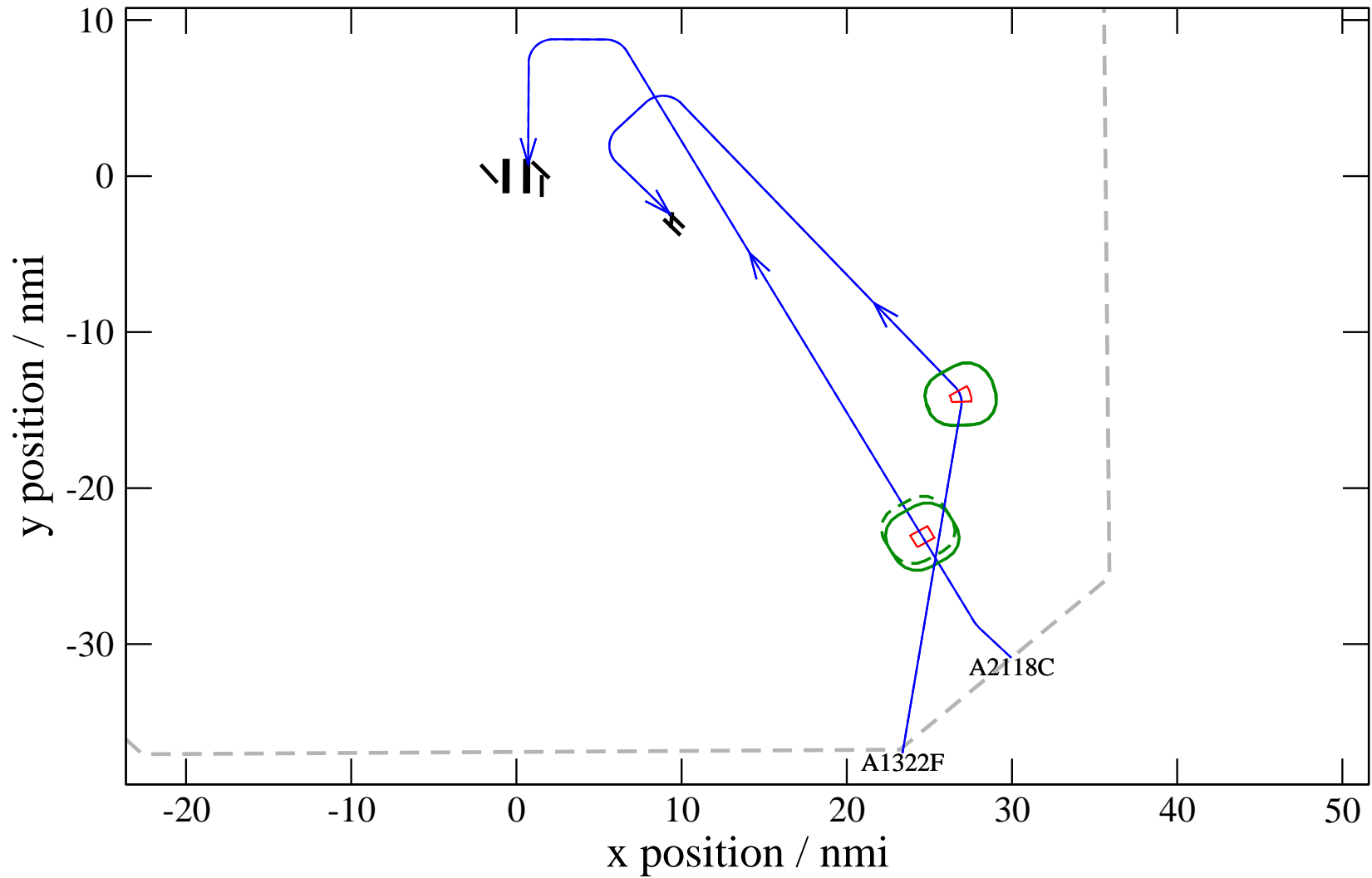
-8:50 [2.72H/-1.00V] A2118C speed dec 32 kn





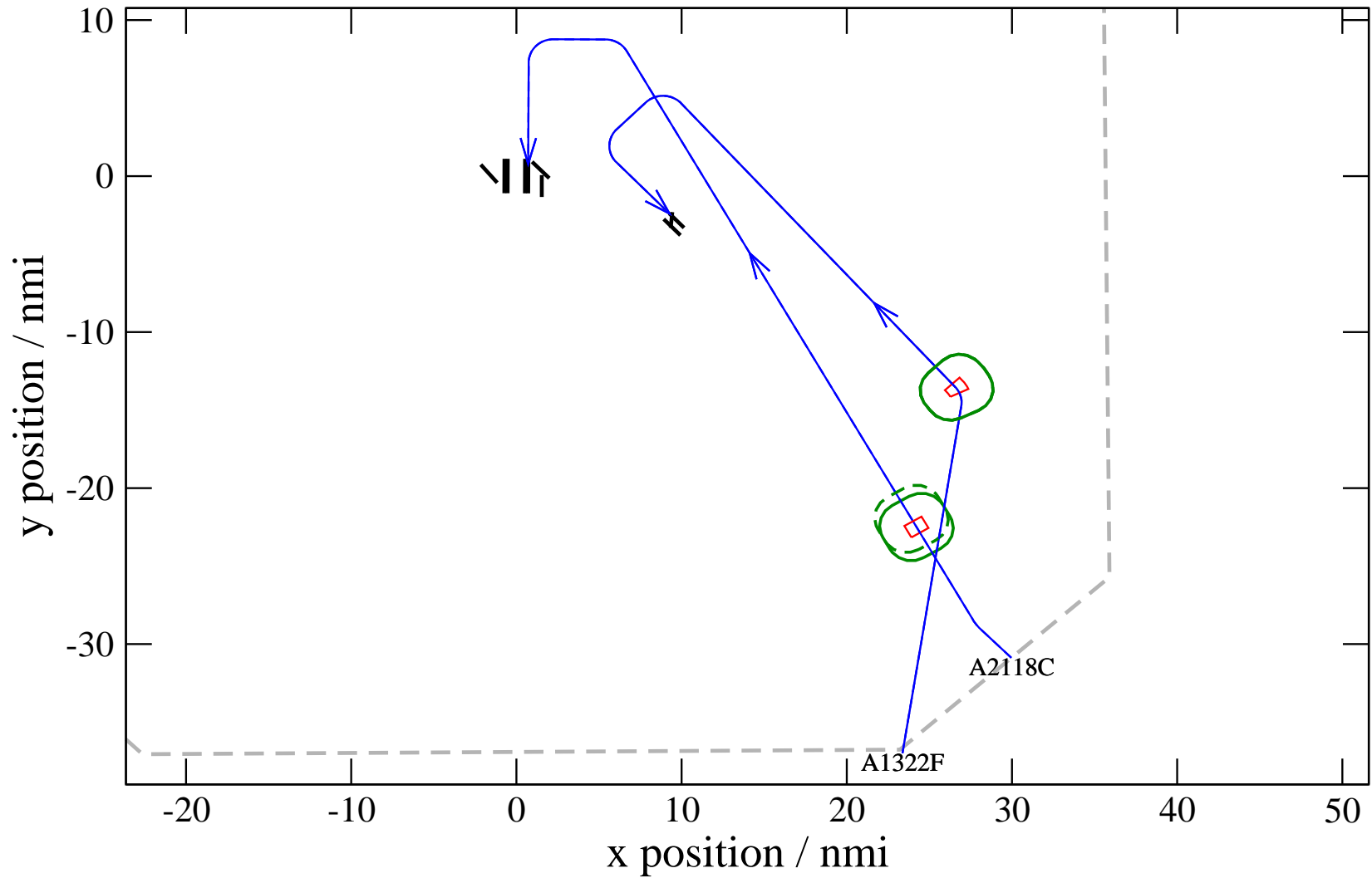
# Maneuver Time Steps

-8:30 [2.70H/-1.00V] A2118C speed dec 32 kn



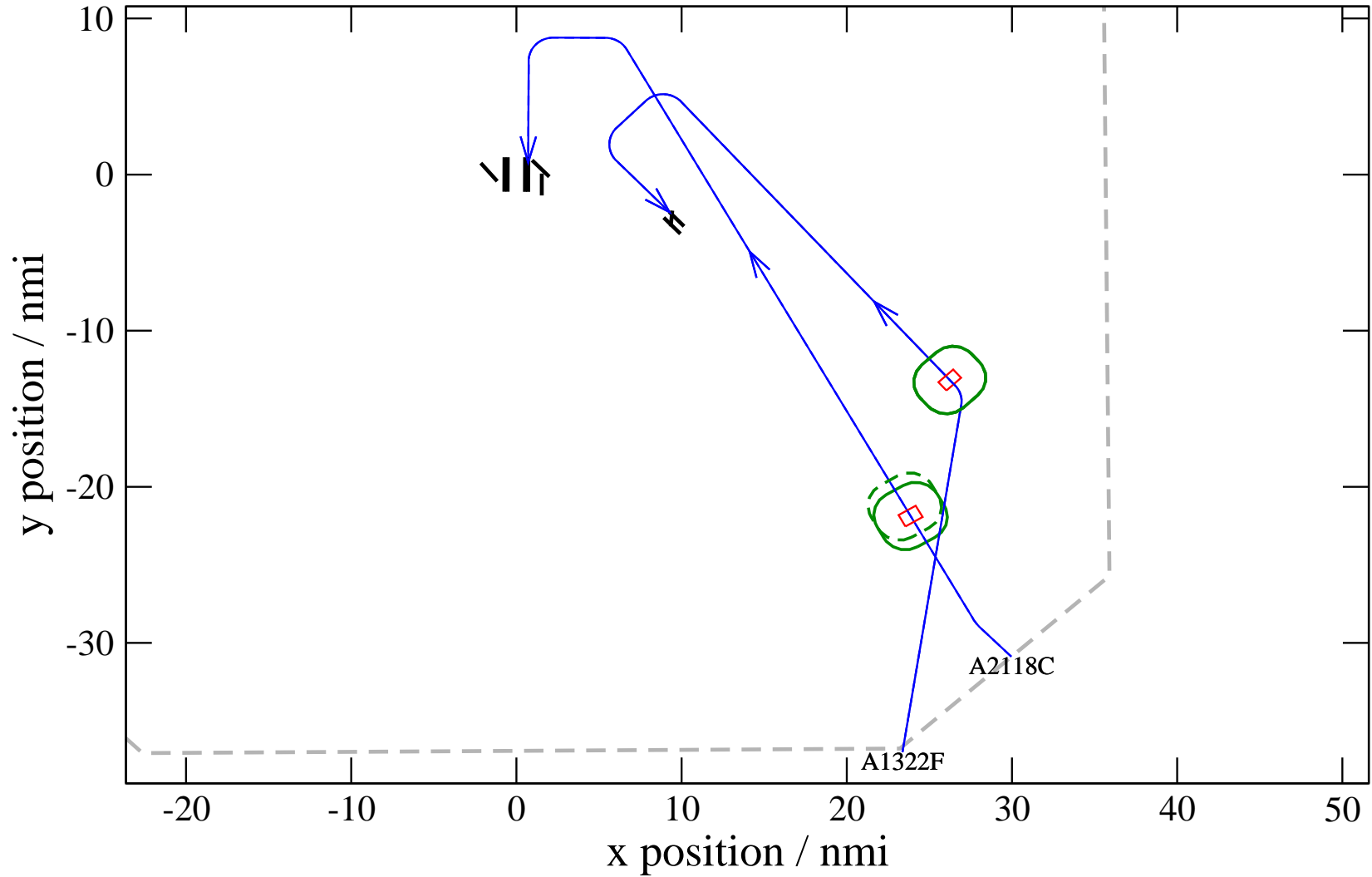
# Maneuver Time Steps

-8:20 [2.62H/-1.00V] A2118C speed dec 32 kn



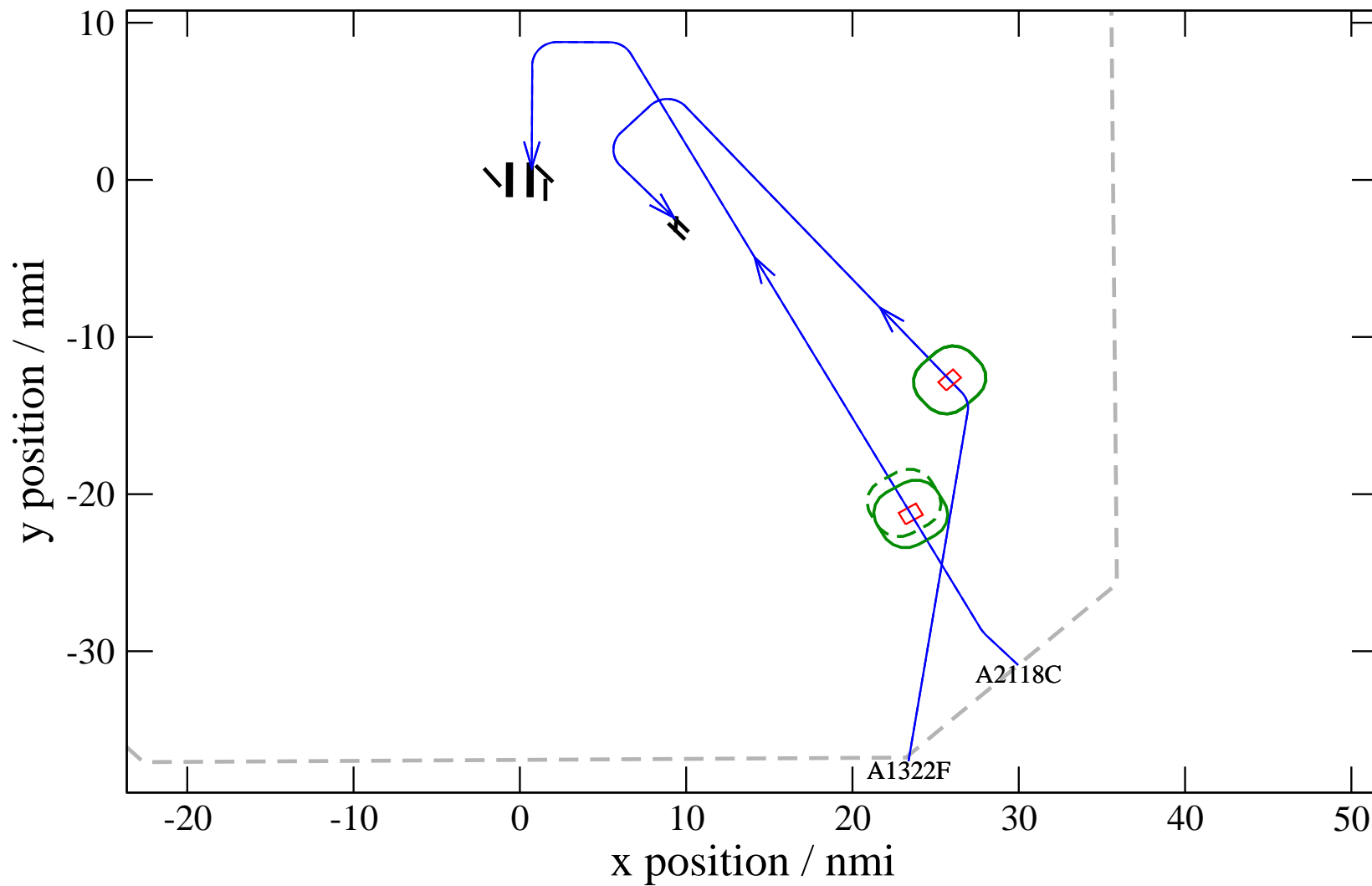
# Maneuver Time Steps

-8:10 [2.54H/-1.00V] A2118C speed dec 32 kn



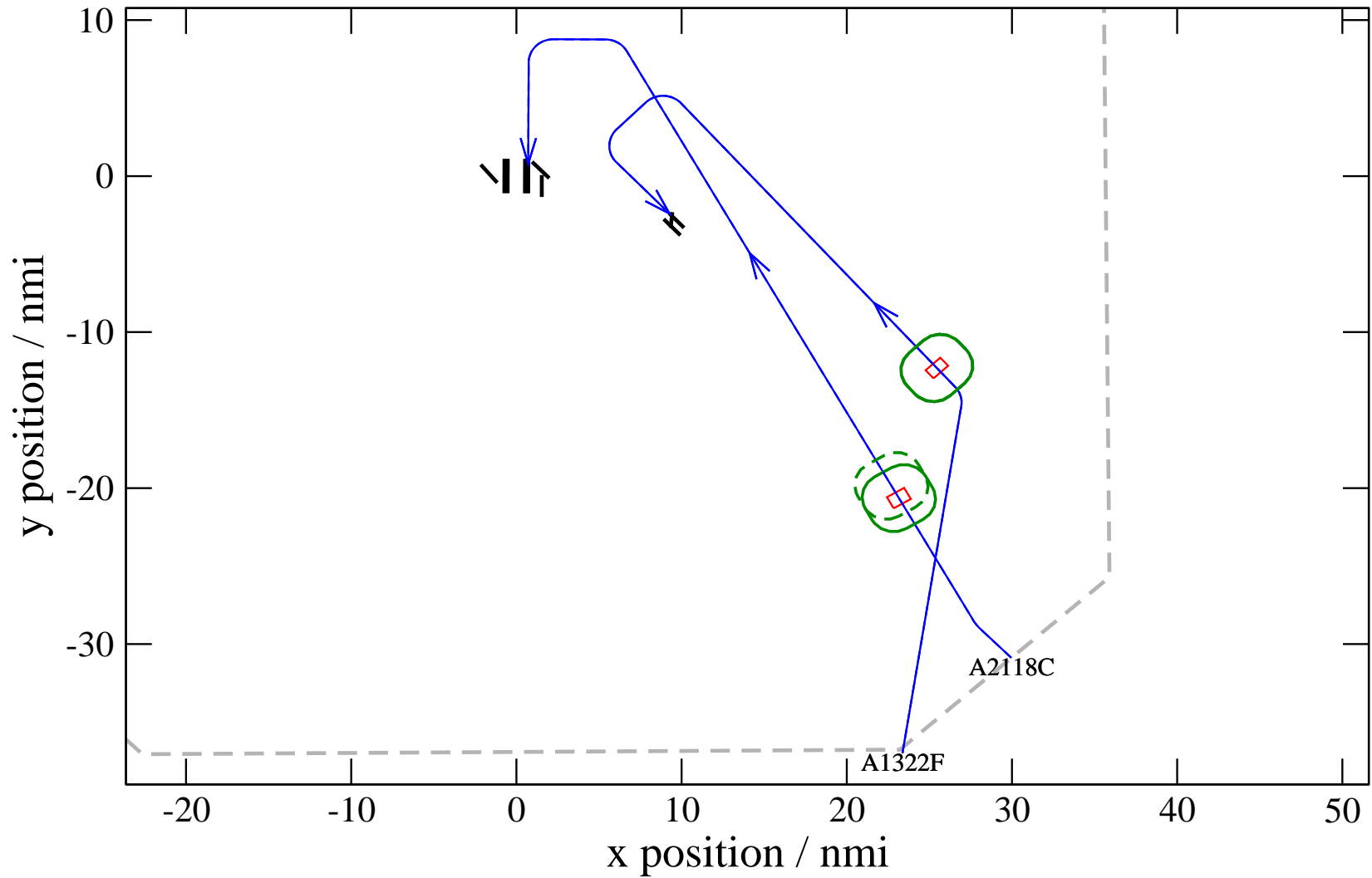
# Maneuver Time Steps

-8:00 [2.48H/-1.00V] A2118C speed dec 32 kn



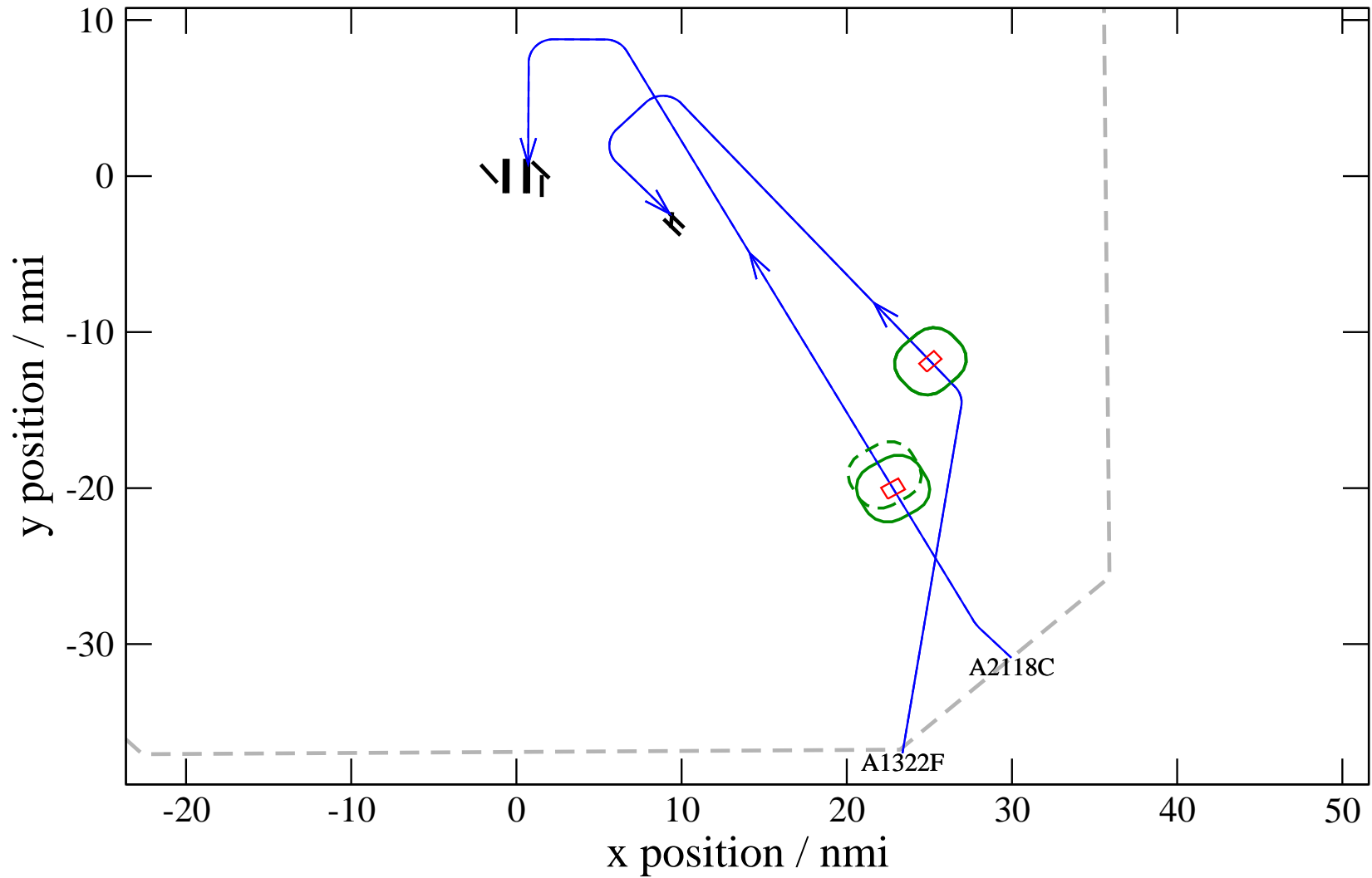
# Maneuver Time Steps

-7:50 [2.41H/-1.00V] A2118C speed dec 32 kn



# Maneuver Time Steps

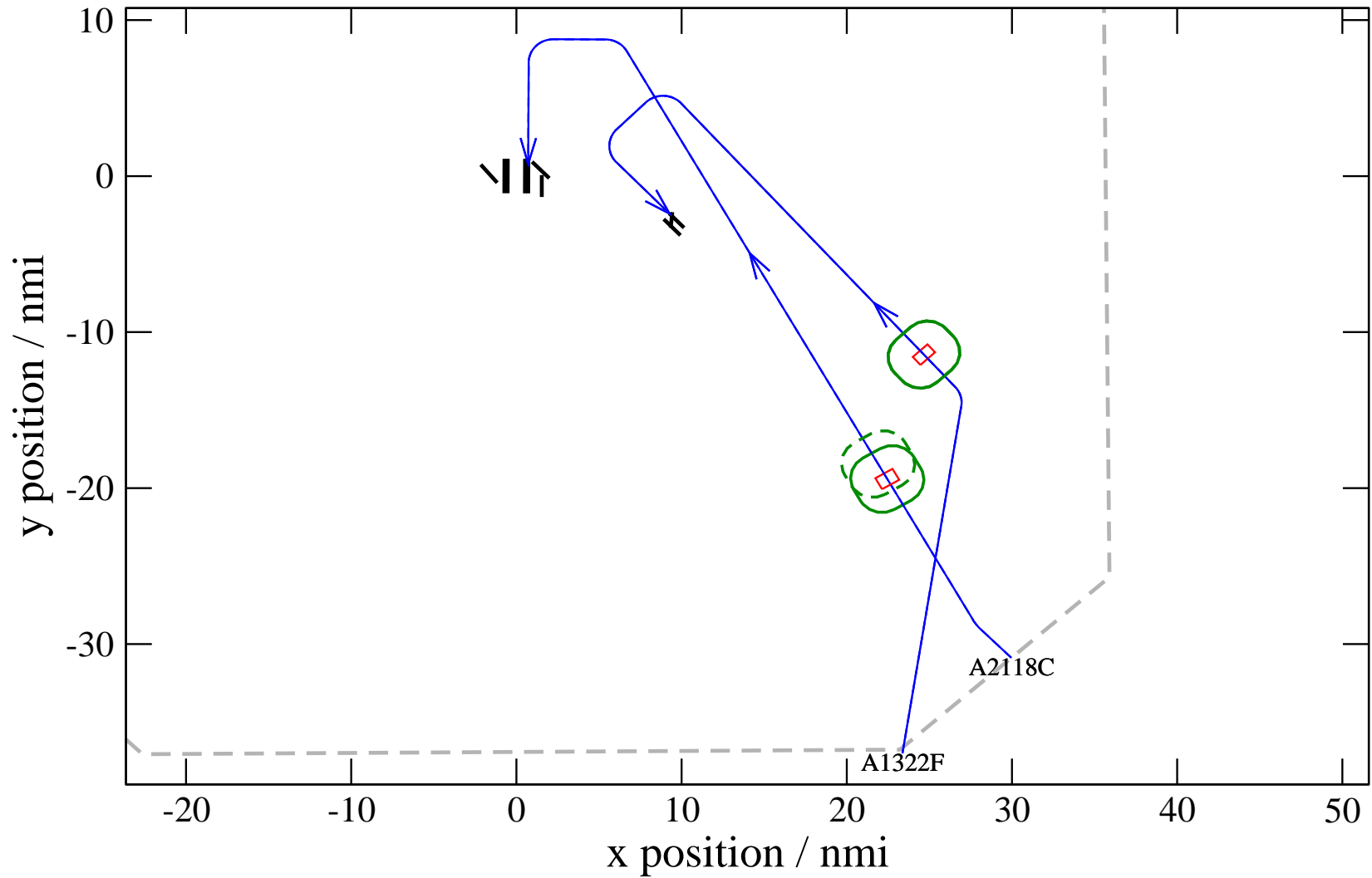
-7:40 [2.35H/-1.00V] A2118C speed dec 32 kn





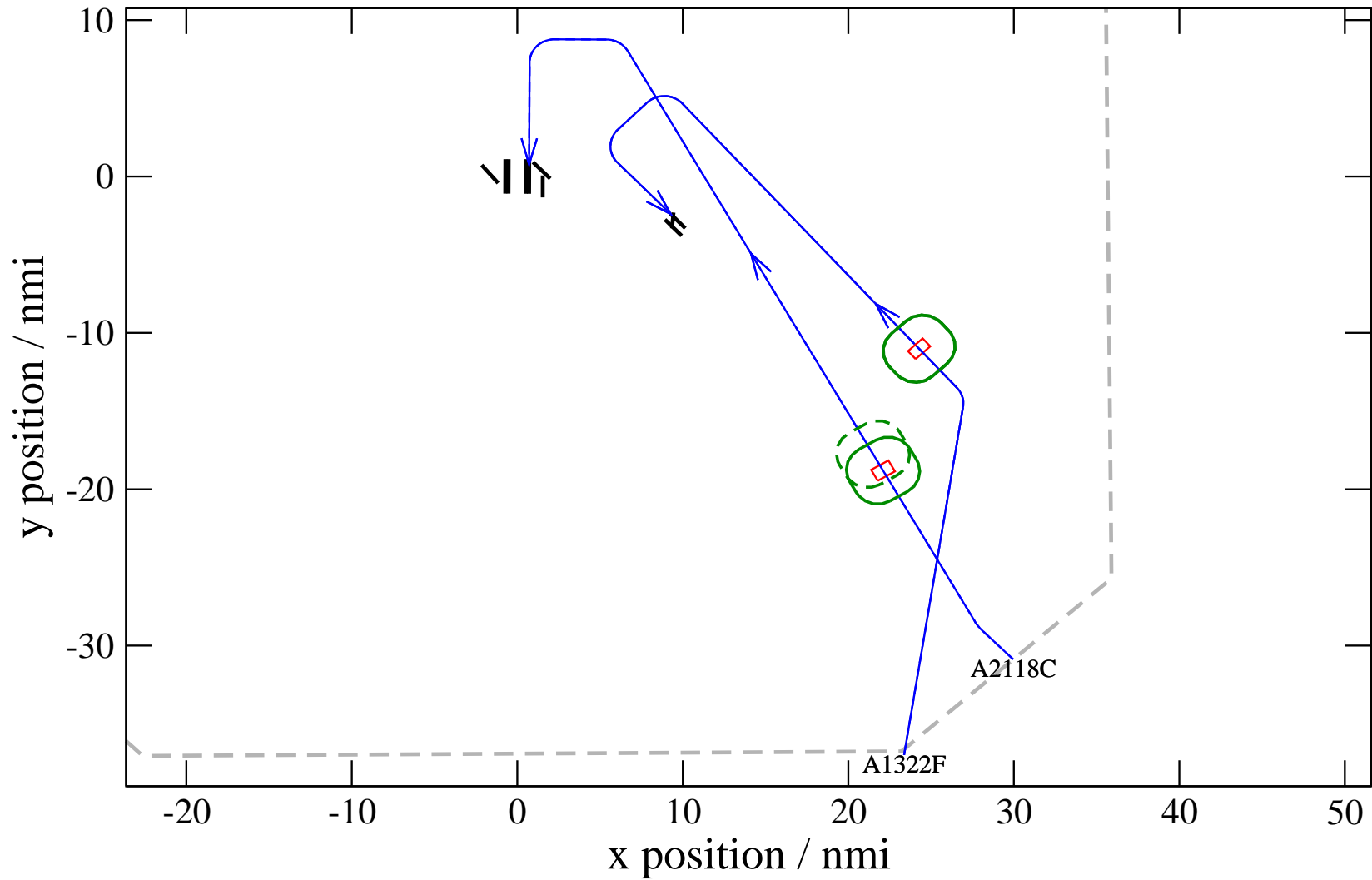
# Maneuver Time Steps

-7:30 [2.29H/-1.00V] A2118C speed dec 32 kn



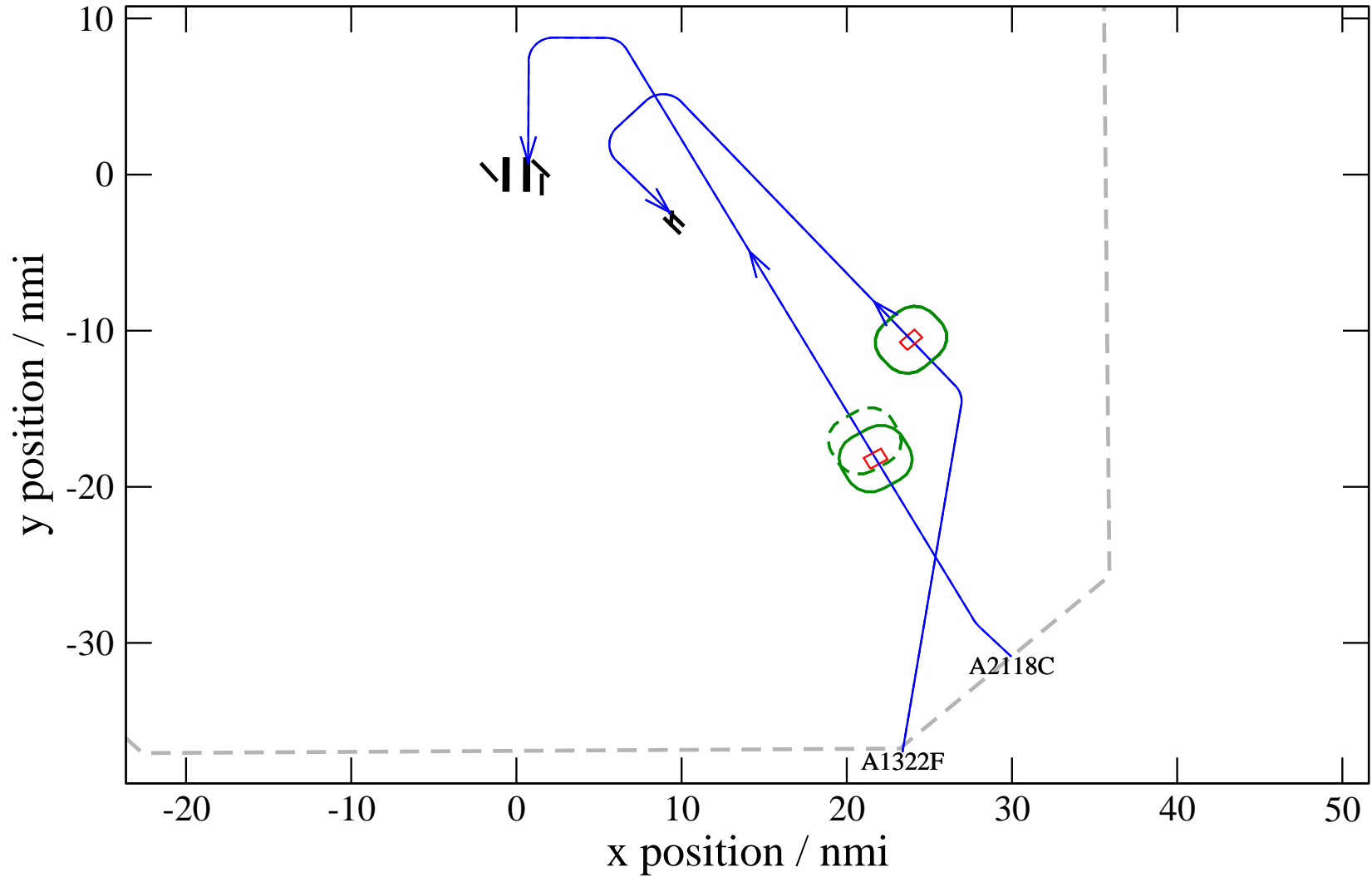
# Maneuver Time Steps

-7:20 [2.23H/-1.00V] A2118C speed dec 32 kn



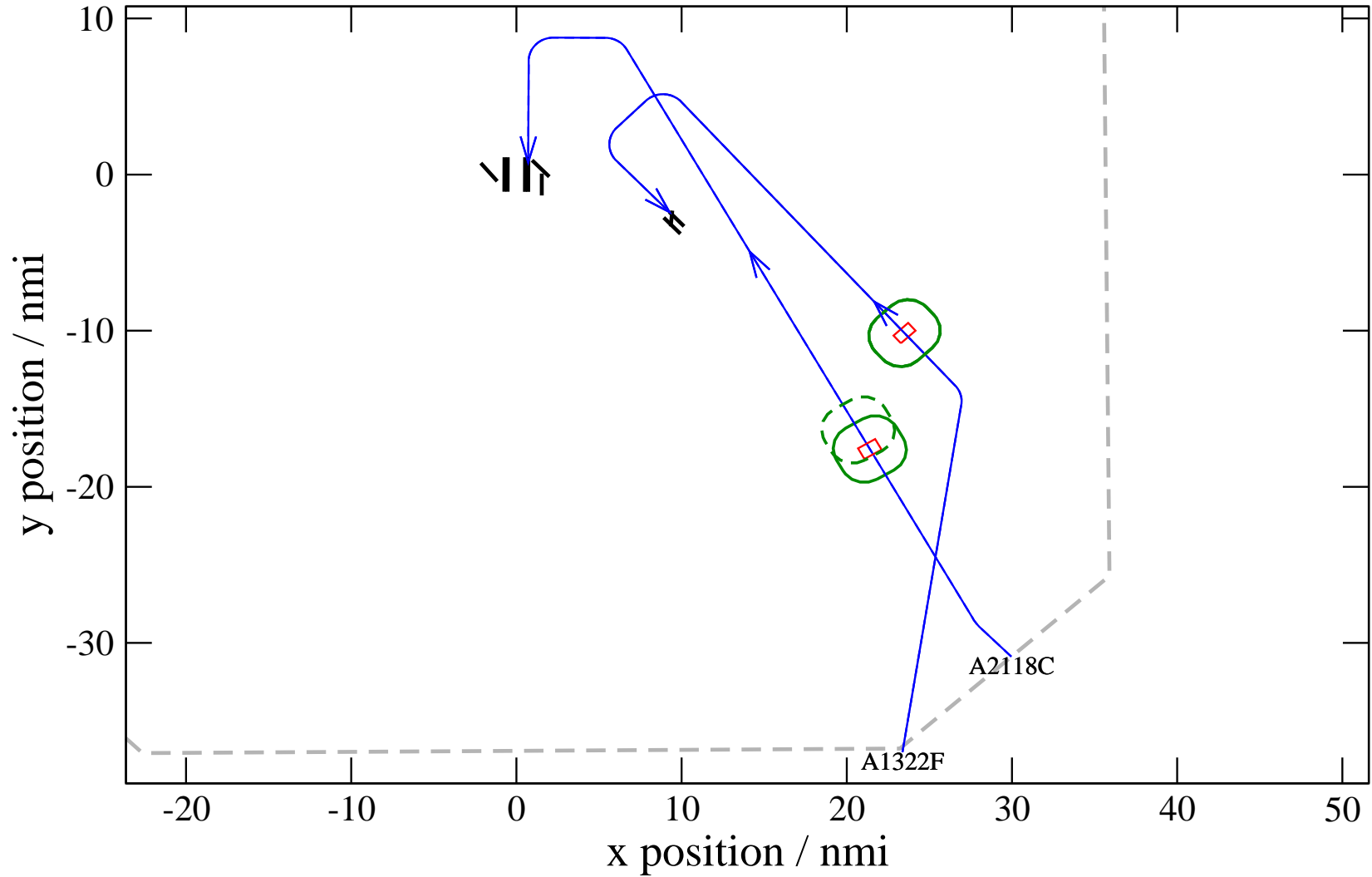
# Maneuver Time Steps

-7:10 [2.17H/-1.00V] A2118C speed dec 32 kn



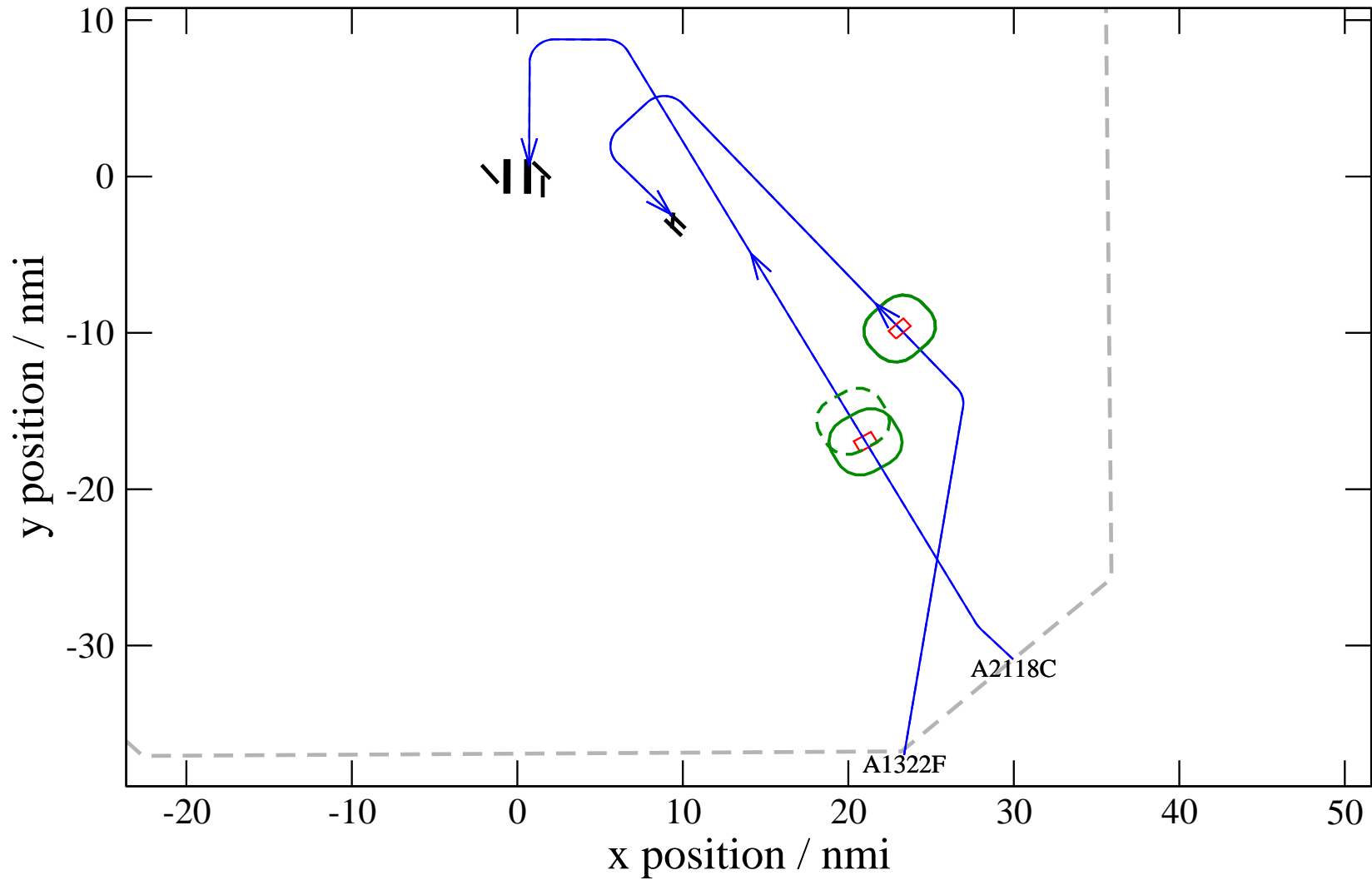
# Maneuver Time Steps

-7:00 [2.11H/-1.00V] A2118C speed dec 32 kn



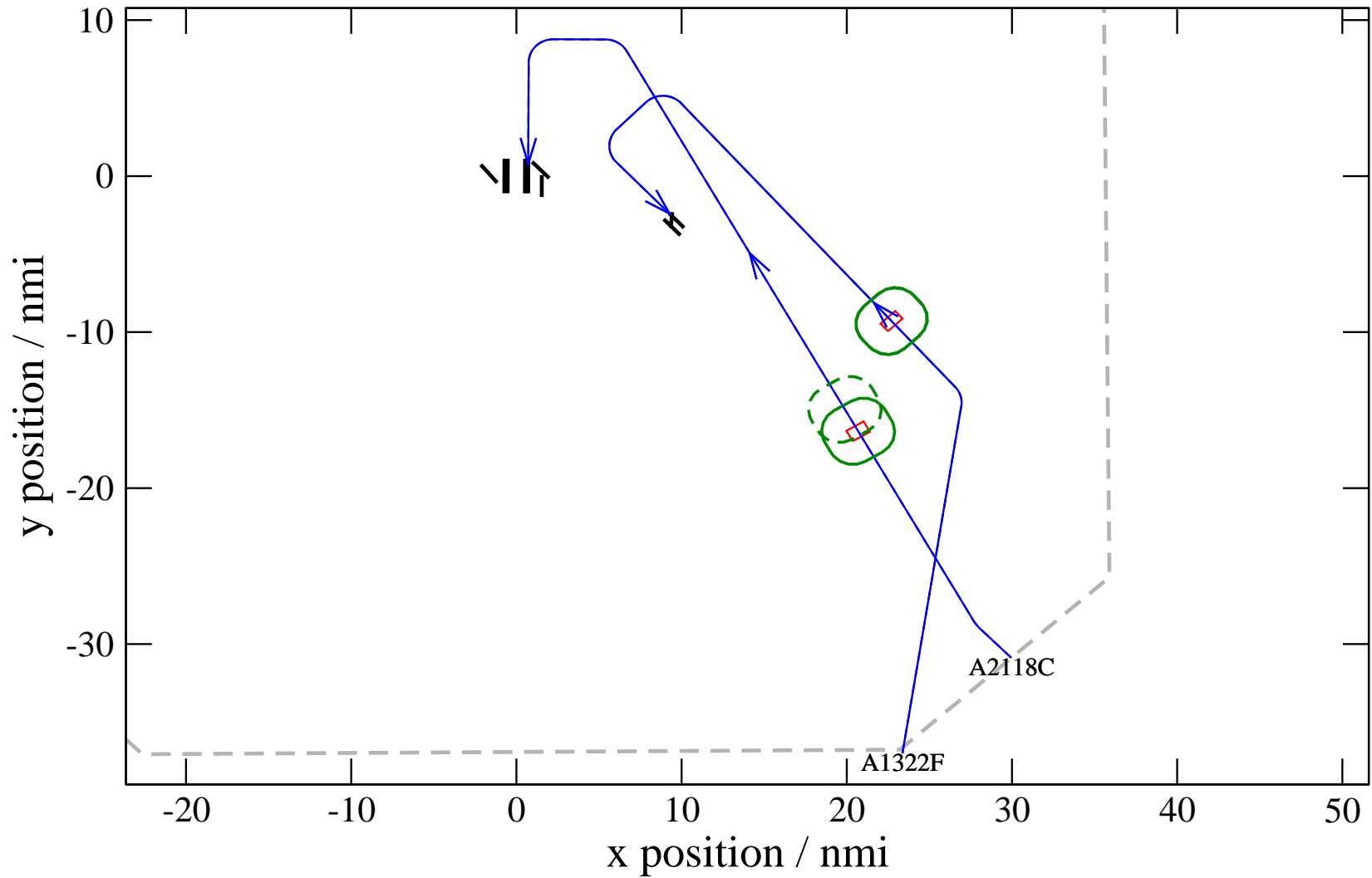
# Maneuver Time Steps

-6:50 [2.05H/-1.00V] A2118C speed dec 32 kn



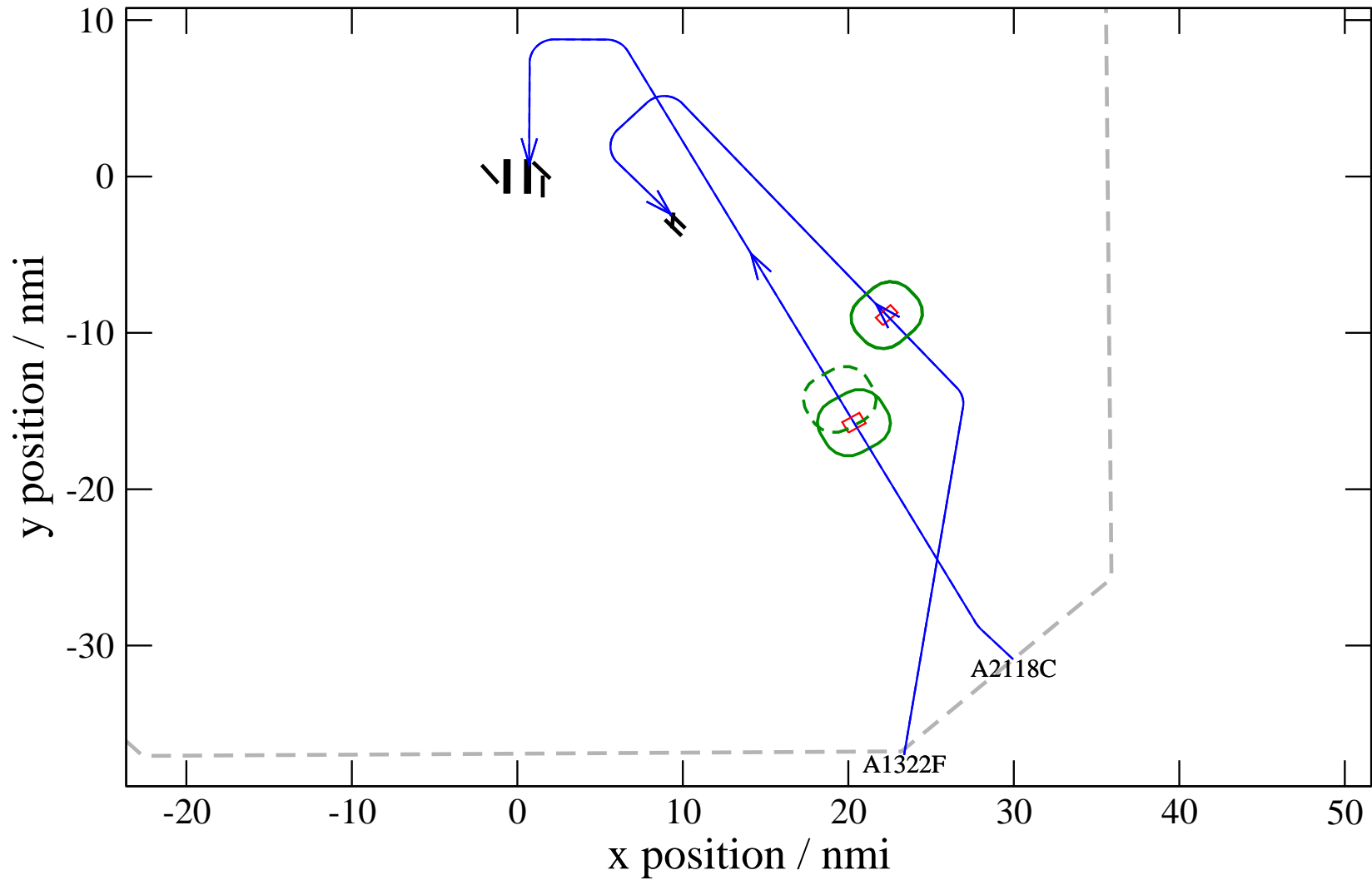
# Maneuver Time Steps

-6:40 [1.99H/-1.00V] A2118C speed dec 32 kn



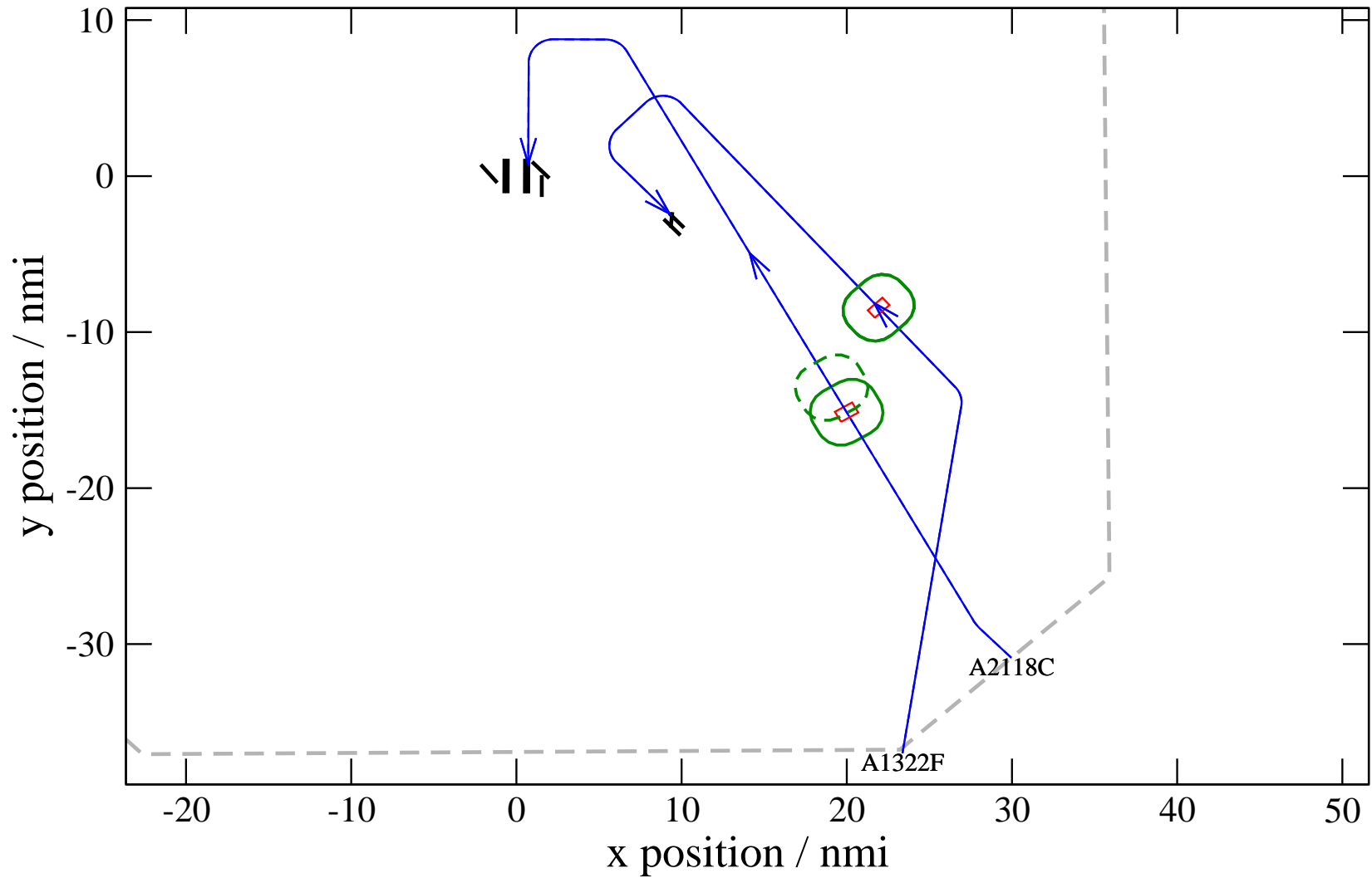
# Maneuver Time Steps

-6:30 [1.93H/-1.00V] A2118C speed dec 32 kn



# Maneuver Time Steps

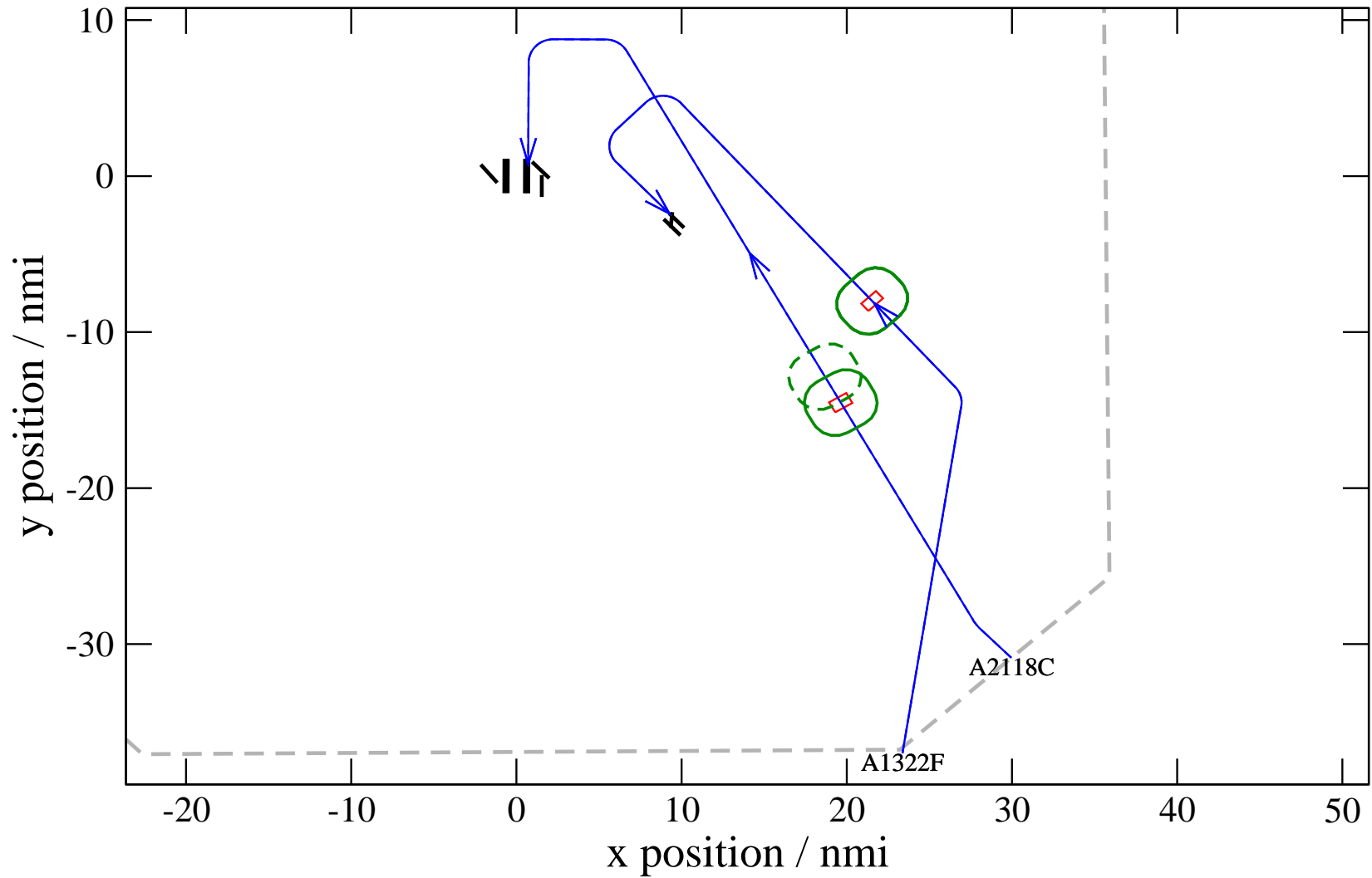
-6:20 [1.87H/-1.00V] A2118C speed dec 32 kn





# Maneuver Time Steps

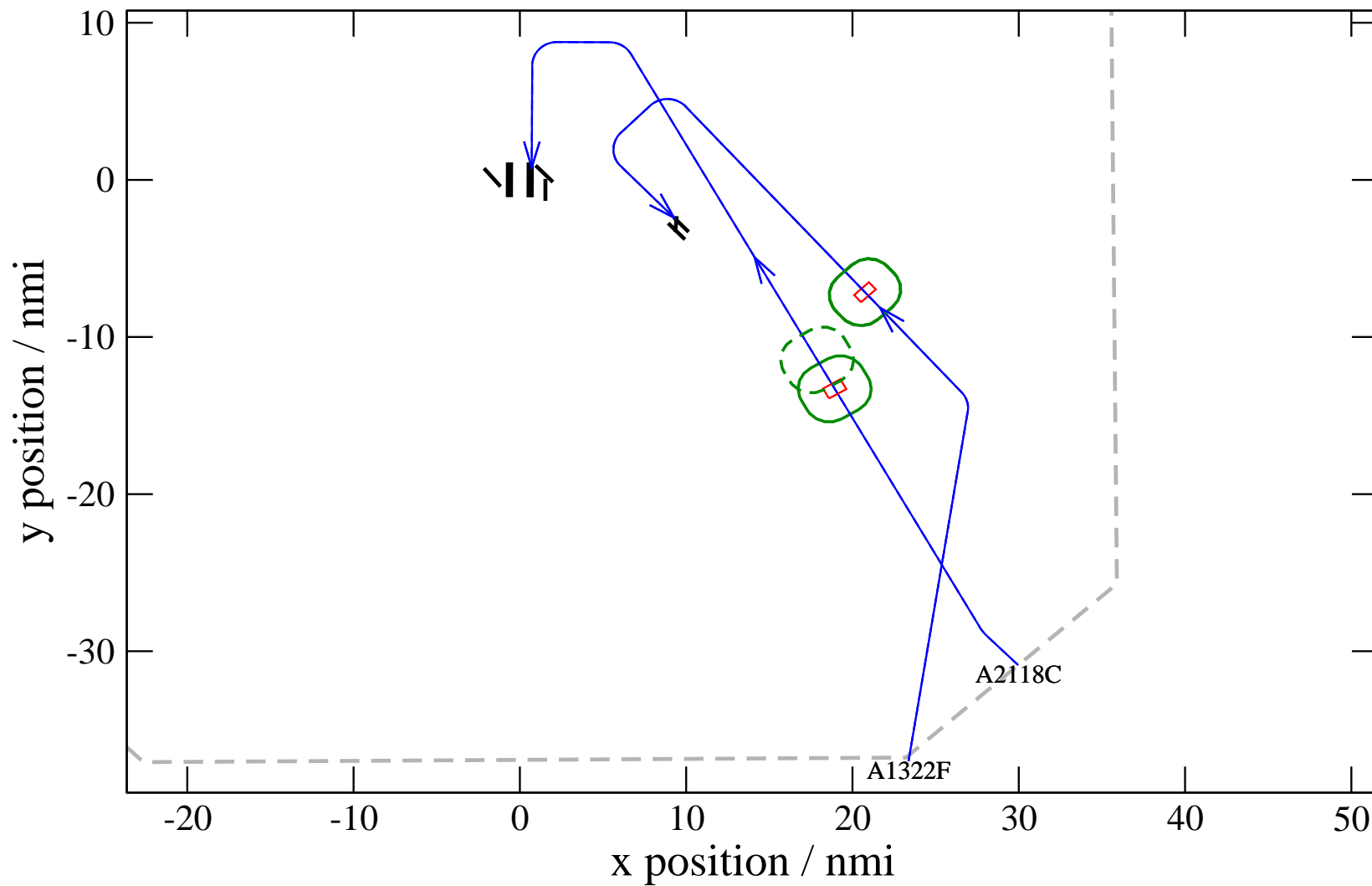
-6:10 [1.81H/-1.00V] A2118C speed dec 32 kn





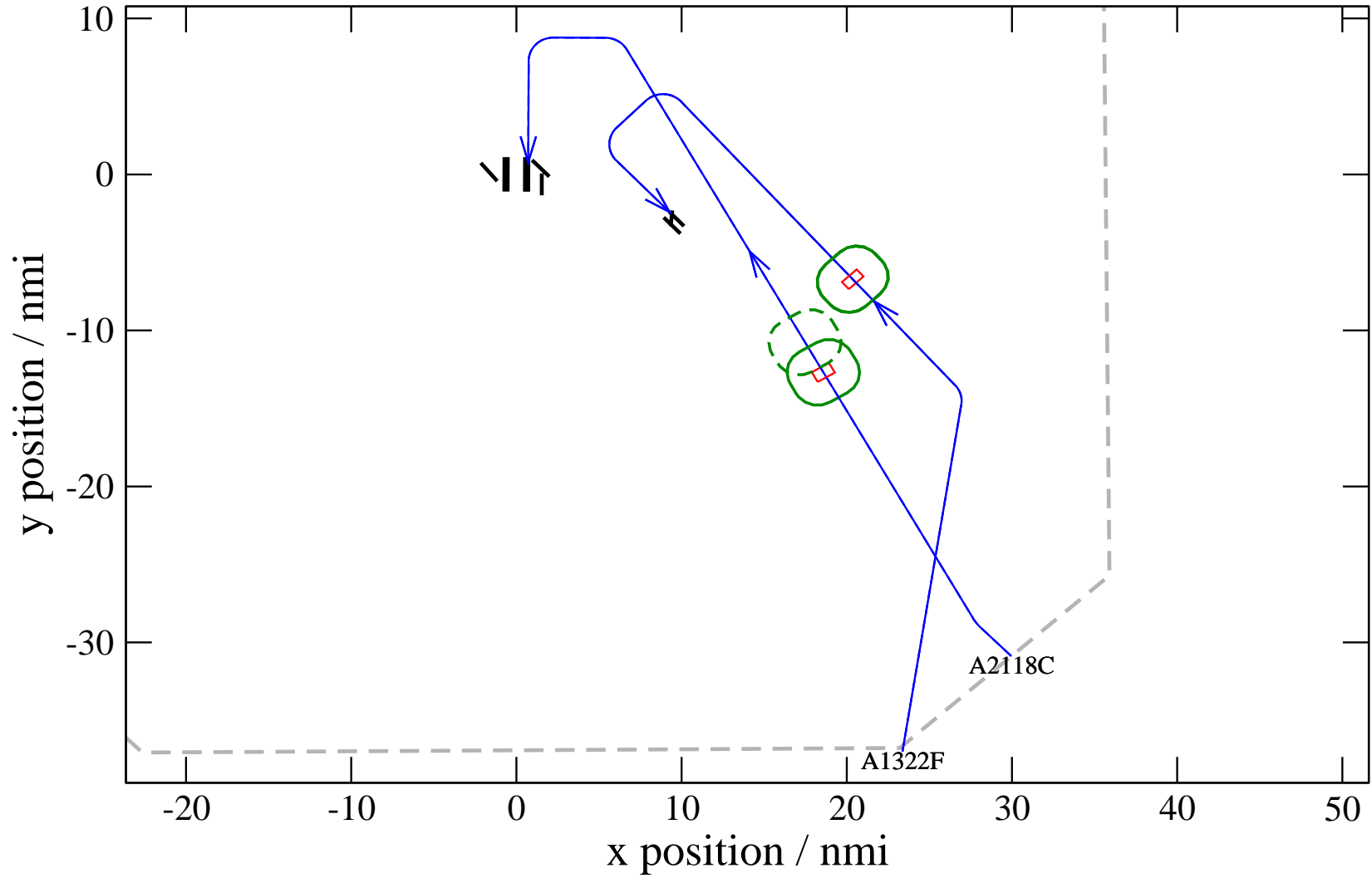
# Maneuver Time Steps

-5:50 [1.69H/-1.00V] A2118C speed dec 32 kn



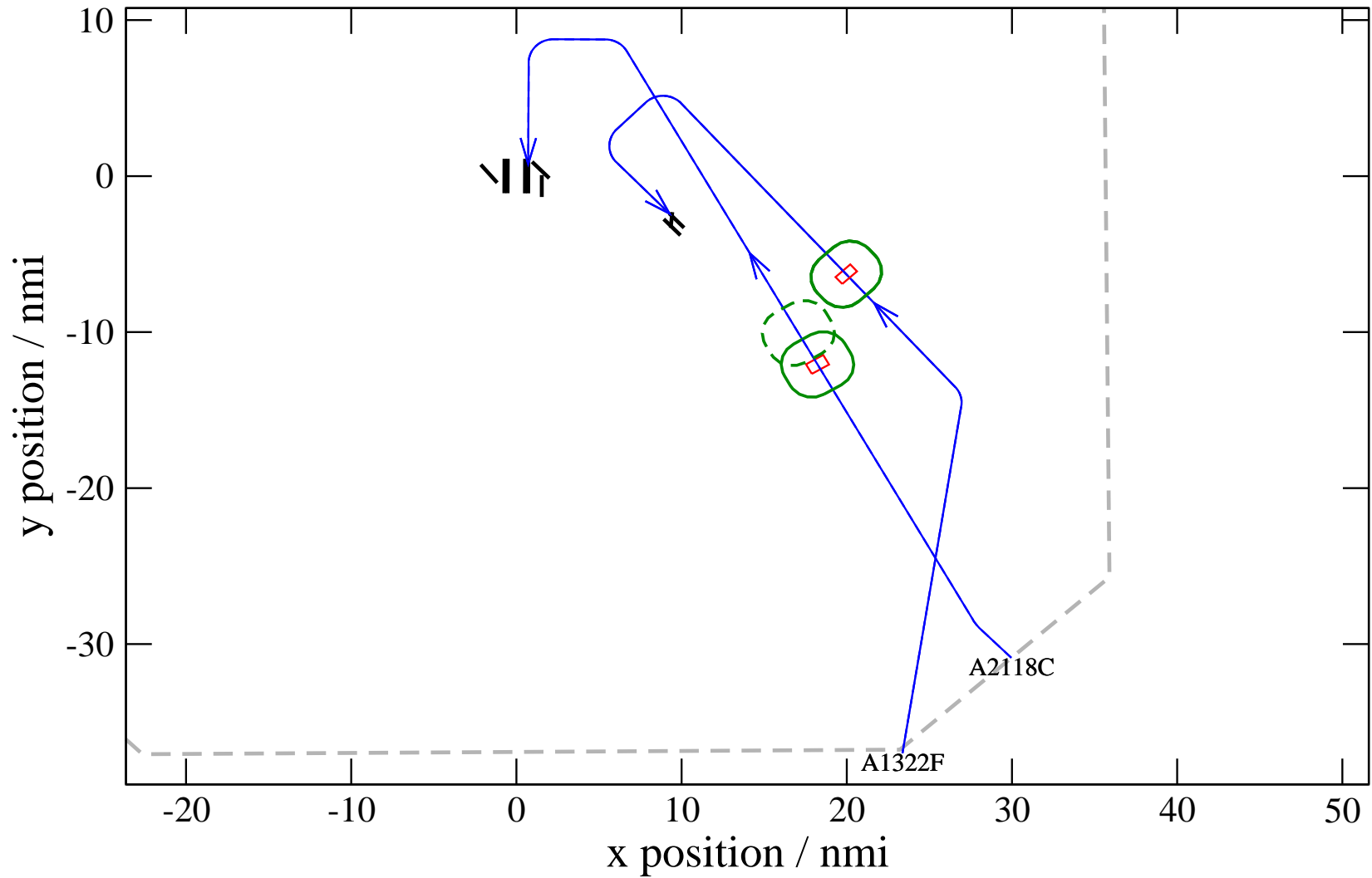
# Maneuver Time Steps

-5:40 [1.63H/-1.00V] A2118C speed dec 32 kn



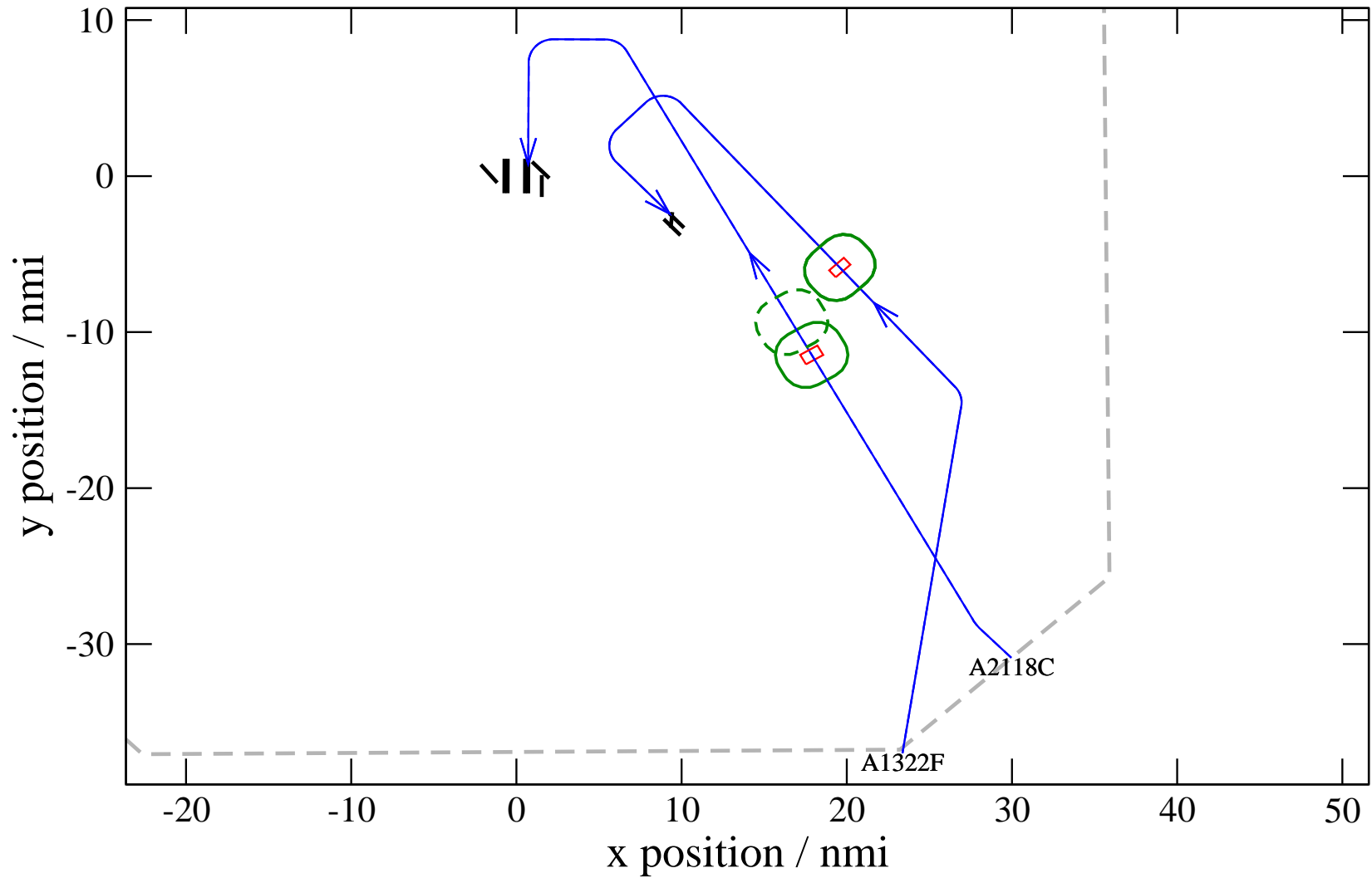
# Maneuver Time Steps

-5:30 [1.57H/-1.00V] A2118C speed dec 32 kn



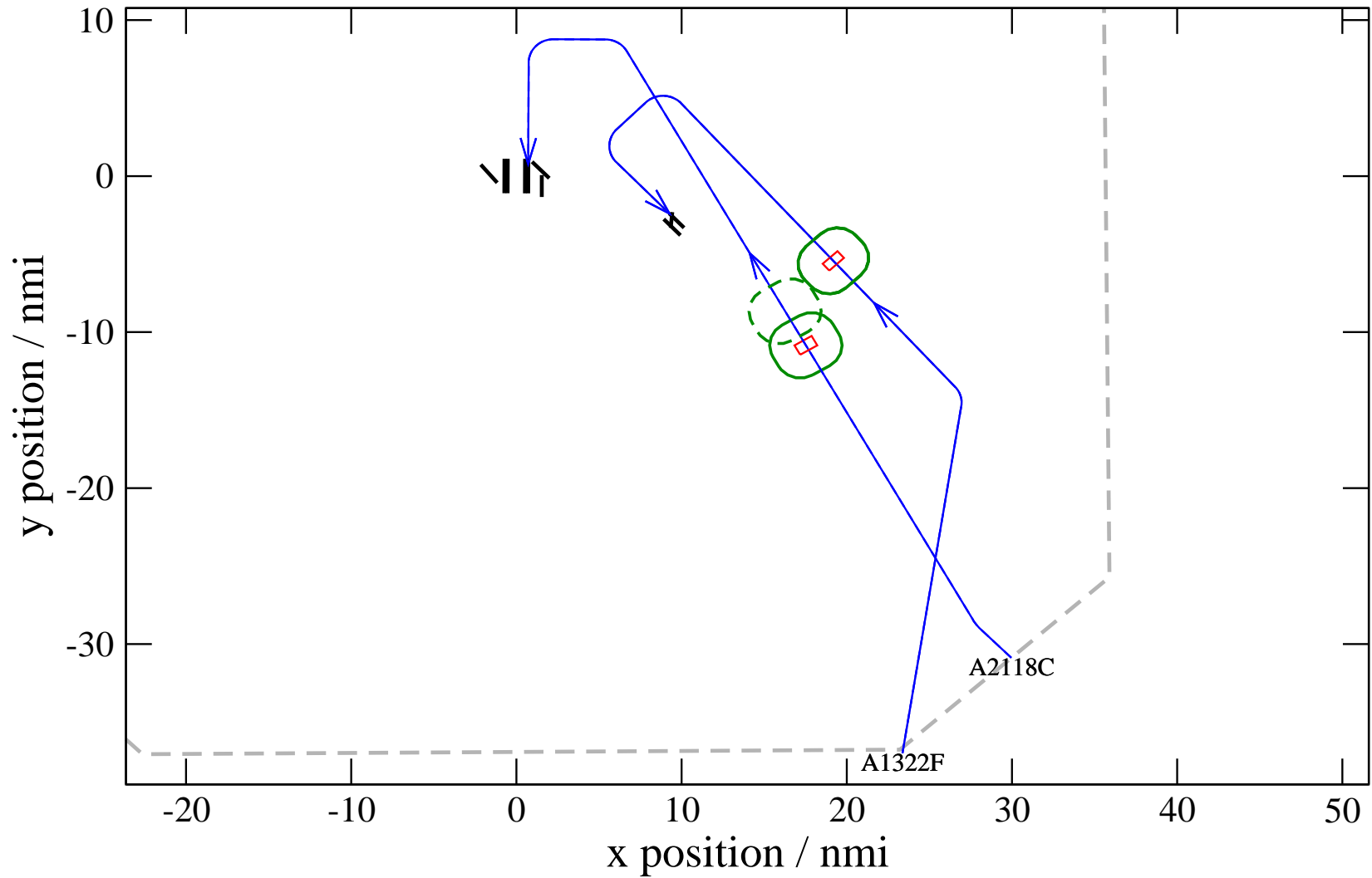
# Maneuver Time Steps

-5:20 [1.50H/-1.00V] A2118C speed dec 32 kn



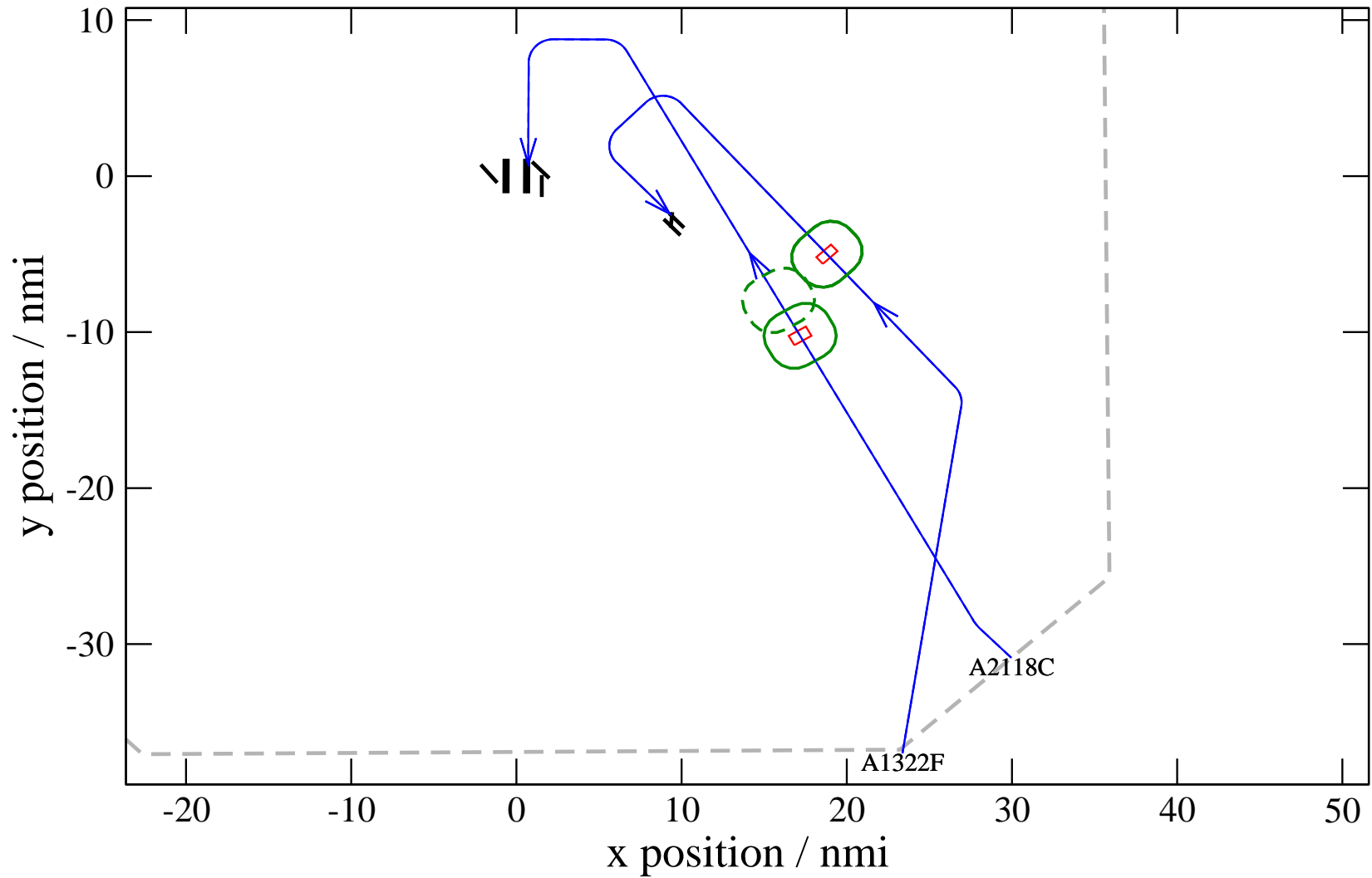
# Maneuver Time Steps

-5:10 [1.44H/2.79V] A2118C speed dec 32 kn



# Maneuver Time Steps

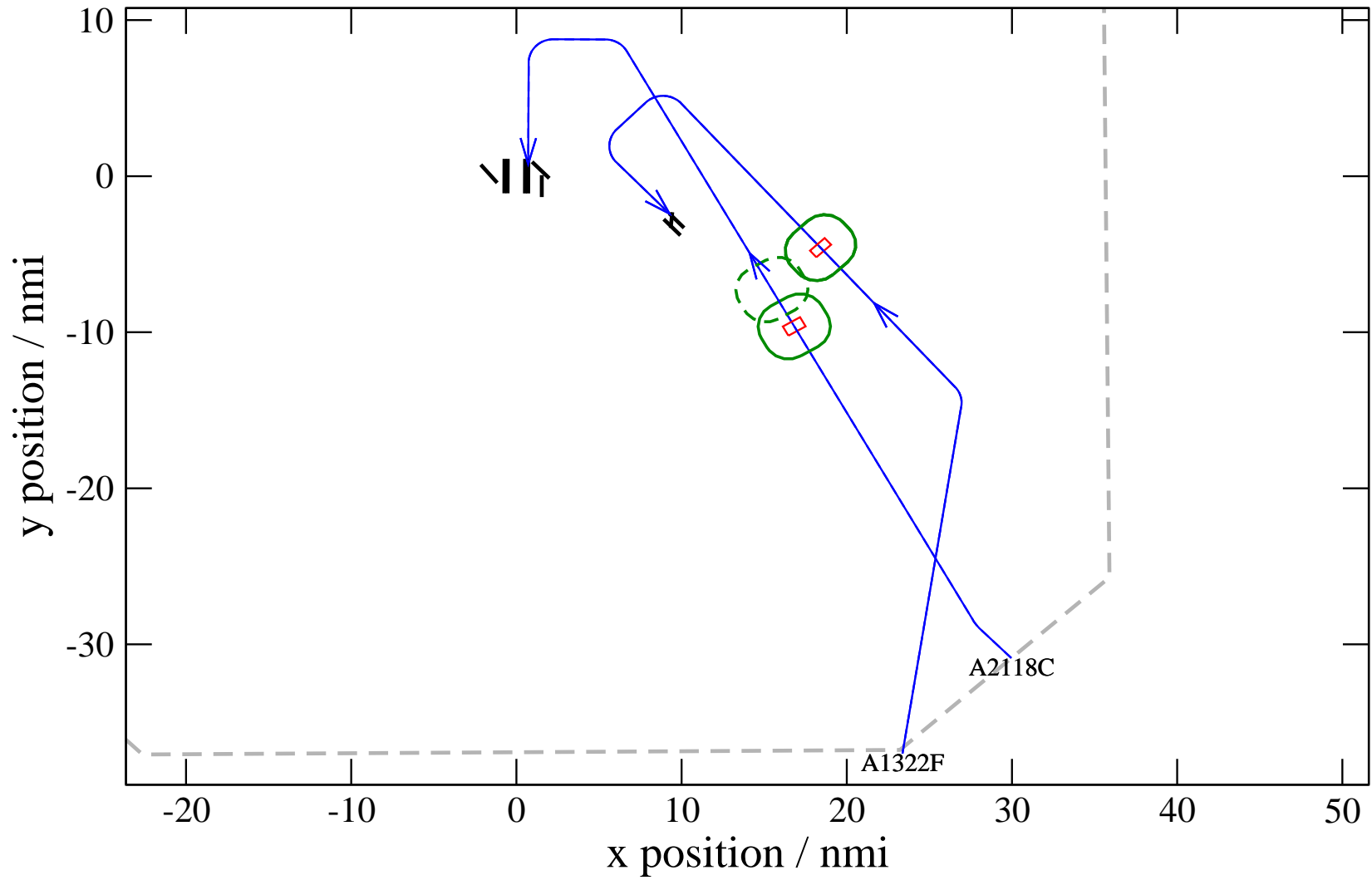
-5:00 [1.38H/2.95V] A2118C speed dec 32 kn





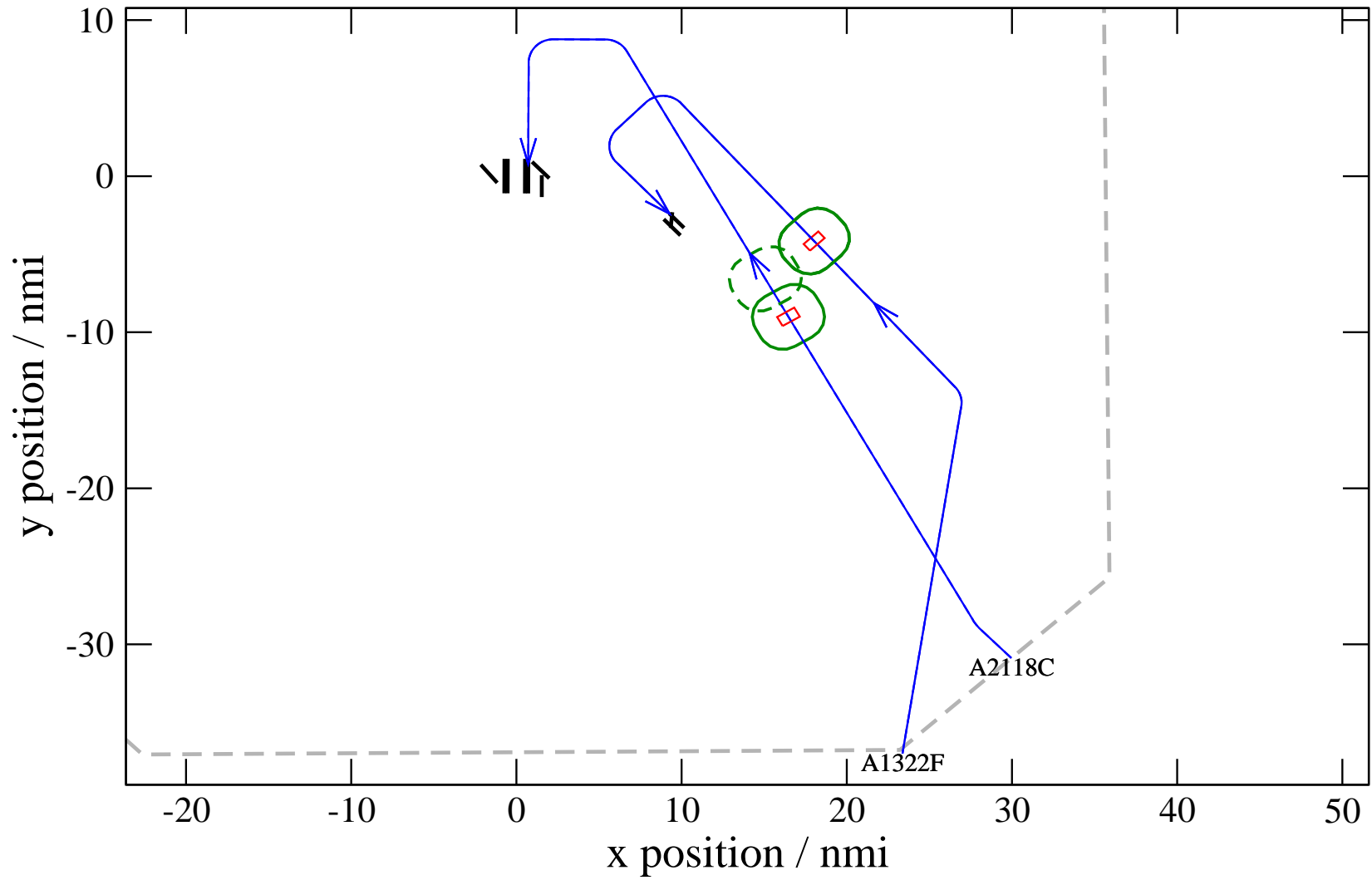
# Maneuver Time Steps

-4:50 [1.32H/2.93V] A2118C speed dec 32 kn



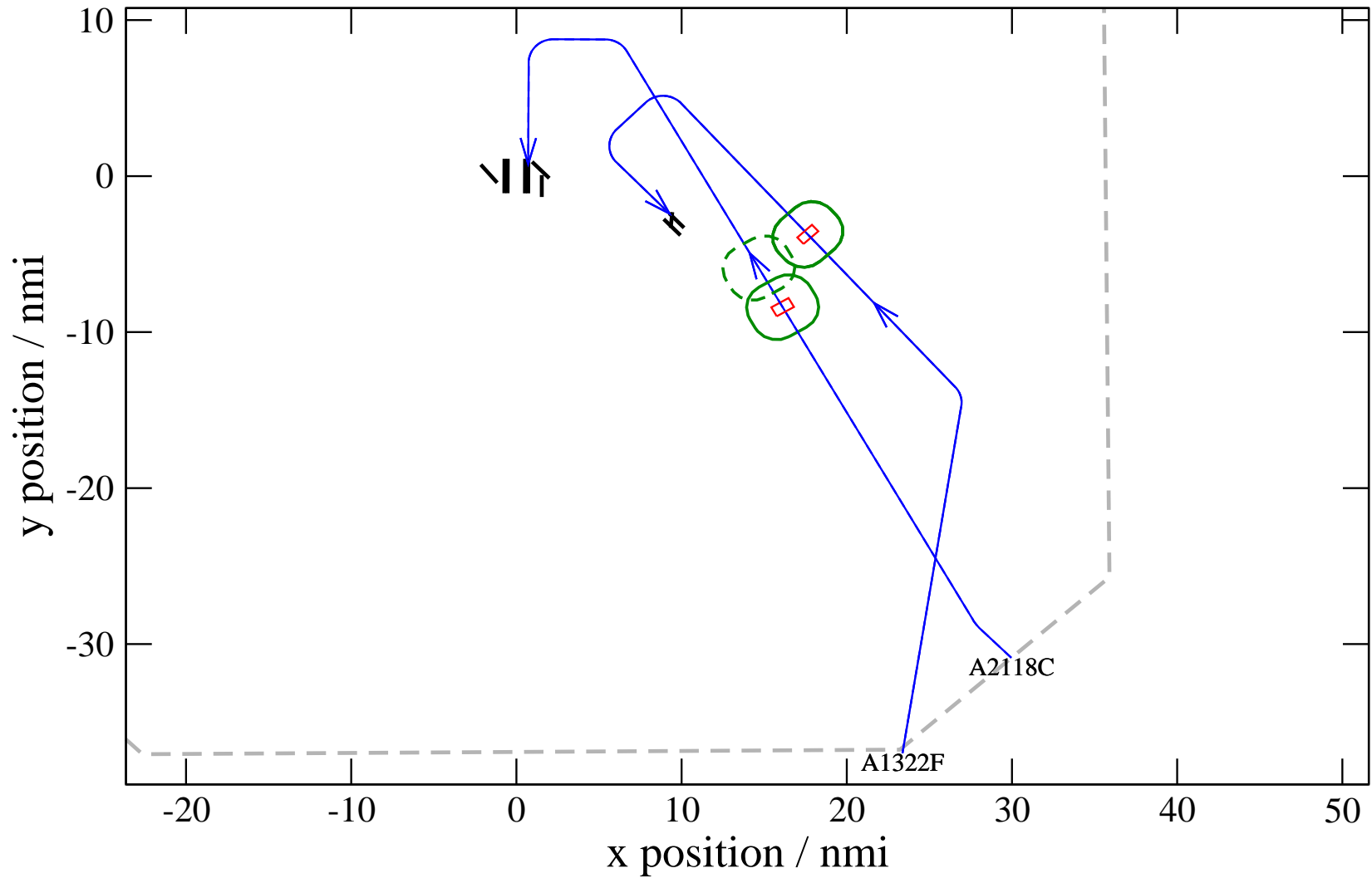
# Maneuver Time Steps

-4:40 [1.26H/2.98V] A2118C speed dec 32 kn



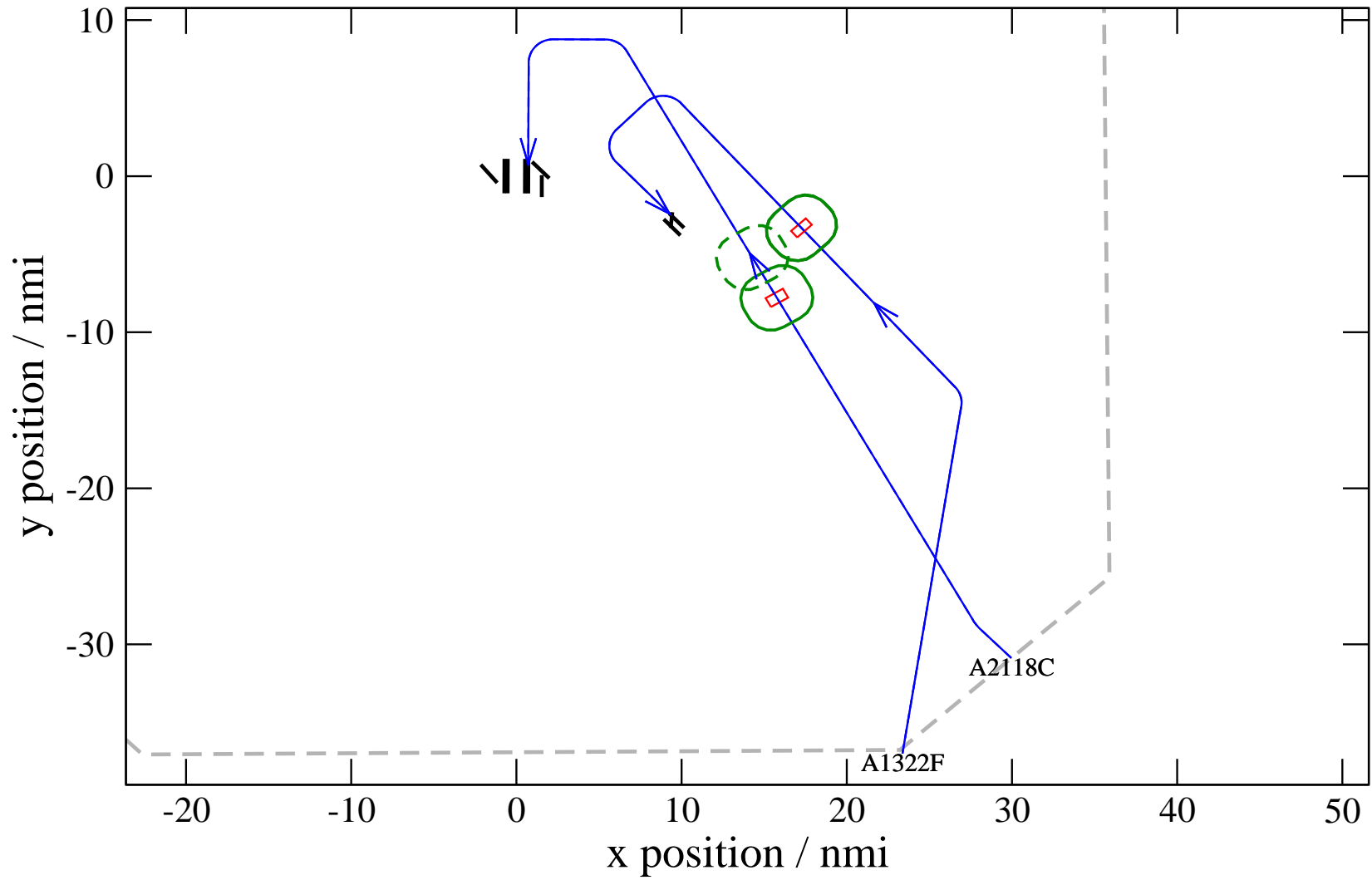
# Maneuver Time Steps

-4:30 [1.20H/2.89V] A2118C speed dec 32 kn



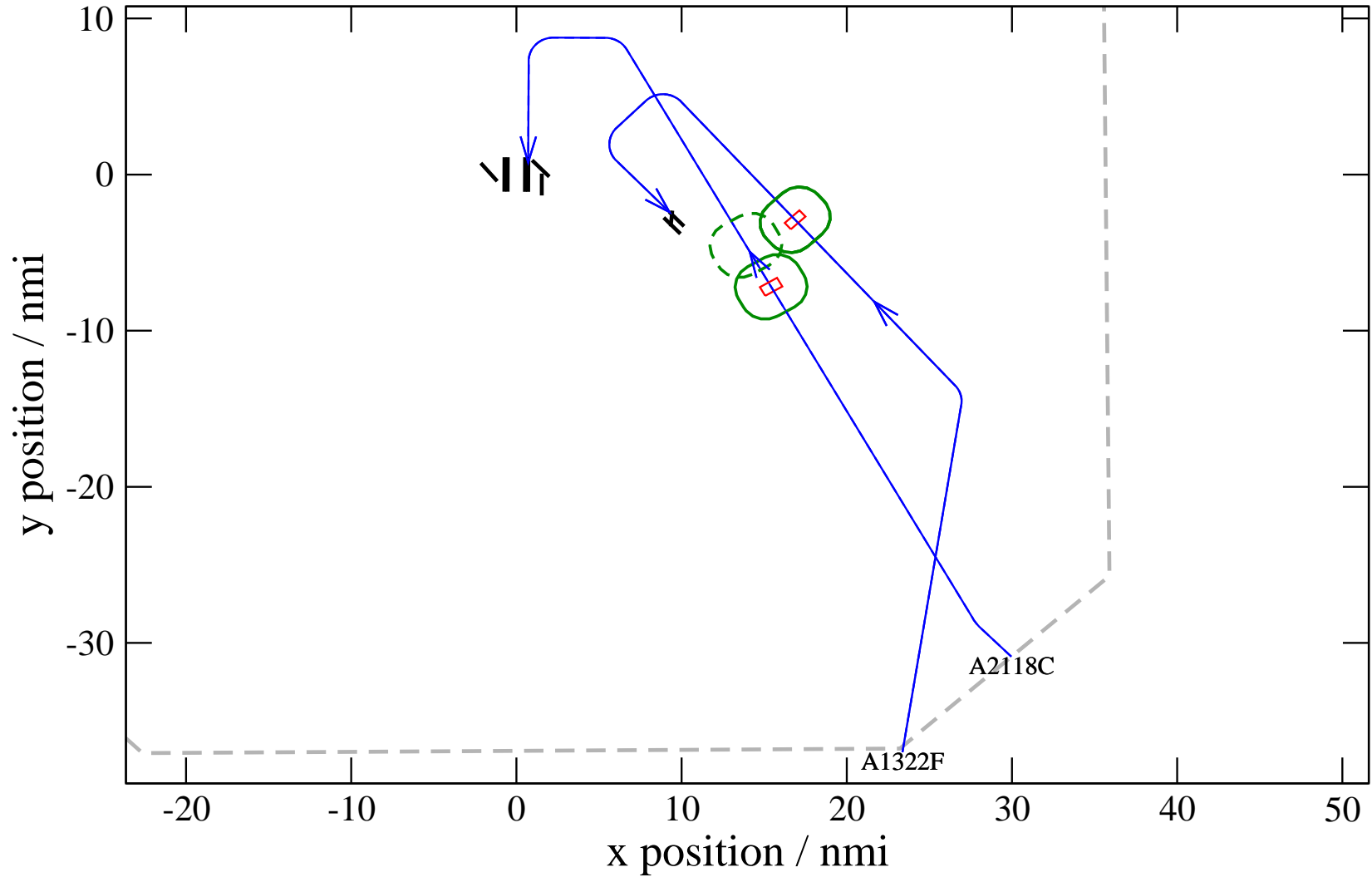
# Maneuver Time Steps

-4:20 [1.13H/2.78V] A2118C speed dec 32 kn



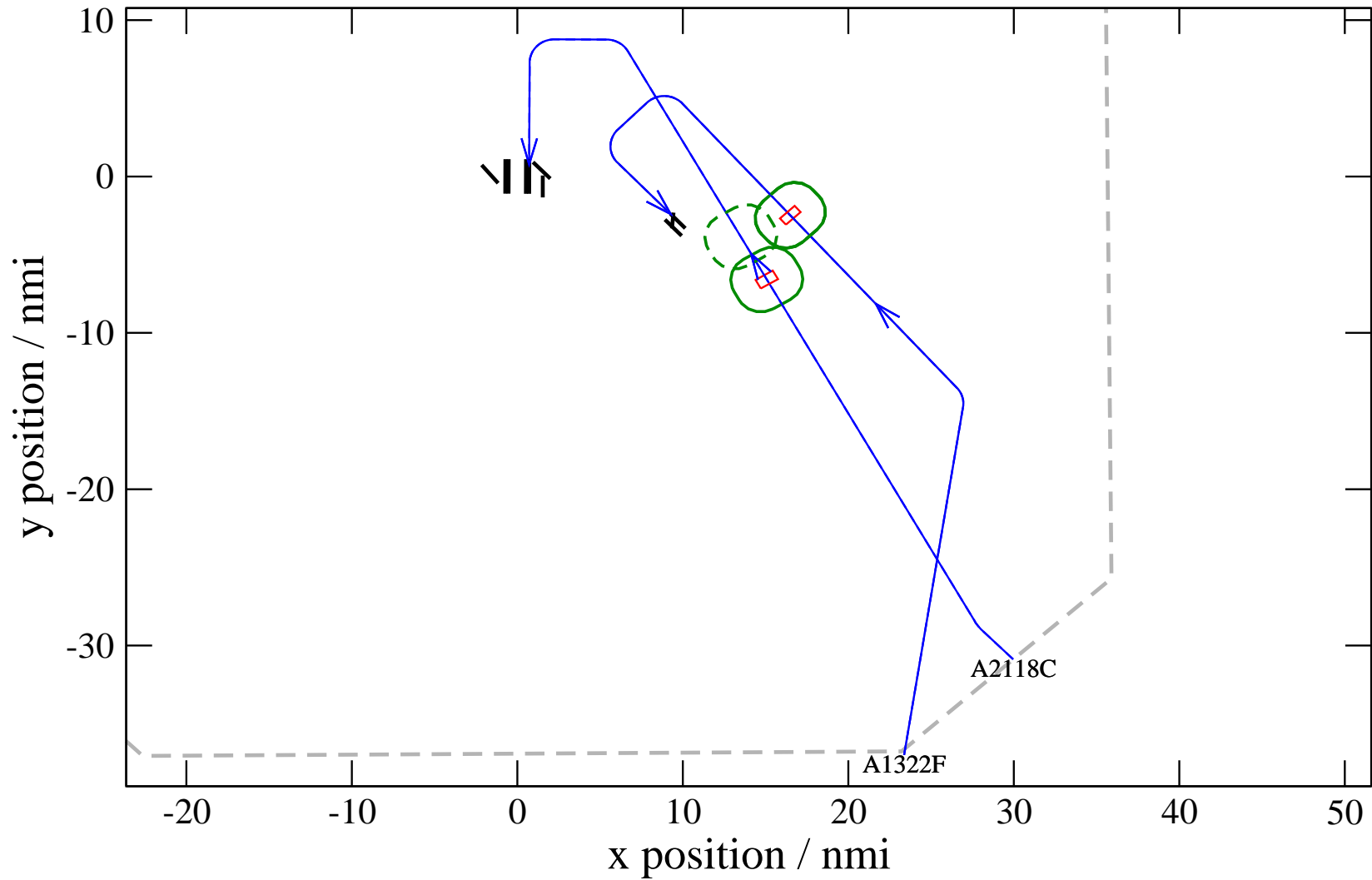
# Maneuver Time Steps

-4:10 [1.07H/2.64V] A2118C speed dec 32 kn



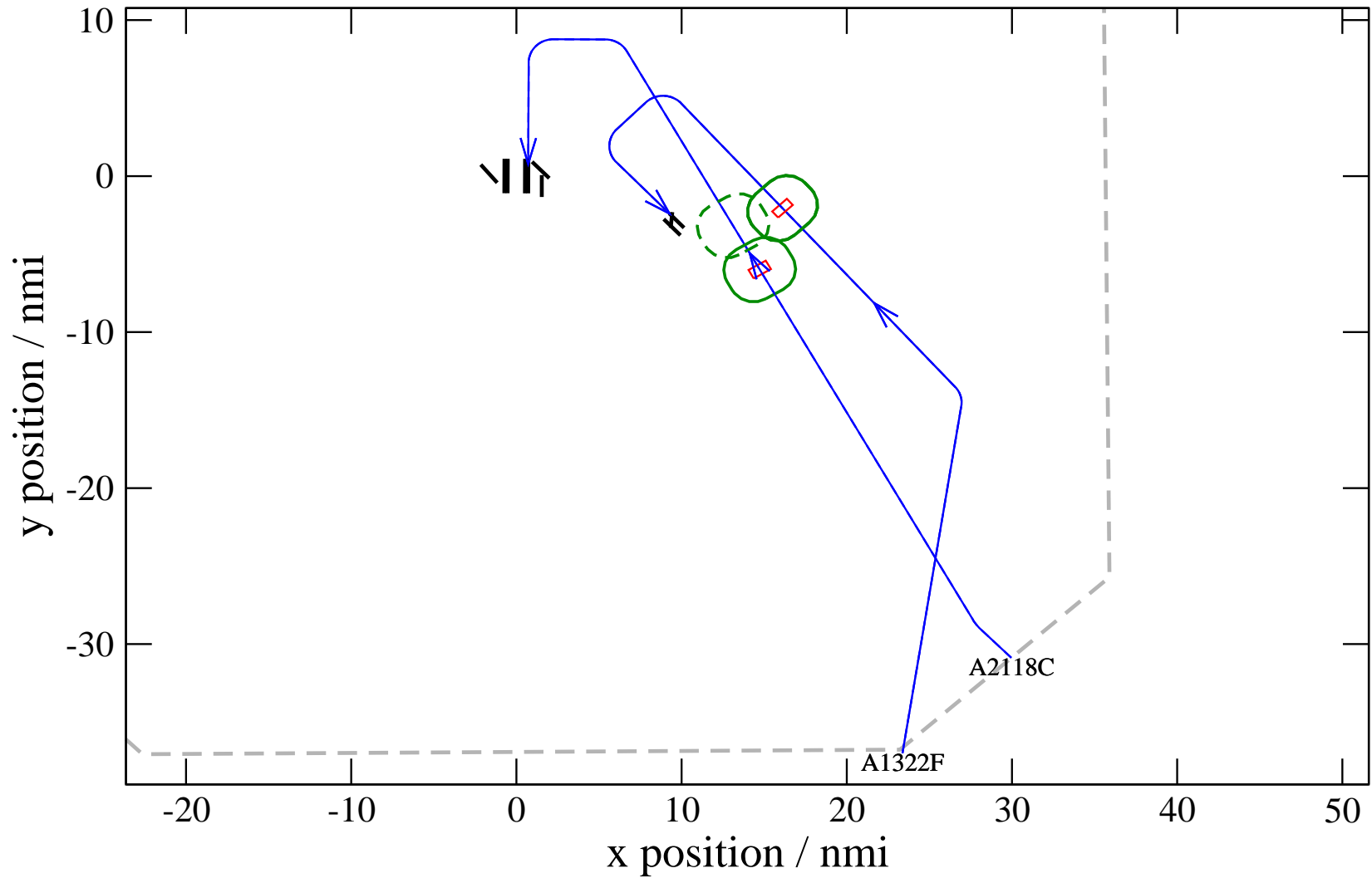
# Maneuver Time Steps

-4:00 [1.01H/2.48V] A2118C speed dec 32 kn



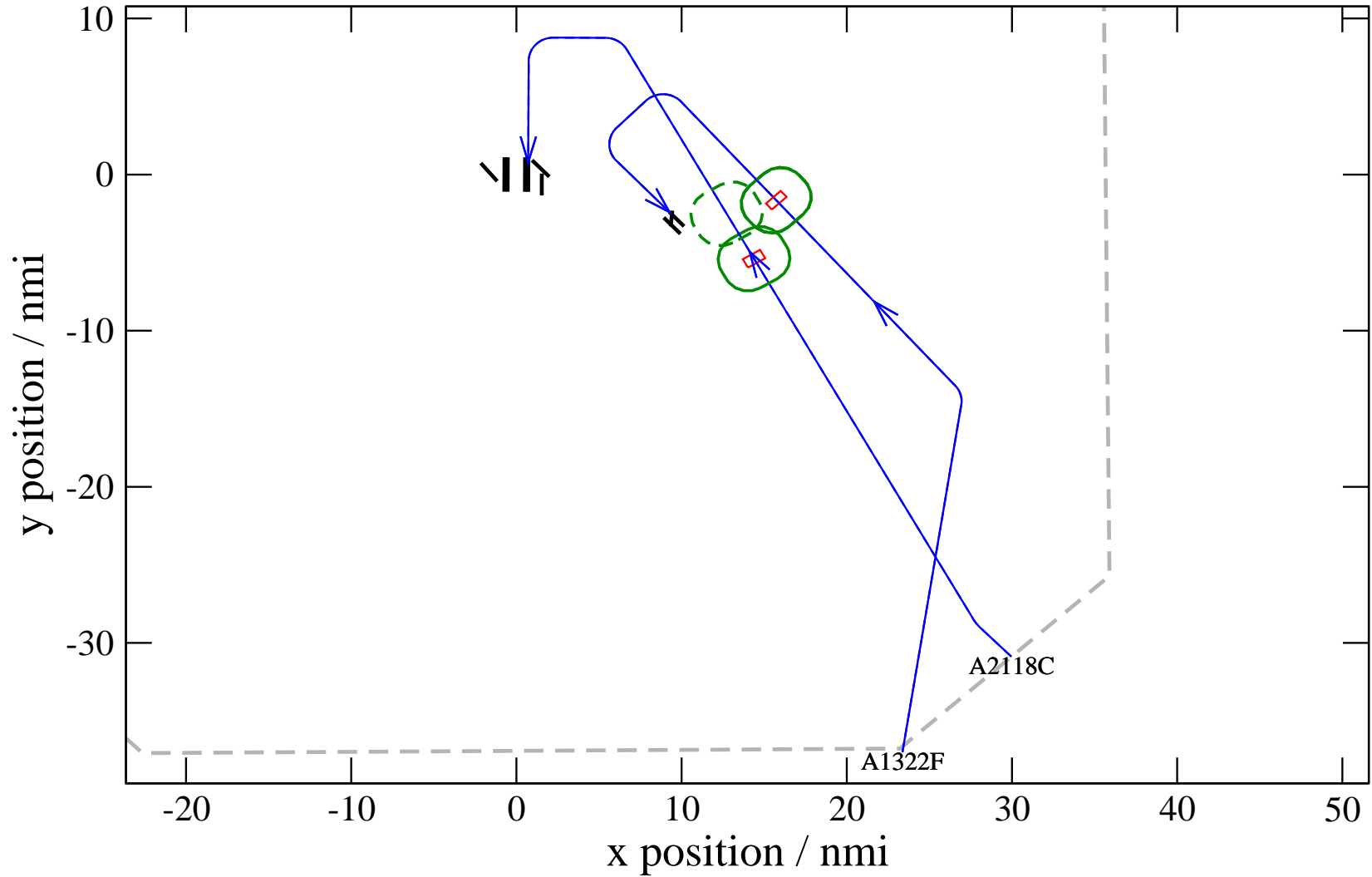
# Maneuver Time Steps

-3:50 [0.95H/2.33V] A2118C speed dec 32 kn



# Maneuver Time Steps

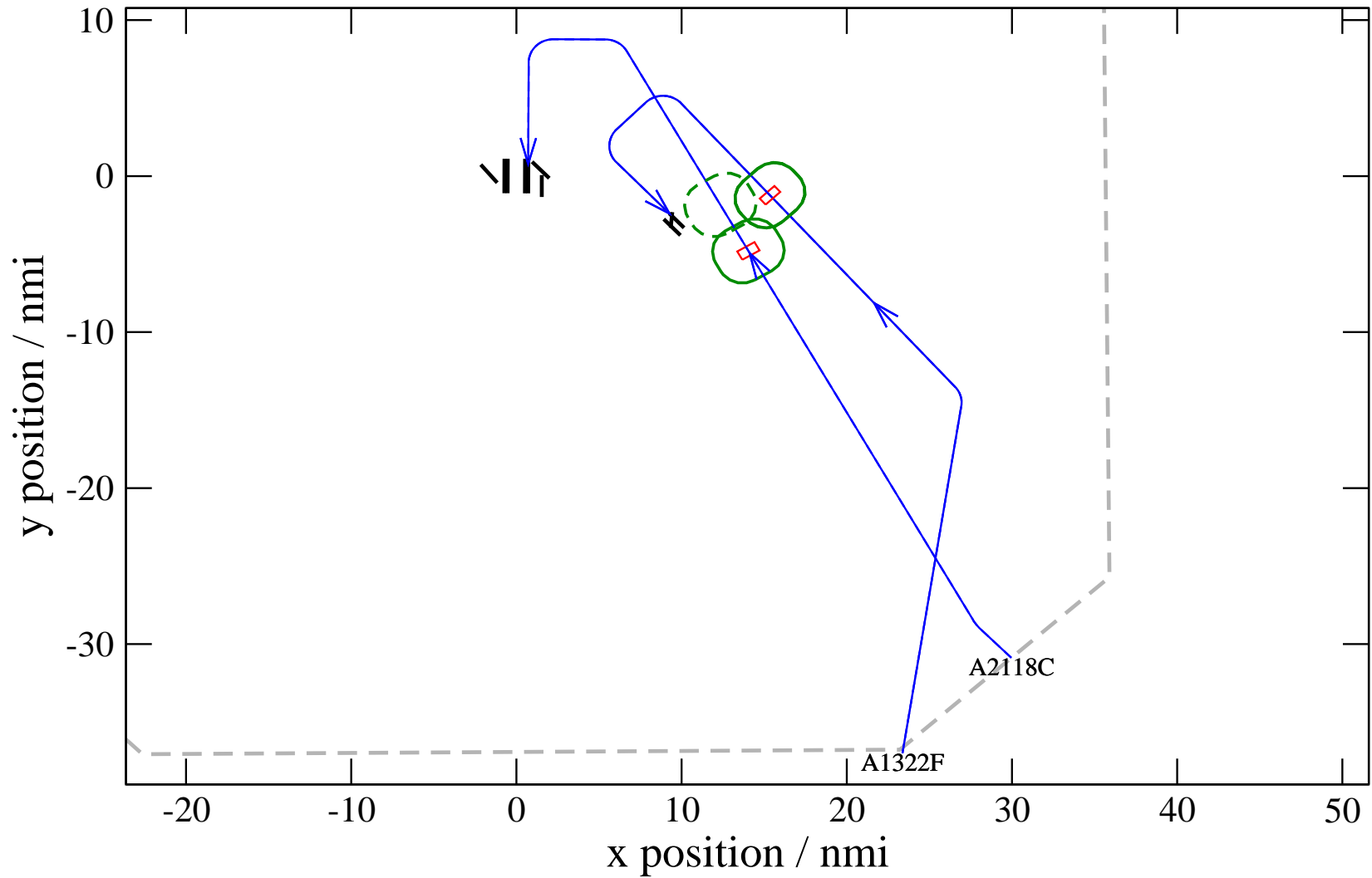
-3:40 [0.89H/2.21V] A2118C speed dec 32 kn





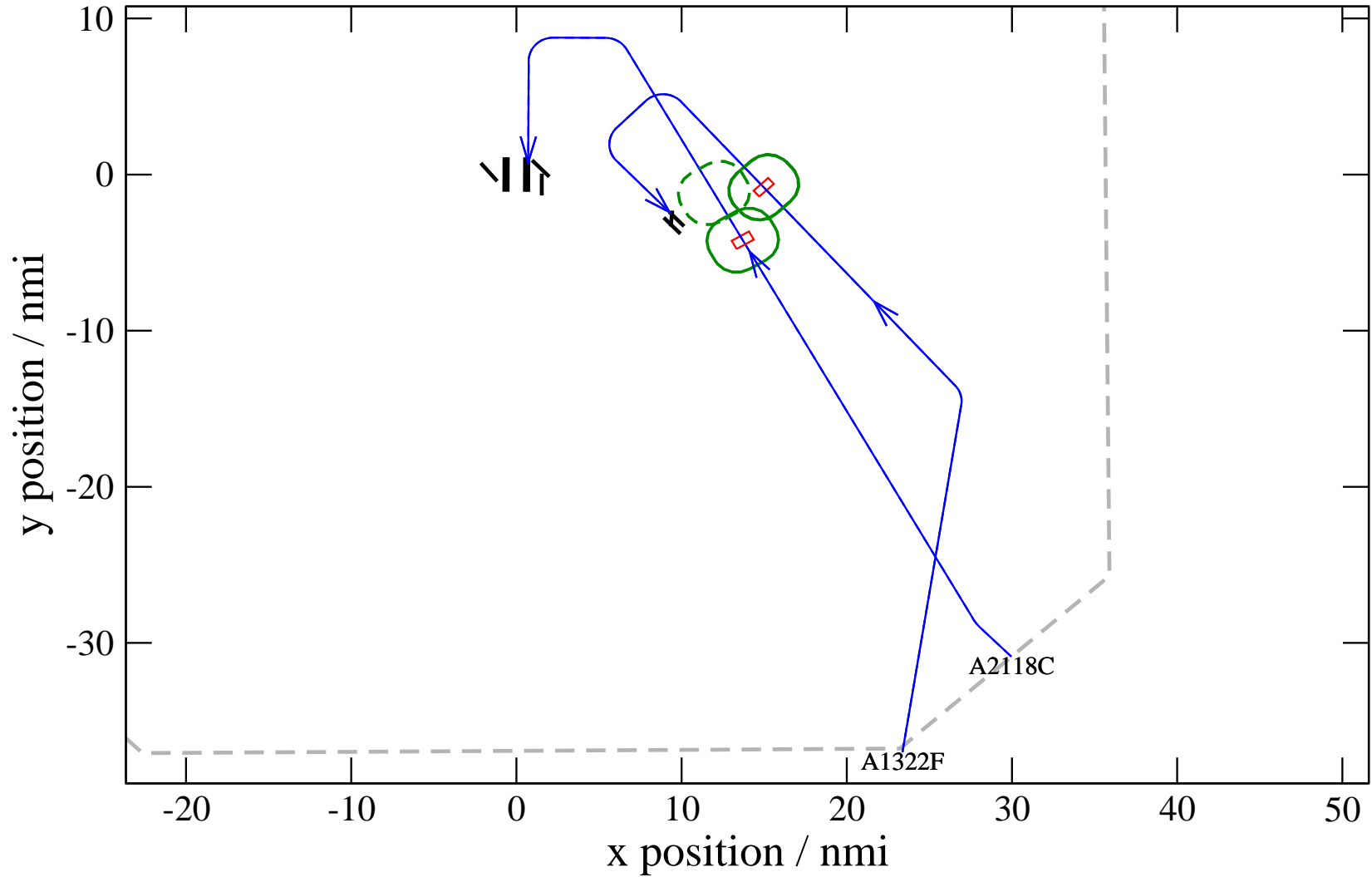
# Maneuver Time Steps

-3:30 [0.83H/2.10V] A2118C speed dec 32 kn



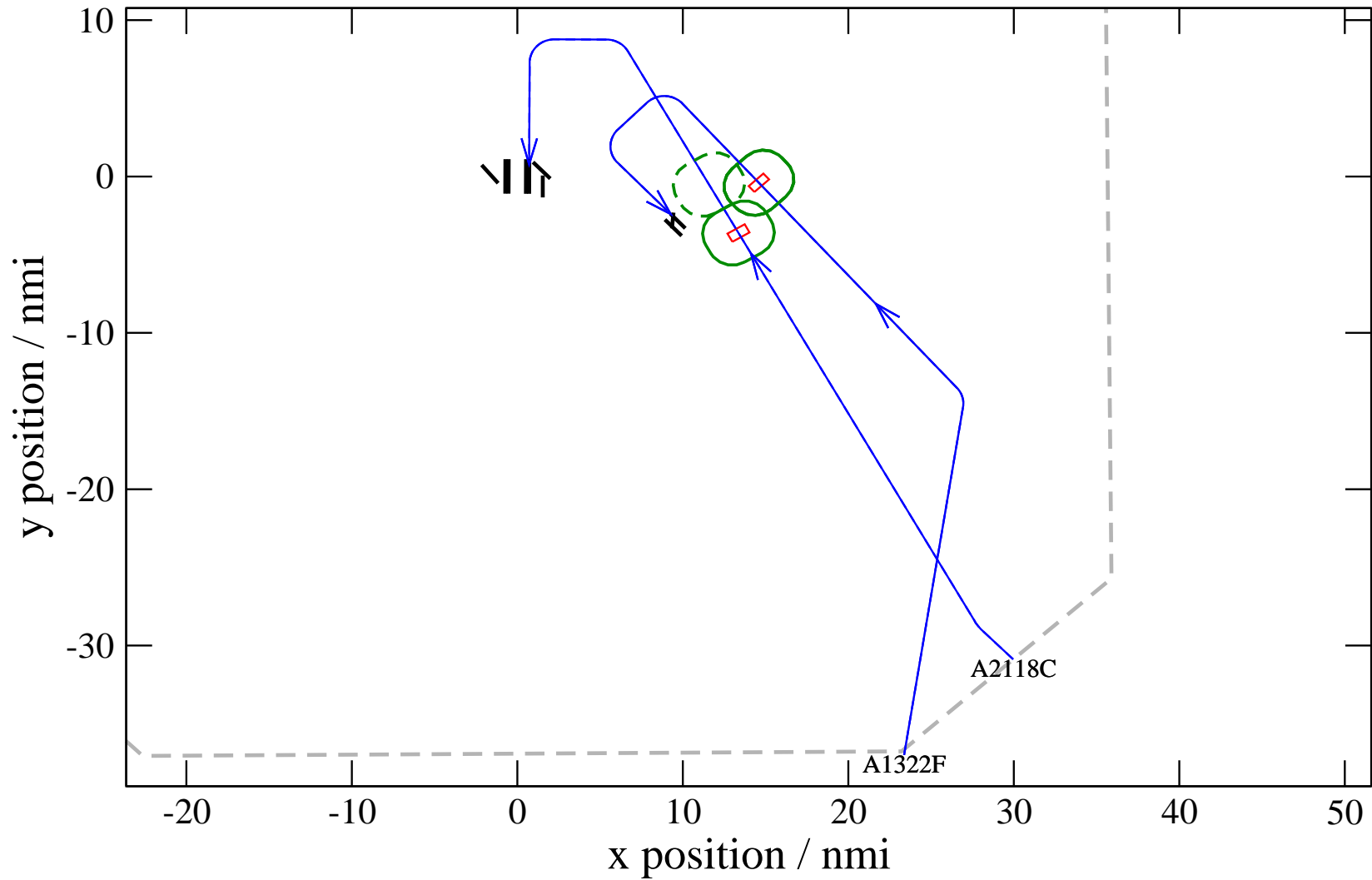
# Maneuver Time Steps

-3:20 [0.77H/2.02V] A2118C speed dec 32 kn



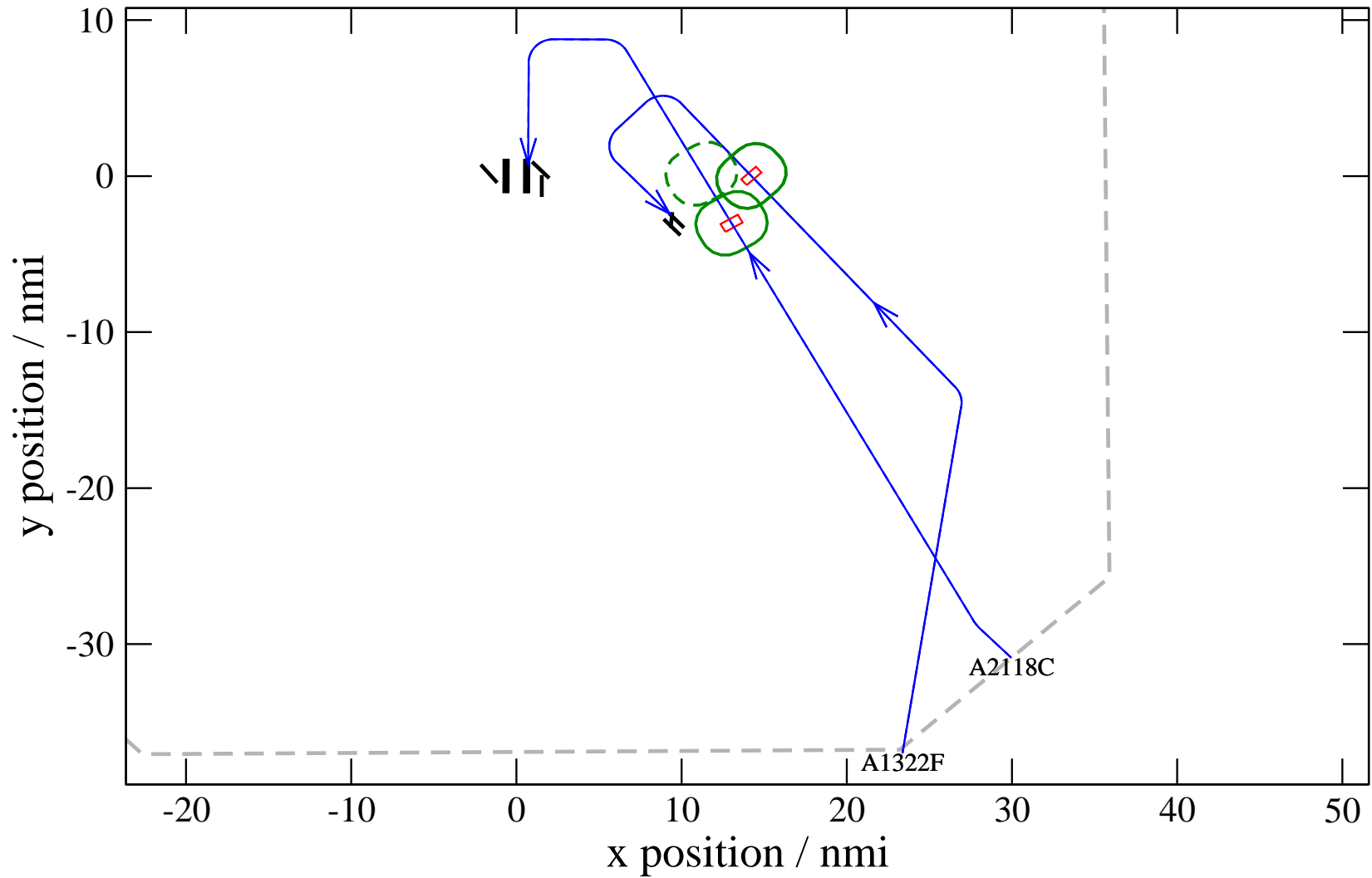
# Maneuver Time Steps

-3:10 [0.72H/1.95V] A2118C speed dec 32 kn



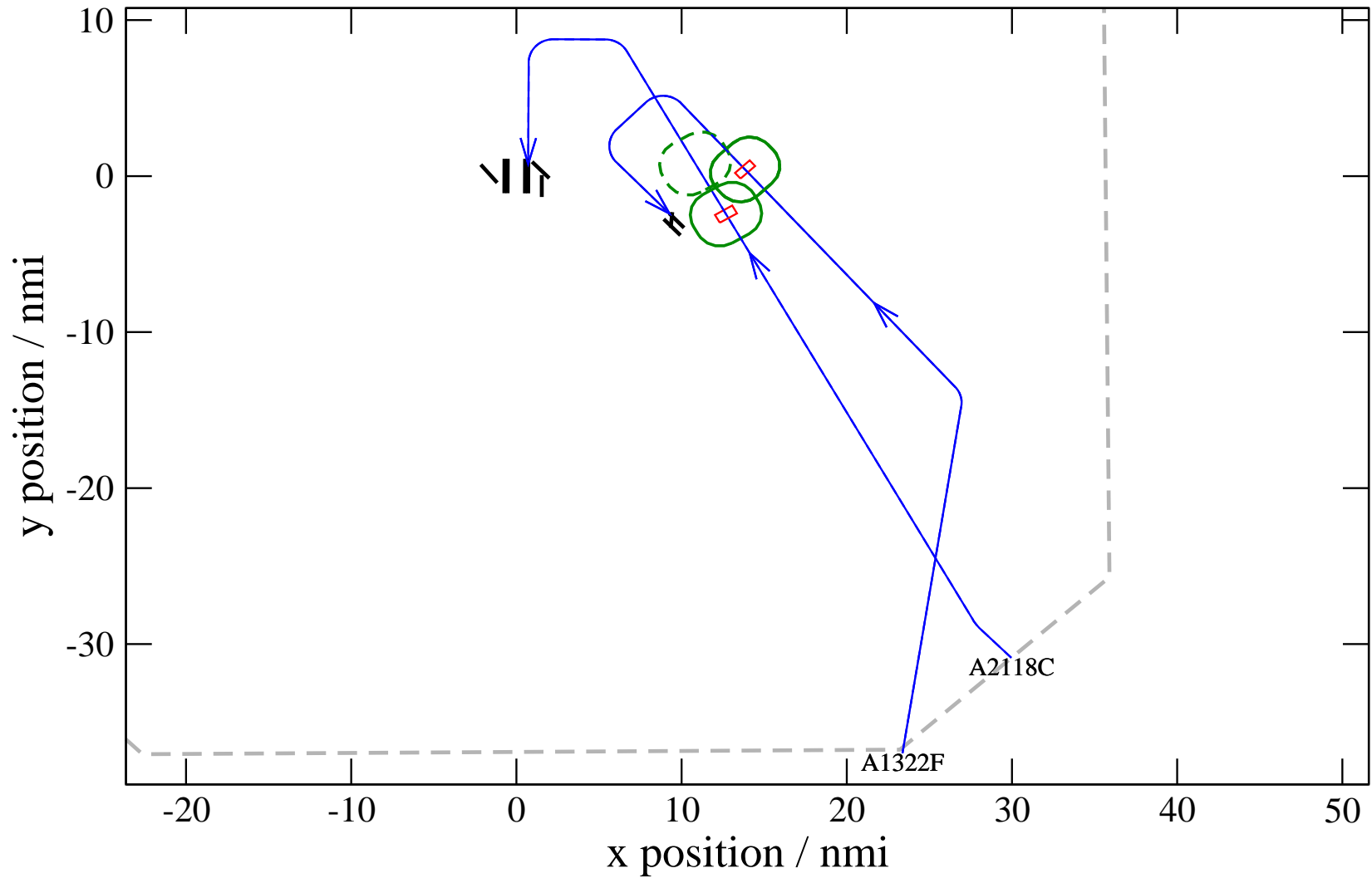
# Maneuver Time Steps

-3:00 [0.66H/1.90V] A2118C speed dec 32 kn



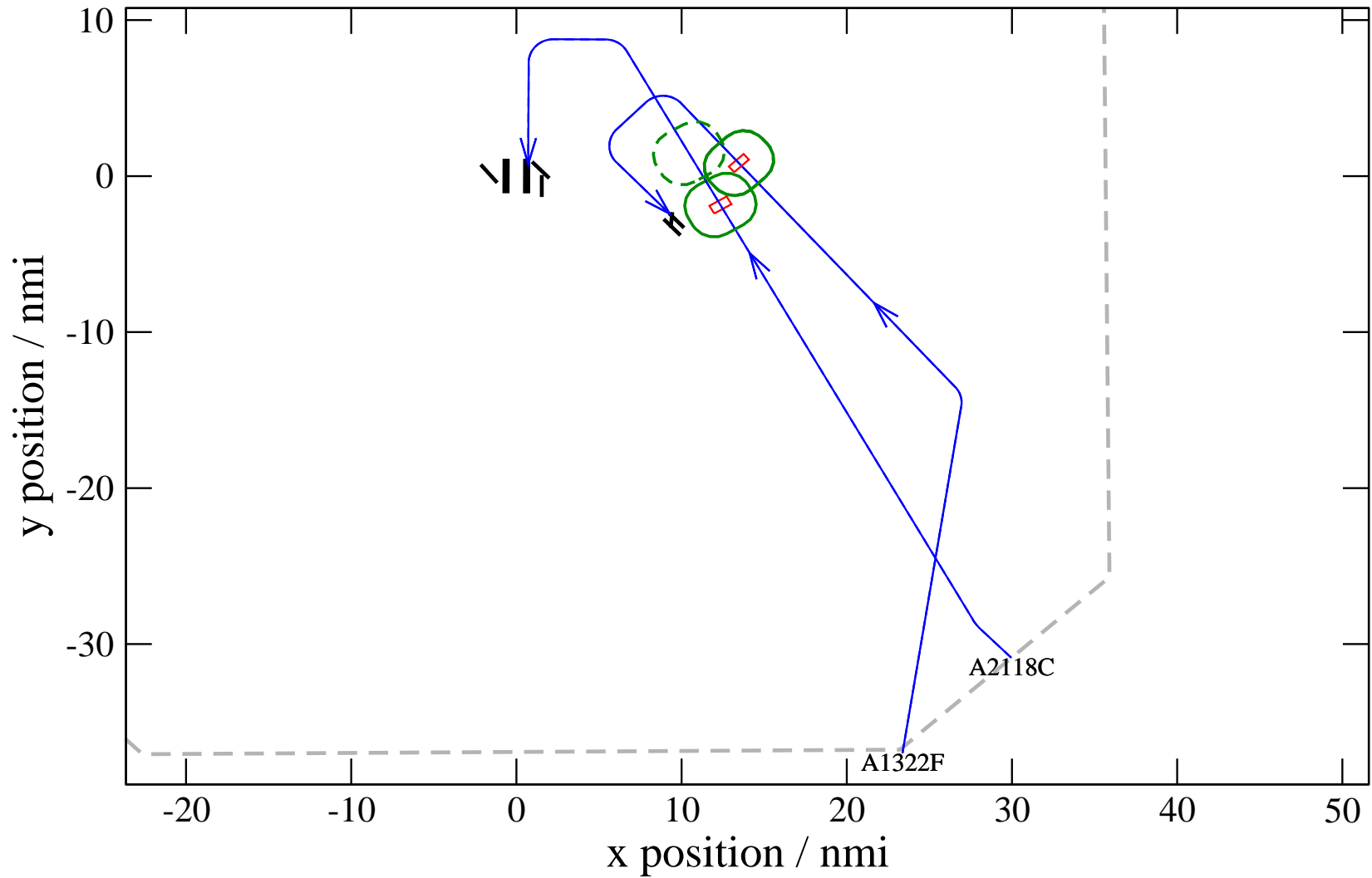
# Maneuver Time Steps

-2:50 [0.60H/1.86V] A2118C speed dec 32 kn



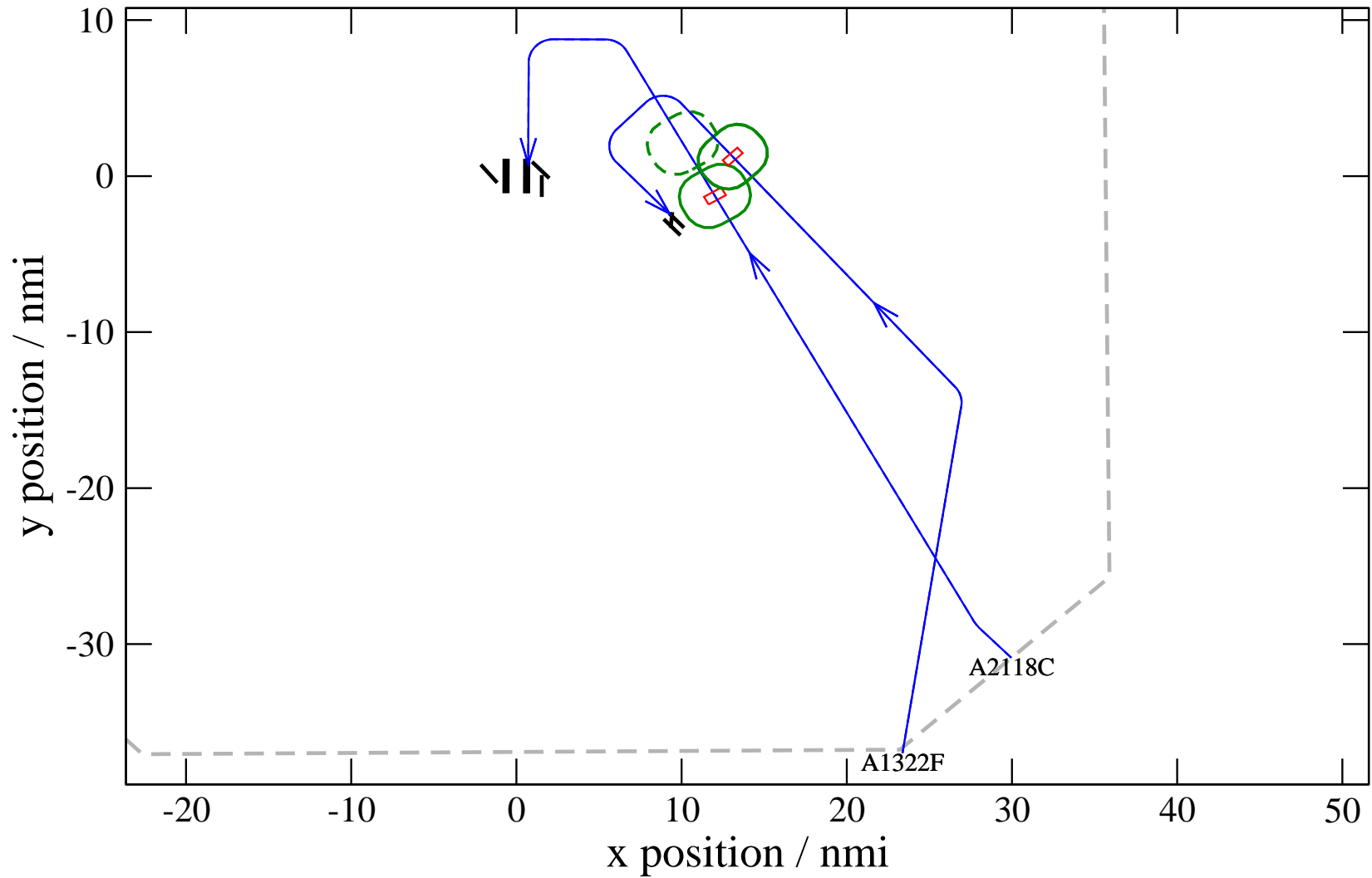
# Maneuver Time Steps

-2:40 [0.54H/1.82V] A2118C speed dec 32 kn



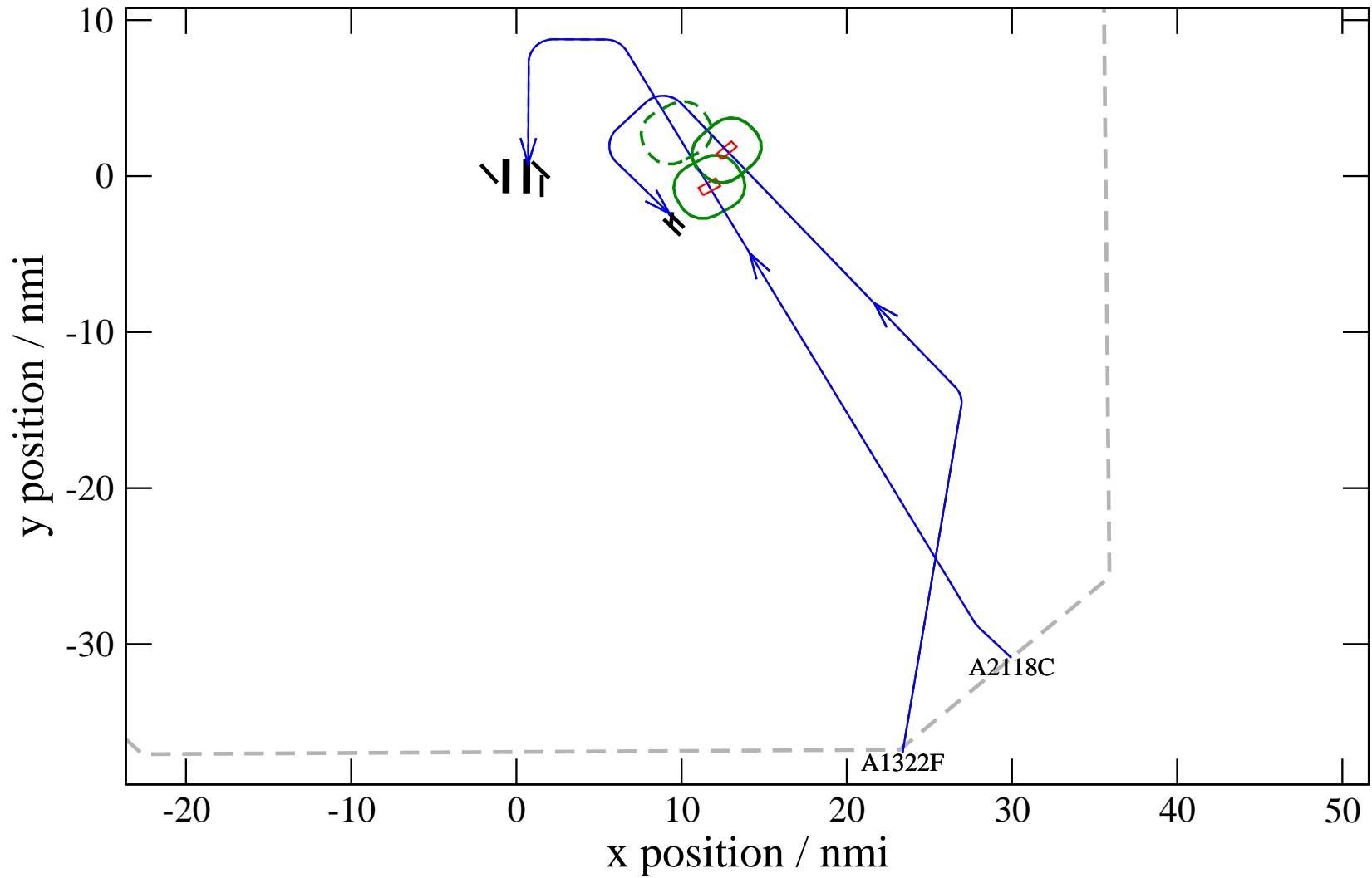
# Maneuver Time Steps

-2:30 [0.48H/1.77V] A2118C speed dec 32 kn



# Maneuver Time Steps

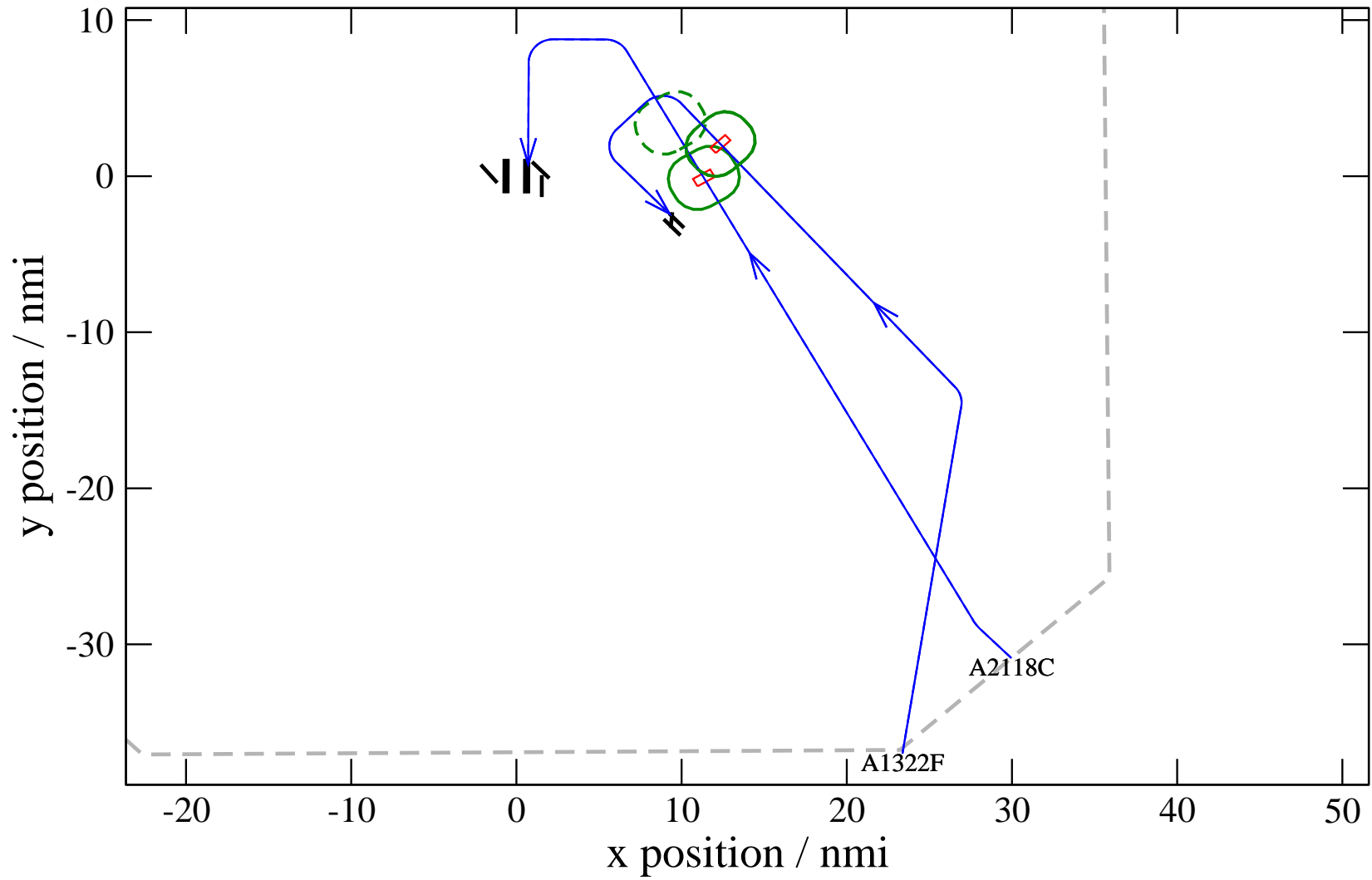
-2:20 [0.43H/1.73V] A2118C speed dec 32 kn





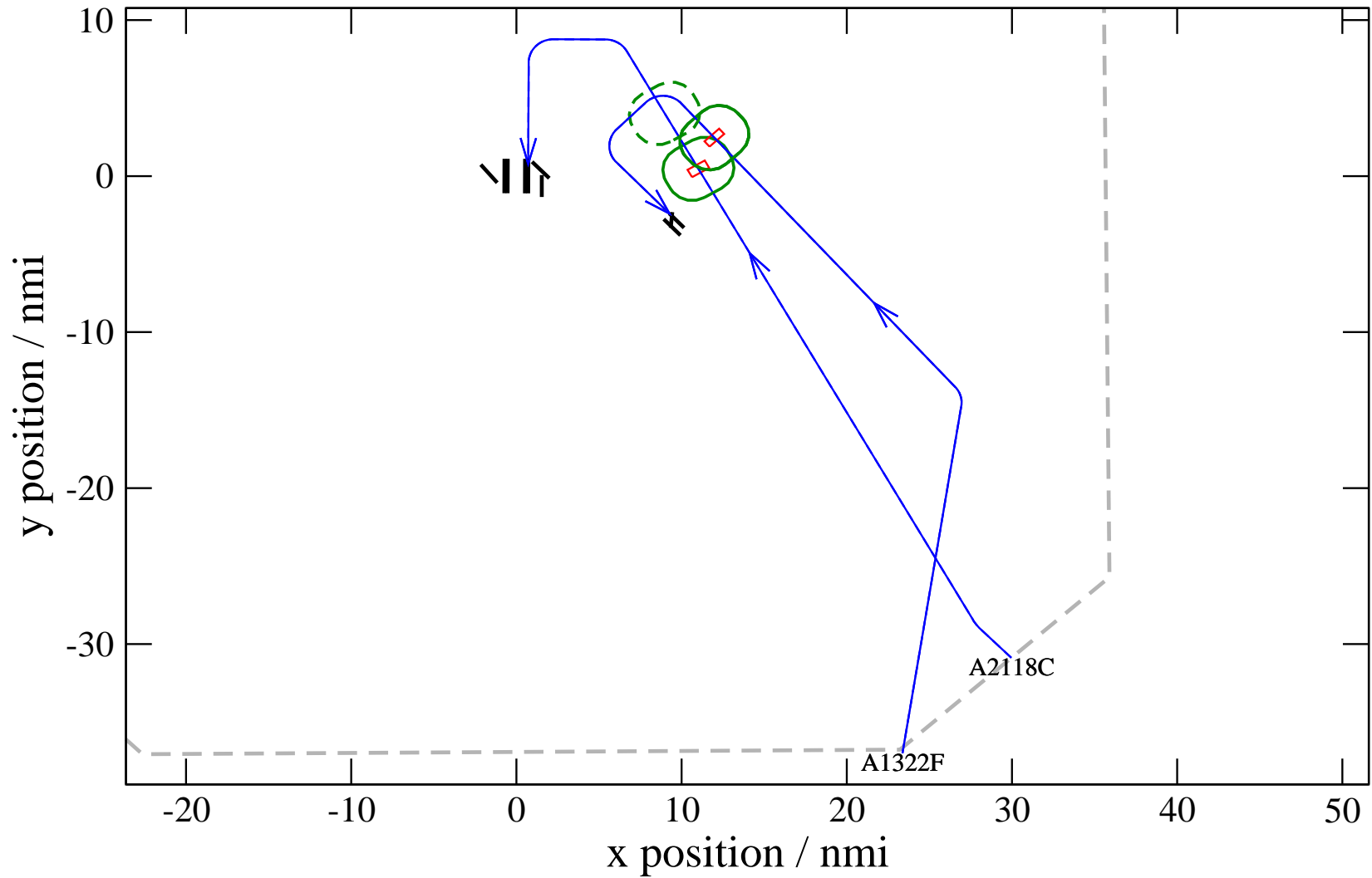
# Maneuver Time Steps

-2:10 [0.37H/1.68V] A2118C speed dec 32 kn



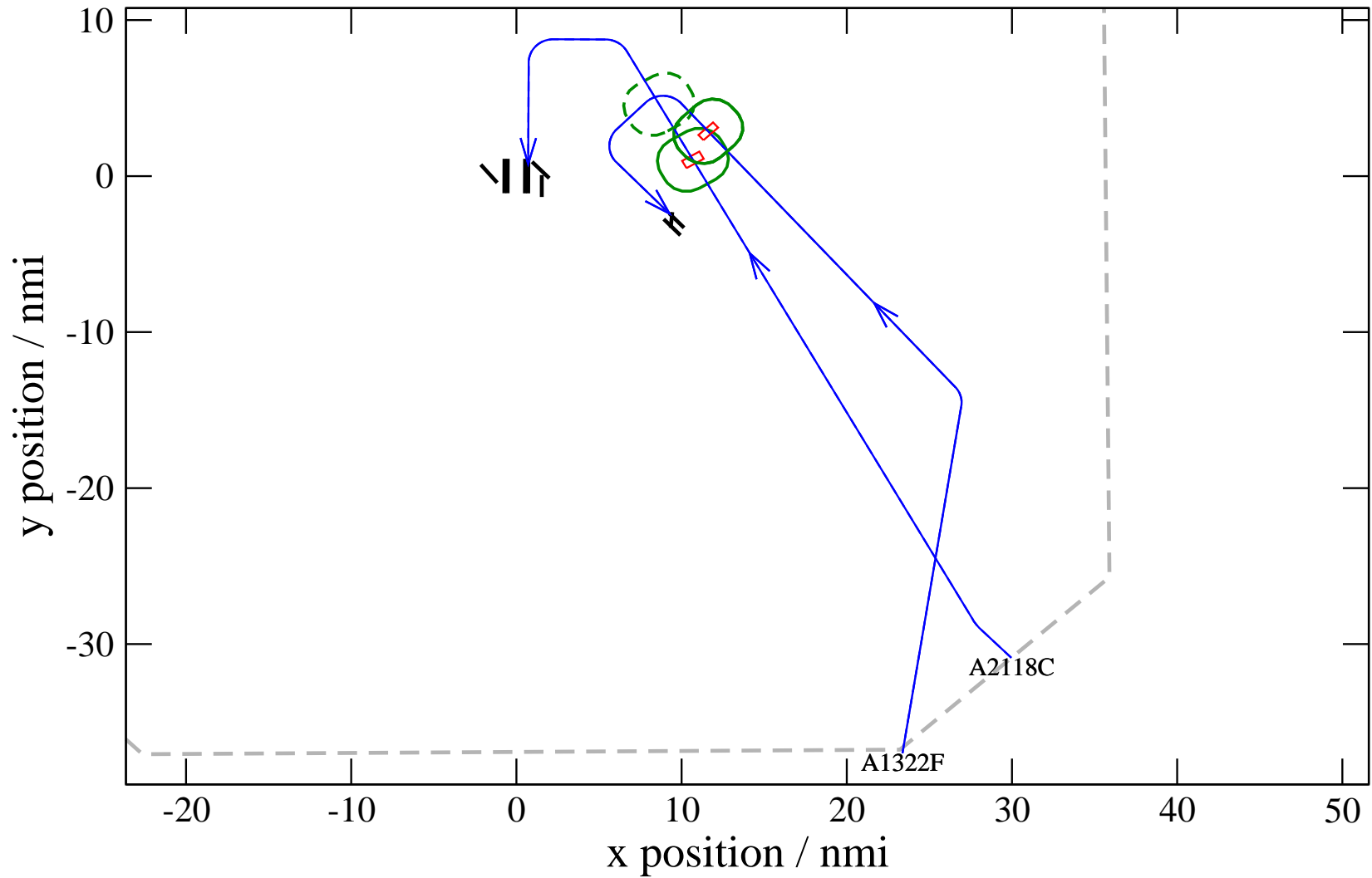
# Maneuver Time Steps

-2:00 [0.31H/1.64V] A2118C speed dec 32 kn



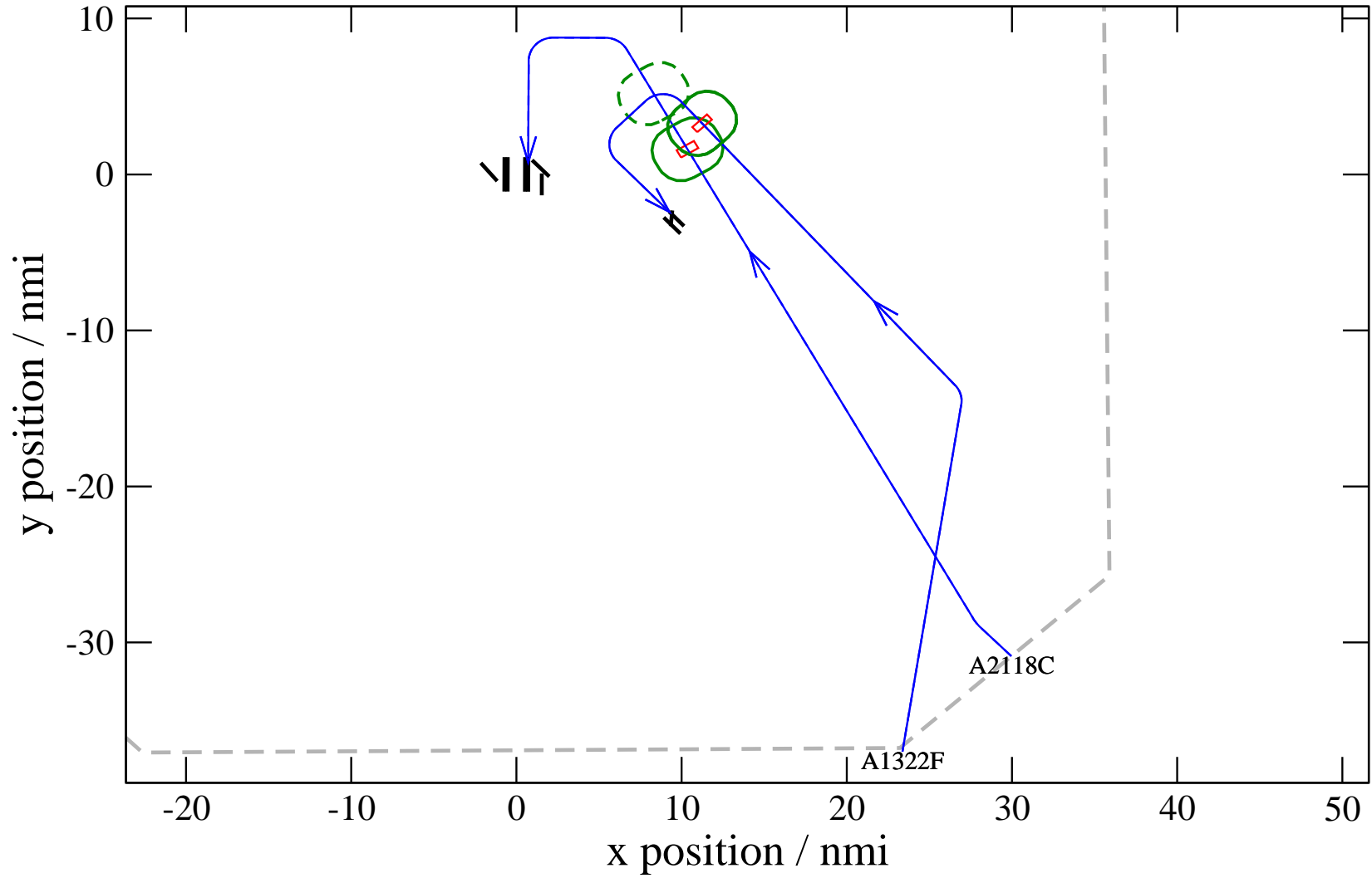
# Maneuver Time Steps

-1:50 [0.26H/1.59V] A2118C speed dec 32 kn



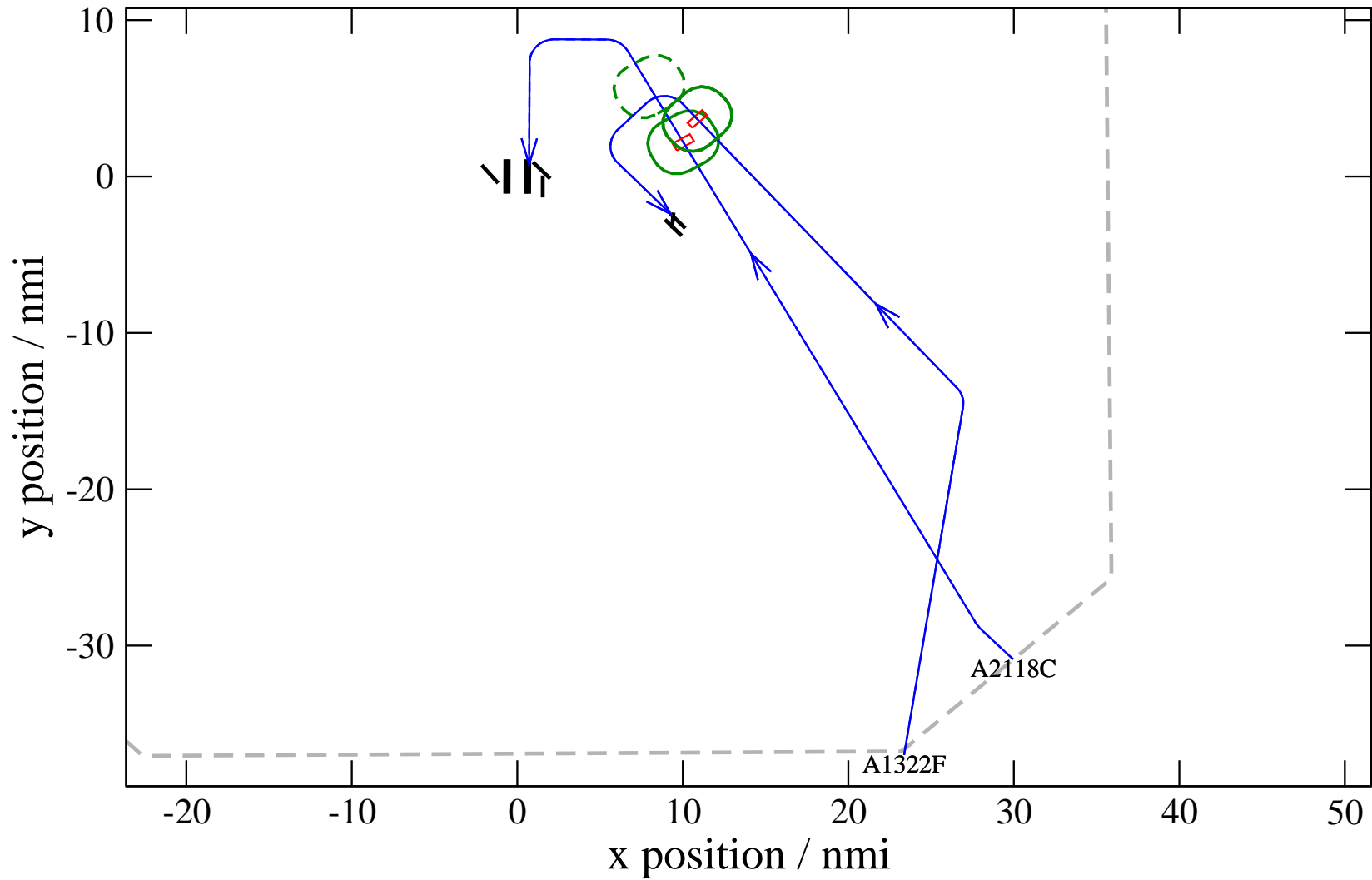
# Maneuver Time Steps

-1:40 [0.20H/1.54V] A2118C speed dec 32 kn



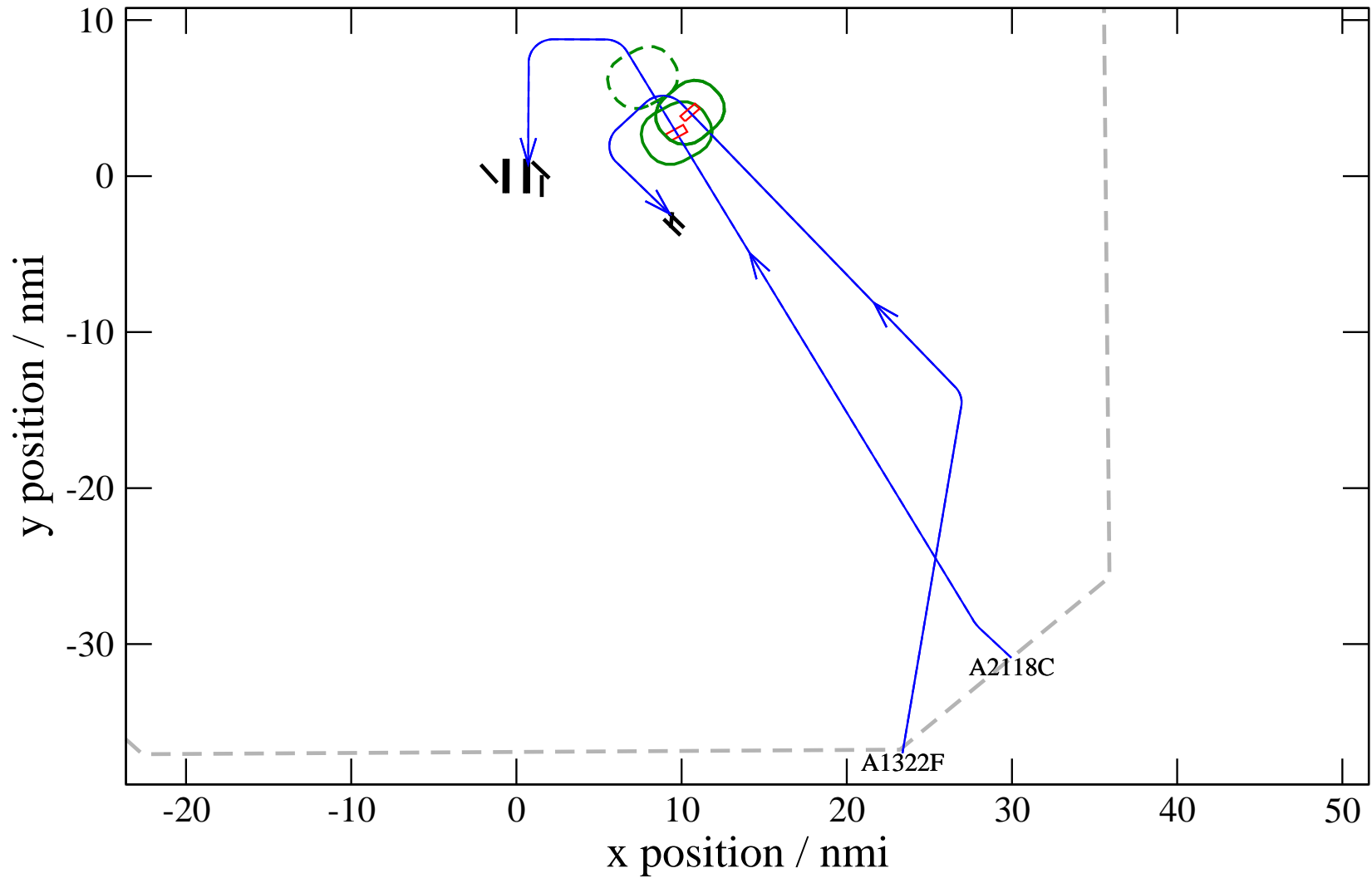
# Maneuver Time Steps

-1:30 [0.14H/1.49V] A2118C speed dec 32 kn



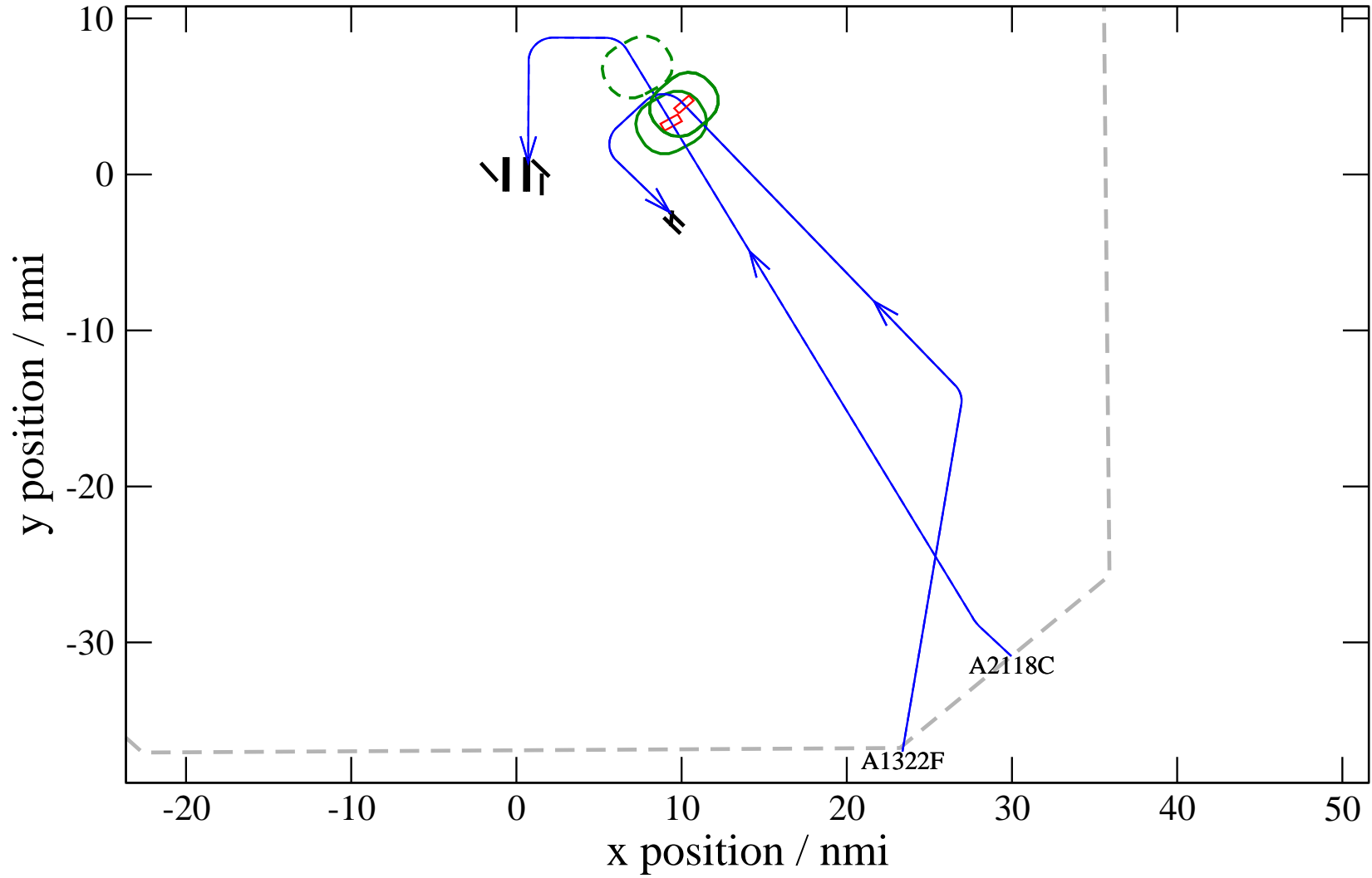
# Maneuver Time Steps

-1:20 [0.09H/1.44V] A2118C speed dec 32 kn



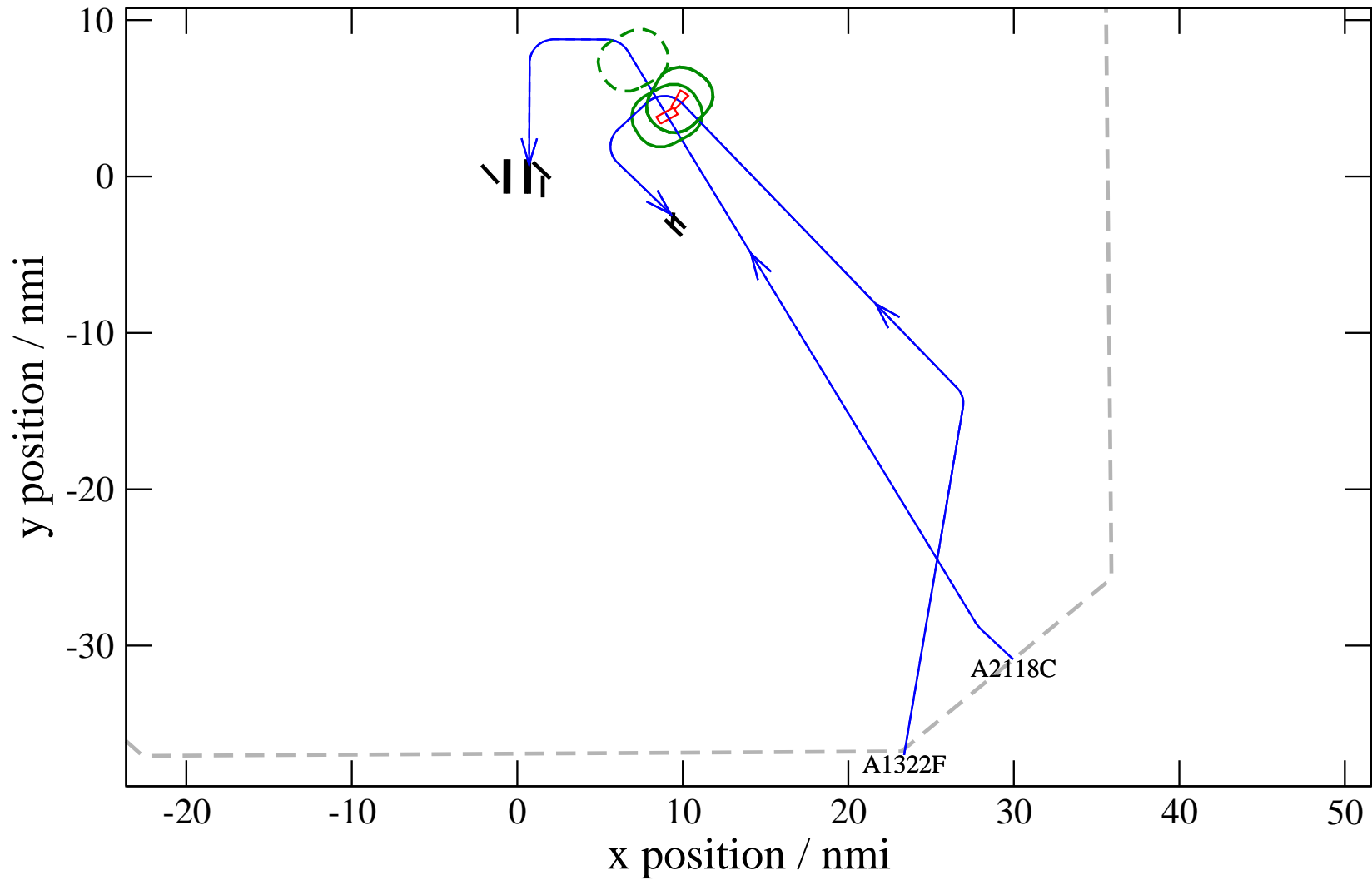
# Maneuver Time Steps

-1:10 [0.04H/1.39V] A2118C speed dec 32 kn



# Maneuver Time Steps

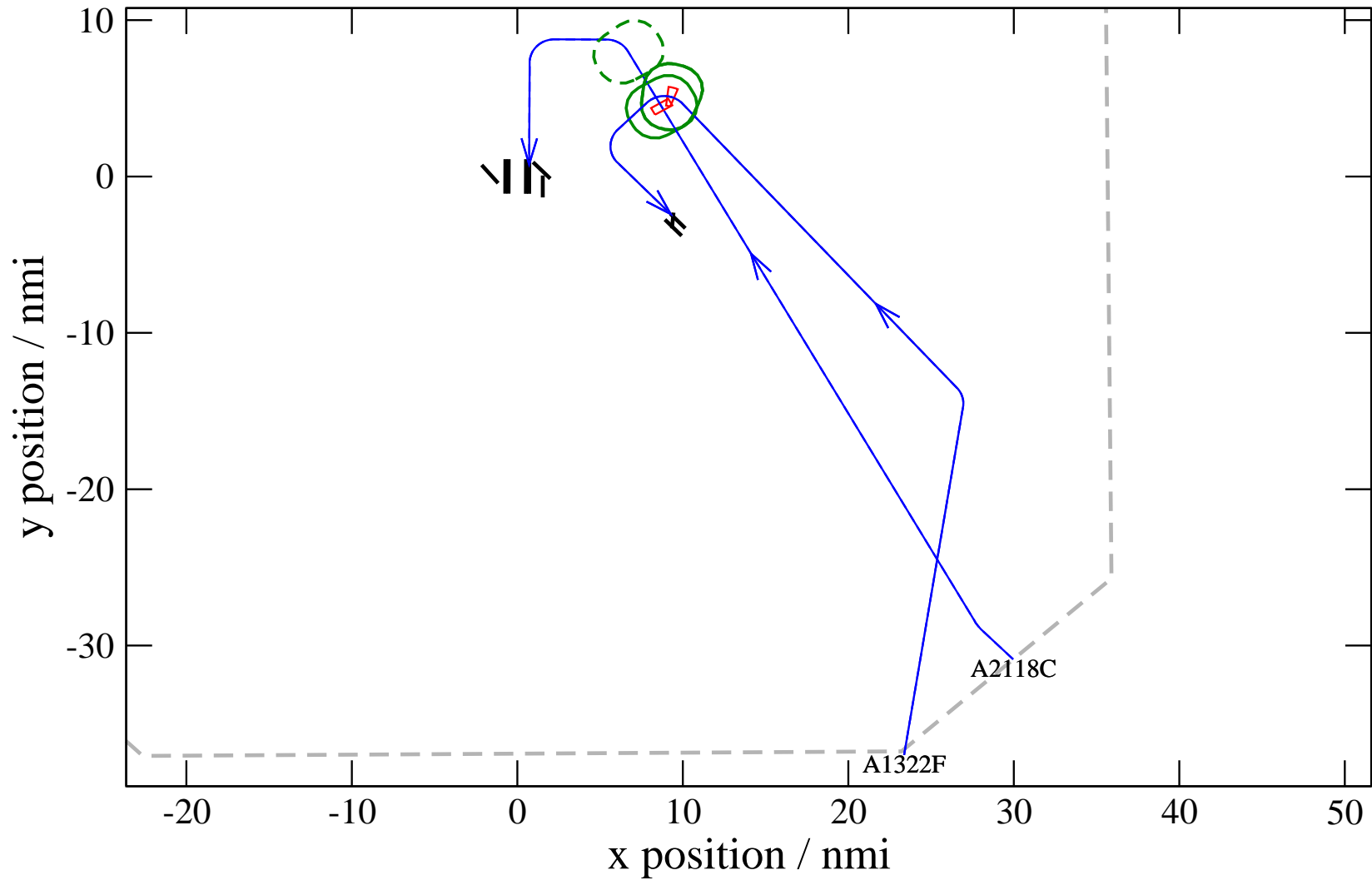
-1:00 [0.04H/1.33V] A2118C speed dec 32 kn





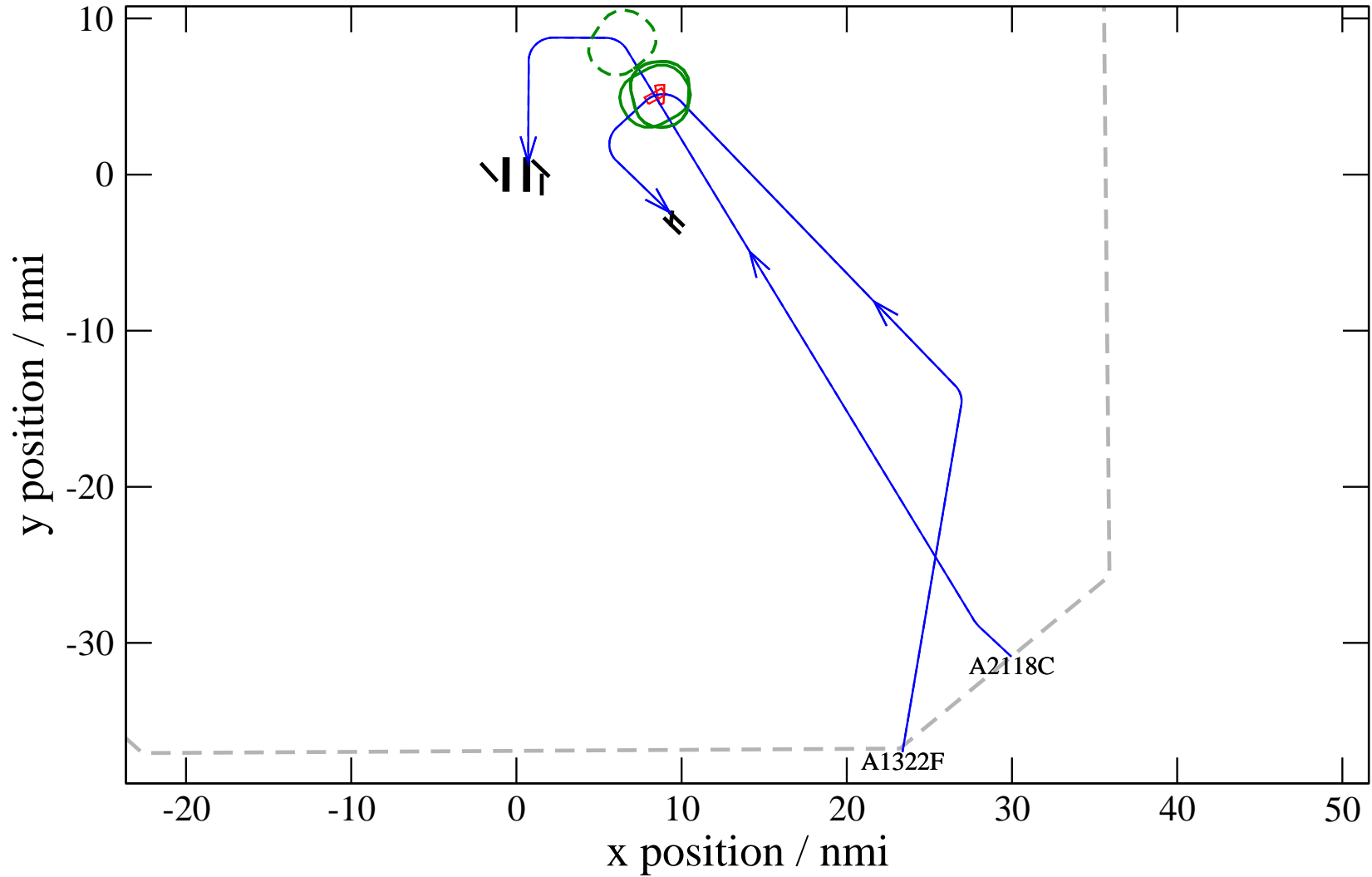
# Maneuver Time Steps

-0:50 [0.10H/1.27V] A2118C speed dec 32 kn



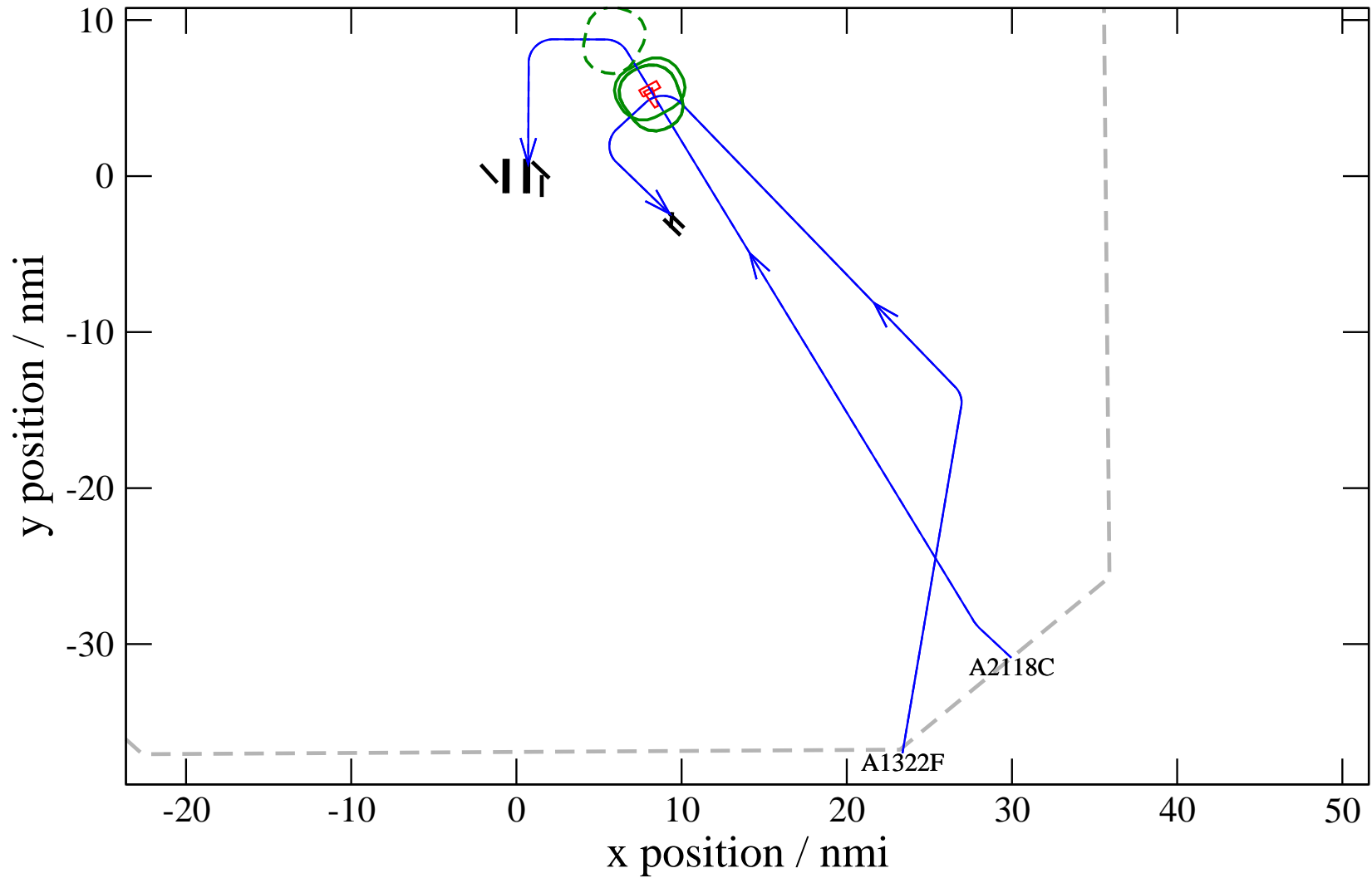
# Maneuver Time Steps

-0:40 [0.05H/1.21V] A2118C speed dec 32 kn



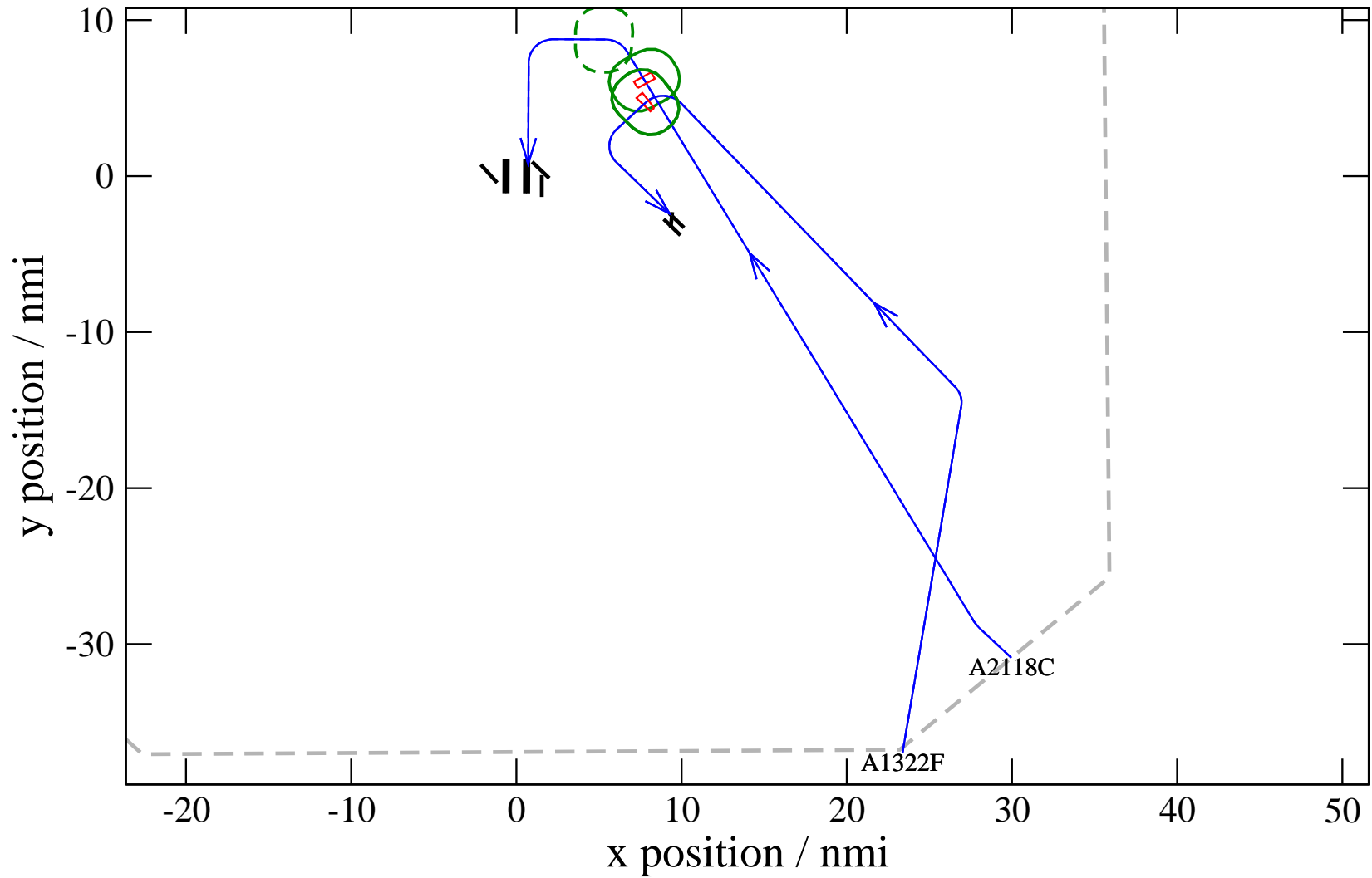
# Maneuver Time Steps

-0:30 [0.09H/1.16V] A2118C speed dec 32 kn



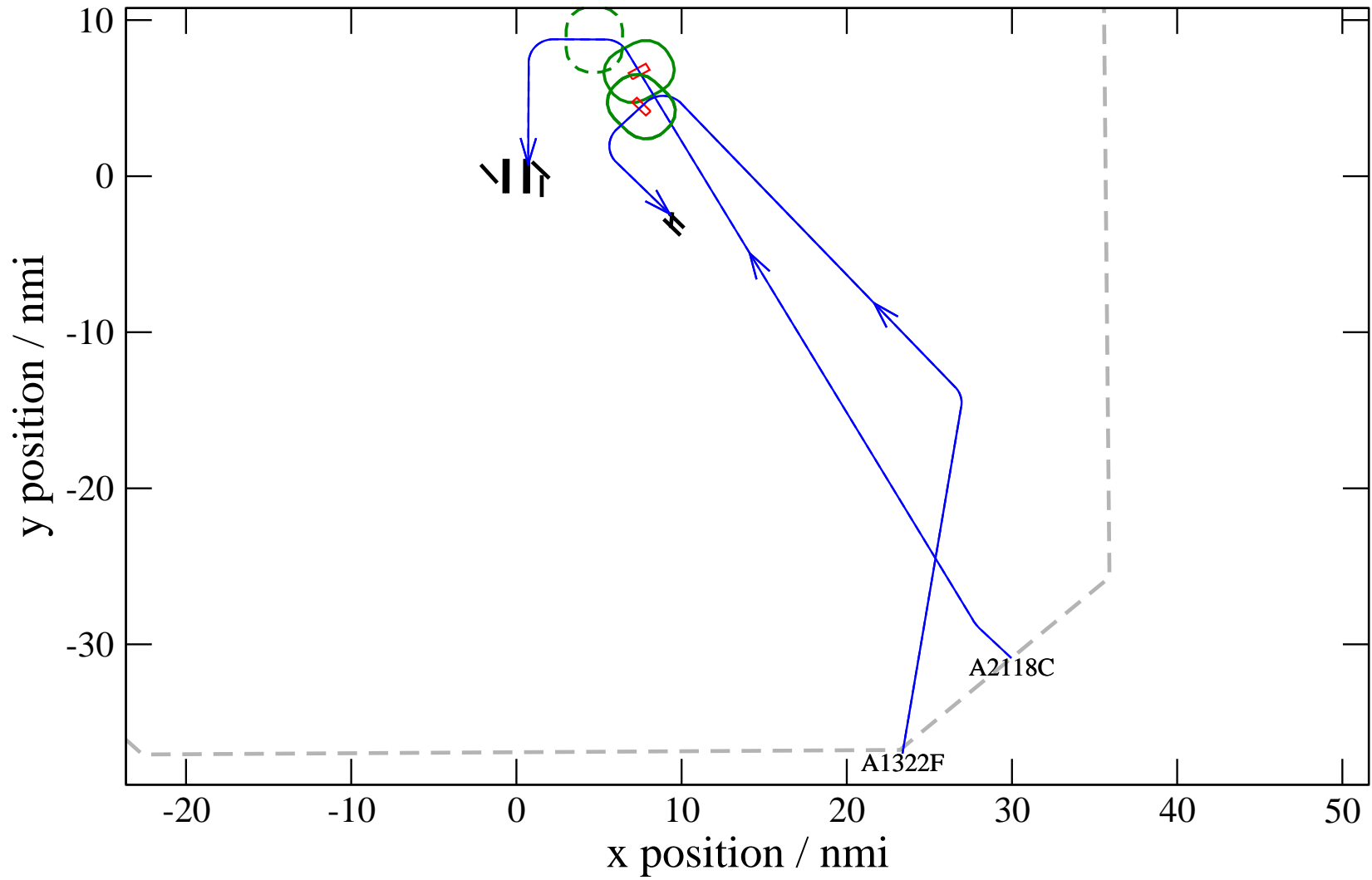
# Maneuver Time Steps

-0:20 [0.29H/1.09V] A2118C speed dec 32 kn



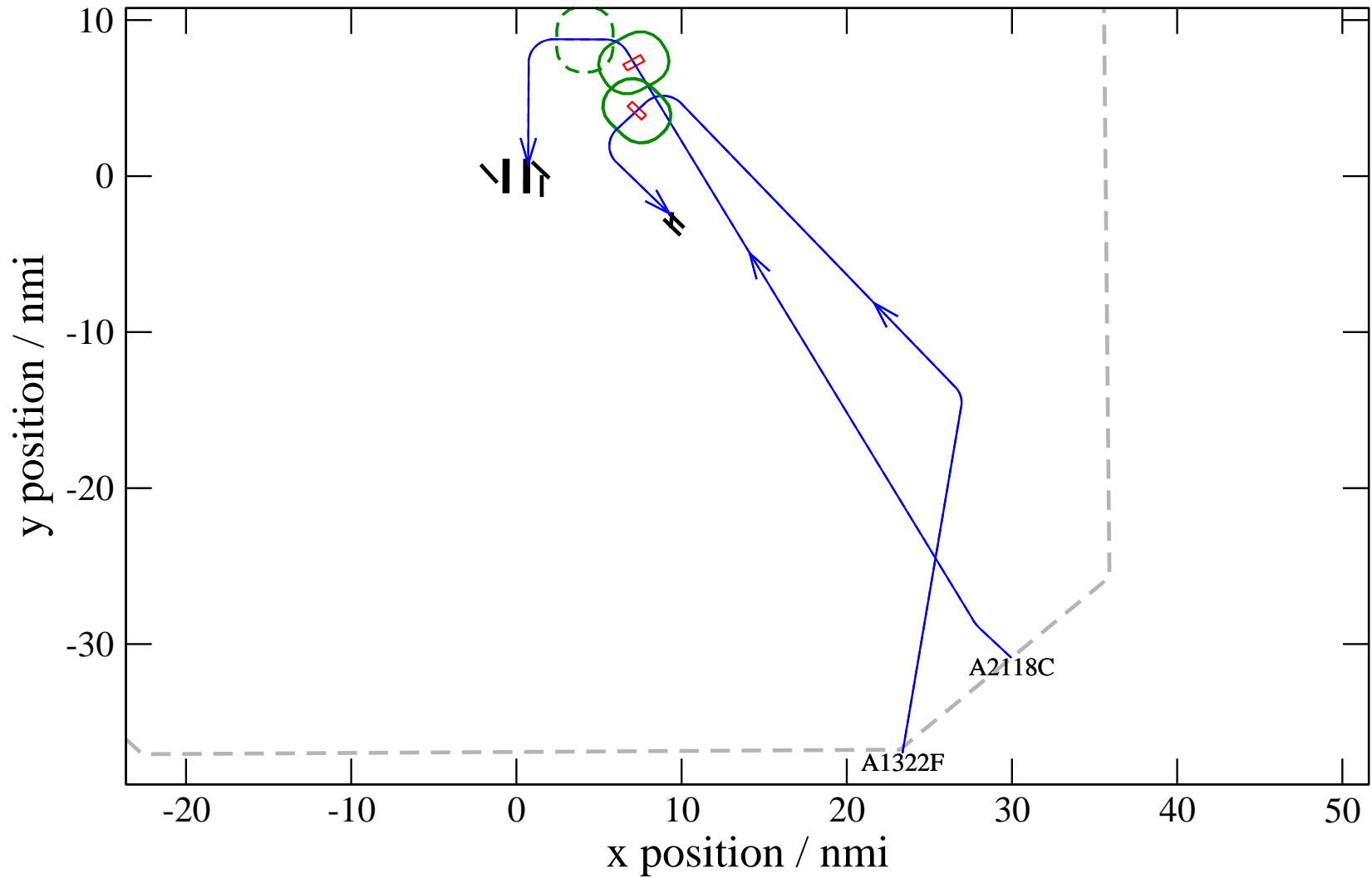
# Maneuver Time Steps

-0:10 [0.55H/1.04V] A2118C speed dec 32 kn



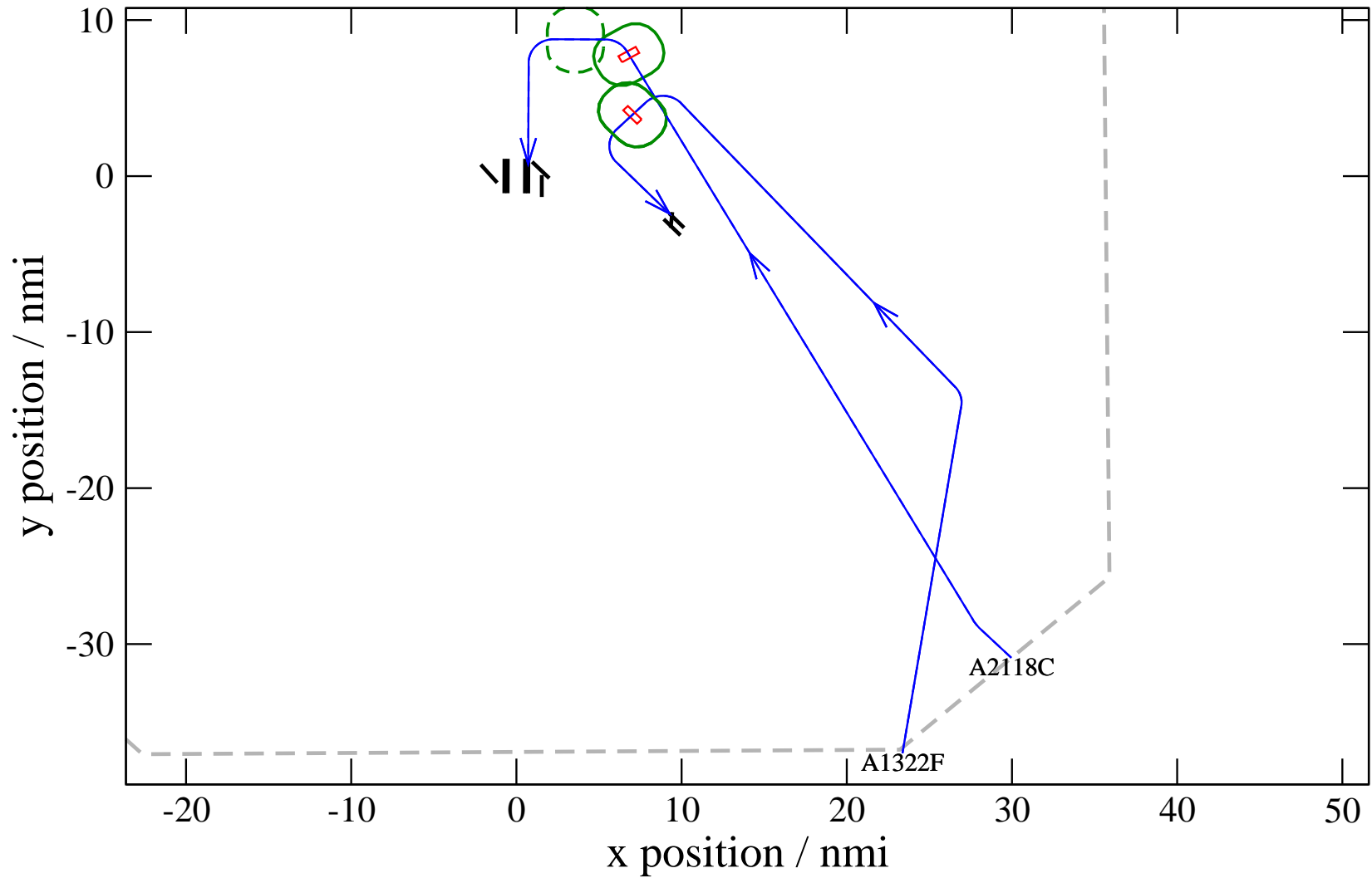
# Maneuver Time Steps

+0:00 [1.00H/0.99V] A2118C speed dec 32 kn



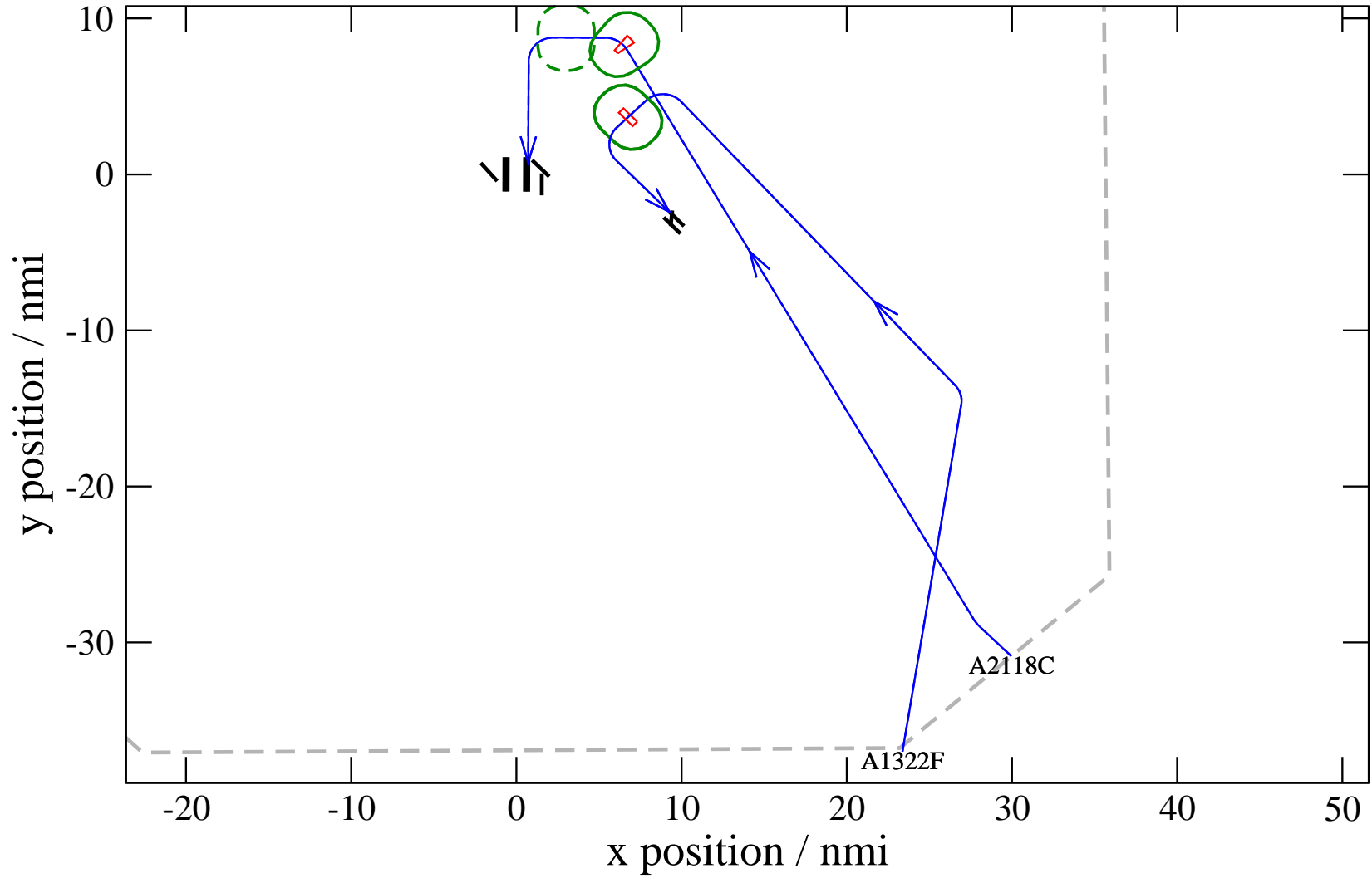
# Maneuver Time Steps

+0:10 [1.02H/1.02V] A2118C speed dec 32 kn



# Maneuver Time Steps

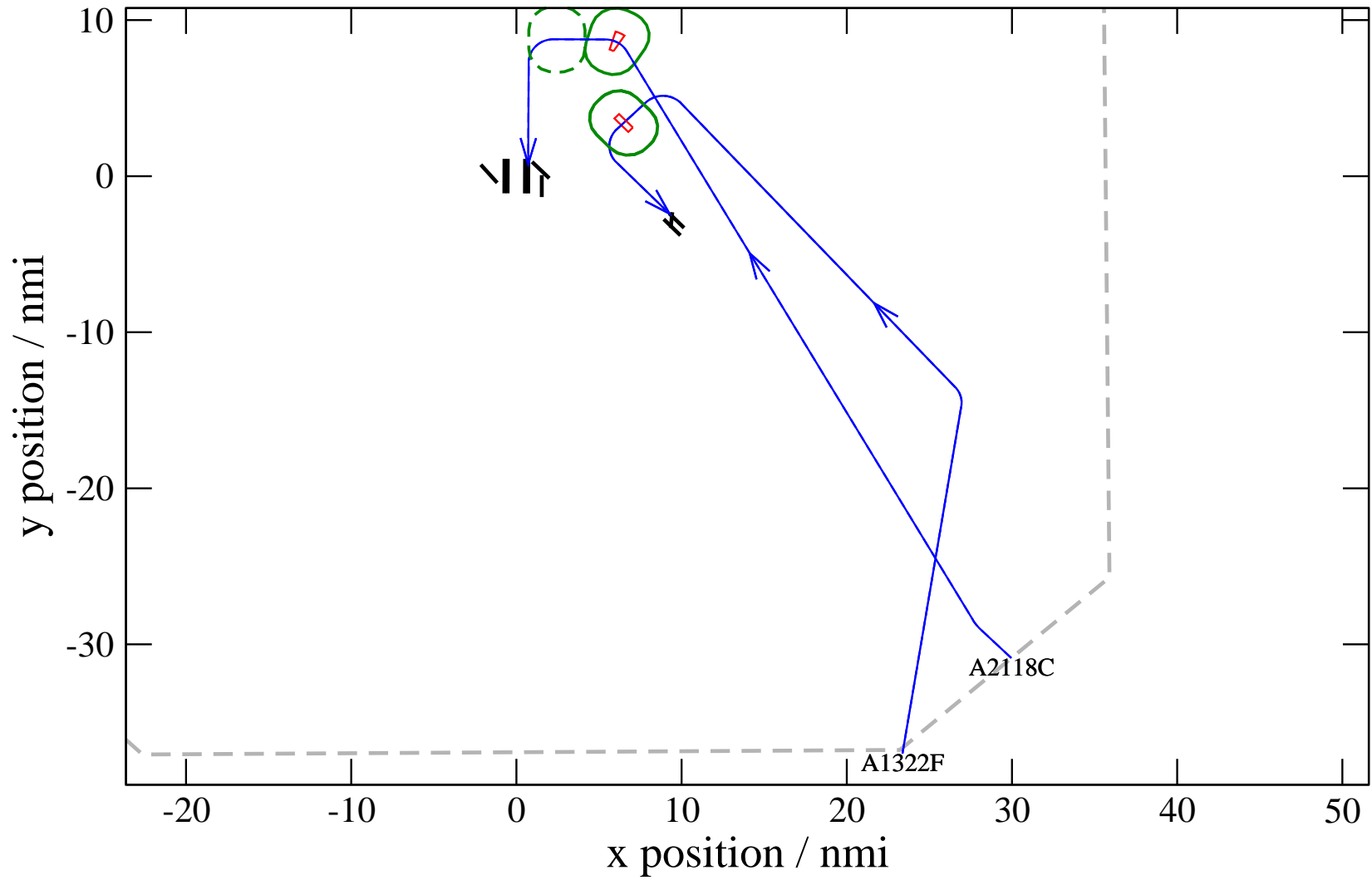
+0:20 [1.18H/1.07V] A2118C speed dec 32 kn





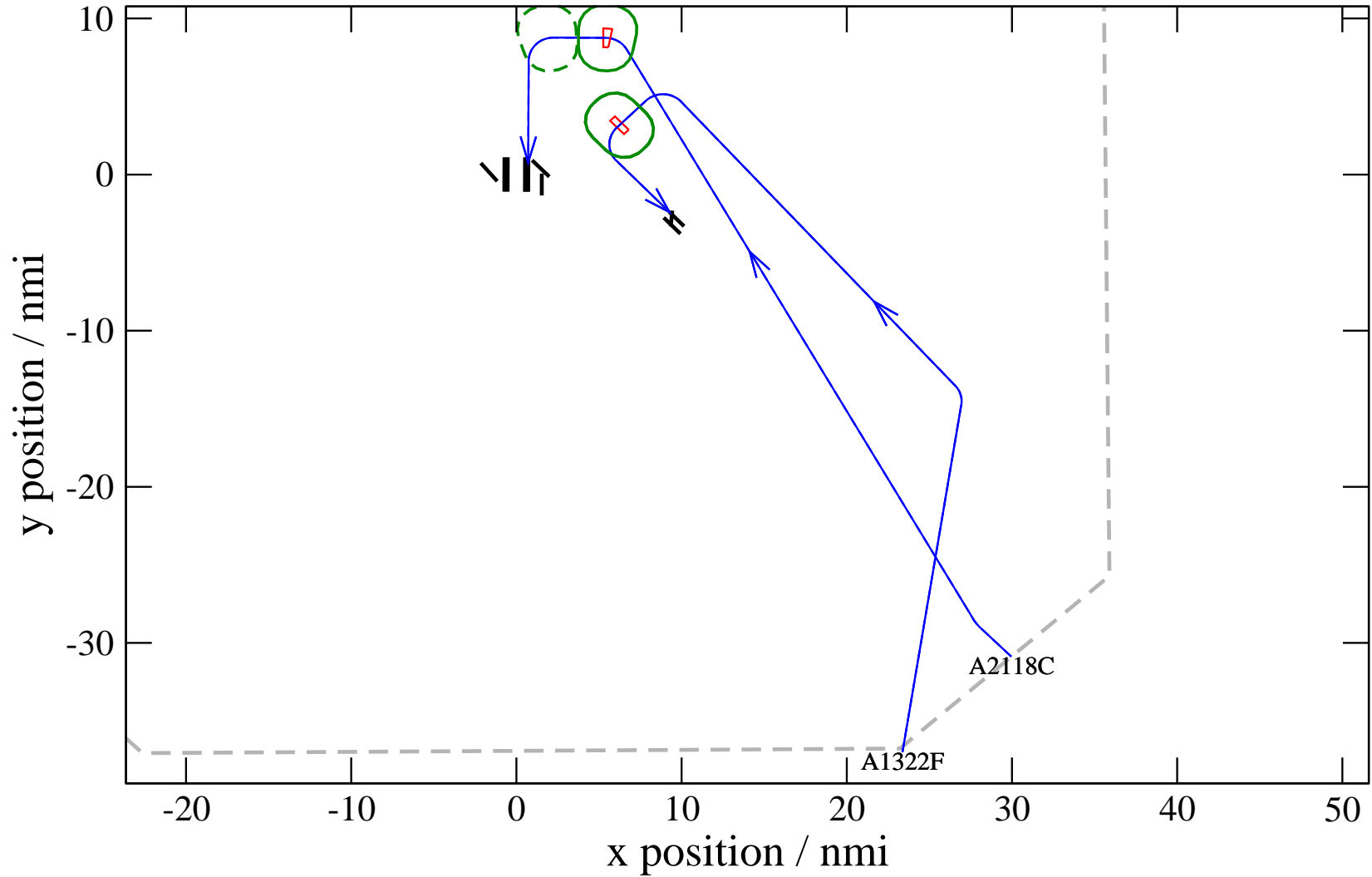
# Maneuver Time Steps

+0:30 [1.35H/1.03V] A2118C speed dec 32 kn



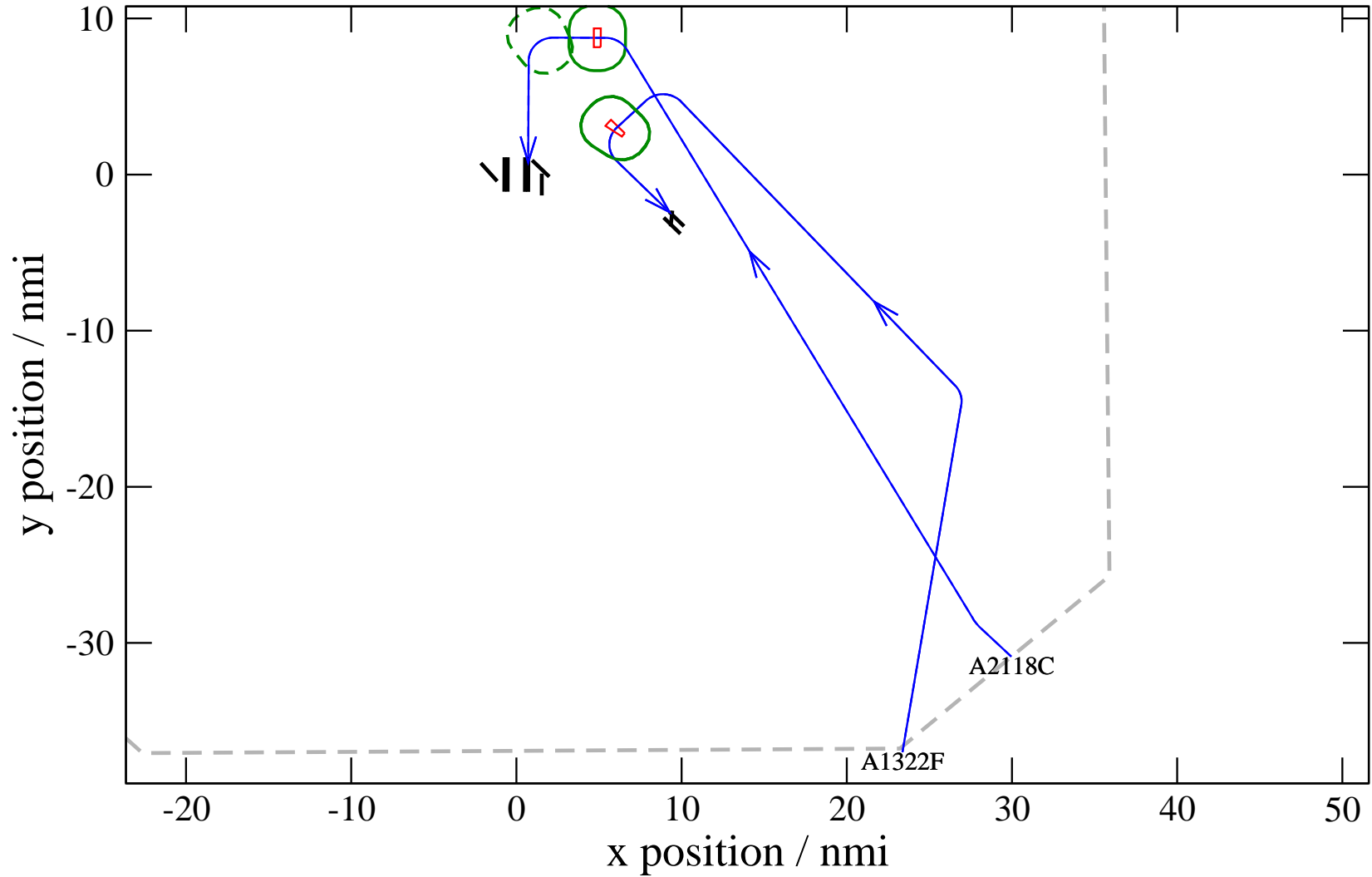
# Maneuver Time Steps

+0:40 [1.48H/0.99V] A2118C speed dec 32 kn



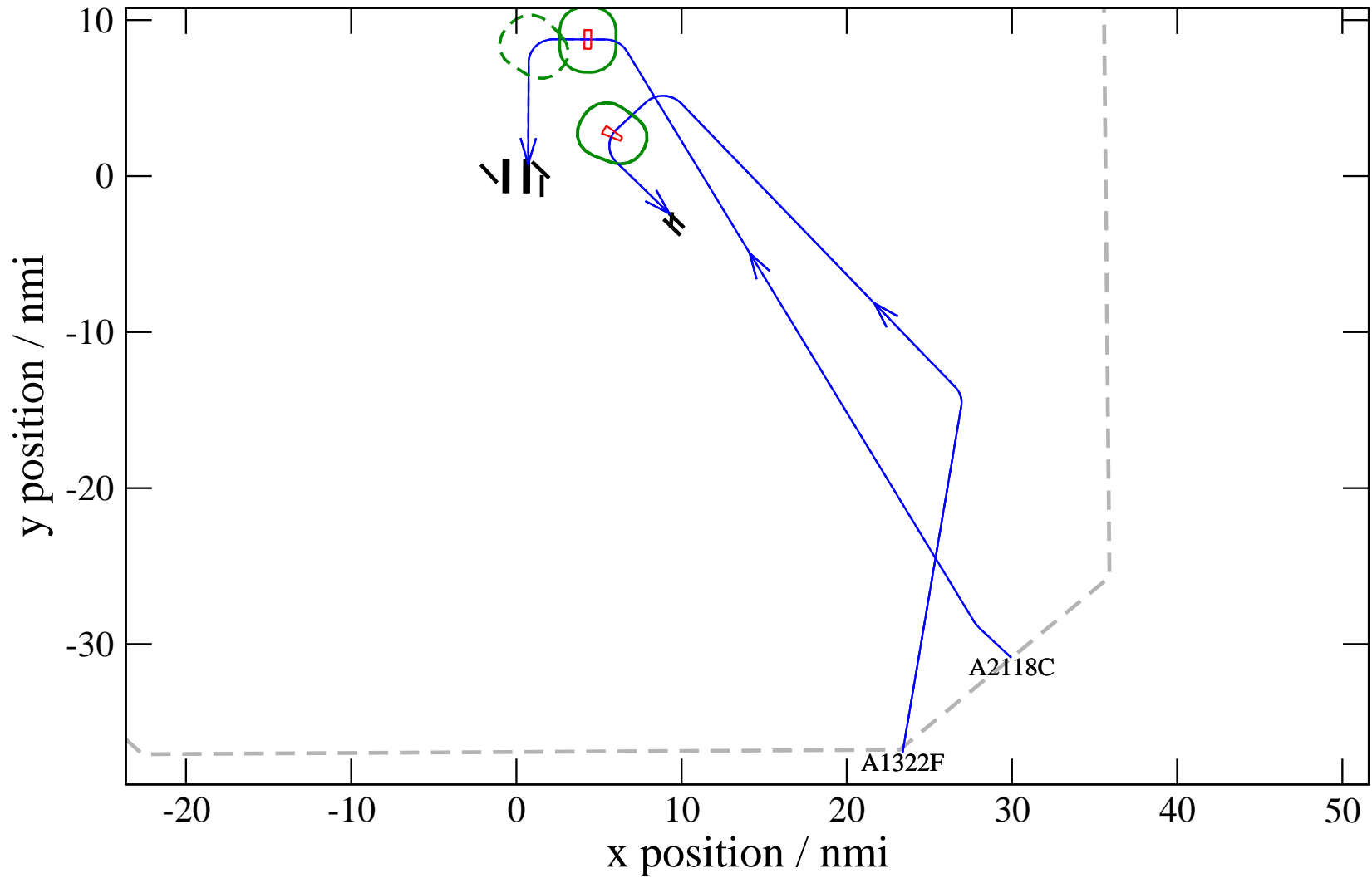
# Maneuver Time Steps

+0:50 [1.57H/-1.00V] A2118C speed dec 32 kn



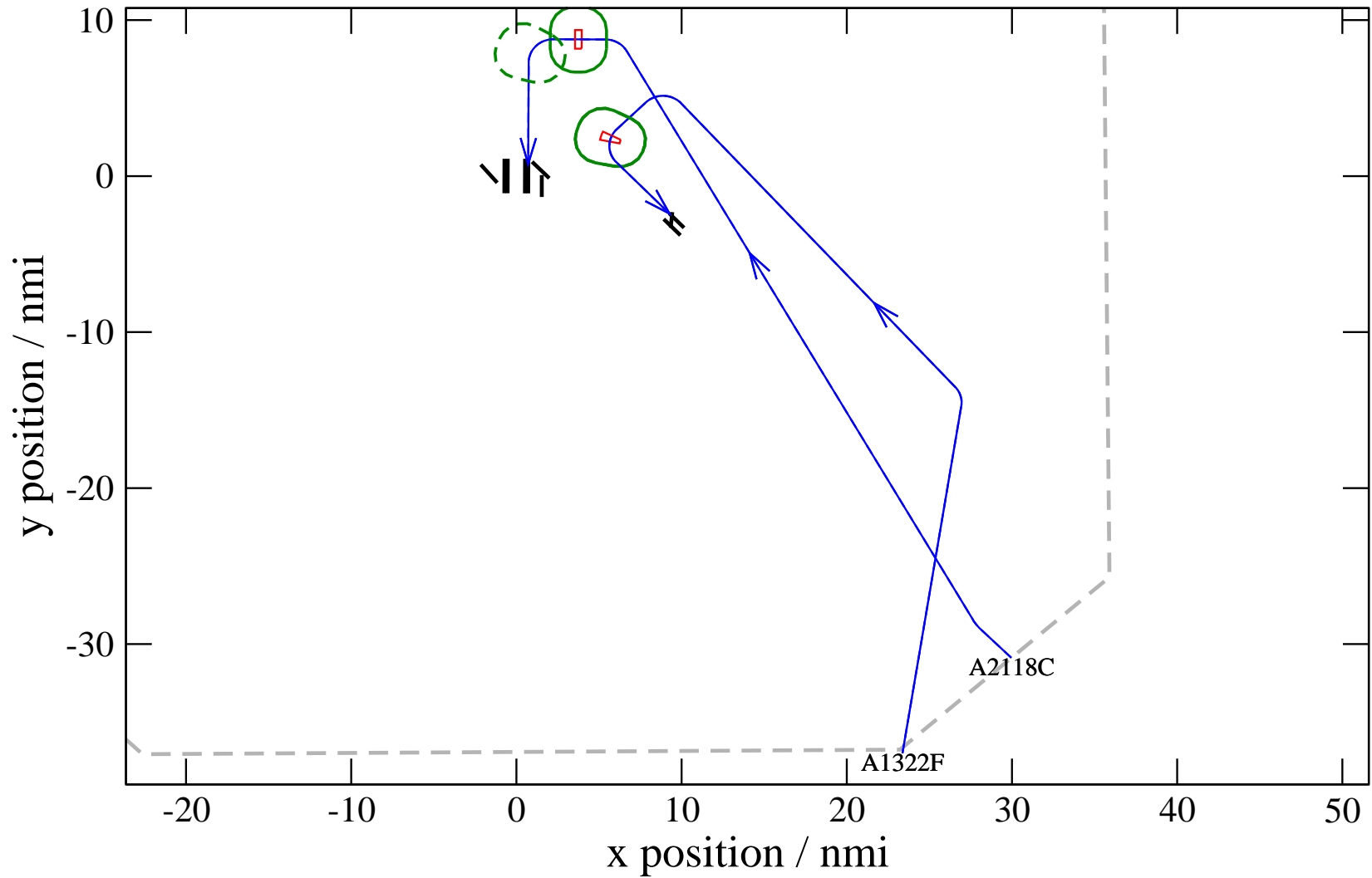
# Maneuver Time Steps

+1:00 [1.68H/-1.00V] A2118C speed dec 32 kn



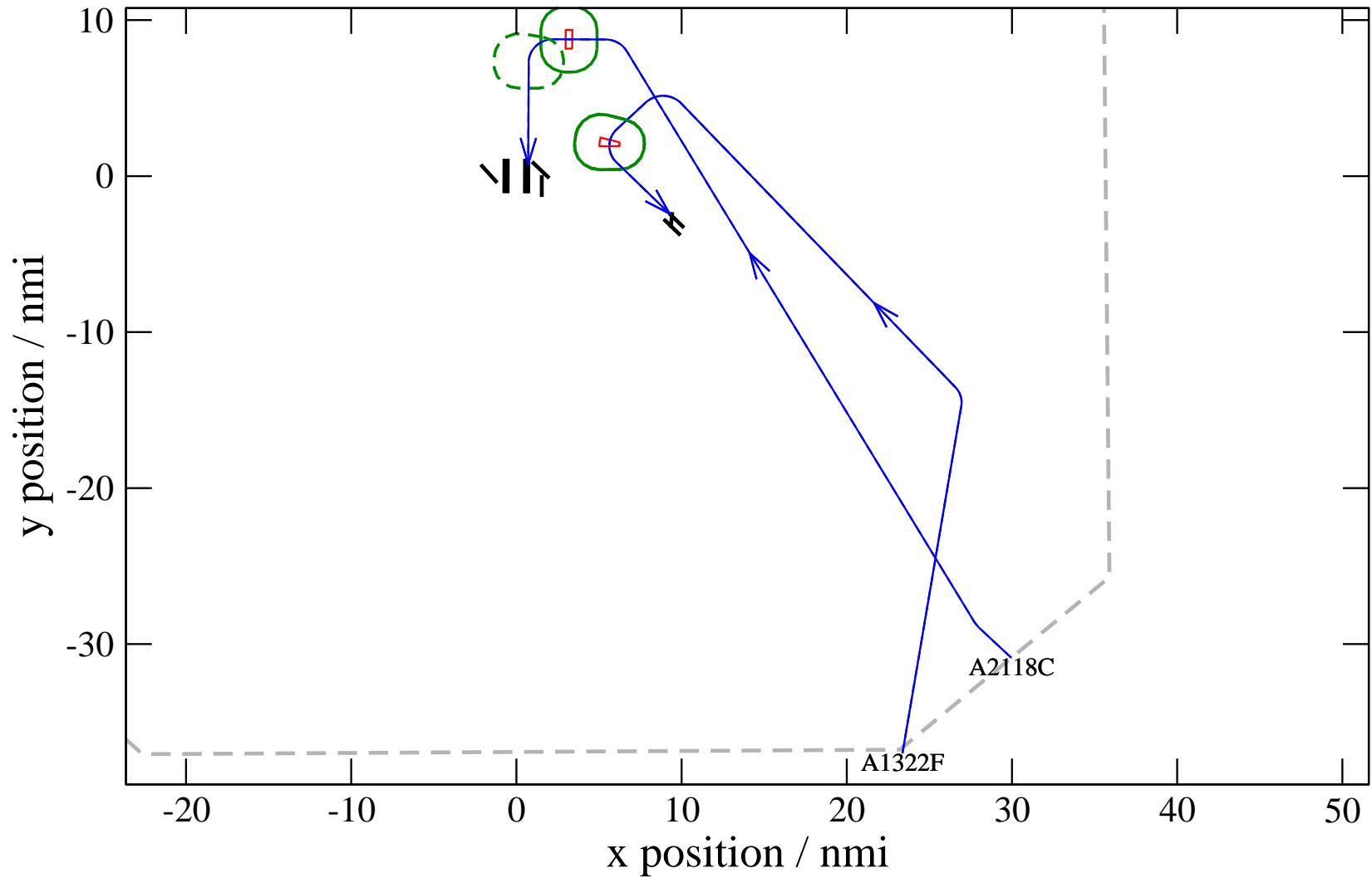
# Maneuver Time Steps

+1:10 [1.82H/-1.00V] A2118C speed dec 32 kn



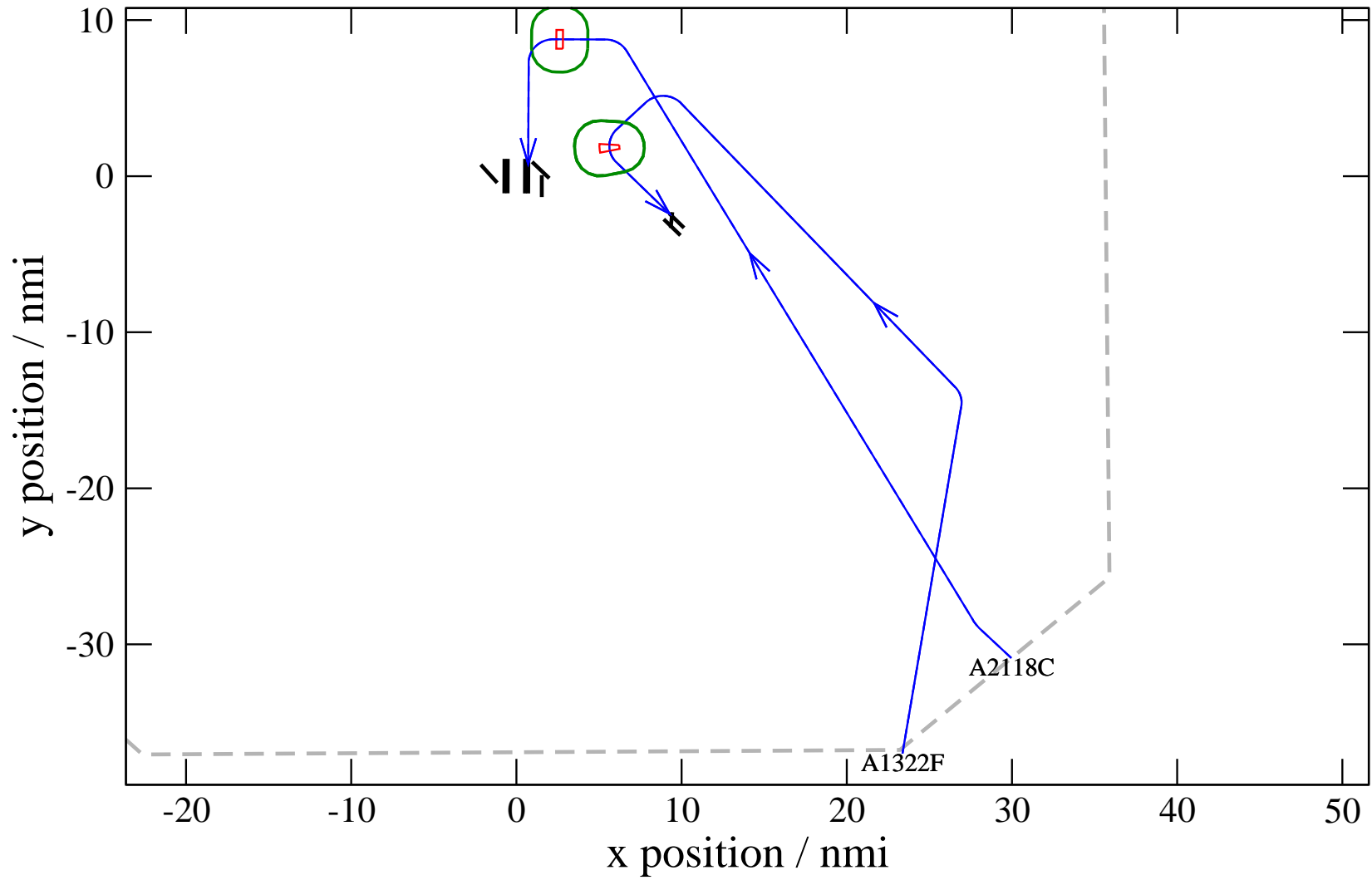
# Maneuver Time Steps

+1:20 [1.98H/-1.00V] A2118C speed dec 32 kn



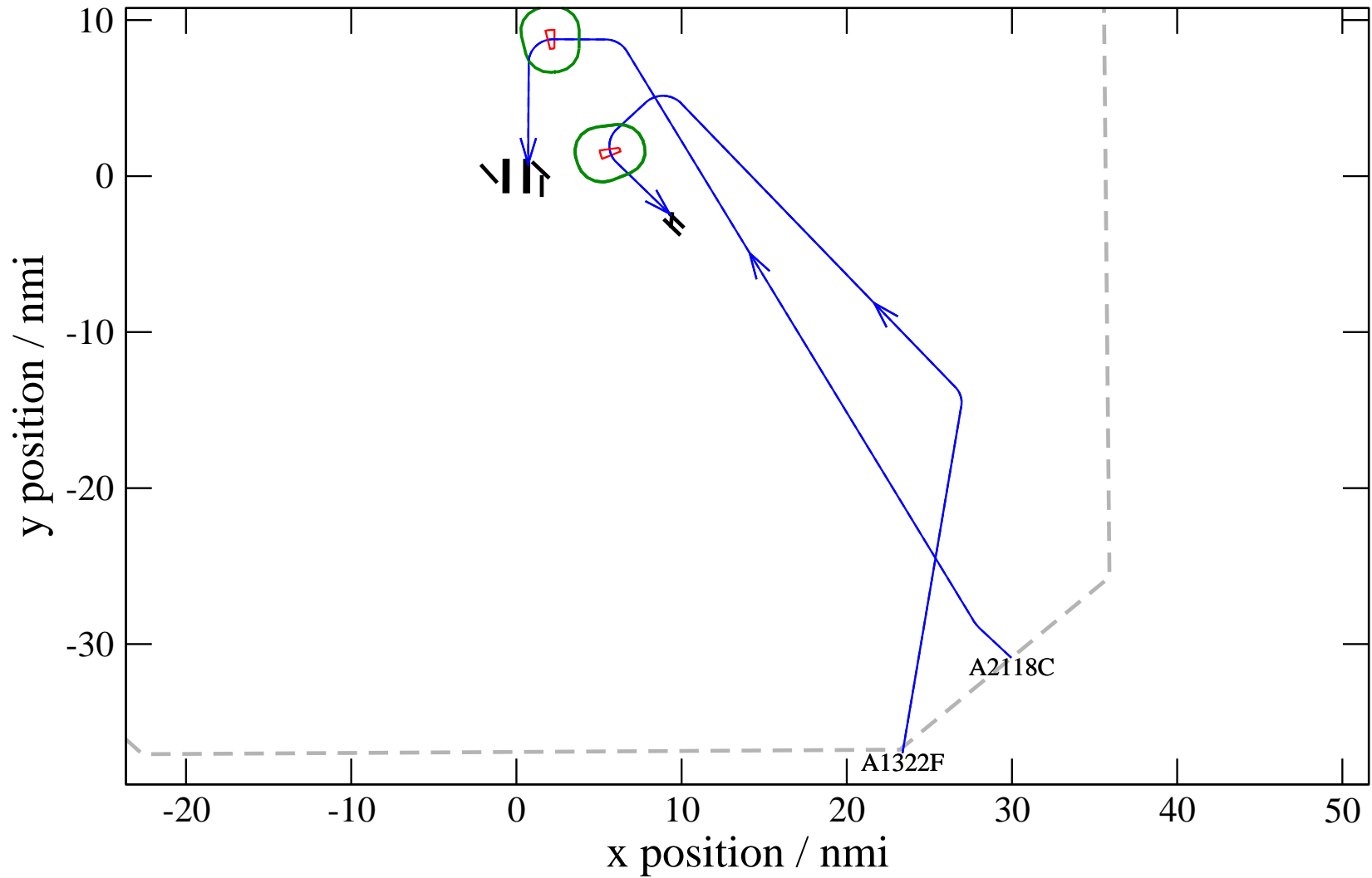
# Maneuver Time Steps

+1:30 [2.17H/-1.00V] A2118C speed dec 32 kn



# Maneuver Time Steps

+1:40 [2.36H/-1.00V] A2118C speed dec 32 kn

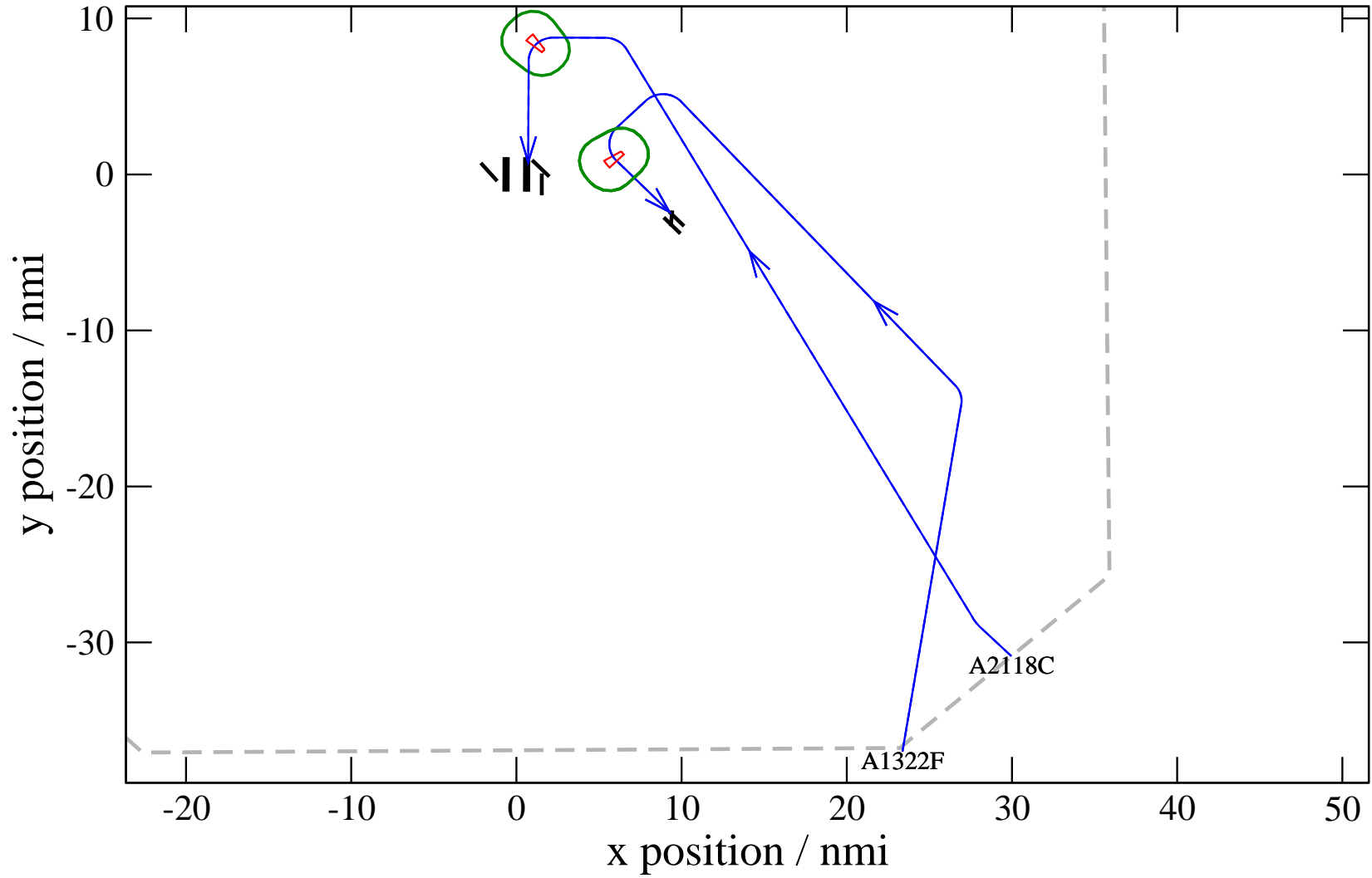






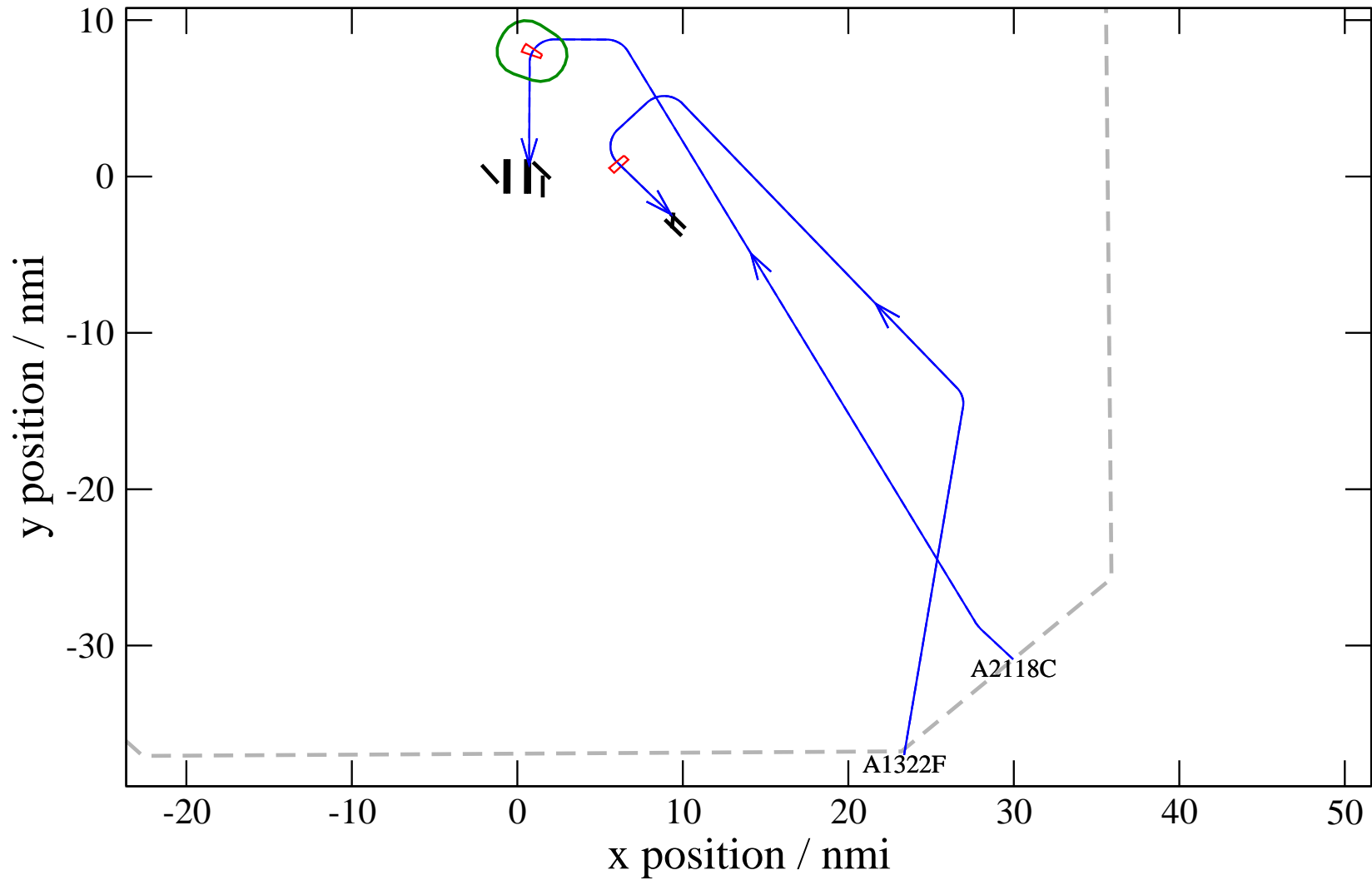
# Maneuver Time Steps

+2:00 [2.64H/-1.00V] A2118C speed dec 32 kn



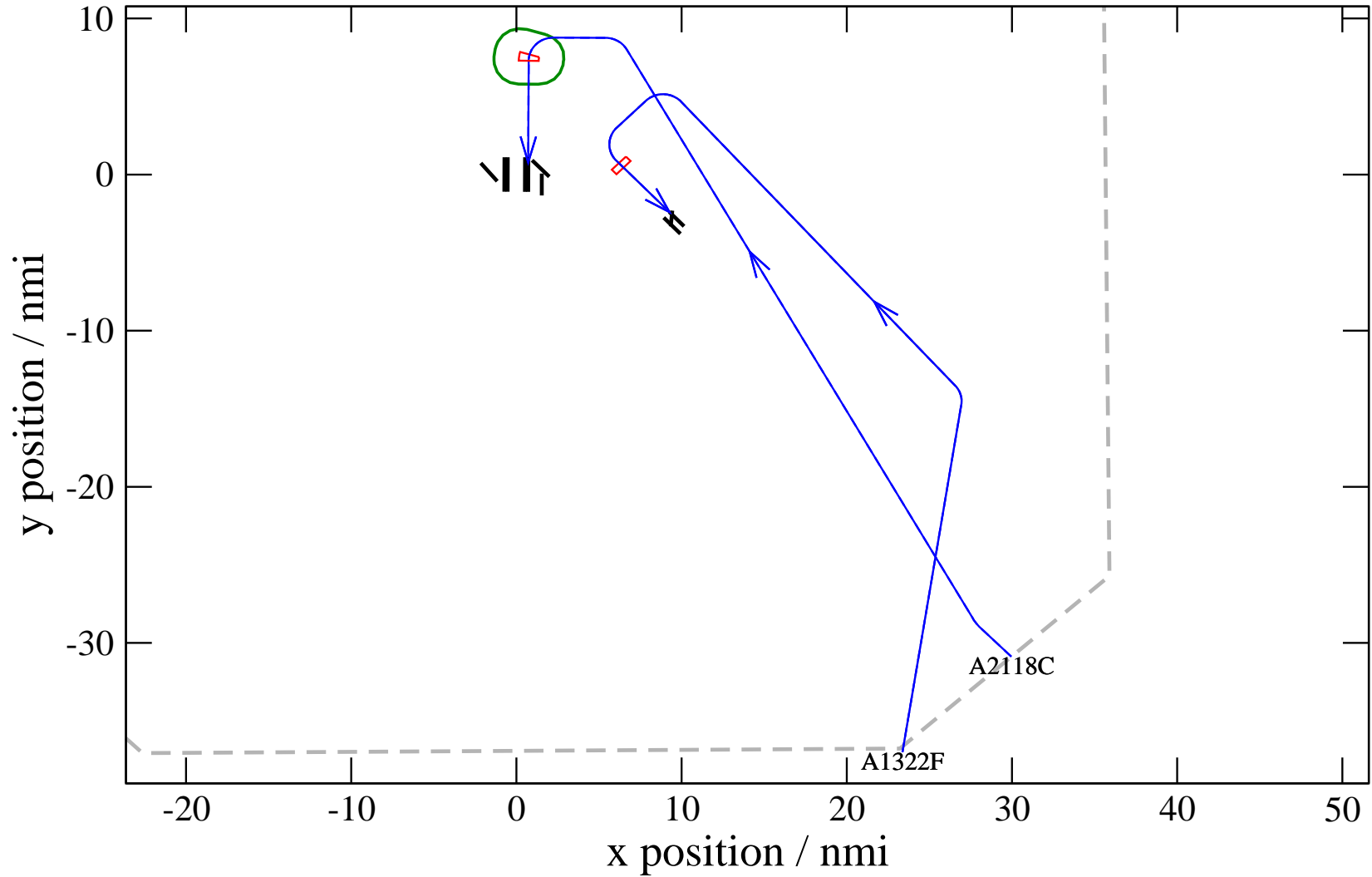
# Maneuver Time Steps

+2:10 [2.68H/-1.00V] A2118C speed dec 32 kn



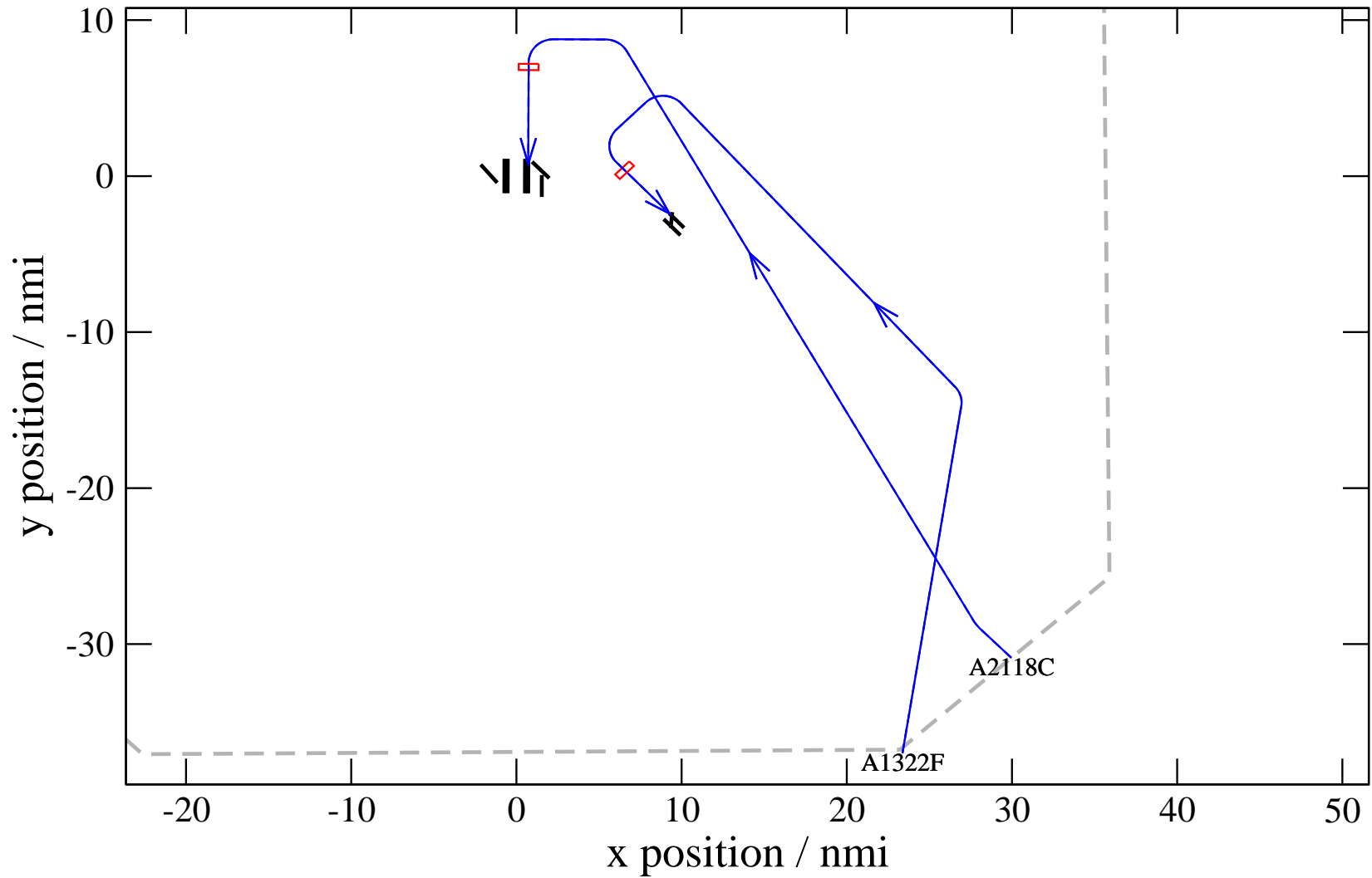
# Maneuver Time Steps

+2:20 [2.70H/-1.00V] A2118C speed dec 32 kn



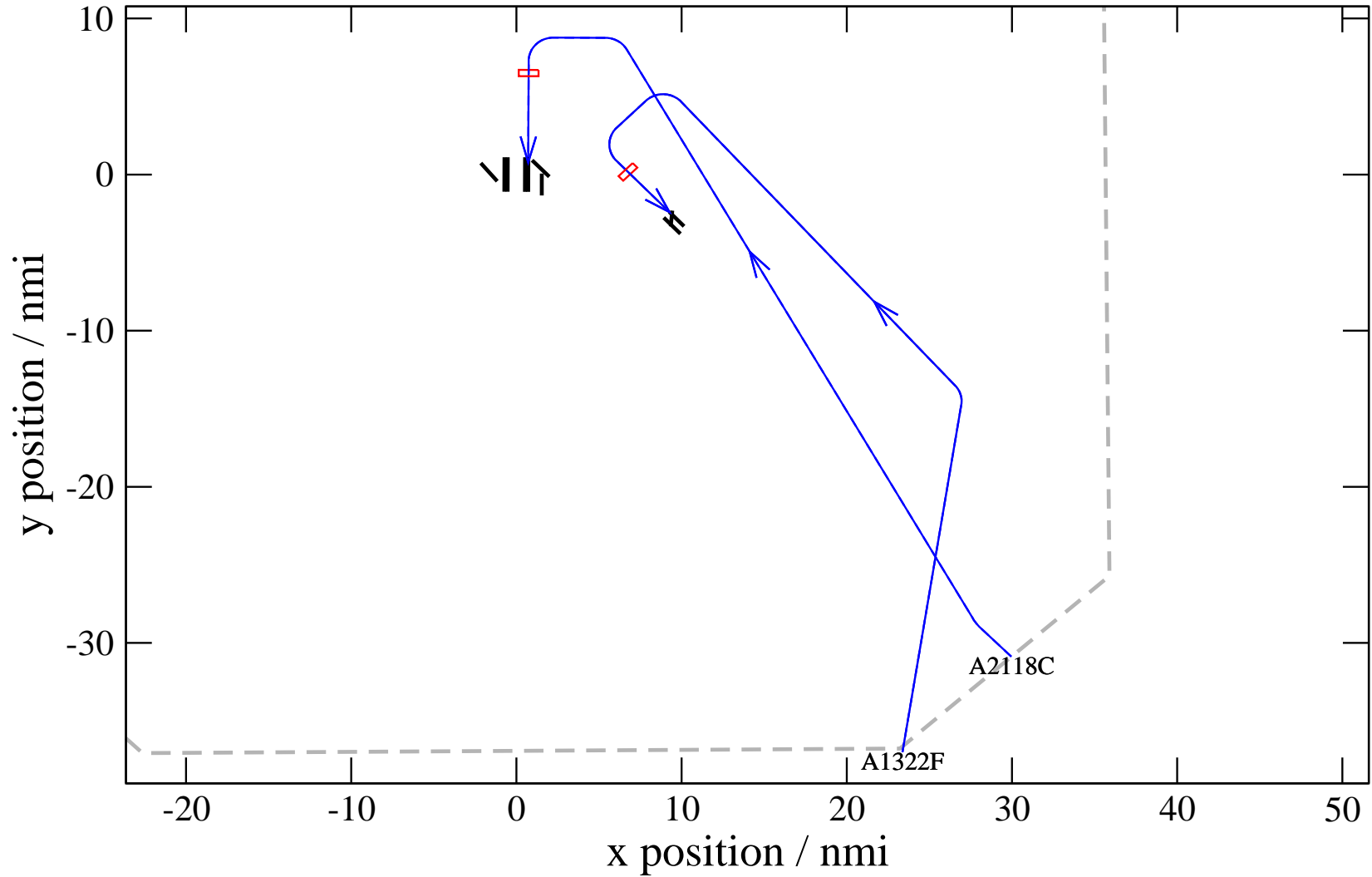
# Maneuver Time Steps

+2:30 [2.68H/-1.00V] A2118C speed dec 32 kn



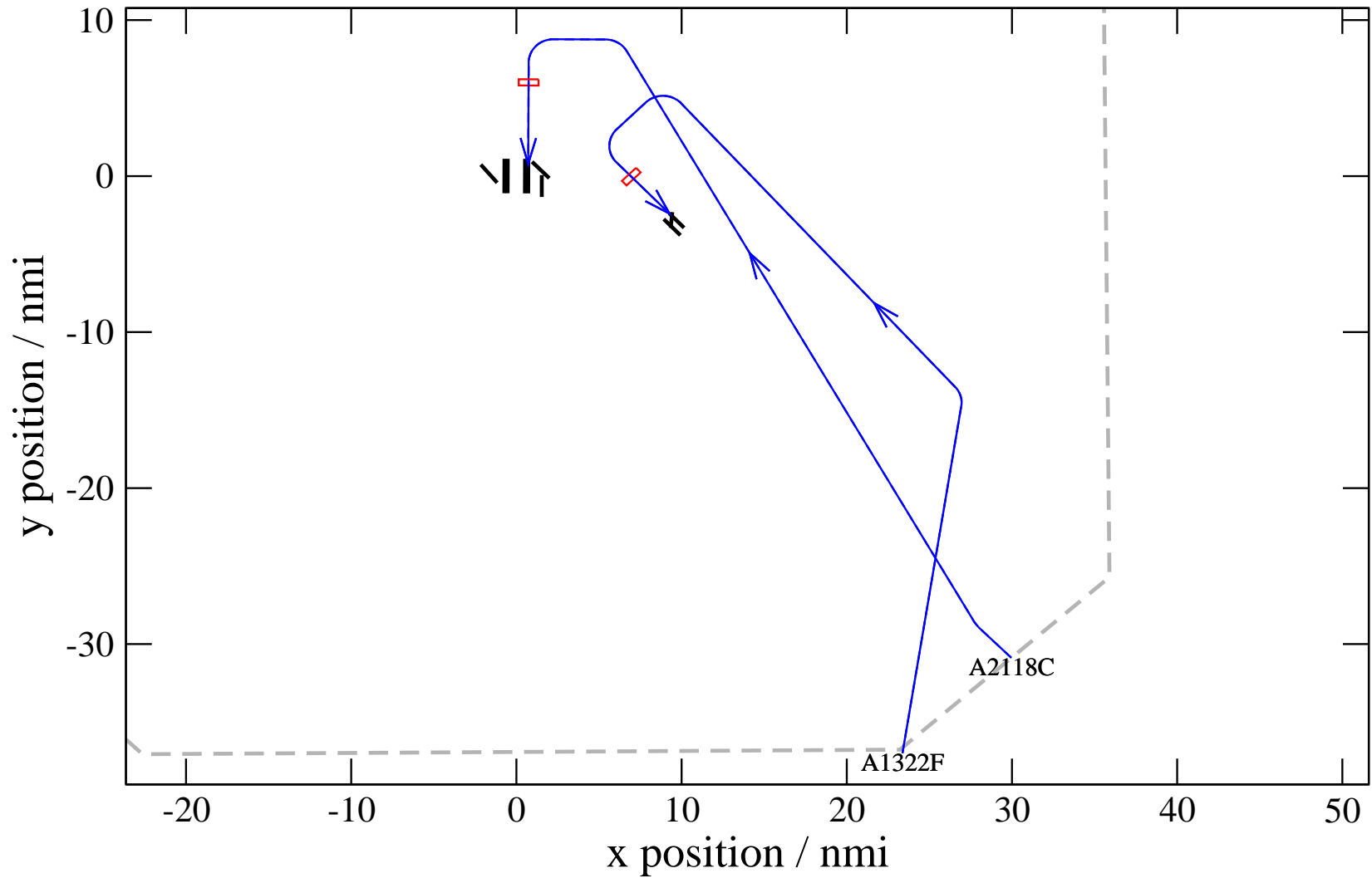
# Maneuver Time Steps

+2:40 [2.66H/-1.00V] A2118C speed dec 32 kn



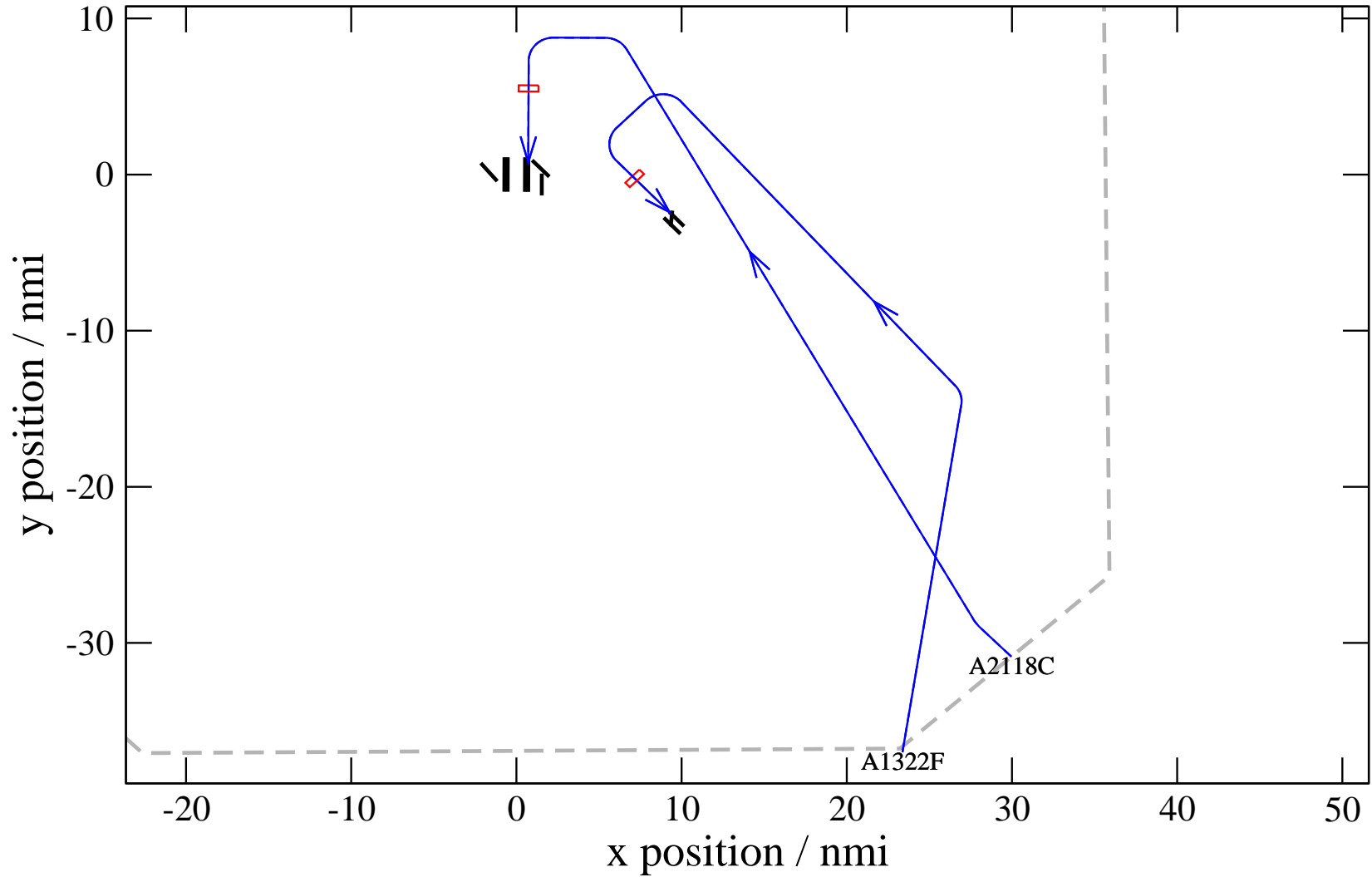
# Maneuver Time Steps

+2:50 [2.64H/-1.00V] A2118C speed dec 32 kn



# Maneuver Time Steps

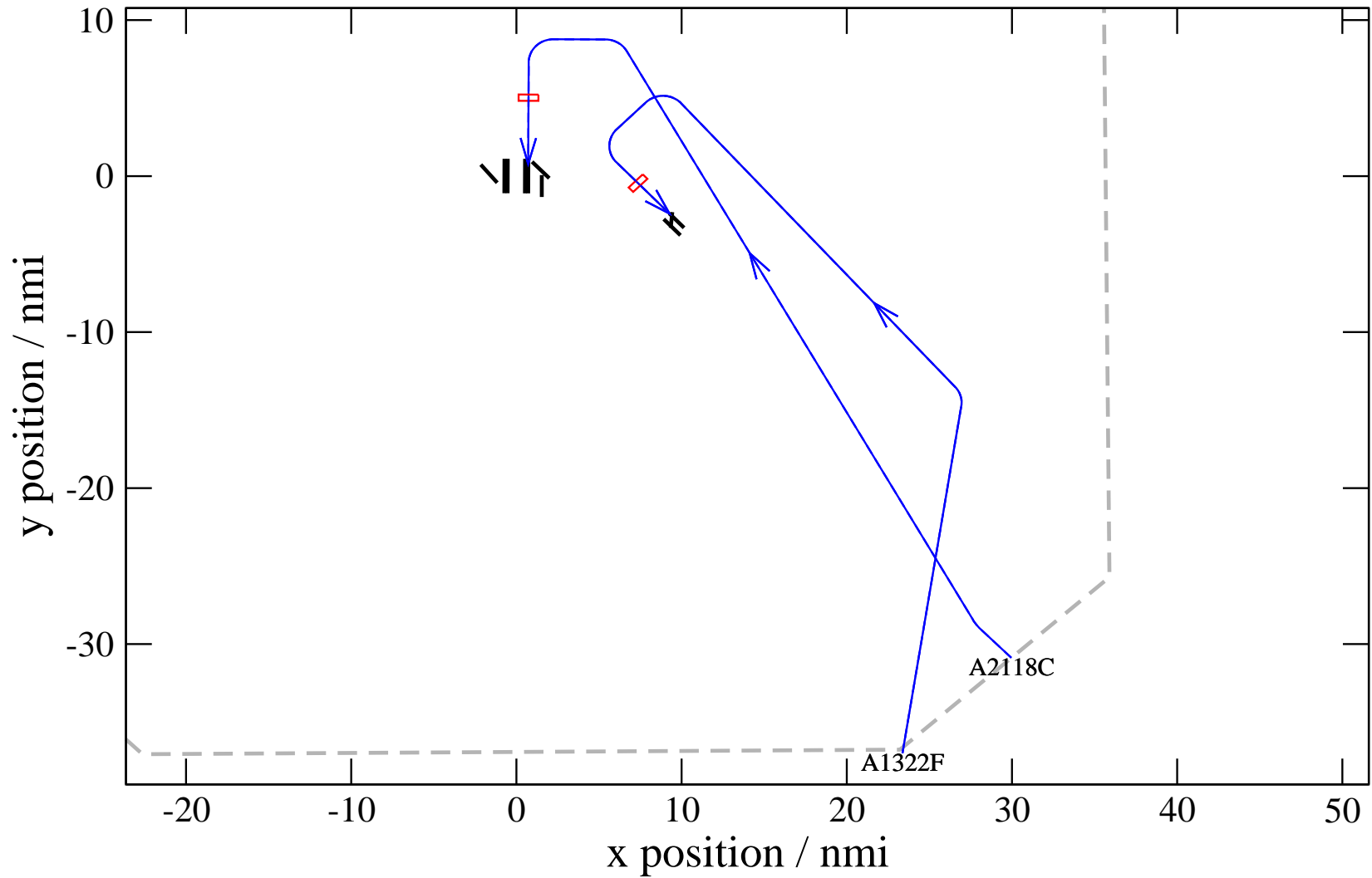
+3:00 [2.62H/-1.00V] A2118C speed dec 32 kn





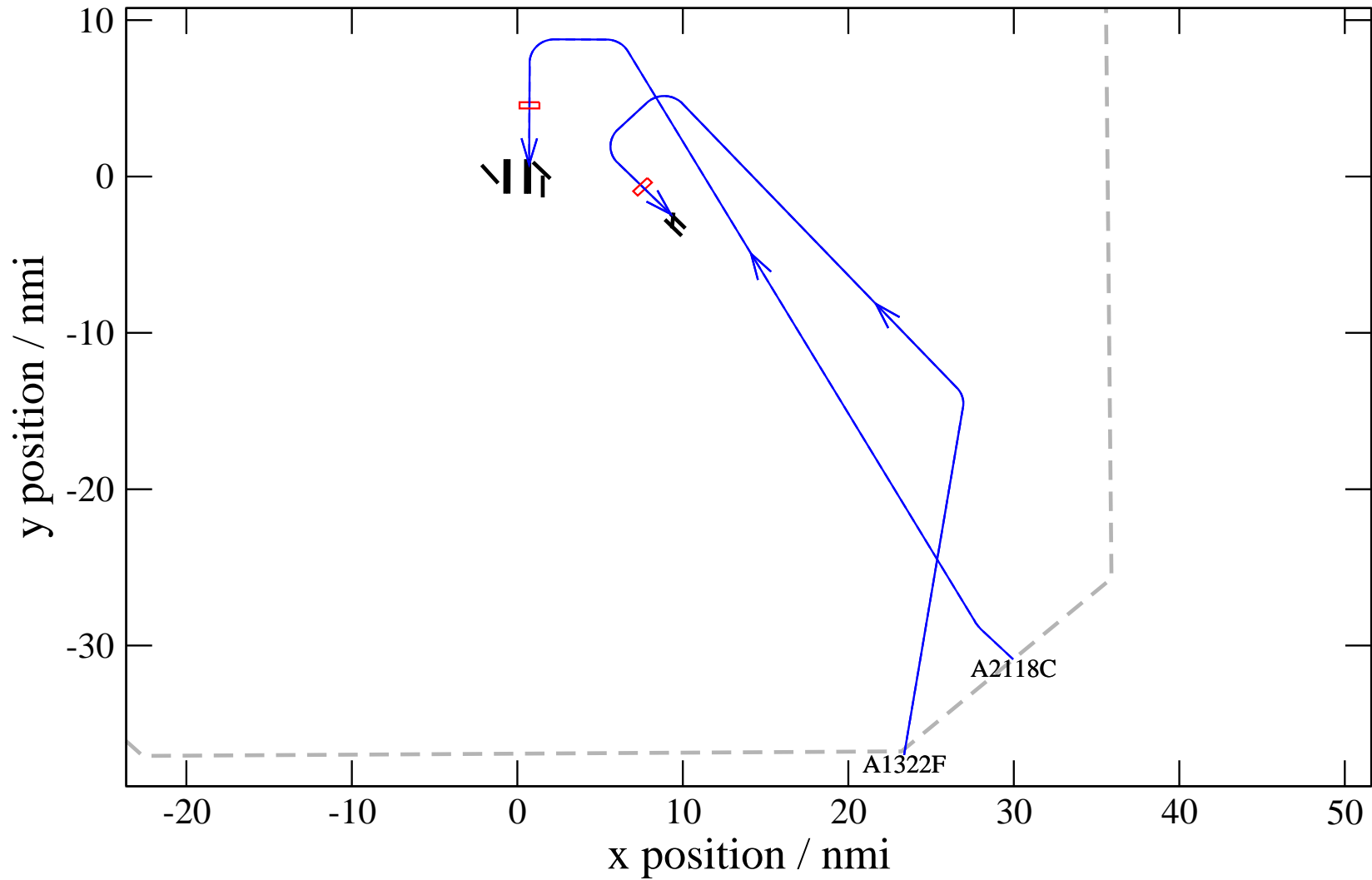
# Maneuver Time Steps

+3:10 [2.60H/-1.00V] A2118C speed dec 32 kn



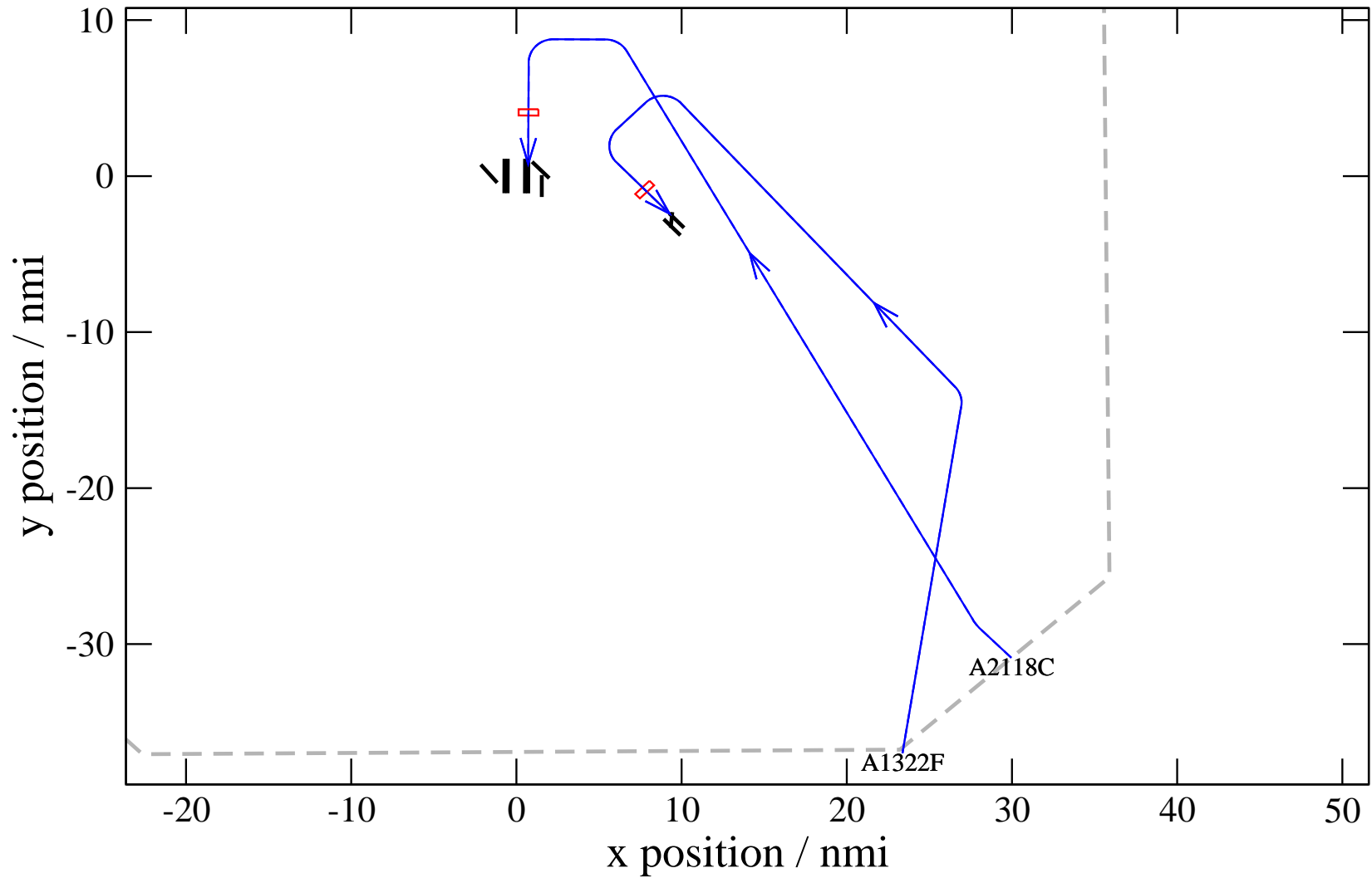
# Maneuver Time Steps

+3:20 [2.58H/-1.00V] A2118C speed dec 32 kn



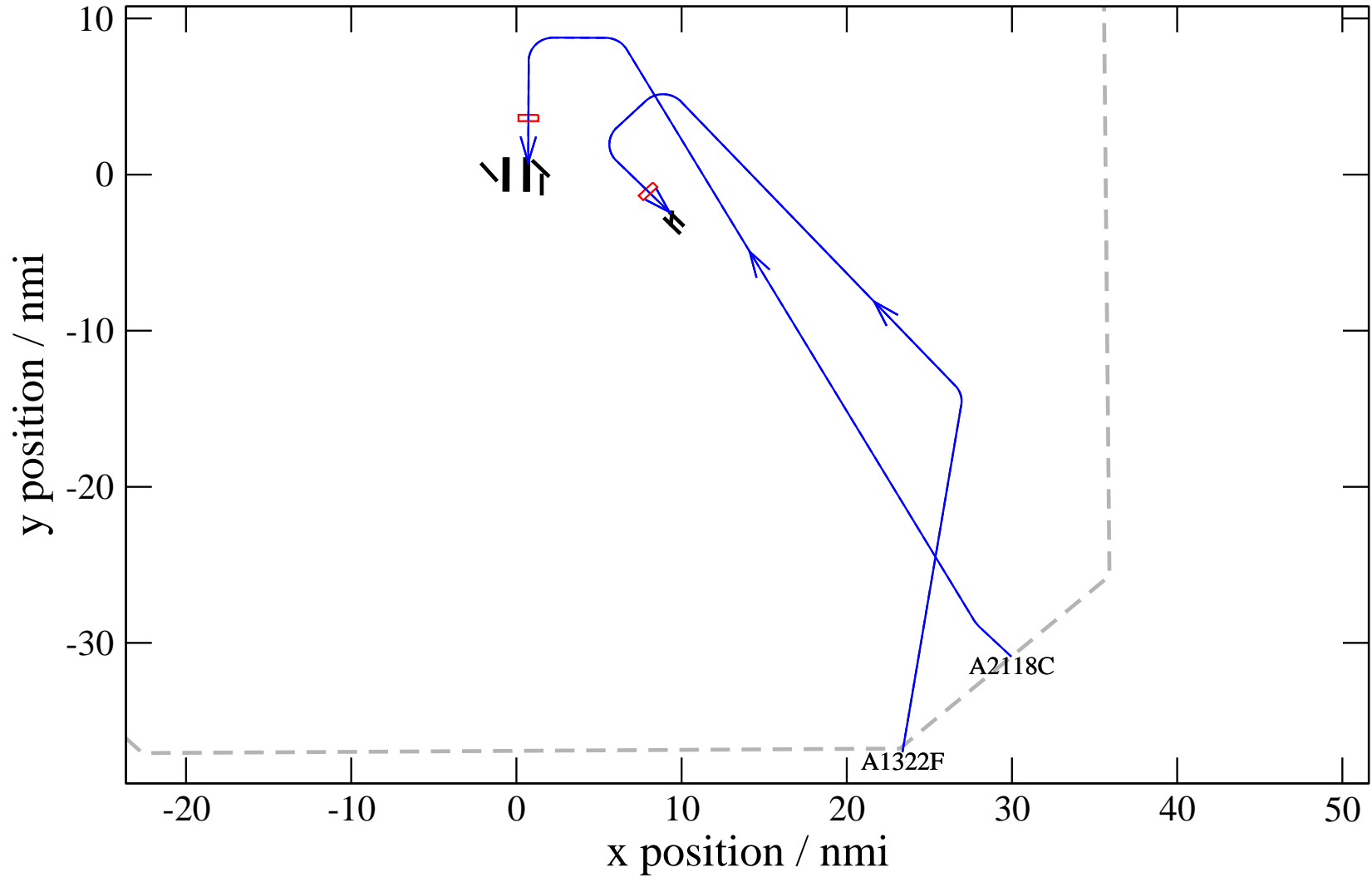
# Maneuver Time Steps

+3:30 [2.58H/-1.00V] A2118C speed dec 32 kn



# Maneuver Time Steps

+3:40 [2.57H/-1.00V] A2118C speed dec 32 kn

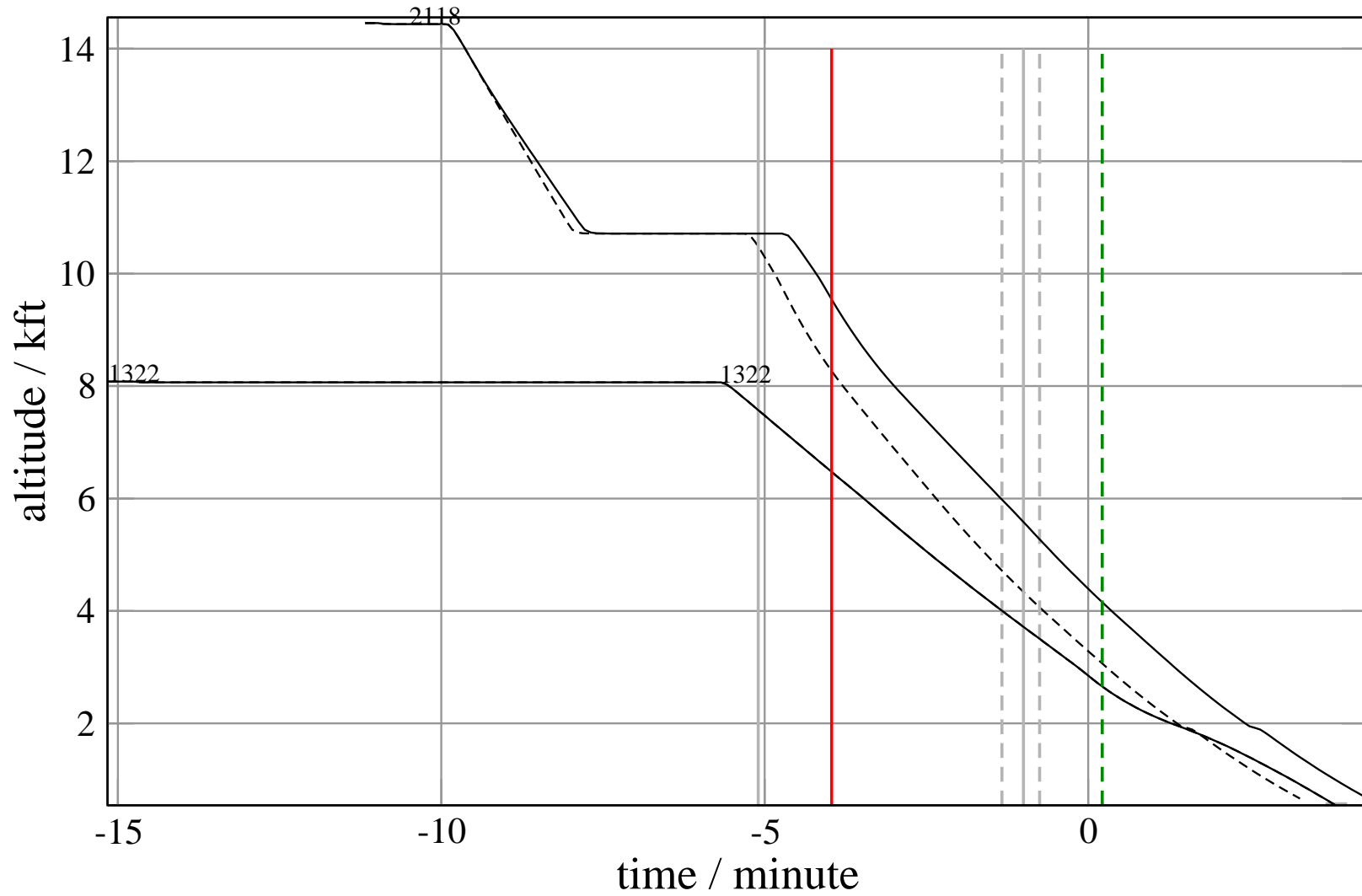






# Maneuver Altitude Profiles

+ A2118C-A1322F 0.785H->1.000H(div): A2118C speed dec 32 kn (+63 s)



# Separation Ratios

+ A2118C-A1322F 0.785H->1.000H(div): A2118C speed dec 32 kn (+63 s)

