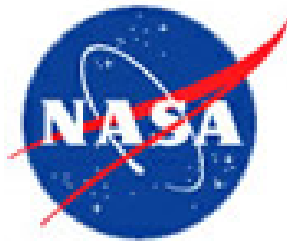


# Plots of Constant-Velocity Encounter Geometry



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The following plots show the planview geometry of air traffic encounters at constant velocity (i.e., constant speed and direction). The trajectories here are based on idealized velocity vectors with no tolerances and are therefore not representative of trajectory specification, but they are useful for illustrating the basic geometry of air traffic encounters.

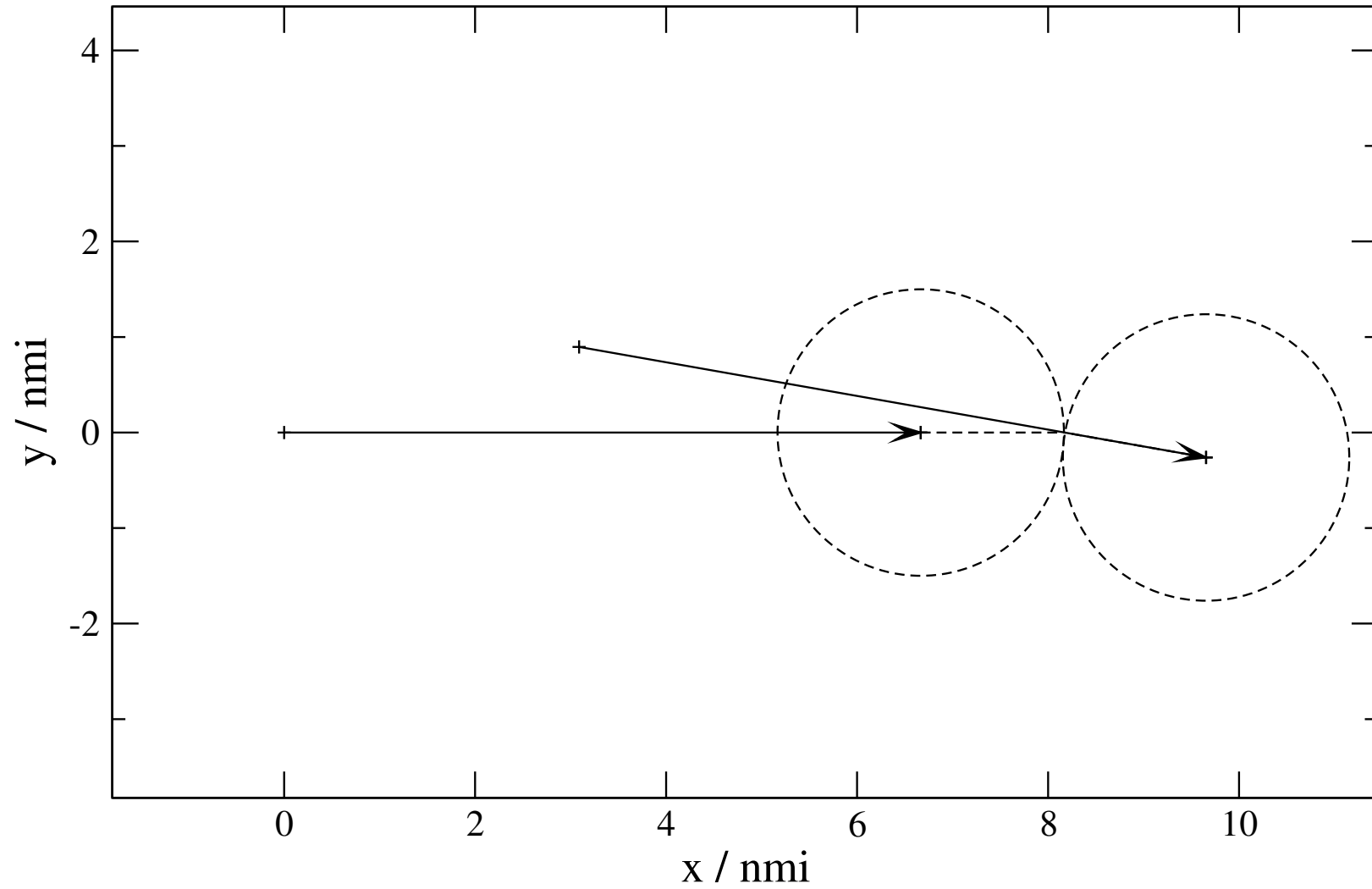
In each of the following plots, the speeds are 200 knots, and the minimum separation is 3 nmi (nautical miles). Each plot represents a particular encounter angle, starting at 10 degrees and incrementing by 10 degrees for each encounter. The circles are 3 nmi in diameter and are centered at the point of minimum separation. The horizontal separation is exactly 3 nmi when the circles touch without overlapping (i.e., are tangent to each other) as shown.

An encounter with a given angle and minimum separation can have two different geometries, depending on which flight passes ahead of or behind the other (i.e., which crosses the route intersection point first. Both crossing orders are shown in the plots. First the encounter angles are stepped through for one crossing order and then the other.

[generated with plot/ConstVelEncounter.scala]

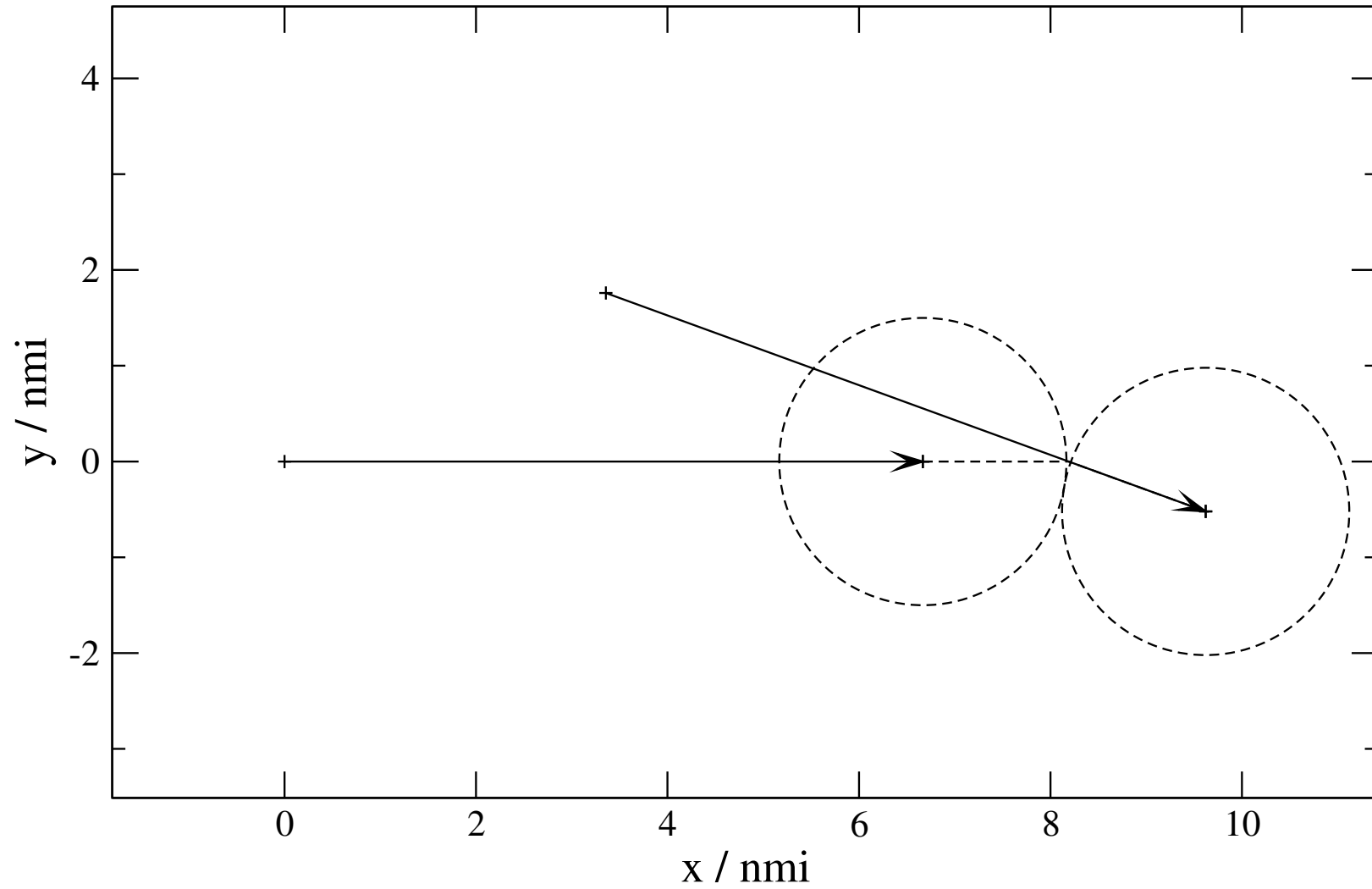
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 10 deg, min separation: 3.00 nmi



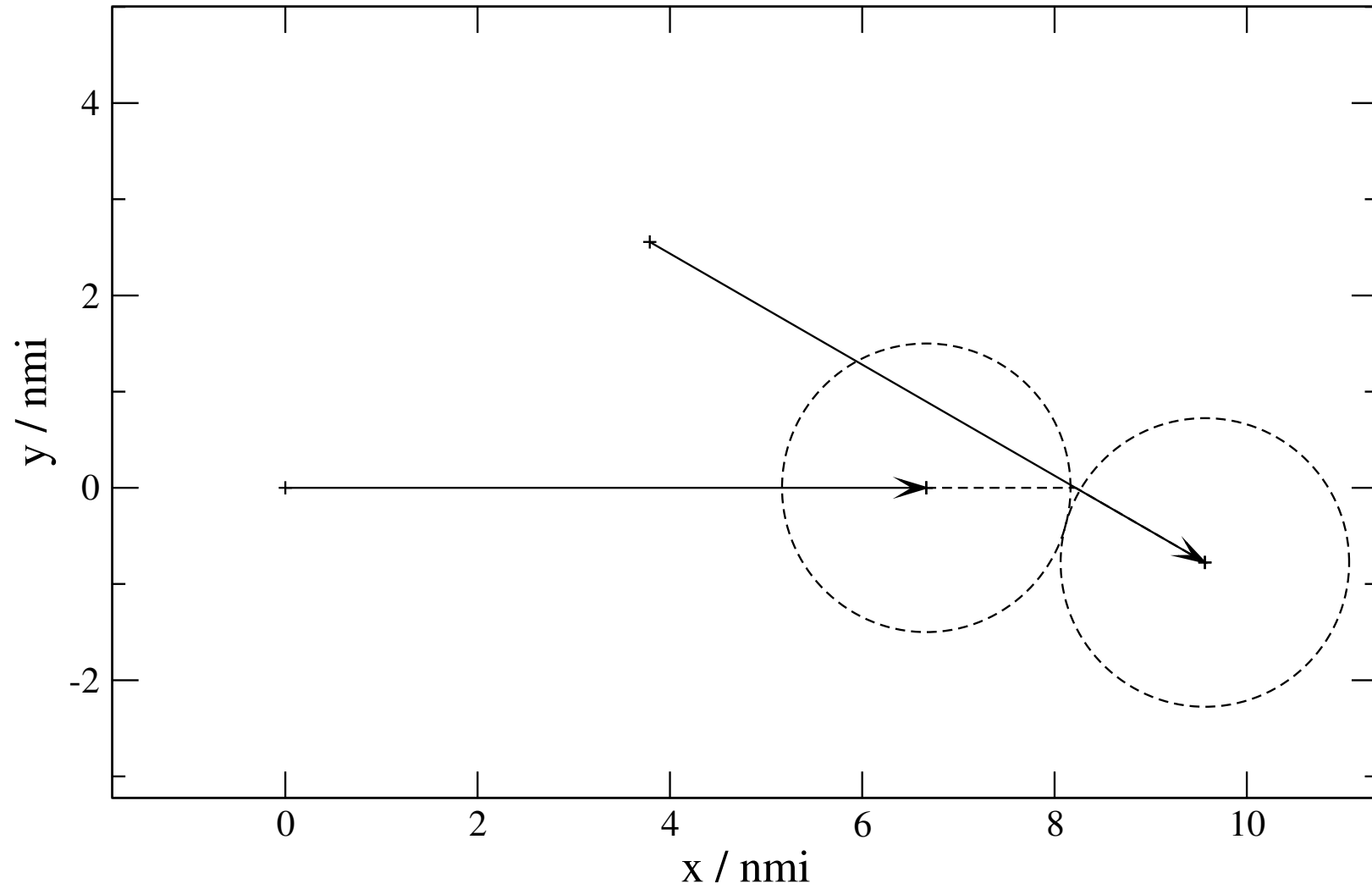
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 20 deg, min separation: 3.00 nmi



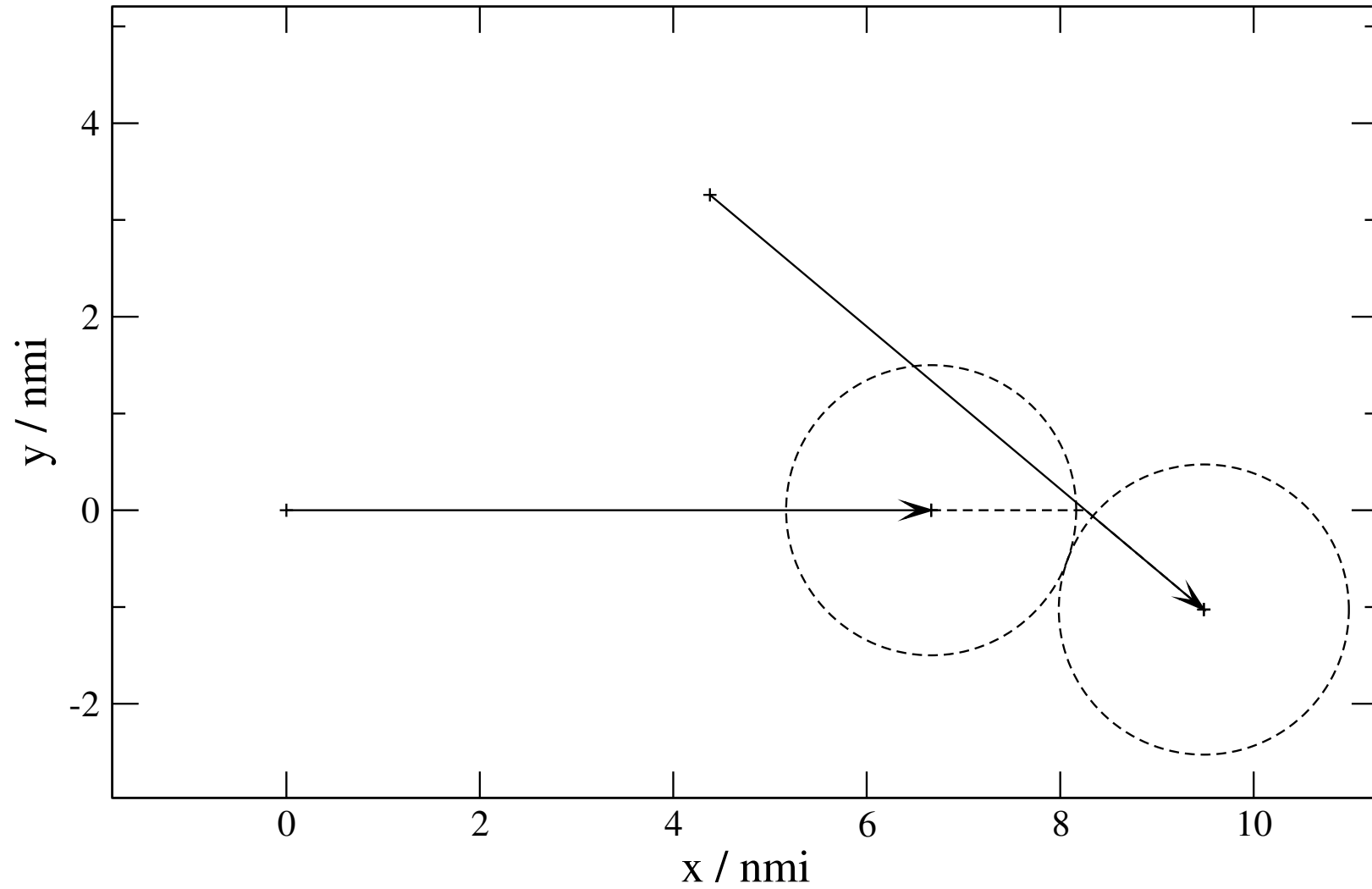
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 30 deg, min separation: 3.00 nmi



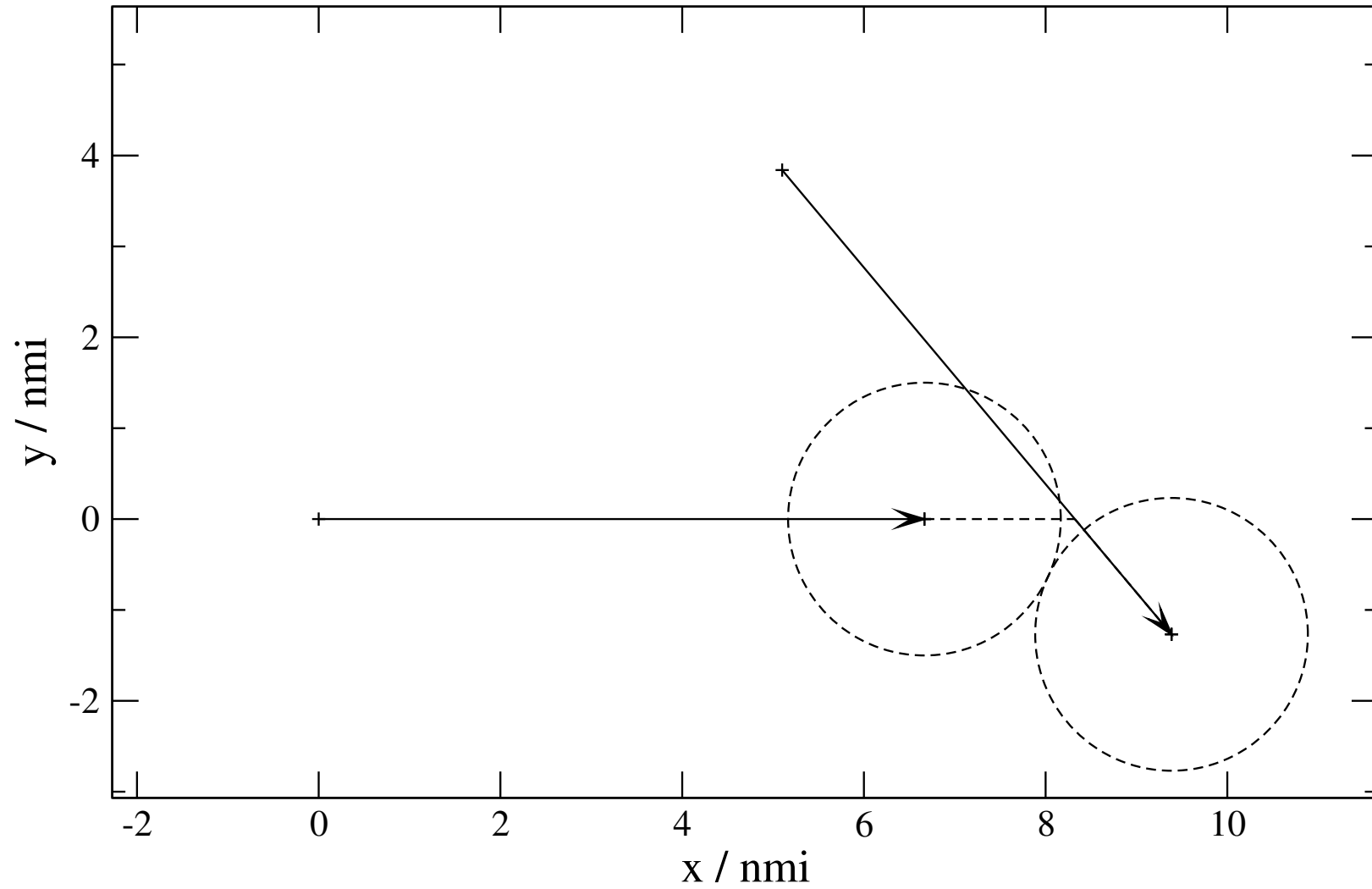
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 40 deg, min separation: 3.00 nmi



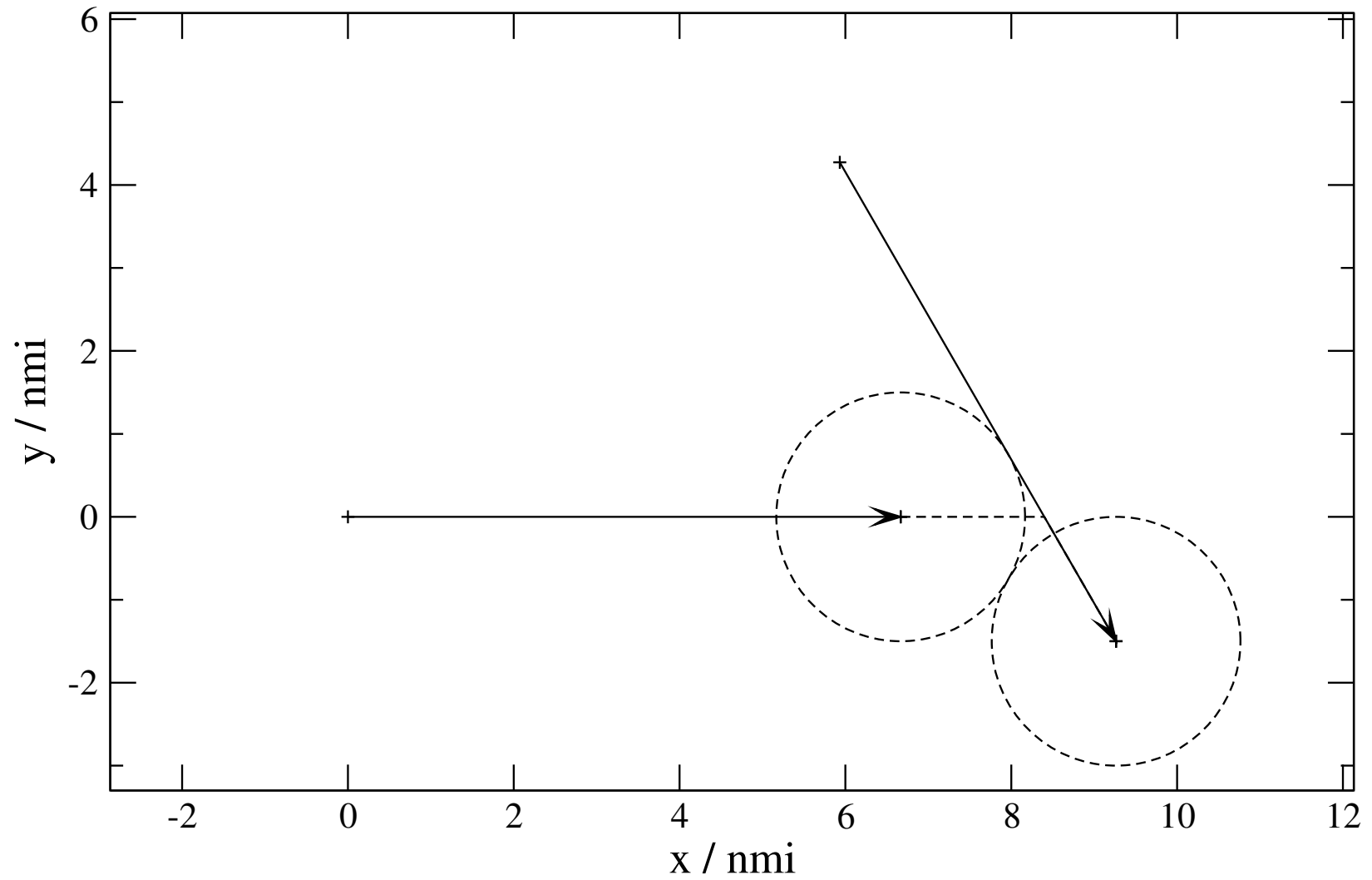
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 50 deg, min separation: 3.00 nmi



# Constant-Velocity Encounter Planview

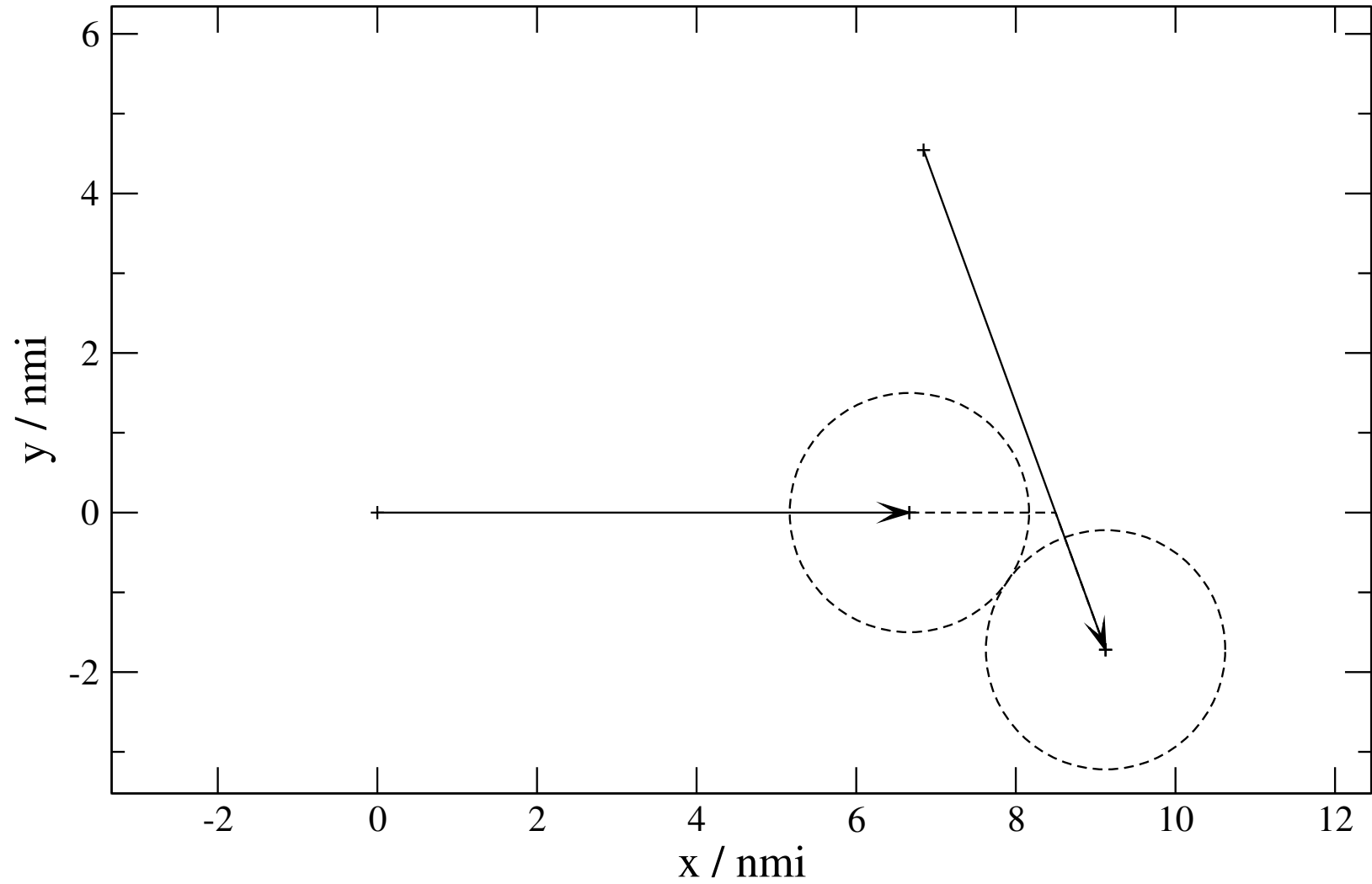
time: +0.0 sec, angle: 60 deg, min separation: 3.00 nmi





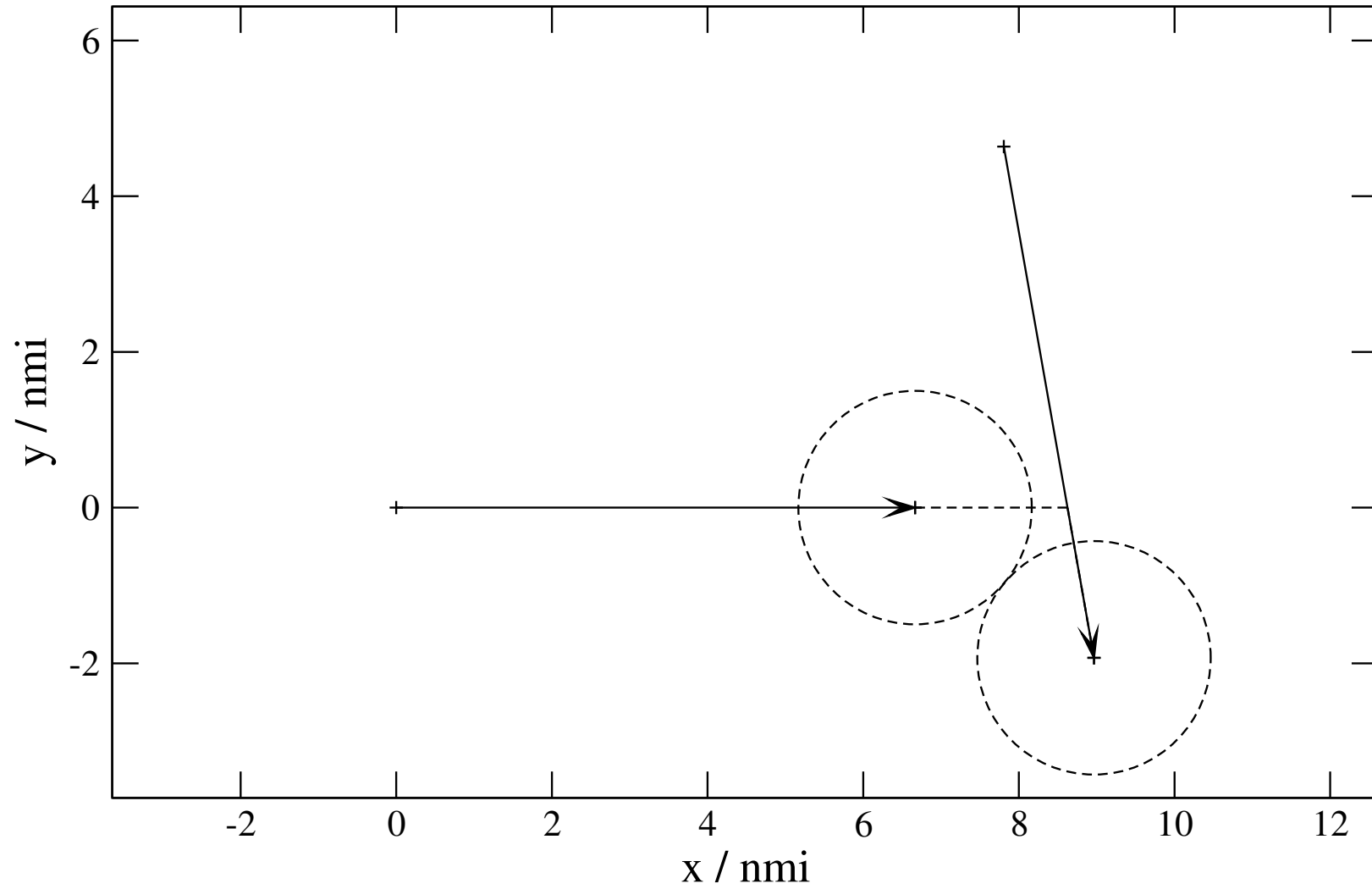
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 70 deg, min separation: 3.00 nmi



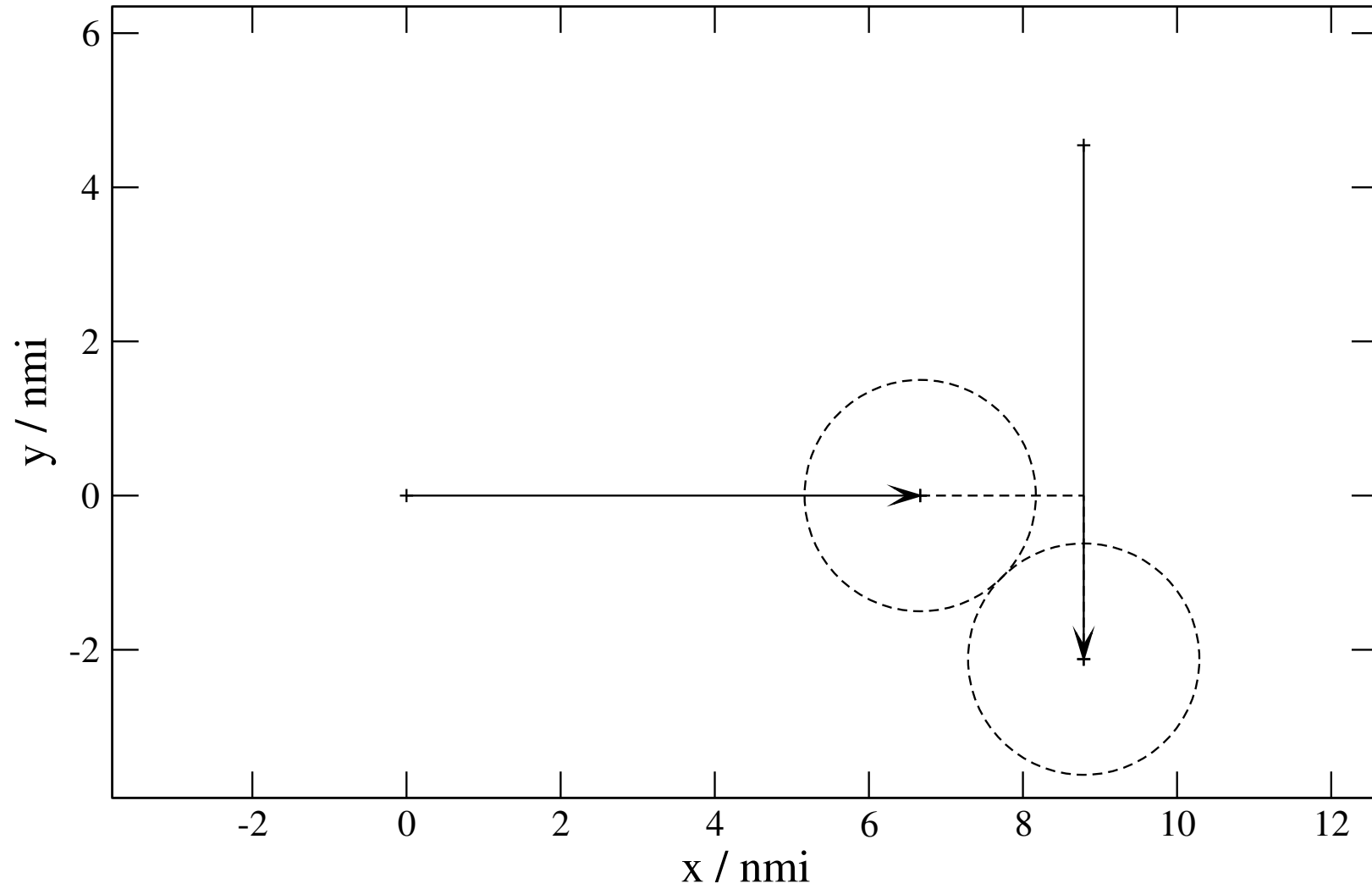
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 80 deg, min separation: 3.00 nmi



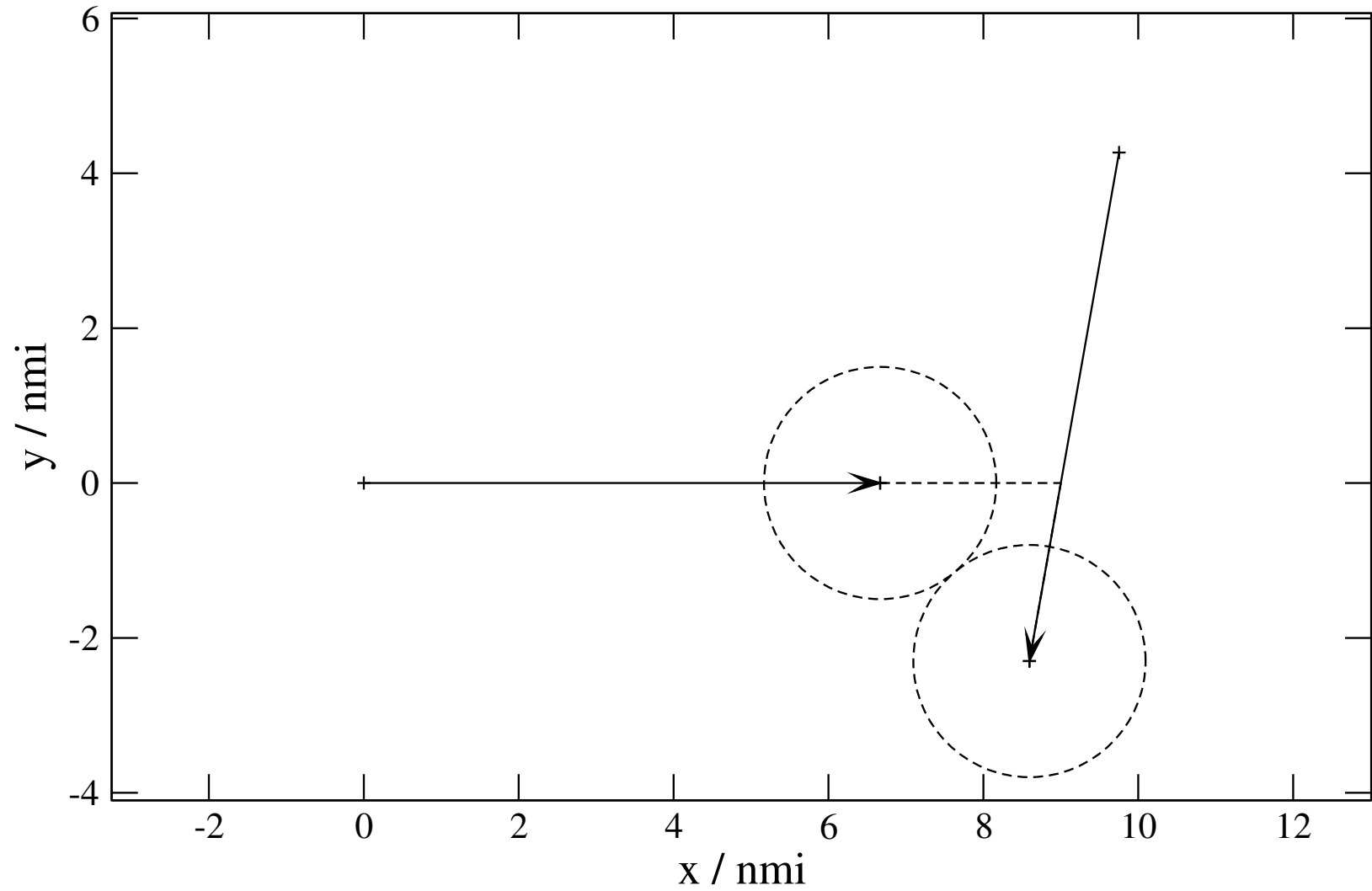
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 90 deg, min separation: 3.00 nmi



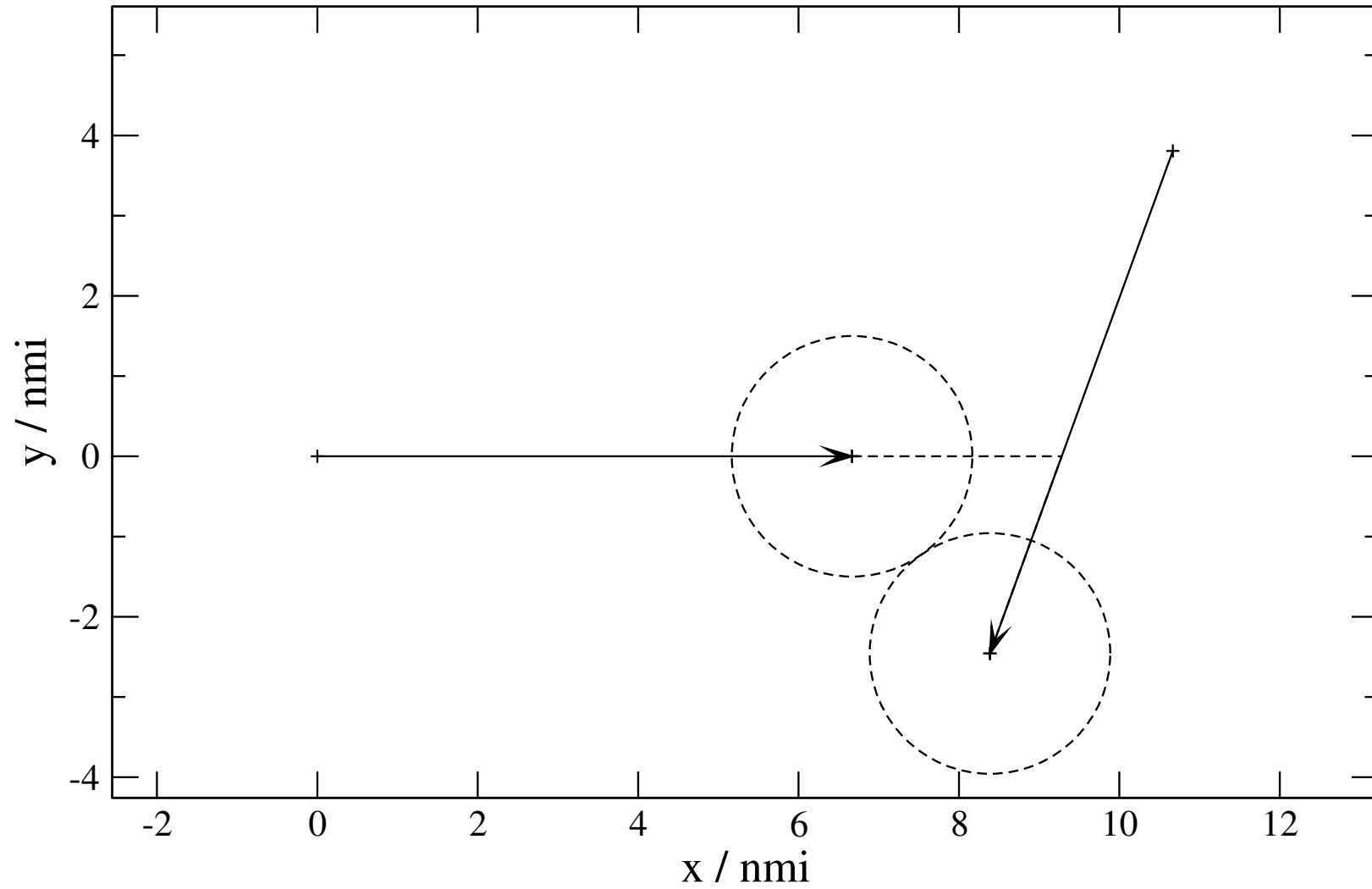
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 100 deg, min separation: 3.00 nmi



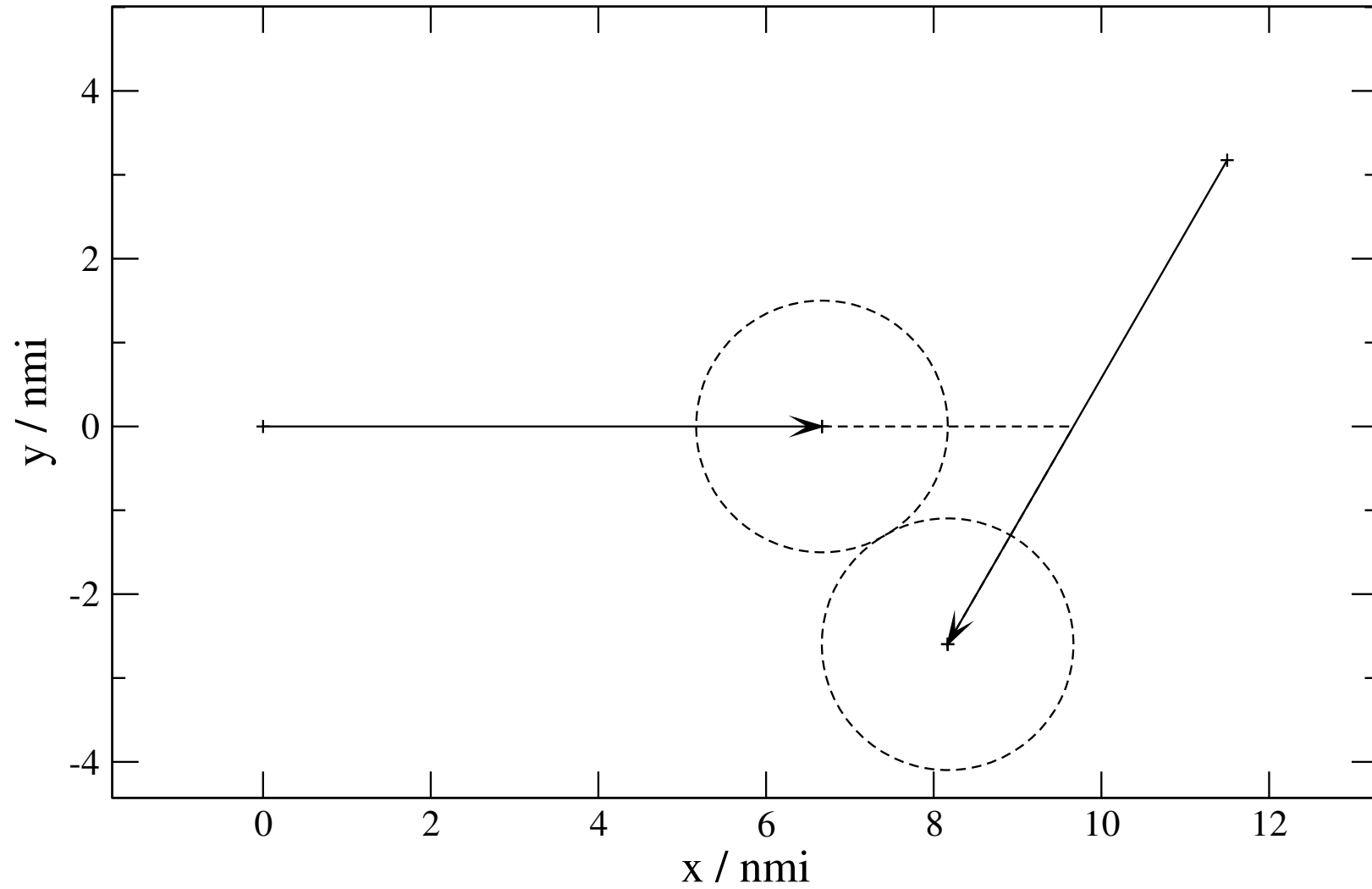
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 110 deg, min separation: 3.00 nmi



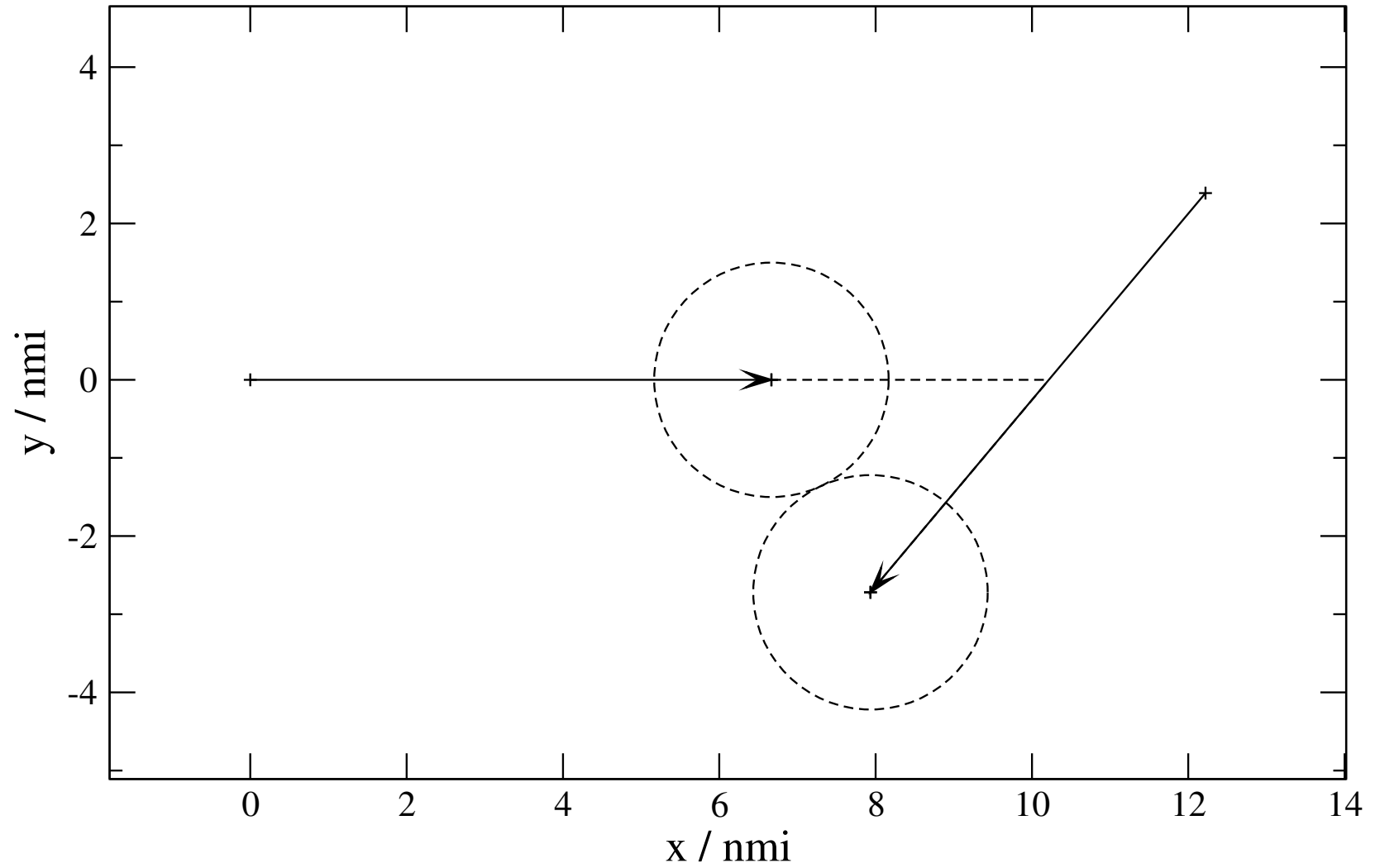
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 120 deg, min separation: 3.00 nmi



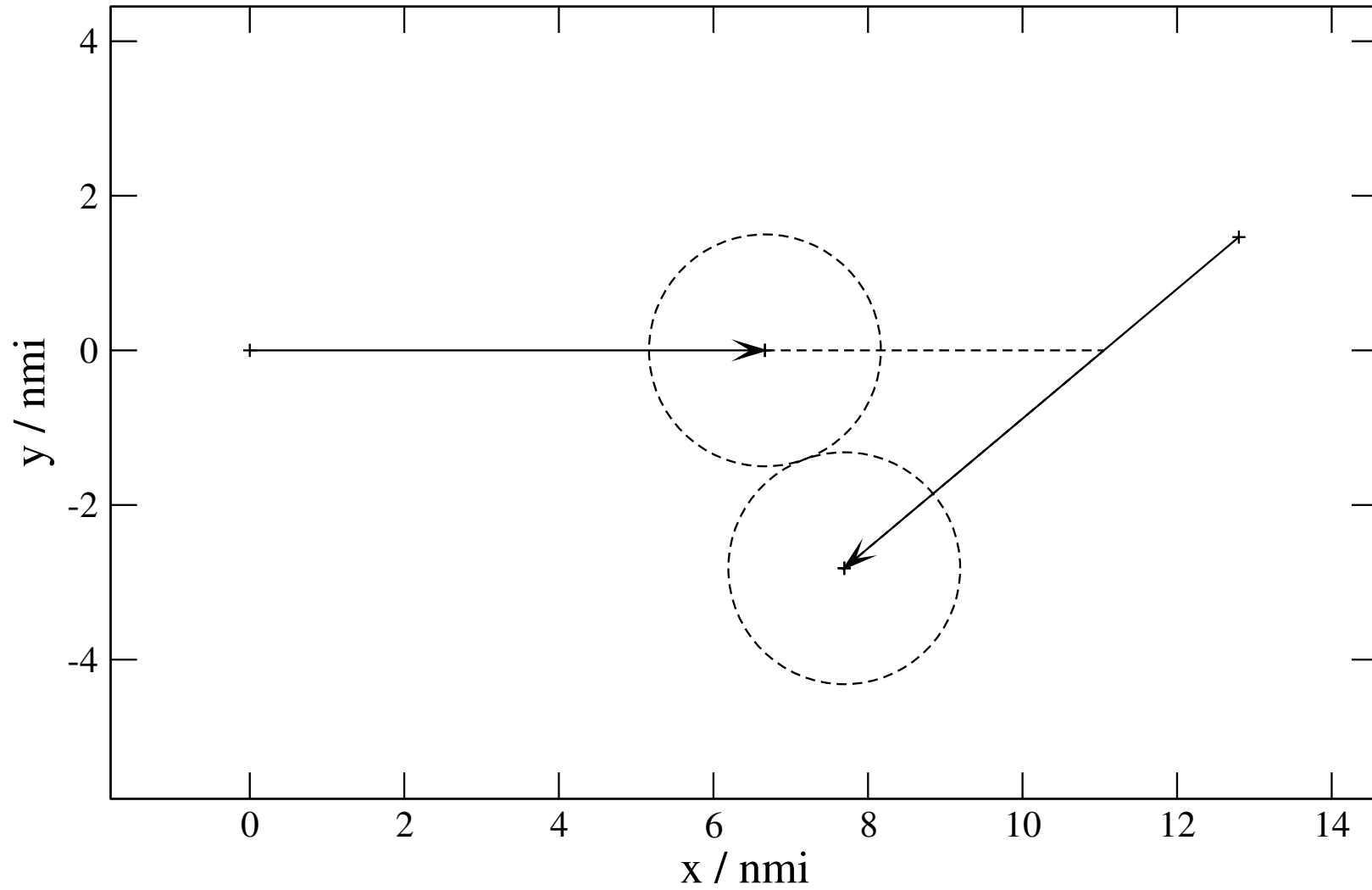
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 130 deg, min separation: 3.00 nmi



# Constant-Velocity Encounter Planview

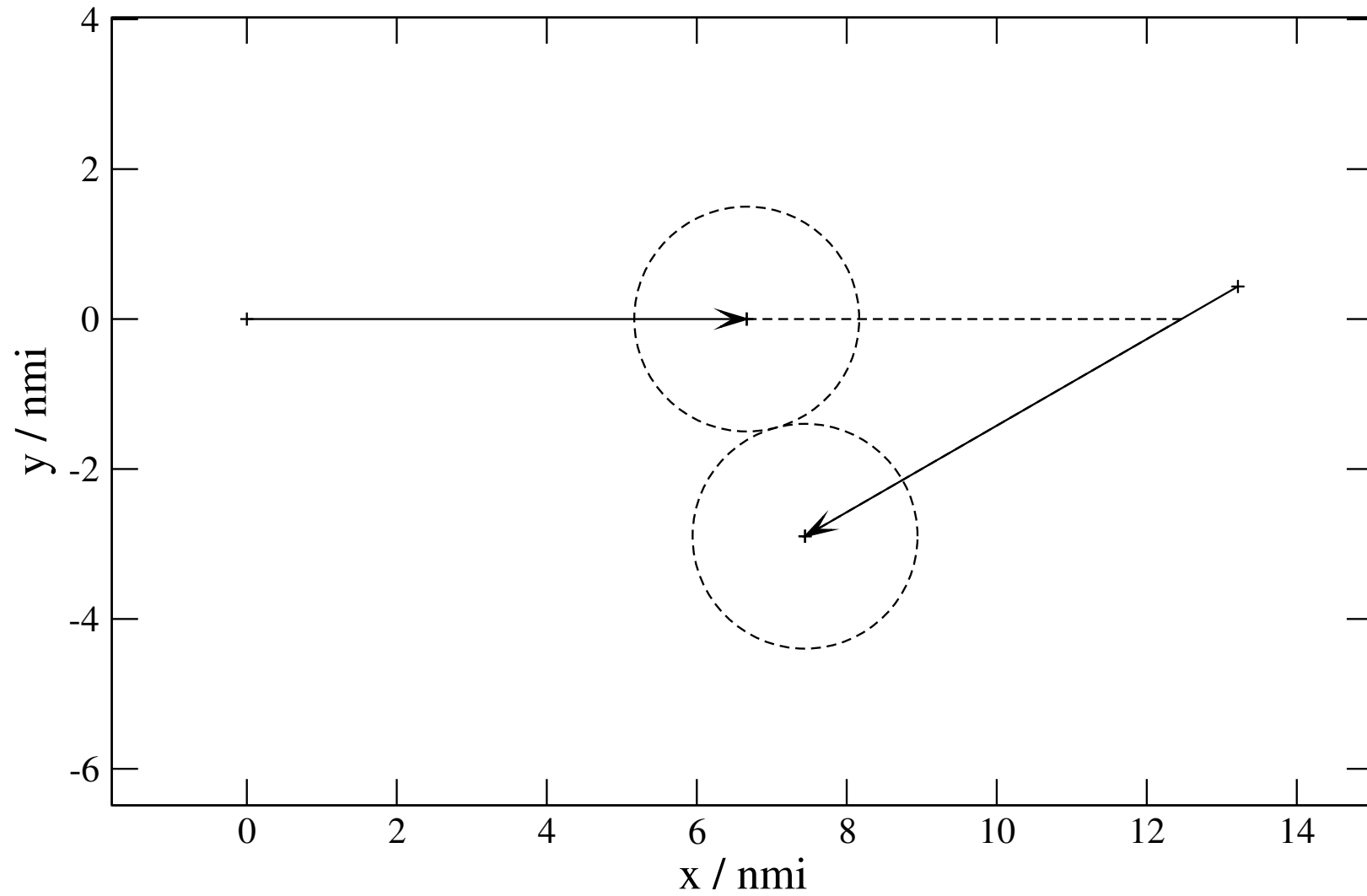
time: +0.0 sec, angle: 140 deg, min separation: 3.00 nmi





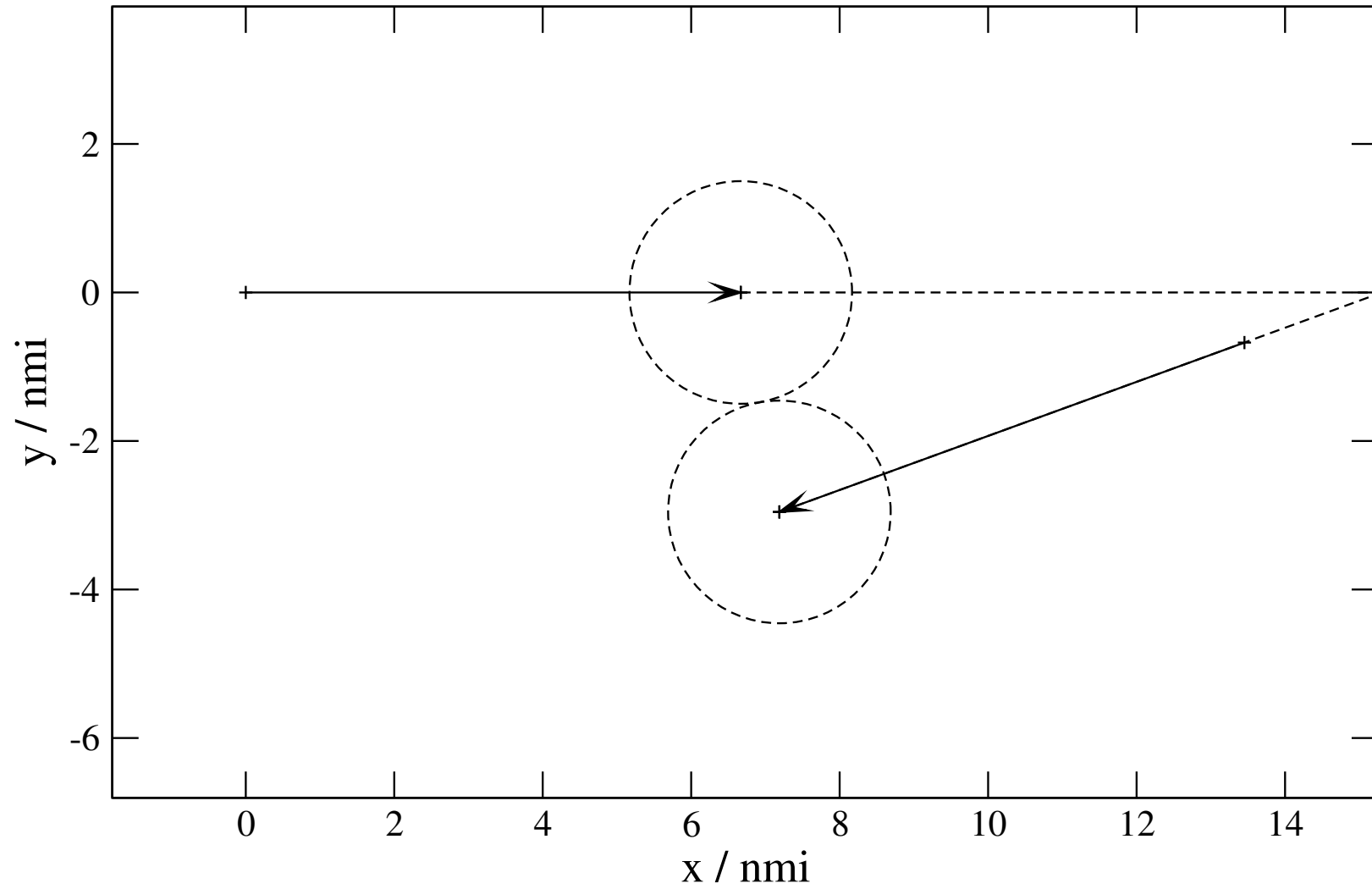
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 150 deg, min separation: 3.00 nmi



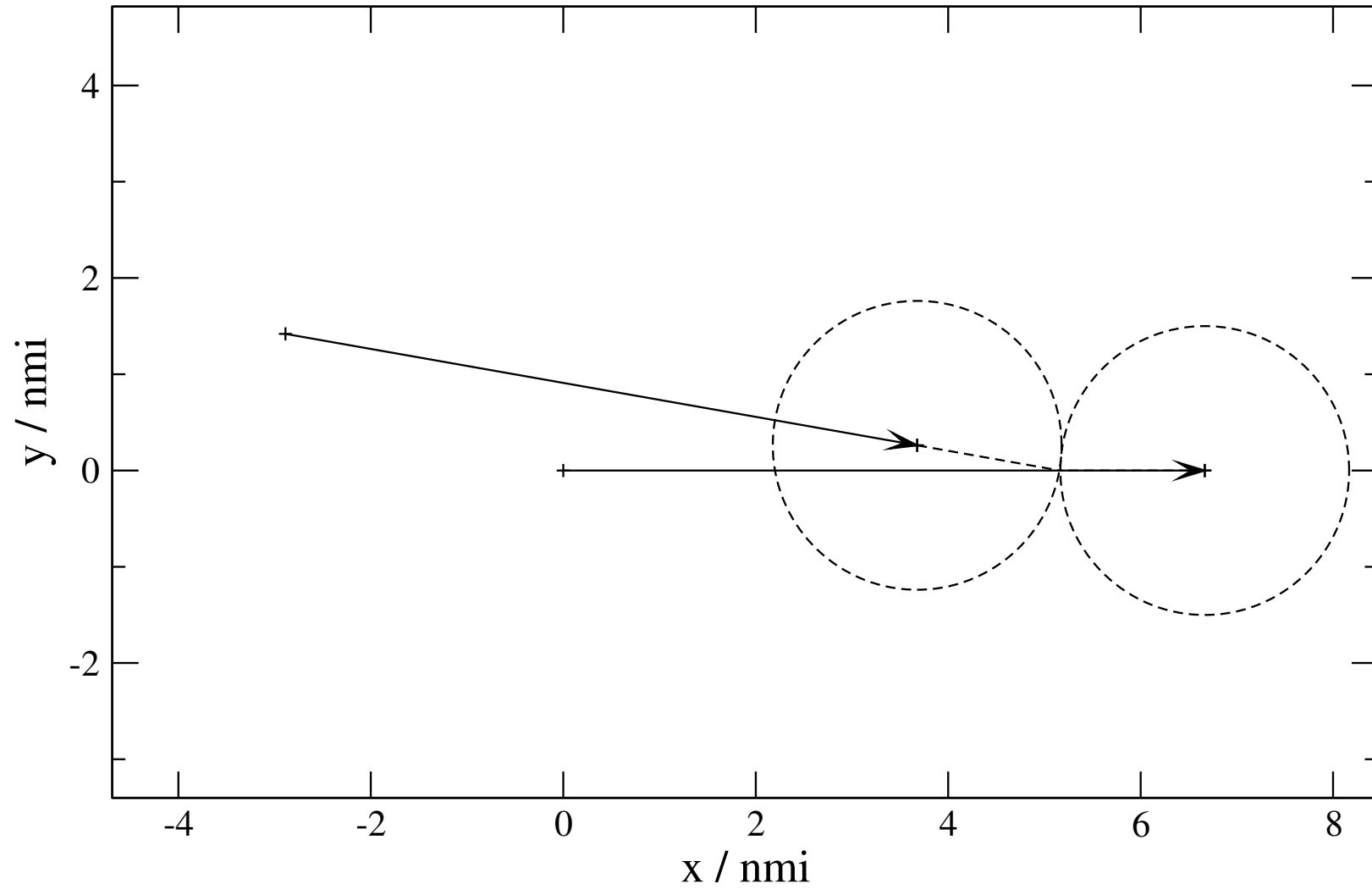
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 160 deg, min separation: 3.00 nmi



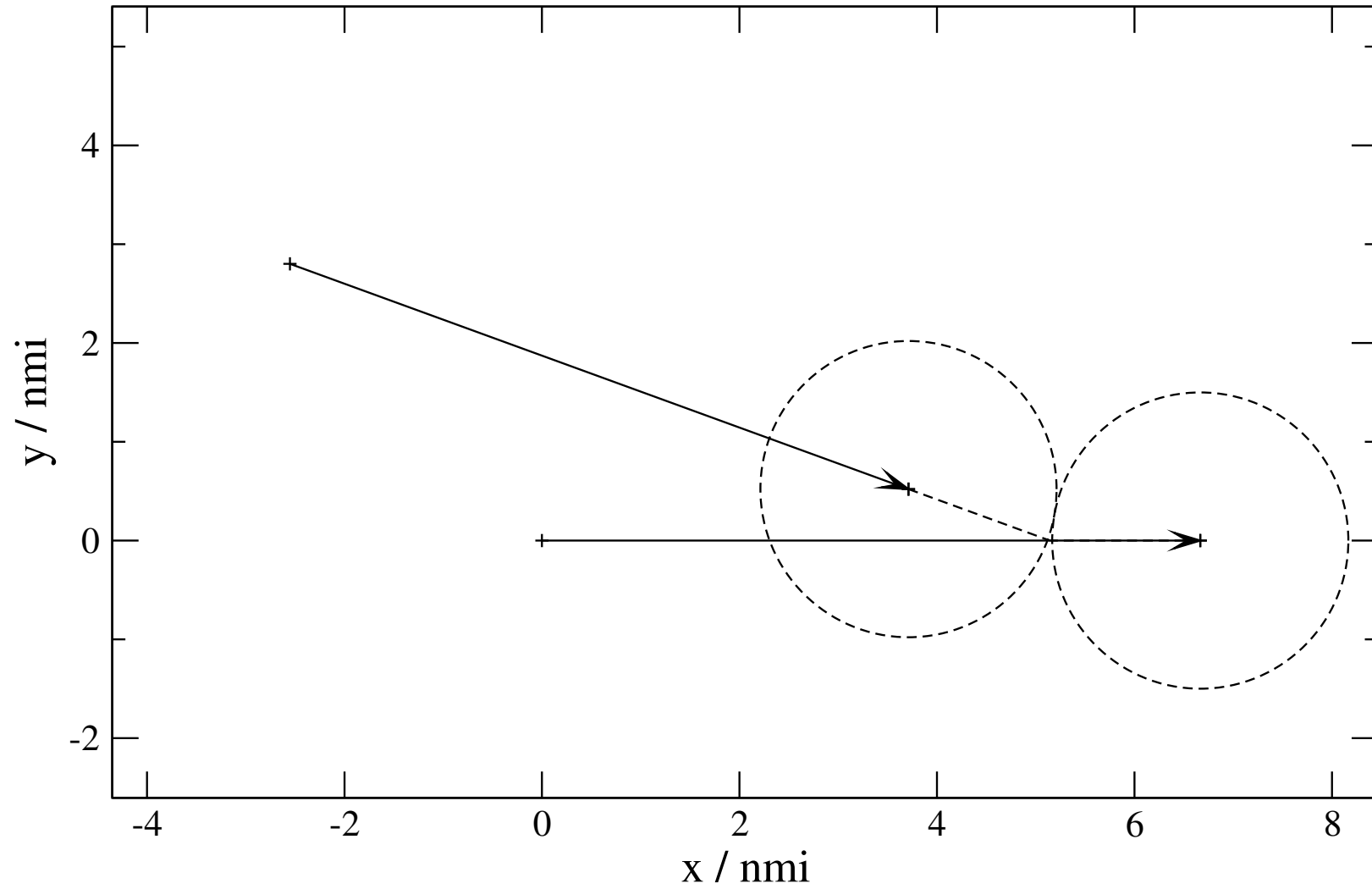
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 10 deg, min separation: 3.00 nmi



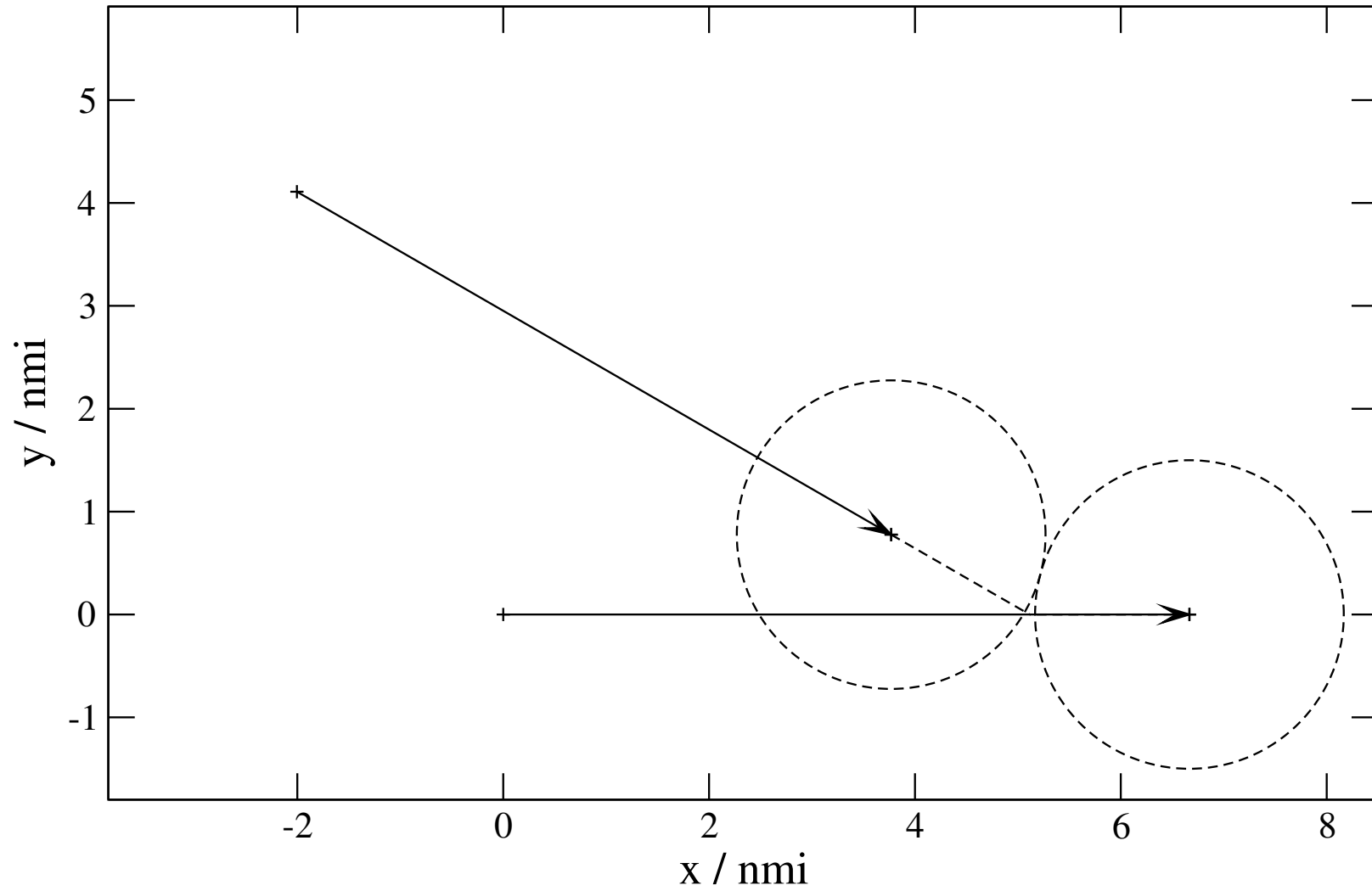
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 20 deg, min separation: 3.00 nmi



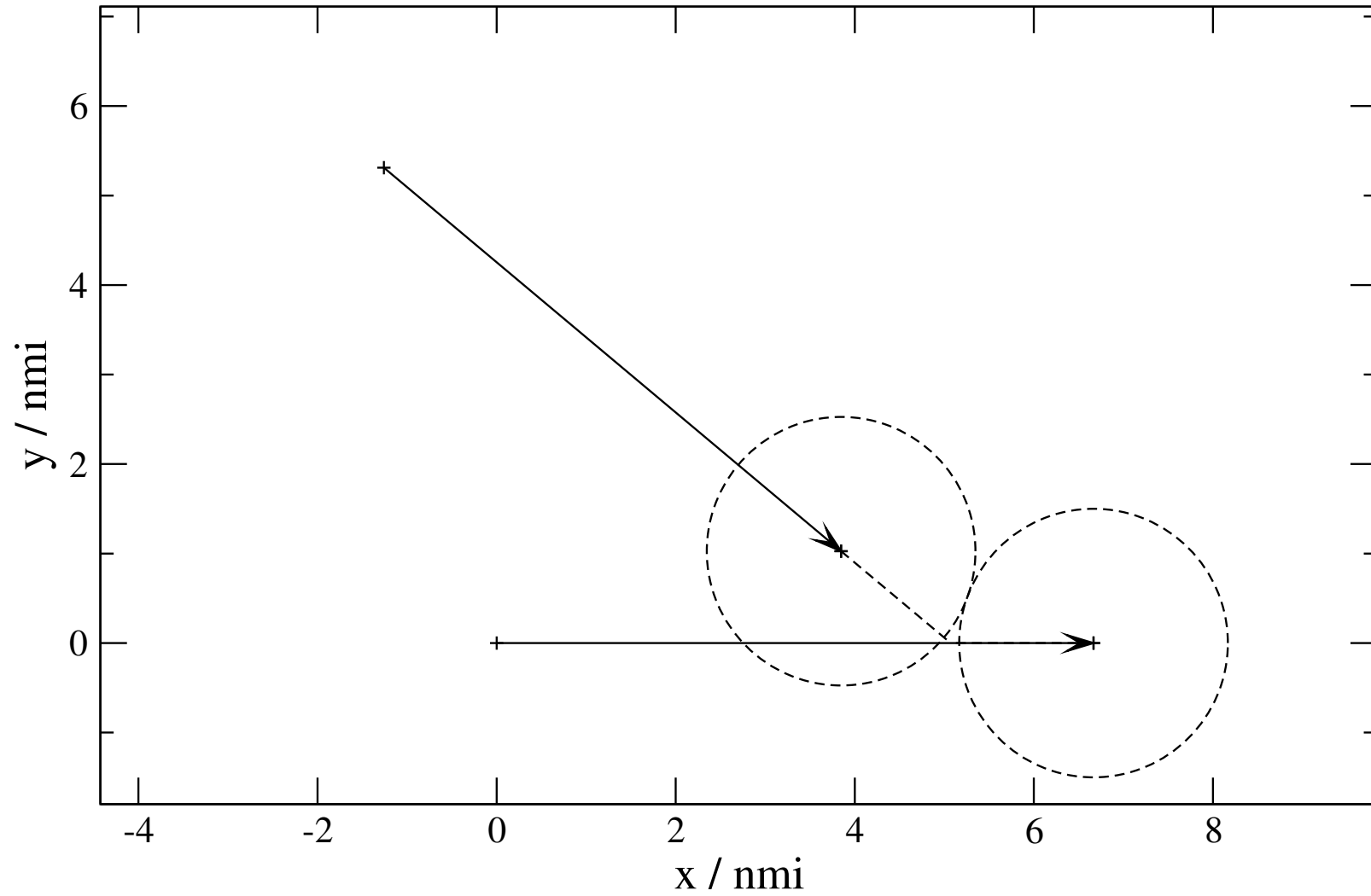
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 30 deg, min separation: 3.00 nmi



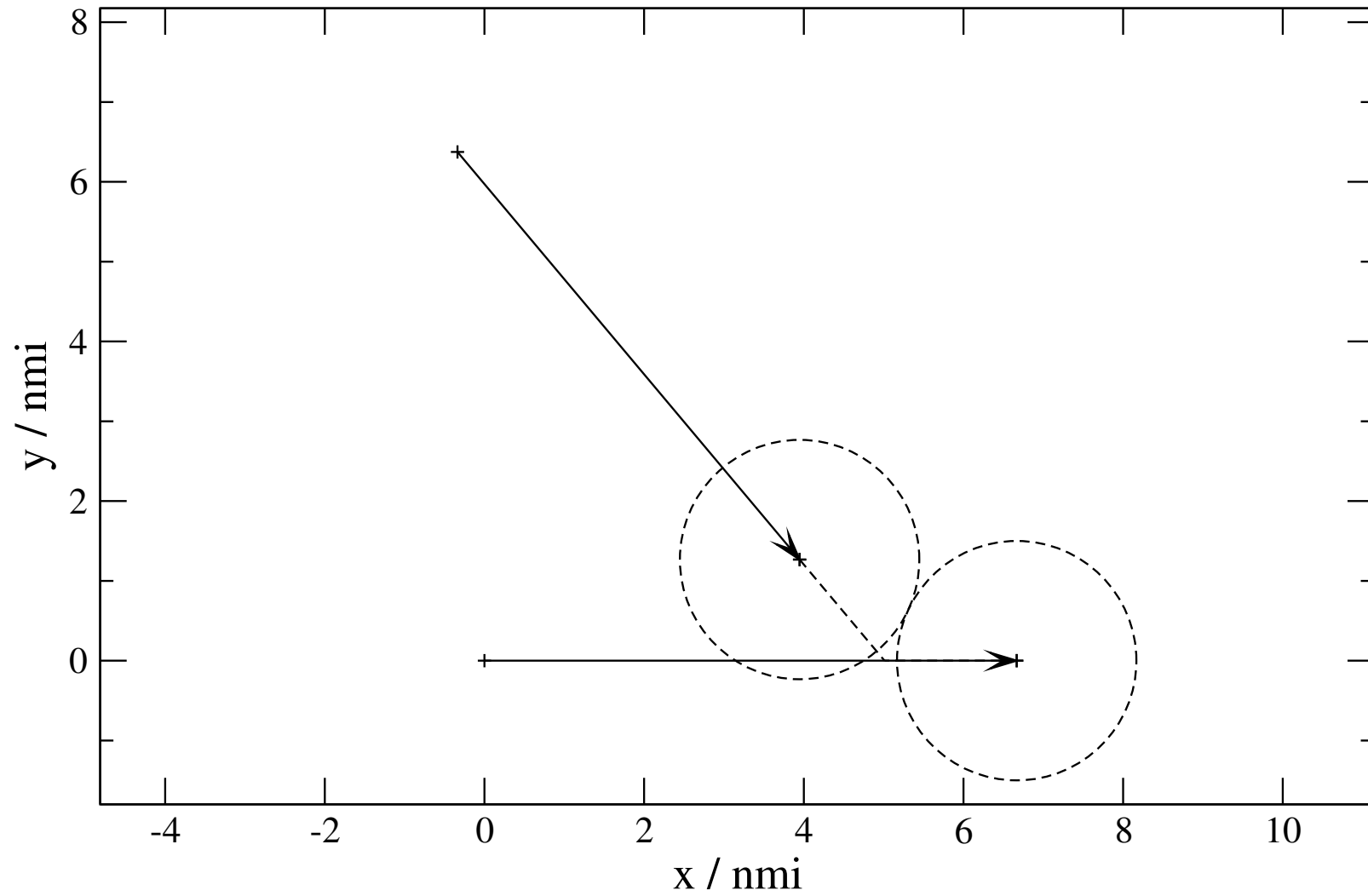
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 40 deg, min separation: 3.00 nmi



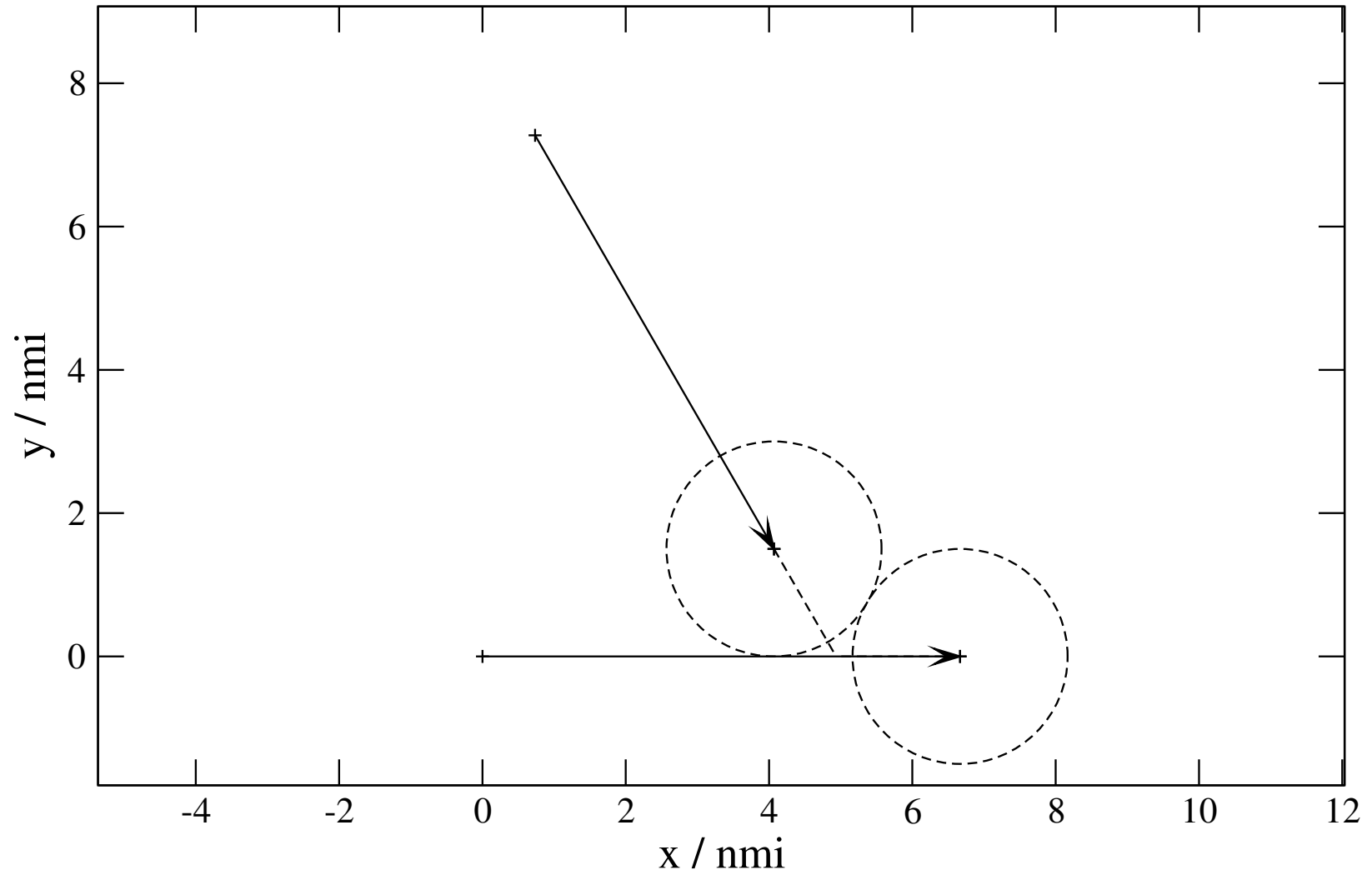
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 50 deg, min separation: 3.00 nmi



# Constant-Velocity Encounter Planview

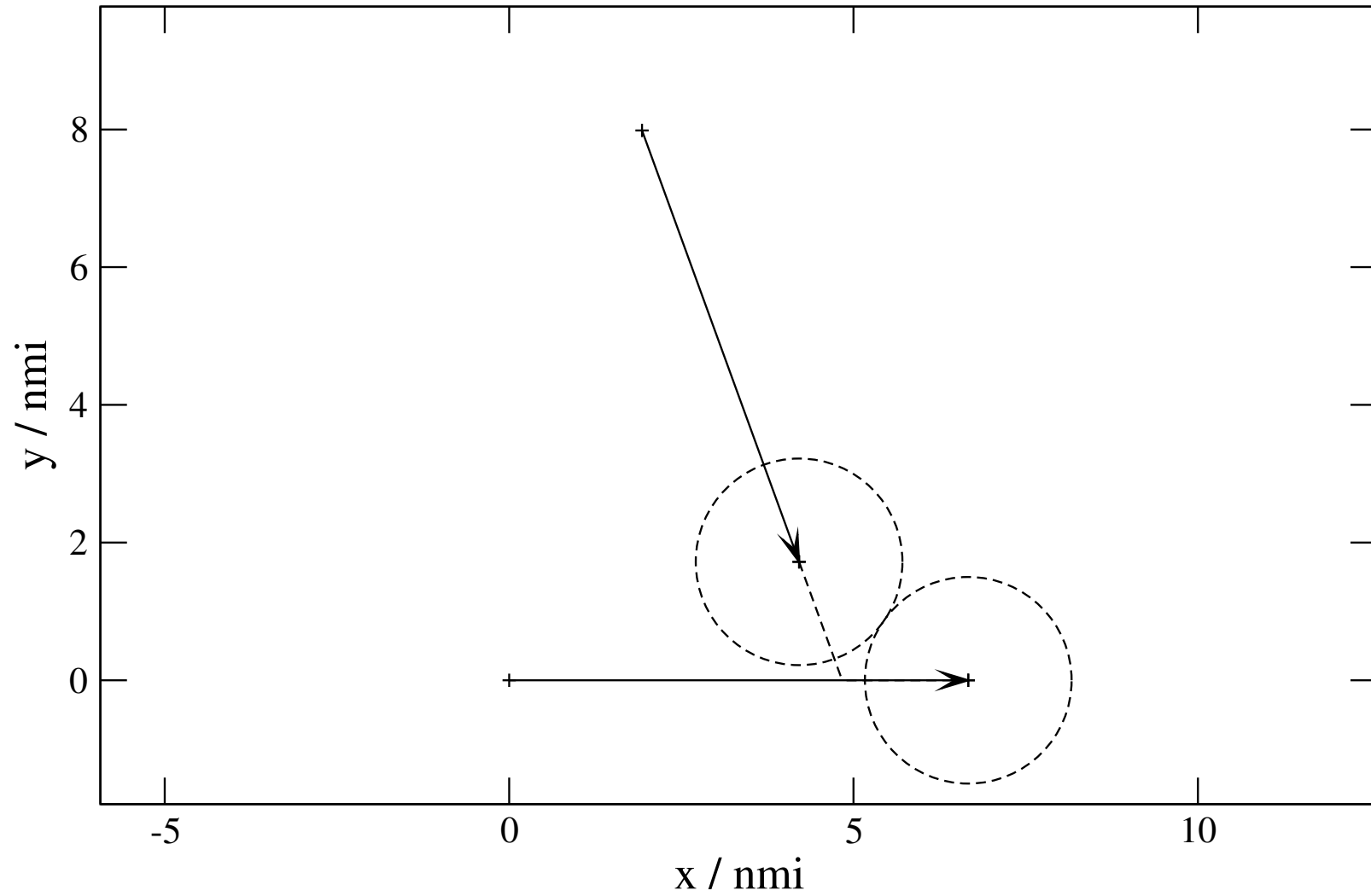
time: +0.0 sec, angle: 60 deg, min separation: 3.00 nmi





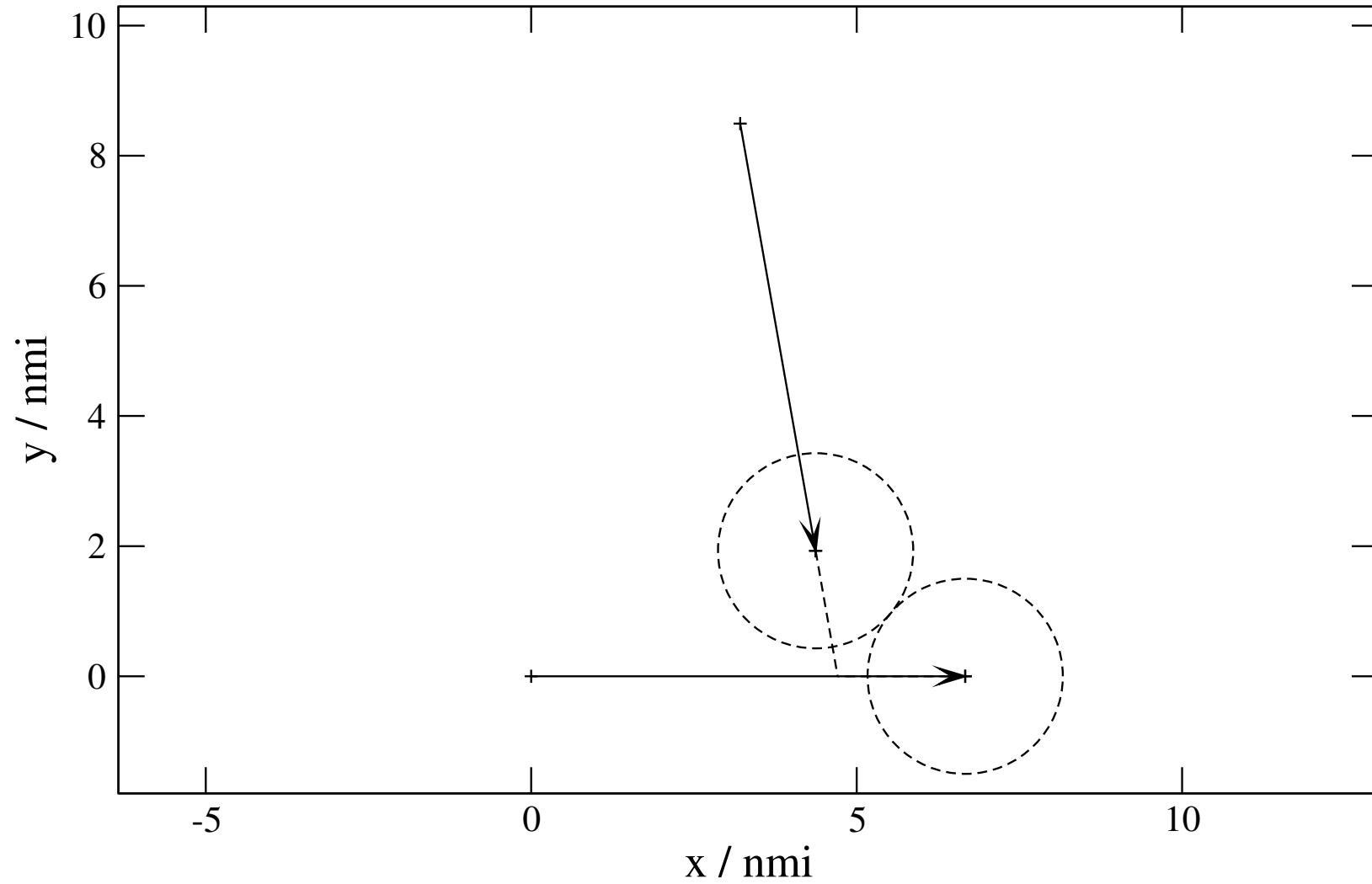
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 70 deg, min separation: 3.00 nmi



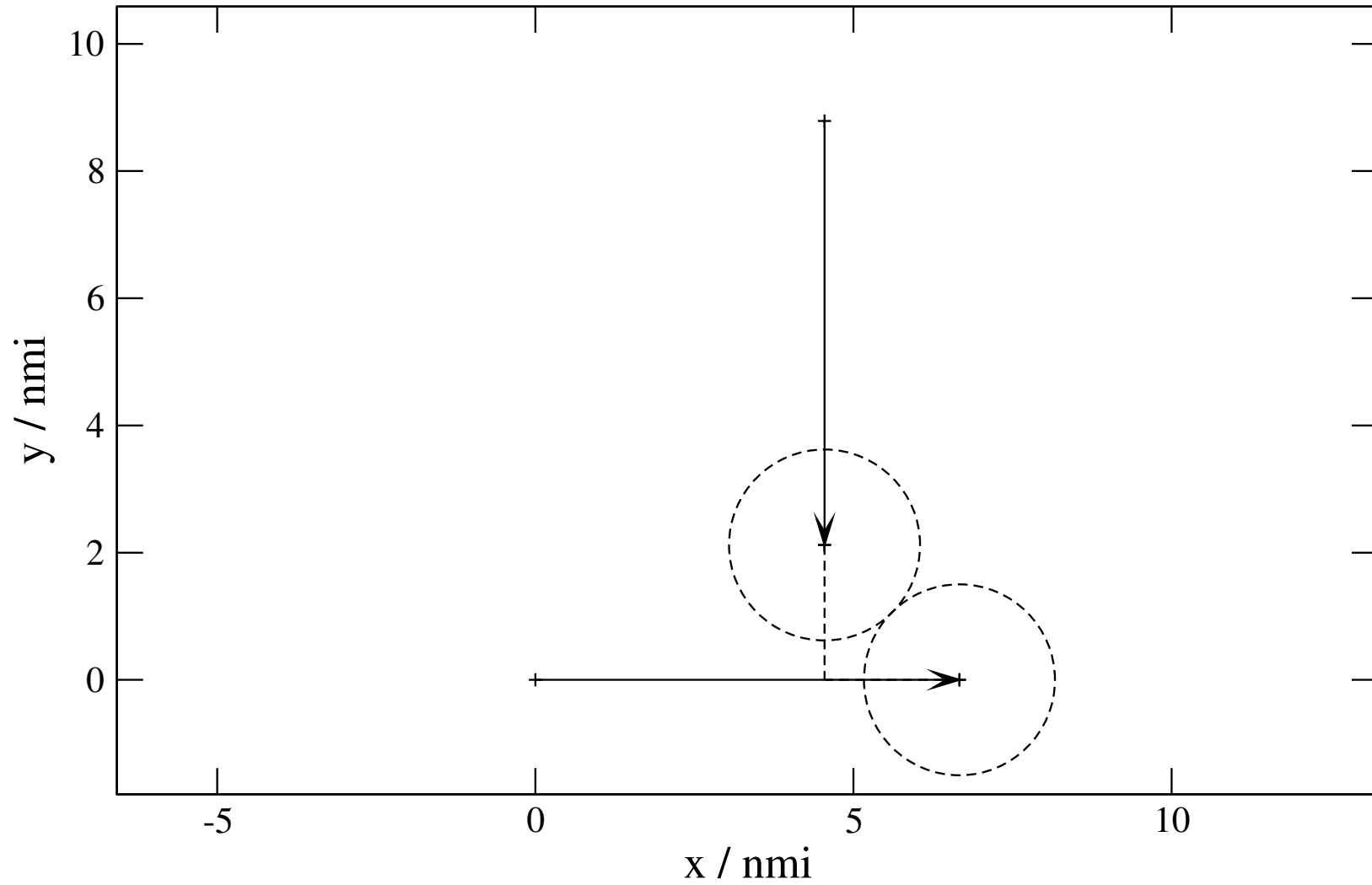
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 80 deg, min separation: 3.00 nmi



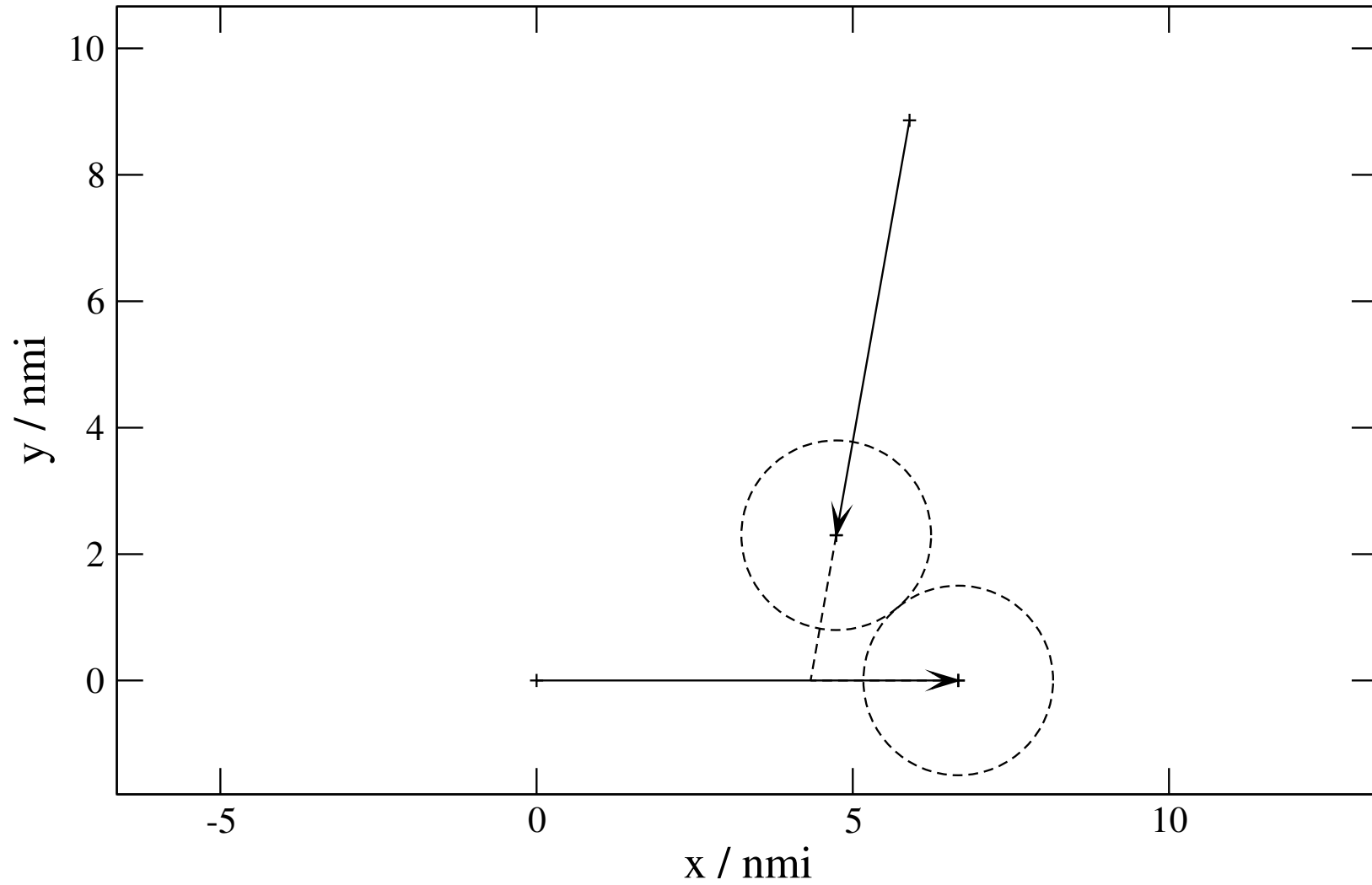
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 90 deg, min separation: 3.00 nmi



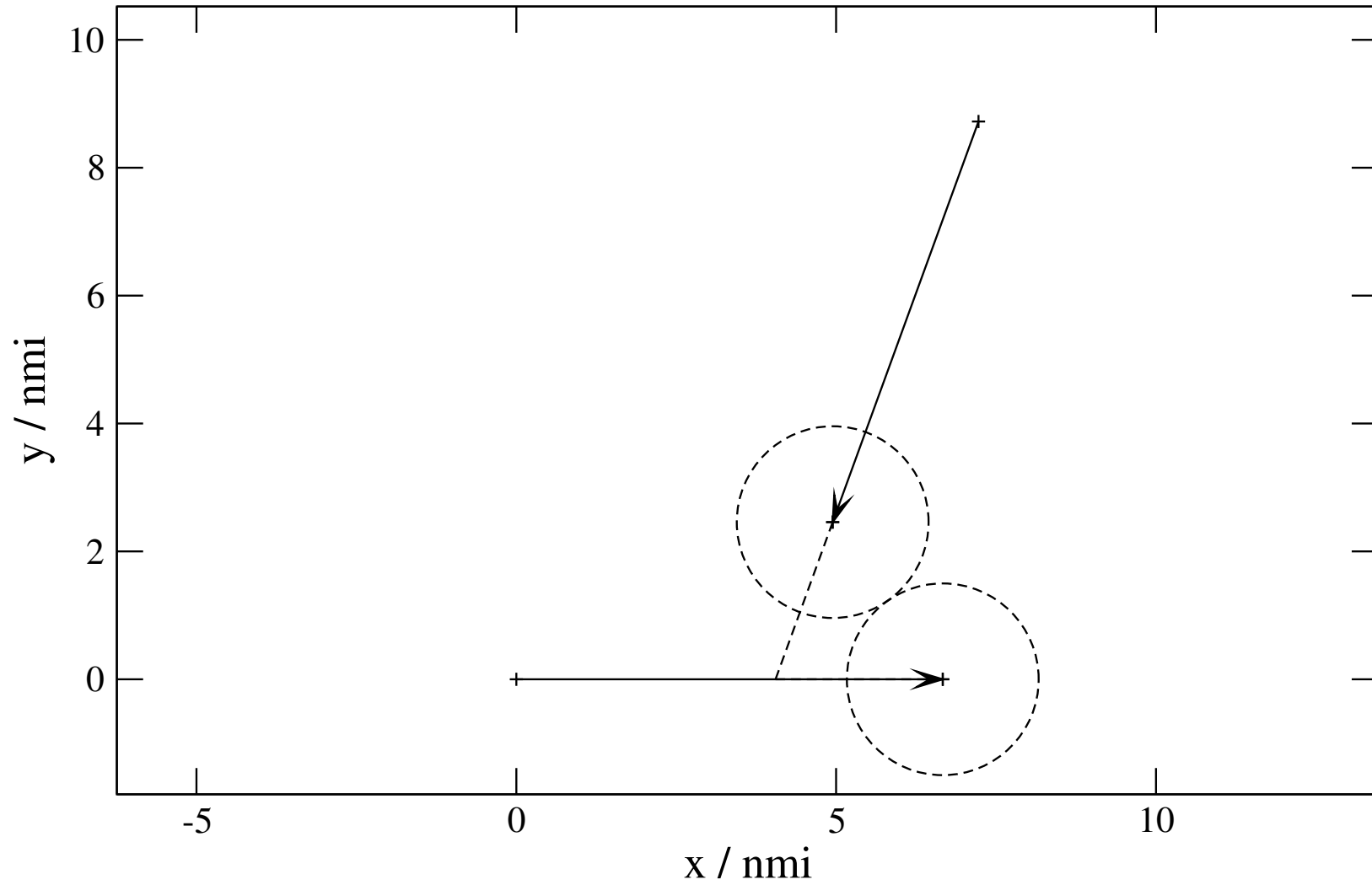
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 100 deg, min separation: 3.00 nmi



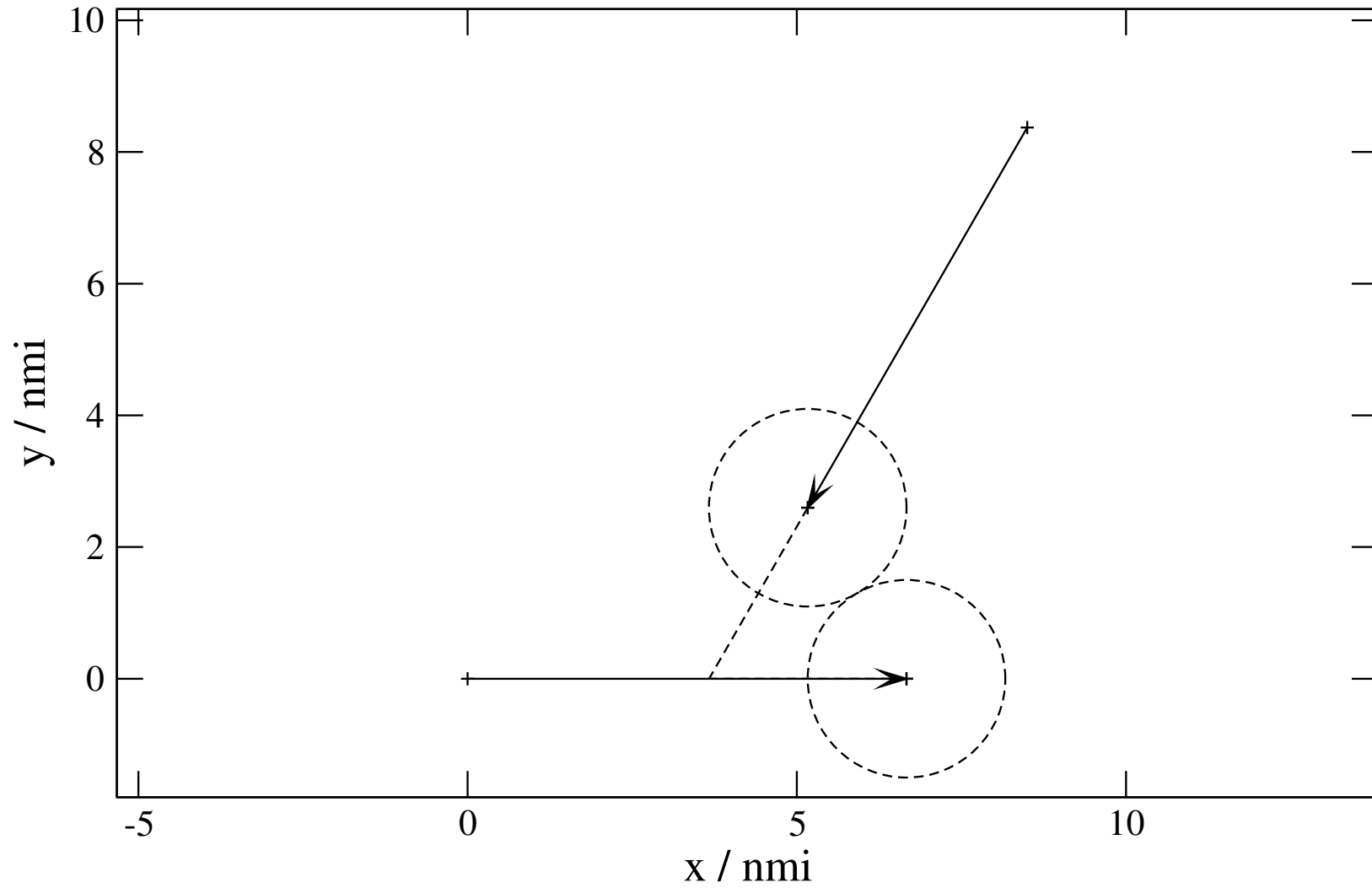
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 110 deg, min separation: 3.00 nmi



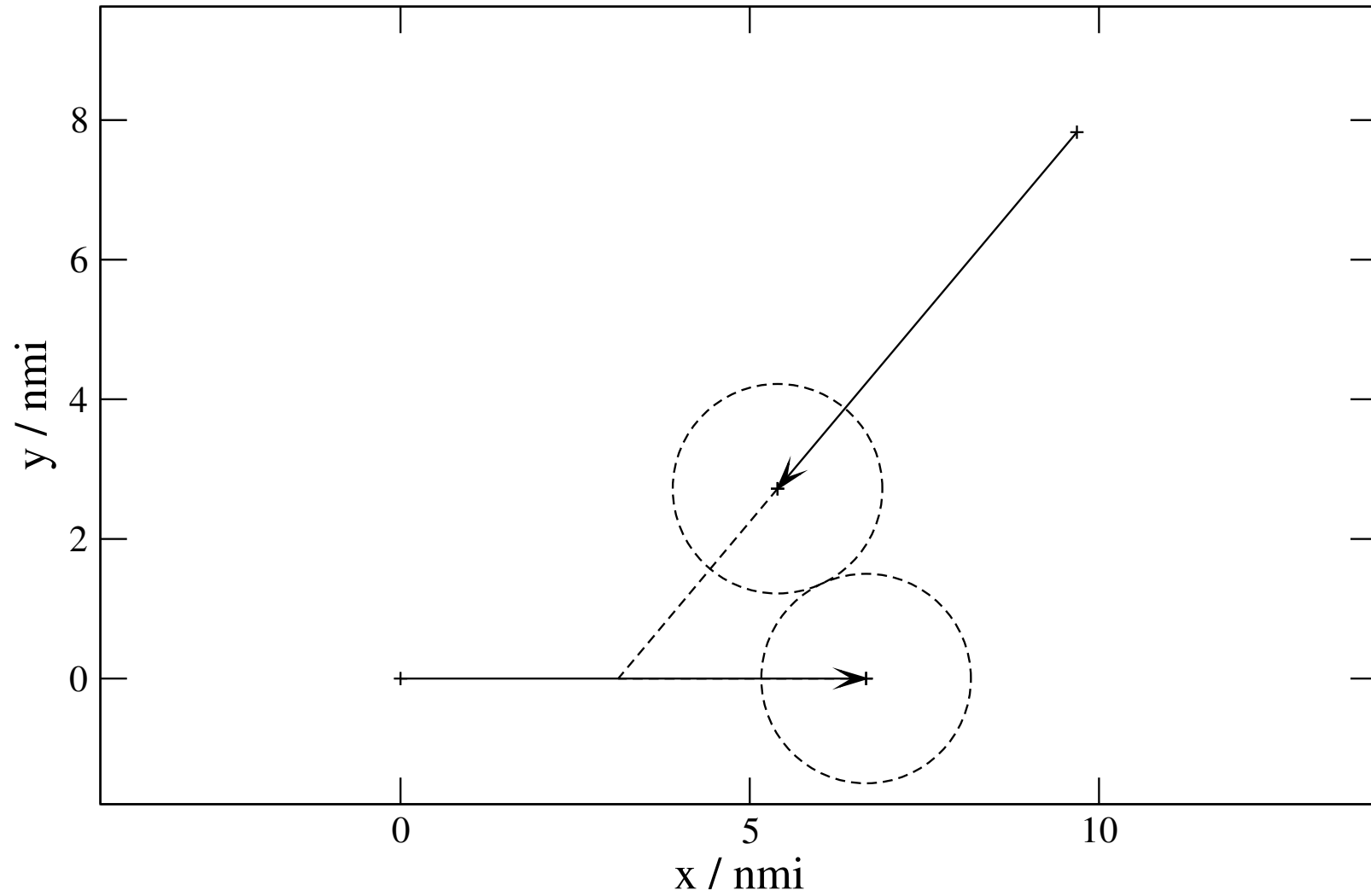
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 120 deg, min separation: 3.00 nmi



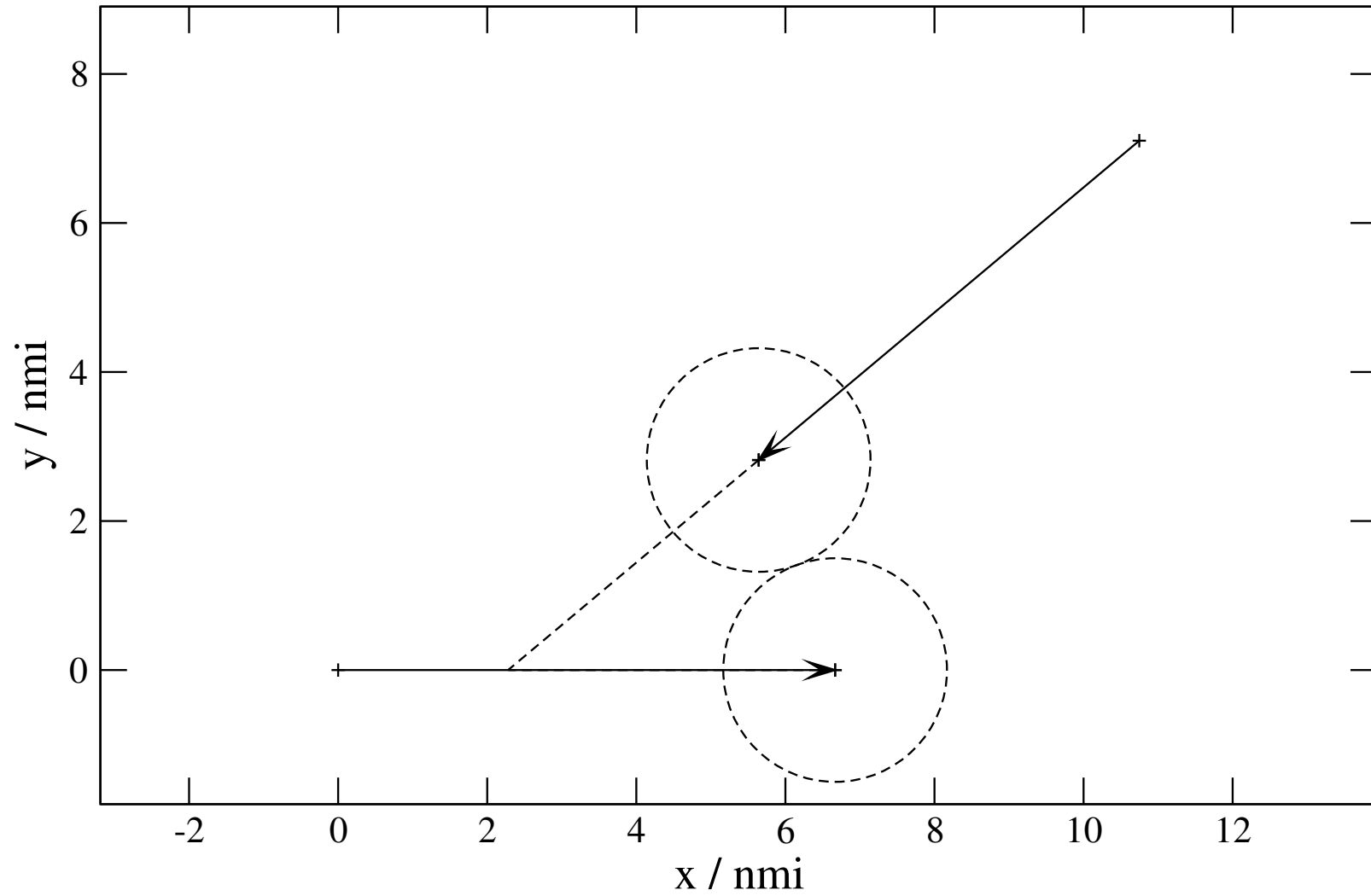
# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 130 deg, min separation: 3.00 nmi



# Constant-Velocity Encounter Planview

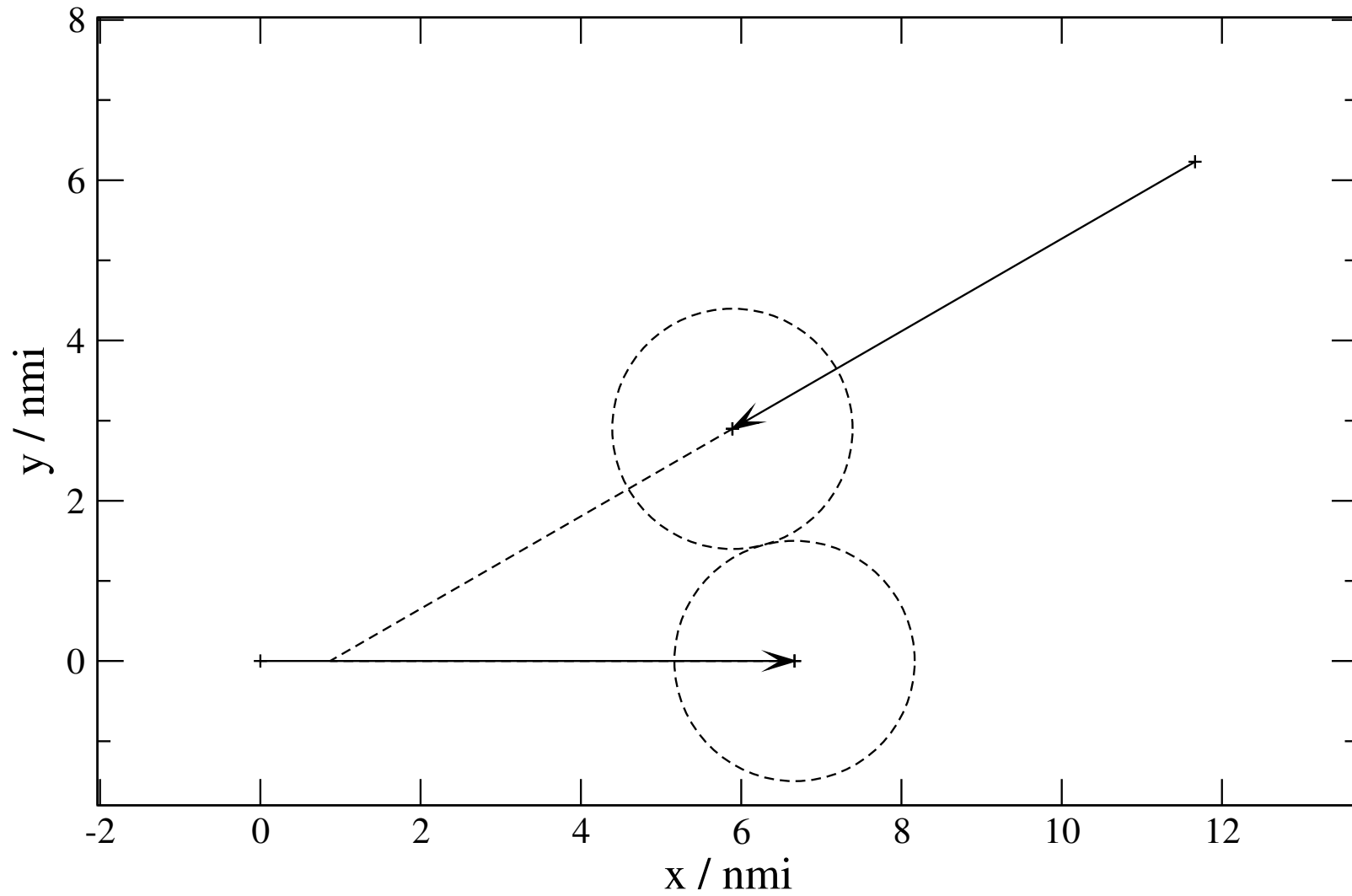
time: +0.0 sec, angle: 140 deg, min separation: 3.00 nmi





# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 150 deg, min separation: 3.00 nmi



# Constant-Velocity Encounter Planview

time: +0.0 sec, angle: 160 deg, min separation: 3.00 nmi

