**Casbeer’s Notes:**

1. Change to continuous time
   1. Integral?
2. Better justification for dubins kinematics
   1. Expect for an infinitely fast turning robot, optimal trajectory is straight line
   2. *The resulting guidance is expected to return sharp turns and straight line optimal paths when used with the Dubins kinematic model.*
3. More explanation as to why vehicle is moving away on fig A of failed PN
   1. *Figure 2 demonstrates both the singularity at near zero range and false nulled LOS-rate condition, guiding the interceptor away from the target.*
4. More descriptive captions for figures
   1. Added
5. Callout each sub figure in text
   1. Check
6. Define intercept
   1. *The objective was to use PN guidance with uncertain position information to reduce the distance to target, referred to as intercept, and to tail chase the target, referred to as follow.*
7. Define the axes and which is altitude
   1. *East is the positive $X$ axis and up, or altitude, is the positive $Y$ axis.*
8. Fix misspellings
   1. Wat, pseudotarget 🡪wait, pseudotarget’s
9. More clear explanation as to what the state machine is doing in Figure 4
   1. Check
10. Change detected to something more representative to what is happening
    1. Check
11. Repeat Figure 5 description in caption
    1. Added

**Jay’s Notes:**

1. Explain clearly what is meant by intercept and follow
   1. *The objective was to use PN guidance with uncertain position information to reduce the distance to target, referred to as intercept, and to tail chase the target, referred to as follow.*
2. What is the coordinate systems –y is altitude?
   1. *East is the positive X axis and up, or altitude, is the positive Y axis.*
   2. Also added description in Figure 1
3. How do the plots in the conclusion help understand/design the system?
   1. *Following distance to initial range ratios indicate that the modified guidance performs optimally when the initial LOS angle is less than $45^\circ$ and larger initial sight angles may benefit from other intercept methods.*
4. What is the overall objective – intercept/hit the intruder or is it to come close?
   1. *The objective was to use PN guidance with uncertain position information to reduce the distance to target, referred to as intercept, and to tail chase the target, referred to as follow.*
5. How does uncertainty circle come into play with this
6. Update references and add meaningful literature references
   1. Added 7 additional references that discuss target following and interception, mostly for fixed wing UAVs, but could be applicable for multirotors. Traditional controls, path following, and LOS guidance are discussed
7. ICUAS format (IEEE)
   1. Work in progress