

Danger Space Engagement Techniques

Danger Space Hold

A sniper preparing to overwatch a ground force can simplify their task to affect targets out to a specified range with one elevation hold. The sniper can use this technique to provide rapid and discriminate fires for the ground force.

Utilizing the AB Kestrel and based on their mission set, the sniper can compile data to formulate one elevation hold to use for their area of operation.

Example: The sniper anticipates that 400 meters would be their longest engagement.

The hold for a 400-meter target: 2.5 Mils

The Hold for 220 meters (Max Ordinate): 0.6 Mils

These two lines of information tells the sniper precisely where the bullet's location is at its maximum ordinate.

$$2.5 - 0.6 = 1.9 \text{ Mils}$$

If the sniper is shooting at a target at 400 meters, their line of sight in the scope is 2.5 Mils. At the highest point in the flight of that shot (220 meters) the bullet is at 0.6 Mils in the scope. That equates to being 1.9 Mils above the line of sight.

$$1.9 \text{ Mils} \times 3.937 \text{ (constant)} \times 2.2 = 16.45 \text{ Inches}$$

This simple calculation tells the sniper that holding or dialing 2.5 Mils on their scope will enable them to engage any target out to 400 meters with a single hold. To further enhance their chances of striking all targets out to 400 meters, the sniper can lower their point of aim on all targets to the beltline. Now, holding 2.5 Mils on the beltline, all shots fired will be no higher than 16 inches above the hold of 2.5 Mils.

Target Width in MPH

The sniper can determine effects of wind knowing the average target width of their target. Using a one mph wind value, the sniper can determine what the width of the target in miles per hours is at that range (how much wind it would take to blow the round off target).

Example: The sniper knows the average width of the targets in the area are 18". A target at 400 meters is 1.14 Mils wide. At 400 meters, the 1 mph wind value is 0.10 Mils. If the sniper divides the target's mil reading by the 1 mph wind value, the sniper will get 11.4 mph. This number tells the sniper that it would take 11.4 mph of wind (or error in wind velocity estimation) to

blow the round off target if aiming at the upwind side of the target. This means the target at 400 meters is 11.4 mph wide for AA11 (175 SMK) ammunition fired at 2,600 fps. Knowing this information, the sniper can do a quick estimation of wind and favor the upwind side of the target (where the wind is coming from) and as long as the wind is under 11 mph, the sniper will hit the target.

With these two techniques, the sniper can quickly and efficiently eliminate targets of opportunity by using a single hold and favoring the upwind side of a target without knowing the exact range to a target or mentally calculating a wind hold. If working in sniper teams, the danger space hold can be broken down into range brackets to cover near, middle and far target areas and by utilizing different sniper weapon system platforms, different effects can be achieved to great success.

Wind Chart M118LR at 60 ° F and 29.92 InHg MV=2600		IPSC Target	
Range to Target	1 MPH effect of wind (in mils)	18" Target width (mils)	Target width (mph)
100 m	0.02 mils	4.57	228.5
200 m	0.04 mils	2.29	57.25
300 m	0.07 mils	1.52	21.71
400 m	0.10 mils	1.14	11.4
500 m	0.12 mils	0.91	7.58
600 m	0.16 mils	0.76	4.75
700 m	0.19 mils	0.65	3.42
800 m	0.23 mils	0.57	2.47
900 m	0.26 mils	0.50	1.92
1000 m	0.30 mils	0.46	1.53