

Gunfire Test of the U.S. Navy's Improved Kinetic Energy – Electronic Time Projectile

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The Navy's 5" 54 and 62 Caliber Guns

Cruisers (CG's)



Destroyers (DDG's)



**"History does not long entrust the care of freedom
to the weak or the timid" – General Eisenhower**

Navy's Requirement

The Navy's 5" 54/62 caliber guns have an anti-surface warfare requirement to defend against small boat threats

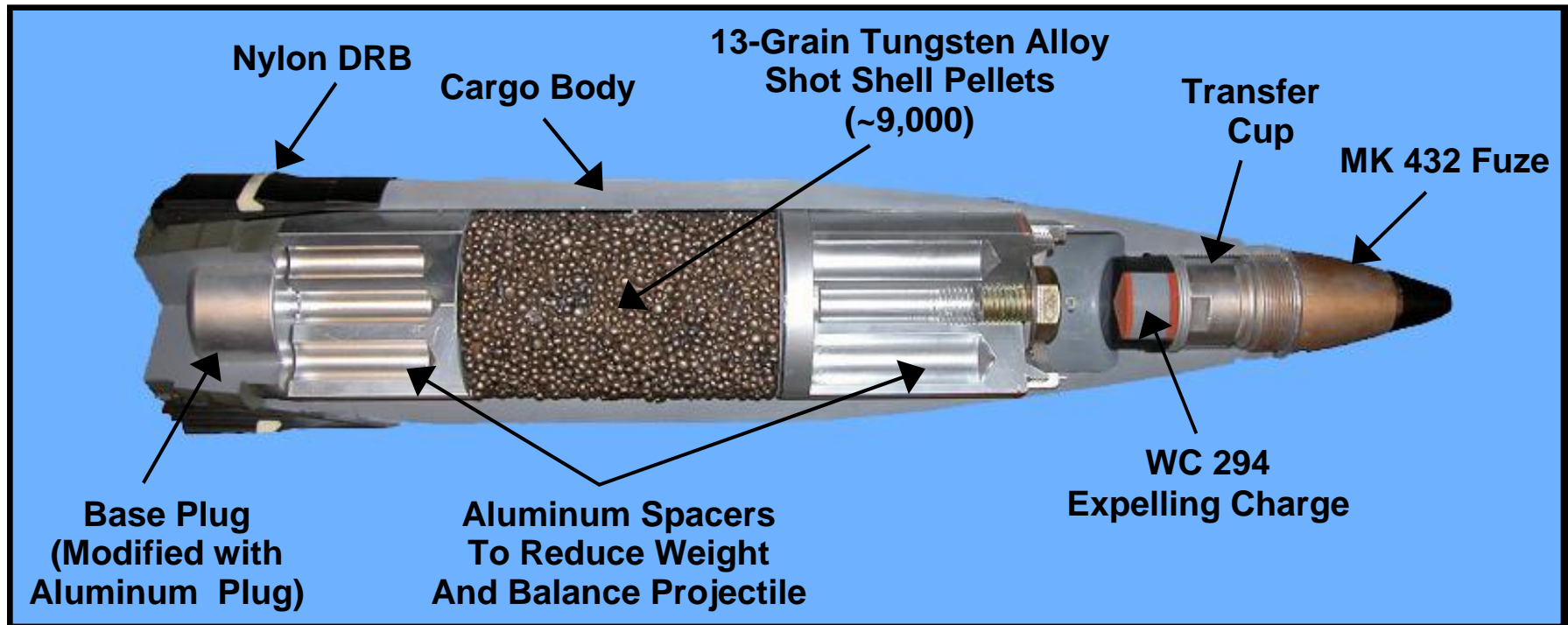
- **Swarming tactics**
- **Terrorists**
- **Pirates**



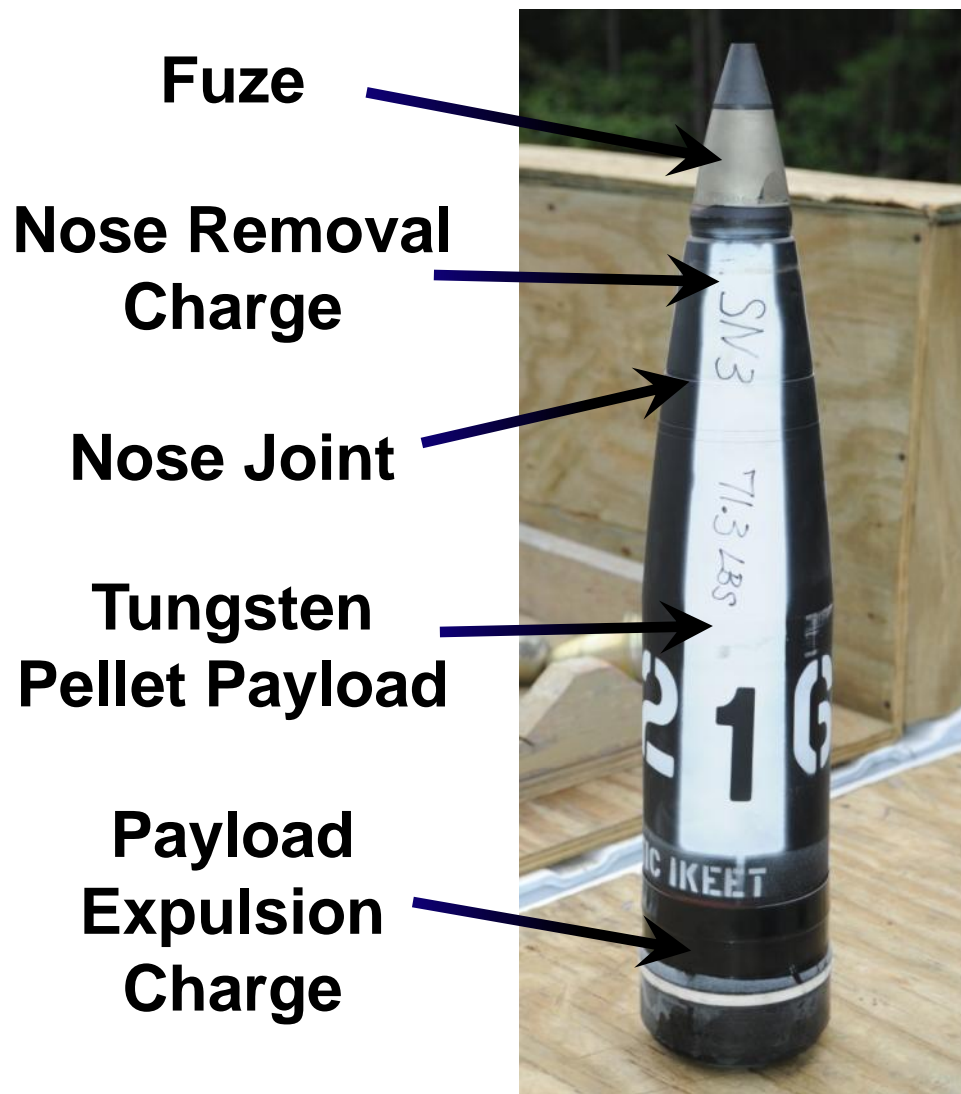
MK 182

KE-ET Anatomy

- The MK 182 KE-ET is currently fielded in the fleet
- KE-ET: The pellets lose kinetic energy by being expelled from the base
- IKE-ET: The pellets gain kinetic energy by being expelled from the nose



IKE-ET Anatomy



IKE-ET Test

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- 4 BL&Ps
- 2 KE-ETs
- 3 Reduced Charge IKE-ETs (1 fuze failure)
- 5 Full Charge IKE-ETs



KE-ET 1

KE-ET 2



IKE-ET RC 1

IKE-ET RC 2

IKE-ET RC 3



IKE-ET FC 1

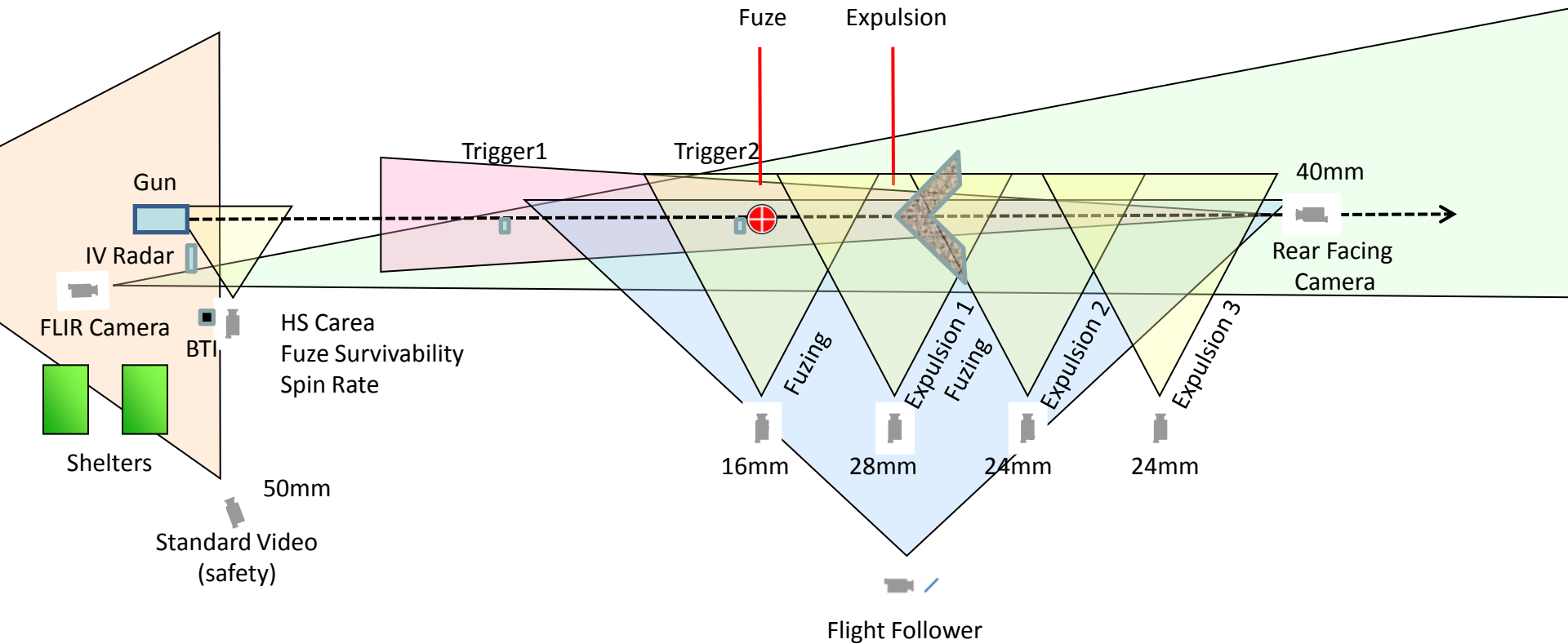
IKE-ET FC 2

IKE-ET FC 3

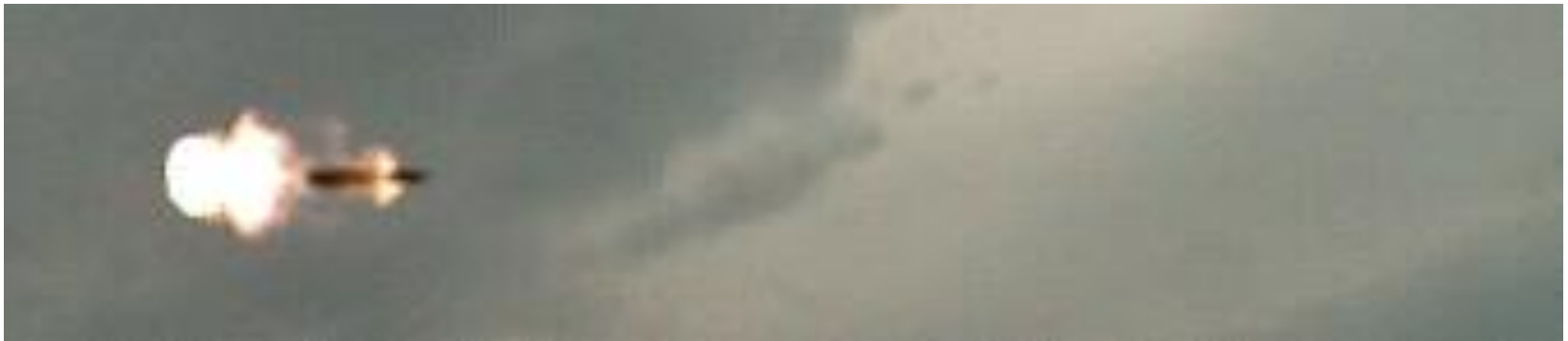
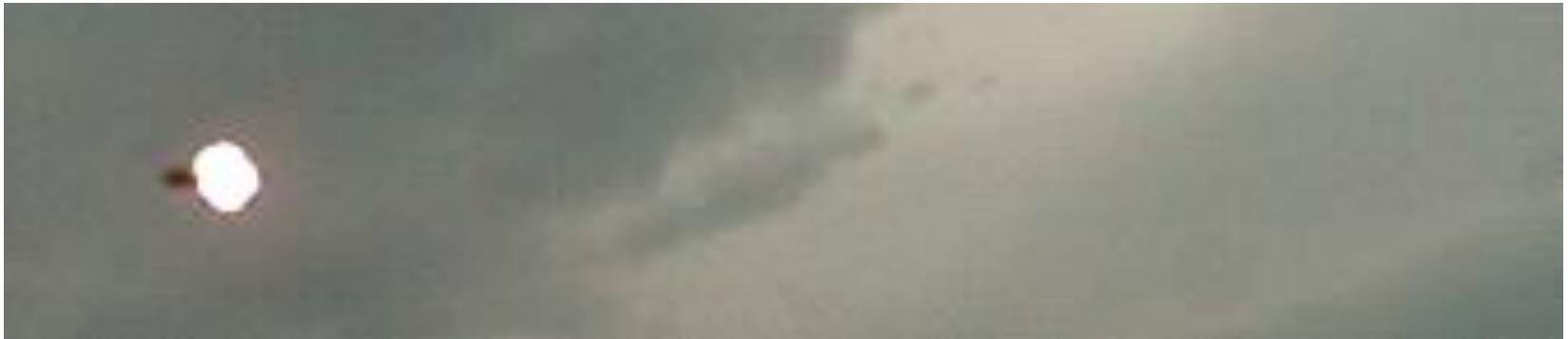
IKE-ET FC 4

IKE-ET FC 5

Test Instrumentation Layout



Test Photos (Nose Separation)



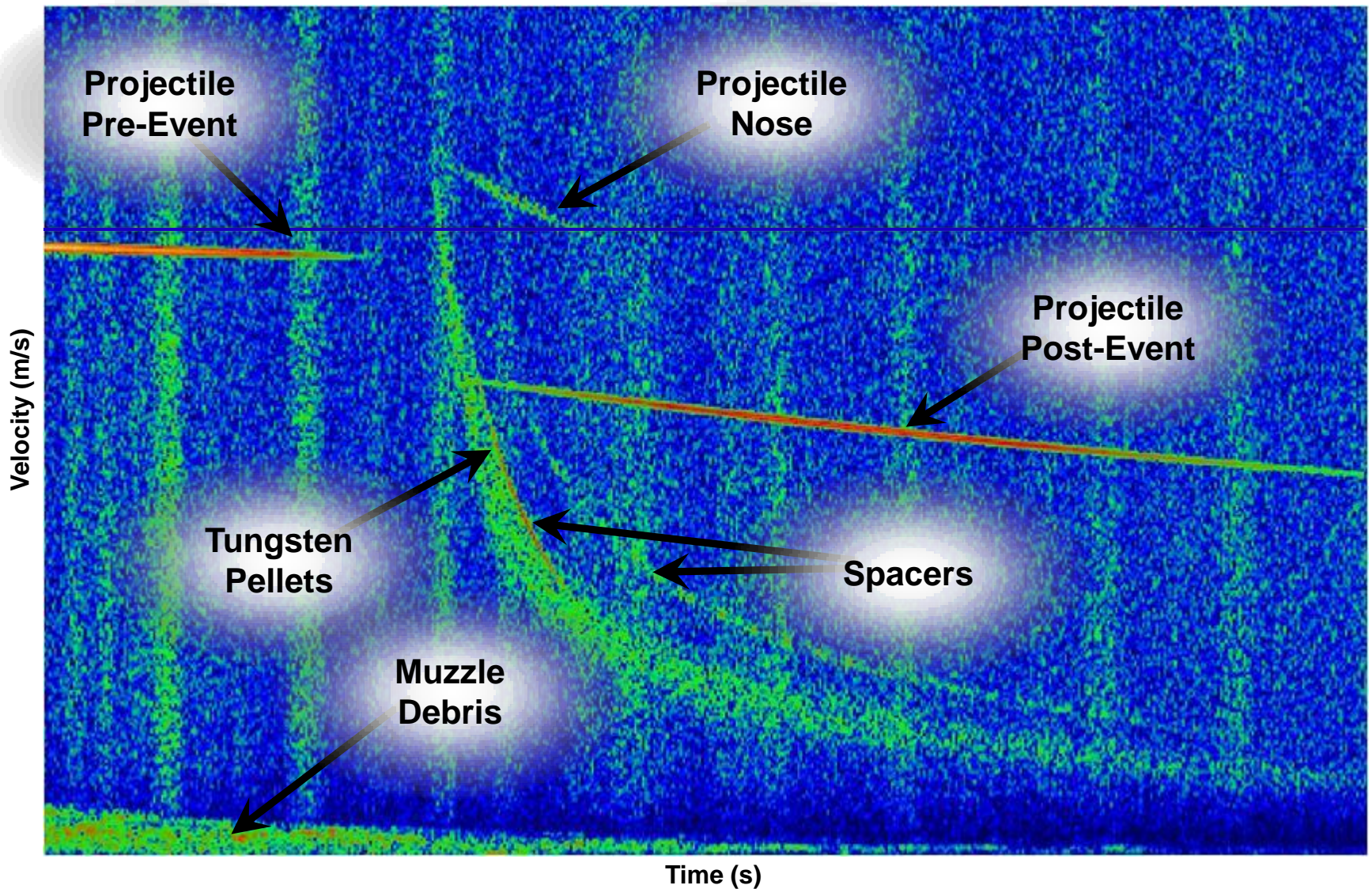
Test Photos (Payload Expulsion)



Test Photos (Flight Follower)



Sample Radar Plot



Results Photos



Debris Impact Divots

Results Photos

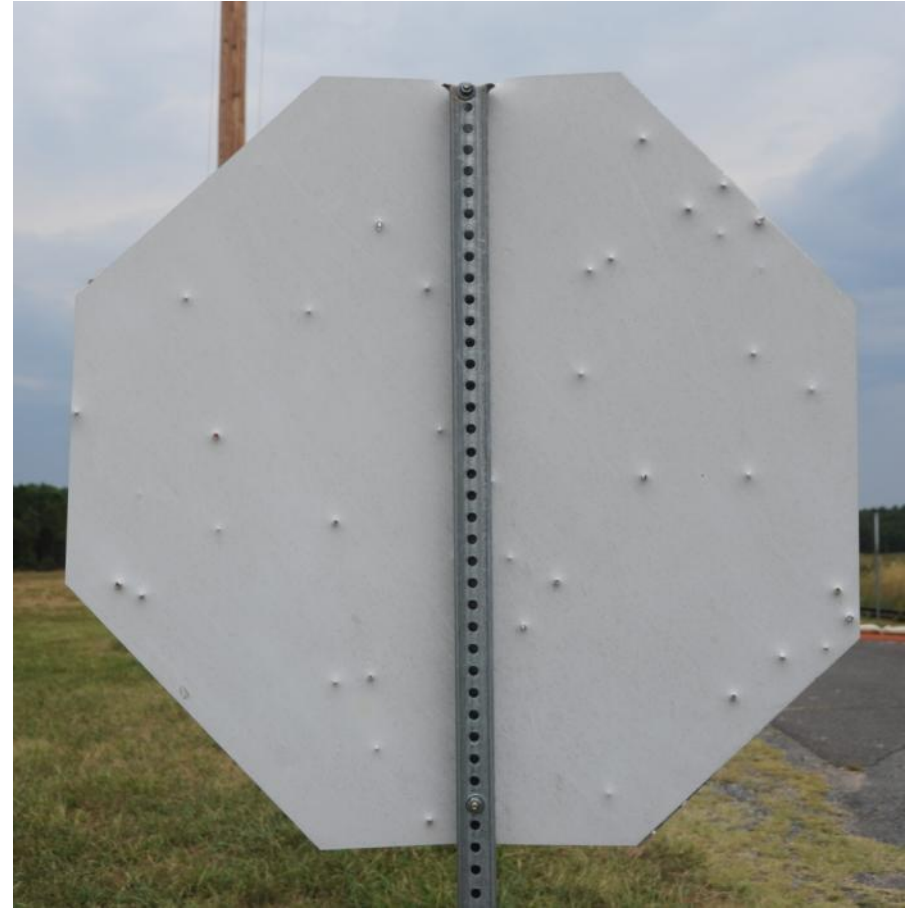


Spacer vs. Sandbag

Results Photos



IKE-ET vs. Camera Shelter



IKE-ET vs. Stop Sign

The Future of IKE-ET

- **The IKE-ET is still in the Small Business and Innovative Research (SBIR) phase**
- **What's to come?**
 - **Currently the contractor is redesigning the projectile specifically for this application**
 - **After the redesign phase we will test fire the projectile again to verify survivability and functionality**
 - **The test will also attempt to acquire dispersion and velocity data (Z-data)**
 - **The Z-data will be provided to the lethality analysts to characterize IKE-ET's effectiveness vs. certain targets**
 - **The lethality results will support a decision whether or not to proceed with the program**



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Backup Slides

5 Inch 54 Caliber Gun Mount



Shelters



FLIR



Field Cameras



Flight Follower and Triggers



Rear Facing Camera



Future Dynamic Arena Test Layout

