

2008 NDIA Guns & Missiles Brief

Long Range Land Attack Projectile (LRLAP)

*John Rinko
24 April 2008*



Spirit of '76



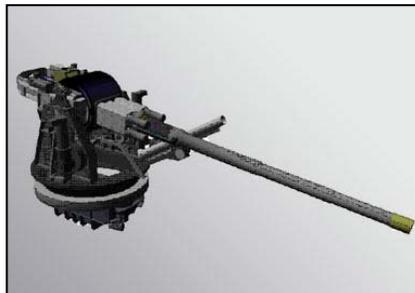
DDG 1000 AGS & LRLAP Introduction

155-mm Advanced Gun System

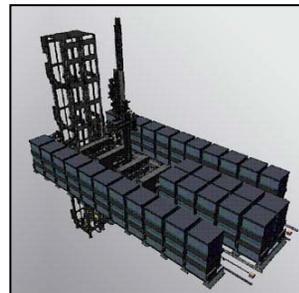
- Primary land attack armament for DDG1000
- Fully automated high volume magazine
- All weather, accurate, multi-mission support
- 10 rounds per minute rate of fire
- Sustainable fires 24 / 7
- Multiple round simultaneous impact



LRLAP



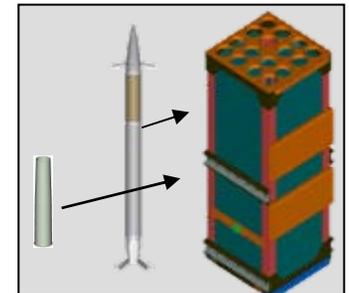
Fully Automated 155-mm
Vertical Load Gun



Fully Automated
High-Volume Magazine



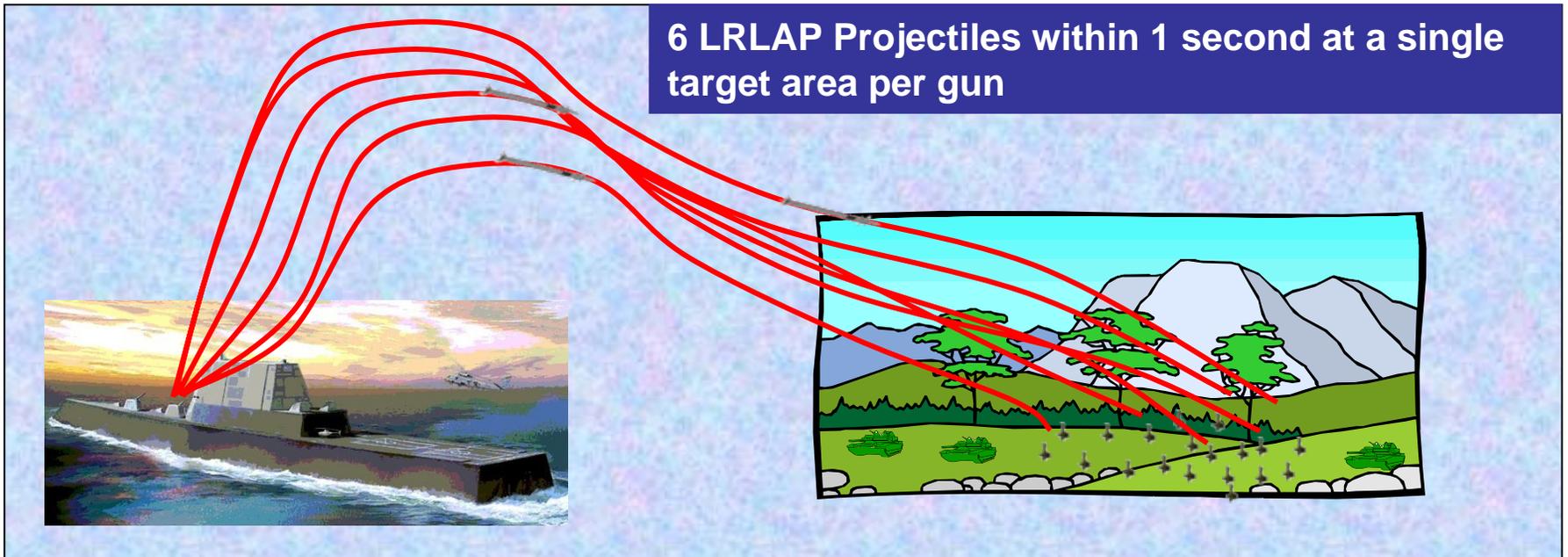
Reduced RCS/IR
Signatures



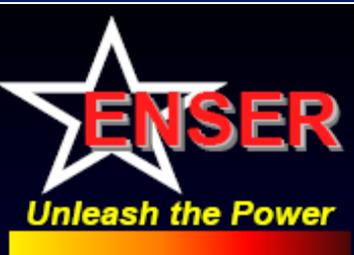
Munitions Integrated into
AGS Pallet

LRLAP Capabilities

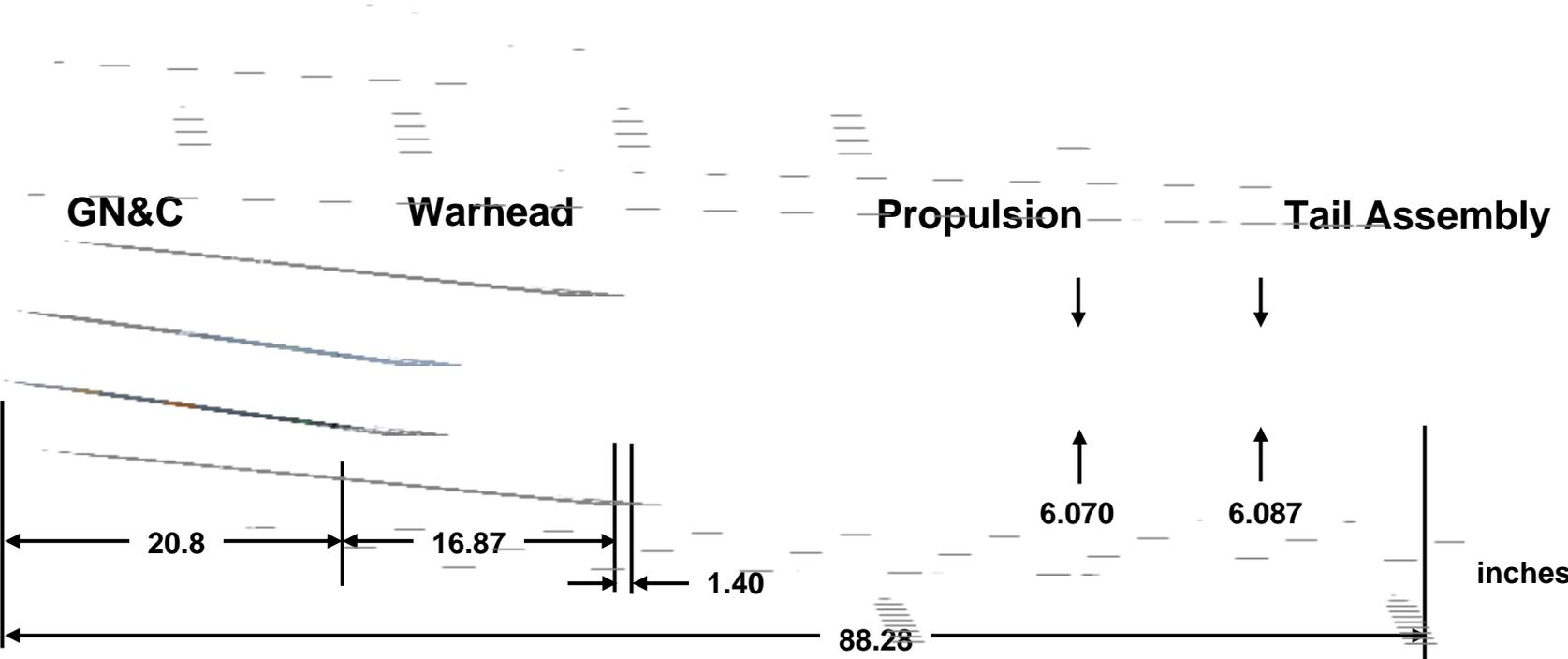
- ◆ Multiple Round Simultaneous Impact (MRSI)
- ◆ Greater than 63 nautical mile range
- ◆ Unitary high-explosive warhead
- ◆ Effective for wide range of targets
 - Operational in close proximity with friendly forces and in urban terrain
 - Effective against reverse slope targets



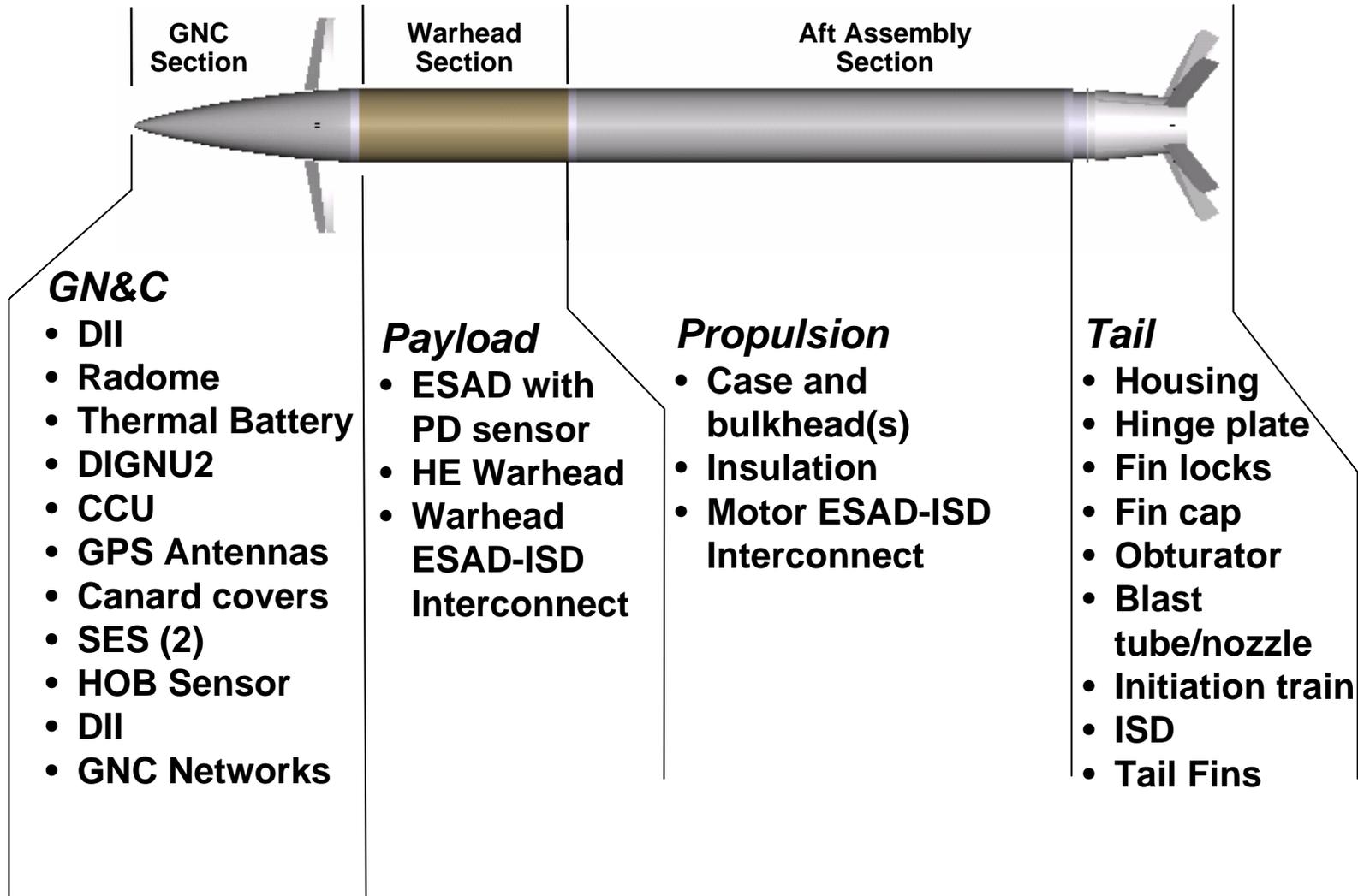
LRLAP Contractor Team



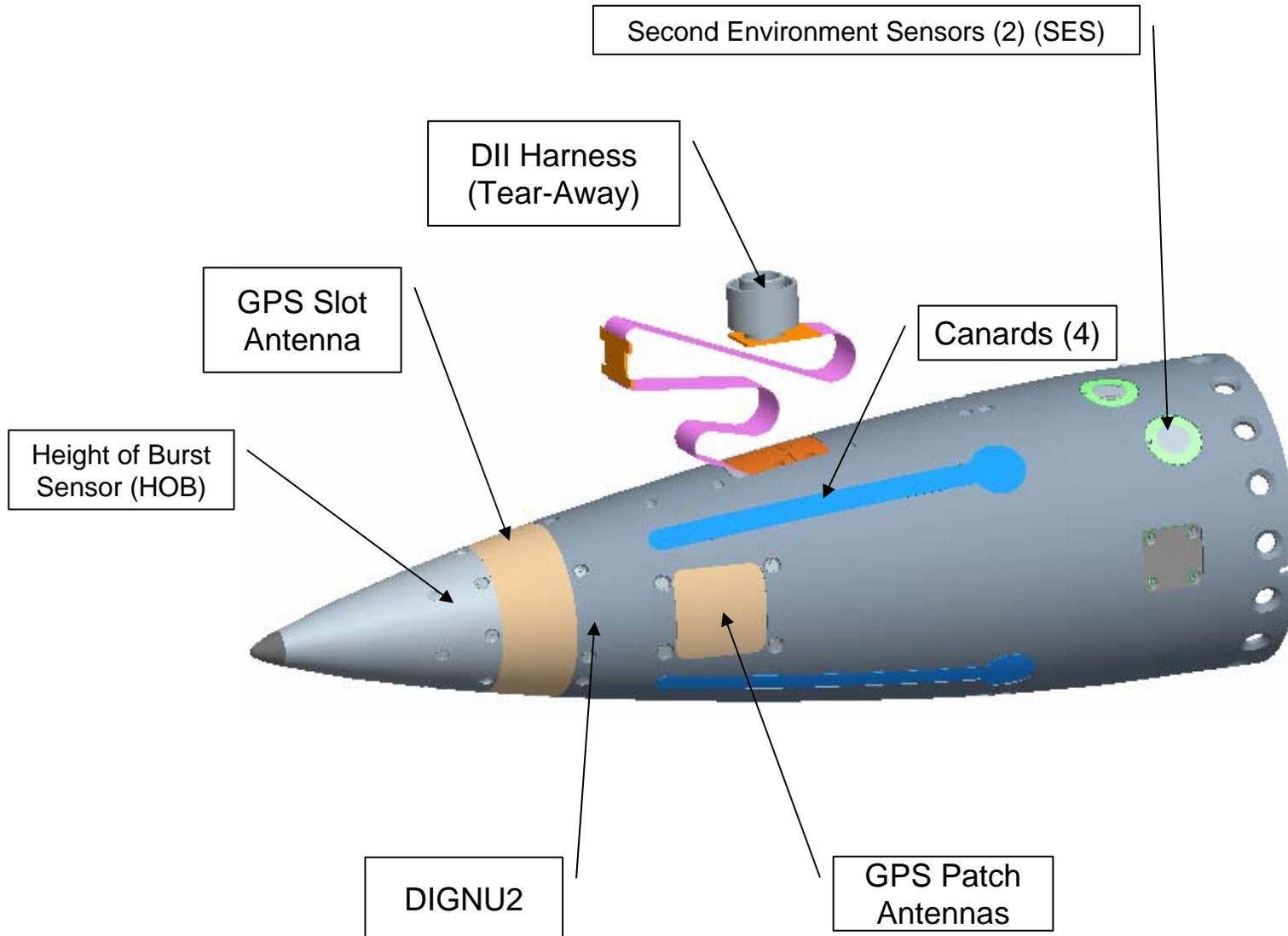
LRLAP Tactical Baseline Description



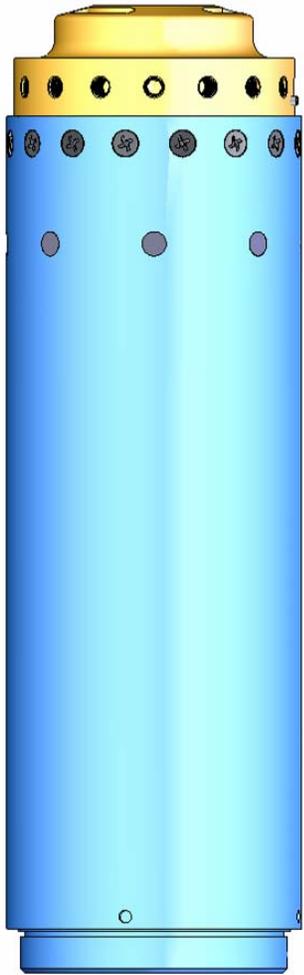
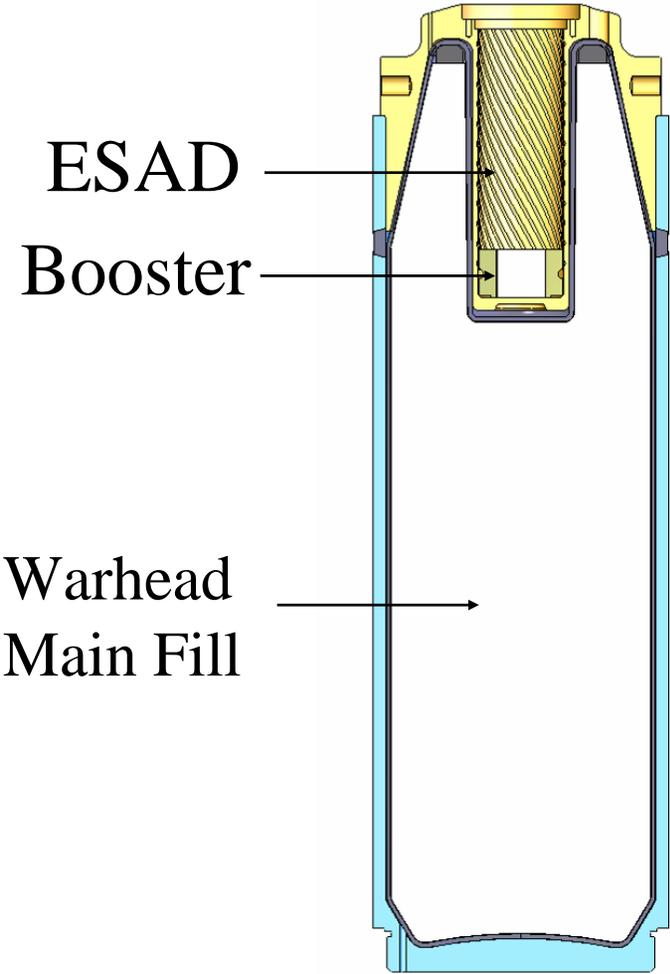
LRLAP System Overview



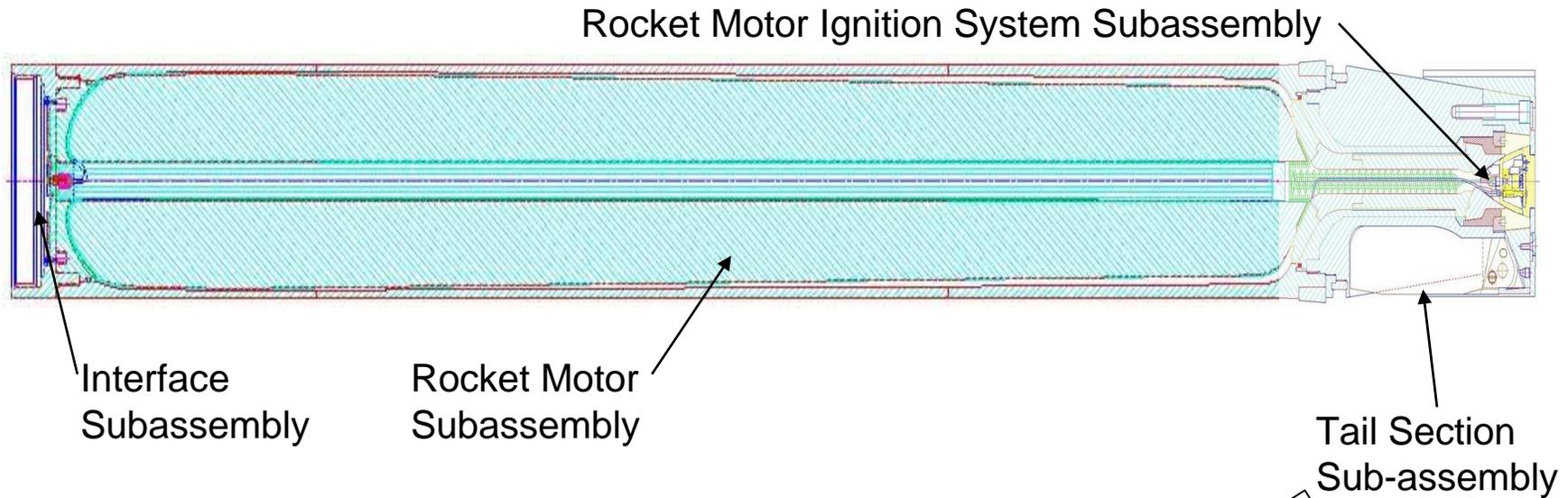
GN&C Section



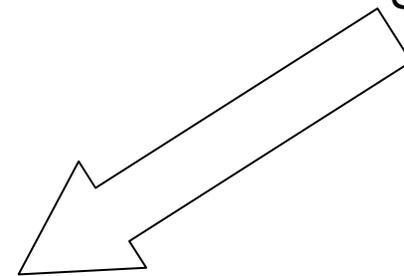
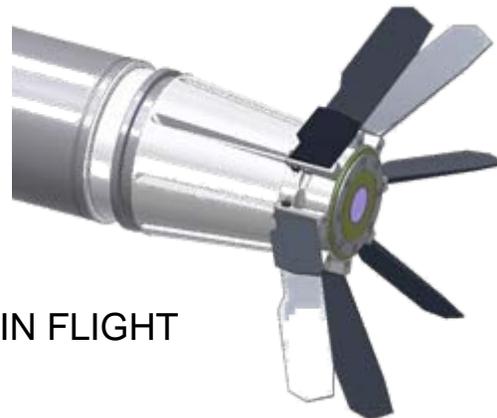
Warhead Section



Aft Assembly Section



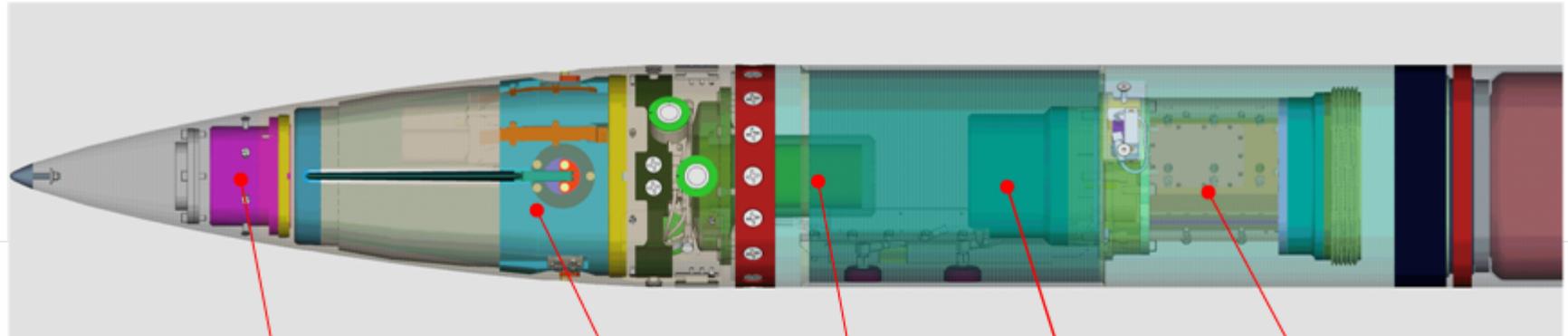
Tail Assembly sub- Section



LRLAP Test Results - EDM Flight Tests

- ◆ Numerous Recoverable Gun Tests
 - Common Guidance Program
 - LRLAP Program
- ◆ 1 Electronics Ballistic Flight Test
 - EG-1: Ballistic Flight Test of GN&C Electronics
- ◆ 9 Guided Flight Tests
 - GF-1: Engineering Integration Test
 - GF-2&3: DD(X) Milestone B Tests
 - GF-4: Engineering Flight Maneuver Test
 - GF-5 through 9: Extended Range Flight Tests

LRLAP Test Results - EDM Projectile Configuration



Canard Locking Mechanism

CCU

Fuze/SAD
ballast

DIGNU 1

Telemetry Electronics
FIU/RPU

Guidance Section

Payload / TM
Section

Aft Assembly



Wrap-around GPS/TM
Antenna Assembly

Initialization/test port

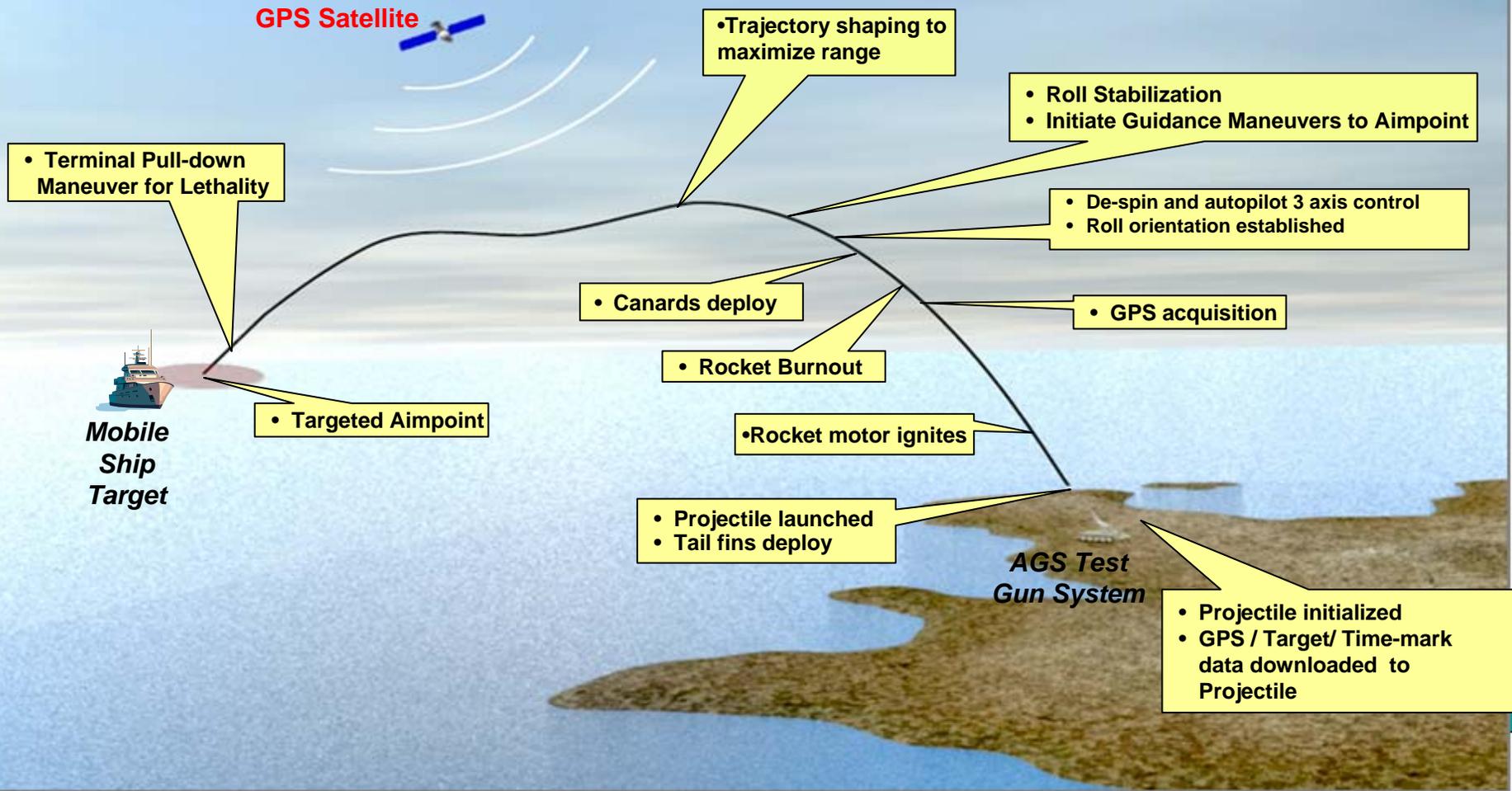
Rocket Motor

Nylon
Obturator

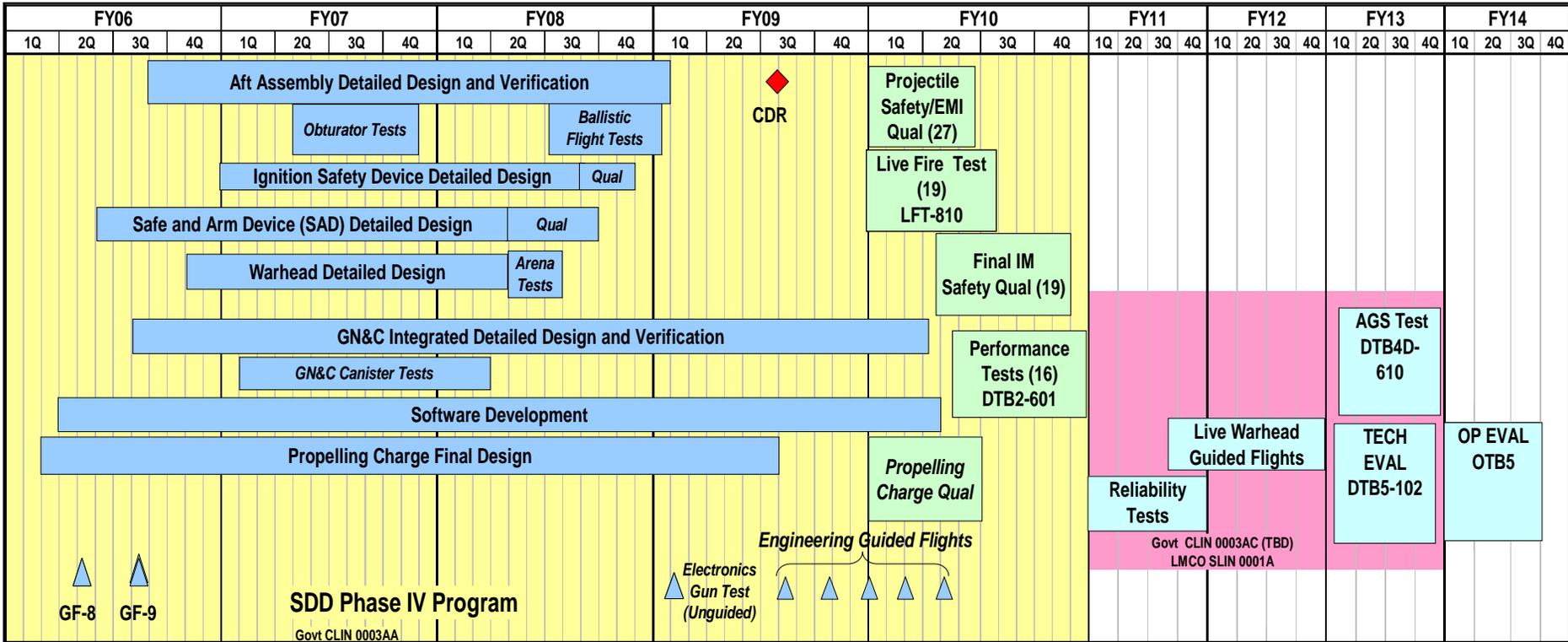
Fin cap

LRLAP Test Results - EDM Guided Flight Description

NAWC-WD Pt Mugu, San Nicolas Island



LRLAP Path Forward



Conclusion

- ◆ Proven Guidance Capability
- ◆ Threshold Range Requirement Met
- ◆ Qualification Testing In FY10
- ◆ IOC in FY14
- ◆ Funded Program of Record
- ◆ Supports DDG1000 Ship Schedule

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