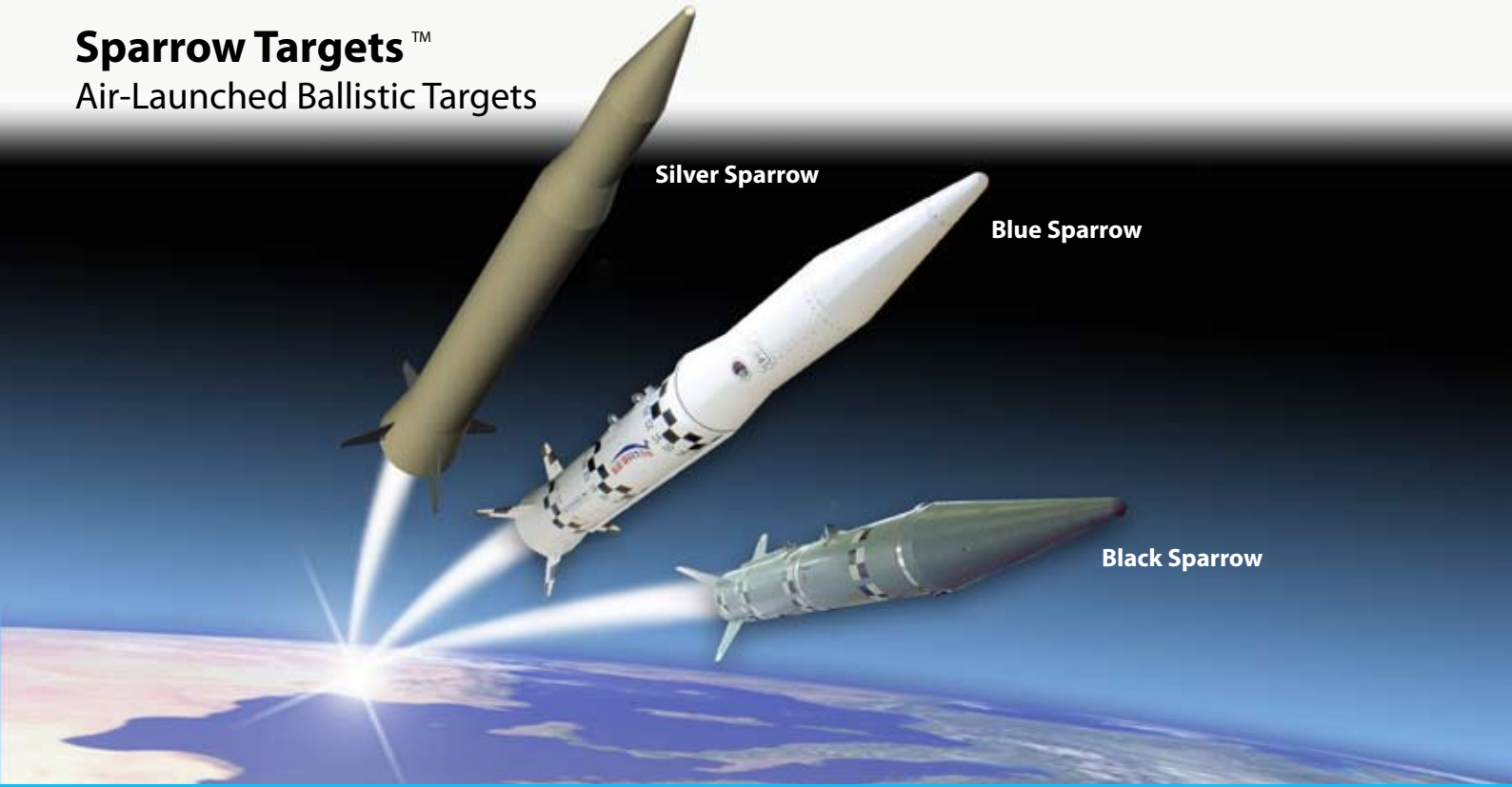


Sparrow Targets™ Air-Launched Ballistic Targets



Silver Sparrow

Blue Sparrow

Black Sparrow

Step forward to test readiness

Benefits

- Salvo/Raid capability using target adapter on the launch aircraft
- Air-launched, providing test scenario flexibility
- Affordable target & presentation
- Multiple threat representation
- Test ready in less than 3 months
- Raytheon & Rafael team, experienced in missile systems

Sparrow Targets

Sparrow targets simulate trajectories, re-entry maneuvers and signatures of various Ballistic Missiles. Targets include the short-range Black Sparrow and the medium-range Blue Sparrow and Silver Sparrow. They were selected by the Israeli Ministry of Defense for testing the US/Israeli Arrow Missile Defense Systems. The Black Sparrow was also selected by a foreign country. The Sparrow targets can be supplied as a “target in the air” according to customer requirements.

Flexible Test Capabilities

Sparrow targets offer medium to high fidelity threat representation and a comprehensive response to BMD sensor and interceptor test and training requirements. They can be launched above land and over sea, providing test scenario flexibility. The target systems are easily adaptable to test range requirements due to adjustable trajectories, telemetry, radar transponders and Flight Termination System.

Quick Test Readiness

Target mission preparation and verification are quick and simple. Target operational software is easily loaded during pre-flight procedures. This enables a dramatic time reduction in achieving test readiness.

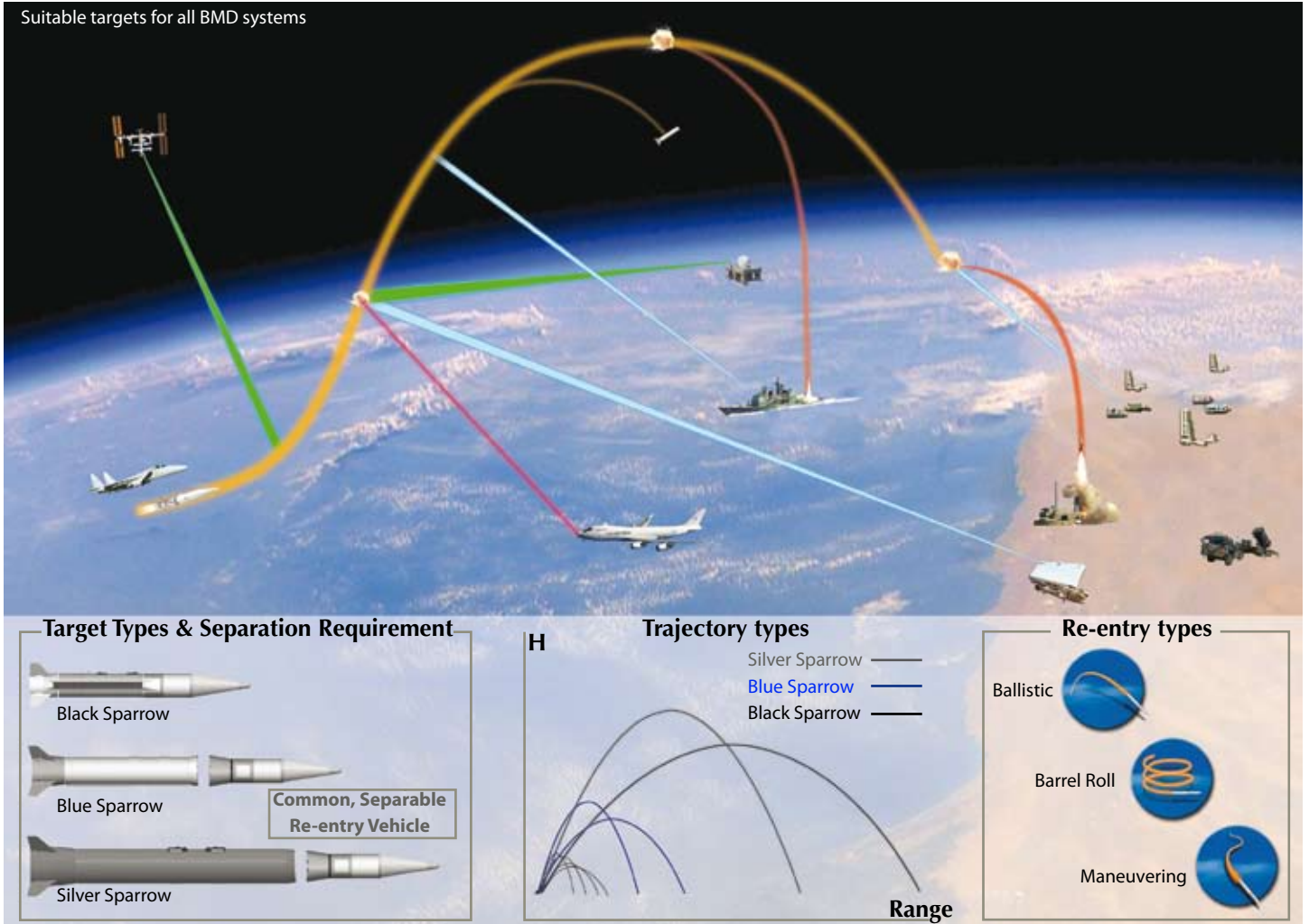
Target Descriptions

Black Sparrow simulates unitary short-range theater Ballistic Missiles such as the SCUD-B. It has performed very successfully in a series of fly-out and interception test missions where various trajectories and re-entry maneuvers, were carried out.

Blue and Silver Sparrow simulates unitary and separable medium to long-range theaters such as SCUD-C/D, Shihab and others. Both targets use the same RV, incorporating a redundant Autonomous Flight Termination System and a 3-axis Attitude Control System. Blue Sparrow performed flawlessly in all its missions so far.

Selectable Threat Representation

Suitable targets for all BMD systems

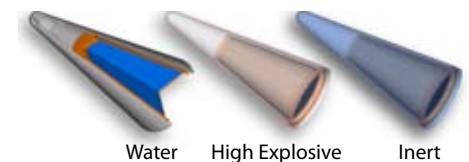


Technical Specifications

	Black Sparrow	Blue Sparrow	Silver Sparrow
Threat representation	SCUD-B	SCUD-C/D	SCUD-C/D Shihab
Target Length	4.85 m	6.51 m	8.39 m
Propulsion	Single Stage Solid Rocket Propellant		
Pre-launch weight	1,275 kg	1,900 kg	3,130 kg
Navigation system	INS / GPS	GPS and Dual INS	
Attitude Control System	N/A	3-axis, cold-gas, mounted on RV	
Telemetry system	2-channels, omni-coverage		
Flight Termination System	Dual Redundant	Dual Redundant with Autonomous System	
Avionics & Nose-Cone Payload	Common to all targets		
Re-entry Vehicle	Not Separable	Common Configuration (nose-cone, electronics and ACS Section)	

Modular Target Components

Modular warhead types, selectable according to test mission:



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