MISSILE DEFENSE AGENCY

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Fact Sheet

Sea-Based X-Band Radar

Once integrated into the Ballistic Missile Defense System, the Sea-Based X-Band Radar will track, discriminate, and assess the characteristics of hostile ballistic missiles. The Sea-Based X-Band Radar will provide an advanced capability to the overall Ballistic Missile Defense System thus greatly increasing the Missile Defense Agency's ability to conduct operational and realistic testing of its Ground-Based Midcourse Defense Element, while providing an operational capability to the Combatant Commands.

Overview

- The Sea-Based X-Band Radar is a unique combination of an advanced X-band radar with a mobile, ocean-going, semi-submersible platform that provides the Ballistic Missile Defense System with an extremely powerful and capable radar that can be positioned to cover any part of the globe.
- The vessel is based on a fifth-generation semi-submersible oil drilling platform. It is twin-hulled, self-propelled, and stable in high winds and turbulent sea conditions.
- Its ocean-spanning mobility allows the radar to be repositioned as needed to support the various test scenarios envisioned for the Ballistic Missile Defense System or to provide an advanced radar capability to obtain missile tracking information while an incoming threat missile is in flight, discriminate between the hostile missile warhead and any decoys, and provide that data to interceptor missiles so that they can successfully intercept and destroy the threat missile before it can reach its target.

Details

- The Sea-Based X-Band Radar is 240 feet wide and 390 feet long. It towers more than 280 feet from its keel to the top of the radar dome and displaces nearly 50,000 tons.
- Larger than a football field, the main deck houses living quarters, workspaces, storage, power generation, bridge, and control rooms while providing the floor space and infrastructure necessary to support the radar antenna array, command control and communications suites, and an In-flight Interceptor Communication System Data Terminal which provides missile tracking and target discrimination data to interceptor missiles.
- The Sea-Based X-Band Radar will be manned by approximately 85 crew members.

Development

- Construction of the vessel and integration of the payloads were completed in two Texas shipyards and extensive sea-trials were conducted in the Gulf of Mexico and the Pacific Ocean.
- The Sea-Based X-Band Radar is home-ported at Adak, Alaska. SBX can move throughout the world's oceans as needed to support both testing and defensive operations for the Ballistic Missile Defense System.