MISSILE TRACKING

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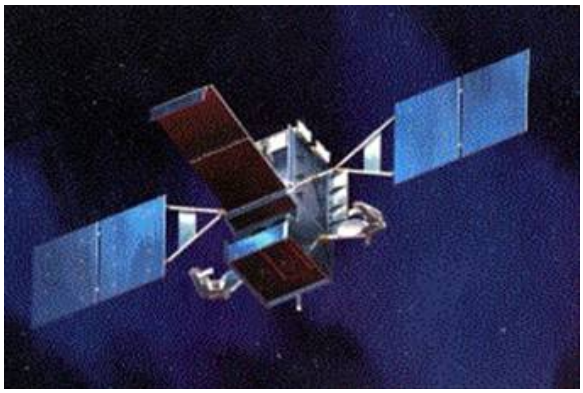
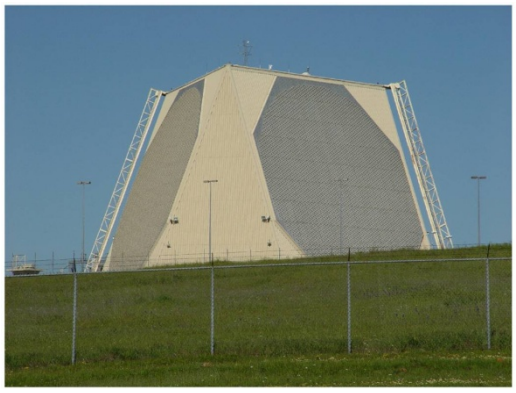
Missile tracking operations support missile warning and missile defense missions using a mix of space-based and ground-based sensors. (See figure titled Space-Based Infrared System and Phased Array Warning System for examples of space-based and ground-based systems.) These systems provide tactical warning and attack assessment information to operational command centers regarding nuclear detonations or adversary use of ballistic missiles. Tactical warning is a timely notification that a threat event is occurring or has occurred. An attack assessment evaluates component elements of the threat event including the country of origin and country(s) at risk and the type, size, and time of the event.[1]

There are two missile warning missions: strategic and theater. Strategic missile warning is notification to national leaders of a missile attack against North America, as well as attacks against allied and coalition partners. Theater missile warning is notification to geographic combatant commanders (GCC), allied and coalition partners, and forward deployed personnel. In some cases, the data or information derived from missile tracking is exchanged with other countries to provide shared early warning (SEW). Additionally, missile tracking is a major contributor to ballistic missile defense. Upgraded systems support multiple missions including missile warning, space surveillance, and missile defense.

Strategic Missile Warning.
Space-based systems usually provide the first level of immediate missile detection. Ground-based systems provide follow-on information on launches and confirmation of strategic attack. These ground-based systems include the ballistic missile early warning system, the phased array warning system, and the perimeter acquisition radar attack characterization system.

[1] JP 3-14, *Space Operations*.

Space-Based Infrared System and Phased Array Warning System

Theater Missile Warning.
The reaction time for theater forces to respond to incoming missiles is relatively short. Therefore, GCCs have adopted a strategy known as "assured" warning. This strategy weighs potentially false reports against the time required to obtain fully processed reports. GCCs have elected to receive quicker launch notifications understanding the warning could be ambiguous. The joint force commander should forward requests for theater missile warning to CDRUSSTRATCOM via approved procedures. The support request should clearly state their requirements and applicable objectives as appropriate.[2]

Shared Early Warning
The United States exchanges missile detection and warning information with its allies and coalition partners. This exchanged information is known as shared early warning. The objective of SEW is the continuous exchange of missile early warning information derived from US missile early warning sensors and, when available, from the sensors of SEW partners. Information on missile launches is provided on a near real-time basis. This information can take the form of data, voice warning, or both. The objective of SEW is to enhance regional stability by providing theater ballistic missile warning to combatant commanders (CCDRs), sponsored partner countries, and allies.[3]

Ballistic Missile Defense
Missile tracking is a vital contributor to ballistic missile defense. Voice and data information on ballistic missile launches is relayed in near-real-time to provide timely detection notification, support tactical decision-making, and provide executable data to the missile defense network. For further information on this subject, reference JP 3-01, *Countering Air and Missile Threats.*

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[2] JP 3-14, *Space Operations.*
[3] JP 3-14, *Space Operations* Appendix.