The Ascent of Terror: A brief Chronology of Development of the Navy's Submarine Launched Ballistic Missiles
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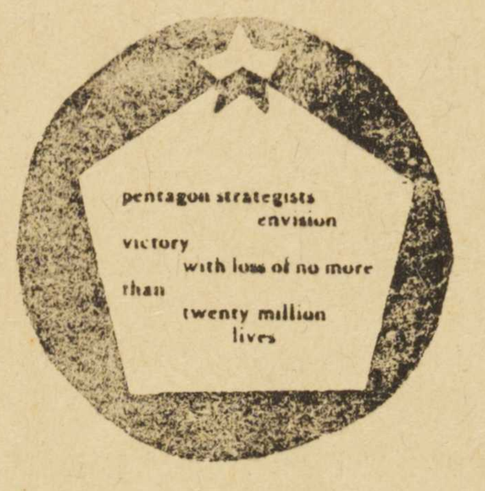

The Trident II is the latest and most deadly weapon in a series of submarine launched ballistic missiles (SLBMs) developed and deployed by the US Navy since 1960 when the first SLBM became operational. The first Trident II missile is expected to be deployed on board the ninth Trident submarine in December, 1989. When deployed it will pose a first-strike threat against Soviet missile silos and other hard targets such as command and control centers. A weapon is considered to be capable of a first-strike when it has the explosive power to destroy enemy missiles in their silos, made "hard" in cement bunkers, combined with the accuracy to land warheads nearly on top of their targets from great distances, and the speed to aid in the element of surprise and decrease the enemy's time to respond to an incoming attack. What follows is a brief chronology of the missiles preceding the Trident II and an update on the Trident II system in 1985.

POLARIS

The USS George Washington became operational in November, 1960 and was the Navy's first ballistic missile-firing submarine. It carried 16 solid fuel Polaris A-1 missiles. Each missile was armed with a single one megaton warhead and had a range of about 1,200 nautical miles. In 1963 the Polaris A-2, also a single warhead missile, became operational. It had a range of about 1,500 nautical miles. That same year the Navy tested the Polaris A-3 from a submarine for the first time. The A-3 had a range of 2,500 nautical miles and carried a "triplet" reentry vehicle called a Multiple Reentry Vehicle (MRV). The intent behind the new design was that the warheads would shotgun down on their target. Because they could not be independently targeted (all three warheads had to go to the same target) the A-3 was thought to possess little or no first-strike capability.

By the end of 1966 the Polaris fleet had swelled to 41 submarines: 8 were armed with the A-2; and 33 eventually carried the A-3.

The increase in range of the A-3 increased the area in which the submarines could patrol and still be within striking distance of their intended targets. It was believed at the time that the Polaris boats armed with the A-3 could maneuver in 15 million square miles of ocean and still strike cities and military and industrial targets within 200 miles of the Soviet border. This distance could be increased by maneuvering closer to the Soviet territory. The greater range of the missile gave the submarines more ocean to hide in, thus increasing their survivability in the event of breakthroughs in Soviet anti-submarine warfare technology.

POSEIDON (C-3)

The first Poseidon missile was tested in August, 1968, with the development of the entire system being completed in 1970. When it was finished 31 Polaris boats had been converted with longer launch tubes to carry the larger Poseidon (C-3) missile, while the 10 remaining Polaris boats retained their A-3 missiles until being retired some years later. The Poseidon missile has a range of up to 2,500 nautical miles and can carry up to 14 Multiple Independently Targeted warheads (MIRVs). When originally deployed the Poseidon carried a warhead mix with some missiles carrying a full load of 14 warheads and others carrying only 10. The range of the Poseidon missile was expected to increase beyond 2,500 nautical miles with fewer warheads.

The first Poseidon submarine was operational in March 1971. Though the range, accuracy and payload of the Poseidon increased over the Polaris A-3 it was still not considered to possess a first-strike capability. For the next eight years these Poseidon submarines roamed the oceans of the world with the potential of unleashing total destruction on 224 cities or other targets each.

STRAT-X, ULMS, and TRIDENT: The Search for Accuracy

"Better bang for the buck" must have been the catchphrase in the halls of the Pentagon in the busy years of the mid-sixties. Out of that mood the Defense Department began a study of strategic systems that would provide weapons systems with a high dollar to warhead ratio. But not