

the atomic bomb website

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Intercontinental Ballistic Missile

After World War II, the U.S. defensive policy of strategic deterrence depended on a large fleet of long-range bombers that could deliver accurate nuclear strategic attacks. This method of defence was too slow to deploy in case of extreme emergency, a better, faster, and less costly solution was needed.

Three developments in the mid-1950s, however, led to the intercontinental ballistic missile (ICBM): (1) development of the thermonuclear bomb with a much greater destructive power than the original atomic bomb; (2) the rapid refinement of inertial guidance systems for ballistic missiles; and (3) the development of powerful booster engines for multistage rockets, greatly increasing their size and range. As a result, ballistic missiles became sufficiently accurate and powerful to destroy targets 8000 km (5000 mi) away. For more than thirty years, the ICBM has been the the symbol of the United States' strategic nuclear arsenal.



US / USSR Intercontinental Ballistic Missiles
[click image for larger view]



Atlas D Missile Intercontinental Ballistic Missile stands 75ft high and 10 ft in diameter. Atlas, the U.S.'s first successful ICBM, was tested in 1959 and was followed one year later by the Titan. Both were multistage liquid-fueled rockets using extremely low temperature propellants that had to be added just before launching.
[click image for larger view]



Titan II in silo Intercontinental Ballistic Missile 103 ft high, 10 ft in diameter
[click image for larger view]



Minuteman I in silo 53 ft high, 5.5 ft in diameter. The U.S. Minuteman II ICBM (second generation) that went into service in 1962 used solid fuels stored within the missile, could be launched on short notice, and was sheltered in underground concrete silos. It could carry three individual warheads.
[click image for larger view]



The U.S. Peacekeeper ICBM (formerly MX), the most modern ICBM used by the United States during the 1990s. Its design combines advanced technology in fuels, guidance, nozzle design, and motor construction with protection against the hostile nuclear environment associated with land-based systems. The Peacekeeper is much larger than Minuteman, over 70 feet long and weighing 198,000 pounds.
[click image for larger view]

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