

= Bold Orion =

The Bold Orion missile , also known as Weapons System 199B (WS @-@ 199B) , was a prototype air @-@ launched ballistic missile (ALBM) developed by Martin Aircraft during the 1950s . Developed in both one- and two @-@ stage designs , the missile was moderately successful in testing , and helped pave the way for development of the GAM @-@ 87 Skybolt ALBM . In addition , the Bold Orion was used in early anti @-@ satellite weapons testing , performing the first interception of a satellite by a missile .

= = Design and development = =

The Bold Orion missile was developed as part of Weapons System 199 , initiated by the United States Air Force (USAF) in response to the U.S. Navy 's Polaris program , with funding authorised by the United States Congress in 1957 . The purpose of WS @-@ 199 was the development of technology that would be used in new strategic weapons for the USAF 's Strategic Air Command , not to deliver operational weapons ; a primary emphasis was on proving the feasibility of an air @-@ launched ballistic missile .

The designation WS @-@ 199B was assigned to the project that , under a contract awarded in 1958 to Martin Aircraft , would become the Bold Orion missile . The design of Bold Orion was simple , using parts developed for other missile systems to reduce the cost and development time of the project . The initial Bold Orion configuration was a single @-@ stage vehicle , using a Thiokol TX @-@ 20 Sergeant solid @-@ fuel rocket . Following initial testing , the Bold Orion configuration was altered to become a two @-@ stage vehicle , an Allegany Ballistics Laboratory Altair upper stage being added to the missile .

= = Operational history = =

Having been given top priority by the Air Force , the first flight test of the Bold Orion missile was conducted on May 26 , 1958 , from a Boeing B @-@ 47 Stratojet carrier aircraft , which launched the Bold Orion vehicle at the apex of a high @-@ speed , high @-@ angle climb . The zoom climb tactic , combined with the thrust from the rocket motor of the missile itself , allowed the missile to achieve its maximum range , or , alternatively , to reach space .

A twelve @-@ flight test series of the Bold Orion vehicle was conducted ; however , despite suffering only one outright failure , the initial flight tests of the single @-@ stage rocket proved less successful than hoped . Authorisation was received to modify the Bold Orion to become a two @-@ stage vehicle ; in addition to the modifications improving the missile 's reliability , they increased the range of Bold Orion to over 1 @, @ 000 miles (1 @, @ 600 km) . Four of the final six test firings were of the two @-@ stage vehicle ; these were considered completely successful , and established that the ALBM was a viable weapon .

= = ASAT test = =

The final test launch of Bold Orion , conducted on October 13 , 1959 , was a test of the vehicle 's capabilities in the anti @-@ satellite role . Launched from an altitude of 35 @, @ 000 feet (11 @, @ 000 m) from its B @-@ 47 mothership , the missile successfully intercepted the Explorer 6 satellite , passing its target at a range of less than 4 miles (6 @. @ 4 km) at an altitude of 156 miles (251 km) . Had the missile been fitted with a nuclear warhead , the satellite would have been destroyed .

The Bold Orion ASAT test was the first interception of a satellite by any method , proving that anti @-@ satellite missiles were feasible . However this test , along with an earlier , unsuccessful test of the High Virgo missile in the anti @-@ satellite role , had political repercussions ; the Eisenhower administration sought to establish space as a neutral ground for everyone 's usage , and the " indication of hostile intent " the tests were seen to give was frowned upon , with anti @-@ satellite weapons development being curtailed shortly thereafter .

== Legacy ==

The results of the Bold Orion project , along with those from the testing of the High Virgo missile , also developed under WS 199 , provided data and knowledge that assisted the Air Force in forming the requirements for the follow on WS 138A , which would produce the GAM 87 Skybolt missile .

== Launch history ==