

U.S. plays catch-up on hypersonic missiles

In a race to catch up with China and Russia, the U.S. Air Force, Army and Navy are sharing funding and technology to develop a range of hypersonic missile systems

BOOST-GLIDE VEHICLES: Launched to high altitude, glide to their target at Mach 3-20

Tactical Boost Glide (TBG)

USAF - Raytheon Technologies

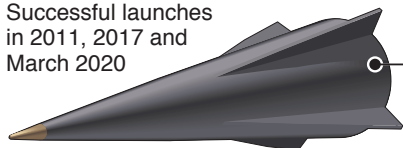
Successful launches in 2011, 2017 and March 2020



Common Hypersonic Glide Body (C-HGB)

USN / U.S. Army - Sandia National Laboratories

Submarine-launched and truck-based



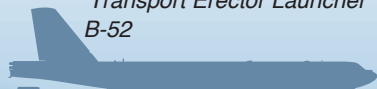
INTEGRATED MISSILE SYSTEMS

Using Boost-Glide Vehicles (*all Lockheed Martin developed*)

Long-Range Hypersonic Weapon (LRHW) U.S. Army
Mobile ground-launched vehicle for C-HGB



Transport Erector Launcher
B-52



F-15



Intermediate Conventional Prompt Strike (ICPS) USN

Using C-HGB atop a submarine-launched booster



Virginia class nuclear submarine

Hypersonic Conventional Strike Weapon (HCSW) USAF

Based on C-HGB. Cancelled

AGM-183A Air-Launched Rapid Response Weapon (ARRW) USAF

Uses TBG, is smaller than HCSW.

Twice as many ARRWs could be carried on B-52, or launched singly from the F-15



Operational Fires (OpFires) US Army

Ground-launched boost-glide system based on TBG

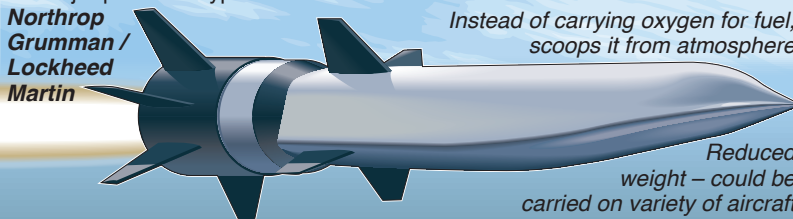
HYPERSONIC CRUISE MISSILES: Powered during flight by attached engine

Hypersonic Air-breathing Weapon Concept (HAWC)

Scramjet-powered hypersonic cruise missile

**Northrop
Grumman /
Lockheed
Martin**

*Instead of carrying oxygen for fuel,
scoops it from atmosphere*



Reduced weight – could be carried on variety of aircraft