



HYPERSONIC MISSILE: NEW CHALLENGES TO GLOBAL SECURITY



FOOTAGE OF TESTS - NOT ACTUAL COMBAT



**III INTERNATIONAL SYMPOSIUM ON HYPERSONIC FLIGHT
2ND LIEUTENANT L. NARDI 2ND LIEUTENANT F.M. RIBOLI
POZZUOLI, 31/05/2019**



HYPERSONIC MISSILE: NEW CHALLENGES TO GLOBAL SECURITY



What possible future scenarios can we expect?

What will the proliferation of such weapons change in the geopolitical scenario we live in?

What are the main advantages of Hypersonic Weapons compared to standard ballistic missile?

Is it worthwhile for Italy and its allies to invest money in R&D initiatives on hypersonic technologies?

What are NATO Countries doing with respect to this situation?

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AGENDA

HISTORICAL BACKGROUND

H.G.V. AND H.C.M.

POTENTIAL ROLES

FUTURE SCENARIOS

CONCLUSION

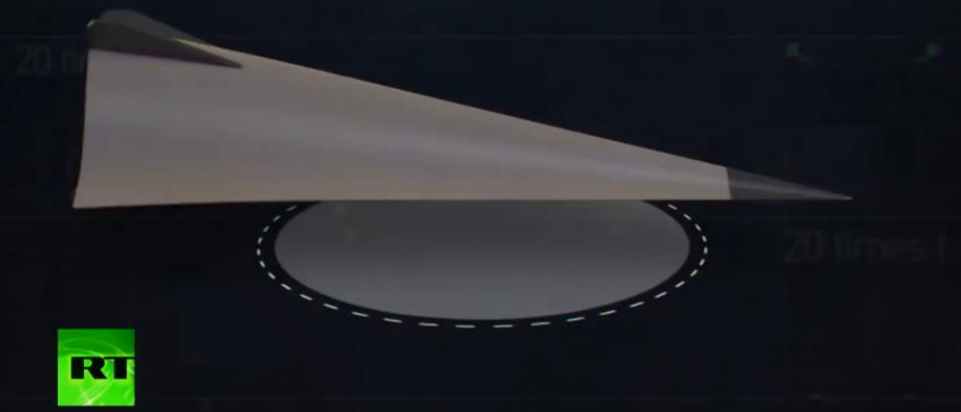
YESTERDAY: STATISTICAL WARFARE



Today: Mutually Assured Destruction



AVANGAR

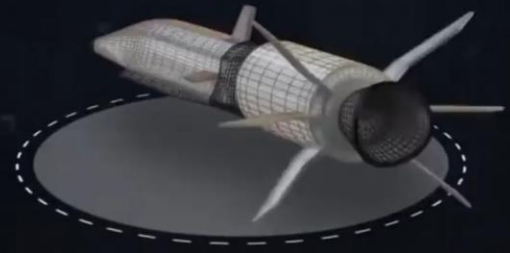


FOOTAGE OF TESTS - NOT ACTUAL COMBAT



Hypersonic Cruise Missile

K



FOOTAGE OF TESTS NOT ACTUAL COMBAT



ADVANTAGES



Speed

Manoeuvrability

Defense Penetration

Survivability

Rapid Response Time

Destructive Power

No Crew Risk

Range

POTENTIAL ROLES



	Engagement of Time-Sensitive Targets
A.	1. Mobile TSTs 2. Fixed TSTs
B.	Hard and Deeply Buried Targets (HDBTs)
C.	Suppression of Enemy Air Defence (SEAD)
D.	Additional Defensive Layer for an Air Defence System

1

MBDA
MISSILE SYSTEMS



**HMs Carried by Fighters Jets:
New Tactics**

**Possibility of Hitting a
Surface Target at Any Time**

2



Air-to-Air Applications

**An Hypersonic Stealth
Air-to-Air Missile**

FUTURE POSSIBLE SCENARIOS

Current Response Time

23 min

HM Scenario

6 min

**New Decision-Making
Process**

Equilibrium Still Relies on MAD

Emerging Destabilizing Threats

**Dangerous
Uncertainty of Intent**

Conventional Warhead

Unconventional Warhead (WMD)

Dual-Use

«It should be underlined that hypersonic missiles could have destabilizing effects not much because they increase the likelihood of a crisis, but because they would make it more acute, and favor an escalatory logic in case a crisis occurs in the first place . »

COUNTERMEASURES

DETERRENCE

**ANTI-HYPERSONIC
DEFENSE SYSTEMS**

**LAUNCH ON
WARNING
POSTURE**

**DEVOLUTION OF
DECISION
MAKING**

FILL THE GAP

CONCLUSION: THE KEY IS TIME

03:57:00

FIND SHELTER BEFORE COUNTDOWN EXPIRES



**Joint NATO Commission
to Evaluate the Situation**



Need of a Space Force

Thank you for your attention!



Regards to:



SEZIONE ROMADUE
LUIGI BROGLIO
ASSOCIAZIONE ARMA AERONAUTICA



Distretto Aerospaziale
della Campania



ACCADEMIA AERONAUTICA



III Simposio Internazionale sul Volo Ipersonico

Hypersonic Missiles: New Challenges to Global Security

Missili Ipersonici: Nuove Sfide alla Sicurezza Globale

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