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## China Successfully Tests First Hypersonic Aircraft (Download PDF)

(November 30, 2018)

China successfully tested its 1<sup>st</sup> cutting-edge hypersonic “waverider” flight vehicle (aircraft) Xingkong-2 (Starry Sky-2). Waverider is flight vehicle that flies in atmosphere & uses shockwaves generated by its own hypersonic flight w/air to glide at high speed.

**NASA** **Mach Number** **Glenn Research Center**

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**ratio =  $\frac{\text{Object Speed}}{\text{Speed of Sound}}$  = Mach Number**

**Subsonic**  
Mach < 1.0

**Transonic**  
Mach = 1.0

**Supersonic**  
Mach > 1.0

**Hypersonic**  
Mach > 5.0

Image of Hypersonic Supersonic Subsonic

- United States & Russia are carrying out similar experiments.

### About Test

- Xingkong-2 hypersonic waverider flight vehicle was released in air from rocket after about 10 minutes.
- It flew independently, made large-angle turning maneuvers & landed in targeted area as planned.
- During test, it had reached 30 kms in altitude at Mach 5.5 - 6 speed.
- Test proved various parameters of flight vehicle, thus marking successful launch of Xingkong-2 & 1<sup>st</sup> flight of Chinese waverider.

*Image of China Tests Waverider Hypersonic Aircraft*

## **Xingkong-2 (Starry Sky-2)**

- Hypersonic waverider flight vehicle was designed by state-run China Academy of Aerospace Aerodynamics (CAAA) in collaboration w/China Aerospace Science & Technology Corporation.
- It can carry both conventional & nuclear warheads.
- It has capability to penetrate any current generation anti-missile defence systems due to its high speed & unpredictable trajectory.
- Current generation of anti-missile defence systems is mainly designed to intercept cruise & ballistic missiles which are either slower or easier to predict, making them possible to intercept.
- Hypersonic waverider flight vehicle may see civil use in future.
- China is advancing shoulder-to-shoulder w/US & Russia in developing hypersonic waverider flight vehicle.
- China is expected to test this wave rider more frequently in future before being handed over for final deployment to People's Liberation Army (PLA).

## **China Aerospace Science & Technology Corporation**

- Founded in – 1999