



## China Successfully Tests its First Hypersonic Aircraft

China has successfully tested its first waverider hypersonic flight vehicle, a weapon that can carry nuclear warheads and break through any current generation anti-missile defense system due to its high speed and unpredictable trajectory.

- **The Xingkong-2, or Starry Sky-2**, was launched in a rocket and released in the air after about 10 minutes.
- The current generation of anti-missile defense systems are mainly designed to intercept cruise and ballistic missiles, which are either slower or easier to predict, making them possible to intercept.
- In addition to its military use, the hypersonic flight vehicle may also see civil use and industrial transport.

### Hypersonic Aircraft

- These are the aircrafts which travels at least four times **faster than the speed of sound**.
- It flies through the atmosphere at speeds above Mach 5, a speed where dissociation of air begins to become significant and high heat loads exists.
- This type of aircraft, also known as the **Waverider** uses the shock waves generated by its own flight as a lifting surface to glide at high speed .
- A traditional engine's fan blades cannot be used for these jets, as they would melt if used at hypersonic speeds.
- The aircraft instead uses the shockwaves created by travelling at such high speeds to squeeze incoming air.

PDF Reference URL: <https://www.drishtias.com/printpdf/china-successfully-tests-its-first-hypersonic-aircraft>