

Superjet technology nears reality after Australia test

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A joint US-Australian military research team is running a series of 10 trials at the world's largest land testing range, Woomera in South Australia, developing the scramjet, a supersonic combustion engine

A two-hour flight from Sydney to London is a step closer to reality after the latest successful test Wednesday of hypersonic technology in the Australian desert.



A joint US-Australian military research team is running a series of 10 trials at the world's largest land testing range, Woomera in South Australia, and at Norway's Andoya Rocket Range.

"It is a game-changing technology... and could revolutionise global air travel, providing cost-effective access to space," Australia's chief scientist Alex Zelinsky said in a statement.

Scientists have said <u>hypersonic technology</u> could cut travelling time from Sydney to London to as little as two hours for the 17,000-kilometre (10,560-mile) flight.

Hypersonic <u>flight</u> involves travelling at more than five times the speed of sound (Mach 5).

Scientists involved in the programme—called Hypersonic International Flight Research Experimentation (HIFiRE)—are developing an <u>engine</u> that can fly at Mach 7, Michael Smart of the University of Queensland told AFP.

"It's an exciting time... we want to be able to fly with a hypersonic engine at Mach 7," said Smart, a hypersonics expert involved in the programme which also includes US aerospace giant Boeing and German space agency DLR.

He added that the scramjet was a supersonic combustion engine that uses oxygen from the atmosphere for combustion of its fuel, making it lighter and faster than fuel-carrying rockets.

"The practical application of that is you could fly long distances over the Earth very, very quickly but also that it's very useful as an alternative to a <u>rocket</u> for putting satellites into space," Smart said.



The experimental rocket in the trial on Wednesday reached an altitude of 278 kilometres and a target speed of Mach 7.5, Australia's defence department said.

Each <u>test</u> builds on previous ones, with the latest used to measure heat on the outside of a vehicle in <u>hypersonic flight</u>, Smart said.

The next test, scheduled for 2017, would involve the scramjet engine separating from the rocket booster and flying on its own, he added.

The first test was conducted in 2009 with the project expected to be completed in 2018.

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