



Contract awarded to design a 'hypersonic spaceplane', which is as cool as it sounds

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The Defense Advanced Research Projects Agency has commissioned three companies to design a next-generation space plane whose description sounds straight out of a science fiction movie.

The contract is for the first phase of DARPA's 'Experimental Spaceplane (XS-1)' program — an effort to find reusable, affordable space launch systems for the government.

It's no secret that the government has been on the lookout for technology to make satellite launches faster, cheaper and more efficient. So how will this 'hypersonic spaceplane,' as it's known, accomplish that?

Here's how it works:

A satellite is traditionally launched into space via a giant rocket, which is an expensive undertaking that requires scheduling years ahead for limited slots, DARPA said.

The new craft is envisioned as an airplane-like vehicle. It will ferry an expendable rocket and the satellite into suborbital altitude. Once it deploys

the rocket, the plane will break off and fly back to earth, just like any other commercial flight. Then it will be ready to go for the next launch.

As part of the contract, DARPA wants each company's spaceplane to demonstrate 10 flights in 10 days, fly at least once at 10 times the speed of sound, and do it all for less than \$5 million per flight.

The companies selected to design this futuristic plane are partnerships between space giants and start-ups. They include Boeing with Blue Origin and Northrop Grumman with Virgin Galactic. The third contractor is a joint venture between California start-ups Masten Space Systems and XCOR Aerospace.

"We chose performers who could prudently integrate existing and up-and-coming technologies and operations," Jess Sponable, the agency's program manager, said in a statement.

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