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US boasts of laser weapon's 'plausible deniability'

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An airborne laser weapon dubbed the "long-range blowtorch" has the added benefit that the US could convincingly deny any involvement with the destruction it causes, say senior officials of the US Air Force (USAF).

The Advanced Tactical Laser (ATL) is to be mounted on a [Hercules military transport plane](#). Boeing announced the first test firing of the laser, from a plane on the ground, earlier this summer.

Cynthia Kaiser, chief engineer of the US Air Force Research Laboratory's [Directed Energy Directorate](#), used the phrase "plausible deniability" to describe the weapon's benefits in [a briefing \(powerpoint format\)](#) on laser weapons to the New Mexico Optics Industry Association in June.

Plausibly deniable

John Corley, director of USAF's Capabilities Integration Directorate, used the same phrase to describe the weapon's benefits at an Air Armament Symposium in Florida in October 2007 ([see page 15, pdf format](#)).

As the term suggests, "plausible deniability" is used to describe situations where those responsible for an event could plausibly claim to have had no involvement in it.

Corley and Kaiser did not respond to requests from **New Scientist** to expand on their comments. But John Pike, analyst with defence think-tank [Global Security](#), based in Virginia, says the implications are clear.

"The target would never know what hit them," says Pike. "Further, there would be no munition fragments that could be used to identify the source of the strike."

Silent strike

A laser beam is silent and invisible. An ATL can deliver the heat of a blowtorch with a range of 20 kilometres, depending on conditions. That range is great enough that the aircraft carrying it might not be seen, especially at night.

With no previous examples for comparison, it may be difficult to discern whether damage to a vehicle or person was the result of a laser strike.

The 5.5-tonne ATL combines chlorine and hydrogen peroxide molecules to release energy, which is used in turn to stimulate iodine into releasing intense infra-red light.

The US uses Hercules aircraft for accurate cannon strikes on moving vehicles. The ATL is touted as bringing a new level of accuracy to such attacks, for example being able to pinpoint a vehicle's tyres to disable it safely.

A second, larger version of the laser is also nearing initial testing. The much larger Airborne Laser is intended for missile defence and will be carried by a Boeing 747.

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ATL official fact sheet, USAF (PDF format)
<http://www.kirtland.af.mil/shared/media/document/AFD-070404-027.pdf>

John Corley's presentation - see page 15 (PDF format)
http://www.ndiagulfcoast.com/events/archive/33rd_symposium/day2/05_XR%20NDIA%2010-11%20Oct%20%20Final.pdf

Cynthia Kaiser's briefing (PowerPoint format)
http://www.nmoia.org/images/NMOPTICS_Briefing_a.ppt

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