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Laser gunship hits \$30 million bulls-eye

Posted by [Jonathan Skillings](#)

The U.S. Air Force has awarded Boeing a new contract worth up to \$30 million for the next phase of development on the Advanced Tactical Laser.

The **[ATL is a C-130H aircraft](#)** outfitted with a 12,000-pound high-energy chemical laser module that would be used as a weapon against ground targets. It's the smaller sibling of the Airborne Laser, a highly modified 747 under development that packs a similar weapon but that would be used against ballistic missiles.



The Advanced Tactical Laser will use a rotating ball turret to fire its laser weapon at ground targets.

(Credit: Ed Turner, Boeing)

While the 747-centric ABL is designed to fire its laser through a bulbous nose apparatus, the ATL totes a belly turret reminiscent of the manned versions used in some World War II bombers.

The new Extended User Evaluation contract marks the start of a transition for the ATL, which Boeing has been working on as an Advanced Concept Technology Demonstration project. The EUE phase means another round of ground and flight tests, along with "hands-on operation" for the Air Force and other potential users.

Why use a laser when the Air Force already has a wide array of missiles and bombs at its disposal? (The standard gunship variant of the C-130 can already be equipped with 40mm and 105mm cannons.) "Little to no collateral damage," Boeing says, thanks to the laser weapon's "ultra-precision engagement capability." That is, think laser pointer with extreme prejudice.

In addition, the laser would presumably strike more or less silently--no thump-thump-thump or rat-a-tat-tat. (*Note, 11:30 a.m. PDT: A reader writes in to say that high-power lasers operating in the atmosphere are anything but silent, perhaps because of ionizing the air - a la lightning.*)

For use against missiles, mortars, and the like, laser weapons are intended to heat up and

weaken the metal skin of the projectile, causing it to rupture while in flight. Against ground targets, the ATL could, say, zap fuel tanks or even vehicle tires--if it could hold focus long enough.

In a [Medill Reports story](#) on the ATL, Northwestern University engineering professor [Manijeh Razeghi](#) said there is a range of potential military uses for lasers.

"Lasers can create fires. They can kill," said Razezhi, who has worked on lasers for the military. "Each (laser) wavelength has some application. Some of them you know about; some of them are classified, and we cannot speak about them."

The National Academies of Science, meanwhile, is raising questions about the overall costs of laser weapons programs, the power requirements for the systems, and just how much collateral damage might actually occur, according to *Wired's* [Danger Room](#) blog.

Two months ago, Boeing said it had completed the first ground test of the entire ATL weapon system, with the laser being fired through the beam control system. At the time, it also said that before the end of 2008, it expected to conduct an in-flight test of the gunship firing at "mission representative" ground targets.

In this week's contract announcement, Boeing did not mention a time frame for an in-flight test, and a company representative could not say whether the test would occur before year's end.

In August, Boeing touted a \$36 million contract win to carry on with its work on a [truck-mounted laser weapon system](#), the HEL TD.

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