

LaserMotive To Demonstrate Wireless Power Technology for UAVs at SPIE Orlando

System Uses Laser Power Beaming to Create a Virtually Limitless Power Supply

Orlando, Florida (April 26, 2011) – LaserMotive, an independent R&D company specializing in laser power beaming and winner of the 2009 NASA-sponsored Power Beaming Challenge, will be showcasing examples of its wireless power system for unmanned aerial vehicles, including models of electric helicopters and aircraft, here at the SPIE Defense, Security and Sensing Exhibition April 26-29 in Orlando, Florida, booth 3700.

The LaserMotive technology uses laser power beaming – the wireless transfer of energy over long distances using laser light – to create an endless source of power to aircraft. The LaserMotive laser power beaming system is based on technology the company developed for its winning entry in the 2009 Power Beaming Challenge for a purse prize of nearly \$1 million, marking the first time any team ever won the Challenge.

Among the technologies on display are:

- A fully-functioning demonstration of a laser powered micro-helicopter. The demonstration is eye-safe and has been designed to fit inside LaserMotive's booth at the Exhibition. The tethered demonstration model uses technology LaserMotive developed for the longest duration tethered laser-powered helicopter flight on record, set last August at the AUVSI Conference. At that time, the demonstration model successfully flew up to six hours continuously each day of the four-day conference.
- A simulation of a ground-based laser transmitter and multiple aircraft with laser receivers, including the record breaking laser-powered free-flying quadcopter. That flight took place in October 2010 at the Future of Flight Aviation Center, where the unmanned quadcopter flew continuous for more than 12 hours powered solely by lasers.

The technologies on display are part of the company's long-term strategy to develop a full-scale laser power system for unmanned aerial vehicles (UAVs). According to industry research firm the Teal Group, UAVs are one of the largest growth sectors in the aerospace and defense industries with an expected growth rate worldwide to \$11.5 billion annually by 2020.

In addition to the display, LaserMotive President Tom Nugent will present a paper titled #8045-40, with the title "Laser power beaming for defense and security applications." This paper will overview wireless power via laser for unmanned aerial vehicles, remote sensors, and forward operating bases.

"We're pleased to be able to demonstrate our technology at SPIE, which is one of the industry's leading meeting places for scientists and engineers from industry, military, government agencies, and academia throughout the world," said Tom Nugent, president and co-founder of LaserMotive. "Not only does our technology enable electric aircraft to be recharged in flight, but it also has the potential to extend their abilities, improve their endurance and enable new missions. It is especially viable for high-altitude, long endurance unmanned aerial vehicles and other types of aircraft that need power over a long period of time."

Headquartered in Kent, Wash., LaserMotive is a privately-held R&D company specializing in laser power beaming for commercial applications. The company was co-founded in 2006 by Dr. Jordin Kare, one of the foremost experts on laser propulsion, and Tom Nugent, former Research Director for LiftPort Group. Its industry partners include some of the leading companies in aerospace and lasers, including The Boeing Company, DILAS, MS Kennedy, Ophir Spiricon, Zaber Technologies, and In-Tec. For more information, including a white paper on LaserMotive's UAV strategy, please visit the company website at www.lasermotive.com.

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