Lockheed Martin Applies Wind Measurement Technology For More Precise Cargo Airdrops To U.S. Ground Forces

WindTracer® for Precision Air Drop to Demonstrate Faster, Safer Supply Deliveries

PALO ALTO, Calif., June 12, 2014 /PRNewswire/ -- The U.S. Air Force Research Laboratory (AFRL) has awarded Lockheed Martin [NYSE: LMT] a contract to adapt its WindTracer® wind measurement system to help C-130 and C-17 aircrews make safer, faster and more accurate airdrops of essential supplies to U.S. ground forces at remote locations.

Under the contract, Lockheed Martin will design and build a prototype Precision Air Drop (PAD) unit for testing. As part of the demonstration, the prototype unit will be airdropped to the test site and used to measure winds.

[High-res imagery available at http://www.lockheedmartin.com/us/news/press-releases/2014/june/0612-12-airdrop.html]

"Currently air drop missions require several flyovers to accurately determine wind readings, but our WindTracer technology would eliminate the need for so many passes," said Dr. Kenneth Washington, vice president of STAR Labs, Lockheed Martin's space technology research and development group. "WindTracer is an adaptable commercial system. By developing this prototype, we're putting this technology on a path for fielding."

Lockheed Martin will make WindTracer smaller to fit on a pallet and ruggedize it to survive shock and vibration. Engineers will also modify the existing technology to measure wind velocity from the ground to the airdrop altitude and add the ability to send real-time telemetry.

PAD is based on Lockheed Martin's commercially available WindTracer wind-profiling lidar technology. WindTracer systems are installed at airports worldwide detecting hazardous winds and aircraft wakes.

"Applying proven technology to the airdrop mission is the most effective way to deliver fast, affordable innovation," said Mike Hamel, president of Lockheed Martin's Commercial Ventures group. "WindTracer has been helping commercial airliners take off and land safely for years, and it is an ideal technology to support military air drops."

WindTracer operates by transmitting pulses of eye-safe infrared laser light that reflect off naturally occurring aerosol particles in the atmosphere. Wind moves these particles, which alters the frequency of the light that is scattered back to the system. WindTracer processes the return signal to determine wind conditions with extremely high accuracy.

Headquartered in Bethesda, Maryland, Lockheed Martin is a global security and aerospace company that employs approximately 113,000 people worldwide and is principally engaged in the research, design, development, manufacture, integration and sustainment of advanced technology systems, products and services. The Corporation's net sales for 2013 were $45.4 billion.

For additional information, visit our website: http://www.lockheedmartin.com

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