

Kernco Delivers the First Ultraminiature Laser-Based Atomic Clock to AFRL

DANVERS, Mass. – August 18, 2003—

Kernco Inc. announced today the delivery of the first Ultraminiature Laser-Based Atomic Clock (ULAC) to the Air Force Research Laboratory (AFRL), Wright-Patterson AFB, Ohio, on June 4, 2003. The ULAC unit, delivered under a Small Business Innovation Research (SBIR) program, is based on a technology called Coherent Population



Trapping (CPT) that only recently has been exploited for time-keeping applications. Kernco's patented CPT clock design offers great potential for extremely small, low power atomic clocks. The ULAC is the first of its kind to be delivered to the United States Government. Work continues at Kernco to further reduce the weight, power and size of the CPT clock through the support of the Office of Naval Research (ONR). Kernco has published several papers on their development efforts to explore alternative laser-based atomic clock designs as a prelude to the first practical design for the ULAC. This unit is the start of a new generation in Kernco's design and manufacture of precision atomic clocks and quartz crystal oscillators for various commercial, military and telecommunications applications.

Kernco, founded in 1978, has accomplished research, development and production of high performance frequency standards and quartz crystal oscillators utilized in the Global Positioning System (GPS) program.



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