

# OPTRA's Laser Event Recorder wins Aviation Week's Product Breakthrough Award!

The article below, from the November 15, 2004 issue of *Aviation Week*, names the OPTRA Laser Event Recorder as one of five Product Breakthrough Award winners (selected from a list of 25 finalists) for 2004. The device, developed over the past 2 years for NavAir, measures and records laser light level, wavelength, pulse duration & repetition frequency, position (from a built-in GPS unit), and the scene where the laser was detected. It also provides real-time warnings of laser exposure. Up to 100 laser events can be recorded over an 8-hour period. The unit is completely self-contained, operates on 4 AA cells, and stores its data on a CompactFlash card.



## Naval Air Station Vision Laboratory Laser Event Recorder

The virtually universal green/yellow/red warning light system is being put to good use by the Patuxent River (Md.) Naval Air Station's Vision Laboratory in a deceptively simple device.

The Navair Human Systems Dept. developed a device that gives aviators instant notice in the cockpit when they are on the receiving end of laser radiation potentially hazardous to eyesight.

The compact Laser Event Recorder with three colored LEDs tells a pilot or crewmember if they're being targeted by a laser. Green means normal; yellow, a laser is pointed at them but is not a hazard; and red, an eye-threatening laser is in use.

The device not only provides instant feedback in real time, it also records detailed information onto a compact flash card for later analysis by intelligence officers, medical staff or fellow air personnel, says Jerri Tribble, research physicist and technical lead for the development team.



Jim Sheehy, chief scientist and chief technology officer for human systems, points out that inside that 1.4-lb. unit (smaller than a cigar box) is a sophisticated process of data analysis that has not been achieved in a device of this type and size, to date. Sensors now in use can't cover the complete range of laser threats, nor their capability for vision damage.

The timeframe of this development

was extraordinary: "Two years from first conception to prototype," Tribble notes.

In all tests, the LER was able to identify various types of lasers, at night and in bright daylight, and has proved resistant to being fooled by other light sources. "We haven't been able to estimate a false alarm rate yet," Sheehy says, "because we haven't gotten any."

The LER recently completed an 11-hr. (over three days) flight test in a NAS Fallon (Nev.) SH-60 Seahawk. Cockpit integration issues will be minimal since the unit operates autonomously. The device is loaded with a compact flash card and four AA batteries which will power the LER for up to 8 hr., and is mounted in place with a universal clip.

The LER can be easily placed on armored vehicles, or even integrated in the gear for individual infantry or special forces troops.

