



# ITT

*Engineered for life*

## ITT Has Proven Lidar Systems for Today's Challenges LIDAR Systems

---



ITT prototype being prepped for airborne campaign.

ITT has developed a breakthrough Lidar system – the Multi-Functional Fiber Laser Lidar (MFLL). The new system offers the community a revolutionary capability in Lidar for weather, climate, land/ocean and exploration from satellites, airplanes and UAVs. Through the use of fiber lasers and sophisticated signal processing, the MFLL requires 10 to 100 times less Power, Mass and Volume compared to conventional systems. Furthermore, the MFLL system and components have been matured to Technology Readiness Level 6. ITT has developed and deployed several MFLL Engineering Development Units, under real world field and airborne conditions. These results have validated our physics-based performance models and confirmed the end-end performance in an operational setting.

### **The MFLL is Applicable to Many of Active Remote Sensing Applications:**

#### **Laser Absorption Spectroscopy**

- TRL 6 solution matches NASA, NOAA needs in climate, atmosphere composition, pollution, weather
  - Pocket sized solution enables new UAV mission
  - Low cost solution enables networks of sensors
-

## LIDAR Systems



### Topographic Mapping of Glaciers, Fault Zones

ITT has been funded to deliver an advanced airborne Lidar system which will be used to support climate research through the mapping of glacial ice sheets.

### Rendezvous & Docking

The Agile Laser Imaging Sensor offers 100% operability solution for rendezvous, docking and inspection of space vehicles.

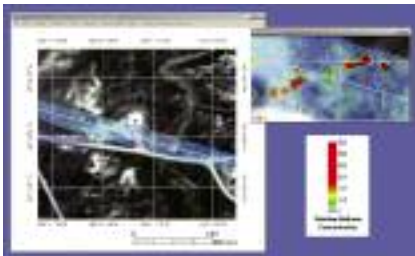
### ITT also offers conventional Lidar:

#### DIAL Lidar for detection of trace gases

- ITT offers an airborne natural gas emission lidar technology that detects, quantifies, images and maps locations of natural gas leaks.
- Another sensor system that ITT has developed can passively detect propane and ethylene using an imaging hyperspectral instrument.



ICE mapping system



Display of pipeline leaks detected by ITT DIAL Lidar system.

ITT provides a full range of remote sensing and GPS navigation solutions. For further information, contact us at:

ITT Corporation  
Space Systems Division  
1919 West Cook Road, P. O. Box 3700  
Fort Wayne, Indiana 46801, USA  
Telephone: 260-451-6000  
[www.ssd.itt.com](http://www.ssd.itt.com)

