



Technology Available for License

Flying Insect Detection and Identification

Laser-based detection system can monitor and discriminate flying insects.

Monitoring and identifying insect populations is a valuable tool for efficient and effective insect control management. MSU researchers have developed an insect detection system that aims laser light at flying insects and detects the reflective signature of their wings. The technology can distinguish flying insects without interference from foliage, or other background clutter. The device can scan the environment to monitor insect migration, effectiveness of insect control measures, or in locating insects.

Applications

- Monitoring of insect migration and location
- Identify insects and determine population densities
- Improving insect control efficiency and effectiveness
- Detecting insects such as bees “trained” to locate explosives

Benefits

- Real-time electronic signal for alarm or feedback to initiate insect control measures
- Able to continuously scan in all directions, at range
- Minimal interference from weather, or other background clutter
- Able to identify a wide range of insects

Technology Transfer and Development Status

The insect monitoring technology is a product of research the Montana State University [Optical Technology Center \(OpTeC\)](#). A patent has been issued ([U.S. patent number 7,511,624](#)) and research is ongoing.

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