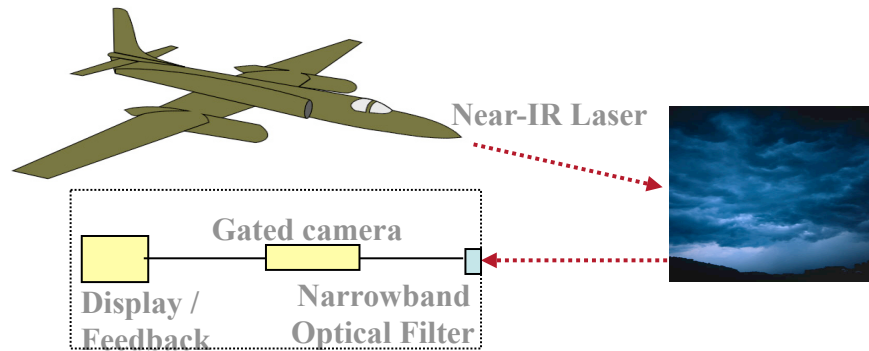




# Near Infrared (NIR) LIDAR for Hazard Detection and Mitigation

## On-board NIR Hazard Detection



**Need:** Visualization through common obscurants such as fire, fog, rain, dust and sand represents a difficulty to many branches of the military. As a result, the ability to add or enhance such visualization would have significant applications in: special operations, surveillance, aviation, targeting systems, home-land security, transportation and maritime activities

**Technology description:** RL Associates is developing a NIR range-gated LIDAR system to detect external obscurants and hazards. System will characterize type and severity of the hazard, interface with other on-board systems. Under certain conditions system will image through obscurants for hazard mitigation. System will be compact/lightweight and will operate in eye-safe region (1.5 um).

## Capabilities:

- Characterize type and severity of hazard
- Image through fog, smoke, haze, water vapor
- Illuminated SWIR imagery - object detail
- Equivalent day or night performance
- Configurable for many platforms (i.e. commercial jet, helicopter, private plane)

## Potential Applications:

Take-offs/landings from environmentally obscured runways

- Medical/News helicopters
- Carrier landings in severe weather
- Brownout/Whiteout conditions
- Smoke/fire environment for evacuation helicopters



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