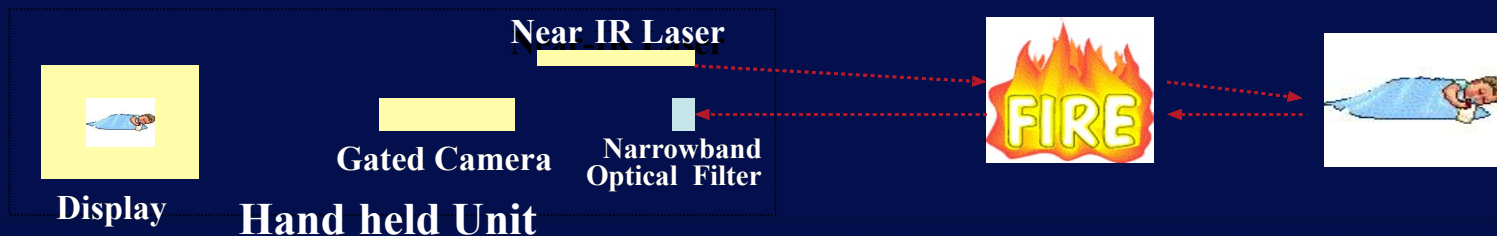


LITO

Laser Imaging Through Obscurants

- ❖ Shortwave IR laser system is safe to human eye
- ❖ Ultra-narrowband optical filter removes unwanted background radiation (i.e. flame, solar, etc.)
- ❖ Gated camera removes scatter from glass/fog/smoke
- ❖ Polarization discrimination increases signal to noise

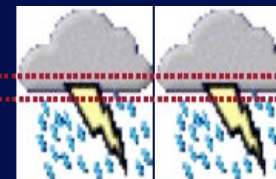


System Attributes

- ❖ Shortwave IR system can image through fire, smoke, haze, fog, water vapor, glass
- ❖ Illuminated SWIR imagery - object detail
- ❖ Range to the target, target size, and motion of the target
- ❖ Equivalent day or night performance
- ❖ Configurable for many platforms (i.e. aircraft, ship, truck, handheld)



Navy Ship in Port



Unknown Vessel

Ground test data from EHD system

Church Towers at 500m



Visible camera in clear air



NIR EHD in clear air



Visible camera in Rain/Drizzle

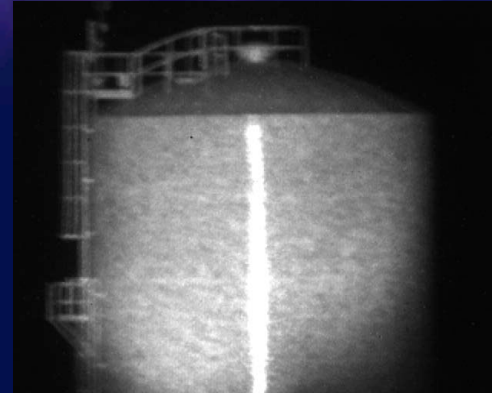


NIR EHD in Rain/Drizzle

Ground test data from EHD system Water Tower @ 2km



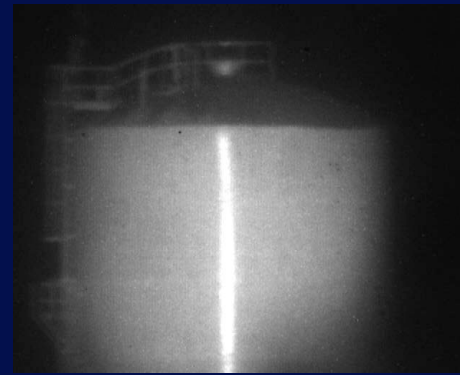
Visible camera in clear air



LITO system in clear air



Visible camera in fog/snow



LITO system in fog/snow

Airborne Platforms for LITO

Civilian Aircraft

- ❖ Take-offs/landings from environmentally obscured runways
- ❖ Medical/News helicopters



Military Aircraft

- ❖ Take-offs/landings from environmentally obscured (fog, haze, rain) runways
- ❖ Carrier landings in severe weather
- ❖ Brownout/Whiteout conditions
- ❖ Smoke/fire environment for evac helos



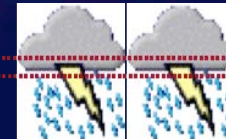
Shipboard Platforms for LITO

Naval

- ❖ In-Port surveillance
- ❖ Shipboard firefighting
- ❖ Open water cruising through environmental obscurants (piracy)



Navy Ship in Port



Unknown Vessel

Civilian Shipping

- ❖ Merchant Marine
- ❖ Fireboats
- ❖ Tugboats
- ❖ Search and Rescue
- ❖ Rail Carrier transport



Vehicle Mounted/Portable Platforms

Military Applications

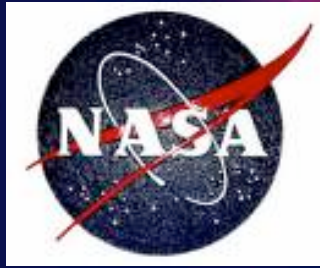
- ❖ Camouflage fires
- ❖ Enhanced night vision
- ❖ Laser range finders/designators
- ❖ Laser targeting systems
- ❖ Homeland security surveillance



Firefighting

- ❖ Searching for trapped victims in environmentally obscured conditions
- ❖ Searching for hazards i.e. downed wires, holes in floors, missing steps
- ❖ Forest fires
- ❖ 1st responders to natural disaster/terrorist attacks





Customers



- NASA
- Homeland Security
- DOD
- Commercial Aviation
- Shipping

