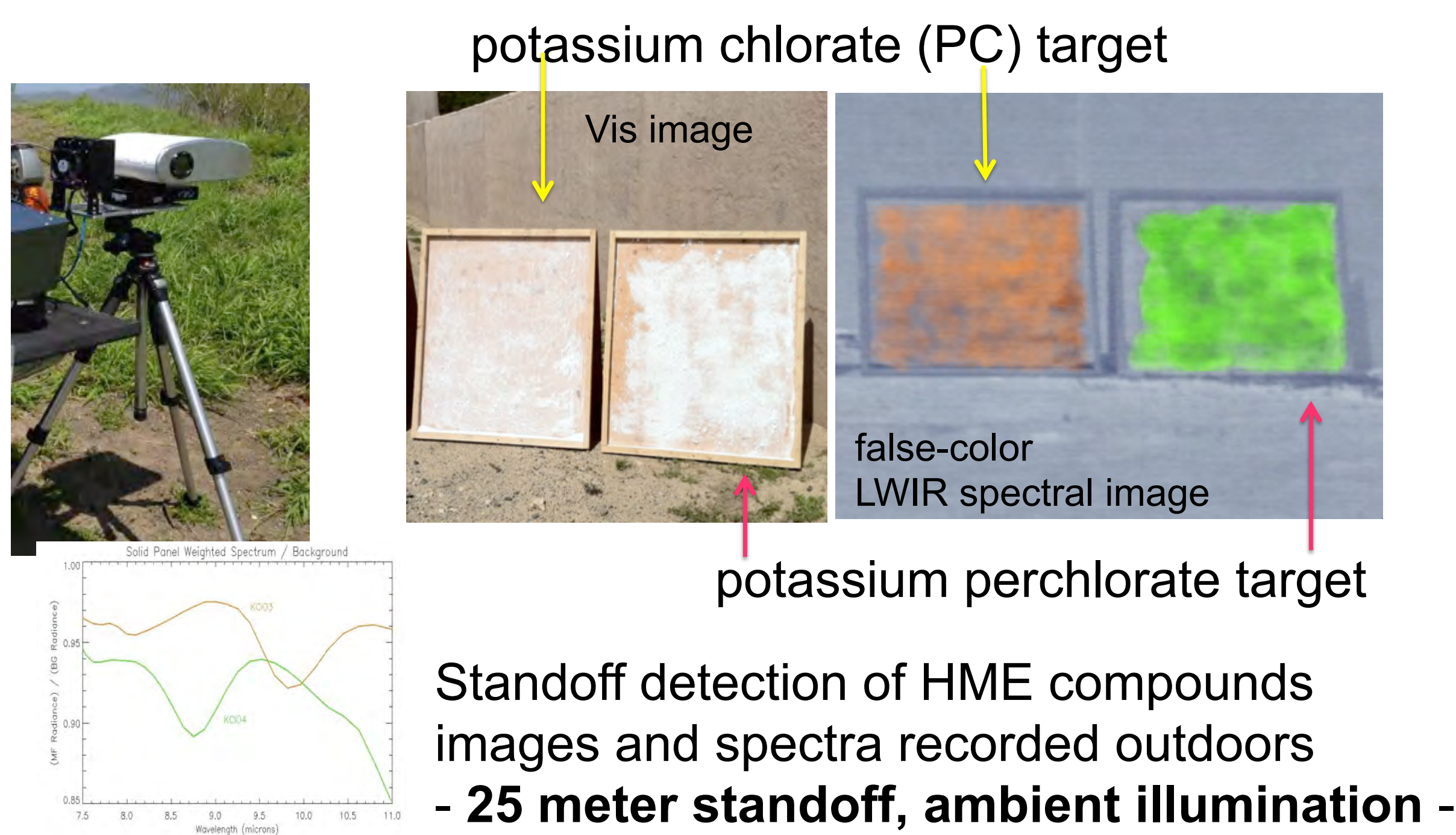


Compact Spatial Fourier Transform Spectrometer Technologies for Standoff Chemical Identification Applications

Background: Spectrum Photonics is a **small business** located at the Manoa Innovation Center, Honolulu, Hawaii

We specialize in compact IR spectral imaging and remote chemical sensing



Past and current funding, US DoD sponsors:

- DARPA
- US Army
- US Air Force
- JIEDDO
- ONR
- JPM NBC CA

We are interested to collaborate as part of a team that focuses on standoff chemical detection using an active illumination strategy coupled with one or more compact IR spectrometer detectors

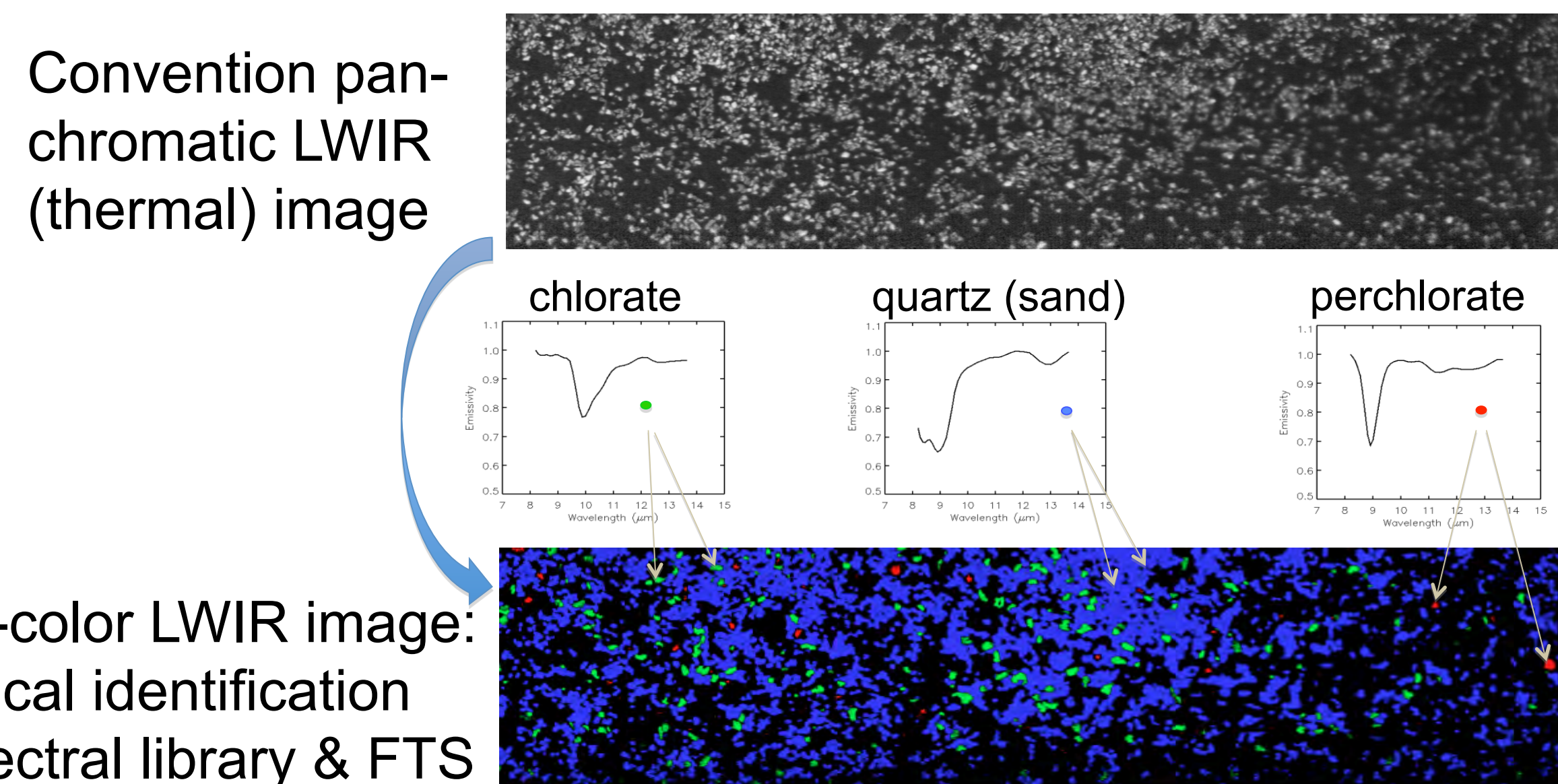
We seek to team with partners having specialized integrative capabilities, including:

- Active IR source technologies suitable for 30+ meter standoff probe illumination
- Advanced chemical detection algorithms, especially remote spectral sensing systems

Areas of Interest: Chemical sensing efforts have focused on IR spectroscopic methods using compact spatial Fourier Transform spectrometer-based methods.

Technologies demonstrated for various chemical detection applications, including:

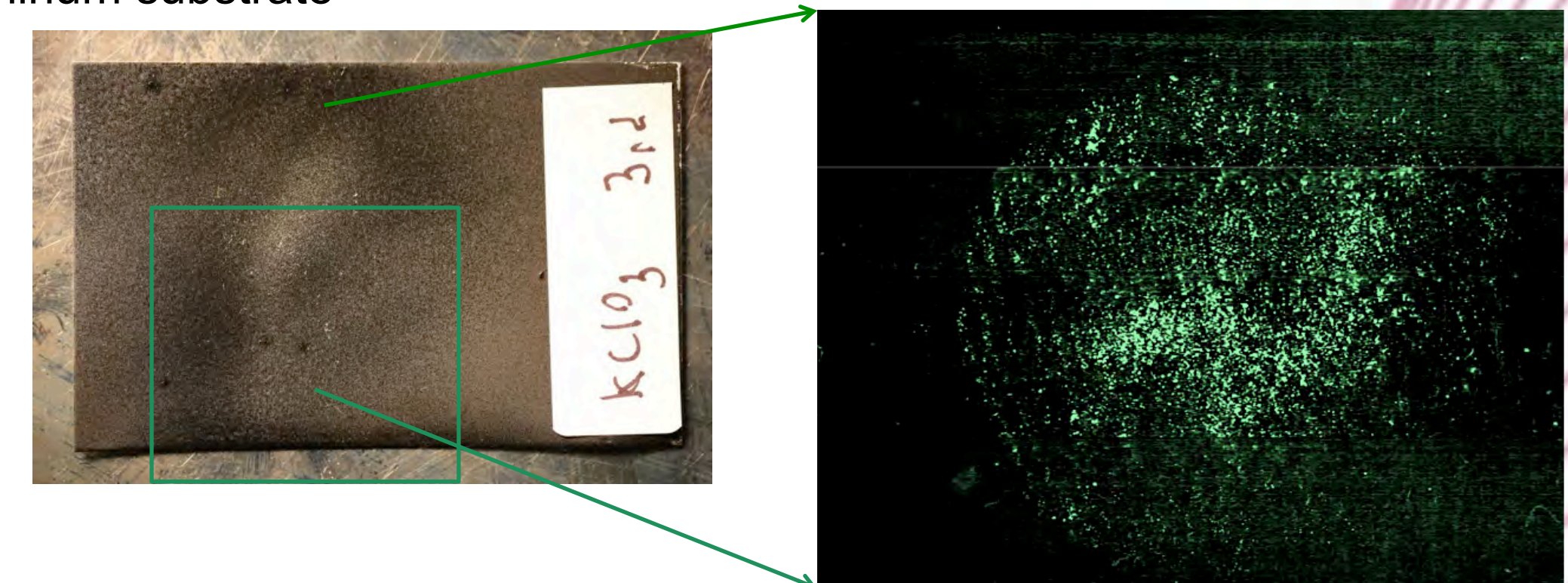
- Standoff detection of solids, including home-made explosive (HME) compounds
 ← (depicted in figure to the left)
- Chemical microimaging, complex mixtures



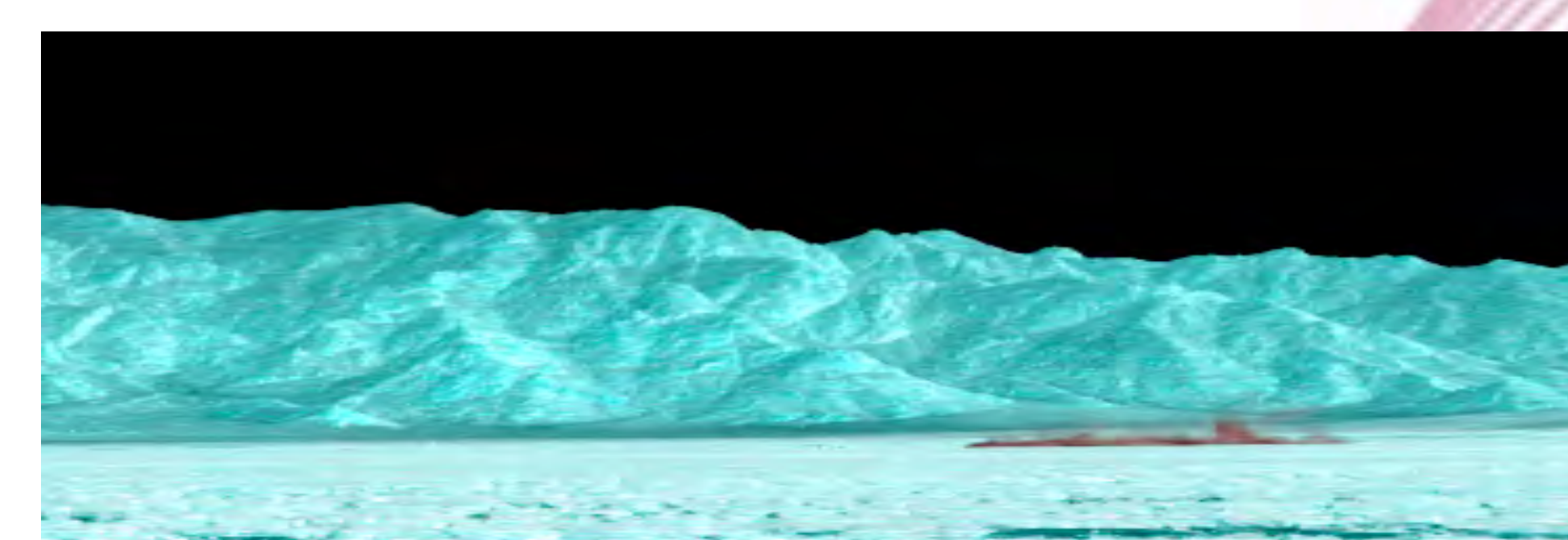
- Chemical microimaging, fingerprints

3rd "touch" post-contact with crushed Potassium Chlorate. Black painted aluminum substrate

Automated Matched Filter PC Particle Detection



- Aerosolized plumes (shown: 3 km)
- Liquids on surfaces



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