

THE EFFECTS OF ATMOSPHERIC COMPENSATION UPON GAS PLUME SIGNATURES. *B. Miller, D. Messinger**, Center for Imaging Science, blm7787@cis.rit.edu, dwmpci@cis.rit.edu

The first step in the detection and identification of gaseous plumes is to remove the effects of the atmosphere from the pixel spectra. In the thermal band this involves accounting for the upwelling radiance and the atmospheric transmission. Two popular algorithms that exist for the compensation of the atmosphere are In-scene Atmospheric Compensation (ISAC) and Autonomous Atmospheric Correction (AAC). This study looks at how atmospheric compensation techniques impact gas signatures in the LWIR region (8-12 microns) of simulated images.