

# AIRBORNE FIRE MONITORING—EXTRACTION OF ACTIVE FIRE FRONTS FROM TIME-SEQUENCE IMAGING OF THE ARCH ROCK FIRE IN SOUTHEAST OHIO

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This project investigates a prescribed fire in southeastern Ohio through remote sensing measurements of emitted radiance. Time-sequence airborne imaging consisted of multiple over-flights with a repeat interval of 3-6 minutes performed by an aircraft equipped with an infrared camera. Images were processed and analyzed to extract the active fire fronts and estimate the direction of fire propagation, rate of spread, fuel consumption, and fire intensity. Using airborne high-resolution infrared imagery provides an unprecedented opportunity to accurately estimate fuel consumption and fire intensity over large burn units. The resulting fire behavior information can then be used to determine the fire's ecological effects.

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