

NIROPS 2013 Closeout

- The Phoenix IR System

- Engineering Team

- Woody Smith (Ring Leader)
 - Charles Kazimir (Kaz)
- Bill Forsyth (Hawaiian Bill)
- Dave Chamberlain (Super Dave)

- The Phoenix IR System

- Flight Technicians

- Woody Smith (The Old Guy)
 - Charles Kazimir (Kaz)
 - Rob Navarro (Big Rob)
- John "Woody" Kessler (WoodyK)

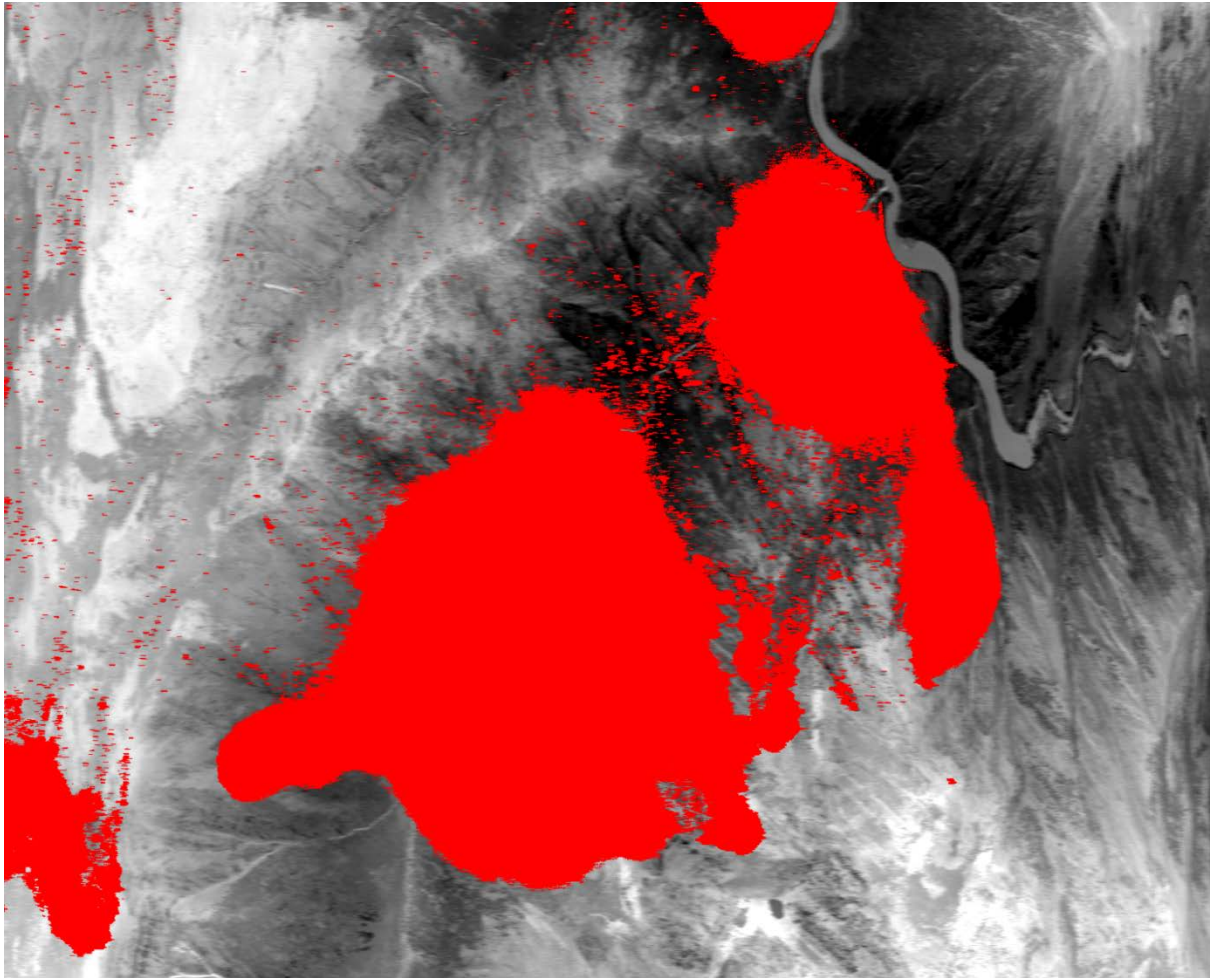
2013 Technician Statistics

- Total Technician Hours were 967.89 (about 80 hours less than 2012) hours
- Total Technician Days were 270 (same as 2012) Days
- Total Technician Missions were 1237 (200 less than 2012)
- Almost 2x more hours/missions than 2007 to 2011.

Milestones

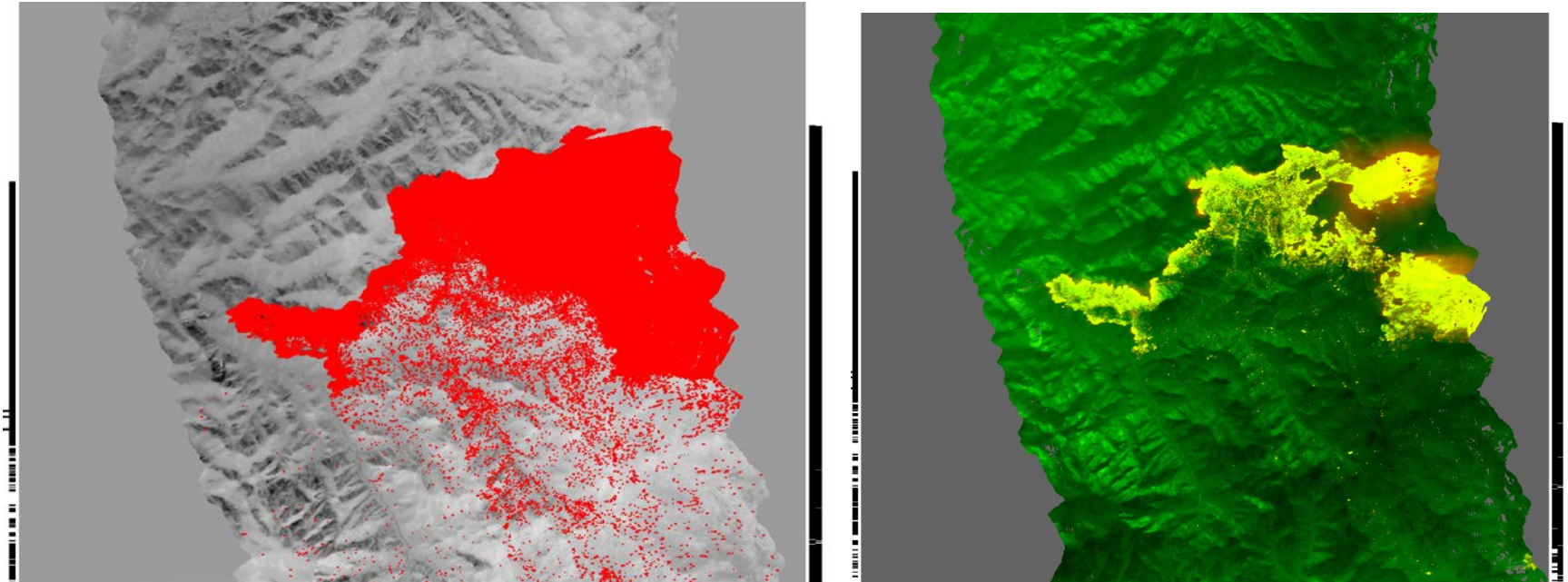
- Stabilized and cleaned up signals
 - More gain = better sensitivity, clearer image
 - Image “stretch” improved for all conditions
 - Improved digital image signal filtering
- New fire detection and “desmoke”
 - More reliable sub-pixel heat detection
 - Able to “see under” gaseous heat cloud which improves actual “on-the-ground” heat perimeter interpretation

Gaseous Extreme Heat Cloud



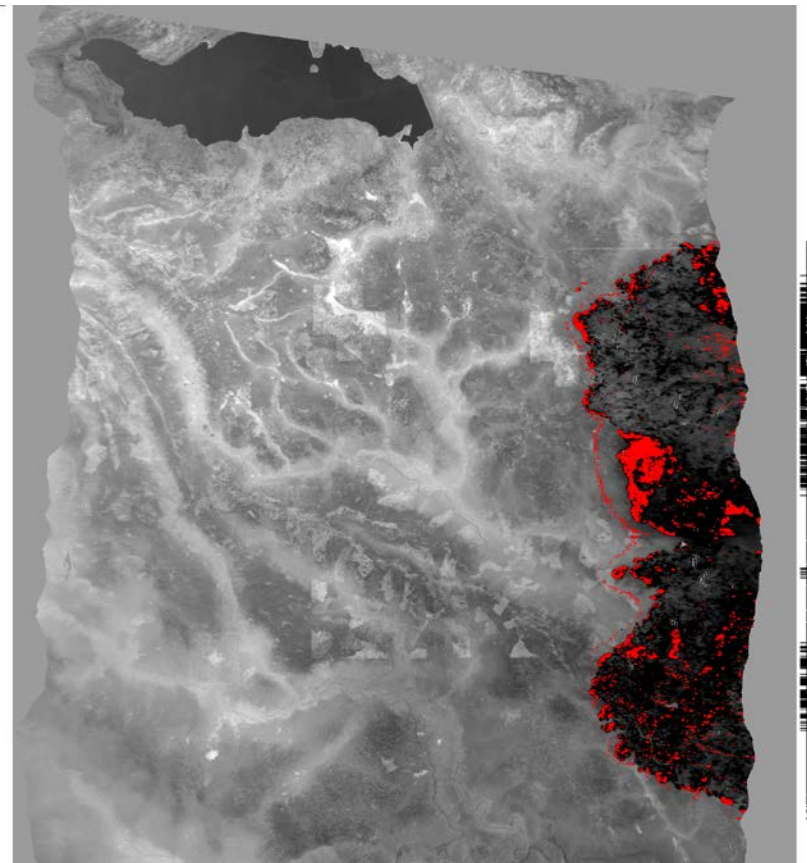
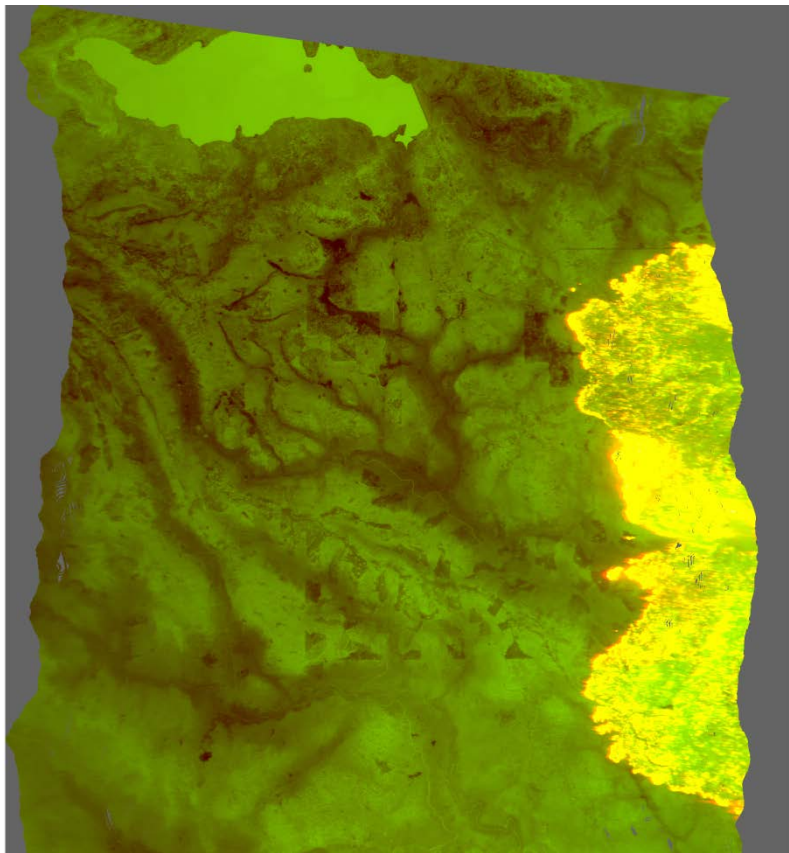
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Implement “Desmoke”

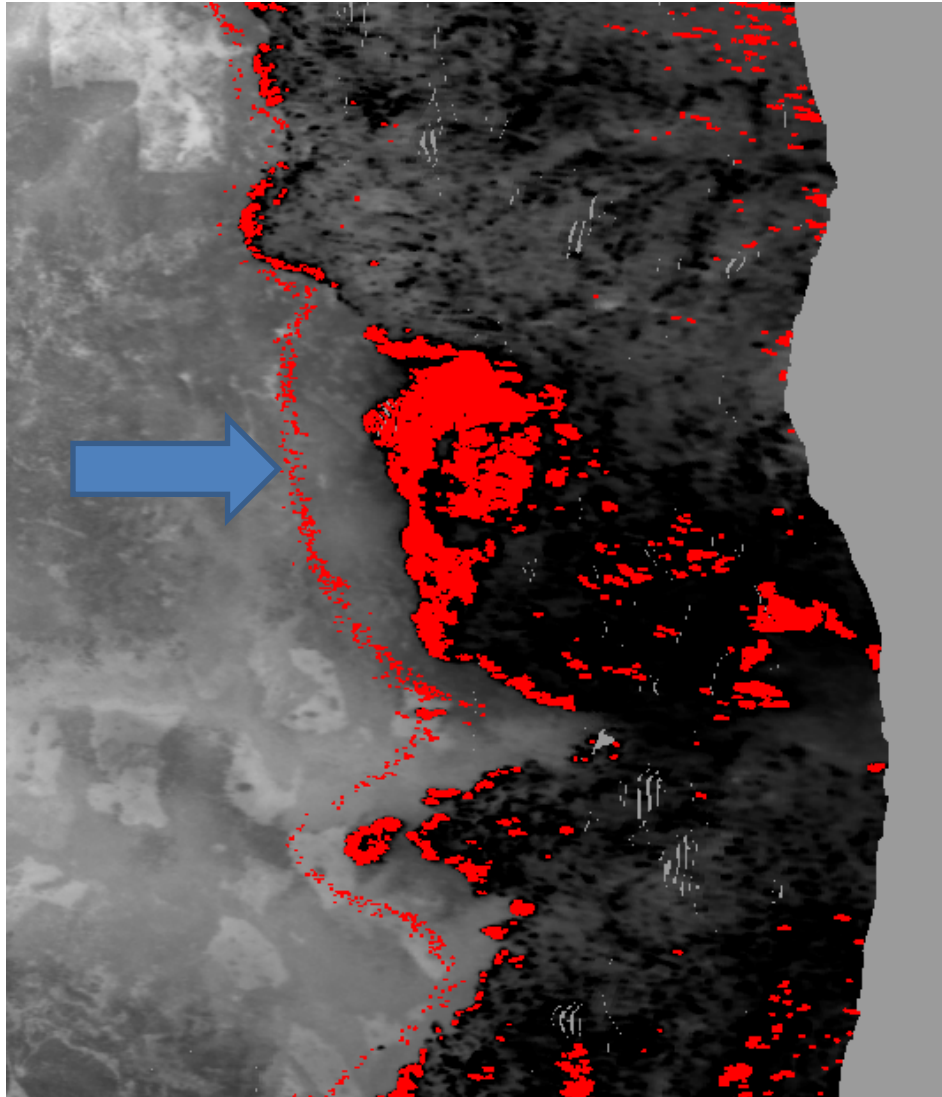


Desmoke Effect

- Better heat perimeter location

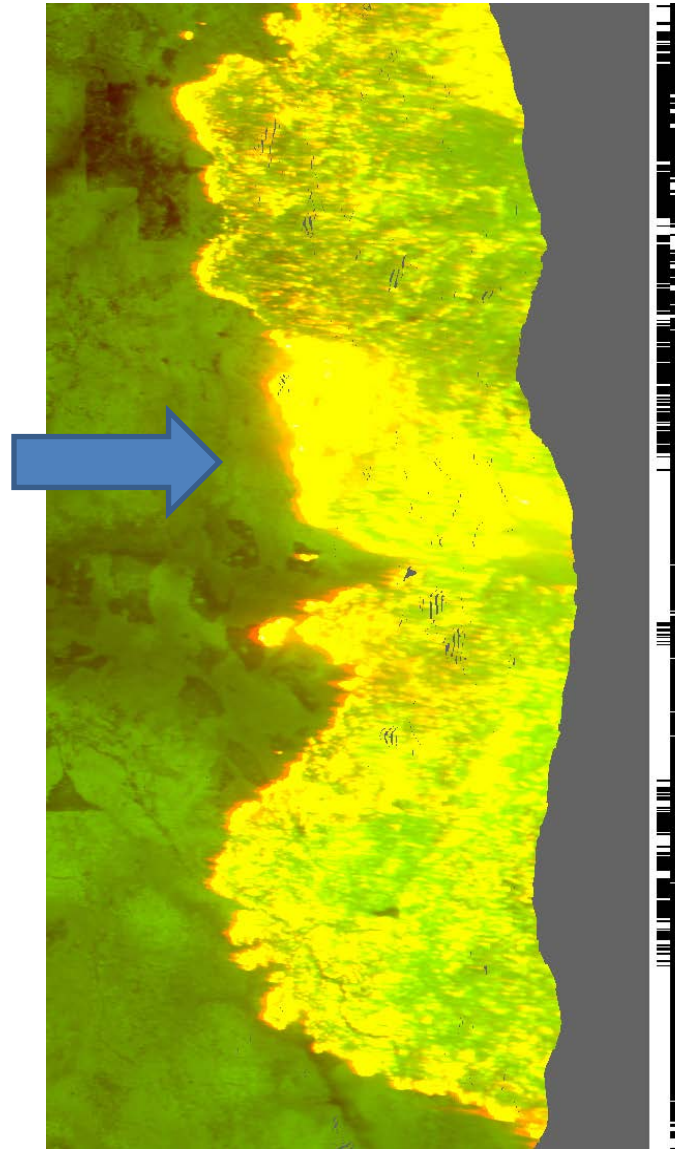


Heat “Halo” Effect



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Color ortho used to “eliminate” halo effect



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AMS System

- Received AMS system from NASA in March 2013
- Installed in N144Z in March 2013.
- Next week we will work w/NASA engineers to start transforming the operator interface from a scientific research instrument to an operational user interface.
- The AMS will provide additional capabilities important to forest health discoveries and
(we are still learning what we can do with it)

Continuous Improvement Program

- Optics
- Detectors
- Analog signal chain
- Digital data processing
- Products development
- Delivery
- Quality assurance

IR information sharing

- Facebook Group – Infrared
- FreeArc link - We are using version 0.666
<http://freearc.org/Download.aspx>

download the Windows installer and the

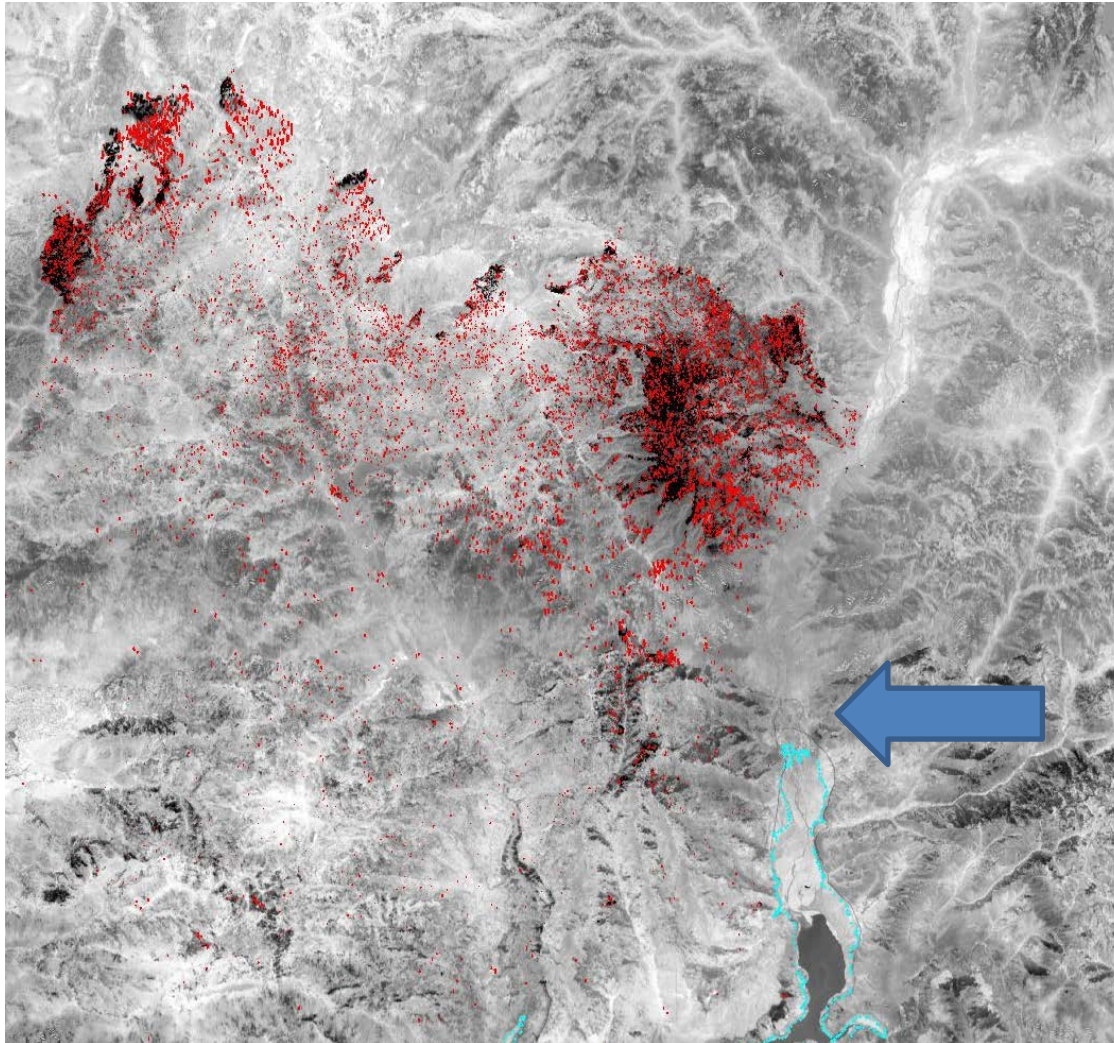
Add-on: FreeArc PowerPack (standard set of external compressors)

FreeArc documentation

<http://freearc.sourceforge.net/index.htm>

Fire Detection

“Saved The Day – Elk and Pony”



SUN VALLEY & KETCHUM AREA