

2018 IR Technicians Report

- Ekinox upgrade and mount
- Channel A 3um-5um noise.
 - Preamplifier shielding
- New DSP/ADC contract extended
 - International shortage of microchip
- I made proposals to:
 - Replace AirCell
 - Replace LN2 detectors w/cryocooled

- Captured more detail on SolidWorks 3D model of the RS-25 scanner.
- Discovered new plating for IR mirrors.
 - In process of building a new light weight set.
- New, speed controlled motor w/high resolution encoder on order.
- I made CNC parts for IR scanner door on N144Z
- Partnered w/BSU Sr Eng students (Michael) to:
 - Analyze & optimize preamp design, add 2 channels for 2.2um & .6... detectors
 - Redesign sample & hold (signal conditioning) board.

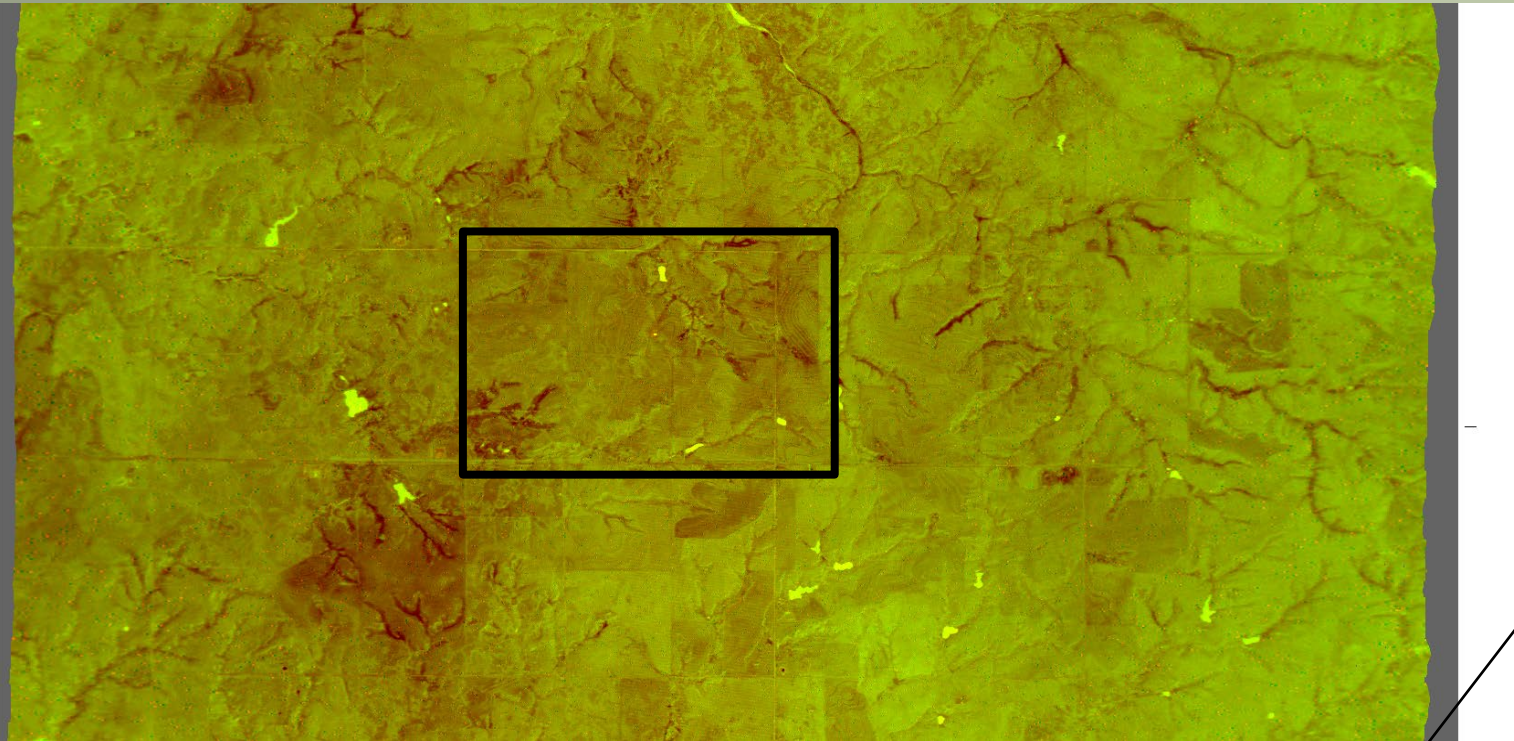
- Trained 3 new IR Technicians.
 - Bob Brantlinger, Kelli Gammons, Brian Teats. All three are, were IRIN's.
- Friday Oct 12 performed pot test w/N144Z.
 - High speed scanning w/positive results to 20K AGL.
 - NADIR only, will test again w/new 64bit hardware @ NADIR and near edge of scan extent.
- In-track flares aligned with intense heat spots that are visible in Chan A data of color images.
 - Secondary path in scan head. Redesigning & building new detector window.

- Technician flight stats N149Z.
 - Total flight hours = 689.65
 - Total number of missions = 912
- Technician flight stats N144Z.
 - Total flight hours = 404.51
 - Total number of missions = 957
- FY 2018 Season totals
 - Flight hours = 1,094.16
 - # of missions = 1,869

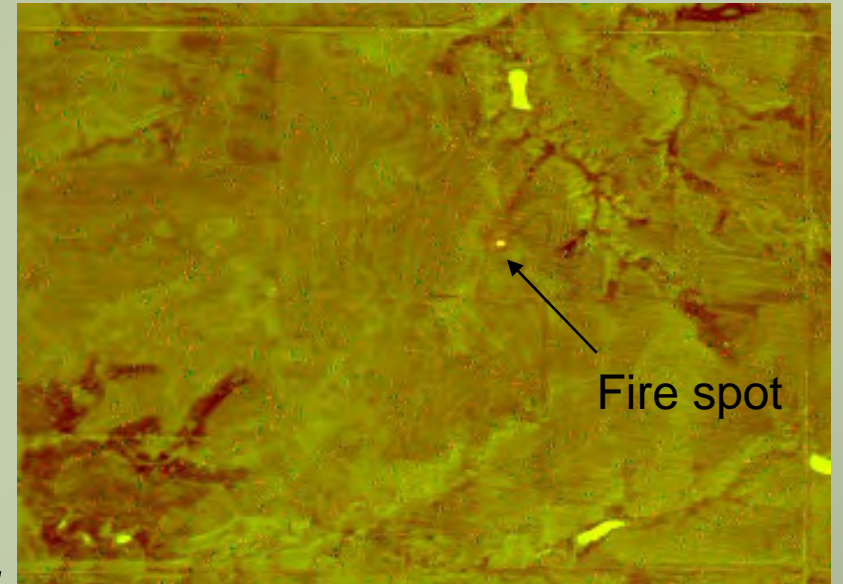
● Flight stats by technician.

● Hours & # of missions	Season totals	Max missions per night
● Bob Brantlinger-	139.07 hours & 293 missions	21 missions
● Jill Kuenzi -	143.01 hours & 384 missions	30 missions
● Josh Bayok -	194.77 hours & 302 missions	17 missions
● Kaz -	122.75 hours & 297 missions	26 missions
● Kelli Gammons-	35.78 hours & 49 missions	7 missions
● Michael Mann -	158.13 hours & 250 missions	18 missions
● Rob Navarro -	98.71 hours & 156 missions	21 missions
● Woody Smith -	97.5 hours & 66 missions	5 missions
● Brian Teats	missions will be counted in FY19.	

NATIONAL INFRARED OPERATIONS

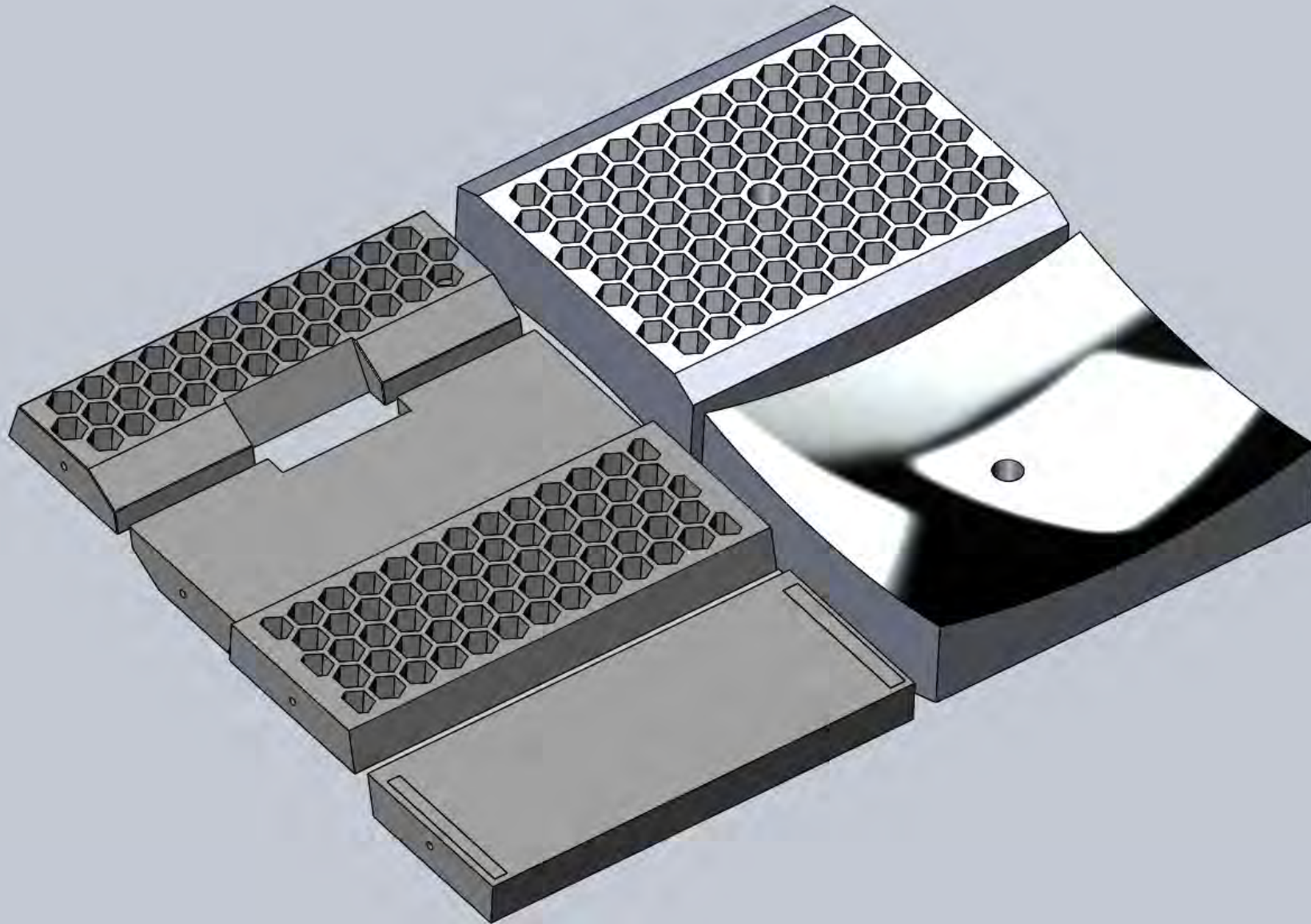


Standard 6.5 mile wide scan



Same zoom box

Chan A only
Noise



New light weight mirror set. Minus the rotating equilateral triangle mirror.

NATIONAL INFRARED OPERATIONS



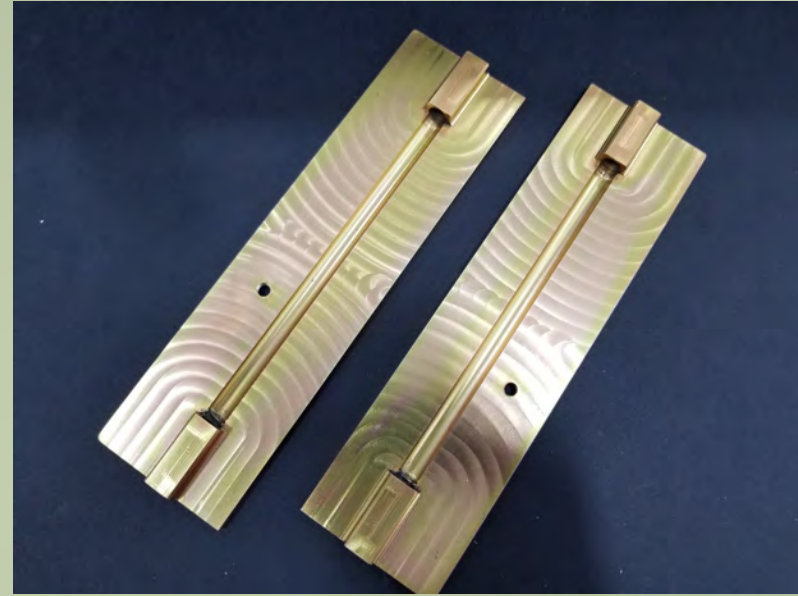
Drilling



Midway



Making trax

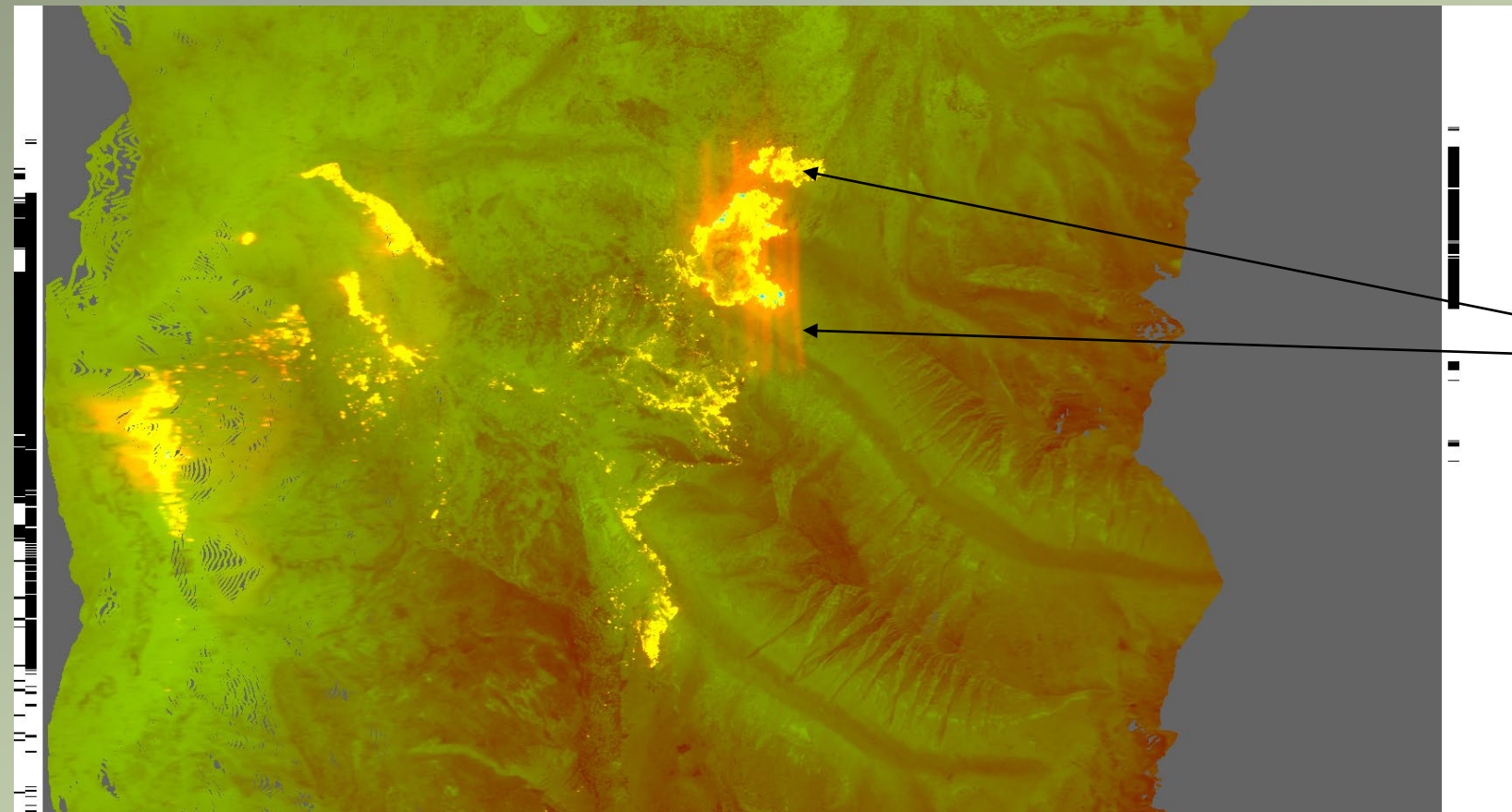


Final Cadmium plated

Riveting



NATIONAL INFRARED OPERATIONS



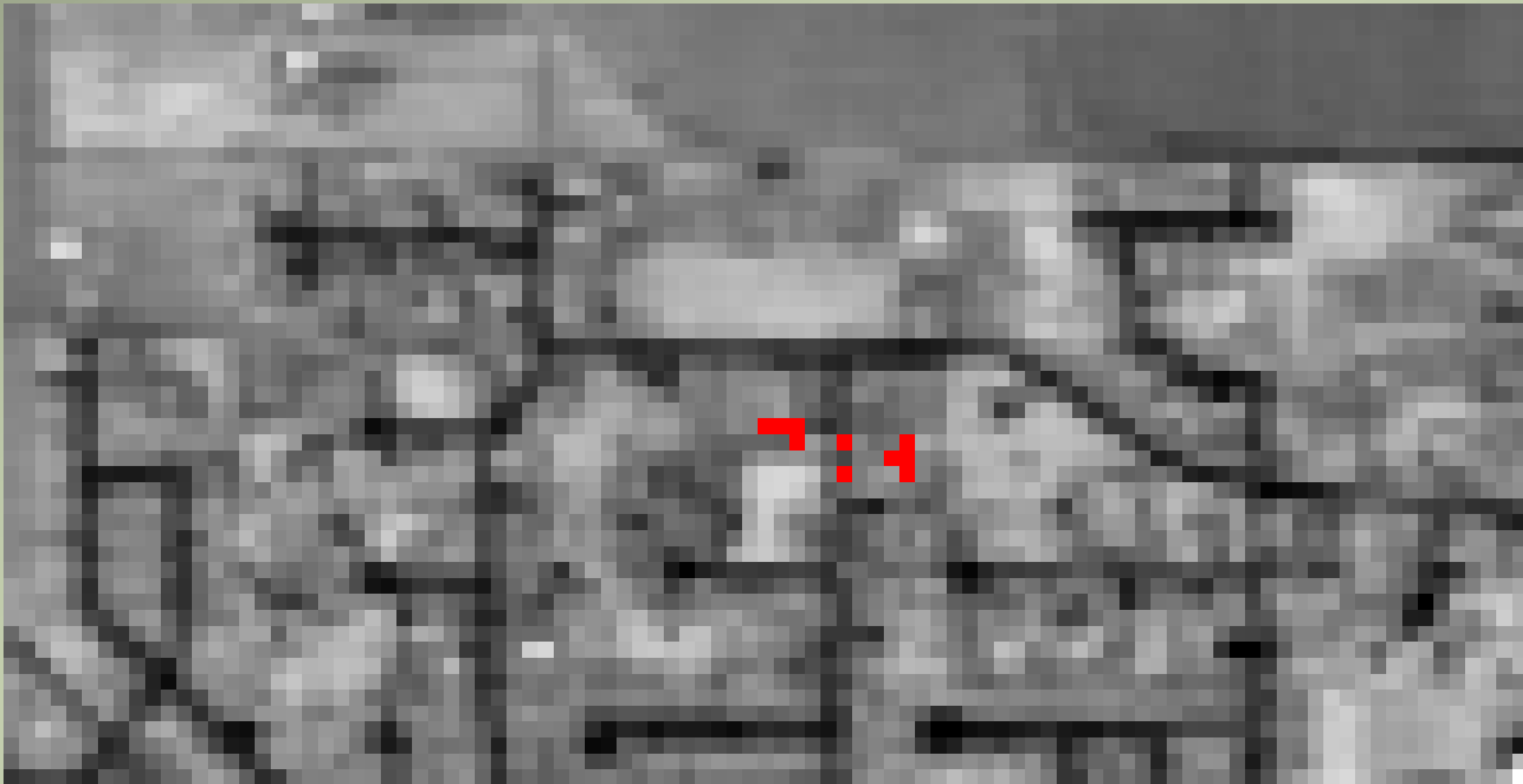
Example of flare from Secondary path to detector. Shows up in-track and center 1/3rd of image.

NATIONAL INFRARED OPERATIONS



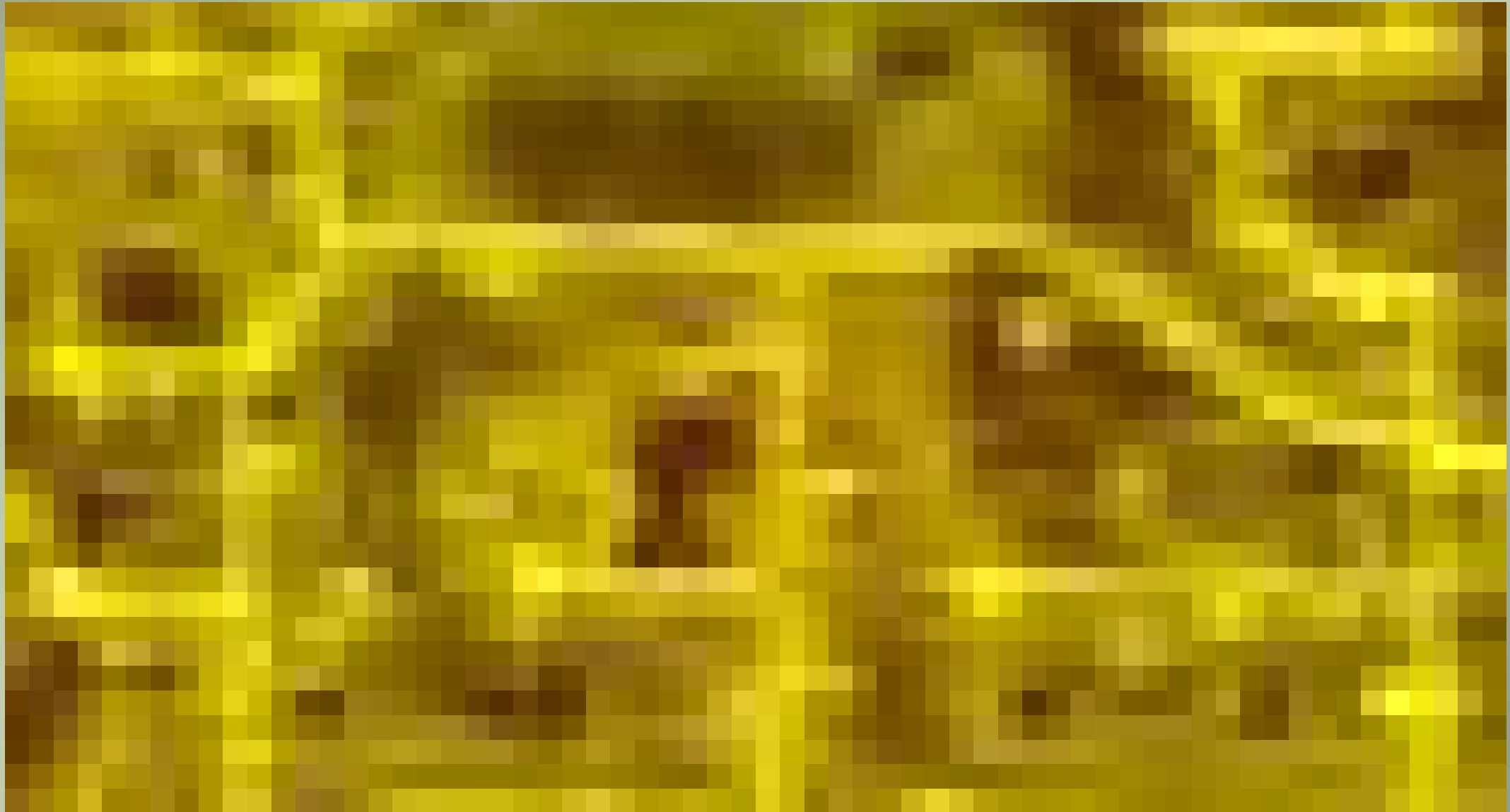
18K AGL
340 Knots
across the
ground.

~100' between
12" & 9", and
also 12" & 6"
pots.



18K AGL
340 Knots
across the
ground.

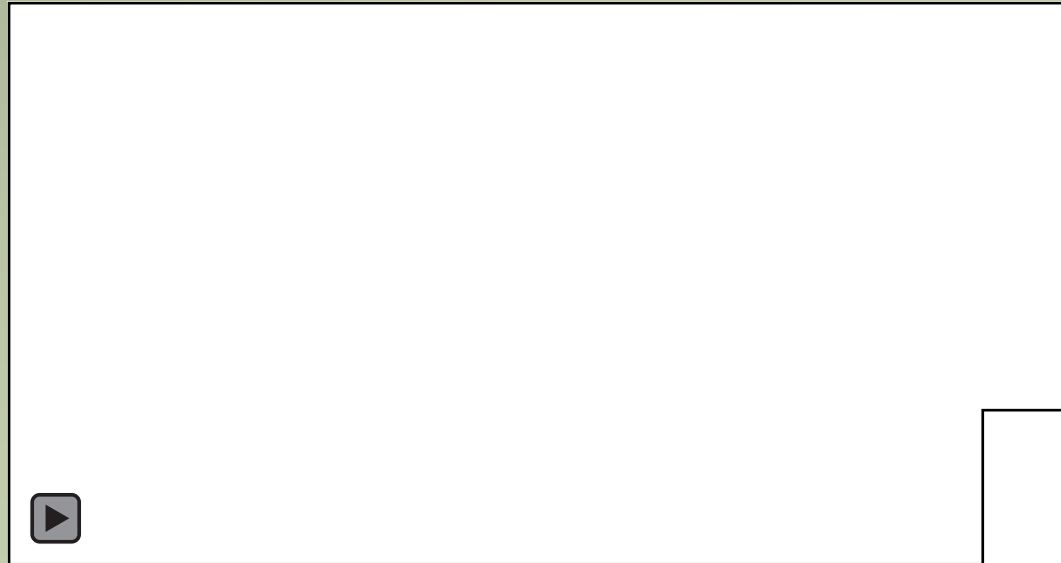
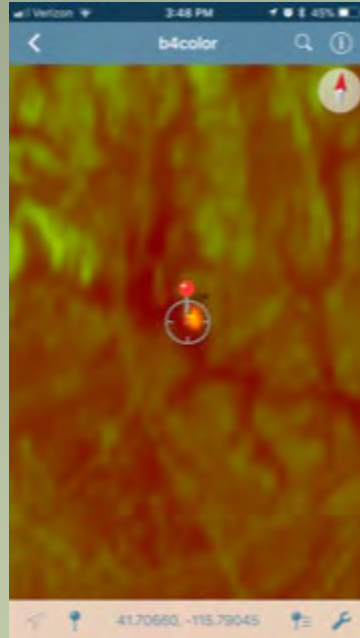
~100' between
12" & 9", and
also 12" & 6"
pots.



NATIONAL INFRARED OPERATIONS



Sugarloaf
burnt meadow.



NATIONAL INFRARED OPERATIONS



Sugarloaf
4 spots.

~5days after
the front.

