

# Colorado Multi-Mission Aircraft



2017 Year in Review

# What is the MMA?



- Pilatus PC-12 aircraft
  - FAA certified airframe and operations
  - Pressurized, high-altitude, affordable, and long endurance
  - Day and Night operations
- Systems installed:
  - Color and thermal cameras
    - Fire detection
    - Fire mapping
    - Overwatch for safety, tactics, strategy, near real-time information
  - Broadband internet
    - CO-WIMS and Fire EGP access
    - Direct delivery of imagery and surveillance information
    - Internet chat, real-time video, and email
  - Data and image processing
  - Interoperable voice radios
- Minimum crew of two
  - Pilot and Mission System Operator (MSO)
- Based in Centennial, CO
  - Deployable to many forward operating locations



# Season Numbers.....

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- 962 flight hours
  - 370.6 out of state
- 435 missions
  - 169 out of state
- 99 new fires found
  - 69 out of state
- 92 days out of state
- 9 different states



(1/1/2017 to 12/1/2017)

# FY 2017 SACC Support



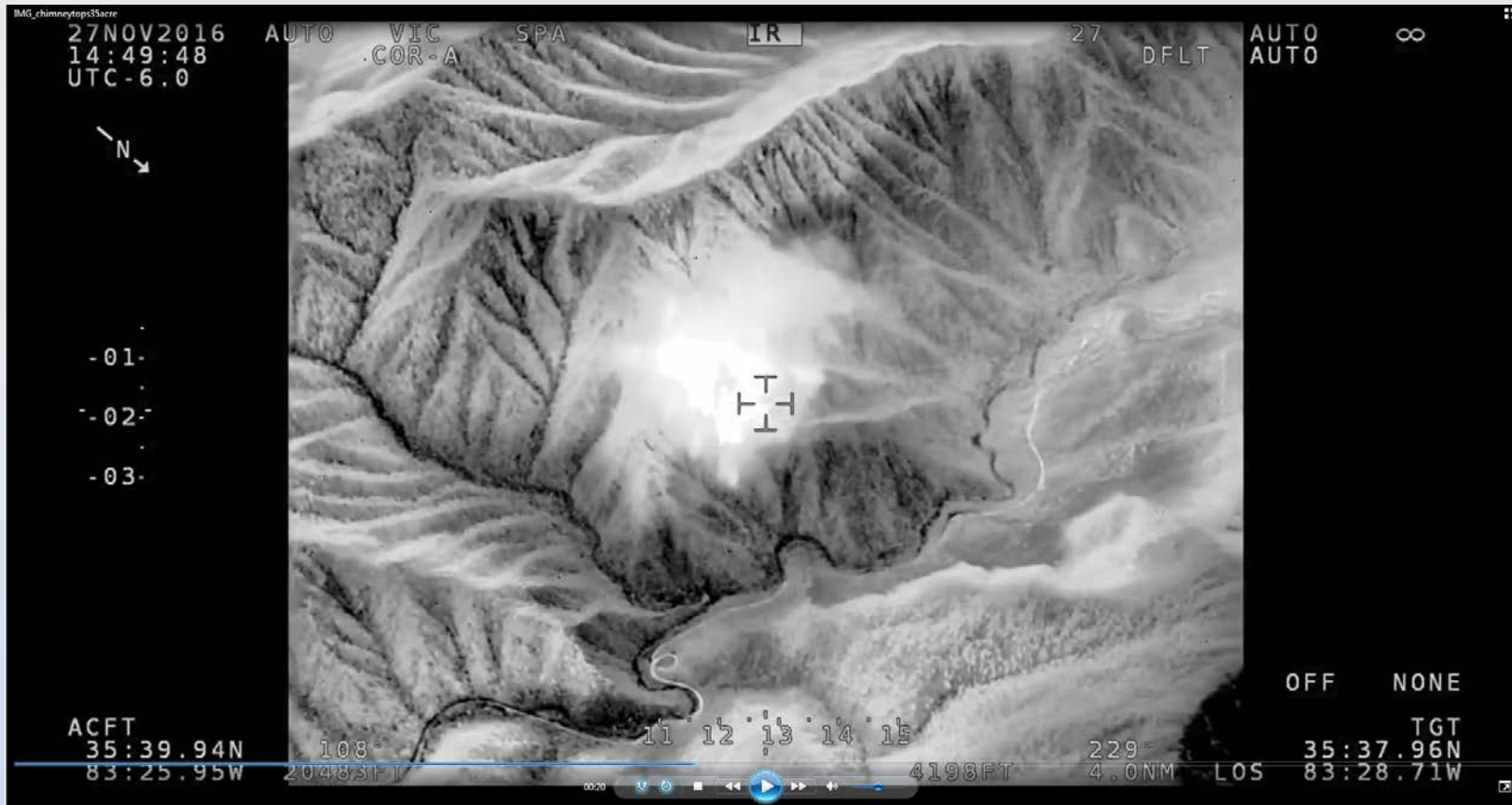
- Assigned on 11 November, 2016
- Flew fires in GA, NC, VA, TN, AL
- Chimney Tops 2 detected on 11/23, first flown on 11/27
  - Burned into Gatlinburg and Pigeon Forge on 11/28



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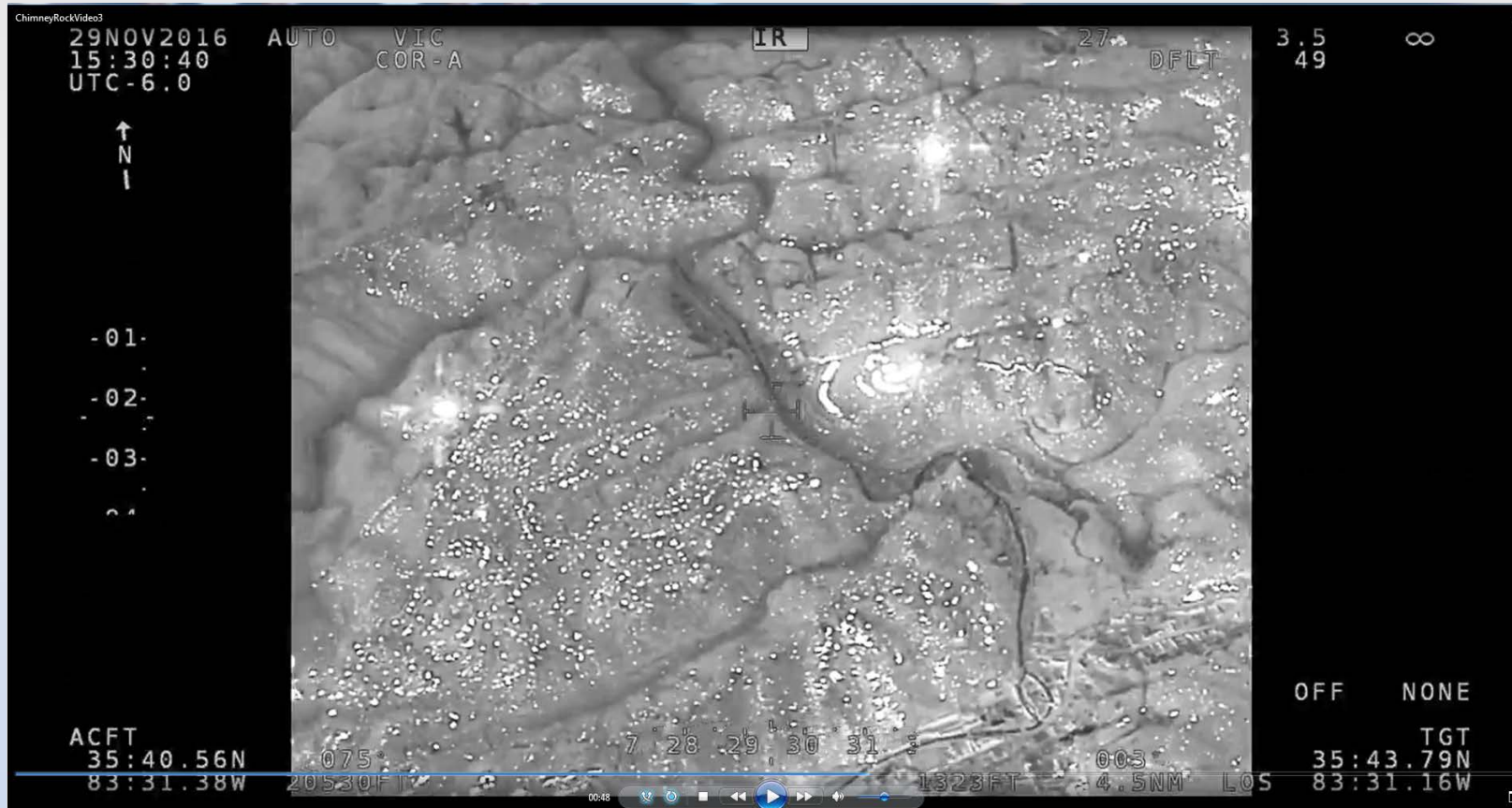
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# FY 2017 SACC Support



What went well.....

- Centralized coordination
- Previous experience with the assigned teams
- Participation in the daily briefing calls
- Contact information for each incident

What didn't go well.....

- Information distribution
  - Email lists are difficult to manage
  - Many folks were not familiar with CO-WIMS/EGP, or weren't able to get the desired products from there.



# West Mims



- 17 to 20 May, and 26 May to 9 June
- Assigned solely to the West Mims

What went well.....

- On roll #2, clear direction and oversight from the AOBD

What didn't go well.....

- Hardware issues during the first roll.
- On roll #1, assigned to an individual with no aviation knowledge, and little incident business knowledge.

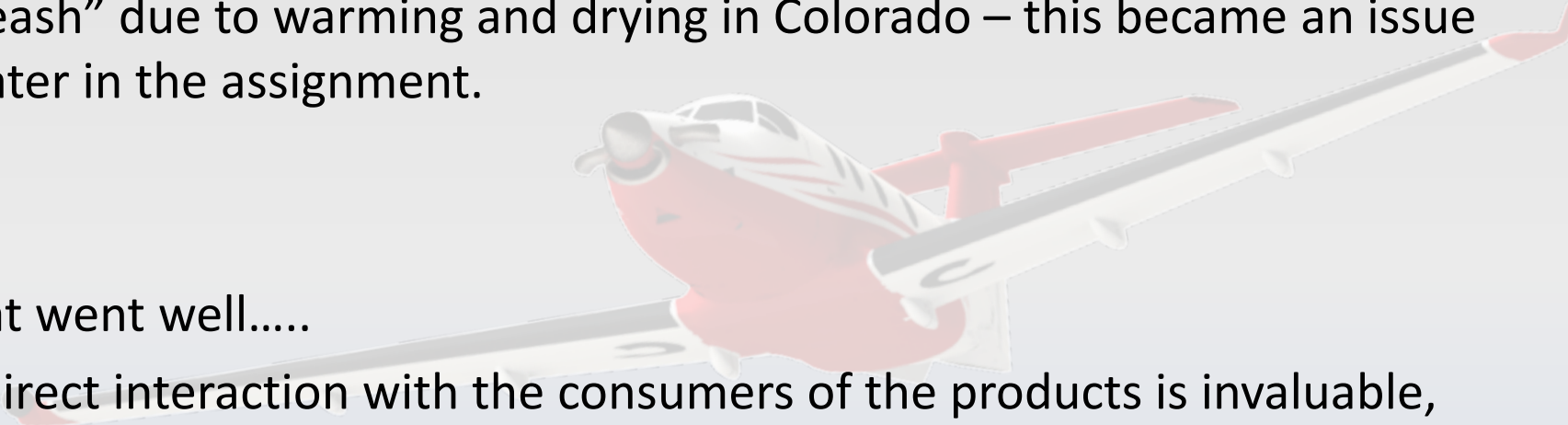
# Region 3 - Highline / R-3 Support / Gila ABCD Misc.



- Initially assigned to the Highline Fire, then reassigned to a regional support code.
- The aircraft was approved for an out of region assignment on a “short lease” due to warming and drying in Colorado – this became an issue later in the assignment.

What went well.....

- Direct interaction with the consumers of the products is invaluable, understanding their needs.
- Using the aircraft in appropriate roles, such as near-real time intelligence gathering and dissemination during the operational period, or for detection while assigned to areas experiencing lightning and emerging incidents.



# Brianhead



- Reassigned directly from the Region 3 assignment
- Assigned solely to the incident

What went well.....

- Proximity to the incident allowed for face to face interaction with the situation unit. This allows for us to obtain clear intent, ask questions, and also allowed our operators to familiarize the ground users with CO-WIMS / EGP and how to download our products directly from there.
- Timing flights to fit into the planning cycle

# Burro



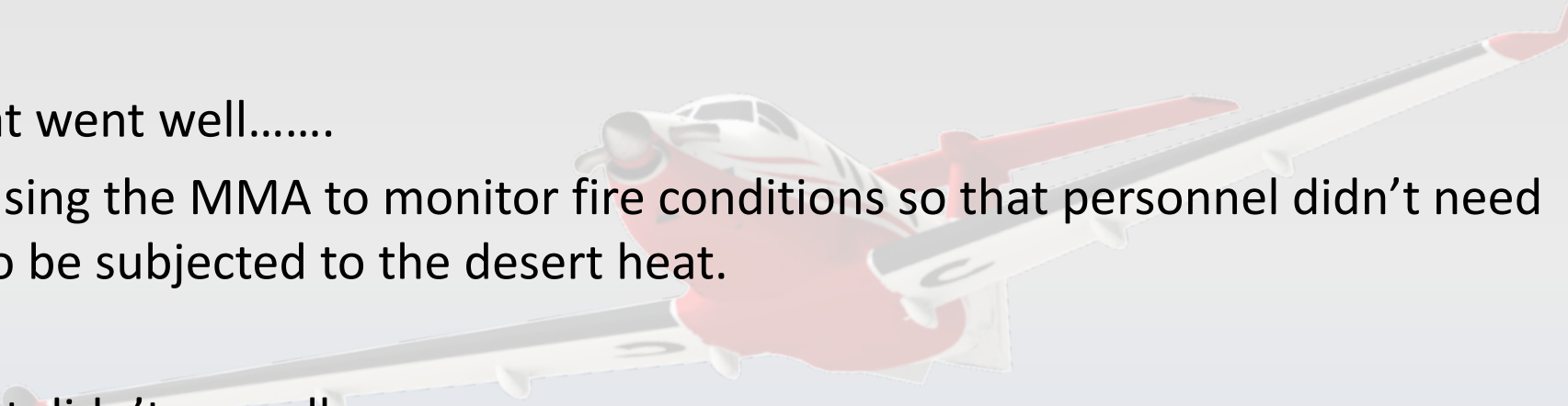
- Reassigned from Brianhead
- Assigned to the incident

What went well.....

- Using the MMA to monitor fire conditions so that personnel didn't need to be subjected to the desert heat.

What didn't go well.....

- Recall of the aircraft back to Colorado as our fire season ramped up. While the aircraft had been allowed out of region on a "short leash" initially, that message got lost as it was reassigned.



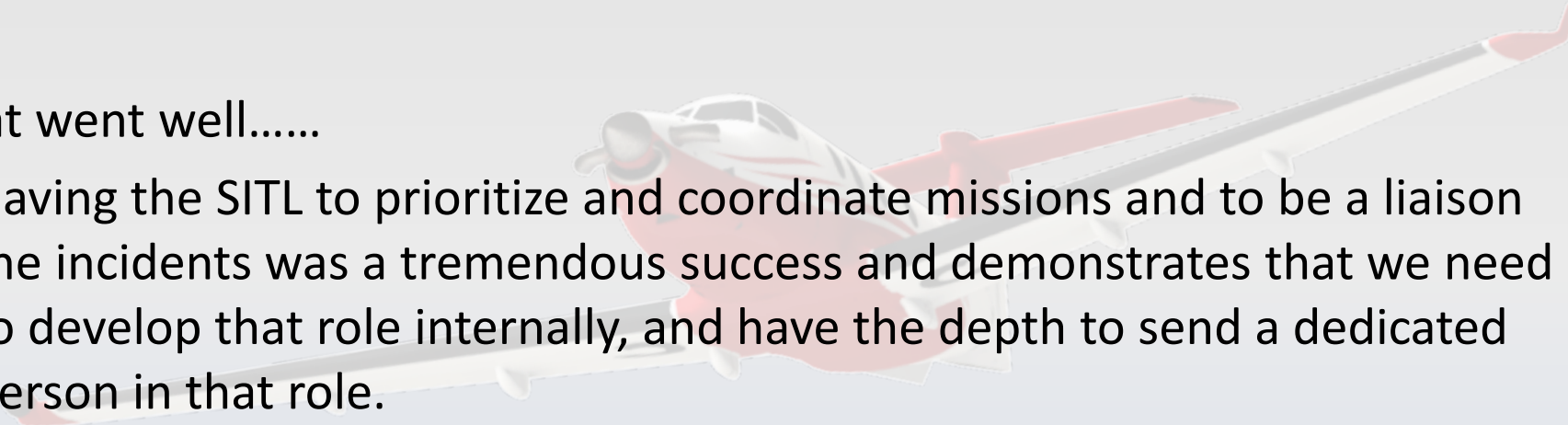
# California – North Ops



- Assigned on a regional preposition code to support numerous fires
- Assigned to work with a SITL to coordinate missions

What went well.....

- Having the SITL to prioritize and coordinate missions and to be a liaison the incidents was a tremendous success and demonstrates that we need to develop that role internally, and have the depth to send a dedicated person in that role.
- The aircraft was used in multiple roles, from detection to mapping to providing information to the incident ATGS's when they couldn't see through the smoke. All of these taskings were appropriate, and made full use of the aircraft's capabilities.



# Montana



- Assigned on a regional preposition code, initially to fill in for NIROPS due to both of their aircraft being down for service.

## What didn't go well

- Initially, there was no clear intent or chain of command for the operators to obtain that intent. We were pointed toward multiple contacts who had varying needs and objectives.
- The aircraft was ordered as a substitute for NIROPS. While we can do some similar things, the expectation that the MMA can fill the NIROPS role is unrealistic.
- The MMA was tasked with flying incidents without anyone on the incidents knowing about it, which led to confusion about cost and where the MMA products were coming from.

## What went well.....

- Transition to an incident and interaction with an Area Command Team allowed for more communication with individual incidents, and a streamlining of the ordering process.
- Outreach to the incidents as time passed led to better understanding and more effective usage of the tool.

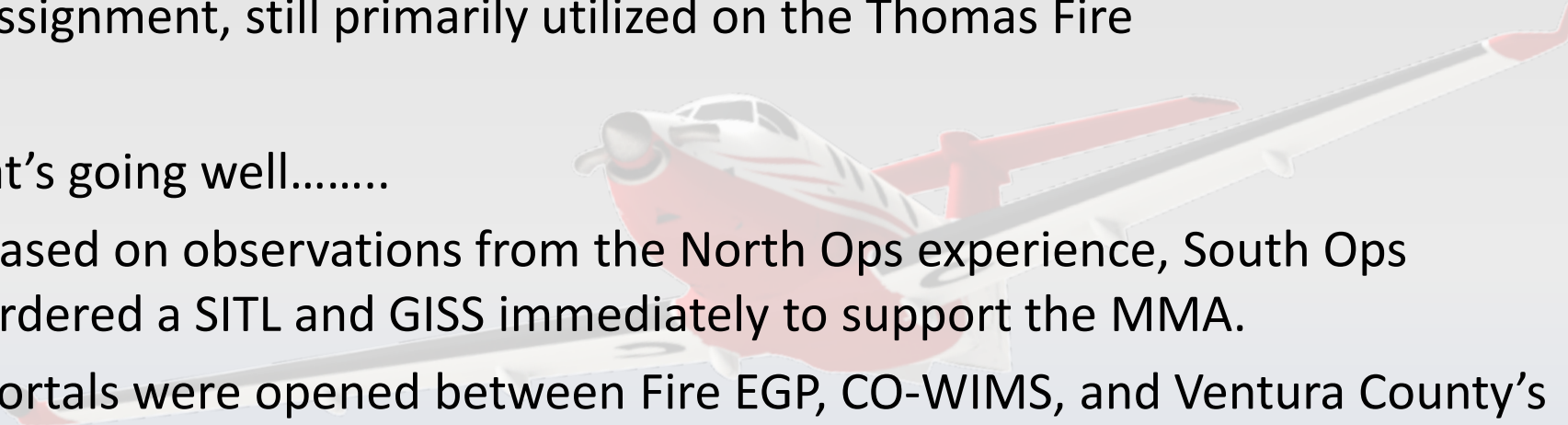
# California – South Ops



- Initially ordered by a County Fire Department to gain intelligence on the Thomas Fire
- Transitioned to a South Ops controlled resource two days into the assignment, still primarily utilized on the Thomas Fire

What's going well.....

- Based on observations from the North Ops experience, South Ops ordered a SITL and GISS immediately to support the MMA.
- Portals were opened between Fire EGP, CO-WIMS, and Ventura County's VSAT (all Intterra Situation Analyst platforms) to insure effective information distribution.



# Overall Lessons Learned



- Educating users about capabilities, limitations, and how to access the products needs to be our priority. Opportunities to reach out to users during incidents should be capitalized upon, as these are often our best chance to educate users.
- Defining where we fit into the incident organization is a challenge, and varies from incident to incident based on the needs of the incident.
- Day to day coordination should be done by someone that is not assigned to fly on the aircraft. This can be achieved either by the hosting unit, or by DFPC developing a liaison capability and sending an additional person to the incident or dispatch center.

# Northern California

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