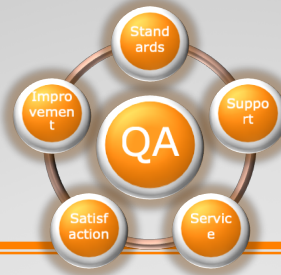


Aviation Forecasting Performance



Part of the NPP

QMS



MET QA

- **Documentation/Administration**

- ✓ No notable errors/corrections
- ~ Revamped training program delayed process

- **Timeliness**

- ☐ Delivery of products on time
 - ✓ TAF
 - ~ OBS (Correcting after hours tower communication issue)
 - ~ Balloon Data (WAIS Divide)
 - ✓ Flight Packets

- **Accuracy**

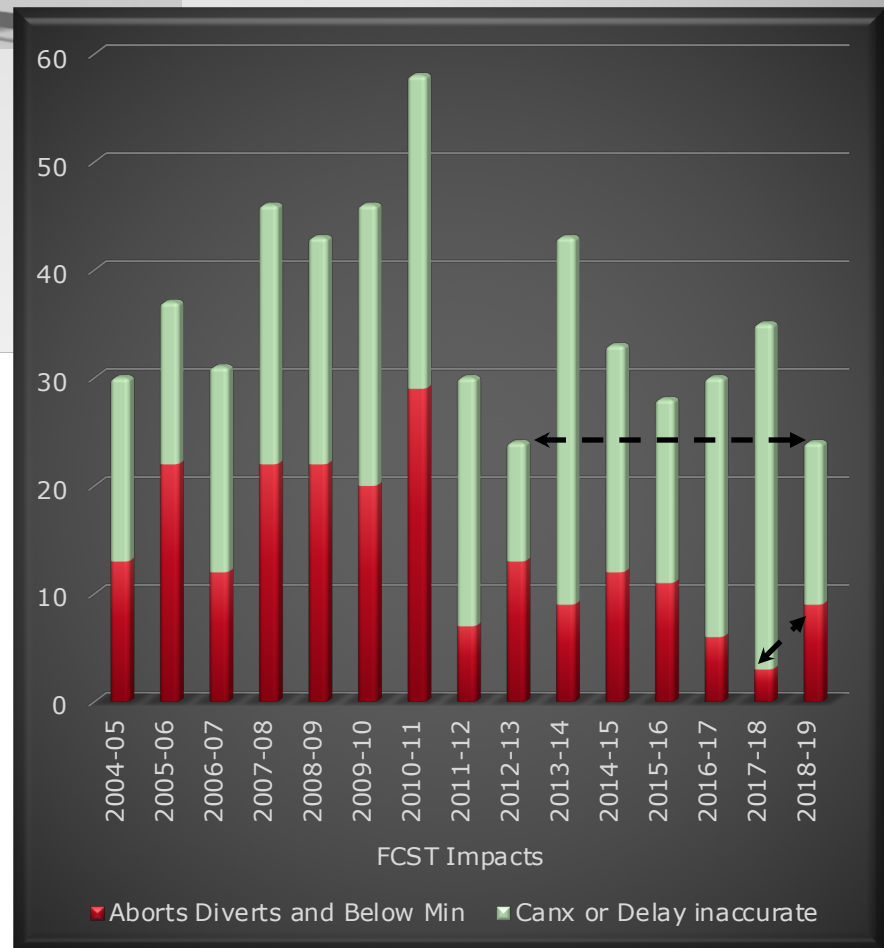
- ☐ OPVER up from 93% 2017-18 to 95%
 - ✓ A bit more aggressive forecasting over last year
 - Major Storm Delay to start followed by significant heavy weather patterns

MET QA

Specifics

Our process provides the means to immediately identify areas to assist/repair and capture ideas for future improvement

- 2017/18 Pros – less costly/risky mistakes
- Cons – too many mistakes
- 2018/19 Pros – less mistakes & no risky mistakes
- Cons – an increase in costly mistakes



MET QA

2018 Ideas for Improvement

Last year we identified areas that could assist to improve forecasting to include:

- Satellite - Addition of NPP and JPSS
- Radar – X-band system might provide support
- Webcams – Viewer that provides multi-images
- More/Better Observations from the field
- Improved modeling through more data
- Better tools for Fog predictions

MET

Accomplishments

Last year we identified areas that could assist to improve forecasting to include:

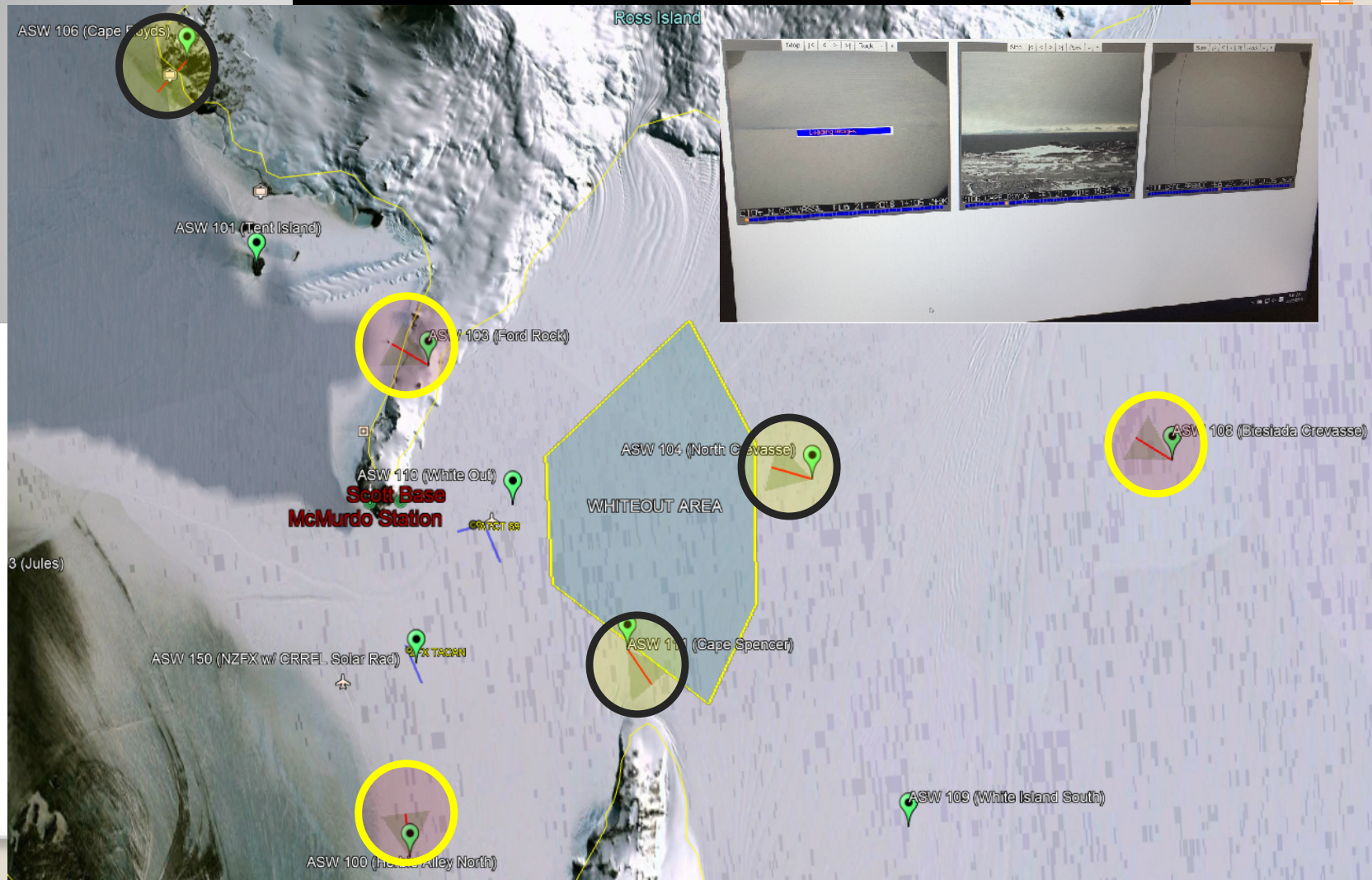
- Satellite - Addition of NPP and JPSS
 - Pending implementation in 2020
- Radar – X-band system might provide support
 - Field testing beginning in 2019
- Webcams – Viewer that provides multi-images
 - ✓ Completed and contributed to greater awareness
- More/Better Observations from the field
 - ✓ Implemented new MET Kit at major locations improving data availability (24x7)
- Improved modeling through more data
 - ❑ WAIS Divide Upper Air
- Better tools for Fog predictions
 - ✗ Not at this time, although camera assistance in several occasions were a greater contribution than expected

MET QA

Accomplishments

- Webcams

-Need to add deep field

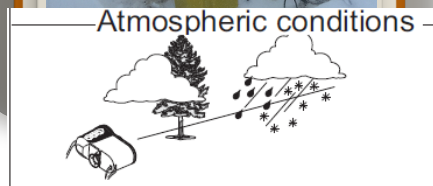


MET QA

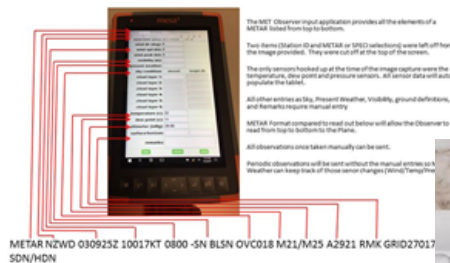
Accomplishments And More Ideas

- 24x7 Base Obs
- LRF CIG/VSBY
- App for <errors
- Auto DB entry

- More/better Observations



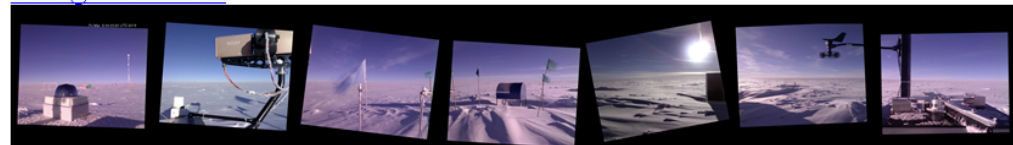
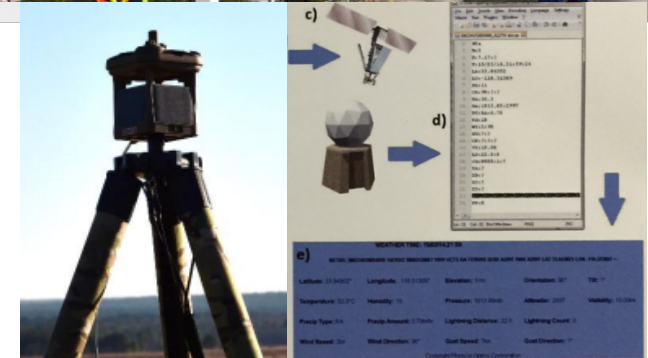
NEW MET KIT APP



MET Kits
Radar
Cameras
U/A return
to WAIS



Craig Kulesa
University of Arizona
ckulesa@email.arizona.edu



MET QA

Forward Movement

Initial Restructure Administrative Goals

Qualify staff new or pending personnel

Redefine Roles and Responsibilities

- CM/MET MGRs/Team

Write Qualifications to fit new/alterd task assignments

- CM/MET MGRs/Team

Develop Training Plan to meet any new qualifications

We are getting closer to our staffing reorganization

Get W/O footprint in place

Get the remainder footprint in place

To align with new structure either in conjunction with administrative or after

Focus

Systems

Groups

Fcst Techniques

• Research new techniques

• Develop / improve rules

• NWP responses
• Observation responses

- AWS
- Climo norms
- Radiosondes
- Other future systems

AMPS new tools now becoming routine and trustworthy

- Ensemble forecasts – addition of several different elements to gage a margin of error
- Wind flow animations helps identify areas for
 - Fog development in certain situations
 - Snow convergent regions

Additional items:

- Special areas of interest **BIG PLUS**

MET QA

Other Ideas

Five top items from NSF's 2018/19 external MET review.

1. Automation of data entry in development of forecast products/documents (no fusion software – forced manual entry)
2. Institute briefing to discuss issues of weather, staffing, maintenance, etc. for enhancing the situational awareness of the entire program. Done in several forums and includes combined groups (ASC/GEM/MET/ATC):
 - Daily: turnover briefs, SFA Staff or AOPB
 - Weekly: Town Meeting
 - Annual: Post Season, TERPS Conference, APM, 109th DC College
3. Consider possibilities to dynamically distribute workloads and shift tasking for more efficient operations (need a more flexible shared daily task master)
4. Determine limiting factors of the PIREP system or protocols that may be limiting operators' ability to comply with all regulations and requirements regarding PIREP. (Re-brief at DC College but MET has no authority to force compliance of AF Regulation)
5. Obtaining or develop creation of RGB products directly from the McMurdo satellite downlink for MacWeather forecast operations. (Learn/apply from NWS and COMET Module experience)

MET QA

Questions

Standards

Issues

Innovation

Fixes