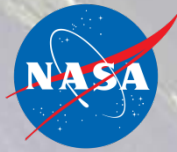


SnowEx: a NASA airborne campaign leading to a snow satellite mission

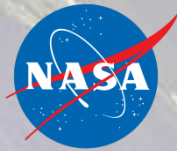
SnowEx update: Jan 5, 2017

Revised Agenda



- a. Ground: update postponed to next webex
- b. Airborne
 - i. P-3 engineering & instruments status: Eugenia or Ed (5 mins)
 - ii. draft personal equipment list (P-3 flyers) – Ed (2 mins)
 - iii. other confirmed/potential aircraft – Ed (3 mins)
 - iv. flight planning overview – Ed (5-10 mins)
 - v. draft daily schedule – Ed (3 mins)
 - vi. Airborne Q + A (3 mins)
- c. Schedules & Logistics for winter deployment
 - i. overall schedule – Amy (3 mins)
 - ii. draft weekly logistics for ground truth participants – Amy (5 mins)
 - iii. schedules & logistics Q + A (3 mins)
- d. Data Management
 - i. update - Amanda (3 mins)
 - ii. Data Management Q + A (2 mins)
- 2. Meetings & Events/D. Hall: (5 mins)
 - i. quick report on AGU Town Hall
 - ii. Igarss (July 23-28, 2017) ***** abstract deadline Jan 9 *****
 - iii. SnowEx Workshop (Boulder, CO, August 2017)
- 3. Update from HQ - Jared Entin - (3 min)
- 4. Q & A (5 mins)
- 5. next webex (1 min)
- 6. adjourn

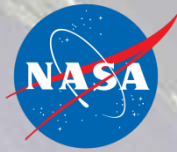
For more information, see
snow.nasa.gov → snowex
Slides will be posted there, too.



Winter Airborne Preparations Update

Ed Kim/Eugenia De Marco

P-3 sensors status

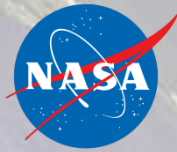


- SnowSAR
 - Wrapping up instrument preparation and shipping to US
 - Corner reflectors (calibration targets) received
 - Radar transmit permission for local test flights ok; still waiting for Colorado
- CAR (BRDF)
 - Installed on P-3 (photo, right)
 - Testing in progress
- AESMIR (passive mw)
 - Shipped to P-3 base
 - Installation to begin after CAR
- Thermal IR
 - Installation to begin right after AESMIR



All P-3 aircraft/ sensor work on schedule for Feb deployment

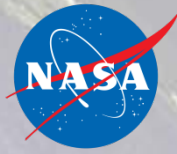
P-3 flyers preparations



- Navy swim qualification/water survival training complete
- 6 sensor operators confirmed
- Cross-training started
- Flight suits, special bags, & other gear arriving

All P-3 flyer preparations proceeding on target

Confirmed and potential aircraft



List as of Jan 5

Confirmed

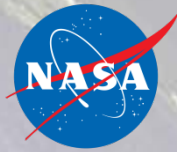
- NRL P-3 (VXS-1)
- King Air with ASO (same as fall)
- NASA G-III with GLISTIN-A (same as fall)
- Second NASA G-III with UAVSAR
- Twin Otter with WISM (new)

Potential

- Twin Otter with NRL ice suite
- Twin Otter with green lidar

Flight coordination for safety & science quality will be essential

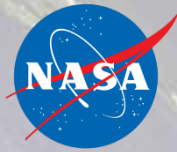
Airborne



Safety considerations

- Target boxes for GM & SB sites
 - Only one aircraft in a target box at a time *at a given altitude*
 - Minimum vertical separation 1000 ft
 - Common radio frequency
 - Pilots of each aircraft to make radio calls before entering box and after leaving box
 - Actions of one aircraft or sensor can impact other aircraft/sensors & ground activities
 - Any deviation or abort decisions, etc. to be made by on-board lead for each aircraft & filtered through overall airborne lead
 - Certain communications/decisions scenarios to be ironed out in advance.
-
- Fraser site to be flown over during transit from Peterson to GM (P-3 only)

Airborne



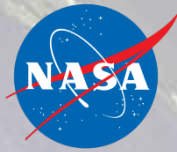
Basic daily schedule

- Go/no-go telecon evening before
- Early morning final wx check & go/no-go
- IF “NO-GO”, stand down

- IF “GO”
- P-3 takes off from (COS) Peterson, fly over Fraser on the way to GM, executes GM flight lines, transit to SB, execute SB flight lines, return to COS.
- ASO: take off from GJT, exact time weather dependent, choice of GM or SB first must be coordinated with P-3, return to GJT
- UAVSAR & GLISTIN-A: take off from TX and CA, transit to CO, execute line(s), return back to base
- WISM: take off from GJT, fly own flight lines over GM, return to GJT
- Data copying, quick look generation, post-flight debriefing

- REPEAT

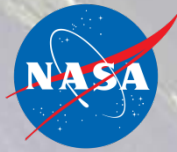
Airborne



Altitudes (in feet) over GM

- Hours of available daylight are a constraint
 - Altitudes optimized for SnowEx objectives
 - P-3: (multiple) 1000 AGL, 6000* AGL, match ASO altitude
 - ASO: optimize for high shots/m² in target box in single sortie
 - UAVSAR: 41000 MSL
 - GLISTIN-A: 41000 MSL
 - WISM: 2500-4000* AGL
-
- * to be adjusted after test flight

Airborne

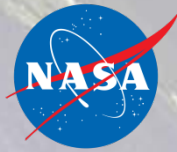


Altitudes (in feet) over SB

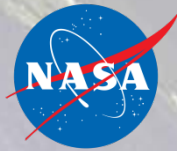
- Hours of available daylight are a constraint
- Altitudes optimized for SnowEx objectives
- P-3: (multiple) ~~1000 AGL~~, 6000* AGL, match ASO altitude
- ASO: optimize for high shots/m² in target box in single flight
- UAVSAR: 41000 MSL
- GLISTIN-A: 41000 MSL
- WISM: n/a, not flying over SB

* to be adjusted after test flight

Airborne



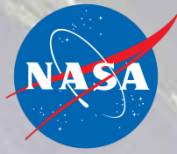
Q & A



SCHEDULE/LOGISTICS

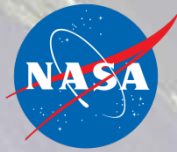
Amy Misakonis

Schedule



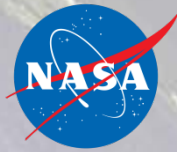
- Instrument Integration is happening now
- Test Flights – 1/12 and 1/13 – May be pushed to the right a few days
- Aircraft and Ground Early Arrivals – 2/1
- Week 1 Ground personnel arrive 2/5
- First ground measurement day 2/6
- First potential flight day 2/6

General Logistics



- Those that are ATA Associates – PLEASE COMPLETE ONBORADING REQUESTS
- All personnel will arrive on Sundays with the intent of group transport from the airport (unless arriving in a POV or rental)
- Personnel will be requested to arrive in Grand Junction at or before 12:30 local time
 - Shuttles will run twice a day from GJT and GML/MLL
- Lodging and Food at Grand Mesa is included in the campaign, Lodging is provided at SBB with food on per diem
- PROVIDE ROOMATE REQUESTS NLT COB TOMORROW
- We will send out a list of personal items to bring

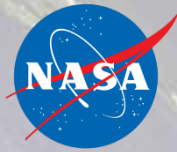
Data Management



Amanda Leon/Jeff Deems

- **Survey**
- **Q & A**

Upcoming Meetings

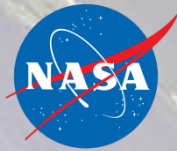


Dorothy Hall

SnowEx Fall AGU Town Hall quick summary

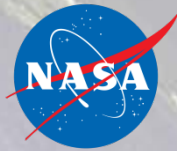
IGARSS special session (July) ***abstract deadline Jan 9***

SnowEx Workshop (Boulder, CO, August 2017)



NASA HQ update

Jared Entin



General Q & A