

**ABOVE**  
**Airborne Science Planning Meeting**  
**and 3rd Science Team Meeting**  
**UCAR Center Green, Boulder, CO**  
**17-20 January 2017**

Meeting Objective: Integrate new Airborne, Carbon Cycle Science, and Affiliated Projects  
into the Science Team and plan 2017 activities

**Thursday, January 19, 2017**

**Center of Auditorium- Building CG1**

<b>Time</b>	<b>Title</b>	<b>Speaker</b>
8:00 AM	Meeting Check-in Hang 4'x4' posters by 8:30 AM	
8:30 AM	Introduction & Science Team meeting objectives	Scott Goetz
8:45 AM	HQ perspective and update	Hank Margolis, Eric Kasischke
9:00 AM	CCE Office update	Peter Griffith
9:15 AM	Overview of previous days' Airborne Planning meeting with Q&A period	Chip Miller
9:45 AM	<i>Break (15min)</i>	
10:00 AM	Working Group results updates & Plans for 2017 field activities ~15 minutes each, incl. questions (12+3)	Scott Goetz
10:00 AM	Hydrology & Permafrost	John Kimball
10:15 AM	Vegetation Dynamics	Bruce Cook, Mike Goulden
10:30 AM	Fire Disturbance	Michelle Mack
10:45 AM	Carbon Dynamics	Sue Natali
11:00 AM	Wildlife & Ecosystem Services	Natalie Boelman
11:15 AM	Modeling Framework & Comparisons	Josh Fisher
11:30 AM	<i>Break (15 min)</i>	
11:45 AM	Collaborations & Engagement	Libby Larson
12:00 PM	Student & Citizen Science / Communications	Peter Griffith
12:15 PM	High resolution Imagery & Digital Elevation Models	Liz Hoy, Chris Neigh

12:30 PM	Data and acknowledgement policy	Peter Griffith
12:45 PM	<i>Lunch and Poster Session</i>	
2:00 PM	Infrastructure & logistics updates	Dan Hodkinson, Leanne Kendig, Sarah Sackett
	<i>Safety &amp; Risk Mitigation, Fairbanks, Yellowknife, NEPA</i>	
2:15 PM	ABoVE Science Cloud & Data Holdings	Liz Hoy
2:30 PM	Presentations by new Airborne Science teams	Chip Miller
	<i>9 selected projects – 5 minutes each Science/sensor/platform summary Ground site/location/timing requirements and priorities</i>	
	<b>Permafrost and Hydrology</b>	
2:30 PM	Iwahana-01: Quantification of thermokarst and carbon release in ice-rich permafrost regions	Go Iwahana
2:35 PM	Schaefer-06: The Airborne InSAR and PoISAR Permafrost Dynamics Observatory	Kevin Schaefer
2:40 PM	Smith-L-01: Sensitivity of Arctic-Boreal surface water to permafrost state	Laurence Smith
2:45 PM	Tabatabaenejad-01: Estimation of Belowground Biomass and Permafrost Active Layer Properties Using Radar and Lidar Measurements	Alireza Tabatabaenejad
	<b>Vegetation Structure and Function</b>	
2:50 PM	Drewry-01: Airborne Solar Induced Chlorophyll Fluorescence to Characterize Arctic Boreal Zone Phenology and Productivity	Darren Drewry
2:55 PM	Huemmrich-01: Causes and consequences of arctic greening: the importance of plant functional types	Fred Huemmrich
	<b>Carbon Dynamics</b>	
3:00 PM	Miller-C-05: Imaging Arctic Methane Plumes	Chip Miller
3:05 PM	Sweeney-01: Airborne seasonal survey of CO2 and CH4 across ABoVE Domain	Colm Sweeney
	<b>Modeling</b>	
3:10 PM	Chatterjee-01: GEOS-5 Forecasting and Modeling in Support of ABoVE airborne research	Abishek Chatterjee
3:15 PM	<i>Break (15 min)</i>	
3:30 PM	Partners Presentations--(10 min each)	Eric Kasischke
3:30 PM	Polar Knowledge Canada (POLAR)	Mike Gill
3:40 PM	NRCan - CFS	Jason Edwards

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3:50 PM	ECCC	Chris Derksen
4:00 PM	NRCan – CCMEQ	Ridha Touzi
4:10 PM	University of Guelph	Merritt Turetsky
4:20 PM	Yukon	Aynslie Ogden
4:30 PM	GNWT	Andrew Applejohn
4:40 PM	<i>Break (15 min)</i>	
4:55 PM	BNZ LTER research efforts	Michelle Mack
5:05 PM	Arctic LTER research efforts	Natalie Boelman
5:15 PM	NGEE-Arctic research efforts	Stan Wullschleger, Shawn Serbin
5:25 PM	NEON sites update	Sarah Elmendorf/Rommel Zulueta
5:35 PM	Discussion + Plans for Day 2, Adjourn & No-host social	Scott Goetz
6:30PM	Boulder Beer Company, 2880 Wilderness Pl	

Friday, January 20, 2017		
Center of Auditorium- Building CG1		
Time	Title	Speaker
8:30 AM	IARPC Planning	Eric Kasischke
8:45 AM	<b>NASA Carbon Cycle Science (5) and Affiliated (11) Projects</b>	Hank Margolis
	<i>Speed talks ~5 minutes each Science objectives, locations, etc. How this investigation integrates into broader ABoVE goals</i>	
	<b>Carbon Cycle Science</b>	
8:45 AM	Keeling-08: Detection, Quantification, and Analysis of Changes in Boreal and Arctic Ecosystems Using Measurements and Models of CO <sub>2</sub> and Its Isotopes	Ralph Keeling
8:50 AM	Rogers-02: Understanding the Causes and Implications of Enhanced Seasonal CO <sub>2</sub> Exchange in Boreal and Arctic Ecosystems	Brendan Rogers

8:55 AM	Munger-04: Multi-scale data assimilation and model comparison for ABoVE to identify processes controlling CO <sub>2</sub> and CH <sub>4</sub> exchange and influencing seasonal transitions in Arctic tundra ecosystems --	Bill Munger
9:00 AM	Cook-B-02: Fingerprinting Three Decades of Changes in Interior Alaska (1982-2014) Using Field Measurements, Stereo Air Photos, and G-LiHT Data	Chad Babcock
9:05 AM	Neigh-01: Disturbance, Growth, and Recovery of Boreal Forests Spanning the Satellite Era: 3D Structure, Site Index, and Ecosystem Carbon Flux with Changing Climate	Chris Neigh
	<b>Affiliated Projects</b>	Peter Griffith
	<b>Carbon Dynamics</b>	
9:10 AM	Rocha-01: NSF-LTREB: Following the reorganization and resynchronization of biogeochemical cycles after an unprecedented tundra fire	Adrian Rocha
9:15 AM	Wunch-01: Atmospheric Total Column Measurements of Carbon Dioxide and Methane over the ABoVE Domain	Debra Wunch
	<b>Fire Disturbance</b>	
9:20 AM	Douglas-01: Variations in Wetland Terrain Feature Conditions: The Role of Permafrost and Impacts to Military Operations	Thomas Douglas
	<b>Permafrost and Hydrology</b>	
9:25 AM	Touzi-01: Investigation of the added value of L- and P-band PolinSAR for permafrost characterization and mapping	Ridha Touzi
9:30 AM	Genet-01: Modeling landscape vulnerability to thermokarst disturbance and its implication for ecosystem services in the Yukon Flats National Wildlife Refuge, Alaska	Rob Striegl
9:35 AM	Quinton-01: Consortium for Permafrost Ecosystems in Transition (CPET)	Oliver Sonnentag
9:40 AM	Marsh-01: Hydrology, snow and permafrost in the western Canadian Arctic	Philip Marsh
9:45 AM	Wheater-01: Changing Cold Regions Network (CCRN)	Philip Marsh
9:50 AM	Touzi-01: Investigation of the added value of L- and P-band PolinSAR for permafrost characterization and mapping	Ridha Touzi
9:55 AM	Turner-K-01: Evaluating the influence of climate and land cover changes on water and carbon balance in Old Crow Flats, Yukon, Canada	Kevin Turner
	<b>Vegetation Structure and Function</b>	
10:00 AM	D'Arrigo-01: Determining the Vulnerability and Resilience of Boreal Forests and Shrubs across Northwestern North America	Scott Goetz
10:05 AM	<i>Break</i>	
10:20 AM	Open Discussion and Plans for 2017	Scott Goetz
12:30 PM	Adjourn	