

NASA ABoVE
1st Science Team Meeting
Minneapolis, MN
Sep 29–Oct 2, 2015

[above.nasa.gov /STM1_agenda_detailed](http://above.nasa.gov/STM1_agenda_detailed)

Meeting Locations:

- Day 1: The Commons Hotel
- Day 2, 3, and 4: McNamara Alumni Center

Café Information:

- Starbucks in the Commons Hotel
- Espresso Exposé across from the Commons hotel (on the corner of SE Washington Ave & SE Harvard St)
- D'Amico & Sons Café at the McNamara Alumni Center (open 7am-2pm)

Agenda

Tuesday, September 29: The Commons Hotel

9:00 AM Plenary -Pinnacle Ballroom

9:00 AM	Introduction and Welcome	Scott Goetz/ Chip Miller/ Peter Griffith
9:15 AM	Objectives	Scott Goetz
9:45 AM	View from NASA HQ	Hank Margolis/ Eric Kasischke
10:15 AM	Overview of the Science Team	Peter Griffith
10:30 AM BREAK		
10:45 AM Fauna & Ecosystem Services		
10:45 AM	Animals on the move: Remotely based determination of key drivers influencing movements and habitat selection of highly mobile fauna throughout the ABoVE study domain	Natalie Boelman
11:00 AM	Biophysical drivers and socio-ecological impacts of environmental change in the Yukon-Kuskokwim Delta region, western Alaska	Gerald Frost

11:15 AM	Assessing Alpine Ecosystem Vulnerability to Environmental Change Using Dall Sheep as an Iconic Indicator Species	Laura Prugh
11:30 AM	Biophysical Characteristics and Mechanisms of Environmental Disturbances Influencing Human Access to Ecosystem Services in Boreal Alaska	Todd Brinkman
11:45 AM	DISCUSSION	Natalie Boelman
12:00 PM LUNCH		
1:15 PM Vegetation Structure & Function		
1:15 PM	Fingerprinting Three Decades of Changes in Interior Alaska (1982-2014) Using Field Measurements, Stereo Air Photos, and G-LiHT Data	Bruce Cook/ Doug Morton
	A Joint USFS-NASA Pilot Project to Estimate Forest Carbon Stocks in Interior Alaska by Integrating Field, Airborne and Satellite Data	Doug Morton
1:30 PM	LiDAR, passive spectral, and ecophysiological approaches to link Forest Tundra Ecotone structure and function	Jan Eitel
1:45 PM	A High-Resolution Circumpolar Delineation of the Forest-Tundra Ecotone With Implications for Carbon Balance	Jon Ranson
2:00 PM	Changes in Shrub Abundance in Arctic Tundra from the Satellite High Resolution Record for the Arctic-Boreal Vulnerability Experiment and Impacts on Albedo	Mark Chopping
2:15 PM	DISCUSSION	Doug Morton
2:30 PM Vegetation Dynamics & Distribution		
2:30 PM	Mapping and modeling attributes of an arctic – boreal biome shift: Resource management implications within the ABoVE domain	Scott Goetz
2:45 PM	Shifting Patterns of Boreal Forest Succession and Browning Over the Last 30 Years	Michael Goulden
3:00 PM	Landscape-Scale Histories and Active Monitoring of Disturbance, Seasonality and Greenness Trends for ABOVE from Landsat	Curtis Woodcock/ Mark Friedl
3:15 PM	Recovery and Archiving of Key Arctic Alaska Vegetation Map and Plot Data for Long-Term Vegetation Analyses	Skip Walker
3:30 PM	CHARS Experimental and Reference Area (ERA) & Associated Projects	Donald McLennan
3:45 PM	DISCUSSION	Michael Goulden
4:00 PM BREAK		

4:15 PM Fire Disturbance

4:15 PM	Understanding the Vulnerability and Resiliency of Boreal-Taiga Ecosystems to Wildfire in a Changing Climate: A study of the 2014 Northwest Territories Wildfires	Laura Bourgeau- Chavez
	Planning and Collection of Data on Boreal Wildfire Effects: Studies of broad-scale 2014 Wildfires in NWT, Canada	Laura Bourgeau-Chavez
4:30 PM	Quantifying long-term impacts of single and repeated wildfire burning in North American tundra on organic soil carbon stocks and ecosystem functioning	Tatiana Loboda
	Long-Term Multi-Sensor Record of Fire Disturbances in High Northern Latitudes	Tatiana Loboda
4:45 PM	Increasing fire severity and the loss of legacy carbon from forest and tundra ecosystems of northwestern North America	Michelle Mack
5:00 PM	Developing a spatially-explicit understanding of fire-climate forcings and their management implications across the ABoVE domain	Brendan Rogers
5:15 PM	DISCUSSION	Michelle Mack
5:30 PM	<i>Adjourn</i>	

Wednesday, September 30: McNamara Alumni Center

8:30 AM Plenary --Johnson Great Room

8:30 AM	Welcome	Scott Goetz
8:45 AM Carbon Dynamics		
8:45 AM	Evaluating growing season length and productivity across the ABoVE Domain using novel satellite indices and a ground sensor network	John Gamon
9:00 AM	Satellite data driven model assessment of landscape variability and environmental controls on the Arctic-Boreal carbon budget	John Kimball
9:15 AM	Characterizing methane emission response to the past 60 years of permafrost thaw in thermokarst lakes	Franz Meyer
9:30 AM	Quantifying CO ₂ and CH ₄ Fluxes from Vulnerable Arctic-Boreal Ecosystems Across Spatial and Temporal Scales	Chip Miller
	CARVE (Carbon in Arctic Reservoirs Vulnerability Experiment) Airborne Observations of Carbon Dynamics in the Vulnerable Arctic-Boreal Ecosystems of Northwestern Canada - CARVE-CAN	Chip Miller
	Permafrost Vulnerability in a Seasonally Sea Ice-free Arctic	Chip Miller

9:45 AM	Regional Mapping of Soil Conditions in Northern Alaska Permafrost Landscapes Using AirMOSS and Land Model Data Assimilation, and Associated Impacts on Terrestrial Carbon Fluxes	Mahta Moghaddam
10:00 AM BREAK		
10:15 AM	Development of a Data-Assimilation Framework for Integrating 25 Years of Surface and Airborne observations to assess patterns of net CO2 Exchange from Arctic Ecosystems	William Munger
10:30 AM	Winter respiration in the Arctic: Constraining current and future estimates of CO2 emissions during the non-growing season	Sue Natali
10:45 AM	DISCUSSION	Sue Natali
11:00 AM Permafrost & Hydrology		
11:00 AM	Determining the Extent and Dynamics of Surface Water for the ABoVE Field Campaign	Mark Carroll
11:15 AM	Remotely-Sensed Active Layer Thickness (ReSALT) Product Derived from InSAR Data Over North American Arctic Regions	Kevin Schaefer
11:30 AM	Vulnerability of inland waters and the aquatic carbon cycle to changing permafrost and climate across boreal northwestern North America	Rob Striegl
11:45 AM	DISCUSSION	Rob Striegl
12:00 PM LUNCH		
1:30 PM Modeling & Model Intercomparisons		
1:30 PM	A Model-Data Integration Framework (MoDIF) for ABoVE Phase I research: simulation, scaling and benchmarking for key indicators of Arctic-boreal ecosystem dynamics	Joshua Fisher
1:45 PM	NGEE-Arctic	Stan Wulschleger
2:00 PM	DISCUSSION	Joshua Fisher
2:15 PM	Discussion of common themes & potential / obvious synergies	Scott Goetz
2:45 PM	Charge to Breakouts (with Implementation Plan elements)	
2:50 PM BREAK		

3:05 PM	Thematic Breakouts	
	<div><div>1. Fauna & Ecosystem Services (Boelman)-- Gateway Room</div><div>2. Flora (Goulden)--Minnesota Room</div><div>3. Fire Distrubance (Mack)--Thomas H. Swain Room</div><div>4. Carbon Biogeochemistry/Permafrost/Hydrology (Kimball)--Johnson Great Room</div></div>	
5:05 PM	Plenary--Q&A, wrap-up of Day 2 & plans for Day 3	
5:35 PM	Adjourn	
<u>Thursday, October 1: McNamara Alumni Center</u>		
9:00 AM	Plenary --Johnson Great Room	
9:00 AM	Breakout Group Reports	
10:00 AM	DISCUSSION	
10:30 AM	BREAK	
10:45 AM	Data Products and Data Management During ABoVE	Peter Griffith
11:00 AM	The ABoVE Science Cloud	Liz Hoy/ Mark McInerney
11:15 AM	High resolution imagery for ABoVE	Paul Morin
11:30 AM	Data Sharing and Archiving	Bob Cook
11:45 AM	DISCUSSION	
12:15 PM	LUNCH	
1:45 PM	Charge to Breakouts	
1:50 PM	Crosscutting Breakouts	
	<div><div>1. Flora-Fauna Interactions--Gateway Room</div><div>2. Fire- Flora recovery/ Interactions--Minnesota Room</div><div>3. BGC- Fire-Permafrost interactions--Ski-U-Mah Room</div><div>4. Hydrology/snow- Permafrost interactions--Johnson Great Room</div></div>	
3:50 PM	BREAK	
4:05 PM	Plenary--Coordinating Permitting, Logistics, and Safety	Dan Hodkinson
4:20 PM	Implementation Plan Discussion 1	
5:05 PM	Adjourn	

Friday, October 2: McNamara Alumni Center

9:00 AM Breakout Reports- Johnson Great Room

10:00 AM DISCUSSION

10:30 AM Implementation Plan Discussion 2

11:00 AM BREAK

11:15 AM Airborne Campaign
-Remote Sensing in BOREAS: Lessons Learned

Chip Miller

12:00 PM Plans for Next Meetings

Peter Griffith

12:10 PM Next Steps and Action Items

Scott Goetz

12:30 PM Adjourn

1:30 PM Optional: Polar Geospatial Center Visit

On the final afternoon of the ABoVE meeting, participants are invited to visit the Polar Geospatial Center on the University of Minnesota St. Paul campus (a short 10-15 minute bus ride from the conference venue) from 1:30-3:30pm. PGC has a long-standing relationship with the National Geospatial-Intelligence Agency (NGA) and commercial satellite vendors. PGC is primarily funded by the NSF, but also has NASA funding specifically to provide high resolution satellite imagery and related tools and products to support the ABoVE project. PGC staff and students will be on hand to give a brief tour and to discuss joint efforts with the ABoVE science team.
