View from Headquarters for the First ABoVE Science Team Meeting

Hank Margolis, TE Program Manager

Eric Kasischke, TE Program Scientist

Presentation Overview

1. Overview – Program Manager and Budgets
2. ABoVE Science Team
3. Organization of ABoVE
4. Schedule for Near-Term Science Team Meetings

Big Shoes To Fill

Are these really Diane Wickland's Shoes???

Lots of Support at HQ

- Kathy Hibbard
- Eric Kasischke
- Ken Jucks
- Paula Bontempi

My Background

- US and Canadian Experience and Citizenship
- Professor, Faculty of Forestry, Geography and Geomatics, Laval University, Quebec City, Canada for several decades.
- BOREAS (1992-1997): A NASA-led field experiment in Manitoba and Saskatchewan. PI for the Canadian University Participation.
- Fluxnet-Canada Research Network (2002-2007): Program Leader and PI.
- Canadian Carbon Program (2007-2011). Program Leader and PI.

My Current Challenge

- Program Manager, NASA Terrestrial Ecology Program, NASA Headquarters.
- ABoVE: 2015-2025
- Program Scientist, ORNL-DAAC
- Deputy Program Scientist
  - GEDI (ISS): 2018 launch date
  - ICESat-2: 2018 launch date
  - ASCENDS: Pre-formulation
  - Other: CMS, Carbon Cycle Science, NACP, AVIRIS airborne, NISAR

My View of ABoVE

- ABoVE should be a highly-coordinated field experiment where the whole should be **much** greater than the sum of the parts.
- ABoVE addresses critically important scientific issues regarding the impacts of a changing environment on ecosystems processes and services in the ABR.
- ABoVE is going to be a big part of the NASA Terrestrial Ecology Program activities over the next decade.

ABoVE Budget Synopsis and Projection

	FY2015	FY2016	FY2017	FY2018
ABoVE-1 Commitments	$3,741,263	$4,332,937	$5,443,629	$3,002,244
Funds Held for ABoVE-2*		$1,600,000	$5,000,000	$5,000,000
Total for ABoVE	$3,741,263	$5,932,937	$10,443,629	$8,002,244
ABoVE Commitments and Reserves (FY15-18): ~$28 M (~50%)				
Additional Support for ABoVE				
CCEO Support (some % for ABoVE)				
TE Unallocated Funds (some % for ABoVE)				
NASA Postdoc and Graduate Student Fellowships				
Partner Contributions				

* Airborne data collection, airborne science, filling science gaps, initial ecosystem services & synthesis research

Thank you

ABoVE Science Team

a. Membership
b. Requirements
c. Expectations
d. Developing the ABoVE Science Implementation Plan
e. Identifying near-term priorities for additional research

a. ABoVE Science Team Membership

	Investigators	Organizations
Principal Investigators	35	23
Funded Investigators	101	59
Collaborators	131	55
Total	232	104

	U.S.	Canada	Europe	Japan	Total
University	43	10	3		56
National Agencies/Labs	18	6	4	1	29
State/Provincial/Territorial	2	8			10
Private	4	2			6
Native Organizations	2	1			3
Total	69	27	7	1	104

b. Requirements for NASA Funded Investigations

- Participate and contribute in the development of the scientific content, direction, and priorities within ABoVE
- Participate in ABoVE-wide activities and interactions with partner organizations
- Ensure team participation in Science Team Meetings and Workshops
- Inform CCEO of
  - Major ABoVE research plans, activities, and schedules
  - Recipient's requirements for infrastructural and logistical support, when requested
  - Travel schedules so that NASA management, local and regional stakeholders, and other science team members may be kept accurately informed
- Make cost-effective use of support provided by the CCEO, when appropriate
- Comply with
  - Applicable safety and logistical procedures provided by the NASA.
  - All ABoVE data policies as well as established NASA data policies and practice, as well as U.S. Government-mandated standards for data products
- Produce an annual progress report and deliver it to NSSC, NASA HQ and the CCEO.
- Inform the relevant NASA HQ and CCEO of any results nearing publication or data products ready for public release

c. Expectations for ABoVE Science Team Members

- Perform research identified in project proposals
- Develop collaborative research activities with members of appropriate ABoVE Projects that address Tier 2 science questions and objectives
- Fully exploit the resources available through the ABoVE Science Cloud and other related activities
- Engage in coordinated outreach activities with key stakeholder groups
- Share results of research during Science Team Meetings, presentations at key scientific conferences, submission of articles to peer-reviewed journals, and participate in meetings/workshops designed to coordinate U.S. and International HNL research (e.g., NACP, IARPC, SEARCH, etc.)

d. Developing the ABoVE Science Implementation Plan

- ***The ABoVE Concise Experiment Plan***
  - Provides the blueprint for the ABoVE Field Campaign
  - Identifies the priority (Tier 2) science questions and objectives to be addressed
  - Provides the schedule for different research activities that will be carried out
  - Calls for the *coordination of research sponsored by NASA with research, monitoring, and stakeholder engagement activities sponsored by other organizations, including those organizations forming Partnerships with NASA*

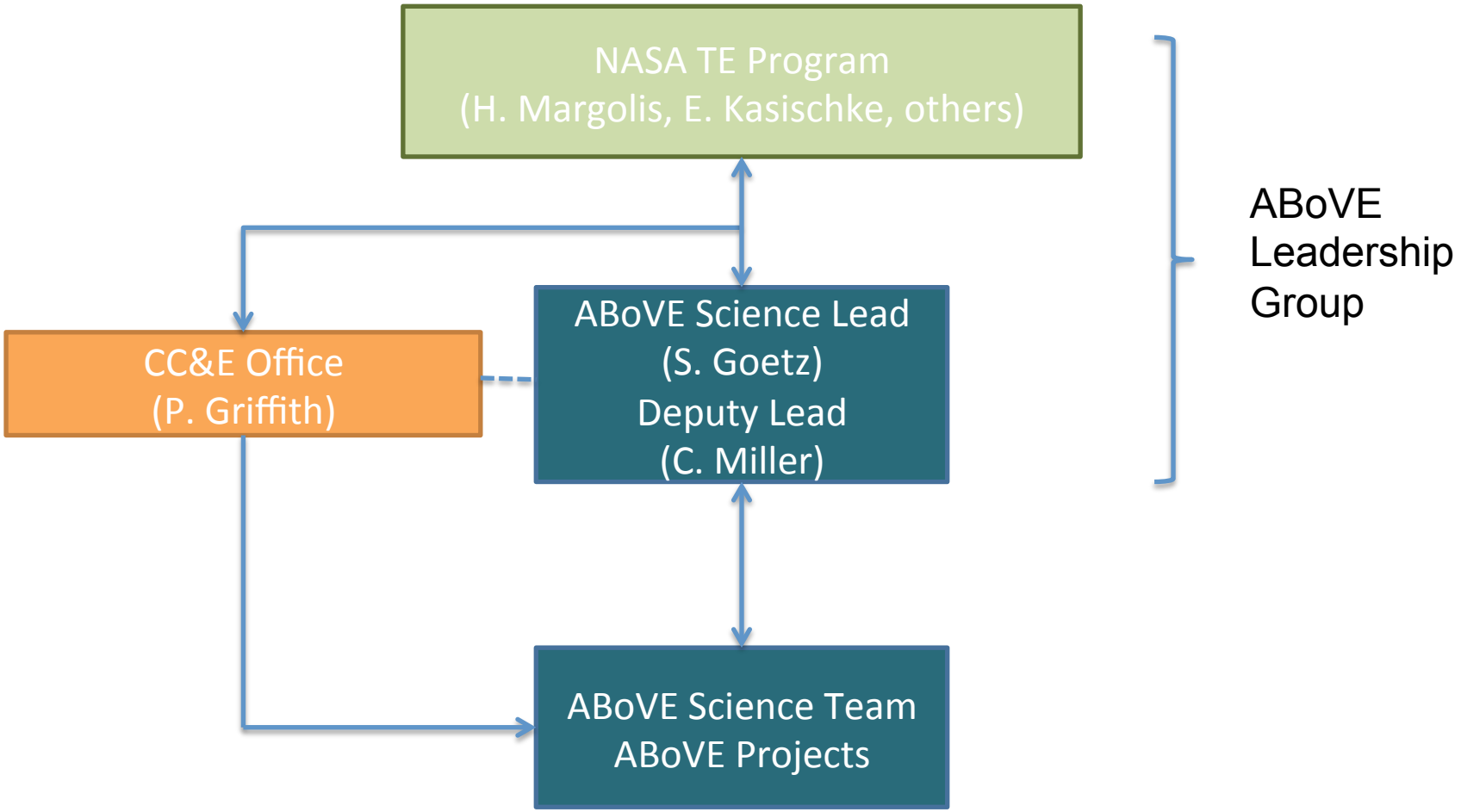
d. Developing the ABoVE Science Implementation Plan

- ***The ABoVE Science Implementation Plan***
  - Based on ABoVE projects, determines which Tier 2 science questions and objectives will be addressed
  - Provides a framework for coordination of the research in the different ABoVE projects needed to address specific Tier 2 questions and objectives
  - Will be a living document
    - As a result of the need to address the different phases of the Field Campaign
    - Change in response to the completion of some projects and the addition of others

e. Identifying near-term priorities for additional research

1. **Additional field-based research to address key gaps in current ABoVE Projects**
   - Example – research on factors controlling post-disturbance recovery of vegetation
2. **Additional research based on use of satellite remote sensing data**
   - Example – use of spaceborne SAR data for mapping and monitoring of HNL wetlands and peatlands, a high priority not only for ABoVE, but for NASA's NISAR Mission
3. **Priorities for airborne remote sensing data**
   - What airborne remote sensing data are needed to address Tier 2 research questions and objectives
   - What airborne remote sensing data can build upon the research of existing ABoVE Projects

Organization of ABoVE



Importance of ABoVE to U.S./International Research Priorities

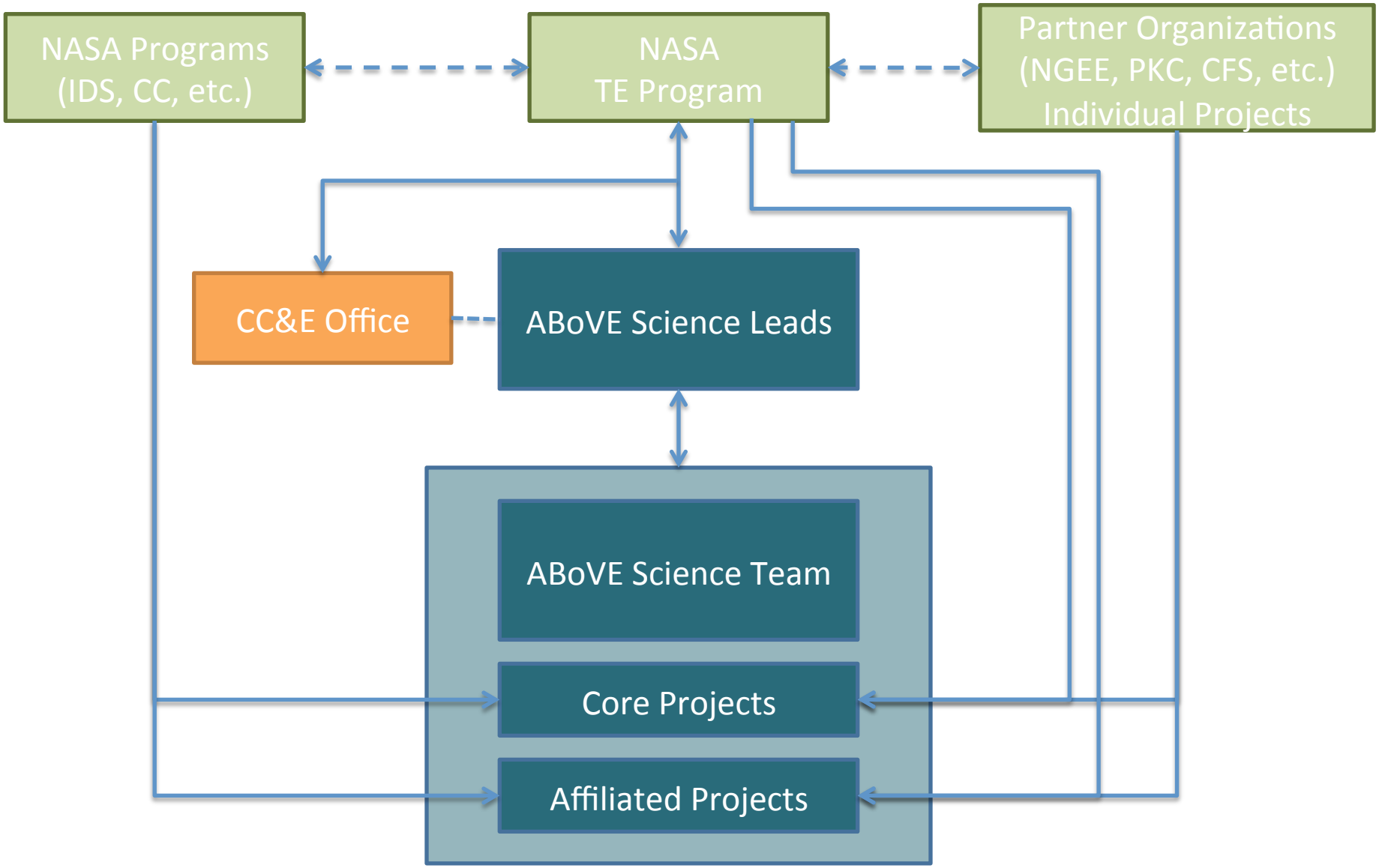
The research during ABoVE represents a major NASA contribution to a number of U.S. and International research activities

- NACP/CarboNA
- Interagency Arctic Research Policy Committee (IARPC)
- U.S. Global Change Research Program (GCRP)
- Search Permafrost Action Team
- Arctic Council Working Groups (CAFF, AMAP)

All these activities call for coordination of research being conducted across multiple organizations

NASA Partnerships for ABoVE

Target Partner Organizations	Members of Current ABoVE Projects	Additional ABoVE Projects Expected
Polar Knowledge Canada	X	X
Canadian Forest Service	X	X
Canadian Centre for Remote Sensing		X
Changing Cold Region Network	X	X
CANet	X	X
Ducks Unlimited Canada		X
Government of Northwest Territories	X	X
Government of Yukon	X	X
Aboriginal/Native Organizations	X	X
Department of Energy (includes NGEE-Arctic)	X	X
U.S. Geological Survey	X	X
U.S. Fish & Wildlife Service	X	X
U.S. National Park Service	X	X
U.S. Forest Service	X	X
Alaska Landscape Conservation Cooperatives	X	X
North Slope Science Initiative		X
Bureau of Land Management		X
Alaska Fire Science Consortium		X
State of Alaska - Department of Fish and Game	X	X
State of Alaska - Department of Natural Resources		X


NASA Programs (IDS, CC, etc.)
NASA TE Program
Partner Organizations (NGEE, PKC, CFS, etc.) Individual Projects
CC&E Office
ABoVE Science Leads
ABoVE Science Team
Core Projects
Affiliated Projects

Criteria for Becoming an ABoVE Project

- The Project activities are within the ABoVE Study Domain and will be carried out during the time period of the field campaign (ca 2015 to 2025)
- The Project activities address one or more of the Tier 2 Science Questions or Objectives in a significant way
- The Project's sponsor is willing to commit the resources needed to the support the activities & obligations of becoming either a Core or Affiliated Project
- The Project participants are willing to meet the obligations of serving on the ABoVE Science Team as expected for either a Core or Affiliated Project
- All proposed projects pass review of these criteria by the ABoVE Leadership Group, based on bilateral discussions with Partner Organizations when appropriate

Schedule for Near Term Science Team Activities

- 28 Sep – 2 Oct 2015 – ABoVE Science Team Meeting 1
- Week of 18-22 Jan 2016 – ABoVE Science Team Meeting 2a – Anchorage, AK
- Early Apr 2016 – ABoVE Science Team Meeting 2b – Northwestern Canada