2017 Arctic Change Workshop
Opportunistic strategies to integrate measurements and modeling to enhance understanding of Arctic change

Workshop aims.
Upcoming field activities, such as the Multidisciplinary drifting Observatory for the Study of Arctic Climate (MOSAiC) and the Year of Polar Prediction (YOPP), provide an opportunity to better integrate Arctic measurements and modeling. To explore this opportunity, a workshop was held in June 2017 that brought Arctic scientists together to discuss strategies and practical steps forward. The themes of the workshop were to find better ways to utilize models for planning observational programs and also better ways to use observations in model development. The main goals of the workshop were to identify the processes that are key to these themes, find ways to facilitate these themes, and potentially form collaborations around them.

Workshop structure
The workshop took place on June 22-23 2017 at the NCAR Mesa Lab in Boulder, CO. It included presentations on planned observations and model developments and discussions about priority areas of work. The agenda allowed considerable time for discussion and brainstorming about potential ways forward. Breakout groups were formed around three science themes including biogeochemical cycles, heat budgets, and momentum exchange. Starting from a science question within each theme, meeting participants were asked to identify the processes of interest, the observations required to constrain those processes, and modeling tools and experiments needed to further understanding. These breakout sessions allowed small groups of scientists with varied areas of expertise to work through science examples and identify needed synthesis datasets, i.e. a collection of several coordinated observations and model experiments, to address questions of interest. Results from breakout groups were then presented back in a plenary discussion to allow for further discussion.