The Sea Ice Drift Forecast Experiment

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The Sea Ice Drift Forecast Experiment (SIDFEx) was launched in summer 2017. SIDFEx is a community effort to solicit, collect, and analyze sea ice drift forecasts, based on arbitrary methods, for a number of IABP sea-ice buoys on a regular basis. The YOPP initiative is inspired by increasing research and operational needs to forecast future positions of assets drifting in Arctic sea ice. The examination of sea ice drift forecasts provides an integrated assessment of many aspects of the coupled atmosphere-ice-ocean system and will motivate in depth investigations into how key variables are measured, modeled, and forecast. We expect that a systematic assessment of real drift forecasting capabilities will improve our physical understanding of sea ice and enable us to identify and resolve model shortcomings. In 2017, six groups have contributed drift forecasts to SIDFEx: Four groups have derived their seasonal-range forecasts by means of diagnostic tracking based on prediction drift fields of coupled or uncoupled general circulation models; three of these correspond to September sea-ice forecasts that were part of the 2017 Sea Ice Outlook (SIO) of the Sea Ice Prediction Network (SIPN). In addition, one group has based its forecasts on satellite-derived drift fields of past years which may serve as a proxy for a climatological reference forecast. All these groups have submitted ensembles of drift trajectories. Moreover, one group has started submitting daily short-term (10-day) deterministic forecasts in near-real-time. We are very grateful to all contributors. Our poster presents the motivation, experimental design, and early results of SIDFEx in some detail and outlines plans for 2018-2020.