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[EJ] Evening Poster | A (Atmospheric and Hydrospheric Sciences) | A-CG Complex & General

## [A-CG38]Science in the Arctic Region

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The Arctic and circumpolar region is the key area for the study of global change because the anthropogenic impact is projected to be the largest in this area due to the complicated feedback processes of the nature. A number of international and interdisciplinary research projects have been conducted for the studies on the land-atmosphere-ocean system. In order to understand the feedback processes occurring in the Arctic and to project the global warming in the future, we need to establish the intense observational network and to exchange the knowledge and information by combining the different scientific communities under the common interest of the Arctic. The objectives of this session are 1) to exchange our knowledge on the observational facts and integrated modelling and 2) to deepen our understanding on wide range of natural sciences related to the Arctic and the circumpolar region. Studies on humanities, social sciences, and interdisciplinary fields are also welcomed.

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## [ACG38-P15]Summary of the R/V Mirai Arctic Ocean cruise in 2017

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Keywords:Arctic Ocean, R/V Mirai, ArCS

We conducted meteorological and hydrographic surveys including marine biogeochemical samplings in the northern Bering Sea and the Arctic Ocean on board the R/V Mirai from 23 August to 1 October 2017 under a Japanese research project, the Arctic Challenge for Sustainability (ArCS). The research areas included the EEZ and the territorial sea of the USA. The observational activities consisted of CTD/LADCP/water samplings, XCTD, ocean microstructure measurements by Turbulence Ocean Microstructure Acquisition Profiler (TurboMAP), drifting buoy deployments, bio-optics measurements, plankton net (NORPAC, closing, and BONGO net) samplings, sediment samplings, incubation experiments, visual observations of marine animals by binoculars, ship-board ocean current and surface water monitorings, meteorological measurements and samplings, aerosol observations, satellite observations, radiosondes, Doppler radar, sea ice radar, sea bottom topography, gravity, and magnetic field measurements, and mooring and sediment trap recoveries and deployments. At an ice-edge area, we approached to the sea ice by a small working boat (Zodiac) and conducted unique surveys using a UCTD sensor, fluorometer, water sampler, and plankton net.