B06-O11

INTER-ANNUAL AND SHORTER-TERM VARIABILITY IN PHYSICAL AND BIOLOGICAL CHARACTERISTICS ACROSS BARROW CANYON IN AUGUST – SEPTEMBER 2005-2014

Carin Ashjian *(Woods Hole Oceanographic Institution, United States)*
Robert G Campbell *(University of Rhode Island, United States)*
Stephen Okkonen *(University of Alaska, United States)*
Philip Alatalo *(Woods Hole Oceanographic Institution, United States)*
Frank Bahr *(Woods Hole Oceanographic Institution, United States)*

cashjian@whoi.edu

Late summer physical and biological conditions along a 37-km transect crossing Barrow Canyon have been described for the past ten years as part of an ongoing program, supported by multiple funding sources including the NSF AON, focusing on inter-annual variability and the formation of a bowhead whale feeding hotspot near Barrow. These repeated transects (at least two per year, separated in time by days-weeks) provide an opportunity to assess the inter-annual and shorter term (days-weeks) changes in hydrographic structure, ocean temperature and salinity, current velocity and transport, chlorophyll fluorescence, nutrients, and micro- and mesozooplankton community composition and abundance. Inter-annual variability in all properties was high and was associated with larger scale, meteorological forcing. Shorter-term variability could also be high but was strongly influenced by changes in local wind forcing. The sustained sampling at this location provided critical measures of inter-annual variability that should permit detection of longer-term trends that are associated with ongoing climate change.