# Moored long-term ecosystem monitoring

# **Mooring Observatory Consortium**

AOOS - Industry - NPRB - UAF - UW - U. Laval

### **Objectives**

- Monitor the Chukchi ecosystem year-round from the vantage of multiple disciplines, across multiple trophic levels, and with high temporal resolution.
- Relate timing and magnitude of fluctuations of nutrient and carbonate chemistry, particulate, phytoplankton, zooplankton, and fish parameters to variations in each other and the currents, waves, wind, light, and ice.
- Provide researchers and resource managers with a multiyear reference arctic shelf biogeochemical dataset.

# Instrumentation build-out plan

New measurement parameters in future years:

Sediment Trap
Passive Acoustic Recorder
Nitrate, CDOM, OBS, O<sub>2</sub>
pCO<sub>2</sub>, pH

### **2014 Configuration**



#### 33 m below the surface

Acoustic Doppler Current Profiler:

Current speed & direction
Significant wave height & direction

Laser In-Situ Scattering Transmissometer:

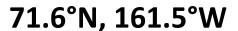
Particle size spectra & volume concentration Optical transmission

Acoustic Zooplankton and Fish Profiler:

Target strength Volume backscatter Ice draft

SeaCat datalogger:

Pressure, Temperature, Salinity Chlorophyll Fluorescence Photosyntetically Available Radiation





Recording Current Meter:

Current speed & direction Pressure, Temperature, Salinity Turbidity



MicroCat datalogger:

Pressure, Temperature, Salinity Acoustic Releases:

2 Push-Off Release Transponders

