

## ***Distribution of CDOM and biomarkers in the Arctic Ocean***

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SUMMARY: Linking CDOM to ligand distribution, halocline formation, and sea ice melt distribution

### **SCIENTIFIC OBJECTIVES**

1. Extend the observations of CDOM in the Arctic Ocean in relation to hydrography and other water mass tracers (oxygen isotopes, DIC, DOC, trace elements)
2. Investigate CDOM and lignin as indicators for ligand (Fe) distribution and transport
3. Use CDOM as a measure for halocline ventilation
4. Use CDOM to reevaluate the distribution of sea ice melt in Arctic Ocean surface waters

MEASUREMENTS: CDOM (in situ, water samples), lignin phenols, DOC

### **SAMPLE NEEDS**

1. Room on the CTD to mount 2 CDOM sensors
2. 3-8 Liter water samples for the analyses of biomarkers (not every station and depth)

### **ANTICIPATED SCIENTIFIC COLLABORATORS**

- 1) All PIs involved in hydrography, carbon biogeochemistry, nutrients and tracer oceanography (oxygen isotopes, stable isotopes of DIC, trace elements).

### **BERTHS and LOGISTICS**

Two berths for people responsible for collection and processing of water samples. Room on the CTD rosette to mount 2 CDOM sensors. Room in wet lab for sample filtration and extraction. Biomarker samples need to be stored in Freezer (-20C).