

Otto Schmidt Laboratory Summer School
“Colored Dissolved Organic Matter (CDOM) in the Arctic”
January 29-31, 2014, St. Petersburg

Dear colleagues,

We are pleased to announce that the OSL Summer School “Colored Dissolved Organic Matter (CDOM) in the Arctic” will be held in St. Petersburg on 29-31 January 2014.

The Summer School was initiated by the Otto Schmidt Laboratory for Polar and Marine Research specifically for young researchers beginning their scientific careers in the interdisciplinary and fascinating field of Earth Sciences. The program will consist of lectures, tutorials about the visualization and analysis of remote sensing data and the modeling of optical properties in aquatic environments as well as a laboratory training course.

The lecturers are Birgit Heim (AWI Potsdam), Sebastian Rössler (FIELAX, Bremerhaven), Elena Dobrotina (AARI & OSL), and Jens Hölemann (AWI Bremerhaven & OSL),

Scientific Program:

Colored Dissolved Organic Matter is found in all natural waters and it can make up a sizeable fraction of the dissolved-organic-matter pool. CDOM is one of the major light-absorbing constituents in natural waters. As a consequence of its optical behavior CDOM has the potential to significantly affect the phytoplankton productivity and the thermal structure of the water column (Granskog et al. 2007, doi:10.1016/j.csr.2007.05.001; Stedmon et al. 2011, doi:10.1016/j.marchem.2010.12.007).

Its color signal is an important factor in remote sensing applications where the effect of CDOM must be accounted for when reflectance measurements are utilized for the retrieval of phytoplankton (proxy: Chl-a) and suspended sediment observations. As a result, however, this also opens up the possibility of using remote sensing methods for measuring the dissolved-carbon pool in the surface waters (Stedmon et al. 2000, doi:10.1006/ecss.2000.0645; Fichot et al. 2013, doi:10.1038/srep01053).

The following topics will be addressed:

- distribution and potential impacts of CDOM in the Arctic
- the optical properties of CDOM: an introduction
- water color remote sensing: the basics
- Beam/Visat: an open-source desktop application to be used for visualization, analysis and processing of remote sensing raster data
- WASI: a free WINDOWS based program for modeling and analyzing optical in-situ measurements in aquatic environments in-situ measurement of Fluorescent Dissolved Organic Matter: examples from the TRANSDRIFT expeditions
- measuring CDOM absorption with a UV/Vis Spectrophotometer

Registration:

The number of participants is limited to 16. The participants will be sponsored by the Alfred Wegener Institute Helmholtz Centre for Polar and Marine Research.

Please send your registration by 25 December 2013 at the latest by email to:

jens.hoelemann@awi.de.

A detailed schedule and program will be distributed in the second circular by 15th January 2014.