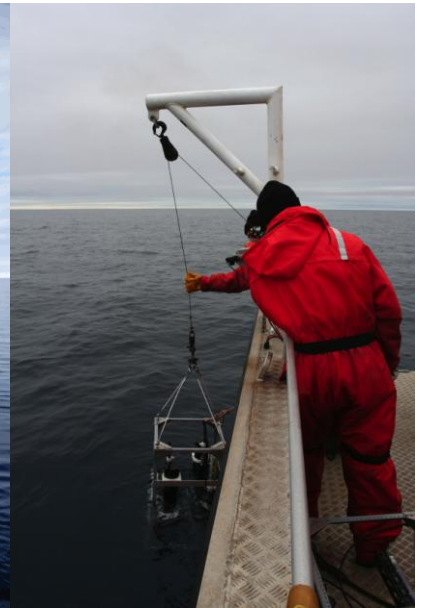
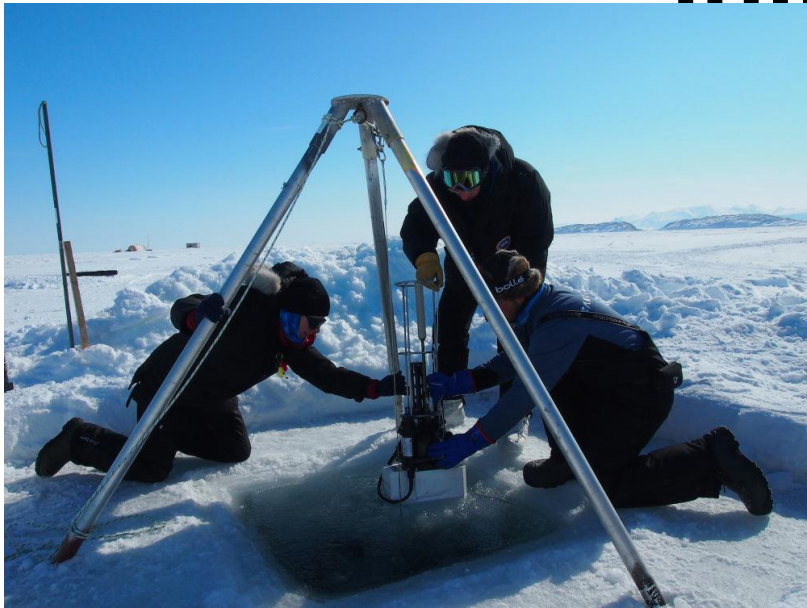
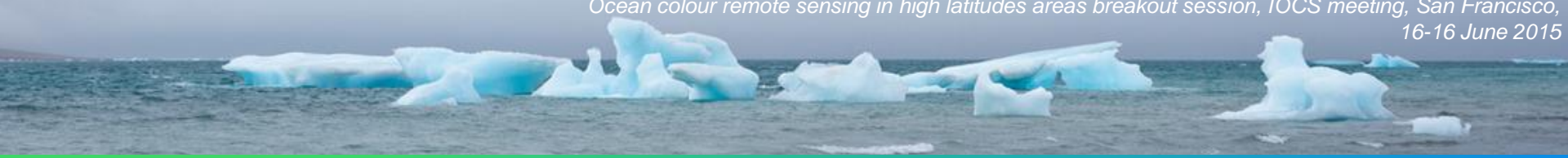


Green Edge Field Campaign (2015-2016), a Takuviik initiative





Green Edge overall objective

“to understand the dynamics of the Phytoplankton Spring Bloom (PSB) and determine its role in the Arctic Ocean of tomorrow, including for human populations. More specifically, we want to

- 1) understand the key physical, chemical and biological processes that govern the PSB,
- 2) identify the key phytoplankton species involved in the PSB and model their growth under various environmental conditions, and
- 3) predict the fate of the PSB and related carbon transfer through the food web and toward the bottom sediments over the next decade” .

Green Edge collaborators

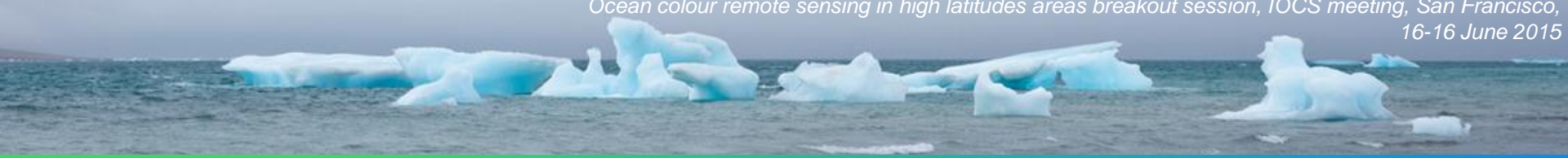
Canada

- Takuvik (Ulaval-CNRS)
Babin, Devred, Dominé, Forest, Fortier,
Levasseur, Lovejoy, Maps, Massé, Tremblay,
Juillet...
- UQAR/ISMER
Archambault, Bélanger, Dumont, Gosselin,
Rochon, St-Onge, Tremblay
- U Manitoba - CEOS
Ehn, Mundy, Rysgaard, ...
- UQAM - GEOTOP
De Vernal, Hillaire-Marcel
- DFO
Davidson, Lu
- CMN
Poulain
- Memorial U.
Erdinger, De Moura Neves

France and USA

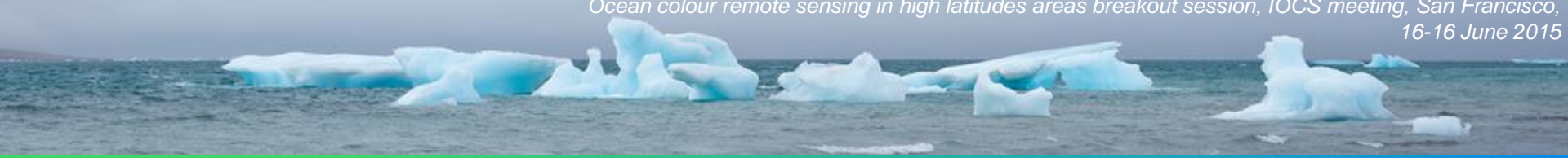
- LOCEAN (hydrodynamics, modeling)
- LEMAR (pelago-benthic coupling, modeling)
- LOV (optics, RS, autonomous platforms)
- Roscoff (biodiversity)
- LOMIC (bacterial activity and diversity)
- EPOC (geochemistry, sediment core analyses)
- LGGE (snow physics and RS)
- LOA (atmospheric optics)
- MOI (organic matter & Si assimilation)
- LIENs (coupled physical-biological modeling)

- Scripps (optics, RS)
- U. Maine (optics, RS, biodiversity)
- WHOI (biodiversity)
- NOAA (RS)
- NASA (RS)
- CRREL (optics)



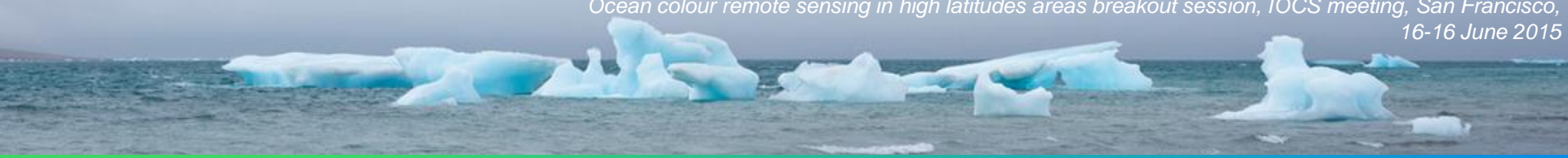
Green Edge workpackages

1. Coordination and communication
2. Detailed description and understanding of the spring bloom dynamics
3. Transfer through food web and toward bottom
4. Current trends in the spring bloom (remote sensing)
5. Spring bloom in the past (paleoceanography)
6. Spring bloom in the future (modeling)

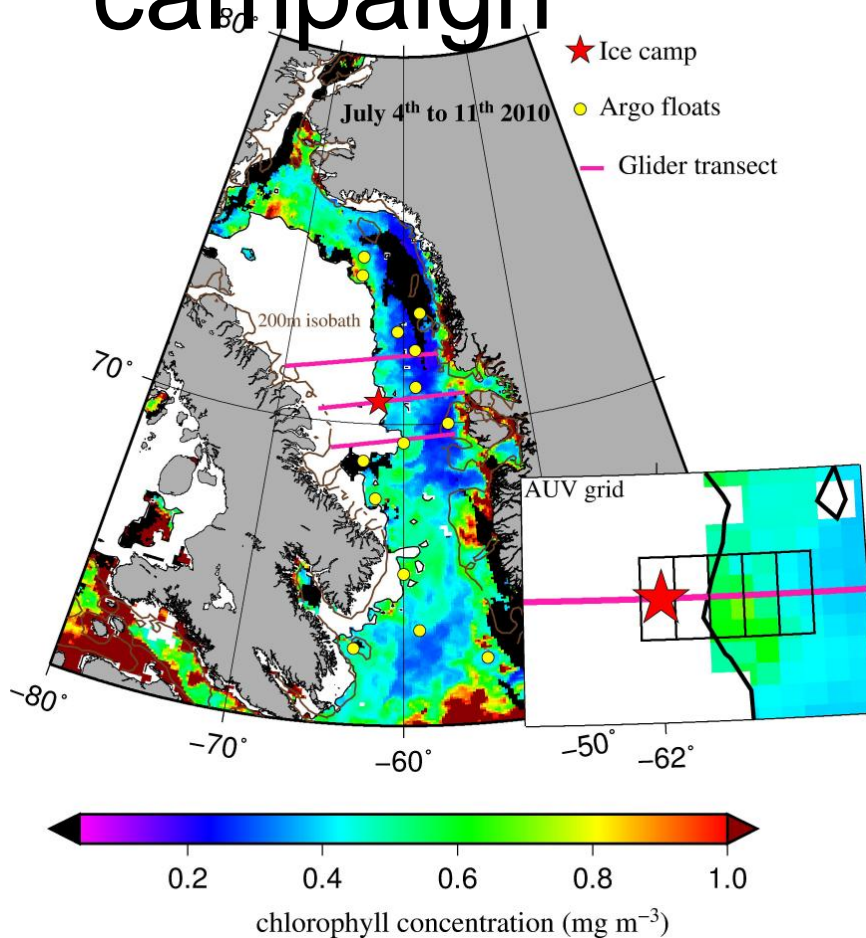


VW 2. Detailed description and understanding of the spring bloom dynamics

- Ice camp + cruise
- Full optics
- Nutrients
- PP
- Photosynthesis
- Phyto + bacteria diversity
- Physics
- Autonomous platforms
- Lab experiments on isolated strains
- Quantify model parameters
- Understand processes involved in species succession

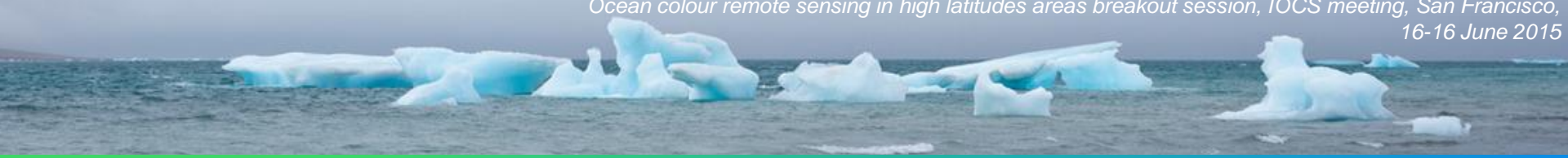


Green Edge 2015/16 field campaign



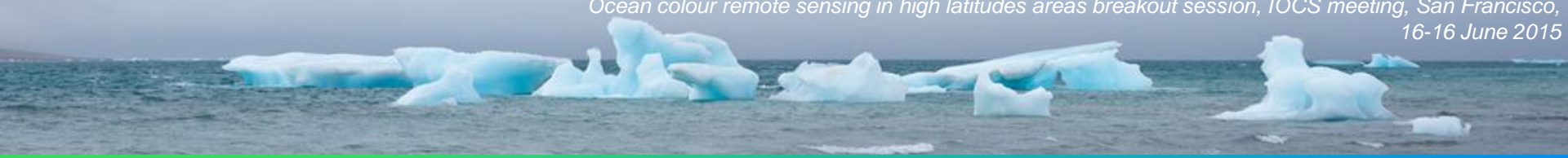
Sentinel-1 May 11th 2015





WP4: Current trends in the spring bloom (remote sensing)

- Algorithm development for open waters
- Correct for signal contamination related to sea-ice
- Develop a new approach for derived PP from remote sensing over ice-covered waters
- Derive trends at pan-Arctic scale



Green Edge sponsors



TRANSPORTATION PARTNERS

