M. Hoppmann¹, M. Nicolaus¹, B. Rabe¹, F. Wenzhöfer¹, C. Katlein¹, D. Scholz¹, L. Valcic²

¹Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung, Bremerhaven, Germany ²Bruncin Observation Systems, Zagreb, Croatia

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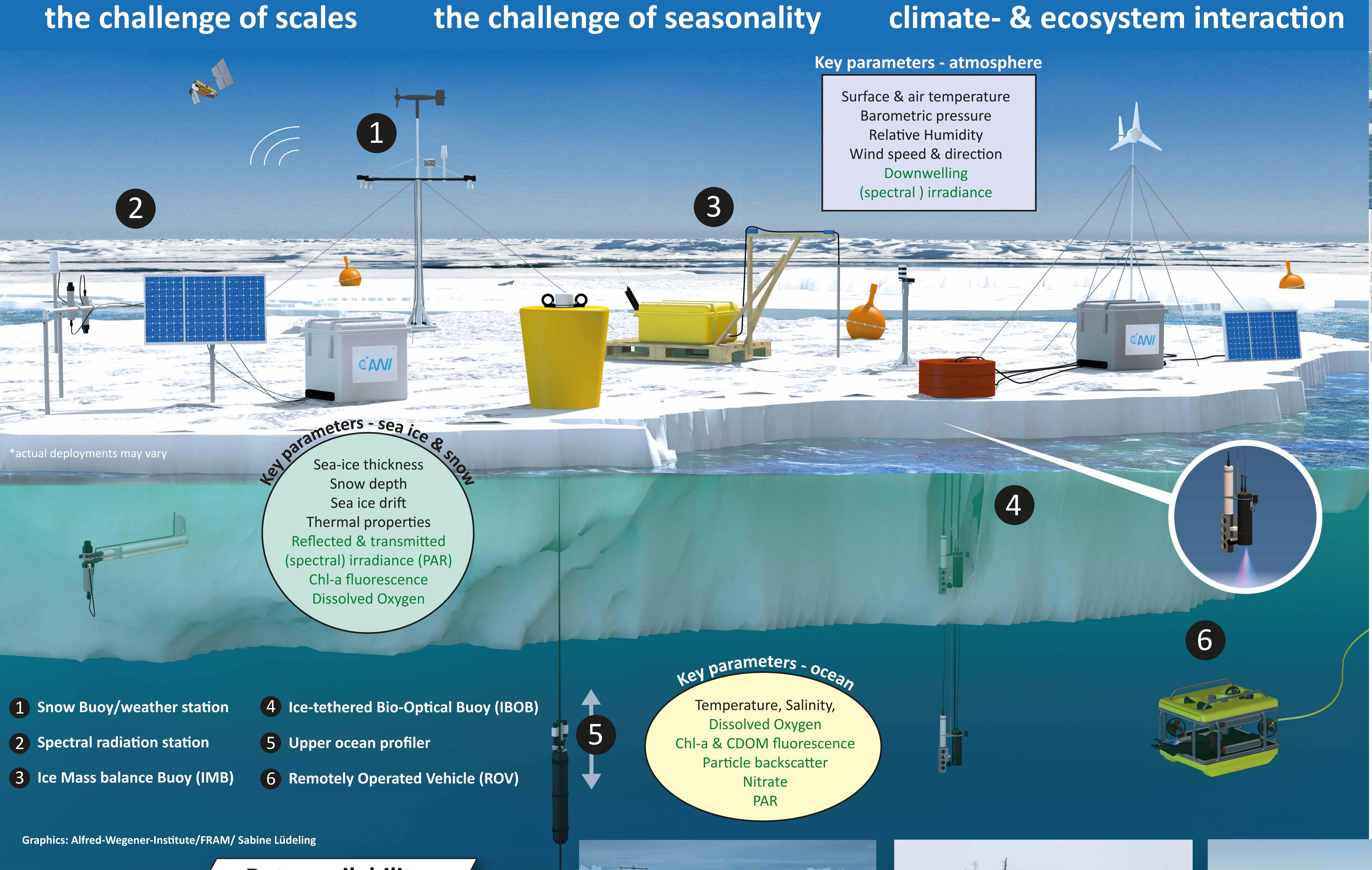
A distributed atmosphere - sea ice - ocean observatory in the central Arctic

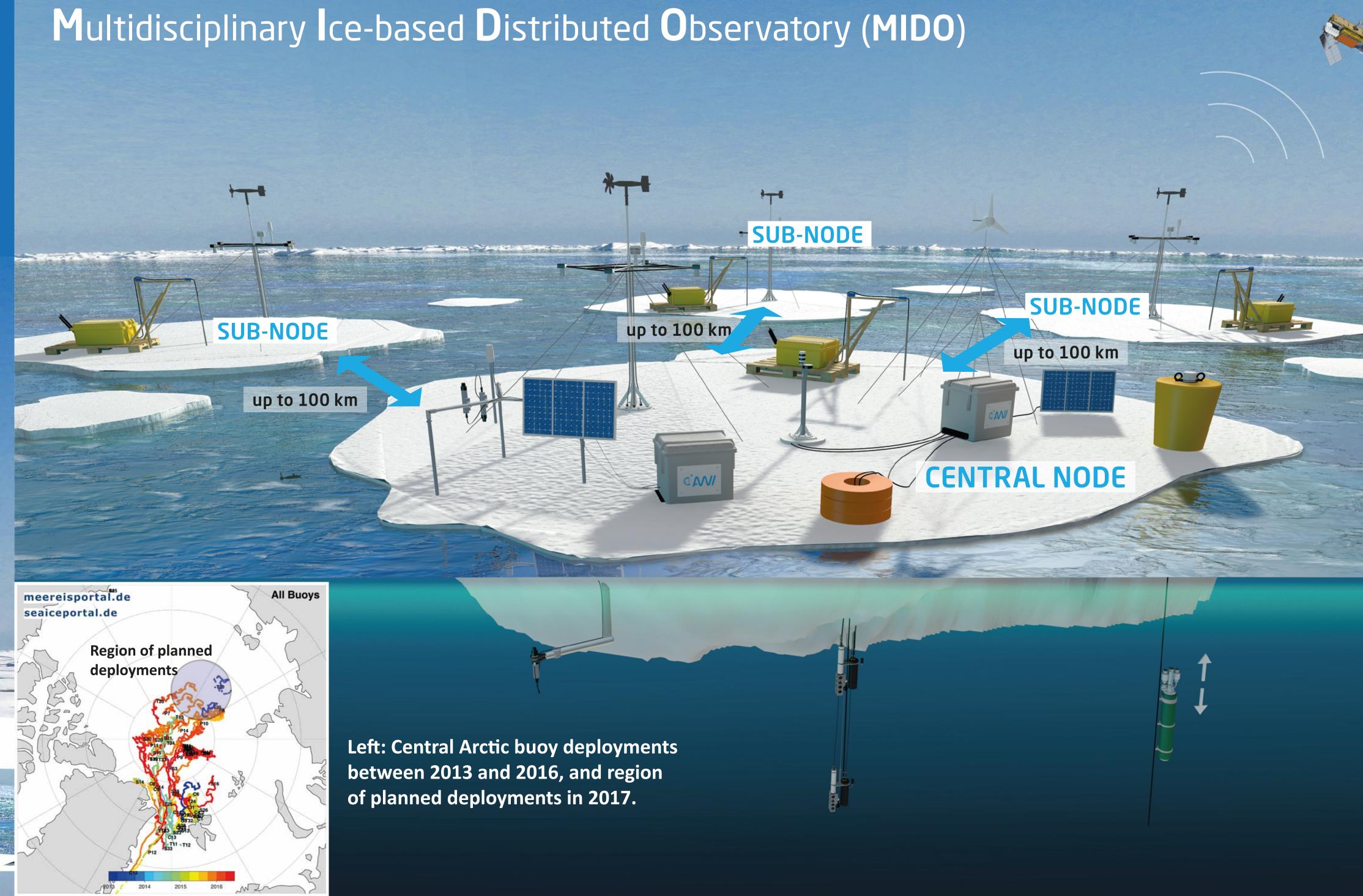
to overcome the Three main observational challenges in ice-covered oceans:

Spatial coverage:

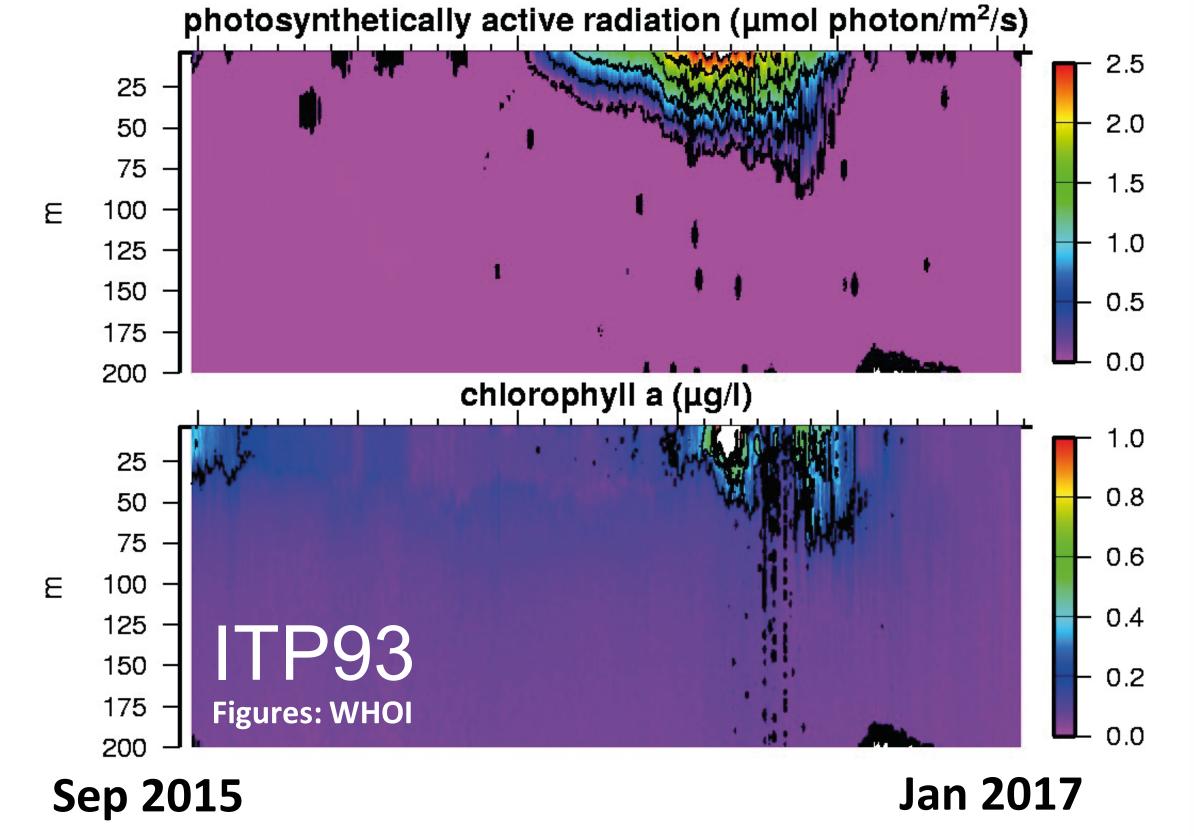
Temporal coverage:

Interdisciplinarity:





Top: One central node and 3 sub-nodes represent one drifting observatory. Each year between 2017 and 2020, two such observatories will be deployed upstream the Transpolar Drift of the Arctic



Top: ocean profiler ITP93 recorded 1,5 years of biophysical data in the Eurasian Basin, revealing a rarely observed autumn phytoplankton bloom.

GRAPHIC O Martin Künsting

ROV operations & buoy observatories are critical elements of the MOSAiC experiment in 2019/20.

Radiance

Scanning sonar
Micron (Tritech)

Data availability

Arctic and Antarctic buoy data are available in near real time on http://data.seaiceportal.de. These buoys also contribute to the international buoy networks, as well as to the Global Telecommunication System (GTS). The data of all buoys are published and distributed through the online database PANGAEA.





right: the remotely operated vehicle "BEAST" is equipped with similar sensors as the buoys to determine the spatial variability of key parameters.



Nitrate Attenuation CTD Photos of buoy deployments: Ice-tethered Bio-Optical Buoy (left), Ice Mass balance Buoy and Snow Buoy (center), upper ocean profiler (right). Far GP-CTD (Seabird)

USBL position
Micronay (Tritech)

Altimeter .HD zoom camera Navigation camera Fluorometer Oxygen
43F DO (Seabird)