Argo in Marginal Seas: examples of data and hydrographic properties.

(FMI examples)

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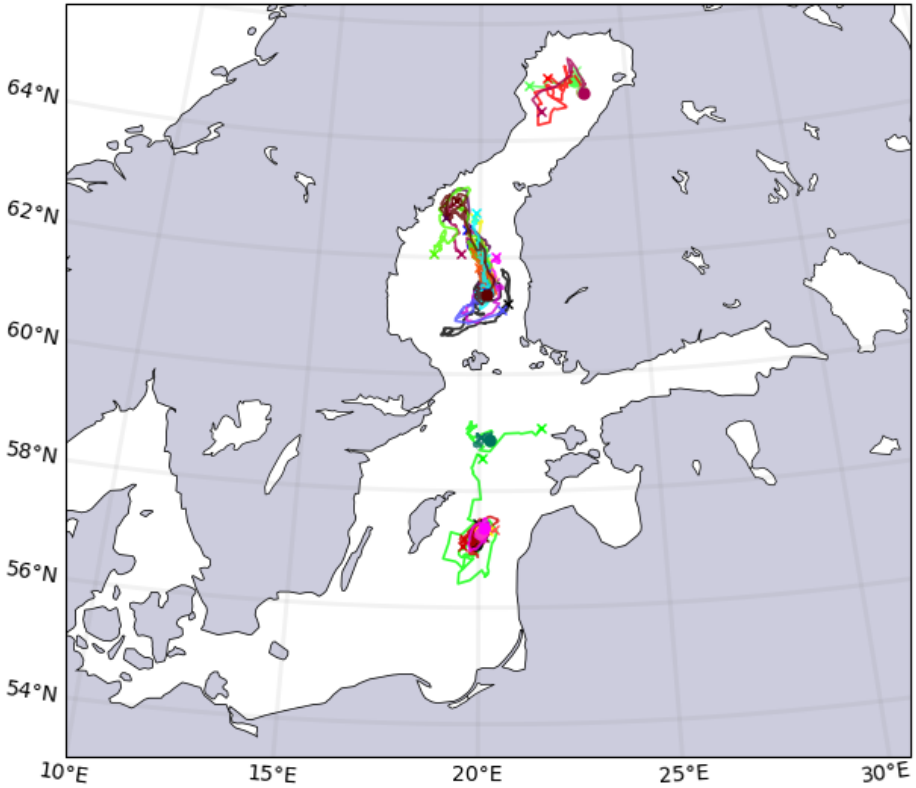
Marginal Seas Argo DMQC workshop, Sopot, Poland
18.04.2023-19.04.2023

Areas of operation



- Bothnian Bay
  - Needs Ice Sensing Algorithm
  - Bottom contacts/stranding risk
- Bothnian Sea
  - Needs Ice Sensing Algorithm
  - First testing area.
  - Tends to travel north and west
- Northern Baltic Proper
  - Latest testing area.
  - Two test show good stability
  - One lost due boat collision
- Gotland deep
  - Second testing area.
  - Floats stay well in small area
  - Deepest profiles

All areas allow recovery of the floats

Float recovery

WMO number	Float serial. No	CTD serial no.	Float type	Country/ Programme	Deployment date	Date of last profile	Calib. of CTD after recovery
6901901	5397	3511	APEX	Argo Finland	17.05.2012	05.12.2012	y
6902013	5396	3503	APEX	Argo Finland	13.06.2013	02.10.2013	y
6902014	6711	4793	APEX	Argo Finland	14.08.2013	21.08.2014	y
6902017	5397	3511	APEX	Argo Finland	31.05.2014	24.10.2015	y
6902018	6710	5051	APEX	Argo Finland	31.05.2014	13.11.2014	y
6902019	7191	5699	APEX	Argo Finland	21.08.2014	05.08.2015	y
6902020	6711	4793	APEX	Argo Finland	05.08.2015	03.08.2016	y
6902021	6710	5051	APEX	Argo Finland	22.09.2015	13.05.2016	y
6902022	5396	3503	APEX	Argo Finland	13.05.2016	11.10.2016	y
6902023	5397	3511	APEX	Argo Finland	13.07.2016	25.01.2018	n
6902024	7191	5699	APEX	Argo Finland	03.08.2016	15.06.2017	y
6902036	7507	7248	APEX	Argo Poland	29.11.2016	01.02.2017	n
6902025	7958	8893	APEX	Argo Finland	09.05.2017	02.10.2018	n
6902026	7959	8894	APEX	Argo Finland	06.06.2017	02.06.2019	n
6902027	6711	4793	APEX	Argo Finland	15.06.2017	15.10.2018	n
6902028	6710	5051	APEX	Argo Finland	06.08.2017	04.09.2018	n
6902029	5396	3503	APEX	Argo Finland	06.08.2017	27.10.2017	y

(part of the table from Euro-Argo RISE deliverable 2.7 https://www.euro-argo.eu/EU-Projects/Euro-Argo-RISE-2019-2022/Deliverables)

Float and Sensors

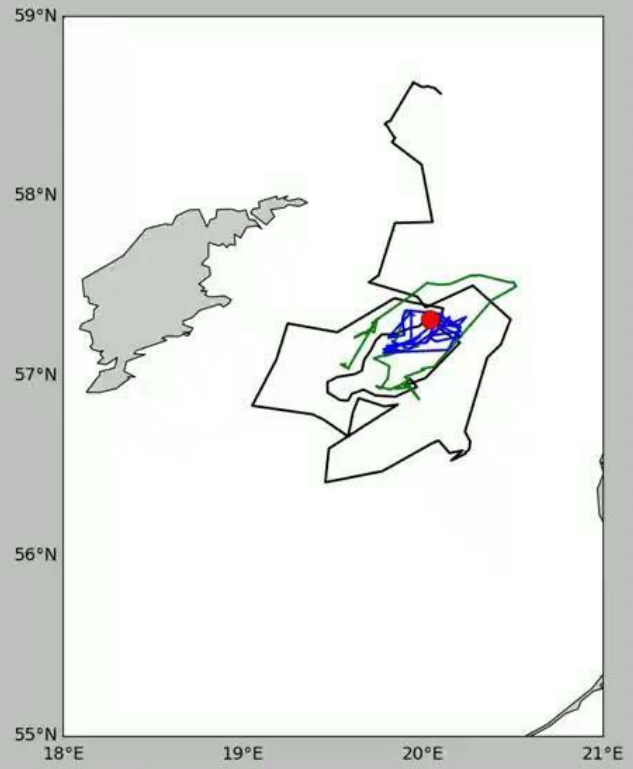
Float types

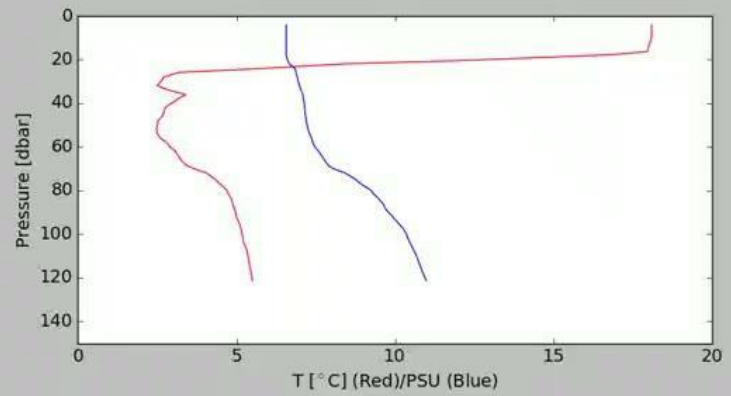
- APEX
  - Teledyne WebbResearch
  - Initial, most missions.
- Arvor-I
  - NKE
  - Tested with SeaBird and RBR CTD
- Arvor-C
  - NKE
  - Bottom-contact, promising
- Provor
  - NKE
  - Heavier, can be fitted with full BGC

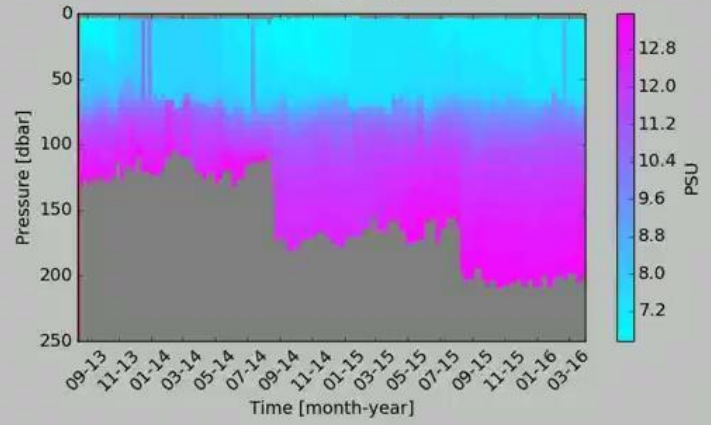
Sensors

- CTD
  - Every float
  - Seabird, tests with RBR
- Oxygen
  - Optode
  - Planned for all new purchases
- FLBB Turbidity sensor
  - For few floats
- RAMSES irradiance sensor
  - Tested successfully in one Provor

Example of Temperature and Salinity from Gotland Deep







WMO 6903700 Bothnian Bay