



AWAKE2



WP3. Fjord Oceanography Task 3.1. Fjord hydrography from historical and new data

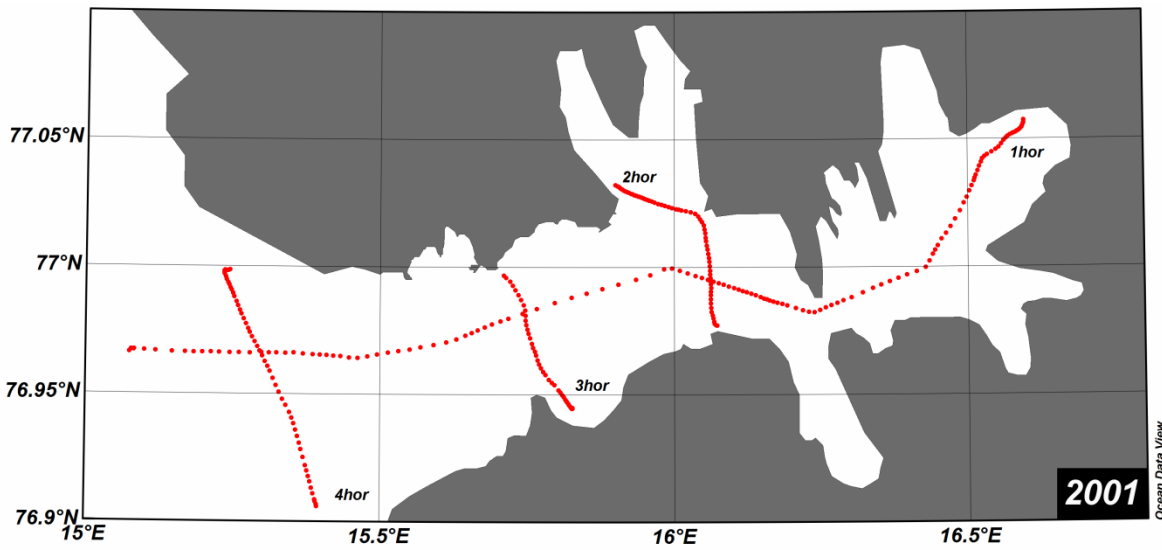
Agnieszka Promińska
Institute of Oceanology PAS
Sopot



Outline

- Data collection
 - Arex cruises
 - AWAKE
 - AWAKE2
- Deliverables: Hydrographic time series
- Summary of data collection

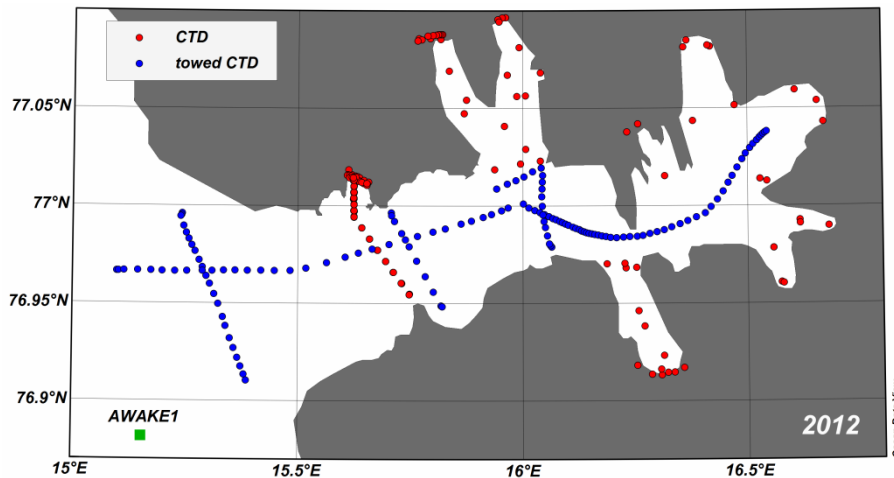
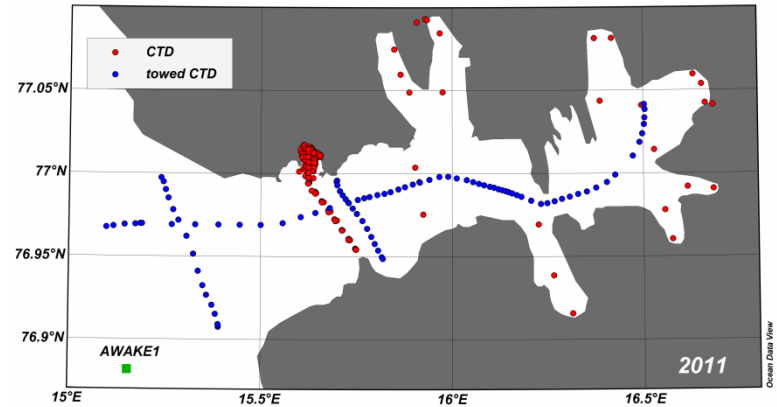
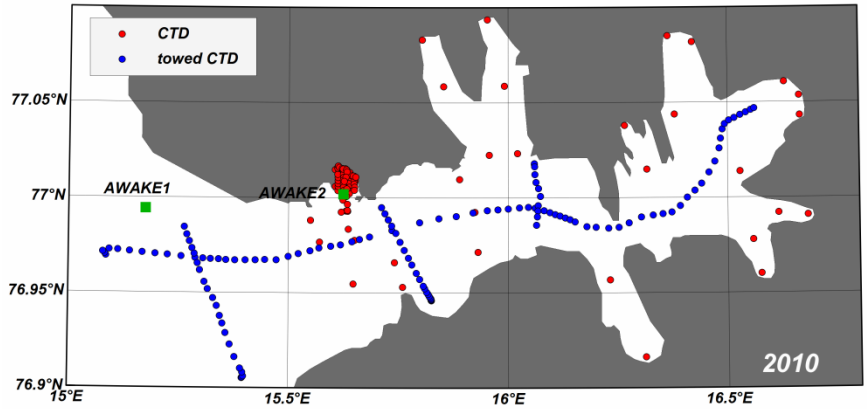
Data collection: ARES cruises



- CTD (Conductivity, Temperature, Depth) data collection - towed CTD profiling system
- 2001 – 2014 - summer cruises onboard the RV Oceania



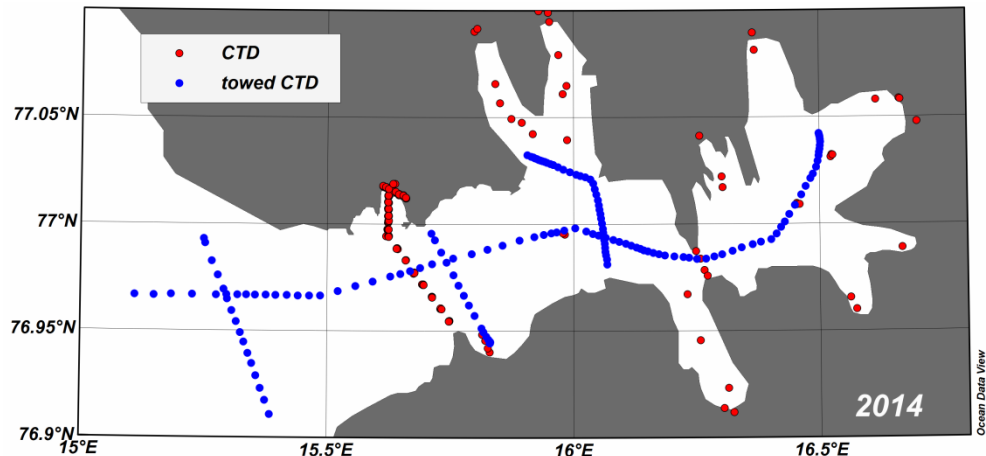
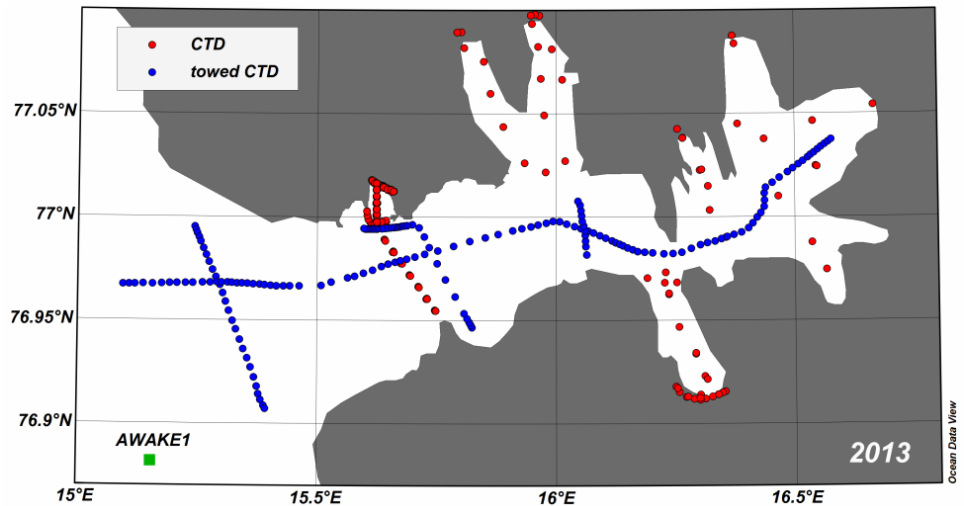
Data collection: AWAKE fieldwork



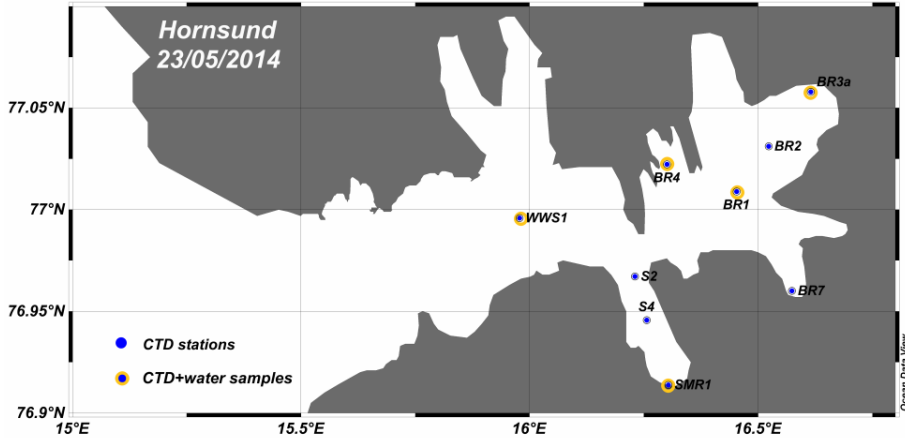
- CTD measurements from April to August
- Section H – once a week
- Section G – once a month
- Section NH – several times in a season
- Stations in front of Hornsund glaciers – one – two times in a season
- moorings

Data collection: AWAKE2 fieldwork

- CTD along fixed sections
- Dissolved Oxygen data collection
- Deployment of temperature strings in The Main Basin (in Spring)
- Water samples for 18O (2014)
- Multibeam echosounding in Hansbukta
- Time series from mooring

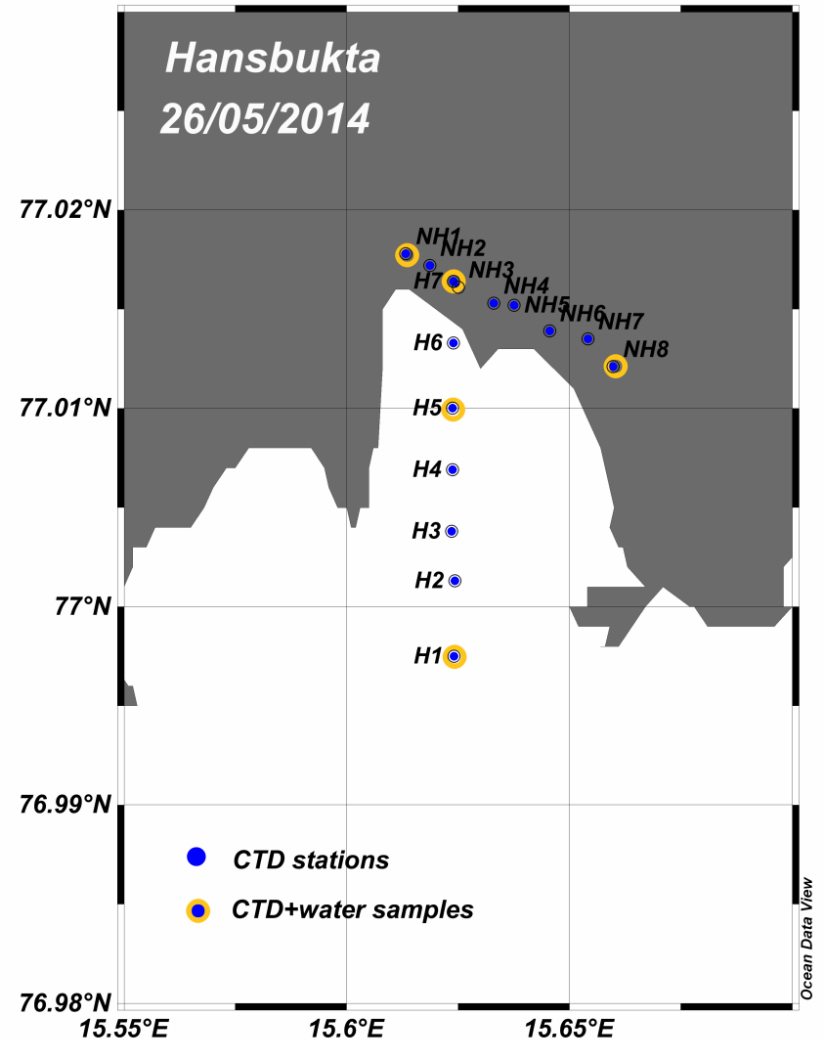


Data collection: AWAKE2 fieldwork

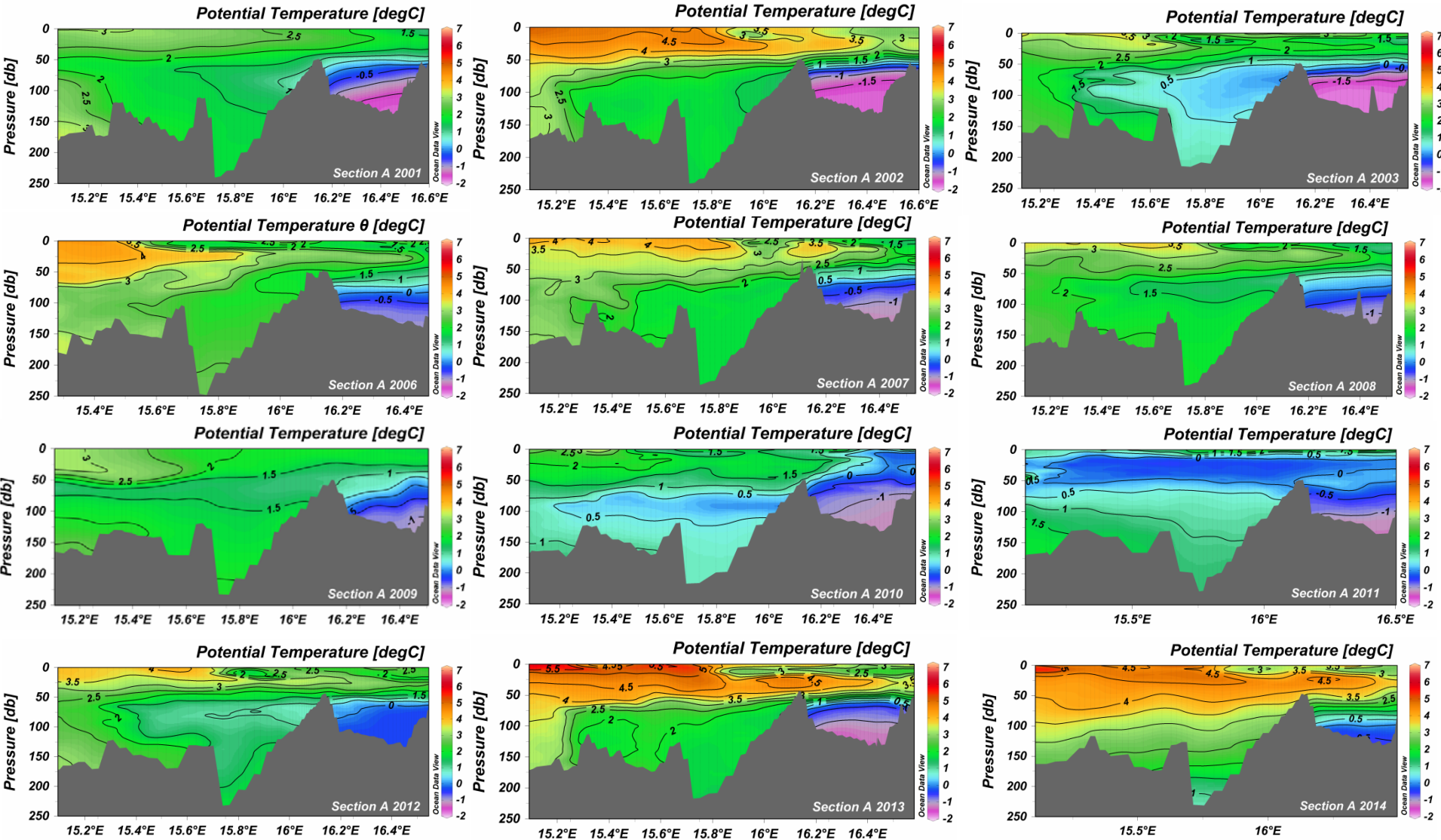


- CTD +DO

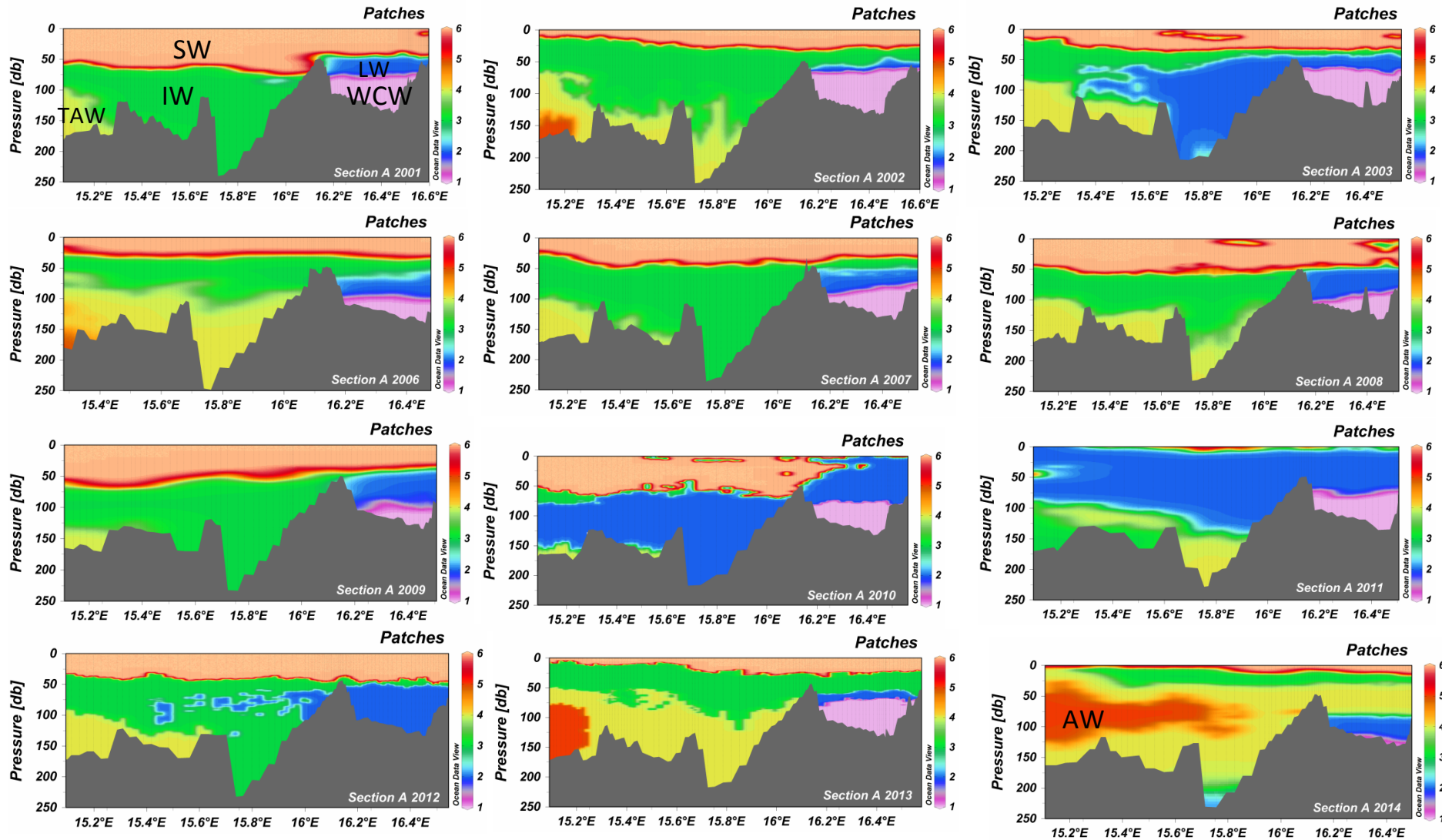
- Water samples for 18O from fixed stations



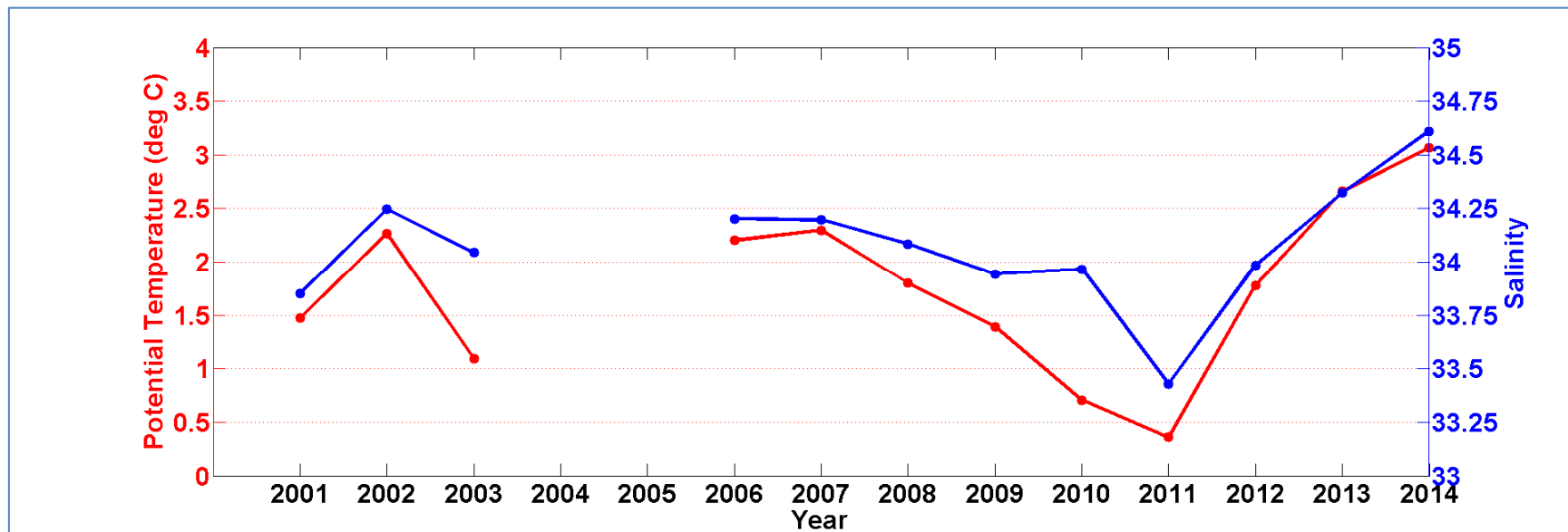
Distribution of potential temperature along section A in July 2001-2014



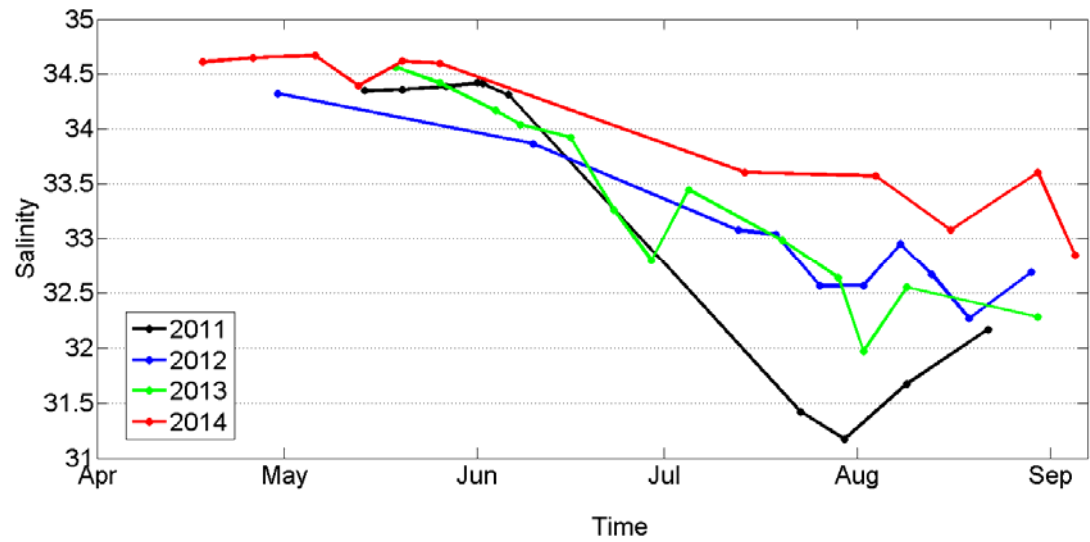
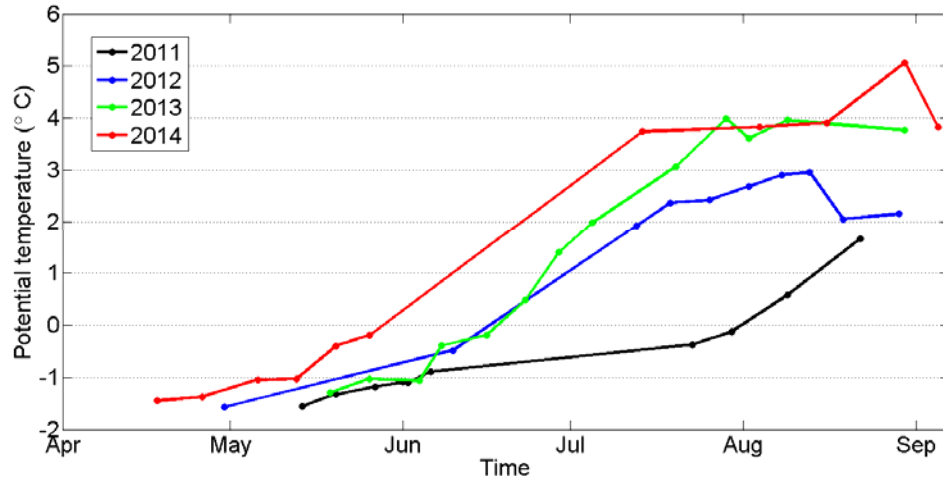
Distribution of water masses along section A in July 2001-2014



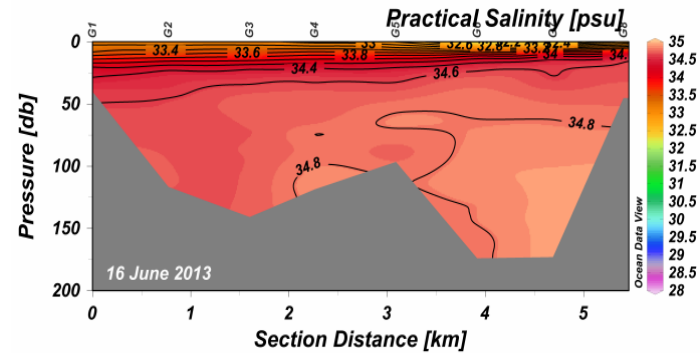
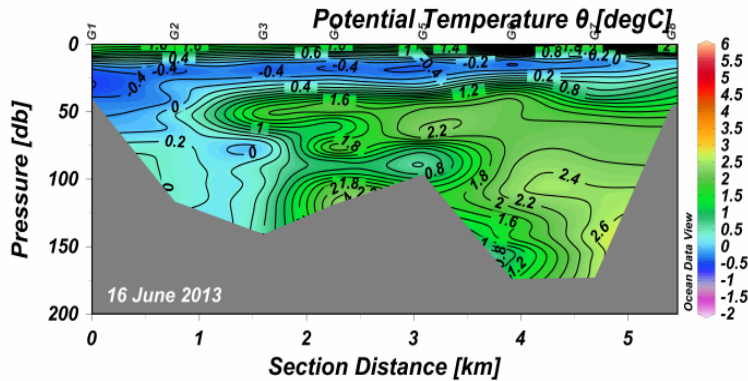
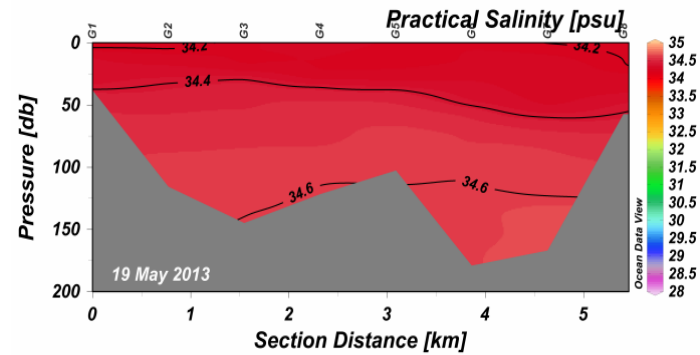
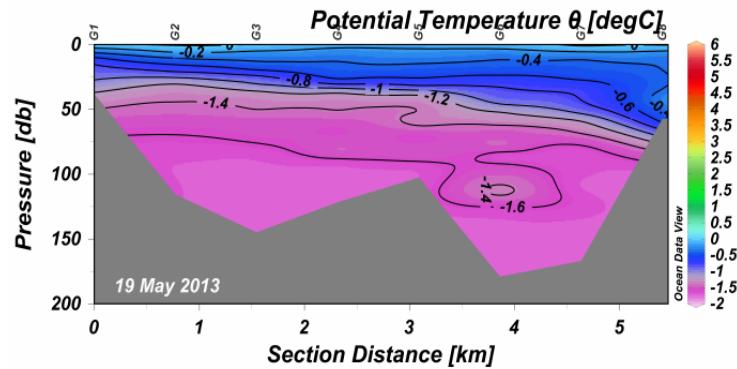
Time series of water potential temperature and salinity along section A in July 2001-2014



Time series of potential temperature and salinity along section H



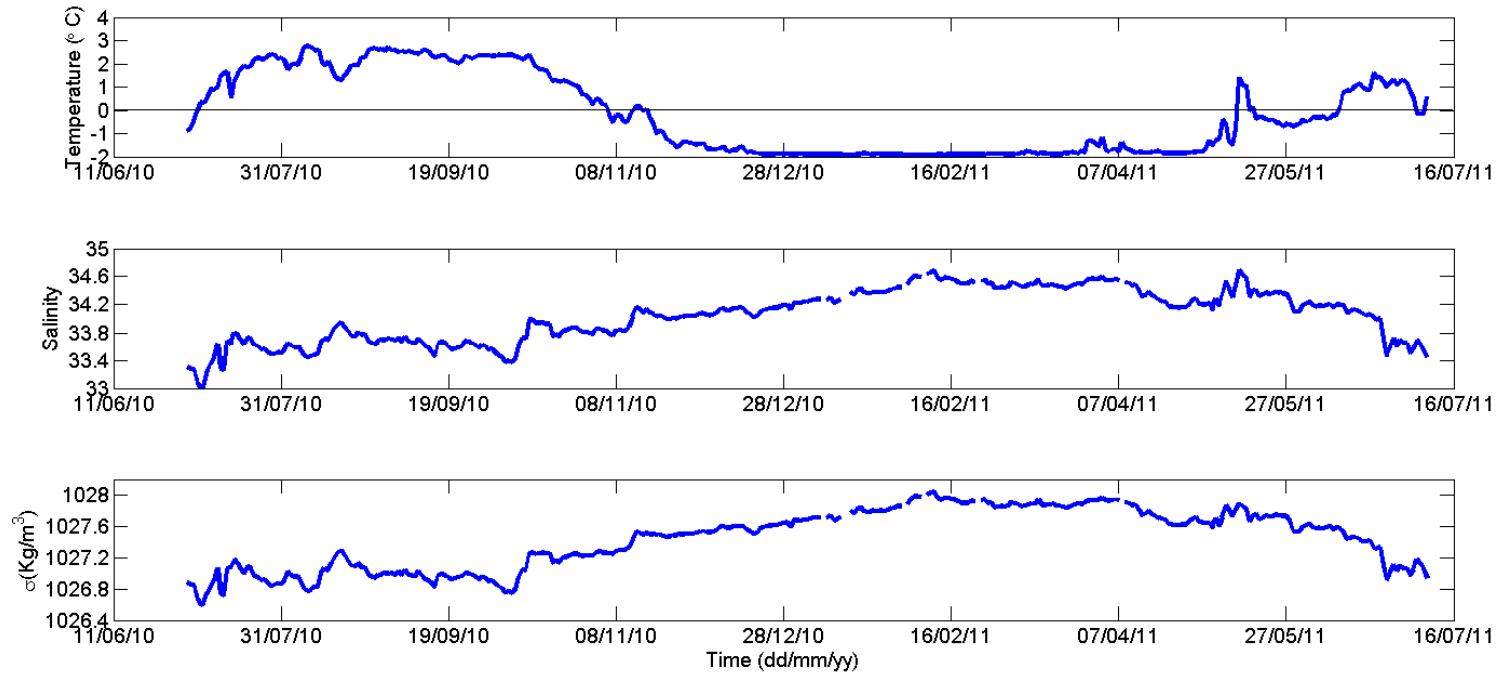
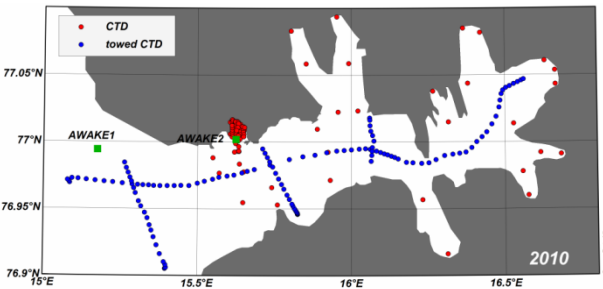
Arctic to Atlantic Type shift



A single-point moorings deployed in 2010 - 2013

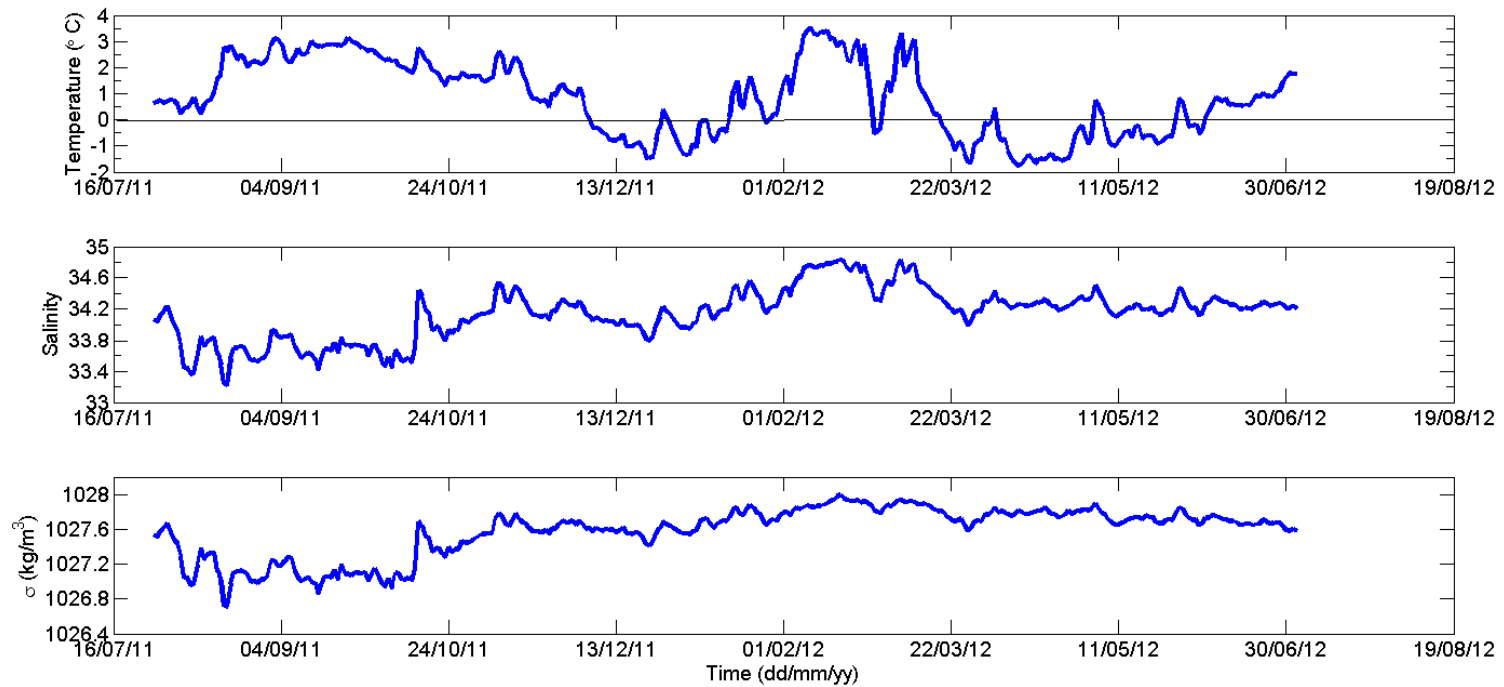
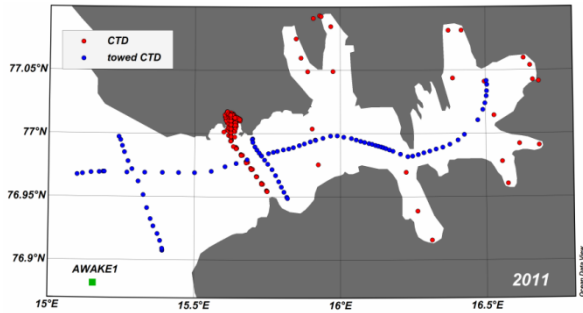
Year	Station	Start time	End time	position	Instrument	Depth (m)
2010	AWAKE1	2010/07/03 20:00 UTC	2011/07/08 11:01 UTC	76 59.651 N	SBE37	24
		2010/07/03 20:16 UTC	2011/02/21 02:16 UTC	15 10.474 E	RDCP 600	74
	AWAKE2	2010/07/25 00:16 UTC	2011/02/03 17:38 UTC	77 00.107 N 15 37.473 E	RDCP 600	57
2011	AWAKE1	2011/07/28 00:00 UTC	2012/07/04 07:00 UTC	76 52.898 N	SBE37	46
		2011/08/01 00:21 UTC	2012/05/19 21:41 UTC	15 09.288 E	RDCP 600	101
2012	AWAKE1	2012/08/04 18:00 UTC	2013/07/11 02:30 UTC	76 52.898 N 15 09.288 E	SBE37	85
2013	AWAKE1			76 52.898 N 15 09.288 E	RDCP 600	~100

Daily mean temperature, salinity and density at AWAKE1 in 2010/2011



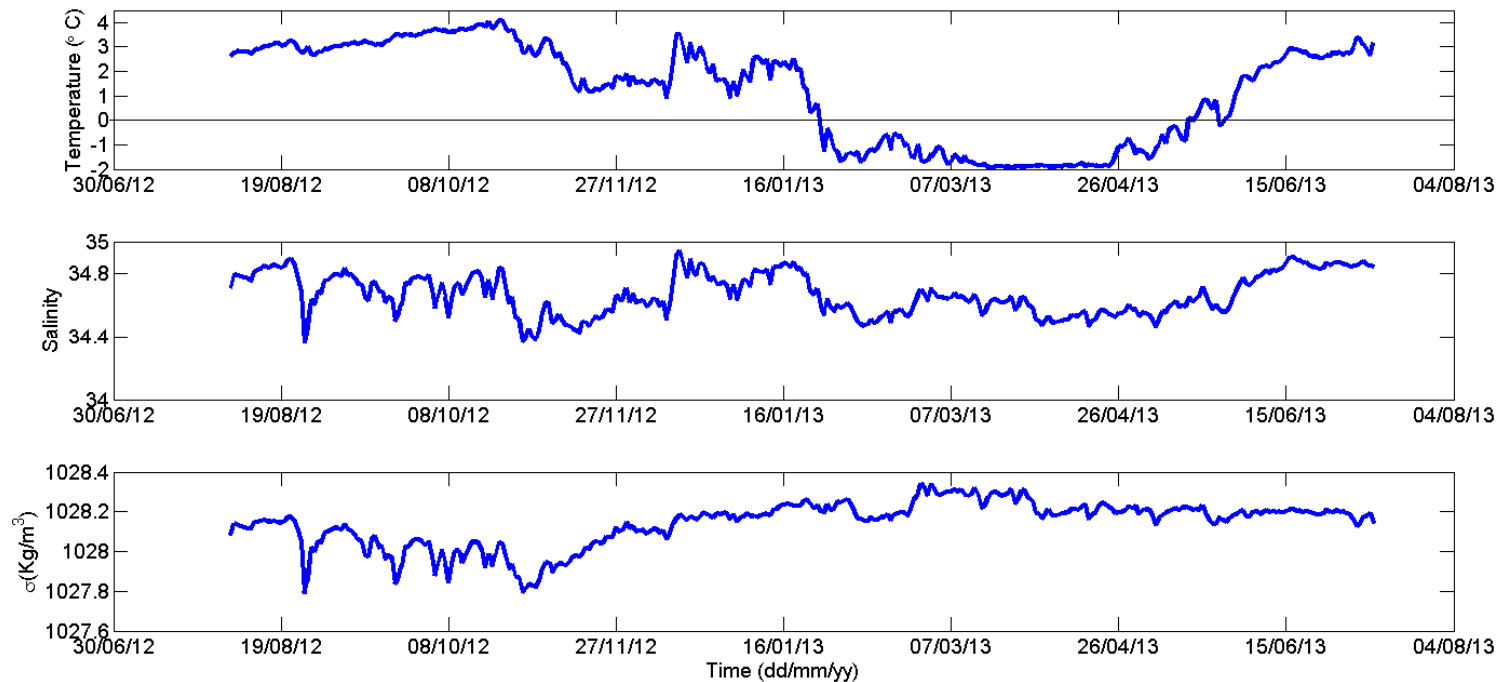
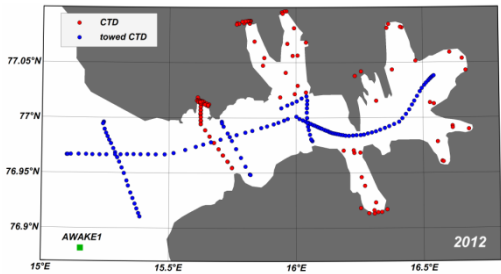
SBE37SM Microcat, depth 24 m

Daily mean temperature, salinity and density at AWAKE1 in 2011/2012



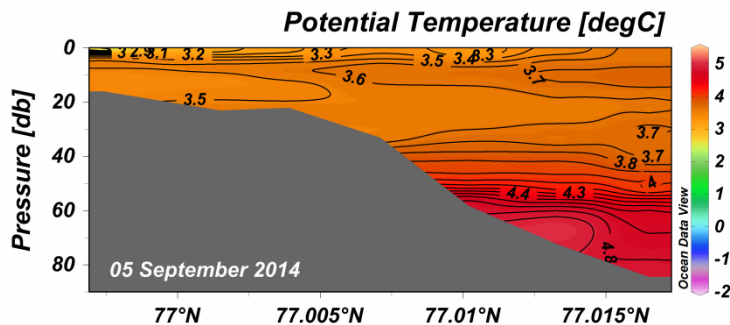
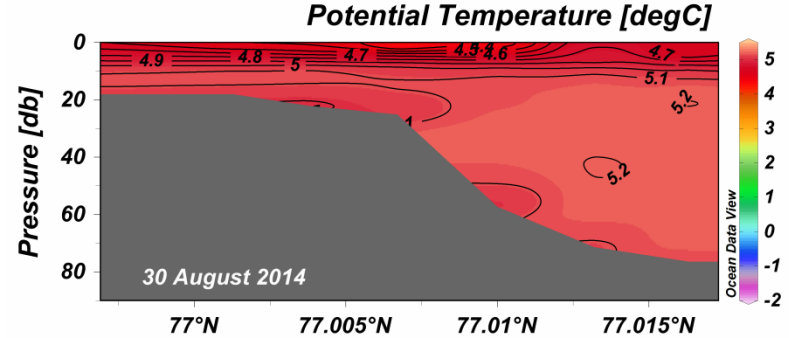
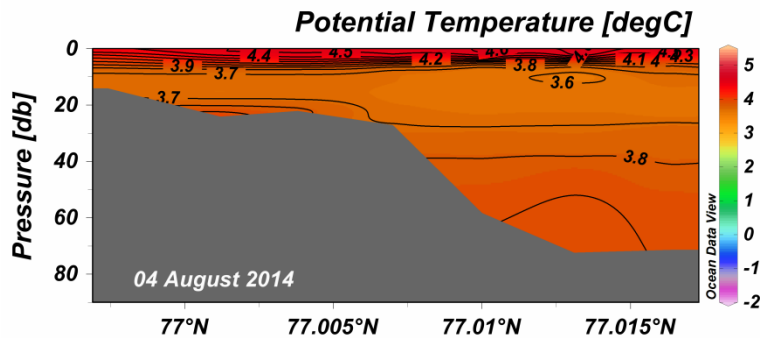
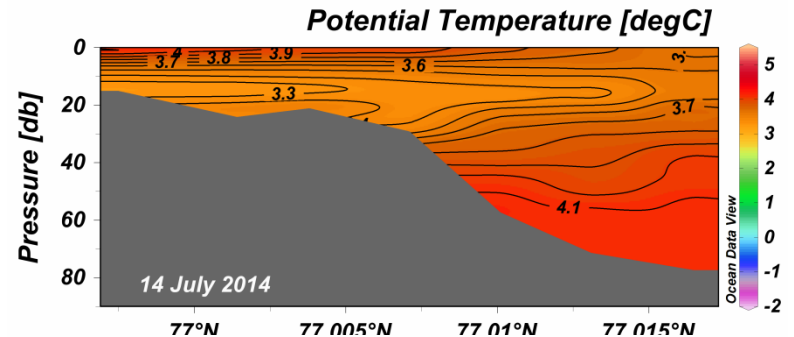
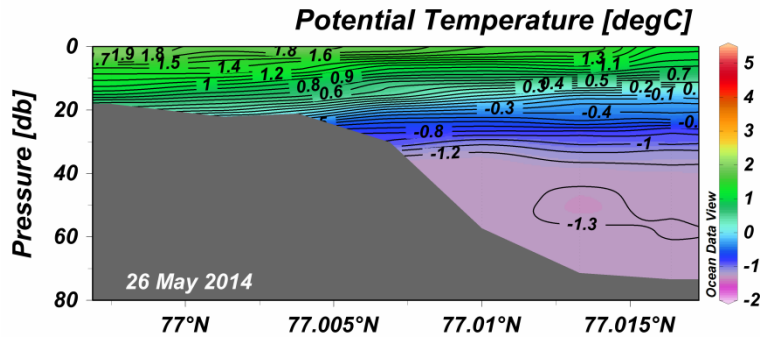
SBE37SM Microcat, depth 46 m

Daily mean temperature, salinity and density at AWAKE1 in 2012/2013

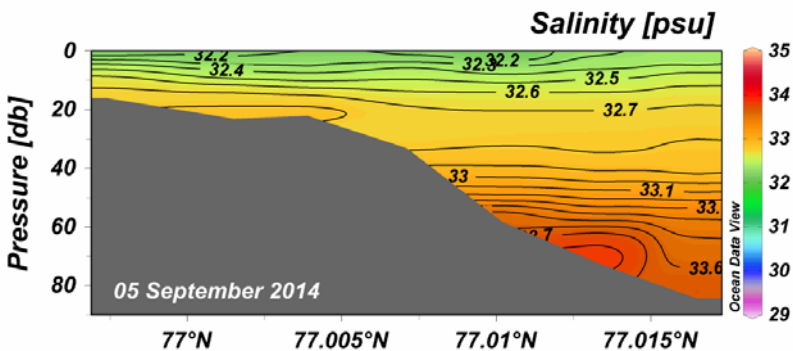
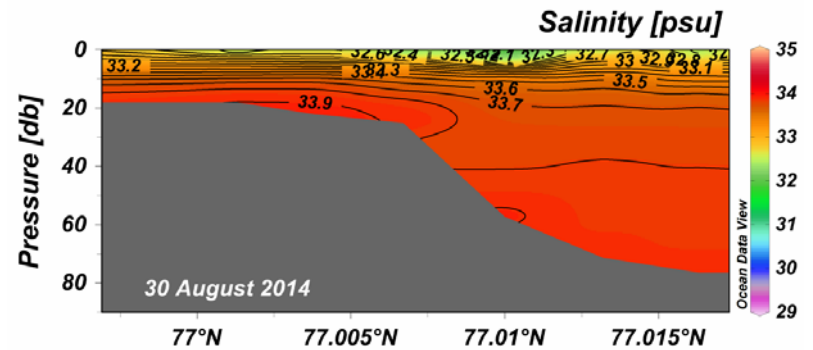
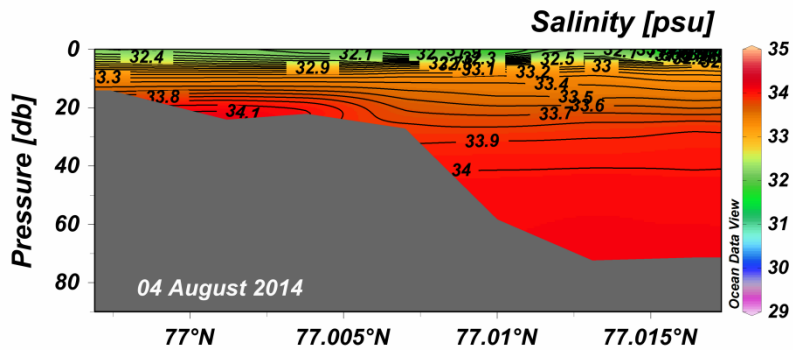
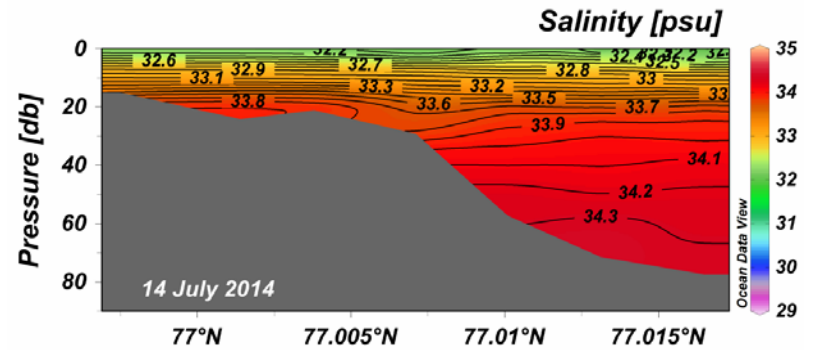
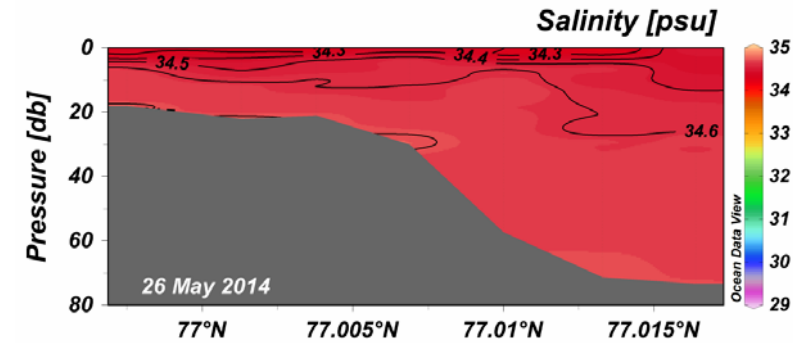


SBE37SM Microcat, depth 85 m

Distribution of potential temperature along section H in 2014



Distribution of salinity along section H in 2014



Summary of data collection

2001-2014
towed CTD

2014
180 water samples
collection

2010-2014
spring-summer
data collection

2013/2014
Time series of water
temperature from
Main Basin

2013-2014
CTD+DO

2010-2014
Time series
from moorings

2014
ADCP +multibeam
echosounding
Hansbukta

