



## **CRUISE REPORT ON RESEARCH ACTIVITIES**

**M.V. SEAFDEC 2 Cruise No. 11-5/2005**

**12 June– 2 July 2005**

**Fisheries Resources Survey in the Western Kalimantan, Indonesia**

**TD/RP/89**

This report is based on preliminary data

For readers who may need data in the report, please contact to:

**Southeast Asian Fisheries Development Center**

**Training Department**

PO. BOX 97 Phrasamutchedi

Samut Prakan, 10290

THAILAND

Tel: 662-4256100

Fax: 662-4256110

E-mail: [td@seafdec.org](mailto:td@seafdec.org)

## Cruise Report on Research Activities

### 1. Cruise Summary

**Vessel name:** M.V. SEAFDEC 2  
**Cruise no.:** 11-5/2005      **Leg no:** -  
**Project Title:** National Research Survey of Indonesian Waters  
**Duration:** 12 June-2 July 2005 (18 days)  
**Covered water:** Western Kalimantan , Indonesia  
 Latitude 00°09'.99 N-02°51'.34 N  
 Longitude 105°05'.35 E-108°49'.36 E  
**Port of call:** Pontianak and Tanjung Uban  
**Objective:** Indonesian national research survey  
 1. Fisheries resource survey by Automatic squid jigging and trawl net.  
 2. Oceanographic survey using Integrated Conductivity Temperature and Depth measuring instrument (iCTD), Thermosalinograph-fluorometer (TSG), Bongo net

### 2. List of personal on board

#### Ship personnel

No.	Position	Name
1	Captain	Mr. Tossaporn Sukhapindha
2	Chief engineer	Mr. Veerachai Chettasumon
3	Second officer	Mr. Suren Pruksarat
4	Apprentice navigator	Mr. Anurak Loog-on
5	Third officer	Mr. Somphote Vudthipanyo
6	Second engineer	Mr. Komson Sangphuek
7	Boatswain	Mr. Vudthirat Vudthipanyo
8	Steerman	Mr. Pradit Kui-prasert
9	Steerman	Mr. Tana Rungjoy
10	Able seaman	Mr. Somkiat Phetrasatien
11	Fitter	Mr. Vallop Phimroom
12	Oiler	Mr. Plew Shodok
13	Oiler	Mr. Boontarin Wara-in
14	Cook	Mr. Saichol Kornnoom
15	Ship's boy	Mr. Phaithoon Sriratanaphon
16	Assist. Master fisherman	Mr. Aussawin Buachuay

#### Researcher from SEAFDEC/TD

No.	Position	Name
16	Chief/Scientist	Mr. Isara Chanrachkij
17	Researcher	Mr. Naroong Ruangsivakul
18	Assist. Researcher	Mr. Sukchai Arnupapboon
19	Assist. Researcher	Mr. Nakaret Yasook

### Researcher from DOF of Indonesia

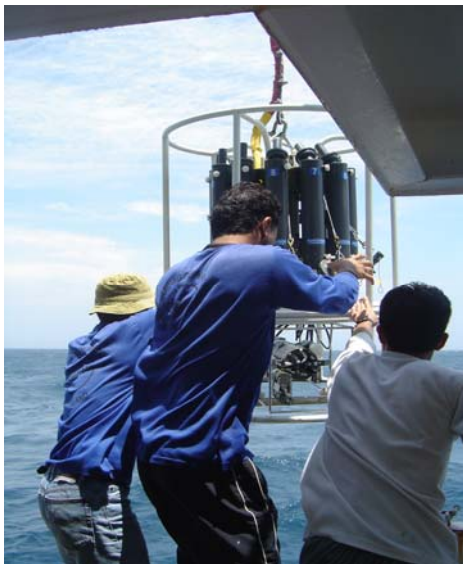
No.	Position	Name
20	Researcher	Mr. Bambang Sulono
21	Researcher	Mr. Badrudin, MSC
22	Researcher	Mr. Yunns Soseisa
23	Researcher	Mr. Tanflk
24	Researcher	Mr. Natrsir
25	Researcher	Mr. Khairul Amri
26	Researcher	Mr. Ednilson
27	Researcher	Mr. Erflnd Nurdin
28	Researcher	Mr. Gatot Sudlono
29	Researcher	Mr. Jamain Ismail
30	Researcher	Mr. Achmadon
31	Researcher	(Navy)

### 3. Observation Summary

#### Oceanographic survey summary

Twenty oceanographic stations along Indonesian water were conducted through this cruise. Each station conducted with 2 main activities including physical and biological oceanographic survey. The equipments that were used in each station and data file name were shown in **Table 1**.

#### *iCTD (SeaBird 911)*



**Fig. 1** Deploying of iCTD

M.V.SEAFFDEC 2 iCTD systems compose with main three sensors for conductivity, temperature and depth, and four auxiliary sensors for dissolved oxygen, pH, chlorophyll fluorometer and PAR. The iCTD was lowered from the ship through the water from surface to 10 m. above sea bottom approximately with constant velocity 0.5 m/s and retrieved to sea surface at the same speed.

All iCTD data were average into every 1 meter interval. Data in each station were divided into down cast and up cast.

During retrieved iCTD, Carousel water sample (Niskin Bottles) which is a part of CTD system were used to collect water sampler from standard depth. The water sample then were filter through Whatman GFC filter paper and stored in the freezer at -40 °C for nutrient (nitrite, nitrate, phosphate and silicate) analysis at SEAFFDEC/Training Department laboratory,

All samples will be analyzed as soon as it is possible. Then data will be sent to Indonesian national coordinator.

***Remark:** Profiles of the physical oceanographic data were plotted from down cast except oxygen data. Due to most of oxygen data from down cast showing a bit of irregular pattern, thus oxygen data for plotting profile were chosen by up cast.*

### ***Thermosalinograph with Fluorometer (TSG-Fluorometer)***

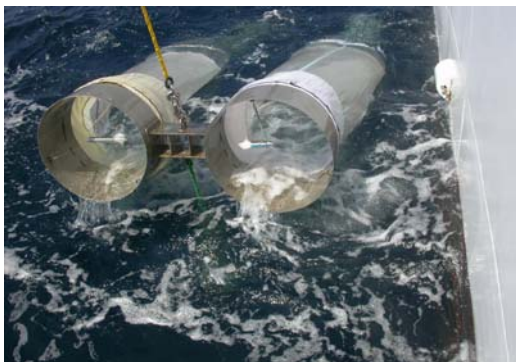
TSG – Fluorometer were operated when MV.SEAFFDEC2 cruising along the cruise track. Its system was designed to continuously record three parameters including temperature, salinity and fluorescence chlorophyll-a from underway vessel at approximately 5 meters below the sea surface. The data were average every 6 second.

### ***Bongo net equipped with flowmeter***

Plankton net consisted of zoo plankton net and larvae net with mesh size were 330  $\mu\text{m}$  and 500  $\mu\text{m}$ , respectively. They were attached to 60 cm. diameter bongo frames. A flowmeter was attached at the aperture of net to measure the water volume passing through the net.

Quality of water ( $\text{m}^3$ ) per one flowmeter revolution in front of zooplankton at station number was 0.0336  $\text{rpm}^3$ , and Quality of water ( $\text{m}^3$ ) per one flowmeter revolution in front of larvae was 0.0094  $\text{rpm}^3$  in all station.

At each station a 30 minutes oblique tow of the bongo net was made with the ship speed 1.5-2 knots approximately. The depth of haul was from surface to 10-15 meters above the sea bottom. The samples were preserved in 10% buffered formalin-seawater immediately.



**Fig. 2** Bongo net operation

**Table 1.** Partial detail of oceanographic survey station of cruise no.11-4/2005

St.No.	Date	Time (Indonesia)	Lat	Long	Oceanographic instruments		Transparency		Bottom Depth(m)	Remark
					SBE CTD	TSG	Secchi disc (m)	Foral scale		
01	18-Jun-05	06:03	00_13.30 N	105_05.35 E	✓	✓	✗	✗	31	
02	18-Jun-05	14:36	00_09.99 N	105_59.69 E	✓	✓	✓	✓	44	
03	19-Jun-05	05:55	00_10.82 N	106_55.26 E	✓	✓	✗	✗	51	
04	19-Jun-05	13:50	00_10.78 N	107_42.72 E	✓	✓	✓	✓	45	
05	20-Jun-05	05:58	00_10.36 N	108_40.35 E	✓	✓	✗	✗	34	
06	23-Jun-05	06:07	00_31.15 N	108_37.05 E	✓	✓	✗	✗	28	
07	22-Jun-05	06:12	00_52.89 N	108_35.75 E	✓	✓	✗	✗	31	
08	22-Jun-05	11:00	00_52.40 N	108_19.02 E	✓	✓	✓	✓	36	
09	22-Jun-05	17:40	00_50.86 N	107_53.67 E	✓	✓	✓	✓	40	
10	25-Jun-05	09:06	00_49.26 N	106_59.42 E	✓	✓	✓	✓	69	
11	25-Jun-05	17:17	00_50.88 N	106_09.70 E	✓	✓	✗	✗	55	
12	26-Jun-05	06:00	01_28.81 N	105_20.39 E	✓	✓	✗	✗	47	
13	26-Jun-05	13:30	01_51.63 N	105_59.95 E	✓	✓	✓	✓	62	
14	27-Jun-05	05:59	01_51.54 N	107_00.26 E	✓	✓	✗	✗	74	
15	27-Jun-05	13:10	01_51.63 N	107_39.07 E	✓	✓	✓	✓	59	
16	28-Jun-05	06:00	01_51.62 N	108_20.11 E	✓	✓	✗	✗	55	
17	28-Jun-05	12:03	01_50.52 N	108_49.36 E	✓	✓	✓	✓	35	
18	29-Jun-05	05:55	02_20.98 N	108_14.31 E	✓	✓	✗	✗	64	
19	29-Jun-05	13:03	02_51.31 N	107_41.25 E	✓	✓	✓	✓	75	
20	30-Jun-05	06:10	02_51.34 N	107_00.10 E	✓	✓	✗	✗	70	

## **Fishing survey summary**

In this survey, 2 kinds of fishing gear were used for sampling.

### ***Bottom Trawl***

This survey was operated bottom trawl total 20 stations. The maximum catch was about 131.63 kg. at operation no.11 (station no.13).

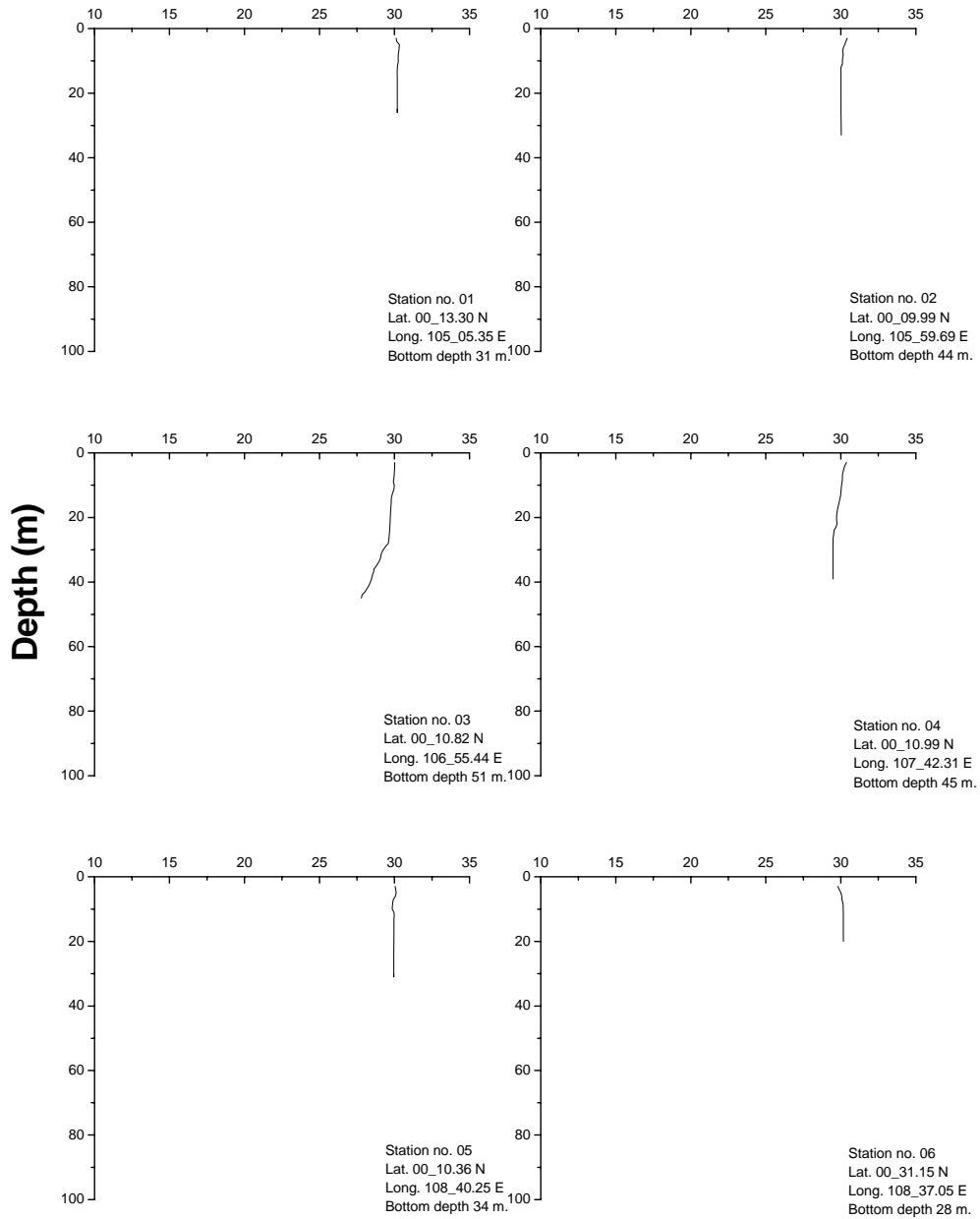
### ***Automatic squid jigging***

This survey was operated automatic squid jigging total 1 station. The target species is *Loligo* sp. Total catch was 2.21 kg.

The detail of fishing operation had shown in fishing logsheet.

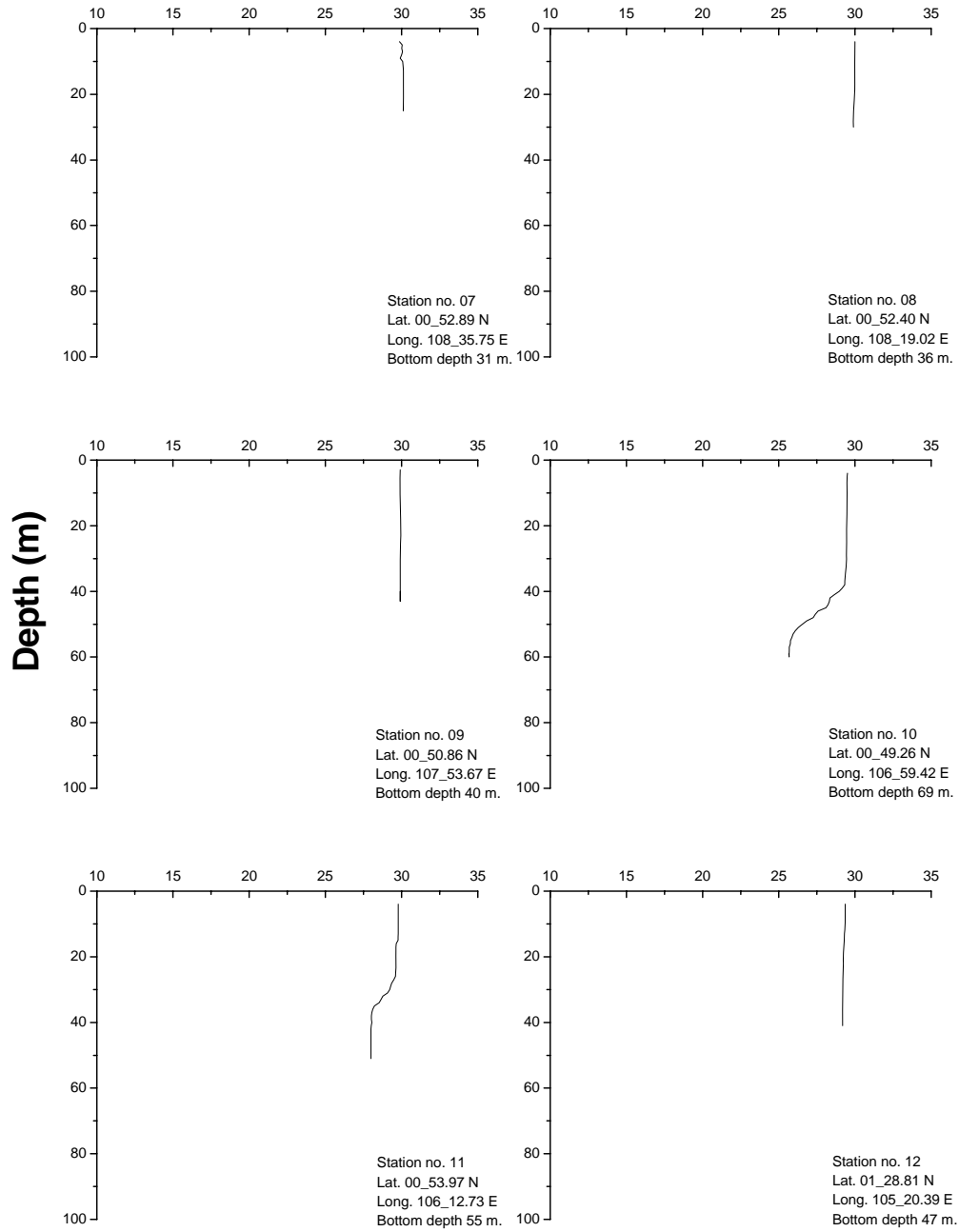
## **Appendix I**

# Temperature (°C)

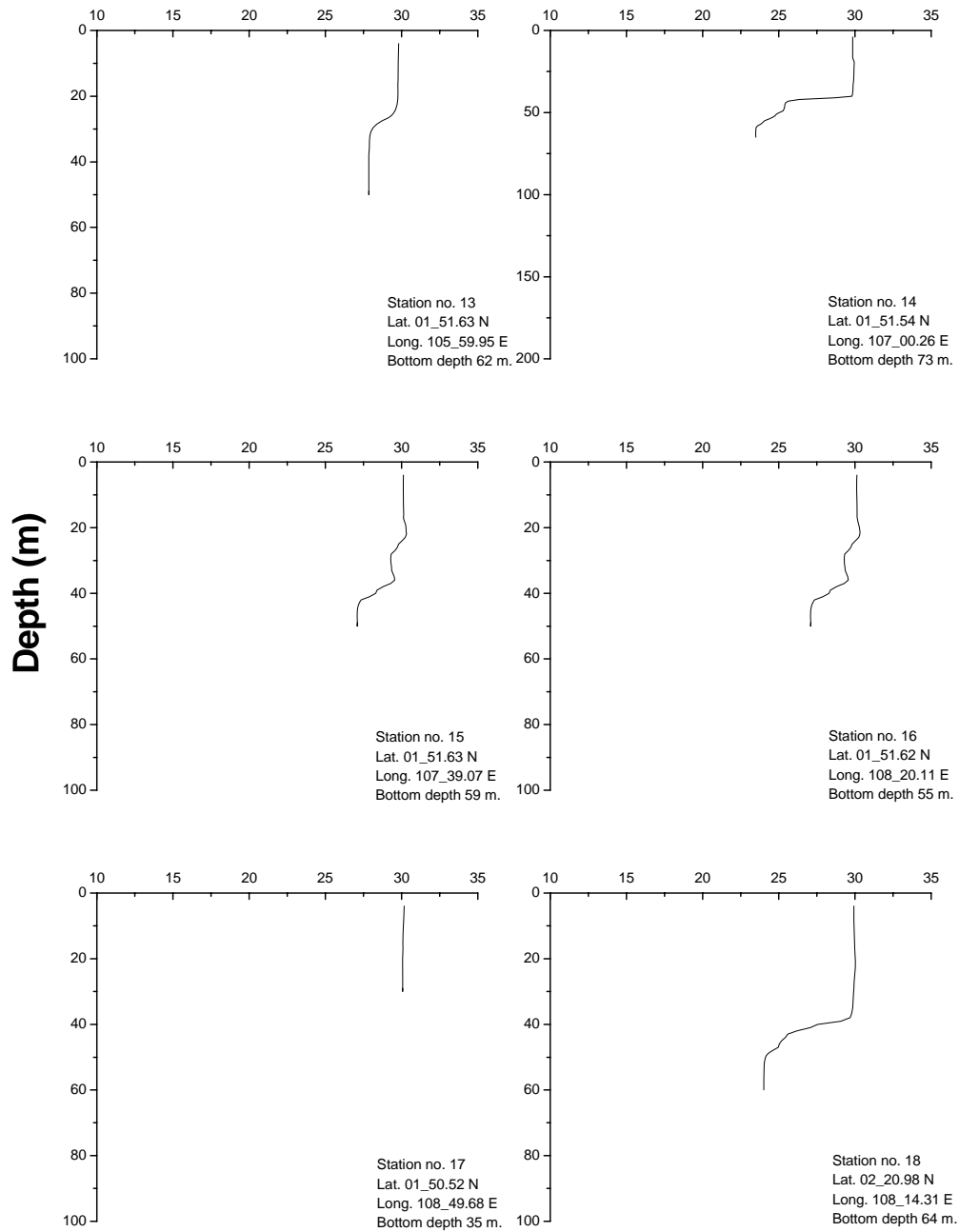




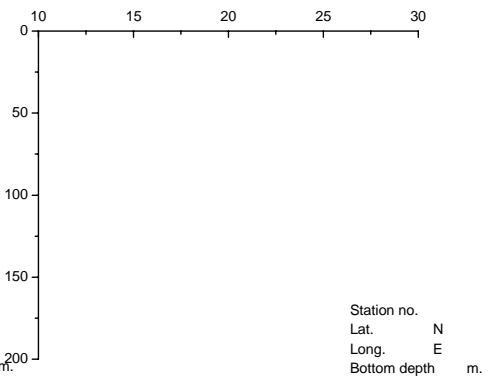
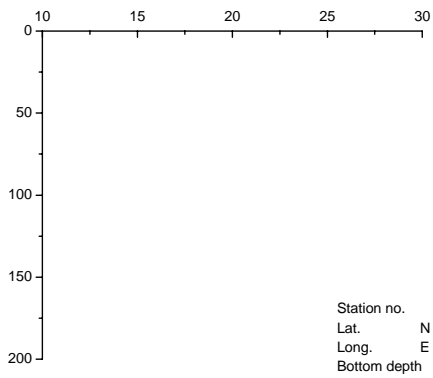
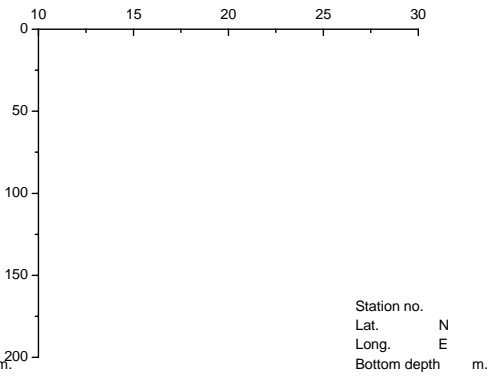
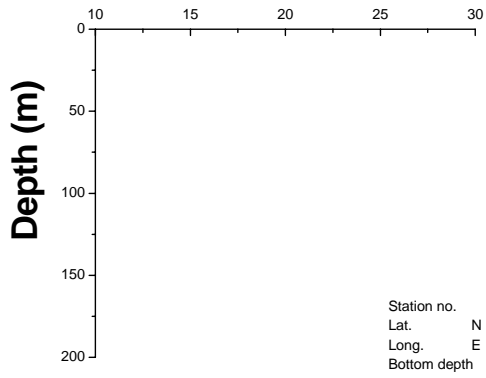
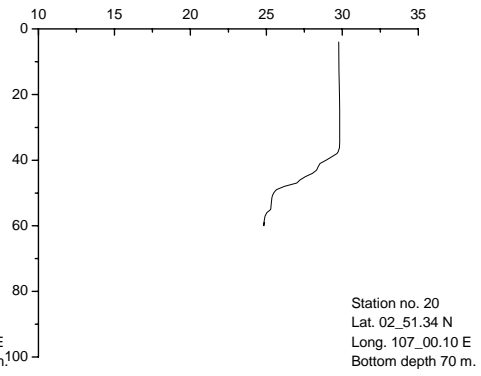
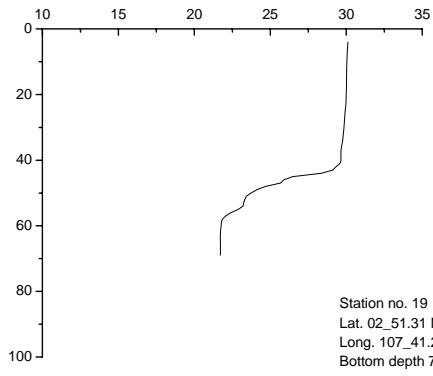
# Temperature (°C)



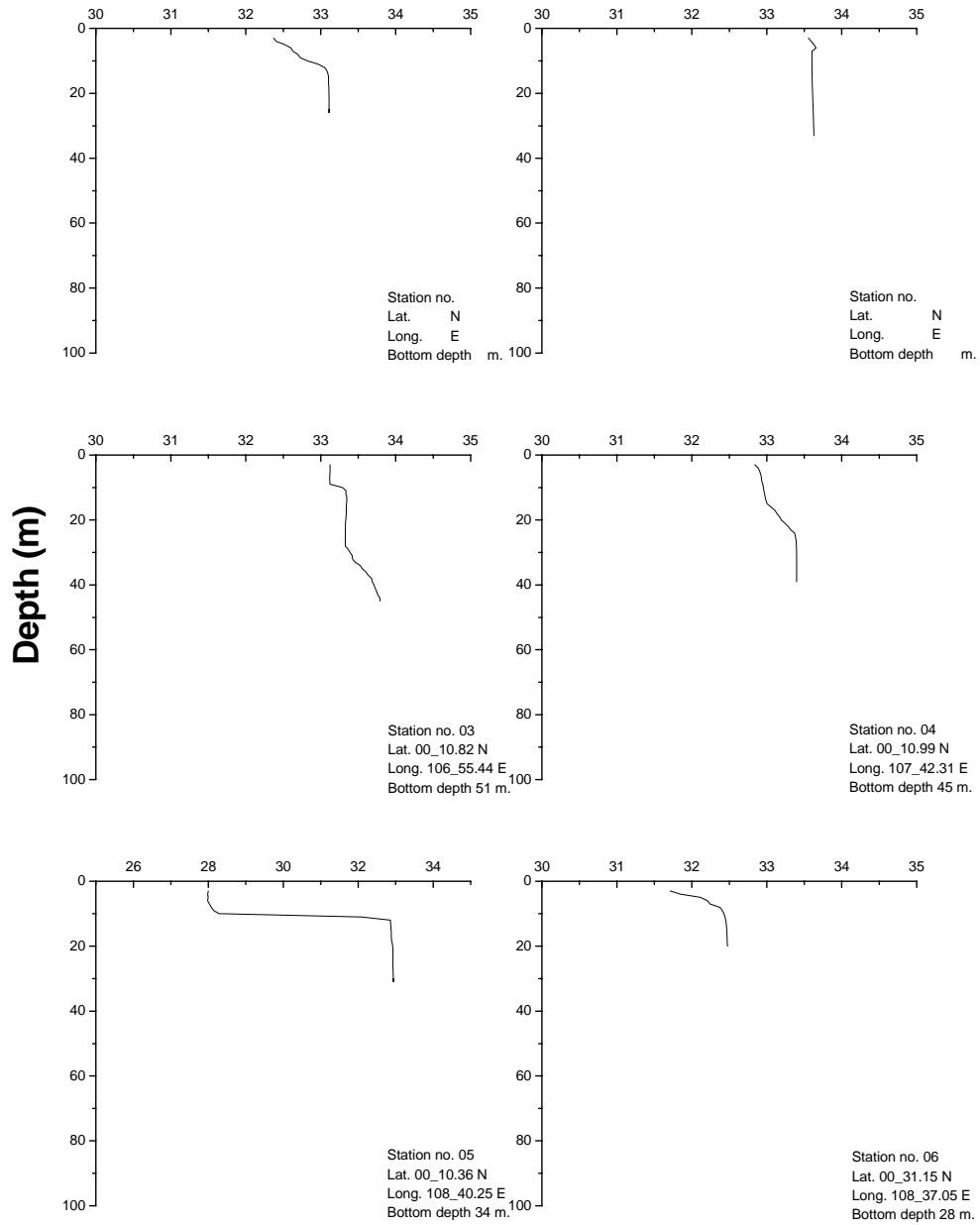
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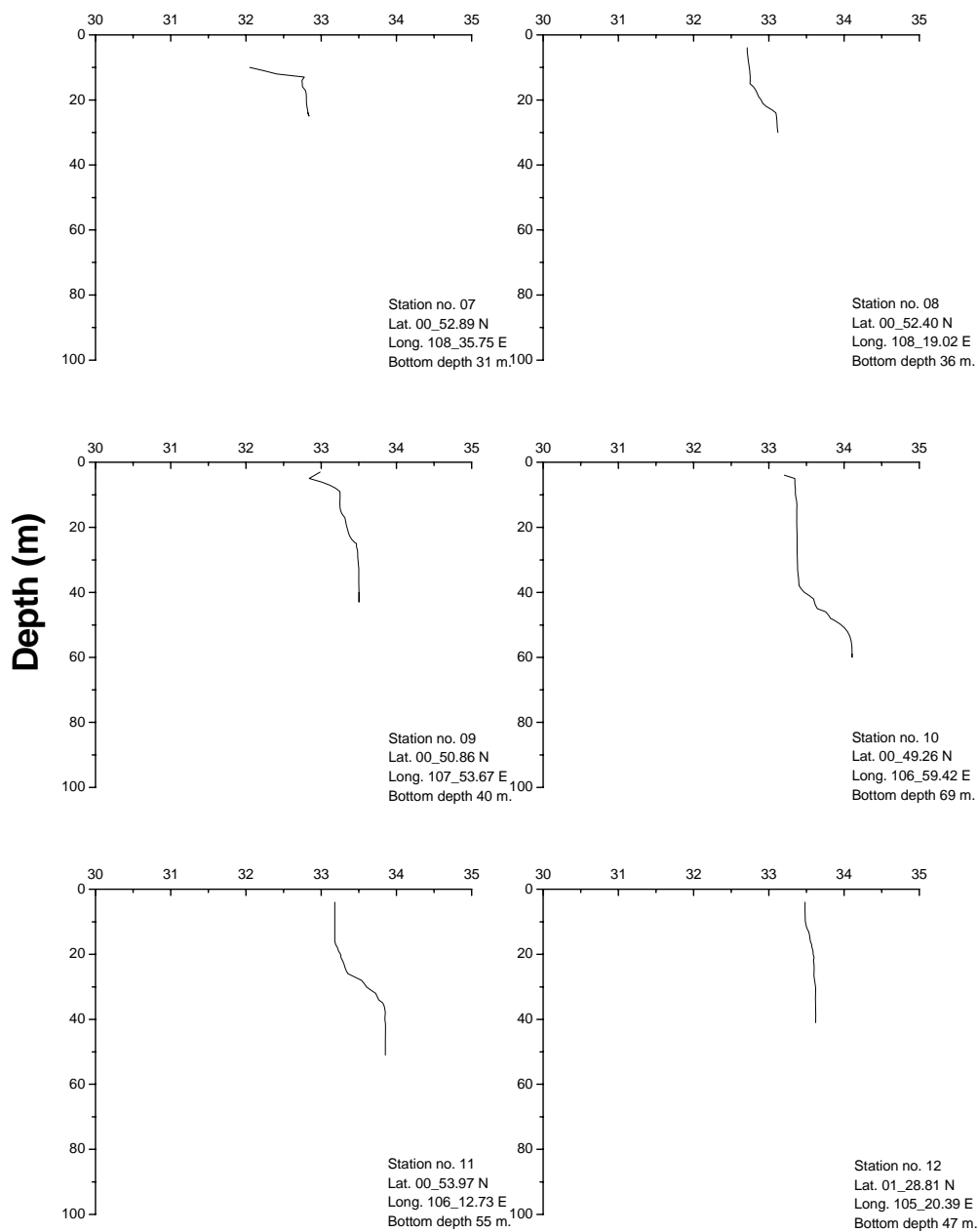
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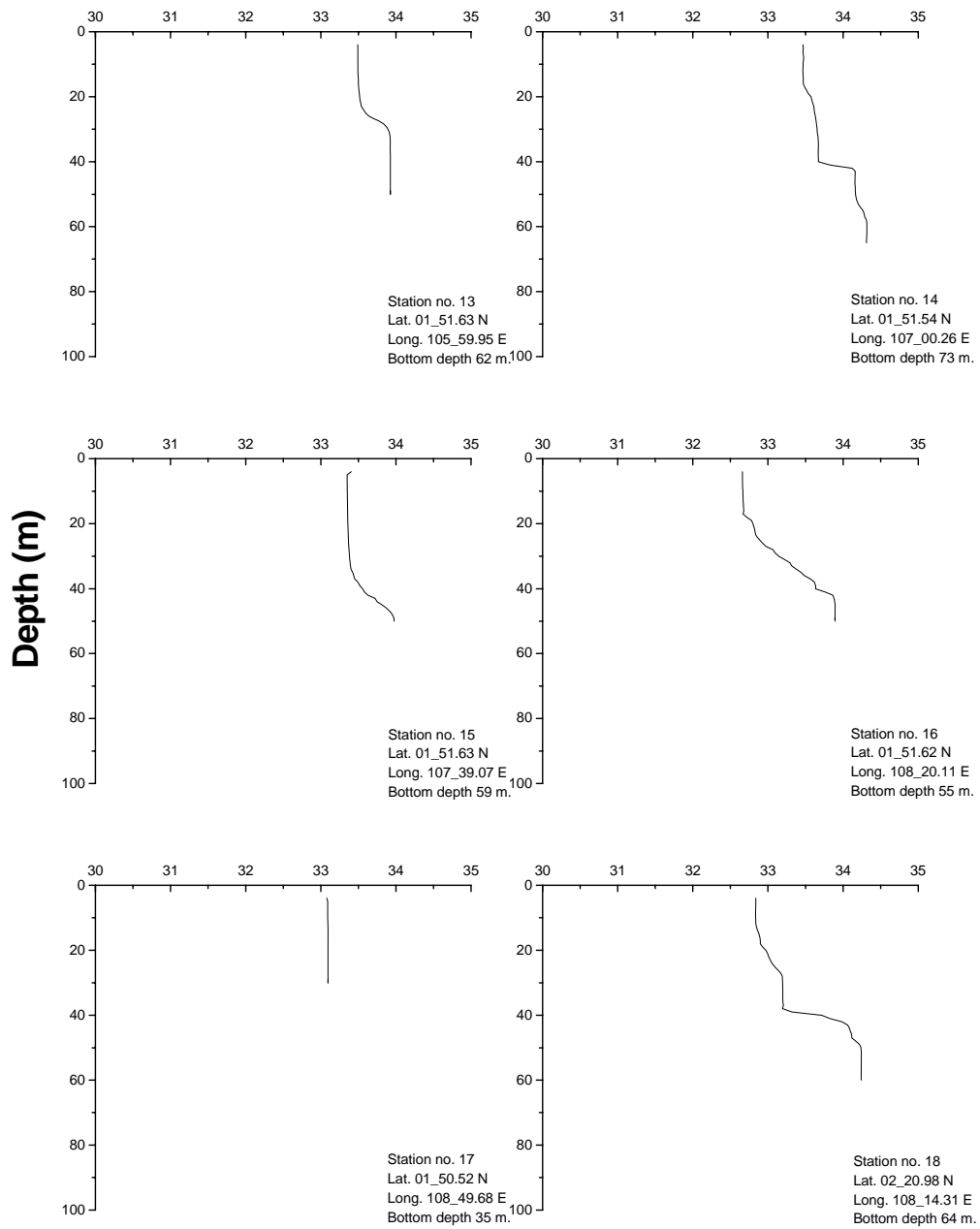
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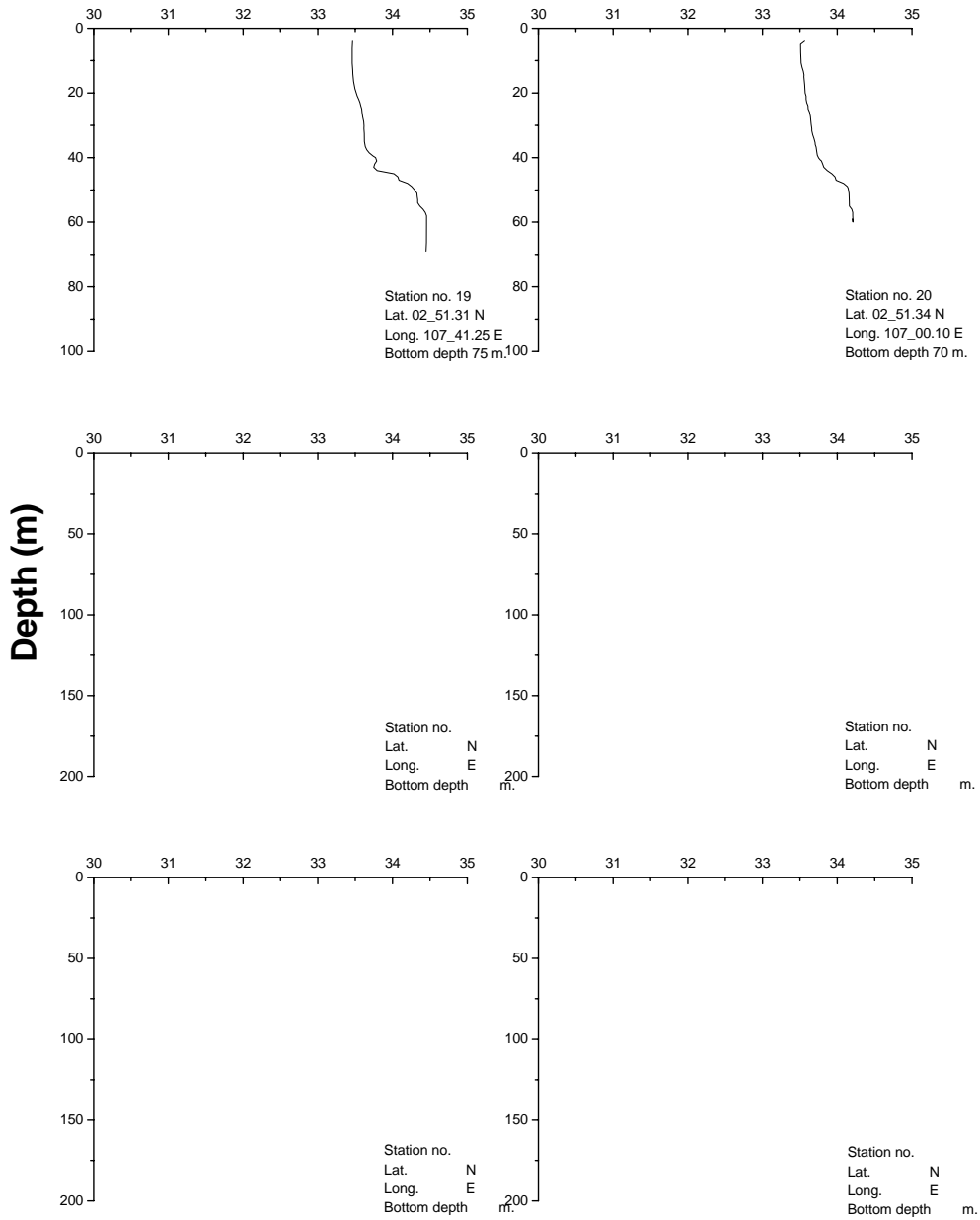
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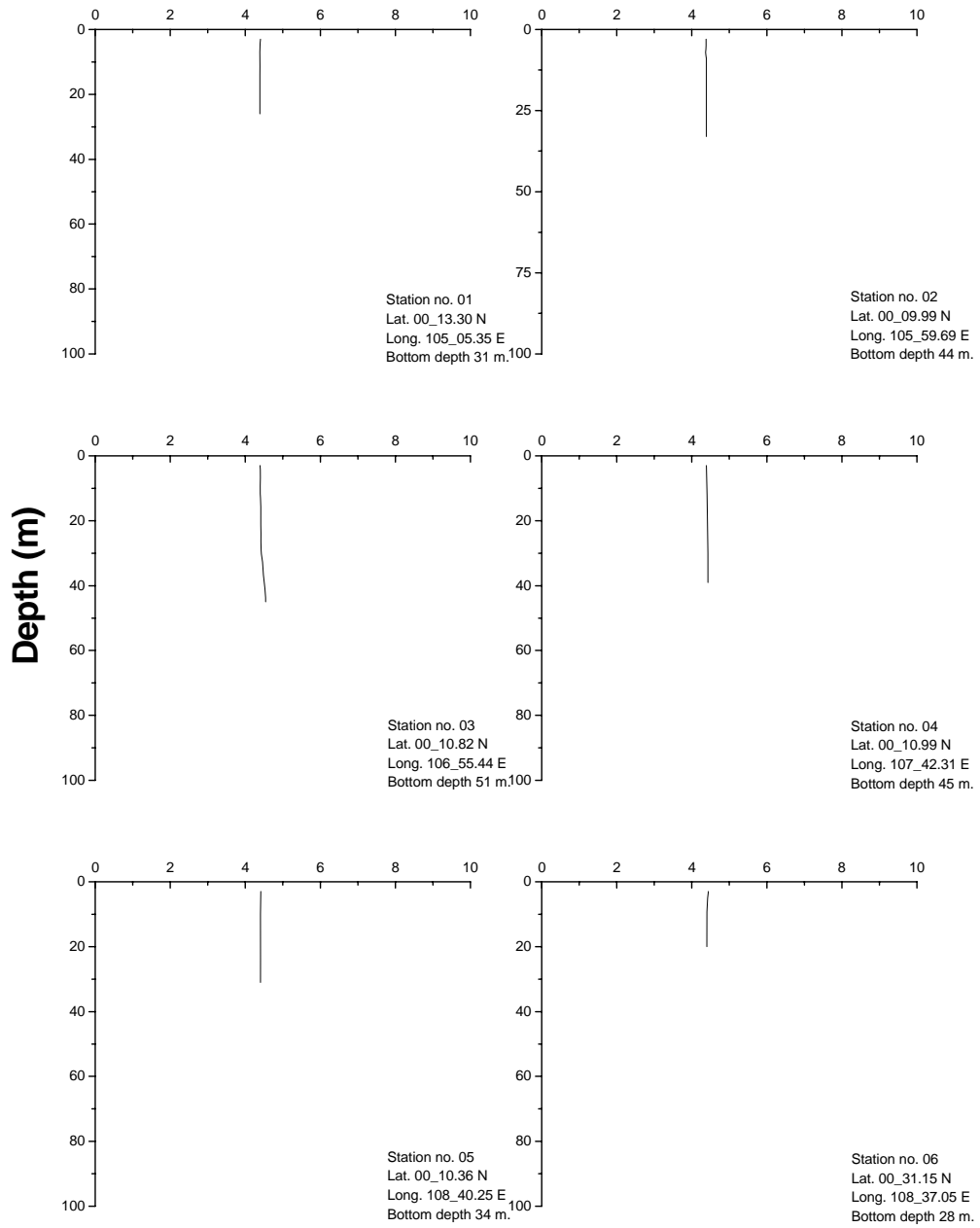
## Salinity (PSU)



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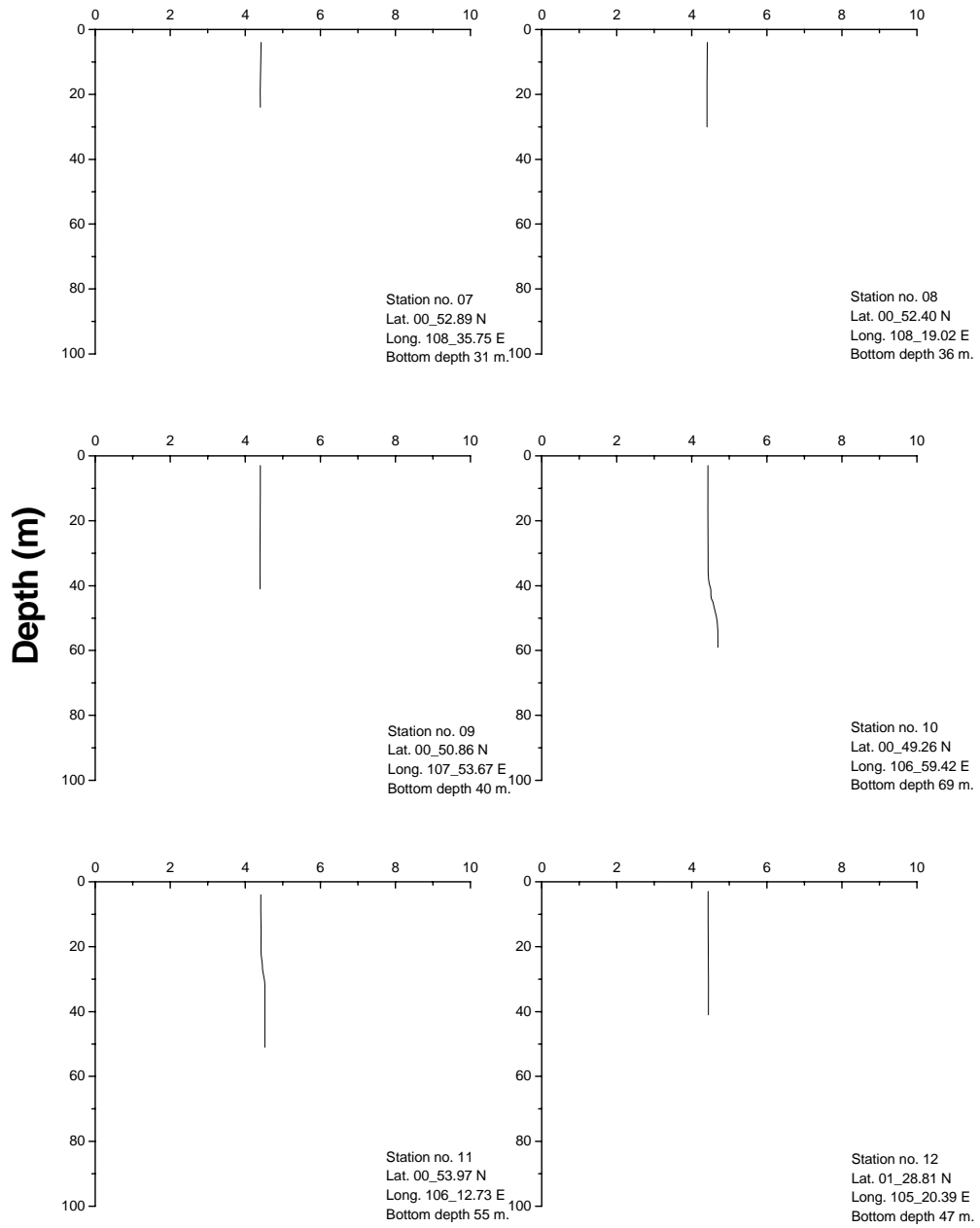


# Oxygen (ml/l)

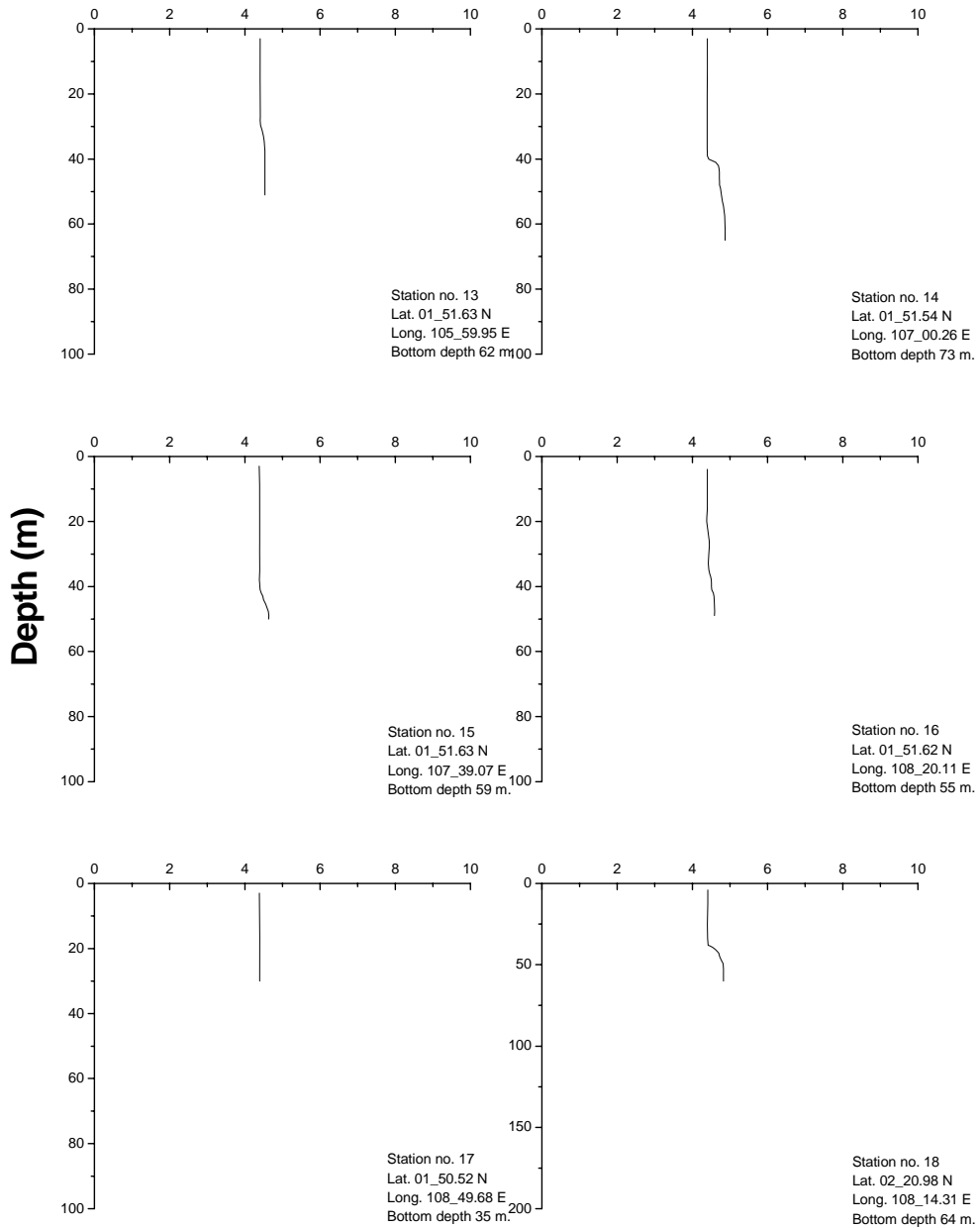




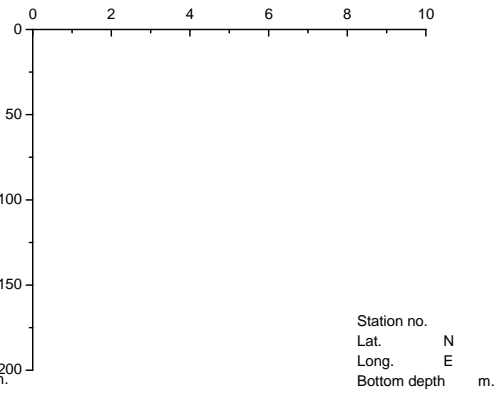
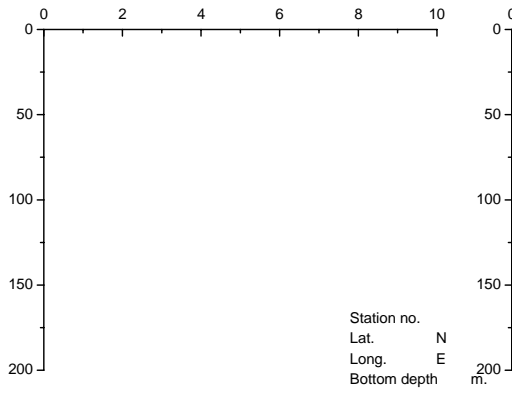
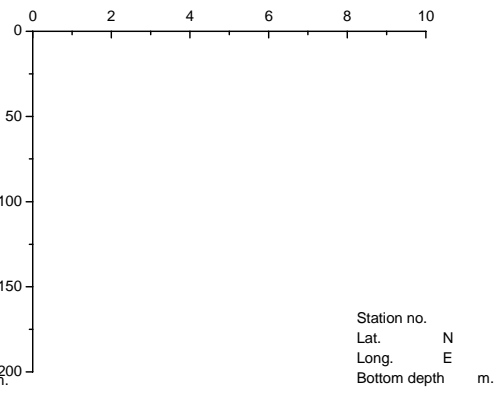
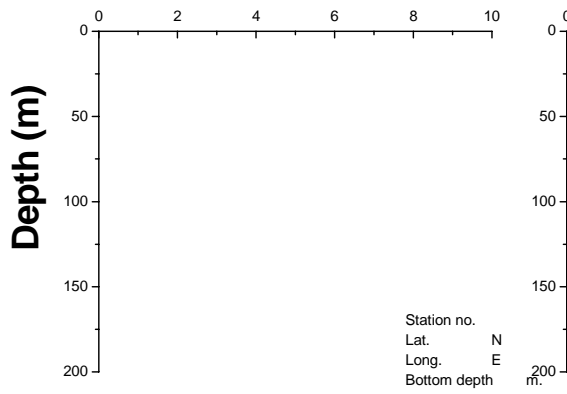
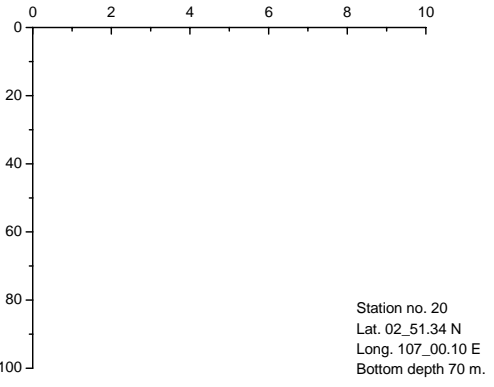
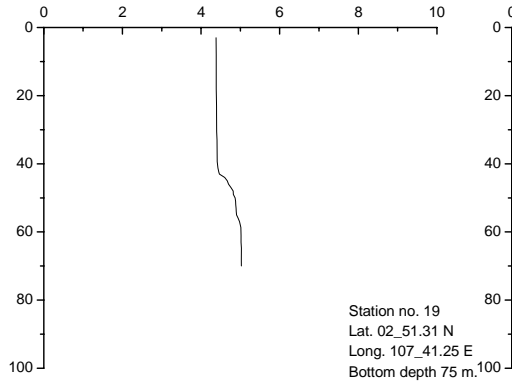
# Oxygen (ml/l)



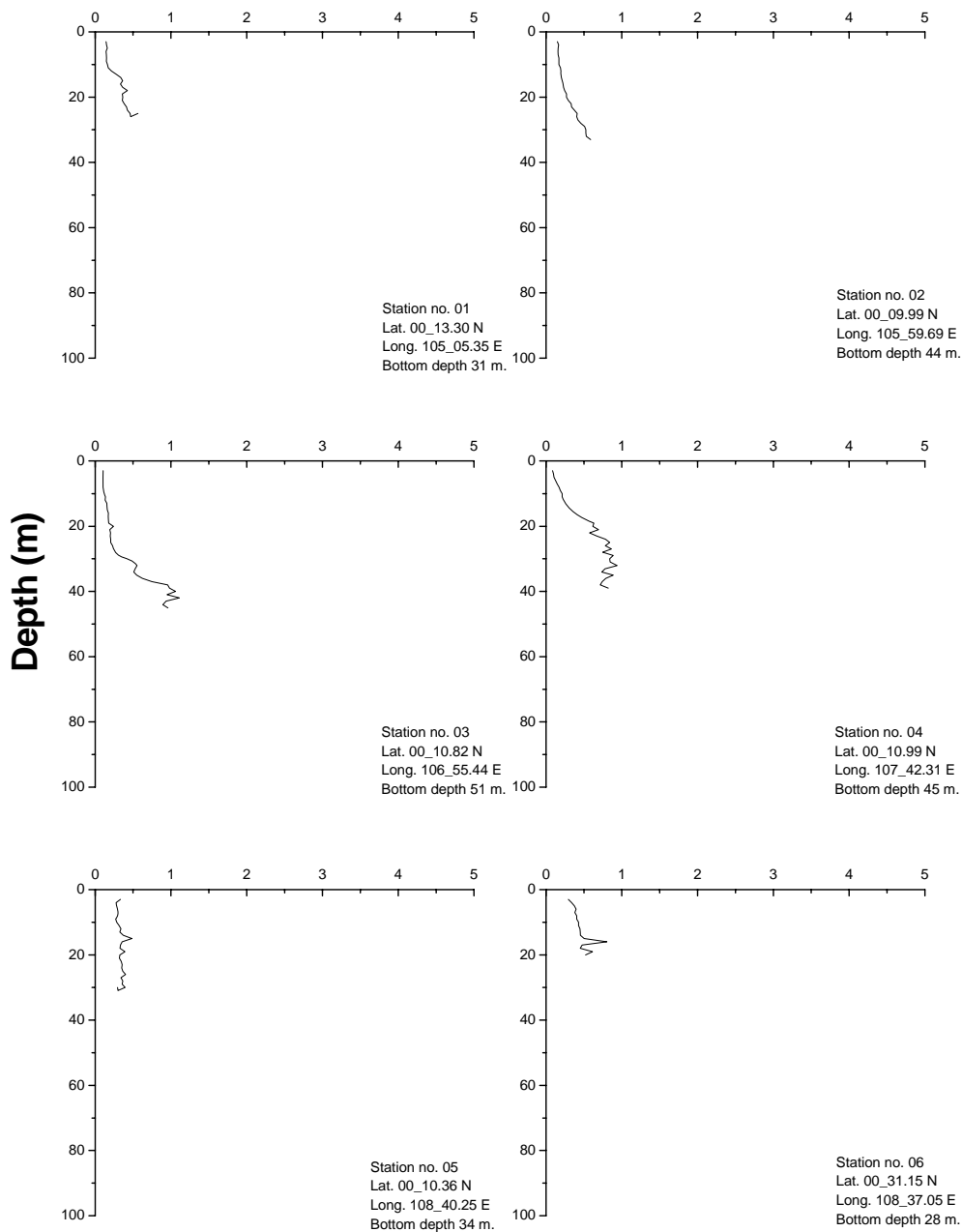
# Oxygen (ml/l)



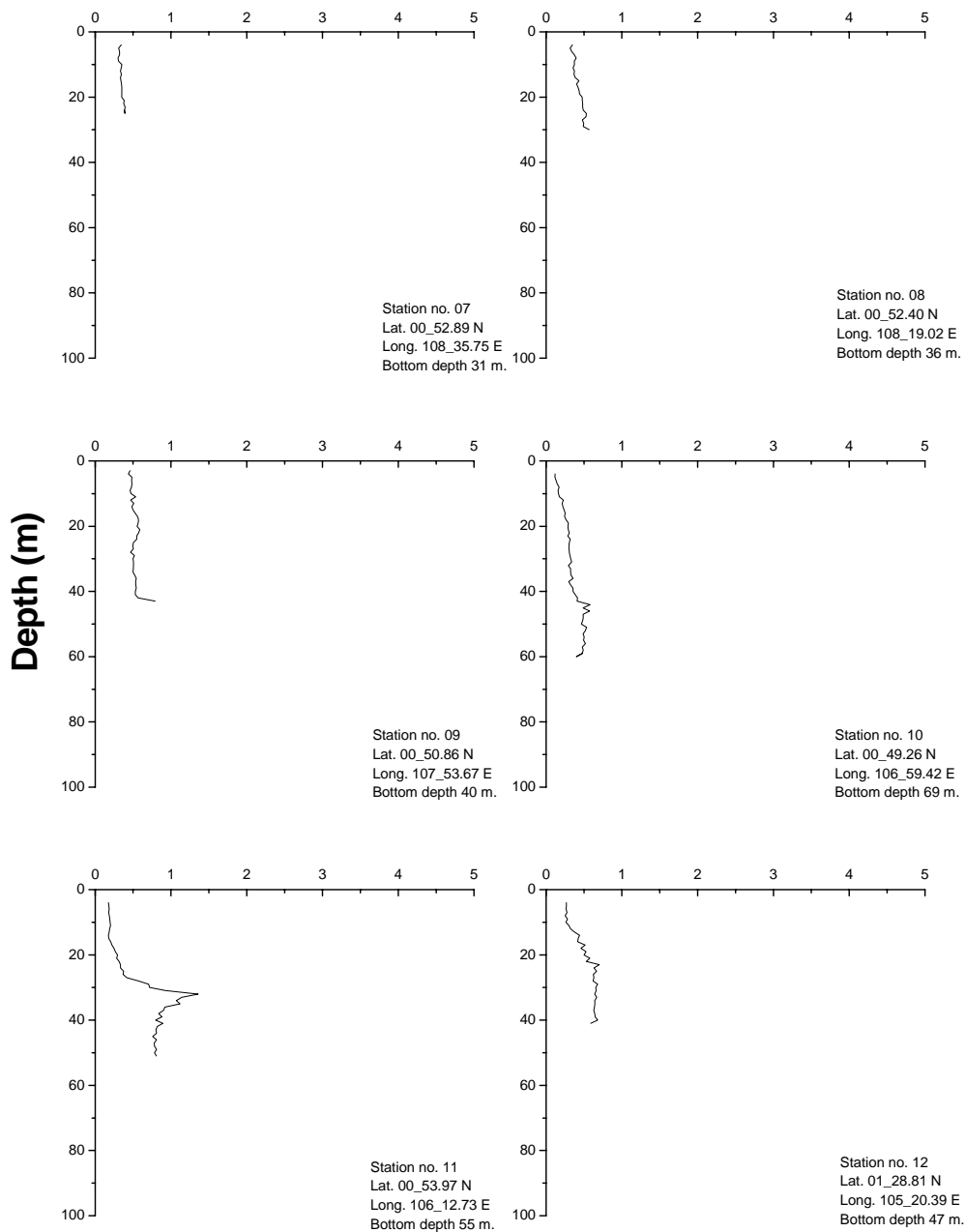
# Oxygen (ml/l)



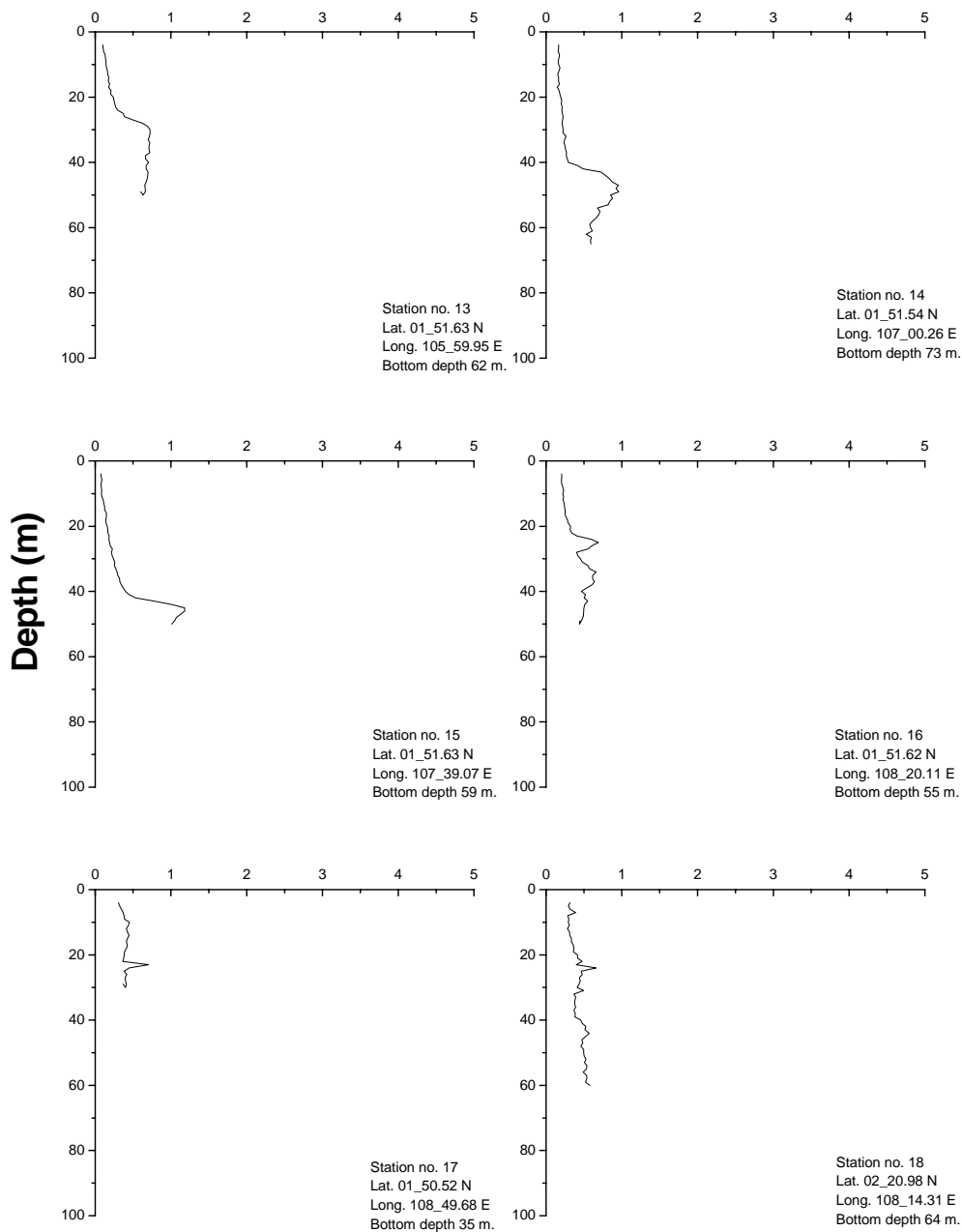
# Fluorescence



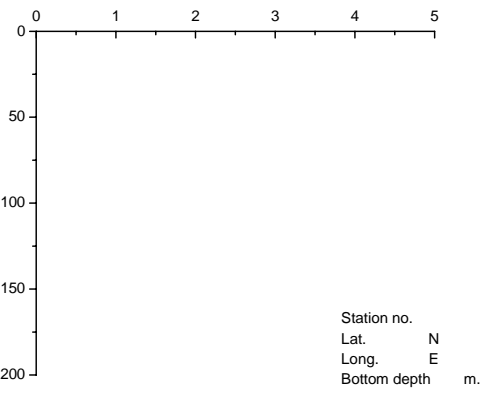
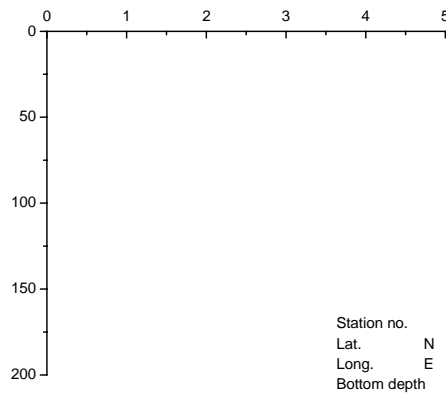
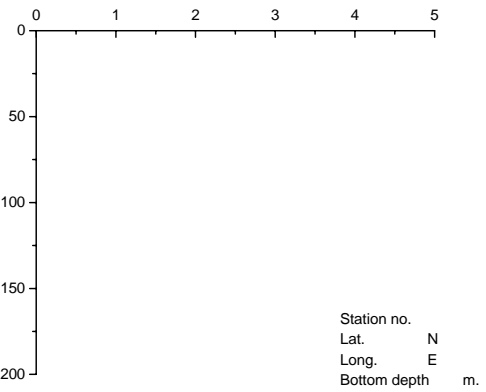
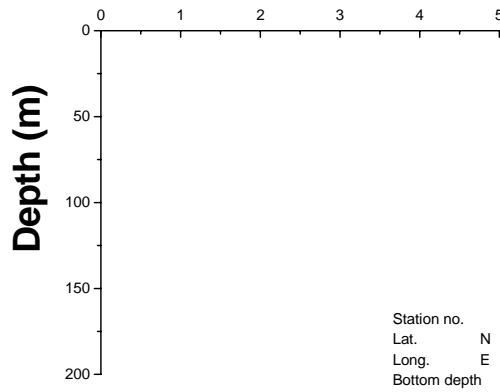
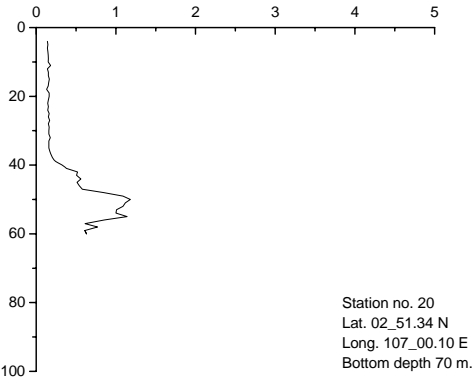
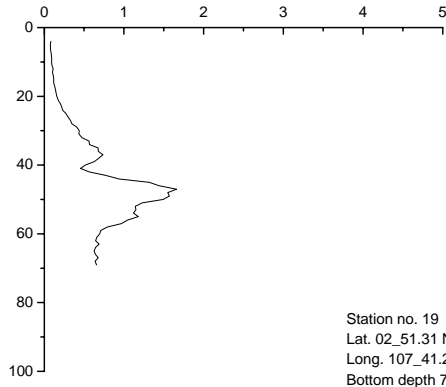
## Fluorescence



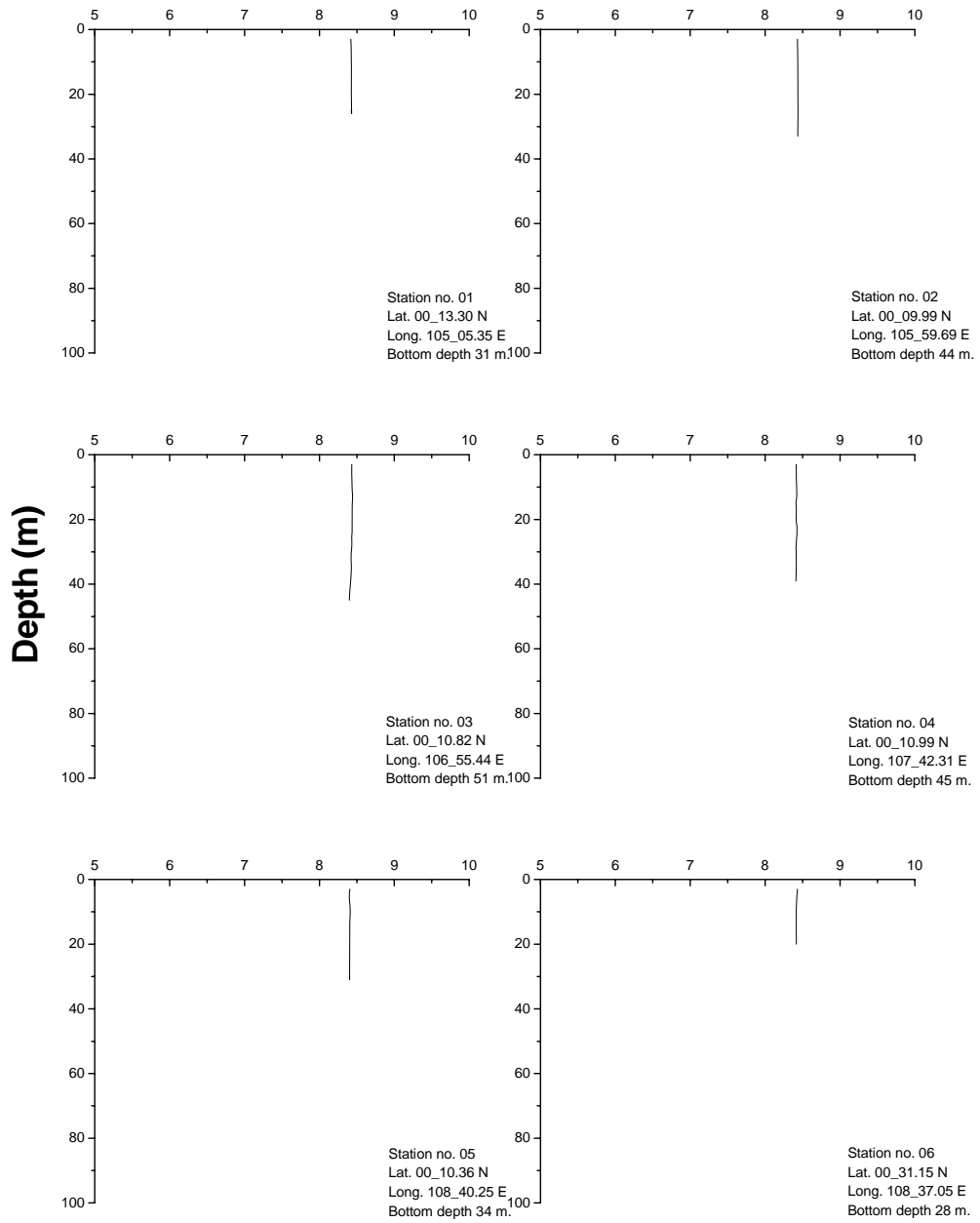
# Fluorescence



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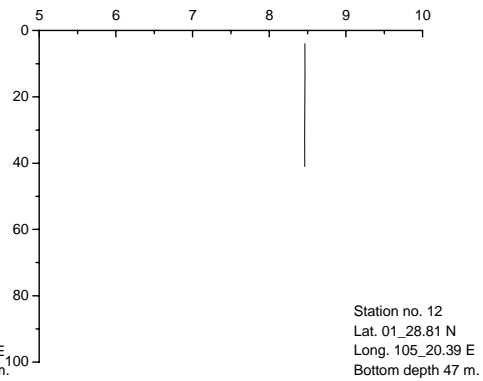
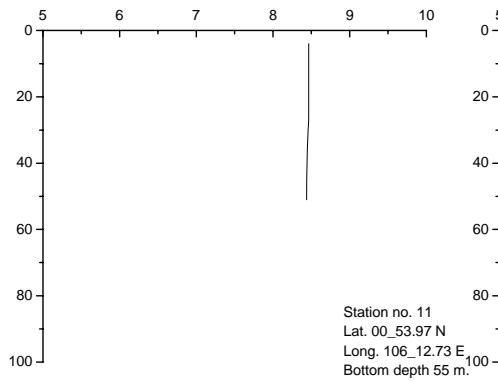
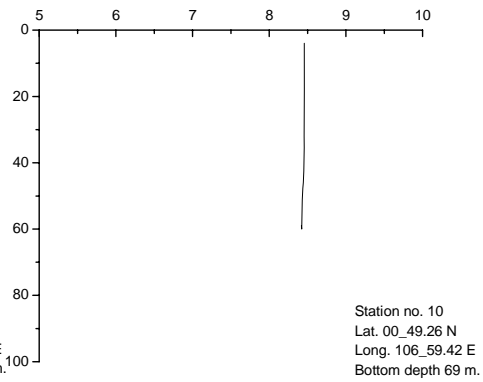
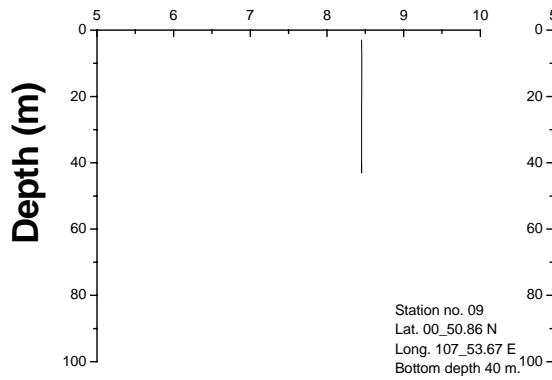
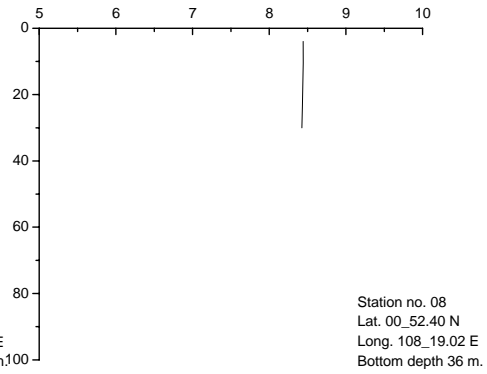
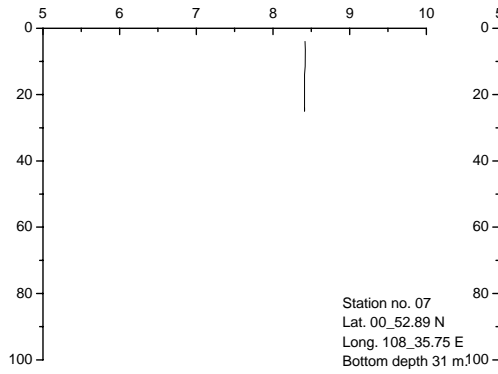


# pH

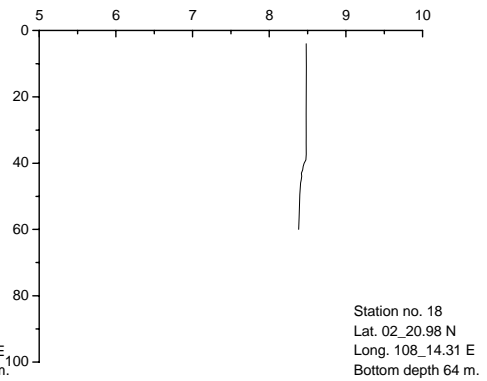
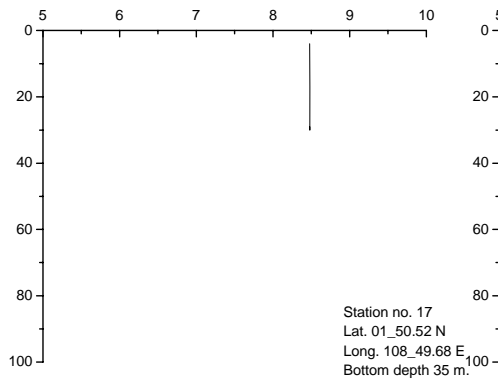
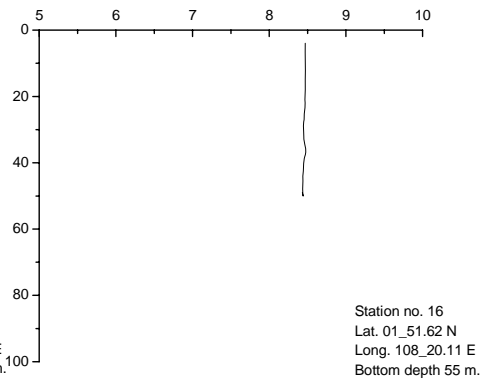
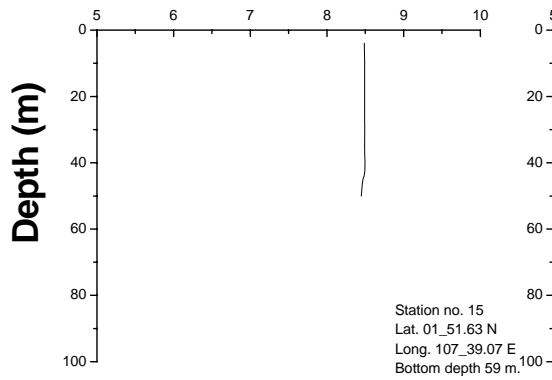
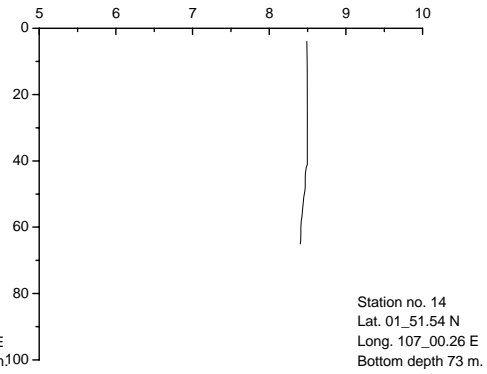
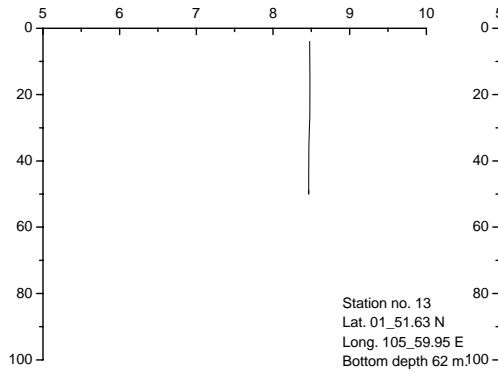




# pH



# pH



# pH

