



CRUISE REPORT ON RESEARCH ACTIVITIES

M.V.SEAFDEC 2 Cruise No. 17-1/2006

12 January – 21 February 2006

Potential fisheries resources survey in Andaman Sea (Thailand)

TD/RP/94

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

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THAILAND

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Cruise Report on Research Activities

1. Cruise Summary

Vessel name: MV.SEAFDEC2
Cruise no.: 17-1/2006
Duration: 12 January-21 February 2006(40 day)
Project Title: Potential fishery resources survey in Andaman Sea
Area: Andaman Sea
Port of call: Phuket (Thailand)
Objective: To carry out the Thailand national research survey
-to assess the potential of fishery resource
-to collect the fish biological and oceanographic information
-to identify the under-exploited resource for more utilization
-Pelagic longline, bottom vertical longline and fish trap operation

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	Third officer	Mr. Somphote Vudthipanyo
5	Second engineer	Mr. Komson Sangphuek
6	Boatswain	Mr. Vudthirat Vudthipanyo
7	Steerman	Mr. Pradit Kui-prasert
8	"	Mr. Tana Rungjoy
9	Able seaman	Mr. Somkiat Phetrasatien
10	Fishing Assistant	Mr. Aussawin Buachuay
11	Fitter	Mr. Vallop Phimroom
12	Oiler	Mr. Plew Shodok
13	"	Mr. Boontarin Wara-in
14	"	Mr. Watchara Panasri
15	Cook	Mr. Saichol Kornnoom
16	Ship's boy	Mr. Phaithoon Sriratanaphon

SEAFDEC Researchers

No.	Position	Name
16	Chief/Scientist	Mr. Isara Chanrachkij
17	Researcher	Mr. Sukchai Arnupapboon
18	"	Mr. Sayan Promjinda

Thai Researcher

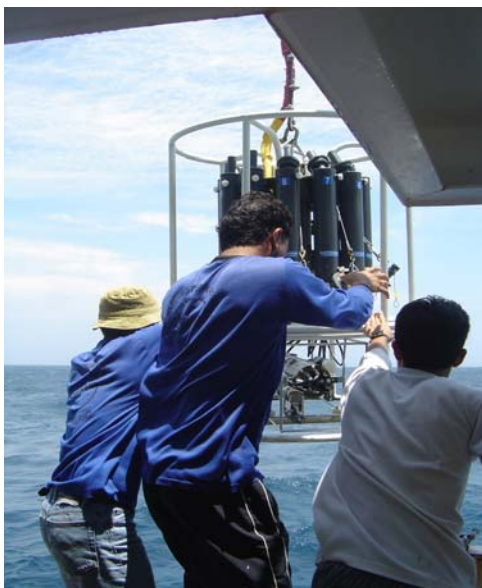
No.	Position	Name
1	Researcher	Mr. Chitjaroon Tantivala
2	“	Mrs. Pattira Lirdwitayaprasit
3	“	Lt. Chirat Nungsang RNT
4	“	Lt.JG. Pisanu Siripitrakool
5	“	Lt. Phitak Chaidee
6	“	Mr. Aekkarat Wongkeaw
7	Assistant researcher	Mr. Treerayuth Tantibannakul
8	“	Mr. Viboon Meechareon
9	“	Mr. Amnuay Pisanpant
10	“	Mr. Virat Jamkrut
11	Observer	Mr. Nich Chatthin
12	“	Mr. Kesorn Inraksa

3. Observation summary

Oceanographic observations were carried out from 12 January to 21 February by M.V.SEAFFDEC2 at 21 stations in Andaman Sea. Each station conducted with 2 main activities including physical and biological oceanographic survey. The equipments that were used in each station data file name were shown in **table no. 1**.

iCTD (SeaBird 911)

M.V.SEAFFDEC2, iCTD systems equipped with three main sensors for conductivity, temperature and depth and four auxiliary sensors for dissolved oxygen, pH, chlorophyll fluorometer and PAR in order to obtain the vertical profiles of water characters. The iCTD was deployed from the sea surface to approximately 10 m. above sea bottom at station shallower than 410 m. and approximately 400 m. at station deeper with constant velocity 0.5 m/s and retrieved to the surface at a similar speed.



All iCTD data were average into every 1 meter interval. Data in each station were divided into down cast and upper cast. Profile of temperature, salinity, pH and fluorescence chlorophyll-a in each station are shown in **Apx. I**.

During retrieving iCTD, Carousel water sample (Niskin Bottles) which is a part of CTD system were used to collect water samples from standard depth. Water sample in each depth was filter through Whatman GFC filter paper and stored in the freezer at -40 °C for nutrient

analysis (nitrite, nitrate, phosphate and silicate) at SEAFDEC/Training Department laboratory later, all samples will be analyzed as soon as possible. Then the result will be sent to Thailand national coordinator.

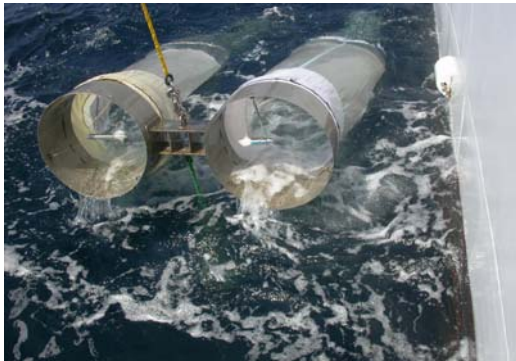
***Remark1:** Profiles of physical oceanographic data were plotted from down cast. Due to oxygen data showing a bit of irregular pattern, thus Oxygen data could not be used until new calibration will be done (good-data will be send to you as soon as they were possible)*

Thermosalinograph with Fluorometer (TSG-Fluorometer)

TSG – Fluorometer were operated during MV.SEAFDEC2 was sailing along the cruise track. The system was designed to continuously record three parameters including temperature, salinity and fluorescence chlorophyll-a, at approximately 5 meters below the sea surface. The data were average every 6 second. Operating summary is shown in **table 2**.

Bongo net equipped with flowmeter:

Plankton net consisted of zoo plankton and larvae net with mesh size of 330 μm and 500 μm , respectively. They were attached to 60 cm. diameter bongo frames. A flow meter was attached at the aperture of net to measure the water volume passing through the net.



Quality of water (m^3) per one flow meter revolution in front of zooplankton was 0.0336 rpm^3 , and Quality of water (m^3) per one flow meter revolution in front of larvae was 0.0094 rpm^3 in all station.

At each station an oblique tow of the bongo net was made with the ship speed 1.5-2 knots approximately. Angel of towing cable was maintained at $50\text{-}60^\circ$ angle. This could be achieved by regulating the speed of vessel speed. (FAO manual recommended that cable angle must be kept at 45° but SEAFDEC's bongo net cannot followed this manual as the centre part casing of SEAFDEC's bongo net do not have swivel mechanism). The depth of operations was from surface to 10-15 m above the sea bottom or maximum depth 150 m., with speed of 0.3 m/s for releasing and retrieving. The samples were preserved in 10% formalin immediately.

Table 1. Partial detail of oceanographic survey station of cruise no.17-1/200613-7/2005

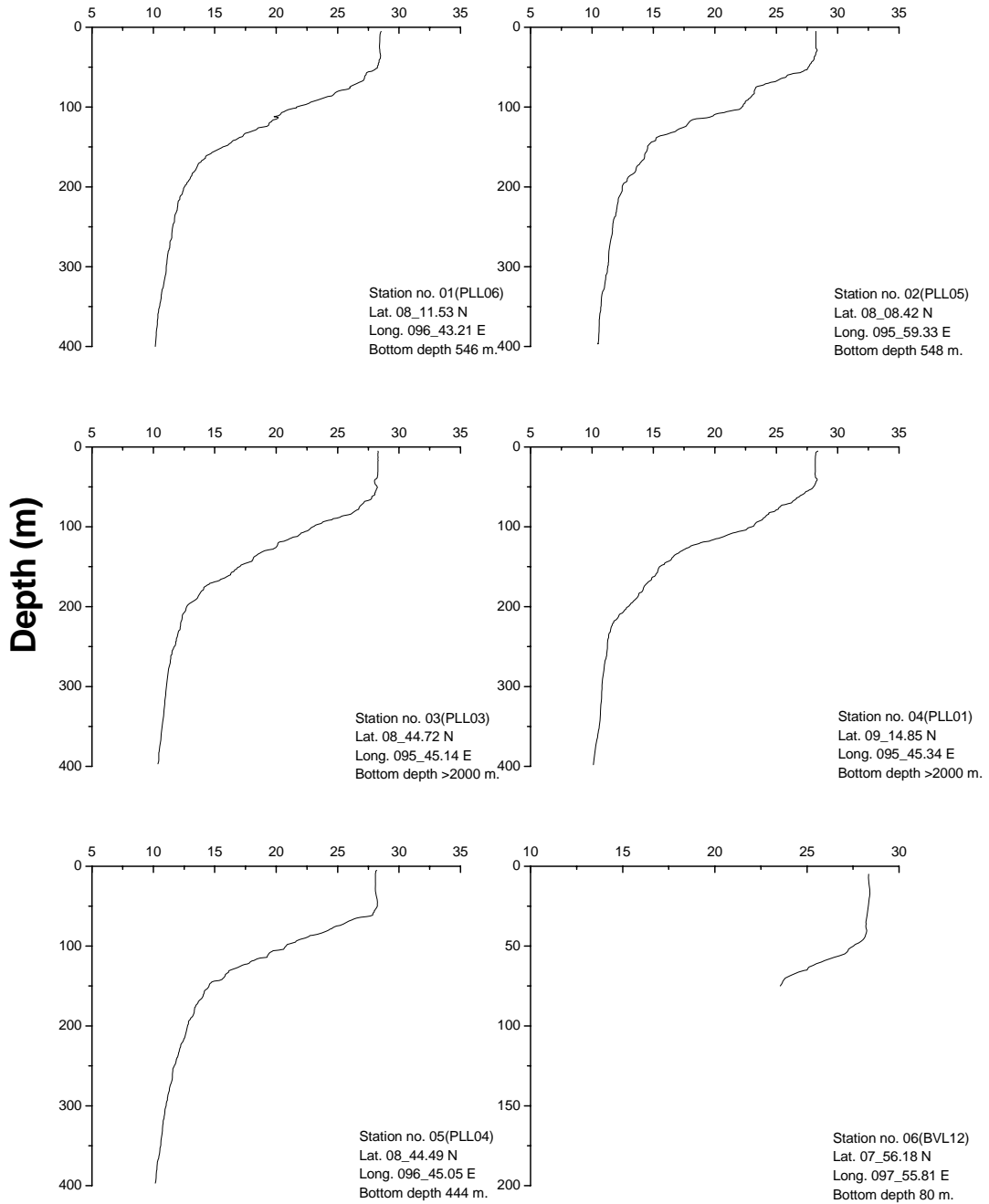
St.No.	Date	Time	Lat	Long	Oceanographic instruments			Transparency		Bottom Depth(m)	Remark
					Bongo-net	SBE CTD	TSG	Secchi disc (m)	Foral scale		
01(PLL06)	19-Jan-06	12:35	08_11.53 N	096_43.21 E	✓	✓	✓	32cos44	3	546	
02(PLL05)	20-Jan-06	08:00	08_08.42 N	095_59.33 E	✓	✓	✓	32cos55	3	548	
03(PLL03)	20-Jan-06	19:35	08_44.72 N	095_45.14 E	✓	✓	✓	32cos45	3	>2000	
04(PLL01)	23-Jan-06	15:00	09_14.85 N	095_45.34 E	✓	✓	✓	28cos28	3	>2000	
05(PLL04)	24-Jan-06	17:03	08_44.68 N	096_45.46 E	✓	✓	✓	25cos60	3	444	
06(BVL12)	28-Jan-06	07:15	07_56.18 N	097_55.81 E	✓	✓	x	25cos45	3	80	
07(BVL10)	29-Jan-07	08:00	07_35.48 N	097_39.84 E	✓	✓	✓	25cos26	5	134	
08(BVVL08)	30-Jan-08	07:30	07_19.92 N	098_04.38 E	✓	✓	✓	25cos52	5	213	
09(BVL06)	30-Jan-06	17:05	07_08.52 N	098_12.69 E	✓	✓	✓	27cos23	5	181	
10(BVL04)	1-Feb-06	07:00	06_53.61 N	098_14.95 E	✓	✓	✓	x	x	165	Night time
11(BVL02)	2-Feb-06	10:57	06_37.44 N	098_05.59 E	✓	✓	✓	20cos37	6	188	
12(BVL14)	5-Feb-06	13:00	08_08.33 N	097_42.73 E	✓	✓	✓	26cos30	4	160	
13(PLL02)	8-Feb-06	07:30	09_05.42 N	096_34.46 E	✓	✓	✓	26cos51	3	426	
14(PLL06)	9-Feb-06	07:50	08_18.38 N	096_25.44 E	✓	✓	✓	28cos47	3	532	
15(PII07)	10-Feb-06	07:50	07_45.34 N	095_50.94 E	✓	✓	✓	24cos40	3	630	
16(PLL08)	11-Feb-06	07:45	07_37.34 N	096_31.10 E	✓	✓	✓	28cos37	3	845	
17(PLL09)	11-Feb-06	18:22	07_15.43 N	096_45.16 E	✓	✓	✓	28cos38	3	975	
18(PLL10)	13-Feb-06	07:45	07_00.83 N	097_21.13 E	✓	✓	✓	x	x	666	Dimming state
19(BVL16)	16-Feb-06	14:10	08_22.30 N	097_35.46 E	✓	✓	✓	32cos65	4	88	
20	17-Feb-06	12:00	08_22.30 N	097_35.37 E	✓	✓	✓	24cos33	5	184	
21(BVL19)	17-fen-06	14:50	08_47.28 N	097_33.34 E	✓	✓	✓	33cos48	4	79	

Table 2. Operation summary of Thermosalinograph with Fluorometer (TSG-Fluorometer)

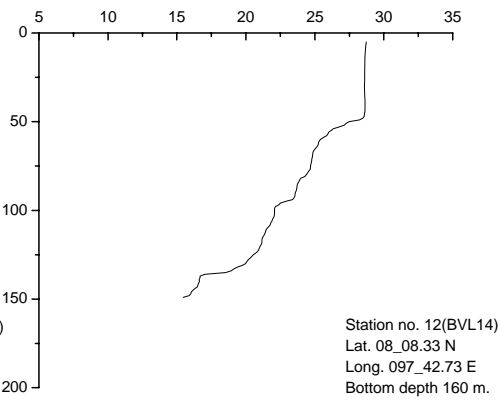
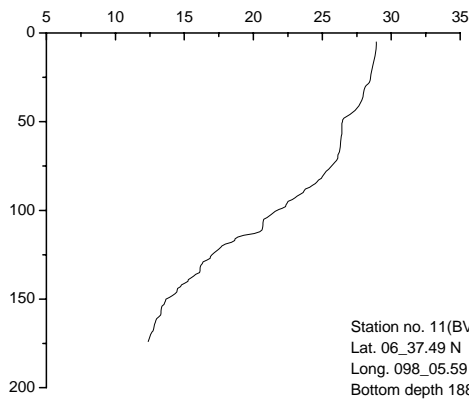
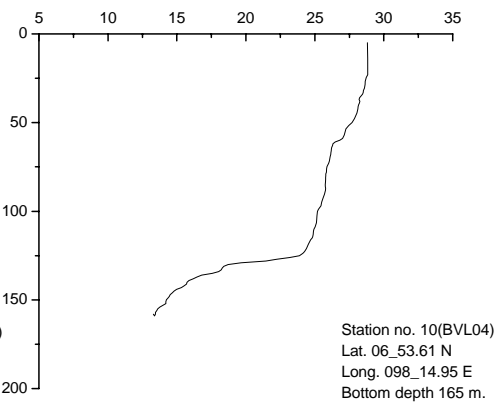
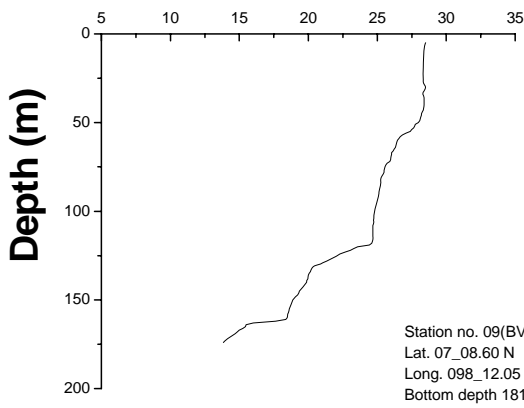
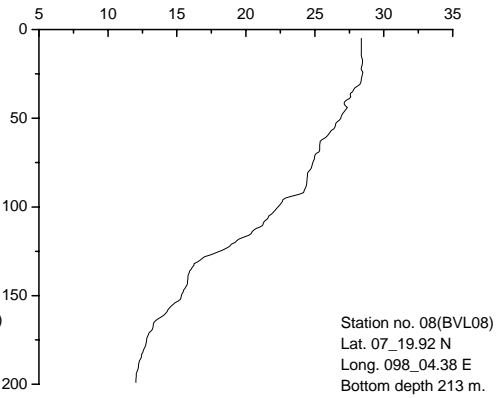
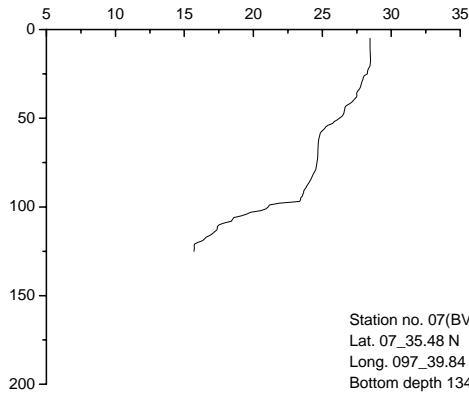
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24-Jan-06	20060124(1)	St.04	St.05
25-Jan-06	20060125(1)	St.05	Phuket
28-Jan-06	20060128(1)	St.06	St.07
29-Jan-06	20060129(1)	St.07	St.08
30-Jan-06	20060130(1)	St.08	St.09
31-Jan-06	20060131(1)	St.09	St.10
1-Feb-06	20060201(1)	St.10	St.11
2-Feb-06	20060202(1)	St.11	Phuket
5-Feb-06	20060205(1)	Phuket	St.12
8-Feb-06	20060208(1)	St.13	St.14
9-Feb-06	20060209(1)	St.14	St.15
10-Feb-06	20060210(1)	St.15	St.16
11-Feb-06	20060211(1)	St.16	St.17
12-Feb-06	20060212(1)	St.17	St.18
13-Feb-06	20060213(1)	St.18	Phuket
16-Feb-06	20060216(1)	St.19	St.20
17-Feb-06	20060217(1)	St.20	St.21
18-Feb-06	20060218(1)	St.21	Phuket

Appendix I

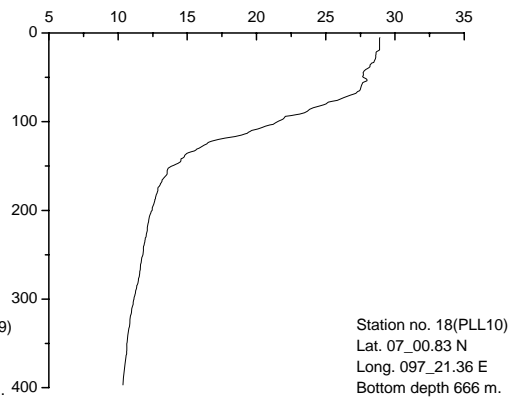
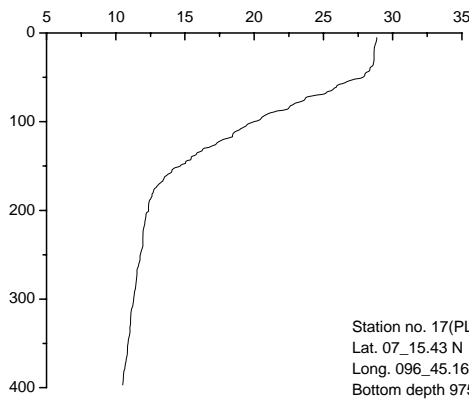
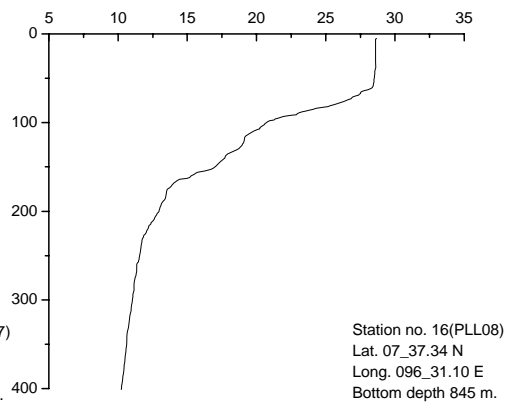
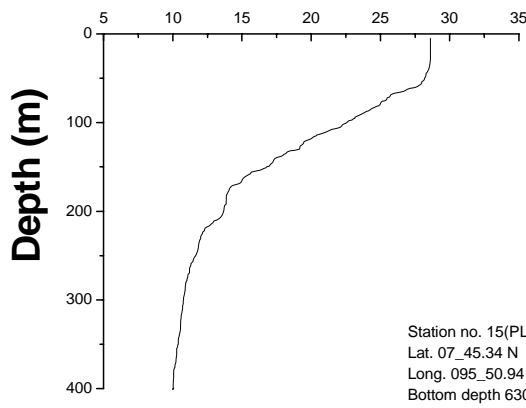
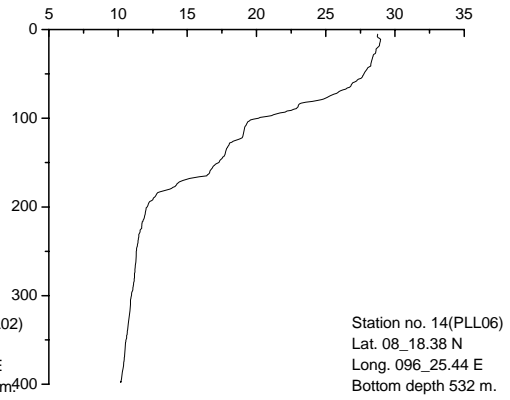
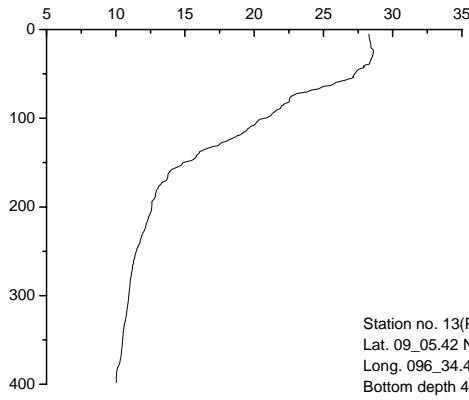
Temperature (°C)



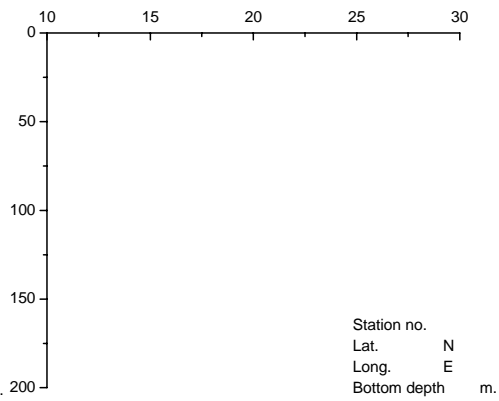
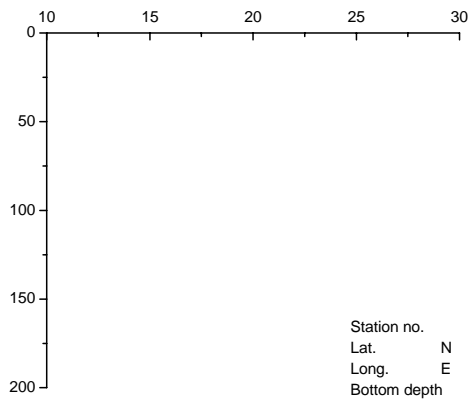
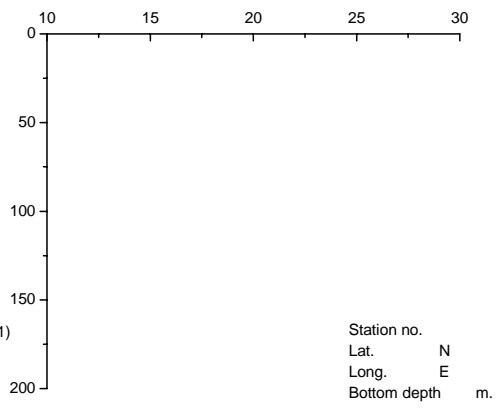
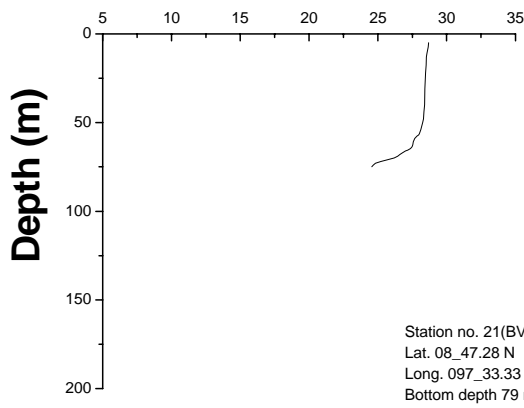
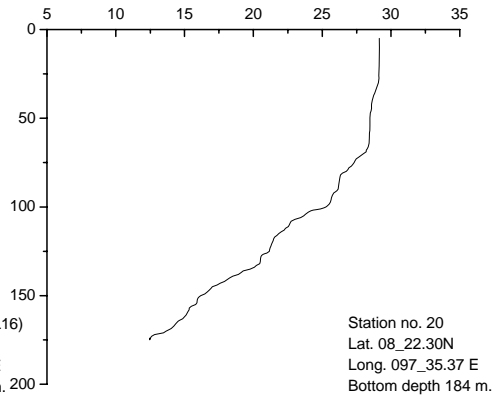
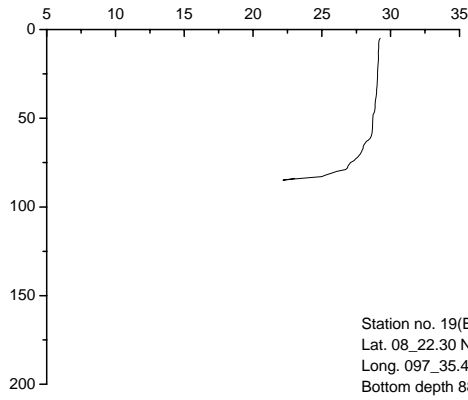
Temperature (°C)



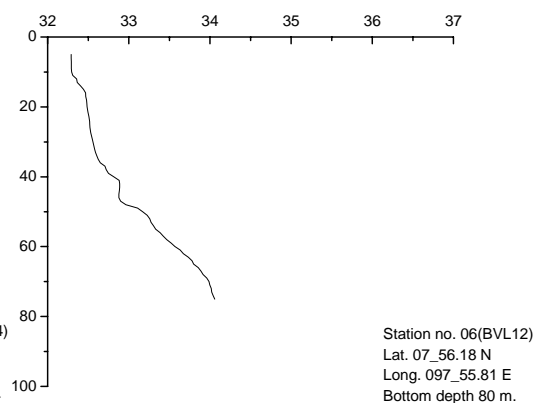
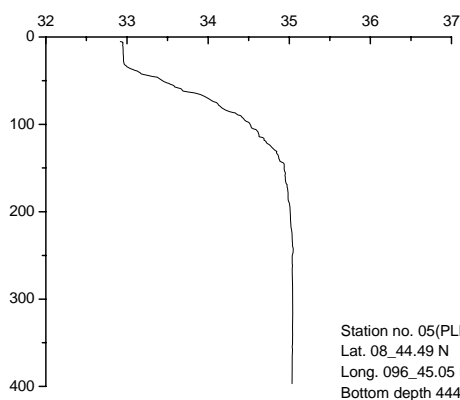
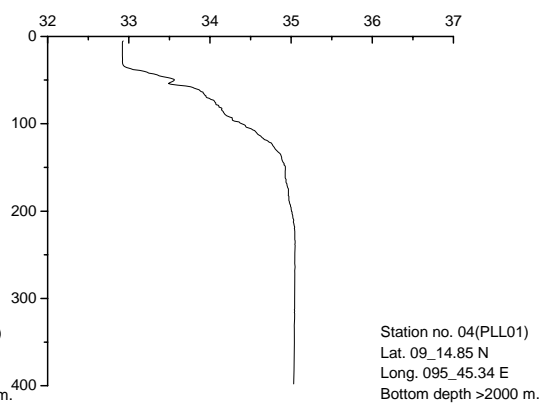
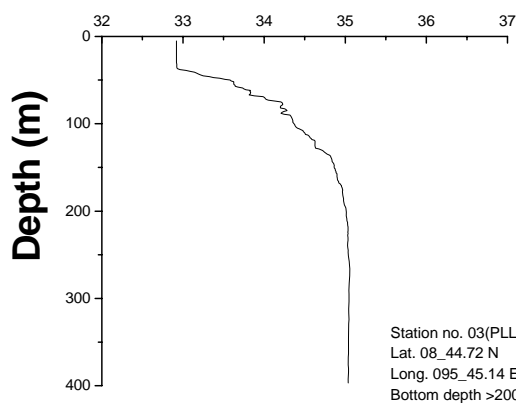
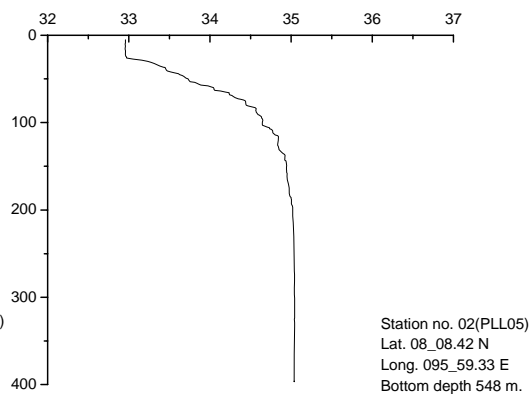
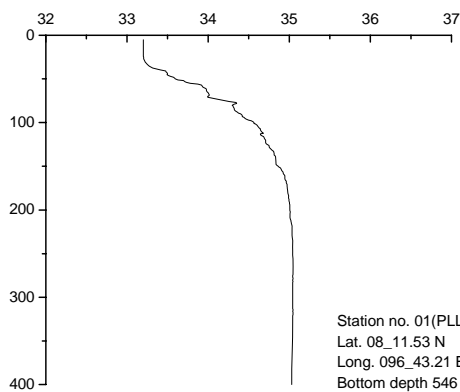
Temperature (°C)



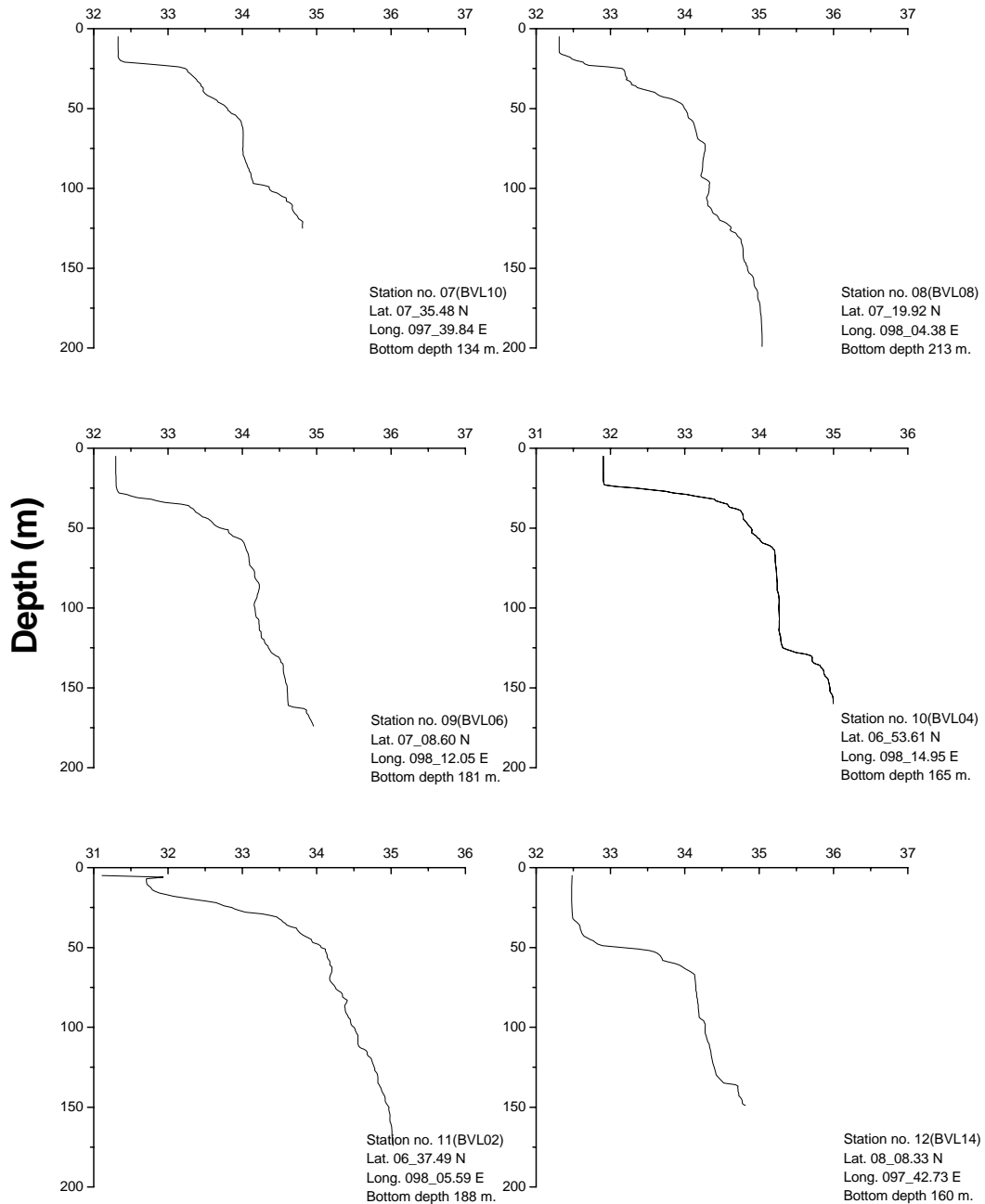
Temperature (°C)



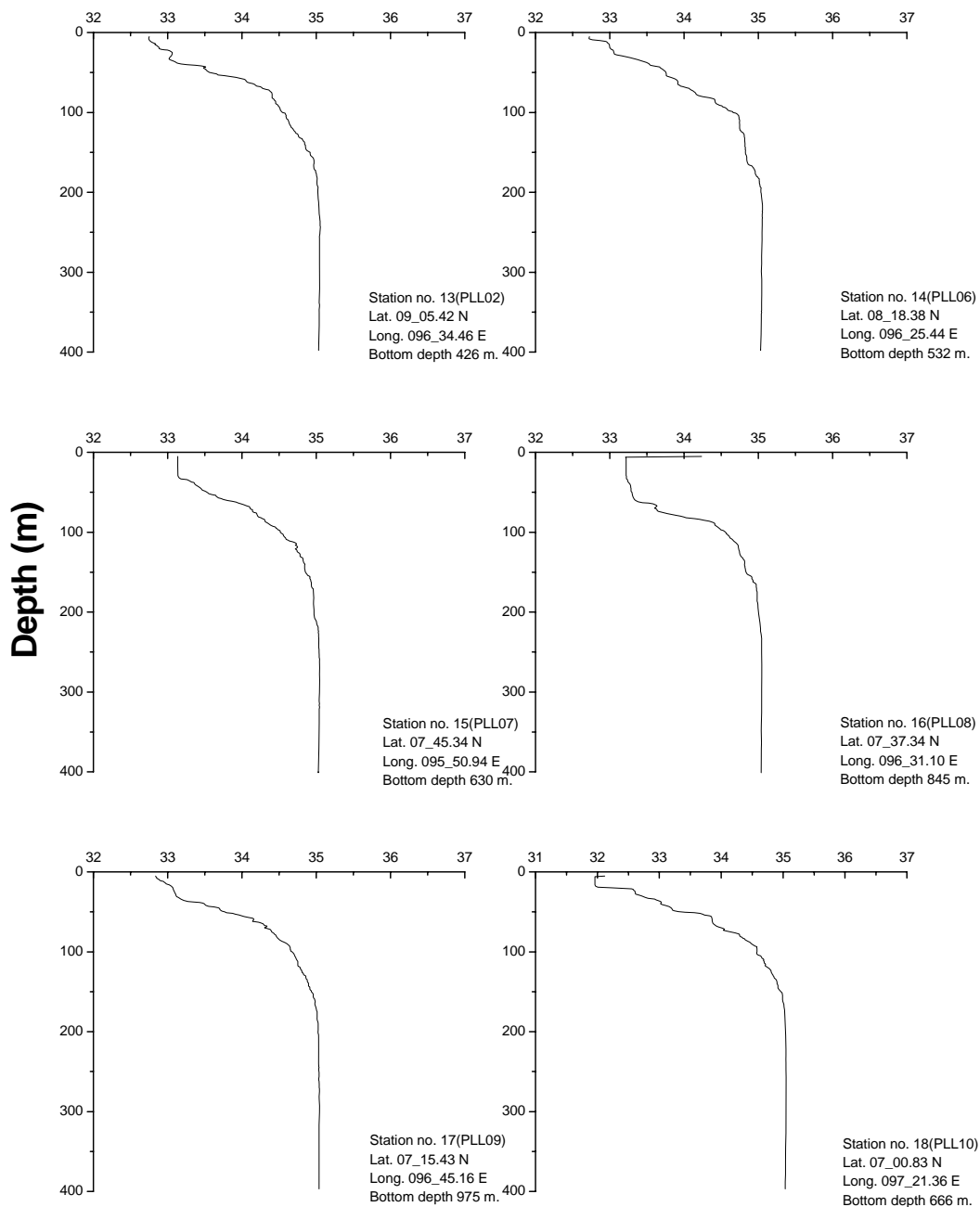
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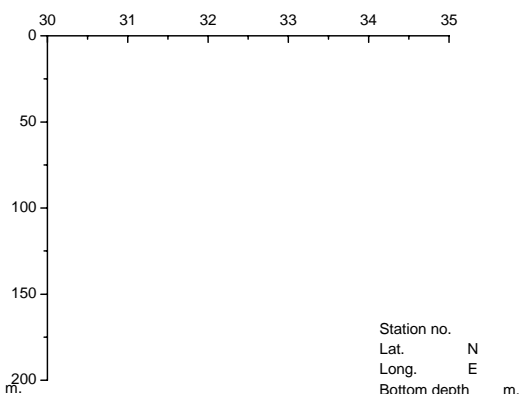
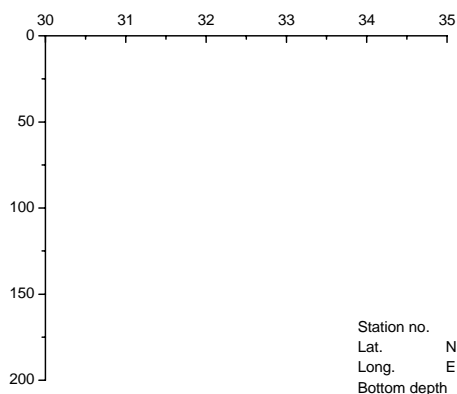
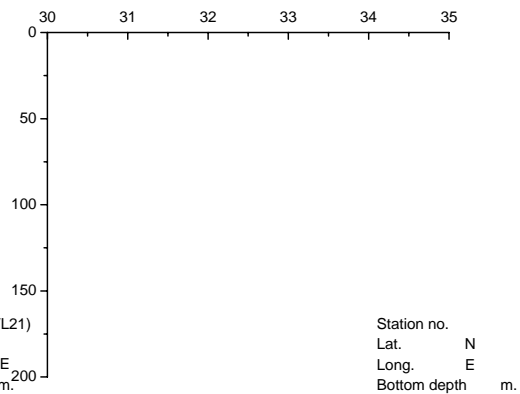
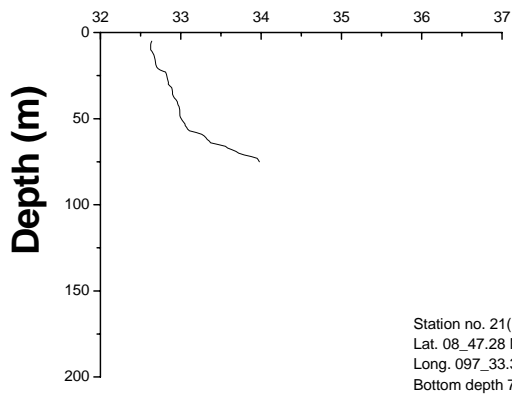
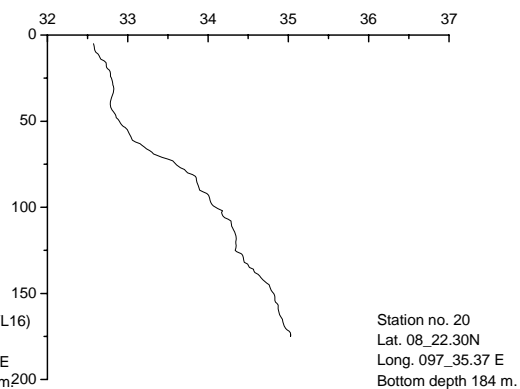
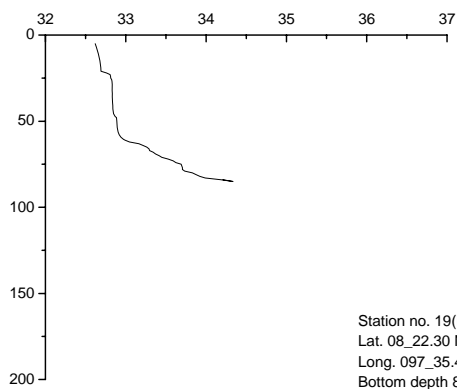
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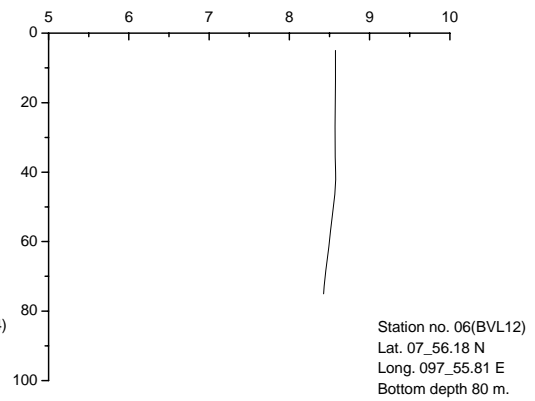
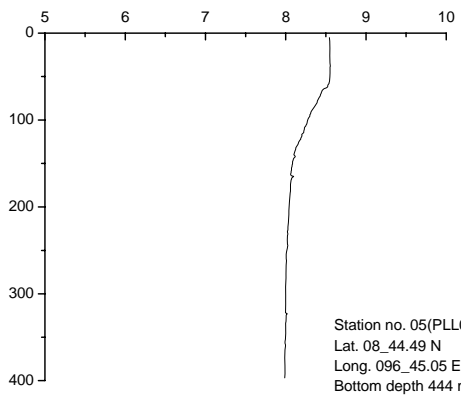
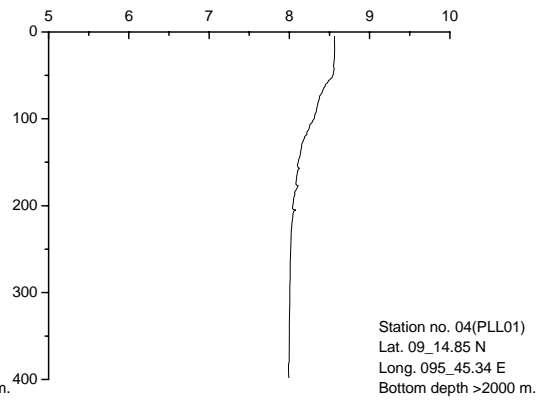
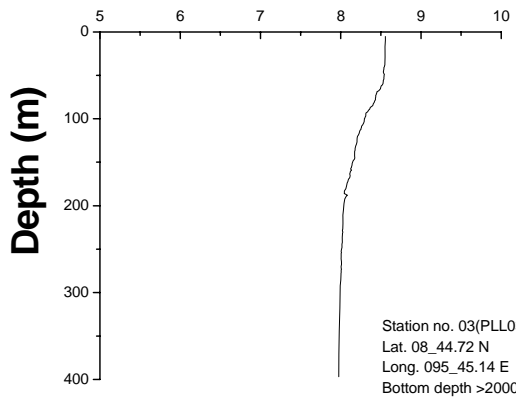
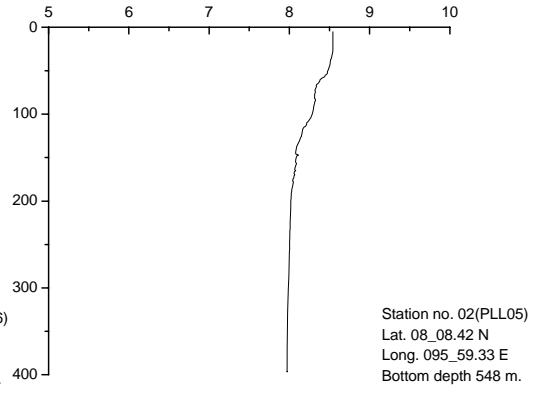
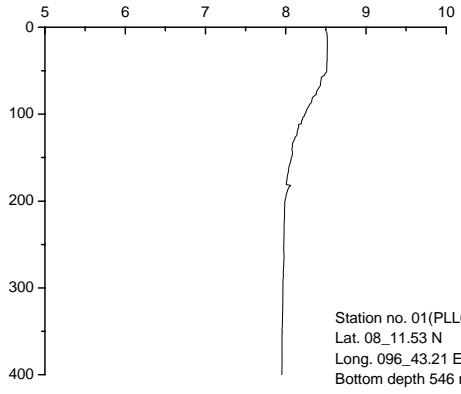
Salinity (PSU)



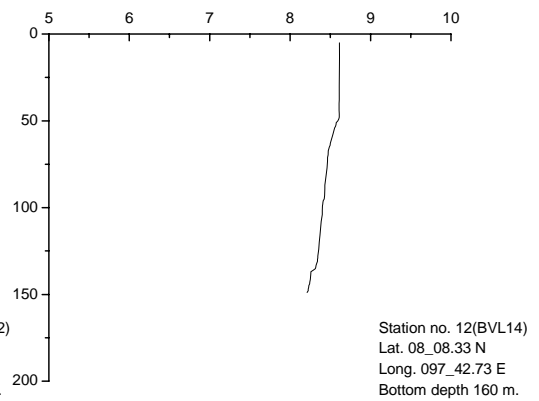
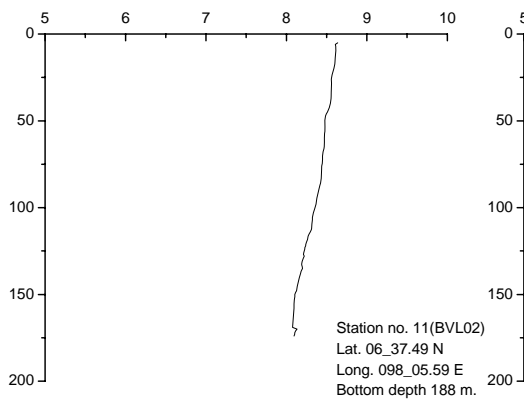
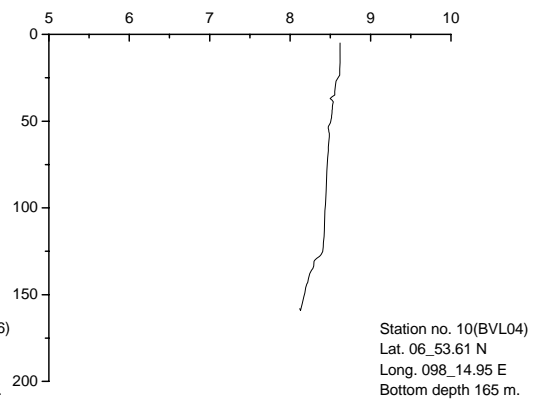
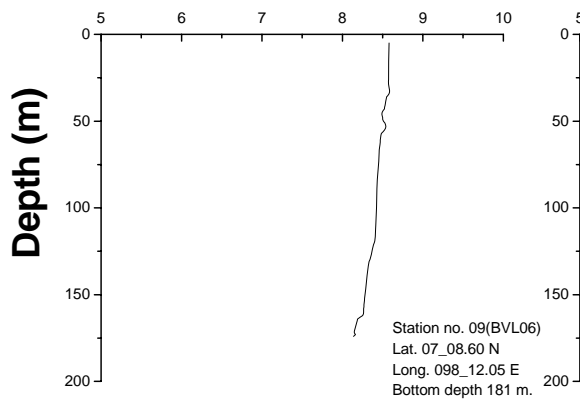
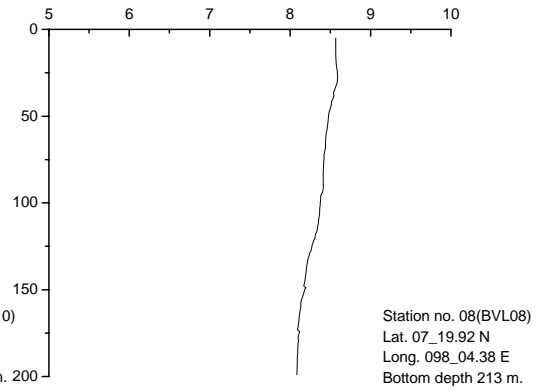
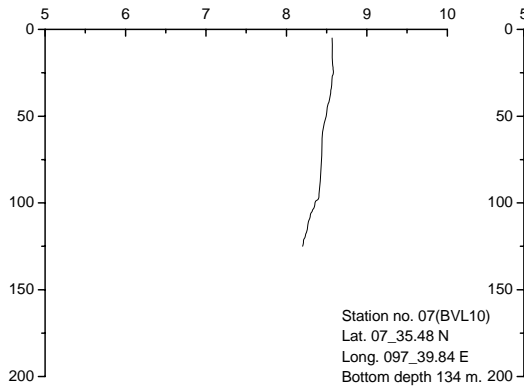
Salinity (PSU)



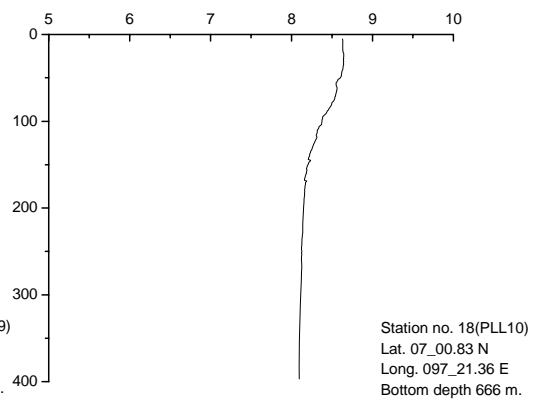
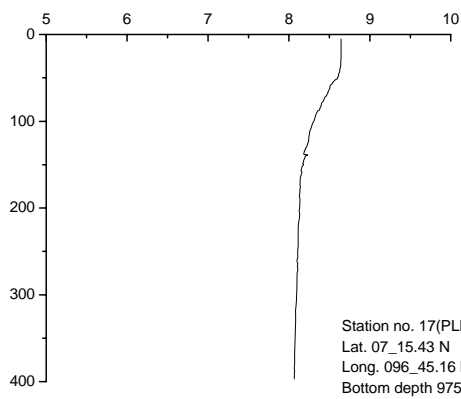
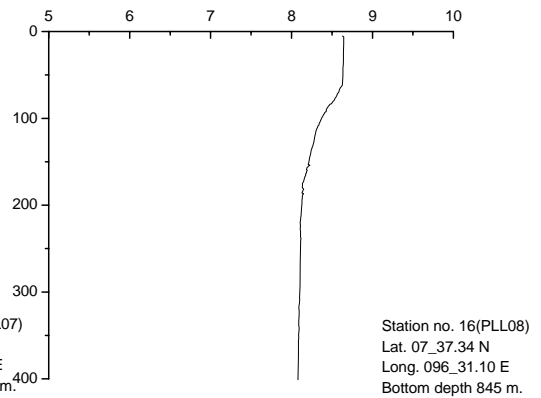
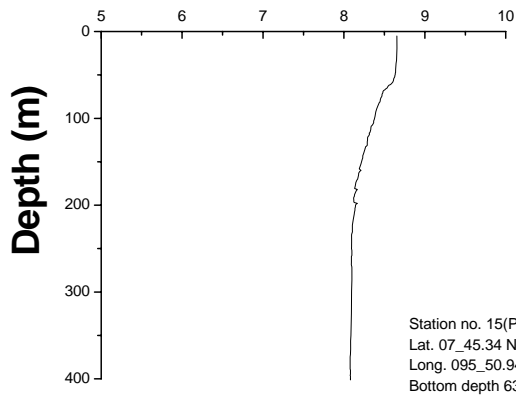
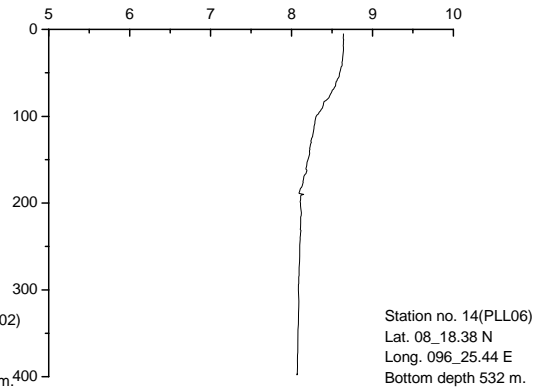
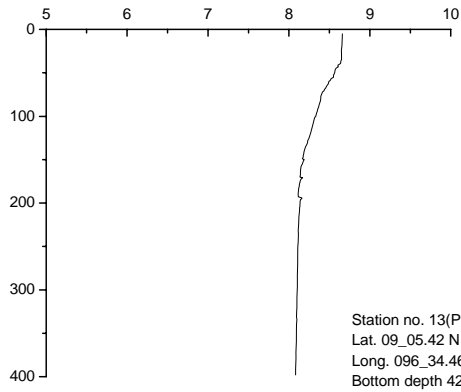
pH



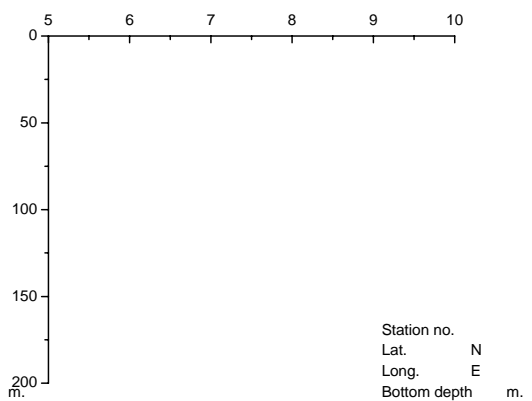
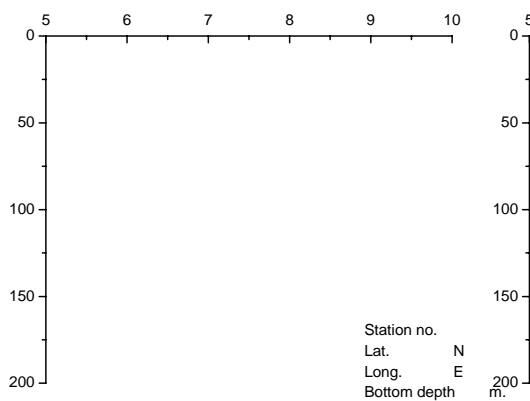
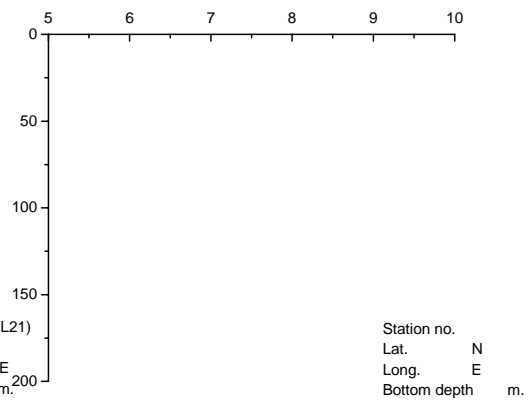
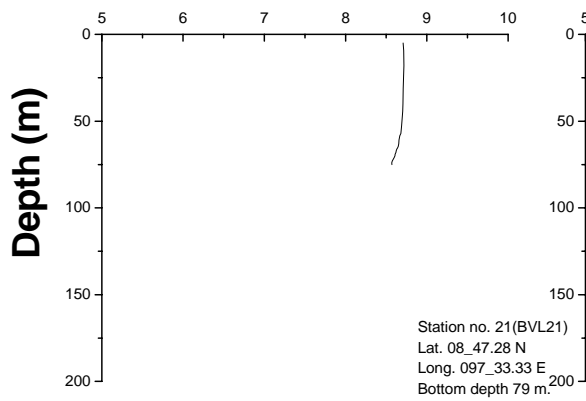
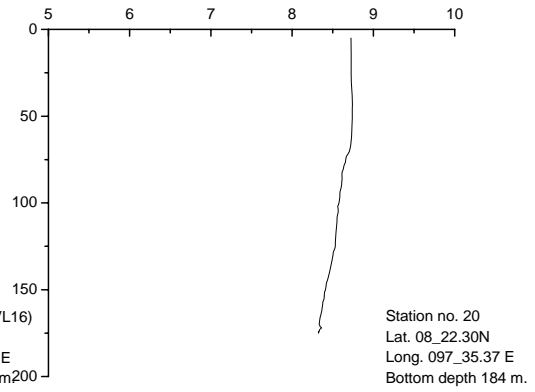
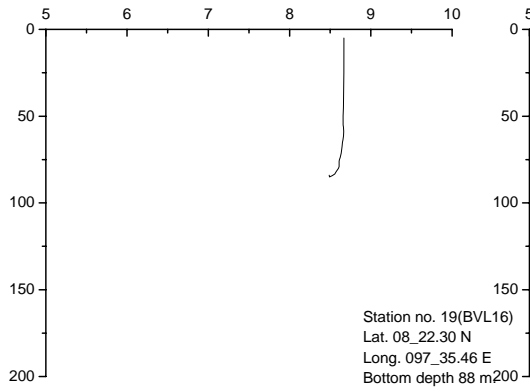
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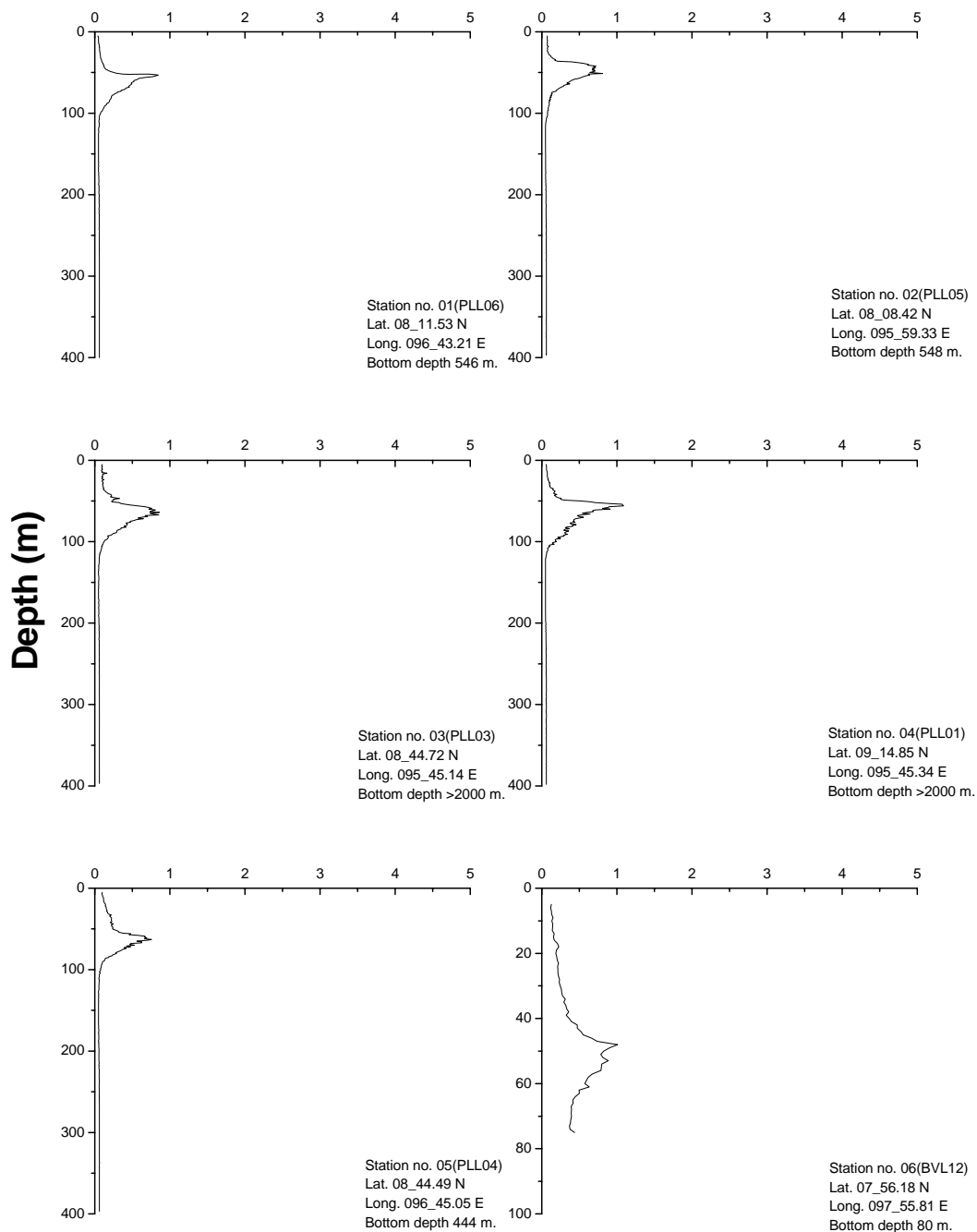
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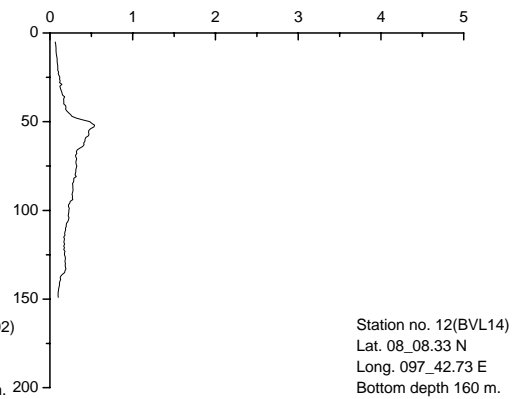
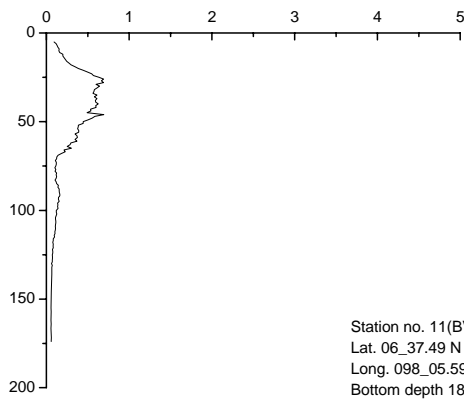
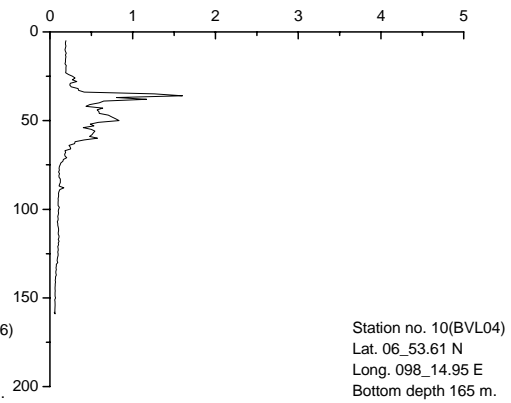
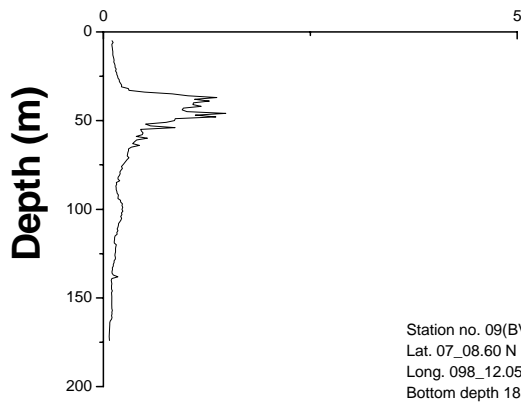
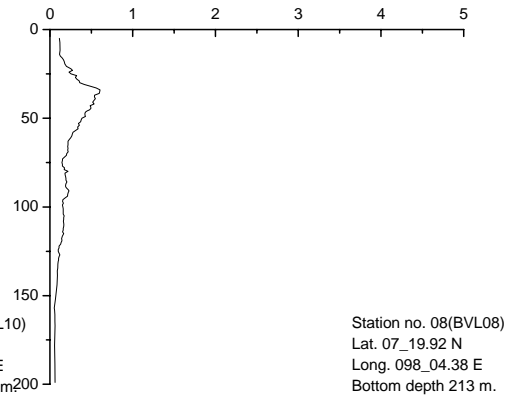
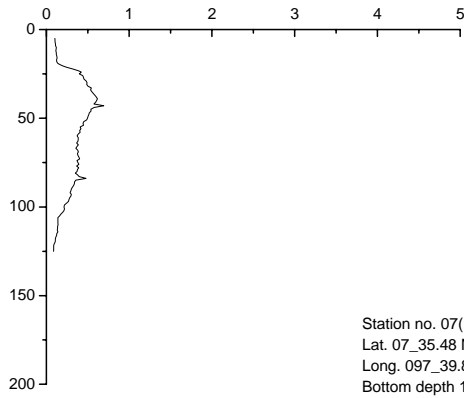
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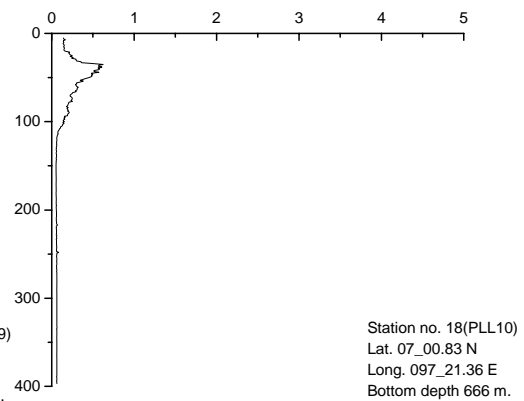
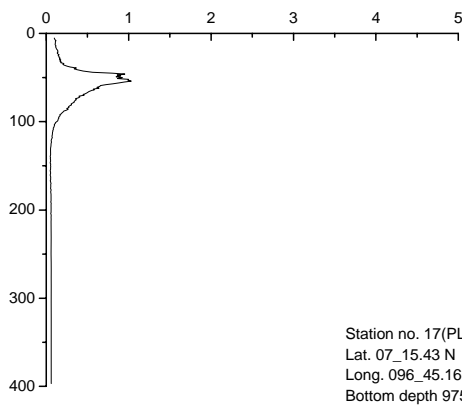
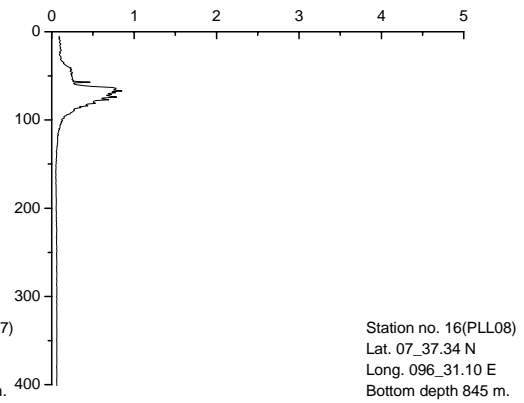
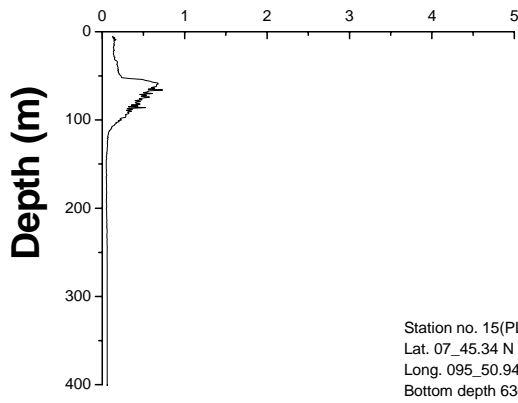
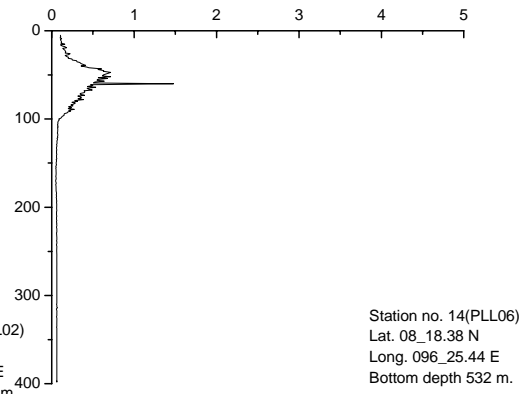
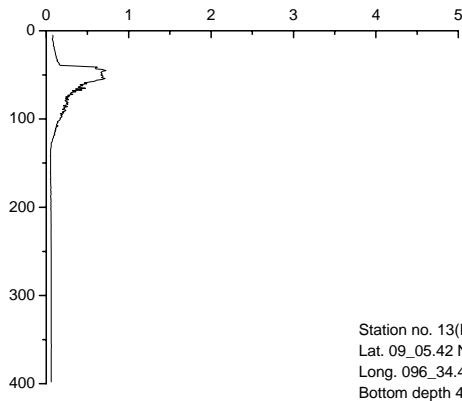
Fluorescence



Fluorescence



Fluorescence



Fluorescence

