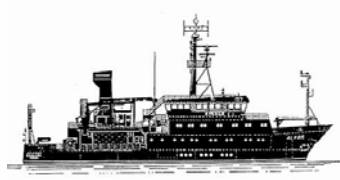


Short Report

ALKOR Cruise No. 414



System tests of the GEOMAR work class ROV “PHOCA” in the Skagerak

Kiel – Hirtshals – Kiel: 02. 05. – 08. 05. 2013

Cruise Lead: Dr. Olaf Pfannkuche

GEOMAR Helmholtz Centre for Ocean Research Kiel

Kiel, Germany

I. Objectives of the cruise

The cruise AKOR 414 was dedicated to the testing the recently acquired GEOMAR 3000m rated work class ROV “Phoca” (Type “sub-Atlantic Cheerokee”). The PHOCA system (winch, launch/recovery system, command container) was specially adapted for the use from our medium sized research vessels R/Vs ALKOR and POSEIDON. The ALKOR A-frame and working deck was prepared for the use of PHOCA during the last ship-yard inspection therefore the purpose of the cruise aimed at system tests on ALKOR and at the deep-water test of the ROV and ROV-peripherals. The central trough of the Skagerak offered the nearest locality to Kiel where a water depth of ca. 700m can be reached in relatively short time.

Four test dives were performed between 175m - 690m water depth in the central Skagerak (Fig. 1, Tab. 1). The port of Hirtshals (DK) was visited for a crew change.

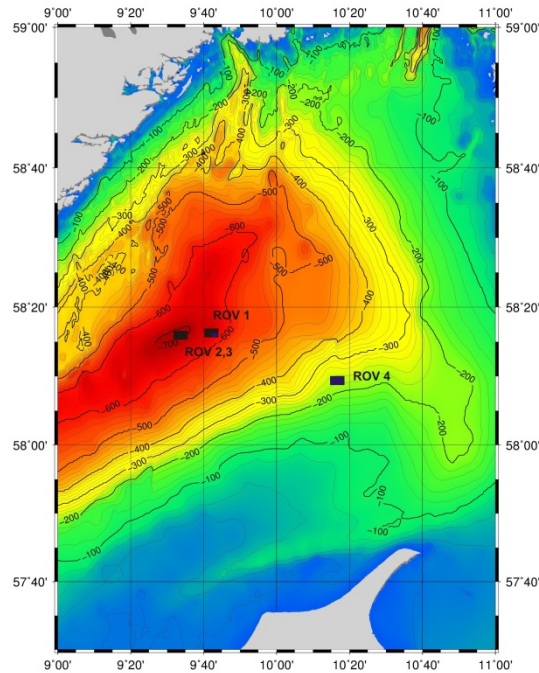


Fig.1: Position of the ROV dives in the Skagerak

II. Narrative

Thursday, 02.05.13

R/V ALKOR left the GEOMAR pier at 08:00h. After a passage through the Great Belt and Kattegat we headed towards our first station in the Norwegian EEZ in the deepest part of the central Skagerak.

Friday, 03.05.13

We deployed the ROV (ROV 1, Stat. 275) by 580m.

Saturday, 04.05.13

The planned ROV deployment in the morning had to be cancelled because of strong winds which did not permit a safe ROV deployment. Therefore we headed directly to Hirtshals for exchange of personnel which was scheduled for this day. We docked in Hirtshals at 13:20 and stayed moored until next morning.

Sunday, 05.05.13

We left Hirtshals at 08:00h and headed back towards the deepest part of the Norwegian Trough with a maximum depth of around 700m. We reached our planned position in the early afternoon and deployed PHOCA by 690m (ROV 2, Stat. 276).

Monday, 06.05.13.

After some maintenance work on the ROV in the morning we deployed the vehicle again in the deepest part of the trough by 690m (ROV 3, Stat. 277). After this dive we ended our activities in the Norwegian EEZ. We headed east towards the Danish EEZ.

Tuesday, 07.05.13

In the morning we undertook our last ROV dive by 175m (ROV 4, Stat. 278). During our dive we spotted the wrack of a wooden cutter of approximately 12-18m length. With this successful dive our testing activities stopped. We started our home passage back to Kiel at noon.

Wednesday, 08.05.13

R/V ALKOR arrived at the GEOMAR Pier in Kiel in the morning thus finishing voyage No. 414.

III. Participants and Participating Institutions

AL- 414/1 Kiel -Hirtshals		AL- 414/2 Hirtshals-Kiel	
Dr. Pfannkuche, Olaf	GEOMAR	Dr. Pfannkuche, Olaf	GEOMAR
Dr. Abegg, Friedrich	GEOMAR	Dr. Abegg, Friedrich	GEOMAR
Berghäuser, Thorben	GEOMAR	Bodendorfer, Matthias	GEOMAR
Bodendorfer, Matthias	GEOMAR	Cuno, Patrick	GEOMAR
Cuno, Patrick	GEOMAR	Henneke, Jan	GEOMAR
Henneke, Jan	GEOMAR	Huusmann, Hannes	GEOMAR
Huusmann, Hannes	GEOMAR	Kubicka, Marcus	DLR
Nowald,Nicolas	Marum	Nowald,Nicolas	Marum
Pieper, Martin	GEOMAR	Opitz, Steffen	DLR
Dr. Schmitz, Nicole	DLR	Pieper, Martin	GEOMAR
Dr. Suck, Inken	GEOMAR	Dr. Suck, Inken	GEOMAR
Dr. Wilde, Martina	AWI/DLR	Dr. Sohl, Frank	DLR

AWI: Alfred Wegener Institute for Polar and Marine Research in the Helmholtz Association (AWI)

DLR: German Aerospace Centre (DLR)

GEOMAR: GEOMAR Helmholtz Centre for Ocean Research Kiel

Marum: MARUM, University Bremen

IV. Station List

Station List ALKOR-414, 02.5. - 08. 5. 2013

Station	Gear	No.	Date	Time	Coordinates 1		Depth	Coordinates 2		Depth	Time
AL414-			2013	(UTC)	Lat. °N	Long. °E	(m)	Lat. °N	Long. °E	(m)	(UTC)
275	ROV	1	03.05.	8:03	58°16,35'	009°40,93'	580	58°16,18'	009°40,98'	580	11:25
276	ROV	2	05.05.	12:38	58°16.37'	009°33,32'	692	58°15.84'	009°33,06'	691	0:00
277	ROV	3	06.05.	10:05	58°15.29'	009°31,96'	692	58°14.83'	009°30,69'	690	14:57
278	ROV	4	07.05.	6:45	58°08.27'	010°14.65'	175	58°08.25'	010°14.34'	173	10:05