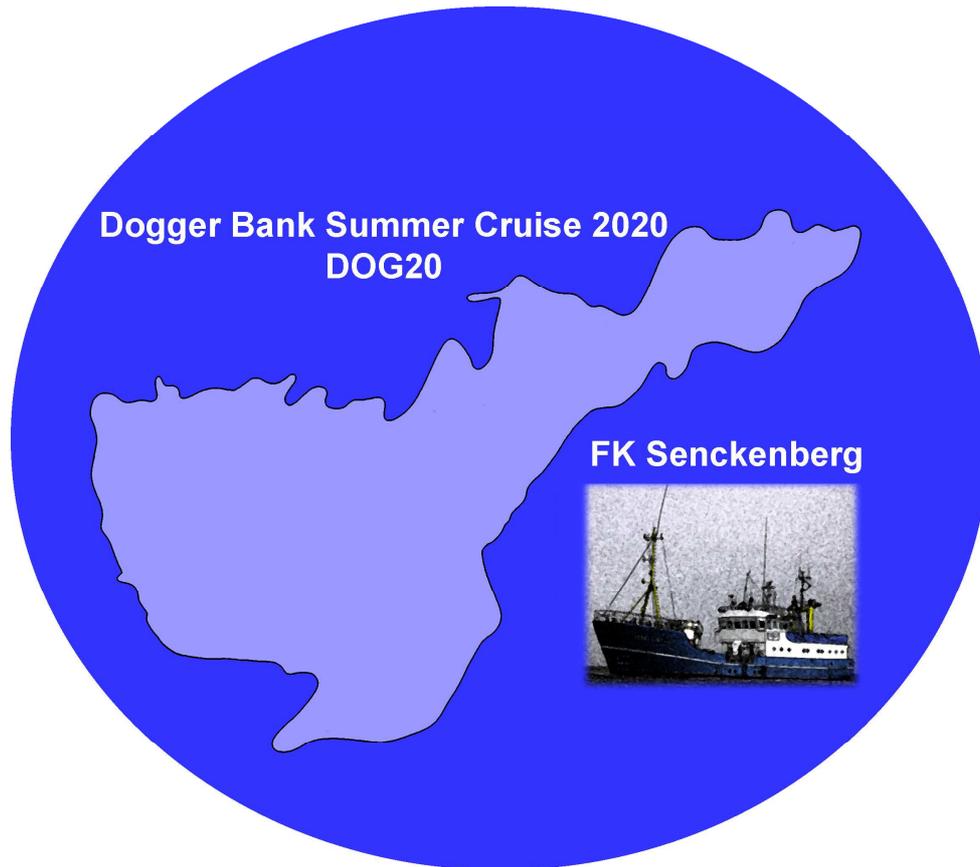


SENCKENBERG

Report on the 2020 Dogger Bank cruise with FK Senckenberg

05.08. – 14. 08. 2020



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Senckenberg Research Institute and Museum of Nature

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1. Aims and setting

The interannual variability of the epibenthic fauna of the Dogger Bank is a long term project of the Senckenberg Research Institute since 1991. This project aims at gathering basic data which is used for understanding presumed environmental changes. Therefore the study refers to 37 stations (see map in Annex) that are, whenever possible, sampled on a yearly basis in the same season with the same gear. The fauna is identified and recorded quantitatively from each sample in order to allow studies on relative abundance. Additionally, temperature parameters are recorded to correlate with faunal composition and species abundances.

The present cruise forms the 27th of the series and gets the suffix DOG20. All former cruises were labelled after the alphabet with one letter starting with DOG-A in 1992. The first cruise in 1991 was called DOG without any suffix.

The present was conducted by the Department for Marine Zoology at the Senckenberg Research Institute in Frankfurt am Main.

2. Narrative

The cruise started on Wednesday, 2020-08-05. On 14:00 CEST (UTC+1), the vessel left the shipyard and headed towards the main working area, the Dogger Bank.

Station 40 (see station map) at British waters was reached on August 06, 2020 at 10:00 CEST and working started immediately after arrival. At this and the following 36 stations, the following technique was used: First, a CTD probe was used to measure the bottom temperature and salinity. Then, a standardized epi- and endobenthic sampling with the ring dredge was performed. Subsequently, one sample with a 2 m beam-trawl was taken, towed for 2 kn of speed on a length of one nautical mile (for more information see methods, chapter 3). Additionally, a Hamon-Grab was used on 20 of the stations in order to provide sediment samples for "Ocean Ecology" lab in the UK with respect to the construction of the Dogger Bank wind farm "SOFIA". On Sunday, August 09, the ship anchored with respect to work safety and bad weather conditions. Since Monday, August 10, the weather got better and work could continue until all 37 stations were successfully sampled. Sampling at the Dogger Bank ended on August 12, 2020 in the afternoon. Afterwardsm FK Senckenberg headed back to the port of Wilhelmshaven. The vessel was moored at Wilhelmshaven port on August 13, 2020 at 22:00 CEST.

The exact sequence of stations sampled can be seen at the station list (annex 1).

3. Methods:

For the measurement of the temperature and salinity of the water column, a CTD probe was lowered to the seafloor, recording while being hauled again.

Standard endobenthic sampling was performed with the Ring Dredge, being towed over the ground for approximately three minutes per station. The samples were recorded qualitatively on board ship, only few material was preserved for later analysis.

Epibenthos was collected with a 2m beam trawl with a tickler chain and a chain in the bottom rope. The minimum mesh size in the cod-end was 1 cm², so that animals above that size were collected quantitatively. The trawl was towed for 1 nautical mile at a speed of 2 knots. The sample was secured quantitatively (as far as possible) and washed through a set of

sieves with 1 cm maximum and 1 mm minimum mesh size, respectively. The 1 cm-fraction was identified and counted on board the vessel, organisms not readily identifiable were preserved and taken back to the home laboratory. The smaller fractions were also preserved and taken back for qualitative analysis.

The Hamon grab was lowered to the seabed and was immediately raised again after it was triggered by touching the sediment. This procedure was repeated until the grab contained a satisfying quantity of sediment. A small quantity of sediment was secured and frozen for grain size analyses, while the bigger quantity was photo-documented and preserved with a 5% Formaldehyde- sea water solution for later faunal analysis at the “Ocean Ecology” lab.

4. Station map

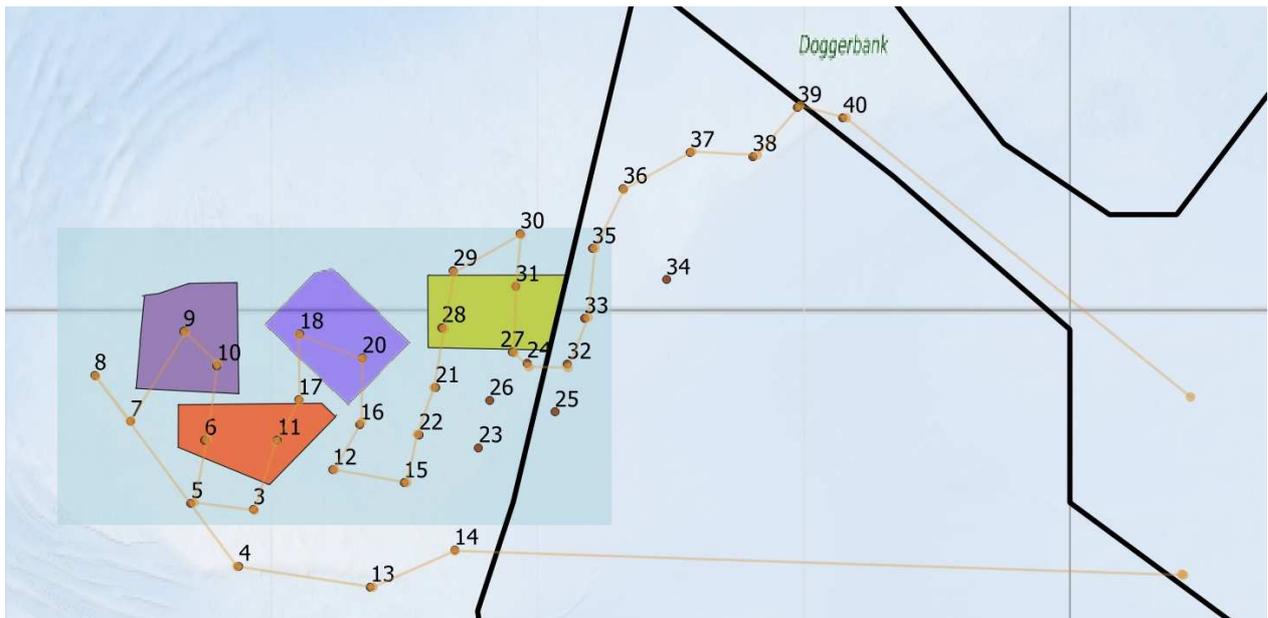


Fig. 1 Station map with stations and ship course. The coloured squares indicate the sites planned for wind farms.

Annex 1 List of stations, gear and sampling actions. CTD = CTD probe; Rd = ring dredge; Ku = beam trawl; Ha = Hamon grab

Date	Station	Device	Time	Event	Lat	Long	Depth [m]
06.08.2020	DOG20-40	CTD	11:16		55° 27,001' N	004° 07,539' E	30,5
06.08.2020	DOG20-40	Rd	11:21	on ground	55° 26,971' N	004° 07,616' E	30
06.08.2020	DOG20-40	Rd	11:27	off ground	55° 26,864' N	004° 07,599' E	30,3
06.08.2020	DOG20-40	Ku	11:39	on ground	55° 27,116' N	004° 07,514' E	30,3
06.08.2020	DOG20-40	Ku	12:11	off ground	55° 26,072' N	004° 07,656' E	29,7
06.08.2020	DOG20-39	CTD	13:04		55° 28,972' N	003° 58,422' E	31,2
06.08.2020	DOG20-39	Rd	13:11	on ground	55° 28,969' N	003° 58,326' E	31,5
06.08.2020	DOG20-39	Rd	13:17	off ground	55° 28,796' N	003° 58,336' E	32
06.08.2020	DOG20-39	Ku	13:35	on ground	55° 29,399' N	003° 57,912' E	32,2
06.08.2020	DOG20-39	Ku	14:02	off ground	55° 28,438' N	003° 58,398' E	31,3
06.08.2020	DOG20-38	CTD	15:09		55° 22,692' N	003° 47,212' E	30
06.08.2020	DOG20-38	Rd	15:17	on ground	55° 22,867' N	003° 47,209' E	30,4
06.08.2020	DOG20-38	Rd	15:24	off ground	55° 22,647' N	003° 47,378' E	30,1
06.08.2020	DOG20-38	Ku	15:32	on ground	55° 22,790' N	003° 47,228' E	30
06.08.2020	DOG20-38	Ku	16:02	off ground	55° 23,925' N	003° 47,167' E	31
06.08.2020	DOG20-37	CTD	16:55		55° 23,260' N	003° 34,361' E	31,7
06.08.2020	DOG20-37	Rd	17:04	on ground	55° 23,304' N	003° 34,202' E	31,8
06.08.2020	DOG20-37	Rd	17:10	off ground	55° 23,486' N	003° 34,436' E	31,6
06.08.2020	DOG20-37	Ku	17:27	on ground	55° 22,935' N	003° 34,091' E	31,5
06.08.2020	DOG20-37	Ku	17:53	off ground	55° 23,801' N	003° 34,981' E	32,4
06.08.2020	DOG20-36	CTD	19:10		55° 18,778' N	003° 19,259' E	29,5
06.08.2020	DOG20-36	Rd	19:17	on ground	55° 18,841' N	003° 19,306' E	29,6
06.08.2020	DOG20-36	Rd	19:23	off ground	55° 18,863' N	003° 19,553' E	29,4
06.08.2020	DOG20-36	Ku	19:35	on ground	55° 18,768' N	003° 19,016' E	29,5
06.08.2020	DOG20-36	Ku	20:01	off ground	55° 19,033' N	003° 20,722' E	29,8
07.08.2020	DOG20-35	CTD	06:14		55° 10,270' N	003° 12,111' E	30,2
07.08.2020	DOG20-35	Rd	06:21	on ground	55° 10,305' N	003° 12,142' E	30,4
07.08.2020	DOG20-35	Rd	06:26	off ground	55° 10,351' N	003° 12,313' E	30,3
07.08.2020	DOG20-35	Ku	06:39	on ground	55° 10,254' N	003° 11,990' E	30,6
07.08.2020	DOG20-35	Ku	07:06	off ground	55° 10,541' N	003° 13,678' E	30,8
07.08.2020	DOG20-33	CTD	08:17		55° 01,320' N	003° 09,962' E	26
07.08.2020	DOG20-33	Rd	08:23	on ground	55° 01,380' N	003° 10,087' E	25,9
07.08.2020	DOG20-33	Rd	08:27	off ground	55° 01,421' N	003° 10,252' E	26

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Date	Station	Device	Time	Event	Lat	Long	Depth [m]
07.08.2020	DOG20-33	Ku	08:36	on ground	55° 01,382' N	003° 10,793' E	27
07.08.2020	DOG20-33	Ku	09:09	off ground	55° 00,409' N	003° 11,389' E	26,8
07.08.2020	DOG20-32	CTD	09:57		54° 55,519' N	003° 06,168' E	26
07.08.2020	DOG20-32	Rd	10:02	on ground	54° 55,487' N	003° 06,221' E	26
07.08.2020	DOG20-32	Rd	10:07	off ground	54° 55,350' N	003° 06,362' E	26,3
07.08.2020	DOG20-32	Ku	10:18	on ground	54° 55,588' N	003° 06,180' E	26,8
07.08.2020	DOG20-32	Ku	10:47	off ground	54° 54,680' N	003° 07,016' E	29,8
07.08.2020	DOG20-24	Ha	11:38		54° 55,532' N	002° 57,233' E	24
07.08.2020	DOG20-24	CTD	11:54		54° 55,491' N	002° 57,243' E	24
07.08.2020	DOG20-24	Rd	12:01	on ground	54° 55,530' N	002° 57,172' E	24
07.08.2020	DOG20-24	Rd	12:07	off ground	54° 55,448' N	002° 57,475' E	23,8
07.08.2020	DOG20-24	Ku	12:21	on ground	54° 55,704' N	002° 56,503' E	24
07.08.2020	DOG20-24	Ku	12:47	off ground	54° 55,414' N	002° 58,162' E	23,5
07.08.2020	DOG20-27	Ha	13:16		54° 56,990' N	002° 54,063' E	25
07.08.2020	DOG20-27	CTD	13:22		54° 57,020' N	002° 54,077' E	25
07.08.2020	DOG20-27	Rd	13:27	on ground	54° 56,999' N	002° 54,171' E	25
07.08.2020	DOG20-27	Rd	13:33	off ground	54° 56,921' N	002° 54,527' E	24,8
07.08.2020	DOG20-27	Ku	13:47	on ground	54° 57,068' N	002° 53,121' E	24,4
07.08.2020	DOG20-27	Ku	14:11	off ground	54° 56,760' N	002° 54,792' E	24,7
07.08.2020	DOG20-31	CTD	15:16		55°05,619' N	002° 53,533' E	27,2
07.08.2020	DOG20-31	Rd	15:21	on ground	55° 05,720' N	002° 53,629' E	27,4
07.08.2020	DOG20-31	Rd	15:27	off ground	55° 05,830' N	002° 53,782' E	27,8
07.08.2020	DOG20-31	Ku	15:40	on ground	55° 05,472' N	002° 53,091' E	27,2
07.08.2020	DOG20-31	Ku	16:08	off ground	55° 06,150' N	002° 54,518' E	32,8
07.08.2020	DOG20-30	Ha	16:55		55° 12,285' N	002° 55,774' E	31
07.08.2020	DOG20-30	CTD	17:02		55° 12,303' N	002° 55,816' E	31
07.08.2020	DOG20-30	Rd	17:07	on ground	55° 12,308' N	002° 55,846' E	31,1
07.08.2020	DOG20-30	Rd	17:14	off ground	55° 12,468' N	002° 56,138' E	32,9
07.08.2020	DOG20-30	Ku	17:30	on ground	55° 12,095' N	002° 55,645' E	31,1
07.08.2020	DOG20-30	Ku	17:55	off ground	55° 12,441' N	002° 56,602' E	34
08.08.2020	DOG20-29	Ha	06:01		55° 07,771' N	002° 40,384' E	29
08.08.2020	DOG20-29	CTD	06:08		55° 07,779' N	002° 40,484' E	28,8
08.08.2020	DOG20-29	Rd	06:15	on ground	55° 07,772' N	002° 40,392' E	29
08.08.2020	DOG20-29	Rd	06:20	off ground	55° 07,860' N	002° 40,581' E	29
08.08.2020	DOG20-29	Ku	06:31	on ground	55° 07,860' N	002° 40,525' E	28,8
08.08.2020	DOG20-29	Ku	06:59	off ground	55° 08,157' N	002° 39,162' E	31

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Date	Station	Device	Time	Event	Lat	Long	Depth [m]
08.08.2020	DOG20-28	CTD	07:59		55° 00,185' N	002° 37,611' E	29,3
08.08.2020	DOG20-28	Rd	08:05	on ground	55° 00,180' N	002° 37,475' E	29,4
08.08.2020	DOG20-28	Rd	08:10	off ground	55° 00,233' N	002° 37,320' E	29,4
08.08.2020	DOG20-28	Ku	08:22	on ground	55° 00,061' N	002° 37,612' E	29,4
08.08.2020	DOG20-28	Ku	08:51	off ground	55° 00,239' N	002° 35,901' E	29,2
08.08.2020	DOG20-21	Ha	09:47		54° 52,583' N	002° 36,189' E	25,1
08.08.2020	DOG20-21	CTD	09:55		54° 52,595' N	002° 36,187' E	25,3
08.08.2020	DOG20-21	Rd	09:59	on ground	54° 52,587' N	002° 36,108' E	25
08.08.2020	DOG20-21	Rd	10:09	off ground	54° 52,648' N	002° 35,926' E	25,2
08.08.2020	DOG20-21	Ku	10:15	on ground	54° 52,546' N	002° 36,277' E	25,4
08.08.2020	DOG20-21	Ku	10:44	off ground	54° 52,106' N	002° 34,711' E	26
08.08.2020	DOG20-22	Ha	11:30		54° 46,207' N	002° 32,483' E	24,7
08.08.2020	DOG20-22	Ha	11:35		54° 46,214' N	002° 32,486' E	24,6
08.08.2020	DOG20-22	CTD	11:40		54° 46,264' N	002° 32,520' E	24,6
08.08.2020	DOG20-22	Rd	11:45	on ground	54° 46,179' N	002° 32,405' E	24,4
08.08.2020	DOG20-22	Rd	11:51	off ground	54° 46,082' N	002° 32,203' E	24,4
08.08.2020	DOG20-22	Ku	12:04	on ground	54° 46,325' N	002° 32,833' E	24,4
08.08.2020	DOG20-22	Ku	12:31	off ground	54° 45,549' N	002° 31,612' E	23
08.08.2020	DOG20-15	Ha	13:19		54° 39,857' N	002° 28,978' E	21,1
08.08.2020	DOG20-15	CTD	13:23		54° 39,840' N	002° 28,951' E	21,2
08.08.2020	DOG20-15	Rd	13:29	on ground	54° 39,829' N	002° 28,928' E	21,4
08.08.2020	DOG20-15	Rd	13:34	off ground	54° 39,735' N	002° 28,680' E	21,1
08.08.2020	DOG20-15	Ku	13:53	on ground	54° 40,217' N	002° 29,663' E	21,3
08.08.2020	DOG20-15	Ku	14:19	off ground	54° 39,720' N	002° 28,174' E	20,6
08.08.2020	DOG20-12	Ha	15:38		54° 41,773' N	002° 12,199' E	25,3
08.08.2020	DOG20-12	CTD	15:43		54° 41,775' N	002° 12,160' E	25,5
08.08.2020	DOG20-12	Rd	15:50	on ground	54° 41,697' N	002° 12,117' E	26,1
08.08.2020	DOG20-12	Rd	15:56	off ground	54° 41,846' N	002° 11,820' E	26,8
08.08.2020	DOG20-12	Ku	16:11	on ground	54° 41,522' N	002° 12,793' E	24,2
08.08.2020	DOG20-12	Ku	16:36	off ground	54° 42,119' N	002° 11,353' E	26,5
10.08.2020	DOG20-16	Ha	06:11		54° 47,533' N	002° 19,386' E	23,4
10.08.2020	DOG20-16	Ha	06:16		54° 47,546' N	002° 19,451' E	23,5
10.08.2020	DOG20-16	CTD	06:22		54° 47,541' N	002° 19,383' E	23,3
10.08.2020	DOG20-16	Rd	06:26	on ground	54° 47,556' N	002° 19,356' E	23,2
10.08.2020	DOG20-16	Rd	06:32	off ground	54° 47,611' N	002° 19,431' E	23,1
10.08.2020	DOG20-16	Ku	06:42	on ground	54° 47,375' N	002° 19,009' E	23,1

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Date	Station	Device	Time	Event	Lat	Long	Depth [m]
10.08.2020	DOG20-16	Ku	07:08	off ground	54° 48,246' N	002° 19,869' E	23,8
10.08.2020	DOG20-20	Ha	08:20		54° 56,222' N	002° 19,748' E	29,1
10.08.2020	DOG20-20	Ha	08:25		54° 56,247' N	002° 19,691' E	29,1
10.08.2020	DOG20-20	Ha	08:30		54° 56,294' N	002° 19,735' E	29,1
10.08.2020	DOG20-20	Ha	08:32		54° 56,285' N	002° 19,693' E	29,1
10.08.2020	DOG20-20	Ha	08:38		54° 56,319' N	002° 19,766' E	29
10.08.2020	DOG20-20	CTD	08:43		54° 56,329' N	002° 19,822' E	29,1
10.08.2020	DOG20-20	Rd	08:48	on ground	54° 56,345' N	002° 19,786' E	29,2
10.08.2020	DOG20-20	Rd	08:54	off ground	54° 56,452' N	002° 19,995' E	28,9
10.08.2020	DOG20-20	Ku	09:06	on ground	54° 56,234' N	002° 19,765' E	29
10.08.2020	DOG20-20	Ku	09:31	off ground	54° 56,932' N	002° 21,029' E	30
10.08.2020	DOG20-18	Ha	10:41		54° 56,321' N	002° 05,648' E	29
10.08.2020	DOG20-18	Ha	10:46		54° 59,372' N	002° 05,656' E	29
10.08.2020	DOG20-18	CTD	10:52		54° 59,391' N	002° 05,655' E	29,2
10.08.2020	DOG20-18	Rd	10:56	on ground	54° 59,401' N	002° 05,616' E	29,1
10.08.2020	DOG20-18	Rd	11:01	off ground	54° 59,520' N	002° 05,655' E	30
10.08.2020	DOG20-18	Ku	11:10	on ground	54° 59,356' N	002° 05,522' E	30
10.08.2020	DOG20-18	Ku	11:36	off ground	55° 00,270' N	002° 04,791' E	31,5
10.08.2020	DOG20-17	Ha	12:53		54° 50,983' N	002° 04,942' E	24,4
10.08.2020	DOG20-17	CTD	12:57		54° 51,000' N	002° 04,919' E	24,3
10.08.2020	DOG20-17	Rd	13:04	on ground	54° 50,993' N	002° 04,887' E	23,7
10.08.2020	DOG20-17	Rd	13:11	off ground	54° 51,211' N	002° 05,028' E	23,4
10.08.2020	DOG20-17	Ku	13:25	on ground	54° 50,722' N	002° 04,639' E	24
10.08.2020	DOG20-17	Ku	13:51	off ground	54° 51,555' N	002° 05,601' E	23,5
10.08.2020	DOG20-11	CTD	14:45		54° 45,310' N	002° 00,272' E	32,4
10.08.2020	DOG20-11	Rd	14:52	on ground	54° 45,251' N	002° 00,147' E	33,9
10.08.2020	DOG20-11	Rd	14:59	off ground	54° 45,506' N	002° 00,272' E	32,2
10.08.2020	DOG20-11	Ku	15:15	on ground	54° 44,950' N	002° 00,042' E	32,7
10.08.2020	DOG20-11	Ku	15:40	off ground	54° 45,866' N	002° 00,748' E	29,2
10.08.2020	DOG20-03	Ha	17:08		54° 36,473' N	001° 54,508' E	23,2
10.08.2020	DOG20-03	CTD	17:13		54° 36,485' N	001° 54,465' E	22,7
10.08.2020	DOG20-03	Rd	17:20	on ground	54° 36,430' N	001° 54,555' E	23,2
10.08.2020	DOG20-03	Rd	17:25	off ground	54° 36,593' N	001° 54,666' E	23,1
10.08.2020	DOG20-03	Ku	17:37	on ground	54° 36,131' N	001° 54,259' E	21,6
10.08.2020	DOG20-03	Ku	18:03	off ground	54° 36,929' N	001° 55,303' E	24,6
11.08.2020	DOG20-05	Ha	06:10		54° 37,091' N	001° 41,663' E	24,5

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Date	Station	Device	Time	Event	Lat	Long	Depth [m]
11.08.2020	DOG20-05	CTD	06:15		54° 37,104' N	001° 41,621' E	24,8
11.08.2020	DOG20-05	Rd	06:20	on ground	54° 37,153' N	001° 41,628' E	24,5
11.08.2020	DOG20-05	Rd	06:24	off ground	54° 37,216' N	001° 41,748' E	23,8
11.08.2020	DOG20-05	Ku	06:35	on ground	54° 37,137' N	001° 41,613' E	25
11.08.2020	DOG20-05	Ku	07:04	off ground	54° 37,810' N	001° 42,892' E	21
11.08.2020	DOG20-06	CTD	08:05		54° 45,464' N	001° 43,836' E	26,4
11.08.2020	DOG20-06	Rd	08:10	on ground	54° 45,496' N	001° 43,816' E	26,5
11.08.2020	DOG20-06	Rd	08:15	off ground	54° 45,616' N	001° 44,002' E	24,7
11.08.2020	DOG20-06	Ku	08:27	on ground	54° 45,480' N	001° 43,806' E	26
11.08.2020	DOG20-06	Ku	08:55	off ground	54° 46,359' N	001° 44,735' E	26
11.08.2020	DOG20-10	CTD	10:01		54° 55,222' N	001° 46,623' E	27,3
11.08.2020	DOG20-10	Rd	10:06	on ground	54° 55,272' N	001° 46,537' E	27
11.08.2020	DOG20-10	Rd	10:11	off ground	54° 55,396' N	001° 46,422' E	27
11.08.2020	DOG20-10	Ku	10:22	on ground	54° 55,339' N	001° 46,490' E	27
11.08.2020	DOG20-10	Ku	10:50	off ground	54° 56,240' N	001° 45,691' E	27,5
11.08.2020	DOG20-09	CTD	11:34		54° 59,249' N	001° 37,607' E	31,1
11.08.2020	DOG20-09	Rd	11:40	on ground	54° 59,341' N	001° 37,493' E	30,6
11.08.2020	DOG20-09	Rd	11:46	off ground	54° 59,508' N	001° 37,399' E	31
11.08.2020	DOG20-09	Ku	12:03	on ground	54° 59,234' N	001° 37,545' E	31
11.08.2020	DOG20-09	Ku	12:32	off ground	55° 00,134' N	001° 36,444' E	29,2
11.08.2020	DOG20-08	Ha	14:01		54° 54,113' N	001° 18,931' E	31,2
11.08.2020	DOG20-08	Ha	14:07		54° 54,130' N	001° 18,935' E	31,2
11.08.2020	DOG20-08	Ha	14:13		54° 54,136' N	001° 18,938' E	31,2
11.08.2020	DOG20-08	CTD	14:21		54° 54,118' N	001° 18,956' E	31,3
11.08.2020	DOG20-08	Rd	14:25	on ground	54° 54,057' N	001° 19,126' E	30,8
11.08.2020	DOG20-08	Rd	14:31	off ground	54° 54,035' N	001° 19,488' E	29,5
11.08.2020	DOG20-08	Ku	14:44	on ground	54° 54,089' N	001° 18,636' E	31,8
11.08.2020	DOG20-08	Ku	15:10	off ground	54° 54,175' N	001° 20,578' E	29
11.08.2020	DOG20-07	Ha	16:09		54° 47,852' N	001° 26,370' E	25,8
11.08.2020	DOG20-07	CTD	16:14		54° 47,847' N	001° 26,356' E	26,3
11.08.2020	DOG20-07	Rd	16:22	on ground	54° 47,862' N	001° 26,016' E	26,4
11.08.2020	DOG20-07	Rd	16:28	off ground	54° 47,884' N	001° 26,340' E	26,2
11.08.2020	DOG20-07	Ku	16:38	on ground	54° 47,932' N	001° 26,952' E	26,3
11.08.2020	DOG20-07	Ku	17:04	off ground	54° 47,978' N	001° 28,777' E	23,8
11.08.2020	DOG20-04	CTD	19:59		54° 29,273' N	001° 51,629' E	20
11.08.2020	DOG20-04	Rd	20:04	on ground	54° 29,396' N	001° 51,614' E	19,1

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Date	Station	Device	Time	Event	Lat	Long	Depth [m]
11.08.2020	DOG20-04	Rd	20:08	off ground	54° 29,503' N	001° 51,640' E	19,6
11.08.2020	DOG20-04	Ku	20:19	on ground	54° 29,290' N	001° 51,509' E	19,6
11.08.2020	DOG20-04	Ku	20:49	off ground	54° 30,264' N	001° 51,995' E	20,9
12.08.2020	DOG20-13	Ha	06:08		54° 27,031' N	002° 15,850' E	17
12.08.2020	DOG20-13	CTD	06:13		54° 27,007' N	002° 16,009' E	17,6
12.08.2020	DOG20-13	Rd	06:18	on ground	54° 27,032' N	002° 16,111' E	17,5
12.08.2020	DOG20-13	Rd	06:22	off ground	54° 27,051' N	002° 16,256' E	17,3
12.08.2020	DOG20-13	Ku	06:33	on ground	54° 27,061' N	002° 15,670' E	17,4
12.08.2020	DOG20-13	Ku	07:00	off ground	54° 27,269' N	002° 17,341' E	17,3
12.08.2020	DOG20-14	Ha	08:59		54° 30,915' N	002° 40,339' E	24
12.08.2020	DOG20-14	CTD	09:03		54° 30,931' N	002° 40,338' E	24
12.08.2020	DOG20-14	Rd	09:08	on ground	54° 31,014' N	002° 40,362' E	24
12.08.2020	DOG20-14	Rd	09:13	off ground	54° 31,105' N	002° 40,445' E	23,8
12.08.2020	DOG20-14	Ku	09:21	on ground	54° 31,129' N	002° 40,337' E	24,1
12.08.2020	DOG20-14	Ku	09:50	off ground	54° 32,101' N	002° 40,737' E	24,5
12.08.2020	DOG20-23	Ha	11:29		54° 45,086' N	002° 45,791' E	21
12.08.2020	DOG20-23	CTD	11:33		54° 45,078' N	002° 45,827' E	21
12.08.2020	DOG20-23	Rd	11:38	on ground	54° 45,119' N	002° 45,918' E	21
12.08.2020	DOG20-23	Rd	11:42	off ground	54° 45,206' N	002° 46,054' E	21
12.08.2020	DOG20-23	Ku	11:52	on ground	54° 45,043' N	002° 45,797' E	21,1
12.08.2020	DOG20-23	Ku	12:18	off ground	54° 45,927' N	002° 46,667' E	21,4
12.08.2020	DOG20-26	Ha	12:57		54° 50,717' N	002° 47,810' E	21,8
12.08.2020	DOG20-26	CTD	13:02		54° 50,742' N	002° 47,820' E	22,4
12.08.2020	DOG20-26	Rd	13:06	on ground	54° 50,726' N	002° 48,003' E	22,6
12.08.2020	DOG20-26	Rd	13:11	off ground	54° 50,676' N	002° 48,315' E	22,6
12.08.2020	DOG20-26	Ku	13:27	on ground	54° 50,881' N	002° 47,322' E	21,8
12.08.2020	DOG20-26	Ku	13:53	off ground	54° 50,875' N	002° 49,091' E	21,8
12.08.2020	DOG20-25	CTD	14:59		54° 49,269' N	003° 03,549' E	31,3
12.08.2020	DOG20-25	Rd	15:04	on ground	54° 49,270' N	003° 03,742' E	30,8
12.08.2020	DOG20-25	Rd	15:11	off ground	54° 49,290' N	003° 04,071' E	31,9
12.08.2020	DOG20-25	Ku	15:25	on ground	54° 49,269' N	003° 03,647' E	31
12.08.2020	DOG20-25	Ku	15:51	off ground	54° 49,729' N	003° 05,352' E	31,8
12.08.2020	DOG20-34	CTD	18:28		55° 06,689' N	003° 28,582' E	28
12.08.2020	DOG20-34	Rd	18:34	on ground	55° 06,806' N	003° 28,627' E	28
12.08.2020	DOG20-34	Rd	18:40	off ground	55° 06,955' N	003° 28,762' E	29
12.08.2020	DOG20-34	Ku	18:50	on ground	55° 06,832' N	003° 28,629' E	28

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Date	Station	Device	Time	Event	Lat	Long	Depth [m]
12.08.2020	DOG20-34	Ku	19:19	off ground	55° 07,706' N	003° 29,489' E	27,6