



RV Aranda

CRUISE PLAN

COMBINE 1 leg 2, 1/2022

21. - 30.1.2022

Description of the cruise

The COMBINE 1 2nd leg winter cruise is based on the HELCOM COMBINE monitoring programme. Sampling and analysis on hydrography and water chemistry will be conducted. In addition, oil and toxic samples in sediments will also be taken. Further, SYKE hydrophones in order to monitor underwater noise will be moored. Maintenance of wave buoys of FMI in the Northern Baltic Proper and in the Bothnian Sea will be carried out. Additionally, studies on ice cover will be conducted by using instruments and devices to measure characteristics of ice in the Bothnian Bay.

Scientific staff:

Chief scientist:	Kotilainen Pekka	SYKE	21.01.2022 - 30.01.2022
CTD chief:		IL	21.01.2022 - 30.01.2022
Chief chemist:		SYKE	21.01.2022 - 30.01.2022
		SYKE	21.01.2022 - 30.01.2022
		SYKE	21.01.2022 - 30.01.2022
		FMI	21.01.2022 - 30.01.2022
		FMI	21.01.2022 - 30.01.2022
		SYKE	21.01.2022 - 30.01.2022
		SYKE	21.01.2022 - 30.01.2022
		SYKE	21.01.2022 - 30.01.2022
		FMI	21.01.2022 - 30.01.2022
		AALTO	21.01.2022 - 30.01.2022

Altogether 12 persons in scientific staff.

Departure from: HANKO

Departure time: Friday 21.01.2022 at 19:00

Cruising speed: 10.0 knots

Average station time: 2 h 0 min.

Arrival to: HELSINKI

Arrival time: Sunday 30.01.2022 at 12:21

Duration of the cruise: 8 days 17 h 21 min

Length of the cruise: 1228.61 nautical miles

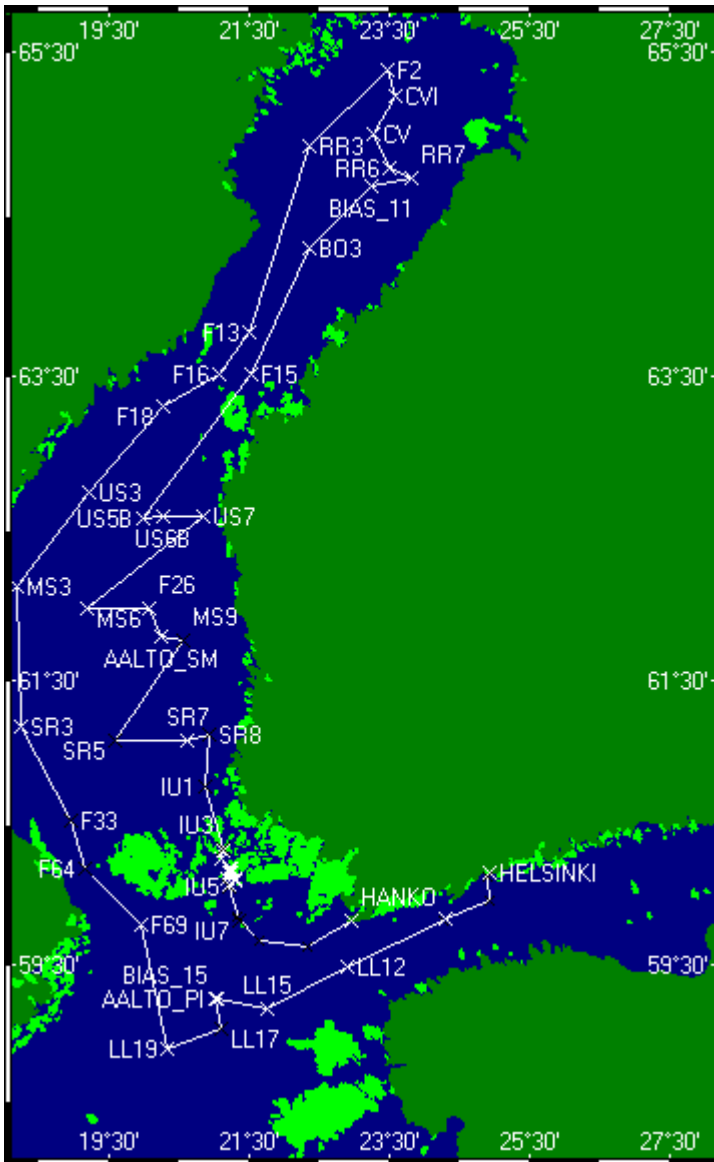
Number of stations 38. Points with name "P" are just route points without observations.

Route:

Nro	Station	Lat.	Long.	Depth		Arrival		Durat.	Speed
				[m]	hh:mm	dy	dd.mm.yyyy		
0	HANKO	59°49.01'	22°56.81'	0	19:00	Fr	21.01.2022	0:00	S 10.0
1	P	59°38.08'	22°19.64'	-	21:10	Fr	21.01.2022	0:00	S 10.0
2	P	59°40.58'	21°38.45'	-	23:15	Fr	21.01.2022	0:00	S 10.0
3	P	59°50.54'	21°18.68'	-	00:40	Sa	22.01.2022	0:00	S 10.0
4	IU7	59°48.91'	21°20.20'	92	00:51	Sa	22.01.2022	2:00	S 10.0
5	IU5	60°03.49'	21°11.90'	89	04:22	Sa	22.01.2022	2:00	S 10.0
6	P	60°04.55'	21°12.80'	-	06:29	Sa	22.01.2022	0:00	S 10.0
7	P	60°06.25'	21°17.20'	-	06:45	Sa	22.01.2022	0:00	S 10.0
8	P	60°06.68'	21°09.68'	-	07:08	Sa	22.01.2022	0:00	S 10.0
9	P	60°07.00'	21°18.00'	-	07:33	Sa	22.01.2022	0:00	S 10.0
10	P	60°09.20'	21°12.75'	-	07:53	Sa	22.01.2022	0:00	S 10.0
11	P	60°09.40'	21°13.75'	-	07:57	Sa	22.01.2022	0:00	S 10.0
12	P	60°11.10'	21°13.80'	-	08:07	Sa	22.01.2022	0:00	S 10.0
13	P	60°11.30'	21°12.40'	-	08:11	Sa	22.01.2022	0:00	S 10.0
14	P	60°15.60'	21°05.50'	-	08:44	Sa	22.01.2022	0:00	S 10.0
15	P	60°15.60'	21°05.50'	-	08:44	Sa	22.01.2022	0:00	S 10.0
16	P	60°19.20'	21°06.25'	-	09:06	Sa	22.01.2022	0:00	S 10.0
17	P	60°19.40'	21°05.50'	-	09:08	Sa	22.01.2022	0:00	S 10.0
18	IU3	60°20.00'	21°06.80'	48	09:14	Sa	22.01.2022	1:00	S 10.0
19	IU1	60°46.01'	20°50.80'	33	12:57	Sa	22.01.2022	1:00	S 10.0
20	SR8	61°07.59'	20°55.80'	46	16:07	Sa	22.01.2022	1:00	S 10.0
21	SR7	61°05.01'	20°35.79'	78	18:07	Sa	22.01.2022	2:00	S 10.0
22	SR5	61°05.00'	19°34.78'	126	23:04	Sa	22.01.2022	2:00	S 10.0
23	MS9	61°46.01'	20°31.83'	101	06:00	Su	23.01.2022	2:00	S 10.0
24	AALTO_SM	61°48.00'	20°14.00'	110	08:52	Su	23.01.2022	2:00	S 10.0
25	F26	61°59.01'	20°03.78'	140	12:04	Su	23.01.2022	2:30	S 10.0
26	MS6	61°59.02'	19°09.81'	72	17:06	Su	23.01.2022	2:00	S 10.0

27	US7	62°36.01'	20°49.78'	23	01:02	Mo	24.01.2022	1:00	S	10.0
28	US6B	62°36.01'	20°15.78'	83	03:36	Mo	24.01.2022	1:00	S	10.0
29	US5B	62°35.17'	19°58.13'	214	05:25	Mo	24.01.2022	2:00	S	10.0
30	F15	63°31.01'	21°30.78'	49	14:24	Mo	24.01.2022	2:00	S	10.0
31	BO3	64°18.12'	22°20.59'	109	21:36	Mo	24.01.2022	2:00	S	10.0
32	BIAS_11	64°41.11'	23°14.33'	?	02:52	Tu	25.01.2022	6:00	S	10.0
33	RR7	64°44.02'	23°48.77'	39	10:22	Tu	25.01.2022	2:00	S	10.0
34	RR6	64°48.02'	23°28.77'	86	13:18	Tu	25.01.2022	2:00	S	10.0
35	CV	65°00.02'	23°14.77'	89	16:38	Tu	25.01.2022	2:00	S	10.0
36	CVI	65°14.02'	23°33.77'	71	20:15	Tu	25.01.2022	2:00	S	10.0
37	F2	65°23.02'	23°27.76'	91	23:11	Tu	25.01.2022	2:00	S	10.0
38	RR3	64°56.02'	22°20.76'	96	05:05	We	26.01.2022	2:00	S	10.0
39	F13	63°47.01'	21°28.77'	65	14:21	We	26.01.2022	2:00	S	10.0
40	F16	63°31.01'	21°03.77'	45	18:18	We	26.01.2022	2:00	S	10.0
41	F18	63°18.86'	20°16.36'	105	22:44	We	26.01.2022	2:00	S	10.0
42	US3	62°45.53'	19°11.74'	182	05:11	Th	27.01.2022	2:00	S	10.0
43	MS3	62°08.07'	18°09.78'	84	11:54	Th	27.01.2022	2:00	S	10.0
44	SR3	61°11.00'	18°13.80'	72	19:36	Th	27.01.2022	2:00	S	10.0
45	F33	60°31.99'	18°56.26'	135	02:01	Fr	28.01.2022	2:00	S	10.0
46	F64	60°11.34'	19°08.55'	285	06:10	Fr	28.01.2022	3:30	S	10.0
47	F69	59°47.00'	19°55.80'	189	13:04	Fr	28.01.2022	2:00	S	10.0
48	LL19	58°52.84'	20°18.65'	169	20:36	Fr	28.01.2022	2:00	S	10.0
49	LL17	59°02.00'	21°04.77'	171	01:09	Sa	29.01.2022	8:00	S	10.0
50	AALTO_PI	59°15.00'	20°59.81'	98	10:29	Sa	29.01.2022	2:00	S	10.0
51	BIAS_15	59°15.00'	21°00.98'	90	12:32	Sa	29.01.2022	6:00	S	10.0
52	LL15	59°11.00'	21°44.81'	126	20:49	Sa	29.01.2022	2:00	S	10.0
53	LL12	59°29.01'	22°53.81'	82	02:46	Su	30.01.2022	1:30	S	10.0
54	P	59°48.69'	24°15.08'	-	08:49	Su	30.01.2022	0:00	S	10.0
55	P	59°50.05'	24°18.09'	-	09:01	Su	30.01.2022	0:00	S	10.0
56	P	59°57.15'	24°54.52'	-	10:59	Su	30.01.2022	0:00	S	10.0
57	P	60°07.85'	24°52.87'	-	12:03	Su	30.01.2022	0:00	S	10.0
58	P	60°09.87'	24°55.91'	-	12:19	Su	30.01.2022	0:00	S	10.0
59	HELSINKI	60°09.55'	24°55.37'	0	12:21	Su	30.01.2022	2:00	S	10.0

Route map:



Cruise plan is printed at 12.01.2022 11:29.