TARTU ÜLIKOOLI EESTI VEEKOGUDE UURIMISE
KOMISJONI VÄLJAANNE NR. 22.

THE THALASSOLOGICAL CRUISES IN THE ESTONIAN SEAS IN 1931, 1932, 1933, 1934

K. KIRDE

TARTU 1935

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„Varrak'u" trükk Tartus, Rüütli 24. 1935.

The Thalassological Observations in 1931.

The following hydrological observations were made by the author with the assistance of Mr. J. Limberg, stud. math., in August and September, 1931, from s.s. "Sekstant", belonging to the Department of Waterways in Estonia.

The time, geographical coordinates, and depths of the observation points are given in Table 1.

Table 1.

3	10. IX	10^h55^m	$\varphi = 59^0 52'$	$\lambda = 26^0 17'$	91 m
4	9. „	14 15	59 50	25 37	83
5	„ „	09 07	59 43	25 01	102
6	21. VIII	13 25	59 36.5	24 21	81
7	„ „	16 30	59 30	23 44	82
8	„ „	19 20	59 26	23 09	103
9 A	22. „	07 00	59 05	23 01	18
9	6. IX.	19 05	59 14	22 11	74
10	„ „	16 40	59 05	21 52	138
11	„ „	14 00	58 54.5	21 14	135
12	5. „	15 50	58 30.5	21 13	90
13	„ „	12 30	58 16	21 00	90
14	1. „	12 22	57 53	21 32	60
15	„ „	10 35	57 42	21 56	26
16	31. VIII.	14 36	57 55	22 32	24
17	29. „	15 52	57 52	23 16	40
18	„ „	09 33	57 55	23 50	33
19	„ „	07 30	58 04	24 12	19
20	26. „	09 50	58 18	24 25	8
21	25 „	19 20	58 10	23 40	28
22	„ „	12 25	58 33.5	23 28	21
23	„ „	08 48	58 49	23 13	8
24	22 „	11 20	59 03	23 04	41

Table 2 gives the temperature, salinity, density, depths in metres, and the metcorological data obtained at the corresponding observation points.

At the bottom of each table the following meteorological data are given: direction of the wind, force of the wind (m. sec), air temperature (T^0), relative humidity (R), motion of the sea (0—9), and cloudiness ($C = {}^0/_{10} - {}^{10}/_{10}$).

Table 3 gives the amount of oxygen (Winkler's method), the alkalinity (Rupin's method) and the pressure of carbonic acid determined after the cruise at the laboratory in Tartu by means of Krogh's apparatus[1]).

O'_2 means the amount of oxygen on saturation, O_2 — the obtained oxygen, both in cc per litre. A is the alkalinity in cc per litre. In the following column Θ_1 means the CO_2 determined in 10^{-4} athm. The next column shows the corrected value of CO_2:

$$\Theta_{t_0} = \Theta_t \frac{B - f}{760.}$$

The last columns contain the temperature *in situ* and the real CO_2 pressure calculated from the formula:

$$\Theta_t = (\Theta_{t_0} - c_{t_0}) \frac{\alpha t_1}{\alpha t} + c_t.$$

Table 4 gives the temperature and the salinity at the surface between the observation points.

Table 5 gives the observations of the transparency: m means the depths in metres at which the white enamelled round plate 60 cm in diameter was noticeable from the surface.

The drawings show the profiles in which the dotted lines represent the isoterms, and the continuous lines — the distribution of salinity in ${}^0/_{00}$.

1) The Ocean Waters. By. B. Helland-Hansen. Intern. Revue d. Gesamten Hydrobiologie und Hydrographie. Nr. 5—6 Juli 1923.

Table 2.

Temperature (t^0), salinity ($S^0/_{00}$), density *in situ* (σ_t) of sea water at the depth of m metres in summer 1931.

P. 3; 1931 10.IX. $10^h\ 55^m$
$\varphi = 59^0 52'$, $\lambda = 26^0 17'$, 91 m.

m	t^0	$S^0/_{00}$	σt
0	13.78	4.78	3.03
5	13.68	4.74	3.01
10	13.68	4.78	3.04
20	13.65	4.96	3.19
30	7.62	5.72	4.43
35	6.22	5.81	4.59
40	5.20	5.99	4.78
50	3.45	6.37	5.13
60	2.82	7.30	5.89
70	2.75	7.32	5.90
80	2.68	7.48	6.02
85	2.74	7.41	5.97

SW 9.6, T = 12.4°, R = 64% S = 4, C = 7/10

P. 4; 1931 9. IX. $14^h\ 15^m$
$\varphi = 59^0 50'$, $\lambda = 25^0 37'$, 83m.

m	t^0	$S^0/_{00}$	σt
0	14.37	5.30	3.34
5	14.35	5.26	3.31
10	14.34	5.28	3.33
20	14.25	5.32	3.38
30	9.00	5.72	4.32
35	7.72	5.88	4.55
40	6.45	6.09	4.81
50	3.04	6.85	5.52
60	2.90	7.21	5.81
70	2.64	7.41	5.96

WSW 9.9; T = 12.4°; R = 60% S = 4, C = 10/10.

P. 5; 1931 9. IX. $9^h\ 07^m$
$\varphi = 59^0 43'$, $\lambda = 25^0 01'$, 102 m.

m	t^0	$S^0/_{00}$	σt
0	14.38	5.75	3.69
5	14.30	5.77	3.71
10	14.25	5.82	3.77
20	14.20	5.70	3.68
30	13.63	6.00	3.99
35	8.12	5.93	4.57
40	5.55	6.04	4.81
50	4.10	6.47	5.20
60	2.47	7.16	5.77
70	2.78	7.90	6.36
80	2.98	8.30	6.68
90	3.05	8.46	6.80
100	3.09	8.44	5.78

W 8.8, T = 11.8°, R = 51% S = 4, C = 9/10.

P. 6; 1931 21.VIII. $13^h\ 25^m$
$\varphi = 59^0 36'.5$, $\lambda = 24^0 21'$, 81 m.

m	t^0	$S^0/_{00}$	σt
0	17.60	6.17	3.45
5	17.63	6.17	3.44
10	17.61	6.17	3.45
20	16.65	6.28	3.70
30	16.12	6.17	3.72
35	8.87	6.17	4.69
40	7.25	6.31	4.93
50	3.20	6.82	5.49
60	2.33	7.23	5.83
70	2.82	8.03	6.46
80	2.72	8.01	6.44

SSE 8.4, T = 16.1°, R = 89% S = 4, C = 10/10

P. 7; 1931 21.VIII. $16^h\ 30^m$
$\varphi = 59^0 30'$, $\lambda = 23^0 44'$, 82 m.

m	t^0	$S^0/_{00}$	σt
0	17.54	6.26	3.53
5	17.46	6.22	3.51
10	17.15	6.22	3.57
20	16.10	6.35	3.86
30	12.65	6.24	4.31
40	6.74	6.28	4.93
50	4.34	6.60	5.30
60	2.68	6.96	5.61
70	2.24	7.56	6.08
80	3.65	9.07	7.28

SSW 7.6, T = 17.9°, R = 76% S = 3, C = 10/10

P. 8; 1931 21.VIII. $19^h\ 20^m$
$\varphi = 59^0 26'$, $\lambda = 23^0 09'$, 103 m.

m	t^0	$S^0/_{00}$	σt
0	17.15	6.42	3.72
5	17.18	6.46	3.75
10	17.15	6.46	3.75
20	16.12	6.42	3.91
30	13.72	6.64	4.47
40	9.20	6.56	4.97
50	3.25	6.74	5.43
60	2.18	6.93	5.58
70	2.62	8.10	6.52
80	4.04	9.54	7.64
90	4.20	9.78	7.82
100	4.35		

SSW 7.6, T = 17.0°, R = 82% S = 3, C = 10/10

P. 9A; 1931 22.VIII. $7^h\ 00^m$
$\varphi = 59^0 05'$, $\lambda = 23^0 01'$, 18 m.

m	t^0	$S^0/_{00}$	σt
0	17.52	6.06	3.38
5	17.50	6.09	3.41
10	17.31	6.33	3.63
15	16.38	6.46	3.89

NE 2.9, T = 16.2°, R = 87% S = 1, C = 10/10

P. 9; 1931 6. IX. $19^h\ 05^m$
$\varphi = 59^0 14'$, $\lambda = 22^0 11'$, 74 m.

m	t^0	$S^0/_{00}$	σt
0	14.65	6.47	4.20
5	14.61	6.49	4.22
10	14.54	6.49	4.23
20	14.25	6.53	4.31
30	12.52	6.58	4.60
35	9.20	6.55	4.95
40	6.12	6.76	5.36
50	2.72	7.00	5.64
60	2.70	7.41	5.97
70	2.75	8.03	6.46

WSW 7.7, T = 12.1°, R = 95% S = 4, C = 10/10, ●

P. 10; 1931. 6. IX. 16h 40m
φ=59°05′, λ=21°52′, 138 m.

m	t°	S‰	σt
0	14.52	6.73	4.42
5	14.65	6.62	4.31
10	14.62	6.64	4.33
20	14.55	6.60	4.32
30	13.77	6.64	4.47
35	11.35	6.85	4.96
40	8.76	6.87	5.24
50	5.20	7.05	5.62
60	3.62	7.45	5.98
70	3.04	8.24	6.63
80	3.94	9.52	7.63
90	4.24	9.89	7.90
100	4.40	10.14	8.10
110	4.95	10.16	8.09
120	4.50	10.30	8.23
130	4.55	10.25	8.18

W 8.3, T=13.5°, R=84%
S=4, C=10/10, ●

P. 11; 1931 6. IX. 14h 00m
φ=58°54.5′, λ=21°14′, 135 m

m	t°	S‰	σt
0	14.95	6.65	4.29
5	14.90	6.69	4.33
10	14.90	6.65	4.30
20	14.89	6.62	4.27
30	13.45	6.74	4.59
35	7.48	6.71	5.22
40	3.90	6.82	5.48
50	2.62	7.05	5.68
60	2.15	7.39	5.96
70	2.60	8.26	6.65
80	4.10	9.61	7.69
90	4.33	9.85	7.87
100	4.50	9.94	7.94
110	4.46	10.08	8.05
120	4.54	10.34	8.26
130	4.64	10.41	8.30

W 4.0, T=13.0°, R=84%
S=4, C=10/10

P. 12; 1931 5. IX. 15h 50m
φ=58°30.5′, λ=21°13′, 90 m

m	t°	S‰	σt
0	14.68	6.65	4.33
5	14.66	6.60	4.30
10	14.66	6.62	4.31
20	14.69	6.60	4.29
25	13.32	6.78	4.64
30	8.32	6.94	5.34
40	3.35	7.02	5.64
50	2.70	7.20	5.80
60	2.22	7.29	5.87
70	2.62	9.87	7.93
80	4.12	9.52	7.62
85	4.25	9.72	7.78

ENE 11.8, T=14.0°, R=81%
S=7, C=10/10, ●

P. 13; 1931 5. IX. 12h 30m
φ=58°16′, λ=21°00′, 90 m.

m	t°	S‰	σt
0	14.55	6.60	4.32
5	14.55	6.60	4.32
10	14.56	6.62	4.32
20	14.56	6.71	4.39
30	13.30	6.80	4.66
35	7.72	6.93	5.38
40	3.88	7.00	5.62
50	2.76	7.18	5.78
60	2.18	7.30	5.89
70	2.70	8.08	6.50
80	4.12	9.45	7.57
85	4.19	9.38	7.50

ENE 9.6, T=13.9°, R=71%
S=6, C=10/10.

P. 14; 1931 1. IX. 12h 22m
φ=57°53′, λ=21°32′, 60 m.

m	t°	S‰	σt
0	15.80	6.74	4.21
5	15.70	6.74	4.23
10	15.67	6.74	4.23
15	15.65	6.73	4.23
20	15.56	6.78	4.28
30	15.40	6.76	4.30
35	14.25	6.85	4.55
40	5.68	7.20	5.72
50	3.23	7.41	5.96
58	3.34	7.41	5.96

SW 12.2, T=16.6°, R=85%
S=7, C=8/10.

P. 15; 1931 1. IX. 10h 35m
φ=57°42′, λ=21°56′, 26 m.

m	t°	S‰	σt
0	14.92	5.66	3.54
5	14.82	5.63	3.52
10	14.77	5.64	3.54
15	13.22	6.64	4.55
20	10.54	6.85	5.05
24	8.18	7.05	5.44

SW 8.2, T=15.6°, R=85%
S=4. C=7/10.

P. 16; 1931 31.VIII. 14h 36m
φ=57°55′, λ=22°32′, 24 m.

m	t°	S‰	σt
0	16.12	5.12	2.92
5	16.10	5.12	2.92
10	15.95	5.12	2.95
15	15.91	5.17	2.99
20	15.88	5.14	2.97
22	15.90	5.17	2.99

W 7.0, T=15.0°, R=61%
S=4, C=3/10.

P. 17; 1931 29.VIII. 15h 52m
φ=57°52′, λ=23°16′, 40 m.

m	t°	S‰	σt
0	16.53	4.78	2.58
5	16.12	4.81	2.68
10	15.85	4.83	2.74
15	11.28	5.25	3.72
20	6.56	5.41	4.26
30	5.56	5.66	4.51
38	5.25	5.72	4.56

N 4.1, T=17.3°, R=80%
S=3, C=1/10.

P. 18; 1931 29. VIII. 9h 33m
φ=57°55′, λ=23°50′, 33 m.

m	t°	S‰	σt
0	16.13	4.85	2.71
5	15.95	4.89	2.77
10	15.90	4.83	2.73
15	15.78	4.87	2.78
20	7.44	5.34	4.15
30	2.54	5.75	4.64

NNE 6.2, T=16.4°. R=70%
S=4, C=0/10

P. 19; 1931 29. VIII. 7h 30m
φ=58°04′, λ= 24°12′, 19m.

m	t°	S‰	σt
0	16.18	4.96	2.78

m	t^0	$S^0/_{00}$	σt
5	16.04	4.89	2.75
10	16.00	4.92	2.79
15	9.04	5.32	4.01
18	7.22	5.41	4.22

NNE 8.0, T=15.1^0, R=86$^0/_0$
S=4, C=$^1/_{10}$.

P.20; 1931 26.VIII. 9^h 50^m
φ=58^{0}18′, λ=24^{0}25′, 8m.

0	17.48	4.36	2.09
5	17.50	4.36	2.08
7	17.54	4.42	2.12

NNE 3.2, T=16.4^0, R=66$^0/_0$
S=2, C=$^3/_{10}$.

P.21; 1931 25.VIII. 19^h 20^m
φ=58^{0}10′, λ=23^{0}40′, 28 m

0	17.45	5.05	2.62
5	17,41	4.94	2 54
10	17.25	4.94	2.57
20	17.12	4.94	2.60
25	13.05	5.21	3.47

SE 3.7, T=17.0^0, R=63$^0/_0$,
S=2, C=$^9/_{10}$.

P.22; 1931 25.VIII. 12^h 25^m
φ=58^{0}33′.5, λ=23^{0}28′, 21 m.

0	17.14	5.05	2.68
5	17.46	4.94	2.53
10	16.97	5.03	2.69
15	16.90	5.05	2.72
19	16.87	5.03	2.71

SW 6.7, T=16.2^0, R=70$^0/_0$
S=3, C=$^5/_{10}$.

P.23; 1931 25. VIII.8^h 48^m
φ=58^{0}49′, λ=23^{0}13′, 8 m.

0	17.15	5.07	2.69
5	17.15	5.08	2.70
6	17.13	5.07	2.69

SSW 6.6, T=15.0^0, R=80$^0/_0$
S=3, C=$^3/_{10}$.

P.24; 1931 22.VIII.11^h 20^m
φ=59^{0}03′, λ=23^{0}04′, 14 m.

0	18.04	5.23	2.64
5	18.04	5.23	2.64
10	16.94	5.99	3.43
12	16.18	6.42	3.90

NE 5.2, T=16.8^0, R=88$^0/_0$
S=2, C=$^{10}/_{10}$.

Table 3.

Oxygen, Alkalinity, and Pressure of Free Carbonic Acid. 1931.

m	t	Cl‰	O'2	O2	$\frac{O_2}{O'_2}\cdot 100$	A	Pressure of CO_2 10^{-4} atm. Θ_t	Corrected CO_2 $\Theta_{t_1}=\Theta_t^1\frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta t=(\Theta_{t_1-ct_1})\frac{\alpha_{t_1}}{\alpha_t}+ct$
					P. 3; 1931. 10. IX.					
0	13.78	2.63	7.00	6.26	89.4	14.69	—	—	—	—
30	7.62	3.15	7.98	6.25	78.3	16.47	—	—	—	—
40	5.20	3.30	8.45	6.42	76.0	17.02	—	—	—	—
60	2.82	3.94	8.93	4.72	52.9	18.08	—	—	—	—
85	2.74	4.09	8.93	4.03	45.1	18.52	—	—	—	—
					P. 4; 1931. 9. IX.					
0	14.37	2.92	6.90	6.28	91.0	16.78	2.25	2.19	14	1.96
20	14.25	2.93	6.91	6.36	92.0	16.19	—	—	—	—
40	6.45	3.36	8.19	6.58	80.3	17.00	—	—	—	—
60	2.90	3.98	8.90	5.26	59.1	18.52	—	—	—	—
70	2.64	4.09	8.96	4.93	55.0	18.74	—	—	—	—
					P. 5; 1931. 9. IX.					
0	14.38	3.17	6.88	6.35	92.3	16.19	1.95	1.90	14	1.72
20	14.20	3.14	6.90	6.43	93.2	18.58	—	—	—	—
40	5.55	3.33	8.39	6.67	79.5	17.35	—	—	—	—
60	2.47	3.95	9.01	5.97	66.3	19.99	—	—	—	—
80	2.98	4.58	8.82	3.31	37.5	19.13	—	—	—	—
100	3.09	4.66	8.79	2.77	31.5	20.19	3.61	3.52	3	2.16
					P. 6; 1931. 21. VIII.					
0	17.60	3.40	6.46	6.73	104.2	18.74	1.57	1.53	18	1.62
40	7.25	3.48	8.02	7.28	90.8	16.64	2.09	2.03	7	1.46
80	2.72	4.42	8.91	3.48	39.1	20.42	4.07	3.96	3	2.46
					P. 7; 1931. 21. VIII.					
0	17.54	3.45	6.46	6.56	101.5	18.35	1.64	1.59	18	1.66
40	6.74	3.46	8.12	6.06	74.6	17.62	2.25	2.19	7	1.55
80	3.65	5.01	8.63	7.12	82 5	18.69	4.32	4.19	4	2.65
					P. 8; 1931. 21. VIII.					
0	17.15	3.54	6.51	6.87	105.5	16.49	1.44	1.40	17	1.42
20	16.12	3.54	6.63	5.99	90 3	16.75	1.71	1.67	16	1.67
40	9.20	3.62	7.66	6.94	90.6	17.30	—	—	—	—
60	2.18	3.82	9.10	7.24	79.6	17.73	2.48	2.42	2	1.46
80	4.04	5.27	8.52	1.45	17.0	19.22	—	—	—	—
100	4.35	5.46	8.43	1.21	14.4	18.63	1.50	1.46	4	0.94
					P. 9 A; 1931. 22. VIII.					
0	17.52	3.34	6.47	6.15	95.1	17.81	1.64	1.62	18	1.73

m	t	Cl‰	O'2	O2	$\frac{O_2}{O'_2}$.100	A	Pressure of CO_2 10^{-4} atlim. Θ_1	Corrected CO_2 $\Theta t_1 = \Theta_1 \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta t = (\Theta_{t_1-ct_1})^{\frac{\alpha_{t_1}}{\alpha_t}} + ct$
P. 9; 1931. 6. IX.										
0	14.65	3.57	6.82	6.49	95.2	17.35	1.80	1.76	15	1.59
20	14.25	3.60	6.87	6.35	92·4	17.55	—	—	—	—
40	6.12	3.73	8.22	7.19	87.5	17.44	—	—	—	—
60	2.70	4.09	8.94	6.54	73.2	18.69	—	—	—	—
70	2.75	4.43	8.90	5.26	59.1	18.40	3.10	3.03	3	1.82
P. 10; 1931. 6. IX.										
0	14.52	3.71	6.83	6.61	96.8	17.13	1.82	1.77	15	1.60
20	14.55	3.64	6.83	6.54	95.8	17.10	—	—	—	—
40	8.76	3.79	7.72	6.96	90.2	19.89	—	—	—	—
60	3.62	4.11	8.73	6-36	72.9	18.40	—	—	—	—
80	3.94	5.26	8.55	2.11	24.7	19.74	—	—	—	—
100	4.40	5.60	8.41	1.54	18.3	18.78	—	—	—	—
130	4.55	5.66	8.37	1.39	16.6	20.31	4.60	4.49	5	2.91
P. 11; 1931. 6. IX.										
0	14.95	3.67	6.77	6.49	95.9	17.91	1.70	1.66	15	1.52
20	14.89	3 65	6.78	6.45	95.1	18.02	—	—	—	—
40	3.90	3.76	8.69	7.53	86.7	17.02	—	—	—	—
60	2.15	4.08	9.08	6.78	74.7	18.43	—	—	—	—
80	4.10	5.31	8.51	1.89	22.2	18.89	—	—	—	—
100	4.50	5.49	8.40	1.49	17.7	19.89	—	—	—	—
130	4.64	5.75	8.35	1.39	16.6	19.47	4.49	4.42	5	2.80
P. 12; 1931. 5. IX.										
0	14.68	3.67	6.81	—	—	17.84	1.60	1.56	15	1.41
20	14.69	3.64	6.81	6.66	97.8	16.80	—	—	—	—
40	3.35	3.87	8.81	8.46	96.0	21.13	—	—	—	—
60	2.22	4.02	9.06	7.71	85.1	17.58	—	—	—	—
85	4.25	5.37	8.47	1.50	17.7	20.42	4.06	3.96	4	2.52
P. 13; 1931. 5. IX.										
0	14.55	3.64	6.83	6 81	99.7	17.57	1.58	1.54	15	1.39
20	14.56	3.70	6.82	—	—	17.64	—	—	—	—
40	3.88	3.86	8.69	8.26	95.1	17.11	1.95	1.90	4	1.17
60	2.18	4.03	9.07	7.76	85.6	17.24	—	—	—	—
85	4.19	5.18	8.50	1.82	21.4	20.13	4.39	4.32	4	2.72
P. 14; 1931. 1. IX.										
0	15.80	3.72	6.66	6.66	100.0	18.19	1.72	1.69	16	1.59
20	15.56	3.74	6.69	6.47	96.7	17.97	1.51	1.48	16	1.39
40	5.68	3.97	8.30	7.14	86.0	18.58	—	—	—	—
58	3.34	4.09	8.79	7.43	84.5	—	2.13	2.11	3	1.33

m	t	$Cl^{0}/_{00}$	O'_2	O_2	$\frac{O_2}{O'_2}.100$	A	Pressure of CO_2 10^{-4} athm. Θ_t	Corrected CO_2 $\Theta_{t_1} = \Theta_t \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t = (\Theta_{t_1} - ct_1)\frac{\alpha_{t_1}}{\alpha_t} + ct$
					P. 15; 1931. 1. IX.					
0	14.92	3.12	6.81	6.71	98.5	19.80	—	—	—	—
20	10.54	3.78	7.41	6.80	91.8	19.21	—	—	—	—
24	8.18	3.89	7.81	7.03	90.0	17.27	1.94	1,91	8	1.43
					P. 16; 1931. 31. VIII.					
0	16.12	2.82	6.67	6.54	98.1	20.02	2.17	2.14	16	2.14
22	15.90	2.85	6.70	6.36	94.9	18.93	2.23	2.20	16	2.20
					P. 17; 1931. 29. VIII.					
0	16.53	2.63	6.64	6.58	99.1	21.60	1.48	1.46	17	1.49
20	6.56	2.98	8.20	6.16	75.1	21.61	—	—	—	—
38	5.25	3.15	8.46	5.51	65.1	20.11	3.18	3.14	5	2.14
					P. 18; 1931. 29. VIII.					
0	16.13	2.67	6.68	6.40	95.8	20.24	2.40	2.37	16	2.34
30	2.54	3.17	9.07	5.77	63.6	20.82	3.39	3.34	3	2.18
					P. 19; 1931. 29. VIII.					
0	16.18	2.73	6.67	6.36	95.4	20.07	2.00	1.97	16	1.94
18	7.22	2.98	8.07	5.38	66.7	20.69	3.31	3.27	7	2.35
					P. 20; 1931. 26. VIII.					
0	17.48	2.40	6.53	6.11	93.6	21.13	2.74	2.70	17	2.80
					P. 21; 1931. 25. VIII.					
0	17.45	2.78	6.52	6.45	98.9	19.58	1.27	1.25	17	1.30
25	13.05	2.87	7.09	5.29	74.6	20.74	3.05	3.01	13	2.65
					P. 22; 1931. 25. VIII.					
0	17.14	2.78	6.55	6.26	95.6	21.43	1.24	1.22	17	1.25
19	16.87	2.77	6.59	6.07	92.1	19.58	2.20	2.17	17	2.25
					P. 23; 1931. 25. VIII.					
0	17.15	2.79	6.55	6.25	95.4	19.08	1.35	1.33	17	1.39
					P. 24; 1931. 22. VIII.					
0	18.04	2.88	6.44	6.03	93.6	20.55	1.51	1.49	18	1.63

Table 4.

Temperature and Salinity at the Surface 1931.

Date		φ	λ	t^0	$S^0/_{00}$
21. VIII. 31.	13h25m	59°36'5	24°21'	17.60	6.17
„	15 30	59 33	24 03	17.52	6.13
„	16 30	59 30	23 44	17.54	6.26
„	18 15	59 28	23 27	17.40	6.24
„	19 20	59 26	23 09	17.15	6.42
„	21 20	59 17.5	23 04	17.60	6.22
22. VIII. 31.	7 00	59 05	23 01	17.52	6.06
„	11 20	59 03	23 04	18.04	5.23
„	13 10	58 58	23 06	17.75	5.16
25. VIII. 31.	8 48	58 49	23 13	17.15	5.07
„	9 50	58 42.5	23 16	16.76	5.07
„	11 10	58 38	23 24	17.55	4 94
„	12 25	58 33.5	23 28	17.14	5.05
„	18 00	58 21.5	23 28.5	17.25	5.03
„	19 00	58 13.5	23 37	17.44	4.98
„	19 20	58 10	23 40	17.45	5.05
26. VIII. 31.	9 50	58 18	24 25	17.48	4.36
29. VIII. 31.	6 35	58 11.5	24 18	17.05	4.76
„	7 30	58 04	24 12	16.18	4 96
„	8 40	57 59	24 00	16.08	4.92
„	9 33	57 55	23 50	16.13	4.85
„	10 40	57 52.3	23 36.5	15 88	4.83
„	15 52	57 52	23 16	16.53	4.78
31. VIII. 31.	14 36	57 55	22 32	16.12	5.12
1. IX. 31.	10 35	57 42	21 56	14.92	5.66
„	12 22	57 53	21 32	15.80	6.74
5. IX. 31.	11 10	58 20	21 23	14.60	6.69
„	12 00	58 17	21 08	14.81	6.65
„	12 30	58 16	21 00	14.55	6.60
„	15 50	58 30.5	21 13	14.68	6.65
6 IX. 31.	14 00	58 54.5	21 14	14.95	6.65
„	16 00	59 02	21 35	14.71	6.55
„	16 40	59 05	21 52	14.52	6.73
„	18 20	59 09.5	22 01.5	14.65	6.64
„	19 05	59 14	22 11	14.65	6.47
„	21 00	59 16	22 31	14.62	6.37
„	22 00	59 17.7	22 53.5	14.71	6.40
„	23 00	59 19.5	23 10.5	14.52	6.29
„	24 00	59 21.5	23 26	15.05	6.29
7. IX. 31.	1 00	59 23	23 43.5	14.48	6.26
9. IX. 31.	9 07	59 43	25 01	14.38	5.75
„	14 15	59 50	27 37	14.37	5.30
10. IX. 31.	10 55	59 52	26 17	13.78	4.78

Table 5.

Observations of the Transparency 1931.

№	Date		m	Sea Motion 0—9	Cloudiness 0—10
3	10. IX. 31.	10h55m	10	4	7
4	9. IX. 31.	14 15	8	4	10
5	„	09 07	6	4	9
6	21. VIII. 31.	13 25	6	4	10
7	„	16 30	8	3	10
8	„	19 20	8	3	10
9 A	22. VIII. 31.	07 00	6	1	10
9	6. IX. 31.	19 05	8	4	10
10	„	16 40	9	4	10
11	„	14 00	9	4	10
12	5. IX. 31.	15 50	7	7	10
13	„	12 30	8	6	10
14	1. IX. 31.	12 22	7	7	8
15	„	10 35	4	4	7
16	31. VIII. 31.	14 36	4	4	3
17	29. VIII. 31.	15 52	5	3	1
18	„	09 33	6	4	0
19	„	07 30	4	4	1
20	26. VIII. 31.	09 50	2	2	3
21	25. VIII. 31.	19 20	4	2	9
22	„	12 25	3	3	5
23	„	08 48	2	3	3
24	22. VIII. 31.	11 20	4	2	10

The Thalassological Observations in 1932.

The Observations were made in August and September 1932, from s.s. "Lood", belonging to the Department of Waterways in Estonia.

The time, geographical coordinates and, depths of the observation points are given in Table 6.

Table 6.

1 A	17. IX.	10^h06^m	$\varphi = 59^0 33'$	$\lambda = 27^0 47'$	37 m
1	„ „	08 30	59 38	27 27	41
2	„ „	06 03	59 47	27 05	66
3	16. „	02 58	50 52	26 17	81
4	15. „	17 09	59 50	25 37	78
5	„ „	10 35	59 43	25 01	104
6 A	20. VIII.	09 55	59 36	24 41	83
6	„ „	07 13	59 36.5	24 21	84.5
7	19 „	14 20	59 30	23 44	90
8	„ „	11 40	59 26	23 09	97
9	16. „	17 20	59 14	22 11	120
10	„ „	14 30	59 05	21 52	128
11	„ „	11 15	58 54.5	21 14	89
12	14. „	17 30	58 30.5	21 13	98
13	„ „	14 55	58 16	21 00	72
14	„ „	11 15	57 53	21 32	60
15	„ „	09 00	57 42	21 56	26
16	13. „	14 50	57 55	22 32	26
17	5. „	14 45	57 52	23 16	43
18	„ „	19 20	57 55	23 50	30
19	6. „	12 20	58 04	24 12	14
20	„ „	14 15	58 18	24 25	8.5
21	10. „	13 30	58 10	23 40	28
22	3. „	10 00	58 33.6	23 28	19
23	2. „	12 10	58 49	23 13	8.5
24	18. „	11 55	59 03	23 04	15

For explications to the following Tables (7, 8, 9, 10) see p. 4.

Table 7.

Temperature (t⁰), Salinity (S‰), density *in situ* (σ_t) of sea water at the depth of m metres in summer 1932.

P. 1 A; 1932 17. IX. 10h06m
φ = 59°33′, λ = 27°47′, 37 m.

m	t⁰	S‰	σ_t
0	14.33	4.16	2.47
5	14.31	4.15	2.46
10	14.40	4.18	2.48
20	14.36	4.25	2.53
30	14.35	4.25	2.53
35	14.34	4.25	2.54

NW 7.0, T = 12.4°, R = 75%,
S = 4, C = 4/10.

P. 1; 1932 17. IX. 8h30m
φ = 59°38′, λ = 27°27′, 41 m.

m	t⁰	S‰	σ_t
0	13.84	4.80	3.03
5	13.90	4.78	3.01
10	13.85	4.80	3.03
20	13.88	4.81	3.04
30	13.90	4.80	3.02
38	13.85	4.83	3.06

NW 7.7, T = 12.8°, R = 68%,
S = 4, C = 3/10.

P. 2; 1932 17. IX. 6h03m
φ = 59°47′, λ = 27°05m, 66 m.

m	t⁰	S‰	σ_t
0	12.83	4.43	2.90
5	12.86	4.58	3.01
10	12.88	4.42	2.88
20	12.88	4.45	2.91
25	12.86	4 43	2.89
30	6.43	5.17	4.08
40	2.65	5.99	4.83
50	1.36	6.40	5.15
60	1.36	6.73	5.41
65	1.68	7.03	5.66

WNW 9.9, T = 11.6°, R = 82%
S = 4, C = 2/10.

P. 3; 1932 16. IX. 2h58m
φ = 59°52′, λ = 26°17′, 81 m.

m	t⁰	S‰	σ_t
0	11.80	4.90	3.39
5	11.72	4.87	3.37
10	11.33	4.69	3.28
15	10.45	5.23	3.80
20	5.02	5.37	4.30
25	3.21	5.64	4.55
30	1.70	6.17	4.97
40	1.22	6.60	5.31
50	1.29	6.80	5.47
60	1.28	6.93	5.57
70	1.32	6.94	5,58
75	1.37	6.98	5.61

WSW 7.1, T = 11.4°, R = 69%,
S = 4, C = 10/10,

P. 4; 1932 15. IX. 17h09m
φ = 59°50m, λ = 25°37m, 78m.

m	t⁰	S‰	σ_t
0	12.24	5.14	3.52
5	12.20	5.14	3.52
10	12.31	5.17	3.54
20	12.70	5.59	3.81
30	12.62	5.72	3.91
40	12.20	5.70	3.96
50	8.61	5.77	4.40
60	1.62	6.85	5.51
70	1.70	7.27	5.85
75	1.90	7.36	5.92

WNW 13.3, T = 12.1°, R = 98%,
S = 5, B = 6/10.

P. 5; 1932 15. IX. 10h35m
φ = 59°43′, λ = 25°01m, 104m.

m	t⁰	S‰	σ_t
0	14.70	5.63	3.54
5	14.76	5.64	3.54
10	14.71	5.63	3.54
20	14.34	5.82	3.75
30	14.15	5.84	3.79
40	12.78	5.86	4.01
45	4.14	6.26	5.03
50	2.59	6.53	5.26
60	1.46	7.09	5.70
70	1.58	7.27	5.85
80	1.62	7.23	5.82
90	2.30	7.63	6.14
95	2.34	7.76	6.24

NNW 6.1, T = 9.2°, R = 71%,
S = 3, C = 1/10.

P. 6 A; 1932 20. VIII. 9h55m
φ = 59°36′, λ = 24°41′, 83 m.

m	t⁰	S‰	σ_t
0	19.15	5.35	2.52
5	19.08	5.35	2.53
10	18.90	5.37	2.58
20	17.04	5.57	3.09
25	5.95	6.31	5.00
30	4.77	6.42	5.14
40	2.55	6.67	5.37
50	1.96	6.82	5.49
60	1.80	7.45	5.99
70	2.34	7.90	6.36
80	3.06	8.35	6.71

SE 4.0, T = 19.0°, R = 70%,
S = 3, C = 5/10.

P. 6; 1932 20. VIII. 7h13m
φ = 59°36′.5, λ = 24°21′, 84 m.

m	t⁰	S‰	σ_t
0	18.93	5.35	2.56
5	18.94	5.35	2.56
10	18.90	5.35	2.57
15	18.20	5.52	2.83
20	7.00	6.08	4.76
30	4.80	6.55	5.24
40	3.05	6.74	5.43
50	2.43	6.82	5.49
60	1.70	6.94	5.58
70	2.02	7.63	6.14
80	3.03	8.44	6.78
82	3.04	8.46	6.80

S 3.8, T = 17.8°, R = 70%,
S = 3, C = 3/10.

P. 7; 1932 19. VIII. 14h20m
φ = 59°30′, λ = 23°44′, 90 m.

m	t⁰	S‰	σ_t
0	19.06	5.46	2.61
5	19.01	5.46	2.62
10	18.86	5.57	2.74
15	12.68	6.04	4.15
20	4.80	6.19	4.95
30	3.76	6.60	5.31
40	3.00	6.74	5.43
50	2.12	6.85	5.52
60	1.97	6.89	5.55
70	1.62	7.20	5.79
80	2.16	7.74	6.23
88	3.61	8.66	6.95

W 6.7, T = 19.2°, R = 74%,
S = 4, C = 3/10.

P. 8; 1932 19. VIII. 11^h40^m
$\varphi = 59^0 26', \lambda = 23^0 09', 97$ m.

m	t°	S‰	σ_t
0	13.31	5.41	2.52
5	19.28	5.41	2.53
10	19.05	5.59	2.72
15	10.30	6.65	4.93
20	8.29	6.69	5.15
30	6.08	6.74	5.34
40	4.38	6.80	5.45
50	2.85	6.93	5.58
60	1.86	7.07	5.70
70	1.87	7.34	5.90
80	2.62	8.03	6.46
90	3.50	8.84	7.10
95	3.88	9.15	7.33

W 5.9, T = 20.8°, R = 69%,
S = 4, C = 4/10.

P. 9; 1932 16. VIII. 17^h20^m
$\varphi = 59^0 14', \lambda = 22^0 11', 120$ m.

m	t°	S‰	σ_t
0	19.41	6.02	2.97
5	19.38	6.02	2.98
10	17.87	6.29	3.49
15	8.91	6.78	5.16
20	6.85	6.76	5.31
30	3.52	6.89	5.54
40	2.46	7.02	5.65
50	2.08	7.09	5.71
60	1.95	7.21	5.81
70	1.96	7.36	5.93
80	2.37	7.63	6.14
90	3.50	8.75	7.02
100	4.26	9.47	7.58
110	4.28	9.63	7.71
118	4.36	9.67	7.73

E 7.0, T = 19.1°, R = 89%,
S = 3, C = 1/10.

P. 10; 1932 16. VIII. 14^h30^m
$\varphi = 59^0 05', \lambda = 21^0 52', 128$ m.

m	t°	S‰	σ_t
0	19.06	6.62	3.50
5	18.91	6.62	3.53
10	17.80	6.62	3.75
15	7.20	6.65	5.20
20	6.95	6.74	5.29
30	4.94	6.82	5.45
40	2.90	6.91	5.56
50	1.64	6.96	5.60
60	2.05	7.11	5.72
70	1.91	7.36	5.92
80	2.88	8.06	6.49
90	3.88	9.09	7.29
100	4.23	9.47	7.58
110	4.40	9.69	7.74
120	4.43	9.74	7.78
125	4.42	9.72	7.77

E 3.7, T = 18.5°, R = 87%,
S = 3, C = 1/10.

P. 11; 1932 16. VIII. 11^h15^m
$\varphi = 58^0 54', 5, \lambda = 21^0 14', 89$ m.

m	t°	S‰	σ_t
5	18.00	6.17	3.37
0	17.89	6.20	3.41
10	16.60	6.11	3.59
15	11.20	6.37	4.60
20	5.96	6.62	5.25
30	3.50	6,83	5.50
40	2.52	6.91	5.56
50	2.23	7.00	5.64
60	1.98	7.23	5.83
70	2.06	7.39	5.96
80	3.34	8.51	6.84
85	3.37	8.80	7.07

E 2.6, T = 18.4°, R = 89%,
S = 3, C = 10/10.

P. 12; 1932 14. VIII. 17^h30^m
$\varphi = 58^0 30'.5, \lambda = 21^0 13', 98$ m.

m	t°	S‰	σ_t
0	17.90	6.53	3.66
5	17.17	6.51	3.78
10	16.45	6.49	3.91
15	11.62	6.67	4.78
20	7.23	6.78	5.30
30	4.08	6.89	5.53
40	3.22	6.96	5.61
50	2.56	7.07	5.70
60	2.45	7.14	5.75
70	2.24	7 23	5.83
80	2.36	7.57	6.09
90	3.96	9.16	7.34
95	4.16	9.45	7.58

W 3.0, T = 18.4°, R = 94%,
S = 2, C = 2/10.

P. 13; 1932 14. VIII. 14^h55^m
$\varphi = 58^0 16', \lambda = 21^0 00', 72$ m.

m	t°	S‰	σ_t
0	18.52	6.58	3.58
5	17.75	6.58	3.73
10	17.26	6.65	3.88
15	16.74	6.64	3.97
20	8.85	6.82	5.20
30	4.12	6.80	5.46
40	2.75	6.91	5.56
50	2.70	7.02	5.65
60	2.56	7.11	5.72
70	2.38	7.34	5.91

W 2 3, T = 19.5°, R = 85%,
S = 2, C = 7/10.

P. 14; 1932 14. VIII. 11^h15^m
$\varphi = 57^0 53', \lambda = 21^0 32', 60$ m.

m	t°	S‰	σ_t
0	18.50	6.53	3.54
5	18.45	6.49	3.53
10	17.55	6.69	3.85
20	11.10	6.85	4.99
25	7.02	6.89	5.40
30	4.26	6.93	5.56
40	3.79	7.02	5.64
50	2.45	7.16	5.77
58	2.48	7.27	5.86

W, 2.0, T = 17.5°, R = 86%,
S = 2, C = 10/10.

P. 15; 1932 14. VIII. 9^h00^m
$\varphi = 57^0 42', \lambda = 21^0 56', 26$ m.

m	t°	S‰	σ_t
0	16.75	5.55	3.14
5	16.10	5.61	3.29
10	14.27	5.93	3.85
15	13.00	6.26	4.28
20	11.81	6.31	4.48
25	8.06	6.82	5.26

WNW 2.4, T = 17.2°, R = 90%,
S = 2, C = 10/10.

P. 16; 1932 13. VIII. 14^h50^m
$\varphi = 57^0 55', \lambda = 22^0 32', 26$ m.

m	t°	S‰	σ_t
0	17.44	5.01	2.59
5	16.75	4.98	2.69
10	16.87	5.17	2.82
15	6.55	5.45	4.29
20	5.06	5.75	4.60
25	5.95	6.19	4.91

W 1.4, T = 18.3°, R = 93%,
S = 1, C = 2/10.

P. 17; 1932 5. VIII. 14^h45^m
$\varphi = 57^0 52', \lambda = 23' 16', 43$ m.

m	t°	S‰	σ_t
0	19.48	4.45	1.76
5	19.40	4.45	1.78
10	18.84	4.49	1.92
15	10.15	5.01	3.66
20	5.87	5.17	4.11
30	2.62	5.57	4.49
40	3.14	5.68	4.58

NW 2.3, T = 18.0°, R = 77%,
S = 2, C = 10/10, ●

m	t^0	$S^0/_{00}$	σ_t
P. 18; 1932 5. VIII. 19h20m $\varphi = 57^0 55'$, $\lambda = 23^0 50'$, 30 m.			
0	19.96	4.60	1.77
5	19.84	4.60	1.79
10	19.75	4.61	1.83
15	12.89	5.03	3.34
20	6.18	5.16	4.08
28	1.54	5.45	4.38
NW 3.6, T = 18.7°, R = 79%, S = 3, C = 10/10.			
P. 19; 1932 6. VIII. 12h20m $\varphi = 58^0 04$, $\lambda = 24^0 12$, 14 m			
0	20.46	4.72	1.76
5	20.50	4.74	1.76
10	20.50	4.74	1.76
12	20.48	4.76	1.78
NNW 8.8, T = 17.6°, R = 92%, S = 5, C = 10/10, ●			
P. 20; 1932 6. VIII. 14h15m $\varphi = 58^0 18'$, $\lambda = 24^0 25'$, 8 m.			
0	20.78	4.20	1.29
5	20.80	4.18	1.28
8	20.81	4.20	1.28
NNW 6.0, T = 17.5°, R = 95%, S = 3, C = 10/10.			
P. 21; 1932 10. VIII. 13h30m $\varphi = 53^0 10'$, $\lambda = 23^0 40'$, 28 m.			
0	18.55	9.92	2.31
5	18.45	4.94	2.34
10	18.25	4.92	2.37
15	9.54	5.23	3.89
20	4.31	5.45	4.38
25	4.18	5.45	4.38
WNW 8.2, T = 18.0°, R = 82%, S = 5, C = 10/10, ●			
P. 22; 1932 3. VIII. 10h00m $\varphi = 57^0 33'.6$, $\lambda = 23^0 28'$, 19 m.			
0	18.50	4.92	2.32
5	18.45	4.92	2.33
10	18.14	4.94	2.40
17	17.57	5.03	2.58
S 3.6, T = 18.0°, R = 86%, S = 2, C = 9/10.			
P. 23; 1932 2. VIII. 12h10m $\varphi = 58^0 49'$, $\lambda = 23^0 13'$, 8 m.			
0	19.38	5.10	2.27
5	19.20	5.10	2.31
8	19.19	5.12	2.33
SSW 4.2, T = 20.5, R = 87%, S = 3, C = 10/10.			
P. 24; 1932 18. VIII. 11h55m $\varphi = 59^0 03$, $\lambda = 23^0 04'$ 15 m.			
0	20.15	5.99	2.78
5	20.12	5.99	2.79
10	20.08	6.02	2.83
14	13.40	6.46	4.38
SSW 8.2, T = 19.8°, R = 83%, S = 3, C = 10/10.			

Table 8.

Oxygen, Alkalinity, and Pressure of Free Carbonic Acid. 1932.

m	t	Cl‰	O'2	O_2	$\frac{O_2}{O'2} \cdot 100$	A	Pressure of CO_2 10^{-4} atm. Θ_t	Corrected CO_2 $\Theta t_1 = \Theta_t \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t = (\Theta_{t_1} - ct_1)\frac{\alpha_t}{\alpha_t} + ct$
P. 1 A; 1932. 17. IX.										
0	14.33	2.29	6.94	6.55	94.4	13.31	2.46	2.40	14	2.18
35	14.34	2.34	6.94	6.26	90.2	13.54	—	—	—	—
P. 1; 1932. 17. IX.										
0	13.84	2.64	6.99	6.27	89.7	14.37	2.24	2.19	14	1.95
38	13.85	2.66	6.99	6.31	90.3	14.53	—	—	—	—

m	t	Cl ‰	O'_2	O_2	$\frac{O_2}{O'_2} \cdot 100$	A	Pressure of CO_2 10^{-4} athm. Θ_1	Corrected CO_2 $\Theta_{t_1} = \Theta_1 \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t = (\Theta_{t_1} - c_{t_1}) \frac{\alpha_{t_1}}{\alpha_t} + c_t$
P. 2; 1932. 17. IX.										
0	12.83	2.44	7.15	6.43	89.9	16.18	2.43	2.37	13	2.06
60	1.68	3.88	9.21	5.70	61.9	16.77	2.73	2.66	2	1.55
P. 3; 1932. 16. IX.										
0	11.80	2.70	7.30	6.92	94.8	14.09	2.30	2.22	12	1.83
20	5.02	2.96	8.53	6.85	80.3	15.90	—	—	—	—
40	1.22	3.64	9.35	7.07	75.6	16.45	2.79	2.70	1	1.53
60	1.28	3.82	9.32	6.45	69.2	16.12	—	—	—	—
75	1.37	3.85	6.29	6.35	68.4	16.51	2.86	2.78	1	1.62
P. 4; 1932. 15. IX.										
0	12.24	2.83	7.21	6.69	92.8	14.36	2.15	2.10	12	1.78
20	12.70	3.08	7.13	6.61	92.7	14.63	—	—	—	—
60	1.62	3.73	9.24	6.23	67.4	18.55	—		—	—
75	1.90	4.06	9.14	4.66	51.0	17.72	1.55	1.51	2	0.87
P. 5; 1932. 15. IX.										
0	14.70	3.10	6.84	6.19	90.5	16.18	1.78	1.73	15	1.60
20	14.34	3.21	6.88	6.31	91.7	15.79	—	—	—	—
40	12.78	3.23	7.11	6.43	90.4	16.29	1.74	1.70	13	1.47
60	1.46	3.91	9.27	6.66	71.8	16.26	—	—	—	—
95	2.34	4.28	9.01	4.80	53.3	17.32	2.63	2.57	2	2.27
P. 6 A; 1932. 20. VIII.										
0	19.15	2.95	6.31	5.93	94.0	15.76	—	—	—	—
40	2.55	3.68	9.02	7.83	86.8	16.29	—	—	—	—
80	3.06	4.61	8.80	2.70	30.7	18.54	—	—	—	—
P. 6; 1932. 20. VIII.										
0	18.93	2.95	6.33	6.00	94.8	16.22	2.17	2.12	19	2.39
20	7.00	3.35	8.08	7.51	92.9	16.12	—	—	—	—
40	3.05	3.72	8.90	8.31	93.4	18.21	—	—	—	—
60	1.70	3.83	9.21	8.06	87.5	17.11	—	—	—	—
82	3.04	4.67	8.80	2.84	32.3	17.99	4.08	4.00	3	2.53

m	t	$Cl^{0}/_{00}$	O'_2	O_2	$\frac{O_2}{O'_2}.100$	A	Pressure of CO_2 10^{-4} atm. Θ_t	Corrected CO_2 $\Theta_{t_1}=\Theta_t\frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t=(\Theta_{t_1}-ct_1)\frac{\alpha_t}{\alpha_{t_1}}+ct$
					P. 7; 1931. 19. VIII.					
0	19.06	3.01	6.31	6.08	96.4	16.58	1.70	1.66	19	1.89
20	4.80	3.41	8.53	7.65	89.7	16.67	—	—	—	—
40	3.00	3.72	8.91	8.02	90.0	17.94	2.10	2.05	3	1.25
60	1.97	3.80	9.15	7.94	86.8	17.06	—	—	—	—
88	3.61	4.78	8.67	1.88	21.7	19.37	4.20	4.09	4	2.65
					P. 8; 1932. 19. VIII.					
0	19·31	2.98	6.29	5.90	93.8	15.35	1.75	1.71	19	1.99
20	8.29	3.69	7.81	7.69	98.5	17.08	—	—	—	—
40	4.38	3.75	8.59	7.94	92.4	18.09	1.48	1.45	4	—
60	1.86	3.90	9.16	7.90	86.2	17.72	—	—	—	0.94
80	2.62	4.43	8.93	5.19	58.1	17.11	—	—	—	—
95	3.88	5.05	8.58	1.55	18.1	18.88	4.25	4.15	4	2.72
					P. 9; 1932. 16. VIII.					
0	19.41	3.32	6.26	6.15	98.2	15.79	1.30	1.27	19	1.53
20	6.85	3.73	8.08	7.74	95.8	15.98	—	—	—	—
40	2.46	3.87	9.02	7.89	87.5	17.66	—	—	—	—
60	1.95	3.98	9.13	7.59	83.1	17.06	2.20	2.14	2	1.29
80	2.37	4.21	9.01	5.96	66.1	17.50	—	—	—	—
100	4.26	5.23	8.48	1.60	18.9	18.29	—	—	—	—
118	4.36	5.34	8.45	1.45	17.2	18.18	4.32	4.22	4	2.83
					P. 10; 1932. 16. IX.					
0	19.06	3.65	6.28	6.42	102.2	17.28	1.44	1.41	19	1.64
20	6.95	3.72	8.06	7.95	98.6	16.73	—	—	—	—
40	2.90	3.81	8.92	8.38	93.9	16.84	—	—	—	—
60	2.05	3.92	9.12	7.48	82.0	17.50	2.02	1.97	2	1.19
80	2.88	4.45	8.86	4.75	53.6	18.18	—	—	—	—
100	4.23	5.23	8.49	1.68	19.8	18.23	—	—	—	—
125	4.42	5.37	8.43	1.41	16.7	18.93	4.66	4.55	4	2.98
					P. 11; 1932. 16. VIII.					
0	18.00	3.40	6.42	6 44	100.3	15.85	1.57	1.54	18	1.66
20	5.96	3.65	8.27	7.91	95.6	16.78	—	—	—	—
40	2.52	3.81	9.01	8.41	93.3	16.72	1.95	1.90	3	1.16
60	1.98	3.99	9·13	7.66	83.9	16.67	—	—	—	—
85	3.37	4.86	8.71	3.08	35.4	18.38	—	—	—	—
					P. 12; 1932. 14. VIII.					
0	17.90	3.60	6.41	6.64	103.6	16.17	—	—	—	—
20	7.23	3.74	8.01	7.85	98.0	17.23	—	—	—	—
40	3.22	3.84	8.84	8.10	91.6	16.62	1.52	1.48	3	0.93
60	2.45	3.94	9.02	8.26	91.6	16.86	—	—	—	—
80	2.36	4.18	9.02	6.78	75.2	19.52	—	—	—	—
95	4.16	5.22	8.50	1.61	18.9	18.38	4.49	4.38	4	2.92

m	t	Cl‰	O'2	O2	$\frac{O_2}{O'_2}.100$	A	Pressure of CO_2 10^{-4} athm. Θ_t	Corrected CO_2 $\Theta_{t_1}=\Theta_t\frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t=(\Theta_{t_1}-ct_1)^{\frac{\alpha_{t_1}}{\alpha_t}}+ct$
					P. 13; 1932. 14. VIII.					
0	18.52	3.63	6.34	6.40	100.9	16.57	1.46	1.43	19	1.61
20	8.85	3.76	7.71	7.91	102.6	17.50	—	—	—	—
40	2.75	3.81	8.96	8.39	93.6	17.39	—	—	—	—
60	2.56	3.92	8.99	8.24	91.7	16.97	—	—	—	—
70	2.38	4.05	9.02	7.42	82.3	17 06	2.49	2.44	2	1.53
					P. 14; 1932. 14. VIII.					
0	18.50	3.60	6.34	6.22	98.1	17.94	1.50	1.45	18	1.63
20	11.10	3.78	7.32	7.09	96.9	18.05	—	—	—	—
40	3.79	3.87	8.71	7.88	90.5	16.75	—	—	—	—
58	2.48	4.01	9.00	7.19	79.9	17.55	2.38	2.33	2	1.46
					P. 15; 1932. 14. VIII.					
0	16.75	3.06	6.58	6.45	98.0	18.60	2.88	2.82	17	2.91
20	11.81	3.48	7.24	5.92	81.8	17.99	—	—	—	—
25	8.06	3.76	7.85	6.61	84.2	18.22	—	—	—	—
					P. 16; 1932. 13. VIII.					
0	17.44	2.76	6.52	6.48	99.4	20.96	2.25	2.19	17	2.27
20	5.06	3.17	8.50	6.03	70.9	18.73	—	—	—	—
25	5.95	3.41	8.28	5.94	71.7	18.51	1.62	1.59	6	1.11
					P. 17; 1932. 5. VIII.					
0	19.48	2.45	6.30	5.93	94.1	19.70	1.44	1.40	19	1.67
20	5.87	2.85	8.36	6.81	81.5	19.56	—	—	—	—
40	3.14	3.13	8.94	5.51	61.6	19.64	3.70	3.61	3	2.30
					P. 18; 1932. 5. VIII.					
0	19.96	2.53	6.25	5.49	87.8	19.04	2.10	2.06	20	2.50
20	6.18	2.84	8.29	6.52	78.6	19.50	—	—	—	—
28	1.54	3.00	9.34	6.75	72.3	20.03	1.59	1.55	2	0.91
					P. 19; 1932. 6. VIII.					
0	20.46	2.60	6.19	5.68	91.8	19.75	2.28	2.23	20	2.74
12	20.48	2.62	6.19	5.49	88.7	20.03	—	—	—	—
					P. 20; 1932. 6. VIII.					
0	20.78	2.31	6.17	5.49	89.0	21.35	2.70	2.64	21	3.26
8	20.81	2.31	6.17	5.37	87.0	19.75	—	—	—	—
					P. 21; 1932. 10. VIII.					
0	18.55	2.71	6.39	5.82	91.1	18.76	1.75	1.72	19	1.96
20	4.31	3.00	8.68	6.18	71.2	19.53	—	—	—	—
25	4.18	3.00	8.71	6.41	73.6	18.65	2.57	2.51	4	1.65
					P. 22; 1932. 3. VIII.					
0	18.50	2.71	6.40	6.00	93.8	18.16	2.07	2.02	18	2.25
17	17.57	2.77	6.50	6.17	94.9	19.72	—	—	—	—
					P. 23; 1932. 2. VIII.					
0	19.38	2.81	6.29	6.10	97.0	18.32	2.10	2.06	19	2.43
8	19.19	2.82	6.31	5.91	93.7	18.57	—	—	—	—
					P. 24; 1932. 18. VIII.					
0	20.15	3.30	6.18	5.91	95.6	17.39	1.44	1.41	20	1.75
14	13.40	3.56	6.99	6.27	89.7	16.95	—	—	—	—

Table 9.

Temperature and Salinity at the Surface 1932.

Date		φ	λ	t°	S‰
2. VIII. 32.	12h10m	58° 49′	23° 13′	19.38	5.10
„	13 05	58 47.5	23 16	17.82	5.14
„	14 55	58 38	23 24	19.29	5.03
3. VIII. 32.	10 00	58 33.6	23 28	18.50	4.92
5. VIII. 32.	12 15	58 06.6	22 42	16.72	4.78
„	13 00	58 02	22 53	17.21	4.81
„	14 00	57 56.2	23 06	19.55	4.54
„	14 45	57 52	23 16	19.48	4.45
„	18 00	57 51	23 29	19.75	4.58
„	18 45	57 33	23 41	19.97	4.58
„	19 20	57 55	23 50	19.96	4.60
„	20 20	57 59	23 58.5	20.32	4.98
6. VIII. 32.	12 20	58 04	24 12	20.46	4.72
„	13 10	58 08.5	24 16	20.52	4.63
„	13 40	58 13	24 20	20.66	4.38
„	14 15	58 18	24 25	20.78	4.20
„	14 50	58 21.4	24 27	20.47	3.87
10. VIII. 32.	13 30	58 10	23 40	18.55	4.92
13. VIII. 32.	14 50	57 55	22 32	17.44	5.01
14. VIII. 32.	9 00	57 42	21 56	16.75	5.55
„	10 00	57 45	21 48	17.10	6.04
„	10 45	57 49.5	21 40	18.47	6.53
„	11 15	57 53	21 32	18.50	6.53
„	12 50	58 01	21 21	18.40	6.60
„	13 45	58 08	21 11	18.70	6.60
„	14 55	58 16	21 00	18.52	6.58
„	16 30	58 24	21 07	18.48	6.38
„	17 30	58 30.5	21 13	17.90	6.53
„	19 50	58 22.2	21 29	17.44	6.44
„	20 35	58 21.5	21 40	17.72	6.44
16. VIII. 32.	7 30	58 26.5′	21 44	18.76	6.46
„	8 30	58 34	21 36	18.57	6.44
„	9 30	58 41	21 28	19.10	6.44
„	10 30	58 48.5	21 20	17.87	6.26
„	11 15	58 54.5	21 14	18.00	6.17
„	13 05	58 59.5	21 28	18.61	6.22
„	14 05	59 04.8	21 42	18.75	6.49
„	14 30	59 05	21 52	19.06	6.62
„	16 30	59 09.5	22 01	19.22	6.62
„	17 20	59 14	22 11	19.41	6.02
„	19 20	59 11.3	22 22.7	19.52	6.15
„	19 45	59 08.5	22 30	19.51	6.19
18. VIII. 32.	11 55	59 03	23 04	20.15	5.99
19. VIII. 32.	9 40	59 07.7	23 02.6	19.14	6.22
„	10 40	59 17	23 04.5	19.22	5.90
„	11 40	59 26	23 09	19.31	5.41
„	13 30	59 28	23 28.5	19.55	5.93
„	14 20	59 30	23 44	19.06	5.46
„	15 30	59 23	23 57	19.28	5.90
20. VIII. 32.	6 45	59 32.5	24 22	18.88	5.50

Date		φ	λ	t°	S°/₀₀
20. VIII. 32.	7h 13m	59°36.5′	24°21	18.93	5.35
„	9 55	59 36	24 41	19.15	5.35
15. IX. 32.	10 35	59 43	25 01	14.70	5.63
„	17 09	59 50	25 37	12.24	5.14
16. IX. 32.	2 58	59 52	26 17	11.80	4.90
17. IX. 32.	6 03	59 47	27 05	12.83	4.43
„	8 30	59 38	27 27	13.84	4.80
„	8 45	59 42	27 17	13.22	4.63
„	9 36	59 35	27 39	14.22	4.36
„	10 06	59 33	27 47	14.33	4.16
„	10 50	59 31	27 54	14.13	3.69

Table 10.

Observations of the Transparency 1932

№	Date		m	Sea Motion 0–9	Cloudiness 0—10
1 A	17. IX. 32.	10h06m	4	4	4
1	„	08 30	7	4	2
2	„	06 03	7	4	2
3	16. IX. 32.	02 58	9	4	10
4	15. IX. 32.	17 09	9	5	6
5	„	10 35	12	3	1
6 A	20. VIII. 32.	09 55	10	3	5
6	„	07 13	10	3	3
7	19. VIII. 32.	14 20	11	4	3
8	„	11 40	10	4	4
9	16. VIII. 32.	17 20	10	3	1
10	„	14 30	15	3	1
11	„	11 15	9	3	10
12	14. VIII. 32	17 30	12	2	2
13	„	14 55	12	2	7
14	„	11 15	10	2	10
15	„	09 00	6	2	10
16	13. VIII. 32.	14 50	8	1	2
17	5. VIII. 32.	14 45	6	2	10
18	„	19 20	6	3	10
19	6. VIII. 32.	12 20	4	5	10
20	„	14 15	2	3	10
21	10. VIII. 32.	13 30	6	5	10
22	3. VIII. 32.	10 00	5	2	9
23	2. VIII. 32.	12 10	4	3	10
24	18. VIII. 32.	11 55	6	3	10

The Thalassological Observations in 1933.

The Observations were made in July and August 1933, from s. s. "Sekstant", belonging to the Department of Waterways in Estonia.

The time, geographical coordinates and, depths of the observation points are given in Table 11.

Table 11.

1 A	10. VIII.	12^h20^m	$\varphi = 59^\circ 33'$	$\lambda = 27^\circ 47'$	37 m
1	„ „	10 30	59 38	27 27	38
2	„ „	07 55	59 47	27 05	70
3	8. „	15 55	59 52	26 17	95
4	„ „	12 30	59 50	25 37	78
5	7. „	19 50	59 43	25 01	108
6	13. VII.	12 35	59 36.5	24 21	85
7	„ „	16 00	59 30	23 44	85
8	17. „	14 50	59 26	23 09	98
9	21. „	06 10	59 14	22 11	120
10	„ „	09 10	59 05	21 52	63
11	„ „	12 40	58 54.5	21 14	73
12	„ „	16 10	58 30.5	21 13	97
13	25. „	09 15	58 16	21 00	87
14	„ „	13 15	57 53	21 32	52
15	„ „	15 40	57 42	21 56	27
16	26. „	08 50	57 55	22 32	28
17	27. „	10 40	57 52	23 16	46
18	28. „	09 55	57 55	23 50	31
19	„ „	12 05	58 04	24 12	17
20	„ „	14 00	58 18	24 25	7.5
21	„ „	07 50	58 10	23 40	27
22	2. VIII.	19 00	58 33.5	23 28	20
23	3. „	09 00	58 49	23 13	8
24	„ „	13 00	59 03	23 04	14

For explications to the following Tables (12, 13, 14, 15) see p. 4.

Table 12.

Temperature (t^0), Salinity ($S^0/_{00}$), density *in situ* (σ_t) of sea water at the depth of m metres in summer 1933.

P. 1A; 1933 10. VIII. 12^h20^m
$\varphi = 59^0 33'$, $\lambda = 27^0 47'$, 37 m.

m	t^0	$S^0/_{00}$	σ_t
0	17.18	4.13	1.96
5	17.18	4.09	1.93
10	17.20	4.04	1.89
15	17.20	4.07	1.92
20	17.19	4.07	1.92
30	16.87	4.31	2.16
35	16.48	4.58	2.44

SW 12.8, T = 16.4. R = 88%, S = 5, C = 10/10.

P. 1; 1933 10. VIII. 10^h30^m
$\varphi = 59^0 38'$, $\lambda = 27^0 27'$, 38 m.

m	t^0	$S^0/_{00}$	σ_t
0	16.92	4.20	2.07
5	17.00	4.22	2.07
10	16.95	4.20	2.06
15	16.50	4.36	2.26
20	16.55	4.38	2.27
30	16.35	4.63	2.50
35	13.02	4.85	3.20

SW 9.4, T = 18.1°, R = 71%, S = 4, C = 10/10.

P. 2; 1933 10. VIII. 07^h55^m
$\varphi = 59^0 47'$, $\lambda = 27^0 05'$ 70 m.

m	t^0	$S^0/_{00}$	σ_t
0	15.71	4.38	2.42
5	15.71	4.36	2.40
10	15.70	4.36	2.40
15	15.68	4.38	2.42
20	15 69	4.36	2.40
30	12.20	4.98	3.40
40	3.00	5 84	4.71
50	2.55	6.71	5.40
60	2.84	7.07	5.70
65	3.42	7.36	5.92

SW 9.6, T = 15.8, R = 83%, S = 4, C = 10/10.

P. 3; 1933 8. VIII. 15^h55^m
$\varphi = 59^0 52'$, $\lambda = 26^0 17'$, 95 m.

m	t^0	$S^0/_{00}$	σ_t
0	15.86	4.81	2.73
5	15.82	4.74	2.68
10	15.80	4.74	2.68
15	15.64	4.78	2.74
20	15.20	4.98	2.96
30	11.34	5.39	3.83
40	3.64	6.04	4.87
50	3.83	6.56	5.29
60	3.20	7.61	6.12
70	3.54	7.99	6.42
80	3.92	8.26	6.63
90	4.92	8.78	7.01

WSW 12.1, T = 16.3°, R = 70%, S = 5, C = 8/10.

P. 4; 1933 8. VIII. 12^h30^m
$\varphi = 59^0 50'$, $\lambda = 25^0 37^m'$, 78 m.

m	t^0	$S^0/_{00}$	σ_t
0	15.20	5.01	2.99
5	15.11	5.01	3.00
10	14.80	5.07	3.09
15	13.14	5.07	3.34
20	12.30	5.90	4.10
30	6.30	5.99	4.81
40	2.64	6.76	5.45
50	2.80	7.00	5.64
60	2.94	7.25	5.84
70	3.22	7.27	5.85

WSW 9.8, T = 18.4°, R = 63%, S = 5, C = 8/10.

P. 5; 1933 7. VIII. 19^h50^m
$\varphi = 59^0 43'$, $\lambda = 25^0 01^m$, 108 m

m	t^0	$S^0/_{00}$	σ_t
0	16.48	5.41	3.07
5	16.47	5.37	3.04
10	16.47	5.50	3.14
15	16.47	5.43	3.09
20	16.42	5.50	3.15
30	15.85	5.55	3.30
35	13.90	5.68	3.71
40	7.15	6.09	4.77
50	3.05	6.51	5.24
60	3.26	7.52	6.05
70	3.32	7.90	6.35
80	3.81	8.42	6.76
90	3.90	8.77	7.03
100	3.96	8.87	7.11

WSW 8.5, T = 17.2°, R = 89%, S = 3, C = 9/10.

P. 6; 1933 13. VII. 12^h35^m
$\varphi = 59^0 36'$,5, $\lambda = 24^0 21'$, 85 m.

m	t^0	$S^0/_{00}$	σ_t
0	18.38	4.69	2.17
5	18.15	4.63	2.17
10	12.65	4.67	3.12
15	8.45	5.77	4.41
20	6.90	6.09	4.78
30	5.02	6.38	5.10
40	3.50	6.60	5.32
50	2.90	7.11	5.72
60	3.33	7.90	6.35
70	3.98	9.13	7.31
80	4.23	9.36	7.49

SW 6.5, T = 17.8°, R = 84%, S = 4, C = 10/10.

P. 7; 1933 19. VII. 16^h00^m
$\varphi = 59^0 30'$, $\lambda = 23^0 44'$, 85 m.

m	t^0	$S^0/_{00}$	σ_t
0	16.92	4.94	2.63
5	16.60	4.92	2.68
10	13.25	6.20	4.20
15	8.51	6.22	4.76
20	5.55	6.35	5.05
30	4.86	6.62	5.29
40	3.33	6.73	5.42
50	2.91	7.20	5.80
60	3.55	8.31	6.67
70	3.94	8.84	7.09
80	4.14	9.13	7.31

SSW 3.4, T = 16.2°, R = 96%, S = 3, C = 9/10.

P. 8; 1933 17. VII. 14^h50^m
$\varphi = 59^0 26'$, $\lambda = 23^0 09'$, 98 m.

m	t^0	$S^0/_{00}$	σ_t
0	16.40	5.26	2.97
5	16.30	5.19	2.96
10	16.02	5.19	3.01
15	13.02	5.52	3.71
20	7.26	6.26	4.89
30	4.62	6.49	5.20
40	4.04	6.74	5.42
50	3.56	6.96	5.60
60	3.32	7.81	6.27
70	3.77	8.62	6.92
80	4.06	9.13	7.31
90	4.04	9.16	7.34

E 7.0, T = 18.3°, R = 81%, S = 4, C = 10/10.

P. 9; 1933 21. VII. 06h10m
φ = 59°14′, λ = 22°11′, 120 m.

m	t°	S‰	σt
0	14.47	6.09	3.94
5	14.45	6.17	4.00
10	14.40	6.09	3.95
15	14.15	6.09	4.03
20	12.78	6.26	4.31
30	6.76	6.65	5.23
40	4.94	6.74	5.39
50	4.44	6.80	5.45
60	3.79	6.87	5.52
70	3.18	6.94	5.59
80	2.85	7.20	5.80
90	3.60	8.39	6.76
100	4.32	9.45	7.47
110	4.15	9.33	7.56

SSW 3.7, T = 14.2°, R = 97%,
S = 2, C = 2/10.

P. 10; 1933 21. VII. 09h10m
φ = 59°05′, λ = 21°52′, 63 m.

m	t°	S‰	σt
0	14.48	6.24	4.04
5	14.39	6.22	4.05
10	13.70	6.73	4.58
15	13.40	6.73	4.62
20	7.02	6.73	5.27
30	6.70	6.73	5.29
40	5.56	6.73	5.35
50	4.28	6.82	5.47
60	4.17	6.87	5.51

SW 3.8, T = 14.8°, R = 93%,
S = 2, C = 7/10.

P. 11; 1933 21. VII. 12h40m
φ = 58°54′,5, λ = 21°14′, 73 m.

m	t°	S‰	σt
0	14.82	6.24	3.99
5	14.44	6.24	4.05
10	13.95	6.24	4.40
15	10.36	6.58	4.87
20	7.18	6.71	5.24
30	4.53	6.78	5.43
40	2.70	6.94	5.59
50	2.72	7.27	5.86
60	2.91	7.47	6.02
70	3.41	8.12	6.52

WSW 3.4, T = 15.2°, R = 93%,
S = 2, C = 1/10.

P. 12; 1933 21. VII. 16h10m
φ = 58°30′.5, λ = 21°13′, 97 m.

m	t°	S‰	σt
0	15.01	6.40	4.09
5	14.60	6.38	4.14
10	13.65	6.38	4.28
15	13.56	6.38	4.30
20	8.28	6.58	5.06
30	4.72	6.65	5.33
40	4.00	6.80	5.47
50	3.91	6.98	5.62
60	2.84	7.16	5.77
70	3.15	8.10	6.51
80	3.63	8.77	7.04
90	3.92	9.25	7.41
95	4.22	9.49	7.59

W 3.6, T = 16.0°, R = 96%,
S = 2, C = 1/10.

P. 13; 1933 25. VII. 09h15m
φ = 58°16′, λ = 21°00′, 87 m.

m	t°	S‰	σt
0	15.57	6.56	4.12
5	15.44	6.55	4.12
10	15.39	6.51	4.10
15	13.70	6.58	4.43
20	8.78	—	—
30	4.28	6.85	5.50
40	3.80	6.93	5.57
50	3.41	7.00	5.63
60	2.95	7.16	5.77
70	2.98	7.61	6.12
80	3.70	8.64	6.94

WSW 3.5, T = 16.0°, R = 96%,
S = 5, C = 1/10.

P. 14; 1933 25. VII. 13h15m
φ = 57°53′, λ = 21°32′, 52 m.

m	t°	S‰	σt
0	16.71	6.62	3.96
5	16.20	6.40	3.89
10	15.97	6.38	3.91
15	14.54	6.37	4.14
20	14.28	6.37	4.18
30	7.94	6.76	5.24
40	5.17	6.87	5.48
50	4.21	7.05	5.66

WSW 6.3, T = 17.0°, R = 91%,
S = 4, C = 1/10.

P. 15; 1933 25. VII. 15h40m
φ = 57°42′, λ = 21°56′, 27 m.

m	t°	S‰	σt
0	17.20	6.02	3.41
5	17.11	5.99	3.40
10	15.40	6.17	3.84
15	13.67	6.26	4.19
20	13.44	6.42	4.34
25	12.86	6.29	4.32

SW 8.0, T = 18.0°, R = 83%,
S = 4, C = 2/10.

P. 16; 1933 26. VII. 08h50m
φ = 57°55′, λ = 22°32′, 28 m.

m	t°	S‰	σt
0	17.56	4.99	2.55
5	17.52	4.99	2.56
10	17.08	4.94	2.61
15	11.02	5.12	3.66
20	3.54	5.59	4.51
25	4.02	5.99	4.82

SW 9.0, T = 16.1°, R = 87%,
S = 3, C = 3/10.

P. 17; 1933 27. VII. 10h40m
φ = 57°52′, λ = 23°16′, 46 m.

m	t°	S‰	σt
0	16.74	5.26	2.91
5	16.72	5.26	2.91
10	16.70	5.25	2.91
15	16.67	5.26	2.92
20	16.19	5.25	3.00
25	3.20	5.46	4.40
30	3.03	5.46	4.41
40	6.28	5.88	4.64

WNW 11.8, T = 17.0°, R = 83%,
S = 5, C = 1/10.

P. 18; 1933 28. VII. 09h55m
φ = 57°55′, λ = 23°50′, 31 m.

m	t°	S‰	σt
0	17.24	5.16	2.74
5	17.15	5.16	2.76
10	17.06	5.43	2.99
15	16.71	5.23	2.89
20	13.18	5.35	3.56
25	4.33	5.57	4.47
30	3.42	5.70	4.60

W 5.1, T = 17.5°, R = 86%,
S = 3, C = 4/10.

P. 19; 1933 28. VII. 12h05m
φ = 58°04, λ = 24°12, 17 m.

m	t°	S‰	σt
0	18.41	4.81	2.25
5	18.35	4.85	2.29
10	18.10	4.81	2.32
15	16.24	5.10	2.88

SW 4.1, T = 17.5°, R = 86%,
S = 2. C = 10/10.

m	t^0	$S^0/_{00}$	σ_t
P. 20; 1933 28.VII. 14h00m $\varphi = 58^0 18'$, $\lambda = 24^0 25'$, 7.5 m.			
0	20.17	4.49	1.64
5	20.10	4.45	1.63
7	20.05	4.47	1.65
SW 7.6, T = 19.1°, R = 77%, S = 2, C = 6/10.			
P. 21; 1933 28. VII. 07h50m $\varphi = 58^0 10'$, $\lambda = 23^0 40'$, 27 m.			
0	17.19	5.25	2.82
5	17.20	5.28	2.85
10	16.95	5.41	2.99
15	15.74	5.45	3.23
20	11.55	5.84	4.15
25	8.38	5.84	4.47
W 6.6, T = 17.8°, R = 85%, S = 3, C = 0.			
P. 22; 1933 2.VIII. 19h00m $\varphi = 57^0 33'.5$, $\lambda = 23^0 28'.2$ 0m.			
0	18.80	5.52	2.71
5	18.39	5.55	2.83
10	17.52	5.61	3.03
15	17.30	5.61	3.07
19	17.18	5.61	3.09
— 0, T = 20.4°, R = 71%, S = 0, C = 2/10.			
P. 23; 1933 3. VIII. 09h00m $\varphi = 58^0 49'$, $\lambda = 23^0 13'$, 8 m.			
0	18.81	6.15	3.19
5	19.90	6.15	2.96
7	18.84	6.13	3.17
SE 3.3, T = 18.0°, R = 75%, S = 2, C = 9/10.			
P. 24; 1933 3. VIII. 13h00m $\varphi = 59^0 03'$, $\lambda = 23^0 04'$, 14 m.			
0	19.00	6.11	3.12
5	18.82	6.09	3.15
10	16.94	6.38	3.73
13	16.96	6.40	3.69
W 1.0, T = 18.8, R = 78% S = 1, C = 10/10.			

Table 13.

Oxygen, Alkalinity, and Pressure of Free Carbonic Acid. 1933.

m	t	$Cl^0/_{00}$	O'2	O_2	$\frac{O_2}{O'_2} \cdot 100$	A	Pressure of CO_2 10^{-4} athm Θ_t	Corrected CO_2 $\Theta_{t_0} = \Theta_t \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_{t=} = (\Theta_{t_1-ct_1})^{\alpha_{t_1}}_{\alpha_t} + ct$
P. 1 A; 1933. 10. VIII.										
0	17.18	2.27	6.58	4.27	6.49	13.75	—	—	17	—
20	17.19	2.24	—	—	—	14.87	—	—	—	—
35	16.48	2.52	—	—	—	14.55	—	—	—	—
P. 1; 1933. 10. VIII.										
0	16.92	2.31	6.61	4.60	69.6	14.19	2.05	1.99	17	2.13
20	16.55	2.41	—	—	—	13.86	—	—	—	—
35	13.02	2.67	—	—	—	14.89	—	—	—	—
P. 2; 1933. 10. VIII.										
0	15.71	2.41	6.75	5.68	84.1	13.64	0.90	0.89	16	0.90
20	15.69	2.40	—	—	—	—	—	—	—	—
40	3.00	3.22	—	—	—	—	—	—	—	—
60	2.84	3.90	—	—	—	16.71	—	—	—	—
65	3.42	4.06	—	—	—	17.82	—	—	—	—
P. 3; 1933. 8. VIII.										
0	15.86	2.65	—	—	—	14.53	0.90	0.89	16	0.91
20	15.20	2.74	—	—	—	15.20	—	—	—	—
40	3.64	3.33	—	—	—	16.09	—	—	—	—
60	3.20	4.20	—	—	—	17.10	—	—	—	—
80	3.92	4.56	8.62	2.95	34.2	19.44	—	—	—	—
85	—	—	—	—	—	18.21	—	—	—	—

m	t	Cl‰	O'2	O2	$\frac{O_2}{O'_2}$.100	A	Pressure of CO_2 10^{-4} athm. Θ_1	Corrected CO_2 $\Theta_{t_1} = \Theta_1 \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t = (\Theta_{t_1} - ct_1)\frac{\alpha_{t_1}}{\alpha_t} + ct$
						P. 4; 1933. 8. VIII.				
0	15.20	2.76	6.79	6.09	89.7	—	1.01	1.00	15	0.98
20	12.30	3.25	7.18	6.29	87.6	—	—	—	—	—
40	2.64	3.73	8.99	5.75	64.0	18.38	—	—	—	—
60	2.94	4.00	8.89	4.64	52.3	17.38	—	—	—	—
70	3.22	4.01	8.83	4.47	50.6	18.53	2.20	2.18	3	1.39
						P. 5; 1933. 7. VIII.				
0	16.48	2.98	6.62	6.06	91.5	15.93	0.74	0.73	16	0.77
20	16.42	3.03	6.62	6.24	94.3	17.04	—	—	—	—
40	7.15	3.36	8.05	7.07	87.8	16.32	—	—	—	—
60	3.26	4.15	8.81	5.70	64.8	17.93	1.17	1.06	3	0.66
80	3.81	4.65	8.64	3.37	39.0	17.88	—	—	—	—
100	3.96	4.90	8.58	2.67	31.1	19.05	4.11	4.08	4	2.74
						P. 6; 1933. 13. VII.				
0	18.38	2.58	6.42	6.34	98.8	16.34	1.53	1.48	18	1.75
20	6.90	3.36	8.10	7.67	94.7	17.66	—	—	—	—
40	3.50	3.64	8.80	8.02	91.2	16.48	1.66	1.60	4	1.05
60	3.33	4.36	8.77	—	—	17.99	—	—	—	—
80	4.23	5.17	8.49	2.38	28.0	19.27	4.28	4.13	4	2.83
						P. 7; 1933. 13. VII.				
0	16.92	2.72	6.58	6.18	94.0	14.32	1.14	1.10	17	1.20
20	5.55	3.50	8.36	8.12	97.1	17.28	—	—	—	—
40	3.33	3.71	8.83	8.16	92.4	16.34	1.14	1.10	3	0.71
60	3.55	4.59	8.70	4.94	56.8	19.31	—	—	—	—
80	4.14	5.04	8.52	2.63	30.9	18.56	—	—	—	—
						P. 8; 1933. 17. VII.				
0	16.40	2.90	6.63	6.44	97.2	17.93	0.70	0.68	16	0.74
20	7.26	3.45	8.02	7.72	96.2	18.66	—	—	—	—
40	4.04	3.72	8.67	8.03	92.7	17.68	0.57	0.55	4	0.36
60	3.32	4.31	8.77	5.97	68.0	17.93	—	—	—	—
90	4.04	5.06	8.54	2.68	31.4	18.10	3.96	3.81	4	2.61
						P. 9; 1933. 21. VII.				
0	14.47	3.36	6.85	6.72	98.1	15.85	0.90	0.87	14	0.88
20	12.78	3.45	7.01	6.92	98.8	16.26	—	—	—	—
40	4.94	3.72	8.47	8.05	95.0	17.32	0.84	0.81	5	0.56
60	3.79	3.79	8.72	7.99	91.7	17.80	—	—	—	—
80	2.85	3.97	8.92	7.26	81.4	17.54	0.64	0.62	3	0.39
110	4.15	5.15	8.51	2.21	26.0	19.68	2.36	2.28	4	1.54
						P. 10; 1933. 21. VII.				
0	14.48	3.44	6.85	6.74	98.4	16.75	1.27	1.23	14	1.23
20	7.02	3.71	8.05	—	—	17.21	—	—	—	—
40	5.56	3.71	8.34	8.01	96.0	17.88	1.39	1.34	6	0.97
60	4.17	3.79	8.63	8.01	92.8	17.54	1.46	1.41	4	0.95

m	t	Cl‰	O'2	O2	$\frac{O_2}{O'_2}$.100	A	Pressure of CO_2 10^{-4} athm. Θ_1	Corrected CO_2 $\Theta_{t_1} = \frac{B-f}{760} = \Theta_1$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t = (\Theta_{t_1} - ct_1)\frac{\alpha_{t_1}}{\alpha_t} + ct$
					P. 11; 1933. 21. VII.					
0	14.82	3.44	6.80	6.81	100.0	15.91	0.50	0.49	15	0.50
20	7.18	3.70	8.02	7.97	99.4	17.60	—	—	—	—
40	2.70	3.83	8.97	—	—	17.79	0.71	0.69	3	0.42
60	2.91	4.12	8.89	6.68	75.1	18.53	—	—	—	—
70	3.41	4.48	8.74	5.08	58.2	19.33	2.95	2.87	3	1.93
					P. 12; 1933. 21. VII.					
0	15.01	3.53	6.77	6.87	101.6	15.88	1.20	1.19	15	1.14
20	8.28	3.63	7.82	7.88	100.8	16.96	—	—	—	—
40	4.00	3.75	8.68	8.31	95.7	16.89	1.60	1.59	4	1.02
60	2.84	3.95	8.92	8.14	91.2	18.11	—	—	—	—
80	3.63	4.84	8.65	3.46	40.0	19.89	—	—	—	—
95	4.22	5.24	8.49	2.06	24.3	19.35	0.69	0.67	4	0.44
					P. 13; 1933. 25. VII.					
0	15.57	3.62	6.69	6.86	102.5	17.50	0.72	0.70	16	0.75
20	8.78	—	—	7.68	—	16.34	—	—	—	
40	3.80	3.82	8.71	7.92	91.0	16.52	0.62	0.60	4	0.39
60	2.95	3.95	8.90	7.49	84.2	16.91	—	—	—	—
80	3.70	4.77	8.64	4.18	48.3	18.77	0.71	0.70	4	0.42
					P. 14; 1933; 25. VII.					
0	16.71	3.65	6.55	6.42	97.9	17.38	0.76	0.76	17	0.84
20	14.28	3.51	6.87	6.21	90.3	18.99	—	—	—	—
40	5.17	3.79	8.41	7.56	89.9	16.90	—	—	—	—
50	4.21	3.89	8.61	7.54	87.7	17.34	0.99	0.99	4	0.66
					P. 15; 1933. 25. VII.					
0	17.20	3.32	6.51	6.32	97.1	17.93	1.04	1.04	17	1.16
20	13.44	3.54	6.99	6.16	88.1	17.66	—	—	—	—
25	12.86	3.47	7.08	6.07	85.7	17.92	1.24	1.24	13	1.15
					P. 16; 1933. 26. VII.					
0	17.56	2.75	6.50	6.18	95.0	19.11	1.25	1.24	18	1.37
20	3.54	3.08	8.85	7.54	85.2	18.70	—	—	—	—
25	4.02	3.30	8.72	7.02	80.5	17.47	1.91	1.91	4	1.28
					P. 17; 1933. 27. VII.					
0	16.74	2.90	6.59	6.15	93.2	18.88	1.40	1.40	17	1.52
20	16.19	2.89	6.66	6.22	93.5	18.88	—	—	—	—
40	6.28	3.24	8.24	5.59	67.8	20.11	2.20	2.20	6	1.61
					P. 18; 1933. 28. VII.					
0	17.24	2.84	6.53	5.94	91.0	19.11	1.35	1.34	17	1.48
20	13.18	2.95	7.06	5.92	83.8	18.74	—	—	—	—
30	3.42	3.14	8.87	5.51	62.2	20.78	1.08	1.07	3	0.67

m	t	Cl‰	O'2	O2	$\frac{O_2}{O'_2}$.100	A	Pressure of CO_2 10^{-4} athm. Θ_t	Corrected CO_2 $\Theta_{t_1} = \Theta_t \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t = (\Theta_{t_1} - ct_1)\frac{\alpha_{t_1}}{\alpha_t} + ct$
					P. 19; 1933. 28. VII.					
0	18.41	2.65	6.42	5.70	88.9	19.55	1.10	1.09	18	1.26
15	16.24	2.81	6.65	5.41	81.3	19.55	—	—	—	—
					P. 20; 1933. 28. VII.					
0	20.17	2.47	6.23	5.53	88.8	19.86	1.50	1.50	20	1.94
7	20.05	2.46	6.24	5.39	86.4	20.30	—	—	—	—
					P. 21; 1933. 28. VII.					
0	17.19	2.89	6.54	5.72	87.4	18.77	1.18	1.17	17	1.30
20	11.55	3.22	7.29	5.66	77.6	18.82	—	—	—	—
25	8.38	3.22	7.83	5.12	65.3	19.57	1.75	1.75	8	1.38
					P. 22; 1933. 2. VII.					
0	18.80	3.04	6.34	6.14	96.9	18.77	1.31	1.31	19	1.58
19	17.18	3.09	6.52	5.97	91.6	18.78	—	—	—	—
					P. 23; 1933. 3. VIII.					
0	18.81	3.39	6.32	5.95	94.2	18.48	0.47	0.47	19	0.62
7	18.84	3.38	6.32	5.93	93.9	18.10	—	—	—	—
					P. 24; 1933. 3. VIII.					
0	19.00	3.37	6.29	6.03	95.8	18.94	—	—	—	—
13	16.96	3.53	6.52	6.05	92.8	17.93	—	—	—	—

Table 14.

Tempetature and Salinity at the Surface 1933.

Date		φ	λ	t^0	$S^0/_{00}$
13. VII. 33.	12h35m	59°36'.5	24°21'	18.38	4.69
„	14 20	59 34	24 08.5	17.72	4.63
„	16 00	59 30	23 44	16.92	4.94
17. VII. 33.	14 00	59 21	23 17.5	16.73	5.05
„	14 50	59 26	23 09	16.40	5.26
„	16 40	59 19.5	22 58	16.32	5.05
„	17 40	59 13	22 47.5	16.08	5.50
21. VII. 33.	06 10	59 14	22 11	14.47	6.09
„	08 10	59 09	22 01.5	14.50	6.19
„	09 10	59 05	21 52	14.48	6.24
„	10 50	59 01	21 38	14.31	6.37
„	11 50	58 57	21 24	14.51	6.24

Date		φ	λ	t°	S‰
21. VII. 33.	12h40m	58° 54′.5	21° 14′	14.82	6.24
„	14 15	58 46	21 14	14.82	6.15
„	15 15	58 38	21 14	14.83	6.20
„	16 10	58 30.5	21 13	15.01	6.40
„	17 55	58 27.5	21 25.5	15.64	6.55
„	18 55	58 23	21 45	16.22	6.47
25. VII. 33.	06 30	58 21	21 41	16.53	6.40
„	07 30	58 19	21 27	16.16	6.40
„	08 30	58 17.5	21 13	15.15	6.49
„	09 15	58 16	21 00	15.57	6.56
„	11 00	58 09	21 09	16.29	6.65
„	12 00	58 02	21 20	16.72	6.55
„	13 00	57 55	21 29	16.50	6.55
„	13 15	57 53	21 32	16.71	6.62
„	14 40	57 48	21 44	16.66	—
„	15 40	57 42	21 56	17.20	6.02
„	17 00	57 50	22 04	15.34	6.24
26. VII. 33.	08 00	57 55	22 18	14.31	6.11
„	08 50	57 55	22 32	17.56	4.99
„	10 00	58 03	22 36	16.60	5.01
27. VII. 33.	08 15	58 06	22 44	15.60	5.54
„	09 15	58 00	22 58	16.66	4.96
„	10 15	57 54	23 11	16.62	5.19
„	10 40	57 52	23 16	16.74	5.26
28. VII. 33.	05 30	57 53	23 22	17.20	5.01
„	07 10	58 05.5	23 36	17.31	5.26
„	07 50	58 10	23 40	17.19	5.25
„	09 00	58 03	23 46.5	17.54	5.25
„	09 55	57 55	23 50	17.24	5.16
„	11 00	57 59	24 01	17.34	5.26
„	12 05	58 04	24 12	18.41	4.81
„	13 05	58 12	24 21	19.31	4.69
„	14 00	58 18	24 25	20.17	4.49
„	14 35	58 21.5	24 27	19.92	4.78
2. VIII. 33.	19 00	58 33.5	23 28	18.80	5.52
„	20 45	58 37.5	23 24	18.70	5.77
3. VIII. 33.	07 35	58 41	23 17.5	18.17	5.73
„	09 00	58 49	23 13	18.81	6.15
„	10 10	58 55	23 08.5	18.90	6.20
„	13 00	59 03	23 04	19.00	6.11
7. VIII. 33.	13 45	59 37	24 43.5	16.46	5.39
„	19 50	59 43	25 01	16.48	5.41
„	21 45	59 42	25 16	16.32	5.54
„	22 45	59 40	25 31	16.50	5.46
8. VIII. 38.	12 30	59 50	25 37	15.20	5.01
„	14 30	59 51	25 58	15.62	4.76
„	15 55	59 52	26 17	15.86	4.81
10. VIII. 33.	07 00	59 43	26 56	15.18	4.36
„	07 55	59 47	27 05	15.71	4.38
„	09 45	59 42.5	27 16	15.93	4.25
„	10 30	59 38	27 27	16.92	4.20
„	11 45	59 35.5	27 38	16.85	4.25
„	12 20	59 33	27 47	17.18	4.13
„	13 15	59 31	27 53	17.28	3.93
„	13 45	59 29	28 00	17.23	3.95

Table 15.

Observations of the Transparency 1933.

№	Date	m	Sea Motion 0—9	Cloudiness 0—10
1 A	10. VIII. 33. 12h20m	4	5	10
1	„ 10 30	5	4	10
2	„ 07 55	7	4	10
3	8. VIII. 33. 15 55	8	5	8
4	„ 12 30	7	5	8
5	7. VIII. 33. 19 50	7	3	9
6	13. VII. 33. 12 35	7	4	10
7	„ 16 00	7.5	3	9
8	17. VII. 33. 14 50	7	4	10
9	21. VII. 33. 06 10	10	2	2
10	„ 09 10	11	2	7
11	„ 12 40	11	2	1
12	„ 16 10	12	2	1
13	25. VII. 33. 09 15	12.5	4	1
14	„ 13 15	9	4	1
15	„ 15 40	8.5	4	2
16	26. VII. 33. 08 50	6	3	3
17	27. VII. 33. 10 40	6.5	5	1
18	28. VII. 33. 09 55	7	3	4
19	„ 12 05	4	2	10
20	„ 14 00	1	2	6
21	„ 07 50	6.5	3	0
22	2. VIII. 33. 19 00	4.5	0	2
23	3. VIII. 33. 09 00	5	2	9
24	„ 13 00	5	1	10

The Thalassological Observations in 1934.

The Observations were made in July and Oktober 1934, from s. s. „Sekstant", belonging to the Department of Waterways in Estonia.

The time, geographical coordinates and, depths of the observation points are given in Table 16.

Table 16.

1	12. X.	18h40m	φ = 59°38′	λ = 27°27′	40 m
2	„ „	21 30	59 47	27 05	69
3	11. „	06 40	59 52	26 17	85
4	10. „	18 07	59 46	25 34	77
5	„ „	12 45	59 43	25 01	110
6	19. VII.	21 10	59 36.5	24 21	88

7	20. VII	09h15m	φ = 59°30′	λ = 23°44	85 m
8	22. „	04 45	50 26	23 09	93
9 A	20. „	17 30	59 05	23 01	18
9	22. „	18 05	59 14	22 11	110
10	23. „	20 03	59 05	21 52	145
11	24. „	03 15	58 54.5	21 14	70
12	„ „	06 45	58 30.5	21 13	97
13	25. „	14 40	58 16	21 00	59
14	„ „	18 40	57 53	21 32	60
15	„ „	21 10	57 42	21 56	27
16	26. „	02 45	57 55	22 32	28
17	„ „	06 10	57 52	23 16	48
18	„ „	12 50	57 55	23 50	29
19	„ „	16 40	58 04	24 12	17
20	„ „	18 40	58 18	24 25	8
21	27. „	14 52	58 10	23 40	29
22	„ „	21 05	58 33.5	23 28	21
23	28. „	15 13	58 49	23 13	8

For explications to the following Tables (17, 18, 19, 20) see p. 4.

Table 17.

Temperature (t°), salinity (S‰), density *in situ* (σ_t) of sea water at the depth of m metres in summer 1934.

m	t°	S‰	σ_t
P. 1; 1934 12. X. 18h 40m			
φ=59°38′, λ=27°27′, 40 m.			
0	10.00	5.03	3.69
5	10.05	4.98	3.65
10	10.05	4.98	3.65
15	10.10	4.96	3.63
20	10.69	5.16	3.72
25	11.24	5.23	3.71
30	5.63	5.97	4.74
38	3.42	6.33	5.10
NNW 4.0, T=10.1°, R=75%			
S=3, C=9/10			
P. 2; 1934 12. X. 21h 30m			
φ=59°47′, λ=27°05′, 69 m.			
0	11.70	5.46	3.83
5	11.55	5.45	3.84
10	11.60	5.46	3.85
15	11.62	5.50	3.87
20	11.55	5.46	3.85
30	11.46	5.48	3.88
35	4.05	5.95	4.79
40	2.72	6.17	4.98
50	2.31	6.64	5.35
60	2.40	6.98	5.62
65	2.42	7.07	5.70
WNW 4.1, T=9.4°, R=79%			
S=3, C=5/10			
P. 3; 1934 11. X. 06h 40m			
φ=59°52′, λ=26°17′, 85 m.			
0	9.88	5.14	3.79
5	9.80	5.16	3.81
10	9.93	5.10	3.75
15	10.50	5.34	3.88
20	10.97	5.39	3.87
25	10.30	5.79	4.25
30	6.72	5.97	4.69
40	3.21	6.38	5.14
50	2.60	6.91	5.56
60	2.48	7.32	5.90
70	2.60	7.29	5.87
78	2.75	7.41	5.97
WSW 5.2, T=9.3°, R=83%			
S=4, C=10/10, ●			
P. 4; 1934 10. X. 18h 07m			
φ=59°46′, λ=25°34′, 77m.			
0	11.98	5.64	3.94
5	12.09	5.63	3.92
10	12.05	5.77	4.03

m	t^0	$S^0/_{00}$	σ_t
15	12.12	5.66	3.95
20	12.45	5.88	4.06
30	9.30	5.77	4.33
40	4.88	6.37	5.10
50	3.15	7.02	5.65
60	3.08	7.32	5.89
70	3.05	7.30	5.88

S 7.3, T=13.0°, R=79%
S=3, C=10/10

P. 5; 1934 10. X. 12h 45m
φ=59°43′, λ=25°01′, 110 m.

m	t^0	$S^0/_{00}$	σ_t
0	11.25	5.34	3.79
5	11.19	5.43	3.88
10	11.20	5.35	3.81
15	11.21	5.35	3.81
20	11.65	5.54	3.90
30	11.35	5.91	4.23
35	7.70	6.24	4.84
40	5.52	6.47	5.15
50	3.44	6.83	5.50
60	3.20	7.30	5.88
70	3.06	7.50	6.04
80	2.76	7.47	6.01
90	3.24	7.90	6.36
100	3.21	8.03	6.46

SSW 9.2, T=13.4°, R=84%,
S=4, C=7/10,

P. 6; 1934 19. VII. 21h 10m
φ=59°36.5′λ=24°21′, 88 m.

m	t^0	$S^0/_{00}$	σ_t
0	15.76	5.79	3.49
5	15.76	5.75	3.46
10	15.72	5.86	3.55
15	7.02	6.37	4.99
20	4.40	6.53	5.24
30	3.35	6.67	5.37
40	2.78	6.91	5.56
50	2.34	7.05	5.68
60	2.91	7.70	6.20
70	3.78	9.06	7.26
80	3.83	9.34	7.49
85	4.26	9.51	7.61

ENE 6.7, T=15.8°, R=92%,
S=5, C=10/10

P. 7; 1934 20. VII. 09h 15m
φ=59°30′, λ=23°44′, 85 m.

m	t^0	$S^0/_{00}$	σ_t
0	16.11	6.08	3.65
5	15.82	6.13	3.75
10	11.09	6.08	4.39
15	9.03	6.51	4.94
20	4.27	6.38	5.12
30	3.55	6.55	5.26
40	3.95	6.78	5.45
50	2.76	6.85	5.52
60	2.61	7.21	5.81
70	3.80	9.38	7.52
80	4.38	9.61	7.68

E 6.7, T=15.1°. R=92%,
S=5, C=10/10

P. 8; 1934 22. VII. 04h 45m
φ=59°26′, λ=23°09′, 93 m.

m	t^0	$S^0/_{00}$	σ_t
0	16.46	6.04	3.56
5	16.40	6.11	3.62
10	10 44	6.65	4.91
15	7.65	6.67	5.18
20	4.96	6.74	5.39
30	3.16	6.87	5.53
40	2.75	6.93	5.58
50	2.50	7.14	5.75
60	2.91	7.81	6.28
70	3.93	9.00	7.22
80	4.18	9.58	7.55
90	4.30	9.85	7.87

SE 1.6, T=14.7°, R=95%,
S=1, C=10/10.

P.9A; 1934 20.V II. 17h 30m
φ=59°05′, λ=23°01′, 18 m.

m	t^0	$S^0/_{00}$	σ_t
0	13 11	6.44	4.40
5	4.32	6.73	5.40
10	3.80	6.74	5.42
15	3.72	5.95?	4.79?

NE 6.1, T=14.0°, R=90%,
S=3. C=10/10.

P. 9; 1934 22. VII. 18h 05m
φ=59°14′, λ=22°11′, 110 m.

m	t^0	$S^0/_{00}$	σ_t
0	17.89	6.33	3.51
5	17.55	6.26	3.52
10	16.56	6.33	3.76
15	11.87	6.49	4.62
20	7.47	6.69	5.21
30	3.91	6.80	5.47
40	2.75	6.89	5.55
50	2.65	7.00	5.64
60	4.45	6.76	5.42
70	3.74	8.71	6.99
80	4.15	9.42	7.53
90	4.30	9.76	7.80
100	4.34	9.96	7.96
105	3.75	9.31	7.46

W 1.4, T=17.0°, R=74%,
S=1, C=2/10.

P. 10; 1934 23. VII. 20h 03m
φ=59°05′, λ=21°52′, 145 m.

m	t^0	$S^0/_{00}$	σ_t
0	17.27	6.24	3.56
5	17.30	6.33	3.63
10	14.70	6.33	4.07
15	7.46	6.64	5.17
20	5.09	6.71	5.35
30	3.36	6.87	5.53
40	2.72	7.23	5.83
50	3.08	7.48	6.02
60	3.70	8.06	6.47
70	3.80	8.84	7.09
80	4.12	9.31	7.45
90	4.28	9.72	7.78
100	4.31	9.90	7.92
110	4.32	9.90	7.92
120	4.44	10.14	8.10
130	4.39	10.12	8.09
140	4.56	10.14	8.10

N 3.4, T=17.1°, R=89%,
S=3, C=5/10,

P. 11; 1934 24. VII. 03h 15m
φ=58°54.5′, λ=21°14′, 70 m.

m	t^0	$S^0/_{00}$	σ_t
0	16.28	6.06	3.61
5	16.15	6.08	3.64
10	14.69	6.20	3.98
20	11.71	6.20	4.41
30	8.34	6.44	4.94
40	4.35	6.78	5.44
50	3.16	6.87	5.53
60	2.78	7.12	5.74
68	3.44	8.08	6.49

NNE 5.8, T=15.1°, R=99%,
S=4, C=10/10.

m	t^0	$S^0/_{00}$	σ_t
P. 12; 1934 24. VII. 06h 45m $\varphi = 58^0 30'.5\ \lambda = 21^0 13'$, 97 m.			
0	17.80	6.33	3.53
5	17.80	6.37	3.56
10	17.44	6.38	3.64
15	14.55	6.71	4.39
20	12.32	6.73	4.74
30	6.46	6.76	5.34
35	4.07	6.83	5.49
40	2.60	6.98	5.62
50	2.57	7.14	5.75
60	2.84	7.43	5.99
70	3.76	8.59	6.89
80	4.24	9.31	7.44
90	4.87	9.31	7.42
N 4.6, T=17.0°, R=90%, S=6, C=10/10.			
P. 13; 1934 25. VII. 14h 40m $\varphi = 58^0 16'$, $\lambda = 21^0 00'$, 59 m.			
0	18.40	6.35	3.42
5	18.34	6.37	3.45
10	17.77	6.37	3.57
15	14.29	6.65	4.40
20	10.48	6.74	4.97
25	5.82	6.82	5.41
30	3.80	6.85	5.51
40	3.33	6.96	5.60
50	3.12	7.05	5.68
55	3.15	7.11	5.72
N 2.7, T=19.0°, R=93%, S=3, C=9/10.			
P. 14; 1934 25. VII. 18h 40m $\varphi = 57^0 53'$, $\lambda = 21^0 32'$, 60 m.			
0	18.80	6.51	3.46
5	14.70	6.83	4.57
10	12.51	6.87	4.82
15	10.92	6.87	5.11
20	7.37	6.87	5.36
30	3.82	6.96	5.60
40	3.25	7.11	5.71
50	3.36	7.30	5.88
58	3.80	7.63	6.13
N 0.9, T=19.0°, R=94%, S=3, C=10/10, ●0.			
P. 15; 1934 25. VII. 21h 10m $\varphi = 57^0 42'$, $\lambda = 21^0 56'$, 27 m			
0	19.85	5.63	2.64
5	19.66	5.63	2.68
10	14.45	6.29	4.09
12	12.25	6.46	4.54
15	7.93	6.89	5.32
20	6.66	6.91	5.43
25	5.77	6.89	5.47
ESE 0.8, T=20.0°. R=91%, S=2, C=10/10, ●.			
P. 16; 1934 26. VII. 02h 45m $\varphi = 57^0 55'$, $\lambda = 22^0 32'$, 28 m.			
0	20.81	5.35	2.16
5	20.70	5.35	2.18
10	17.85	5.50	2.88
15	14.86	5.61	3.50
20	11.12	5.64	4.05
25	6.95	6.76	5.31
ENE 1.2, T=21.5°, R=94%, S=1, C=10/10.			
P. 17; 1934 26. VII. 06h 10m $\varphi = 57^0 52'$, $\lambda = 23^0 16'$, 48 m.			
0	21.52	5.46	2.08
5	21.50	5.43	2.05
10	19.01	5.48	2.64
15	13.35	5.34	3.52
17	11.60	5.35	3.77
20	8.26	5.37	4.12
30	2.82	5.50	4.43
40	3.37	5.59	4.51
45	3.80	5.61	4.51
E 2.2, T=21.0°, R=91%, S=2, C=9/10.			
P. 18; 1934 26. VII. 12h 50m $\varphi = 57^0 55'$, $\lambda = 23^0 50'$, 29 m.			
0	21.69	5.21	1.85
5	21.55	5.26	1.92
10	17.02	5.37	2.95
15	14.50	5.43	3.42
20	9.42	5.45	4.07
28	5.40	5.48	4.35
SW 2.3, T=24.0°, R=77%, S=2. C=9/10.			
P. 19; 1934 26. VII. 16h 40m $\varphi = 58^0 04'$, $\lambda = 24^0 12'$, 17 m.			
0	21.25	4.99	1.78
5	21.12	4.98	1.80
10	16.00	5.14	2.95
15	12.69	5.08	3.42
W 3.8, T=21.5°, R=82%, S=3, C=8/10.			
P. 20; 1934 26. VII. 18h 40m $\varphi = 58^0 18'$, $\lambda = 24^0 25'$, 8 m.			
0	21.68	5.10	1.77
5	21.51	5.07	1.78
7	16.49	5.17	2.89
SW 2.0, T=21.5°, R=79%, S = 2, C = 10/10.			
P. 21; 1934 27. VII. 14h 52m $\varphi = 58^0 10'$, $\lambda = 23^0 40'$, 29 m.			
0	20.60	5.52	2.33
5	20.51	5.48	2.32
10	16.79	5.63	3.19
15	13.34	5.54	3.67
20	9.46	5.52	4.13
26	7.10	5.46	4.27
SSE 3.7, T=19.3°, R=76%, S=3, C=6/10.			
P. 22; 1934 27. VII. 21h 05m $\varphi = 58^0 33'.5$, $\lambda = 23^0 28'$, 21 m.			
0	20.56	5.57	2.37
5	20.46	5.57	2.40
10	19.86	5.72	2.64
15	18.69	6.02	3.12
20	18.34	6.13	3.28
S 4.2, T = 19.0°, R = 85%, S = 3, C = 10/10.			
P. 23; 1934 28. VII. 15h 13m $\varphi = 58^0 49'$, $\lambda = 23^0 13'$, 8 m.			
0	20.05	6.09	2.89
5	20.03	6.11	2.90
7	20.02	6.15	2.93
WSW 4.5, T=19.0°, R=66%, S = 3, C = 9/10.			

Table 18.

Oxygen, Alkalinity, and Pressure of Free Carbonic Acid. 1934.

m	t	$Cl^0/_{00}$	O'_2	O_2	$\frac{O_2}{O'_2}.100$	A	Pressure of CO_2 10^{-4} athm. Θ_t	Corrected CO_2 $\Theta_{t_1}=\Theta\frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_t=(\Theta_{t_1}-ct_1)\frac{\alpha t_1}{\alpha t}+ct$
					P. 1; 1934. 12. X.					
0	10.00	2.77	7.57	7.16	94.7	15.72	—	—	—	—
20	10.69	2.84	7.46	7.14	95.7	14.67	—	—	—	—
38	3.42	3.49	8.83	6.12	69.3	17.62	—	—	—	—
					P. 2; 1934. 12. X.					
0	11.70	3.01	7.28	7.05	96.9	15.76	—	—	—	—
20	11.55	3.01	7.31	6.98	95.5	15.99	—	—	—	—
40	2.72	3.40	9.00	6.94	77.1	16.00	—	—	—	—
65	2.42	3.90	9.03	5.66	62.7	18.01	—	—	—	—
					P. 3; 1934. 11. X.					
0	9.88	2.83	7.59	7.28	96.0	15.13	—	—	—	—
20	10.97	2.97	7.41	7.12	96.2	18.59	—	—	—	—
40	3.21	3.52	8.88	7.20	81.1	17.06	—	—	—	—
60	2.48	4.04	9.00	5.48	60.8	18.30	—	—	—	—
78	2.75	4.09	8.93	5.43	60.8	18.17	—	—	—	—
					P. 4; 1934. 10. X.					
0	11.98	3.11	7.23	7.02	97.1	17.00	0.74	0.73	12	0.61
20	12.45	3.24	7.15	6.76	94.5	16.00	—	—	—	—
40	4.88	3.51	8.50	7.43	87.4	17.12	—	—	—	—
60	3.08	4.04	8.86	6.22	70.2	18.60	—	—	—	—
70	3.05	4.03	8.87	5.88	66.3	20.17	—	—	—	—
					P. 5; 1934. 10. X.					
0	11.25	2.94	7.36	7.14	97.1	15.80	0.47	0.46	11	0.36
20	11.65	3.05	7.29	7.11	97.5	16.46	—	—	—	—
40	5.52	3.57	8.36	7.37	88.2	17.87	—	—	—	—
60	3.20	4.03	8.83	6.40	72.5	17.79	—	—	—	—
80	2.76	4.12	8.92	5.45	61.1	19.27	—	—	—	—
100	3.21	4.43	8.78	4.50	51.2	19.39	—	—	—	—
					P. 6; 1934. 19. VII.					
0	15.76	3.19	6.70	6.61	98.6	16.90	1.95	1.93	16	2.00
40	2.78	3.81	8.95	8.42	94.1	17.56	1.05	1.03	3	0.63
85	4.26	5.25	8.48	2.33	27.5	20.60	0.87	0.86	4	0.55
					P. 7; 1934. 20. VII.					
0	16.11	3.35	6.65	6.34	95.4	16.96	0.53	0.52	16	0.55
20	4.27	3.52	8.63	8.11	94.0	17.10	0.68	0.67	4	0.43
40	3.95	3.74	8.68	8.33	96.0	16.79	0.51	0.50	4	0.31
60	2.61	3.98	8.97	7.54	84.1	17.79	0.25	0.25	3	0.13
80	4.38	5.31	8.45	2.19	25.9	18.12	0.57	0.56	4	0.37

m	t	Cl‰	O'2	O2	$\frac{O_2}{O'_2}$.100	A	Pressure of CO_2 10^{-4} atm. Θ_t	Corrected CO_2 $\Theta_{t_1} = \Theta_t \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_{t_1} = (\Theta_{t_1} - ct_1)^{\alpha t_1}_{\alpha t} + ct$
					P. 8; 1934. 22. VII.					
0	16.46	3.33	6.60	6.32	95.8	17.92	0.68	0.67	16	0.72
20	4.96	3.72	8.46	8.02	94.8	17.49	—	—	—	—
40	2.75	3.82	8.95	8.22	91.8	17.85	0.56	0.55	3	0.33
60	2.91	4.31	8.87	6.45	72.7	20.41	—	—	—	—
80	4.18	5.29	8.49	—	—	20.79	—	—	—	—
90	4.30	5.44	8.45	6.22	73.6	19.51	0.60	0.58	4	0.35
					P. 9 A; 1934. 20. VII.					
0	13.11	3.55	7.04	7.31	103.8	17.03	—	—	—	—
15	3.72	3.28	8.79	8.24	93.8	16.74	—	—	—	—
					P. 9; 1934. 22. VII.					
0	17.89	3.49	6.42	6.46	100.6	20.07	1.85	1.82	18	2.04
20	7.47	3.69	7.97	7.62	95.6	18.02	—	—	—	—
40	2.75	3.80	8.96	8.45	94.3	18.61	—	—	—	—
60	4.45	3.73	8.57	7.22	84.3	19.33	0.61	0.60	4	0.37
80	4.15	5.20	8.51	2.84	33.4	21.51	—	—	—	—
105	3.75	5.14	8.60	3.80	44.0	19.88	0.65	0.64	4	0.40
					P. 10; 1934. 23. VII.					
0	17.27	3.44	6.49	6.34	97.7	16.22	0.72	0.71	17	0.80
20	5.09	3.70	8.44	7.62	90.3	17.54	—	—	—	—
40	2.72	3.99	8.95	7.36	82.3	21.52	0.60	0.59	3	0.35
60	3.70	4.45	8.67	5.30	61.1	20.29	0.59	0.58	4	0.39
80	4.12	5.14	8.52	2.55	29.9	20.93	—	—	—	—
100	4.31	5.47	8.44	2.66	31.5	18.23	0.91	0.90	4	0.56
120	4.44	5.60	8.41	2.31	27.5	21.33	—	—	—	—
140	4.56	5.60	8.38	3.15	37.6	24.14	4.42	4.35	5	3.00
					P. 11; 1934. 24. VII.					
0	16.28	3.54	6.61	6.88	104.3	19.32	0.59	0.58	16	0.67
20	11.71	3.42	7.25	—	—	16.68	—	—	—	—
40	4.35	3.74	8.60	7.67	89.2	19.34	2.55	2.50	4	1.68
68	3.44	4.46	8.73	5.27	60.3	18.93	2.61	2.57	3	1.64
					P. 12; 1934. 24. VII.					
0	17.80	3.49	6.43	6.22	96.7	16.34	1.03	1.02	18	1.17
20	12.32	3.71	7.14	7.10	99.4	18.39	—	—	—	—
40	2.60	3.85	8.99	8.22	91.4	18.01	1.53	1.51	3	0.92
70	3.76	4.74	8.64	6.75	78.1	21.14	—	—	—	—
90	4.87	5.14	8.36	2.97	35.5	19.39	0.63	0.62	5	0.39
					P. 13; 1934. 25. VII.					
0	18.40	3.50	6.36	6.35	99.9	18.35	1.29	1.27	18	1.40
20	10.48	3.72	7.42	7.57	102.1	18.90	—	—	—	—
40	3.33	3.84	8.82	8.58	97.3	17.76	—	—	—	—
55	3.15	3.92	8.85	8.36	94.5	18.59	1.47	1.45	3	0.94

m	t	Cl‰	O'_2	O_2	$\frac{O_2}{O'_2}.100$	A	Pressure of CO_2 10^{-4} athm. Θ_t	Corrected CO_2 $\Theta_{t_1} = \Theta_t \frac{B-f}{760}$	Temperature *in situ*	Real CO_2 *in situ* $\Theta_{t=} = (\Theta_{t_1-ct_1})\frac{\alpha_{t_1}}{\alpha_t} + ct$
					P. 14; 1934. 25. VII.					
0	18.80	3.59	6.31	6.08	96.4	18.34	0.59	0.58	19	0.77
20	7.37	3.79	7.97	7.87	98.8	16.99	—	—	—	—
40	3.25	3.92	8.82	7.90	89.6	16.84	—	—	—	—
58	3.80	4.21	8.68	5.90	68.0	18.35	2.23	2.21	4	1.48
					P. 15; 1934. 25. VII.					
0	19.85	3.10	6.23	6.06	97.2	19.45	1.52	1.50	20	1.90
20	6.66	3.81	8.11	8.62	106.4	17.45	—	—	—	—
25	5.77	3.80	8.29	7.74	93.4	17.68	1.60	1.58	6	1.13
					P. 16; 1934. 26. VII.					
0	20.81	2.95	6.14	6.18	100.7	21.90	1.45	1.43	21	1.93
25	6.95	3.73	8.05	6.13	76.2	18.79	0.61	0.60	7	0.42
					P. 17; 1934. 26. VII.					
0	21.52	3.01	6.06	5.96	98.3	19.90	0.66	0.65	22	1.10
20	8.26	2.96	7.87	6.96	88.5	20.22	—	—	—	—
45	3.80	3.09	8.79	5.54	63.0	19.81	0.90	0.89	4	0.57
					P. 18; 1934. 26. VII.					
0	21.69	2.87	6.05	6.02	99.5	19.19	0.60	0.59	22	1.05
28	5.40	3.02	8.44	5.93	70.3	21.01	2.60	2.57	5	1.81
					P. 19; 1934. 26. VII.					
0	21.25	2.75	6.10	6.10	100.0	20.23	1.36	1.34	21	1.88
15	12.69	2.80	7.15	5.64	78.9	19.99	0.54	0.53	13	0.46
					P. 20; 1934. 26. VII.					
0	21.68	2.81	6.05	5.73	94.8	21.21	1.87	1.84	22	2.54
7	16.49	2.85	6.62	5.90	89.1	21.84	—	—	—	—
					P. 21; 1934. 27. VII.					
0	20.60	3.04	6.15	5.90	96.0	19.34	0.46	0.45	21	0.76
20	9.46	3.04	7.66	6.11	79.7	20.46	—	—	—	—
26	7.10	3.01	8.09	5.60	69.3	19.73	1.97	1.94	7	1.44
					P. 22; 1934. 27. VII.					
0	20.56	3.07	6.16	6.04	98.2	19.68	1.02	1.00	21	1.40
20	18.34	3.38	6.33	5.63	89.0	20.32	0.47	0.46	18	0.59
					P. 23; 1934. 28. VII.					
0	20.05	3.39	6.19	5.83	94.2	18.79	0.52	0.51	20	0.75
7	20.02	3.37	6.20	5.88	94.9	18.25	—	—	—	—

Table 19.

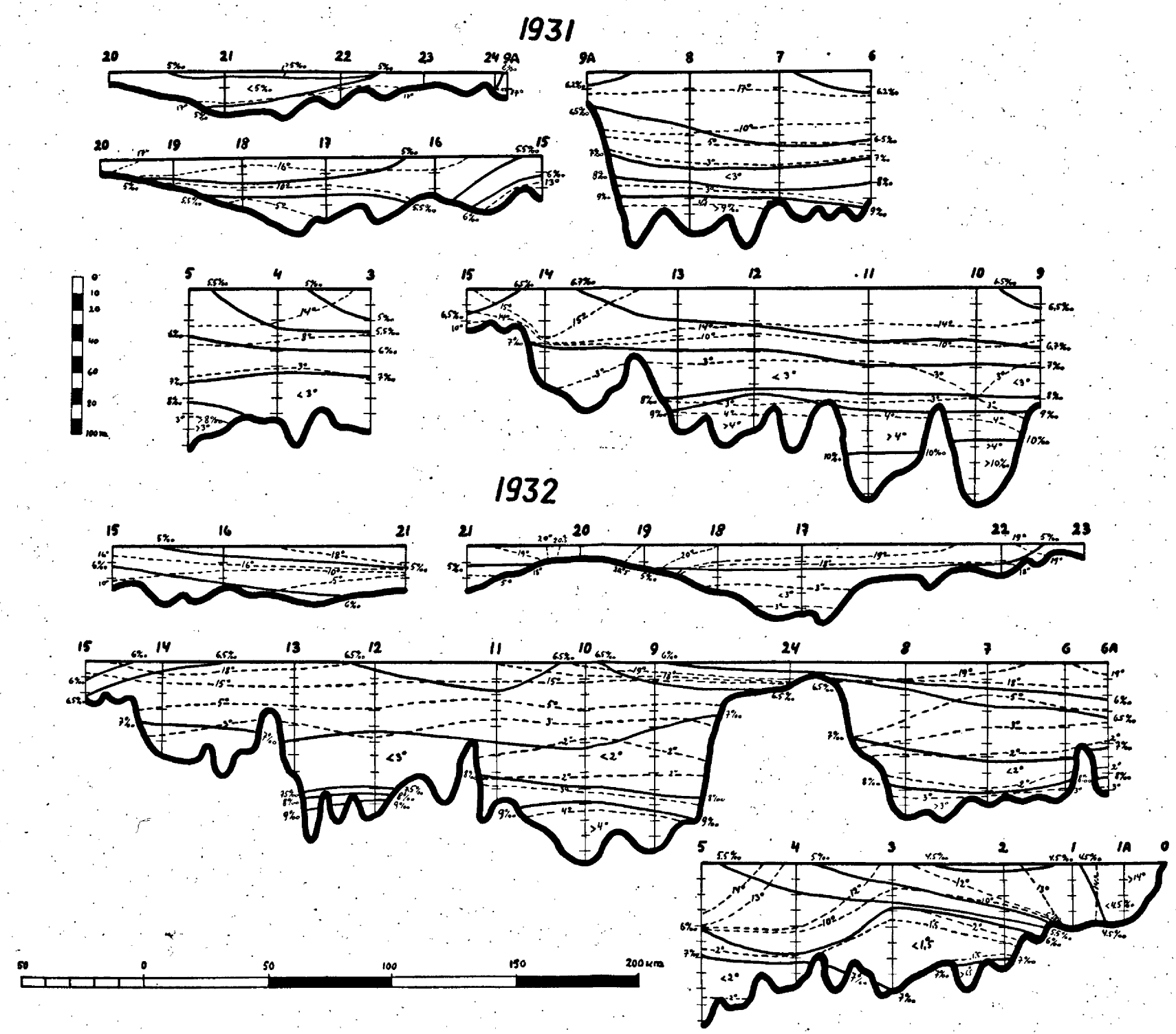
Temperature and Salinity at the Surface 1934.

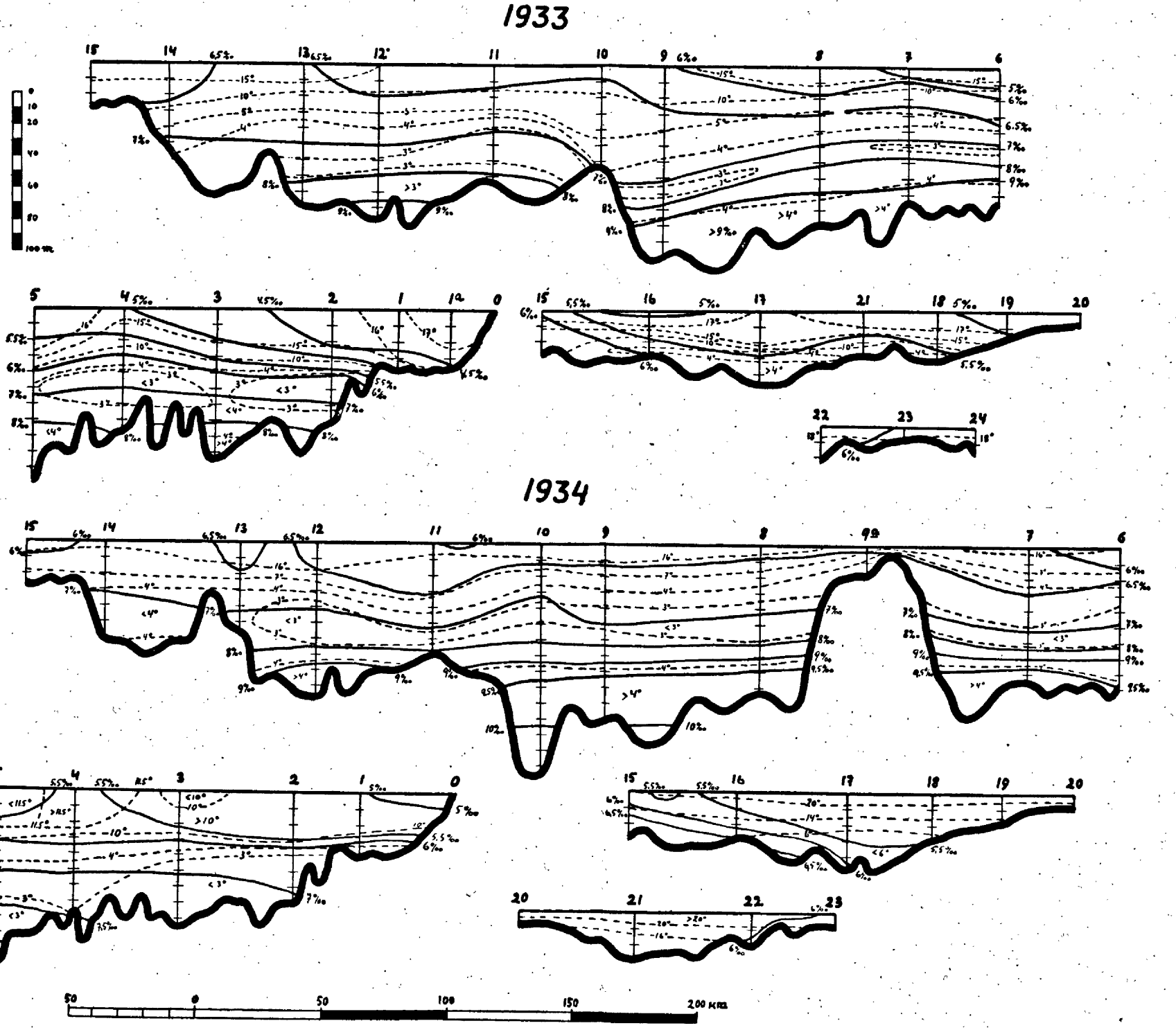
Date		φ	λ	t^0	$S^0/_{00}$
19. VII. 34.	21^h10^m	59°36'.5	24°21'	15.76	5.79
20. VII. 34.	09 15	59 30	23 44	16.11	6.08
,,	17 30	59 05	23 01	13.11	6.44
22. VII. 34.	04 45	59 26	23 09	16.46	6.04
,,	18 05	59 14	22 11	17.89	6.33
23. VII. 34.	20 03	59 05	21 52	17.27	6.24
24. VII. 34.	01 27	59 01.5	21 37	17.35	6.33
,,	02 15	58 58	21 25	16.25	5.90
,,	03 15	58 54.5	21 14	16.28	6.06
,,	04 47	58 46.5	21 13.5	17.55	6.42
,,	05 44	58 38	21 13.5	17.59	6.28
,,	06 45	58 30.5	21 13	17.80	6.33
,,	08 25	58 32	21 29	17.62	6.38
25. VII. 34.	12 50	58 20	21 30	16.49	6.76
,,	14 00	58 18	21 13.5	16.58	6.60
,,	14 40	58 16	21 00	18.40	6.35
,,	16 00	58 10	21 08	17.30	6.80
,,	16 55	58 04	21 16	17.43	6.78
,,	17 45	57 59	21 24	17.69	6.82
,,	18 40	57 53	21 32	18.80	6.51
,,	20 10	57 47	21 44	19.99	5.59
,,	21 10	57 42	21 56	19.85	5.63
,,	22 25	57 48	22 06	20.68	5.46
26. VII. 34.	01 15	57 54.5	22 09	20.67	5.57
,,	02 00	57 54.8	22 21	20.52	5.48
,,	02 45	57 55	22 32	20.81	5.35
,,	04 10	57 53.7	22 25	21.16	5.46
,,	06 10	57 52	23 16	21.52	5.46
,,	11 45	57 52	23 34	21.79	5.01
,,	12 50	57 55	23 50	21.69	5.21
,,	16 40	58 04	24 12	21.25	4.99
,,	17 20	58 07.5	24 16	21.54	5.05
,,	18 05	58 14.5	24 23	21.64	5.12
,,	18 40	58 18	24 25	21.68	5.10
,,	19 10	58 21.5	24 27	21.71	5.01
27. VII. 34.	14 10	58 13.5	23 48.5	21.60	5.32
,,	14 52	58 10	23 40	20.60	5.52
,,	21 05	58 33.5	23 28	20.56	5.57
28. VII. 34.	15 13	58 49	23 13	20.05	6.09
,,	17 45	57 53.6	23 14	20.44	6.26
10. X. 34.	12 45	59 43	25 01	11.25	5.34
,,	18 07	59 46	25 34	11.98	5.64
11. X. 34.	06 40	59 52	26 17	9.88	5.14
12. X. 34.	18 40	59 38	27 27	10.00	5.03
,,	21 30	59 47	27 05	11.70	5.46

Table 20.

Observations of the Transparency 1934.

№	Date		m	Sea Motion 0—9	Cloudiness 0—10
1	12. X. 34.	18h 40m	6	3	9
2	,,	21 30	7	3	5
3	11. X. 34.	06 40	6	4	10
4	10. X. 34.	18 07	7	3	10
5	,,	12 45	7	4	7
6	19. VII. 34.	21 10	6	5	10
7	20. VII. 34.	09 15	7	5	10
8	22. VII. 34.	04 45	8	1	10
9 A	20. VII. 34.	17 30	9	3	10
9	22. VII. 34.	18 05	9.5	1	2
10	23. VII. 34.	20 03	—	3	5
11	24. VII. 34.	03 15	—	4	10
12	,,	06 45	8	6	10
13	25. VII. 34.	14 40	9	3	9
14	,,	18 40	9.5	3	10
15	,,	21 10	6.5	2	10
16	26. VII. 34.	02 45	—	1	10
17	,,	06 10	8.5	2	9
18	,,	12 50	7	2	9
19	,,	16 40	5.5	3	8
20	,,	18 40	5	2	10
21	27. VII. 34.	14 52	7	3	6
22	,,	21 05	6	3	10
23	28. VII. 34.	15 13	5.5	3	9


1931
1932
0
10
20
40
60
80
100 m.
50
0
50
100
150
200 km


1933
1934
0
10
20
40
60
80
100 m
50
0
50
100
150
200 km