

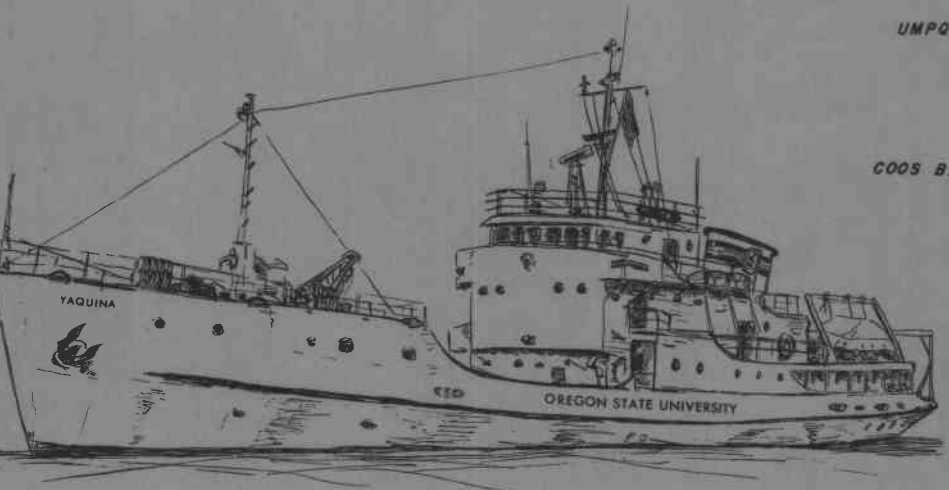
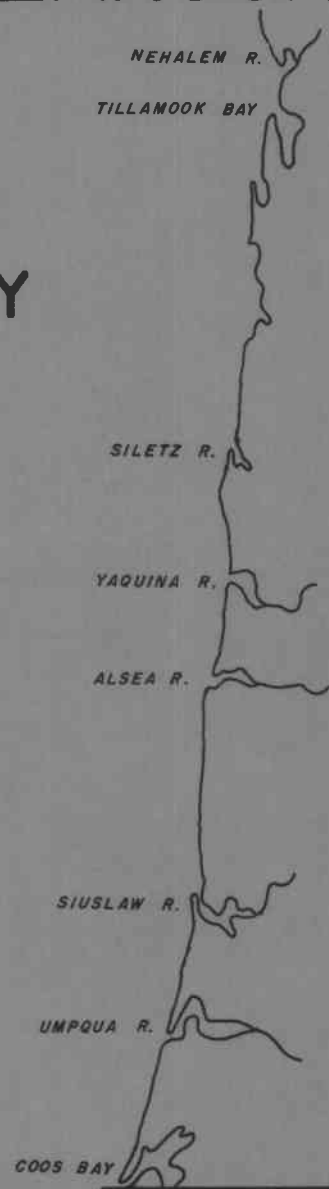
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CARPENTER'S OXYGEN SOLUBILITY TABLES AND NOMOGRAPH FOR SEAWATER AS A FUNCTION OF TEMPERATURE AND SALINITY

by
William Gilbert, Walter Pawley,
and Kiho Park

Office of Naval Research
Contract Nonr 1286(10)
Project NR 083-102

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Data Report No. 29 Reference 68-3
March 1968

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John V. Byrne
Chairman

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Introduction

Dissolved oxygen content of seawater has been widely used to study water mass characterization (RICHARDS, 1957), to study dynamics of water movement (MIYAKE, 1948; WOOSTER and VOLKMANN, 1960; WEYL, 1965; PYTKOWICZ and KESTER, 1966), to investigate organic matter production and consumption (SUGIURA, 1953; REDFIELD *et al.*, 1963), and to estimate air-sea oxygen exchange (REDFIELD, 1948).

Because of its importance in oceanography we need accurate oxygen solubility data for seawater. In the past, oxygen solubility as a function of temperature and salinity has been determined repeatedly (FOX, 1907 and 1909; WHIPPLE and WHIPPLE, 1911; TRUESDALE *et al.*, 1955; MONTGOMERY *et al.*, 1964; GREEN, 1965). Recently CARPENTER (1966) published oxygen solubility data with an analytical accuracy of approximately 0.1%. His solubility data appear to be more reliable than those in current use.

In order to facilitate a rapid adoption of Carpenter's solubility data we have recently prepared an expanded oxygen solubility table and a nomograph with respect to an atmosphere of 20.94% oxygen and 100% relative humidity. With the use of Control Data Corporation computer model 3300, we have prepared the following empirical solubility equation to cover a temperature range of 0.5-36.0°C and a chlorinity range of 0.0 to 20.0‰.

$$(O_2)_{n,m}(Cl, T) = \sum_{i=0}^n \sum_{j=0}^{m-i} A_{ij}(Cl)^i(T)^j \quad (\text{ml/liter at STP}) \quad (1)$$

For $n, m=9$, we find:

$$(O_2)_{9,9} = A_{0,0}(Cl)^0(T)^0 + A_{0,1}(Cl)^0(T)^1 + \dots \\ + A_{1,0}(Cl)^1(T)^0 + A_{1,1}(Cl)^1(T)^1 + \dots \\ + A_{9,0}(Cl)^9(T)^0 \quad (2)$$

The coefficients obtained are listed in Table 1. The above equation has a standard deviation of ± 0.00336 ml/liter. Therefore, for normal seawater, the relative standard deviation of the above equation is less than $\pm 0.1\%$ of oxygen solubility.

Based on the equation (2), we constructed the expanded oxygen solubility table by the above computer with temperature intervals of 0.05°C and salinity intervals of 0.2‰, for the oxygen solubility is strongly affected by temperature change but weakly by salinity (chlorinity). The chlorinity values in equations (1) and (2) were converted into salinity by an empirical relationship of $S=0.030+1.805Cl$. The resulting table shows oxygen solubility changes of 0.01 ml or less with the change in either temperature or salinity, thus eliminating any interpolation of oxygen solubility.

A nomograph for Carpenter's solubility data was prepared by modifying slightly the oxygen nomograph already prepared by RICHARDS and CORWIN (1956). The revised nomograph takes into account non-linear dependency of the oxygen solubility with respect to salinity that was found recently (GREEN, 1965; CARPENTER, 1966). The nomograph (Fig. 1) agrees with Carpenter's data with a precision of ± 0.01 ml.

Two oxygen concentration units are shown on the nomograph: ml/liter at STP and m mole/liter. The selection of the latter unit is based on the strict chemical meaning: it gives the concentration of oxygen molecules, as O_2 , rather than the concentration of oxygen atoms, as O. (In seawater dissolved oxygen exists as

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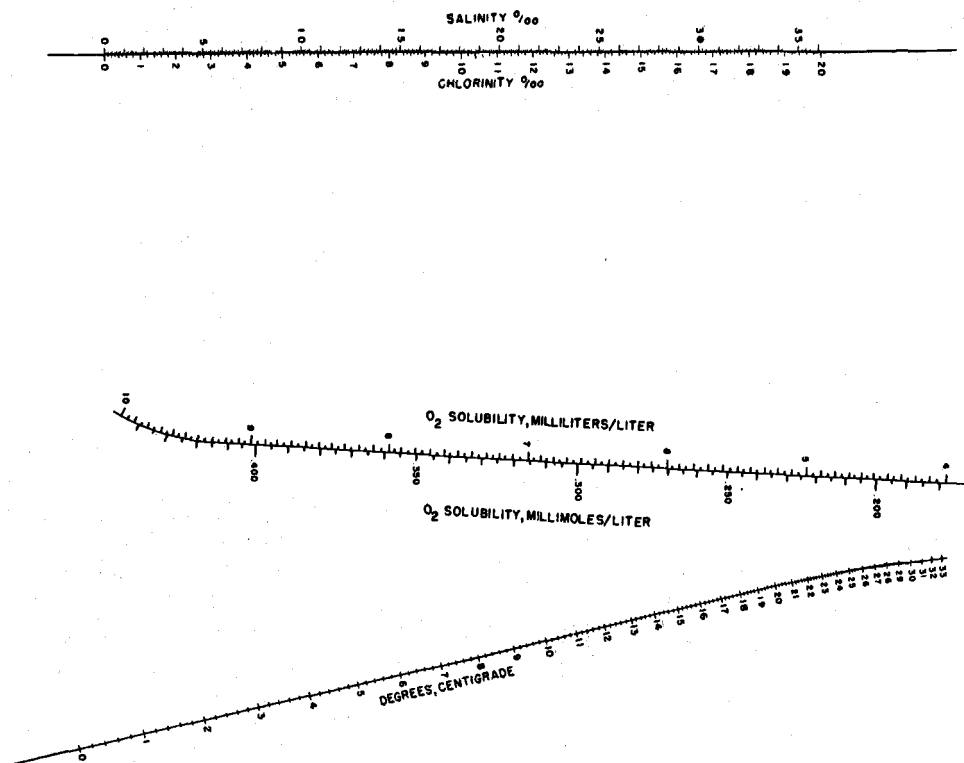


Fig. 1. Revised oxygen solubility nomograph for seawater.

O₂ not as O.) Of course, when necessary oxygen units can be converted to other units by the following relationship:

$$22.4 \text{ ml} = 1.00 \text{ mM} = 2.00 \text{ mg-atom} = 32.0 \text{ mg.}$$

CARPENTER (1966) also gives oxygen solubility data for zero chlorinity, distilled water. Table 2 was obtained from equation (2) at 0.05°C intervals.

The expanded oxygen solubility data is listed in Table 3.

We found that the table is quite useful during oceanographic cruises, for it readily gives the 100% oxygen saturation with respect to the wet marine climate.

Acknowledgments

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Table 1. Empirical coefficients Aij.

^a i\j	1=0	1	2	3	4	5	6	7	8	9
1=0	1.0246728707E-01	-2.8904460719E-01	1.0803273229E-03	9.8901778127E-04	-7.7847104522E-05	2.1125660610E-06	1.2331766716E-08	-1.7797278023E-09	3.2324918884E-11	-1.7887607593E-13
1	-1.4025246676E-01	1.3703815871E-02	-1.5999626356E-03	9.7164533837E-05	-3.1094777127E-06	1.2038920012E-07	-6.1486668803E-09	1.6473509600E-10	-1.5720090114E-12	
2	2.1851477423E-03	-6.8417748616E-04	7.7609009803E-05	-6.3954460511E-06	1.9760113212E-07	-1.7153631010E-10	-8.7395483013E-11	1.0643321974E-12		
3	-1.1498976569E-04	7.0756025193E-05	3.6922171607E-06	-5.9782618895E-08	-3.4163843946E-09	6.5210863333E-11	-1.7696723010E-13			
4	-2.5468831132E-07	-1.5713473137E-05	-4.3353971548E-07	1.5732026895E-08	-8.3888770016E-12	-8.0635627422E-13				
5	2.3388304524E-06	1.8569857166E-06	1.1222449037E-08	-7.4411686109E-10	1.5166290414E-12					
6	-3.4949858320E-07	-1.0912112887E-07	3.5078125295E-10	1.1755012370E-11						
7	2.2571752470E-08	3.0198872086E-09	-1.4870109681E-11							
8	-6.6825440235E-10	-3.0512533558E-11								
9	7.2447722111E-12									

Footnote: E stands for exponent with respect to base 10. For example E-02 means 10⁻².

Table 2. Oxygen solubility (ml/liter STP) in distilled water with respect to an atmosphere of 20.94% oxygen and 100% relative humidity.

$t^{\circ}\text{C}$	.00	.05	.10	.15	.20	.25	.30	.35	.40	.45	.50	.55	.60	.65	.70	.75	.80	.85	.90	.95
0.	10.25	10.23	10.22	10.20	10.19	10.17	10.16	10.15	10.13	10.12	10.10	10.09	10.07	10.06	10.05	10.03	10.02	10.00	9.99	9.97
1.	9.96	9.95	9.93	9.92	9.90	9.89	9.87	9.86	9.85	9.83	9.82	9.80	9.79	9.78	9.76	9.75	9.73	9.72	9.71	9.69
2.	9.68	9.67	9.65	9.64	9.62	9.61	9.60	9.58	9.57	9.56	9.54	9.53	9.52	9.50	9.49	9.48	9.46	9.45	9.44	9.42
3.	9.41	9.40	9.38	9.37	9.36	9.34	9.33	9.32	9.31	9.29	9.28	9.27	9.25	9.24	9.23	9.22	9.20	9.19	9.18	9.17
4.	9.15	9.14	9.13	9.12	9.10	9.09	9.08	9.07	9.05	9.04	9.03	9.02	9.01	8.99	8.98	8.97	8.96	8.95	8.93	8.92
5.	8.91	8.90	8.89	8.87	8.86	8.85	8.84	8.83	8.82	8.81	8.79	8.78	8.77	8.76	8.75	8.74	8.73	8.71	8.70	8.69
6.	8.68	8.67	8.66	8.65	8.64	8.63	8.61	8.60	8.59	8.58	8.57	8.56	8.55	8.54	8.53	8.52	8.51	8.50	8.49	8.47
7.	8.46	8.45	8.44	8.43	8.42	8.41	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.27
8.	8.26	8.25	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.11	8.10	8.10	8.09	8.08
9.	8.07	8.06	8.05	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.89
10.	7.88	7.87	7.87	7.86	7.85	7.84	7.83	7.82	7.81	7.80	7.80	7.79	7.78	7.77	7.76	7.75	7.74	7.73	7.73	7.72
11.	7.71	7.70	7.69	7.68	7.67	7.67	7.66	7.65	7.64	7.63	7.62	7.62	7.61	7.60	7.59	7.58	7.57	7.57	7.56	7.55
12.	7.54	7.53	7.52	7.52	7.51	7.50	7.49	7.48	7.47	7.47	7.46	7.45	7.44	7.43	7.43	7.42	7.41	7.40	7.39	7.39
13.	7.38	7.37	7.36	7.35	7.35	7.34	7.33	7.32	7.31	7.31	7.30	7.29	7.28	7.28	7.27	7.26	7.25	7.24	7.24	7.23
14.	7.22	7.21	7.21	7.20	7.19	7.18	7.17	7.17	7.16	7.15	7.14	7.14	7.13	7.12	7.11	7.11	7.10	7.09	7.08	7.08
15.	7.07	7.06	7.05	7.05	7.04	7.03	7.02	7.02	7.01	7.00	6.99	6.99	6.98	6.97	6.96	6.96	6.95	6.94	6.93	6.93
16.	6.92	6.91	6.90	6.90	6.89	6.88	6.87	6.87	6.86	6.85	6.85	6.84	6.83	6.82	6.82	6.81	6.80	6.80	6.79	6.78
17.	6.77	6.77	6.76	6.75	6.74	6.74	6.73	6.72	6.72	6.71	6.70	6.70	6.69	6.68	6.67	6.67	2.66	6.65	6.65	6.64
18.	6.63	6.63	6.62	6.61	6.60	6.60	6.59	6.58	6.58	6.57	6.56	6.56	6.55	6.54	6.54	6.53	6.52	6.52	6.51	6.50
19.	6.49	6.49	6.48	6.47	6.47	6.46	6.45	6.45	6.44	6.43	6.43	6.42	6.41	6.41	6.40	6.39	6.39	6.38	6.38	6.37
20.	6.36	6.36	6.35	6.34	6.34	6.33	6.32	6.32	6.31	6.30	6.30	6.29	6.28	6.28	6.27	6.27	6.26	6.25	6.25	6.24
21.	6.23	6.23	6.22	6.21	6.21	6.20	6.20	6.19	6.18	6.18	6.17	6.16	6.16	6.15	6.15	6.14	6.13	6.13	6.12	6.12
22.	6.11	6.10	6.10	6.09	6.09	6.08	6.07	6.07	6.06	6.06	6.05	6.04	6.04	6.03	6.03	6.02	6.01	6.01	6.00	6.00
23.	5.99	5.99	5.98	5.97	5.97	5.96	5.96	5.95	5.95	5.94	5.93	5.93	5.92	5.92	5.91	5.91	5.90	5.89	5.89	5.88
24.	5.88	5.87	5.87	5.86	5.86	5.85	5.84	5.84	5.83	5.83	5.82	5.82	5.81	5.81	5.80	5.80	5.79	5.78	5.78	5.77
25.	5.77	5.76	5.76	5.75	5.75	5.74	5.74	5.73	5.73	5.72	5.72	5.71	5.71	5.70	5.70	5.69	5.69	5.68	5.68	5.67
26.	5.66	5.66	5.65	5.65	5.64	5.64	5.63	5.63	5.62	5.62	5.61	5.61	5.60	5.60	5.59	5.59	5.58	5.58	5.58	5.57
27.	5.57	5.56	5.56	5.55	5.55	5.54	5.54	5.53	5.53	5.52	5.52	5.51	5.51	5.50	5.50	5.49	5.49	5.48	5.48	5.47
28.	5.47	5.46	5.46	5.46	5.45	5.45	5.44	5.44	5.43	5.43	5.42	5.42	5.41	5.41	5.40	5.40	5.39	5.39	5.39	5.38
29.	5.38	5.37	5.37	5.36	5.36	5.35	5.35	5.34	5.34	5.33	5.33	5.33	5.32	5.32	5.31	5.31	5.30	5.30	5.29	5.29
30.	5.29	5.28	5.28	5.27	5.27	5.26	5.26	5.25	5.25	5.24	5.24	5.24	5.23	5.23	5.22	5.22	5.21	5.21	5.20	5.20
31.	5.20	5.19	5.19	5.18	5.18	5.17	5.17	5.16	5.16	5.16	5.15	5.15	5.14	5.14	5.13	5.13	5.12	5.12	5.12	5.11
32.	5.11	5.10	5.10	5.09	5.09	5.09	5.08	5.08	5.07	5.07	5.06	5.06	5.05	5.05	5.05	5.04	5.04	5.03	5.03	5.02
33.	5.02	5.02	5.01	5.01	5.00	5.00	4.99	4.99	4.98	4.98	4.98	4.97	4.97	4.96	4.96	4.95	4.95	4.95	4.94	4.94
34.	4.93	4.93	4.93	4.92	4.92	4.91	4.91	4.90	4.90	4.90	4.89	4.89	4.88	4.88	4.87	4.87	4.87	4.86	4.86	4.85
35.	4.85	4.85	4.84	4.84	4.83	4.83	4.83	4.82	4.82	4.81	4.81	4.81	4.80	4.80	4.80	4.79	4.79	4.78	4.78	4.78
36.	4.77	4.77	4.77	4.76	4.76	4.75	4.75	4.75	4.74	4.74	4.74	4.73	4.73	4.73	4.72	4.72	4.72	4.71	4.71	4.71

Table 3. Expanded oxygen solubility (ml/liter STP) data with respect to an atmosphere of 29.94% oxygen and 100% relative humidity.

TEMP./SAL.	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
.50 *	10.09	10.07	10.06	10.04	10.03	10.01	10.00	9.99	9.97	9.96	9.94	9.93	9.91	9.90	9.89	9.87	9.86	9.84	9.83	9.81
.55 *	10.07	10.06	10.04	10.03	10.02	10.00	9.99	9.97	9.96	9.94	9.93	9.91	9.90	9.89	9.87	9.86	9.84	9.83	9.82	9.80
.60 *	10.06	10.04	10.03	10.02	10.00	9.99	9.97	9.96	9.94	9.93	9.91	9.90	9.89	9.87	9.86	9.84	9.83	9.82	9.80	9.79
.65 *	10.04	10.03	10.02	10.00	9.99	9.97	9.96	9.94	9.93	9.92	9.90	9.89	9.87	9.86	9.84	9.83	9.82	9.80	9.79	9.78
.70 *	10.03	10.02	10.00	9.99	9.97	9.96	9.94	9.93	9.92	9.90	9.89	9.87	9.86	9.85	9.83	9.82	9.80	9.79	9.78	9.76
.75 *	10.02	10.00	9.99	9.97	9.96	9.94	9.93	9.92	9.90	9.89	9.87	9.86	9.85	9.83	9.82	9.80	9.79	9.78	9.76	9.75
.80 *	10.00	9.99	9.97	9.96	9.95	9.93	9.92	9.90	9.89	9.87	9.86	9.85	9.83	9.82	9.80	9.79	9.78	9.76	9.75	9.74
.85 *	9.99	9.97	9.96	9.95	9.93	9.92	9.90	9.89	9.87	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.76	9.75	9.74	9.72
.90 *	9.97	9.96	9.95	9.93	9.92	9.90	9.89	9.87	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.76	9.75	9.74	9.72	9.71
.95 *	9.96	9.95	9.93	9.92	9.90	9.89	9.88	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.76	9.75	9.74	9.72	9.71	9.70
1.00 *	9.95	9.93	9.92	9.90	9.89	9.88	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.76	9.75	9.74	9.72	9.71	9.70	9.68
1.05 *	9.93	9.92	9.90	9.89	9.88	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.76	9.75	9.74	9.72	9.71	9.70	9.68	9.67
1.10 *	9.92	9.90	9.89	9.88	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.77	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66
1.15 *	9.90	9.89	9.88	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.77	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64
1.20 *	9.89	9.88	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.77	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63
1.25 *	9.87	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.77	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62
1.30 *	9.86	9.85	9.83	9.82	9.81	9.79	9.78	9.77	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60
1.35 *	9.85	9.83	9.82	9.81	9.79	9.78	9.77	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59
1.40 *	9.83	9.82	9.81	9.79	9.78	9.76	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58
1.45 *	9.82	9.81	9.79	9.78	9.76	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.57
1.50 *	9.80	9.79	9.78	9.76	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.57	9.55
1.55 *	9.79	9.78	9.76	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.57	9.55	9.54
1.60 *	9.78	9.76	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.57	9.55	9.54	9.53
1.65 *	9.76	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.57	9.55	9.54	9.53	9.51
1.70 *	9.75	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.56	9.55	9.54	9.53	9.51	9.50
1.75 *	9.74	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.56	9.55	9.54	9.53	9.51	9.50	9.49
1.80 *	9.72	9.71	9.70	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.56	9.55	9.54	9.53	9.51	9.50	9.49	9.47
1.85 *	9.71	9.69	9.68	9.67	9.66	9.64	9.63	9.62	9.60	9.59	9.58	9.56	9.55	9.54	9.53	9.51	9.50	9.49	9.47	9.46
1.90 *	9.69	9.68	9.67	9.65	9.64	9.63	9.62	9.60	9.59	9.58	9.56	9.55	9.54	9.52	9.51	9.50	9.49	9.47	9.46	9.45
1.95 *	9.68	9.67	9.65	9.64	9.63	9.61	9.60	9.59	9.58	9.56	9.55	9.54	9.52	9.51	9.50	9.49	9.47	9.46	9.45	9.44
2.00 *	9.67	9.65	9.64	9.63	9.61	9.60	9.59	9.58	9.56	9.55	9.54	9.52	9.51	9.50	9.49	9.47	9.46	9.45	9.44	9.42
2.05 *	9.65	9.64	9.63	9.61	9.60	9.59	9.58	9.56	9.55	9.54	9.52	9.51	9.50	9.49	9.47	9.46	9.45	9.43	9.42	9.41
2.10 *	9.64	9.63	9.61	9.60	9.59	9.57	9.56	9.55	9.54	9.52	9.51	9.50	9.49	9.47	9.46	9.45	9.43	9.42	9.41	9.40
2.15 *	9.63	9.61	9.60	9.59	9.57	9.56	9.55	9.54	9.52	9.51	9.50	9.48	9.47	9.46	9.45	9.43	9.42	9.41	9.40	9.38
2.20 *	9.61	9.60	9.59	9.57	9.56	9.55	9.53	9.52	9.51	9.50	9.48	9.47	9.46	9.45	9.43	9.42	9.41	9.40	9.38	9.37
2.25 *	9.60	9.59	9.57	9.56	9.55	9.53	9.52	9.51	9.50	9.48	9.47	9.46	9.45	9.43	9.42	9.41	9.40	9.38	9.37	9.36
2.30 *	9.58	9.57	9.56	9.55	9.53	9.52	9.51	9.50	9.48	9.47	9.46	9.45	9.43	9.42	9.41	9.40	9.38	9.37	9.36	9.35
2.35 *	9.57	9.56	9.55	9.53	9.52	9.51	9.49	9.48	9.47	9.46	9.44	9.43	9.42	9.41	9.39	9.38	9.37	9.36	9.34	9.33
2.40 *	9.56	9.55	9.53	9.52	9.51	9.49	9.48	9.47	9.46	9.44	9.43	9.42	9.41	9.39	9.38	9.37	9.36	9.34	9.33	9.32
2.45 *	9.54	9.53	9.52	9.51	9.49	9.48	9.47	9.46	9.44	9.43	9.42	9.41	9.39	9.38	9.37	9.36	9.34	9.33	9.32	9.31
2.50 *	9.53	9.52	9.51	9.49	9.48	9.47	9.46	9.44	9.43	9.42	9.41	9.39	9.38	9.37	9.36	9.34	9.33	9.32	9.31	9.29
2.55 *	9.52	9.50	9.49	9.48	9.47	9.45	9.44	9.43	9.42	9.40	9.39	9.38	9.37	9.36	9.34	9.33	9.32	9.31	9.29	9.28
2.60 *	9.50	9.49	9.48	9.47	9.45	9.44	9.43	9.42	9.40	9.39	9.38	9.37	9.35	9.34	9.33	9.32	9.31	9.29	9.28	9.27
2.65 *	9.49	9.48	9.47	9.45	9.44	9.43	9.42	9.40	9.39	9.38	9.37	9.35	9.34	9.33	9.32	9.30	9.29	9.28	9.27	9.26
2.70 *	9.48	9.46	9.45	9.44	9.43	9.42	9.40	9.39	9.38	9.37	9.35	9.34	9.33	9.32	9.30	9.29	9.28	9.27	9.26	9.24
2.75 *	9.46	9.45	9.44	9.43	9.41	9.40	9.39	9.38	9.36	9.35	9.34	9.33	9.32	9.30	9.29	9.28	9.27	9.26	9.24	9.23
2.80 *	9.45	9.44	9.43	9.41	9.40	9.39	9.38	9.36	9.35	9.34	9.33	9.32	9.30	9.29	9.28	9.27	9.25	9.24	9.23	9.22
2.85 *	9.44	9.43	9.41	9.40	9.39	9.38	9.36	9.35	9.34	9.33	9.31	9.30	9.29	9.28	9.27	9.25	9.24	9.23	9.22	9.21
2.90 *	9.42	9.41	9.40	9.39	9.37	9.36	9.35	9.34	9.33	9.31	9.30	9.29	9.28	9.27	9.25	9.24	9.23	9.22	9.21	9.19
2.95 *	9.41	9.40	9.39	9.37	9.36	9.35	9.34	9.33	9.31	9.30	9.29	9.28	9.26	9.25	9.24	9.23	9.22	9.20	9.19	9.18

TEMP./SAL.	.2	.4	.6	.8	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0
35.50 *	4.81	4.80	4.80	4.79	4.79	4.78	4.78	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.72	4.72	4.71	4.71
35.55 *	4.80	4.80	4.79	4.79	4.78	4.78	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71
35.60 *	4.80	4.79	4.79	4.78	4.78	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70
35.65 *	4.79	4.79	4.78	4.78	4.78	4.77	4.77	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70	4.70
35.70 *	4.79	4.79	4.78	4.78	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.71	4.71	4.70	4.70	4.69
35.75 *	4.79	4.78	4.78	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70	4.70	4.69
35.80 *	4.78	4.78	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70	4.70	4.69	4.69
35.85 *	4.78	4.77	4.77	4.76	4.76	4.76	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70	4.70	4.69	4.69	4.68
35.90 *	4.78	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70	4.69	4.69	4.68	4.68
35.95 *	4.77	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70	4.70	4.69	4.69	4.68	4.68
36.00 *	4.77	4.76	4.76	4.75	4.75	4.74	4.74	4.73	4.73	4.72	4.72	4.71	4.71	4.70	4.70	4.69	4.69	4.68	4.68	4.67

TEMP./SAL.	4.2	4.4	4.6	4.8	5.0	5.2	5.4	5.6	5.8	6.0	6.2	6.4	6.6	6.8	7.0	7.2	7.4	7.6	7.8	8.0
35.50 *	4.70	4.70	4.69	4.69	4.68	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61
35.55 *	4.70	4.69	4.69	4.68	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60
35.60 *	4.70	4.69	4.69	4.68	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60
35.65 *	4.69	4.69	4.68	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.62	4.61	4.61	4.60
35.70 *	4.69	4.68	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60	4.60	4.59
35.75 *	4.69	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60	4.60	4.59	4.59
35.80 *	4.68	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60	4.60	4.59	4.59
35.85 *	4.68	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60	4.60	4.59	4.59	4.58
35.90 *	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60	4.60	4.59	4.59	4.58	4.58
35.95 *	4.67	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.61	4.61	4.61	4.60	4.60	4.59	4.59	4.58	4.58
36.00 *	4.67	4.66	4.66	4.65	4.65	4.64	4.64	4.63	4.63	4.62	4.62	4.61	4.61	4.60	4.60	4.59	4.59	4.58	4.58	4.57

TEMP./SAL.	8.2	8.4	8.6	8.8	9.0	9.2	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8	11.0	11.2	11.4	11.6	11.8	12.0
35.50 *	4.60	4.60	4.59	4.59	4.58	4.58	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51
35.55 *	4.60	4.59	4.59	4.58	4.58	4.57	4.57	4.56	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51
35.60 *	4.60	4.59	4.59	4.58	4.58	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50
35.65 *	4.59	4.59	4.58	4.58	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50
35.70 *	4.59	4.58	4.58	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50	4.49
35.75 *	4.58	4.58	4.57	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50	4.49
35.80 *	4.58	4.58	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50	4.49	4.49
35.85 *	4.58	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50	4.49	4.49	4.48
35.90 *	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50	4.49	4.49	4.48	4.48
35.95 *	4.57	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50	4.49	4.49	4.48	4.48
36.00 *	4.57	4.56	4.56	4.55	4.55	4.54	4.54	4.53	4.53	4.52	4.52	4.51	4.51	4.50	4.50	4.49	4.49	4.48	4.48	4.47

TEMP./SAL.	12.2	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.6	15.8	16.0
10.50 *	7.21	7.20	7.19	7.18	7.17	7.16	7.16	7.15	7.14	7.13	7.12	7.11	7.10	7.09	7.08	7.07	7.06	7.06	7.05	7.04
10.55 *	7.20	7.19	7.18	7.17	7.17	7.16	7.15	7.14	7.13	7.12	7.11	7.10	7.09	7.08	7.07	7.07	7.06	7.05	7.04	7.03
10.60 *	7.19	7.18	7.18	7.17	7.16	7.15	7.14	7.13	7.12	7.11	7.10	7.09	7.08	7.08	7.07	7.06	7.05	7.04	7.03	7.02
10.65 *	7.19	7.18	7.17	7.16	7.15	7.14	7.13	7.12	7.11	7.10	7.09	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.01
10.70 *	7.18	7.17	7.16	7.15	7.14	7.13	7.12	7.11	7.10	7.10	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.01	7.01
10.75 *	7.17	7.16	7.15	7.14	7.13	7.12	7.11	7.11	7.10	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.02	7.01	7.00
10.80 *	7.16	7.15	7.14	7.13	7.12	7.12	7.11	7.10	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.03	7.02	7.01	7.00	5.99
10.85 *	7.15	7.14	7.13	7.13	7.12	7.11	7.10	7.09	7.08	7.07	7.06	7.05	7.04	7.04	7.03	7.02	7.01	7.00	5.99	5.98
10.90 *	7.14	7.14	7.13	7.12	7.11	7.10	7.09	7.08	7.07	7.06	7.05	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.98	5.97
10.95 *	7.14	7.13	7.12	7.11	7.10	7.09	7.08	7.07	7.06	7.06	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.98	6.98	5.97
11.00 *	7.13	7.12	7.11	7.10	7.09	7.08	7.07	7.07	7.06	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.99	6.98	6.97	5.96
11.05 *	7.12	7.11	7.10	7.09	7.08	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.01	7.00	7.00	6.99	6.98	6.97	6.96	5.95
11.10 *	7.11	7.10	7.09	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.01	7.01	7.00	6.99	6.98	6.97	6.96	6.95	5.94
11.15 *	7.10	7.10	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.01	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.94	5.94
11.20 *	7.10	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.02	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.95	6.94	5.93
11.25 *	7.09	7.08	7.07	7.06	7.05	7.04	7.03	7.03	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.95	6.94	6.93	6.92
11.30 *	7.08	7.07	7.06	7.05	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.92	6.91	5.91
11.35 *	7.07	7.06	7.06	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.98	6.97	6.97	6.96	6.95	6.94	6.93	6.92	6.91	5.90
11.40 *	7.07	7.06	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.92	6.91	6.91	6.90	5.90
11.45 *	7.06	7.05	7.04	7.03	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	5.89
11.50 *	7.05	7.04	7.03	7.02	7.01	7.00	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.92	6.92	6.91	6.90	6.89	5.88
11.55 *	7.04	7.03	7.02	7.01	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.93	6.92	6.91	6.90	6.89	6.88	5.87
11.60 *	7.03	7.02	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.87	5.87
11.65 *	7.03	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.95	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.88	6.87	5.86
11.70 *	7.02	7.01	7.00	6.99	6.98	6.97	6.96	6.96	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.89	6.88	6.87	6.86	5.85
11.75 *	7.01	7.00	6.99	6.98	6.97	6.97	6.96	6.95	6.94	6.93	6.92	6.91	6.90	6.90	6.89	6.88	6.87	6.86	6.85	5.84
11.80 *	7.00	6.99	6.98	6.98	6.97	6.96	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.84	6.84	5.84
11.85 *	7.00	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.92	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.85	6.84	5.83
11.90 *	6.99	6.98	6.97	6.96	6.95	6.94	6.93	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.86	6.85	6.84	6.83	5.82
11.95 *	6.98	6.97	6.96	6.95	6.94	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.86	6.85	6.84	6.83	6.82	5.81
12.00 *	6.97	6.96	6.95	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.87	6.86	6.85	6.84	6.83	6.82	6.81	5.81
12.05 *	6.96	6.96	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.88	6.87	6.86	6.85	6.84	6.83	6.82	6.82	6.81	5.80
12.10 *	6.96	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.84	6.83	6.83	6.82	6.81	6.80	6.79	5.79
12.15 *	6.95	6.94	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.84	6.83	6.83	6.82	6.81	6.80	6.79	6.78	5.78
12.20 *	6.94	6.93	6.92	6.91	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.84	6.83	6.82	6.81	6.80	6.79	6.78	6.77	5.77
12.25 *	6.93	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.85	6.84	6.83	6.82	6.81	6.80	6.79	6.79	6.78	5.77
12.30 *	6.93	6.92	6.91	6.90	6.89	6.88	6.87	6.86	6.85	6.84	6.83	6.82	6.81	6.81	6.80	6.80	6.79	6.78	6.77	5.76
12.35 *	6.92	6.91	6.90	6.89	6.88	6.87	6.87	6.86	6.85	6.84	6.83	6.82	6.81	6.81	6.80	6.79	6.78	6.77	6.76	5.75
12.40 *	6.91	6.90	6.89	6.88	6.88	6.87	6.86	6.85	6.84	6.83	6.82	6.82	6.81	6.80	6.79	6.78	6.77	6.76	6.75	5.75
12.45 *	6.90	6.89	6.89	6.88	6.87	6.86	6.85	6.84	6.83	6.83	6.82	6.82	6.81	6.80	6.79	6.78	6.77	6.76	6.75	5.74
12.50 *	6.90	6.89	6.88	6.87	6.86	6.85	6.84	6.83	6.83	6.82	6.81	6.80	6.79	6.78	6.77	6.77	6.76	6.75	6.74	5.73
12.55 *	6.89	6.88	6.87	6.86	6.85	6.84	6.84	6.83	6.82	6.81	6.80	6.79	6.78	6.77	6.77	6.76	6.75	6.74	6.73	5.72
12.60 *	6.88	6.87	6.86	6.85	6.85	6.84	6.83	6.82	6.81	6.80	6.79	6.79	6.78	6.77	6.76	6.75	6.74	6.73	6.73	5.72
12.65 *	6.87	6.86	6.86	6.85	6.84	6.83	6.82	6.81	6.80	6.80	6.79	6.78	6.77	6.76	6.75	6.74	6.73	6.73	6.72	5.71
12.70 *	6.87	6.86	6.85	6.84	6.83	6.82	6.81	6.81	6.80	6.79	6.78	6.77	6.76	6.75	6.74	6.73	6.72	6.71	6.70	5.70
12.75 *	6.86	6.85	6.84	6.83	6.82	6.82	6.81	6.80	6.79	6.78	6.77	6.76	6.75	6.74	6.73	6.72	6.71	6.70	6.70	5.69
12.80 *	6.85	6.84	6.83	6.83	6.82	6.81	6.80	6.79	6.78	6.77	6.76	6.76	6.75	6.74	6.73	6.72	6.71	6.70	6.69	5.69
12.85 *	6.84	6.84	6.83	6.82	6.81	6.80	6.79	6.78	6.77	6.77	6.76	6.75	6.74	6.73	6.72	6.71	6.71	6.70	6.69	5.68
12.90 *	6.84	6.83	6.82	6.81	6.80	6.79	6.78	6.78	6.77	6.76	6.75	6.74	6.73	6.72	6.72	6.71	6.70	6.69	6.68	5.67
12.95 *	6.83	6.82	6.81	6.80	6.79	6.79	6.78	6.77	6.76	6.75	6.74	6.73	6.73	6.72	6.71	6.70	6.69	6.68	6.67	5.67

TEMP./SAL.	12.2	12.4	12.6	12.8	13.0	13.2	13.4	13.6	13.8	14.0	14.2	14.4	14.6	14.8	15.0	15.2	15.4	15.6	15.8	16.0
35.50 *	4.50	4.50	4.49	4.49	4.48	4.48	4.47	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41
35.55 *	4.50	4.50	4.49	4.49	4.48	4.48	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41
35.60 *	4.50	4.49	4.49	4.48	4.48	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41	4.40
35.65 *	4.49	4.49	4.48	4.48	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.43	4.42	4.42	4.41	4.41	4.40
35.70 *	4.49	4.48	4.48	4.47	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41	4.40	4.40
35.75 *	4.49	4.48	4.48	4.47	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41	4.40	4.39
35.80 *	4.48	4.48	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41	4.40	4.40	4.40	4.39
35.85 *	4.48	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.42	4.41	4.41	4.40	4.40	4.39	4.39
35.90 *	4.48	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41	4.40	4.40	4.39	4.39	4.38
35.95 *	4.47	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41	4.40	4.40	4.39	4.39	4.38	4.38
36.00 *	4.47	4.46	4.46	4.45	4.45	4.44	4.44	4.43	4.43	4.42	4.42	4.41	4.41	4.40	4.40	4.39	4.39	4.39	4.38	4.38

TEMP./SAL.	16.2	16.4	16.6	16.8	17.0	17.2	17.4	17.6	17.8	18.0	18.2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	19.8	20.0
.50 *	9.01	9.00	8.98	8.97	8.96	8.95	8.93	8.92	8.91	8.90	8.88	8.87	8.86	8.85	8.84	8.82	8.81	8.80	8.79	8.77
.55 *	9.00	8.99	8.97	8.96	8.95	8.94	8.92	8.91	8.90	8.89	8.87	8.86	8.85	8.84	8.82	8.81	8.80	8.79	8.78	8.76
.60 *	8.99	8.97	8.96	8.95	8.94	8.93	8.91	8.90	8.89	8.88	8.86	8.85	8.84	8.83	8.81	8.80	8.79	8.78	8.77	8.75
.65 *	8.98	8.96	8.95	8.94	8.93	8.91	8.90	8.89	8.88	8.87	8.85	8.84	8.83	8.82	8.80	8.79	8.78	8.77	8.76	8.74
.70 *	8.97	8.95	8.94	8.93	8.92	8.90	8.89	8.88	8.87	8.85	8.84	8.83	8.82	8.81	8.79	8.78	8.77	8.76	8.75	8.73
.75 *	8.96	8.94	8.93	8.92	8.91	8.89	8.88	8.87	8.86	8.84	8.83	8.82	8.81	8.80	8.78	8.77	8.76	8.75	8.73	8.72
.80 *	8.94	8.93	8.92	8.91	8.89	8.88	8.87	8.86	8.85	8.83	8.82	8.81	8.80	8.79	8.77	8.76	8.75	8.74	8.72	8.71
.85 *	8.93	8.92	8.91	8.90	8.88	8.87	8.86	8.85	8.84	8.82	8.81	8.80	8.79	8.77	8.76	8.75	8.74	8.73	8.71	8.70
.90 *	8.92	8.91	8.90	8.89	8.87	8.86	8.85	8.84	8.82	8.81	8.80	8.79	8.78	8.76	8.75	8.74	8.73	8.72	8.70	8.69
.95 *	8.91	8.90	8.89	8.88	8.86	8.85	8.84	8.83	8.81	8.80	8.79	8.78	8.77	8.75	8.74	8.73	8.72	8.71	8.69	8.68
1.00 *	8.90	8.89	8.88	8.86	8.85	8.84	8.83	8.82	8.80	8.79	8.78	8.77	8.76	8.74	8.73	8.72	8.71	8.69	8.68	8.67
1.05 *	8.89	8.88	8.87	8.85	8.84	8.83	8.82	8.80	8.79	8.78	8.77	8.76	8.74	8.73	8.72	8.71	8.70	8.68	8.67	8.66
1.10 *	8.88	8.87	8.85	8.84	8.83	8.82	8.81	8.79	8.78	8.77	8.76	8.75	8.73	8.72	8.71	8.70	8.69	8.67	8.66	8.65
1.15 *	8.87	8.86	8.84	8.83	8.82	8.81	8.80	8.78	8.77	8.76	8.75	8.74	8.72	8.71	8.70	8.69	8.68	8.66	8.65	8.64
1.20 *	8.86	8.85	8.83	8.82	8.81	8.80	8.78	8.77	8.76	8.75	8.74	8.72	8.71	8.70	8.69	8.68	8.67	8.65	8.64	8.63
1.25 *	8.85	8.83	8.82	8.81	8.80	8.79	8.77	8.76	8.75	8.74	8.73	8.71	8.70	8.69	8.68	8.67	8.65	8.64	8.63	8.62
1.30 *	8.84	8.82	8.81	8.80	8.79	8.78	8.76	8.75	8.74	8.73	8.72	8.70	8.69	8.68	8.67	8.66	8.64	8.63	8.62	8.61
1.35 *	8.82	8.81	8.80	8.79	8.78	8.76	8.75	8.74	8.73	8.72	8.70	8.69	8.68	8.67	8.66	8.65	8.63	8.62	8.61	8.60
1.40 *	8.81	8.80	8.79	8.78	8.77	8.75	8.74	8.73	8.72	8.71	8.69	8.68	8.67	8.66	8.65	8.63	8.62	8.61	8.60	8.59
1.45 *	8.80	8.79	8.78	8.77	8.75	8.74	8.73	8.72	8.71	8.70	8.68	8.67	8.66	8.65	8.64	8.62	8.61	8.60	8.59	8.58
1.50 *	8.79	8.78	8.77	8.76	8.74	8.73	8.72	8.71	8.70	8.68	8.67	8.66	8.65	8.64	8.63	8.61	8.60	8.59	8.58	8.57
1.55 *	8.78	8.77	8.76	8.75	8.73	8.72	8.71	8.70	8.69	8.67	8.66	8.65	8.64	8.63	8.61	8.60	8.59	8.58	8.57	8.56
1.60 *	8.77	8.76	8.75	8.73	8.72	8.71	8.70	8.69	8.67	8.66	8.65	8.64	8.63	8.62	8.60	8.59	8.58	8.57	8.56	8.55
1.65 *	8.76	8.75	8.74	8.72	8.71	8.70	8.69	8.68	8.66	8.65	8.64	8.63	8.62	8.61	8.59	8.58	8.57	8.56	8.55	8.53
1.70 *	8.75	8.74	8.72	8.71	8.70	8.69	8.68	8.67	8.65	8.64	8.63	8.62	8.61	8.59	8.58	8.57	8.56	8.55	8.54	8.52
1.75 *	8.74	8.73	8.71	8.70	8.69	8.68	8.67	8.65	8.64	8.63	8.62	8.61	8.60	8.58	8.57	8.56	8.55	8.54	8.53	8.51
1.80 *	8.73	8.71	8.70	8.69	8.68	8.67	8.66	8.64	8.63	8.62	8.61	8.60	8.58	8.57	8.56	8.55	8.54	8.53	8.52	8.50
1.85 *	8.71	8.70	8.69	8.68	8.67	8.66	8.64	8.63	8.62	8.61	8.60	8.59	8.57	8.56	8.55	8.54	8.53	8.52	8.50	8.49
1.90 *	8.70	8.69	8.68	8.67	8.66	8.65	8.63	8.62	8.61	8.60	8.59	8.58	8.56	8.55	8.54	8.53	8.52	8.51	8.49	8.48
1.95 *	8.69	8.68	8.67	8.66	8.65	8.63	8.62	8.61	8.60	8.59	8.58	8.56	8.55	8.54	8.53	8.52	8.51	8.49	8.48	8.47
2.00 *	8.68	8.67	8.66	8.65	8.64	8.62	8.61	8.60	8.59	8.58	8.57	8.55	8.54	8.53	8.52	8.51	8.50	8.48	8.47	8.46
2.05 *	8.67	8.66	8.65	8.64	8.62	8.61	8.60	8.59	8.58	8.57	8.55	8.54	8.53	8.52	8.51	8.50	8.49	8.47	8.46	8.45
2.10 *	8.66	8.65	8.64	8.63	8.61	8.60	8.59	8.58	8.57	8.56	8.54	8.53	8.52	8.51	8.50	8.49	8.48	8.46	8.45	8.44
2.15 *	8.65	8.64	8.63	8.61	8.60	8.59	8.58	8.57	8.56	8.54	8.53	8.52	8.51	8.50	8.49	8.48	8.46	8.45	8.44	8.43
2.20 *	8.64	8.63	8.61	8.60	8.59	8.58	8.57	8.56	8.55	8.53	8.52	8.51	8.50	8.49	8.48	8.46	8.45	8.44	8.43	8.42
2.25 *	8.63	8.62	8.60	8.59	8.58	8.57	8.56	8.55	8.53	8.52	8.51	8.50	8.49	8.48	8.47	8.45	8.44	8.43	8.42	8.41
2.30 *	8.62	8.60	8.59	8.58	8.57	8.56	8.55	8.54	8.52	8.51	8.50	8.49	8.48	8.47	8.45	8.44	8.43	8.42	8.41	8.40
2.35 *	8.61	8.59	8.58	8.57	8.56	8.55	8.54	8.52	8.51	8.50	8.49	8.48	8.47	8.46	8.44	8.43	8.42	8.41	8.40	8.39
2.40 *	8.59	8.58	8.57	8.56	8.55	8.54	8.53	8.51	8.50	8.49	8.48	8.47	8.46	8.45	8.43	8.42	8.41	8.40	8.39	8.38
2.45 *	8.58	8.57	8.56	8.55	8.54	8.53	8.51	8.50	8.49	8.48	8.47	8.46	8.45	8.43	8.42	8.41	8.40	8.39	8.38	8.37
2.50 *	8.57	8.56	8.55	8.54	8.53	8.51	8.50	8.49	8.48	8.47	8.46	8.45	8.44	8.42	8.41	8.40	8.39	8.38	8.37	8.36
2.55 *	8.56	8.55	8.54	8.53	8.52	8.50	8.49	8.48	8.47	8.46	8.45	8.44	8.42	8.41	8.40	8.39	8.38	8.37	8.36	8.35
2.60 *	8.55	8.54	8.53	8.52	8.50	8.49	8.48	8.47	8.46	8.45	8.44	8.42	8.41	8.40	8.39	8.38	8.37	8.36	8.35	8.33
2.65 *	8.54	8.53	8.52	8.50	8.49	8.48	8.47	8.46	8.45	8.44	8.43	8.41	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.32
2.70 *	8.53	8.52	8.51	8.49	8.48	8.47	8.46	8.45	8.44	8.43	8.41	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.32	8.31
2.75 *	8.52	8.51	8.49	8.48	8.47	8.46	8.45	8.44	8.43	8.42	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.31	8.30
2.80 *	8.51	8.49	8.48	8.47	8.46	8.45	8.44	8.43	8.42	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.31	8.30	8.29
2.85 *	8.50	8.48	8.47	8.46	8.45	8.44	8.43	8.42	8.41	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.30	8.29	8.28
2.90 *	8.48	8.47	8.46	8.45	8.44	8.43	8.42	8.41	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.30	8.29	8.28	8.27
2.95 *	8.47	8.46	8.45	8.44	8.43	8.42	8.41	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.29	8.28	8.27	8.26

TEMP./SAL.	16.2	16.4	16.6	16.8	17.0	17.2	17.4	17.6	17.8	18.0	18.2	18.4	18.6	18.8	19.0	19.2	19.4	19.6	19.8	20.0
35.50 *	4.41	4.40	4.40	4.39	4.39	4.38	4.38	4.37	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.33	4.33	4.32	4.32
35.55 *	4.40	4.40	4.39	4.39	4.38	4.38	4.38	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.33	4.33	4.33	4.32	4.32
35.60 *	4.40	4.40	4.39	4.39	4.38	4.38	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.34	4.33	4.33	4.32	4.32	4.31
35.65 *	4.40	4.39	4.39	4.38	4.38	4.37	4.37	4.36	4.36	4.35	4.35	4.35	4.34	4.34	4.33	4.33	4.32	4.32	4.31	4.31
35.70 *	4.39	4.39	4.38	4.38	4.37	4.37	4.36	4.36	4.36	4.35	4.35	4.34	4.34	4.33	4.33	4.32	4.32	4.32	4.31	4.31
35.75 *	4.39	4.38	4.38	4.38	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.33	4.33	4.32	4.32	4.32	4.31	4.31	4.30
35.80 *	4.39	4.38	4.38	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.33	4.33	4.33	4.32	4.32	4.31	4.31	4.30	4.30
35.85 *	4.38	4.38	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.34	4.33	4.33	4.32	4.32	4.31	4.31	4.30	4.30	4.30
35.90 *	4.38	4.37	4.37	4.36	4.36	4.35	4.35	4.35	4.34	4.34	4.33	4.33	4.32	4.32	4.31	4.31	4.30	4.30	4.30	4.29
35.95 *	4.37	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.33	4.33	4.32	4.32	4.31	4.31	4.31	4.30	4.30	4.29	4.29
36.00 *	4.37	4.37	4.36	4.36	4.35	4.35	4.34	4.34	4.33	4.33	4.32	4.32	4.32	4.31	4.31	4.30	4.30	4.29	4.29	4.28

TEMP./SAL.	20.2	20.4	20.6	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	23.0	23.2	23.4	23.6	23.8	24.0
.50 *	8.76	8.75	8.74	8.73	8.71	8.70	8.69	8.68	8.67	8.65	8.64	8.63	8.62	8.61	8.59	8.58	8.57	8.56	8.55	8.53
.55 *	8.75	8.74	8.73	8.72	8.70	8.69	8.68	8.67	8.66	8.64	8.63	8.62	8.61	8.60	8.58	8.57	8.56	8.55	8.54	8.52
.60 *	8.74	8.73	8.72	8.71	8.69	8.68	8.67	8.66	8.65	8.63	8.62	8.61	8.60	8.59	8.57	8.56	8.55	8.54	8.53	8.51
.65 *	8.73	8.72	8.71	8.70	8.68	8.67	8.66	8.65	8.64	8.62	8.61	8.60	8.59	8.58	8.56	8.55	8.54	8.53	8.52	8.50
.70 *	8.72	8.71	8.70	8.68	8.67	8.66	8.65	8.64	8.62	8.61	8.60	8.59	8.58	8.57	8.55	8.54	8.53	8.52	8.51	8.49
.75 *	8.71	8.70	8.69	8.67	8.66	8.65	8.64	8.63	8.62	8.60	8.59	8.58	8.57	8.56	8.55	8.53	8.52	8.51	8.50	8.48
.80 *	8.70	8.69	8.68	8.66	8.65	8.64	8.63	8.62	8.60	8.59	8.58	8.57	8.56	8.55	8.53	8.52	8.51	8.50	8.49	8.47
.85 *	8.69	8.68	8.67	8.65	8.64	8.63	8.62	8.61	8.59	8.58	8.57	8.56	8.55	8.54	8.52	8.51	8.50	8.49	8.48	8.46
.90 *	8.68	8.67	8.66	8.64	8.63	8.62	8.61	8.60	8.58	8.57	8.56	8.55	8.54	8.53	8.51	8.50	8.49	8.48	8.47	8.45
.95 *	8.67	8.66	8.65	8.63	8.62	8.61	8.60	8.59	8.57	8.56	8.55	8.54	8.53	8.52	8.50	8.49	8.48	8.47	8.46	8.44
1.00 *	8.66	8.65	8.64	8.62	8.61	8.60	8.59	8.58	8.56	8.55	8.54	8.53	8.52	8.51	8.49	8.48	8.47	8.46	8.45	8.43
1.05 *	8.65	8.64	8.62	8.61	8.60	8.59	8.58	8.57	8.55	8.54	8.53	8.52	8.51	8.50	8.48	8.47	8.46	8.45	8.44	8.42
1.10 *	8.64	8.63	8.61	8.60	8.59	8.58	8.57	8.56	8.54	8.53	8.52	8.51	8.50	8.48	8.47	8.46	8.45	8.44	8.43	8.41
1.15 *	8.63	8.62	8.60	8.59	8.58	8.57	8.56	8.55	8.53	8.52	8.51	8.50	8.49	8.47	8.46	8.45	8.44	8.43	8.42	8.40
1.20 *	8.62	8.61	8.59	8.58	8.57	8.56	8.55	8.53	8.52	8.51	8.50	8.49	8.48	8.46	8.45	8.44	8.43	8.42	8.41	8.39
1.25 *	8.61	8.60	8.58	8.57	8.56	8.55	8.54	8.52	8.51	8.50	8.49	8.48	8.47	8.46	8.44	8.43	8.42	8.41	8.40	8.38
1.30 *	8.60	8.58	8.57	8.56	8.55	8.54	8.53	8.51	8.50	8.49	8.48	8.47	8.46	8.44	8.43	8.42	8.41	8.40	8.39	8.37
1.35 *	8.59	8.57	8.56	8.55	8.54	8.53	8.52	8.50	8.49	8.48	8.47	8.46	8.45	8.43	8.42	8.41	8.40	8.39	8.38	8.36
1.40 *	8.58	8.56	8.55	8.54	8.53	8.52	8.51	8.49	8.48	8.47	8.46	8.45	8.44	8.42	8.41	8.40	8.39	8.38	8.37	8.35
1.45 *	8.57	8.55	8.54	8.53	8.52	8.51	8.50	8.48	8.47	8.46	8.45	8.44	8.43	8.41	8.40	8.39	8.38	8.37	8.36	8.34
1.50 *	8.55	8.54	8.53	8.52	8.51	8.50	8.48	8.47	8.46	8.45	8.44	8.43	8.42	8.40	8.39	8.38	8.37	8.36	8.35	8.33
1.55 *	8.54	8.53	8.52	8.51	8.50	8.49	8.47	8.46	8.45	8.44	8.43	8.42	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.32
1.60 *	8.53	8.52	8.51	8.50	8.49	8.48	8.46	8.45	8.44	8.43	8.42	8.41	8.40	8.38	8.37	8.36	8.35	8.34	8.33	8.31
1.65 *	8.52	8.51	8.50	8.49	8.48	8.47	8.45	8.44	8.43	8.42	8.41	8.40	8.39	8.37	8.36	8.35	8.34	8.33	8.32	8.30
1.70 *	8.51	8.50	8.49	8.48	8.47	8.45	8.44	8.43	8.42	8.41	8.40	8.39	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.29
1.75 *	8.50	8.49	8.48	8.47	8.46	8.44	8.43	8.42	8.41	8.40	8.39	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.30	8.28
1.80 *	8.49	8.48	8.47	8.46	8.45	8.43	8.42	8.41	8.40	8.39	8.38	8.37	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.27
1.85 *	8.48	8.47	8.46	8.45	8.44	8.42	8.41	8.40	8.39	8.38	8.37	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.26
1.90 *	8.47	8.46	8.45	8.44	8.42	8.41	8.40	8.39	8.38	8.37	8.36	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.26	8.25
1.95 *	8.46	8.45	8.44	8.43	8.41	8.40	8.39	8.38	8.37	8.36	8.35	8.33	8.32	8.31	8.30	8.29	8.28	8.27	8.25	8.24
2.00 *	8.45	8.44	8.43	8.42	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.32	8.31	8.30	8.29	8.28	8.27	8.26	8.24	8.23
2.05 *	8.44	8.43	8.42	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.31	8.30	8.29	8.28	8.27	8.26	8.25	8.24	8.22
2.10 *	8.43	8.42	8.41	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.30	8.29	8.28	8.27	8.26	8.25	8.24	8.23	8.21
2.15 *	8.42	8.41	8.40	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.29	8.28	8.27	8.26	8.25	8.24	8.23	8.22	8.20
2.20 *	8.41	8.40	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.29	8.28	8.27	8.26	8.25	8.24	8.23	8.22	8.21	8.19
2.25 *	8.40	8.39	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.27	8.26	8.25	8.24	8.23	8.22	8.21	8.19	8.18
2.30 *	8.39	8.38	8.36	8.35	8.34	8.33	8.32	8.31	8.30	8.28	8.27	8.26	8.25	8.24	8.23	8.22	8.21	8.19	8.18	8.17
2.35 *	8.38	8.36	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.27	8.26	8.25	8.24	8.23	8.22	8.21	8.20	8.19	8.17	8.16
2.40 *	8.37	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.26	8.25	8.24	8.23	8.22	8.21	8.20	8.19	8.17	8.16	8.15
2.45 *	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.26	8.25	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.16	8.15	8.14
2.50 *	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.27	8.25	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.15	8.14	8.13
2.55 *	8.33	8.32	8.31	8.30	8.29	8.28	8.27	8.26	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.14	8.13	8.12
2.60 *	8.32	8.31	8.30	8.29	8.28	8.27	8.26	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.12	8.11
2.65 *	8.31	8.30	8.29	8.28	8.27	8.26	8.25	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.12	8.11	8.10
2.70 *	8.30	8.29	8.28	8.27	8.26	8.25	8.24	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.12	8.11	8.10	8.09
2.75 *	8.29	8.28	8.27	8.26	8.25	8.24	8.23	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.10	8.09	8.08
2.80 *	8.28	8.27	8.26	8.25	8.24	8.23	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.10	8.09	8.08	8.07
2.85 *	8.27	8.26	8.25	8.24	8.23	8.22	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.11	8.09	8.08	8.07	8.06
2.90 *	8.26	8.25	8.24	8.23	8.22	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.11	8.09	8.08	8.07	8.06	8.05
2.95 *	8.25	8.24	8.23	8.22	8.21	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.11	8.10	8.08	8.07	8.06	8.05	8.04

TEMP./SAL.	20.2	20.4	20.6	20.8	21.0	21.2	21.4	21.6	21.8	22.0	22.2	22.4	22.6	22.8	23.0	23.2	23.4	23.6	23.8	24.0
35.50 *	4.32	4.31	4.31	4.30	4.30	4.29	4.29	4.28	4.28	4.28	4.27	4.27	4.26	4.26	4.25	4.25	4.25	4.24	4.24	4.23
35.55 *	4.31	4.31	4.30	4.30	4.29	4.29	4.29	4.28	4.28	4.27	4.27	4.26	4.26	4.26	4.25	4.25	4.24	4.24	4.23	4.23
35.60 *	4.31	4.30	4.30	4.30	4.29	4.29	4.28	4.28	4.27	4.27	4.26	4.26	4.26	4.25	4.25	4.24	4.24	4.23	4.23	4.23
35.65 *	4.31	4.30	4.30	4.29	4.29	4.28	4.28	4.27	4.27	4.27	4.26	4.26	4.25	4.25	4.24	4.24	4.24	4.23	4.23	4.22
35.70 *	4.30	4.30	4.29	4.29	4.28	4.28	4.28	4.27	4.27	4.26	4.26	4.25	4.25	4.24	4.24	4.24	4.23	4.23	4.22	4.22
35.75 *	4.30	4.29	4.29	4.28	4.28	4.28	4.27	4.27	4.26	4.26	4.25	4.25	4.25	4.24	4.24	4.23	4.23	4.22	4.22	4.22
35.80 *	4.29	4.29	4.29	4.28	4.28	4.27	4.27	4.26	4.26	4.25	4.25	4.25	4.24	4.24	4.23	4.23	4.22	4.22	4.22	4.21
35.85 *	4.29	4.29	4.28	4.28	4.27	4.27	4.26	4.26	4.26	4.25	4.25	4.24	4.24	4.23	4.23	4.23	4.22	4.22	4.21	4.21
35.90 *	4.29	4.28	4.28	4.27	4.27	4.27	4.26	4.26	4.25	4.25	4.24	4.24	4.23	4.23	4.23	4.22	4.22	4.21	4.21	4.20
35.95 *	4.28	4.28	4.27	4.27	4.27	4.26	4.26	4.25	4.25	4.24	4.24	4.24	4.23	4.23	4.22	4.22	4.21	4.21	4.21	4.20
36.00 *	4.28	4.28	4.27	4.27	4.26	4.26	4.25	4.25	4.24	4.24	4.24	4.23	4.23	4.22	4.22	4.21	4.21	4.21	4.20	4.20

TEMP./SAL.	24.2	24.4	24.6	24.8	25.0	25.2	25.4	25.6	25.8	26.0	26.2	26.4	26.6	26.8	27.0	27.2	27.4	27.6	27.8	28.0
.50 *	8.52	8.51	8.50	8.49	8.48	8.46	8.45	8.44	8.43	8.42	8.41	8.40	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.30
.55 *	8.51	8.50	8.49	8.48	8.47	8.45	8.44	8.43	8.42	8.41	8.40	8.39	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.30
.60 *	8.50	8.49	8.48	8.47	8.46	8.44	8.43	8.42	8.41	8.40	8.39	8.38	8.36	8.35	8.34	8.33	8.32	8.31	8.30	8.29
.65 *	8.49	8.48	8.47	8.46	8.45	8.43	8.42	8.41	8.40	8.39	8.38	8.37	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.28
.70 *	8.48	8.47	8.46	8.45	8.44	8.43	8.41	8.40	8.39	8.38	8.37	8.36	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.27
.75 *	8.47	8.46	8.45	8.44	8.43	8.42	8.40	8.39	8.38	8.37	8.36	8.35	8.34	8.32	8.31	8.30	8.29	8.28	8.27	8.26
.80 *	8.46	8.45	8.44	8.43	8.42	8.41	8.39	8.38	8.37	8.36	8.35	8.34	8.33	8.31	8.30	8.29	8.28	8.27	8.26	8.25
.85 *	8.45	8.44	8.43	8.42	8.41	8.40	8.38	8.37	8.36	8.35	8.34	8.33	8.32	8.30	8.29	8.28	8.27	8.26	8.25	8.24
.90 *	8.44	8.43	8.42	8.41	8.40	8.39	8.37	8.36	8.35	8.34	8.33	8.32	8.31	8.29	8.28	8.27	8.26	8.25	8.24	8.23
.95 *	8.43	8.42	8.41	8.40	8.39	8.38	8.36	8.35	8.34	8.33	8.32	8.31	8.30	8.28	8.27	8.26	8.25	8.24	8.23	8.22
1.00 *	8.42	8.41	8.40	8.39	8.38	8.37	8.35	8.34	8.33	8.32	8.31	8.30	8.29	8.27	8.26	8.25	8.24	8.23	8.22	8.21
1.05 *	8.41	8.40	8.39	8.38	8.37	8.36	8.34	8.33	8.32	8.31	8.30	8.29	8.28	8.27	8.26	8.25	8.24	8.23	8.22	8.20
1.10 *	8.40	8.39	8.38	8.37	8.36	8.35	8.33	8.32	8.31	8.30	8.29	8.28	8.27	8.26	8.24	8.23	8.22	8.21	8.20	8.19
1.15 *	8.39	8.38	8.37	8.36	8.35	8.34	8.32	8.31	8.30	8.29	8.28	8.27	8.26	8.25	8.23	8.22	8.21	8.20	8.19	8.18
1.20 *	8.38	8.37	8.36	8.35	8.34	8.33	8.31	8.30	8.29	8.28	8.27	8.26	8.25	8.24	8.22	8.21	8.20	8.19	8.18	8.17
1.25 *	8.37	8.36	8.35	8.34	8.33	8.32	8.30	8.29	8.28	8.27	8.26	8.25	8.24	8.23	8.21	8.20	8.19	8.18	8.17	8.16
1.30 *	8.36	8.35	8.34	8.33	8.32	8.31	8.29	8.28	8.27	8.26	8.25	8.24	8.23	8.22	8.20	8.19	8.18	8.17	8.16	8.15
1.35 *	8.35	8.34	8.33	8.32	8.31	8.30	8.28	8.27	8.26	8.25	8.24	8.23	8.22	8.21	8.19	8.18	8.17	8.16	8.15	8.14
1.40 *	8.34	8.33	8.32	8.31	8.30	8.29	8.27	8.26	8.25	8.24	8.23	8.22	8.21	8.20	8.18	8.17	8.16	8.15	8.14	8.13
1.45 *	8.33	8.32	8.31	8.30	8.29	8.28	8.26	8.25	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.16	8.15	8.14	8.13	8.12
1.50 *	8.32	8.31	8.30	8.29	8.28	8.27	8.25	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.15	8.14	8.13	8.12	8.11
1.55 *	8.31	8.30	8.29	8.28	8.27	8.26	8.24	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.14	8.13	8.12	8.11	8.10
1.60 *	8.30	8.29	8.28	8.27	8.26	8.25	8.23	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.13	8.12	8.11	8.10	8.09
1.65 *	8.29	8.28	8.27	8.26	8.25	8.24	8.22	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.12	8.11	8.10	8.09	8.08
1.70 *	8.28	8.27	8.26	8.25	8.24	8.23	8.21	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.11	8.10	8.09	8.08	8.07
1.75 *	8.27	8.26	8.25	8.24	8.23	8.22	8.20	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.10	8.09	8.08	8.07	8.06
1.80 *	8.26	8.25	8.24	8.23	8.22	8.21	8.19	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.11	8.09	8.08	8.07	8.06	8.05
1.85 *	8.25	8.24	8.23	8.22	8.21	8.20	8.18	8.17	8.16	8.15	8.14	8.13	8.12	8.11	8.10	8.09	8.07	8.06	8.05	8.04
1.90 *	8.24	8.23	8.22	8.21	8.20	8.19	8.17	8.16	8.15	8.14	8.13	8.12	8.11	8.10	8.09	8.08	8.06	8.05	8.04	8.03
1.95 *	8.23	8.22	8.21	8.20	8.19	8.18	8.16	8.15	8.14	8.13	8.12	8.11	8.10	8.09	8.08	8.07	8.05	8.04	8.03	8.02
2.00 *	8.22	8.21	8.20	8.19	8.18	8.17	8.15	8.14	8.13	8.12	8.11	8.10	8.09	8.08	8.07	8.06	8.04	8.03	8.02	8.01
2.05 *	8.21	8.20	8.19	8.18	8.17	8.16	8.14	8.13	8.12	8.11	8.10	8.09	8.08	8.07	8.06	8.05	8.03	8.02	8.01	8.00
2.10 *	8.20	8.19	8.18	8.17	8.16	8.15	8.13	8.12	8.11	8.10	8.09	8.08	8.07	8.06	8.05	8.04	8.02	8.01	8.00	7.99
2.15 *	8.19	8.18	8.17	8.16	8.15	8.14	8.12	8.11	8.10	8.09	8.08	8.07	8.06	8.05	8.04	8.03	8.01	8.00	7.99	7.98
2.20 *	8.18	8.17	8.16	8.15	8.14	8.13	8.11	8.10	8.09	8.08	8.07	8.06	8.05	8.04	8.03	8.02	8.01	7.99	7.98	7.97
2.25 *	8.17	8.16	8.15	8.14	8.13	8.12	8.10	8.09	8.08	8.07	8.06	8.05	8.04	8.03	8.02	8.01	8.00	7.98	7.97	7.96
2.30 *	8.16	8.15	8.14	8.13	8.12	8.11	8.09	8.08	8.07	8.06	8.05	8.04	8.03	8.02	8.01	8.00	7.99	7.97	7.96	7.95
2.35 *	8.15	8.14	8.13	8.12	8.11	8.10	8.08	8.07	8.06	8.05	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.96	7.95	7.94
2.40 *	8.14	8.13	8.12	8.11	8.10	8.09	8.07	8.06	8.05	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.95	7.94	7.93
2.45 *	8.13	8.12	8.11	8.10	8.09	8.08	8.06	8.05	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.93	7.92
2.50 *	8.12	8.11	8.10	8.09	8.08	8.07	8.05	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.92	7.91
2.55 *	8.11	8.10	8.09	8.08	8.07	8.06	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.91	7.90
2.60 *	8.10	8.09	8.08	8.07	8.06	8.05	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.90	7.89
2.65 *	8.09	8.08	8.07	8.06	8.05	8.04	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.88
2.70 *	8.08	8.07	8.06	8.05	8.04	8.03	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.89	7.87
2.75 *	8.07	8.06	8.05	8.04	8.03	8.02	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.89	7.88	7.86
2.80 *	8.06	8.05	8.04	8.03	8.02	8.01	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.89	7.88	7.87	7.86
2.85 *	8.05	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.89	7.88	7.87	7.85
2.90 *	8.04	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.89	7.88	7.87	7.86	7.84
2.95 *	8.03	8.02	8.01	8.00	7.99	7.98	7.97	7.96	7.95	7.94	7.93	7.92	7.91	7.90	7.89	7.88	7.87	7.86	7.85	7.83

TEMP./SAL.	24.2	24.4	24.6	24.8	25.0	25.2	25.4	25.6	25.8	26.0	26.2	26.4	26.6	26.8	27.0	27.2	27.4	27.6	27.8	28.0
35.50 *	4.23	4.22	4.22	4.21	4.21	4.21	4.20	4.20	4.19	4.19	4.18	4.18	4.18	4.17	4.17	4.16	4.16	4.15	4.15	4.14
35.55 *	4.22	4.22	4.22	4.21	4.21	4.20	4.20	4.19	4.19	4.19	4.18	4.18	4.17	4.17	4.16	4.16	4.15	4.15	4.15	4.14
35.60 *	4.22	4.22	4.21	4.21	4.20	4.20	4.19	4.19	4.19	4.18	4.18	4.17	4.17	4.16	4.16	4.16	4.15	4.15	4.14	4.14
35.65 *	4.22	4.21	4.21	4.20	4.20	4.20	4.19	4.19	4.18	4.18	4.17	4.17	4.17	4.16	4.16	4.15	4.15	4.14	4.14	4.13
35.70 *	4.21	4.21	4.21	4.20	4.20	4.19	4.19	4.18	4.18	4.17	4.17	4.17	4.16	4.16	4.15	4.15	4.14	4.14	4.14	4.13
35.75 *	4.21	4.21	4.20	4.20	4.19	4.19	4.18	4.18	4.18	4.17	4.17	4.16	4.16	4.15	4.15	4.15	4.14	4.14	4.13	4.13
35.80 *	4.21	4.20	4.20	4.19	4.19	4.19	4.18	4.18	4.17	4.17	4.16	4.16	4.15	4.15	4.15	4.14	4.14	4.13	4.13	4.12
35.85 *	4.20	4.20	4.19	4.19	4.19	4.18	4.18	4.17	4.17	4.16	4.16	4.16	4.15	4.15	4.14	4.14	4.13	4.13	4.12	4.12
35.90 *	4.20	4.20	4.19	4.19	4.18	4.18	4.17	4.17	4.17	4.16	4.16	4.15	4.15	4.14	4.14	4.13	4.13	4.13	4.12	4.12
35.95 *	4.20	4.19	4.19	4.18	4.18	4.17	4.17	4.17	4.16	4.16	4.15	4.15	4.14	4.14	4.14	4.13	4.13	4.12	4.12	4.11
36.00 *	4.19	4.19	4.18	4.18	4.18	4.17	4.17	4.16	4.16	4.15	4.15	4.15	4.14	4.14	4.13	4.13	4.12	4.12	4.11	4.11

TEMP./SAL.	28.2	28.4	28.6	28.8	29.0	29.2	29.4	29.6	29.8	30.0	30.2	30.4	30.6	30.8	31.0	31.2	31.4	31.6	31.8	32.0	
35.50 *	4.14	4.14	4.13	4.13	4.12	4.12	4.11	4.11	4.11	4.10	4.10	4.09	4.09	4.08	4.08	4.08	4.07	4.07	4.06	4.06	4.06
35.55 *	4.14	4.13	4.13	4.12	4.12	4.12	4.11	4.11	4.10	4.10	4.09	4.09	4.09	4.08	4.08	4.07	4.07	4.06	4.06	4.06	4.05
35.60 *	4.13	4.13	4.12	4.12	4.12	4.11	4.11	4.10	4.10	4.09	4.09	4.09	4.08	4.08	4.07	4.07	4.07	4.06	4.06	4.05	4.05
35.65 *	4.13	4.13	4.12	4.12	4.11	4.11	4.10	4.10	4.10	4.09	4.09	4.08	4.08	4.07	4.07	4.07	4.06	4.06	4.05	4.05	4.05
35.70 *	4.13	4.12	4.12	4.11	4.11	4.10	4.10	4.10	4.09	4.09	4.08	4.08	4.08	4.07	4.07	4.07	4.06	4.06	4.05	4.05	4.04
35.75 *	4.12	4.12	4.11	4.11	4.11	4.10	4.10	4.09	4.09	4.08	4.08	4.08	4.08	4.07	4.07	4.06	4.06	4.05	4.05	4.04	4.04
35.80 *	4.12	4.12	4.11	4.11	4.10	4.10	4.09	4.09	4.08	4.08	4.08	4.08	4.07	4.07	4.06	4.06	4.06	4.05	4.05	4.04	4.04
35.85 *	4.12	4.11	4.11	4.10	4.10	4.09	4.09	4.09	4.08	4.08	4.07	4.07	4.06	4.06	4.06	4.05	4.05	4.04	4.04	4.04	4.03
35.90 *	4.11	4.11	4.10	4.10	4.10	4.09	4.09	4.08	4.08	4.07	4.07	4.07	4.06	4.06	4.05	4.05	4.04	4.04	4.04	4.03	4.03
35.95 *	4.11	4.10	4.10	4.10	4.09	4.09	4.08	4.08	4.07	4.07	4.07	4.06	4.06	4.05	4.05	4.04	4.04	4.04	4.03	4.03	4.02
36.00 *	4.11	4.10	4.10	4.09	4.09	4.08	4.08	4.08	4.07	4.07	4.06	4.06	4.05	4.05	4.05	4.04	4.04	4.03	4.03	4.02	4.02

TEMP./SAL.	32.2	32.4	32.6	32.8	33.0	33.2	33.4	33.6	33.8	34.0	34.2	34.4	34.6	34.8	35.0	35.2	35.4	35.6	35.8	36.0
35.50 *	4.06	4.05	4.05	4.04	4.04	4.04	4.03	4.03	4.02	4.02	4.02	4.01	4.01	4.00	4.00	3.99	3.99	3.99	3.98	3.98
35.55 *	4.05	4.05	4.04	4.04	4.04	4.03	4.03	4.02	4.02	4.02	4.01	4.01	4.00	4.00	4.00	3.99	3.99	3.98	3.98	3.97
35.60 *	4.05	4.04	4.04	4.04	4.03	4.03	4.02	4.02	4.02	4.01	4.01	4.00	4.00	4.00	3.99	3.99	3.98	3.98	3.97	3.97
35.65 *	4.05	4.04	4.04	4.03	4.03	4.02	4.02	4.02	4.01	4.01	4.01	4.00	4.00	3.99	3.99	3.98	3.98	3.98	3.97	3.97
35.70 *	4.04	4.04	4.03	4.03	4.03	4.02	4.02	4.01	4.01	4.01	4.00	4.00	3.99	3.99	3.99	3.98	3.98	3.97	3.97	3.96
35.75 *	4.04	4.03	4.03	4.03	4.02	4.02	4.01	4.01	4.01	4.00	4.00	3.99	3.99	3.99	3.98	3.98	3.97	3.97	3.96	3.96
35.80 *	4.03	4.03	4.03	4.02	4.02	4.01	4.01	4.01	4.00	4.00	3.99	3.99	3.99	3.98	3.98	3.97	3.97	3.97	3.96	3.96
35.85 *	4.03	4.03	4.02	4.02	4.02	4.01	4.01	4.00	4.00	4.00	3.99	3.99	3.98	3.98	3.98	3.97	3.97	3.96	3.96	3.95
35.90 *	4.03	4.02	4.02	4.02	4.01	4.01	4.00	4.00	4.00	3.99	3.99	3.98	3.98	3.98	3.97	3.97	3.96	3.96	3.95	3.95
35.95 *	4.02	4.02	4.02	4.01	4.01	4.00	4.00	4.00	3.99	3.99	3.98	3.98	3.98	3.97	3.97	3.96	3.96	3.96	3.95	3.95
36.00 *	4.02	4.02	4.01	4.01	4.00	4.00	4.00	3.99	3.99	3.98	3.98	3.98	3.97	3.97	3.96	3.96	3.96	3.95	3.95	3.94

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Biological Laboratory, Oceanography
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Seattle, Washington 98102
- 1 Dr. Gene A. Rusnak
U. S. Geological Survey
Marine Geology & Hydrology
345 Middlefield Road
Menlo Park, California 94025
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Oceanography Museum of Natural History
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University of Rhode Island
Kingston, Rhode Island 02881
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- 1 Director
Lamont Geological Observatory
Columbia University
Palisades, New York 10964
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145 Palisade Street
Dobbs Ferry, New York 10522
- 1 Great Lakes Research Division
Institute of Science & Technology
University of Michigan
Ann Arbor, Michigan 48105
- 1 Department of Physics
Northern Michigan University
Marquette, Michigan 49855
- 1 Director
Chesapeake Bay Institute
Johns Hopkins University
Baltimore, Maryland 21218
- Department of Geology
Yale University
New Haven, Connecticut 06520
- 1 Director, Marine Laboratory
University of Miami
#1 Rickenbacker Causeway
Miami, Florida 33149
- 2 Head, Department of Oceanography and Meteorology
Texas A&M University
College Station, Texas 77843
- 1 Director
Scripps Institution of Oceanography
P. O. Box 109
La Jolla, California 92038
- 1 Allan Hancock Foundation
University Park
Los Angeles, California 90007
- 1 Chairman, Department of Oceanography
Oregon State University
Corvallis, Oregon 97331
- 1 Director, Arctic Research Laboratory
Pt. Barrow, Alaska 99723
- 1 Head, Department of Oceanography
University of Washington
Seattle, Washington 98105
- 1 Director Institute of Marine Science
University of Alaska
College, Alaska 99735
- 1 Director
Bermuda Biological Station for Research
St. Georges, Bermuda
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Osservatorio Geofisico Sperimentale
Trieste, Italy
- 1 Department of Engineering
University of California
Berkeley, California 94720
- 1 Applied Physics Laboratory
University of Washington
1013 N. E. Fortieth Street
Seattle, Washington 98105
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Nova University
1786 S. E. Fifteenth Avenue
Fort Lauderdale, Florida 33316
- 1 Director
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P. O. Box 8009
Wellington, New Zealand
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Instituto Nacional de Oceanographia
Rivadavia 1917-R25
Buenos Aires, Argentina
- 1 Lieutenant Nestor C. L. Granelli
Head, Geophysics Branch
Montevideo 459, 4^o "A"
Buenos Aires, Argentina
- 1 Oceanographische Forschungssantalt der Bundeswehr
Lornsenstrasse 7
Kiel, Federal Republic of Germany
- 1 Underwater Warfare Division of the Norwegian Defense Research Establishment
Karljohansvern, Horten, Norway
- 1 Department of Geodesy and Geophysics
Cambridge University
Cambridge, England
- 1 Institute of Oceanography
University of British Columbia
Vancouver, B. C., Canada
- 1 Dept. of the Geophysical Sciences
University of Chicago
Chicago, Illinois 60637
- 1 Coastal Engineering Laboratory
University of Florida
Gainesville, Florida 32601
- 1 Marine Science Center
Lehigh University
Bethlehem, Pennsylvania 18015
- 1 Institute of Geophysics
University of Hawaii
Honolulu, Hawaii 96825
- 1 Mr. J. A. Gast
Wildlife Building
Humboldt State College
Arcata, California 95521
- 1 Department of Geology and Geophysics
Massachusetts Institute of Technology
Cambridge, Massachusetts 02139
- 1 Division of Engineering and Applied Physics
Harvard University
Cambridge, Massachusetts 02138