

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 2767
CALIBRATION DATE: 22-Jul-10

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.34185539e-003
h = 6.33980667e-004
i = 2.18268570e-005
j = 2.04088569e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121324e-003
b = 5.94179913e-004
c = 1.52531165e-005
d = 2.04232893e-006
f0 = 2938.914

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	2938.914	-1.5001	0.00003
0.9999	3110.025	0.9999	-0.00003
4.4999	3361.573	4.4999	-0.00003
7.9999	3627.474	7.9999	-0.00001
11.4999	3908.125	11.4999	0.00001
14.9999	4203.915	14.9999	0.00005
18.4999	4515.213	18.4999	0.00003
22.0000	4842.395	22.0000	-0.00002
25.5000	5185.799	25.5000	-0.00005
29.0000	5545.778	29.0000	-0.00001
32.5000	5922.653	32.5000	0.00003

$$\text{Temperature ITS-90} = 1/\{g + h[\ln(f_0/f)] + i[\ln^2(f_0/f)] + j[\ln^3(f_0/f)]\} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Temperature IPTS-68} = 1/\{a + b[\ln(f_0/f)] + c[\ln^2(f_0/f)] + d[\ln^3(f_0/f)]\} - 273.15 \text{ (}^\circ\text{C)}$$

Following the recommendation of JPOTS: T_{68} is assumed to be $1.00024 * T_{90}$ (-2 to 35 °C)

Residual = instrument temperature - bath temperature

