

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1008
CALIBRATION DATE: 16-Nov-06

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.80411992e-003
h = 6.74255131e-004
i = 2.68567044e-005
j = 2.17627190e-006
f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.68121298e-003
b = 5.99702844e-004
c = 1.53109749e-005
d = 2.17774870e-006
f0 = 5886.066

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	5886.066	-1.5000	-0.00005
1.0000	6225.540	1.0001	0.00007
4.5000	6724.216	4.5000	0.00004
8.0000	7250.921	7.9999	-0.00006
11.5000	7806.427	11.4999	-0.00005
15.0000	8391.457	15.0000	0.00003
18.5000	9006.682	18.5000	0.00002
22.0000	9652.797	22.0000	0.00002
25.5000	10330.446	25.5000	-0.00001
29.0000	11040.260	29.0000	-0.00003
32.5000	11782.848	32.5000	0.00001

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

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

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

Residual = instrument temperature - bath temperature

