

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1366
CALIBRATION DATE: 16-Nov-06

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.83455538e-003
h = 6.76673086e-004
i = 2.58719959e-005
j = 2.02107914e-006
f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.68121278e-003
b = 6.02960098e-004
c = 1.49113563e-005
d = 2.02251025e-006
f0 = 6124.085

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6124.085	-1.5000	-0.00003
1.0000	6475.303	1.0001	0.00006
4.5000	6990.982	4.5000	0.00002
8.0000	7535.347	7.9999	-0.00007
11.5000	8109.171	11.5000	-0.00003
15.0000	8713.166	15.0000	0.00005
18.5000	9348.009	18.5000	0.00004
22.0000	10014.385	22.0000	0.00001
25.5000	10712.950	25.5000	-0.00001
29.0000	11444.314	28.9999	-0.00007
32.5000	12209.123	32.5000	0.00004

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

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

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

Residual = instrument temperature - bath temperature

