

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1049
CALIBRATION DATE: 12-Aug-04

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.84700916e-003
h = 6.77429233e-004
i = 2.70388753e-005
j = 2.18226424e-006
f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.68121275e-003
b = 6.00372661e-004
c = 1.50496070e-005
d = 2.18372227e-006
f0 = 6268.065

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6268.065	-1.5000	-0.00003
1.0000	6629.141	1.0001	0.00006
4.5000	7159.475	4.5000	-0.00000
8.0000	7719.538	8.0000	-0.00002
11.5000	8310.105	11.5000	-0.00005
15.0000	8931.950	15.0000	0.00001
18.5000	9585.791	18.5001	0.00006
22.0000	10272.318	22.0000	0.00003
25.5000	10992.220	25.5000	-0.00004
29.0000	11746.166	29.0000	-0.00004
32.5000	12534.781	32.5000	0.00003

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

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

