

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1008
CALIBRATION DATE: 26-Jan-10

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.80461409e-003
h = 6.75296334e-004
i = 2.73777392e-005
j = 2.25682810e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121470e-003
b = 5.99664667e-004
c = 1.54055076e-005
d = 2.25832340e-006
f0 = 5884.449

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5002	5884.449	-1.5002	0.00002
0.9998	6223.829	0.9998	-0.00004
4.4998	6722.431	4.4998	0.00002
7.9998	7249.063	7.9998	-0.00003
11.4998	7804.505	11.4998	0.00004
14.9999	8389.465	14.9999	0.00001
18.4999	9004.630	18.4999	0.00001
21.9999	9650.671	21.9998	-0.00006
25.4998	10328.258	25.4998	0.00002
28.9998	11038.011	28.9998	0.00002
32.4998	11780.512	32.4998	-0.00001

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 IPTS-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

