

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 5236
CALIBRATION DATE: 10-May-13

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.39583840e-003
h = 6.78589450e-004
i = 2.80455879e-005
j = 2.13487287e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121214e-003
b = 6.24838974e-004
c = 2.10385015e-005
d = 2.13684623e-006
f0 = 3000.688

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3000.688	-1.5000	0.00001
0.9999	3166.649	0.9999	0.00000
4.5000	3410.055	4.5000	-0.00003
8.0000	3666.667	7.9999	-0.00005
11.5000	3936.854	11.5000	0.00004
15.0000	4220.946	15.0001	0.00006
18.4999	4519.269	18.4999	-0.00002
22.0000	4832.191	22.0000	-0.00001
25.5000	5159.995	25.5000	-0.00002
29.0000	5503.000	29.0000	-0.00002
32.5000	5861.507	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 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

