

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 5140
CALIBRATION DATE: 07-Feb-14

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.36463665e-003
h = 6.40913384e-004
i = 2.22449273e-005
j = 2.06627300e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121214e-003
b = 5.99487294e-004
c = 1.54266194e-005
d = 2.06774331e-006
f0 = 3017.179

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3017.179	-1.5000	0.00001
1.0000	3191.249	1.0000	-0.00000
4.5000	3446.982	4.5000	-0.00003
8.0000	3717.117	8.0000	-0.00002
11.5000	4002.041	11.5000	0.00001
15.0000	4302.135	15.0001	0.00011
18.5000	4617.734	18.4999	-0.00007
22.0000	4949.229	21.9999	-0.00008
25.5000	5296.963	25.5001	0.00007
29.0001	5661.235	29.0001	-0.00001
32.5000	6042.358	32.5000	-0.00000

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

