

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 4828
CALIBRATION DATE: 23-Oct-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.39616266e-003
h = 6.40348016e-004
i = 2.14509229e-005
j = 1.80667829e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121242e-003
b = 5.98111722e-004
c = 1.52070737e-005
d = 1.80809308e-006
f0 = 3180.322

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3180.322	-1.5000	-0.00001
1.0000	3364.238	1.0000	0.00000
4.5000	3634.469	4.5000	-0.00000
8.0000	3919.964	8.0000	0.00002
11.5000	4221.135	11.5000	0.00001
15.0000	4538.387	15.0000	-0.00004
18.5000	4872.130	18.5000	0.00000
22.0000	5222.729	22.0000	-0.00004
25.5000	5590.577	25.5000	0.00004
29.0000	5976.010	29.0000	0.00004
32.5000	6379.374	32.5000	-0.00003

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

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

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

Residual = instrument temperature - bath temperature

