

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 2574
CALIBRATION DATE: 25-Jan-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.35468817e-003
h = 6.45398767e-004
i = 2.32465194e-005
j = 2.20086104e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121177e-003
b = 6.02991424e-004
c = 1.61346740e-005
d = 2.20241145e-006
f0 = 2948.555

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2948.555	-1.5000	0.00004
1.0000	3117.655	1.0000	-0.00002
4.5000	3366.022	4.4999	-0.00007
8.0000	3628.299	7.9999	-0.00006
11.5000	3904.864	11.5001	0.00008
15.0000	4196.059	15.0001	0.00013
18.5000	4502.223	18.5000	-0.00003
22.0000	4823.716	21.9999	-0.00010
25.5000	5160.872	25.5000	-0.00002
29.0000	5513.983	29.0000	0.00002
32.5000	5883.350	32.5000	0.00002

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

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

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

Residual = instrument temperature - bath temperature

