

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1008
CALIBRATION DATE: 18-Jul-13

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.80177432e-003
h = 6.56911938e-004
i = 2.43143853e-005
j = 1.88622649e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121304e-003
b = 5.87573494e-004
c = 1.40978608e-005
d = 1.88755029e-006
f0 = 6110.729

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	6110.729	-1.5001	0.00005
1.0000	6470.613	1.0000	-0.00001
4.5000	6999.933	4.4999	-0.00010
7.9999	7559.811	7.9999	-0.00003
11.4999	8151.118	11.4999	0.00004
14.9999	8774.677	15.0000	0.00012
18.4999	9431.268	18.4999	0.00001
21.9999	10121.731	21.9999	-0.00001
25.5000	10846.826	25.4999	-0.00007
29.0000	11607.266	28.9999	-0.00009
32.5000	12403.821	32.5001	0.00009

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

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

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

Residual = instrument temperature - bath temperature

