

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 4230
CALIBRATION DATE: 28-Jun-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.37264123e-003
h = 6.48658458e-004
i = 2.29617183e-005
j = 1.86681247e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121242e-003
b = 6.04887847e-004
c = 1.67994826e-005
d = 1.86837107e-006
f0 = 3020.144

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3020.144	-1.5000	-0.00001
1.0000	3192.806	1.0000	0.00000
4.5000	3446.387	4.5000	0.00002
8.0000	3714.152	8.0000	-0.00001
11.5000	3996.496	11.5000	-0.00001
15.0000	4293.794	15.0000	-0.00000
18.5000	4606.414	18.5000	-0.00000
22.0000	4934.715	22.0000	0.00001
25.5000	5279.040	25.5000	-0.00001
29.0000	5639.731	29.0000	0.00001
32.5000	6017.102	32.5000	-0.00001

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

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

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

Residual = instrument temperature - bath temperature

