

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1364
CALIBRATION DATE: 13-Mar-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.84889420e-003
h = 6.79175433e-004
i = 2.55321730e-005
j = 1.90622665e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121078e-003
b = 6.05094537e-004
c = 1.51076002e-005
d = 1.90766435e-006
f0 = 6219.678

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6219.678	-1.4999	0.00011
1.0000	6575.048	0.9999	-0.00006
4.5000	7096.764	4.4998	-0.00016
8.0000	7647.404	7.9999	-0.00012
11.5000	8227.730	11.5001	0.00009
15.0000	8838.449	15.0003	0.00034
18.5000	9480.169	18.5001	0.00009
22.0000	10153.636	21.9997	-0.00026
25.5000	10859.617	25.4999	-0.00014
29.0000	11598.667	29.0000	0.00001
32.5000	12371.363	32.5001	0.00010

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

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

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

Residual = instrument temperature - bath temperature

