

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0884
CALIBRATION DATE: 07-Nov-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.85396627e-003
h = 6.80673244e-004
i = 2.79699114e-005
j = 2.33492601e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121204e-003
b = 6.01581711e-004
c = 1.51029085e-005
d = 2.33641241e-006
f0 = 6301.459

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6301.459	-1.5000	0.00002
1.0000	6663.689	1.0000	-0.00002
4.5000	7195.677	4.5000	-0.00003
8.0000	7757.389	8.0000	-0.00001
11.5000	8349.592	11.5000	0.00000
14.9999	8973.034	15.0000	0.00014
18.5000	9628.395	18.4999	-0.00012
22.0000	10316.453	22.0000	-0.00001
25.5000	11037.810	25.5000	0.00003
29.0000	11793.089	29.0000	-0.00002
32.5000	12582.932	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

