

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 4563
CALIBRATION DATE: 06-Jul-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.40037567e-003
h = 6.50703227e-004
i = 2.28452729e-005
j = 1.93104613e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121211e-003
b = 6.06067185e-004
c = 1.62288961e-005
d = 1.93257286e-006
f0 = 3148.490

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3148.490	-1.5000	0.00002
1.0000	3328.115	1.0000	-0.00002
4.5000	3591.854	4.5000	0.00000
8.0000	3870.254	8.0000	-0.00000
11.5000	4163.706	11.5000	-0.00001
15.0000	4472.596	15.0000	0.00003
18.5000	4797.281	18.5000	0.00001
22.0000	5138.125	22.0000	-0.00001
25.5000	5495.473	25.5000	-0.00002
29.0000	5869.659	29.0000	-0.00000
32.5000	6260.999	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

