

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 4328
CALIBRATION DATE: 28-Jun-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.33515093e-003
h = 6.45226544e-004
i = 2.25587833e-005
j = 1.87835913e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121202e-003
b = 6.04259052e-004
c = 1.66777314e-005
d = 1.87990948e-006
f0 = 2853.645

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2853.645	-1.5000	0.00002
1.0000	3016.958	1.0000	-0.00002
4.5000	3256.824	4.5000	-0.00001
8.0000	3510.121	8.0000	-0.00004
11.5000	3777.227	11.5000	0.00003
15.0000	4058.484	15.0000	0.00001
18.5000	4354.254	18.5000	0.00004
22.0000	4664.866	22.0000	0.00003
25.5000	4990.644	25.4999	-0.00006
29.0000	5331.921	28.9999	-0.00006
32.5000	5689.006	32.5001	0.00005

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

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

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

Residual = instrument temperature - bath temperature

