

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 2305
CALIBRATION DATE: 23-Oct-12

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.36619419e-003
h = 6.45013305e-004
i = 2.38587763e-005
j = 2.29779904e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121256e-003
b = 6.00941317e-004
c = 1.62888212e-005
d = 2.29936856e-006
f0 = 3010.586

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	3010.586	-1.5000	-0.00002
1.0000	3183.860	1.0000	0.00002
4.5000	3438.424	4.5000	0.00001
8.0000	3707.329	8.0000	0.00002
11.5000	3990.958	11.5000	0.00000
15.0000	4289.684	14.9999	-0.00008
18.5000	4603.893	18.5000	0.00002
22.0000	4933.912	22.0000	0.00002
25.5000	5280.090	25.5000	0.00003
29.0000	5642.746	29.0000	-0.00001
32.5000	6022.201	32.5000	-0.00001

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

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

