

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1701
CALIBRATION DATE: 13-Mar-09

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.79081637e-003
h = 6.54370821e-004
i = 1.87555007e-005
j = 1.05548092e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121323e-003
b = 5.97853470e-004
c = 1.31547928e-005
d = 1.05663756e-006
f0 = 5913.016

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	5913.016	-1.5001	0.00003
0.9999	6255.027	0.9998	-0.00010
4.4999	6757.393	4.5000	0.00009
7.9999	7287.833	7.9999	0.00001
11.4999	7847.154	11.4999	0.00001
14.9999	8436.099	15.0000	0.00009
18.4999	9055.311	18.4997	-0.00018
21.9999	9705.619	21.9998	-0.00010
25.4999	10387.668	25.5000	0.00013
28.9999	11102.050	29.0000	0.00014
32.4999	11849.385	32.4998	-0.00011

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

