

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1371
CALIBRATION DATE: 03-Nov-09

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.83503872e-003
h = 6.80191959e-004
i = 2.74267576e-005
j = 2.22595640e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121354e-003
b = 6.02964522e-004
c = 1.53746100e-005
d = 2.22745133e-006
f0 = 6103.721

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	6103.721	-1.5001	0.00001
0.9999	6453.769	0.9999	0.00001
4.4999	6967.803	4.4999	-0.00004
7.9999	7510.509	7.9999	-0.00002
11.4998	8082.616	11.4999	0.00006
14.9999	8684.870	14.9999	0.00002
18.4999	9317.945	18.4999	0.00001
21.9999	9982.510	21.9998	-0.00007
25.4999	10679.253	25.4999	-0.00002
28.9998	11408.758	28.9999	0.00007
32.4998	12171.605	32.4998	-0.00003

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

