

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1369
CALIBRATION DATE: 23-Jan-08

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.83426861e-003
h = 6.74909745e-004
i = 2.54439722e-005
j = 1.95689716e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121439e-003
b = 6.02022935e-004
c = 1.48138048e-005
d = 1.95830997e-006
f0 = 6143.278

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	6143.278	-1.5002	-0.00005
0.9999	6496.161	1.0000	0.00006
4.4999	7014.335	4.4999	0.00004
7.9999	7561.399	7.9999	0.00001
11.4999	8138.110	11.4999	-0.00002
14.9999	8745.198	14.9998	-0.00007
18.4999	9383.401	18.4999	0.00000
21.9999	10053.372	21.9999	0.00001
25.4999	10755.778	25.4999	0.00001
28.9999	11491.276	29.0000	0.00009
32.4999	12260.400	32.4998	-0.00007

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

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

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

Residual = instrument temperature - bath temperature

