

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1369  
CALIBRATION DATE: 26-Oct-07

SBE3 TEMPERATURE CALIBRATION DATA  
IPTS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.83518672e-003  
h = 6.76098645e-004  
i = 2.59559177e-005  
j = 2.03086118e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68121238e-003  
b = 6.02084051e-004  
c = 1.49228989e-005  
d = 2.03229243e-006  
f0 = 6143.344

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6143.344	-1.5000	-0.00001
1.0000	6496.185	1.0000	0.00002
4.5000	7014.316	4.5000	-0.00004
8.0000	7561.364	8.0000	0.00003
11.5000	8138.050	11.5000	-0.00000
15.0000	8745.130	15.0000	0.00002
18.5000	9383.295	18.5000	-0.00002
22.0000	10053.249	22.0000	-0.00000
25.5000	10755.641	25.5000	0.00002
29.0000	11491.091	29.0000	-0.00001
32.5000	12260.223	32.5000	0.00000

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

