

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0997  
CALIBRATION DATE: 26-Oct-07

SBE3 TEMPERATURE CALIBRATION DATA  
IPTS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.88402659e-003  
h = 6.82657367e-004  
i = 2.84466719e-005  
j = 2.36673296e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68121237e-003  
b = 6.00725797e-004  
c = 1.50753764e-005  
d = 2.36821883e-006  
f0 = 6599.916

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6599.916	-1.5000	-0.00000
1.0000	6979.865	1.0000	-0.00000
4.5000	7537.924	4.5000	0.00001
8.0000	8127.221	8.0000	0.00000
11.5000	8748.571	11.5000	0.00000
15.0000	9402.763	15.0000	0.00002
18.5000	10090.534	18.5000	-0.00004
22.0000	10812.642	22.0000	-0.00004
25.5000	11569.793	25.5001	0.00005
29.0000	12362.608	29.0000	0.00002
32.5000	13191.744	32.5000	-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

