

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1367  
CALIBRATION DATE: 04-Sep-08

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

### ITS-90 COEFFICIENTS

g = 4.86063215e-003  
h = 6.76102661e-004  
i = 2.71113186e-005  
j = 2.17582402e-006  
f0 = 1000.0

### IPTS-68 COEFFICIENTS

a = 3.68121498e-003  
b = 5.97892720e-004  
c = 1.49789943e-005  
d = 2.17727141e-006  
f0 = 6441.646

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5002	6441.646	-1.5002	0.00000
0.9999	6814.304	0.9999	-0.00002
4.4999	7361.828	4.4999	0.00003
7.9998	7940.206	7.9998	0.00003
11.4999	8550.299	11.4998	-0.00006
14.9998	9192.886	14.9998	0.00001
18.4999	9868.765	18.4999	-0.00001
21.9999	10578.651	21.9999	0.00001
25.4999	11323.265	25.4999	-0.00000
28.9999	12103.310	28.9999	0.00001
32.4999	12919.429	32.4999	-0.00001

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

