

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1371  
CALIBRATION DATE: 23-Jan-08

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

### ITS-90 COEFFICIENTS

g = 4.83367493e-003  
h = 6.78372032e-004  
i = 2.65889400e-005  
j = 2.09646159e-006  
f0 = 1000.0

### IPTS-68 COEFFICIENTS

a = 3.68121346e-003  
b = 6.02906824e-004  
c = 1.52399770e-005  
d = 2.09792884e-006  
f0 = 6103.249

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	6103.249	-1.5001	0.00002
0.9999	6453.295	0.9999	-0.00003
4.4999	6967.334	4.4999	-0.00000
7.9999	7510.023	7.9999	0.00001
11.4999	8082.116	11.4999	0.00002
14.9999	8684.324	14.9999	-0.00004
18.4999	9317.385	18.4999	0.00002
21.9999	9981.942	21.9999	0.00001
25.4999	10678.656	25.4999	-0.00003
28.9999	11408.178	28.9999	0.00002
32.4999	12171.070	32.4999	-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

