

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1384  
CALIBRATION DATE: 19-Jul-11

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.86997023e-003  
h = 6.80596974e-004  
i = 2.70980811e-005  
j = 2.15149456e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121204e-003  
b = 6.02130024e-004  
c = 1.50904970e-005  
d = 2.15295571e-006  
f0 = 6453.217

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6453.217	-1.5000	0.00002
1.0000	6823.825	1.0000	0.00000
4.5001	7368.085	4.5000	-0.00008
8.0000	7942.710	8.0000	0.00001
11.5000	8548.511	11.5001	0.00007
15.0001	9186.239	15.0001	0.00000
18.5001	9856.634	18.5001	-0.00000
22.0001	10560.415	22.0001	-0.00002
25.5001	11298.272	25.5001	-0.00004
29.0001	12070.880	29.0001	0.00002
32.5001	12878.837	32.5001	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

