

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0573  
CALIBRATION DATE: 16-Jun-09

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.76099857e-003  
h = 6.83963604e-004  
i = 3.75347867e-005  
j = 4.35351100e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121286e-003  
b = 5.94021299e-004  
c = 1.52674849e-005  
d = 4.35527301e-006  
f0 = 5512.226

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	5512.226	-1.5000	0.00006
0.9999	5833.257	1.0000	0.00008
4.4999	6305.119	4.4998	-0.00012
7.9999	6803.791	7.9996	-0.00027
11.4999	7329.957	11.4997	-0.00016
14.9999	7884.246	15.0001	0.00023
18.4999	8467.179	18.5004	0.00052
21.9999	9079.226	22.0002	0.00030
25.4999	9720.881	25.4995	-0.00043
28.9999	10392.761	28.9991	-0.00085
32.4999	11095.626	32.5005	0.00062

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

