

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1701  
CALIBRATION DATE: 12-Mar-10

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.79053708e-003  
h = 6.53968270e-004  
i = 1.85583061e-005  
j = 1.02349007e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121236e-003  
b = 5.97848975e-004  
c = 1.31281832e-005  
d = 1.02464022e-006  
f0 = 5912.954

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	5912.954	-1.5000	-0.00000
1.0000	6254.975	0.9999	-0.00005
4.5000	6757.329	4.5001	0.00008
8.0000	7287.763	8.0000	0.00001
11.4999	7847.064	11.4999	0.00004
15.0000	8435.995	15.0000	0.00000
18.5000	9055.212	18.4998	-0.00019
22.0000	9705.519	21.9999	-0.00007
25.5000	10387.573	25.5002	0.00019
29.0000	11101.939	29.0001	0.00012
32.5000	11849.282	32.4999	-0.00012

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

