

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 2329  
CALIBRATION DATE: 20-Jul-10

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.34010743e-003  
h = 6.41617690e-004  
i = 2.33559945e-005  
j = 2.27227401e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121214e-003  
b = 5.99783047e-004  
c = 1.61311396e-005  
d = 2.27382601e-006  
f0 = 2897.568

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2897.568	-1.5000	0.00001
1.0000	3064.663	1.0000	-0.00001
4.5000	3310.181	4.5000	-0.00001
8.0000	3569.559	8.0000	-0.00003
11.4999	3843.175	11.5000	0.00006
15.0000	4131.397	15.0000	0.00001
18.5000	4434.568	18.5000	-0.00003
21.9999	4753.033	21.9999	-0.00000
25.4999	5087.131	25.4999	-0.00000
28.9999	5437.173	28.9999	-0.00000
32.4999	5803.462	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

