

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 2265  
CALIBRATION DATE: 30-Jun-12

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

**ITS-90 COEFFICIENTS**

g = 4.33191569e-003  
h = 6.44063544e-004  
i = 2.37285084e-005  
j = 2.26551448e-006  
f0 = 1000.0

**IPTS-68 COEFFICIENTS**

a = 3.68121148e-003  
b = 6.01984329e-004  
c = 1.66426151e-005  
d = 2.26711035e-006  
f0 = 2848.077

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2848.077	-1.4999	0.00006
1.0000	3011.701	1.0000	-0.00005
4.5000	3252.090	4.4999	-0.00006
8.0000	3506.010	7.9999	-0.00007
11.5000	3773.840	11.5001	0.00007
15.0000	4055.919	15.0001	0.00012
18.5000	4352.589	18.5001	0.00005
22.0000	4664.189	21.9999	-0.00008
25.5000	4991.059	25.4999	-0.00008
29.0000	5333.502	29.0000	-0.00004
32.5000	5691.821	32.5001	0.00007

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

