

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 2631  
CALIBRATION DATE: 07-Feb-12

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.33819041e-003  
h = 6.35456954e-004  
i = 2.20890131e-005  
j = 2.12330934e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121183e-003  
b = 5.95637572e-004  
c = 1.53028967e-005  
d = 2.12477021e-006  
f0 = 2914.073

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2914.073	-1.5000	0.00004
1.0000	3083.309	1.0000	-0.00004
4.5000	3332.060	4.5000	-0.00002
8.0000	3594.949	8.0000	-0.00001
11.5000	3872.367	11.5000	0.00003
15.0000	4164.686	15.0001	0.00005
18.5000	4472.263	18.5000	-0.00003
22.0000	4795.472	22.0000	0.00001
25.5000	5134.632	25.4999	-0.00006
29.0063	5490.751	29.0063	0.00002
32.5000	5862.155	32.5000	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

