

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 5774  
CALIBRATION DATE: 20-Apr-13

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.33674173e-003  
h = 6.27238487e-004  
i = 1.95575048e-005  
j = 1.47736517e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121429e-003  
b = 5.90353861e-004  
c = 1.48042073e-005  
d = 1.47868923e-006  
f0 = 2940.021

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	2940.021	-1.5001	-0.00005
1.0000	3112.352	1.0000	0.00005
4.5000	3365.769	4.5001	0.00005
8.0000	3633.768	8.0000	-0.00002
11.5000	3916.781	11.5000	-0.00003
15.0000	4215.215	15.0000	-0.00004
18.5000	4529.478	18.5000	0.00000
22.0000	4859.956	22.0000	0.00001
25.5000	5207.038	25.5000	0.00005
29.0000	5571.084	29.0000	0.00001
32.5000	5952.462	32.5000	-0.00003

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

