

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0658  
CALIBRATION DATE: 14-Jan-12

SBE16 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.19154934e-003  
h = 5.95053866e-004  
i = 6.87211906e-006  
j = -1.03413729e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.64763618e-003  
b = 5.79817886e-004  
c = 9.76722280e-006  
d = -1.03355166e-006  
f0 = 2522.667

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	2522.667	0.9999	-0.00009
4.5000	2731.228	4.5002	0.00016
15.0000	3430.427	15.0000	-0.00001
18.5000	3689.211	18.4998	-0.00021
24.0000	4123.251	24.0001	0.00010
29.0000	4547.813	29.0002	0.00020
32.5000	4862.526	32.4999	-0.00014

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

