

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 3233  
CALIBRATION DATE: 27-Nov-12

SBE21 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

### ITS-90 COEFFICIENTS

g = 4.21684423e-003  
h = 6.33361437e-004  
i = 1.99540805e-005  
j = 1.35890842e-006  
f0 = 1000.0

### IPTS-68 COEFFICIENTS

a = 3.64763572e-003  
b = 6.00112881e-004  
c = 1.62149641e-005  
d = 1.36034760e-006  
f0 = 2519.111

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	2519.111	0.9999	-0.00006
4.5000	2720.205	4.5001	0.00011
15.0000	3392.690	14.9998	-0.00015
18.5000	3641.006	18.5001	0.00011
24.0000	4056.690	24.0000	-0.00005
29.0000	4462.497	29.0001	0.00011
32.5000	4762.795	32.4999	-0.00006

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

Date, Offset(mdeg C)

