

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 4799  
 CALIBRATION DATE: 18-Mar-09

SBE3 TEMPERATURE CALIBRATION DATA  
 ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.36401867e-003  
 h = 6.37068419e-004  
 i = 2.09335409e-005  
 j = 1.76469979e-006  
 f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121343e-003  
 b = 5.97311988e-004  
 c = 1.50925238e-005  
 d = 1.76609917e-006  
 f0 = 3029.499

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	3029.499	-1.5001	0.00002
0.9999	3204.929	0.9999	-0.00003
4.4999	3462.718	4.4999	-0.00001
7.9999	3735.089	7.9999	0.00001
11.4999	4022.439	11.4999	-0.00000
14.9999	4325.168	15.0000	0.00006
18.4999	4643.635	18.4999	-0.00004
21.9999	4978.232	21.9999	-0.00004
25.4999	5329.313	25.4999	0.00003
28.9999	5697.208	28.9999	0.00002
32.4999	6082.254	32.4999	-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

