

# SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington, 98005 USA  
 Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1701  
 CALIBRATION DATE: 28-Feb-08

SBE3 TEMPERATURE CALIBRATION DATA  
 ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.79025066e-003  
 h = 6.53559753e-004  
 i = 1.83755265e-005  
 j = 9.96476639e-007  
 f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121375e-003  
 b = 5.97833614e-004  
 c = 1.30893522e-005  
 d = 9.97620345e-007  
 f0 = 5913.078

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	5913.078	-1.5001	-0.00001
0.9999	6255.113	0.9998	-0.00007
4.4999	6757.492	4.5000	0.00011
7.9999	7287.942	7.9999	0.00003
11.4999	7847.264	11.4999	-0.00000
14.9999	8436.200	14.9999	0.00000
18.4999	9055.432	18.4997	-0.00018
21.9999	9705.752	21.9998	-0.00006
25.4999	10387.806	25.5000	0.00014
28.9999	11102.211	29.0001	0.00019
32.4999	11849.551	32.4997	-0.00015

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

