

# 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: 2767  
CALIBRATION DATE: 24-Jan-08

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.34181974e-003  
h = 6.33925758e-004  
i = 2.18167787e-005  
j = 2.04417637e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121368e-003  
b = 5.94157828e-004  
c = 1.52323129e-005  
d = 2.04561762e-006  
f0 = 2938.950

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	2938.950	-1.5001	-0.00000
0.9999	3110.074	0.9999	0.00000
4.4999	3361.632	4.4999	-0.00002
7.9999	3627.546	7.9999	0.00002
11.4999	3908.207	11.4999	0.00002
14.9999	4204.000	14.9999	-0.00002
18.4999	4515.310	18.4999	-0.00001
21.9999	4842.496	21.9999	0.00000
25.4999	5185.907	25.4999	-0.00001
28.9999	5545.891	28.9999	0.00004
32.4999	5922.756	32.4999	-0.00002

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

