

# 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: 15-Feb-07

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.34185014e-003  
h = 6.33954936e-004  
i = 2.18150276e-005  
j = 2.03924115e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68121232e-003  
b = 5.94173350e-004  
c = 1.52464824e-005  
d = 2.04068306e-006  
f0 = 2938.972

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2938.972	-1.5000	-0.00000
1.0000	3110.093	1.0000	0.00001
4.5000	3361.647	4.5000	-0.00001
8.0000	3627.554	8.0000	-0.00002
11.5000	3908.214	11.5000	0.00002
15.0000	4204.009	15.0000	0.00002
18.5000	4515.314	18.5000	-0.00001
22.0000	4842.498	22.0000	-0.00002
25.5000	5185.915	25.5000	0.00000
29.0000	5545.900	29.0000	0.00001
32.5000	5922.776	32.5000	-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 ITS-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

