

**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: 1652  
CALIBRATION DATE: 17-Aug-06

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPRATURE SCALE

ITS-90 COEFFICIENTS

g = 4.83642655e-003  
h = 6.76728052e-004  
i = 2.53248170e-005  
j = 1.88330555e-006  
f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.68121151e-003  
b = 6.03601254e-004  
c = 1.51058652e-005  
d = 1.88473616e-006  
f0 = 6132.166

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	6132.166	-1.4999	0.00006
1.0000	6483.446	1.0000	-0.00000
4.5000	6999.224	4.4999	-0.00012
8.0000	7543.707	7.9999	-0.00013
11.5000	8117.671	11.5001	0.00009
15.0000	8721.820	15.0003	0.00035
18.5000	9356.734	18.4999	-0.00005
22.0000	10023.252	21.9998	-0.00023
25.5000	10722.070	25.5000	-0.00004
29.0000	11453.732	29.0000	0.00004
32.5000	12218.848	32.5000	0.00004

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

