

# 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: 2958  
CALIBRATION DATE: 21-Aug-09

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.39511417e-003  
h = 6.73527864e-004  
i = 3.04437226e-005  
j = 2.88396737e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121259e-003  
b = 6.16762143e-004  
c = 2.08719747e-005  
d = 2.88600804e-006  
f0 = 3033.650

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	3033.650	-1.5000	0.00008
0.9999	3203.691	0.9998	-0.00011
4.4999	3453.315	4.4999	0.00000
7.9999	3716.737	7.9999	-0.00002
11.4998	3994.335	11.4998	0.00002
14.9999	4286.490	14.9999	0.00004
18.4999	4593.531	18.5000	0.00009
21.9999	4915.786	21.9998	-0.00006
25.4999	5253.613	25.4998	-0.00006
28.9998	5607.304	28.9998	-0.00004
32.4999	5977.199	32.5000	0.00006

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

