

# SEA-BIRD ELECTRONICS, INC.

13431 NE 20th Street, Bellevue, Washington, 98005-2010 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 2633  
CALIBRATION DATE: 19-Jul-11

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.36666761e-003  
h = 6.48385326e-004  
i = 2.41656823e-005  
j = 2.35750699e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121236e-003  
b = 6.04015296e-004  
c = 1.64331387e-005  
d = 2.35910266e-006  
f0 = 2995.913

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2995.913	-1.5000	-0.00000
1.0000	3167.439	1.0000	0.00002
4.5001	3419.353	4.5001	-0.00003
8.0000	3685.345	8.0000	0.00002
11.5000	3965.799	11.5000	0.00003
15.0001	4261.071	15.0000	-0.00008
18.5001	4571.526	18.5001	0.00005
22.0001	4897.476	22.0001	0.00003
25.5001	5239.255	25.5001	-0.00003
29.0001	5597.187	29.0001	-0.00001
32.5001	5971.561	32.5001	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 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

