

**SEA-BIRD ELECTRONICS, INC.**  
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SENSOR SERIAL NUMBER: 2946  
CALIBRATION DATE: 12-Aug-04

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS  
g = 4.34402998e-003  
h = 6.39234340e-004  
i = 2.14700579e-005  
j = 1.85362098e-006  
f0 = 1000.0

ITS-68 COEFFICIENTS  
a = 3.68121240e-003  
b = 5.99740914e-004  
c = 1.55364933e-005  
d = 1.85507137e-006  
f0 = 2920.986

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2920.986	-1.5000	-0.00001
1.0000	3089.439	1.0000	0.00004
4.5000	3336.912	4.5000	-0.00003
8.0000	3598.328	8.0000	-0.00004
11.5000	3874.067	11.5000	-0.00003
15.0000	4164.504	15.0001	0.00008
18.5000	4469.978	18.5000	0.00003
22.0000	4790.852	22.0000	-0.00001
25.5000	5127.465	25.5000	-0.00002
29.0000	5480.136	28.9999	-0.00008
32.5000	5849.203	32.5001	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 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

