

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1049  
CALIBRATION DATE: 04-Aug-98

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.84678707e-003  
h = 6.77051552e-004  
i = 2.68978478e-005  
j = 2.16570235e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68152665e-003  
b = 6.00356063e-004  
c = 1.50020961e-005  
d = 2.16715431e-006  
f0 = 6265.816

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5232	6265.816	-1.5232	-0.00001
1.0353	6635.438	1.0353	0.00000
4.6120	7178.151	4.6120	0.00002
8.1185	7740.364	8.1185	0.00002
11.6222	8332.729	11.6222	-0.00002
15.1826	8966.809	15.1825	-0.00006
18.6463	9615.491	18.6463	0.00003
22.1467	10303.613	22.1468	0.00003
25.6742	11030.839	25.6742	0.00001
29.1455	11780.277	29.1455	-0.00004
32.6214	12564.882	32.6214	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

