

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 2490  
CALIBRATION DATE: 29-Aug-07

SBE3 TEMPERATURE CALIBRATION DATA  
IPTS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.32788013e-003  
h = 6.32873797e-004  
i = 2.11254193e-005  
j = 1.69727411e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68121248e-003  
b = 5.94083504e-004  
c = 1.57760312e-005  
d = 1.69870886e-006  
f0 = 2874.446

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	2874.446	-1.5000	-0.00001
1.0000	3041.847	1.0000	0.00002
4.5000	3287.968	4.5000	0.00000
8.0000	3548.186	8.0000	-0.00002
11.5000	3822.907	11.5000	-0.00001
15.0000	4112.525	15.0000	0.00002
18.5000	4417.422	18.5000	0.00001
22.0000	4737.975	22.0000	-0.00002
25.5000	5074.557	25.5000	0.00002
29.0000	5427.511	29.0000	-0.00000
32.5000	5797.187	32.5000	-0.00000

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

