

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1609  
CALIBRATION DATE: 28-Feb-08

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.86582132e-003  
h = 6.79702349e-004  
i = 2.60948076e-005  
j = 2.00567785e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.68121194e-003  
b = 6.03704376e-004  
c = 1.49530749e-005  
d = 2.00711392e-006  
f0 = 6399.718

BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5001	6399.718	-1.5000	0.00013
0.9999	6766.229	0.9998	-0.00010
4.4999	7304.386	4.4997	-0.00017
7.9999	7872.464	7.9998	-0.00007
11.4999	8471.236	11.5001	0.00018
14.9999	9101.435	15.0003	0.00043
18.4999	9763.598	18.4996	-0.00029
21.9999	10458.758	21.9997	-0.00021
25.4999	11187.468	25.4999	-0.00002
28.9999	11950.347	29.0000	0.00015
32.4999	12747.940	32.4999	-0.00002

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

