

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1701  
CALIBRATION DATE: 01-Feb-07

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPRATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.79058458e-003  
h = 6.54003555e-004  
i = 1.85848319e-005  
j = 1.02921394e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68121262e-003  
b = 5.97842624e-004  
c = 1.31240030e-005  
d = 1.03036370e-006  
f0 = 5913.312

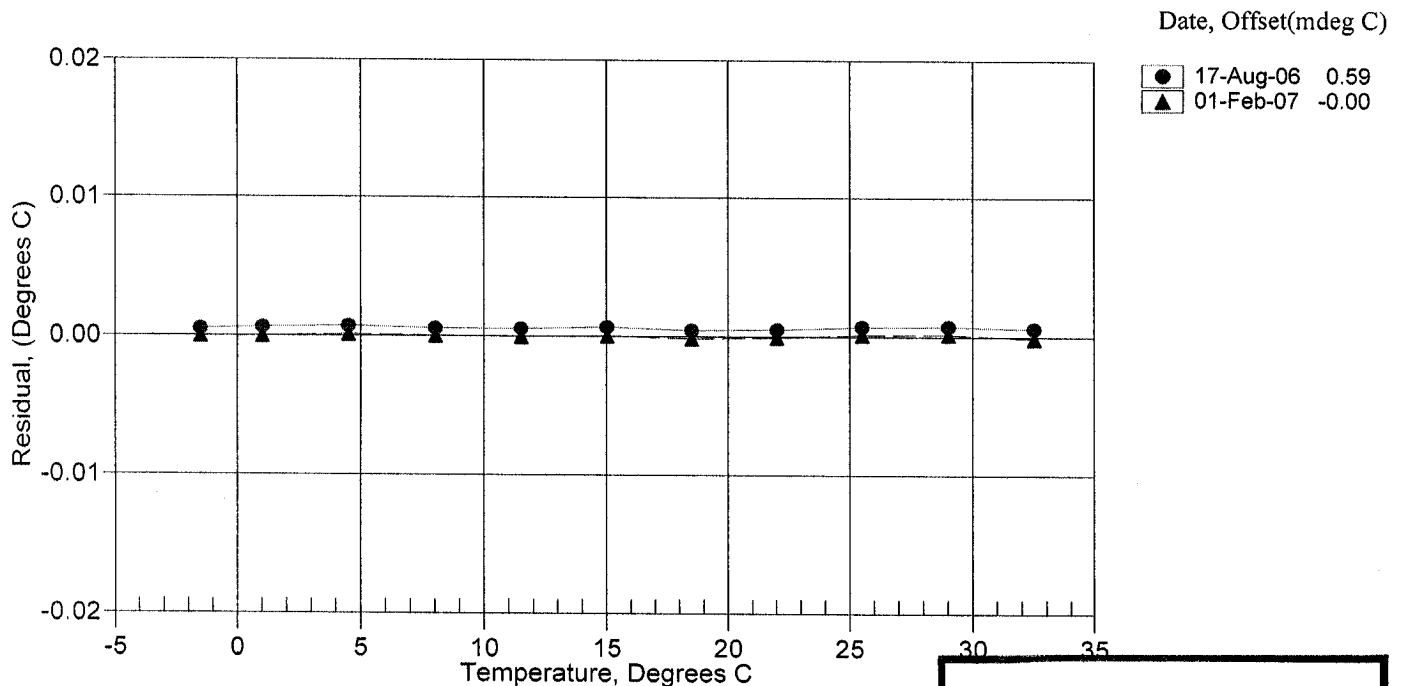
BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5000	5913.312	-1.5000	-0.00002
1.0000	6255.364	1.0000	-0.00003
4.5000	6757.751	4.5001	0.00009
8.0000	7288.221	8.0000	0.00001
11.5000	7847.565	11.5000	-0.00003
15.0000	8436.537	15.0000	0.00004
18.5000	9055.794	18.4998	-0.00016
22.0000	9706.136	21.9999	-0.00007
25.5000	10388.215	25.5001	0.00012
29.0000	11102.643	29.0002	0.00017
32.5000	11850.012	32.4999	-0.00013

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



**POST CRUISE  
CALIBRATION**