

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 2946  
CALIBRATION DATE: 14-Jul-05

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPRATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.34408123e-003  
h = 6.39266064e-004  
i = 2.14967103e-005  
j = 1.86201446e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68121483e-003  
b = 5.99742617e-004  
c = 1.55358267e-005  
d = 1.86346576e-006  
f0 = 2921.157

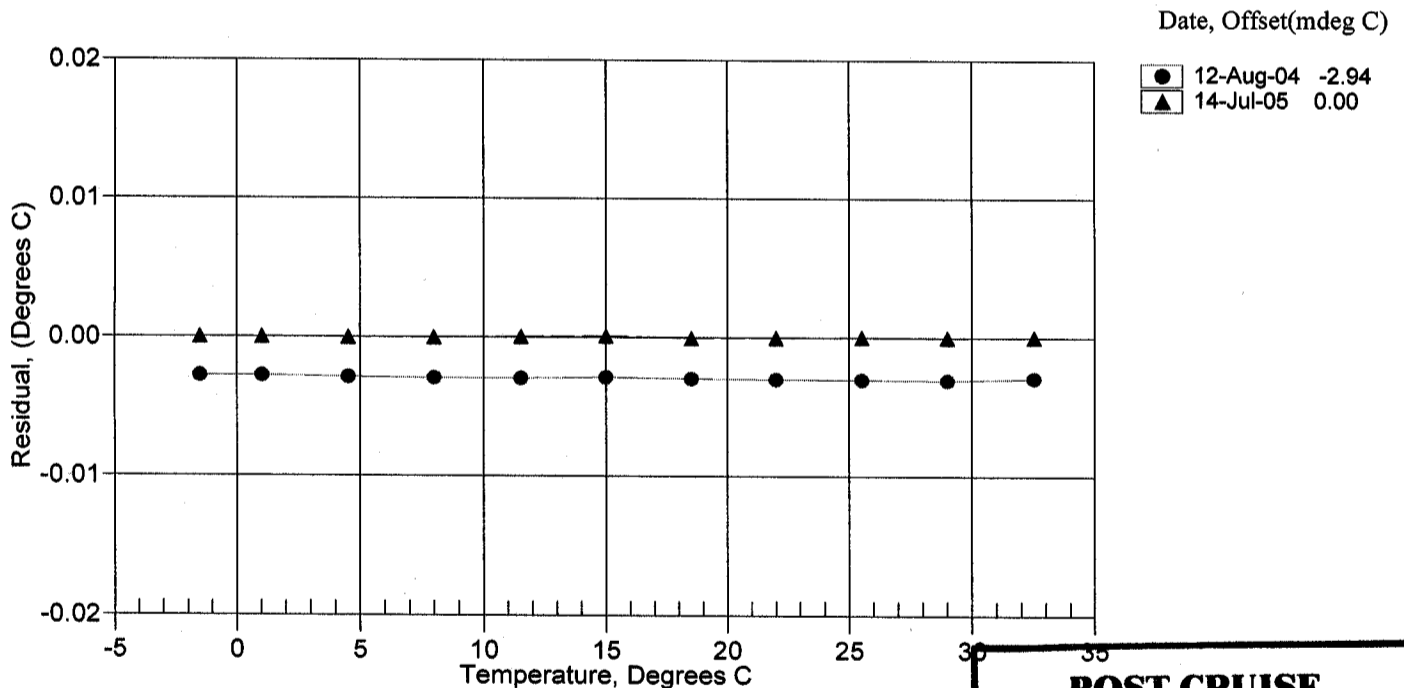
BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5002	2921.157	-1.5002	0.00001
0.9998	3089.616	0.9998	0.00001
4.4998	3337.104	4.4998	-0.00004
7.9998	3598.536	7.9998	-0.00004
11.4998	3874.294	11.4998	0.00004
14.9998	4164.741	14.9999	0.00009
18.4998	4470.222	18.4998	-0.00005
21.9998	4791.115	21.9998	-0.00003
25.4998	5127.746	25.4998	0.00000
28.9998	5480.433	28.9998	-0.00002
32.4998	5849.501	32.4998	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 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**