

# SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington, 98005 USA

Phone: (425) 643 - 9866 Fax (425) 643 - 9954 Email: seabird@seabird.com

SENSOR SERIAL NUMBER: 1075  
CALIBRATION DATE: 14-Jul-05

SBE3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPRATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.86428746e-003  
h = 6.81716890e-004  
i = 2.64104367e-005  
j = 1.94063787e-006  
f0 = 1000.0

## ITS-68 COEFFICIENTS

a = 3.68121496e-003  
b = 6.04070123e-004  
c = 1.56674748e-005  
d = 1.94211835e-006  
f0 = 6359.856

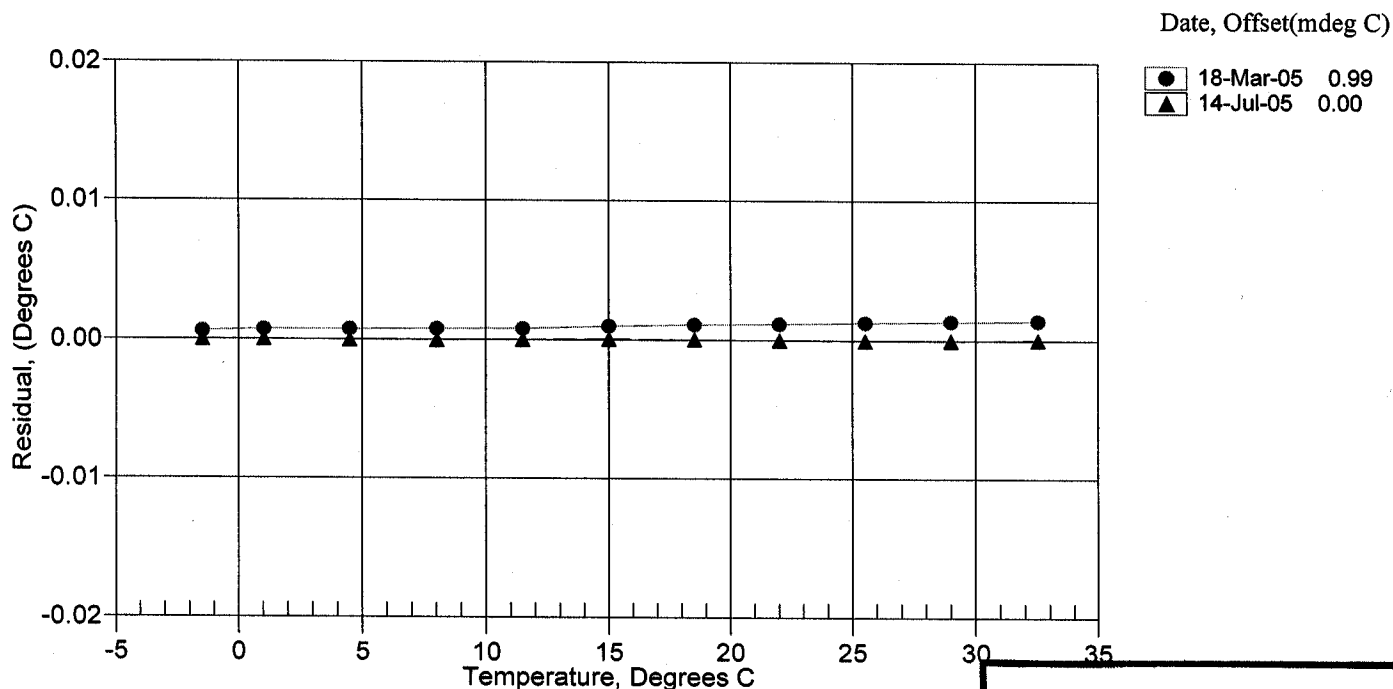
BATH TEMP (ITS-90)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
-1.5002	6359.856	-1.5002	0.00001
0.9998	6723.919	0.9998	0.00002
4.4998	7258.499	4.4998	-0.00004
7.9998	7822.874	7.9998	-0.00004
11.4998	8417.833	11.4998	0.00001
14.9998	9044.134	14.9999	0.00005
18.4998	9702.511	18.4998	0.00002
21.9998	10393.694	21.9998	-0.00001
25.4998	11118.383	25.4998	-0.00003
28.9998	11877.245	28.9998	-0.00004
32.4998	12670.942	32.4998	0.00004

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**