

# SEA-BIRD ELECTRONICS, INC.

1808 136th Place N.E., Bellevue, Washington 98005 USA  
Phone: (425) 643 - 9866 Fax: (425) 643 - 9954 Internet: seabird@seabird.com

SENSOR SERIAL NUMBER = 1609  
CALIBRATION DATE: 27-Feb-03s

SBE 3 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.86608742e-03  
h = 6.80172472e-04  
i = 2.62956971e-05  
j = 2.03466045e-06  
f<sub>0</sub> = 1000.000

## IPTS-68 COEFFICIENTS

a = 3.68120954e-03  
b = 6.03733122e-04  
c = 1.49935623e-05  
d = 2.03610358e-06  
f<sub>0</sub> = 6398.686

BATH TEMP  
(ITS-90 °C)

INSTRUMENT FREQ  
(Hz)

INST TEMP  
(ITS-90 °C)

RESIDUAL  
(ITS-90 °C)

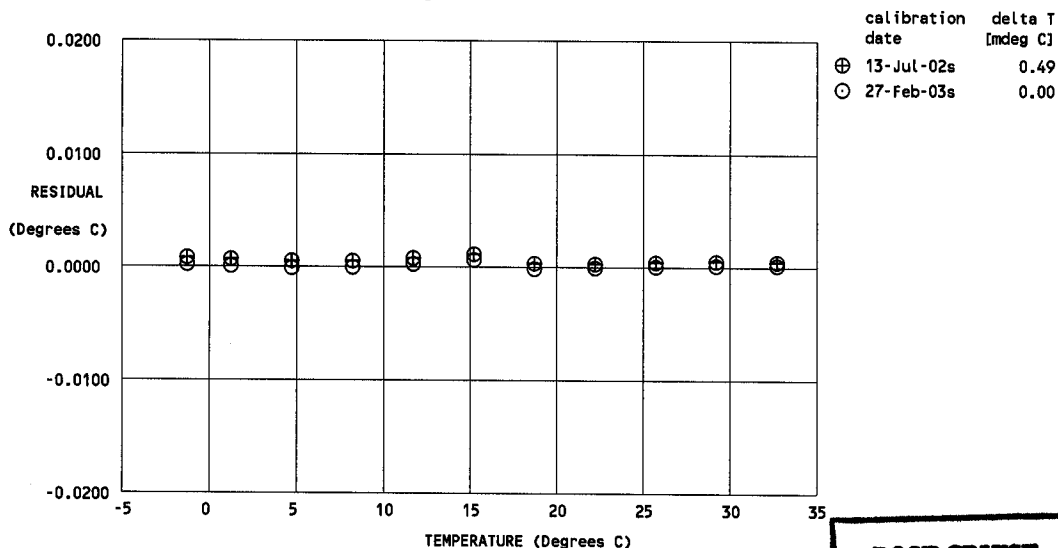
-1.4999	6398.686	-1.4998	0.00010
1.0001	6765.135	1.0001	-0.00003
4.5002	7303.183	4.5000	-0.00020
8.0002	7871.143	8.0001	-0.00013
11.5002	8469.805	11.5003	0.00015
15.0002	9099.903	15.0007	0.00051
18.5002	9761.933	18.5000	-0.00025
22.0002	10456.959	22.0000	-0.00018
25.5002	11185.512	25.5001	-0.00006
29.0002	11948.226	29.0002	0.00004
32.5002	12745.701	32.5003	0.00005

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<sub>68</sub> is assumed to be 1.00024 \* T<sub>90</sub> (-2 to 35 °C).

Residual = instrument temperature - bath temperature



**POST CRUISE  
CALIBRATION**