

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER = 1692  
CALIBRATION DATE: 16-Nov-99s

TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

$g = 4.80162264e-03$   
 $h = 6.71460214e-04$   
 $i = 2.53785825e-05$   
 $j = 1.98710959e-06$   
 $f_0 = 1000.000$

## IPTS-68 COEFFICIENTS

$a = 3.68139072e-03$   
 $b = 6.00429993e-04$   
 $c = 1.48517526e-05$   
 $d = 1.98852538e-06$   
 $f_0 = 5873.219$

BATH TEMP (ITS-90 °C)	INSTRUMENT FREQ (Hz)
-1.5131	5873.219
1.0483	6220.019
4.6212	6728.076
8.1280	7254.927
11.6314	7809.953
15.1916	8404.046
18.6552	9011.813
22.1560	9656.679
25.6834	10338.114
29.1546	11040.324
32.6298	11775.375

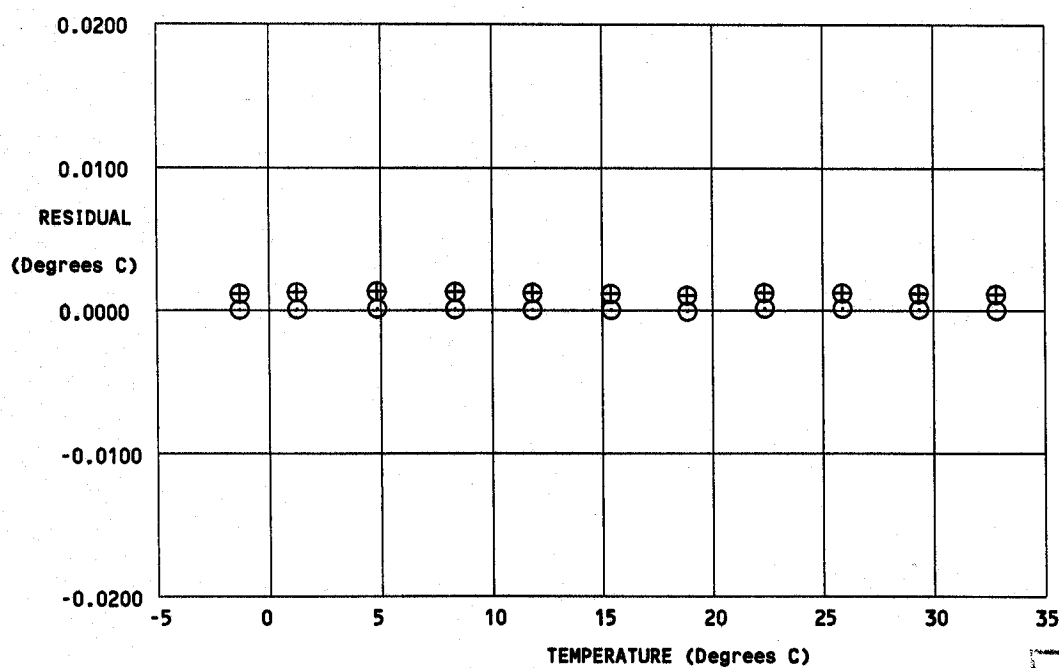
INST TEMP (ITS-90 °C)	RESIDUAL (ITS-90 °C)
-1.5132	-0.00004
1.0483	0.00002
4.6213	0.00006
8.1280	0.00002
11.6314	-0.00002
15.1915	-0.00004
18.6551	-0.00013
22.1560	0.00009
25.6835	0.00009
29.1547	0.00002
32.6297	-0.00006

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



7000 CRUISE  
CALIBRATION