

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER = 436  
 CALIBRATION DATE: 09-Jun-93

## TEMPERATURE CALIBRATION DATA ITS-90 TEMPERATURE SCALE

### ITS-90 COEFFICIENTS

$g = 4.20030677e-03$   
 $h = 6.11494306e-04$   
 $i = 8.00015062e-06$   
 $j = -9.70474199e-07$   
 $f_0 = 1000.000$

### IPTS-68 COEFFICIENTS

$a = 3.67514592e-03$   
 $b = 5.95519390e-04$   
 $c = 1.05582186e-05$   
 $d = -9.69801948e-07$   
 $f_0 = 2386.344$

BATH TEMP (ITS-90 °C)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90 °C)	RESIDUAL (ITS-90 °C)
-1.0514	2386.344	-1.0517	-0.00026
2.9427	2609.657	2.9430	0.00035
6.9634	2849.021	6.9644	0.00093
10.9903	3103.646	10.9882	-0.00205
14.9495	3369.625	14.9507	0.00119
18.9652	3654.966	18.9650	-0.00022
22.9366	3953.442	22.9365	-0.00012
27.2774	4298.651	27.2778	0.00042
31.3307	4639.245	31.3304	-0.00025

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

