

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER = 775  
 CALIBRATION DATE: 22-Jul-99

## TEMPERATURE CALIBRATION DATA ITS-90 TEMPERATURE SCALE

### ITS-90 COEFFICIENTS

$g = 4.20848314e-03$   
 $h = 5.93290328e-04$   
 $i = -4.47101083e-06$   
 $j = -4.16239421e-06$   
 $f_0 = 1000.000$

### IPTS-68 COEFFICIENTS

$a = 3.64446300e-03$   
 $b = 5.90657924e-04$   
 $c = 7.41495149e-06$   
 $d = -4.16244768e-06$   
 $f_0 = 2585.377$

BATH TEMP (ITS-90 °C)	INSTRUMENT FREQ (Hz)	INST TEMP (ITS-90 °C)	RESIDUAL (ITS-90 °C)
1.2390	2585.377	1.2385	-0.00045
4.8230	2799.821	4.8238	0.00082
15.5390	3514.725	15.5384	-0.00060
18.9130	3764.031	18.9128	-0.00015
29.3290	4611.692	29.3301	0.00111
32.7010	4912.324	32.7003	-0.00072

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

