

# SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0074  
CALIBRATION DATE: 09-Apr-09

GliderAPL TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

g = 4.28362524e-003  
h = 6.27571878e-004  
i = 2.29357445e-005  
j = 2.39458191e-006  
f0 = 1000.0

## IPTS-68 COEFFICIENTS

a = 3.64763651e-003  
b = 5.87490423e-004  
c = 1.54245009e-005  
d = 2.39607948e-006  
f0 = 2855.461

| BATH TEMP<br>(ITS-90) | INSTRUMENT FREQ<br>(Hz) | INST TEMP<br>(ITS-90) | RESIDUAL<br>(ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| 0.9999                | 2855.461                | 0.9999                | -0.00002             |
| 4.5000                | 3088.489                | 4.5000                | 0.00002              |
| 15.0000               | 3870.096                | 15.0000               | 0.00003              |
| 18.5000               | 4159.388                | 18.5000               | -0.00005             |
| 24.0000               | 4644.389                | 23.9999               | -0.00008             |
| 29.0000               | 5118.517                | 29.0002               | 0.00018              |
| 32.5000               | 5469.686                | 32.4999               | -0.00009             |

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

Date, Offset(mdeg C)

