

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1609

CALIBRATION DATE: 03-Aug-04

SBE3 TEMPERATURE CALIBRATION DATA

ITS-90 TEMPRATURE SCALE

ITS-90 COEFFICIENTS

g = 4.86575232e-003

h = 6.79619270e-004

i = 2.60555361e-005

j = 2.00003179e-006

f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.68121106e-003

b = 6.03709377e-004

c = 1.49453741e-005

d = 2.00146644e-006

f0 = 6399.579

| BATH TEMP (ITS-90) | INSTRUMENT FREQ (Hz) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| -1.5000 | 6399.579 | -1.4999 | 0.00009 |
| 1.0000 | 6766.094 | 1.0000 | -0.00004 |
| 4.5000 | 7304.223 | 4.4998 | -0.00017 |
| 8.0000 | 7872.272 | 7.9999 | -0.00012 |
| 11.5000 | 8471.025 | 11.5001 | 0.00015 |
| 15.0000 | 9101.213 | 15.0005 | 0.00048 |
| 18.5000 | 9763.344 | 18.4997 | -0.00027 |
| 22.0000 | 10458.472 | 21.9998 | -0.00021 |
| 25.5000 | 11187.153 | 25.5000 | -0.00000 |
| 29.0000 | 11949.980 | 29.0001 | 0.00008 |
| 32.5000 | 12747.561 | 32.5000 | 0.00001 |

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 ITS-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

