

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 4799
CALIBRATION DATE: 21-May-09

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.36415575e-003
h = 6.37354699e-004
i = 2.11350518e-005
j = 1.81145262e-006
f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121355e-003
b = 5.97323696e-004
c = 1.51385504e-005
d = 1.81286198e-006
f0 = 3029.517

| BATH TEMP (ITS-90) | INSTRUMENT FREQ (Hz) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| -1.5001 | 3029.517 | -1.5001 | 0.00001 |
| 0.9999 | 3204.947 | 0.9999 | -0.00001 |
| 4.4999 | 3462.735 | 4.4999 | 0.00000 |
| 7.9999 | 3735.105 | 7.9999 | -0.00001 |
| 11.4999 | 4022.457 | 11.4999 | -0.00003 |
| 14.9999 | 4325.193 | 15.0000 | 0.00007 |
| 18.4999 | 4643.663 | 18.4999 | -0.00003 |
| 21.9999 | 4978.263 | 21.9999 | -0.00002 |
| 25.4999 | 5329.340 | 25.4999 | 0.00000 |
| 28.9999 | 5697.233 | 28.9999 | -0.00000 |
| 32.4999 | 6082.276 | 32.4999 | 0.00000 |

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

