

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 1384
CALIBRATION DATE: 15-Feb-07

SBE3 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.86994894e-003
h = 6.80556510e-004
i = 2.70786442e-005
j = 2.14860704e-006
f0 = 1000.0

ITS-68 COEFFICIENTS

a = 3.68121249e-003
b = 6.02131685e-004
c = 1.50871607e-005
d = 2.15006861e-006
f0 = 6453.269

| BATH TEMP (ITS-90) | INSTRUMENT FREQ (Hz) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| -1.5000 | 6453.269 | -1.5000 | -0.00001 |
| 1.0000 | 6823.886 | 1.0000 | 0.00002 |
| 4.5000 | 7368.143 | 4.5000 | 0.00000 |
| 8.0000 | 7942.774 | 8.0000 | 0.00001 |
| 11.5000 | 8548.560 | 11.5000 | -0.00002 |
| 15.0000 | 9186.289 | 15.0000 | 0.00001 |
| 18.5000 | 9856.682 | 18.5000 | -0.00001 |
| 22.0000 | 10560.467 | 22.0000 | -0.00001 |
| 25.5000 | 11298.331 | 25.5000 | 0.00001 |
| 29.0000 | 12070.931 | 29.0000 | 0.00002 |
| 32.5000 | 12878.882 | 32.5000 | -0.00002 |

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

