

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 3114
CALIBRATION DATE: 11-Jan-12

SBE16 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

$g = 4.21000399e-003$
 $h = 5.87975768e-004$
 $i = -1.50977296e-006$
 $j = -3.05673990e-006$
 $f_0 = 1000.0$

IPTS-68 COEFFICIENTS

$a = 3.64763889e-003$
 $b = 5.82581603e-004$
 $c = 7.30542303e-006$
 $d = -3.05661949e-006$
 $f_0 = 2608.193$

| BATH TEMP (ITS-90) | INSTRUMENT FREQ (Hz) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| 0.9999 | 2608.193 | 0.9997 | -0.00020 |
| 4.5000 | 2822.713 | 4.5003 | 0.00034 |
| 14.9999 | 3540.450 | 14.9998 | -0.00009 |
| 18.5000 | 3805.725 | 18.4997 | -0.00032 |
| 24.0000 | 4250.351 | 24.0001 | 0.00014 |
| 29.0000 | 4685.023 | 29.0004 | 0.00042 |
| 32.5000 | 5007.094 | 32.4997 | -0.00030 |

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

