

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 1367
 CALIBRATION DATE: 13-Feb-14

SBE3 TEMPERATURE CALIBRATION DATA
 ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

g = 4.86013586e-003
 h = 6.75484888e-004
 i = 2.68386669e-005
 j = 2.13623576e-006
 f0 = 1000.0

IPTS-68 COEFFICIENTS

a = 3.68121240e-003
 b = 5.97880269e-004
 c = 1.49279195e-005
 d = 2.13767390e-006
 f0 = 6441.289

| BATH TEMP (ITS-90) | INSTRUMENT FREQ (Hz) | INST TEMP (ITS-90) | RESIDUAL (ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| -1.5000 | 6441.289 | -1.5000 | -0.00001 |
| 1.0000 | 6813.922 | 1.0000 | 0.00000 |
| 4.5000 | 7361.412 | 4.5000 | 0.00001 |
| 8.0000 | 7939.771 | 8.0000 | 0.00001 |
| 11.5000 | 8549.818 | 11.5000 | -0.00002 |
| 15.0000 | 9192.365 | 15.0000 | -0.00001 |
| 18.5000 | 9868.184 | 18.5000 | 0.00002 |
| 22.0000 | 10578.006 | 22.0000 | -0.00001 |
| 25.5000 | 11322.565 | 25.5000 | -0.00002 |
| 29.0000 | 12102.562 | 29.0000 | 0.00004 |
| 32.5001 | 12918.640 | 32.5001 | -0.00002 |

$$\text{Temperature ITS-90} = 1/\{g + h[\ln(f_0/f)] + i[\ln^2(f_0/f)] + j[\ln^3(f_0/f)]\} - 273.15 \text{ (}^\circ\text{C)}$$

$$\text{Temperature IPTS-68} = 1/\{a + b[\ln(f_0/f)] + c[\ln^2(f_0/f)] + d[\ln^3(f_0/f)]\} - 273.15 \text{ (}^\circ\text{C)}$$

Following the recommendation of JPOTS: T_{68} is assumed to be $1.00024 * T_{90}$ (-2 to 35 °C)

Residual = instrument temperature - bath temperature

