

# Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 6826  
CALIBRATION DATE: 13-Jan-12

SBE16plus TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

## ITS-90 COEFFICIENTS

a0 = 1.305837e-003

a1 = 2.568581e-004

a2 = 1.377053e-007

a3 = 1.335830e-007

| BATH TEMP<br>(ITS-90) | INSTRUMENT<br>OUTPUT(n) | INST TEMP<br>(ITS-90) | RESIDUAL<br>(ITS-90) |
|-----------------------|-------------------------|-----------------------|----------------------|
| 1.0000                | 618292.500              | 1.0000                | 0.0000               |
| 4.5000                | 547281.727              | 4.4999                | -0.0001              |
| 14.9999               | 371933.636              | 14.9999               | 0.0000               |
| 18.5000               | 325148.100              | 18.5000               | -0.0000              |
| 24.0000               | 261899.900              | 24.0001               | 0.0001               |
| 29.0000               | 214006.800              | 28.9998               | -0.0002              |
| 32.5000               | 185198.000              | 32.5001               | 0.0001               |

$MV = (n - 524288) / 1.6e+007$

$R = (MV * 2.900e+009 + 1.024e+008) / (2.048e+004 - MV * 2.0e+005)$

Temperature ITS-90 =  $1 / \{a_0 + a_1[\ln(R)] + a_2[\ln^2(R)] + a_3[\ln^3(R)]\} - 273.15$  (°C)

Residual = instrument temperature - bath temperature

