

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0043
CALIBRATION DATE: 27-Jan-12

SBE 49 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 8.465392e-004
a1 = 2.813514e-004
a2 = -2.170496e-006
a3 = 1.880379e-007

BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	755510.441	1.0001	0.0001
4.4999	668947.051	4.4997	-0.0002
15.0000	448765.814	15.0001	0.0001
18.5000	388354.492	18.5001	0.0001
24.0000	305464.695	23.9998	-0.0002
29.0000	241691.780	29.0000	-0.0000
32.5000	202893.051	32.5001	0.0001

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

$$R = (MV * 2.295e+010 + 9.216e+008) / (6.144e+004 - MV * 5.3e+005)$$

$$\text{Temperature ITS-90} = 1 / \{ a0 + a1[\ln(R)] + a2[\ln^2(R)] + a3[\ln^3(R)] \} - 273.15 \text{ (}^\circ\text{C)}$$

Residual = instrument temperature - bath temperature

