

Sea-Bird Electronics, Inc.

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SENSOR SERIAL NUMBER: 0043
CALIBRATION DATE: 06-Feb-14

SBE 49 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 8.284959e-004
a1 = 2.872175e-004
a2 = -2.803128e-006
a3 = 2.106788e-007

BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0000	755518.949	1.0001	0.0001
4.5000	668952.322	4.4999	-0.0001
15.0000	448760.136	15.0002	0.0002
18.5000	388349.220	18.4998	-0.0002
24.0000	305448.915	23.9999	-0.0001
29.0000	241674.441	29.0000	0.0000
32.5001	202876.186	32.5001	-0.0000

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

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

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

$$\text{Residual} = \text{instrument temperature} - \text{bath temperature}$$

