

SEA-BIRD ELECTRONICS, INC.

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SENSOR SERIAL NUMBER: 0088
CALIBRATION DATE: 17-Jun-09

SBE 49 TEMPERATURE CALIBRATION DATA
ITS-90 TEMPERATURE SCALE

ITS-90 COEFFICIENTS

a0 = 8.469540e-004
a1 = 2.761405e-004
a2 = -1.444851e-006
a3 = 1.706450e-007

BATH TEMP (ITS-90)	INSTRUMENT OUTPUT(n)	INST TEMP (ITS-90)	RESIDUAL (ITS-90)
1.0001	748473.669	1.0001	0.0000
4.5000	663390.620	4.5000	-0.0000
15.0000	446836.207	15.0001	0.0001
18.5000	387323.719	18.4999	-0.0001
24.0000	305539.074	24.0001	0.0001
29.0059	242435.372	29.0058	-0.0001
32.5165	203912.140	32.5166	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

