



Sea-Bird Scientific  
13431 NE 20<sup>th</sup> Street  
Bellevue, WA 98005  
USA

+1 425-643-8866  
seabird@seabird.com  
www.seabird.com

SENSOR SERIAL NUMBER: 0043  
CALIBRATION DATE: 31-May-17

SBE 49 TEMPERATURE CALIBRATION DATA  
ITS-90 TEMPERATURE SCALE

COEFFICIENTS:

a0 = 8.334917e-004  
a1 = 2.855504e-004  
a2 = -2.619344e-006  
a3 = 2.039831e-007

BATH TEMP (° C)	INSTRUMENT OUTPUT (counts)	INST TEMP (° C)	RESIDUAL (° C)
1.0000	755504.615	1.0001	0.0001
4.5000	668937.844	4.4999	-0.0001
15.0000	448755.074	15.0002	0.0002
18.5000	388346.205	18.4999	-0.0001
24.0000	305451.303	23.9999	-0.0001
29.0000	241677.760	29.0001	0.0001
32.5000	202883.157	32.5000	-0.0000

n = Instrument Output (counts)

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

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

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

Residual (°C) = instrument temperature - bath temperature

